

# THE SOUTH ASIATIC OLETHREUTINI

(LEPIDOPTERA, TORTRICIDAE)

BY

A. DIAKONOFF

With a frontispiece, 14 plates and 732 figures

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## EXPLANATION OF FRONTISPICE

Plate 1. Representatives of the subtribes of the South Asiatic Olethreutini. Fig. 1, Gatesclarkeanae: *Gatesclarkeana confracta* sp. n., ♂, holotype, Assam, Khasis, Shillong, 5000 ft., 25. VII. 1928 (T.B. Fletcher, BM). Fig. 2, Gnathmocerodides: *Gnathmocerodes (G.) lecythocera* (Meyrick), ♂, Central Java, Gedangan, 28. VIII. 1931, larva in fruits of "poetat" (*Barringtonia spicata* Bl.) (L. G. E. Kalshoven, LM). Fig. 3, Rhodocosmariae: *Rhodocosmaria operosa* (Meyrick), ♀, E Papuan Is., d'Entrecasteaux Is., Goodenough Id., 1897 (Meek, Wals. Coll. 18141, BM). Fig. 4, Zomariae: *Zomaria frustulosa* sp. n., ♀, paratype, New Guinea, Milne Bay (A. S. Meek, LM). Fig. 5, Sorolophae: *Sorolopha epichares* sp. n., ♂, holotype, New Guinea, Milne Bay (A. S. Meek, BM). Fig. 6, Sycacanthae: *Sycacantha hilarograptia* (Meyr.), E Java, Kediri, Ngadiredjo, low country, 12. VIII. 1940, bred from leaves of unidentified composite plant (A. Diakonoff, LM). Fig. 7, Statherotides: *Statherotis discana* (Feld. & Rogenh.), ♂, W Java, Buitenzorg, 250 m, 13.V.1949 (F. C. J. Drescher, LM). Fig. 8, Neopotamiae: *Neopotamia orophias* (Meyr.), ♂, Himalaya, Simla, VIII. 1898 (C.G.M., Meyrick Coll., BM). Fig. 9, Bactrae: *Bubonoxena ephippias* (Meyr.), ♂, Ceylon, Kandy, VII. 1909 (Wals. Coll., BM), genit. slide 7861. Fig. 10, Endotheniae: *Molybdocrates opulenta* sp. n., ♂, holotype, Moluccan Is., Batian Id., 1879 (Doherty, BM). Fig. 11, Lobesiae: *Lobesia (Lomaschiza) acroleuca* sp. n., ♂, holotype, E Java, Tengger Mts., Nongkodjadjar, 1300 m, at light, 15. III. 1940 (A. M. R. Wegner, LM). Fig. 12, Olethreutae: *Lasio-gnatha quartaria* sp. n., ♂, holotype, Central E Sumatra, Fort de Kock, 920 m, VI. 1921 (E. Jacobson, LM).

Dedicated to the memory of my lamented friend

Arthur M. R. Wegner,

at the time, insect collector in Nongkodjadjar, Java, happy companion of unforgettable trips, sharer of many an enthusiastic plan for future collecting.

## CONTENTS

Introduction . . . . .	IX
Historical . . . . .	X
Phylogeny . . . . .	XI
Classification . . . . .	XIV
Scent organs . . . . .	XV
Signa . . . . .	XVI
Similarities with the South Asiatic Eucosmini . . . . .	XVII
The genera of the Palaearctic Olethreutini . . . . .	XVII
The material used . . . . .	XVIII
Supplementary type, apotype, and apallotype . . . . .	XX
Acknowledgements . . . . .	XX
Systematical section . . . . .	I
Tribus Olethreutini Obraztsov, 1946 . . . . .	I
1. Subtribus Gatesclarkeanae nov. . . . .	5
2. Subtribus Gnathmocerodides nov. . . . .	25
3. Subtribus Rhodocosmariae nov. . . . .	35
4. Subtribus Zomariae nov. . . . .	39
5. Subtribus Sorolophae nov. . . . .	47
6. Subtribus Sycacanthae nov. . . . .	105
7. Subtribus Statherotides nov. . . . .	179
8. Subtribus Neopotamiae nov. . . . .	295
9. Subtribus Bactrae nov. . . . .	337
10. Subtribus Endotheniae nov. . . . .	363
11. Subtribus Lobesiae . . . . .	373
12. Subtribus Olethreutae nov. . . . .	393
Addendum . . . . .	507
Systematical list of the treated South Asiatic Olethreutini . . . . .	509
References . . . . .	519
Appendix I. A list of South Asiatic species of <i>Argyroploce</i> sensu Meyrick. . . . .	525
Appendix II. The dates of publication of Kennel's "Die Paläarktischen Tortriciden" . . . . .	530
Figures 1-732 . . . . .	531
Plates 2-15	
Indices	
Index to Latin names of the Olethreutini . . . . .	693
Index to Latin names of food plants. . . . .	700

## INTRODUCTION

Although a large number of Tortricoid species and several genera from the Indo-Malayan region have been described by earlier authors (Walker, Snellen, Walsingham, Meyrick, and a few others), no survey of the present group has ever been made. Edward Meyrick, the author of most of the new names, has never attempted a synopsis of the Olethreutinae. He made surveys of the Australian and New Zealand Tortricoidea (1911), but the results are too superficial for our modern standards.

During a long sojourn, working and collecting in Java, I became greatly fascinated by that fauna. Having completed a number of preliminary studies of the subfamily Tortricinae (1939 et seq.), I turned next to the South Asiatic, especially Javanese, Olethreutinae. After a long delay due to World War II, their revision has been initiated by the study of the two then least known and most confused genera, *Bactra* Stephens and *Lobesia* Guenée (Diakonoff, 1950 et seq.).

The difficulties associated with generic taxonomy of the Olethreutini proved to be considerable, so that the present revision required many more years of study than I had anticipated. A few incidental descriptions of new genera and species preceded publication of a more extensive survey (Diakonoff, 1966), dealing with the New Guinean and Pacific species of the "genus" *Argyroploce* sensu Meyrick, a precursor of the present paper.

My original intention was to present a revision of the South Asiatic representatives of the complex "genus" *Argyroploce* sensu Meyrick or *Olethreutes* sensu Clarke, as surveyed and illustrated by the latter author in his third volume of the Monograph on Meyrick's types (1958). But very soon this revision has extended to cover all South Asiatic Olethreutini and also some of Meyrick's species from China (as far as these were available to me), besides stray notes on the generic position of some Olethreutini from Japan. Some more additions from outside the Asiatic region proper are appended.

Because the concepts of the older authors of the genera *Olethreutes* Hübner and *Argyroploce* Hübner are vague and separation of the groups of species concerned unsatisfactory, I endeavour to present a new classification for the taxa in question, using as many examples from the Holarctic region as available data and opportunity allow; I have tried, though, not to deviate too far from my original intention with this revision.

In passing some Palaearctic members of the tribe Olethreutini, especially those from Japan, are also treated. The rich Japanese fauna in particular is of great interest, forming a remarkable mixture of Palaearctic and tropical elements, besides an important percentage of endemisms.

In the later years the Tortricid fauna of the Far East, especially of the Maritime Region of the Soviet Union, has been extensively explored and studied. Whatever data are known on the genital characters of those species we owe to those studies by

A. S. Danilevsky, V. I. Kuznetsov, and M. I. Falkovitch of the Zoological Institute of the Academy of Sciences at Leningrad. Several Japanese species appeared to occur on the continent opposite (the Maritime Region). Although these species do not occur in Southern Asia, some are closely related to tropical species. Therefore it seems useful to record some of these.

The treatment of non-Asiatic species has remained tentative, without any pretence of completeness. A more extensive survey of the Palaearctic Olethreutini may follow at some later date.

### HISTORICAL

The Tortricoidea form a compact and natural superfamily of Microlepidoptera of moderate size and characteristic facies. Except for the earliest authors, lepidopterists did not have too much trouble in recognizing the members of this superfamily. In fact, so distinct was their appearance, as compared with that of other groups of the so called "micros", that for a long time the Tortricoidea or "Tortricina" were regarded as a single family. Only at the end of the last century did Walsingham (1897) divide them into two subfamilies, viz., Tortricinae and Olethreutinae. His delimitation of the two groups was rather vague, however, and is no longer tenable. It is to Meyrick (1910 et seq.) that we owe a better defined division of the superfamily "Tortricina" into several "families", viz., Carposinidae (at present removed from the Tortricoidea), Phaloniidae, Tortricidae and Eucosmidae, and later, Chlidanotidae. These groups can be separated easily on the basis of superficial characters, which Meyrick used exclusively. The modern study revealed incidental errors in his classification of the families (actually far less serious than his mistakes in other groups). Mutatis mutandis, with necessary alterations, we use Meyrick's general subdivision until to-day. But we have abandoned his idea that these taxa are families and have re-established Walsingham's concept, although in a modified form, treating them instead as subfamilies.

An altogether different matter is the generic and specific subdivision by Walsingham and Meyrick. The use of the characters of superficial structure alone at these levels is altogether disappointing, these structures being uniform to a high degree. So by their method these authors unavoidably came to a lumping on a large scale. Their single genera *Argyroploce*, *Eucosma* and *Laspeyresia* agree for the greater part with the three tribes Olethreutini, Eucosmini and Laspeyresiini, respectively, as understood by modern authors.

The first attempt to classify the Olethreutinae on the basis of genital characters was made by Dampf (1908). He studied only some 90 Palaearctic species — as he himself remarked, an insufficient number for far-going conclusions. Still, he noticed many interesting facts, e.g., the isolated position of *Bactra* and the differences of the male genitalia within what we now regard as the above mentioned three tribes. He gained, in fact, sufficient insight to be able to criticize sharply Kennel's old-fashioned classification of the Palaearctic Tortricidae (his beautifully illustrated monograph) which

had started to appear at about the same time. Although Kennel (1908-1921) studied and illustrated some male genital characters, he hardly used them at other than the specific level. Kennel's generic classification is simply a repetition of Heinemann's system (1859-1876) and the Staudinger & Bang-Haas' Catalogue (1901).

The modern study of the subfamily Olethreutinae actually begins with the classical survey of the British species by Pierce and Metcalfe (1922), based entirely upon the characters of the genitalia. Their new classification is rather one-sided, but nevertheless forms the foundation for all further study of the group. To give credit to these authors, a proposal has been made (Diakonoff, 1954) to use their terminology of the genital parts; this has been generally accepted.

Soon after their survey of the genitalia of the British Tortricidae excellent revisions of the North American species by Heinrich appeared (1926, 1932). Based on genital, together with other available imaginal characters, his revisions resulted in a more natural system and are still most useful.

In spite of a strong revival of interest in the taxonomy of the Palaearctic Tortricoidea in later years, we are still far from having a complete survey. Extensive modern research by Obraztsov (1954-1968), Razowski (1959 et seq.) and Danilevski & Kuznetsov (1968) has greatly contributed to our knowledge of the Palaearctic fauna. The monumental project of the rich edition of the series "Microlepidoptera Palaearctica", with full colour illustrations of every species, seems to warrant an exhaustive study of this subject. Razowski's beautiful Cochyliidae volume (1970) forms the first contribution to the treatment of the Tortricoidea.

In contrast, revisions of other faunas are scanty. The above mentioned work of Heinrich on the North American Olethreutinae needs revision. Common (1958, 1965 et seq.) is revising the Australian Tortricidae. Powell surveyed Californian Tortricidae and has started on a revision of New World Spargonothidini. Razowski (1966) published a monograph of the Tortricini of the World. Diakonoff (1939 et seq.) has published records and descriptions of the Indo-Malayan, Papuan, and Philippine Tortricoidea.

A just initiated extensive project of a series of monographs of all Lepidoptera of North America by several specialists is now in progress.

#### PHYLOGENY

Controversy persisted with regard to the phylogenetic position of the three tribes of the Olethreutinae. While Meyrick (1913) considered the Tortricinae a development of the Olethreutinae, "The Laspeyresiine group" being the most primitive, Heinrich (1926), on the contrary, regarded the Olethreutinae as developed from the tortricine stock and the Laspeyresiini the most progressive of the three tribes, judging chiefly from the characters of the male genitalia. His argument is that the Tortricinae have a basic type of male genitalia, widely spread among Lepidoptera, while the Olethreutinae (= Eucosmidae) represent an advanced development of this type, along the lines

of "progressive reduction". Especially the structure of the valva in the Olethreutinae is of a so much more specialized type than in the Tortricinae, that it is unimaginable that the latter could have developed out of the former. He says (p. 9): "The genitalia of the Olethreutidae with the peculiar fusing of the upper margin of sacculus to the costal edge of the harpe (= valva) leaving a restricted opening toward the base of the harpe, the narrowed articulating base of the harpe, articulating against the juxta of the anellus and connecting with the tegumen only by the costal hook, ... rather than the primitive articulation along the lateral margin of the vinculum, as well as the loss of transtilla and the progressive reduction and elimination of many fundamental structures all indicate a specialized and advanced type. From this no generalized type could have developed, and in every way the tortricid (= tortricine) genitalia are distinctly the more generalized type".

This view, exactly opposite to Meyrick's, has been generally accepted since. Nevertheless, the above citation contains a few inaccuracies. The valva in both the Olethreutinae and the Tortricinae is a flat lobe composed of an external and an internal sheet. In the Olethreutinae the internal sheet is excised at the base, thus forming the "basal opening", referred to by Heinrich and serving for attachment of retractor muscles. However, the statement of the importance of the basic difference constituted by the presence of this opening in the Olethreutinae or its invariable absence in the Tortricinae, is entirely correct and of paramount importance for their separation. The presence of this opening is indeed progressive, as compared with its absence. An explanation follows below.

Furthermore, it is not correct that the valva in the Olethreutini articulates against the juxta while connecting with the tegumen only by the costal hook, as against a primitive articulation along the lateral margin of the vinculum, in the Tortricinae. In both there is a firm connection with the vinculum along the whole stretch of the basal edge of the valva, from above the ventrobasal process of the sacculus, articulating against the juxta, as far as the "costal hook" (processus basalis) of the Olethreutinae — and along the entire inside margin of the base of the valva connected with the diaphragma. Only the length of this articulation differs, often being much shorter in the Olethreutinae, owing to the narrower base of their valva.

A new and convincing support for Heinrich's concept of the evolution of the Tortricoidae is provided by Danilevski & Kuznetsov (1968) in their recent excellent monograph on the tribe Laspeyresiini of the Soviet Union. To understand the significance and evolution of the parts of the male genitalia in various groups, they studied the function of these parts, derived from the position and development of the musculature. A comparison of this function in the Tortricinae and the Olethreutinae reveals a surprising difference of the copulatory mechanism of these two groups.

In the Tortricinae the prehensile function of the male genitalia, i.e. the holding of the female abdomen during copulation, is situated mainly in the upper (dorsal) parts, where the large hooked uncus with the sclerotized gnathos, both movable, form a kind of tongs, closed by the action of a pair of powerful muscles between the inner side of



the tegumen and the base of the uncus. The large pair of muscles closing the valvae are attached not to the discs of the valvae but connect the lateral legs of the vinculum (and through them the bases of the valvae) with the coecum penis; the valvae therefore have only accessory function during copulation and the harpes on their surface may serve solely as inactive organs for additional prehension. A similar situation occurs generally throughout Lepidoptera and must be regarded as "primitive" or plesiomorphic.

In the Olethreutinae, on the contrary, a process of continuous reduction can be observed from this generalized type towards a strong secondary simplification of the genitalia. All the three tribes of the Olethreutinae participate in this process, but the final result is different, as though the three tribes represent, more or less, three subsequent evolutionary stages. Although each tribe has undergone the same process of reduction, the Olethreutini evidently have stayed the furthest behind: they have the most archaic characters; the Laspeyresiini have advanced furthest, the Eucosmini taking an intermediate position.

This process results in a reduction and eventually a final disappearance of the uncus, the gnathos, and the socii. As a result, according to Danilevski & Kuznetsov, other parts, viz., the valvae, took over the prehensile function; consequently, their shape becomes more oblong, often with a subapical constriction and with a cover of dense bristles on the more or less rigid and transversely elongate cucullus, while the flexor muscles are strongly developed and are attached not to the vinculum legs but to the base of the disc of the valva, inside an opening in its internal sheet (the "basal opening" of Heinrich). This opening, so characteristic of the Olethreutinae, is absent in the Tortricinae where, as we have seen, the flexor muscles are attached to the vinculum and the valvae do not actively participate in the prehension of the female abdomen. Furthermore, the olethreutine aedeagus lacks the coecum for the attachment of the flexor muscles of the valva; these are inserted, instead, upon the sides of the anellus (fultura) which is folded around the aedeagus, modified and enlarged, to provide sufficient support.

Since the general structure of the genitalia and their musculature throughout the Lepidoptera agrees with the situation in the Tortricinae, this must be the plesiomorphic condition, whereas the considerably specialized male genitalia of the Olethreutinae represent the apomorphic situation, proving the more advanced character of the last mentioned subfamily.

With the Laspeyresiini accepted as the most progressive tribe, there is no question about the Eucosmini being other than intermediate. This leaves the tribe at issue, the Olethreutini, the most ancient, "primitive" of the three. However, from the text and figures of the present paper the reader might, instead, conclude that we are dealing with a highly specialized group, for which Heinrich's term "primitive" is rather confusing. Therefore the term plesiomorphic, in the meaning of Hennig, seems more adequate. Indeed, the archaic character of the Olethreutini is more apparent from a comparative study of the three tribes than from the superficial appearance of the repre-

sentatives of this tribe alone. The often very complicated secondary sexual characters of the male and intricate genitalia in both sexes suggest a high development and considerable specialization, rather than the contrary. The evolution that the Olethreutinae have undergone seems to apply also to the Tortricinae where the advanced Archipini are the most simplified, the archaic Tortricini the most complex. Apparently, both subfamilies (Tortricinae and Olethreutinae) have followed a parallel "development of reduction", the first group being the ancient one, the second the progressive. It is uncertain, at the present time, where the connection between the two groups lies. Having sprung from a common ancestor these groups have undergone a parallel but independent evolution.

#### CLASSIFICATION

The discrimination of the tribes of the tropical Olethreutinae does not present great difficulties, since they follow the taxonomic pattern of their Holarctic relatives in all regions of the world.

The South Asiatic Olethreutinae, too, form three distinct tribes: Olethreutini, Eucosmini, and Laspeyresiini. The present part of the revision deals only with the first tribe. Given enough time and opportunity, the revision of the other two will follow. Although the South Asiatic genera and species show the general scheme of genital and other characters of the tribe, some novel developments have been observed, making description of a considerable number of new genera inevitable. A few of these have been published recently elsewhere (Diakonoff, 1966, 1967).

The present revision has been facilitated by Dr. Clarke's monumental monograph on Meyrick's types in the British Museum (1955, 1958); for the first time, he illustrated the genitalia of many species.

The taxonomy of the Tortricidae is based not mainly on the characters of superficial structures, such as venation, shape of the head and palpi, etc., but chiefly on the genital characters of the males and, for the division of higher taxa, also on those of the females. Therefore special attention is paid to detailed illustrations of these characters.

The fauna of the South Asiatic Olethreutinae appears to be composed of a few large genera, forming, so to say, its backbone; out of each of these big units a large number of small genera radiate; some forms represent inter-connections, others appear to be isolated. A rather confusing feature of the present tribe is the evidence of considerable parallel development of the otherwise not closely related taxa. Consequently, often a certain marked type of colouring and markings persists throughout unallied groups, as e.g., the type of markings of *Statherotis discana* Felder & Rogenhöfer, repeated in several distant genera.

In the present tribe more than in other groups the great diversity of male genital structures has compelled me to create a considerable number of new genera. This is unavoidable if one wishes to take into account the differences of structures. Not accounting for them would make our elaborate study of genitalia rather useless. One

should not lose a sense of proportion, though, and must also strive to detect true resemblances (as against spurious parallelisms), in order to arrive at relationships between higher taxa. This should be the final aim of every revision.

The fact that we are still far from an in any sense complete knowledge of the existing forms is responsible for the motley and lacunary picture of the tribe that we have gained at present. The fragments now appear more independent than they would if we were acquainted with many more of them. In my opinion, it is preferable to characterize these "fragments" as so many genera, running the risk that future data will bridge their differences, rather than try and unite in a few heterogeneous genera elements that obviously are unsuitable for union.

### SCENT ORGANS

The males of the Olethreutini often have a pronounced sexual dimorphy, manifested in secondary sexual characters, viz., the development of complex scent organs and, in connection with them, often a simplified or abnormal neuration of the hind wings.

The scent organs have in many species reached a high degree of development. They are usually formed (1) by the dorsum of the hind wing, which is rolled up into a tube-like edge, filled out with modified scales, together with (2) the hair tuft of the hind tibia, developed into a long stiff pencil, originating from the base of the tibia above and appressed to the upper side of the tibia, sometimes projecting beyond its top, at rest lying partly in a dorsal concavity of a dense hair-brush on the inner or upper side of the tibia. The long pencil apparently can be placed inside the dorsal roll, which for that purpose can partly unroll, take up its secretion, and transfer it to the tibial brush. Afterwards, the pencil and the brush can be greatly expanded, to effect a quick evaporation of the scent fluid.

Other Olethreutini, as shall be elaborated in the systematic section, besides the usual coremata also possess several paired or single dense abdominal brushes of hairs (*Statherotis*), a single ventro-mesal (*Gatesclarkeana*) or paired, ventro-lateral (*Lobesia*), concave pouches of glandular scent scales; these pouches can be extruded for the same purpose of evaporation. Other species (*Sorolopha*) have several pairs of long lateral, abdominal pencils of scent hairs; these features are usually developed in combination with the tibial pencils, but also occur without them.

The working mechanism of the scent organs in male Lepidoptera, in casu Rhopalocera, has been observed and described in a fascinating paper by Lincoln P. Brower and Margaret A. Jones (1965), who were able to observe the male butterfly actively brush the coremata at the tip of the abdomen alternately against the androconial patches upon the upperside of the right and left hind wing before and during the courting of the female. Undoubtedly a similar mechanism or mechanisms must be in operation in the courting males of our Olethreutini.

The development of such an organ, for the biological function of which several independent parts of the insect body cooperate and have even undergone pronounced

morphological changes, is in itself highly remarkable. Its presence must indicate an extremely complex evolution, demanding a complicated genetic mechanism. A parallel can be observed in the Orthoptera and other orders, where stridulatory organs of a similarly duplex nature exist.

Within the history of the systematics of the Tortricoidea, secondary sexual characters of the male have been repeatedly used and then again abandoned as being only of a specific and very seldom of a generic value. The parts of the scent organ, formerly always considered separately, were also attributed to the same category of characters. It is the merit of M. I. Falkovitch to have shown in a recent paper (1962c) the complex character of the male scent organs, as being a functional combination of the tibial pencil of hairs and the dorsal roll of the hind wing, in certain Palaeartic *Olethreutini*.

The insight thus gained into the double nature and function of the scent organs requires re-consideration of their taxonomic significance and pleads for renewed interest in them, according to Falkovitch. He uses their presence or absence for a novel — and so far the only existing — subdivision of the Palaeartic members of the tribe *Olethreutini*, which he treats as a subfamily and divides into four “tribes”.

The new view of Falkovitch on the double character and functional unity of the scent organs is certainly correct and original. But their taxonomic value seems to be more limited than appeared to him. His subdivision of the Palaeartic genera is not altogether satisfactory. While the groups “*Lobesiini*” and “*Bactrini*” are undoubtedly natural and are adopted in the present revision, the other two big “tribes”, “*Eudemiini*” and “*Olethreutini*”, are characterized much less distinctly and represent large, heterogeneous groups. As Falkovitch himself remarks, our limited knowledge of the extra-Holarctic fauna of the *Olethreutini* is a serious handicap. In any case, the taxonomic importance of the primary absence of the scent organs seems to be absolute unlike their presence, which is incidental, as will be elaborated here in the systematic section: where they are present, the taxonomic value of these organs hardly exceeds that of other secondary sexual characters of the males, being chiefly specific. They may be present in one, and absent in another allied species.

#### SIGNA

The fauna of the *Olethreutini* of South Asia is composed of a considerable number of tropical genera and a much smaller number of genera chiefly from the Palaeartic or Holarctic regions. The superficial generic characters, such as venation, structure of the head and of its appendages, etc., are rather uniform and present a monotonous picture, with a few exceptions. The genital structures, on the contrary, are rich and complicated and form an excellent instrument for the definition of genera. In fact, the male genitalia are so varied that it is sometimes difficult to detect intrageneric relationships.

In the dubious cases I have resorted to the genitalia of the female; there, the shape of the signa was the leading character. Unfortunately, as is well known, in some often

entirely unrelated species the signa may be absent; however, this does not decrease their importance where they are available. Leaning upon this accessory feature, I have divided the tribe into subtribes. To the signa I have given, for the sake of convenience, inofficial denominations: scobinate, cornute, pectinate, etc., alluding to their aspect.

#### SIMILARITIES WITH THE SOUTH ASIATIC EUCOSMINI

As has already been said, the mutual relationships of the three tribes of the Olethreutinae in South Asia follow the general lines of those in the Holarctic region. Only the South Asiatic Eucosmini are in a way different: some genera of this tribe show, in fact, a closer similarity of certain male structures with the Olethreutini, often to such an extent that separation of the two tribes, solely on the basis of external characters, becomes difficult. This is never the case for the Palaearctic genera of the Eucosmini. However, in most cases the genitalia of the South Asiatic Eucosmini provide easily recognized differences.

Thus, certain genera of unmistakably Eucosmine character may possess such typically olethreutine peculiarities as the elaborate scent organs of the male, often with the hind legs enormously thickened by scaling and with the hind wing modified in a way entirely similar to that in Olethreutini. In consequence several species of these Eucosmini were promptly assigned to the olethreutine genus "*Argyroplote*" (sensu Meyrick). The phylogenetic importance of this complex character is limited, however, because similar scent organs are known also in various not closely related Tortricinae. The females of these eucosmine species either show an even more olethreutine build of the sterigma or have a peculiar, elaborate, and sclerotized sterigma of a special type (as in *Rhectogonia* Diakonoff). In other groups males may have such plesiomorphic characters as a long, hooked uncus, an elaborate gnathos, etc. In such doubtful cases I let myself be guided by the shape, the armatures and the mode of attachment of the male valva, and if I was lucky enough to have the material, by the signa of the female. Usually, all the characters taken together pointed out the correct tribe. A more detailed description of these cases will be more appropriately located in the planned second part of this revision, dedicated to the Eucosmini.

#### THE GENERA OF THE PALAEARCTIC OLETHREUTINI

These genera may be reviewed briefly, for the sake of completeness.

The most recent survey is by H. J. Hannemann (1961). This work also reflects the views of N. S. Obraztsov, who published an outstanding revision of the genera of Palaearctic Tortricidae from 1954 until 1968. His untimely death prevented him from finishing the revision by treating the Olethreutini.

Hannemann's work enumerates 22 genera of the present tribe. One of them, *Epibactra* Ragonot, obviously belongs to the Eucosmini. One more also seems to me to

belong to that tribe, viz., *Froelichia* Obraztsov. They are omitted from further discussion here.

The remarkable genus *Pelatea* Guenée does not possess signa but judging from the characteristic valva I am assigning it to the Olethreutini. One species occurs in South Asia and the genus is fully treated in this paper.

*Aterpia* Guenée has stellate, but simplified signa and is assigned to the subtribe Neopotamia, although the type species has no signa at all. Two species occur in South Asia.

*Bactra* Stephens, is placed in the subtribe Bactrae, *Lobesia* Guenée and *Endopiza* Clemens, in Lobesiae and *Endothenia* Stephens, in Endotheniae.

Of the remaining genera of the Olethreutini I am synonymizing *Argyroploce* Hübner with *Olethreutes* Hübner (one of the latest authors to come to the same conclusion as Swatschek, 1958); *Celyphoides* Obraztsov I sink as subgenus of *Celypha* Hübner, and *Paracelypha* Obraztsov, as a subgenus of *Olethreutes*, under the name of *Syricoris* Treitschke.

*Pseudosciaphila* Obraztsov (= *Sciaphila* auct. nec Treitschke) belongs to the Neopotamia. I assigned to this genus one species from South Asia.

The remaining ten Palaearctic genera all belong to the subtribe Olethreutae. Six genera occur also in South Asia, viz., *Cymolomia* Lederer, *Eudemis* Hübner, *Hedya* Hübner, *Olethreutes* Hübner, *Apotomis* Hübner, and *Celypha* Hübner, while four Palaearctic genera do not inhabit our region, viz., *Priesterognatha* Obraztsov, *Capricornia* Obraztsov, *Pseudohermenias* Obraztsov and *Orthotaenia* Stephens. These are treated briefly, in passing.

Falkovitch (1962) described four new genera of the Olethreutini from the Far East and re-established one: *Selenodes* Guenée (from *Olethreutes*). This genus, together with *Rudisociaria* Falkovitch and *Piniphila* Falkovitch, belongs to the Olethreutae. Two others, *Pseudohedya* Falkovitch and *Saliciphaga* Falkovitch, I assign to the Neopotamia. All these do not occur in South Asia.

Oku (1963) published a new genus, *Alloendothenia*, from Japan. This is closely allied to, or perhaps a subgenus of, *Endothenia* and is assigned to the Endotheniae.

A taxon of Palaearctic distribution is defined in the present paper, viz. *Stictea* Guenée, which is separated from *Olethreutes* Hübner.

Finally a Nearctic subgenus *Neothenia* is described below, separated from the nominate subgenus *Endothenia* Stephens, stat. nov.

#### THE MATERIAL USED

The disappointing aspect of the present study lies in the paucity of the material.\* Instead of the urgently needed series of specimens, usually only a few were available.

\*) "One of the principal difficulties encountered by workers in tropical Microlepidoptera is the few specimens available for study" (W. D. Duckworth, Smithsonian Contrib. Zool., nr. 106, p. 1, 1971).

It was fortunate to find sex partners both having intact abdomens; often the available material consisted of one sex or the abdomens were missing.

An unfortunate peculiarity of dried material of small Lepidoptera is that their abdomens are lost so easily; especially in the males the connection between thorax and abdomen is so delicate that it often breaks with the slightest touch or shock. And since the greater part of the material — originating from the largest collections concerned: the British Museum (Natural History), London, and the Leiden Museum — was collected at the end of last century and had remained unworked, it is no wonder that after so many years the specimens have become brittle and many abdomens were missing. The greater part of my own collection, brought together in Java by my friend A. M. R. Wegner and myself, has survived the World War II in the Buitenzorg Museum, but several specimens have lost their abdomens owing to insect damage.

The limited amount of material has influenced this revision. It had to be purely taxonomic, the available data on the biology being very scanty.

Dr. L. G. E. Kalshoven was one of the few collectors, who reared *Olethreutini* from larvae; the food plants usually are indicated on the labels by their native (Javanese or Sundanese) names; as there is no standardization whatever of these names throughout Indonesian dialects, the identifications are somewhat doubtful. Therefore the native plant name in quotation marks is followed by an interrogation mark and the surmised Latin name, in parentheses. The standard work of Heine, 2nd edition (1927) has been used.

The sketches of neuration have been drawn as thoroughly as possible with the use of a camera lucida, as the exact position and shape of the veins in my opinion are of considerable importance for the characterization of a genus. It is its physiognomy, so to say, and should, therefore, always accompany the original description. Slight specific variation of neuration does not affect this point. The sketches of heads have been made out of free hand, being of somewhat less importance.

However, as is already said, the external characters of the genera of the *Olethreutini* are rather uniform, generally speaking. This pertains especially to the wing venation. Notwithstanding, I have figured, for the sake of completeness, the neuration of the type-species of every new genus and also of every genus belonging to the South Asiatic fauna. Neuration of the Palaeartic genera is figured more incidentally: in a few cases I have abstained from this time-consuming task, because the neuration of the Palaeartic genera is sufficiently well known already anyhow, having been figured earlier by various workers. Many Palaeartic genera have been figured though, often because the hind wing is aberrant, or simply, because, a figure was available to me.

Keys to genera and species are included and every species known is treated briefly. Only *Bactra* Stephens, and *Lobesia* Stephens, extensively revised earlier, are now dealt with less elaborately.

For the convenience of the reader a list of the species of *Argyroproce* sensu Meyrick, etc., with the new assignments, is presented on p. 525.

This paper contains records of 12 subtribes, 94 genera, 17 subgenera, 430 species,

14 subspecies and 2 formae, of which 11 tribes, 39 genera, 3 subgenera, 176 species and 7 subspecies are described as new.

#### SUPPLEMENTARY TYPE, APOTYPE, AND APALLOTYPE

When describing new species I have defined both sexes and their genitalia (when available!) and designated a holotype (preferably, a male), besides which, if possible, a female allotype. This practice proved to be useful, because the female genital characters in Lepidoptera very often are of no less taxonomic importance than those of the male. And so long these characters firmly rule the taxonomy of Lepidoptera, I see no reason for doing otherwise. On the other hand, legally speaking, an allotype has no more official status in the Rules of Zoological Nomenclature than that of a paratype; therefore, by using it for convenience's sake (as the bearer of the supplementary description), no harm whatever is done.

Allotypes described after the original publication of a species have been termed "neallotype". However, this term is argued to be confusing, as it may also mean a new allotype selected to replace a lost original allotype. It seems to me that a similar confusion easily can be prevented by giving an explanation of the used term at the start. A still better term would be supplementary type, or apotype; this, however, is a composite term, indicating a series of specimens (Schuchert & Buckman, 1905). In order to avoid any confusion and also to indicate that my supplementary type always is of the opposite sex, I propose the term apallotype, which may be diagnosed as follows.

Apallotype is the supplementary type of the opposite sex, upon which an additional subsequent description is based; the author, the locality, or the series of apallotype may be either original or not.

To stress the difference of supplementary types from the primary type categories (holotype, lectotype, neotype), they often are indicated as "typoids", but this term is decidedly not melodious. As to the often used term "paratypoid", it implies repetition, is therefore a monstrosity and should be avoided.

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## SYSTEMATICAL SECTION

### Tribus *Olethreutini* Obraztsov, 1946

*Olethreutini* Obraztsov, 1946: 23. — Hannemann, 1961: 180. — Bentinck & Diakonoff, 1968: 152.

A large natural group of Tortricidae usually with broad and truncate fore wings and subtrapezoidal or semioval hind wings, as a rule slightly broader than the fore wings.

Head usually thickly scaled with broad subappressed scales sometimes forming a short transverse tuft above forehead. Antenna  $2/3$  or  $3/4$ , simple, or diversely ciliated, in male usually longer ciliated than in female; flagellum sometimes slightly thickened in male, scape simple. Labial palpus usually porrect, sometimes ascending, moderate to moderately long, more or less sinuate, diversely scaled, basal segment short and simple, median segment of diverse length, sometimes dilated or expanded posteriorly with roughish scales along edge, and then appearing triangular in lateral aspect, terminal segment short, subobtusate or truncate, sometimes concealed in scales of median; palpus in female longer than in male. Maxillary palpi vestigial, usually hardly traceable. Proboscis diversely developed, sometimes vestigial or absent. Ocellus posterior. Thorax sometimes with a single or double posterior crest.

Posterior tibia in male sometimes forming together with the dorsal edge and cilia of the hind wing a complex scent organ, as described in the introduction. Sometimes this organ formed by paired scent pouches at the basal sternite or a single pouch on the third sternite, or by long pencils of hairs implanted upon more or less developed lateral prominences on abdominal segments; sometimes the sexual dimorphy manifest by dark androconial spots in disc of fore wing underside, or of hind wing upper or underside.

Fore wing broad, subtriangular or oval-truncate, seldom narrow; without a costal fold; with 12 veins of which 7 and 8, seldom 8 and 9 may be stalked; all other veins separate. A chorda of diverse position and a median branch, ending between the origins of veins 4 and 5, rarely to origin of 4 or of 5, usually present, seldom absent. Veins 3-5 diversely grouped at origin and sometimes approximated at termen. Vein 2 originating from  $2/3$ - $3/4$  of cell; 1b furcate at base.

The fore wing is very diversely marked, but usually the following elements may be discriminated, as a rule, darker upon a lighter ground colour. A basal patch, a median transverse fascia and an apical or subapical patch, sometimes modified into a clavate terminal patch and an ocelloid patch in tornus, pale, dark dotted and with metallic edges. Sometimes there are metallic transverse lines from costa posteriorly and almost always a number of double pale transverse costal marks.

Hind wing with a frenulum and with eight veins, seldom seven, when 3 and 4 are coincident; invariably with a diversely developed pecten of hairs along the base of

lower edge of cell (cubitus). Vein 2 variably situated, from before  $1/2$  to  $3/4$  of cell, vein 3 from angle of cell, separate or connate from 4, exceptionally very short-stalked with 4; seldom 3 from before angle; 5 curved at base and approximated, 6 and 7 closely approximated towards base, seldom stalked (*Bactra* group). Anal veins often weak, 1b furcate at base, 1c reduced and only represented by a slight fold.

The male genitalia are characterized, as a rule, by a slender and high tegumen with a hooked uncus, diversely developed hairy socii and a more or less developed gnathos, seldom sclerotized, usually shaped as a submembraneous transverse band with a median connection with the anellus (henion), which forms two rods below, embracing the aedeagus. Valva usually oblong and narrow, sacculus with a large basal opening, a basal process instead of transtilla and one, two, three, or more diversely developed spine clusters ( $Spc_1$ ,  $Spc_2$  and  $Spc_3$ ), sometimes implanted upon elevated processes or beside those (harpe); a primary excision sometimes present; cucullus bristles forming, as a rule, a discernible thick patch at base of cucullus edge, which sometimes has a basal process. Aedeagus diversely shaped, without coecum penis, often sitting in a cup (anellus) upon a stalk (caulis). Cornuti sometimes present, diverse numbers of moderate spines.

The female genitalia have voluminous, hairy, semioval lobi anales, each with a short postapophyse. Sterigma usually well developed, diversely shaped, aciculate. Ostium funnel-shaped. Colliculum rod-like, sclerotized and bivalval, of diverse length. Ductus bursae moderate, corpus bursae usually pear-shaped, signa of some seven distinct types, one or two, seldom equal, sometimes absent.

The egg is of the usual tortricoid shape, more or less flattened-oval, deposited singly or in groups, upon or within the plant.

The larva is tortricoid, spindle-shaped, white, sometimes coloured pale green or pink, grey or brownish. It lives in a light web upon the plant, between spun leaves or within the plant, in stems, shoots, roots, pods or fruits, sometimes mining leaves, during the early instars sometimes living in galls or causing these.

The chaetotaxy is that of the general tortricoid type. Thoracal segment 1 with setae  $L1-3$  present. Setae  $L1$  and  $L2$  with pinnacula always touching on abdominal segments 1-8; the seta  $SV3$  usually absent on abdominal segments 8 and 9; seta  $D1$  of segment 9 equidistant from  $D2$  and  $SD1$  but situated not in one line. Crochets uniserial, circular or oval.

Although larval characters are important taxonomic means for separating species and sometimes genera, they are less useful for dividing higher taxa. So it is not possible at present to point out reliable characters which would separate the larvae of subfamilies Tortricinae and Olethreutinae.

According to Swatschek (1958), however, it is feasible to separate three tribes of the Palaearctic Olethreutinae with the use of larval characters. Especially the present tribe, Olethreutini, is considerably different from the other two, as follows.

The setae  $D1$  and  $SD1$  (Swatschek's setae I and III) of the 9th abdominal segment

are upon separate pinnacula; if they are upon a joint pinnaculum, then the setae L1 and L2 (Swatschek's IV and V) of this segment are of about the same length, or the sutura coronalis of the head capsule is considerably longer than the adfrontals are broad at the tip of the clypeus.

In how far this also applies to the South Asiatic Olethreutini, I am, unfortunately, not able to decide. The larval characters in general have been studied not at all sufficiently so far. Those of the tropical species have been hardly studied at all.

The pupa has a spined abdomen, encased in pupal shelter, and protruding partly out of it during ecdysis; cremaster of hooked spines present.

#### Key to the subtribes of the Olethreutini

It should be kept in mind that this key is tentative, because at our present state of knowledge, with several genera being represented by the male sex only, it is not well possible to provide an in all respects trustworthy key.

Although most of the proposed subtribes manifest themselves as natural units, no clear-cut diagnoses are yet possible and one is cast upon comparison of total sums of characters of the subtribes available.

1. Signa double, seldom single, pectinate or derivations of this type; male genitalia diversely shaped, but mostly with a distinct hooked uncus and developed socii; if uncus absent then socii very large, rigid and pending; or naked and porrect; or tegumen broadly conical and socii parietal and extended . . . **Statherotides**
- Signa double, single or absent, not distinctly derived from pectinate type, but scobinate, cornute or stellate . . . . . 2
2. Signa double, unusually large, mostly unequal, of diverse shape, often having strongly extended fragmentary basal plates; males with complicated valvae, mostly with a large harpe or labis towards costal edge . . . . . **Neopotamiae**
- Signa double, single or absent, not thus hypertrophied . . . . . 3
3. Signum single or absent, basket-shaped. Uncus either present, hooked, beset along edge with downwards directed spines or uncus absent; valva either curved, with a thorny subbasal harpe or short, diversely shaped with clusters of spines; hind wings with veins 6 and 7 usually stalked . . . . . 4
- Signa double, single or absent, not basket-shaped . . . . . 5
4. Signum single, valva curved, with a thorny subbasal harpe; scent organs usually present, dorso-tibial or parts of these; usually moderate species . . . **Endotheniae**
- Signum single or absent; valva diversely shaped, often with a separate valvula; scent organs invariably absent; usually small species with pointed fore wings . . . . . **Bactrae**
5. Signum usually absent. Valva slender, with spine clusters, with two, one or no excision, uncus absent, gnathos often well developed, with rising lateral horns; fore wing in two sexes usually with veins 9-10 distant at base, approximated to-

- wards margin; pterostigma sometimes present; males often with strongly modified hind wing and reduced neuration, often with paired scent pouches upon first ventrite . . . . . **Lobesia**
- These characters not so combined or absent . . . . . 6
6. Valvae strongly asymmetrical, or only clusters of bristles asymmetrical . . . . . 7
- Valvae symmetrical . . . . . 8
7. Valvae strongly asymmetrical, with much extended unequal rounded or clavate harpes and groups of bristles; usually either a scent pouch on the 3rd ventrite or scent organ dorso-tibial; signum one, cornute, often with more than one central horns, or signum absent . . . . . **Gatesclarkeanae**
- Socii large. Valva strongly constricted, eucosmine, with asymmetrical clusters of spines and bristles; sometimes subscaphium present with two rigid processes; signum single, cornute and large . . . . . **Gnathocerodides**
8. Uncus present . . . . . 9
- Uncus absent . . . . . 10
9. Tegumen slender and high, narrowed; genitalia generally elongate, valva with strong, unequal spines or with clusters of bristles, Spc<sub>3</sub> often present; signa double, moderate or small, cornute, with round basal plates . . . . . **Olethreutae**
- Tegumen broad and rather short; valva evenly and densely spined or bristled; uncus long and very slender, bent downwards, or a broad, sometimes emarginate flap; if uncus short and acutely pointed then two pairs of socii. . . . . **Sycacanthae** (partim)
10. Valva with a group of large, geniculate spines on the outer margin of sacculus; signa double, serrate horns . . . . . **Rhodocosmariae**
- Valva without such spines . . . . . 11
11. More or less greenish-tinged species, almost invariably with a rounded sub-terminal spot; scent organ dorso-tibial, often also with long hair-pencils along sides of abdomen; socii pending, long, rigid; signa, double or single, small scobinations, or signa absent . . . . . **Sorolophae**
- Not thus . . . . . 12
12. Valva strongly clavate or oval, with large harpes or a long pencil of bristles; gnathos strong, diversely shaped; socii large, a single pair; signum, stellate **Zomariae**
- Valva narrowed or parallel-sided, long, slender; gnathos vestigial; socii mostly two pairs, equal or unequal; signa double, single or absent: small, scobinate or cornute . . . . . **Sycacanthae** (partim)

## I. SUBTRIBUS GATESCLARKEANAE NOV.

Signa one or two, of scobinate-cornute type or scobinate only, often centrally with several small cornute spines.

Scent organ, when present, of two different types,

- (1) formed by diversely developed scent pouches of the venter of the abdomen together with diversely developed hairing of the posterior tibia; pencil of tibia and dorsal roll invariably absent, or
- (2) scent organ shaped as a diversely developed slight dorsal roll and a small pencil at the base of the tibia above.

To the first type belongs a single highly specialized genus, especially characteristic by the asymmetry of the male genitalia, otherwise with plesiomorphic features resembling Eucosmini. Uncus weak and hairy. Gnathos absent. Socii well-developed. Sterigma aciculate, asymmetrical.

To the second type may be assigned another genus, with somewhat less bizarre male genitalia which are also asymmetrical, but not so anomalously reduced as in the former group. Uncus and gnathos absent, socii developed. Sacculus with apomorphic, asymmetrical excrescences.

### Key to the genera of the subtribus Gatesclarkeanae

1. Males with posterior tibia usually strongly dilated with rough scales; abdomen usually with scent pouch on the 3rd sternite. Only costal part of cucullus forming excrescences (labides); only right valva with  $\text{Sp}_3$  . . . . . *Gatesclarkeana*
- Males with posterior tibia normal; abdomen without scent pouch. Cucullus with large excrescences at the costal as well as at the ventral edge; both right and left valvae with a pedunculate  $\text{Sp}_3$ . . . . . *Asymmetrarcha*

### *Gatesclarkeana* Diakonoff, 1966

*Gatesclarkeana* Diakonoff, 1966: 48, figs. 28, 30, 32. — Diakonoff, 1968: 40, 41, 321 (figs. 58-62), 322 (figs. 63-64), 419 (figs. 521-522).

Type-species, *Platyephus erotias* Meyrick, 1905 (India), by original designation.

This remarkable genus is characterized chiefly by the peculiar, asymmetrical genitalia of the male and by the development of male scent pouches of the 3rd abdominal sternite. Usually the second sternite is lengthened while the third and probably the fourth sternites actually form the scent organ. The third sternite is extended transversely and forms a covered pouch on each side, with a narrow longitudinal, median fold in between, densely filled with large modified scent scales. Externally the ex-

tended third sternite appears as a smooth shield-like semicircular prominence, usually whitish or silvery, sometimes extending laterally beyond the sides of the abdomen. The scent organ is specifically of diverse development; in some species it is vestigial or entirely absent.

The posterior tibia is dilated with roughish bristly scales above and beneath, especially beneath, and flattened laterally, but sometimes it is normally scaled; the pencil is invariably absent.

The pattern of the fore wings is rather constant; dark markings form a moderate basal patch, a rather regular but not quite continuous transverse fascia, a slender, characteristic oblique terminal streak (from below  $3/4$  of costa to termen above middle) and a dot in the apex. Besides there are often metallic spots; smaller and rounded, scattered over dark markings and larger, fasciate, finely black-edged metallic marks, arranged between markings as follows: a streak halfway the basal patch and the transverse fascia, another vertical, between preterminal patch and tornus, and a third streak, edging the preterminal streak from above, with 4-5 additional metallic dots above it. Often the ground colour, at least along costa, is pink.

The material at my disposal is not too extensive and not always in good condition. Still the characters of the genitalia and of the abdomen are so distinct that the following species can be discriminated without a too great difficulty. Superficially they look very similar.

The male genitalia are double-folded across the base of the tegumen, the tegumen half pressed down upon the valvae and the whole rather compressed dorsoventrally. The tegumen is triangular, the uncus is a weak and hairy oval pad, very much resembling a joined pair of female lobi anales; its size is specifically diverse. The socii are large and diversely bristled. The gnathos is absent. The vinculum is strongly reduced which contributes to the anomalous development of the valvae and gives a laspeyresiine appearance to their attachment. The valvae are remarkable, being distinctly divided in a sacculus and a cucullus portion. The right sacculus is large, usually semioval or semicircular, thickened and sclerotized along its lower (external) half, and bears a "valvula" or harpe, a crooked process at the middle of its basal edge; this harpe is diversely shaped, with the posterior half of its internal surface beset with strong spines; the right cucullus portion is constricted at the base, thence abruptly bent downwards, at a sharp angle to the length of the sacculus; it is oblong-oval, more or less pointed and appears to be folded lengthwise in two; at the base of the lower half of the cucullus a sheaf of very long bristles is attached which runs between the two halves and projects beyond the apex of the cucullus. The left sacculus is small, diversely shaped, with an also smaller harpe which is broader and more rounded and has a larger area of spines on the inside. The left cucullus is single, elongate-oval and smaller than the right one. The aedeagus is sitting upon a long and slender caulis and has a bulbous base; cornuti are represented by a longitudinal rod-like sclerite, diversely dentate along its side.

The female genitalia possess a characteristic sterigma which is sclerotized and

formed of an inner sheet (lamella postvaginalis), abruptly folded double at the lower end and becoming a diversely shaped elongate, aciculate and erected lamella ante-vaginalis, with a long tubular ostium and colliculum soldered to its inner side and shifted to the right. Signa often two, a larger scobination and a minute rounded one; the latter apparently becomes obliterate in some species.

The genus forms an extremely characteristic group of closely allied species, occurring throughout South Asia, from India to the Philippines and from Java to New Guinea, and the Bismarck Islands to South China.

### Key to the species of *Gatesclarkeana*

#### Males

1. With a well-developed abdominal scent organ . . . . . 2
- With the venter of the abdomen normal, without scent pouches. . . . . 3
2. Abdominal pouches large, glossy white, strongly keeled in the middle, with a median separation bearing large and glossy, oval modified scales; posterior tibia with dense fuscous-grey hairs; dorsum of hind wing in male with leaden-grey modified scales and a small prominent lobe . . . . . *idia* and *erotias*
- Abdominal pouches moderate, dull opalescent grey, flattened, mesially broadly excised; posterior tibia with a moderate light fuscous hair-brush; dorsum of hind wing light fuscous-ochreous . . . . . *domestica*
- Abdominal pouches small; posterior tibia smooth outside, moderately dilated by appressed scales beneath, less so above, dorsum of hind wing without a lobe, with a slight marginal roll . . . . . *moderatrix*
3. A large dark species with leaden-metallic glossy markings. Socii broad, densely long-haired. Cornutus smooth, band-like. . . . . *pachnodes*
- A smaller species, lighter, densely marbled with fuscous-brown, upon a pale ochreous ground colour, only partially pinkish. Socii elongate, thinly haired. Cornutus with dentations . . . . . *senior*

#### Females

1. Fore wing peculiarly shaped, with notched apex . . . . . *confracta*
- Fore wing normal . . . . . 2
2. Ground colour of dark brownish-purple or fuscous, or fore wing bright crimson . 3
- Ground colour pale ochreous, markings brownish; if pinkish then only along costal edge . . . . . 4
3. Terminal fourth of wing pale pink, dark markings reduced to a sinuate small streak resting on middle of termen; sterigma, a long, slender tube. . . . *eothina*
- Terminal fourth of wing bright crimson, obscured by dense purplish-brown or dark brown marbling; sterigma, a slightly sinuate plate, dilated above, of diverse width . . . . . 5



4. Sterigma dilated, top rounded, with an additional lobe at the right side, upper edge with a rounded prominence . . . . . *erotias*  
 — Sterigma as above, but without an additional lobe, upper edge at the right side extended in a slender process. . . . . *idia*  
 — Sterigma strongly sinuate and curved to the right . . . . . *batianensis*
5. Fore wing dark, with numerous glossy silvery-leadened metallic spots; hind wing black with ochreous cilia; sterigma short and broad, with longitudinal corrugations . . . . . *pachnodes*  
 — Fore wing lighter, with a dense fuscous-brown marbling; cilia of hind wing grey 6
6. Larger (15-18 mm), terminal fourth rather densely marbled with darker, obscuring the terminal mark which is irregular, almost z-shaped. Sterigma as in *erotias* . . . . . *senior*  
 — Smaller (12-14 mm), terminal fourth paler than other parts, pale ochreous, with a usually well-defined terminal mark which is rather straight, oblique, dark brown  
*domestica*

**Gatesclarkeana idia spec. nov.**

(figs. 2, 11, 14, 16)

♂ 13-15 mm, ♀ 12.5-16 mm. Head and palpus pinkish-fulvous, median segment of palpus with a black obliquely-transverse median strigula, not reaching lower edge. Thorax fuscous, anterior third and apical tuft cinnamon-brown, scales with yellow tips, a brown antemedian transverse line; tegula fulvous-orange, shoulder and collar pink, a median purple transverse mark. Abdomen opalescent slaty-grey, paler towards base, dark grey in certain lights; venter with anterior half glossy white, scent organ prominent, with strong gloss, mesially suffused with black, posterior half of venter dull light fuscous. Posterior femur and tibia with dense brushes of light fuscous long hair-scales, on tibia very long and forming a flat fan appressed to venter and concealing scent organ.

Fore wing triangular-suboval, broad, costa curved throughout, more so anteriorly, apex short-rounded, termen long, gently convex, rounded below. Pale ochreous-tawny with a strong pink tinge, deeper along costa. Markings narrow, irregular and complicated, dull dark fuscous; spaces between them partly filled out with dark leaden-grey with a metallic gloss, partly with broad edges of ground colour. Basal patch to 1/4, its edge indicated by a strongly rounded series of four quadrate dots, narrowly interconnected, third of these transversely extended basad and crossing fold; transverse fascia with a larger quadrate spot on costa just before middle, below with a horizontal streak posteriorly; two more horizontal narrow streaks, in middle of disc and halfway towards dorsum, respectively, their both extremities linear and turned up and also narrowly extended down; some irregular marbling along middle of fascia between these lines; sometimes narrow vertical lines more or less interconnected, so as to form an incomplete transverse line, being posterior edge of transverse

fascia; an oblique, somewhat irregular terminal fascia, almost resting on termen just above middle; a couple of oblique lines on tornus and some more before apex. Cilia pinkish, suffusedly and irregularly barred and clouded with purple, basal third crimson, regularly barred with purple.

Hind wing fuscous-grey, in certain lights with a purple-coppery gloss, becoming paler and thinner scaled towards base, in male dorsum with dense short glossy silvery-grey scales, longer and forming a prominence in tornus; in female dorsum normal.

Male genitalia with uncus rather broad, rounded. Socius moderate, about twice as long as uncus, thinly bristled, socii less bristled at bases which form a large folded structure. Right sacculus gradually and broadly rounded, right harpe long, spiny point long, curved; left sacculus oval, left harpe with spiny part broad and rounded. Aedeagus with 1 to 4 or 5 large thorns in middle of left edge.

The male abdomen has ventral scent pouches, the third sternite being swollen and covered with numerous transverse folds which probably allow strong expansion of this sternite; its posterior edge projects slightly over the fourth sternite and conceals a large cavity opening caudad and lined with dense large glossy scales; in the middle the sternite has a transverse slit of which the edges especially are densely adorned with said modified scent scales. The fourth sternite is less modified and only has oblique lateral folds, narrowing mesially, their slightly curved points not reaching the middle of the segment; their surface is also finely wrinkled and probably similarly expansile. Finally the fifth sternite has an oval modified area along the posterior edge, not reaching the sides of the sternite, with semicircular wrinkles at the sides and punctuated median tumescence in the shape of a letter X.

Female genitalia with lamella antevaginalis long, obliquely rising and asymmetrical, dilated towards top which has a small process at the right side; the lamella postvaginalis of a variable degree of sclerotization. Signum an inequally scobinate and dentate concave plate, with usually a second signum, shaped as a small round scobination, sometimes absent. Seventh sternite small, oval-trapezoidal.

West Java, Mt. Salak, 28.v.1925 (L. G. E. Kalshoven), 1♀, genit. slide 5966. Sindanglaja, 1400 m, e l. tea leaves and flowers (*Thea*), ii, vii, x, xi. 1935, 1936 (P. van der Goot, R. Awibowo), genit. slides 4549 ♂; allotype ♀: 7399; 7400 ♂, 7408 ♂, 7410A; e l. leaves of *Citrus*, holotype ♂, genit. slide 2574 ♂. Tjiapoos, 600 m, 27.viii, e l., "Pomona", 1 ♂. Tapos, 600-700 m, vii.1941 (L. G. E. Kalshoven) e l. leaves and flowers of *Aleurites*, 1 ♂. Buitenzorg (= Bogor), 250 m, e l. pistil of *Durio*, x.1943, 1 ♂ (R. Awibowo). e l. leaves *Ricinus*, 1921 (W. C. van Heurn), 1 ♂, e l. leaves of *Perilla* (C. Franssen), 1 ♂, e l. flower *Eugenia*, 17.viii.1942 (M. Soediro), 1 ♂, 4 ♀. Pasar Minggoe, 50 m, e l. *Citrus* flowers, ii.1941 (C. Franssen), 2 ♂, 6 ♀. Tjiomas, 300 m, e l. leaves *Nephelium*, 16-19.ix.1935 (P. van der Goot), 3 ♂. Central Java, Telawa, 40 m, teak forest, e l. fruits "temblehan" (? *Lantana*), ii, iii, viii.1934, 1938 (L. G. E. Kalshoven), 6 ♂, 2 ♀. East Java, Tengger Mts., Kletak Pass, 2000 m, at light, 29.v.1941 (A. M. R. Wegner), 1 ♂. (All LM).

West Bali, Prapatagoeng, 300 m, v.1935 (J. P. A. Kalis), 1 ♂, genit. slide 5836 (BM).

West Sumatra, Fort de Kock, 920 m, 1925 (E. Jacobson), 2 ♂, genit. slide 7410 (LM).

East Borneo, 125 m, Tabang, Bengen River, 29.viii.1956 (A. M. R. Wegner), 1 ♂, genit. slide 7405 (LM).

Moluccan Is., Buru, 1921, Buru Expedition, Station 1, vii (L. J. Toxopeus), 1 ♀, genit. slide 7409. Northwest Obi, Anggai, 0-50 m, x.1953 (A. M. R. Wegner), 1 ♂, genit. slide 5961 (LM).

Talau Id., 1892 (Doherty), 1 ♂, genit. slide 8026 (Walsingham Coll. 41448, BM).

South China, Canton, e l. leaves *Averrhoa carambola*, 8.x.1957 (Sin-King-Liu), 1 ♂, genit. slide 2573 (LM).

### *Gatesclarkeana erotias* (Meyrick, 1905)

(figs. 3, 28)

*Platyepplus erotias* Meyrick, 1905: 585 (Ceylon, ♂♀). — Clarke, 1955: 132.

*Argyroploce erotias*; Meyrick, 1911a: 269 (Kei Is., Timor). — Fletcher, 1921: 59 (biology). — 1932: 29. — Diakonoff, 1966: 16, figs. 28, 30, 32.

*Olethreutes erotias*; Clarke, 1958: 507, pl. 252 figs. 4-4b (lectotype select., genit. illustr.).

*Gatesclarkeana erotias*; Diakonoff, 1966: 50. — 1968: 42, 321 (fig. 58, recte 60, fig. 59, genit. ♂ illustr.), 322 (figs. 63-64, neuration, head illustr.). — 1971: 200 (S. Thailand).

Distribution. Ceylon. India: Coorg, Bangalore, Sikkim. Key Is., Timor, Thailand.

The study of the genitalia of the two sexes revealed that the topotypical material of *G. erotias* is distinct from the material of the Sunda Islands, available to me, and named by Meyrick as *erotias*. Superficially the species are exactly similar but minor differences of the male genitalia and especially the female sterigma are constant and different from the species, described above under the name *Gatesclarkeana idia* spec. nov.

Male genitalia. Uncus small, compact, semioval, formed of two dorsal short lobes and two lobe-like ventral, smaller tumescences (in *idia* socii much broader); upper ends of socii broader than uncus. Right labis moderately long, curved: concave above, convex beneath (in *idia* longer, less or hardly curved). Aedeagus without a spine or spines at the left side.

Female genitalia. Sterigma broader than in *idia*, more delated, and gently curved to the left side, with an additional fold at the right side and the rounded and naked lobe at the right side of the upper edge of lamella antevaginalis, obtusely rounded and short.

Ceylon, Hambantota, sea level, 189.. (Pole), 1 ♀, genit. slide 7782; Maskeliya, x.189.. (Pole), 1 ♀, genit. slide 7783; iv.189.. (Pole), 1 ♀. Bogawantalawa, iv.189.. (Pole), 1 ♂, genit. slide 8029 (BM).

The lectotype, ♂, genit. slide 7291, is in the British Museum.

**Gatesclarkeana batianensis** spec. nov.

(fig. 20)

♀ 14 mm. Exactly similar to *G. erotias* Meyrick, but at once recognizable by the sterigma which has the shape of that in *G. idia*, but is gradually and considerably curved to the right, its left side being convex; in the last mentioned species the sterigma is straight, while in *erotias* its lower half is moderately turned to the left, the right side being convex, consequently.

No males are available.

Moluccan Is., Northern Batian Id. (= Batjan Id.), vi-vii, 1953, 0 m (A. M. R. Wegner), 1 ♀, holotype, genit. slide 7406 (LM). Batian Id., viii, 1897 (Doherty), 1 ♀, paratype, genit. slide 7780 (BM).

**Gatesclarkeana moderatrix** spec. nov.

(fig. 37)

♂ 16 mm. In all respects very similar to *G. erotias* (Meyrick) and differing only as follows. Fore wing with costa more curved throughout, dorsum rather straight (in *erotias* mostly more sinuate). Terminal fascia rather reduced to a series of irregular, interconnected spots, with a linear stalk to middle of dorsum.

Hind wing slightly paler fuscous-grey, dorsum in male normally rounded, tornus simple (without the small projecting lobe with modified scales, as in *erotias*), dorsum along basal half with a small closed roll. Cilia normal.

Posterior tibia glossy grey, outwardly smoothly short-scaled, moderately dilated by loosely appressed scales above and especially beneath (but less dense and long than in *erotias*).

Male genitalia. Tegumen triangular, strongly narrowed. Uncus rather small, bilobed, on the very top of the tegumen. Socii long and rather narrow, meeting along upper half, thence diverging. Valvae resembling those of *G. erotias* closely, but left cucullus shorter and more rounded, left sacculus with a triangular moderate patch of spines, narrowed posteriorly; right cucullus as in *erotias*, right sacculus somewhat smaller, labis transversely oval, its base projecting upwards (in mount). Aedeagus sclerotized, with a moderate rounded base (smaller than in *erotias* or *domestica*) and a single long strong spine in middle of left side with a couple of minute teeth at its base.

The male venter has the usual scent pouches but these are small and reduced: a pair of moderate, touching folds on second sternite, small triangular not touching tumescences on the third and a single semicircular fold or pouch on the fourth sternite.

Celebes, Bontain, 3000-6000 ft, 1896 (Doherty), 1 ♂, holotype, genit. slide 7792, 1 ♂, paratype (BM). Superficially entirely similar to *erotias* but easily recognized by the normal tornus and only moderately hairy posterior tibia in the male. No females

are available to me, but I expect them to have a differently shaped sterigma, although superficially they might be completely similar to *erotias* females.

***Gatesclarkeana domestica* spec. nov.**

(figs. 12-13, 15, 22)

♂ 12-14 mm. Head fuscous. Palpus fuscous with a slight purplish gloss, with a subbasal, a supramedian and a subapical oblique purple transverse streak, basal segment and base of median pale ochreous-yellowish, terminal segment purple. Thorax light fuscous-tawny slightly dusted with darker; an anterior purplish-fuscous dark band; tegula and apical tuft tinged orange-tawny, tipped (tegula) or mixed (apex) with dark fuscous, tips of scales lighter. Abdomen slaty grey with some opalescence in male, dull brown in female. Posterior tibia in male fuscous-grey (paler than in *erotias*), with a moderate brush of loose scales along basal half of upper edge, lower edge throughout with a fan of loose scales.

Fore wing oblong-subtruncate, costa moderately curved throughout, apex rounded, termen gently convex, moderately oblique. Dull fuscous-tawny, densely marbled with brighter ochreous-tawny and darker fuscous and strewn with a few small purplish-grey slightly glossy scales. Costa paler ochreous, anterior fourth with three small and one large dark fuscous dots, followed by a fifth, distant dot; basal patch to 1/3, rather mixed with purplish-grey, edge angulate, narrowly fuscous-purple, preceded in the middle by irregular purple black strigulae; transverse fascia broad but ill-defined, below costa almost confluent with basal patch, on costa with two marginal and a small median purple-brown marks, anterior extended below so as to form an oblique, curved wedge-shaped mark, crossing fascia; a white well-defined elongate dot in centre of fascia and a patch of dark grey raised scales just above fold on anterior edge; beside these marks lower part of fascia indicated only by darker fuscous suffusion and some blackish-purple irregular transverse and marginal strigulae; a pale ochreous suffused spot on 2/3 of costa, adjacent to transverse fascia; wing beyond fascia usually paler, with a very oblique preterminal streak and a few strigulae below and above and parallel to this streak, upper strigula preapical. Cilia grey, becoming pale grey towards tornus, irregularly barred with dark fuscous, basal third deep brown, regularly fuscous-barred, throughout with a broad whitish-ochreous basal line.

Hind wing evenly fuscous-grey, slightly opalescent, dorsum with dense and long paler grey hair-scales, very dense and darker grey and forming a prominence on tornus. Cilia fuscous, with a darker antemedian fascia and a pale basal line.

♀ 12-14 mm. Similar to the male and differing only thus: ground colour slightly paler, making the division between the basal patch and the transverse fascia on costa more distinct; wedge-shaped costal spot more distinct; apical fourth of wing paler, preterminal streak broader and more suffused; white central dot extended into a short horizontal strigula; pale spot on 2/3 of costa extended and more conspicuous.

Hind wing rather light fuscous with a paler base and a whitish dorsum and dorsal cilia. Cilia elsewhere evenly fuscous with a pale basal line.

The rather variable species possesses also a melanistic form which may be described as follows.

Head and palpus grey-fuscous, sprinkled with whitish (tips of scales whitish), palpus with basal and underside of base of median segment yellowish-white; sometimes palpus and shoulder with a strong pale pink iridescence in certain lights. Thorax light fuscous strewn with darker, with an anterior brown-fuscous darker band and ante-median transverse line of the same colour; apical tuft mixed with dark fuscous. Abdomen iridescent slaty-grey in male, dull brown in female. Posterior tibia light fuscous, dilated by a moderate tuft of loose hair-scales along basal  $2/3$  of upper side and a broader fan throughout along under side.

Fore wing oblong, suboval-truncate, costa moderately curved throughout, apex rounded, termen gently convex. Rather dark fuscous-brown, for the greater part covered with leaden-grey spots with a slight metallic gloss (which colour disappears almost entirely in rubbed specimens). Basal patch to  $1/3$ , edge formed by a sharply angulate and rather irregular blackish edge, obliterate on dorsum, preceded by some irregular zigzag strigulae and dots; transverse fascia formed by a curved-wedge-shaped mark on middle of costa, pointed towards upper  $1/3$  of termen, tawny, blackish-edged; lower part of fascia indicated only by a few very irregular zigzagged obliquely-longitudinal and vertical marginal strigulae and a subrhomboidal dark mark on dorsum posteriorly; apical fourth of wing paler tawny-ochreous, with a conspicuous oblique preterminal small streak, fuscous-black, with suffused deep tawny edge, dilated posteriorly; a pure white dot in centre of fascia and a patch of raised dark grey scales just above fold anteriorly (easily rubbed off).

The melanistic female differs from the male by the entire basal half of wing as far as the transverse fascia being leaden-grey, with black incomplete reticulation; the pale spot at  $3/4$  of costa conspicuously white, followed by some three parallel, oblique transverse black lines from costa to termen, on costa slightly dilated, interrupted on vein 8; an oval black dot in apex. A male and a female from Gedangan, 7.viii.1931, bred from leaves of kendajaan (F. A. Th. H. Verbeek).

Male genitalia with uncus large, elongate, top pointed and emarginate, basal half of uncus dilated and rounded. Socius long and narrow, with top projecting upwards to the middle of uncus. Right sacculus somewhat less regularly rounded than in *G. erotias*, smaller; right harpe shorter, spined apical part shorter, curved, more abruptly pointed; left sacculus rectangular or pointed, small; right sacculus more oval. Aedeagus longer and more slender than in *erotias*; cornutus, a broad bar with short dentations along the upper side and slightly to the left.

Male abdomen with venter less modified than in *erotias*. The third sternite extended and with a pattern of numerous small wrinkles, with the posterior edge also extending over the fourth sternite, as in *erotias*, but this edge regularly bilobed, with a shallow median excision which is triangular and wide, not clustered with scent scales; the

fourth sternite with lateral folds or ridges similar, but shorter, the wrinkled structure of the fifth sternite also similar, but smaller.

Female genitalia characteristic, sterigma turned to the right side and exposing lamella postvaginalis (left), being a short sclerite; lamella antevaginalis erected-semi-oval, on the inside concealing the tubular colliculum. Signum single, an inequally dentate and scobinate plate.

Central Java, Semarang, teak forest, 21.vi.1931 (No. 544) "*Argyroploce erotias* Meyr., det. Meyr." "32", "boeah koetoe" (? *Bridelia*) (L. G. E. Kalshoven), holotype, ♂, genit. slide 7403; allotype, ♀, same labels except that of food plant, genit. slide 7404. All other are paratypes:

Central Java, Semarang, Telawa, Seneng, Gedangan, teak forest, iii, vi, vii, viii, ix, x, xii. 1931, 1934, 1938, e l. leaves and flowers of "temblehan" (*Cinnamomum*), "ploso" (*Butea monosperma*), "senoe" (? *Pipturus incanus*), "boeng sog" (? *Peltophorum pterocarpum*), "setjang" (? *Caesalpinia sappan*), *Erythrina* (Papilionaceae), "kendajaan" (? *Bauhinia malabarica*), "koetoe" (? *Bridelia*) (L. G. E. Kalshoven), 16 ♂, 12 ♀, genit. slides 5962 ♀, 5963 ♀, 5965 ♂, 7403 ♂, 7404 ♀, 7607 ♂, 7614 ♂.

East Java, Pasoeroean, 5 m, at light, 3.iii.1941 (A. Diakonoff), 1 ♂, genit. slide 5814; 1 ♂, 12.vi.1940, genit. slide 7462.

East Sumatra, Pangkalan Balai, Prisoners of War Camp, near Palembang, e l. *Schima noronhae* (Theaceae), 25.xi.1943 (A. Diakonoff), 1 ♂, genit. slide 7529, 1 ♂, genit. slide 7530; 8.xii.1943, 1 ♀, genit. slide 5832; 12, 15 and 23.xii.1943, 3 ♂. (All material, LM).

Very similar to *G. erotias* but differing as indicated in the key. These differences summarized are: the smaller size, the lack of pink tinge, the conspicuous dark mark on the middle of costa and the, usually, pale oblique transverse fascia starting from the light costal spot, with the well-defined dark preterminal fascia. The males are recognizable at once also by the peculiarities of the hind tibia and the underside of the abdomen.

### **Gatesclarkeana senior** Diakonoff, 1966

(figs. 1, 10, 17-19, 23-24)

*Gatesclarkeana senior* Diakonoff, 1966: 50, fig. 32 (♂, Timor, genit. illustr.).

*Gatesclarkeana asynthetes* Diakonoff, 1968: 42, 43, 301, 321 (fig. 60, recte 58, genit. ♂; figs. 61, genit. ♀, 62, ♂ abdomen), 419 (figs. 521, 522, ♂♀) (♂♀, Luzon, Negros, Palawan, Mindanao, on *Mallotus*). Syn. nov.

Distribution. Timor Id. Philippine Is.

Food plant. *Mallotus* (Papilionaceae).

A good series, reared and in rather good condition allows a more satisfactory re-description.

♂ 16-18 mm, ♀ 15-18.5 mm. Head ochreous-fuscous, with a purple tinge in certain

lights. Palpus light fuscous, tip of basal segment, a median, and an apical ring of median segment and entire terminal segment, deep purple. Posterior tibia normal, hardly dilated by roughish bristly scales above and beneath; pale fuscous-ochreous, glossy. Thorax light greyish-fuscous with purplish reflections, anterior third and shoulder dark fuscous, tegula with slight pinkish reflections, tuft at apex of thorax orange in certain lights.

Fore wing rather broad, subtruncate, moderately dilated, costa gradually curved, apex rounded, slightly produced, termen very gently sinuate above, rounded beneath. Light ochreous, except narrowly along costal edge, nowhere suffused or tinged with pink; densely obscured with dark fuscous-brown and with numerous glossy submetallic pale grey spots. Basal patch dark fuscous-brown, with glossy light grey patches; a quadrate blackish costal dot on posterior edge of patch; this edge with two short teeth, above and below middle, respectively; a narrow marginal line of ground colour separating patch from rather obscured interspace which is indistinctly parted from costa to dorsum by an interrupted blackish line; transverse fascia rather ill-defined, broad, cloudy dark fuscous-brown, not interrupted, in its upper part anteriorly containing a continuous darker fuscous-brown large patch, reaching below middle of disc; this patch is abruptly narrowed on costa and has anteriorly one short, posteriorly two very long horizontal teeth which enclose the pale central mark; this mark not paler than ground colour, longitudinal, slightly sinuate and subrhomboidal; a usually well-defined oblique streak of pale ground colour parted with black, from  $3/4$  of costa to tornus, often furcate or dilated below and filling out tornus; terminal area irregularly filled out with dark fuscous-brown and scattered with submetallic pale leaden-grey patches and dark oblique lines. Cilia dark fuscous-brown, with a pale basal line, followed by a blackish antemedian line.

Hind wing in ♂ normal, fuscous with a purplish gloss, in ♀ darker.

Male genitalia with uncus larger and broader than in *erotias*. Socius long and rather broad, finely bristled. Right sacculus less gradually curved, right harpe rather short, clavate. Left sacculus subrectangular, usually with a prominent angle, left harpe moderate. Aedeagus with dilated base, rather long and narrower; cornutus, a serrate blade-like sclerite.

Male abdomen not modified, with scent pouches, only sternite 1 + 2 moderately dilated and forming a median lobe of the posterior edge, which fits in a shallow emargination of the anterior edge of segment 3.

Female genitalia with lamella antevaginalis large, asymmetrical, rising, strongly dilated above, with a prominence on upper edge right from the tubular colliculum, or without prominence; the width of the lamella is subject to slight variation which, however, must be inside the species. Signum a large dentate scobination, with a second signum: small, round and finely scobinate. Seventh sternite large, rectangular-trapezoidal.

West Java, Sindanglaja, 1400 m, 9.x.1935, bred from tea leaves (*Thea*) (P. van der Goot), 1 ♀, genit. slide 4561. Central Java, Telawa and Gedangan, teak forest,



45 m, bred from leaves of "soetih", "sogo" (? *Peltophorum pterocarpum*), "temblekan" (? *Lantana*), 21.iii-24.v and 21.x.1934, 1935, 1938, 1940 (L. G. E. Kalshoven, P. Blijdorp) 9 ♂, 5 ♀, genit. slides 5964 ♂, 7401 ♀, 7402 ♂. Pekalongan (Van Deventer), Snellen Collection, 1 ♂. East Java, Nongkodjadjar, at light, 8.xi.1940 (A. M. R. Wegner), 1 ♀, genit. slide 4560.

Bali Id., 1896 (Doherty), 1 ♀, genit. slide 7793 (BM).

Moluccan Is., Batian Id., 1 ♀, genit. slide 7781 (BM). Halmahera, Goa Plains, 50-100 m, 9-12.ix.1951 (A. M. R. Wegner), 1 ♂, genit. slide 5818, 1 ♀, genit. slide 5960 (LM).

Described from the Philippine Is. Very similar to *G. erotias* Meyrick and more than once identified as that species by Meyrick himself. The difference lies in the normal hind tibia, the dorsum of hind wing and abdomen in the male, and in the two sexes, the pale ochreous ground colour without a pinkish tinge or reflections, except the costal edge (sometimes); and the distinct, dark-parted postmedian streak. The species usually is slightly larger than *erotias*.

In my paper of 1968, page 321, the numbers of illustrations 58 and 60 unfortunately have been confounded, while the captions are correct.

The holotype of *G. senior* is in the British Museum (Natural History), the holo- and allotypes of *G. asynthes*, in the U.S. National Museum.

### *Gatesclarkeana pachnodes* (Meyrick, 1911)

(figs. 7-9)

*Argyroploce pachnodes* Meyrick, 1911a: 266 (Solomon Is., New Guinea, ♀). — Clarke, 1955: 231. — Diakonoff, 1966: 24, figs. 28, 30.

*Gatesclarkeana pachnodes*; Diakonoff, 1966: 50.

Distribution. Solomon Is.: New Georgia, Isabel Id. New Guinea: Fergusson Id.

♂ 16 mm. Head pale ochreous-orange, mixed with dark purple appearing black, face purple. Antenna pale ochreous, scape dark purple. Palpus dark purple, basal segment and lower edge of median segment pale yellow-ochreous, median segment with a suffused pale yellow-ochreous subapical transverse band. Thorax blackish-fuscous with a paler grey-fuscous median transverse band and patagia. Posterior tibia normal; greyish-purple, articulations yellow-ringed. Abdomen pale leaden-grey, glossy.

Fore wing broad, costa curved at extremities, almost straight in middle, apex sub-obtuse, slightly prominent, termen straight, hardly concave along upper third, moderately rounded below. Pale ochreous more or less touched with pinkish, suffused with pinkish along costa; numerous, well-defined and narrowly blackish-edged pale leaden metallic spots scattered all over the wing; markings fuscous-black or purplish. Basal patch irregular, beyond 1/4, with a subcostal and a median longitudinal metallic marks. Transverse fascia broad, formed of irregular dark marbling and containing numerous metallic spots and an oval ocellus-like metallic-edged mark on posterior edge above middle; along costa this fascia deep black-purple, with two marks of

ground colour beyond middle; a straight oblique moderate streak before apex from well below costa to termen above middle; a vertical metallic large mark between this streak and tornus and several metallic spots above it; a couple of pink preapical oblique lines, each with a dark dot on costa; a suffused dark spot in apex. Cilia fuscous-grey mixed with pale pink, a dark purple basal line.

Hind wing dark fuscous-purple, costa whitish. Cilia whitish, a dark fuscous-purple subbasal band.

Male genitalia. Uncus rather narrow and attenuated, small. Socius very broad, triangularly dilated in middle, densely long-haired. Aedeagus long, base not distinctly dilated. Both valvae with triangularly pointed tops. Right sacculus moderate, short, lower angle short-rounded, lower edge rather straight (this lobe smaller, lower edge less rounded than in *erotias*); right harpe broad at base, top long and slender. Left sacculus also rather large, but smaller than right, broadly oval; left harpe smaller than in *erotias*. Aedeagus very long, moderately clavate, base not bulbate, cornuti longitudinal, fold-like, narrow sclerites without teeth.

Male abdomen normal, without scent pouches. Sternite 1 + 2 with a small triangular median lobe, smaller than in *senior*, sternite 3 not modified at all, its posterior edge straight.

Abdominal ventrites not modified.

Female genitalia with sterigma haired, rather short and broad, lamella postvaginalis semihyaline, lamella antevaginalis broad, strongly convex lengthwise, with an apical pointed process, colliculum tubular, longer than sterigma. Signum single, a rather small denticulate plate.

New Guinea, Fergusson Id., d'Entrecasteaux Is., 1-9.x.1894 (A. S. Meek), 2 ♂, genit. slide 5834, 1 ♀, genit. slide 6444 (BM, Rothschild Bequest). Papua, Milne Bay (A. S. Meek), 2 ♀; Trobriand Id., Kiriwini, iii.1896 (A. S. Meek), 1 ♀; Geelvink Bay, Ron Id. (Doherty), 4 ♂, 2 ♀ (BM).

Bismarck Is., New Hanover, iii.1933 (A. S. Meek) (BM).

#### *Gatesclarkeana eothina* spec. nov.

(figs. 5-6)

♀ 12 mm. Head, palpus and thorax brownish-fuscous, palpus with small tuft at apex below, dark fuscous; terminal segment of palpus rather long, slender. Abdomen dark fuscous.

Fore wing rather broad, dilated, costa curved throughout, apex obtuse-rectangular, termen slightly concave, almost straight along upper fourth, moderately rounded below. Pale pink, on anterior 2/3 except along costa light tawny-fuscous, markings dark fuscous, pale grey-metallic ill-defined spots scattered over wing. Basal patch to 1/3, strongly prominent but obtuse in middle, upper half of edge dark fuscous, with a tooth above middle of patch, lower edge strongly inwards-oblique, notched beyond base; transverse fascia continuous, cloudy, gently outwards-convex, not dilated,

anterior half dark fuscous, with a projection below costa, another in middle; posterior half lighter greyish-fuscous, irregular; this fascia on costa blackish, with a rectangular spot of ground colour in middle; terminal streak slightly sinuate, its top connected by a straight, inwards-oblique line with middle of transverse fascia, metallic spots pale-golden grey, not conspicuous: a large vertical streak above tornus, an oblique streak above terminal fascia, several roundish spots strewn over transverse fascia; a dark apical spot, preceded by three costal spots, second of these emitting a straight slender subapical line to termen. Cilia fuscous-grey mixed with paler, basal third black, a fine whitish basal line.

Hind wing fuscous-bronze, costa whitish. Cilia whitish, a bronze-fuscous subbasal band.

Female genitalia. Ostium and antrum shaped as a long free tube, apparently retractile, sclerotized and finely haired on the outer side. Lamella postvaginalis, long patch of fine aciculations, downwards becoming closely placed small scales. Cestum, a small sclerotized band. Signum single, a rosette-like, scobinate round patch.

East Borneo, Bengen River, Tabang, 125 m, 29.x.1956 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 5835 (LM). Characteristic by extended pink colouring and the genitalia.

***Gatesclarkeana contracta* spec. nov.**

(fig. 25, pl. 1 fig. 1)

♀ 16 mm. Head dark fuscous. Palpus fuscous-grey, basal segment, base and lower edge of median segment white. Thorax roughly scaled, fuscous tinged ferruginous, sprinkled with a few white scales, a large double posterior crest ferruginous. Abdomen fuscous-grey, thickly scaled at the sides.

Fore wing subtriangular, dilated and queerly shaped: costa slightly curved along basal third, gently concave in middle, rounded-prominent before apex, straight as far as tip of apex which is rectangular, termen very strongly sinuate: concave and moderately outwards-oblique along upper half, very strongly prominent and obtuse below middle, strongly rounded and oblique below; thus the wing making the impression of its apex being missing! Fuscous touched with olive-grey, patches along costa and apex ferruginous, base suffused purple. Markings limited, formed by white scales with narrow tawny bases, strewn with brightly glossy silvery-metallic spots and strigulae of diverse sizes. Basal patch hardly to 1/4, ill-defined, a purple suffusion with a pale spot at extreme base; this patch strongly spotted throughout, but more so on base of costa, by shining pale blue round spots; a pair of similar transverse spots on 1/4 of costa, oblique and reaching upper edge of cell; there marks followed by an elongate-semioval ferruginous streak along costa, not interrupted, only before posterior end with a few silvery marks; a transverse, sinuate fascia of not quite continuous white dusting, dark bases of scales causing transverse fine striation; this fascia originating

with an acute narrow point on costal prominence, triangularly dilated and well-defined along upper third, slightly narrowed in middle and gradually curved along lower  $2/3$ , anterior edge stronger concave and denser white; this fascia parted and also preceded by parallel series of larger round silvery-shining spots; space beyond fascia bright ferruginous, with silvery striae only before apex from below costa and along upper half of termen and with two white inwards-oblique marginal marks: before and in apex, respectively; remaining part of wing, from dorsum to upper edge of cell fuscous, in centre of wing suffused with purple, strewn with round groups of minute metallic pale blue scales, groups tending to form vertical series, except in middle of wing. Cilia glossy dark leaden-grey, basal third dull ferruginous, cilia along apex and upper fourth of termen becoming white.

Hind wing dull bronze-fuscous, dark tips of scales forming fine transverse striation. Cilia pale grey-fuscous, a creamy basal line and a brown subbasal band.

Female genitalia. Seventh sternite with dark concave edge. Sterigma shaped as a simple dark, slightly asymmetrical cylindre, its edge level, with a calice-shaped ostium, of which the long tubular colliculum is a slender stalk; they are apparently entirely soldered with the cylindre. Signum small, scobinate, with a few elevated teeth in centre.

India, Assam, Khasis, Shillong, 5000 ft, 25.vii.1928 (T. B. Fletcher), "*Eucosma* tab. f. 2", "Sat with wings flattened and looked like a lump of excrement on leaf" (both in Fletcher's hand), "Presented by R. L. E. Ford, BM 1949-487", 1 ♀, holotype, genit. slide 7735.

Judging from the female genitalia this remarkable insect is a primitive form of the present genus. Unfortunately no males are available.

#### *Asymmetrarcha* gen. nov.

Head with appressed scales, on forehead long, forming a bifid porrect crest over face. Ocellus developed. Proboscis rather short. Palpus subascending, strongly dilated triangularly, median segment with smoothly appressed scales, roughish only along upper edge; terminal segment moderate, exposed, tolerably pointed, more so in female. Antenna in male slightly thickened, minutely ciliate, in female filiform, pubescent. Thorax with a posterior elevated crest. Posterior tibia normal. Abdomen in male normal.

Fore wing oblong-truncate, costa gently curved throughout, apex rounded-rectangular, termen straight above, broadly rounded beneath. Vein 2 from  $2/3$ , 3 from angle, 4 closer to 3, 3-5 converging on termen, 5-7 tolerably parallel, 7 separate, to termen, 8 from angle, 9 from  $4/5$  distance 8-10, 11 from middle, chorda from close before 10 to just below base of 7, median stem distinct.

Hind wing in male normal, with a cubital pecten, slightly over 1, vein 2 from beyond middle, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather small, triangular, crowned with a pair of voluminous, densely haired socii. Gnathos, a slender transverse submembraneous band. Valva elongate, diversely shaped, asymmetrical: sacculus strongly developed, with remarkable asymmetrical processes, often strongly different right and left; cucullus similarly asymmetrical, with a broad naked space along or beyond the shallow primary excision ending in a process crowned with a sheaf of long bristles.

Female genitalia unknown.

Type-species, *Asymmetrarcha xenopa* spec. nov. (Shillong).

A remarkable, compact group of species with anomalous developments of the basal region of the valva, apparently showing the initial stage of the same trend that reaches an optimum of asymmetry in the entire genital apparatus of *Gatesclarkeana* Diakonoff. *Asymmetrarcha* seems to be intermediate between that genus and the normal, symmetrical forms.

#### Key to the species of *Asymmetrarcha*

1. Rather dark species, with a distinct paler large ocelloid spot extending as an oblique band to costa . . . . . 2  
— Rather pale species, ocelloid spot not paler than remainder of ground colour. . . . .  
*torquens*
2. Ocelloid spot becoming less defined on upper half of wing; base of costa pale, contrasting with dark basal mark . . . . . *xenopa*  
— Ocelloid spot forming a continuous distinct band to just below costal edge; base of costa not paler . . . . . *iograptia*

#### *Asymmetrarcha xenopa* spec. nov.

(fig. 30)

♂ 14-15 mm. Head pale fuscous mixed with pinkish, tuft on forehead purplish. Palpus with basal segment, and basal half of median segment, white, apical half of median segment grey-purplish, iridescent pink-lilac in certain lights, a black oblique transverse line in middle, terminal segment pinkish-lilac-purple. Thorax light grey-purplish, mixed with darker grey, strongly rising towards apex, posterior crest ferruginous, whitish at base. Posterior tibia glossy white, tarsus dark grey-ringed. Abdomen glossy light fuscous-grey, venter paler.

Fore wing oblong-truncate, moderately broad. Costa moderately curved throughout, apex rounded, termen vertical, gently concave above, rounded beneath. Opalescent greyish-white, touched with pale pink, markings ferruginous-brown, mixed with grey. Costa with two moderate wedge-shaped transverse marks, alternating with smaller and paler similar marks; a sinuate, acute slender dark spot rising from 1/5 of dorsum and reaching middle of disc at 1/3 (apparently representing lower part of basal patch); some irregular fuscous dusting above this; transverse fascia postmedian,

broad, not dilated, formed of three longitudinal spots: upper costal, semi-ellipsoid, posterior edge excised; this spot extending from before middle to before  $1/4$ ; second, slender and crescentic, in center of disc, concave above, anterior end higher than posterior; and a third larger patch on dorsum, concave above, posterior end clavate; some leaden-grey suffusion between two lower spots and on third spot; posterior fourth of costa forming a ferruginous elongate patch extending over apex and preceded by a snow-white double marginal mark; a second, narrower, parallel mark from termen below apex, halfway towards costa; a curved series of irregular black small marks from below posterior end of costal spot to above posterior end of dorsal spot; ocellus of unobscured ground colour, well-defined; some light ferruginous suffusion on dorsum, somewhat obscuring markings, becoming greyish above. Cilia dark purple, very fine whitish basal, subbasal, and subapical lines, cilia in tornus pale fuscous.

Hind wing rather light fuscous-bronze, paler towards base. Cilia glossy grey-fuscous.

Male genitalia. Similar to those of *A. iograptus* (Meyrick) but with cucullus broader, especially right cucullus; base of right cucullus triangular, broader and less projecting than in the former species, patch of bristles elongate, bristles shorter; left process short, bristles in an apical bundle; sacculus right and left with very large complicated processes, asymmetrical, left single, right furcate. Aedeagus long, pointed, sclerotized.

India, "Khasis, Shillong, 4.xii.1922, Fletcher coll.", "*Argyroploce rupifera* M. teste T.B.F.", "Brit. Mus. 1934-38", 1 ♂, holotype, genit. slide 6469. Very similar to *Corethrarcha rupifera* (Meyrick) comb. nov., but really belonging to the present aberrant genus. It differs from *A. iograptus* (Meyrick) chiefly by the male genitalia. In the fore wing the apical and subapical patches are united, while also other markings are more interconnected by dark suffusion.

#### *Asymmetrarcha torquens* spec. nov.

(fig. 29)

♂ 12 mm. Head whitish, vertex pale fulvous, face with a pale fulvous projecting tuft. Palpus with basal segment and base of median segment white, edge of this colour very oblique (horizontal); remainder of palpus pale tawny tinged pale purplish, with a median horizontal dark purple line, ending in a small frontal tuft at apex; terminal segment purplish-grey, pale-tipped, appearing darker in certain lights. Thorax glossy silvery-white, touched with pale fuscous, with a double posterior light ferruginous crest. Posterior tibia normal, pale ochreous. Abdomen pale grey-fuscous, with base and anal tuft whitish-fuscous, venter whitish.

Fore wing oblong, suboval-truncate; costa gently curved throughout, apex rounded-prominent, termen hardly concave, straight above, rounded beneath. Whitish, glossy, irregularly and sparsely mixed and strewn with minute pale fuscous dots. Markings dark and light fuscous. Anterior  $4/5$  of costa throughout with numerous

alternating larger and smaller dark fuscous strigulae, anteriorly oblique and very short, posteriorly longer and more horizontal; basal patch indicated by an inwards-oblique fuscous subbasal patch on dorsum, pointed; some fuscous and pale fuscous scales strewn along the course of vein 12; transverse fascia rather irregular, dilated downwards and almost interrupted twice, being formed of a subcrescentic dark fuscous mark obliquely crossing middle of costa, pointing posteriorly; by a second similar mark in middle of wing breadth, slightly shifted posterad; and by a slightly inwards-oblique transverse spot on dorsum before tornus, rising to middle of vein 4, top rounded, posterior edge well-defined, anterior edge extended by lighter fuscous suffusion almost to middle of dorsum, with dark fuscous scales along fold reaching basal patch; apex with a dark fuscous oval spot, preceded on costa by two marks, interconnected by lighter fuscous suffusion, lower edge well-defined, very outwards-oblique; a dark fuscous small streak dilated posteriorly and resting on dorsum just above middle, parallel to edge of apical suffusion; preterminal area from costa to tornus more clearly silvery-whitish. Cilia fuscous mixed with whitish, a pale basal line and a dark fuscous subbasal streak, becoming much paler towards and around tornus.

Hind wing semihyaline pale grey-fuscous with a golden gloss. Cilia fuscous with a pale basal and a darker antemedian line, cilia around tornus and dorsum becoming pale fuscous.

Male genitalia. Socii large, rounded. Right valva with a very large, rod-like appendix at the top of the sacculus, followed by an extremely large mushroom-shaped labis; right cucullus slender, with a large ventral lobe, crowned with a patch of long bristles. Left valva larger, process of sacculus short, labis slender, clavate; left cucullus longer than right, ventral lobe shorter, with shorter bristles. Aedeagus conical-tubular, slender.

East Java, Tengger Mountains, S slope of Mt. Smeroe, Ranoe Daroengan, 820 m, primary rain forest, 30.v.1941, at light (A. Diakonoff), 1 ♂, holotype, genit. slide 4957 (LM).

***Asymmetrarcha iograpt*** (Meyrick, 1907) comb. nov.

(figs. 21, 26-27, 31)

*Eucosma iograpt* Meyrick, 1907: 137 (♂♀, Khasi Hills, Assam). — 1908: 592. — Clarke, 1955: 174.

*Olethreutes iograpt*; Clarke, 1958: 523, p. 260, figs. 1-1a (lectotype ♂ select., illustr.).

Distribution. Assam: Khasias.

♂ 14 mm. Head, thorax fulvous. Palpus projecting more than breadth of head, strongly dilated: whitish, apical edge strongly suffused with purplish, a purple oblique subapical streak and some scattered purplish scales; terminal segment short, appressed, purplish.

Fore wing elongate, rather narrow, costa gently curved throughout, more so anteriorly, apex subrectangular, termen tolerably straight. Light fulvous, on dorsal

half becoming light fuscous, throughout with slight purplish reflections in certain lights, partly suffused with light violet-purple, posteriorly ground colour pale silvery-grey, glossy. Markings ferruginous and fulvous. Costa anteriorly with four ferruginous suffused oblique strigulae from well beyond base; basal patch represented by a well-defined dark fuscous-brown, acutely wedge-shaped patch on dorsum beyond base, point reaching to middle of disc breadth at  $\frac{1}{3}$ ; transverse fascia ferruginous, more distinct on costal half, narrow on costa, abruptly dilated below costa and with three deep and pointed excisions of posterior edge, forming two teeth of fascia, lower of these dark brown; lower posterior edge of fascia vertical; wing beyond fascia pale silvery-grey, glossy, becoming violet towards costa, on costa with two wedge-shaped narrow transverse marks; a darker ferruginous oblique streak from below these marks, to middle of termen, parallel-edged; apical part of wing beyond this streak suffused with fulvous-violet, slightly glossy, marked with dull reddish spots: one pre-apical, wedge-shaped, another apical, rounded, and an oblique streak below the spots. Cilia ferruginous-purple, mixed with whitish, with a white basal line and a brighter fulvous antemedian band.

Hind wing pale fuscous becoming slightly darker towards margin, with a silky gloss. Cilia pale fuscous with a white basal and a darker antemedian line, cilia around apex darker fuscous.

Male genitalia. Socii moderate, semioval. Gnathos indefinite. Right valva with a thickened elongate-oval socius upon which an extremely large erect mushroom-shaped process (harpe), right labis apparently absent. Right sacculus with a finger-like ventral process with a sheaf of spines. Left sacculus longer, top clavate, without a harpe, left labis slender, moderate and pointed (in the lectotype entirely absent); left cucullus with a shorter process, bristles very long. Aedeagus cylindrical, rather short.

Assam, Khasis, 1 ♂, genit. slide 6500.



## 2. SUBTRIBUS GNATHMOCERODIDES NOV.

Signum one, cornute, with a diversely developed, concave basal plate, seldom only a fragment of this traceable (without horn).

Scent organ, a strong, diversely shaped dorsal roll, with or without additional combs of hairs along certain veins on under or upper side and a tibial brush with pencil, or scent organ absent.

### Key to the genera of Gnathmocerodides

1. Signum, a subscoberinate fragment. Valva bifid . . . . . *Heteroschistis*  
— Signum cornute, well-developed. Valva single . . . . . 2
2. Valva excised in middle of lower edge, with clusters of spines . . . *Gnathmocerodes*  
— Valva not excised, with a single huge spine . . . . . *Dynatorhabda*

### *Heteroschistis* Diakonoff, 1966

*Heteroschistis* Diakonoff, 1966: 67, figs. 16, 43, 45 (type-species, *Proschistis actaea* Meyrick, Solomon Is., by original designation).

Head with appressed scales, spreading on crown, forehead with a projecting tuft, thick at the sides. Proboscis very short. Antenna in male slightly thickened and flattened, shortly fasciculate-ciliated, in female filiform, short-ciliate. Thorax with a slight tuft. Posterior tibia with appressed bristly scales above and beneath, without pencil.

Fore wing broad, suboval, termen sinuate. Vein 2 from  $2/3$ , 3 from angle, 4 close to 5, 7 free to termen, 9 from  $1/4$ , 10 from  $2/3$  distance 9-11, 11 from middle. As a slight correction to the original description should be added that a weak chorda is traceable from somewhere before base of 10 to base of 7, very close to upper edge of cell, while the median branch terminates at, and not above, the base of 5.

Hind wing with pecten, 2 from  $2/3$ , 3 from distinctly before angle, 4 from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia with rather low tegumen, uncus conical and ill-defined. Socius large, appressed. Valva bifid, sacculus with a long, spined process, cucullus longer, densely bristled below, less so above, with a peculiar furcate spine below top.

Female genitalia. Ninth ventrite punctate. Seventh sternite suboval, punctulose. Ostium V-shaped, sides long-aciculate. Ductus bursae rather short. Signum, a small scoberinated patch.

As stated in the original description of the genus (1966: 68), it belongs to the *Olethreutini*. It might be related with the *Sorolopha* group of genera, judging from the shape of the valva, but is otherwise quite isolated.

**Heteroschistis actaea** (Meyrick, 1911)

(figs. 54-58)

*Proschistis actaea* Meyrick, 1911a: 260 (♂♀, Solomon Is.). — Clarke, 1955: 36. — Diakonoff, 1966: 35, figs. 16, 43, 45 (genit. ♂♀, neuriation figured; transferred to *Heteroschistis*).

*Heteroschistis actaea*; Diakonoff, 1966: 67 (type-species).

Distribution. Solomon Is.: Choiseul Id., Isabel Id.

Solomon Is., Isabel Id. (A. S. Meek), 1 ♂, 1 ♀, genit. slide 7945 ♂ (BM).

An elegant, bright tawny species with less than apical half of the rather broad fore wing whitish-ochreous, with an oblique well-defined edge, four costal small marks, a larger dark brown wedge in apex and a well-defined oblong-clavate dark fuscous longitudinal terminal spot, with narrow stalk to above middle of termen.

My remark that the species belongs to the Eucosmini (1966: 35) is a slip of the pen, as on p. 68 of the same paper its olethreutine character is stated correctly.

**Gnathmocerodes** Diakonoff, 1968

*Gnathmocerodes* Diakonoff, 1968: 71 (type-species, *Gnathmocerodes petrifraga* Diakonoff, Philippine Is., by original designation).

Head with roughly appressed scales, on vertex spreading, face roughish. Ocellus posterior. Proboscis weak. Antenna slightly thickened in male, serrulate and pubescent. Palpus rather short, moderately broad, sinuate, subporrect, median segment strongly dilated with closely appressed scales, expanding but hardly roughish along apex, apex rounded below, without a projecting tuft, terminal segment broad, pointed, very short but exposed. Thorax with a double posterior crest. Posterior tibia smooth, or with extremely dense expanding scales on the inside and towards apex throughout, dorsally always with a groove and a slender pencil from base; posterior tarsus with two basal segments dorsally with long hair-scales. Abdomen normal.

Fore wing elongate-subtruncate, moderately broad. Vein 2 from beyond 2/3, 3 from angle, 3-5 remote, 4 closer to 3, 7 to termen, 8 and 9 closely approximated towards base, 10 closer to 11, 11 from middle of cell; chorda from before base of 10 to below base of 8, close to upper angle of cell; median branch from halfway between base of wing and base of 11 to just below base of 5.

Hind wing with cubital pecten. Vein 2 from beyond 2/3 of cell, 3 and 4 short-stalked from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia very characteristic, with a weak triangular and hairy uncus, socius moderate, subparietal. Gnathos strong, sclerotized, arms semicircular, top straight, and tubular, with a central concavity, and two diverging long horns at the top; apparently tubular portion protects the tuba analis, its external part is very delicate and membranous. Valvae asymmetrical, right usually with a very deep incision and

a narrow stalk, resembling slightly the valva of the Eucosmine genus *Crociosema*, but with one or two spine clusters; left valva usually with a thick stalk and a less deep excision, with strongly extended spine — or bristle — clusters and sometimes with an additional cluster. Aedeagus sclerotized, with a broad caulis which seemingly is continued all the way to gnathos by a broad equally sclerotized henion.

Female genitalia with the 8th tergite moderately sclerotized, semicylindrical. Seventh sternite with a broad, diversely shaped marginal excision, in this a short subcylindrical or subspherical sterigma, densely aciculate and with a frontal excision of diverse shape. Colliculum, a long sinuate dark tube. Signum single, denticulate, cornute, upon a diversely shaped basal plate.

The species have a characteristic appearance and markings. The females of *G. tonsoria* and *lecythocera* are superficially very similar; those of *G. petrifraga* are unknown. The characters of the male genitalia point towards an affinity with the Eucosmini: reduced uncus and constricted valva. The females belong to the cornute group.

There are two distinct subgenera which superficially are very similar.

#### Key to the subgenera of *Gnathmocerodes*

1. Fore wing with the origin of vein 10 as far to that of 11 as to that of 9. An armed subsaphium type of gnathos absent . . . . . *Agnathmacera*
- Fore wing with the origin of 10 closer to that of 11 than to that of 9. A subsaphium type of gnathos present with two strong basal horns. . . . . *Gnathmocerodes*

#### *Agnathmacera* subgen. nov.

With all superficial characters similar to those of the nominate genus, but with the vein 10 of the fore wing originating as far from 9 as from 11. Posterior tibia strongly thickened with dense appressed scales, those on inner side above, modified, white, broad; with a spreading pencil from base above to top of tibia. Posterior tarsus with basal segment elongated, strongly dilated with rough bristly scales above and beneath.

Male genitalia. Tegumen high and rather broad, top rounded. Uncus depressed, broad, membranous, prominent along middle third. Socius curved mesad and slightly clavate, hairs continued to top of uncus. Gnathos, a weak band, lower edge concave, upper edge not perceptible. Valva moderately broad, oblong, with a deep primary excision, sacculus with a rectangular top and a small digitoid harpe above centre, lower edge thinly bristled, Spc<sub>2</sub> hardly developed right, strong left; cucullus densely and evenly bristled. Aedeagus slender, curved and pointed, sclerotized.

Female genitalia. Sterigma oval, upper half flattened into a submembranous lamella postvaginalis, lower half finely aciculate and centred with ostium bursae. Colliculum, a very long straight tube, slightly spindle-shaped and sclerotized. Signum, a single, finely aciculate thorn.

Type-species, *Gnathmocerodes (Agnathmacera) labidophora* spec. nov. (New Guinea).

A peculiar form, in all respects, except the entirely different uncus and gnathos, resembling the nominate genus. The colouring and markings of the type species also agree closely.

***Gnathmocerodes (Agnathmacera) labidophora* spec. nov.**

(figs. 36, 42-45)

♂♀ 16-18 mm. Head pale fuscous, vertex more infuscated. Palpus pale fuscous, suffused with greyish along apical half of posterior edge and with a pair of grey dots on and below apex; terminal segment infuscated. Thorax pale ochreous-greyish, mixed with fuscous and tawny, scales roughish, rising, pale-tipped. Posterior tibia and tarsus in male as described with the genus; pale greyish-fuscous, glossy, scaling of upper half of inner side, modified: white, long and broad scales. Abdomen pale fuscous-grey, venter white, anal tuft ochreous below, whitish inside.

Fore wing oblong, suboval, narrow at base, abruptly dilated, costa curved along basal half and again before apex, straight between, apex moderately rounded, termen hardly convex above, slightly oblique, rounded beneath. Whitish-grey, markings fuscous and tawny. Basal patch not reaching  $\frac{1}{3}$ , dark fuscous-grey along edge, elsewhere paler, edge well-defined, hardly concave and little oblique above, a trifle more concave and oblique below, just above fold (i.e. below middle) with a small acute and short tooth; transverse fascia represented chiefly by a large inverted-triangular and slightly inwards-oblique fuscous patch, occupying costa from before middle to  $\frac{4}{5}$ , with three slender pairs of oblique, white costal marks; below costa with ill-defined concentric, inwards-oblique dark fuscous suffusion; lower half of patch more regularly triangular and paler fuscous, well-defined; anterior edge on upper half concave and strongly suffused; terminal fourth of wing with a well-defined fuscous characteristic mark; an inwards-oblique erected-triangular fasciate spot, rising from dorsum before tornus, top narrowly connected with an annular mark before upper half of termen, almost or entirely interrupted anteriorly, posterior lower part emitting a slender branch to termen above tornus; apex and upper part of termen with fuscous spots, edged anteriorly by darker fuscous strigulae. Cilia (damaged) fuscous, in tornus pale fuscous.

Hind wing in male dull dark fuscous, becoming semipelluculent and paler in centre, still paler at base, but dorsum gradually becoming opaque and pale fuscous-grey; covered with long hairs, dorsal edge extended and concave above. Cilia fuscous with a pale basal and a darker subbasal line, cilia around tornus glossy white. Hind wing in female paler fuscous, dorsum normal, cell 1a pale grey, termen between veins 3-5 angular and slightly prominent. Cilia concolorous.

Male and female genitalia as described with the subgenus.

New Guinea, d'Entrecasteaux Is., Fergusson Id., 7-20.xi.1894, 1 ♂, holotype, genit. slide 7676; the same locality, 23-31.xii.1894, 1 ♀, allotype, genit. slide 7677;

9-22.x. and 23-31.xii.1894, 2 ♂, paratypes. East Papuan Is., Louisiades, St. Aignan Id., 1897, 1 ♂, 1 ♀, paratypes (A. S. Meek) (BM).

Australia, Queensland, Geraldton near Cairns (Meek), 1 ♂, paratype (without abdomen) (BM).

The insect is very similar to *G. (G.) tonsoria* (Meyrick), but with more contrasting markings.

Subgenus **Gnathmocerodes** Diakonoff, 1968, stat. nov.

Key to the species of *Gnathmocerodes* (*Gnathmocerodes*)

#### Males

1. Fore wing light ochreous-yellow with tawny-brown reticulate markings *euplectra*  
 — Fore wing not so coloured . . . . . 2
2. Hind wing with dorsum thickened, long-haired; cilia white. Posterior tibia strongly expanded by brushy hairs . . . . . *tonsoria*  
 — Hind wing normal, cilia concolorous. Posterior tibia normally smooth-scaled, only with a pencil in a basal groove . . . . . 3
3. Hind wing fairly unicolorous fuscous, hardly paler towards dorsum. Fore wing with transverse fascia shaped as a faint large dark triangle, sometimes only a few dark spots across disc; termen with a slender dark mark before margin, sometimes shaped as a letter F. . . . . *lecythocera*  
 — Hind wing dark fuscous becoming paler towards base and dorsum. Fore wing with transverse fascia forming a well-defined narrower triangular spot on costa, constricted below middle; termen with a dark fascia becoming a large dark spot in middle . . . . . *petrifraga*

#### Females

1. A dark triangular costal spot, well-defined and contrasting with usually light grey ground colour . . . . . 2  
 — A dark costal spot, if present, large and strongly suffused, usually hardly contrasting, or wing evenly suffused with greyish fuscous . . . . . *lecythocera*
2. Termen with a very slender clavate oblique mark, enclosing pale round dot, sometimes partly obliterate . . . . . *tonsoria*  
 — Termen with a dark line, forming a dark patch in middle which contains the pale round dot . . . . . *petrifraga*

**Gnathmocerodes (Gnathmocerodes) tonsoria** (Meyrick, 1909)

(figs. 38-41)

*Argyroploce tonsoria* Meyrick, 1909: 592 (♂, Ceylon). — Fletcher, 1921: 61. — 1932: 31 (Java, Andaman Is.). — Clarke, 1955: 312.

*Olethreutes tonsoria*; Clarke, 1958: 556, pl. 277 figs. 2-2a (holotype, wings and genit. ♂ figured).  
*Gnathmocerodes tonsoria*; Diakonoff, 1968: 72. — 1971: 190 (S. Thailand).

Distribution. Ceylon, S. Thailand. Andaman Is. Java.

Food plant. *Barringtonia racemosa* (Myrtaceae), fruit, top shoots.

A moderate, variable species with rather pale greyish-ochreous ground colour, and a large, conspicuous fuscous or dark fuscous triangular patch on costa beyond middle, slightly inwards-oblique and reaching halfway below fold beyond its middle; a terminal clavate spot is shaped as a grey-fuscous ring on a dark fuscous stalk, often only this dark stalk sharply marked.

Hind wing variably grey-fuscous.

Male genitalia. Valvae symmetrical, strongly constricted,  $Spc_1$  right: a small submarginal tuft, left: similar but slightly larger at base;  $Spc_3$  only at the left side: a long pencil extended along edge almost to base of sacculus; a small clavate harpe, only at the left valva, bristly at the top, may be the pulvinus. Aedeagus long and slender.

Female genitalia. Sterigma with a deep quadrate frontal excision of upper edge, pale and not aciculate behind this. Colliculum very long. Signum with a small basal plate.

West Java, Buitenzorg, 250 m, xi.1923 (L. G. E. Kalshoven), 2 ♀. Central Java, Pekalongan (sea coast) (Van Deventer), 1 ♂, genit. slide 7471. Semarang, Seneng, Telawa, Gedangan, teak forest, 40 m, i-ii and vi-ix in 1925 and 1930-1933 (L. G. E. Kalshoven), 23 ♂, 35 ♀, bred from fruit, top shoots and leaves of "poetat", *Barringtonia* spec. Genit. slides ♂ 3412, 4570, 4585; ♀ 4571, 4573, 4586 (LM).

The male scent organ is formed by a strong dorsal fold of the hind wing, folded over the upper side of the wing and thickened, partly concealing a loose brush of very long and fine whitish or fuscous hairs, usually partly extended; cell 1b is clothed with thick modified short scales towards wing margin, forming a triangular darker fuscous fold or folds; posterior tibia clothed with extremely dense scales, smoothly appressed and light grey along outer basal half, elsewhere, especially at the whole inside and towards top of tibia white, sometimes fuscous, curly, and broadly spreading; basal and sub-basal segments of the posterior tarsus are equally dense-haired above.

**Gnathmocerodes (Gnathmocerodes) lecythocera** (Meyrick, 1937)

(figs. 32-35, 47-48, pl. 1 fig. 2)

*Argyroploce lecythocera* Meyrick, 1937: 160 (♂♀, description not complete). — Clarke, 1955: 183.

*Argyroploce lecythophora* Meyrick, 1939: 49 (♂♀, the same description completed, Java; nom. emend.). — Clarke, 1955: 183. — 1958: 524 (name invalid).

*Olethreutes lecythocera*; Clarke, 1958: 524, pl. 261 figs. 3-3a (lectotype select., wings, genit. ♂ figured, *lecithophora* invalid).

*Gnathmocerodes lecythocera*; Diakonoff, 1968: 72 (comb. nov.).

Distribution. Java.

Central Java, Pekalongan, sea level (Van Deventer), 1 ♂, genit. slide 4589. — Telawa, Seneng, Gedangan, teak forest, 40 m, bred from leaves and fruits of "poetat", *Barringtonia* spec., from leaves of "kalak loetoeng" (Anonaceae) and fruits of "poeloetan" (*Urena lobata*) (L. G. E. Kalshoven), 5 ♂, 13 ♀, two specimens with labels: "*Argyroploce lecithophora* Meyr. n. sp., det. Meyrick": these are from the original series, but have not been sent to Meyrick and were labelled afterwards; they are not cited in the original description and legally are no syntypes. Genit. slides ♂ 4583, 4589, 7473, ♀ 4584, 6989 and 7472 (LM).

Very similar to *G. (G.) tonsoria* (Meyrick) but usually recognizable by strong reduction or complete absence of the dark costal patch; also the terminal mark is reduced, the circular part at the top invariably broken opposite apex of wing or entirely absent. However, both these features: costal patch and terminal marking may be reduced in *tonsoria* as well, in which case only the genitalia present decisive characters.

Hind wing variably fuscous-grey.

Male genitalia. Valvae asymmetrical, left less constricted than right and both less constricted than in *G. tonsoria*. Spc<sub>3</sub>, a broad marginal brush along top of sacculus, mixed with an additional brush along base of cucullus bristles; these brushes entirely absent upon the right valva; Spc<sub>1</sub> formed by a dense cluster of short thick spines, right, at the bottom of the primary excision, left, at the border of cucullus bristles on costal margin. Aedeagus shorter and broader.

Female genitalia. Sterigma larger, cylindrical, posterior edge gently emarginate, anterior edge with a moderate, about triangular excision. Colliculum slightly broader and shorter than in *tonsoria*. Signum shorter, more pointed, with a larger basal plate.

The scent organ of the male is little developed and formed by a simple small sub-marginal fold of the dorsum underside in the hind wing and of a groove along the basal part of the posterior tibia which is smooth and very short-scaled and has a moderate appressed light grey pencil, reaching almost to the top of tibia. The hind wing of the male is normal.

### ***Gnathmocerodes (Gnathmocerodes) petrifraga* Diakonoff, 1968**

(fig. 53)

*Gnathmocerodes petrifraga* Diakonoff, 1968: 72, figs. 76, 116, 543 (♂, Philippine Is.: Luzon Id. — India: Bengal).

Distribution. Philippine Is. India: Calcutta.

A species being more or less an intermediate between the two foregoing. The costal

patch is less conspicuous than in *G. tonsoria*, but more distinct than in average *G. lecythocera*. The terminal mark with circular part narrowly broken opposite angle of wing, basal part (stalk) much broader than in the other two species, its extreme base extended along termen to tornus.

Hind wing paler grey fuscous.

Male genitalia. Resembling those of *G. tonsoria*, but valvae asymmetrical, left sacculus being broader, rectangular,  $Spc_2$  extended along entire posterior margin,  $Spc_3$  long, at the lower part of this margin; right  $Spc_2$  broad but thinly bristled;  $Spc_1$  similar to that in *lecythocera*: small clusters of thick short spines, but right cluster, as well as left, situated at the bottom of the primary excision. Aedeagus intermediate: as long as in *lecythocera* but as narrow as in *tonsoria*.

***Gnathmocerodes (Gnathmocerodes) euplectra* (Lower, 1908) comb. nov.**

(fig. 4)

*Tortrix euplectra* Lower, 1908: 322 (♂, Queensland: Brisbane).

*Argyroploce euplectra*; Meyrick, 1911a: 271 (♂, Brisbane, Cooktown).

Distribution. Australia: Queensland.

Australia, "Queensland, Cooktown, M. 96" 1 ♂, genit. slide 8053 (Meyrick Coll. 2/1, BM).

The present single male specimen apparently is Meyrick's homotype (which he compared with the type specimen).

Meyrick (1911) writes: "...two specimens, including the type". This means that the other specimen (Cooktown, Meek), has been compared by him with Lower's type. This homotype of Meyrick has been studied by me at present and proves, surprisingly to belong to *Gnathmocerodes*. It is rather differently looking as compared with the other representatives of the genus, light ochreous-yellow, with tawny-brown markings, forming a reticulated pattern and dividing the ground colour in several inequal roundish spots. Basal patch to 1/3, with irregular edge; dark spot on middle of costa present, darker brown, much suffused, containing a blackish dash above its apex; posterior edge above limited by a curved subcostal row of three dark brown slender chain-link-shaped marks.

Hind wing pale ochreous, apical half suffused with greyish.

Male genitalia. Uncus depressed, on each side prolonged into a distinct socius ending in a rigid pending and slender point. Gnathos sclerotized, with narrow arms and a large median part ending in two rigid horns. Henion long and slender. Aedeagus long, narrow. Valvae strongly constricted, tolerably symmetrical.

A second, obviously distinct specimen in Meyrick's collection from Japan, "(2)2", is relegated to *Olethreutes* Hübner.



**Dynatorhabda** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis vestigial. Antenna in male moderately thickened, subserrulate and short-ciliate. Palpus rather long, curved and ascending, in male reaching to base of scape, in female exceeding base of scape, basal segment thickened with dense appressed scales, median segment strongly dilated and axe-shaped, upper edge concave, lower and apical edges forming one broad curve, terminal segment short, porrect, in profile entirely concealed in scaling of median. Thorax with a slight posterior crest. Posterior tibia normally scaled, scales somewhat bristly below and at apex. Abdomen normal.

Fore wing oblong-truncate, rather narrow, little dilated. Fore wing underside in male with a longitudinal fold along vein 12, concealing this vein (cf. sketch of neurotation); this fold before its base forming a triangular crevice or opening; the top of the peculiar long retinaculum, which is implanted below and beyond the base of cell, disappearing in this opening; posteriorly fold entirely concealed by a flat large patch of closely appressed scales over cell, tips directed costad. Vein 2 thin, from slightly beyond  $5/6$  of lower edge of cell (!), veins 3 and 4 close together from angle, 5 close to 4 but not approximated, 7 separate, to termen, 8 close to 7 from upper angle of cell, 9 close to 8; in male 11 from  $2/3$  of cell, 10 from halfway between 9 and 11; in female 11 from middle of cell, 10 also from halfway between 9 and 11; chorda weak, from halfway 11 and 10 to base of 7, median branch weak, to below 5; in male a patch of dense elongate scales with tips directed costad, in upper half of cell underside, from beyond retinaculum to  $3/4$  of cell; retinaculum, a triangular flat comb of glossy whitish bristles closely pasted together.

Hind wing about 1, broadly semielliptical-subtrapezoidal, with a cubital pecten. Vein 2 from well beyond middle, 3 distinctly from before angle, 4 from angle, 5 moderately approximated at base, 6 and 7 closely approximated towards base; in female 3 from angle, 4 separate, otherwise neurotation as in male.

Male genitalia. Tegumen broad and rather low, subspherical. Uncus, a triangular thickening with a small brush of short hairs at the top and with some three long and strong bristles on the back. Socius moderate, ovoid. Gnathos, a weak, finely haired throughout, transverse band. Valva rather long and slender, curved, posterior half moderately dilated; Spc<sub>1</sub>, a large patch of short and thin bristles. Ventral projection of cucullus small but bearing a huge straight spike, with subobtuse top, almost as long as entire cucullus. Aedeagus robust, rather thick, caulis very long.

Female genitalia. Seventh sternite with a broad emargination of upper edge which is slightly thickened. Lamella postvaginalis with a slight accolade-shaped structure; colliculum moderate, narrowed in middle, little sclerotized. Signum single, a small horn with an oblique basal plate.

Type-species, *Argyroploce cremnocrates* Meyrick (New Guinea).

Judging from the genitalia, the genus may have some affinity to the more primitive *Sorolopha* Lower species, but has besides a series of quite unusual features, especially

the remarkable position of vein 2 in the fore wing and the peculiar retinaculum. It belongs in the group of several small genera with a triangular, fleshy uncus, tumescent socii and a comparatively simple, moderately curved and slender valva. The female signum is mono- or bicornute.

***Dynatorhabda cremnocrates* (Meyrick, 1932) comb. nov.**

(figs. 46, 49-52)

*Argyroploce cremnocrates* Meyrick, 1932: 225 (♂, New Guinea: Biagi). — Clarke, 1955: 103. *Olethreutes cremnocrates*; Clarke, 1958: 499, pl. 248 fig. 5 (holotype, wings figured).

Distribution. British New Guinea: Membare River.

New Guinea, Papua, Maneau Range, 700 m, Mt. Dayman, N slope, 16 and 26.vii.1953 (G. M. Tate, 4th Archbold Expedition to New Guinea, 1953), 3 ♂, genit. slide 6308; 1 ♀, apallotype, the same locality, 17.vii.1953, genit. slide 6309.

The unique holotype in the British Museum is without abdomen. The present valuable small series enables an exact determination of the generic position, and description of the genitalia and of the female. The species proves to be sexually dimorphous.

♀ 18 mm, apallotype. Slightly larger than the male and with exactly similar ground colour and the dark purple clavate mark from the middle of termen. The conspicuous purple dorsal spot, however, in male occupying about the middle third of dorsum, is reduced in female to a moderate, outwards-curved, hooked vertical mark, actually being the posterior fourth of the (male) dorsal patch; it is finely edged with whitish.

Hind wing pale fuscous-grey, towards apical fourth suffusedly marbled with dark fuscous. Otherwise similar to the male.

Male and female genitalia as described with the genus above.

### 3. SUBTRIBUS *Rhodocosmariae* NOV.

Signa two, unequal, flattened, with truncate top, strongly granulated, with serrulate edge, apparently derived from the cornute type.

Scent organ, a dorsal roll with modified additional hairs and scales on the upper side of dorsal area.

A single, isolated genus of moderate species with uniform fuscous-grey anterior and typically marbled posterior half of fore wing.  $Spc_3$  with long geniculate spines, is unique. Uncus flattened, gnathos ill-defined, socius partly parietal.

Sterigma moderate, cup-shaped. Colliculum, a long strong tube.

#### *Rhodocosmaria* gen. nov.

Head with appressed scales, dense on vertex, on forehead projecting in two pointed tufts over face. Ocellus posterior. Proboscis short. Antenna minutely ciliate in male, simple in female. Palpus subascending, sinuate, smooth-scaled, median segment strongly dilated at apex above, triangular, terminal segment moderate, porrect, rather pointed; upper edge of palpus forming a straight line with vertex and tufts on forehead. Thorax smooth. Posterior tibia in male moderately thickened with scales, a closely appressed small pencil from base.

Fore wing oblong-truncate, costa little curved anteriorly, apex rounded-rectangular. Vein 2 from  $2/3$ , 3 from angle, not approximated to 4 posteriorly, 4 closer to 3, 7 free to termen, 7 and 8 distinctly separate, 8 from upper angle, 9 slightly more distant, 10 from middle distance 9-11, 11 from before middle of cell, chorda from before 10 to base of 7, median branch to halfway 4 and 5.

Hind wing with cubital pecten; broadly subtrapezoidal, over 1, apex rounded. Vein 2 from beyond middle, 3 and 4 very short-stalked from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base; dorsum in male with a slight marginal roll, open on underside, followed by a concave field on upperside with long hairs throughout, a pencil of hairs on base of vein 1b.

Male genitalia. Intersegmental membrane at the foot of the tegumen with very long, pencil-like corema. Tegumen rather broad. Uncus broad, flattened, rounded or emarginate. Socius small, sometimes parietal. Gnathos ill-defined, only laterally traceable, in middle membranous, but supporting a very large and broad, partly rigid tuba analis. Valva curved, sacculus  $1/2$ , with a costal  $Spc_1$  of long bristles, a compact  $Spc_2$  halfway upon disc and a peculiar  $Spc_3$ , marginal and formed of two geniculate very large and long spines, sometimes unequal. Cucullus bristles forming an oblique strong pecten of diverse length or absent. Cucullus of diverse length and shape, broadly semioval. Aedeagus moderate, cylindrical, robust, curved; cornuti, a field of small dentations.

Female genitalia. Edge of seventh sternite aciculate. Ostium, an aciculate cup. Col-

liculum a long and strong tube. Signa two, unequal, large, flat, obtuse teeth, denticulate along edge, basal plate scobinate.

Type-species, *Argyroploce operosa* Meyrick, 1911 (Woodlark Id.).

A peculiar, isolated group of large species with uniform fuscous-grey colouring and a paler characteristically marbled posterior half of fore wing. The geniculate long spines of  $\text{Sp}_{c_3}$  are unique, as also are the flat denticulate signa which apparently point out a relationship with the bicornute *Neopotamia* group, also adorned with very robust signa.

#### Key to the species of *Rhodocosmaria*

1. Median fuscous band broader, narrowed downwards, contrasting with glossy whitish-leadened basal half of wing; lower half of furcate terminal spot almost reaching that band.  $\text{Sp}_{c_2}$ , a sheaf of stiff bristles . . . . . *occidentalis*
- Median fascia narrower, less attenuated, less contrasting with grey basal half of wing; lower half of that spot shorter, reaching about halfway towards band.  $\text{Sp}_{c_2}$ , a series of stout spines . . . . . *operosa*

#### *Rhodocosmaria occidentalis* spec. nov.

(figs. 59-61)

♂♀ 18-20 mm. Head very pale tawny, in female darker. Palpus pale tawny, apical segment deeper tawny, in female also apex of median segment suffused with deeper tawny-lilac. Thorax fuscous-lilac, apex mixed with blackish. Abdomen dark olive-grey-brown, dorso-laterally suffused with black.

Fore wing oblong-subtruncate, costa moderately curved throughout, apex obtuse, termen slightly convex, little oblique above, rounded below. Basal half pale lilac-grey, with a leaden gloss, irregularly strewn with a few minute purple points; costa with a series of slender faint transverse lines; a large, rather ill-defined patch of dull vinaceous-grey suffusion along basal third of dorsum, reaching above fold; a little oblique moderate, median transverse brown fascia, becoming suffused and touched cinnamon anteriorly, deeper brown posteriorly, finely whitish-edged there, well-defined, with numerous short teeth, prominent below costa, concave above middle, gradually becoming convex downwards; about posterior half of wing pale whitish-lilac, along fascia darker, bluish-lilac, throughout rather obscured by leaden-grey, with numerous purple lines along veins and anteriorly short semicircular transverse lines; a large, semioval terminal darker lilac-fuscous patch, anteriorly not reaching transverse fascia, posteriorly with an attenuated stalk descending to termen above tornus; this patch centred with a horizontal pale lilac dash and traversed by very slender dark veins; an oblique dark mark before apex. Cilia dark leaden-grey, dusted with whitish and vinaceous, a purple basal line.

Hind wing glossy light grey-fuscous with a yellowish tinge, apical third with a deep fuscous-purple suffusion, narrowed downwards, reaching tornus. Cilia whitish-grey,

with a fuscous subbasal shade and a yellowish basal line; along dorsum cilia pale fuscous.

Male genitalia. Uncus broad, top concave. Socius short, parietal. Valva shorter and broader than in *operosa*; Spc<sub>1</sub>, marginal bristles, Spc<sub>2</sub>, a conical dense tuft below middle of disc of sacculus; Spc<sub>3</sub> spines very large, subequal; pecten of spines along base of cucullus absent; cucullus broadly semioval.

Female genitalia. Edge of seventh sternite shallowly and broadly excised, notched in middle, aciculate edges narrow. Ostium with posterior edge sinuate. Signa large.

Malay Peninsula, Kuala Lumpur, 26.ix.1924, larvae feeding on *Mesua ferrea* (Guttiferae), 1660 (G. H. Corbett and B. A. R. Gater), 1 ♂, holotype, genit. slide 6476, 1 ♀, allotype, genit. slide 6477; 2 ♂, 1 ♀, 31.i.1930, 16.iv.1931, iv.1931, paratypes (BM).

Very similar to *R. operosa* (Meyrick), but differently tinged, with a larger preterminal spot and distinct genitalia.

***Rhodocosmaria operosa* (Meyrick, 1911) comb. nov.**

(figs. 62, 71, pl. 1 fig. 3)

*Argyroploce operosa* Meyrick, 1911a: 272 (♀, Woodlark Id.). — Clarke, 1955: 225.

Distribution. New Guinea: Woodlark Id.

New Guinea, "Woodlark I., ASM., .05" (in Meyrick's hand), "*Argyroploce operosa* Meyr., 2/1, E. Meyrick det., in Meyrick Coll.", "*operosa* Meyr." (in Meyrick's hand), 1 ♀, lectotype, hereby designated. The same label, but "2/2", 1 ♀, (syntype) = paratype (BM).

East Papuan Is., d'Entrecasteaux Is., Woodlark Id., 1897 (Meek), 1 ♂, genit. slide 7933 (Walsingham Coll. 18108), ♀, genit. slide 7934 (Walsingham Coll. 18110), 1 ♀ (Walsingham Coll. 18109). Goodenough Id., 1897 (Meek), 5 ♀ (Walsingham Coll. 18107, 18142 and 18143; BM).

Moluccan Is., Obi Major Id., ix.1897 (Doherty), 1 ♀, genit. slide 7941; 2 ♀ (BM).

Solomon Is., Ysabel Id., Tatamba, 2.x.1953 (J. D. Bradley), 1 ♂, genit. slide 6478 (BM).

Male genitalia. Uncus subconical, rather slender. Socius small, free. Gnathos with attenuated small sclerites at the sides. Valva long and slender, angulate. Spc<sub>1</sub> absent, Spc<sub>2</sub> probably represented by a pecten of very strong dark spines along edge of cucullus; Spc<sub>3</sub> spines very unequal, anterior long, posterior short. Cucullus angulate, with a short corona of spines along base of edge.

Female genitalia. Edge of seventh sternite abruptly and deeply emarginate, only narrow edges inside emargination darkly aciculate. Ostium with anterior edge notched in middle, posterior straight. Signa unequal, slightly smaller than in *R. occidentalis* spec. nov.

The preterminal spot is shorter, rounded and horizontally furcate, with a round additional dot before lower branch. The ground colour is dull, deeper fuscous-lilac, vinaceous patch at base of dorsum ill-defined.

#### 4. SUBTRIBUS ZOMARIAE NOV.

Signum, a stellate or substellate scobination.

Scent organ, a well-developed, separate dorsal lobe and tibial pencil, seldom absent.

A peculiar group with a tendency to diverse strongly complicated development of the gnathos region, except in *Thysanocrepis* Diakonoff. Uncus apparently absent, socii voluminous but simple. Valva diversely shaped, usually with more or less complicated spine clusters. Sterigma well-developed, with lateral more or less pointed lobes.

The group combines a plesiomorphic absence of uncus with apomorphic features: usually a normal scent organ and also a complicated gnathos.

#### Key to the genera of Zomariae

1. Fore wing with chorda originating from between 11 and 10 . . . . . *Actinocentra*  
— Fore wing with chorda originating from halfway 10 and 9 . . . . . 2
2. Hind wing with a transverse vein connecting upper edge of cell with vein 8  
*Eubrochoneura*  
— Hind wing without such additional vein . . . . . 3
3. Fore wing with 7 and 8 closely approximated towards base; 9 remote from 8  
(1/3 distance 9-10) . . . . . *Thysanocrepis*  
— Fore wing with 7 and 8 moderately approximated at base; 9 approximated to 8  
(about 1/6 distance 9-10) . . . . . *Zomaria*

#### *Zomaria* Heinrich, 1926

*Zomaria* Heinrich, 1926: 111 (type-species, *Penthina interruptolineana* Fernald, North America, by original designation). — Obratzsov, 1958: 233.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna in male moderately thickened, short-ciliated, in female normal. Palpus rather long, porrected, moderately sinuate, median segment abruptly dilated beyond middle, smoothly scaled, rough along apex, terminal segment moderate, porrect, subobtuse. Thorax without a crest. Posterior tibia slightly thickened by closely appressed scales, above also closely appressed, but longer, forming a groove in which fits a short slender black pencil from base. Abdomen normal.

Fore wing oblong, truncate, costa considerably curved, posteriorly slightly less curved and faintly prominent beyond end of vein 11, apex subrectangular, terminally gently concave and vertical above, gently prominent and rounded below. Vein 2 from beyond 2/3, 3 from angle, 3-5 approximated at base, 4 closer to 5, 7 separate, to termen, 8 from upper angle of cell, 9 rather close to 8, 10 from before middle of distance 9-11, 11 from middle; chorda from beyond middle distance 9-11, to base of 7, median branch to below base of 5.

Hind wing with cubital pecten; semioval, pointed, about 1; dorsum with a slender pointed free lobe, rolled downwards. Vein 2 from 2/3, 3 from angle, separate, but closely approximated at base to 4, 5 closely approximated towards base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather broad and moderately high, with straight shoulders. Uncus moderate, weak, rounded above, or sometimes much depressed and then more or less concealed. Socius long, hairy, more or less confluent with uncus (in type-species shaped as a continuous broad edge around sides and top of under side of uncus), sometimes free. Gnathos very large and robust, forming a semicylindre, sometimes with denticulate lower edge and a prominent median beak-like hook (flattened out in mount). Valva characteristic, submembranous, finely haired throughout, deeply constricted beyond sacculus which is robust and triangular (type-species) or small,  $Spc_2$  upon a prong-like arm,  $Spc_3$  sometimes very long. Aedeagus without cornuti.

Female genitalia. A scobinate patch with two ear-like projections. Signum, a scobination, formed of several rounded sclerites, joined at different angles.

Judging from the genitalia, the present genus stands rather isolated. It may be related to *Apotomis* Hübner indeed, as Heinrich thought, but not close. The discovery of the genus in the Papuan region is a great surprise. Heinrich described it for three North American species. Two of these are being transferred now to *Olethreutes* (*Biscofa*) subgen. nov. The species described below is the second true species of *Zomaria* Heinrich which becomes known.

***Zomaria frustulosa* spec. nov.**

(figs. 69-70, 80-81, pl. 1 fig. 4)

♂♀ 14-16 mm. Head sordid white, vertex slightly infuscated, face with two lateral black raised hair-tufts. Antenna pale fuscous, scape dark fuscous. Palpus whitish, median segment with three large black dots arranged in a triangle, terminal segment black below. Thorax pale fuscous-grey, towards anterior edge (except on collar and tegulae) slightly suffused with light tawny; a darker fuscous spot before apex. Posterior tibia pale fuscous, white on the inside, pencil black. Abdomen dark fuscous, uncus dark fuscous, anal tuft light ochreous inside, venter pale ochreous.

Fore wing subtruncate, costa curved, apex rectangular, termen vertical and gently concave above, slightly prominent, rounded beneath. Light leaden-grey, glossy, edges to markings narrowly whitish-ochreous. Markings dark and lighter fuscous, strongly broken and fragmentary. Basal half of costa with three oblique inequally spaced wedge-shaped small marks; an interrupted dark fuscous-brown line from base, about along anterior third of edge of cell, clavate at end; a fuscous-grey shade on dorsum, reaching to 1/3, indistinctly parted by two parallel, slightly oblique pale lines; transverse fascia from middle of costa to end of dorsum, curved and dissolved into a series of small horizontal, dark fuscous-brown strigulae; costal third of fascia continuous by a fuscous suffusion; fascia in middle broadly interrupted, below middle

of disc suffused and less defined; fascia directly followed by a zigzag fuscous stria from upper third of posterior end of fascia, to tornus; posterior part of costa with four larger oblique and wedge-shaped marks, posterior just subapical; a fine fuscous subcostal line, almost touching tips of costal marks, running in a curve from transverse fascia to before upper third of termen, connected there with end of a similar but vertical line from subapical costal dot; an oblong-subclavate, oblique, preterminal mark, connected by a narrow vertical stalk with termen above tornus. Cilia pale ochreous, a small fuscous transverse strigula along basal half from below apex to middle of termen.

Hind wing semipelluculent dark fuscous-bronze, paler towards base. Cilia dark fuscous with a pale basal and a dark subbasal band, cilia along tornus and on dorsal lobe paler, fuscous-grey.

Male genitalia. Uncus strongly depressed, concealed within top of tegumen and appearing absent. Socius large, thick, thinly bristled; gnathos large, sclerotized, an inverted-trapezoidal plate with a median split from upper edge and a flat, porrect hook above this. Valva with a short triangular sacculus with outer edge notched in middle and a prong-like clavate and thorny harpe from above top of primary excision; Spc<sub>3</sub>, a long pencil from a digitoid curved process, cucullus large, clavate.

Female genitalia. Sterigma T-shaped, aciculate, sclerotized, lateral lobes hanging down, pointed. Colliculum rigid, a straight tube (stalk of the T). Signum moderate, asteroid, with a rounded scobinate centre.

New Guinea, Geelvink Bay, Ron Id., 1897 (Doherty), 1 ♂, holotype, genit. slide 7719; vii.1897, 1 ♀, allotype, genit. slide 7729; 4 ♂, paratypes. d'Entrecasteaux Is., Fergusson Id., 25.x-10.xi.1894 (Meek), 1 ♂, paratype. Milne Bay (A. S. Meek), 1 ♂, 1 ♀, paratypes (BM, LM), 7 ♂, 2 ♀.

A moderate species, with strongly broken up markings, somewhat resembling the type of markings of *Asymmetrarcha* relationship. *Z. frustulosa* is in all particulars a close relative of the Northern American *Z. interruptolineana* Fernald!

#### *Actinocentra* gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis absent. Antenna in male subserrulate, long-biciliate, ciliations 2. Short, apparently bisegmented maxillary palpus exposed. Labial palpus long, porrected, median segment slightly sinuate, with appressed scales, slightly roughish along lower edge, basal segment roughish, terminal segment about 1/2 median, drooping, exposed, top rounded. Thorax smooth. Abdomen normal. Posterior tibia normal, smooth.

Fore wing oblong, rather narrow, pointed, termen straight and oblique. Vein 2 from 2/3, 3 from angle, 4 approximated, slightly converging at margin, 5 distant, parallel to 6, 7 slightly diverging, free, to termen, 7-9 approximated, 8 from angle, 10 from beyond halfway 11-9, 11 from before middle; chorda from beyond middle of distance 11-10 to above base of 6, media from towards base to below base of 5.



Hind wing with a cubital pecten, 2 from beyond middle of cell, 3 and 4 separate, almost connate, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen short, broad and rounded. Socius very large, thinly bristled along outer edge only, ending in a transverse thick naked pad. Henion rigid, with transverse lateral densely spined extensions. Valva moderately broad, clavate; sacculus simple, with a well-defined  $\text{Sp}_1$  at margin, preceded by a patch of bristles,  $\text{Sp}_2$  forming a large spiny excrescence, preceded by a small patch of bristles. Primary excision and patch of cucullus bristles absent. Aedeagus moderate and slender.

Female genitalia unknown.

Type-species, *Actinocentra aliena* spec. nov. (S. Sumatra).

Judging from the tegumen part of the male genitalia the present genus may be related with the *Phaecasiophora* group. However, the processes at the base of the valva suggest a relationship with higher Olethreutini, as e.g. *Oestropha* gen. nov.

***Actinocentra aliena* spec. nov.**

(figs. 68, 78-79)

♂ 18 mm. Head white, slightly infuscated (rubbed). Antenna fuscous ringed with white. Palpus with basal segment white, median segment pale grey, dusted with darker grey, terminal segment whitish. Thorax (rubbed) white, shoulder black, a blackish median spot at apex, metathorax white. Posterior tibia creamy white. Abdomen pale grey.

Fore wing oblong, rather narrow, pointed, costa gently sinuate, apex slightly prominent, termen sinuate, oblique. White, markings black mixed with pale grey (rather rubbed). Costa with some 10 dark spots alternating along anterior half of costa with slender black strigulae, along posterior half alternating with pairs of small transverse marks; more than anterior half of wing with some four oblique transverse streaks, originating from costal dots, anterior streak subbasal; on lower half of disc these streaks crossed by four strongly inwards-oblique streaks; a transverse fascia from beyond middle of costa to lower angle of cell, thence dilated and curved, to tornus, in middle emitting a straight thick branch to apex and almost touching a triangular spot just below middle of termen. Cilia black, with a white basal line and white-barred posterior half.

Hind wing pale fuscous, becoming semipellucet on basal 2/3. Cilia concolorous, with a whitish basal line.

Male genitalia as described with the genus above.

South Sumatra, Mt. Tanggamoës, 2100 m, summit, 19-21.iii.1940 (M. A. Lieftinck), 1 ♂, holotype, genit. slide 4958 (LM). Rather rubbed, but markings discernible and the genitalia very characteristic.

**Eubrochoneura** Diakonoff, 1966

*Eubrochoneura* Diakonoff, 1966: 62, figs. 66-69 (type-species, *Argyroploce parasema* Meyrick, 1911a, Solomon Is., by original designation).

Head with appressed scales. Ocellus posterior. Proboscis short. Palpus moderate, curved and ascending in male, subascending in female, with closely appressed scales, median segment strongly dilated, in female slightly roughish. Antenna long-biciliate, ciliations 1 in male, short-ciliate in female. Thorax with crest. Posterior tibia slightly thickened, without pencil.

Fore wing oblong-truncate, narrow, costa posteriorly obliquely truncate, apex obtuse. Vein 2 from 5/6, 3 from angle, 4 closely approximated at base, 7 separate, to termen, 9 from 2/3 distance 8-10, 10 from beyond 3/4, 11 from about middle, chorda from halfway 9-10, to base of 7, median branch to base of 5.

Hind wing with cubital pecten; in male costa posteriorly with a modified fringe of hairs. 2 from 2/3, 3 from angle, 4 almost connate, 5 closely approximated at base, 6 and 7 closely approximated towards base; vein 8 furcate towards cell.

Male genitalia. Tegumen subtriangular, top rounded. Uncus absent. Socius large, weak, projecting upon a vertical membraneous fold. Gnathos dark, rigid, Y-shaped. Valva long, oval, finely long-haired throughout, of two distinct sheets, joined along edge except midventrally, along an excision, a sheaf of long bristles projecting basad between two sheets; Spc<sub>1</sub> shifted basad. Aedeagus robust, cornute; a sheaf of spines and a patch of dentations.

Female genitalia. Sterigma small, annular, colliculum rigid, tubular, straight, very long. Signum, a large scobinate gully, with several petal-like scales, radiating at the end.

A remarkable, specialized form of uncertain affinity and apomorph character. The stellate signum and strong gnathos assign it to the present group, at least tentatively.

Key to the species of *Eubrochoneura*

1. Fore wing rather narrow, oblong, not dilated, termen vertical. . . . . *parasema*  
— Fore wing broad, dilated, termen outwards-oblique . . . . . *aversa*

***Eubrochoneura parasema*** (Meyrick, 1911)

(figs. 72-77)

*Argyroploce parasema* Meyrick, 1911a: 267 (♀, Solomon Is.). — Clarke, 1955: 235. — Diakonoff, 1966: 26 (holotype genit. ♀ figured, described; new genus).

*Eubrochoneura parasema*; Diakonoff, 1966: 62, 64 (type-species, gen. nov.).

Distribution. Solomon Is., Bismarck Is., St. Matthias Id., Squally Id.

New Guinea, Milne Bay (A. S. Meek), 1 ♀. St. Matthias Id., vi-vii.1923 (A. F.

Eichhorn), 2 ♂, 1 ♀, genit. slide 7946 ♂ (BM). — Misool Id., Fakal, 0-75 m, 8.ix-20.x.1948 (M. A. Lieftinck), 1 ♀, no abdomen (LM).

Bismarck Is., New Hanover, iii-iv.1923 (A. S. Meek), 1 ♂ (BM).

South Celebes, Mt. Lompobatang, Borong Rapoa, 850 m, 19-24.viii.1949 (A. Diakonoff), 1 ♀, genit. slide 5841 (LM).

A species of moderate size and characteristically shaped fore wing: oblong, truncate and rather narrow, with a sinuate costa, rounded-prominent at  $1/4$  and more so, at  $3/4$ , before apex straight and oblique, apex shortly produced. Pale purplish-ochreous, mixed with leaden colour and variably marked with deep purple: usually a small spot on middle of costa, another on dorsum before tornus and 3-4 longitudinal streaks in disc: two from or before base, one curved before apex, to termen above tornus, a fourth straight streak below this.

Hind wing light tawny-bronze.

Male and female genitalia, as described with the genus.

***Eubrochoneura aversa* spec. nov.**

(fig. 67)

♀ 14 mm. Head glossy fuscous-purple. Palpus long, more than eye diameter projecting beyond face, porrect, triangularly dilated, dark fuscous-purple, base whitish. Thorax dark fuscous-purple, glossy, with a double posterior crest. Abdomen pale ochreous, anal tuft fuscous, with a golden gloss.

Fore wing broad and rather short, dilated, costa curved at base, concave in middle, curved and prominent posteriorly, apex pointed and gently prominent, termen deeply concave above, rounded and prominent below, slightly outwards-oblique. Pale grey, strewn with metallic glossy pale leaden scales, marbled and veins narrowly streaked, with purple. Extreme costal edge pinkish along anterior third, with some six black dots, middle of concavity with a purple marginal streak, posterior convexity black with three white spots, faintly continued as pale bands across wing; basal third of wing from costa to cell suffused with anthracite-grey; an inwards-oblique band of dark fuscous-purple suffusion from  $2/5$  of dorsum to costal concavity, anterior edge with a deep purple, strongly inwards-oblique moderate streak, with posterior end curved upwards; an ill-defined strongly suffused band of dark fuscous suffusion from end of concavity to  $3/4$  of dorsum; a similar but narrower fascia of marbling, from costa before apex to dorsum above tornus, narrowed downwards; posterior third of wing, except dark marbling, rather conspicuously greyish-white, almost entirely glossy metallic pale leaden in certain lights. Cilia (imperfect) whitish, with a dark fuscous median band.

Hind wing fuscous grey, becoming paler grey towards base, with a faint bronze gloss, dark tips of scales causing fine transverse striation; upper side with two pencils of pale fuscous hairs, one long, from base of vein 1a, directed below this vein; another

shorter, from base of 1b, directed along this vein, both slightly sunk in moderate folds. Cilia fuscous with a darker subbasal band.

Female genitalia. In all respects similar to those of *E. parasema* (Meyrick).

Male unknown.

South Celebes, Mt. Lompobatang, 850 m, Borong Rapoa, 19-24.vii.1949 (A. Diakonoff), 1 ♀, holotype, genit. slide 5841 (LM).

Neuration of the hind wing similar to that in ♀ of *E. parasema*, except that vein 8 is normal and not furcate at base. Therefore this feature proves to be only a specific and not a generic character, as I already thought in 1966.

### *Thysanocrepis* Diakonoff, 1966

*Thysanocrepis* Diakonoff, 1966: 45, figs. 47, 58 (type-species, *Argyroploce crossota* Meyrick, by original designation).

Head with appressed scales, roughish on vertex, a flat tuft on forehead. Proboscis developed. Antenna pubescent in the two sexes. Palpus 2 times diameter of eye, sub-ascending, median segment strongly dilated, roughish above and beneath, terminal segment long, slightly under 1/2, porrect, subobtuse. Thorax smooth. Posterior tibia with appressed scales.

Fore wing rather broad, dilated, costa characteristically but slightly bent and prominent before angle, straight in middle. Vein 2 from 3/5, 3 from angle, distant from 4, 4 and 5 approximated, 7 separate, to termen, towards base closely approximated to 8, both from angle, 6 more or less remote (above middle of discoidal), 9 from 1/3 distance 10-8, 11 from middle. Chorda very short, from before base of 9 to origin of 7, more distinct in female, median branch distinct, to just below base of 5.

Hind wing semioval, 1, dorsum in male with a marginal expansile pencil of long hairs; 2 from 2/3, 3 from angle, separate from 4, 5 closely approximated at base, discoidal indefinite, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather low, rounded, somewhat Eucosmini-like. Uncus absent. Socii erect, rather thick, submembranous. Gnathos absent. Valva rather short, sacculus broad, 1/3, long-haired before margin, top obtusely projecting, followed by primary excision, disc of valva naked. Cucullus slender, clavate, its base with an obtuse prominence crowned with thin bristles, top of cucullus bristly. Aedeagus moderate, little narrowed.

Female genitalia. Sterigma and 8 + 9 abdominal segments sclerotized, lamella antevaginalis, a simple triangular lobe, lamella postvaginalis deeply punctate, with lateral subtriangular excrescences. Colliculum broad, below narrowed and bivalval. Cestum present, a pear-shaped, moderately sclerotized dilatation. Signum one, nasket-shaped, with hand-shaped, truncate, divergent teeth.

The chance to study the genitalia of the female allows the assignment of this genus to the present tribe. Superficially the species is very similar to *Eubrochoneura parasema* (Meyrick). In the original sketch of the ♂ neuration the (quite indistinct)

chorda is omitted. At the time, without the evidence of the female genitalia I thought the male genitalia to be Eucosmine. The genus now proves to have nothing in common with "*Articolla*" *prospera* Meyrick.

***Thysanocrepis crossota* (Meyrick, 1911)**

(figs. 63, 66)

*Argyroploce crossota* Meyrick, 1911a: 366 (♂, Solomon Is., New Guinea). — Clarke, 1955: 105. — Diakonoff, 1966: 13 (assigned to a new genus of the Eucosmini).

*Thysanocrepis crossota*; Diakonoff, 1966: 45 (type of new genus).

Distribution. Solomon Is., New Guinea.

New Guinea, Misool Id., Waigama, 0-75 m, 8.ix-20.x.1948 (M. A. Lieftinck), 1 ♀, apallotype, superficially in all respects similar to the male; genit. slide 6366 (LM).

Female genitalia. As described with the genus above.

## 5. SUBTRIBUS SOROLOPHAE NOV.

Signa two or one, long, granulate or flattened, curved horns or two or one small scobinations, sometimes one of them bearing a small horn.

Scent organ of abdomino-tibial type, abdomen often with long hair-brushes at the sides of segments 3-7, sometimes implanted upon raised papillae; tibia with densely developed brushes of hairs, with a pencil; dorsum of hind wing sometimes with modified pencils of hairs or a slight roll. Sometimes scent organ absent.

Uncus reduced, small and obtuse. Socius slender, pending. Gnathos vestigial. Valva slender, often with a prominent sacculus and a ventral process of the cucullus. Sterigma diversely shaped, calyciform.

A very characteristic group of genera, ranging from the Holarctic to the Australian region, but obviously of southern Asiatic origin where it is widely distributed, with numerous species. Most of these are recognizable by a round or clavate subterminal spot and many, by an elegant green colouring.

### Key to the genera of Sorolophae

1. Signa, two or one large hooks . . . . . 2
- Signa, usually one, more seldom two, scobinations, sometimes one of these with a small central horn. Gnathos invariably absent . . . . . *Sorolopha*
2. Signa, two large curved, granulate hooks. Gnathos sometimes present. Valva slender, or bifid . . . . . *Eudemis*
- Signum, one flat hook. Gnathos absent. Valva broad, voluminous . . . *Eudemopsis*

### Sorolopha Lower, 1901

*Sorolopha* Lower, 1901: 73 (type-species, *S. cyclotoma* Lower, 1901, Australia, by monotypy). — Meyrick, 1911a: 263 (syn. of *Argyroploce*). — Fletcher, 1929: 205 (syn. of *Argyroploce*).

*Acanthohyspoda* Lower, 1908: 319 (type-species, *A. elaeodes* Lower, 1908, Australia, by monotypy). — Meyrick, 1911a: 263, 281 (syn. of *Argyroploce* Hübner). — Fletcher, 1929: 2 (syn. of *Argyroploce* Hübner). — Diakonoff, 1966: 56, figs. 25, 27, 71 (valid genus; *Choganhia* Razowski syn.). — 1968: 47, 51 (subgen. of *Eudemis* Hübner; *Choganhia* Razowski syn.).

**Syn. nov.**

*Alypeta* Turner, 1916: 528 (type-species, *A. delochlora* Turner, Queensland, by monotypy). — Meyrick, 1920: 350 (syn. of *Argyroploce*). **Syn. nov.**

*Alytopeta* Fletcher, 1929: 10 (type-species "*delochlora* T.") (lapsus). **Syn. nov.**

*Choganhia* Razowski, 1960: 387, figs. b, 13 (type-species, *Argyroploce sphaerocopa* Meyrick, 1929, Tonkin, by original designation).

Head with loosely appressed scales, roughish on crown. Proboscis developed. Ocellus posterior. Antenna in male thickened, fasciculate-ciliated, ciliations 1/2. Palpus moderately long, porrected, median segment strongly dilated, triangular, terminal

segment moderate, exposed, slightly drooping, obtuse. Thorax with a slight double posterior crest. Posterior tibia in male sometimes strongly dilated or expanded by whorls or brushes of dense hairs, usually with a pencil from base above. Abdomen in male sometimes with a pair of long hair-pencils at the sides of each segment or on several pairs of segments, on raised papillae; sometimes abdomen normal.

Fore wing elongate-subtruncate, moderately broad, termen usually slightly rounded, little oblique. Vein 2 from beyond  $2/3$ , 3 from angle, close to or rather distant from 4, 5 distant, 6 slightly diverging from 5 towards apex, 7 separate, diverging, to termen, 7 to 9 equidistant at base, seldom 7 and 8 almost connate, 11 from before middle of cell, chorda developed, from just beyond 10 or from about  $2/3$  between 11 and 10 to between 6 and 7; median branch also developed, sinuate, from towards base to below base of 5.

Hind wing with a cubital pecten; with tornus in male sometimes slightly modified, covered with scent scales, sometimes causing abnormal venation, subject to considerable variation in the male. Vein 2 from  $1/2-2/3$ , 3 from before angle, 4 remote from angle, or 3 and 4 connate from angle, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen usually narrowed towards top, more or less erected-triangular. Valva complicated, ventral side of cucullus being more or less prominent triangularly and crowned with a hook; sacculus well-defined, usually with a strong  $Spc_1$  at top;  $Spc_2$  and  $Spc_3$  mostly absent. Gnathos, a weak, membranous transverse band, usually absent.

Female genitalia with sterigma, an aciculate short funnel, of which often only fore side is developed (lamella antevaginalis), with a deep median split, colliculum long. Signum one, thorn-shaped, or two, rounded small patches of thickened wall structure.

In my recent treatment of the genus (1968) I regarded it as a subgenus of *Eudemis* Hübner, but in my paper of 1966 (written later than the first, but appeared earlier), I restored it to the generic rank. Although the relation of the two groups is close, I am now satisfied that it is preferable to regard *Sorolopha* as a distinct genus and a tropical relative of *Eudemis*. For this separation speak, in the first place, the more complicated sterigma and the peculiar large, paired signa of *Eudemis*, the comparatively simple valva and the presence of one or two pairs of spine clusters  $Spc_3$ , being long pencils on the outer side of the sacculus of the species of this genus.

Besides, the generic name *Acanthothyspoda* Lower, 1908, now appears to be a junior subjective synonym of the name *Sorolopha* Lower, 1901. The type-species of the latter, *Sorolopha cyclotoma* Lower, from Australia, is a characteristic member of the present genus, superficially closely resembling *S. archimedi* (Meyrick) and also belonging to that group, but with quite distinct male genitalia.

*Sorolopha* is a close but distinct, characteristically tropical relative of Palearctic *Eudemis*, developed into a great number of species throughout Southern Asia which are comparatively easy of recognition superficially. Consequently most of Meyrick's species, discriminated by him by the superficial characters only, prove to be valid and

only a few to be synonyms. Many species are elegantly green-coloured and have a circular large preterminal spot in the fore wing.

A third member of the present close group of genera is *Eudemopsis* Falkovitch, from the East of the Palaearctic region.

The male genitalia show considerable specific variation.

The present arrangement of species is based on the development and shape of the valva and socii, and where possible, of the signa or signum. However, of several species only one sex is available which makes the arrangement somewhat arbitrary. The signa are especially useful, in addition to the male sexual characters.

The development of the valva may have been as follows. From the simple, not or little dilated, slender and long ancestral valva of the general *Hedya* stock, the comparatively simple valva of *Eudemis* might have developed, together with moderate socii and a distinct  $Spc_3$ .

From this simple type the genitalia of *Eudemopsis* Falkovitch could be derived, with a broad and short, but simple valva and moderate, slender, pending socius.

The plesiomorphic *Sorolopha* species possess a long and slender valva, devoid of  $Spc_3$ , while the socii are strongly lengthened and clavate.

This valva gradually develops a prominence of the base of cucullus; another path of development leads to a simple sacculus with a triangular basal part of cucullus, leading in its turn, first, to a simplified valva with a thickened but rounded cucullus, and second, to a more slender and long valva with the cucullus projection ending in a spine and with the sacculus gradually developing a triangular prominence at the base, being either well or not adorned with a strong  $Spc_2$ ; when at last the cucullus process becomes a spiny, distad-directed appendage, the final step in this development is reached.

The female has in the *Eudemis* type, surprisingly, two very large and hooked, thorn-like socii and so is of the bicornute type, unusual for the entire tribe. However, these socii have a strongly granulate surface and therefore are quite different from the usual cornute signa in the Eucosmini.

In *Eudemopsis* one signum is lost, while in *Sorolopha* a further reduction takes place, giving rise either to a modest, acute single thorn, or to single or paired scobinations, being the basal plates or plate of the disappeared thorns.

For the sake of convenience the species of the present group are arranged following this hypothetical course of development.

Over twenty species have been described so far and doubtless many more will be gradually discovered in Southern Asia. Some might have been misplaced in other genera.

#### Key to the species of *Sorolopha*

1. Fore wing ochreous-whitish, marbled with pale blue-grey, markings brown  
*agathopis*
- Fore wing pale grey, fuscous or brown, with darker, vinaceous, brown, grey or



- purple markings, without a trace of green colour . . . . . 2
- Fore wing with green colour predominant, developed or at least distinctly visible . . . . . 15
2. Fore wing with a single sinuate longitudinal fascia, sometimes divided . . . . . 3
- Fore wing with a transverse fascia distinct, at least on costal half . . . . . 6
3. Fore wing with longitudinal fascia divided at  $2/3$ , so as to form a terminal spot . . . . . 4
- Fore wing with fascia entire . . . . . 5
4. Fore wing with fascia purple, not reaching dorsum, terminal spot round *agalma*
- Fore wing with fascia black, traceable to dorsum, terminal spot oval, not broader than fascia . . . . . *camarotis* ♀
5. Fore wing: dark fascia not connected with middle of costa; hind wing unicolorous pale grey . . . . . *camarotis* ♂
- Fore wing: dark fascia connected with middle of costa; hind wing dark grey, paler at base . . . . . *stygiaula*
6. Fore wing with a basal patch, sometimes this reduced to a distinct wedge-shaped dark spot on dorsum beyond base . . . . . 7
- Fore wing without a well-defined basal patch or subbasal spot on dorsum . . . . . 11
7. Hind wing orange-bronze, marginal third blackish; dorsal spot shaped as an equilateral triangle . . . . . *bathysema*
- Hind wing grey or fuscous with a bronze gloss . . . . . 8
8. Fore wing: transverse fascia with outer edge convex, inner edge suffusedly extended anteriorly, almost to dorsal spot; larger species (16 mm) . . . . . *cyclotoma*
- Fore wing: transverse fascia with outer edge usually sinuate or obtusely pointed, never extending anteriorly to dorsal spot; smaller species (14 mm) . . . . . 9
9. Transverse fascia separated from terminal spot by a moderate pale fascia of ground colour . . . . . 10
- Transverse fascia separated from terminal spot by a slender white line only . . . . . *compstitis*
10. Dorsal spot more slender, top exceeding middle of wing height, directed to costa before origin of transverse fascia . . . . . *a. archimediass*
- Dorsal spot broader, top not exceeding middle of wing height, directed exactly towards origin of transverse fascia on costa . . . . . *archimediass oxygona*
11. Transverse fascia more than twice as broad in middle as on costa, with a rounded anterior prominence, triangularly descending below fold. . . . . *plinthograpta*
- Transverse fascia entire, not dilated or not more than twice dilated above middle . . . . . 12
12. Fore wing: transverse fascia interrupted or obliterate on dorsum . . . . . *semiculta* (part.)
- Fore wing: transverse fascia complete . . . . . 13
13. Fore wing pale grey, terminal spot rather small, clavate, as dark as transverse fascia; hind wing glossy fuscous-purple . . . . . *artocincta*

- Fore wing darker grey, terminal spot large, round, paler than transverse fascia; hind wing glossy grey, without purple (or sub 14 below) . . . . . *metastena*
14. Fore wing rather dark grey with a faintest green tinge, basal patch reduced to subbasal dark spots, transverse fascia entire, dark grey, terminal spot large, round, pale fulvous (cf. also sub 13, above) . . . . . *metastena*
- Fore wing not thus coloured and marked . . . . . 15
15. Fore wing with basal third distinctly paler than darkly suffused posterior 2/3 (except dorsum and tornus) . . . . . 16
- Fore wing with basal half not paler than other parts of wing . . . . . 17
16. Basal third whitish-green, dark markings confluent, blackish . . . *melanocyclus*
- Basal third light bluish-green, transverse fascia (upper part) and terminal spot distinct, ground colour of apical 2/3 vinaceous-grey (only in certain lights rather luminescent, but still darker than base of wing) . . . . . *caryochlora*
17. Ground colour rather deep green, dark markings moderately contrasting, suffused; a small white mark before terminal spot or white marks beyond transverse fascia very distinct . . . . . 18
- Ground colour much paler than markings, otherwise no strikingly paler markings at those places or ground colour different . . . . . 22
18. Fore wing rich green, limited silvery-white suffusion edging transverse fascia posteriorly, often separated in a median and a submedian spot, basal patch formed by several irregular dark spots . . . . . *mniochlora*
- Fore wing with a single silvery-white small mark before terminal spot . . . 19
19. White spot before terminal spot minute, round; a black triangular spot on dorsum . . . . . *englyptopa*
- White spot inverted-V-shaped, irregular; no dark dorsal spot . . . . . 20
20. Hind wing blackish with a purple gloss . . . . . *plumboviridis*
- Hind wing grey-fuscous with a purplish gloss . . . . . 21
21. Fore wing with transverse fascia deep green, well-defined, with an oval large appendix in centre of wing . . . . . *herbifera*
- Fore wing with transverse fascia entirely suffused except on costa and indefinite *hydrargyra*
22. A dark, well-defined rounded, clavate or triangular terminal spot present, often accentuated by a much paler edge . . . . . 23
- No such terminal spot or it is indefinite . . . . . 48
23. Edge to dark terminal spot much paler than other markings, at least, along upper half of spot, or a paler triangle in front of spot . . . . . 24
- Edge to terminal spot not much paler than other markings . . . . . 37
24. A paler triangle on costa, in front of terminal spot which is erect-triangular, deep brown . . . . . *bryana* ♀\*)
- Paler markings limited to an edge to upper half of terminal spot which is not

\*) *S. homalopa* Diakonoff from the Philippine Is. is closely allied but differs by the sterigma being higher, less depressed than in *bryana*, forming a distinct high "collar".

- brown . . . . . 25
25. Terminal spot pale ochreous, almost confluent with white edge, white colour filling out apex . . . . . *euochropa*
- Terminal spot not so pale . . . . . 26
26. Ground colour of posterior half of wing throughout or only around terminal spot, pale pink . . . . . 27
- Ground colour of posterior half of wing whitish, bluish or greenish . . . . . 28
27. Posterior half of wing throughout tinged pink and marked vinaceous *liochlora*
- Posterior half of wing with a broad pinkish white ring around terminal dark brown spot . . . . . *elaeodes temenopis*
28. Ground colour below costa posteriorly and on termen much darker than pale edge to terminal spot . . . . . 29
- Ground colour below costa posteriorly and on termen as pale and more or less confluent with pale edge to terminal spot . . . . . *sphaerocopa*
29. Pale edge of terminal spot above not narrow, extending halfway to costa. . . . . 30
- Pale edge of terminal spot very narrow, ground colour below costa and on termen suffused with bright green or light blue-green. . . . . 31
30. Male valva with a triangularly projecting ventral edge of cucullus. Female with a large sterigma, asymmetrical, broadly V-shaped; lobes of lamella postvaginalis irregularly truncate above; signa two, small. . . . . *phyllochloa*
- Male valva with an obtuse ventral projection of cucullus. Female sterigma simply V-shaped; lobes of lamella antevaginalis transversely oblong, upper edge convex; signum one, large . . . . . *e. elaeodes*
- Male unknown. Female sterigma strongly elongate longitudinally, lobes of lamella antevaginalis erected medio-caudally, rounded-triangular, longer than broad; signa two, very small . . . . . *cervicata*
31. Ground colour on costa posteriorly dull greyish-green, in tornus paler, bluish-green, edge of subtriangular fuscous terminal spot narrow, greyish-white *asphaeropa*
- Not thus . . . . . 32
32. Ground colour posteriorly rather bright and silky or light and dull, moss-green 33
- Ground colour posteriorly glossy light bluish-green. . . . . 34
33. Transverse fascia on lower half broadly dilated along dorsum to base. . . . . *dictyonophora*
- Transverse fascia on lower half not so dilated . . . . . 35
34. Hind wing purplish-brown, fore wing rather narrow ( $1:2\frac{1}{2}$ ) . . . . . *authadis*
- Hind wing bronze-purple, semipellucant at base . . . . . *timiochlora*
35. Transverse fascia rather narrow, excavate on lower half anteriorly (male with brushy posterior tibiae) . . . . . *arctosceles*
- Transverse fascia gradually dilated downward, not excavate (males unknown) 36
36. Transverse fascia rather strongly suffused or tinged fuscous, concave above dorsum . . . . . *prasinias*

- Transverse fascia deep moss green, posterior edge above dorsum convex, its median tooth blackish . . . . . *elaeodes parachlora*
37. Fore wing with a subtriangular green spot on middle of dorsum, edged with deep green . . . . . *aeolochlora*
- Fore wing without a green dorsal spot . . . . . 38
38. Fore wing with a white spot on upper angle of cell . . . . . *margaritopa*
- Fore wing without such white spot . . . . . 39
39. Hind wing orange-bronze or with an orange dorso-basal spot . . . . . 40
- Hind wing grey or fuscous, sometimes with a black apex. . . . . 41
40. Hind wing orange-bronze. . . . . *rubescens*
- Hind wing blackish with an orange dorso-basal spot . . . . . *auribasis*
41. Fore wing whitish-green, markings bright green . . . . . *eurychlora*
- Fore wing not thus . . . . . 42
42. Fore wing unicolorous rather deep green, markings light ferruginous, little contrasting; hind wing dorsum with long grey hairs above . . . . . *bryana* ♂
- Fore and hind wings not thus . . . . . 43
43. Hind wing unicolorous light glossy grey, fore wing with upper half of transverse fascia fuscous-black . . . . . *atmochlora*
- Hind wing not thus, fore wing: fascia not so dark. . . . . 44
44. Transverse fascia brownish, not reaching dorsum . . . . . 45
- Transverse fascia green. . . . . 46
45. Transverse fascia and terminal spot chestnut-brown, marked black; no triangle on dorsum . . . . . *nucleata*
- Transverse fascia and terminal spot suffused dark fuscous; a triangular dark spot on end of dorsum; hind wing grey with black apex . . . . . *semiculta* (part.)
46. Transverse fascia narrow, with a quadrate appendix in middle of anterior edge . . . . . *autoberylla*
- Transverse fascia without an appendix anteriorly . . . . . 47
47. Transverse fascia moderate, not dilated, with undulate edges . . . . . *dyspeista*
- Transverse fascia spindle-shaped, narrow at ends, anterior edge concave, posterior toothed . . . . . *chortodes*
48. A bright silvery or orange dot or a large whitish calyciform mark on upper angle of cell . . . . . 49
- No such marks, sometimes female with orange suffusion in that place . . . . . 51
49. A small conspicuously paler silvery or orange discal spot. . . . . 50
- A larger, whitish, calyciform discal mark . . . . . *callichlora*
50. Discal spot greyish-silvery . . . . . *argyropha*
- Discal spot small, pale yellow, followed by a larger orange spot. . . . . *doryphora*
51. Ground colour rather pale olive, markings dark brown . . . . . *agana*
- Ground colour dark brown or red-brown, markings pale green-grey . . . . . *epichares*

*Sorolopha cyclotoma* group of species

Valva moderate, cucullus simple, or with an obtuse dilatation,  $\text{Sp}_1$  and  $\text{Sp}_2$  variably developed.

Sterigma V-shaped, edges thickened and aciculate. Signum, one semioval subscobinate sclerite, or signa two, small, granulate.

***Sorolopha archimedi*s** (Meyrick, 1912) comb. nov.

(figs. 86, 90)

*Argyroploce archimedi*s Meyrick, 1912: 63 (♂, China). — Clarke, 1955: 52.

*Argyroploce purpurissatana* Meyrick, 1930: 604 (nec Kennel, 1901) (Ceylon, on *Litsea glutinosa*).

*Olethreutes purpurissatana*; Clarke, 1958 (nec Kennel, 1901): 540, pl. 269 figs. 4-4a (lectotype design., wings, genit. ♂ figured; *archimedi*s Meyrick, syn.).

*Eudemis archimedi*s; Falkovitch, 1962a: 191 (distinct species).

*Eudemis (Eudemis) archimedi*s; Diakonoff, 1968: 49, fig. 526 (compared with *E. (E) oxygona* Diakonoff.).

Distribution. China: Hongkong. Ceylon.

Food plant. *Litsea glutinosa* (Lauraceae).

China, Hongkong, 1 ♂, paratype, genit. slide 4600 (BM). India, Bengal. Calcutta, 1 ♀, genit. slide 4601 (BM).

Ceylon, Nawalapitiya, 2000 ft, 189.. (Pole), 1 ♀ (BM).

Assam, Khasis, Cherra Punji, v.1895 (Doncaster), 1 ♀ (BM).

West Java, Bogor (Buitenzorg), 250 m, 10.ii.1943 (Mas Soediro), 4 ♂, 3 ♀, genit. slide 6356 ♂. Central Java, Telawa, Seneng and Gedangan, 40 m, teak forest, 16.vii-23.vii, 3.viii, 5-30.x, 30.xi, 10-28.xii, 4.i, 28.ii, 9.iii, 1930-1932, 1935-1936 (L. G. E. Kalshoven, F. A. T. H. Verbeek), 10 ♂, 10 ♀, genit. slides ♂ 4590, 4644, ♀ 4591, 4645. East Java, Mt. Ardjoeno, Tretes, 900 m, e.l. 16.iii.1940 (A. Diakonoff), 1 ♂, genit. slide 4643 (LM).

Food plants: "sentoh" (? *Cinnamomum* spec.), *Eugenia*, "ademati" (? *Litsea chinensis*) and an unknown plant.

Male genitalia very similar to those of the preceding species, but socius decidedly shorter, sacculus with an angular prominence, cucullus broader.

Female genitalia. Sterigma erect-oval, excision rather broad, flanked by tolerably pointed lobes. Colliculum strong, slightly asymmetrical, point narrowed, directed to the left side. Signa, two small scobinations.

The species has the "classical" colouring and markings of the Palearctic species *Eudemopsis purpurissatana* (Kennel) and is very similar also to *S. cyclotoma* Lower. The ground colour is pale grey-fulvous, brighter and pinkish towards costa. The basal patch is represented by a deep purple wedge-shaped spot slightly before 1/4 of dorsum, with acute top reaching above fold and finely edged with whitish; transverse fascia

rather dark fuscous-grey, strongly suffused and becoming obliterate on lower third; its posterior edge is well-defined, rounded, along upper two-thirds marked by a fine white line; apical area beyond fascia evenly paler greyish-pink; preterminal spot large, circular, conspicuously dark purple, finely white-edged except below where it is slightly extended towards middle of termen and becoming paler.

Hind wing rather light fuscous, hardly becoming paler towards base.

The figures of the genitalia are of the ♂ paratype from Hongkong (4600) and ♀ from Calcutta (4601). They are identical with the genitalia of the Javanese material.

**Sorolopha archimediass oxygona** (Diakonoff, 1968) comb. et stat. nov.

*Eudemis (Eudemis) oxygona* Diakonoff, 1968: 50, figs. 65, 111-112, 527 (♀, Philippine Is.)

Distribution. Philippine Is., Luzon.

At present I am convinced that this form, described after a single female specimen, should be regarded as a Philippine subspecies of the preceding species (*archimediass*) from India, Java, and China. The superficial differences are slightly larger size and more robust build, and paler and more contrasting ground colour with a more slender subbasal dorsal spot. But now that I am better acquainted with the female genital characters of *S. archimediass*, I cannot find sufficient differences with *oxygona* in order to maintain this as a species.

Only the type specimen is known. It is in the U.S. National Museum collection.

**Sorolopha prasinias** (Meyrick, 1916) comb. nov.

(figs. 92, 93)

*Argyroploce prasinias* Meyrick, 1916: 562 (♂, Kanara; Ceylon). — Clarke, 1955: 257.

*Olethreutes prasinias*; Clarke, 1958: 540, pl. 269 figs. 2-2b (lectotype design., wings & genit. ♂ figured).

*Eudemis (Acanthothyspoda) prasinias*; Diakonoff, 1968: 52 (new status; record: China, an error).

Distribution. Ceylon (China: err.).

Ceylon, Peradeniya, 1911, 1 ♀, apallotype, genit. slide 8005 (BM).

A moderate, rather light moss-green species, with pronounced transverse strigulation of the costal half of wing with slender dark fuscous lines. The markings are but little darker than ground colour and more moss-green tinged, the basal patch over 1/4, edge traceable, above with dark strigula convex throughout; transverse fascia with suffused and straight anterior edge, concave above dorsum, posterior edge infuscated, finely margined with white, twice-toothed above; posterior part of wing rather tinged vinaceous-brown, markings deep purplish-fuscous, terminal spot so deeply excavate in middle of lower edge as to appear hook-shaped, upper half triangular with rounded top, stalk straight.

Hind wing light fuscous-purplish, apex darker, dorsum with long and dense pale ochreous cilia and a characteristic dark fuscous pencil of cilia from dorsal edge towards its base, lying upon pale cilia.

Male genitalia. Of *archimedioides* type. Tegumen high and slender. Socius slender to middle, top densely short-spined. Valva long and slender, sacculus rounded below, Spc<sub>1</sub> moderate, constriction well-defined; cucullus with a characteristic for this group, oblong-semioval prominence of lower edge, free end of cucullus rather slender, shorter than prominence. Abdomen with long lateral pencils of dark hair-scales on segments 2-8, on segment 1 very short.

♀ 12 mm, apallotype. Similar to the male, but with markings on posterior half of fore wing more contrasting, being rather mixed and partly suffused with blackish-fuscous. Basal patch as in male, edge slightly angulate, transverse fascia more dilated, posterior edge sinuate, without teeth, in middle with blackish spot; terminal spot similar, but excavation rather suffused with fuscous; a small triangular spot preceding terminal spot; costal spots darker, blackish-fuscous.

Hind wing semipellucid dark fuscous-blackish, apical half suffused with denser fuscous-black, subopaque. Cilia whitish, with a dark fuscous subbasal band.

Female genitalia. Similar to those of *S. elaeodes*, but the V-shaped sterigma short and thick, median split but short, upper arms of lamella antevaginalis strongly convex above, their ends rounded downwards. Colliculum moderate. Signum, a moderate concave scobinate plate.

***Sorolopha nucleata* spec. nov.**

(fig. 106)

♀ 18 mm. Head green, appearing lilac in certain lights, face ochreous. Antenna ochreous, scape above suffused with dark fuscous. Palpus bright ochreous. Thorax ochreous-fulvous, a median transverse band of black irroration, sides of thorax and posterior crest green, turning bluish-lilac in certain lights. Abdomen pale ochreous, dorsum suffused and mixed with fuscous.

Fore wing subtruncate, rather broad, costa curved throughout, apex subrectangular, termen straight, little oblique above, rounded beneath. Anterior half of wing forming a bright lilac-grey area, with posterior acute angle projecting to upper angle of cell, anteriorly descending below fold, so as to form two obtuse lobes; remainder of wing bright green, strewn with numerous brown transverse strigulae and a few ochreous points. Basal patch indefinite; a broad bright ochreous streak from above base of dorsum, quickly becoming suffused and narrow, running along vein 1c; another short similar streak along basal third of vein 3; base of dorsal edge suffused with blackish; transverse fascia from middle of costa, oblique, moderately broad, slightly narrowed below costa, dilated towards lower end, abruptly truncate and concave above fold; this fascia brown, below its middle with a black transverse streak interrupted in middle; fascia along this streak finely and thinly edged with white; ter-

minal spot large, rounded, brown, upper part black, finely edged with silvery; this patch crowned with 3-4 ochreous thick lines, alternating with blackish lines or marks; two small brownish-black wedge-shaped marks preceding terminal spot; costa posteriorly with edge suffused with pale yellowish-green, and with five brown-grey spots alternating with minute strigulae, first spot small, other rectangular; a larger brown spot in apex, edged anteriorly with silvery; a silvery terminal line with chestnut dots on veins. Cilia green, slightly suffused with ochreous, a subbasal and a postmedian brown shade, and faint brown bars.

Hind wing semipelluculent dark purplish-fuscos, more transparent and paler towards base, costa with a white elongate spot concealed by fore wing; cilia concolorous, with a paler basal and a darker subbasal line.

Female genitalia. Resembling those of *S. sphaerocopa* (Meyrick), but lamella antevaginalis with a broader and shallower split, lobes simply rounded, lateral angles less porrected. Colliculum much wider but shorter. One signum large, with a flat basal plate and a short small point, another signum minute, rounded.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, viii.1949 (A. M. Neervoort), 1 ♀, holotype, genit. slide 7583 (LM). Belongs to the *cyclotoma* group of species.

***Sorolopha auribasis* spec. nov.**

(fig. 82)

♂ 12 mm. Head light ochreous, face whitish. Palpus black, median segment mixed with white, apex pale ochreous. Thorax pale bluish-green (discoloured pale ochreous). Posterior tibia glossy dark grey on the outside, dull black inwardly, strongly dilated by appressed rather smooth scales above and beneath, at top rounded below, more pointed-rounded and projecting above; posterior tarsus with basal segment elongate, dilated with scales above and beneath, attenuated towards apex. Abdomen glossy ochreous, suffused with pale grey with a brassy gloss, venter whitish grey, sides with dark grey brushes of dense long hairs.

Fore wing oblong-subtriangular, dilated, broadest at 4/5, costa rather curved throughout, more curved posteriorly, apex obtuse, termen straight, moderately oblique above, rounded beneath. Pale bluish-green, becoming paler and more silvery on posterior half. Markings deep purplish-fuscos. Basal patch short, to beyond 1/5, slightly dusted with dark fuscous, edge indicated only by a gradually moderately curved dark fuscous interrupted streak; space beyond patch parted by suffused lighter brownish line; transverse fascia oblique, from before middle of costa to 3/4 of dorsum, deep brown-purple, anterior edge suffused, straight, below middle irregularly invaded with ground colour, posterior edge well-defined, accentuated by a white marginal line, obtusely angulate in middle, straight above and below angulation; costa beyond this with one minute mark and four unequal spots, posterior apical; first spot largest, obliquely transverse, dark brown, lower half mixed moss-green; two following spots moderate, more or less continued by dark convergent lines, running to base



of preterminal spot; this spot obliquely subquadrate, posterior angle produced and forming a stalk to above middle of termen, thence marginal and attenuated, to tornus; upper edge of patch margined with a narrow white line; its lower angle connected by a dark line with dorsum before tornus; apical spot transversely subfasciate. Cilia fuscous-purplish, with a pale basal line and a subbasal dark line.

Hind wing dark purple, costa as far as cell silvery grey, dorsum as far as cell and vein 2 golden-ochreous, this area well-defined. Cilia fuscous-ochreous with a pale basal line and a darker subbasal fascia, cilia along dorsum longer and thick, dark purplish-fuscous.

Male genitalia of *elaodes* type and very similar to those of *S. elaeodes* but with cucullus process pointed-triangular (not truncate) with a single median row of strong bristles; uncus longer and more slender, socius slightly shorter, slightly less clavate and thinly bristled.  $Spc_1$  and  $Spc_2$  confluent, both very weak: sparse hairs scattered across sacculus. Aedeagus more slender and shorter than in *elaodes*. Tuba analis clavate, with moderately thickened sides, well-defined.

Southwest New Guinea, Kapaur, 6-2000 m, 1.xii.1896-e.ii.1897 (Doherty), 1 ♂, holotype, genit. slide 7995; 1 ♂, paratype (BM). Very distinct by the colouring of the hind wing and the clothing of the hind legs.

***Sorolopha timiochlora* spec. nov.**

(fig. 91)

♂ 14 mm. Head milky-green. Palpus greenish-fuscous, mottled with paler, terminal segment moderate, deeper fuscous. Thorax light green, mixed and medially broadly suffused, with dark moss-green. Abdomen brown-black, glossy, lateral hair-pencils very dense and long, black-brown; venter pale. Posterior leg glossy fuscous-grey, turning pale purplish-grey in certain lights, tibia with very dense appressed hairs above, on the inner side forming a large flat and fan-like semicircular grey tuft.

Fore wing elongate-subtriangular, costa gently curved, more curved towards apex, apex subobtusate, termen hardly sinuate, vertical. Pale milky-green turning deep milky-green in certain lights, strewn with irregular sparse bright moss-green strigulae and marks; markings blackish-fuscous. Basal patch to about 1/4, incomplete, irregularly centred with ground colour, edge convex and slightly undulate, a more conspicuous clavate dark patch along base of dorsum from beyond base of wing; transverse fascia moderately broad, from middle of costa to dorsum well before tornus, its outer edge well-defined and convex, its inner edge becoming suffused and indefinite along lower half, ground colour penetrating here into fascia; a parting series of very irregular dark marks from costa to fold, between basal patch and fascia, below touching the latter; posterior half of costa dark with two pairs anteriorly and three pairs posteriorly, of white double marks, two ultimate marks single; fuscous-olive suffusion and some longitudinal strigulation below posterior half of costa; a rounded dark spot halfway between cell and termen above middle of wing, containing a crescentic snow-

white dot above anteriorly, above posteriorly with a rising projection which turns down abruptly and descends parallel to termen to its middle, and is followed by olive suffusion to above tornus; ground colour towards termen becoming silvery-green; an interrupted dark fuscous terminal line. Cilia blackish-fuscous, mixed with light grey, a narrow white basal line, cilia in tornus pale grey.

Hind wing dark bronze-purple, becoming semipellucous and paler towards base. Cilia concolorous, with a whitish basal line.

Male genitalia. Tegumen high, elongate-triangular, uncus rather long, rounded; socius slender, gently curved, hardly dilated towards extremities, top with moderate, thin bristles. Valva simple, sacculus with spread sparse bristles only, cucullus angularly rising, angle rounded-prominent, point rather broad and rounded; spines along lower half of edge, moderate. Aedeagus curved and slender, on a long caulis.

East Borneo, Tabang, Bengen River, 125 m, 1.xi.1956 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 4638 (LM). An elegant species, allied with *S. archimedioides* (Meyrick).

#### *Sorolopha authadis* spec. nov.

(figs. 87, 161-162)

♀ 15 mm. Head and thorax pale, whitish-green (pale ochreous discoloured). Palpus pale green, median segment with a fuscous small spot above, below apex (top of segment discoloured pale yellowish). Abdomen pale tawny.

Fore wing oblong-triangular, rather narrow, costa gently curved at extremities, straight in middle, apex obtuse, termen straight, little oblique above, rounded beneath. Pale olive-green with whitish reflections, glossy, markings moss-green mixed with ochreous (probably ochreous colour due to discolouring). Basal patch indicated by some three concentric curved and irregular fuscous striae, first subbasal, third at 1/4, second halfway these, a fourth subparallel partly interrupted stria, parting space beyond patch; transverse fascia from middle of costa to dorsum well before tornus, well-defined, gradually dilated, anterior edge suffused and notched between fold and vein 1b, slightly concave along median third; posterior edge of fascia slightly convex-prominent along lower 3/4, gently undulate; posterior half of costa and apex with the usual five spots, first small, second hardly larger than the following, all similarly depressed, white marks separating them, short but thick, minutely parted by blackish; terminal spot large, rather erect-transverse, higher than broad, edged along upper half and stalk to termen with a deep purple line, lower edge extending downwards halfway to tornus, marked with a few purple specks and with a purple connecting line from lower end to tornus; a regularly and rather widely interrupted deep purple line halfway below wing margin and terminal spot, encircling it above and posteriorly, becoming double on termen, thence marginal, continuous, to tornus. Cilia grey-fuscous, with a dark fuscous basal third.

Hind wing reddish-bronze, paler on basal half. Cilia ochreous, with a reddish-brown broad subbasal band.

Female genitalia. Similar to those of *S. elaeodes* but with the halves of lamella antevaginalis broader and shorter, colliculum slightly wider. Signum much larger, a single horn.

North New Guinea, Geelvink Bay, Ron [Roon] Id., vii.1897 (Doherty), 1 ♀, holotype, genit. slide 8004, 2 ♀, paratypes, genit. slide 8015 (BM). All three rather rubbed, but the unusual markings of the apical half of fore wing and the reddish-bronze hind wing are characteristic.

### *Sorolopha cyclotoma* Lower, 1901

(figs. 94, 113A)

*Sorolopha cyclotoma* Lower, 1901: 74 (♂♀, Queensland; type of the genus).

*Argyroploce cyclotoma*; Meyrick, 1911a: 273, no. 390 (from x to ii, in Queensland).

Distribution. Australia: Queensland.

A well-preserved male specimen may be redescribed as follows (genit. slide 6355).

Head and thorax slaty-grey, evenly suffused, except on posterior half, with purplish, tuft of thorax deep purple. Posterior tibia extremely dilated and rather thickened with appressed long and dense hair-scales: light ochreous externally, white seen from behind, tibia above ochreous with a blackish pencil from base, interno-laterally and below dark grey; posterior tarsus with basal segment strongly dilated, ochreous externally, snow-white internally.

Fore wing slaty grey, rather suffused except on middle of dorsum, with light pinkish vinaceous, markings deep purple. Basal patch hardly traceable above, to 1/4, edge very obtusely pointed, lower half represented by an acute triangular spot on dorsum beyond base, top to above middle of disc; anterior edge suffused, posterior well-defined by a white line; transverse fascia oblique, spindle-shaped, considerably dilated in and above middle, anterior edge strongly suffused, preceded by a faint black suffusion, posterior edge well-defined, limited by white colour, convex, slightly impressed above middle; preterminal patch large, semicircular, posteriorly prolonged below and dark-strigulated, to middle of termen, upper half white-edged; costa throughout with purplish strigulae, posteriorly costal marks rather linear and marginal, two fine lines before apex, a few in a horizontal series below costa. Cilia bright vinaceous, a submedian and a subapical finest white line.

Hind wing deep bronze-red-coppery, paler towards base, darker posteriorly; dorsum beyond base with a triangular projecting lobe, apparently wedged between abdomen and posterior tibia. Cilia pale fuscous, a darker subbasal band.

Queensland, Townsville, "P.P.D., 1.2.01" (in Meyrick's hand) (Meyrick Collection, BM), 1 ♂, genit. slide 6355.

South New Guinea, Milne Bay (A. S. Meek), 1 ♂, 1 ♀, genit. slide 8202 (BM).

An elegant, distinct species, superficially closely resembling *S. archimeditas* (Meyrick), and judging from the genitalia, belonging to the same group.

Male genitalia. Tegumen high and slender, socius long, slender with clavate, moderately bristly top, with a few projecting long bristles. Valva with a moderately broad sacculus,  $Spc_1$  broad, but thinly bristled; cucullus with a broad rounded prominence and a long and slender cucullus proper, rising almost at a right angle.

Female genitalia. Sterigma small, upper edge strongly prominent, with excisions at the sides and a deep emargination in the middle of upper edge. Colliculum rather long, one-sheathed. Signum one, a rather large prominent scobination.

***Sorolopha dictyonophora* spec. nov.**

(figs. 88-89)

♀ 19 mm. Head deep orange, spreading tufts on vertex mixed with olive-green. Palpus pale ochreous-olive, from middle gradually suffused with darker olive-green, median segment with an oblique dark green or blackish transverse streak, frontal edge towards apex dark green, terminal segment suffused with ochreous above. Thorax pale green, mixed posteriorly with darker green, anterior third suffused and posterior crest strongly mixed with bright ochreous-orange; collar with a posterior fringe of snow-white broad scales. Abdomen dark purple-fuscous, venter ochreous with a black median stripe.

Fore wing oblong-triangular, costa moderately curved throughout, apex subobtuse, slightly projecting, termen gently sinuate above, rounded beneath, little oblique. Ground colour reduced, light milky-green and almost pale sky-blue, strongly suffused with deep and rich moss-green. Extreme base of wing suffused with orange. Markings on upper half of wing blackish-brown, on lower, deep moss-green, edge of these colours suffused. Less than anterior half of costa with four suffused black spots, transversely oval, alternating with smaller fasciate transverse spots; basal patch reduced to some purplish and olive marbling in middle of disc; transverse fascia originating from a quadrate blackish spot on costa before middle, narrowed below costa, then abruptly dilated, running towards tornus but not reaching this and abruptly curved to dorsum before tornus: deep green, only in middle of disc ferruginous, narrowly black-edged; deep moss-green suffusion occupying entire dorsum as far as fold, but separated from transverse fascia by several round dots of ground colour along fold, turning to  $3/4$  of dorsum; posterior half of costa with one small and three larger semi-circular dark greenish-grey spots, posterior before apex, all separated by pairs of transverse marks of pale green ground colour, turning white on costal margin, below continued so as to form broad double streaks, two anterior united; a darker green suffusion below second dot, cut by a black oblique dash; apex with a dark brown spot; terminal patch large, almost mushroom-shaped, anterior end of top somewhat produced, base irregularly furcate, posterior end to middle of termen; upper half of this spot dark purplish-brown, lower green; all parts of dark markings situated in an

elongate-wedge-shaped area from  $1/3$  of disc to termen below apex edged with snow-white; these edges of middle of transverse fascia and top of terminal patch separated by a ferruginous strigula; a few orange scales on transverse fascia below costa. Cilia pale olive-green, turning milky-green in certain lights, a black bar in apex, cilia on dorsum brownish.

Hind wing semipellucant, distinctly pointed; purple-bronze, becoming darker and opaque towards edges and apex. Cilia concolorous, with a pale basal fascia.

Female genitalia. Sterigma, a long, delicate funnel, long-aciculate above, upper edge with a deep emargination or split, so formed lateral lobes rounded-triangular. Signum single, a small round scobination.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, ix.1949 (A. M. Neervoort), 1 ♀, holotype, genit. slide 4640 (LM).

An elegantly coloured, intensely green species, judging from the female genitalia belonging to the present group. Characteristic by the strongly dilated transverse fascia.

***Sorolopha elaeodes* (Lower, 1908) comb. nov.**

(figs. 84-85, 102-104, 109)

*Acanthothyspoda elaeodes* Lower, 1908: 320 (♂, Queensland; type-species). — Diakonoff, 1966: 56.

*Argyroploce elaeodes*; Meyrick, 1911a: 281 (♂, redescr.).

*Eudemis (Acanthothyspoda) elaeodes*; Diakonoff, 1968: 52.

Distribution. Queensland.

North New Guinea, Humboldt Bay, iv.1893 (Doherty), 1 ♀. S. New Guinea, Milne Bay, xii.1898 (A. S. Meek), 2 ♀, genit. slide 8008 (BM).

West Celebes, Paloe district, Mt. Tempoe, 2700 ft, ii.1937 (J. P. A. Kalis, Rothschild Coll.), 1 ♀, genit. slide 6575 (BM).

The original description is based on two specimens: "Cooktown and Cairns (Dodd)". The syntype from "Cairns (Dodd)" has been redescribed by Meyrick (1911a) as "type". This specimen is herewith selected lectotype.

Male genitalia very similar to those of *S. mnioclora* (Meyrick) but with the valva different:  $Spc_1$ , a large patch of bristles, those along the proximal edge quite long; the patch extends to the margin and occupies a part of the disc of the sacculus; prominence at base of cucullus larger, trapezoidal, without strong marginal spines, but a dense brush of spiny bristles along the proximal and the distal edges: cucullus shorter.

Female genitalia showing a transition to the following group. Sterigma not rounded, but V-shaped, lamella postvaginalis being entirely membraneous; the sides of the V thickened, densely aciculate, base of V transversely striate. Signum, a minute denticulate patch.

The species has rather broad and dilated wings, the ground colour is dull bluish

green, rather pale, with some three fuscous transverse lines obliquely across the basal half of wing, indistinctly angulated in middle; transverse fascia dark fuscous, conspicuous, entire and well-defined, straight in male, gently sinuate and slightly constricted below costa in female; terminal spot sometimes fasciate, forming an oblique streak from last costal dot to termen above middle. "Posterior tibiae clothed internally with dense brush of dark grey scales, basal joint of tarsi slightly rough-scaled above" (as stated in the original description).

The earlier figured genitalia are of material from Australia, kindly sent to me for study many years ago; presumably this material has been correctly identified.

The species is rather variable, with the ground colour sometimes suffused with purplish-fuscous (perhaps discoloured). Usually the terminal patch is conspicuous, deep brown-purple and semicircular, on a short stalk, encircled by pale ground colour.

*Sorolopha elaeodes parachlora* subsp. nov.

♀ 15 mm. Head light moss-green. Palpus pale green, base of median segment and basal segment throughout, pale ochreous, median with an oblique purplish subapical band. Pectus partly snow-white. Thorax rather deep moss-green (discoloured to light fuscous-lilac). Abdomen bronze-fuscous, venter creamy towards base.

Fore wing suboval-truncate, moderately dilated, costa little curved except before apex, apex obtuse, termen gently rounded above, hardly oblique, rounded below. Bright bluish-green, between fascia and terminal spot pale blue-green, markings deep moss-green partially slightly infuscated. Basal patch to  $1/3$ , edge prominent and acutely angulate in fold, obsolete along upper half, with two transverse black strigulae from costa; costa paler, with short pairs of white marks, centred with blackish; space beyond patch irregularly striated with deeper green, an irregular spot on dorsum; transverse fascia well-defined, from middle of costa to posterior fourth of dorsum, gradually dilated downward, anterior edge gently concave, straight, slightly oblique; on costa both edges marked with dark fuscous, posterior edge shallowly undulate on upper half, a short black tooth in middle, a white line edging fascia throughout; terminal spot black-fuscous, triangular above, lower edge excavated by moss-green suffusion, descending to tornus with a pair of transverse dark strigulae (representing the ocelloid spot); a white line edging terminal spot only above anteriorly; second costal mark large, fasciate, deep green traversed by blackish lines, with a black end to whole edge of terminal spot; three following costal marks fuscous, narrowly divided by white, ultimate mark apical, darker, with a terminal streak to above tornus; dorsum strigulated dark fuscous. Cilia dark fuscous with a whitish base (imperfect), in tornus white.

Hind wing blackish-fuscous with a bronze gloss, basal  $3/5$  paler, greyish, semipelluculent. Cilia fuscous, along middle part of termen glossy white, throughout with a dark fuscous subbasal band.

Female genitalia similar to those of the nominate form.

South Celebes, low country, 1896 (Doherty), 1 ♀, holotype, genit. slide 8006 (BM). Distinct by the reduction of white margin of the terminal spot.

**Sorolopha elaeodes temenopis** (Meyrick, 1936) comb. et stat. nov.

*Argyroploce temenopis* Meyrick, 1936: 614 (♀, Formosa). — Clarke, 1955: 304.

*Olethreutes temenopis*; Clarke, 1958: 535, pl. 266 figs. 4-4c (lectotype selected, wings, genit. figured; syn. of *phyllochloa* Meyrick).

*Eudemis (Acanthothyspoda) temenopis*; Diakonoff, 1968: 52 (good species).

Distribution. Formosa.

Belonging to the *liochlora* species group, *temenopis* seems to be distinct from *phyllochloa*, having a larger preterminal spot which is supramedian and broadly connected with terminal margin, while the posterior edge of the transverse fascia has no prominence and is more shifted anterad than in *phyllochloa*.

Female genitalia approach those of *S. liochlora* (Meyrick) but have a wider split, more rounded sides of upper edge of sterigma which is more V-shaped instead of semioval, as in *liochlora*, of the next group of species.

The males, unfortunately, are not known.

*Sorolopha liochlora* group of species

Tegumen and socii longer than in the preceding group. Valva with the basal prominence tending to become more and more triangularly extended, with or without an apical spine. Base of socius more or less rounded. Aedeagus long, slender and curved.

Sterigma usually an inverted-triangular, acuminate, dorso-ventrally flattened funnel, with median part forming a prominent vertical fold, with a deep incision above. Signa usually two moderate denticulate plates.

**Sorolopha liochlora** (Meyrick, 1914) comb. nov.

(figs. 95-97)

*Argyroploce liochlora* Meyrick, 1914: 771 (♂, Kanara). — Clarke 1955: 189.

*Olethreutes liochlora*; Clarke, 1958: 559, pl. 261 fig. 5 (type figured).

Distribution. India: Kanara.

West Central Sumatra, Fort de Kock, 920 m, ii.1921, 1 ♂, genit. slide 4633; vi.1921, 1 ♀, genit. slide 4634, 1 ♂ (without abdomen), 1 ♀; v.1924, 1 ♀ (LM).

Celebes, near Chambi, low country, 1896 (Doherty), 1 ♀, genit. slide 7999 (BM).

Male genitalia. Uncus rather depressed. Tuba analis rigidly rising but hardly sclerotized. Socius  $\frac{1}{2}$ , slender, moderately but distinctly dilated beyond base and towards apex, apex with spines. Valva moderately broad at base, sacculus not projecting, Spc<sub>1</sub>, a large patch of sparse bristles; constriction moderate; cucullus long

and slender, its arm triangularly projecting, with a series of strong spines above and a dense patch of cucullus bristles along inner edge. Aedeagus slender, curved; caulis long.

Female genitalia. Sterigma, a finely aciculate cup or short funnel with a deep frontal cleft with thickened edges; side angles slightly produced. Signa two, small round scobinations.

The unique type specimen of this species, from Kanara, lacks the abdomen. The markings of the fore wing, however, resemble those in the present material closely, so that I am satisfied that it is the same species. It is closely allied to *S. phyllochloa* (Meyrick) comb. nov. from Ceylon and South India.

*S. ptilosoma* (Meyrick) comb. nov. is a synonym of *S. phyllochloa*, as Clarke showed by comparison of the male genitalia. The third form, however, *S. elaeodes temenopsis* (Meyrick), from Formosa, of which a single female is available, seems to me to be distinct.

The elegantly coloured species has head, thorax and anterior 2/3 of fore wing bright moss green; a faint paler bluish-green oblique band parts the green area of the fore wing; posterior edge of green area finely suffused with dark purple, well-defined, oblique and slightly convex; apical third of wing pale grey, finely strigulated with dark fuscous-purple; this strigulation, arranged more or less concentrically around the large purplish pretornal spot, subtriangular, with posterior edge and base slightly convex, anterior edge deeply concave, stalk to middle of termen, narrow. Hind wing dark purplish-fuscous, with the basal half paler, fuscous-grey. Posterior tibia in the male with basal half normal, slender and smoothly scaled, glossy grey; apical half abruptly and extremely expanded by dense appressed scales, grey on both sides above, forming a peculiar thick filling of white shorter hairs from middle to end of dorsum of tibia; at the end apparently giving rise to a fan of pale ochreous longer hairs on inside of tibia; posterior tarsus with a thick brush of long, more or less appressed hairs above, dark grey at the sides, glossy white inwardly.

#### *Sorolopha eurychlora* spec. nov.

(figs. 99-100)

♀ 13 mm. Head light green (palpi missing). Thorax green with a broad and suffused glossy pale milky-green postmedian transverse band, apical crest light ferruginous. Abdomen grey, venter pale grey. Hind leg whitish.

Fore wing oblong-subtriangular, costa gently and somewhat irregularly curved throughout, apex obtuse, termen hardly sinuate, slightly oblique. Glossy pale milky green, markings dull deep moss-green, towards apex infuscated, towards costal edge turning blackish. Basal patch to 1/3, irregular, not quite reaching costa nor base, edge irregularly suffused, truncate in middle, angularly notched above middle, on middle of dorsum almost connected with an acute, slightly inwards-oblique triangle, not exceeding fold; a faint parting line not reaching fold; transverse fascia from just



beyond middle of costa to end of dorsum, straight, dilated in middle gradually; posterior edge obtusely angulate in middle, obtusely serrate above angulation, straight below; anterior edge more or less suffused, concave above dorsum; anterior half of costa with some five black dots, alternating with minute points; two larger black dots marking edges of transverse fascia; posterior part of costa with a dark suffusion at  $2/3$  of wing, preceded by two, followed by three white paired marks, two ultimate marks single; apex fuscous; a blackish-fuscous preapical oblique line from below costa to upper part of termen, thence marginal, to above tornus; a large round pre-terminal spot, its posterior edge dark fuscous, continued as a line to middle of termen, brownish-fuscous suffusion there; upper half of anterior edge of the round patch edged by a silvery-white strigula, preceded just above middle of wing by a small dark triangular spot. Cilia blackish-brown, with a pale basal line, cilia in tornus light grey.

Hind wing purple-blackish, becoming semipelluculent and pale along basal half of dorsum. Cilia concolorous, with a pale basal line.

Female genitalia. Sterigma triangular, aciculate, with a deep median notch and fold, colliculum abruptly inbent at the right side, sinuate, then straight, of moderate length. Signum single, a rounded finely scobinate small sclerite.

West Java, Bantam, Dungus Iwul, 100 m, 4.xi.1952 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 5854 (LM). An elegant, small species. The single specimen is somewhat rubbed, but quite distinct. Allied with *S. liochlora* (Meyrick), from Java and China, but can at once be discriminated by the concolorous (green) apical part of wing, as against *liochlora* where this portion is pale pink.

The female genitalia provide another difference: the sterigma together with ostium and colliculum is tolerably symmetrical in *liochlora*, with the colliculum about as long as the sterigma is high; in the present species this sterigma is asymmetrical, being deeply impressed at the right side, while the colliculum is less sclerotized but much longer and has another bend, at the left side; besides the signum is larger and single.

#### *Sorolopha euochropa* spec. nov.

(fig. 98)

♂ 15 mm. Head and palpus pale greyish-green, orbits, a subapical band to median segment of palpus, and terminal segment, touched with light tawny. Antenna with scape pale greyish-green, flagellum pale grey-purplish.

Thorax light green, tips of scales whitish, apical half of tegula pale ochreous, with raised and roughly expanded scales. Abdomen pale purple-grey, anal tuft long and dense, pale purple grey, blackish anteriorly, venter pale. Posterior tibia grey on the outside, jet-black on the inside, strongly dilated by a large, oval, flat brush of scales.

Fore wing rather narrow, oblong, costa gently curved throughout, hardly prominent beyond middle, apex obtuse, termen slightly convex, little oblique. Greyish-green, transversely strigulated with darker green; more than median third of wing from just beyond base to end of cell pale grey, transversely strigulated with darker,

fuscous-brownish; basal half of costa with numerous oblique and slender brownish-green transverse lines, costal edge white between these; posterior half of costa with five oblique fuscous-greenish darker spots, oblique and semioval to wedge-shaped, second spot smallest and fasciate, third largest and transversely semioval; these spots divided by pairs of small silvery costal marks; a transverse dark purplish mark in apex; terminal area occupied by a large white patch, limited above by course of vein 9, below by that of vein 4, its anterior edge obliquely truncate, with upper angle reaching upper angle of cell; upper edge with a black dot halfway between cell and costa; an indication of a ferruginous straight transverse fascia, narrow but slightly dilated in middle and then on dorsum, from the first green costal spot to the end of dorsum; this fascia limiting the white patch anteriorly; lower edge of patch suffused with ground colour; white patch containing just below centre a large circular pale ochreous-olive terminal spot, resting on lower edge of patch and adjacent to middle of terminal margin; lower half of anterior edge and entire lower edge of spot coarsely strewn with ferruginous-brown; a ferruginous, curved vertical strigula preceding spot; a dark brown interrupted terminal line to end of vein 3; dorsum with a pale ochreous elongate marginal spot at  $1/4$  (dorsal tuft) and several black transverse marks. Cilia dark grey, with two slender sharp white bars, between ends of veins 7 and 6, and 6 and 5, respectively, also cutting terminal dark line.

Hind wing purplish-fuscous, darker on apical half, paler and semipellucant on basal half of vein 1a with a pecten of long fine fuscous-grey hairs; extreme end of costal edge whitish-ochreous. Cilia fuscous with a pale basal line, apical half glossy whitish in certain lights.

Central West Sumatra, Fort de Kock, 920 m, vi.1921 (E. Jacobson), 1 ♂, holotype, genit. slide 4642 (LM).

Closely allied to *S. arctosceles* (Meyrick) from the Papuan region, but smaller, differently marked and with minor differences of genitalia.

***Sorolopha arctosceles* (Meyrick, 1931) comb. nov.**

(fig. 101)

*Argyroploce arctosceles* Meyrick, 1931: 136 (♂, New Ireland). — Clarke, 1955: 52.

Distribution. Bismarck Is.: New Ireland.

New Guinea, d'Entrecasteaux Is., Fergusson Id., 7-20.xi.1894 (Meek), 1 ♂, genit. slide 6273 (BM).

This little known species possesses modified hind legs in the male: posterior tibia strongly dilated and inwardly expanded by very dense hairs, grey on the outer side, jet-black on the inside; also the basal segment of posterior tarsus with a tuft of black hairs above.

Fore wing greenish, finely dusted with purplish-ferruginous, markings also ferru-

ginous with a purplish tinge: basal patch indefinite, transverse fascia well-defined, rather narrow on costa, on dorsum forming a triangular spot, anterior margin of fascia in middle suffused, its posterior margin well-defined throughout and tolerably straight except on lower fourth where it is variable; a blackish dot in apex; preterminal spot large, ferruginous-purple, subcircular, lower third partly obliterate, stalk to termen narrow; this spot accentuated by an edge of three alternating whitish and pale green lines.

Hind wing dark, blackish-purple.

Male genitalia very similar to those of *S. euochropa* spec. nov. and differing chiefly by the shape of the valva: broader, with a deeper primary excision, sacculus more rounded,  $Sp_1$  larger and with denser and longer spines, cucullus broader, more triangular.

### *Sorolopha phyllochloa* (Meyrick, 1905) comb. nov.

(fig. III)

*Platyepplus phyllochloa* Meyrick, 1905: 585 (♂, Ceylon). — Clarke, 1955: 249.

*Eucosma phyllochloa*; Meyrick, 1907: 137.

*Argyroploce phyllochloa*; Meyrick, 1908: 592.

*Argyroploce ptilosoma* Meyrick, 1916: 563 (♂, South India). — Clarke, 1955: 264.

*Olethreutes phyllochloa*; Clarke, 1958: 535, pl. 266 figs. 2-2b (lectotype select., wing & ♂ genit. figured; *ptilosoma* syn.).

*Olethreutes ptilosoma*; Clarke, 1958: 535, pl. 266 figs. 3-3a (lectotype select., wing and genit. ♂ figured; syn. of *phyllochloa*).

*Eudemis (Acanthothyspoda) phyllochloa*; Diakonoff, 1968: 52 (*ptilosoma* syn.).

Distribution. Ceylon. South India.

India, Assam, Khasias Hills, 1898-9 (Doherty), Walsingham Coll., 2 ♀, genit. slide 8010 (BM).

A species of moderate size, superficially closely resembling *S. elaeodes* Lower, especially the females, but with distinct genitalia. In the male the brush of the posterior tibia is black on inner side. Forewings are rather light green, with basal third more or less strigulated with blackish; central fascia deeper green, more or less mixed with black, narrowest on costa, with shorter angulations in middle; terminal patch obliterate on lower half, stalk narrow. Hind wings with subdorsal groove and hair pencil: dark fuscous. The abdomen in the male has a pair of thick lateral black hair-pencils on each segment.

Male genitalia very similar to those of *S. arctosceles* but with *socii* shorter ( $1/3$  height of tegumen), slightly longer aedeagus, narrowed and longer valva, with a larger basal opening, stronger narrowed in middle, cucullus projection smaller, cucullus top broader.

Female genitalia. Sterigma robust, asymmetrical, turned downwards obliquely to the left, wide. Lobes of lamella antevaginalis robust, upper edges gently concave, median split deep and straight, sides forming small projecting folds. Colliculum strong,

twisted and sinuate. Signum, a single, comparatively very large, granulate horn upon a funnel-shaped base.

The species is suspiciously similar to both *S. elaeodes* and *arctosceles*, superficially but the genitalia in the two sexes are distinct; especially different are the genitalia of the females of *phyllochloa*, while it is similar again to those of *S. elaeodes temenopis* Meyrick, from Formosa, which has been synonymized by Clarke (1958). Contrary to his opinion I regard the latter species as a subspecies of *S. elaeodes* Lower. Unfortunately the females of *S. arctosceles* (Meyrick) are unknown. Variability of the species and most deplorable lack of material make these statements somewhat uncertain. Study of ample material from tropical Australia may be very useful.

***Sorolopha cervicata* spec. nov.**

(fig. 110)

♀ 14 mm. Head pale olive-green. Palpus whitish-green, spotted with darker greenish. Thorax pale olive-green, apical tuft whitish. Abdomen pale bronze-fuscous, venter white.

Fore wing truncate, moderately dilated, costa gently curved throughout, apex sub-obtuse, termen almost straight, hardly concave and vertical above, rounded beneath. Pale olive, posteriorly whitish-green. Basal patch indicated by three spots of dark fuscous irroration, at 1/5 of costa, in fold beyond 1/4 and on dorsum beyond base; some dark dots along costa anteriorly; a grey-fuscous small suffusion on 2/5 of dorsum; transverse fascia rather dark fuscous, excavated by ground colour anteriorly between middle and dorsum; posterior edge of fascia straight, well-defined; space beyond fascia almost white, except on costa and dorsum; costal spots small, depressed, greyish, second largest, with a faint fuscous line parting pale space to middle of wing; terminal spot dark fuscous, lower edge and rounded extension along termen to above tornus, pale olive; lower edge of patch anteriorly excavated by white colour. Cilia fuscous (imperfect).

Hind wing light fuscous-purple, paler on basal half, rather bright on apical. Cilia pale fuscous: with a darker fuscous subbasal band and a pale base, tips along termen whitish.

Female genitalia. Sterigma elongate longitudinally, lamella antevaginalis long-aciculate, lobes elongate, rounded-triangular, longer than broad; colliculum very short. Signa two, very small. Corpus bursae characteristic: somewhat flattened and pear-shaped, lower part tri-lobed.

Lower Burma, Thayetmyo, viii.1893 (E. Y. Watson), 1 ♀, holotype, genit. slide 8011. Allied to *S. phyllochloa* (Meyrick) (BM).

*Sorolopha rubescens* spec. nov.

(fig. 108)

♂♀ 13 mm. Head rather deep green, face creamy. Palpus light grey with a greenish hue, subapical spot and apex of median segment and entire terminal segment deep green. Thorax green, slightly mottled by pale tips of scales, apical tuft apparently deep green (discoloured to brownish-ochreous). Posterior tibia pale glossy fuscous, dilated by roughish long hair-scales above and more so beneath, tips of scales beneath and especially at apex of tibia curly, glossy, grey, thick. Abdomen in male opalescent pale fuscous-ochreous, side-tufts very long, grey, pale grey-fuscous in certain lights, anal tuft whitish-ochreous.

Fore wing oblong-truncate, dilated, costa gently curved throughout, more so at 4/5, apex obtuse, termen hardly concave above, rounded beneath. Bright glossy bluish-green, markings dark fuscous, partly narrowly edged with white. Basal patch to 1/4, angulate in fold, with a round excavation below fold, elsewhere narrowly blackish-edged; costa as far as fascia with numerous oblique rather thick blackish marks, alternating with very faint and small whitish double marks; space between basal patch and fascia parted by a light moss-green, dull interrupted streak, gently dilated downwards and outwards-convex; transverse fascia dark fuscous, oblique, anteriorly invaded by deep green suffusion, running from middle of costa to dorsum before tornus, little dilated downwards, anterior edge straight, suffused, posterior well-defined, also straight, with an obtuse, angulate projection in middle; posterior 2/5 of costa with four rather large spots, separated by three pairs of small white costal marks, two approximated pairs before first spot; this spot largest, oblique, rounded-wedge-shaped, two following spots small, last apical, large, interrupted below by ground colour; preterminal patch large, subtriangular, with a slender stalk to middle of termen and along this narrowly to tornus; this spot with truncate top, anterior edge subconcave, other straight; ground colour between this patch and apex whitish-green. Cilia deep fuscous-purple, with a fine white basal line.

Hind wing bright fulvous-brassy, towards base becoming lighter, brassy-golden; in female hind wing slightly lighter. Cilia light golden with a fulvous-brassy subbasal fascia.

Male genitalia. Slender, little sclerotized. Uncus rather long, distinctly prominent. Socius long and slender, top clavate, moderately long-bristled, apex weakly bristled along outer side. Valva slender, sacculus with a submarginal moderate oblong  $Spc_1$ , a slight  $Spc_2$  opposite this anteriorly, space between with scattered few hairs; cucullus process moderate, with some 3 larger spines, top of cucullus slender, rounded. Aedeagus sclerotized, gently curved, top sinuate.

Moluccan Is., Halmahera Id., Gani, 1897 (Doherty), 1 ♂, holotype, genit. slide 8002. The single specimen is rather rubbed, with darker hind wings.

d'Entrecasteaux Is., Fergusson Id., 23-31.xii.1894 (Meek), 1 ♀, allotype, without abdomen, otherwise in good condition (BM).

Judging from the pattern of the fore wing and the colour of the hind wing, these two specimens are conspecific.

Superficially resembling *S. bathysema* spec. nov. most, but the genitalia are much less specialized and nearest to *S. liochlora* (Meyrick).

***Sorolopha agalma* spec. nov.**

(fig. 105)

♂ 23 mm. Head ferruginous-vinaceous, face pale ochreous, forehead infuscated. Antenna pale ochreous, finely dark-ringed above, scape reddish-ferruginous. Palpus dark ferruginous. Thorax pale ochreous with a faint vinaceous tinge, becoming paler posteriorly, raised tuft on apex large, circular, deep ferruginous-purple. Posterior tibia with rather closely appressed but dense hairs, moderately dilated and slightly thickened, glossy white on the inside, faintly vinaceous-tinged on the outside, tarsus light vinaceous. Abdomen pale pinkish-ochreous, with grey-silvery reflections on venter, dorsum infuscated.

Fore wing dilated, oblong, suboval, costa hardly curved anteriorly, more and more curved posteriorly, apex rounded, termen rounded, oblique. Pale ochreous with a faint vinaceous tinge, throughout strewn with fine and short well-defined, zigzag transverse strigulae. Costa slightly suffused with deeper vinaceous and along basal third suffused with brown; its lower half with numerous fine transverse lines, posterior half with about six brownish oblique wedge-shaped small marks, ultimate larger, oval, apical; posterior half of upper half of wing except on costa, suffused with light slaty-grey, towards apex turning light pinkish. Markings large, deep ferruginous, turning red and chestnut-brown, finely edged along upper half with silvery-white. Basal patch absent, replaced only by a faint inwards-oblique fuscous small shadow beyond base; a large clavate scythe-shaped mark from before  $\frac{1}{4}$  of dorsum to centre of disc, thence narrowed and curved, pointing towards tornus and reaching beyond base of vein; anterior half of stalk of this mark gently narrowed from beyond base, above fold gradually dilated, posterior half of mark becoming crescentic-subtriangular, upper edge obtusely angulate, lower gradually concave, posterior point gradually narrowed, truncate, suffused with fuscous and connected with dorsum by a zigzag fuscous line; this mark deep purple at base, in disc becoming ferruginous-red; pre-terminal patch very large, well-defined, erect-ovoidal, gently oblique, lower edge gently suffused, resting on terminal edge between veins 3-5; this patch purple-vinaceous, becoming paler posteriorly and downwards; a few small vinaceous oblique strigulae and lines before apex. Cilia concolorous: pinkish-vinaceous along upper  $\frac{2}{3}$  of termen, light ochreous along lower third and in tornus, with a vinaceous submedian line and bars.

Hind wing pale fuscous-grey with faint pinkish-golden gloss, becoming whitish at base, rather thinly scaled; dorsum whitish anteriorly, concave on upper side of wing

and more or less enclosing a conspicuous oblique pencil of black hairs from vein 1c above its middle. Cilia greyish-white, greyish opposite apex.

Male genitalia. Tegumen robust, moderately long. Socius long, pending, top clavate but small, with a dense covering of rather short and slender spines. Tuba analis with thick edges, hyaline. Subscaphium indicated as two small triangular sclerites at the base of tuba analis. Valva robust, sacculus with a large patch of spines (Spc<sub>1</sub>); cucullus subtriangular, with a somewhat clavate top and a very large triangular basal projection with strong spines. Aedeagus small, slender, little curved, base but little dilated.

Central New Guinea, Mt. Goliath, 5-7000 ft, i.1911 (A. S. Meek), 1 ♂, holotype, genit. slide 6580 (BM). British New Guinea, Biagi, Mambare River, 5000 ft, i-iv. 1906 (A. S. Meek), 1 ♂.

A robust and elegant species, easily recognizable by the characteristic markings and colouring. Judging from the genitalia, it belongs to the *S. liochlora* group of species but is very distinct.

#### *Sorolopha herbifera* group of species

Male genitalia robust, valva more or less elongate, with a process at the base of sacculus, usually with a very dense Spc<sub>2</sub> and a large triangular ventral process of the cucullus, ending with a spine.

The sterigma characteristically is an aciculate funnel with entire upper edge, often with thickened lateral supports. Signum one, a slender long hook upon a basal plate.

#### *Sorolopha herbifera* (Meyrick, 1909) comb. nov.

(figs. 112-113)

*Argyroplote herbifera* Meyrick, 1909: 603 (♂♀, Assam). — Clarke, 1955: 157.

*Olethreutes herbifera*; Meyrick, 1930: 604 (food plant). — Clarke, 1958: 516, pl. 257 figs. 4-4a (lectotype select., ♂ genit. figured).

*Eudemis (Acanthothyspoda) herbifera*; Diakonoff, 1968: 51.

Distribution. Assam: Khasis.

Food plant. *Cinnamomum camphora* (Lauraceae).

West Central Sumatra, Fort de Kock, 920 m, v.1921, 1 ♂, genit. slide 4631; ii-v, xii.1921, "1924", 2 ♂ (one without abdomen), 4 ♀ (3 without abdomens) (all by E. Jacobson) (LM).

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, x.1948 (A. M. Neervoort), 1 ♀, genit. slide 4632. Tjiboeloe, 1500 m (East Preanger Residency), i.ii.1928, no. 581, "*Argyroplote herbifera* Meyr.", "*Cinnamomum camphora*" (Fr. A. Th. M. Verbeek), 1 ♀, without abdomen; identified by Meyrick (LM).

Male genitalia. Uncus moderate. Socius long, curved, densely haired, thick along

basal half, constricted at base, from middle gradually narrowed, top clavate, with a wreath of curved spines, becoming larger towards apex. Valva with a triangularly projecting sacculus with a high but not broad terminal patch of bristles ( $Spc_1$ ); cucullus slender and sinuate, arm strongly projecting in a curved spike, a patch of long pending bristles along margin.

Female genitalia. Seventh sternite sclerotized throughout, with lateral semioval folds, convex mesad; caudal edge deeply emarginate on each side of sterigma; the latter, a short funnel, obliquely truncate below, without lateral supporting rods. Signa two small round scobinations.

The larger, narrow-winged species with a light bluish-grey ground colour, partially marbled with white, with dark green well-defined markings. Very conspicuous is an inwards-oblique, wedge-shaped and sinuate snow-white mark edging the preterminal spot from above, and sometimes parted by a dark minute line; basal patch well-defined, but with a very irregular zigzagged edge, above striped with blackish, usually with a slender white wedge-shaped incision on fold; transverse fascia complete and narrow, but just above middle with a large, incurved and pending process of inner side, preterminal patch large subcircular, with a narrow connection to termen, lower edge slightly extended towards tornus, anterior edge with a narrow process. Hind wing glossy dark fuscous-bronze. Posterior tibia of the male rough-scaled beneath.

*Sorolopha autoberylla* (Meyrick, 1932) comb. nov.

(fig. 115)

*Argyroploce autoberylla* Meyrick, 1932: 226 (♂, Java). — Clarke, 1955: 60.

*Olethreutes autoberylla*; Clarke, 1958: 487, pl. 242 figs. 3-3a (type illustr. genit.).

*Eudemis (Acanthothyspoda) autoberylla*; Diakonoff, 1968: 51.

Distribution. Java: Seneng.

Central Java, Seneng near Semarang, 40 m, teak forest, 21.vii.1931, no. 299, "*Argyroploce autoberylla* Meyr., det. Meyrick", bred from leaves of *Eugenia* spec. (Myrtaceae) (L. G. E. Kalshoven), 1 ♂, genit. slide 6265 (LM).

Male genitalia. Tegumen high and rather narrow. Uncus rather long. Socius about,  $\frac{1}{2}$ , bent beyond base and again below top, little dilated beyond base, top with a dense bunch of very strong, curved spines. Valva very similar to that in *S. herbifera* (Meyrick). Aedeagus curved, top truncate.

The species is intermediate between *S. callichlora* and *herbifera*. Although superficially the species are quite different, *autoberylla* being smaller, more slender, and without the conspicuous white marks of *herbifera*, the genitalia differ chiefly by shorter and thicker cucullus in *autoberylla* than in *callichlora*, and by shorter, more curved socii than in both *callichlora* and *herbifera*. The aedeagus, being fore-shortened in Clarke's photograph actually is as long as in *herbifera*; socius more slender, bent



twice (in *herbifera* thickened beyond base, then narrowed gradually, curved, not angularly bent), apical spines longer in *autoberylla*, and the dorsal half of cucullus in the latter species shorter and thicker.

A species of moderate size, richly olive-green. Actually the ground colour is light bluish-green and markings deep olive-green, but the entire dorsal half of the wing is slightly paler and therefore more olive-tinged. The whitish mark beyond the pre-terminal spot is rather obscured, the terminal spot large, broad and extended below, its upper edge with an excision anteriorly; the appendix of transverse fascia large and dark green, almost touching basal patch which is interrupted by greyish in middle of its base. The hind wing is light bronze-fuscous, apex dark fuscous. The posterior legs are missing in my specimen. Their peculiarities were omitted in the original description.

**Sorolopha compsitis** (Meyrick, 1912) comb. nov.

*Argyroploce compsitis* Meyrick, 1912: 870 (♀, Ceylon). — Clarke, 1955: 87.  
*Olethreutes compsitis*; Clarke, 1958: 496, pl. 247 figs. 4-4b (holotype ♀, wings, genit. figured).

Distribution. Ceylon.

I did not have any additional material of this species: the unique holotype is in the BM. The small insect is leaden-grey, with purplish reflections and almost black markings: a large, triangular subbasal dorsal spot; central fascia, well-defined and rather slender above, strongly dilated on dorsum, anterior edge excised below middle; terminal spot large, separated from fascia by a slender white line only.

Hind wing whitish, apical half black.

The female genitalia have a rather large, truncate-conical (trapezoidal) sterigma, with lamella postvaginalis shallowly, lamella antevaginalis, more deeply excised and concave, ostium bursae rather wide, conical, colliculum moderately sclerotized, broad, narrowed, lower half becoming membranous and hyaline on the right side. Signa, two rounded and convex moderate scobinations.

Belongs to the *S. herbifera* group.

**Sorolopha epichares** spec. nov.

(figs. 116-118, pl. 1 fig. 5)

♂ 16-17 mm. Head dark fuscous tinged dull greenish, face whitish. Palpus grey touched with green, apex of median segment black, a subapical grey spot on upper edge. Thorax light bluish-green, apical tuft ferruginous. Posterior tibia normal, grey and ochreous, inside white. Abdomen orange-ochreous, dorsum except base and apical tuft, ferruginous or brownish, anal tuft orange, dorsum tinged coppery.

Fore wing subtriangular, strongly dilated, costa moderately curved along anterior half, more curved along posterior half, apex pointed, slightly prominent, termen

sinuate above, rounded beneath, little oblique, long. Basal patch to  $2/5$  of costa, edge vertical to cell, thence strongly inwards-oblique, to lower edge of cell at  $1/4$ , thence deeply concave and somewhat suffused, to  $1/4$  of dorsum; this patch light bluish-green, costal edge pale grey-ochreous with numerous small fuscous transverse marks; two light bluish-green spots on dorsum, from  $2/5$  to  $4/5$ , anterior spot rounded, to fold, posterior paler, erected above fold, gently constricted in middle; both finely edged with dark brown, second spot with a few brown strigulae; a deep ferruginous central patch, filling out space beyond preceding, below cell suffused with green and strigulated with dark brown; this patch with a transverse spot on costa just before middle, outer edge outwards-oblique to vein 8, thence slightly inwards-oblique towards dorsum beyond middle (between dorsal green spots); posterior half of wing beyond these markings paler brown with a lilac tinge and a golden faint gloss, transversely strigulated with thin blackish undulate strigulae; two pairs of whitish marks on costa beyond middle, each continued by a straight oblique grey strigula, converging in a rounded lilac-grey spot reaching vein 8; a silvery-greenish wedge-shaped spot from tornus, pointing towards preceding, reaching to middle of wing; a pair of irregular pale grey marks between this and costal marking; three equidistant pairs of short white marks along more than posterior fourth of costa, each continued by a sinuate pink strigula becoming silvery metallic, all three converging into a single silvery-greenish fascia to above middle of termen, finely parted by darker. Cilia deep fuscous-brown, a single white bar below apex, a double one above middle.

Hind wing with a pointed lobe between veins 3 and 4, termen sinuate before and beyond this, apex rounded and prominent; golden brown-fuscous, apical and terminal prominences suffused with purple, space between vein 1b and cell less darkly suffused with purplish-fuscous except at base, dorsum semipelluculent pale fuscous. Cilia whitish with fuscous basal third, purple around apex, pale fuscous along dorsum.

Male genitalia. Uncus moderate, rounded. Socius rather weak, narrow, parietal above, free from below middle, with oblong moderately thickened top, clothed throughout with bristles, fine and sparse above, longer and stronger on top, but without spines. Juxta extended, darkly sclerotized. Valva slender,  $Spc_1$  at top of sacculus moderate, flatly oval (as in *S. argyropha* but slightly longer), cucullus with a broad ventral process, apical spine from upper angle (as in *S. semiculta*), top part of cucullus slender, not clavate, top regularly rounded. Aedeagus slender, rather shorter than in allied species, with a free curved spine-like process at upper side before apex.

♀ 16-18 mm. Very similar to the male, but abdomen purple-banded and tipped with bright orange; fore wing oblong-suboval, much narrower, apex obtuse, termen straight above, rounded beneath. Basal patch slightly suffused with yellowish-olive towards base of wing, edged ochreous and not reaching dorsum; dorsal spots similar and about equal in size, contiguous, tops diverging; anterior spot ochreous-edged, posterior with suffused top; central area ferruginous-red; mark on costa beyond middle smaller, more slender, tornal patch smaller, base submarginal, spots above this bright orange (instead of pale grey), anterior round; third pair of costal marks not

continued below, not converging with two other pairs, streak to termen less conspicuous. Cilia with two broad ochreous subapical bars, and three bars along tornus.

Hind wing oblong-suboval, termen rather concave above, apex being distinctly prominent, but terminal lobe absent; grey-fuscous-bronze, marginal third deep purple. Cilia light ochreous-yellow, around apex purple, along dorsum pale fuscous.

Female genitalia. Sterigma calyciform, with flat top and erected upper angles, from which straight oblique folds descend as sides of a pyramid; ostium indicated by a round edge in front; colliculum, a short weak dilatation. Ductus bursae narrow. Corpus bursae simple.

South New Guinea, Milne Bay (A. S. Meek), 1 ♂, holotype, genit. slide 7957; 1 ♂, 1 ♀, paratypes. East Papuan Is., Louisiades, St. Aignan Id., 1897 (Meek), 1 ♀, allotype, genit. slide 7701. d'Entrecasteaux Is., Fergusson Id., 7-20.xi.1894, 2 ♀, paratypes (BM).

An elegant species allied to *S. argyropha*, distinct by markings and genitalia.

***Sorolopha semiculata* (Meyrick, 1909) comb. nov.**

(figs. 114, 121-123)

*Argyroploce semiculata* Meyrick, 1909: 604 (♂♀, Ceylon). — 1914: 275. — Clarke, 1955: 283. — Fletcher, 1920: 61.

*Argyroploce heteraspis* Meyrick, 1936: 614 (♀, Formosa). — Clarke, 1955: 158.

*Olethreutes semiculata*; Clarke, 1958: 547, pl. 272 figs. 3-3a, 4-4c (lectotype designated, *heteraspis* syn.; wings and genit. ♂ *semiculata*, holotype ♀ *heteraspis* figured).

Distribution. Ceylon, Assam. North Kanara. Formosa.

Food plants. *Alceodaphne semicarpifolia* (Lauraceae).

A pale brownish-grey coloured species; male with only the basal half of fore wing and dorsum to tornus faintly tinged greenish; a small dark brown dot in fold instead of a basal patch; transverse fascia represented only by a dark brown transverse patch from middle of costa to slightly below fold, edge rounded anteriorly, angularly pointed below, subundulate anteriorly with an excavation below its middle, containing a white dot; preterminal patch obliquely oval, brown; costa posteriorly with four light brown spots, posterior apical.

Hind wing deep fuscous-bronze on posterior half, becoming fuscous grey and semi-pelluculent, with purplish veins, on anterior half.

Male genitalia of *S. argyropha* type. Socius densely long-bristled at the top. Valva very long and slender,  $Spc_1$  large, transverse, exceeding breadth of sacculus; cucullus spine apical (central); cucullus top clavate. Aedeagus long, curved at base.

Female genitalia. Sterigma calyciform: ostium being inverted-conical, with a truncate top (Formosa), or gently excavate towards middle (the Ceylon specimen), laterally with long obliquely descending lateral aciculate ridges.

Ceylon, Kandy, vii.1910 "(WCBM)", 1 ♀, genit. slide 8001 (BM).

Solomon Is., Isabel Id. (A. S. Meek), 1 ♀, genit. slide 7994 (BM). This female has the genitalia exactly similar to those of the type of *S. heteraspis* (Meyrick); this supports Clarke's opinion that *S. heteraspis* is but a synonym; the markings however differ slightly as follows. Fore wing with a distinct blackish-fuscous dot below fold at  $1/5$  of wing length, narrowly connected in left wing with a dark fuscous suffusion extending along basal third of dorsum; transverse fascia on costa broader, including three very slender and obscure pairs of pale marks; posterior edge of fascia oblique, moderately undulate, upper horn, enclosing pearly spot, absent, this spot larger, longitudinal, bordered posteriorly and above by a fuscous dot; terminal spot distinctly more oblique, less vertical; ground colour paler.

Sula Mangoli Id. (Doherty), 1 ♂, genit. slide 5839 (BM).

*Sorolopha doryphora* spec. nov.

(fig. 120)

♀ 15 mm. Head olive-grey. Palpus pale orange, dotted with fuscous posteriorly. Thorax deep grey-green, purple in centre, posterior tuft bright ferruginous. Abdomen blackish, venter ochreous.

Fore wing oblong, semioval-truncate, costa curved, more so posteriorly, in middle almost straight, apex obtusely rectangular, termen straight, vertical above, rounded beneath. Rather dark leaden-grey. Costa anteriorly with numerous fine dark dots and strigulae, posteriorly with five pairs of whitish marks, continued below and so merging in an undulate leaden-grey subcostal line; ultimate pair small, subapical, below forming a whitish transverse line before apex; basal patch deep greyish-green with various shades in certain lights; to  $1/3$ , edge ill-defined, inwards-oblique; other markings chiefly dark fuscous, on upper half of wing suffused with deep ferruginous-red: a large, transverse-semioval dark patch beyond middle, occupying more than one third of costa, rounded lower end to vein 1c, thence with a narrow stalk to dorsum; this patch emitting from costa posteriorly a curved, dilated band to middle third of termen and in the angle between patch and band including an irregular bright orange subtriangular spot, cut by two transverse brown strigulae, on upper angle of cell; lower edge of this light spot connected by a vertical broad band with dorsum before tornus, top of band merging anteriorly in transverse dark patch; dark markings so leaving a wedge-shaped glossy pale grey patch, connecting tornus with posterior lower angle of orange spot; an interrupted purple-brown marginal line along termen and tornus; dorsum suffused with purplish brown. Cilia (imperfect) purplish with a pale basal line.

Hind wing pale grey and semipelluculent on basal half and dorsum, black and opaque on marginal half, black suffusion gradually narrowed towards tornus. Cilia white with a dark fuscous-grey basal band.

Female genitalia. Sterigma, a rather long funnel, edge of lamella postvaginalis

thickened and extended on both sides forming lateral supports. Signa, two minute round sclerotizations of the granulate wall of the bursa.

East Borneo, Tabang, Bengen River, 125 m, 6.ix.1956 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 4639 (LM). A distinct species, related with *S. argyropha* spec. nov. and with *S. semiculta* (Meyrick), the genitalia differing only by the lamella antevaginalis being distinctly developed.

***Sorolopha argyropha* spec. nov.**

(fig. 119)

♂ 16.5 mm. Head olive-grey. Palpus vinaceous-tawny, upper edge of median segment to before base and posterior half of lower edge suffused with black. Thorax greenish-grey, anterior third and apex suffused with light ochreous, tegula pale olive-grey. Abdomen purplish-fuscous, becoming whitish towards base, anal tuft pale ochreous-orange, venter ochreous-white, mesially suffused with purple. Posterior leg pale grey above, pale ochreous below.

Fore wing broadly subtriangular, strongly dilated, costa curved throughout, apex pointed, termen irregularly and very gently undulate, slightly concave above middle, moderately oblique. Anterior  $2/5$  glossy pale grey, touched with greenish, except posterior broad edge, suffused with olive-green, becoming deeper towards base; costal edge with numerous small dark brown transverse marks of various size, some tending to be continued to upper edge of cell by series of dark dots, two larger blackish spots on  $1/4$  of costa, each with a round black dot below it; posterior  $3/5$  of wing deep ferruginous, becoming darker ferruginous-brown anteriorly, posteriorly lighter, mixed with bright ochreous and some golden orange but obscured by dark brown strigulation; two pairs of ill-defined whitish marks on costa beyond middle, another three smaller but more distinct pairs, at  $3/4$ , beyond  $5/6$  and before apex, respectively; these pairs continued and interconnected below costa by faint curved guirland-like, pinkish streaks, a circular, conspicuous, silvery-white spot on upper angle of cell with a small appendix below posteriorly; two elongate, erect-triangular blotches of pale grey ground colour, on  $3/4$  of dorsum and in tornus, respectively; first of these with truncate top pointing towards white spot, but by far not reaching it, second longer, pointed top reaching vein 7 beyond white spot; terminal patch occupying median third of termen, broadly fasciate and moderately curved, merging in ferruginous colouring beyond and above white spot; some bright yellow suffusion beyond white spot; apex orangeish-tinged, a lilac-grey irregular fascia before apex; dorsum irregularly infuscated anteriorly, an interrupted purple line along extreme terminal edge. Cilia purple, with a pale basal line; apical third orange-tawny with purple bars.

Hind wing modified: apex and upper third of termen rounded, median third of termen between veins 2-5 with a rounded prominence; semipellucet, light fuscous-purple, more transparent towards base and dorsum; apex and prominence of termen suffused with purplish-black, the same suffusion along posterior fourth of vein 1b and

along edge of wing opposite end of this vein. Cilia fuscous, opposite apex and prominence of termen purple with whitish apical half, a pale basal line throughout.

Male genitalia. Very similar to those of *S. semiculata* (Meyrick), but with socius more robust, densely bristled and with large patches of long spiny bristles at apex; valva with sacculus more projecting,  $Spc_1$  larger; aedeagus longer.

Central East Borneo, "Midden Oost-Borneo Expeditie", Long Petak, 450 m, 4.x.1925 (H. C. Siebers), 1 ♂, holotype, genit. slide 2685 (LM). A distinct species, allied with the preceding.

***Sorolopha artocincta* spec. nov.**

(fig. 130)

♂ 11.5 mm. Head light grey touched with purplish. Palpus darker grey, an oblique suffused spot below apex of median segment. Thorax grey, faintly touched vinaceous. Posterior tibia in male simple, upper half rather dark purple, lower half white. Abdomen light fuscous-brown, glossy opalescent vinaceous, anal tuft tawny, venter pale ochreous.

Fore wing oblong, truncate, costa gradually moderately curved along basal 3/4, straight posteriorly, apex subobtuse, almost rectangular, termen gently sinuate above, vertical, rounded beneath. Light grey touched vinaceous, dusted with darker grey except on dorsum and sparsely strigulated with tawny-fuscous. Basal patch hardly to 1/4, faintly touched ochreous, better indicated by a narrow dark brown, interrupted edge only, little curved above, straight below, oblique; a small dark brown strigula from costa to fold beyond base; costa anteriorly with ill-defined short whitish marks alternating with dark brown dots; transverse fascia rather narrow, conspicuously dark brown, paler above dorsum, from costa before middle, to 3/4 of dorsum, hardly dilated along median third, narrower on costa; anterior edge almost straight, irregularly slightly excavate and subserrate along lower 2/3; posterior edge well-defined, gently convex; space between patch and fascia slightly deeper and purer ashy grey; faintly parted by an interrupted minute brownish line; apex with a dark brown oval spot; preterminal patch dark brown, well-defined, regularly clavate and little oblique; base of its short stalk on middle of termen moderately extended above and beneath, not reaching apical spot; wing beyond transverse fascia appearing paler because of narrow white edges to dark markings, on costa with four small spots alternating with pairs of short, thick white marks; first spot minute and furcate, second largest. Two following smaller and oblique; ground colour before and beyond preterminal patch narrowly parted with brown strigulae; a similar subterminal strigula below patch, interrupted on veins. Cilia dark fuscous, darker opposite apex, a small pale subapical bar on basal half.

Hind wing light purple with a brassy gloss, dorsum paler, cubital pecten rather large, fan-shaped. Cilia light fuscous with a basal pale line.

Paratype very similar to the holotype, only preterminal spot larger, preceded be-

low costa by three suffused parallel tawny longitudinal lines; these lines traceable also in holotype.

Male genitalia. Abdomen with a single pair of small lateral brushes on segment 3. The genitalia, surprisingly, resemble those of *S. herbifera* (Meyrick) closely but have a more depressed uncus, longer and more slender socii, but especially: shorter valva with a little dilated sacculus and a moderate  $Spc_1$ ; thinly bristled sacculus and no trace of any submarginal bristles (no trace of  $Spc_3$ ). Tuba analis well-defined, small, conical, sides thickened.

Moluccan Is., Batian Id., viii.1897 (Doherty), 1 ♂, holotype, genit. slide 7998, 1 ♂, paratype (BM). Apparently belongs to the *S. herbifera* group of species.

***Sorolopha callichlora* (Meyrick, 1909) comb. nov.**

*Argyroploce callichlora* Meyrick, 1909: 603 (♂, Assam). — Clarke, 1955: 70.

*Olethreutes callichlora*; Clarke, 1958: 491, pl. 244 figs. 1-1a (holotype wing and genitalia figured).

*Eudemis (Acanthothyspoda) callichlora*; Diakonoff, 1968: 51.

Distribution. Assam: Khasis.

Male genitalia very similar to those of *S. herbifera*, socii and aedeagus slightly longer; the point of cucullus, however, is much shorter and broader than in that species and  $Spc_1$  decidedly smaller.

Females are unknown.

The richly green coloured species of moderate size has a light bluish-grey ground colour with deep green markings, of which the basal patch has fallen apart into two costal transverse marks and an irregular large, somewhat Y-shaped mark beyond base of dorsum; transverse fascia as in *herbifera*, but its median appendix thicker and less curved, its base more dilated on dorsum; the white mark not above but beyond the dorsal patch and larger, Y-shaped, but less clearly white than in *herbifera*. The posterior tibia "somewhat rough-scaled". Hind wing fuscous, darker towards apex.

***Sorolopha hydrargyra* (Meyrick, 1931) comb. nov.**

(fig. 126)

*Argyroploce hydrargyra* Meyrick, 1931: 137 (♂♀, New Hannover). — Diakonoff, 1949: 136 ("hydrargyra", syn. of *herbifera*). — 1966: 19, figs. 30a, 44 (lectotype selected, genit. ♂♀ figured). — Clarke, 1955: 164.

Distribution. Bismarck Is.

Male genitalia resembling those of *herbifera* closely, but differing by shorter and less slender cucullus, larger, triangular ventral prominence ending in a free digitoid process, crowned with the terminal spine, and by an exaggerated triangular prominence of the sacculus with a very strong and long, rising  $Spc_1$ .

Female genitalia similar to those of *herbifera*, but sterigma stronger prominent, ex-

cisions of the edge of the seventh ventrite on both sides being deeper, ostium bursae abrupter dilated above, colliculum longer.

The species resembles *S. herbifera* closely by general colouring and shape of wing. The ground colour is rather light moss-green, partly marbled with silvery-whitish; costa dark grey; basal patch also whitish-marbled; transverse fascia broadly dilated downwards, followed by leaden-whitish streak and a whitish mark below  $3/4$  of costa; preterminal patch suffused darker green; ocelloid patch limited by silvery streaks. Hind wing dark fuscous, lighter anteriorly.

Closely related to *herbifera* and *callichlora*.

***Sorolopha melanocycla* spec. nov.**

(fig. 134)

♂ 21 mm. Head deep brownish-green, collar posteriorly becoming paler moss-green, scales partly tipped with ochreous. Palpus deep brownish-green, a pale grey sub-apical mark on upper edge of median segment, basal half of palpus greyish-white. Thorax light ochreous, a black small dot on shoulder below tegula, a narrow black transverse streak at  $2/3$ , interrupted in middle, obliterate laterally, apical third of thorax bright chestnut, mixed with black-purple, tips of scales ferruginous. Posterior tibia normally scaled, pale ochreous, with a few bristly appressed scales above, pencil from base very short. Abdomen fuscous, paler towards base, anal tuft paler fuscous, vertex pale fuscous.

Fore wing oblong-triangular, costa moderately curved throughout, apex pointed, termen gently sinuate above, rounded below, little oblique. Pale whitish-green, towards base of costa tinged pale ochreous (discoloured?), faintly strigulated and sparsely dusted with darker green and grey. Extreme edge of costa pale ochreous, with a series of faint grey dots; posterior  $2/3$  of wing as far as middle of fold and midway veins 2 and 3 posteriorly, occupied by two coalescent round black patches, becoming slightly paler, black-fuscous posteriorly faintly touched with greenish; these patches well-defined anteriorly and below, elsewhere space between them and edge of wing filled out with dark greenish-leadens; a snow-white small round spot at lower edge, where the patches converge (i.e., between veins 4 and 5 at  $1/3$  of their lengths); costal edge posteriorly tawny with numerous transverse purple dots and strigulae traversing space above round patches; two purple lines crossing before apex, each continued along termen as a marginal strigula, followed by more such strigulae to tornus; a suffused subquadrate deep green spot on  $1/4$  of dorsum, mixed with purple; a series of a few purple dots along dorsum. Cilia green, basal third darker, mixed with purple, apical third paler, suffused with ochreous.

Hind wing fuscous-bronze with apical half darker, with a purple gloss, basal half semipellucens, dorsum with strong purple iridescence. Cilia fuscous, a paler basal line and a darker subbasal band.

Male genitalia. Tegumen narrowed, pedunculi (legs) strongly dilated towards base.



Socius long, slender, naked, only the moderately pointed top with long fine hairs. Valva long and slender, curved, similar to that in *S. argyropha* spec. nov. but  $\text{Sp}_1$  larger, very dense. Cucullus prominence triangular, smaller and less densely bristled, cucullus point longer and more slender, not clavate. Aedeagus very long, gradually curved.

Female unknown.

New Guinea, Papua, Mt. Tafa, 8500 ft, ii.1934 (L. E. Cheesman) (BM), 1 ♂, holotype, genit. slide 7700. A very distinct species as to the markings. The genitalia place it close to *S. argyropha* spec. nov., differing at once by haired and not spined socius.

### *Sorolopha caryochlora* spec. nov.

(figs. 127-128)

♀ 18 mm. Head olive-coloured (patagia laterally discoloured light ochreous). Palpus rather dull pale olive. Thorax light moss green, apex whitish. Abdomen dark fuscous, posterior halves of segments orange-ochreous discoloured, venter pale ochreous at base.

Fore wing oblong-subtruncate, costa straight anteriorly, moderately and gradually curved posteriorly, apex obtusely rectangular, termen gently rounded, slightly oblique. Anterior half of wing dull light moss-green with a glossy pale bluish-green transverse band, posterior half glossy light grey marked with blackish-purple. Basal patch slightly over  $1/4$ , ill-defined, light moss-green, dull, edge gently curved, extended along dorsum; irregular mixing of white scales towards edge on lower half (possibly due to rubbing); space between patch and transverse fascia glossy pale bluish-green, slightly parted with moss-green above; costa whitish along basal half with minute purple points; transverse fascia from middle of costa, blackish-purple edge and lower end suffused with deep moss-green, below separated by silvery-grey ground colour from a dentoid patch on dorsum before tornus; this fascia gradually dilated downwards, posterior edge twice concave excavate; costa at  $2/3$  with semioval rather larger spot, preceded by an oblique slender mark, followed by three smaller spots, posterior apical; these spots separated on costa by pairs of minute white marks, continued as broad lines of glossy silvery grey ground colour slightly mixed with pink; some four parallel slender longitudinal marks below large costal spot, partly filling out second concavity of transverse fascia; preterminal patch larger, rather erect, irregularly pentagonal, below connected with tornus by pale pinkish suffusion and irregular dark lines; similar suffusion along termen; space before preterminal patch finely parted by dark grey. Cilia purplish-black, a black basal line, cilia in tornus pale pinkish.

Hind wing pale purple-fuscous, subpelluculent, with fine transverse striation, marginal third opaque, deep fuscous-purple. Cilia ochreous with a deep purple subbasal band.

Female genitalia. Ostium together with colliculum forming a large clavate tubular ostium, finely aciculate on the inside; lamella antevaginalis indicated by its lateral rims which diverge downwards and end each in a small cup-shaped impression. Sig-

num absent, but wall of corpus bursae apparently with a cordiform impression denser punctulate than remainder of the wall.

North New Guinea, Humboldt Bay, iv.1893 (Doherty), 1 ♀, holotype, genit. slide 7993 (BM). An elegant species, superficially resembling *S. melanocyclus* spec. nov. (of which a single male is known) by markings, but differing by colouring. The genitalia are very distinct.

***Sorolopha chortodes* (Diakonoff, 1968) comb. nov.**

(figs. 107, 129)

*Eudemis (Acanthothyspoda) chortodes* Diakonoff, 1968: 52, figs. 77-78, 528 (♂, Luzon; genitalia, wings figured).

Distribution. Philippine Is., Luzon Id., 1800 m.

The ground colour is greyish-green, with dark green and fuscous-black markings. Three irregular curved streaks on basal 1/3 of wing, transverse fascia from middle of costa straight and oblique, anterior edge gradually convex, excised below, posterior edge with a small notch in middle, followed by a triangular projection: dark green, in middle suffused black; posterior half of costa with five dark wedges; preterminal spot large, round, with a robust branch to middle of termen, a slender branch below obliquely to tornus. Hind wing dark fuscous-bronze, a small crest of stiff scales along base of vein 3 above, tornus with thick modified greenish-white scales.

"... posterior tibia strongly extended and dilated triangularly with a thick brush of appressed scales, glossy grey, blackish on the inside, with a white lateral streak, posterior spot, apex of tuft and inner side of posterior tarsus pure white".

Male genitalia with a rather short tegumen. Valva with an acute-triangular socius,  $Spc_1$  small, on top of prominence;  $Spc_2$  developed; primary incision extremely large, the stalk of cucullus narrow; cucullus proper bifid, the ventral broadly clavate projection even larger than the actual cucullus top. All the abdominal segments bearing pairs of hair pencils.

***Sorolopha plumboviridis* spec. nov.**

(fig. 135)

♂ 19 mm. Head pale ochreous-green, face white. Antenna greyish-fuscous, scape light yellow-ochreous. Palpus whitish, median and terminal segments suffused with pale yellow. Thorax rather bright ochreous, mixed with pale yellowish-green, patagia pale yellowish-green, tegula pale olive mixed with whitish-blue green, tuft at apex yellow-green; snow-white modified broad scales below base of fore wing. Posterior tibia pale greyish-fuscous, darker fuscous outside. Abdomen rather light opalescent grey, lateral brushes darker grey, anal tuft ochreous, venter whitish.

Fore wing oblong-triangular, costa hardly curved at base, straight along basal 2/3,

rather curved posteriorly, apex subrectangular, termen straight, long, moderately oblique. Basal patch to beyond  $1/3$ , edge rather straight and moderately oblique to fold, absent below fold; this patch rich moss-green mixed with ochreous, a black suffusion along costa and along edge to fold, becoming paler below; costa with two suffused pairs of whitish-leadен transverse marks, an irregular whitish-leadен slightly black-centred patch across fold beyond base; transverse fascia well-defined, oblique, rather narrow and black on upper half, broadly furcate, moss-green and ochreous on lower half, containing a jet-black quadrate spot on middle of anterior edge; anterior leg of furcation pointed, subtriangular, posterior gently curved; space before and beyond fascia (actual ground colour) forming brilliant silvery-leadен transverse streaks, anterior along upper half of wing, broader than transverse fascia, incompletely parted with black, on upper edge of cell traversed by white, below mixed with green, below cell much narrowed, limited by vein 1b; posterior streak as broad as transverse fascia and double from costa to cell, originating from two pairs of short white costal marks, narrow and straight in middle, dilated in tornus; a curved-wedge-shaped silvery-grey spot between legs of transverse fascia on  $2/3$  of dorsum; posterior  $2/5$  of costa light green-yellowish with three snow-white curved small marks, anterior double, each continued by an irregular silvery-leadен line which converge on upper third of termen, apex black, preterminal patch rather suffused, black with deep green, an oblique thick stalk to termen just above middle, top of patch with a rectangular notch containing a yellowish-white inverted-V-shaped mark; a short oblique mark on  $2/3$  of dorsum and a couple of marginal roundish marks towards tornus, leadен-grey; four minute white specks along upper half of termen from just below apex; dorsum and tornus almost completely filled out with moss-green and ochreous-yellow. Cilia light grey, suffusedly barred with dark grey, basal line black, grey-barred.

Hind wing rather narrowly subtrapezoidal, pointed, deep fuscous-purple, paler and subpellucet before vein 1b. Cilia paler bronze-fuscous, along termen glossy white, throughout with a darker fuscous subbasal fascia.

Male genitalia. Very similar to those of *S. herbifera* (Meyrick), but distinct by smaller and narrower sacculus, with a less developed and smaller  $Sp_1$ , formed of larger spiny bristles and by a shorter and depressed uncus.

Moluccan Is., Batian Id., 1892 (Doherty), 1 ♂, holotype, genit. slide 7996 (BM). Closely allied to *S. herbifera* (Meyrick) but differing by colouring, markings and the male genitalia. ~

### *Sorolopha plinthograpt* (Meyrick, 1931) comb. nov.

(figs. 131-133)

*Argyroploce plinthograpt* Meyrick, 1931: 135 (♀, Formosa). — Clarke, 1955: 253.

*Olethreutes plinthograpt*; Clarke, 1958: 539, pl. 268 fig. 1 (wings of holotype).

*Eudemis plinthograpt*; Issiki, in Esaki et al., 1957: 69, no. 332, pl. 11 fig. 332 (Japan) (too red).

Distribution. Formosa, Japan.

Japan, Kyushu, prov. Hyuga, Takanahe, ♂, 1.x.1895 (A. E. Wileman), 1 ♂, genit. slide 6352. Formosa, Banshōryō, ♀, 31.v.1906 (A. E. Wileman), 1 ♀, genit. slide 6353.

♂♀ 18 mm. Ground colour slaty-grey with slight violet tinge, markings rather unicolorous dark brown. Basal patch almost entirely filled out by fine marbling of ground colour, in female somewhat ochreous-tinged; a distinct costal mark or strigula halfway this patch and median fascia, flanked by minute strigulae; transverse fascia abruptly dilated below costa on both sides, posterior edge regularly curved, to dorsum before tornus, anterior edge on lower half with a large, semioval excavation, filled out by ground colour, and turning obliquely upwards; in this way upper half of fascia forming a conspicuous clavate mark from costa, with lower anterior angle rather triangularly pointed; preterminal spot rhomboidal, upper anterior margin narrowly edged with white, slightly concave, lower edge extended, somewhat suffused and furcate below.

Hind wing deep purplish-brown, becoming almost black towards margin, basal half becoming fuscous-grey.

Male genitalia. Resembling those of *S. semiculta* (Meyrick) but with tegumen higher and more slender, socius longer and narrower, without apical modified bristles, simply haired throughout. Sacculus broader, Spc<sub>1</sub> much smaller, cucullus bristles shorter but forming a broad patch with a peculiar narrow submarginal extension almost to Spc<sub>1</sub>; cucullus not clavate, rather slender, its projection strong and long, as long as the terminal spine itself. Aedeagus sclerotized, curved, apex acutely and obliquely truncate.

Female genitalia. Resembling those of *S. herbifera* (Meyrick), but excisions of the margin of segment flanking ostium deeper, the funnel of colliculum much longer and more slender; ostium bursae at the sides with well-defined, thickened ridges. Corpus bursae finely aciculate throughout, signa inequal patches of fine scobinations, one very small, another larger and concave.

A rather similar specimen but, alas, without head and abdomen, from East Java, Tengger Mts., Nongkodjadjar, 1300 m, collected at light, 26.i.1941 (A.M.R. Wegner) (LM) may or may not be conspecific.

#### *Sorolopha sphaerocopa* group of species

Cucullus with a broad, oval projection of ventral side, directed distad and sacculi often asymmetrical and so resembling those in *Gnathmocerodes*.

Sterigma large, fleshy and funnel-shaped, with enlarged lateral upper angles and a moderate split, so resembling the sterigma of the first group (*cyclotoma*).

The group thus combining the plesiomorphic sterigma with apomorphic cucullus, may indicate the polyphyletic development of the present genus.

**Sorolopha sphaerocopa** (Meyrick, 1929) comb. nov.

(figs. 124-125, 138)

*Argyroploce sphaerocopa* Meyrick, 1929: 481 (♂, Tonkin). — Clarke, 1955: 290.  
*Choganhia sphaerocopa*; Razowski, 1960: 387, figs. b, 13 (head and genit. of type figured).  
*Acanthothyspoda sphaerocopa*; Diakonoff, 1966: 56.  
*Eudemis (Acanthothyspoda) sphaerocopa*; Diakonoff, 1968: 47, 51, 52.

Distribution. Tonkin.

Central West Sumatra, Fort de Kock, 920 m, iv.1921, vi.1922, 1923 (E. Jacobson), 1 ♂, genit. slide 4635; 2 ♀, genit. slide 6264.

West Java, Buitenzorg, 250 m (W. Roepke), 2 ♂, genit. slides 4636, 4641, 9 ♀, genit. slide 4637. Central Java, Telawa, Seneng, teak forest, 40 m, bred on leaves of sintok (? *Cinnamomum* spec.), 29.ii, 1, 26.iii, 21.viii, 25.ix, 1931, 1932, 1934 (L. G. E. Kalshoven), 4 ♂, genit. slides 6269, 7585; 3 ♀, genit. slide 6270. Salatiga, 200 m, 1919 (W. Roepke), 2 ♂, genit. slide 7586; 1 ♀.

Moluccan Is., West Obi, Obi Lake, 160-260 m, vii-ix.1953 (A. M. R. Wegner), 1 ♀ (no abdomen) (LM).

The material from Seneng and Telawa has been named by Meyrick "*Argyroploce phyllochloa* Meyr."

? Assam, Khasis, Cherra Punji, iii.1895 (Doncaster), 2 ♀ (BM) (without abdomen and rather rubbed).

The species is redescribed after the material from Fort de Kock. The type specimen from Tonkin is rather rubbed and is darker ochreous-grey, but otherwise very similar. The male genitalia show no differences whatever.

♂ 15-16, ♀ 16-17 mm. Head and palpus light grey, appearing olive-tinged in certain lights, slightly strewn with fuscous points. Thorax slightly darker, with a faint olive tinge in certain lights. Abdomen light grey-fuscous, darker towards apex. Posterior tibia in male densely clothed with closely appressed hair-scales, whitish-grey on the outside, dark grey on the inside, spurs and tarsus white.

Fore wing oblong, rather narrow, costa gently curved throughout, more so in middle, apex obtusely angular, termen gently convex, almost vertical above, rounded beneath. Pale bluish-grey, sometimes with a pale green tinge. Extreme costal edge whitish, with numerous small dark marks; basal patch indicated by a slightly darker olive suffusion, very faint, to 1/4, traversed and edged by a series of interrupted faint fuscous transverse strigulae; a faint fuscous strigula from a costal mark at 1/3, angulate at 1/3 of disc, to an erect slender wedge-shaped fuscous mark on 2/5 of dorsum; transverse fascia from just beyond middle, rather straight and simple, spindle-shaped, being gently dilated towards its middle but broadest just above fold, just below with an equilateral triangular notch; fascia on dorsum slightly narrower than in disc; anterior edge suffused, posterior well-defined by a thin white line, serrulate, with a small dark tooth just in middle; deep olive-fuscous, in male darker infuscated towards posterior edge; apical part of costa with five dark marks, first

fasciate and thin, flanked by minute short lines; second largest, subquadrate; two following spots longitudinal, ultimate spot apical, elongate; a slender more or less interrupted blackish line below and more curved than costa, from below the second mark, before apex bending down and running along termen as a series of thickened white-edged dots; this line edged and costa above it filled out with greyish-olive; preterminal patch large, semicircular, fuscous-black, lower edge suffused, space around patch greyish-white in female, place of ocelloid spot filled out with pale bluish-grey ground colour; a small comma-shaped black mark preceding preterminal patch, vertical, another below end of vein 4, horizontal. Cilia with basal third fuscous or purplish, dark grey elsewhere, pale grey in tornus.

Hind wing pale, grey marginal half broadly suffused with bronze-fuscous, in male wing thinly scaled in and below cell, edge with an obtusely angulate projection on termination of vein 4. Cilia light fuscous with a deeper subbasal band, in male cilia along dorsum long, dense and strongly spreading, whitish; a dense pencil of long, blackish hairs on middle of vein 1b upperside, followed by a fan of fuscous hairs along this vein to wing margin.

*Sorolopha asphaeropa* spec. nov.

(fig. 148)

♂ 15 mm. Head olive-green, face white. Palpus olive-green, basal segment pale. Thorax olive-greenish-grey, towards apex slightly suffused with greenish-white, a caudad-angulate black narrow transverse band in middle, top of large flat apical tuft tawny-olive. Posterior tibia strongly dilated by closely appressed long hair-scales above and beneath inwardly, below semioval in contour, above flat, on the inner side flat, black, on the outer side hair brushes suffused dark grey, tibia itself glossy pale ochreous. Pectus with a few brilliant metallic pale olive scales. Abdomen dark grey, with thick pale ochreous lateral tufts, venter white.

Fore wing suboval-truncate, costa gently curved anteriorly, more curved and prominent at  $3/4$ , apex rounded, termen straight above, vertical, rounded beneath. Rather dull bluish-green, markings darker dull moss-green, general appearance rather dark. Basal patch hardly indicated in right wing, by a partly interrupted dark fuscous suffused line, to  $1/3$ , indefinite in left wing; costa narrowly whitish-green, densely strigulated by alternately thicker and slender dark fuscous transverse strigulae; entire space from base to transverse fascia marbled with diverse shades of green and transversely and finely strigulated with dark fuscous; a deeper moss-green suffusion mixed with fuscous, occupying about second fourth of dorsum, rising to middle of wing; transverse fascia slender, gently curved, anterior edge well-defined, narrowly dark fuscous, followed by whitish; posterior edge suffused, and irregularly excavate from  $1/3$  to above dorsum; a small and four larger costal spots posteriorly grey-fuscous, rather obscured by greyish-green ground colour; terminal spot large, upper half subtriangular; dark fuscous, centred with deep moss-green, lower edge suffused and

paler; encircled above by a narrow white line, this line dilated in middle of wing, as is the white edge to transverse fascia. Cilia deep moss-green, partly infuscated, two slender whitish bars below apex.

Hind wing rather fuscous, basal half paler and semipelluculent, dorsum forming a large flat roll throughout, filled with dark fuscous hairs and opaque. Cilia along dorsum long, rather curled, pale fuscous touched with tawny. Cilia elsewhere fuscous with pale fuscous apical half and a pale basal line.

Male genitalia. Very similar to those of *S. sphaerocopa* and with similarly asymmetrical sacculus, but with ventral process of cucullus much narrower, dorsal process more rounded-clavate and broader. Socius slender, under 1/2 of tegumen. Aedeagus sclerotized, slender, gradually curved.

South New Guinea, Milne Bay (A. S. Meek), 1 ♂, holotype, genit. slide 8007 (BM). A rather surprising specimen, with the genitalia resembling those of *S. sphaerocopa* but with the colouring, general facies and hind wing quite different.

***Sorolopha aeolochlora* (Meyrick, 1916) comb. nov.**

(figs. 136-137)

*Argyroploce aeolochlora* Meyrick, 1916: 562 (♂, Assam). — Clarke, 1955: 37.

*Choganhia aeolochlora*; Razowski, 1960: 387 (type of genus).

*Eudemis (Acanthothyspoda) aeolochlora*; Diakonoff, 1968: 51.

Distribution. Assam.

♀ 16 mm. Apallotype. Exactly similar to the male, but with both fore and hind wing slightly narrower. The edge of the brown area somewhat more oblique consequently. The hind wing is without a dark pencil of hairs on dorsum, present in the male, paler at base, with apex darker than in the male.

The species has a bright green posterior third of wing and, especially characteristic, suboval medio-dorsal green patch, edged with deep blackish-green. The remainder of wing and the dark markings on the apical third, deep vinaceous-brown, sometimes paler only towards costal half of anterior portion of wing; basal patch absent, transverse fascia not defined anteriorly; preterminal patch rounded, with an obtuse appendix below; three costal spots rather small, equal, preceded by a small strigula, apical spot dark, larger.

Hind wing fuscous-vinaceous, with dark apex and paler base, in female paler basal 2/3. Male with "a projecting pencil of long dark fuscous hairs from near dorsum in middle". Abdomen with six pairs of long lateral hair pencils; fuscous-grey, dorsum opalescent olive in certain lights, with a purplish gloss, mixed with white, anal tuft fuscous-purple, venter white, dusted with dark grey.

Male genitalia resembling those of *atmochlora* but with shorter and more curved socius; Spc<sub>1</sub> slightly larger; and chiefly: the ventral projection of the cucullus much broader, almost rectangular-semioval, as broad as the free clavate top of cucullus is long.

Female genitalia. Sterigma cup-shaped, lamella antevaginalis represented by two oblique dark spindle-shaped folds, median split V-shaped; this sterigma below surrounded by a rounded field of very dense short scales (corethrogynae; removed in mount). Colliculum slender, almost clavate. Signa, two very small round subscoberate patches.

An elegantly green species, very characteristic by the presence of a suboval green dorsal spot and by the unique dark hair pencil from the middle of vein 1a above, already mentioned in the original description. The species belongs to the *sphaerocopa* group.

Assam, Khasias, Cherra Punji, v.1895 (Doncaster), 1 ♂, genit. slide 7997, 1 ♀, allotype, genit. slide 8003; 2 ♀ (one without abdomen). Khasias Hills, 1898-9, Walsingham Coll. (Doherty), 1 ♂ (BM).

#### *Sorolopha bryana* group of species

The group of species resembling the preceding and derivable from those. Usually elegantly green, markings blackish or dark brown, preterminal spot accentuated by silvery edging.

Ventral process of cucullus becoming as big as or bigger than terminal part of cucullus, semioval or clavate with an irregular group of spines and no longer triangular with a terminal spine.

Female genitalia with a wide funnel-shaped ostium bursae and a very long and narrow colliculum, curved asymmetrically to the right side; sterigma proper absent. Signum, a single tooth with granulate surface.

The female genitalia thus resemble those of the second group of species (*S. liochlora*).

#### *Sorolopha bryana* (Felder & Rogenhofer, 1874) comb. nov.

(figs. 139-141)

*Penthina bryana* Felder & Rogenhofer, 1874: pl. 137 fig. 54 (Ceylon). — Walsingham, in Moore, 1887: 494. — Swinhoe, in Cotes & Swinhoe, 1887: 698, no. 4760.

Distribution. Ceylon.

Head, palpus and thorax, variably mixed with olive-green. Posterior tibia in male with long roughish black hair-scales above and beneath. Abdomen in male black, with long lateral pencils of hairs on all segments.

Fore wing truncate-suboval, in female more dilated, costa curved throughout, more so in male, apex obtusely pointed in male, rounded in female, termen gently convex, little oblique. Ground colour rather variable, from light moss-green, to rather deep olive strongly marbled with greyish-white. Markings purplish or brownish-black. Basal patch formed of irregular dark marbling with a very oblique edge, rounded below; this patch interrupted below cell by greenish and whitish zigzag lines; anterior



part of costa with dark marks alternating with minute strigulae; in female costal half of ground colour rather tinged ochreous; transverse fascia large, from before middle of costa, upper part moderate and less oblique, below costa abruptly dilated on both sides and more oblique, anterior edge concave along lower third and with a deep acute notch below, directed obliquely upwards and almost cutting fascia in two; posterior edge of fascia broadly undulate, tolerably straight and very oblique, vertical on dorsum, space beyond fascia narrow, green in male, greyish-white in female, green in both along termen; posterior part of costa with four subquadrate dark dots, ultimate apical; preterminal patch very large, rounded in male, erected vertically in female: upper half dark brown, almost touching costal dots, lower half suffused with tawny, extended almost to tornus, narrowed downwards, stalk to termen narrow, median. Cilia grey-green in male, dark fuscous in female, barred with blackish and pale tawny.

Hind wing in male fuscous-grey, a pecten of very long projecting scales along the whole length of lower edge of cell and vein 3, pale grey becoming whitish-grey towards base; hind wing in female dark grey-fuscous, paler and thinly scaled at base.

Male genitalia with curved, rather long socii, valva strongly narrowed in middle and curved, sacculus rectangular, with a spiny  $Spc_1$  and a compact but rather short  $Spc_3$ ; cucullus with a very long and strongly clavate ventral process, bearing a group of stout spines, cucullus top curved, elongate-oval, shorter than process.

Female genitalia. Ostium very wide and crater-like, asymmetrical and shallow-cup-shaped inside, colliculum very long and slender, curved to the right side. Signum, a slender, granulate thorn with a weak basal plate.

Ceylon, Patipola, "F.M.M., 4.09", 1 ♂, genit. slide 6271. "Ceylon, J.P., 04", 1 ♀ (labels in Meyrick's hand), genit. slide 6272, Meyrick Collection (BM). The above re-description is based on this pair. Ceylon, 1902 (Mckwd), 1 ♀ (without abdomen).

***Sorolopha homalopa* (Diakonoff, 1968) comb. nov.**

(figs. 165-166)

*Eudemis (Acanthothyspoda) homalopa* Diakonoff, 1968: 54, figs. 117-118, 529 (♀, Philippines; nos. of figs. 118 and 119 confounded).

Distribution. Philippine Is., Mindanao.

The fore wing is fuscous, strewn with darker, costa, apex and dorsal half as far as fold marbled and suffused with light olive green and fuscous-green; dorsum mixed with dark fuscous; a large round tornal patch, light fuscous with upper and posterior edges suffused darker; an oblique straight pale grey transverse band from costa, following tornal patch. Hind wing semipelluculent towards base; thinly scaled throughout, especially in dorsum; blackish towards apex, appearing dark grey elsewhere.

Female genitalia very similar to those of *S. bryana* (Felder & Rogenhofer), but sterigma higher, less depressed, forming a distinct high collar.

The holotype is still unique (USNM).

**Sorolopha margaritopa** (Diakonoff, 1953) comb. nov.

*Argyroploce margaritopa* Diakonoff, 1953: 108 (♂, Central West New Guinea).

*Eudemis (Acanthothyspoda) margaritopa*; Diakonoff, 1968: 52.

Distribution. Central West New Guinea: Snow Range, 2250 m.

Unfortunately the unique type specimen lacks the abdomen. At the time the genitalia remained, therefore, undescribed. The species is very distinct, large (21.5 mm) and broad-winged, with a conspicuous snow-white subquadrate spot on upper angle of cell; ground colour pale greenish-blue, tinged ochreous towards base (which might be an artefact); markings deep olive-green finely white edged; basal patch represented by a subbasal streak from costa, a small spot at 1/6 of costa and a triangular one below and beyond this above fold; transverse fascia constricted below costa, median appendix rounded, to below fold, a notch of outer edge just above middle containing the white spot, a second constriction at 3/4; terminal patch indefinite, only its silvery white edge below present. Posterior tibia slightly rough along posterior half of under side. The species is tentatively placed here, but its exact position without the knowledge of the genitalia remains uncertain.

**Sorolopha atmochlora** (Meyrick, 1930) comb. nov.

(fig. 142)

*Argyroploce atmochlora* Meyrick, 1930: 603 (♂♀, Java). — Clarke, 1955: 58.

Distribution. Java.

Lectotype, hereby designated: 1 ♂, West Java, East Preanger Regencies, Tjiboeloe, 1500 m, 31.X.1928. "*Argyroploce atmochlora* Meyr.", "*Cinnamomum camphora*", "no. 681" (Fr. A. Th. H. Verbeek), genit. slide 6263 (LM).

Apparently this is the only one of the four syntypes which is available. It has been bred "at the same time from larvae feeding in the same way" as those of *S. herbifera* Meyrick.

Male genitalia. Tegumen high and rather narrow. Uncus moderate, rounded. Socius 1/2, slender, weakly bristled, apical third heavier bristled, but not strongly so. Valva with sacculus moderately projecting, Spc<sub>1</sub>, rather small, marginal half with shorter bristles, cucullus with a rounded-clavate ventral projection and apparently, slender point (missing right and left); Spc<sub>3</sub> present, moderate. Aedeagus long, slender, gradually curved.

Abdomen with short pencils of hairs on lateral papillae of some six segments. Posterior tibiae thickened, but smoothly scaled. Ground colour light blue-green, partially suffused yellowish-green\*). Transverse fascia with upper half broad, blackish, moder-

\*) Probably discoloration, an artefact due to chemical changes of green pigment after contact with some desinfectant.

ately oblique, on costal half preceded by grey-whitish suffusion (according to Meyrick; my specimen is rather rubbed at this place); a distinct small projection above middle of posterior edge, appendix of anterior edge triangular and rather short, hardly exceeding fold; lower half of fascia deep green, narrow, regularly curved, dilated only on dorsum, three semioval dots on costa posteriorly and a round dot in apex; preterminal spot large, dark fuscous, rounded and slightly club-shaped, well-defined by silvery-bluish edge. Hind wing fuscous, dorsum with a submarginal groove from which projects a pencil of jet-black hairs.

***Sorolopha metastena* spec. nov.**

(figs. 143-144)

♀ 16.5 mm. Head and thorax greenish-grey, tips of scales whitish; a double posterior thoracic tuft. Palpus greenish-grey, towards apex tinged pale pinkish-ochreous. (The greenish-grey colour turning more fuscous-grey in certain lights). Abdomen dark grey, venter pale grey, base white.

Fore wing oblong-subtruncate, costa curved throughout, apex obtusely pointed, termen gently sinuate above, rounded beneath, oblique. Greyish-green, turning more green or more fuscous-grey in certain lights, slightly marbled with darker. Costa throughout with numerous fine transverse short strigulae. Basal patch indefinite, represented by three or four interrupted darker parallel bands, slightly zigzag and strongly curved from costa to dorsum; second of these lines becoming blackish and suffused on lower half; third line, being the ultimate edge of basal patch, including a conspicuous fuscous-grey, blackish-edged subquadrate spot at  $1/4$  and just below middle of wing and some black dusting between this and dorsum; a cloudy subtrapezoidal deeper greenish spot on middle of dorsum; transverse fascia rather narrow, blackish-grey, from before middle of costa to dorsum before tornus, straight; anterior edge obtusely projecting along about median third, below this but above dorsum with a rounded notch reaching to middle of breadth of fascia; posterior edge tolerably straight, with two depressed angulations, at  $1/3$  and below middle, respectively; this edge with a narrow grey-white line; posterior half of costa with five grey marks, first very small, second largest, transverse, following rather marginal, ultimate apical, extended below and dark brown; preterminal spot large, light grey, rounded edge along upper half with a grey line, anterior edge sinuate, pale line followed by an oblique dark strigula; lower edge of patch suffused, to about vein 4, with a darker marginal appendix almost to end of vein 2. Cilia grey, barred with darker greenish.

Hind wing dark grey, becoming slightly paler in centre at base, veins dark grey. Cilia fuscous-grey, a pale basal and a darker subbasal line.

Female genitalia. Colliculum long, dark, gradually dilating so as to form a funnel, sterigma represented only by a transverse band-like lamella antevaginalis, dilated into moderate lobes at the sides and finely aciculate throughout. Signum single, a strong thorn with granulose surface.

South Celebes, slopes of Mt. Lompobatang, Borong Rapoa, 850 m, at light, 19-24. viii.1949 (A. Diakonoff), 1 ♀, holotype, genit. slide 4993 (LM).

*Sorolopha dyspeista* spec. nov.

(fig. 147)

♂ 12 mm. Head pale whitish-green suffused with pale fuscous. Palpus light green, whitish towards base, a dark, fuscous subapical band of median segment. Thorax pale greyish-green. Posterior tibia snow-white, smooth-scaled. Abdomen light glossy fuscous, with thick dark grey side-tufts, anal tuft yellow-ochreous, venter white.

Fore wing subtriangular-oval, dilated, costa little curved anteriorly, more curved before apex, apex subobtuse, termen moderately rounded, long, little oblique above, more oblique below. Rather light green with faint bluish tinge. Basal patch indicated by a regularly curved moderate fuscous band before  $1/4$  and fuscous suffusion on base of wing and on base of dorsum; a faint fasciate fuscous suffusion, parting space between basal patch and transverse fascia, on lower half becoming dilated to an ill-defined fuscous suffusion; transverse fascia from middle of costa to dorsum before tornus, fuscous, centred with rather bright moss-green, dilated and rather rounded below costa, narrowed and excavated anteriorly above dorsum, posterior edge well-defined, followed by a fine white line, upper half undulate, a moderate obtuse tooth below middle, terminal spot with upper half triangular, posterior side continued by a straight stalk to middle of termen, lower edge excavate; a pale fuscous faint suffusion connecting this edge with tornus, posterior  $2/5$  of costa almost confluent, greyish-fuscous, cut by five usual white pairs of marks, anterior two pairs thicker, third pair connected by pale narrow fascia with termen above middle. Cilia dark fuscous (rubbed), with two white bars below apex.

Hind wing rather broad, triangular, apex pointed, termen gently undulate, tornal area above slightly corrugated. Greyish-fuscous, semipellucet, marginal third deep purplish-fuscous, opaque. Cilia along dorsum and in tornus snow-white, elsewhere (rubbed) pale fuscous with white tips.

Male genitalia. Tegumen slender, narrowed above, uncus small but well-defined, rounded. Socius moderate, narrow, not reaching middle of tegumen, top little clavate, with a group of long slender spines. Sides of tuba analis indicated by short strigulae-like lateral rims. Valva slender, sacculus  $1/3$ ,  $Spc_1$  moderate, not dense. Cucullus very characteristic. Lower process strongly elongate, from sacculus to below top, oblong-semioval, top rounded; free part of cucullus about  $1/4$  of entire length, subclavate. Aedeagus short, top attenuated and bent.

Celebes, near Chambi, low country, 1896 (Doherty), 1 ♂, holotype, genit. slide 8000 (BM). Judging from the genitalia, belongs to the *S. bryana* group and is nearest to that species but also close to *S. aeolochlora* (Meyrick) from the preceding group of species.

*Sorolopha stygiaula* group of species

Tegumen and socius strongly elongate, narrow; valva very long and slender with a hooked, rounded, or without a dilatation at base of cucullus.  $Spc_1$  and  $Spc_2$  sometimes strong.

Sterigma rounded, lamella postvaginalis a round plate, ostium simple, in its centre. Signum one, small horn with scobinate base or signum absent.

***Sorolopha mniochlora* (Meyrick, 1907) comb. nov.**

(figs. 145-146, 157)

*Eucosma mniochlora* Meyrick, 1907: 138 (♂♀, Palni Hills). — Clarke, 1955: 208.

*Argyroploce mniochlora*; Meyrick, 1908: 592.

*Olethreutes mniochlora*; Clarke, 1958: 528, pl. 263 figs. 4-4a (lectotype design., genit. ♂, wings figured).

*Eudemis (Eudemis) mniochlora*; Diakonoff, 1968: 49.

Distribution. South India: Palni Hills.

South India, Madras, Palni Hills, 5000 ft, 189.. (Campbell), 1 ♂, 1 ♀ (without head, not spread). Madras, Nilgiris, 7500 ft, vi.1897, "Garden" 9433-9435 and nos. 4986-4988, 6824-6825, 4 ♂, 4 ♀, genit. slides 7956 ♂, 7958 ♀ (BM).

An elegant large species, bright green with blackish-brown markings which slightly resemble the Palaearctic *Eudemis profundana* Denis & Schiffermüller. Basal patch indicated by its broad edge, broken in three spots, largest of these, oblong, along dorsum; transverse fascia moderate with undulate edges, dilated below middle, strongly excavate anteriorly above dorsum; preterminal patch subtriangular, upper angle extended to last costal dot, costa posteriorly with three dark dots; lower angle, to just before 2/3 of termen. Cilia green.

Hind wing dark bronze-fuscous.

Male genitalia. Tegumen high, gradually narrowed. Socius long, slender, rigid, extreme top slightly clavate, with a small patch of strong spines. Valva long and slender, gradually gently curved, base of cucullus rounded and slightly prominent; sacculus with  $Spc_1$  rather long but narrow, straight,  $Spc_2$  marginal, opposite preceding, smaller, oblique.

Female genitalia. Sterigma, a simple, octogonal-rounded aciculate body, in centre of which fits the V-shaped ostium, cylindrical and coarsely punctulate along upper part below sterigma; lower part simple. Colliculum, a rather short constriction, gently sclerotized. Corpus bursae granulate, without signa.

The male genitalia suggest a close affinity to *Eudemis* Hübner, but the female genitalia, instead of a pair of large hooks for signa, have noncomittantly, no signa at all.

**Sorolopha agana** (Falkovitch, 1966) comb. nov.

(fig. 189)

*Choganhia agana* Falkovitch, 1966: 209, figs. 2-3 (♂, China).

Distribution. China: Hangchow.

The species is easily recognizable by the absence of the usual rounded preterminal spot. The ground colour is light ochreous tinged partially olive, the markings are dark fuscous-brown. Basal patch indicated by a subbasal triangular dorsal spot and a slender oblique streak from costa not reaching spot; transverse fascia interrupted below middle by an ochreous-olive spot slightly darker than ground colour, rising from middle of dorsum; posterior edge of fascia with a semicircular excision above its end; lower part of fascia represented by an equilateral triangle on dorsum before tornus; posterior half of costa with three oblique spots alternating with small oblique strigulae, first spot small, second largest; apex filled out with fuscous, this colour containing small pale marks on costa and termen.

Hind wing fuscous-grey, cilia slightly paler.

The above description is derived from fig. 2, the wing markings, slightly elaborated from the description. I did not see the specimen.

Male genitalia have a long tegumen with equally long, slender socii with a bulbous and spiny top. The valva is very slender, long, sacculus with a  $Sp_1$  of short spinules, prominence of the base of cucullus broad and short, cucullus proper clavate, very narrow.

The unique holotype specimen is in the Boucarest Museum. It is from Hangchow in Chekiang Province, 7.v.1937 (H. Höne).

A specialized form, related to *S. bathysema* spec. nov. but differing by shorter tegumen and socii, single  $Sp_1$ , clavate cucullus and entirely different markings.

**Sorolopha bathysema** spec. nov.

(fig. 152)

♂ 13 mm. Head deep slaty grey. Palpus lighter glossy grey, median segment with basal half of lower edge and an oblique transverse subapical band, black in certain lights. Thorax glossy, deep slaty grey, apical third and crest purplish-black. Abdomen light ferruginous-fulvous, anal tuft below and base of venter pale ochreous-golden. Posterior tibia dark grey above, light below, without tufts.

Fore wing suboblong-truncate, costa gently arched, apex subobtuse, termen straight and vertical above, rounded beneath, hardly indented on vein 6. Glossy leaden-grey, partly suffused with darker grey, markings purple-black. Basal patch represented by an equilateral triangular spot on basal tuft; transverse fascia well-defined, from before middle of costa, dilated, occupying posterior third of dorsum and twice as broad there as on costa, anterior edge concave, posterior convex, with lower half slightly shifted

posterad, thus angularly projecting in middle; lower half of fascia containing a suffused round spot of ground colour towards anterior edge and dorsum; fascia black on upper half, lower half purplish-grey; a semioval black spot on 2/3 of costa, preceded by three black dots, followed by two smaller elongate spots, all divided by glossy white of the extreme costal edge (being reduced pairs of white strigulae); a large black spot in apex, edged anteriorly by a white line; a large obliquely oval terminal patch, upper half well-defined, regularly rounded and edged by a white line; lower half invaded by ground colour to beyond middle of patch, edge much suffused; grey-purplish suffusion extending below costal spots but not reaching terminal spot; a short dark strigula descending from this suffusion to anterior end of terminal patch; a dark marginal line in tornus. Cilia in apex and along upper 2/3 of termen dark grey with a black subbasal band, tips white opposite upper third of termen; cilia along lower part of termen and in tornus light lilac-grey.

Hind wing orange-coppery-bronze, in apex and along margin broadly suffused with purple-fuscous. Cilia orange, a fuscous-purplish subbasal fascia.

Male genitalia. Tegumen very high and narrow. Uncus depressed-triangular. Socius extremely long and slender, top clavate, with large spines. Valva long and slender, sacculus indefinite, cucullus with a slight obtuse angle, point long and rather broad, *Hedya*-like. Spc<sub>1</sub>, a thick patch of diverse spines in disc. Aedeagus curved, rather short.

Northwest New Guinea, Sorong, 28.viii-6.ix.1948 (M. A. Lieftinck), 1 ♂, holotype, genit. slide 5853 (LM). Belongs to a characteristic and rather isolated group with coppery hind wings and exaggerated long tegumen and socii.

*Sorolopha camarotis* (Meyrick, 1936) comb. nov.

(figs. 149-150)

*Argyroploce camarotis* Meyrick, 1936: 612 (♂♀, Bengal; Assam). — Clarke, 1955: 72.

*Olethreutes camarotis*; Clarke, 1958: 491, pl. 244 figs. 3-3a (lectotype select., genit. figured).

*Eudemis (Acanthothyspoda) camarotis*; Diakonoff, 1968: 52.

Distribution. India: Bengal; Assam.

Food plant. "From larva rolling leaves of *Michelia sampaca* (Magnoliaceae)" (*Michelia champaca*?).

West Java, Mt. Panggrango, 1000 m, Tjisaroea Zuid, 23.xi.1941 (M. A. Lieftinck), 1 ♂ (LM).

Assam, Khasi Hills, 1 ♀, genit. slide 6354.

Male genitalia. Tegumen high and slender, top with a triangular, pointed projection. Socius long but shorter than in *stygiacula*, little dilated at the top. Gnathos, weak, a transverse band, with a narrowed tuba analis. Valva very slender, with an obtuse-triangular projection beyond the base of sacculus edge, adorned with a patch of long bristles (Spc<sub>3</sub>!); Spc<sub>1</sub> a moderate oval patch in disc; the projection of the base of

cucullus rather broad, with some four short spines, cucullus proper very slender.

Female genitalia. Sterigma a rounded-septagonal, rather large, aciculate plate, in its centre the ostium which is erected-suboval, lower angles slightly erected and thickened; colliculum, a slender, bivalval straight tube; signum, a granulate small hook.

The colouring and markings are very similar to those of *S. stygiaula*, but the male is lighter and distinctly more tawny coloured, while the female is pale pinkish-grey with blackish purple markings. The dark fascia is angulate in the middle and not horizontal, terminating on dorsum before tornus, while the well-defined preterminal spot is free, with a small stalk to termen well below apex. In the male this fascia apparently touches the preterminal patch, but its end and the patch itself are almost completely dissolved in the ground colour or in a suffusion fading out posteriorly.

*Sorolopha stygiaula* (Meyrick, 1933) comb. nov.

(figs. 151, 153-154, 158-159)

*Argyroploce stygiaula* Meyrick, 1933: 419 (♂♀, Java). — Clarke, 1955: 297.

*Olethreutes stygiaula*; Clarke, 1958: 552, pl. 275 figs. 1-1a.

*Eudemis (Acanthothyspoda) stygiaula*; Diakonoff, 1968: 52.

Distribution. Java (Seneng).

Food plant. *Pandanus*, leaves (Pandanaceae).

Central Java, Seneng, teak forest, 40 m, e l., leaves of *Pandanus*, 21.vi.1932, no. 987 (L. G. E. Kalshoven); 1 ♂, genit. slide 6267; the same locality, Telawa, 11.vii.1935, no. 1166 (L. G. E. Kalshoven), 6 ♀, genit. slides 6622, 6623, 6268.

India, Assam, Khasis, Cherra Punji, 1895 (Doncaster), 1 ♂, genit. slide 8014 (BM). Exactly similar to the topotypical material, but slightly larger: 17 mm (as against 15 mm).

Male genitalia. Tegumen very long and narrow. Uncus, a pointed prominence. Socius very long and narrow, top clavate, bristly. Valva slender and long, little narrowed below cucullus which has a slender and rather short projecting arm and a long slender point; sacculus not projecting, with an apical rounded bristly prominence and a moderate, transverse  $Spc_1$ ; beyond this a central group of five dark short spines, a group of three longer spines beyond and above this, a single spine at base and another on top of cucullus arm.

Female genitalia. Sterigma, a rounded aciculate plate, central impression forming ostium; this encircled by an elevated rim, except dorsally, where a second marginal elevated rim is present. Colliculum straight, gently narrowed, sclerotized and tubular. Signum single, a small granulate tooth.

Closely allied with *S. camarotis* (Meyrick) comb. nov.

The male and the female both with a characteristic purple-fuscous or almost black longitudinal broad streak, from dorsum beyond base crossing to middle of cell, thence



straight to termen below apex, including the preterminal spot. The ground colour is light grey. This is one of the species without the green tinge. The hind wing is dark fuscous with the basal half becoming much paler.

The lectotype, a ♂, is in the British Museum (Natural History).

**Sorolopha englyptopa** (Meyrick, 1938) comb. nov.

(fig. 155-156)

*Argyroploce englyptopa* Meyrick, 1938: 85 (♀, Java). — Clarke, 1955: 126.  
*Olethreutes englyptopa* (lapsus); Clarke, 1958: 507, pl. 252 figs. 3-3c (type figured).

Distribution. West Java: Mt. Guntur.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 5.v.1940 (L. J. Toxopeus), 1 ♀, genit. slide 4992. The same locality, ix.1949 (A. M. Neervoort), 1 ♀ (LM).

A deep olive-green tinged species with well-defined white and blackish-fuscous markings: a dark semicircular patch occupying second fourth of dorsum, finely edged with whitish; a snow-white irregular patch just before the terminal spot, preceded by a horizontal dark spot, with a semioval dark costal mark just before and above the horizontal spot. Hind wing blackish, on basal half gradually becoming paler, grey, with black veins.

Female genitalia. Sterigma, a round aciculate cup, a circular outer rim contained in lamella postvaginalis, upper edge of this lamella rounded, with a sclerotized small spot on each side; in front sterigma cup with a deep emargination. Colliculum robust, rather long, gradually narrowed. Signa two, unequal: one, a small aciculate tooth, another, a minute dark scobination.

Male unknown.

The position of the species is somewhat uncertain without the evidence of the male genital characters, but apparently it is close to *A. stygiaula* (Meyrick) comb. nov.

**Sorolopha agathopis** (Meyrick, 1927) comb. nov.

*Argyroploce agathopis* Meyrick, 1927: 76 (♀, Samoan Is.). — Clarke, 1955: 39.  
*Olethreutes agathopis*; Clarke, 1958: 483, pl. 240 fig. 2 (holotype, ♀ wings illustrated).

Distribution. Samoan Islands.

The unique female holotype lacks the abdomen, but the colouring and the markings are those of a typical *Sorolopha*.

The ground colour is ochreous-whitish, marbled, except narrow margins to markings, with pale blue-grey, markings are brown and fuscous, partially edged with darker. Transverse fasciae: beyond base and before middle, central fascia interrupted below middle, followed by a short fourth fascia, not touching the strong, clavate tornal spot; apex dark.

Hind wing grey.

The affinity of this species at present is uncertain.

### *Eudemopsis* Falkovitch, 1962

*Eudemopsis* Falkovitch, 1962: 190, figs. 1-2 (type-species, *Penthina purpurissatana* Kennel, 1901). — Diakonoff, 1968: 48.

Head with appressed scales, rather raised on crown. Ocellus posterior. Proboscis rather short. Palpus moderate, subascending, with closely appressed scales, roughish only along lower edge and at apex above, terminal segment short, concealed, pending. Thorax with a slight posterior crest. Posterior tibia in male normally scaled.

Fore wing suboval, rather narrow, without a costal fold, apex subobtuse, termen rounded, little oblique. Vein 2 from before  $3/4$ , 3 from angle, 3-5 remote, 4 closer to 3, 7 separate, to termen, 8 sinuate and rather closely approximated to 9 at base, from upper angle of cell, 10 remote, from beyond middle of distance 9-11, 11 from beyond middle, chorda strong, from beyond middle of distance 11-10, to well below base of 7, median branch absent.

Hind wing broadly semioval, over 1, with a cubital pecten, vein 2 from just beyond middle, 3 and 4 separate but closely approximated, from angle, 5 closely approximated at base but more remote, 6 and 7 closely approximated towards base; vein 1a on upper side of wing with a pecten of long fine cilia covering a moderate concavity; cilia slightly lengthened and thickened in tornus.

Male genitalia. Tegumen moderately high, uncus shaped as a small lobe. Socius long, pending, naked, at the top with a pair of long crochet-like spines. Valva broad and rather short, cucullus being moderately rounded and comparatively short; sacculus on the contrary strong, almost 1, not narrowed, towards top, bristly,  $Spc_1$ , a patch of rather thin bristly hairs. Caulis cup-shaped. Aedeagus short, curved, with bulbous base.

Female genitalia with sterigma rather large, aciculate and cup-shaped, fore and hind margins incised in middle, colliculum weak. Signum single, obtuse, broad and horn-like.

A simplified off-shoot of the *Eudemis* stock, as is shown by the genitalia. A small genus with Palaearctic distribution.

### Key to the species of *Eudemopsis*

1. A large semioval purple patch along dorsum, including a dark fuscous wedge-shaped spot on  $1/4$  of dorsum and lower part of dark fuscous transverse fascia . . . *pompholycias*
- Dorsum without such spot, entire basal  $3/4$  of wing ashy-grey, darker strigulated; wedge-shaped mark and transverse fascia black, isolated . . . *purpurissatana*

**Eudemopsis purpurissatana** (Kennel, 1901)

(figs. 168, 190, 195)

*Penthina purpurissatana* Kennel, 1901: 252 (♂, Hadjin).*Olethreutes purpurissatana*; Rebel, in Staudinger & Rebel, 1901: 261, no. 1886bis, add. — Clarke, 1958: 540, pl. 269 figs. 4-4a (*Argyroploce archimedioides* Meyrick syn.).*Semasia purpurissatana*; Kennel, 1916: 478, pl. 19 fig. 2 (♂, holotype figured; Ussurigebiet, Sutschan).*Eudemopsis purpurissatana*; Falkovitch, 1962a: 190, figs. 1, 2 (type-species genit. ♂, ♀ figured; foodplant). — Diakonoff, 1968: 50. — Falkovitch, 1970: 68 (foodplant corr.).

Distribution. The Far East: environments of Khabarovsk and Primorski Krai.

Food plants. Bred from rolled leaves of *Schizandra chinensis* (Turcz.) Boill. (Magnoliaceae).Far East, Maritime District, 1 ♂, "Prim. Krai, 14.vii.1961, env. Vladivostok"; 1 ♀, "Rear. no. 19, *Schizandra chinensis* (Turcz.) Boill., larv. 22.v., pup. 2.vi, im. 28.vi. 1963 (Sukhareva, Falkovitch), env. Vladivostok, Okeanskaia Biol. Station, mixed woods" (both specimens in Akad. Petrop.).

The elegant species has ashy-grey ground colour of the fore wings, minutely transversely strigulated with darker, with light crimson apical third. Basal patch represented by a black wedge-shaped spot on dorsum beyond base; transverse fascia slightly sinuate, on lower half outwards-convex and strongly narrowed; anterior margin suffused, posterior well-defined, finely edged with white; terminal spot large, circular, deep crimson, towards upper anterior edge gradually becoming suffused with black. Cilia grey.

Hind wing glossy light grey, cilia silvery-white.

The genitalia of the two sexes are described with the genus above.

**Eudemopsis pompholycias** (Meyrick, 1935) comb. nov.*Argyroploce pompholycias* Meyrick, 1935: 58 (♂, Tien-mushan, 5000 ft). — Clarke, 1955: 254.*Olethreutes pompholycias*; Clarke, 1958: 539, pl. 268 figs. 3-3a (lectotype selected, wings, genit. ♂ figured).

Distribution. China: Tienmushan.

Meyrick correctly concluded that the species is allied with *E. purpurissatana*, judging only from the superficial appearance.

The fore wing is light grey with a large purple semioval patch extending along dorsum and including (dark fuscous) wedge-shaped patch and ditto median part of transverse fascia; upper part of this fascia narrow; terminal spot is dark fuscous and becomes purplish only towards lower end.

Hind wing rather dark grey, with grey cilia.

Male genitalia with socius short and slender, a pencil of long bristles at apex. Valva with cucullus rounded, not conical. Lower edge of sacculus distinctly excised.

Female genitalia unknown.

Closely related to *E. purpurissatana* (Kennel) indeed, but easily distinguished by markings and genitalia.

**Eudemis Hübner, 1825**

(figs. 164, 172)

*Eudemis* Hübner, 1825: 382 (type-species, *Tortrix profundana* Denis & Schiffermuller), by subsequent designation of Westwood, 1840. — Curtis, 1831: 571. — Stephens, 1834: 84 (species elimination, no type designation). — Meyrick, 1881: 649 (in Australia: "*botrana* Schiff."). — Westwood, 1840: 107 (type design. for *Ditula* Stephens). — Stephens, 1852: 74 (subg. of *Sericoris* Treitschke). — Walsingham, 1891: 70 (African species). — Ragonot, 1894: 208 (type-species, *botrana* Denis & Schiffermuller, invalid, not included). — Fernald, 1908: 11, 56 (type-species, *profundana* Fabricius = *porphyrana* Hübner; syn. of *Olethreutes*). — Walsingham, 1914: 244 (syn. of *Olethreutes*). — Pierce & Metcalfe, 1922: 44 (genit. ♂♀). — Fletcher, 1929: 89 (syn. of *Argyroploce*). — Issiki, in Esaki c.s., 1957: 68 (spp. Japan). — Diakonoff, 1968: 47 (*Choganhia* Razowski syn., *Acanthothyspoda* Lower subgen.; Philippine Is.). — Swatschek, 1958: 120, 180 (bion. larva).

*Ditula* Stephens, 1829: 172 (type-species *Tortrix profundana* Denis & Schiffermuller, by subsequent designation of Westwood, 1840). — 1834: 82 (*Eudemis* Hübner & *Paedisca* svn.). — Westwood, 1840: 107. — Curtis, 1837: 196. — Guenée, 1845: 17. — Fernald, 1908: 22, 57 (syn. of *Olethreutes* = *Argyroploce*).

*Thirates* Treitschke, 1829: 233 (type-species, *Tortrix profundana* Denis & Schiffermuller, by subsequent designation of Stephens, 1834). — Curtis, 1831: 167. — Stephens, 1834: 83 (type design.). — Fernald, 1908: 20, 57 (syn. of *Olethreutes*).

In 1968 I treated the present genus as a large group of which *Acanthothyspoda* Lower was a subgenus. At present I prefer to separate *Eudemis* from *Sorolopha* Lower (of which *Acanthothyspoda* Lower is a synonym).

Following this concept, *Eudemis* Hübner is a comparatively small group with two widely distributed Palaearctic species, *E. porphyrana* Hübner (type-species) and *E. profundana* Denis & Schiffermuller, and two more species in Japan and South Asia, respectively.

These species are characterized by a long, simple and slender valva, armed with a single or double  $Sp_{c_3}$ . The males have a simple posterior tibia and normally haired abdomen, the hind wing dorsum without a roll; a distinct gnathos (except in *E. porphyrana*!) and two large, curved, subequal signa with granulose surface. These signa decisively separate *Eudemis* from *Sorolopha*, where invariably there is also no gnathos.

The Japanese species *Argyroploce gyrotis* Meyrick, together with "*Eudemis profundana* Fabricius", have been correctly assigned to the present genus by Issiki (in Esaki, 1957), but he confounded the issue by including also such entirely strange elements as "*Argyroploce hyalitis* Meyrick", "*A. cyanura* Meyrick. *Phaecadobhora fimbrata* Walsingham, and the actually less remote "*A. plinthograpta* Meyrick, in his "*Eudemis*".

Key to the South Asiatic species of *Eudemis*

1. Fore wing with a round darker preterminal spot . . . . . *gyrotis*

- Fore wing without a round preterminal spot. . . . . 2  
 2. Fore wing with an angulate paler streak just above dorsum. . . . . *centritis*  
 — Fore wing without such streak . . . . . *gyrotis*

**Eudemis gyrotis** (Meyrick, 1909)

(figs. 160, 169-170)

*Argyroploce gyrotis* Meyrick, 1909: 604 (♀, Assam). — Clarke, 1955: 151.

*Olethreutes gyrotis*; Inoue, 1954: 107 (S. Honshu, Shikoku, Kyushu, Formosa, India). — Clarke, 1958: 512, pl. 255 figs. 2-2b (lectotype designated, wings, genit. figured).

*Eudemis gyrotis*; Issiki, in Esaki c.s., 1957: 69, pl. 11 figs. 329-330. — Inoue c.s., 1959: 252, pl. 175 fig. 19.

Distribution. Assam (Khasis). Formosa. Japan (South Honshu, Shikoku, Kyushu).

Assam, "Khasi Hills, 6.1906" (printed, in Meyrick Coll., syntype), 1 ♀, genit. slide 7584. Khasis, 5000 ft, Shillong, 27.vii.1928 (Fletcher), 1 ♂, genit. slide 6800.

China, "Hongkong, R., .07" (in Meyrick's hand, Meyrick Coll.), 1 ♀, genit. slide 6804.

Japan, Honsyu, Kinki, Sakai, 2.xi.1954, 22, 23.vi.1955 (S. Issiki), 2 ♂, 2 ♀, genit. slides 9607 ♂, 9608 ♀ (BM). Kobe, 1 ♂, genit. slide 4602, 1 ♀, genit. slide 4603.

A moderate, rather variable species: light grey with a violet tinge and the usual, bright fulvous markings or entirely suffused with reddish-fulvous, except an oblong spot of ground colour along middle of dorsum, with two triangular projections above, and basal half of costa indistinctly suffused with darker grey.

Issiki's fig. 329 pertains to a rather dark example of the typical form, while his fig. 330 correctly depicts the reddish-suffused variety.

The typical male is marked thus.

Basal patch reduced except an inwards-oblique blotch on 1/4 of dorsum, with rounded top and parallel edges, posteriorly edged with a silvery-white line; costa with numerous oblique light fulvous strigulae, four larger spots along posterior third, first continued by a separate strigula, others with their strigulae converging, so as to form a subapical strigula, ultimate spot larger, apical, central fascia deep fulvous-brown, anterior edge suffused, posterior edge gently convex, followed by a narrow whitish line and well-defined fascia, moderately narrow on costa, gradually dilated and forming a triangular patch extending halfway between 2/3 of fold and dorsum; lower half of fascia very narrow, linear; a small acute erect mark on 1/3 of dorsum, greyish; pre-terminal spot circular, dark brown, on a very slender and short, paler stalk. Cilia brownish, around tornus paler, with a row of dark basal points.

Hind wing rather dark bronze-fuscous, darker towards apex which is slightly mixed with grey. Cilia fuscous, a whitish basal line and tip, a darker subbasal fuscous band.

Thorax with a very large rising bifid tuft, grey at base, fulvous-vinaceous at top.

Male genitalia. Tegumen truncate, uncus, a flattened knob. Gnathos submembrane-

ous, point long, pending. Socius rather long, not quite to middle of tegumen, slightly curved, not clavate, top finely haired only. Valva moderate, sacculus hardly  $\frac{1}{3}$ , moderately broad, lower edge prominent beyond base, with a slight hook in middle, concave in between; a small submarginal curved tuft,  $\text{Spc}_3$  beyond this, a long and strong pencil,  $\text{Spc}_2$  small bristles spread over posterior half of lower part of sacculus; cucullus bristles spread, a second small marginal tuft above base of cucullus. Aedeagus long and slender, curved.

Female genitalia. Sterigma, an inverted subtrapezoidal plate, with thinner centre and concave upper edge, towards that edge beset with strong diverging bristles. Ostium and colliculum, a more sclerotized central tube. 7th sternite with a distinct split. Signa, two granulate, long, curved and slender horns with small basal plates.

There exists a colour variety, possibly more numerous with the females and generally not rare, where the grey colour is so much reduced that the original wing pattern disappears: there is no terminal spot, also the dorsal subapical bar is entirely dissolved in the general ferruginous-vinaceous colouring so that only a grey streak along posterior  $\frac{2}{3}$  of dorsum remains with two triangular tops of the upper edge.

***Eudemis centritis* (Meyrick, 1912) comb. nov.**

(fig. 163)

*Argyroploce centritis* Meyrick, 1912: 872 ( $\delta$ , Assam). — Clarke, 1955: 78.

*Olethreutes centritis*; Clarke, 1958: 495, pl. 246 figs. 4-4a (holotype wings, genit.  $\delta$  figured).

Distribution. Assam: Khasis.

An elegant brown species sprinkled with blackish dots and with unusual markings: a zigzag glossy ashy-grey fascia of whitish dusting just above dorsum from  $\frac{1}{4}$  to tornus, accentuated by deeper suffusion of ground colour on dorsal edge. Hind wing grey, thinly scaled, termen dark fuscous.

Male genitalia. Uncus represented by a moderate tumescence. Socius long and voluminous, dilated downwards and clavate. Gnathos well-developed, hook short, not exceeding socii. Valva long and slender, not dilated, in middle of lower edge with indistinct tufts of bristles;  $\text{Spc}_3$  large and dense, relatively short.

The unique specimen, holotype, is in the British Museum.

6. SUBTRIBUS SYCACANTHAE NOV.

The present is a group of genera with the large genus *Sycacantha* in its centre, surrounded by several nearly allied small genera. The numerous species all have characteristic markings and are easily recognizable as members of the group. They play an important part in the fauna of South Asia.

The signum is single or double, or seldom, entirely absent. It is of the scobinate-cornute, seldom cornute type.

Key to the genera and subgenera of *Sycacanthae*

- 1. Uncus absent . . . . . 2
- Uncus present . . . . . 6
- 2. Socii moderate or small, divided in inner and outer pair . . . . . *Sycacantha*
- Socii large, densely haired, pending or porrect, a single pair . . . . . 3
- 3. Socius oblong-oval, pending, weak . . . . . *Phaecasiophora (Phaecasiophora)*
- Socius oblong, not oval, rigid or subrigid, pointed . . . . . 4
- 4. Socius rigid, triangular, with an acute point, densely spined below; cucullus long, slender . . . . . *Prophaecasia*
- Socius oblong . . . . . 5
- 5. Uncus broad, socius broadly oblong, with a strong point. . . . .  
*Phaecasiophora (Megasyca)* part.
- Uncus very small, conical. Socius narrow, without point . . . . . *Sisona*
- Socius oblong, subrigid, with a strong point . . . . . *Phaecasiophora (Megasyca)* part.
- 6. Uncus a broad plate, bilobed or bicornute . . . . . *Psilacantha*
- Uncus a long, slender rod . . . . . *Monacantha*

**Prophaecasia** gen. nov.

Head with loosely appressed scales, rather rough and dense on forehead, forming a smooth high crest on vertex. Ocellus posterior. Proboscis weak. Antenna in male gently thickened and slightly flattened dorso-ventrally, minutely ciliate. Palpus slender, curved and ascending, median segment short-ciliate, roughish along lower edge, its top reaching to middle of eye height, terminal segment very short, rounded, exposed, slightly porrect. Thorax smooth. Hind tibia normal, densely scaled, scales roughish above and beneath. Abdomen normal.

Fore wing oblong-truncate, apex and termen rounded. Vein 2 from slightly beyond 3/4 of cell, 3 from angle, 4 distant but closer to 3, 5-7 distant and parallel, 7 separate, to termen, 9 close to 8 from upper angle of cell, 10 from 2/3 distance 11-9, 11 from beyond 1/3; chorda from before base of 10 to base of 8.

Hind wing with a cubital pecten; broadly semioval, 2 from 2/3, 3 and 4 connate

from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base; dorsum with a marginal glandular thickening, followed on upper side by a small groove in which partially fits a long expanding pencil of hairs from base.

Male genitalia. Tegumen somewhat rounded, with a flattened and scaly top. Uncus absent. Socius large, porrected and pointed, with a dense patch of spiny bristles under the top. Gnathos, a slender rod curving upwards. Valva simple, with a dilated basal third, bearing an obliquely transverse  $Spc_1$  close to pointed base; cucullus long and rather slender, haired throughout, denser haired along basal half. Aedeagus very short, cornuti: a sheaf of spines.

Type-species, *Prophaecasia anthion* spec. nov.

Apparently nearest allied to *Phaecasiophora* and a primitive off-shoot of a common ancestor.

***Prophaecasia anthion* spec. nov.**

(figs. 178-179, 188)

♂ 14 mm. Head light ochreous touched with olive. Antenna glossy ochreous-tawny. Palpus pale ochreous touched with olive towards apex. Thorax greyish-olive, slightly marbled with fuscous. Abdomen fuscous-olive. Posterior tibia light grey, normally but rather densely short-scaled, scales slightly projecting above and beneath.

Fore wing subovate-truncate, slightly dilated, costa curved and slightly prominent at base, gently concave at  $1/3$ , moderately curved and convex along posterior half, apex and termen rounded throughout. Slightly less than anterior half: dull light olive, with very short and slender transverse purplish marks along costa and minute strigulae of the same colour faintly crossing wing and more distinct and continuous, although extremely slender, below fold, where they are gently outwards-oblique; posterior edge of this colour well-defined, accentuated by an interrupted black line, tolerably vertical and straight, except a very obtuse slight posterior prominence in fold and a stronger angulate projection below costa; this projection less well-defined and not black-edged; a glossy, snow-white fascia edging preceding area from top of subcostal prominence to dorsum, with a narrowed top and suffused posterior edge; remainder of wing bright rosy-pink and scattered with irregular black and anthracite-coloured slender marks, tending to be arranged concentrically around a large black, somewhat irregular and gently outwards-oblique suboval longitudinal spot in middle of disc well before termen; posterior half of costa narrowly suffused with greyish-olive, with two double and two single white dots; an interrupted black marginal line. Cilia salmon-pink, tips partly mixed with dark grey, a white basal line and a partially obliterate dark grey subbasal band.

Hind wing purplish-fuscous, on anterior half thinly scaled and paler, touched with olive towards base, with a darker fuscous cubital hair-tuft; dorsum with a very long expansile pencil of orange hairs from base, parallel to dorsum and exceeding tornus; costa glossy, white. Cilia pale pink around apex and along upper half of termen,



fuscous elsewhere, throughout with a whitish-ochreous basal fifth and a fuscous sub-basal band.

Male genitalia as described with the genus above.

East Borneo, Balikpapan, 50 m, Mentawir River, 26.x.1950 (A. M. R. Wegner), holotype, ♂, genit. slide 7451 (LM).

An elegant species, faintly resembling a *Sorolopha*.

### *Sisona* Snellen, 1902

*Grapholitha (Sisona)* Snellen, 1902: 69, pl. 5 figs. 2-2c (type-species, *G. (S.) albitibiana* Snellen, Java, by monotypy).

*Sisona*; Fletcher, 1929: 204 (syn. of *Argyroploce*). — Diakonoff, 1968: 58, 63 (ref., distinct genus).

Head with appressed scales, tufts on vertex raised, face smooth. Ocellus posterior. Proboscis very short. Antenna filiform, short-ciliated, ciliations about 1/2. Palpus rather long, exceeding face the width of an eye, porrected, median segment gently curved and only slightly dilated towards top, with smoothly appressed short scales, roughish only along lower edge, terminal segment very short, obtuse, only partly exposed. Thorax without a crest, a long thick appressed scale-brush, originating from pleura just below base of fore wing, directed caudad and reaching beyond middle of thorax. Posterior tibia strongly thickened with dense snow-white hair-scales, projecting above and beneath, outwardly scales normal, pale ochreous, smoothly appressed, inwardly extremely dense, forming thick appressed pencils above and beneath and a deep oblique concavity in middle of the length of tibia, in which fits a thin creamy pencil from base reaching middle of tibia. Abdomen normal.

Fore wing broad suboval-truncate, apex rectangular, slightly rounded, termen vertical and gently sinuate above, rounded and prominent below. Vein 2 from beyond 3/5, 3 from angle, not approximated at margin, 4 close to 3, 7 to termen, 8 from angle, separate from 7, 9 from beyond 2/3, 10 from middle distance 11-9, 11 from middle of cell, chorda from beyond base of 10 to base of 7, median branch to base of 5.

Hind wing with cubital pecten, in middle 1, dorsum with a rounded prominent lobe and a slight marginal roll, vein 1a under side with a pecten of dense rather long, closely appressed hair-scales throughout, directed towards apex of wing, infuscated posteriorly. Vein 2 from 3/5, 3 and 4 short-stalked from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather short. Uncus, a very short acute point. Two pairs of moderate, bristly socii: upper (inner) slender, narrowed, subporrect and rigid, with a broad base; lower (outer) pair weak, rounded, pending. Gnathos indefinite, tuba analis, a hyaline cone. Valva moderately slender, sinuate, little narrowed, cucullus not modified, with a few short pulvinus hairs; cucullus 2/3, gradually and evenly spined throughout, basal bristles not modified. Aedeagus short, cornuti, a comb of moderate spines.

Female genitalia unknown.

Judging from the double socii, a near relative of *Sycacantha*, but much more progressive by reduced uncus, by the absence of gnathos and by simplified valva.

***Sisona albitibiana* Snellen, 1902**

(figs. 175, 255)

*Grapholitha (Sisona) albitibiana* Snellen, 1902: 69, pl. 5 figs. 2-2c (♂♀, Java; partim: ♂ 18 mm, nec ♂ 15.5 et 16.5 mm, nec ♀).

*Sisona albitibiana*; Fletcher, 1929: 204 (type-species). — Diakonoff, 1968: 58, 63 (lectotype designated: original of figure, ♂, 18 mm).

Distribution. Java.

The still unique lectotype, the original of Snellen's nice coloured figures is re-described below; the three other syntypes, two males and one female are not conspecific (Diakonoff, 1968).

Head pale fuscous, partly dark grey in certain lights. Palpus white, median segment with a suffused subapical black ring, terminal segment grey. Thorax pale fuscous, evenly suffused with fuscous-tawny, metathorax whitish; pectus and humeral pencils snow-white. Posterior tibia as described with the genus above. Abdomen fuscous, anal tuft and venter whitish-grey.

Fore wing shape, cf. with the genus. Whitish-fuscous touched with tawny along costa and in centre of disc moderately suffused with grey beyond cell and in tornus. Costa throughout with ten dark brown transverse marks, on basal fourth fasciate, alternating with minute strigulae, posteriorly oblique, wedge-shaped, alternating with small pairs of white strigulae, more vertical on posterior fourth, ultimate mark longest, apical, inwards-oblique. Basal patch vestigial, to 1/3, indicated by several longitudinal purplish-fuscous marks, more densely confluent on lower half; transverse fascia from middle of costa to 2/3 of dorsum, more or less continuous and purplish-fuscous on lower third, with an anterior projection just above fold, on upper 2/3 almost entirely obliterate, except a grey shadow below costa, an oblique-longitudinal purplish streak in cell and a few marks of the same colour above this posteriorly; a well-defined, dark brown straight streak, from below fourth penultimate costal mark to above middle of termen; anterior edge of this streak slightly suffused, closely preceded by a row of minute dark points; a brown terminal line, interrupted throughout with white. Cilia light tawny, with a brown subbasal band along upper half, tip barred with dark fuscous in middle and at apex.

Hind wing rather light tawny-fuscous, costa white, dorsal lobe before vein 1b thickened with snow-white and silvery-white scales, a thickened marginal roll and a large expanding white pencil of fine hairs from base of margin. Cilia elsewhere pale fuscous with a tawny-fuscous subbasal band, opposite apex and along upper third of termen infuscated along median third.

Male genitalia as described with the genus above.

"West Java, Depok, [50 m], 1886, ♂" (in Snellen's hand) "*Gr. Albitibiana* m. (*Sisona*)" (in the same hand), Leiden Museum label and my lectotype label; genit. slide 2629 (LM).

The specimen superficially is rather similar to certain *Sycacantha* species, e.g. *S. inodes* (Meyrick), especially because of its snow-white brushy tibiae. The coloured figure, otherwise very correct, apparently confused Meyrick: for a long time he referred diverse *Sycacantha* species of more or less similar appearance to the present species of Snellen.

### Phaecasiophora Grote, 1873

*Phaecasiophora* Grote, 1873: 90, pl. 2 figs. 4 (♀), 5 (neur.), 6 (hind legs) (type-species, *Sericoris mutabilana* Clemens = *Sciaphila confixana* Walker, N. America, by subsequent designation of Fernald, 1908). — Zeller, 1875: 276 (bionom.). — Walsingham, 1900a: 135 (two new spp. from Asia). — Fernald, 1908: 41, 60 (type-species design.). — Forbes, 1923: 459 (redescr., *Sciaphila*, *Sericoris*, *Olethreutes* syn. in part). — Heinrich, 1926: 126, figs. 16, 61, 233 (redescr., key to spp.). — Fletcher, 1929: 70 (syn. of *Argyroploce* Hübner). — Diakonoff, 1959: 169 (distinct genus, three subgenera, four spp. Burma). — 1968: 58, 59.

Head with appressed scales. Ocellus posterior. Proboscis developed. Antenna in male short-ciliate. Palpus rather long, ascending and appressed to face, reaching to its middle; with more or less appressed scales, usually roughish only at apex above, terminal segment very short, exposed. Thorax with a posterior crest. Posterior tibia in male strongly tufted with dense scales and with a yellow hair-pencil from base.

Fore wing oblong, apex gently rounded, termen convex, often with small raised tufts of scales along discoidal vein, 2 from 2/3, 3 from angle, 4 nearer to 3, 3-5 approximated at termen, 7 separate to termen, 9 approximated to 8, 11 from middle; chorda from between 10-11 to below 7, (N. American species), or from beyond 10, to base of 7.

Hind wing with 2 from 2/3, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base. Dorsum with a sclerotized ridge (N. American species).

Male genitalia. Uncus absent. Socii large and pending, diversely shaped and densely haired. Valva long, curved, without a primary incision or with a small one; sacculus gently dilated, along costa with a slight hairy prominence, sacculus bristles poorly developed,  $Spc_1$  usually present; cucullus gradually but slightly narrowed, without or with a basal rounded prominence. Aedeagus thick and short with a sheaf of long cornuti.

Female genitalia with a well-developed lamella postvaginalis and diversely shaped lamella antevaginalis. Colliculum sclerotized and tubular, of diverse length. Signa absent (North American species) or a pair, very small, scobino-cornute.

Lord Walsingham (1900) recognized two South Asiatic species, judging from the wing markings and the external characters. The occurrence in South Asia and the bionomics of the genus have been discussed by Diakonoff (1959). He also defined three

subgenera, *Phaecasiophora* Grote, *Megasyca* Diakonoff and *Sycacantha* Diakonoff. The latter subsequently has been elevated to the generic status (Diakonoff, 1966, 1968).

This description is based on the structures of a common South Asiatic species, *P. (P.) attica* (Meyrick). It differs from the North American typical material only by the absence of a signum in the latter.

An apparently apomorphic genus, judging from the pronounced Eucosmine male and female genitalia. It can be divided in two natural subgenera following the male genitalia, although superficially all species are rather uniform.

#### Key to the subgenera of *Phaecasiophora*

1. Socius short and rounded-oval, weak. Cucullus slender, if dilated, then beyond its base . . . . . *Phaecasiophora*
- Socius longer, pointed, usually with a rigid sharp point; cucullus slender, with a rounded thickening at base of lower edge . . . . . *Megasyca*

#### Subgenus *Phaecasiophora* Grote, 1873

*Phaecasiophora*, subgen.; Diakonoff, 1959: 169 (new status; type-species, *Sericoris mutabilana* Clemens = *Sciaphila confixana* Walker).

With the characters of the genus and especially recognizable by the rounded and membraneous socius, pending and bristly, and the absence or reduction of a primary excision of the valva. The female has somewhat diverse sterigma; in the North American species with a membraneous lamella antevaginalis and a long tubular colliculum, while in South Asiatic species this lamella is distinctly sclerotized and bilobed and the colliculum is shorter and gradually dilated towards bursa.

The subgenus is represented in North America by two, in South Asia by eight species.

The foodplant of only one South Asiatic species is recorded.

#### Key to the South Asiatic species of *Phaecasiophora* (*Phaecasiophora*)

1. Fore wing with apical patch decidedly darker blackish-brown than remainder of wing . . . . . *astrosema*
- Apical patch not darker than remainder of wing . . . . . 2
2. Apex only with a tawny round dot, otherwise glossy silvery white . . . *jubilans*
- Apex suffused with darker, not paler than other markings . . . . . 3
3. A white or white-dusted subapical fascia to tornus, sometimes reduced to an oblique series of white scales followed by orange dusting. . . . . 4
- White colouring in disc, if present, forming a reticulate pattern of slender lines, not reaching tornus. . . . . 7
4. White fascia conspicuous, interrupted in middle, curved and free from a distinct

- white discal dot . . . . . *attica*
- White fascia less contrasting, almost confluent with suffused small discal dot or formed of an oblique series of white scales, without discal dot . . . . . 5
5. White fascia formed by an oblique series of white scales only, followed by orange dusting, discal dot absent . . . . . *pertexta*
- White fascia broad, well-developed, contrasting, discoidal dot present, however small . . . . . 6
6. White preapical fascia bluish-centred, above anteriorly not traversing the rather dark central fascia, discal spot round, distinct . . . . . *diluta*
- White fascia preceded by pale lilac suffusion, above anteriorly with a white oblique appendix, traversing central fascia; discal spot very small, depressed . . . *turmaria*
7. Fore wing brown, with violet-leadene striae and a postbasal and median costal dark spots, an orange spot in tornus; hind wing costal cilia with a tuft posteriorly *caryosema*
- Fore wing without such dark costal dots, nor an orange tornal spot . . . . . 8
8. Conspicuous white marbling posteriorly, centred with grey . . . . . *diserta*
- White colouring only before tornus, not conspicuous, wing scattered throughout with light tawny round spots. . . . . *guttulosa*

Note. — The Nearctic species *P. (P.) confixana* (Walker) and *P. (P.) niveiguttana* Grote are treated below, but not incorporated in this key.

### **Phaecasiophora (Phaecasiophora) confixana** (Walker, 1863)

- Sciaphila confixana* Walker, 1863: 340 (♂, N. America).
- Sciaphila? perductana* Walker, 1863: 341 (♂, N. America).
- Sericoris mutabilana* Clemens, 1865: 135 (♂♀, Virginia). — Zeller, 18: 276.
- Phaecasiophora mutabilana*; Grote, 1873: 90, pl. 2 figs. 4-6.
- Sericoris permundana* Grote & Robinson, 1868-1869: 83 (nec Clemens, 1865).
- Phaecasiophora confixana*; Walsingham, 1879: 36, pl. 68 fig. 6 (*perductana* Walker, *mutabilana* Clemens, *permundana* Grote & Robinson syn.). — Fernald, 1902, in Dyar: 455, no. 5077. — Barnes & McDunnough, 1917: 169, no. 6877. — Forbes, 1923: 459. — Heinrich, 1926: 127, figs. 16, 61, 233, 394 (genit. ♂♀ figured, bionom., distrib., *perductana* Walker, *mutabilana* Clemens syn.).

Distribution. North America: New Hampshire, New Jersey, Pennsylvania, Maryland, Virginia, District of Columbia, Texas.

The species is extensively treated by Heinrich who also gives excellent illustrations of the genitalia of ♂♀ and of the hind leg of the male.

Material from Java, identified as this species, proves to belong to *P. (P.) diluta* spec. nov.

### **Phaecasiophora (Phaecasiophora) niveiguttana** Grote, 1873

- Phaecasiophora? niveiguttana* Grote, 1873: 91 (♀, Pennsylvania). — Forbes, 1923: 459. — Heinrich, 1926: 127, figs. 231, 395 (bionom., genit. ♂♀ illustr. *Phaecasiophora*).

*Olethreutes niveiguttana*; Fernald, 1903, in Dyar: 454, no 5075. — Kearfott, 1910: 539.  
*Argyroploce niveiguttana*; Barnes & McDunnough, 1917: 169, no. 6873.

Distribution. North America: Massachusetts, Connecticut, New Jersey, Pennsylvania, Maryland, Virginia, District of Columbia, North Carolina, Florida, Arkansas, Missouri, Illinois.

Food plants. *Sassafras* (Lauraceae), *Hamamelis* (Hamamelidaceae).

Male genitalia very similar to those in *P. confixana*, but with the valva more constricted, cucullus being slightly clavate, and with a smaller socius. The female has a smaller lamella antevaginalis with a rounded upper edge and a much longer colliculum.

***Phaecasiophora (Phaecasiophora) diluta* spec. nov.**

(figs. 181-182)

♂ 20 mm. Head pale ochreous, face and a transverse band across vertex fuscous. Palpus light ochreous, median segment except top, base and lower edge, light fuscous, terminal segment fuscous. Thorax (imperfect) fuscous with two whitish-ochreous transverse stripes, edges of tegulae whitish-ochreous, collar tawny-orange, bases of scales fuscous. Posterior tibia pale ochreous, strongly dilated with pale ochreous roughly projecting scales above, dense on the inside, less so above, beneath only from base to spurs; inner side mixed with brilliant white glossy scales, a pencil, blackish at base, from base of tibia. Abdomen pale tawny-ochreous.

Fore wing dilated, subtruncate, rather broad, costa moderately curved throughout, distinctly prominent at  $3/4$ , apex subrectangular, termen straight, moderately oblique. Transverse fascia median, moderately oblique, rather dark fuscous, anterior edge concave to fold, thence extending along dorsum to base, posterior edge more defined, irregularly serrate, including a small white discal dot, lower half of edge rather paler grey; basal part of wing before fascia pale orange-tawny, densely marbled with fuscous; costa narrowly dark fuscous, traversed by short yellowish pairs of marks; a more or less continuous orange subcostal streak, interrupted by transverse fascia, beyond this becoming bright orange; a large pale oblique transverse blotch beyond transverse fascia, from below costa to just above tornus, white, anteriorly irregularly mixed with silvery and marbled with grey; subapical dark fuscous band curved between veins 6 and 9, merging into a horizontal oblong dark fuscous spot on middle of termen; silvery-grey metallic strigulae from marks along posterior half of costa, forming a slender curved line to termen above middle; a dark fuscous narrow terminal line; tornus marbled with grey. Cilia grey, faintly barred paler, with a chestnut subbasal band and pale ochreous basal line, cilia in tornus with a broad white bar.

Hind wing pale bronze-fuscous, semipellucet with a silvery golden gloss, dorsum without a roll but with dense clothing of long grey-ochreous hairs. Cilia glossy light ochreous, with a fuscous subbasal slender band, cilia opposite apex entirely infuscated.

♀ 35 mm. Head and thorax more suffused with blackish. Fore wing tawny tinged orange, faintly marbled throughout with white, slightly infuscated, suffused with black towards base; costa anteriorly narrowly black, rather suffused with dark grey; a large basal patch only slightly darker fuscous, edge prominent above middle; transverse fascia reduced to a semioval moderate spot on middle of costa, ferruginous edged with black, and by a horizontal black strigula in cell, before and below a round white discal dot; white band beyond fascia narrower, very irregular, constricted in middle, anteriorly suffused with silvery-grey; apical part of wing beyond this evenly suffused with orange-tawny ground colour, with three suffused horizontal fuscous streaks, lower of these darker and distinct, to termen above middle; metallic subcostal strigulae reduced; tornus broader filled with silvery-grey, dark terminal line interrupted. Otherwise as male.

Hind wing darker, more opaque, more tawny-fuscous tinged. Otherwise as in male.

Male genitalia. Tegumen broad, lower than high. Socius voluminous, slightly sclerotized, with lateral and lower prominent angles, ventromedian small process hairy only. Valva slender, sacculus about  $\frac{1}{3}$ , Spc<sub>1</sub> a small group of weak bristles, costa prominent at base, with a group of very long bristles; cucullus gently curved, not clavate. Aedeagus large, broad. Cornuti, a small sheaf of moderate spines.

Female genitalia. Ostium, a circular sclerite, with slightly extended upper angles, lower edge extended by further moderate sclerotization. Colliculum moderate, broad at base. (Bursa lost).

India, Assam, Khasias Hills, 1898-9 (Doherty), 1 ♂, holotype, genit. slide 8063 (Walsingham Coll., BM).

Java, "W. Java, Preanger, 5000 ft (Sythoff), ♂" (in Snellen's hand). "M 71" "*Arg. attica* Meyr."; 1 ♀, allotype, genit. slide 7449 (Snellen Coll., LM); "Java (Brants)", ♂ (the same collection), 1 ♀, paratype, genit. slide 2861 (rubbed) (LM).

A species, very similar to (and confounded with) *P. (P.) attica* (Meyrick), but much paler, with less contrasting pale subapical blotch, especially in female.

***Phaescasiophora (Phaescasiophora) turmaria* (Meyrick, 1931) comb. nov.**

(fig. 167)

*Argyroploce turmaria* Meyrick, 1931: 131 (♀, Bismarck Is.). — Clarke, 1955: 320. — Diakonoff, 1966: 28 (holotype ♀, genit. figured).

Distribution. Bismarck Is.

A robust species with the characteristic *Phaescasiophora* markings, somewhat resembling *P. attica*, superficially appearing intermediate between this and *P. diluta* spec. nov. Whitish, densely marbled with purplish, markings bright fulvous. Basal patch with angulate edge, broken in three spots: one oblong, along base of wing and of dorsum, second on costa beyond base, smaller and triangular, third slightly submedian, being the middle of edge of patch; two small fulvous spots beyond this below

fold; transverse fascia broadly divided: a tawny oblong-oval subcostal spot, middle connected with costa; an ill-defined narrow tawny streak below this; a large, irregular sinuate spot from end of cell to middle of fold; posterior end connected with irregular subtriangular spot on end of dorsum; subapical band broad, posterior edge regularly dentate, apex tawny-fulvous with distinct pale blue strigulae from costal white marks, extreme apex with a purplish spot.

Hind wing grey-fuscous with a purplish tinge.

Female genitalia. Ostium strong, cup-shaped, with short and slightly curved lateral appendages, lamella postvaginalis with triangular upper edge. Signa absent.

Only the holotype, in BM, is known. The generic position, without the evidence of the males, is somewhat uncertain; the species might belong to the subgenus *Megasyca* or to the genus *Sycacantha* as well.

***Phaecasiophora (Phaecasiophora) astrosema* (Meyrick, 1909)**

*Argyroploce astrosema* Meyrick, 1909: 594 (♂♀, Assam). — Clarke, 1955: 57.

*Olethreutes astrosema*; Clarke, 1958: 487, pl. 242 figs. 1-1a (lectotype select., wing, genit. ♂ illustr.).

*Phaecasiophora (Phaecasiophora) astrosema*; Diakonoff, 1959a: 171, pl. 3 figs. 9-10 (comb nov.; Burma).

Distribution. Assam. Burma.

Northeast Burma, Kambaiti, 700 m (R. Malaise), 1 ♂, genit. slide 7448. India: Assam: Khasias Hills, Cherra Punji (native), v.1895 "(Dncstr.)", 1 ♂ (BM).

Male genitalia. The sacculus is short and the cucullus longer and narrower than in any other species of the subgenus.

A variable species, paler or darker, with ground colour from whitish-ochreous to tawny-fuscous; the blackish-fuscous apical patch, however, invariably present, slightly marked with minute metallic lines; costa throughout suffused with fulvous-tawny; darker grey-fuscous suffusion rising from dorsum in two or three little oblique, fasciate spots, especially distinct in pale specimens, not rising above middle of disc.

Hind wing pale to rather dark fuscous.

Male genitalia. Socius rather small and triangular, however, without a rigid point. Valva long and slender, gently curved, more so towards apex, without an excision or a prominence of cucullus base.

Judging from the genitalia, an intermediate, pointing out connection with the following subgenus, *Megasyca*.

***Phaecasiophora (Phaecasiophora) jubilans* Diakonoff, 1959**

*Phaecasiophora (Phaecasiophora) jubilans* Diakonoff, 1959a: 170, pl. 2 fig. 5, nec 7 (♂, Burma).

Distribution, Burma: Kambaiti.

Dark fuscous, as *P. attica*, but easily recognizable, because this dark ground colour



is well-defined posteriorly with the serrate edge from costa beyond middle to end of dorsum; apical part of wing silvery-whitish, a tawny dot in apex and a faint light tawny dark irrorated subapical curved fascia from below  $3/4$  of costa to tornus; costal marks posteriorly tawny, instead of white.

Hind wing glossy white, suffused with greyish towards apex and dorsum.

Male genitalia. Resembling those of *attica*, but socius thicker, valva not constricted but incised above sacculus, cucullus narrower, gradually curved.

The species is less close to *P. (P.) attica*. There is a distinct primary excision of the valva and the socius is larger and thicker.

In the explanation to plate 2 the numbers of some figures are exchanged, so fig. 5 should read: 6, *Sociosa macrographa* (Diakonoff), aedeagus with juxta, etc.; fig. 6 should read 7, the same, eighth abdominal segment etc.; and finally, fig. 7 should read 5, *Phaecasiophora (P.) jubilans* spec. nov., holotype (figs. 4 and 8 are explained correctly).

***Phaecasiophora (Phaecasiophora) attica* (Meyrick, 1907)**

(figs. 171, 186-187, 252c)

*Eucosma attica* Meyrick, 1907: 137 (♂♀, India: Assam). — Clarke, 1955: 59.

*Argyroploce attica*; Meyrick, 1935: 61 (Tienmushan, W. China). — 1938: 2 (Yunnan).

*Olethreutes attica*; Clarke, 1958: 487, pl. 242 figs. 2-2a.

*Phaecasiophora (Phaecasiophora) attica*; Diakonoff, 1959: 170, pl. 11 fig. 4 (genit. ♂, Burma).

Distribution. India: Sikkim, Assam, Burma. West China.

A robust species with characteristic colouring and markings. Deep blackish-fuscous, slightly mottled with greyish, about posterior half of costal third of wing orange-tawny, except dark costal edge with five pairs of bright white strigulae; the pale band diversely shaped, often strongly suffused, snow-white, from below costa beyond middle to tornus, narrowly interrupted in middle, discal dot pure white; cilia in tornus conspicuously white.

Hind wing dark fuscous-bronze.

Male genitalia. Tegumen broad, top obtusely conical. Socius broad, triangular, laterally of its base, a moderate, rounded, naked knob. Valva gently constricted, cucullus about spindle-shaped, broadest in middle; pulvinus hairy, followed by a moderate transverse ridge, starting from a prominence at the base of costa. Aedeagus wide and short, cornuti, a dense sheaf of slender spines.

Female genitalia. Ostium, a wide shallow cup; lamella postvaginalis gently sclerotized and aciculate, with scalloped upper edge which has a small truncate lip in middle, flanked by low horizontal ridges, followed by oblique slender stronger lateral ridges. Colliculum broad, of moderate length. Signa, two minute granulate thorns.

Very near to *P. (P.) diluta* spec. nov., differing by shorter and wider cucullus, knobs of socii and extended lamella postvaginalis, and also by darker fore and hind wings.

India, Sikkim, 7000 ft, ix.1895 (Pilcher), 1 ♂. Darjeeling (Swinhoe, Walsingham

Coll.), 1 ♂, genit. slide 6512. Assam, Cherra Punji, Khasis, 1895 (Doncaster), 1 ♀, genit. slide 8062. Khasias Hills, 1898-9 (Doherty, Walsingham Coll.), 1 ♂ (BM).

**Phaecasiophora (Phaecasiophora) pertexta** (Meyrick, 1920) comb. nov.

*Argyroploce pertexta* Meyrick, 1920: 351 (♂♀, Sikkim). — Clarke, 1955: 242.

*Olethreutes pertexta*; Clarke, 1958: 535, pl. 266 figs. 1-1c (lectotype design., wings, genit. ♀ figured).

Distribution. Sikkim: Darjeeling.

The species is closely allied and intermediate to both *P. (P.) attica* (Meyrick) and *diluta* spec. nov., but differs by almost complete absence of the suffused white postmedian or subapical band. In lectotype (BM) this band is reduced to an oblique series of sparse white scales, followed by more pronounced orange dusting; this series runs from below  $3/4$  of costa to before tornus, is interrupted between middle of veins 5 and 6, with lower half more oblique than upper half; the subcostal orange dusting posteriorly is less distinct than in *attica*, as also are the five pairs of whitish costal marks.

Male genitalia not studied.

Female genitalia. Similar to those of *P. diluta* spec. nov., but the edge of ostium more robust, especially in front (lamella antevaginalis) while in back this edge is dilated in middle and quite reduced laterally (while in *diluta* the lateral angles are triangularly dilated); besides there is a distinct inverted-trapezoidal transverse rod in the lamella postvaginalis, completely lacking in both *attica* and *diluta*.

Clarke (1958) selected a ♀ lectotype, probably because the male cited in the original description was without abdomen or erroneously sexed.

**Phaecasiophora (Phaecasiophora) diserta** (Meyrick, 1909) comb. nov.

*Argyroploce diserta* Meyrick, 1909: 593 (♂♀, Assam). — Clarke, 1955: 118.

*Olethreutes diserta*; Clarke, 1958: 504, pl. 251 figs. 1-1b (lectotype select., genit. ♂ fig.).

Distribution. Assam: Khasis.

India: Assam: Khasias Hills, 1898-9 (Doherty, Walsingham Coll., BM), 1 ♂.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, v.1949 (A. M. Neervoort), 1 ♂, genit. slide 5954. East Java, Tengger Mts., Nongkodjadjar, 1300 m, 20.i.1941 (A. M. R. Wégner), 1 ♂ (LM).

A characteristic large species with costa in the fore wings strongly angulate and prominent at  $2/3$ , termen truncate. The hind tibia is flattened dorso-ventrally and strongly dilated by a dense brush of white hair-scales, upon which a long creamy pencil from base.

Male genitalia. With a broad sacculus and a well-defined primary excision, cucullus is long and robust, hardly narrowed towards top. The species probably is nearest to *P. (P.) attica*.

Dark purplish-fuscous, densely strewn with paler, ochreous-tawny, rounded dots, narrowly purple-edged; in fresh specimens a dusting or marbling of snow-white along median part of wing, interrupted beyond middle, posteriorly more conspicuous, forming irregular reticulation around an oval light slaty-grey spot beyond cell; a thick blue-leaden subapical line.

Hind wing light grey-fuscous.

Posterior tibia strongly dilated, snow-white.

***Phaecasiophora (Phaecasiophora) guttulosa* spec. nov.**

(fig. 180)

♂ 21 mm. Head fuscous mixed with creamy (damaged; palpi broken). Pectus snow-white, glossy. Thorax fuscous densely mixed and strewn with pale tawny and pale ochreous. Posterior tibia pale ochreous, dilated in middle with very large broad glossy white, loosely appressed scales on the inner side projecting triangularly below, less projecting above, pencil from base slender, creamy, to beyond middle of tibia. Abdomen fuscous.

Fore wing oblong-truncate, rather dilated, broad, broadest at  $3/4$ , costa gently curved at base and again curved and gently prominent at  $3/4$ , apex obtusely rectangular, termen hardly convex, little oblique. Rather dark grey-fuscous, slightly suffused with tawny-fulvous towards  $3/4$  of costa, densely scattered throughout except along anterior half of transverse fascia and on apical third, with roundish small pale leaden grey spots. Basal patch faintly indicated by darker fuscous-brown suffusion to beyond  $1/5$ , indistinct by dense pale dotting, edge little oblique, slightly convex in middle, transverse fascia darker, blackish-fuscous, from before middle of costa to  $3/4$  of dorsum, anterior half not dotted, posterior indefinite by dotting, this formed of larger dots arranged in an erect-oval central patch around end of cell; an irregular curved and oblique silvery-white mark above tornus, indicating ocelloid spot; posterior, subapical fascia from  $3/4$  of costa, curved and undulate to tornus, unspotted, markedly suffused with brighter tawny-fulvous below costa; apex and termen with leaden-grey dotting partly confluent in larger spots; costa throughout dark fuscous, anterior  $2/5$  with three pairs of pale grey-leaden transverse marks, two posterior pairs largest; posterior half of costa with a single and five paired slender oblique white marks, posterior of these vertical and subapical. Cilia dark fuscous with a pale basal line.

Hind wing rather light tawny-grey, apex suffused with darker. Cilia fuscous-grey with a pale basal line and a darker fuscous subbasal band.

Male genitalia. Tegumen broad and depressed, forming lateral angular prominences. Socius small, oval, densely long-haired, at the inner side of the prominence. Valva with a short cucullus,  $1/4$ , and gradually curved little narrowed sacculus; costa prominent at  $1/4$ , cucullus bristles extending to pulvinus which is little prominent. Aedeagus short and thick, truncate and tubular.

India, Sikkim, 7000 ft, vii.1895 (Pilcher), 1 ♂, holotype, genit. slide 7692 (BM). Nearest to *P. confixana* (Walker) but differing by strongly reduced white colour in the fore wing and by genitalia.

**Phaecasiophora (Phaecasiophora) caryosema** (Meyrick, 1931) comb. nov.

*Argyroploce caryosema* Meyrick, 1931: 138 (♂ Formosa; ? ♀ Assam). — Clarke, 1955: 75.  
*Olethreutes caryosema*; Clarke, 1958: 492, pl. 245 figs. 2-2a (lectotype select., wing, genit. ♂ illustr.).

Distribution. Formosa. Whether the female specimen from Assam is conspecific remains uncertain.

A warmer brown coloured species, throughout with metallic violet-leadened marbling; an ochreous-brown costal spot marked with blackish, indicating edge of basal patch and another, showing origin of transverse fascia, with a white dot beneath this; a large ochreous-brown spot on termen below middle, a streak towards costa.

Hind wing dark grey; cilia with a strong tuft before costa.

Male genitalia. Resembling those of *P. jubilans*, but socius more oblong; valva deeply excised; cucullus moderately but distinctly dilated at base, much shorter than in *jubilans*, Spc<sub>1</sub> strong, larger than in other species.

Judging from the male genitalia the species is close to *P. (P.) jubilans*, differing by a shorter cucullus which is more dilated at base, and by larger Spc<sub>1</sub>.

Subgenus **Megasycya** Diakonoff, 1959

*Megasycya* Diakonoff, 1959: 171, pl. 4 fig. 12 (subgen. of *Phaecasiophora* Grote; type-species, *Phaecasiophora fernaldana* Walsingham, 1900, Japan, by original designation).

The subgenus is easily recognizable by the male genitalia. The tegumen is unusually broad, with subrigid pending socii which are enlarged, ending in a sclerotized point, while the cucullus is dilated, rounded and densely bristled at base, and very slender and long beyond base, narrowed apicad.

Four species and one subspecies have been described. They are closely related and all have fuscous or tawny, finely marbled fore wings of a characteristic pattern.

Key to the species of *Phaecasiophora (Megasycya)*

1. Fore wing with a fuscous sinuate longitudinal streak from above base of dorsum to centre of disc, thence to before tornus . . . . . *pyragra*
- Fore wing without such longitudinal streak . . . . . 2
2. Fore wing with leaden or blue-metallic oblique strigulae below posterior fifth of costa . . . . . 3
- Fore wing devoid of metallic marks or only with a couple of dark leaden points before apex . . . . . 6

3. Fore wing with basal patch well-defined and darker than ground colour on dorsum . . . . . 4  
 — Fore wing with basal patch obliterate on dorsum, never distinctly darker than strongly marbled ground colour . . . . . 5
4. Ground colour light pinkish-vinaceous; central fascia interrupted above middle . . . . . *ectropa*  
 — Ground colour pale ochreous; central fascia complete from costa to below fold . . . . . *obraztsovi*
5. Fore wing with silvery-blue metallic subcostal strigulae slender, beginning immediately below pairs of costal markings, thence curved and more or less united into metallic subcostal streak running to before termen, limited by vein 7 . . . . . *latior*  
 — Fore wing with metallic strigulae pale leaden, thicker, beginning well below costa, not distinct at origin, forming together a series of thick short leaden marks instead of a subcostal streak, this series to before termen, thence bent downwards along and before termen almost to tornus. . . . . *cornigera* (part)
6. Fore wing with pale spot on end of cell fasciate; long, inwards-oblique, preceded by a dark fuscous triangular spot with blackish base . . . . . *leechi*  
 — Fore wing with pale spot on end of cell rounded, smaller, preceded by a distinct horizontal blackish strigula . . . . . 7
7. Fore wing, blackish horizontal strigula preceding round pale spot on end of cell hardly as long as that spot; costa with a distinct bend at  $2/3$  . . . . . *walsinghami*  
 — Fore wing with this spot smaller, dark horizontal strigula much longer (about twice) than spot; costa curved gradually, without bend. . . . . 8
8. Fore wing, median transverse fascia shifted anteriorly, on costa distinctly broader than length of dark strigula in cell . . . . . *cornigera* (part)  
 — Fore wing, median transverse fascia not shifted anteriorly, on costa about as broad as length of dark strigula in cell . . . . . *fernaldana*

***Phaecasiophora (Megasyca) fernaldana* Walsingham, 1900**

*Phaecasiophora fernaldana* Walsingham, 1900: 135 (♂♀, Japan, Corea).

*Phaecasiophora (Megasyca) fernaldana*; Diakonoff, 1959: 179, pl. 4 fig. 12, pl. 6 figs. 18-20 (bionom., ♂♀ genit. illustr.).

Distribution. Japan, Corea.

♂♀ 24 mm. Dull fuscous with darker fuscous markings. Costa gradually curved, without a bend. Rounded pale spot on end of cell small, preceding dark line almost twice as long as the diameter of the spot; dark median band on costa as wide as the length of dark strigula in cell.

Male genitalia with socius broad, with a short hooked point. Cucullus base almost semicircularly projecting; cucullus of moderate length;  $Spc_1$  rounded.

Female genitalia with lamella postvaginalis sclerotized, its upper edge rounded.

Colliculum moderate. Ductus bursae very short and rather narrow.

A large, more fuscous-tinged species, with a lighter grey hind wing.

There was no new material available to me.

***Phaecasiophora (Megasyca) leechi* spec. nov.**

(pl. 13)

♀ 20 mm. Head whitish, mixed with light tawny, vertex light tawny. Palpus tawny-fuscous, median segment with apex white, thorax light tawny-fuscous, dusted with whitish. Abdomen (apparently) fuscous.

Fore wing oblong-subtruncate, rather broad, broadest at  $3/4$ , costa little curved anteriorly, more curved towards apex, apex rounded-subrectangular, termen straight, hardly oblique above, rounded below. Whitish, markings dark fuscous, interspaces more or less suffused with paler grey-fuscous. Basal patch to beyond  $1/4$ , with a basal and a posterior blackish-fuscous blotch, not reaching cell, patch in middle irregularly marked with dark fuscous, edge of patch rather well-defined, convex, almost vertical or a trifle inwards-oblique; central fascia formed by three rather large dark fuscous-brown blotches, partly with narrow whitish edges, all three surrounded by paler grey-fuscous suffusion: first patch on middle of costa, oblique, more or less prostrate-oval; median patch slightly inwards-oblique, subquadrate, third patch largest, indistinctly separated from second, triangular, top not reaching dorsum, gently rounded, narrow edge, except above, entire, well-defined, whitish; subapical fascia rather narrow, fuscous, unicolorous, rather angulate in middle, interrupted there, upper half spindle-shaped, lower triangular, top to tornus; apex with a small blackish spot. Cilia (imperfect) fuscous with a white base.

Hind wing dark fuscous, cilia fuscous with a white base.

Female genitalia. Seventh sternite moderately sclerotized. Sterigma small, formed by a wide circular ostium with a thick and dark edge and a semioval small lamella postvaginalis, with slender dark dorso-lateral edges and sinuate lateral short appendages. Colliculum straight, long and strong, little dilated at lower end. Ductus bursae long. Corpus bursae elongate, sausage-like. No signa.

China, Foochau, iv.1886 (Leech) 169 (Walsingham Coll. 60169, BM), 1 ♀, holotype, genit. slide 6316 BM.

The single specimen, holotype, is rather worn, but quite distinct though, by dark spotted markings reminding one of the characteristic *Sycacantha escharota* Meyrick kind of pattern: pale-edged, more or less separate patches. The species is nearest to *P. (M.) fernaldana* Walsingham, but smaller.

***Phaecasiophora (Megasyca) cornigera cornigera* Diakonoff, 1959**

*Phaecasiophora (Megasyca) cornigera cornigera* Diakonoff, 1959: 180, pl. 5 fig. 16, pl. 7 fig. 22 (♂♀, genit. illustr.).

Distribution. Assam: Khasis, Cherra Punji.

India, Assam (Rothschild Bequest, BM), 1 ♂, genit. slide 6245. Assam, Khasias Hills, 1898-9 (Doherty) (Walsingham Coll., BM), 1 ♂, 4 ♀.

Fore wing pale ochreous, faintly reticulate with black, reticulation filled with bright fulvous-tawny; metallic streaks below costa present, but pale leaden, not united in one subcostal streak, but forming separate short marks, descending before termen almost to tornus. Hind wing dark grey with bronze tinge.

Male genitalia with socius long, rigid, with a long pointed apex. Valva very slender and long, prominence of the base of cucullus slight.

Female genitalia distinct from those of *feraldana*: lamella antevaginalis much larger, lamella postvaginalis smaller, sides concave.

A species of moderate size, superficially resembling *P. (M.) latior*.

***Phaecasiophora (Megasyca) cornigera birmensis* Diakonoff, 1959**

*Phaecasiophora (Megasyca) cornigera birmensis* Diakonoff, 1959: 171, pl. 5 fig. 15 (♂, genit. illustr.).

Distribution. North Burma: Kambaiti, 2000 m.

Differs from the nominate form by larger size, narrower fore wings which are devoid of metallic markings and by slightly darker brown markings.

The male genitalia resemble those of the nominate form closely. The female genitalia are unknown.

The type specimen is in the Stockholm Museum.

***Phaecasiophora (Megasyca) latior* Diakonoff, 1959**

*Phaecasiophora (Megasyca) latior* Diakonoff, 1959: 180, pl. 4 fig. 13 (♂, genit. illustr.).

Distribution. Central West Sumatra, Fort de Kock, 920 m; West Borneo, Balikpapan, 50 m.

Fore wing with slender silvery blue metallic streaks below costa posteriorly, united into a subcostal metallic streak.

Male genitalia similar to those of *P. fernaldana*, but with a higher and narrower tegumen, socius with a longer point, valva with the prominence of the base of cucullus more oval (instead of semicircular), Spc<sub>1</sub> a narrow longitudinal patch.

Female unknown.

A smaller species, more reddish-tawny tinged, with well-defined blue-metallic streaks. Hind wing rather dark grey.

No new material available.

***Phaecasiophora (Megasyca) walsinghami* Diakonoff, 1959**

(figs. 173-174)

*Phaecasiophora (Megasyca) walsinghami* Diakonoff, 1959: 179, pl. 4 fig. 14, pl. 6 figs. 20-21 (♂♀, genit. illustr.). — 1971: 192 (W. Java).

Distribution. West Java, 1400 m.

Costa of fore wing with a distinct angulation at  $2/3$ . The light ochreous ground colour is reticulate with reddish-fulvous. Dark strigula preceding pale spot in cell hardly as long as diameter of spot.

Male genitalia with a very long and slender cucullus, its base oblong-oval. Socius very long and more slender than in other species.

Female genitalia extremely close to those of *feraldana* and differing only by less rounded upper edge of lamella postvaginalis; cucullus longer. Ductus bursae much longer and wider than in *feraldana*.

An elegantly reddish-tawny tinged species, of variable size but uniformly coloured. West Java, Mt. Gede, 2500 ft, 1934 (J. P. A. Kalis), 1 ♂ (Rotschild Bequest, BM).

***Phaecasiophora (Megasyca) pyragra* spec. nov.**

(fig. 185)

♂ 15 mm. Head ochreous, vertex slightly mixed with dark fuscous. Antenna light ochreous. Palpus rather slender, ascending, subappressed to face, reaching to middle of the height of eye, light ochreous; terminal segment very short, obliquely porrect, fuscous. Thorax pale ochreous mixed with pale purplish-fuscous, anteriorly and on apex suffused with light ochreous. Abdomen pale ochreous mixed with tawny, on dorsum marbled with dark fuscous and dull; anal tuft pale ochreous.

Posterior tibia on the inside with a very dense brush of long snow-white hair-scales, projecting in a small tuft beyond apex, tarsus normal.

Fore wing oblong-suboval, subtruncate, costa curved throughout, apex rounded-subrectangular, termen straight above, rounded beneath. Light yellow-ochreous, costa with a suffused bright ochreous streak and with numerous oval-wedge-shaped spots, alternating with narrow strigulae, from beyond base to apex, blackish anteriorly, gradually turning brown posteriorly; a large, brown, oblong-ovoid patch, occupying about  $1/4$  of dorsum from beyond base and obliquely reaching second fourth of cell; a continuous brown streak from below middle of costa and parallel to it, traversed by black lines between veins, broadly rounded before apex and descending before upper half of termen, pointed below; a large elongate-oval brown spot extending across disc from middle of cell to before tornus, parted below middle by a streak of ground colour and so resembling a coffee bean; anteriorly this patch is narrowly separated from the subbasal patch (or perhaps contiguous with it); a triangular dorsal area suffused with tawny and transversely marbled with brownish, with some larger



marks on dorsum before tornus, above contiguous with the end of discal patch; a broad, well-defined and curved fascia of ground colour running below and parallel to subbasal brown streak, parted throughout with purplish strigulation and cut by a brown horizontal spot above middle of wing; a series of vertical purple short lines before termen. Cilia ochreous mixed with brownish.

Hind wing fuscous-purple, becoming pale towards base and darker towards apex. Cilia pale fuscous with a pale basal line and a purplish subbasal band.

Male genitalia. Uncus short, triangular and ill-defined. Socius long and slender, with a rigid, hooked top. Gnathos membranous but anellus well-developed, connected with gnathos. Valva with a well-developed and limited, large  $Spc_1$ , cucullus rather slender and moderately long. Aedeagus unusual: very long, with a sclerotized basal and upper half, thorny at apex, base of aedeagus and coecum penis membranous.

Female genitalia unknown.

Hainan Id., Mangrin, June 1904 (Rotschild Bequest, BM), 1 ♂, holotype, genit. slide 6579.

Apparently an intermediate between the nominate subgenus and *Megasycya* Diakonoff, with the socius resembling socius in both these taxa. The species is easily recognizable by elegant markings (although slightly rubbed), as well as by the long, sclerotized aedeagus, unique within the genus.

***Phaecasiophora (Megasycya) ectropa* spec. nov.**

(fig. 191)

♂ 19 mm. Head and thorax light ochreous strongly mixed with bright purplish-fulvous. Palpus whitish-ochreous, basal segment and edges of median segment purplish-fulvous. Posterior tibia strongly dilated by long and fine snow-white hairs above and beneath tufted at apex, a white pencil from base, outwardly spurs and tarsus grey, posterior tarsus with a white tuft above. Abdomen pale fuscous, anal tuft pale ochreous.

Fore wing oblong-truncate, rather broad, costa gently bent at  $2/3$ , little curved elsewhere, apex subrectangular, termen hardly sinuate, straight above, rounded beneath. Light ochreous-creamy, densely dusted with light fulvous, markings ferruginous and fulvous. Costa deep purple with the usual pale marks: two approximated pairs beyond base, two more distant pairs before middle, six pairs posteriorly, first of these on costal spot, obscured; basal patch not reaching  $1/3$ , marbled with ground colour; edge of patch moderately scalloped throughout: concave below costa, projecting in upper half of cell, deeper emarginate below fold, edge on dorsum slightly oblique and extended posterad; transverse fascia broken: a ferruginous, blackish-marked moderate spot on middle of costa, anterior edge concave, posterior produced below costa and cut by an inwards-oblique minute pale line; lower part of fascia represented by some five ferruginous longitudinal marks, arranged in a zigzagged triangle: first and third central, second more posterad, pointed, fourth anterad of third, fifth

posterad of fourth, just below fold; preterminal fascia curved, ferruginous-brown, anterior edge deeply scalloped; pale space of ground colour before this fascia strongly dilated and filling out tornus, only on costal fourth parted by leaden-grey strigulae; subcostal streak tawny-fulvous, with very thin bluish lines; apex deep purple, termen narrowly purple, cut twice by white strigulae. Cilia dark brown, around tornus light ochreous.

Hind wing bronze-fuscous with a faint purplish gloss, dorsum with a moderate downwards roll. Cilia concolorous, with a subbasal line, along dorsum cilia pale ochreous.

Male genitalia. Tegumen with a single pointed-triangular top. Inner socius large and broad, curved, ending in a large apical and three smaller subapical spines. Outer socius small, subparietal, haired throughout. Gnathos ill-defined, sides narrowed. Henion very broad above, only lower half forming slender rods. Labis rather slender and pointed above. Valva broad and short, sacculus deeply emarginate, spined throughout, spines larger and denser towards edge of emargination. Cucullus broad at base, quickly narrowed to a short point, spined throughout, spines large and bifurcate at base, gradually becoming smaller towards top, extreme top with sparse hairs. Aedeagus moderate, narrowed in middle, cornuti not perceptible.

British New Guinea, Aroa River (A. S. Meek), 1 ♂, holotype, genit. slide 7711 (BM). A moderate pale fulvous species of a characteristic *Sycacantha* appearance. Apparently a primitive form to be placed on the very border of the genus *Sycacantha*. Judging from the socii, allied to *Phaecasiophora*, but with valva entirely different.

### ***Phaecasiophora* (*Megasyca*) *obraztsovi* spec. nov.**

(figs. 239-241)

♂♀ 17-18 mm. Head light fuscous. Palpus whitish, infuscated above. Thorax dark brown-fuscous, spotted with pale fuscous or yellowish, collar suffused with light ochreous-fuscous. Posterior tibia in male with a large raised fan-like brush of whitish-fuscous scales above, tarsus smooth. Abdomen fuscous, venter white except two anal sternites, anal tuft white inside.

Fore wing broadly oblong-truncate, rather oval, dilated costa curved, apex sub-obtuse, termen gently rounded, little oblique. Ground colour pale, whitish-ochreous, markings deep fuscous-brown, on apical third more or less mixed with ochreous and orangeish. Basal patch beyond 1/4, dark brown-fuscous, strewn with subquadrate pale ochreous dots over basal 2/3 of patch, edges obtusely angulate above middle, emarginate below middle, slightly extending over dorsum; the following band of ground colour pale, irregularly and incompletely parted with dark fuscous and slightly mixed with leaden; central fascia broad and complete, gradually dilated, anterior edge concave, posterior straight and oblique, both deeply and regularly serrate, deep brown-fuscous; posteriorly this fascia edged by a thick grey leaden-metallic streak, in its turn margined on both sides with whitish, furcate on lower third, so as to separate a sub-

triangular spot on end of dorsum; terminal spot well-defined, semioval-crescentic, containing a series of 8-9 horizontal black marks, slightly suffused with deep ochreous and edged with whitish; this spot reaching to tornus; subcostal streak distinct, lower half orange, upper half pale blue; posterior part of costa with five distinct pairs of creamy small marks, cut below by subcostal line; ultimate line subapical, not cut, but continued along termen to its middle and thence to tornus, but its lower half almost obscured by a congruent deep brown marginal line. Cilia tawny-ochreous, more or less mixed with pale tawny and dark fuscous, whitish in tornus.

Hind wing rather pale fuscous with a bronze gloss, a trifle paler and greyer at base. Cilia grey with a strong silvery-white reflection along upper half of termen, except a continuous dark fuscous subbasal band.

Male genitalia. Tegumen top broadly rounded. Inner socius large, oblong-triangular, obtusely pointed, densely long-bristled all over, except along upper edge, bristles becoming spines on the inner side; outer socius short and rounded, subpend-ing, being a basal lobe of edge of outer socius. Valva curved, cucullus long, gradually narrowed; pulvinus, a bristly patch. Aedeagus robust, curved; cornutus, a single, long spike.

Female genitalia. Representing a specialized type. Sterigma moderate, concave-funicular, flat, aciculate, with thickened frontal edges divided in middle; ostium wide, similarly aciculate, forming a strong, dark colliculum which is long with a characteristic angulation above middle (this is no artefact!), bivalval above, becoming one flat sheet below, ending in a strongly punctate ring. Signa two, cornute, rather small.

Japan, Honshu, Kawati, Iwanakisan, 29.v.1954 (T. Yasuda), 1 ♂, holotype, genit. slide 8088; 1 ♂, paratype, Mt. Tanigawa, Doai, Guuma, 20.vi.1967 (Nagase), 1 ♀, allotype, genit. slide 8182 (KM). Japan, 1886 (Pryer), 1 ♂, paratype, genit. slide 8186 (Walsingham Coll. 70539, BM).

This species can easily be confounded with *Psilacantha pryeri* (Walsingham), but is distinct by the genitalia. It is characteristic by the single, large cornutus.

### *Sycacantha* Diakonoff, 1959

*Phaecasiophora* (*Sycacantha*) Diakonoff, 1959: 181, pl. 5 fig. 17 (subg. of *Phaecasiophora* Grote; type-species, *P. (S.) auriflora* Diakonoff = *Argyroploce hilarograptus* Meyrick, Java, by original designation).

*Sycacantha*; Diakonoff, 1966: 7, 17, 58 (distinct genus). — 1968: 58 (Philippine spp.).

A large genus, very characteristic for the South Asiatic region, ranging from Japan to the Bismarck Islands. Apparently it takes up the ecological niche of the genus *Olethreutes* of the Palaearctic region, the species of which are not numerous in Tropical Asia. *Sycacantha* comprises a considerable number of closely allied and similarly looking species, with a rather constant pattern of the markings in the fore wing. Probably many more species exist and will be discovered gradually. Meyrick attributed the group to his large genus "*Argyroploce*" and confounded several species with Snellen's

*Sisona albitibiana*. For a more elaborate description of the present genus I may refer to my 1968 paper.

The species are intricately marked, as Walker's name *complicitana* suggests. The genitalia in the two sexes render small but reliable characters for separation.

The important features of the male genitalia are the uncus which is shaped as a rounded hood, with the socius formed as a porrect process, bipartite almost to the base or entirely separated in two processes, one slighter, more proximal, another, more distal. These processes I am indicating with the terms inner and outer socius; they are diversely bristled along the edge or only on top and their relative length is specific. The gnathos is well-developed and shaped as a transverse band, with a median, descending part, ending in two slender rod-like appendages which form a ring around the aedeagus and are connected with the anellus. In some genera (e.g. *Pseudohedya* Falkovitch and especially *Dactylioglypha* gen. nov., cf. below) these connections form a rigid broad band. Being a development of the diaphragma this structure, which I call henion, apparently is homologous with the fultura superior. The base of the valva shows three processes, also of specific value. First, there is the processus basalis, upon this follows a keel-like prominence, the labis; and finally there is a weak fold-like, bristly part, the pulvinus. Seldom it is very long, digitoid and conspicuously bristled (*S. f. rutila*); usually it has the shape of a rounded and bristly edge, with the external (lateral) margin indicated only at the top or not at all.

As a rule the males are as large as the females or even slightly larger, and lighter coloured, with more defined markings. An important specific feature is the development of the male scent organ, being the coloured dense hair tufts of tibia and tarsus, and the roll of the dorsum of the hind wing. Often the hairing of the tibia is white on the inside with a single small jet-black hair-pencil at the extreme base of the tibia above. The hind wing in the male is moderately modified, with dorsal edge more or less thickened, glandulose, and naked; this is the dorsal portion of the scent organ. The markings are motley and complicated. The basal patch is usually incomplete and represented by marbling. The transverse fascia, when complete, is broad, formed by marbling and irregular spots of several colours; usually the fascia is divided in three parts by narrow streaks of ground colour, one almost horizontal, above middle, another inwards-oblique, from below middle of posterior edge to base of anterior edge; in the species related to *complicitana* the so formed central part is blackish and contains a small light ocellar mark on end of cell. The species related with *inodes* are without discal markings.

#### Key to the groups of species of *Sycacantha*

The numerous species of the genus may be divided by the male genitalia into two groups.

1. Inner socius broad at base, gradually narrowed, hairy throughout\*), seldom with

\*) Only in *S. caryozona* spec. nov. the inner socius has a broad, triangular base and a long slender naked point.

- bristles at top; outer socius of similar shape, but shorter *S. thermographa* group
- Inner socius slender, clavate, usually bristled only towards apex, bristles often sparse but long; outer socius diversely shaped, similar to the outer, of diverse length, or subparietal and short . . . . . *S. inodes* group

Usually the groups can be separated without difficulty, but there are also intermediates (*amphimorpha*, *tapaenophyes*, etc.). Therefore it seems preferable not to attach subgeneric names to these species groups at present.

*Sycacantha thermographa* group of species

Outer socius broad, subtriangular, haired throughout, seldom with apical spines; inner socius of similar shape, shorter.

Key to the species of the *Sycacantha thermographa* group

1. Fore wing with a distinct triangular pale ochreous spot on termen above tornus *tornophanes*
- Fore wing without such pale tornal spot . . . . . 2
2. Fore wing with a distinct white dot on end of cell, paler than other markings . 3
- Fore wing without such dot, if dot present then as pale as remainder of ground colour . . . . . 7
3. Fore wings with a large round white discal dot and a pale orange spot in posterior third of cell . . . . . *exedra*
- Not thus . . . . . 4
4. Fore wing with a pale triangular patch before middle of dorsum, acutely pointed and separated from costa . . . . . *catharia*
- Fore wing without such pale patch, if there is a pale spot there, it forms a part of a transverse band . . . . . 5
5. Fore wing with ground colour rather bright orange-ochreous, subapical pale oblique fascia infuscated in middle . . . . . *thermographa*
- Fore wing with ground colour whitish; subapical fascia with an annular fuscous mark in middle . . . . . 6
- Discal white dot large, round; annular mark in subapical fascia large, encircling a white ring; posterior edge of that fascia obtusely angulate, followed by reddish colour . . . . . *diatoma*
6. Fore wing, middle third of costa with a large reddish trapezoidal patch *versicolor*
- Not thus . . . . . 7
7. Fore wing with a brown apical spot, much darker than ground colour and well-defined (if not well-defined, then entire wing tinged vinaceous-fulvous) . . . . 8
- Fore wing without a darker apical spot . . . . . 9
8. Fore wing with lower part of transverse fascia entirely obliterate; ground colour pale ochreous . . . . . *maior*

- Fore wing with lower part of transverse fascia fuscous-tawny, well-defined; ground colour cinereous . . . . . *concentra*
9. Fore wing light ochreous-yellow, subcostal portion without markings, two dark spots on basal half of costa ferruginous-red . . . . . *caryozona*
- Fore wing tawny, only tornus orangeish, subcostal markings developed; two spots on basal half of costa dark brown . . . . . *incondita*

***Sycacantha thermographa* spec. nov.**

(fig. 205)

♂ 20 mm. Head pale ochreous, vertex with two longitudinal purple lines between antennae, centre of forehead purplish and touched with orange. Antenna fulvous. Palpus pale ochreous, basal segment blackish except edges, median segment along upper edge and along basal portion of lower edge with a purplish-black irregular line, a suffused purplish spot on lower edge below apex, terminal segment with a purple tip. Thorax bright ochreous, marbled with dark fuscous-purple. Posterior leg dilated with dense scales; outwardly grey with white articulations, above, below, and inwardly, snow-white. Abdomen dark fuscous, venter silvery whitish, anal tuft ochreous.

Fore wing moderately broad, costa considerably curved, termen straight. Pale ochreous finely marbled with light orange, and coarser, with dark purple-fuscous. Basal patch to beyond  $1/4$ , edge regularly convex, rectangular notch below costa; inside of patch paler, with a triangular dark spot on base of dorsum, not extending over marginal scale patch; transverse fascia broad, conspicuous, dark purplish-fuscous, compact, gently curved; its outer edge with three short teeth, lower median and rectangular; ocular spot small, whitish, almond-shaped and slightly oblique, cut lengthwise by a bent dark minute line; a tooth of pale ground colour above ocular spot penetrating into fascia between first and second marginal teeth; metallic line beyond fascia very dark leaden, almost black, little zigzagged, in middle with a long acute point towards termen below apex; this line everywhere broadly edged with pale ground colour, gradually dilated towards tornus; preapical curved dark band much reduced, almost linear, with four scallops, each with a small horizontal line directed basad; subcostal streak rather narrow, light orange, metallic lines slender, bluish, not conspicuous. Cilia bright or pale ochreous, opposite dark markings barred with purplish.

Hind wing blackish-brown. Cilia pale fuscous, grey around apex; a sharp whitish basal line and a blackish subbasal narrow band.

Male genitalia. Inner socius triangular, closely haired throughout, edge with strong bristles; outer socius shorter, semioval, free. Gnathos (transverse part) unusually broad. Valva with a slender sacculus, excision not defined, cucullus bristles not modified; two or three small marginal hooks and one thick spine. Pulvinus rounded-prominent.

Female unknown.

South West Celebes, Bantimurung Falls near Maros, 50 m, 9-18.viii.1949 (A. Diakonoff), 1 ♂, holotype, genit. slide 4574 (LM). Tjamba near Maros, 1500 ft, ii.1938 (J. P. A. Kalis), 1 ♂, paratype (BM, Rothschild Bequest).

Characteristic by its warm brownish-and-orange general colour which is slightly duller in the paratype, and by simple, broad transverse fascia. Male genitalia at once recognizable by the triangular hairy socius, shorter than in *S. diatoma* Diakonoff.

***Sycacantha diatoma* Diakonoff, 1966**

(fig. 231)

*Sycacantha (Sycacantha) diatoma* Diakonoff, 1966: 58, fig. 50 (♂, New Guinea).

Distribution. New Guinea: Setekwa River.

The large species is motley coloured, brownish-tawny, with an extensive pale ochreous or whitish marbling. The discal dot is large, white; the preapical band white, with a series of horizontal tawny streaks and a circular mark in middle; a strongly downwards-curved fulvous subcostal streak, becoming narrow posteriorly.

Hind wing light fuscous-grey, towards apex slightly darker.

Male genitalia. Inner socius long, pointed, much longer than outer socius which is rounded-triangular. Sacculus part of the valva moderate, constricted below end which is rounded-prominent. Cornuti, several short spines.

There is a single specimen known.

***Sycacantha catharia* spec. nov.**

(fig. 257)

♂ 18.5 mm. Head, palpus and thorax creamy, densely marbled with dark brown. Posterior tibia and tarsus outwardly glossy golden-whitish-tawny, fringe of hairs white; inwardly white, pencil from base double: upper very long white, lower short, thin, jet-black. Abdomen light grey, paler towards base, venter whitish.

Fore wing oblong-subtruncate, moderately broad, costa considerably curved throughout, apex subobtuse, termen straight, vertical above. Creamy, markings fuscous, brown and tawny. Basal patch to 1/3, margin angulate and strongly prominent on upper edge of cell, above angulation dentate, below strongly rounded and inwards-oblique; posterior half of this patch deep fuscous-tawny, anterior densely dotted and marbled with pale purplish, the whole patch marbled with dark fuscous, forming continuous irregular series of markings from costa beyond base to fold beyond base and along this to edge; space beyond basal patch on upper half rather suffused with dark grey, parted by an irregular dark fuscous line from below costa to above dorsum, double and filled out with tawny above, single below, touching prominence of basal

patch; costa with a series of dark brown dots, becoming elongate and rather narrow, obliquely-wedge-shaped along posterior half of costa; transverse fascia hardly curved, broad, with a suffused dark brown spot on costa, with a rounded top, beyond this an inwards-oblique elongate oval tawny mark, pale-edged; below this fascia interrupted by leaden-grey horizontal streak, upon which follows a bright patch of ochreous-tawny suffusion; remainder of median part of fascia formed by an inwards-oblique, very irregular blackish-brown spot, partly filled out with tawny, extending from end of cell down to above dorsum, its posterior angle prominent, lower edge with two teeth, anterior angle forming an upcurved hook-like process; this dark spot containing in its upper angle an inwards-oblique, conspicuous, elongate-oval mark; triangular spot on end of dorsum rather high and pointed; subapical fascia broad, dilated downwards, complete, creamy anteriorly, suffused with light fuscous-tawny posteriorly, partly traversed by four wedge-shaped narrow dark brown marks above middle, and with a complete transverse mark in middle; spaces before and beyond subapical fascia filled out with dull dark leaden-grey; apex with a longitudinal black dot; two small spindle-shaped marks along upper part of termen; some fine zigzag black lines in tornus. Cilia (imperfect) ferruginous along apex and upper half of termen, below and in tornus pale ochreous, lower half barred with ferruginous.

Hind wing greyish-bronze, rather thinly scaled and moderately glossy, dorsum paler. Cilia concolorous, with a pale basal line and a dark fuscous subbasal band, in tornus appearing white in certain lights.

Male genitalia. Inner socius triangular, with a broad base, strong bristles along more than the half of edge; outer socius broad, short and round. Gnathos with sclerotized lateral edge and twice emarginate lower edge. Cucullus with a longitudinal groove towards apex, sacculus with a gentle excision and a row of long flat bristles outside, as a corona. Pulvinus subparietal. Subbasal process strongly pointed.

East Sumba, Melolo, 0-25 m, iv-vi.1949, 1 ♂, holotype, genit. slide 5802 (Sutter & Wegner) (BMS). Judging from the colouring and markings, intermediate between *S. complicitata* (Walker) and *S. potamographa* (Diakonoff), from the Philippines and Borneo; judging from the socii, probably allied with *S. thermographa* spec. nov.

***Sycacantha exedra* (Turner, 1916) comb. nov.**

(fig. 230)

*Argyroploce exedra* Turner, 1916: 532 (♂, Queensland). — Diakonoff, 1966: 17 (belongs to *Sycacantha*; genit. ♂ figured).

Distribution. Australia: Queensland.

The species resembles *S. complicitata* (Walker) but has a pale orange spot in posterior third of cell and a much larger, round white spot in disc.

Male genitalia. Tegumen broadly triangular, inner socius with dilated edge, bristled



above, top acutely pointed and bristled; outer socius long, broad, clavate; henion single, narrow.

Only one specimen in Meyrick collection from Kuranda studied by me (genit. slide 6042). This is a distinct species, rather remote from the others by large outer socii.

*Sycacantha versicolor* spec. nov.

(fig. 202)

♂ 20 mm. Head ferruginous, face fulvous. Antenna fuscous. Palpus slender, smooth; fulvous. Thorax creamy-whitish, anteriorly slightly infuscated, tegula ferruginous, a postmedian ferruginous transverse spot, crest laterally ferruginous-red. Posterior tibia outwardly light isabel-grey, an oblique transverse band of white dusting, above, below and inwardly, glossy white. Abdomen bright tawny, venter whitish except towards apex.

Fore wing broad, truncate, costa curved, most curved in middle, termen gently rounded, almost straight. Pale ochreous, closely strewn with fine metallic grey and light tawny, except broad pale edges to markings. Basal patch small, on costa to 1/5, edge well-defined, rounded and strongly inwards-oblique, to dorsum beyond base, thence as a marginal streak to 1/3 of dorsum; transverse fascia very broad, trapezoidal, its upper third light fulvous-pink, its middle third with a large oval ochreous-greyish patch; lower 2/3 of fascia, except this oval patch, dark brown, on dorsum extending from basal patch to tornus, containing two large triangles of ground colour, anterior just before middle of dorsum, truncate by fold, posterior on end of dorsum, centred with brown; about apical fourth of wing pale whitish-fuscous, usual lines from costal dots white, narrow, their metallic parts hardly perceptible, dullish leaden and minute; this apical part separated from other markings by pale, straight streak, dusted in centre, emitting a brown pale-edged horizontal streak to middle of termen; costal spots dark brown on transverse fascia, fulvous along posterior part of costa. Cilia fuscous-brown (rubbed).

Hind wing brownish-fuscous. Cilia fuscous with whitish tips (imperfect).

Male genitalia. Socii large, inner socius very long and robust, edge of anterior half beset with strong spines, of posterior half, with bristles; outer socius is oval and lobe-like, not parietal. Caulis moderate. Valva with an excision under middle, cucullus bristles in a strong discal patch, marginally a row of small hooks and a large spine. Pulvinus subparietal, gently prominent. A patch of very long bristles towards base of costa.

North Borneo, Sarawak, Kuching, Rock Road, 4th mile, 8.v.1909, 1 ♂, holotype, genit. slide 4578 (LM). The specimen is somewhat rubbed, but the markings, which are unusual for the genus, are still distinct and very characteristic.

*Sycacantha tornophanes* (Meyrick, 1930) comb. nov.

(fig. 242)

*Argyroploce tornophanes* Meyrick, 1930: 603 (Solomon Is.). — Clarke, 1955: 312.

Distribution. Solomon Is.: Guadalcanal.

Holotype, ♀, without abdomen: "Solomon Is., Guadalcanal (Meek)" (BM). New Guinea, East Papuan Is., d'Entrecasteaux Is., Fergusson Id., 25.xii.1894 (Meek) (Walsingham Coll.), 1 ♂, apallotype, genit. slide 7670 (BM); the same, 23-31.xii.1894, 1 ♂. East Papuan Islands, Goodenough Id., 1897 (Meek, Walsingham Coll. 18167), 1 ♂ (no head), genit. slide 7681; Ron Id., xii-1897 (Doherty), 1 ♂ (no head); "Milne Bay (A. S. Meek)", 1 ♂, without abdomen (BM and LM).

The gaudy species is easily recognizable by the conspicuous pale ochreous discal dot and triangular spot on the lower part of the termen and by warm brownish-ferruginous colour.

♂ 21-25 mm, ♀ 20 mm. Apallotype, ♂ 24 mm, similar to the female holotype, except that the wing is more dilated and broader and 3/4 of costa more prominent. Head pale ochreous, vertex tawny, forehead with a brown spot, patagia with large brown spots. Thorax deep ferruginous, tips of tegulae and the large double posterior crest fulvous; collar, a subapical transverse band and a transverse submedian series of four spots pale ochreous. Median leg light fulvous, tibia in male and female moderately expanded by bristly hairs. Posterior tibia in male strongly dilated by snow-white projecting silky long hairs above and beneath, very thick on the inner side, a black spot at base above, a creamy stiff pencil from base above, deeply imbedded in other hairs; basal segment of posterior tarsus with white hairs above. Abdomen pale grey-fuscous on basal half, darker fuscous on apical half, anal tuft light ochreous, base of venter white.

Fore wing chestnut-brown, marbled with ferruginous and tawny and with a few irregular leaden-grey marks. Costa deep brown, a semicircular, whitish-ochreous spot beyond base, containing first and second pairs of white marks; an oblong similar spot at 2/5, containing fourth and fifth pairs of costal strigulae; third and sixth pairs indistinct, brownish; posterior half of costa with five distinct white pairs of oblique marks, ultimate pair vertical, these five pairs merging into an orange-golden curved line, edged below with pale leaden-blue, to middle of termen; two larger round whitish patches, touching each other and first costal spot, together indicating basal patch, prominent in middle; extreme base of wing purplish; a rather large, pale ochreous, tawny-parted mark in centre of disc, rectangular, angulate anteriorly, with extremities truncate and semioval, neither reaching angle of cell, nor dorsum before middle, respectively; a bright whitish, ferruginous-edged dot on end of cell; a leaden-grey irregular striga from below 3/4 of costa to tornus, straight but sending off a horizontal branch opposite discal dot, not reaching termen and rounded at end, and another, indistinct dark grey branch from below this to 3/4 of dorsum; a conspicuous triangular patch on lower half of termen, white anteriorly, suffused with ochreous posteriorly.

and above; extreme edge of termen narrowly purple, preceded by white interrupted lines. Cilia in apex and along upper half of termen bright fulvous, with two light ochreous bars, along lower part of termen and tornus light ochreous with a dark grey bar on dorsum.

Hind wing fuscous-purple, cilia whitish; in Ron specimen cilia light ochreous.

Male genitalia. Tegumen broadly rounded, subtruncate; inner socius large and robust, narrower, with apex slightly curved inwards, strong bristles towards top on outer side, weak bristles along inner edge; outer socius as long as inner, sclerotized, rounded, with a thickened edge and sparse hairs. Gnathos with henion slight, sclerotized. Labis sclerotized; pulvinus, a swollen but weak edge with a few spread bristles. Cucullus base prominent, with a row of dark spines, lower of these large, other minute; cucullus long, rather slender, moderately pointed. Aedeagus sclerotized, with a rectangular field of small cornuti scars.

A distinctly marked large species, easily recognizable by the pale ochreous pre-tornal spot. Judging from the genitalia, a primitive form, nearest to *S. exedra* (Turner).

***Sycacantha maior* spec. nov.**

(fig. 212)

♂ 22 mm. Head pale ochreous, forehead suffused with deeper ochreous, vertex deep ferruginous. Palpus pale ochreous, rather long, curved and ascending; median segment with a basal and a suprmedian fuscous ring. Thorax pale ochreous (strongly rubbed). (Posterior tibiae missing). Abdomen fuscous-tawny, venter silvery-white, anal tuft ochreous.

Fore wing oblong-truncate, dilated and broadest at  $2/3$ , costa little curved at extremities, rounded-prominent at  $2/3$ , apex rounded-rectangular, termen straight above, little oblique. Light ochreous, markings dark fuscous. Basal patch to  $1/3$ , edge indicated by a couple of dark oblique marks on costa, an obtuse spot in fold and an irregular streak along basal third of dorsum; a suffused suboval spot on costa just before middle, connected with basal patch by irregular deep blue-grey suffusion hardly reaching to cell and including a dark brown triangular costal dot, preceded and followed by a minute strigula; some dark transverse strigulation in cell; an incomplete circular spot on closing vein, forming a rather irregular edge to a pale ocellar spot; sub-apical fascia with anterior half pale yellow, posterior half black, continuous and fasciate, followed by an interrupted and irregular thick and short metallic-blue streak; costal spots and apex forming an almost continuous dark purplish-brown marginal streak, cut by very narrow white pairs of lines; lower third of termen silvery-whitish, with dark strigulae; dark strigulae across dorsum. Cilia (imperfect) in apex and along upper half of termen purplish, along lower half sordid pale ochreous.

Hind wing dark purplish-fuscous, darker towards apex. Cilia paler, a pale base and a fuscous subbasal band.

Male genitalia. Robust (broken in pieces). Inner socius broadly semioval, outer socius longer, more slender, with a triangular base. Gnathos, a rather straight band with a broad median transverse descending part (henion) above narrow anellus rods (only *versicolor* also has such median broad descending henion, all other species have the narrow anellus rods directly connected with the transverse part of the gnathos). Pulvinus parietal. Subbasal process rather pointed. Valva with sacculus hardly emarginate, only gently narrowed, base of cucullus triangularly prominent, with a couple of spikes. Base of valva broad. Aedeagus very short.

Borneo, Sarawak, Kuching, Matang Road, 7.xii.1909, 1 ♂, holotype, genit. slide 4577 (LM). This unusually large species resembles *Sycacantha inodes*, and has its markings, but the male genitalia indicate a relationship with *S. versicolor* spec. nov.

***Sycacantha concentra* spec. nov.**

(figs. 217-218, 226)

♂ 14-15 mm. Head white, vertex suffused with paler fulvous. Palpus white, median segment, except a broad lower edge and top, suffused with pale tawny, terminal segment tawny. Thorax creamy, mixed with pale tawny and pale fulvous. Posterior tibia white, clothed on all sides with fine long hairs, a slender long pencil from base above, white, probably black at base; basal segment of posterior tibia slightly tufted at base. Abdomen dark fuscous, paler at base, anal tuft light ochreous, venter whitish on basal half, light ochreous, infuscated, on apical half.

Fore wing rather short, moderately broad, suboval-truncate, costa throughout curved, but more curved anteriorly, apex obtuse, termen straight and vertical above, broadly rounded below. White, strewn with a few blackish points. Markings extended, chiefly light tawny. Costa dark fuscous, anteriorly with four, posteriorly with six pairs of bright white marks, posterior pair vertical, posterior line sinuate and separating dark brown apex; basal patch represented by a moderate triangular spot on upper half of base of wing, continued just below fold by a somewhat irregular dark brown horizontal streak, dilated into a triangular spot at end, across fold, at 1/3 of wing, edged posteriorly by white; dorsum as far as vein 1a suffused with light tawny; transverse fascia indicated by a dark fuscous, slightly oblique subrectangular spot just before middle of costa, lower half of posterior edge extended in a cusp; this spot separated from lower part of transverse fascia by an oblique band of ground colour; this lower part forming an irregular, lighter, fuscous-tawny patch, being a marbling with some four small projections anteriorly and several, posteriorly, one of which, in centre of wing, more conspicuous and encircled by a fuscous-leadened line; a curved series of minute leadened transverse lines beyond transverse fascia, dilated below and running to tornus; followed by an oblique curved band of unobscured ground colour which delimits a pale tawny-ochreous apical area; this contains faint pale blue minute lines from costal markings, a horizontal small linear mark in centre of apical area and a curved series of usual dark brown interneural short strigulae towards anterior edge

of apical area; extreme termen with several small vertical strigulae. Cilia opposite apex dark fuscous, along upper half of termen fuscous-fulvous with bright ferruginous basal half, around tornus white, slightly suffused with grey.

Hind wing light fuscous, semipelluculent, turning more pelluculent towards base; dorsum along basal half with a sclerotized light brown naked concave edge. Cilia fuscous-grey with a darker subbasal band, cilia opposite upper half of termen creamy except this band.

♀ 15 mm. Fore wing darker, white colour almost entirely obscured. Basal patch, suffusion along dorsum and complete transverse fascia entirely confluent and more extended, transverse fascia occupying about central third of wing; pale band beyond this almost completely filled out with silvery-purplish, metallic scales; dark subapical interneural strigulae confluent, so as to form a continuous oblique and curved band; dark costal dots alternately larger.

Hind wing darker, fuscous-bronze, more opaque, dorsum normal.

Male genitalia. Tegumen depressed, two tops approximated. Uncus still more depressed, deeply excavated in front, inner socii being rather long, abruptly narrowed to a point from the middle, moderately scaled. Outer socius but little shorter, sparsely scaled, lobe-like (free) and moderately pointed. Gnathos strong, henion well-defined but narrow. Valva comparatively short, hardly constricted; labis moderately rounded, pulvinus indefinite, a group of hairs only; cucullus base projecting, with one big and three small spines, the latter becoming smaller gradually; cucullus short. Aedeagus slightly constricted, rather long. Cornuti in a thick dark sheaf.

Female genitalia. Lobi anales slender. Anapophyses long. Ostium weak, with a moderate lower edge and slender lateral processes. Colliculum: two weak separate sheaths. Ductus bursae from below colliculum to the end granulate. Signum, a minute scobination in a granulate area, wall of corpus bursae elsewhere simple.

Bali Id., 1896 (Doherty), 1 ♂, holotype, genit. slide 7697, 1 ♀, allotype, genit. slide 7842. The same label and also "Bali Id., Sumba Is., Malaysia, Doherty, 1896", 8 ♂, 1 ♀, genit. slide 7698, paratypes (Walsingham Coll., BM; LM).

A small rather dark species, with characteristic markings, of which the small posterior digitoid process of the transverse fascia, finely encircled with a dark line, is most typical. In faded and worn specimens the above described markings are more or less reduced, but usually the small central encircled mark, sometimes reduced to an isolated horizontal strigula is always traceable.

Judging from the male genitalia probably nearest to *S. hilarograptia* (Meyrick) (similar valva), but not close.

***Sycacantha caryozona* spec. nov.**

(fig. 248)

♂ 18 mm. Head and palpus whitish-ochreous. Thorax whitish-ochreous, collar and tegulae suffused with light fulvous. Posterior tibia dilated with fine long snow-white

hairs above, beneath and on the inner side; a snow-white pencil from base above; a suffused jet-black spot at base on the inner side; posterior tarsus long, but little thickened, with a small tuft of hairs above. Abdomen pale fulvous, with the base and the anal tuft pale ochreous.

Fore wing broad, truncate, strongly dilated to  $2/3$ , thence gently narrowed, costa little curved except at base, but at  $2/3$  distinctly angulate and prominent, apex sub-rectangular, termen straight above, rounded beneath. Creamy, partially and slightly suffused with pale ochreous, especially on upper half of wing. Costa narrowly blackish-brown with some 12 short pairs of whitish strigulae. Basal patch indicated by a deep ferruginous, acute triangular spot on base of wing, limited by fold, followed by a lighter ferruginous semioval spot on  $1/4$  of costa, irregularly continued transversely by ferruginous marbling to below fold; transverse fascia much reduced and traceable only as a suffused ferruginous spot on costa just before middle, faintly connected along costa with preceding spot; a small irregular black dusting on end of cell and two patches of greyish irregular marbling from dorsum not reaching cell, at  $1/2$  and  $2/3$ , respectively; irregular grey-fuscous dusting along dorsum, slightly exceeding fold; apical fourth of wing suffused with light grey, indistinctly traversed by oblique and curved whitish lines from costa, metallic subcostal streak linear, white edge below more distinct, undulate below; grey colour before this line tending to form faint inter-neural darker strigulae; apex and upper half of termen blackish, the latter with white oblique strigulae. Cilia (damaged), creamy, along upper half of termen with dark fuscous bars.

Hind wing pale grey, suffused with darker fuscous on apical half, dorsum pale grey, with a naked light brown semitubular structure along more than basal half of margin, on upper side a shallow fold before this, with fine hairs. Cilia concolorous.

Male genitalia. Uncus triangular, pointed. Inner socius very long, gradually narrowed to a slender obtuse point, sparsely fine-haired except along apical third, base broadly triangular, also haired. Outer socius  $1/3$  of the inner, broadly rounded. Gnathos brownish, lower edge at the sides well-defined. Henion strong, furcate below. Valva robust with a subspheroid sacculus part, processus basalis on a distinct prominence. Pulvinus densely bristled and merging into patch of cucullus bristles. Cucullus strongly sinuate on a constricted stalk, prominence rounded and projecting far with very dense bristles and a transverse marginal pecten, apical spine small. Cucullus proper densely haired. Aedeagus brownish, cornuti, a sheaf of rather long spines.

Female unknown.

A novel and distinct form, easily recognizable by the peculiar uncus, socii and valva.

British New Guinea, Aroa River (A. S. Meek), 1 ♂, holotype, genit. slide 7687 (BM).

*Sycacantha incondita* spec. nov.

(figs. 210-211)

♀ 18.5 mm. Head orange-fulvous, face pale ochreous. Palpus rather long, little

dilated with appressed scales; orange-fulvous; terminal segment extremely short, dark ferruginous. Thorax fulvous-ochreous, anteriorly suffused with dark brown, centre broadly suffused with blackish-fuscous. Abdomen dark fuscous.

Fore wing oblong-oval, hardly truncate, costa curved throughout, apex tolerably rounded, termen rounded. Bright ochreous, strongly mixed with fulvous, pink and ferruginous, transversely strigulated with ferruginous and dark brown, markings ill-defined. Costa with a blackish-brown, subtriangular spot at  $1/3$ , preceded by two small dots, and indicating edge of basal patch which is further represented by a slightly outwards-convex spindle-shaped vertical mark in disc; centre of basal patch towards base with irregular reddish-ferruginous marks, space beyond patch rather obscured with blackish, making transverse fascia indistinct; this is apparently broad, much obscured by dark brown, with a double black spot on costa, preceded by a single spot; including above middle an inwards-oblique patch of yellow suffusion; subapical fascia irregular, broad, brown on upper, yellow-ochreous on lower half, with 3-4 black horizontal strigulae; followed by a short grey-leaden streak; a black line along central part of termen; spots along posterior half of costa and in apex dark fulvous. Cilia (rubbed) ochreous and brown.

Hind wing blackish-bronze, becoming paler, fuscous on basal  $2/3$ , cilia concolorous, with a fine light basal line, along upper half of termen cilia on posterior half sordid ochreous.

Female genitalia. Genital sternite subquadrate, upper angles rounded; moderately sclerotized. Lamella postvaginalis developed, forming downwards-directed pointed prominences: one on each side and one longer, in the middle. Colliculum long and slender, narrowed, top curved. Signum, a large hollow tooth, almost without a basal plate. (Second signum may be lost, corpus bursae being torn).

East Java, Tengger Mountains, Baung Falls near Nongkodjadjar, 400 m, 31.v. 1941 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 4556 (LM). The colouring reminds one of *S. hilarograptia* (Meyrick), the cilia, of *formosa* Diakonoff. The present species, however, has more rounded fore wings, different markings and a unique hooked signum. I assign it to the present group of species.

#### *Sycacantha inodes* group of species

Outer socius slender, usually clavate, bristled at top, otherwise naked; inner socius of diverse length, sometimes parietal.

#### Key to the species of the *Sycacantha inodes* group

1. Fore wing uniform dark fuscous, markings only oblique transverse bluish metallic lines . . . . . *rivulosa*
- Not thus . . . . . 2
2. Fore wing without any markings except costal strigulae and darker suffusion in

- disc anteriorly or along costa and in apex. . . . . 3
- Fore wing with at least a costal, together with an apical spot, but usually with intricate markings extended over wing . . . . . 4
- 3. Fore wing only with a dark suffused costal streak and apical spot and lighter grey suffusion anteriorly . . . . . *homichlodes*
- Fore wing only with a dark fuscous suffusion in disc and along dorsum anteriorly . . . . . *solemnis*
- 4. Fore wing with ground colour bright ochreous, markings warm tawny, lilac-fulvous, bright ferruginous or deep brown . . . . . 5
- Fore wing with ground colour pale ochreous, whitish, pale fuscous or grey; if brighter ochreous, then markings brown or dark brown . . . . . 11
- Fore wing with ground colour dark fuscous marbled and dusted with paler, subapical area white, irregular, subapical streak pinkish . . . . . *ostracachtys*
- 5. Hind wing unicolorous dark brown or blackish-brown with contrasting white cilia . . . . . 6
- Hind wing distinctly paler towards base or entirely pale grey; cilia, if pale, ochreous . . . . . 8
- 6. Fore wing, ground colour, bright ochreous dusted with leaden grey, except the edges to dark brown, well-defined, markings. . . . . *praeclara*
- Fore wing with markings reddish-fulvous or deep fulvous . . . . . 7
- 7. Fore wing bright ochreous, markings well-defined, deep reddish-fulvous. Inner and outer socii practically equal; pulvinus separated, obtuse. . . . . *hilarograptia*
- Fore wing with bright ochreous ground colour reduced, instead more suffused with lilac-fulvous or fulvous-crimson; markings deeper fulvous, less contrasting. Inner socius longer than outer socius:
  - a. Deep crimson-red, basal part from 2/3 of costa to 1/3 of dorsum darker (Thailand). . . . . *formosa formosa*
  - b. Paler fulvous-crimson, basal part not darker (North Borneo) *formosa rutila*
- 8. Ground colour bright yellow-ochreous, markings paler fulvous, less contrasting; inner socius broad, truncate, with a pair of extremely large bristles; pulvinus concealed . . . . . *rhodocroca*
- Not thus . . . . . 9
- 9. Fore wing bright yellow-ochreous, a dark grey triangular or semioval suffusion on middle of dorsum . . . . . *crocamicta*
- Fore wing rather dull light ochreous or tawny ochreous, without any darker dorsal suffusion . . . . . 10
- 10. Valva with cucullus base strongly prominent, rounded; inner socius long and slender, outer short, free . . . . . *rufescens*
- Valva with cucullus base moderately prominent; inner socius moderate, outer shorter but broad, rounded, semiparietal . . . . . *inopinata*
- 11. Fore wing ground colour, however reduced by dark brown markings, decidedly light yellowish-ochreous . . . . . *siamensis*



- Fore wing light with ground colour decidedly without any yellow or light ochreous tinge, but whitish, creamy, pale fuscous or cinereous. . . . . 12
12. Large dark brown spots: on costa, on dorsum, before tornus, and in apex, pale-edged and well-defined . . . . . *escharota*
- These spots, if present, not so large and less sharply defined . . . . . 13
13. A diversely shaped blackish, often white-centred, usually suffused discal spot on or beyond cell. . . . . 14
- Posterior half of disc without such ocellar spot, if this is present then reduced to a narrow ring around a dot of ground colour or a white dot only, without a dark edge (when in doubt, cf. also sub paragraph 17) . . . . . 18
14. Metallic-leadens fascia before subapical streak well-developed, undulate, broad 15
- This fascia much reduced, narrow, or not metallic-leadens, if metallic, then not cut in two by a dark horizontal line . . . . . 16
15. A large, dark, oblique Z-shaped central spot, white dot at its upper edge . . . . .  
*potamographa*
- Dark central spot moderate, oblique-crescentic, white dot in its concavity . . . . .  
*complicitana elegans*
16. A distinct, inverted-V-shaped pale mark, on middle of fold . . . . . 17
- No such mark. . . . . *complicitana complicitana*
17. Subapical fascia anteriorly broadly suffused with white, darkly cut in middle, paler than other markings . . . . . *dissita*
- Subapical fascia with a narrow pale ochreous anterior edge . . . . . *choanantha*
18. Ground colour whitish or pale, seldom darker, cinereous (in one female cinereous, touched with pale yellowish) . . . . . 19
- Ground colour pale vinaceous, or fuscous-grey or fuscous . . . . . 21
19. Rather dark grey, markings blackish or dark brown, limited to costa and apex  
*cinerascens*
- Paler whitish, markings fuscous, also in disc and on dorsum. . . . . 20
20. Central fascia with lower part represented only by an irregular, dark fuscous zigzag mark . . . . . *amphimorpha*
- Central fascia with lower 2/3 complete, dilated, grey-fuscous, suffused. . . . .  
*tapaenophyes*
21. Valva with lower half of cucullus forming a large projection of lower edge; top of tegumen together with gnathos quadrate and broad. . . . . *quadrata*
- Not thus . . . . . 22
22. Lamella antevaginalis with concave upper edge, no lateral appendages. . . . . 23
- Lamella antevaginalis with slender lateral appendages of ostium bursae present  
*occulta*
23. Lamella antevaginalis calyx-shaped or very small . . . . . 24
- Lamella antevaginalis rounded-crescentic. Greyish, costal and apical markings reduced, a large blackish suffused spot on end of dorsum. . . . . *subiecta*
24. Ground colour dull whitish-fuscous or fuscous-whitish, in female darker (ocellar

- mark usually absent, Java; this mark present, Solomon Is.) . . . *inodes inodes*  
 — Ground colour more or less tinged vinaceous. . . . . 25  
 25. Male small and pale, costal and apical spots dark, contrasting, ocellar spot minute, dark, beyond cell; female dark, subapical fascia not interrupted, East Borneo . . . . . *inodes rubida*  
 — Male moderate or large, deeper pinkish-vinaceous. Female with subapical fascia almost interrupted in middle . . . . . 26  
 26. Male smaller, more vinaceous-pink (Philippine Is.) . . . . . *inodes perspicua*  
 — Male larger, less brightly pinkish (Celebes) . . . . . *inodes celebensis*

***Sycacantha praeclara* spec. nov.**

(fig. 244)

♂ 17-18 mm. Head and palpus bright ochreous spotted with dark fuscous, terminal segment of palpus dark fuscous. Thorax bright ochreous spotted with fuscous, patagia fuscous with ochreous edge, tegulae fuscous with ochreous base and apex. Posterior tibia strongly dilated with long loose and fine white hairs above and beneath, beneath forming a broad triangular tuft, on inner side these hairs rather appressed; an ochreous pencil of bristly long hairs from base above with a small jet-black tuft below its base; posterior tarsus with basal segment strongly elongate, without a tuft of hairs. Abdomen fuscous.

Fore wing suboval-truncate, dilated and rather broad, costa considerably curved throughout, apex and termen rounded. Bright yellow-ochreous, deeper ochreous along costa, densely strewn and marbled with dull leaden-grey except edges to markings, and on basal half also sparsely strewn with dark fuscous. Markings dark fuscous, well-defined. Costa along anterior half with some five small inequal dots; its posterior fourth with three elongate larger dots, basal patch indefinite, indicated by dark fuscous dusting and marbling, with an elongate mark at  $\frac{1}{4}$  of wing length and  $\frac{1}{3}$  wing breadth; sometimes median  $\frac{1}{3}$  of patch forming a well-defined round spot posteriorly, including elongate mark above a transverse moderate spot on middle of costa, lower end abruptly zigzagged, with one obtuse point anteriorly, another, acute, pointing posteriorly, its ochreous edge connected with that of the rather long, somewhat irregularly curved and strongly pointed, slender terminal spot; a large, subquadrate patch on posterior third of dorsum, anterior edge slightly concave and outwards-oblique, upper edge rounded, posterior edge twice faintly scalloped; an interrupted marginal line from apex to middle of termen, running thence as a row of dots, to tornus. Cilia bright ochreous-yellow, with a series of irregular, dark fuscous spots along lower half.

Hind wing blackish-fuscous with a purplish tinge, dull, faintly paler towards middle; dorsum upper side with an elevated naked brown concave ridge along basal half, containing a stripe of modified short white scales. Cilia pale grey with a purplish subbasal band, from apex to vein 3 cilia beyond this band whitish.

Male genitalia. Inner socius porrect, moderate, tips rounded. Outer socius triangular, moderate, remote from inner. Gnathos well-defined but little sclerotized; henion very short, weak, base bifid, minutely scobinate. Labis large and angular; pulvinus indefinite: four bristles only. Cucullus moderately and rather triangularly prominent, gradually narrowed towards top, long and slender. Aedeagus long, moderately curved, no traces of cornuti.

Batian Id., N. Moluccan Is., 1897 (Doherty), 1 ♂, holotype, genit. slide 7678. The same locality and collector, 1892 and viii.1897 (Walsingham Coll.), 4 ♂ (BM, LM).

The species is recognizable by the broad inner socius, the peculiar slender and rather short cucullus and by the characteristic deep colouring, slightly resembling that in *S. escharota* (Meyrick) only. That Celebes species, however, is much larger, differently marked and has a robust long valva.

*Sycacantha escharota* (Meyrick, 1910) comb. nov.

(fig. 245)

*Argyroploce escharota* Meyrick, 1910: 436 (♂, South Celebes). — Clarke, 1955: 133.

*Olethreutes escharota*; Clarke, 1958: 508, pl. 253 figs. 1-1a.

*Sycacantha escharota*; Diakonoff, 1968: 59, 62.

Distribution. "South Celebes".

South Celebes, low country, 1896 (Doherty), 1 ♂, genit. slide 7679; nr. Chambi (Tjambi), low country, 1 ♂ (BM, LM).

♂ 19-21 mm. A characteristic species, with light ochreous ground colour, slightly dusted and parted by light grey and fuscous. Markings distinct and simplified, deep fuscous. Basal patch formed by three finger-shaped slender radiating marks; anterior half of costa with four dots alternating with points, followed by a semioval small spot on middle, then by four oblique dark marks and an apical dot; a large erect-subsemicircular patch on posterior half of dorsum, reaching over  $\frac{2}{3}$  of disc towards costal spot; an elongate-suboval pretornal spot, with a broad stalk to middle of termen, anterior end obtusely pointed.

Hind wing glossy dark fuscous, dorsum in male with a rather shallow, short gully towards base, thence to margin throughout with long and dense fine fuscous and white hairs; cilia along dorsum thickened and long, white.

Posterior tibia, normally scaled on the outer side: smooth, light golden-fuscous; on the inside and above and beneath strongly expanded by long and dense, snow-white hairs, posteriorly forming more or less distinct longitudinal keels, lateral and dorsal, each ending in loose slightly curling tufts; pencil from base long and slender, creamy, becoming black posteriorly, basal segment of posterior tarsus with a dorsal triangular keel of white hairs.

Abdomen light tawny-grey, venter white, except apically, with lateral rows of short tufts of hair-scales.

Male genitalia. Tegumen with bulbous shoulders. Uncus, a moderate rounded prominence in front of these. Inner socius long and pointed, strong bristles on the outer side. Outer socius half the length of inner, rounded and weakly bristled. Gnathos sclerotized and well-defined, henion rather short, gently dilated downwards. Labis with upper end rather produced; pulvinus indefinite, with a few sparse bristles. Valva long and slender, cucullus base prominent, with a single dark spine, cucullus top moderately pointed. Aedeagus with a sheaf of long, thin cornuti, their bases forming an elongate patch.

Female unknown.

A distinct species, judging from the male genitalia similar to *S. versicolor* spec. nov., but with a more pointed inner socius, more pointed labis and entirely different, easily recognizable well-defined markings, so that a place in the *S. inodes* species group seems more adequate.

***Sycacantha rivulosa* (Diakonoff, 1953) comb. nov.**

(fig. 209)

*Argyroploce rivulosa* Diakonoff, 1953: 111, fig. 331 (♂, New Guinea).

Distribution. New Guinea: Snow Range.

A large species with aberrant markings: narrow metallic-blue strigulae upon dark fuscous ground colour. The male genitalia are equally characteristic, with a narrow and long, gradually curved cucullus, and a sacculus without any constriction or prominence.

Inner socius longer, slender and slightly clavate; outer socius also rather long, broader, not clavate.

***Sycacantha cinerascens* spec. nov.**

(figs. 206-208)

♂ 16 mm. Head fuscous, face pale grey. Antenna fuscous. Palpus pale fuscous, laterally infuscated, less so towards base, fringe of scales along apical half of lower edge whitish. Thorax evenly greyish-fuscous. Posterior tibia and tarsus in lateral aspect glossy light fuscous-grey, hair-tuft at apex of tibia and tarsus becoming white towards tips, between pairs of spurs black; tufts of tibia creamy anteriorly, white posteriorly, pencil from base deeper ochreous. Abdomen fuscous-grey, venter dark grey with whitish base.

Fore wing oblong-truncate, moderately broad. Anterior half light fuscous-purplish as far as middle of costa and tornus, posterior half slightly suffused with submetallic bluish-leadens. Costa narrowly black, cut in numerous dark spots by pairs of short light strigulae; greyish on anterior half, clearer, whitish on posterior half of costa; a

moderate subtriangular black suffusion on middle of costa; a blackish-brown, anteriorly suffused, straight streak from  $\frac{3}{4}$  of costa to middle of termen, preceded throughout by a pinkish suffusion; apex faintly pinkish-tinged, a single faint bluish subapical, oblique line; ultimate white costal strigula subapical, conspicuous; a dot on termen just below apex orange. Cilia (imperfect) greyish.

Hind wing rather light grey-fuscous, dorsal fold touched with ochreous. Cilia fuscous with pale base and tips.

Male genitalia. Socii rather small, inner pair short and slender, with a few (5-6) slender bristles spread along edge; outer socius parietal, sclerotized, marginal, and ridge-like, densely spined, twice as long as inner socius. Caulis long. Valva with excision beyond  $\frac{1}{3}$ , shallow; pulvinus, an oval lobe, free part short. Sacculus with one thick spine (broken).

♀ 15 mm. Head, palpus, and thorax darker grey, palpus with a pale streak along upper edge and apex and with an indication of a supramedian pale ring. Abdomen dark grey-fuscous, venter white.

Fore wing slightly narrower than in male. Pale grey, anterior half transversely strigulated throughout with dull fuscous zigzagged strigulae, partially confluent towards dorsum; costal spots darker and more distinct than in male, those along posterior half larger; middle of costa with a dark brown oblique transverse blotch, below costa suffused and rounded; posterior edge of this blotch continued to dorsum before tornus forms an interrupted and convex edge of the dull fuscous colour; portion beyond this pale leaden grey, submetallic, mixed with dull whitish in middle of disc; subapical fascia light greyish-fuscous, white-edged, traversed by a few irregular black lines and fragments of lines; this fascia continuous, gradually but slightly dilated, lower extremity truncate, touching termen above tornus; metallic lines pale blue and light orange; apex black, an interrupted strigula along upper half of termen; edge of tornus white with a series of grey-fuscous spots. Cilia along upper half of termen light purple with dark purple base, along lower half of termen white, in tornus and on dorsum pale grey.

Hind wing slightly darker than in male, with cilia slightly paler.

Female genitalia. Sterigma spheroid, moderate, ostium bursae almost as large as the sphere, finely aciculate; lamella antevaginalis proper shaped as two pointed-oval lateral sclerites and a crescentic median part, colliculum, a slender narrowed tube. Lower part of ductus bursae granulate. Signa two, equal, small hooks, with ill-defined basal plates.

East Borneo, Tabang, Bengen River, 11.ix.1956, 1 ♂, holotype, genit. slide 4563; 24.x.1956, 1 ♀, allotype, genit. slide 4565 (A. M. R. Wegner) (LM). Characteristic by the even grey colour, reduced discal markings, and genitalia. Additional material may prove that the combination of the sex partners is not correct; they are not altogether similar. But it is very probable that they belong together.

***Sycacantha formosa formosa* Diakonoff, 1971**

*Sycacantha formosa* Diakonoff, 1971: 194 (♂, S. Thailand).

Distribution. South Thailand.

The elegantly coloured species has a crimson-purple ground colour with deep ferruginous markings, finely edged with pale yellow. The basal patch is distinct by the upper part of its angulate edge, the transverse fascia is interrupted below costa, the dark apical area includes deep blue lines from costal pale yellow pairs of strigulae.

Remarkable is also the posterior tibia and tarsus of the unique male holotype; the tibia is glossy grey on the outside, strongly dilated above, beneath and on the inner side by long, snow-white hairs, which in centre of the inner side surround a deep cavity paved by short dense jet-black scales. The posterior tarsus has a large triangular pale tawny hair-tuft along its entire length.

The male genitalia do not differ from those of the following subspecies and are described below.

***Sycacantha formosa rutila* subsp. nov.**

(figs. 213-214)

♂ 22 mm. Head and thorax bright yellow, mixed with fulvous. Palpus bright ochreous, median segment along lower edge except towards apex, fulvous. Antenna deep fulvous. Posterior tibia with a large triangular scale-tuft; outwardly glossy pale golden, slightly mixed along upper edge with tawny, tuft pale golden mixed with tawny, tips white; tibia inwardly naked, jet-black, dense and long marginal hairs white, pencil from base white; posterior tarsus with a similar large triangular tuft of scales, dilated and expanded, glossy pale golden-fuscous, tuft pale fuscous, glossy outwardly, dull inwardly, caudally mixed with white. Abdomen with large lateral hair pencils; light fuscous-tawny, venter with two basal segments white; anal tuft light ochreous.

Fore wing suboval, moderately broad. Light lilac-purple, markings reddish-ferruginous edged with yellow, and tawny-pinkish. Anterior 3/4 of costa with a series of small black dots of diverse size, on posterior fourth of costa replaced by three fulvous spots, all separated by pairs of white small marks, on anterior third of costa less distinct and yellowish; basal patch to beyond 1/3 of wing, edge with median third strongly prominent and obliquely truncate, above and below prominence concave; this patch formed of irregular ferruginous marbling, mixed and edged with yellow, interrupted by ground colour in middle of patch except in its centre; transverse fascia ill-defined and complicated, with a reddish-ferruginous not edged suffusion beyond middle of costa, a series of four irregular ferruginous horizontal streaks between suffusion and lower edge of cell, last of these largest, posterior half dilated, anterior forming a slender crescent; these streaks separated from each other by yellow and

ground colour; lower half of fascia more or less continuous, broad, little oblique, containing spots of ground colour: a round spot below cell and an erected-triangular larger spot on dorsum; subapical fascia tawny-pink, broad, gradually dilated, to middle of termen, thence along termen to above tornus, containing a spot of ground colour in middle of inner side and a triangular smaller spot below middle, on terminal edge; also containing jet-black strigulae along veins; metallic lines beyond subapical fascia interrupted silvery-leadened, not conspicuous; apex tawny-pink; several vertical black strigulae along termen. Cilia tawny-yellow, slightly barred with fulvous, basal fourth fulvous, a fine pale basal line.

Hind wing fuscous-purplish, paler towards base, darker towards apex, throughout with a yellowish tinge. Cilia pale yellow, infuscated in tornus, fuscous on costa, throughout with a fuscous subbasal band.

Male genitalia. Inner socius long, margin of apical half with long dense spines; outer socius shorter, slender, angulate beyond base. Valva slender, excision shallow and gradual, prominence above middle, moderate; with a row of strong spines, one spike. Pulvinus digitoid, slender, separate and bristly. Processus basalis long.

♀ 17 mm. Very similar to male, but more tawny tinged, instead of reddish. Palpus yellowish-tawny. All markings, instead of ferruginous, are tawny with a dark fuscous sparse network, also dark strigulae of subapical fascia extended so as to form dark network. Posterior tibia normal. Hind wing as in male, with the characteristic yellow cilia. Abdomen normal.

Female genitalia. Ostium with lamella antevaginalis not modified, membranous, edge emarginate. Lamella postvaginalis indicated by a simple horizontal rod only. Colliculum long, slender, little dilated above. Ductus bursae partially and corpus bursae entirely, granulate. Signa two, weak hooks with moderate basal plates.

North Borneo, Sarawak, Kuching, Matang Road, 24.iii.1911, 1 ♂, holotype, genit. slide 4579; the same, 10-510 ft, 1 ♀, allotype, genit. slide 4646 (LM). Distinct by bright colouring. Allied to the type-species, but distinct by the peculiar pulvinus and the strong hair tuft of the tarsus.

#### *Sycacantha siamensis* Diakonoff, 1971

*Sycacantha siamensis* Diakonoff, 1971: 196, pl. 7 fig. 18 (♂, S. Thailand).

Distribution. South Thailand.

♂ 19 mm. Head light tawny-ochreous, face paler, with a pair of small brownish lateral tufts. Palpus white, apical half of median segment suffused with pale ochreous-tawny except along lower edge, a dark, purplish, subapical ring, terminal segment tawny, white-tipped. Thorax bright ochreous-tawny, spotted with deeper fulvous, posterior half except edge slightly infuscated. Posterior tibia with long appressed and fine snow-white hairs except on inner side, projecting fan-like beyond top of tibia,

pencil from base above white; posterior tarsus, basal segment with a white tuft above. Abdomen fuscous, anal tuft pale ochreous, venter whitish towards base.

Fore wing rather broad, dilated, costa gradually curved, apex rounded-rectangular, termen slightly concave, almost straight and vertical above, rounded beneath. Light ochreous densely reticulated and marbled with fulvous, tending to form transverse strigulation, strewn with dark fuscous points. Markings deeper fulvous-tawny and ferruginous. Costa narrowly blackish, with ten pairs of pale ochreous transverse marks, four anterior pairs thick; basal patch to  $1/3$  in middle, upper half obliterate, lower half forming an oval ferruginous ill-defined patch along basal half of dorsum, with a rising oblique tooth in middle of posterior edge; this patch mixed with reddish and strewn with black points; a suffused ferruginous moderate spot on middle of costa, containing a longitudinal narrow wedge-shaped black dash; and slightly extended downwards and posterad by paler, tawny suffusion; transverse fascia below this spot almost completely obliterate, except slightly denser light fulvous marbling, forming a more or less hand-shaped reticulation, dentate posteriorly on veins, anteriorly indefinite; discal dot formed by an oblique short white strigula; above and below this an irregular line of black points; subcostal streak before apex rather thick light orange-tawny, with bluish, hardly pale-edged strigulae from costal pairs of marks; preterminal fascia curved, more tawny (not orange) tinged, with some five inter-neural blackish strigulae, their posterior ends forming an interrupted curved sub-marginal line, upper half of termen with three blackish short marginal strigulae; coarse leaden-bluish dusting preceding preterminal fascia, more scarce and spreading above tornus, dorsum with a row of suffused fuscous spots. Cilia bright fulvous with paler apical half which is barred with dark fuscous, cilia along tornus pale ochreous.

Hind wing dark bronze-fuscous, becoming paler towards base; dorsum with cell 1a forming a cavity on upper side filled with whitish-fuscous fine hairs, basal half of dorsal edge underside rigid, brownish. Cilia concolorous with a darker subbasal and a pale basal line.

Male genitalia. Tegumen with dorsal hunches separate. Uncus moderate, trapezoidal. Inner socius long, clavate, strongly bristled along outer side. Outer socius but little shorter, oval, free on both sides. Gnathos slightly sclerotized, ends rounded, almost continued in sides of uncus. Upper edge prominent, henion moderate. Valva with a strong sacculus, constricted, labis rather pointed. Pulvinus, a free moderate pointed process, situated between costa and  $\text{Spc}_2$ . Cucullus base strongly projecting, very densely spined, spines becoming larger discad, several spines on the outer side. Cucullus top slender. Aedeagus slender, curved. Cornuti in a short dense sheaf.

South Thailand, 20 km E of Krabi, 11-31.iii.1962 (G. Friedel), 1 ♂, holotype, genit. slide 7730 (MM). Recognizable by the pale orangeish general colouring, reduced markings, and especially by the unique digitoid pulvinus. This character *S. siamensis* has in common only with *S. formosa rutila*, but there pulvinus is larger and situated more anterad, not dorsad of  $\text{Spc}_2$ .



**Sycacantha inodes** (Meyrick, 1911)

(figs. 176-177, 224-225, 233)

- Argyroploce inodes* Meyrick, 1911a: 269. — Clarke, 1955: 171.  
*Argyroploce albitibiana* (part.); Meyrick, 1928 (nec Snellen, 1901): 447.  
*Olethreutes albitibiana*; Bradley, 1961 (nec Snellen, 1901): 125.  
*Argyroploce conchifera* Meyrick, 1931: 130. — Diakonoff, 1949: 136 (syn. of *albitibiana* Snellen). — 1966: 10 (syn. of *inodes*).  
*Sycacantha inodes*; Diakonoff, 1966: 19, fig. 22 (*conchifera* ssn.). — 1968: 59, fig. 70. — 1971: 195 (S. Thailand).

Distribution. Throughout South Asia, sometimes forming local subspecies; Meyrick's data have all to be checked, as several species may be involved.

Fore wing with costa prominent at  $2/3$ , termen gently rounded; short, rather broad; ocellar spot small, round, edged except above with dark fuscous; subapical fascia reduced to dark brown horizontal strigulae, interconnected posteriorly by a dark brown marginal line; apical part beyond this slightly touched with vinaceous; metallic streak bluish, very short, dull.

Hind wing fuscous-grey, paler or darker. Posterior tibia snow-white externally, all spurs creamy, outer spurs suffused with black, tarsus creamy, dusted with black; internally tibia snow-white, a small jet-black tuft at base.

Male genitalia. Inner socius long and narrow, top with 3-4 long strong bristles; outer socius free, almost as long or shorter, broader, moderately bristled at top. Cucullus with a longitudinal strong groove; basal prominence of cucullus sometimes with a sheaf of long bristles directed downward; ordinary cucullus bristles mixed with flat furcate bristles. Pulvinus parietal and rather prominent, labis strong, pointed.

Female genitalia. Sterigma simple, forming a large calice, rounded below, gently narrowed under the top, outer edge more or less broadly and deeply excised, sides below top sometimes with a slight lateral notch or prominence, without doubt homologous with the lateral processes in the *S. inodes* group of species; colliculum moderate, narrowed, more or less distinctly two-sheathed. Signa absent.

As is remarked above, the widely distributed species forms local subspecies which can be discriminated by minor differences of the parts of the uncus, less so by the shape and armature of the valva and by the colouring and markings.

**Sycacantha inodes inodes** (Meyrick, 1911)

(figs. 176-177, 224-225, 233)

*Sycacantha inodes inodes*; Diakonoff, 1971: 195 (S. Thailand).

The nominate form is of slightly varying moderate size, largest in toptypical material from New Guinea, which is exactly similar to that of the Bismarck Is., 17.5-20 mm. Smallest is the Balinese material: "Bali Id., Lesser Sunda Is.", viz. 16-18 mm,

and intermediate is the series from Java. These differences in size are of course, too slight to be of any importance, but they are still noticeable when comparing whole series.

The markings are rather variable and much more so than size. The basal patch usually is indicated by a light triangular patch from base of dorsum, the costal half of the patch or less being obliterate; the usual costal pairs of strigulae and a small semioval to triangular, dark spot in middle; the dark apical area, chiefly formed by a grey-fuscous curved preterminal fasciate mark; a triangular suffusion on end of dorsum. In females the whole wing is rather suffused with fuscous and is markedly darker. This is an average pattern of the series from Bali.

The Javanese examples are bolder marked, the basal patch is darker, more extended costad. The transverse fascia is traceable as a larger shadow on end of dorsum, sometimes reaching above middle of disc. Sometimes there is a suffusion including the basal patch and the costal spot, with a well-defined concave edge.

Finally the material from New Guinea and the Bismarck Is. is largest, robust, with the usual markings developed all over the wing, with a pale dark edged discal dot, zigzagged marks above and below it, forming the transverse fascia and an apical area with a strongly serrate anterior edge.

The male genitalia of material from the different islands show slight differences, as follows.

Those of New Guinea and the Bismarck Is. are characterized by broader, rounded or slightly subclavate and entirely free outer socius. The inner socius is less than twice as long, top outwardly rather rounded, bristles long and strong. Gnathos perfectly traversing into the uncus, abruptly emarginated in middle above. Valva strong, cucullus slightly tortuous transversely, outer edge prominent in middle; cucullus base with a bunch of very long strong bristles directed downward, reaching beyond middle of sacculus.

Females of this form are not available to me at present.

The male genitalia of the series from Java have outer socius more slender and pointed, gnathos less abruptly narrowed in middle; and especially: the cucullus prominence of the valva without a long dense bunch of downwards-directed bristles or these bristles are short (not exceeding width of neck of valva) and not numerous (only a couple of them).

Female genitalia. Sterigma excised to the half of its length, with small notched lateral projections under the top.

The form from Bali is more or less intermediate, its uncus is the same as in the Javanese material, while the valva is as robust and hairy as in the topotypical form and also has a large bunch of long bristles at the base of cucullus, directed downward. These bristles, however, are not so long as in New Guinea males, not reaching the middle of sacculus, but are longer than in the Javanese insects.

The female genitalia from Bali are the same as from Java.

The variability of the genitalia does not allow of a separation of the above men-

tioned material into subspecies, the mentioned differences being too slight. Therefore I prefer to assign the series from New Guinea, Bismarck Is., Bali and Java to the present subspecies.

West Java, Buitenzorg, 1894, 1 ♂; Batavia, 1 ♂, genit. slide 4552; Batavia, 1 ♀, genit. slide 4551 (Snellen Coll.). Central Java, Semarang, Seneng, Telawa, Gedangan, bred from leaves of "kalak" (Anonaceae), teak forest, 40 m, viii-ix.1931 and i.1932, 1 ♀, genit. slide 4554 (L. G. E. Kalshoven). Rembang Residency and Semarang, iv and v.1931 (F. A. T. Verbeek), 20 ♂, 9 ♀. East Java, Tengger Mountains, Nongkodjadjar, 1300 m, 6.iv.1940 (A. M. R. Wegner), 1 ♂, genit. slide 5944 (LM).

Bali Id., ("Sunda Is., Malaysia") 1896 (Doherty), 12 ♂, genit. slides 7707, 7708; 3 ♀, genit. slides 7683, 7709, 7710 (BM).

Tambora Id., low country, 1896 (Doherty), 1 ♂, genit. slide 7703. The same, 3000 ft (Doherty), 1 ♀ (BM).

Borneo, Bawean Id., 4.vi.1954 (A. Hoogerwerf), 1 ♀, genit. slide 4649A (LM).

New Guinea, Woodlark Id. (holotype). St. Matthias Id., vi-vii.1923 (A. F. Eichhorn), 3 ♂, genit. slide 6138. East Papuan Is., d'Entrecasteaux Is., Goodenough Id., 1897 (Meek), Walsingham Coll. 18162, 1 ♂ (BM).

Bismarck Is., New Hanover, iii.1923 (A. S. Meek), 3 ♂, genit. slides 5941, 7712, 2 ♂. New Ireland, xi-xii.1923 (A. F. Eichhorn), 2 ♂, genit. slide 7713.

Solomon Is., Guadalcanal Id., Honiara, 8-18.ix.1953 (J. D. Bradley), 3 ♂, genit. slides 5942 and 6197 (identified as "*Argyroploce albitibiana* Snellen") (BM).

### *Sycacantha inodes perspicua* Diakonoff, 1968

*Sycacantha inodes perspicua* Diakonoff, 1968: 61, figs. 71, 533.

Distribution. Philippine Islands, Luzon.

Differs from the nominate form by narrower wings and more vinaceous tinge. Pre-tornal dorsal spot is dark brown, strongly contrasting.

Hind wing with the base of dorsal edge thickened, devoid of hairs, pinkish-tinged.

No new material available.

### *Sycacantha inodes celebensis* subsp. nov.

(figs. 201, 222-223)

♂ 19.5 mm. Very similar to the nominate form, but larger, more robust. Basal patch extending across wing to dorsum, the clavate dark brown spot along base of fold being accompanied by one purplish irregular marking above, another below it; costal markings larger, especially the four dots along posterior half of costa; subapical fascia larger, dark brown, well-defined on both sides, followed by dark leaden-grey; a horizontal semioval branch of fascia from inner edge above its end (opposite middle

of termen); this conspicuous small mark is ill-defined in the nominate male, but present in the female of *S. inodes*; transverse fascia on dorsum with a conspicuous rounded-triangular spot. Hind wing blackish-fuscous, darker than in *i. inodes*.

♀ 19.5 mm. Also more robust and larger than the nominate female, but darker, ground colour being anthracite-grey. The markings are more developed and more defined; patch on middle of costa larger, beyond and slightly below this a characteristic small clavate mark, dark fuscous, strongly inwards-oblique and edged with light ochreous. Hind wing much darker blackish. Male genitalia very similar to those of the nominate form, but cucullus thicker, with a longitudinal shallow ventro-lateral groove in which tough hairs are implanted; a sheaf of long spines from the angle of cucullus directed downwards. Socii and pulvinus tolerably similar.

Female genitalia of the same general build, but the excision of the lamella antevaginalis less wide and deeper, gradually rounded below, instead of slightly clavate downwards, as in *i. inodes*; lamella antevaginalis more circular, instead of longitudinal. Colliculum longer and more gradually narrowed.

West Celebes, Palu District, Loda, 4000 ft, v.1937, 1 ♂, holotype, genit. slide 5803; 1 ♂, paratype, genit. slide 5806; 1 ♀, allotype, genit. slide 5804. Lindu Palu, 3700 ft, iv.1937 (J. P. A. Kalis), 1 ♀, paratype, genit. slide 5943 (BM). Southwest Celebes, Pangean near Maros, 2000 ft, iii.1938 (J. P. A. Kalis), 1 ♂, genit. slide 6208 (BM, Rothschild Bequest). Palu, Sidaonta, 4500 ft, vi.1937, 1 ♂, genit. slide 6207 (BM). Although the female genitalia may show constant and trustworthy differences from those of *S. i. inodes*, which only additional material will prove, the complex of characters is not sufficient for the specific separation of this form. The male markings show a connection with those of *S. escharota* (Meyrick), also from Celebes.

### *Sycacantha inodes rubida* Diakonoff, 1971

(figs. 192-193)

*Sycacantha inodes rubida* Diakonoff, 1971: 195 (♂♀, E. Borneo, Bawean Id., South Thailand).

Distribution. East Borneo, type locality; Bawean Id., South Thailand.

♂ 16 mm. Very similar to the nominate form, but with ground colour almost white, marbling and markings dark purplish brown to almost black with a vinaceous hue. Subapical fascia almost black, continuous, only anterior edge irregularly whitish; this fascia preceded and followed by broad irregular fasciae of shining pale metallic leaden-blue, posterior fascia with narrow branches reaching far to costal pairs of white markings. Basal patch formed by not continuous scattered irregular spots; transverse fascia indicated by the usual patch on costa but also by a well-defined oval dark brown spot just beyond lower angle of cell and by a cloudy dorsal spot before tornus. Hind wing dark grey, blackish towards apex, paler and thinly scaled towards base. Dorsal roll visible on the upper side as a narrow naked light yellowish fold. Posterior

tibia white, base inwardly with a blackish tuft, pencil from base, spurs and tibia pale creamy.

♀ 18 mm. Rather dark fuscous with a vinaceous tinge, subapical fascia broad and dark, emarginate in middle anteriorly, almost confluent with dark costal spots and apex; metallic streaks almost absent.

Transverse fascia continuous, formed by irregular darker markings interconnected by dark lines along veins. Hind wing fuscous-black with faint bronze gloss; cilia pale ochreous with a fuscous subbasal band.

Male and female genitalia as in the nominate form.

East Borneo, Tabang, 125 m, Bengen River, 13.ix.1956, 1 ♂, holotype, genit. slide 4566; 19.ix.1956, 1 ♀, allotype, genit. slide 4562 (A. M. R. Wegner) (LM).

*Sycacantha homichlodes* spec. nov.

(figs. 235-236)

♀ 16 mm. Head and palpus light tawny, palpus rather short, not reaching middle of eye height. Thorax dark grey, light tawny anteriorly, tegulae and raised tuft at apex pale tawny, whitish underneath. Abdomen fuscous.

Fore wing oblong-subtruncate, tornus prominent, termen being slightly outwards-oblique, straight, costa curved throughout. Upper half of wing pale grey-tawny, upper fourth below costa suffused with whitish-grey. A dark, fuscous-purple suffusion on dorsum beyond base, forming a very ill-defined fasciate oblique suffusion across wing directed to middle of costa, on upper half of wing extended into a fuscous-grey semioval suffusion, occupying less than median half of wing; apical area from middle of costa to middle of termen suffused with fuscous-grey, slightly strigulated with purplish, separated from median suffusion from below costa by a pale strongly suffused and ill-defined grey-white curved band; median half of dorsum almost to fold evenly suffused with tawny-fulvous; tornal fifth of wing paler, whitish, suffused with pale ochreous, apex with a small purple spot, continued along termen to tornus by a purple line, apical spot edged anteriorly by a white line. Cilia purple in apex, purplish-fulvous along termen, light ochreous in tornus.

Hind wing pale fuscous-grey, paler towards base, transparent at base, towards apex and margin gradually becoming dark fuscous-bronze. Cilia pale grey with a darker grey subbasal band and a pale basal line.

Female genitalia. Sterigma, a moderately sclerotized, rounded-trapezoidal, finely punctulate plate, with slightly rounded lower edge. Ostium moderate, cup-shaped, upper edge excised to middle of ostium height; colliculum a straight tube with a gully-like canal on underside of sterigma, edges irregularly wrinkled. Ductus bursae finely granulate. Corpus bursae strongly elongate, tubular-pear-shaped. No signa.

Sumatra, Mt. Dempo, 4000 ft, viii.1932 (C. J. Brooks), BM 1936-681, 1 ♀, holotype, genit. slide 7693 (BM).

A small species, with characteristically suffused markings. The genitalia are characteristic by the gully-like colliculum. Not closely related with other species and without males — of uncertain affinity.

***Sycacantha ostracachtys* spec. nov.**

(figs. 252A-252B)

♂ 20 mm. Head fuscous (imperfect). Thorax fuscous (rubbed). (Palpi broken). Posterior tibia strongly extended above, below and on inner side with glossy silvery white long hair-scales, on the inside, with modified broad shining snow-white scales; pencil from base thick, creamy-white, duller than other scales. Abdomen dark fuscous-grey, anal tuft dark fuscous-grey.

Fore wing oblong-suboval, broad and gently dilated, costa gently curved, hardly prominent at  $2/3$ , apex rounded, termen straight, little oblique, obliquely rounded below. Dark blackish-fuscous, strongly marbled and dotted with pale grey; a curved, light grey transverse fascia, parted with black, at  $1/3$ , indicating space between basal patch and transverse fascia, basal patch angulate, anterior edge of transverse fascia very irregular; an oblique oval rather large discal white dot; pale posterior fascia white, strongly narrowed above, with four black horizontal strigulae posteriorly, interrupted in middle of wing by grey suffusion, lower part extended to  $2/3$  of dorsum, not reaching tornus; costa with a black spot on middle, beyond this a pale ochreous subcostal fascia with faint leaden strigulae, space before upper half of dorsum grey; costa and apex narrowly black, pairs of markings slender, oblique, white. Cilia fuscous? (rubbed).

Hind wing evenly dark fuscous-grey, cilia concolorous? (rubbed); dorsum with a pale ochreous small fold of under side, with light ochreous hairs above; tornus with cilia elongated, brilliantly snow-white.

Male genitalia. Inner socius moderate, narrowed, basal half bristly above, apical half, below; outer socius short, but slender, pointed. Gnathos little sclerotized. Valva long and narrow, sacculus  $2/5$ , cucullus rather straight, top gently bent with moderate tumescence of outer side;  $Spc_1$  extended, but connected with cucullus by very short small bristles only; labis pointed, pulvinus moderate, hairy. Aedeagus short with thick base, cornuti numerous (bases only).

A rather large darkly coloured species, with the male genitalia apparently closest to those of *S. amphimorpha* spec. nov. (a small, pale species from Java).

Southwest New Guinea, Kapaur, sea level - 2000 ft, I.xii.1896 - e.ii.1897 (Doherty), 1 ♂, holotype, genit. slide 7714 (BM).

*Sycacantha subiecta* spec. nov.

(figs. 183-184)

♀ 20 mm. Head pale ochreous, vertex suffused with pale grey. Antenna fuscous. Palpus pale ochreous, median segment with a faint dorsal and a more distinct submedian longitudinal grey line, extended and becoming blackish below apex, terminal segment grey. Thorax fuscous with slight bronze gloss, tegula marbled with dark fuscous (tips of scales). Abdomen pale ochreous-fuscous.

Fore wing subtruncate, rather broad, costa strongly curved at extreme base, oblique thence, gently and very obtusely prominent at  $3/5$ , straight posteriorly, apex rounded-rectangular, termen almost straight, hardly concave above, broadly rounded-prominent beneath. Evenly fuscous, strongly marbled with whitish-ochreous, short blackish streaks here and there between veins. Costa with some eleven dark fuscous dots, triangular anteriorly, elongate posteriorly, alternating with more or less distinct whitish pairs of costal marks; posterior pair largest, subapical; veins above cell indistinctly marked with series of 2-3 small dark fuscous interneural streaks, edged with whitish-ochreous; transverse fascia ill-defined, obliterate above, except a small blackish triangular spot just before middle of costa; upper half of fascia dissolved into some three posteriorly diverging arrow-shaped fuscous streaks, edged with whitish-ochreous; lower half of fascia represented by a rather well-defined dark fuscous blotch on posterior third of dorsum, its posterior edge irregularly rounded; a series of unequal fine blackish-fuscous interneural lines before termen, edged with whitish-ochreous (dorsum anteriorly in both wings rather rubbed). Cilia deep brownish-fuscous, barred with darker, opposite lower third of termen pale fuscous, in tornus blackish.

Hind wing rather dark greyish-bronze-fuscous, slightly paler towards dorsum. Cilia fuscous with a pale basal line, apical third suffused with pale grey.

Female genitalia. Sterigma, a little sclerotized crescentic broad plate below ostium which is large and circular, its back wall (lamella postvaginalis) strigulated. Colliculum broad but short, triangular, bivalvous. Ductus bursae strongly granulate. Signum absent.

"India, Gorakhpur, U[nited] P[rovinces], (name collector C..., illegible), 3.35" (in Meyrick's hand, Meyrick Coll., BM), 1 ♀, genit. slide 6199. The specimen was named "*albitibiana* Snell.". In fact it is nearest allied with *S. inodes* (Meyrick).

*Sycacantha solemnis* spec. nov.

(fig. 216)

♀ 19 mm. Head bright vinaceous. Palpus whitish, mixed with vinaceous, terminal segment vinaceous. Thorax dark grey mixed and dotted with vinaceous, apex reddish-vinaceous. Abdomen glossy bronze-fuscous.

Fore wing broad, truncate and dilated, costa considerably curved throughout,

apex rectangular-obtuse, termen gently concave, almost straight above, broadly rounded and slightly prominent below. Grey-lilac with purplish gloss, vinaceous in certain lights, extreme costal edge whitish. Costa with numerous short and fine oblique purple lines, more distinct along posterior third; a faint purple suffusion on middle of costa; a whitish oblique line before apex which is filled out with purple; a dark, purplish suffusion obscuring lower  $2/3$  of wing from base to beyond  $2/3$ , edge indefinite; a purplish striga from below  $2/3$  of costa curving down to middle of termen, faintly edged with whitish and broadly interrupted on veins; fragments of another similar striga below preceding, forming a curved series of vertical purple strigulae between veins; ternal margin whitish. Cilia vinaceous with a white base, pale ochreous in tornus.

Hind wing rather light greyish-bronze, somewhat darker fuscous-bronze on posterior half. Cilia greyish-fuscous with a pale basal line.

Female genitalia. Ostium round and wide, lamella antevaginalis semiannular; lamella postvaginalis indicated, narrowed in middle, its lateral appendages long and slightly curved, narrowed and drooping. Colliculum moderate, rather broad. Signa absent.

Central East New Guinea, Stars Range, Ok Sibil, 1260 m, iv.1959 (Netherlands Stars Range Expedition 1959), 1 ♀, genit. slide 7593 (LM). A species with the facies and the genitalia characteristic for the genus, but with the fore wings devoid of markings. Judging from the genitalia probably allied with *S. occulta* spec. nov., but with differently shaped sterigma.

***Sycacantha complicitana complicitana* (Walker, 1863) comb. nov.**

(figs. 203-204)

*Carpocapsa complicitana* Walker, 1863: 411 (♂, Borneo).

*Sycacantha complicitana*; Diakonoff, 1966: 58.

Distribution. Borneo.

♂ 20 mm. Head whitish-ochreous, vertex strongly mixed with fuscous. Antenna pale fuscous, scape dark fuscous at base, flagellum ringed with dark fuscous. Palpus pale ochreous, basal segment dark fuscous, median segment with lower half and narrow edges above and beneath except towards apex of posterior half, dark fuscous. Thorax pale ochreous, strongly mixed and marbled with dark fuscous. Posterior tibia white, tarsus grey, only basal segment of tarsus with a small white tuft. Abdomen fuscous.

Fore wing oblong-truncate, moderate, costa curved and distinctly rounded-prominent at  $2/3$ , termen straight. Pale ochreous, markings dark fuscous and greyish-fuscous. Costa with a series of suboval dark spots, obliquely-wedge-shaped along posterior half, separated by whitish pairs of short strigulae. Basal patch to  $1/3$ , edge rounded, irregular prominences below costa and on dorsum; this patch interrupted by an irregular semicircular band of ground colour, occupying about median third;



transverse fascia broad, not curved, moderately dilated downwards, blackish-fuscous, including paler dotting and marbling, broadly interrupted above middle by an inwards-oblique band of dark-dusted ground colour; this fascia containing an oval black ocellar spot across end of cell, suffused below, pale-edged above; continuation of this edge forming a moderate straight inwards-oblique streak, traversing lower part of transverse fascia; this streak pale ochreous, with a central grey line; some dark grey strigulation forming a narrow streak parallel to posterior edge of transverse fascia; subapical fascia ill-defined, incomplete, above connected with costal spots, interrupted in middle and above tornus, actually formed of a series of inequal ochreous-fuscous and blackish horizontal small marks; metallic lines dull, grey, broadly edged with pale ochreous; apex narrowly blackish-fuscous, an interrupted line of this colour along termen. Cilia greyish-olive, with a pale basal line and a subbasal and an apical blackish band, cilia in tornus pale ochreous.

Hind wing evenly fuscous-grey, only dorsum and extreme base paler. Cilia light grey, a darker fuscous-grey subbasal band.

Male genitalia. Inner socius as in *S. inodes*, more pointed, bristles along apical edge much shorter and weaker; outer socius triangular, bristly only at top. Valva with a thick basal part, considerable excision, moderate prominence with one spike; cucullus  $1/2$ , top truncate. Pulvinus small, parietal. Subbasal process with pointed top. Cucullus bristles not modified.

♀ 20-21 mm, apallotype. Very similar, but darker, blackish-fuscous markings much extended, pale ground colour reduced to narrow edge of markings, otherwise filled out by blackish-grey; basal patch and transverse fascia more or less confluent; the latter with black spot notched posteriorly and containing a white comma-shaped mark anteriorly (which in the male corresponds with the beginning of the pale marginal line); apical part with subapical fascia rather tawny-tinged, the fascia complete, pale-edged, including two pale spots in middle, otherwise tawny, streaked horizontally with black. Cilia as in male but light colour bright tawny instead of pale ochreous.

Hind wing blackish-bronze, gradually paler basad. Cilia concolorous, with a fine basal pale line and a blackish subbasal band.

Female genitalia. Lamella antevaginalis with a rather small rounded excision, with a narrow well-defined rim, flanked by little curved moderately broad and short processes, similar to those in *S. occulta*, but shorter. (In that species edge of ostium in middle with a point). Colliculum long and very slender. Ductus bursae punctulate, short. Signa two, scobinate and corrugated small plates.

A motley species, distinct by white-marked black ocellar spot and modest colouring.

Two atypical specimens are from New Guinea, Kapaur, sea level - 2000 ft, 1.xi. 1896-ii.1897 (Doherty), 1 ♂, genit. slide 7716, and Dorey, 1897 (Doherty), 1 ♀, genit. slide 7715 (BM).

Assam, Margherita, 1884 (Doherty), 1 ♂, genit. slide 6195 (Walsingham Coll. 40201); 1 ♂ (without abdomen) (Walsingham Coll. 40202) (BM).

Hainan Id., Youboi, vi.1904, 1 ♀, genit. slide 5799 (BM, Rothschild Bequest).

Bawean Id., i.vi.1954 (A. Hoogerwerf), 1 ♀, genit. slide 4558 (figured) (LM).

Bali Id., Sunda Is., 1896 (Doherty), 4 ♂, 4 ♀. West Bali, Prapetagung, 1500 ft, v.1935, 1 ♂ (redescribed above), genit. slide 4692. East Bali, Baturiti, 3500 ft, vi.1935, 1 ♂, genit. slide 5800 (figured) (BM).

Sumbawa Id., 31.iii.1922, at light on board ship (L. J. Toxopeus), 1 ♀, without abdomen (LM).

Moluccas, Batian Id., 1897 (Doherty), 1 ♂, genit. slide 7685 (BM).

Soela Mangoli Id., Oct. 97 (W. Doherty), 1 ♂, genit. slide 5801 (BM).

Little Kei Id., 7.vii.1898 (H. Kühn), 1 ♂, genit. slide 6210 (BM).

New Guinea, Geelvink Bay, Ron Id., 1897 (Doherty), 1 ♀ (BM).

*Sycacantha complicitana elegans* subspec. nov.

(fig. 198)

♀ 19 mm. Head with face, forehead and orbits creamy, vertex dark purple-fuscous. Palpus creamy, median segment with broad basal and subapical fuscous bands, upper edge between them fuscous, terminal segment dark fuscous, creamy-tipped. Antenna fuscous. Thorax purple-fuscous, apex with a pale grey patch, tegula with an oblique pale-grey transverse band. Abdomen dark fuscous, venter light grey on basal half.

Fore wing oblong-subtruncate, moderately dilated, costa curved throughout, less so anteriorly, most curved at  $2/3$ , but gradually so, not prominent, apex obtusely rectangular, termen gently sinuate above, rounded below, vertical. Dull pale slaty grey, this ground colour almost entirely obscured and visible only in a series of transverse streaks across fold from beyond base to end of cell. Base of dorsum with a dark fuscous streak, broken along upper edge by pale grey marbling; base of costa with two small dark dots; a large semioval patch occupying costa from  $1/6$  to  $1/2$ , reaching to middle of disc and anteriorly with a projection to below fold; this patch including before its middle two pairs of bluish transverse marks, narrowly white on edge of wing, becoming wider and finally interconnected downwards; transverse fascia represented, except by posterior portion of costal patch, also by a contiguous dark fuscous numeral-3-shaped mark (left wing!), reaching below cell, lower branch dilated and connected with a cross-shaped mark in fold beyond its middle; an ochreous suffusion between these marks and end of dorsum; a broad leaden-grey metallic fascia everywhere narrowly edged with whitish following upon transverse fascia and filling out its sinuations; its white edge dilated into small dots below upper and median projections; subapical fascia, apex and costa confluent into a large dark fuscous-purple apical patch, traversed by a slender subapical bluish line and three pairs of fine and obscure costal strigulae; anterior margin of this dark area edged with a light ochreous streak dilated downward and partly traversed by some four irregular dark projections of subapical fascia; a leaden spot on termen above tornus, a few dark

strigulae in tornus; dorsum with a series of dark brown dots. Cilia along upper half of termen blackish-grey with a black basal half and an ochreous basal line, cilia in tornus sordid ochreous suffused with grey.

Hind wing blackish-bronze, cilia concolorous, with a pale basal line and a blackish subbasal band.

Female genitalia as in the nominate form.

North Borneo, Sarawak, Kuching, Matang Road, 2.iii.1911, 1 ♀, holotype, genit. slide 4576 (LM). An elegantly coloured subspecies, somewhat resembling *S. potamographa* (Diakonoff), but with distinct markings.

***Sycacantha dissita* spec. nov.**

(fig. 251)

♂ 25 mm. Head pale tawny, between bases of antennae suffused with dark fuscous, broad tuft over forehead fuscous, creamy in middle and along frontal edge, face creamy. Palpus creamy, basal segment dark brown except top, median segment brown on basal third and with a subdorsal lateral brown streak to  $2/3$ , a suffused brown spot on lower edge before apex, terminal segment dark-fuscous, pale-tipped. Thorax (rubbed) tawny, mixed with creamy and dark fuscous, tegula (in holotype) bright fulvous with creamy edge. Posterior tibia strongly dilated with long and dense hair-scales above and beneath; basal half of tibia dull pale ochreous, apical half glossy silvery-white with silvery-white pencils above, beneath extending to basal  $1/3$  of tibia; tibia on inner side with pale ochreous long hairs above and beneath, long and brushy and in centre with a thick patch of snow-white broad glossy scales; a blackish suffusion beyond apex on inner side; pencil from base broad, pale ochreous. Posterior tarsus creamy with white hairs above. Abdomen pale grey-fuscous, long-haired, anal tuft tinged ochreous.

Fore wing broad, truncate, costa little curved, except at base, distinctly obtusely angulate and projecting at  $2/3$ , apex rounded, termen straight above, rounded beneath. Creamy-white, costa throughout blackish-fuscous with the usual pairs of white marks. Basal patch blackish, irregular, strongly filled with ground colour, posterior edge broad and distinct, with an obtuse or rather angular (paratype) prominence in middle, reaching beyond  $1/3$ , below costa excised, below fold abruptly turned basad, and running to  $1/4$  of dorsum; transverse fascia of complicated shape, entire, chestnut-brown, edges more or less margined with dark brown; anterior edge straight and little oblique to above middle of disc, thence strongly sinuate, with a round prominence above, concave below; posterior edge with three digitoid processes, upper oval and pointed, median slender, strongly concave below, lower largest, dark brown, subclavate and obliquely rising; white marks between processes: slender wedge-shaped above, obliquely semioval below (distal dot); in centre fascia slightly strewn with fuscous and creamy; subcostal streak glossy leaden with pale orange edges, pre-terminal fascia strongly curved and much reduced anteriorly by extended whitish

ground colour, edged anteriorly by deep purple-leadened strigulae and traversed in middle by a black bar; apex with a subtriangular dark fuscous spot, termen with a dark fuscous interrupted striga. Cilia brown-fuscous, along apex and upper half of termen with a dark brown apical third, cilia around tornus pale tawny slightly suffused with brown above, with dark fuscous, on dorsum.

Hind wing purplish-fuscous, becoming paler anteriorly, especially below cell and on dorsum; dorsum with a moderate fold above throughout; long pale fuscous hairs along anal veins. Cilia fuscous, along termen pale ochreous, throughout with a darker subbasal band and a pale basal line.

Male genitalia. Uncus robust, rounded, depressed, with darkish sides and rounded, large outer socii. Inner socius broad, with a short upper lobe which is densely bristled along inner edge and also above, and on lower apical lobe, triangularly narrowed and densely long-spined along outer edge and sparsely haired above. Outer socius large, rounded. Gnathos with sclerotized sides. Henion rather narrow. Labis long, upper angle pointed, lower depressed. Pulvinus marginal, hairs rather scarce and spread; long bristles on costa marginal. Cucullus base moderately prominent, with one large and over 10 small dark spines, long bristles along outer edge of sacculus. Aedeagus swollen at base; cornuti, a large dark sheaf.

Lesser Sunda Is., Sula Mangoli Id. (Doherty), 1 ♂, holotype, genit. slide 7705; 1 ♂, paratype (BM).

A third male specimen, smaller, 19 mm, with posterior legs and genitalia (slide 5801) damaged, apparently belongs to *S. complicitana*. Its printed label reads: "Sula Mangoli, Oct. '97 (W. Doherty)".

The species superficially rather resembles *S. complicitana* (Walker), but is distinct by its large size, the extended pale band before the preterminal fascia and the unique, strongly haired and bifid inner socius.

### *Sycacantha potamographa* Diakonoff, 1968

(fig. 238)

*Sycacantha potamographa* Diakonoff, 1968: 62, figs. 72, 534 (♂, Borneo, Philippine Is.).

Distribution. Borneo. Philippines.

Type locality: Borneo.

Borneo, Balikpapan, Mentawir River, 18.x.1950 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 4575 (LM).

Philippine Is., Mindanao, Zamboanga del Sur, near Lebak, 8.viii.1958 (H. E. Milliron), 1 ♂, paratype, genit. slide 5320 (BMH).

Male genitalia. Inner socius long and broad, outer socius short, obtuse. Gnathos broadly connected with anellus. Pulvinus apparently slender and digitoid, but inner edge not defined.  $Spc_1$  represented by very dense bristles, continued into cucullus bristles.

Posterior tibia and tarsus in male pale grey with subappressed scales outside, snow-white with roughly raised scales on the inside, scales roughly projecting along upper and lower edge of tibia.

***Sycacantha choanantha* Diakonoff, 1971**

*Sycacantha choanantha* Diakonoff, 1971: 192, figs. 12-13 (♀, S. Thailand, Tenasserim, Sumba Id.).

Distribution. S. Thailand, Sumba Id.

A brightly coloured, elegant species, easily recognizable by the whitish, acutely triangular mark above  $1/3$  of dorsum, the small oblique white dot on end of cell, and by the genitalia. The species is allied to *S. complicitata* (Walker) and can be recognized as indicated in the key above.

Female genitalia. Ostium bursae circular, with a moderate, distinct ring-like edge. Lateral processes triangular, large. Lamella postvaginalis moderately sclerotized but distinct throughout. Colliculum strong, dark, also between sheaths, funnel-shaped, sheaths unequal, ductus bursae strongly granulate.

***Sycacantha inopinata* spec. nov.**

(figs. 247, 258)

♂ 16 mm. Head with vertex and forehead deep purple, rest of head whitish-ochreous. Antenna fulvous. Palpus purplish-brown, slightly mixed with paler, tips of median and terminal segments whitish. Thorax pale tawny mixed with deeper tawny. Posterior tibia dilated by long smooth hairs projecting above and beneath, creamy, slightly infuscated towards base, pencil from base cream-colour; posterior tarsus, basal segment with a creamy tuft above. Abdomen pale ochreous, infuscated on posterior half, venter whitish, anal tuft pale ochreous.

Fore wing rather broad and short, dilated, costa curved, hardly noticeably prominent at  $1/3$  and  $2/3$ , apex obtusely rectangular, termen straight above and vertical, rounded beneath. Cream-colour, sparsely strewn throughout with pale orange-fulvous strongly suffused spots, along dorsum becoming larger and darker, tawny fuscous. Costa and apex deep purple-brown, costa with silvery pairs of markings and an oblong-oval small spot in middle; apical area cut by the usual, strongly down-curved, leaden-grey fascia, edged above with fulvous-orange; preterminal fascia purple-brown, reduced, more or less separated in three parts, preceded by tawny-orange suffusion with a few minute black points; a minute white terminal line, broken by black dots. Cilia along termen deep ferruginous, posterior half blackish-purple, a pale bar above tornus; cilia in tornus pale ochreous-orange.

Hind wing rather light purplish, with a faint vinaceous tinge, semipellucant, especially towards base, paler on dorsum, dark in apex and along terminal edge; basal half of dorsal edge with a naked, brownish gully-like scent organ, open above. Cilia light

purplish-vinaceous-grey with a darker subbasal band and a pale basal line.

♀ 17 mm. Entirely similar but somewhat deeper coloured and more suffused with lilac-fulvous; also with irregular metallic-leadened undulate curved transverse fascia, preceding preterminal fascia.

Hind wing deep purple-brown, cilia as in male but darker.

Male genitalia. Tegumen hunches distant. Uncus with a prominent, but truncate top. Inner socius long and slender, weakly bristled along outer edge and at top, outer socius large, ear-shaped, semiparietal, outer edge and apical third haired throughout. Gnathos with sides prominent. Henion rather weak, narrow, single. Valva with a broad basal half, labis rather obtuse; pulvinus, an elevated and broad, bristly ridge, distinct; cucullus base prominent, without outside bristles; cucullus slender, narrowed, slightly curved. Aedeagus with sclerotized wall (manica) deeply excavate anteriorly so that lower edge is strong and projecting. Cornuti, a sheaf of slender rather short spines.

Female genitalia. Ostium, a flat and wide cup, with slightly thickened frontal edge, lateral processes similarly flat, semioval and concave. Colliculum very short and little sclerotized, followed by a hyaline part with thick refracting walls. Ductus bursae granulate; corpus bursae less densely granulate.

Bali Id., 1896 (Doherty), 1 ♂, holotype, genit. slide 7682; 1 ♀, allotype, genit. slide 7706 (BM).

A smaller species of the *inodes* group, with characteristic colouring and markings: pale orangeish with purplish marginal and entirely obliterate discal or dorsal markings, and with peculiar female genitalia. The species is nearest and resembling *S. rufescens* spec. nov., from Java, but differs by shorter and less bristled inner socius, much broader and larger outer socius, simple henion, short cornuti and less robust valva without the bunch of long spines below cucullus.

### *Sycacantha hilarograpt* (Meyrick, 1933)

(figs. 196-197, pl. 1 fig. 6)

*Argyroploce hilarograpt* Meyrick, 1933: 421 (♂♀; Java; Assam. Lectotype in BM). — Clarke, 1955: 160. — Diakonoff, 1968: 58.

*Olethreutes hilarograpt*; Clarke, 1958: 519, pl. 258 figs. 3-3a (genit. lectotype illustr.).

*Phaenasiophora (Sycacantha) auriflora* Diakonoff, 1959: 181, pl. 5 fig. 17 (Java, ♂).

*Sycacantha auriflora*; Diakonoff, 1968: 58 (syn. of *hilarograpt*).

Distribution. Assam. West and Central Java.

The type locality is Assam, Khasis, the lectotype being selected from that locality.

West Java, Udjung Kulon, Tjigeunteur, 14.vii.1953 (A. M. R. Wegner), 1 ♂, genit. slide 2768 (holotype of *auriflora* Diakonoff) (LM).

Central Java, Semarang, Seneng, teak forest, 7.iii.1932, bred from "Kalak" (Anonaceae) leaves (L. G. E. Kalshoven), 2 ♂, 2 ♀ (genit. slide 4581, 5797 ♀) (LM).

East Java, Ngadiredjo near Kediri, bred from leaves of unnamed plant, viii.1940 (A. Diakonoff), 1 ♂, 1 ♀ (LM).

Fore wing pale ochreous with bright reddish-fulvous markings, partly edged with blackish-fuscous. Costa narrowly black, with numerous pairs of short whitish transverse strigulae. Markings may be briefly described thus: three irregular marks along costa and two marks in disc below middle, first costal mark connected with first discal, to form an angulate band (edge of basal patch). Discal dot large, oval, of ground colour, followed by a similar but round dot on subapical band.

Hind wing dark fuscous-grey, cilia pale.

Posterior tibia and tarsus in male light grey-fuscous, with subappressed scales on the outside, with snow-white, roughly spreading hairs on the inside, projecting above and beneath, when completely expanded, also projecting beyond the knee and exposing a jet-black, apparently smooth cavity, circular, in the centre of tibia, basal segment of tarsus strongly elongate and dilated, also second segment roughly scaled above.

I am satisfied that my species *auriflora* is a synonym. I misinterpreted Clarke's photograph of the Assam lectotype of *hilarograptia* which looks different, but appeared to be the same after a closer study at the British Museum. The species is elegantly reddish and fulvous coloured.

***Sycacantha rhodocroca* spec. nov.**

(fig. 246)

♂ 18 mm. Head and palpus light ochreous-yellow. Thorax light ochreous (damaged). Posterior tibia dark grey on the outer side with dense broad flatly appressed scales; strongly dilated above and beneath with long projecting hairs, snow-white above, dark grey mixed with white below, inner side of tibia with long snow-white hairs, a pencil from base white; posterior tarsus strongly lengthened and moderately thickened, tawny-grey, with a tawny hair-crest above.

Fore wing broad, costa considerably curved throughout, less so posteriorly, apex subobtusate, termen gently convex, hardly oblique above, rounded beneath. Light yellow-ochreous, markings reddish-fulvous. Extreme edge of costa dark fuscous with limited and short dark transverse marks and dots; basal patch indicated by a small round spot at base and a strongly rounded transverse band at  $1/3$ , its posterior edge regularly scalloped, with a short tooth above and one below middle of disc; transverse fascia dissolved in a group of irregular markings: a dark fuscous small suffused spot on middle of costa, with a longitudinal spot, with posterior extremity below costal spot; an inverted-triangular larger spot above  $2/3$  of dorsum, its upper edge angularly excised; a slightly undulate fascia rising from end of dorsum, somewhat outwards-oblique (representing posterior edge of transverse fascia); this fascia abruptly bent anterad and furcate in middle of disc, furcation containing a round spot of ground colour (being the discal pale spot), lower branch of furcation running horizontally;

posterior half of costa suffused with ferruginous, cut by the five usual pairs of whitish marks; these marks oblique and short, posterior two thicker; a dark spot in apex; subapical (i.e. preterminal) fascia broad and very irregular, from below  $\frac{4}{5}$  of costa to middle of termen, almost interrupted in middle by a triangular spot of ground colour, a large excision before lower extremity of posterior edge. Cilia ferruginous, light ochreous opposite markings.

Hind wing purple, becoming paler and light fuscous towards base and dorsum. Cilia whitish. Dorsum with a deep fold of upper side, the same colour, posterior third of vein 1b above with a pencil of long pale fuscous hairs.

Male genitalia. Uncus rounded. Inner socius large and broad, truncate, along and above this truncate edge with a dense row of very strong spine-like bristles. Outer socius small, and slender, inner edge apically free. Gnathos strong. Labis pointed above, rounded beneath. Pulvinus thickened but not conspicuous, marginal, a group of hairs. Base of cucullus with one large and several small spines, a couple of very long spines on the outer side, forming a rather large prominency, cucullus gradually but strongly narrowed. Aedeagus moderate, sclerotized. Numerous cornuti in a dense patch (only scars).

North New Guinea, Humboldt Bay, iv.1893 (Doherty), 1 ♂, holotype, genit. slide 7694 (BM).

The unique specimen is somewhat rubbed, but distinct by the combination of bright colouring and markings with the peculiar spiny inner socii. The species resembles *S. hilarograptia* (Meyrick), from Java.

***Sycacantha rufescens* spec. nov.**

(fig. 215)

♂ 17 mm. Head and antenna light orange-fulvous, face white. Palpus pale ochreous-fulvous, basal segment whitish, median segment with a faint subapical purplish ring, terminal segment purplish at base. Thorax light ochreous strewn with brownish. Posterior tibia with basal half creamy, apical half glossy white externally, snow-white internally. Abdomen fuscous, venter white, seventh segment grey, anal tuft light yellow.

Fore wing broad and rounded, oval-truncate, costa considerably rounded, termen gently sinuate, vertical above, broadly rounded below. Rather bright ochreous, finely strewn with brown, costa and apex suffused with deeper orange-fulvous. Dark marks along costa deep brown, along anterior half small and distant, third mark larger, subtriangular; marks along posterior half larger, well-defined, elongate-wedge-shaped; an obliquely-subtrapezoidal spot on middle of costa formed by a pair of distant costal brown marks, posterior largest, interconnected below costa by an angulate blackish line or suffusion; this spot filled out with deeper tawny; subapical fascia traceable only by its edges, narrow and only slightly paler than ground colour; this fascia preceded by suffused fragments of an irregular zigzagged leaden-metallic line, dissolved



in series of points towards middle; a couple of black lines traversing subapical fascia and some more and larger lines, indicating its posterior edge; a dark dot in apex, another in middle of termen and a few minute vertical short strigulae along termen; ill-defined triangular patch of purplish and brownish sparse dusting, extending along basal half of dorsum and reaching above middle of disc; purplish transverse strigulation along dorsum. Cilia (imperfect) fulvous, in tornus pale ochreous.

Hind wing dark bronze-fuscous, rather sparsely scaled. Cilia whitish-fuscous, darker around apex, with a narrow pale base and a fuscous subbasal line.

Male genitalia. Inner socius very long, clavate, spiny along apical edge; outer socius much shorter, subtriangular. Caulis very long. Valva with a strongly dilated base, excision below middle, cucullus strongly prominent at base of outer edge. Cucullus bristles dense but not strong; large marginal spine absent, a sheaf of long pending bristles on the outer side instead. Pulvinus parietal, top slightly rounded.

West Java, Sukabumi, Mt. Malang, i.1940 (Uko, Coll. Van Groenendael), 1 ♂, holotype, genit. slide 4553 (LM). Distinct by orangeish tinge and sparse markings.

***Sycacantha occulta* spec. nov.**

(figs. 199-200)

♀ 17.5-19 mm. Superficially does not differ from *S. inodes*, except for a different shape of the subapical fascia which in *inodes* from West and Central Java usually is strongly narrowed below middle, so as to form an irregular appendix, while in the Bornean and West Javanese specimens this fascia is continued almost to termen and but gradually narrowed. However, the single specimen from East Java does not show this difference from *inodes* at all. The striking differences, however, provide the female genitalia.

Female genitalia. Ostium bursae is wide, situated towards the edge of the genital sternite, lamella antevaginalis is triangularly projecting in middle, concave sublaterally, laterally with curved long processes (longer than in *complicitana*). Colliculum funnel-shaped, strongly narrowed. Signum entirely absent.

West Java, Mt. Tjampea, West of Buitenzorg (= Bogor), 150 m, 27.xii.1941 (A. Diakonoff), 1 ♀, holotype, genit. slide 4557. East Borneo, Tabang, Bengen River, 125 m, 30.x.1956 (A. M. R. Wegner), 1 ♀, paratype, genit. slide 5805 (LM).

***Sycacantha crocamicta* spec. nov.**

(fig. 250)

♂ 13.5 mm. Head bright ochreous mixed with dark fuscous-purple, fuscous-purple between bases of antennae, scape of antenna dark purple. Palpus fuscous grey, basal segment partially, upper edge and apical fourth of median, pale ochreous. Thorax bright ochreous-orange, collar except on edge mixed with dark purple. Abdomen glossy light grey, anal tuft pale ochreous, venter pale ochreous, whitish at base. Post-

erior tibia white, on the inside with long loose white hairs projecting above and below, a whitish pencil from base above, infuscated at its base, fitting in a submedian groove.

Fore wing oblong-truncate, moderately broad, costa slightly curved throughout, more curved along posterior fifth, apex obtuse, termen hardly convex, almost straight above, rounded beneath. Bright ochreous-orange, suffused with deeper orange along costa, sparsely strewn with dark brown scales and with two irregular curved lines of leaden-grey irroration, at  $1/2$  and  $3/4$ , respectively, both curved; costa with a subtriangular black spot just before middle, faintly parted by ground colour; this spot preceded by four black costal dots, followed by four unequal oblique wedge-shaped dots, alternating with minute points, becoming larger and less oblique posteriorly; basal patch absent, or indicated by a suffused dark spot on base of dorsum (in one paratype, by a suffused purple streak along basal  $1/3$  of fold); a large semioval suffused patch occupying almost whole dorsum, reaching to middle of disc, purplish-grey, spotted with blackish-brown; a curved somewhat irregular purple-black fascia well before apex, gradually dilated posteriorly and resting on middle of termen, followed by an orange line, then by a bluish-leadene preapical oblique streak; apex with an erect-oval purple dot finely edged with white. Cilia bright orange, purple around apex, light yellow around tornus, grey on dorsum.

Hind wing pale purplish-grey, semipelluculent; dorsum with basal half forming a moderate lobe, rolled on upper side and open above. Cilia light grey with a darker subbasal band, cilia along upper half of termen whitish-grey.

In paler and rubbed specimens all markings in disc may disappear.

Male genitalia. Tegumen truncate, with two rounded prominences. Uncus rounded, inner socius short and small, smooth, with only a couple of long bristles along outer edge. Socius almost entirely parietal, a wrinkled and bristly ridge, dilated and curving mesad below. Gnathos distinct, with thickened lower edge, henion membraneous, ill-defined. Labis depressed and rectangular. Pulvinus, a broad rounded lobe, with some eight spread hairs. Valva constricted, base of cucullus distinctly prominent, with a single dark spine, cucullus little narrowed, with a rounded top. Aedeagus long, curved. Cornuti, a small group of (4-5) short spines.

Female unknown.

Bali Id., ("Sunda Is., Malayasia") 1896 (Doherty), 1 ♂, holotype, genit. slide 7680; 3 ♂, paratypes (BM).

East Borneo, Tabang, Bengen River, 125 m, 3.ix.1956 (A. M. R. Wegner), 1 ♂, paratype (LM).

Judging from the male genitalia probably related to *S. cinerascens* spec. nov., but with smaller inner socii and different valva. The colouring is characteristic.

### *Sycacantha quadrata* spec. nov.

(fig. 232)

♂ 15 mm. Head and thorax pale tawny-ochreous marked with fuscous. Palpus pale

tawny-ochreous. Abdomen fuscous. Posterior leg pale fuscous, pencil from base above creamy with a basal black streak; inner side of tibia with a pencil from base, snow-white, more or less obliquely projecting.

Fore wing oval-truncate, costa moderately curved throughout, apex rounded-rectangular, termen straight, almost vertical, rounded below. Creamy, rather densely marbled and strigulated with greyish-fuscous, and partially with grey-lead, markings fuscous. Anterior half of costa with short dark fuscous oblique marks, largest at  $1/5$ ; posterior half of costa narrowly dark fuscous, with some five pairs of white oblique strigulae, becoming less oblique posteriorly, ultimate pair thicker, pale ochreous, vertical; basal patch indicated by an irregular vertical transverse blotch at  $1/4$ , from upper edge of cell to vein 1b, more or less connected by dark marbling along lower part of inner edge with base of wing; transverse fascia from middle of costa to dorsum before tornus, strongly sinuate in middle and broken into three parts: a suffused roundish costal spot, an irregular longitudinal patch in cell posteriorly reaching  $1/3$  towards termen and limited above and beneath by upper edge of cell and its angle; and by a larger equilateral triangular patch on less than posterior third of dorsum, almost reaching to vein 4; a curved broad subapical band from beyond  $3/4$  of costa (between 2nd and 3rd pairs of white strigulae), to below middle of termen, with a longitudinal mark on vein 5 and a few irregular strigulae between this and tornus; anterior edge of band split by five projections of pale ground colour; space beyond this band filled out with paler fuscous, broken in dots opposite middle of termen; a black dot in apex; fuscous marbling parting the pale premedian space; area beyond transverse fascia slightly greyish below costa and with dark leaden-grey metallic marbling from below costa to tornus, interrupted in middle. Cilia (rubbed) dark fuscous with a pale basal line.

Hind wing rather light grey-fuscous, with very faint purplish hue, dorsum semi-pellucid. Cilia concolorous, with a narrow pale basal line.

Male genitalia. Tegumen rather low. Uncus with gnathos quadrate, uncus represented by two straight slender pending processes, each with a couple of setae. Socii absent. Gnathos well-developed, lower edge thickened and folded, arms descending to anellus, strong. Valva broad and robust, with a strongly projecting and rounded base of cucullus, spined along edge, with long bifid bristles over disc.  $Spc_1$ , a large patch of moderate bristles. Aedeagus rather long, dilated. Cornuti, a sheaf of moderate straight spines.

Andaman Is., genit. slide with a label in Meyrick's hand: "S. Andamans, 1200", F., 5.27"; "*Argyroploce albitibiana* Snell., 13/1, E. Meyrick det., in Meyrick Coll.".  
 $1 \text{ } \sigma$ , holotype, genit. slide 6198 (BM). A peculiar form recognizable at once by the absence of outer socii, quadrate uncus and the robust valva which resembles that in *P. creserias* (Meyrick). Probably a transitional form towards *Psilacantha* gen. nov.

***Sycacantha tapaenophyes* spec. nov.**

(fig. 256)

♂ 16 mm. Head pale greyish-ochreous. Palpus pale ochreous-greyish, mixed with brownish along lower edge. Thorax pale ochreous-greyish, in centre slightly darker grey with faintest brownish marbling. Posterior tibia pale ochreous, hardly dilated with appressed hair-scales above and beneath, without pencil. Abdomen light tawny-fuscous.

Fore wing oblong-truncate, rather narrow, costa moderately curved throughout, apex gently rounded, subrectangular, termen gently convex, little oblique. Whitish-ochreous or greyish, transversely strigulated with dense and fine deep fuscous strigulae. Anterior half of costa with four dark fuscous wedge-shaped small oblique spots, alternating with slender paler strigulae; basal patch indicated only by slightly thicker series of strigulae; transverse fascia moderate, from just before middle of costa to dorsum beyond middle, fuscous, broadly interrupted above middle, so as to form a subquadrate costal spot, lower half gradually dilated, anterior edge tolerably straight, posterior suffused and irregular; posterior half of costa with numerous small dark transverse stigulae, a strongly curved slender dark subterminal line, from below 3/4 of costa to vein 7, thence to above tornus; another, more slender subapical oblique line, a series of short oblique strigulae in apex and along termen. Cilia whitish-ochreous-fuscous, with a subbasal suffused fuscous fascia, except in tornus.

Hind wing fuscous-grey with bronze gloss, slightly paler and subpellucous towards base. Cilia concolorous. Dorsum shallowly concave.

Male genitalia. Tegumen (damaged) with inner socius rather thick, with a few bristles above, top rounded, outer socius rather broad, oval, longer. Valva long and slender, sacculus 1/3, pulvinus with a group of sparse bristles, Spc<sub>1</sub> large, oval, confluent with sacculus; this rather long and slender, base with a rounded prominence and a marginal series of inequal spines, top of cucullus moderately narrowed.

West Sumba, Waimangura, 450 m, viii.1949 (E. Sutter & A. M. R. Wegner), 1 ♂, holotype, genit. slide 7384 (BMS).

A distinct species, by colouring and markings only similar to *S. amphimorpha* spec. nov., from Java, but with both pairs of socii larger and a differently shaped cucullus.

***Sycacantha amphimorpha* spec. nov.**

(fig. 221)

♂ 14 mm. Head pale ochreous, on vertex slightly mixed with brown. Scape of antenna brownish. Palpus pale ochreous, slightly dusted with brown. Thorax pale ochreous, shoulder with a pair of dark brown points. Posterior tibia (worn) with snow-white hairs, a slender dark fuscous pencil from base above. Abdomen fuscous, venter whitish, anal tuft pale ochreous.

Fore wing broad, truncate, dilated, costa rather curved throughout, more so at

base, apex obtuse, termen straight, almost vertical. Pale ochreous, sparsely strewn with dark fuscous-brown scales, markings fuscous-brown. Costa with a wedge-shaped, oblique moderate spot, preceded by three small triangular darker dots, alternating with two minute strigulae, and followed by five oblique wedge-shaped dots, becoming slightly larger posteriorly, ultimate dot apical; median fascia indicated by an irregular coarse dusting from below costal spot to posterior third of dorsum; a paler greyish-fuscous and well-defined curved fasciate spot from below posterior fourth of costa, curved down and running before termen, not reaching tornus; an interrupted slender subterminal strigula. Cilia (imperfect) pale ochreous mixed with brownish.

Hind wing rather light fuscous-grey, cilia concolorous with a pale basal line.

Male genitalia. Uncus broad, upper processes moderate and with rounded tops, socius but slightly thicker, rather short. Gnathos straight. Valva rather robust, sacculus with a moderate patch of spines which almost conceal the few sparse bristles of  $Spc_1$ ; pulvinus rather pointed. Cucullus moderately curved. Aedeagus with bases of numerous cornuti visible.

West Java, Ujung Kulon Peninsula, Tjigeunteur, 14.vii.1955 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 7528 (LM).

#### *Psilacantha* Diakonoff, 1966, stat. nov.

*Psilacantha* Diakonoff, 1966: 70 (subgenus of *Sycacantha* Diakonoff; type-species, *Olethreutes charidotis* Durrant, N. Guinea, by original designation).

With superficial characters of *Sycacantha* Diakonoff, but with the male genitalia differing in having a broad flat uncus, more or less deeply divided in two lobes, or small processes, devoid of bristles. The socii are diversely developed, either only outer socius is present (*charidotis*) or both outer and inner pairs of socii (*creserias*, *spinosa*).

The situation in *P. creserias* (Meyrick) and *spinosa* spec. nov. where both pairs of the socii are developed, at the foot of the flap-like bicornute uncus, proves that neither of these pairs of appendages represent the uncus and that both pairs must be derivatives of the socii, each socius divided in an upper, more median (inner), and a lower, more lateral (outer), often semiparietal, part.

At present I am satisfied that the group should be raised to generic rank.

#### Key to the species of *Psilacantha*

1. Fore wing with costa strongly prominent just beyond middle . . . . . 2
- Fore wing with costa normally curved . . . . . 3
2. Fore wing tawny-vinaceous, costal patch very small, purplish-fuscous . . . . .  
*manifesta*
- Fore wing pale ochreous-olive, with silvery-whitish marks; costal patch large,  
 dark fuscous, extending to base . . . . . *charidotis*
3. Light fascia before apex slaty-leaden-grey . . . . . *spinosa*

- Light fascia before apex tawny, vinaceous, or pale ochreous. . . . . 4
4. Transverse fascia brown, not interrupted below costa, forming a round, largish spot on fold; subapical fascia entire, broad, from below  $\frac{1}{3}$  of costa to above tornus, black transverse lines long and distinct . . . . . *pryeri*
- Transverse fascia indicated by a dark costal spot, in disc interrupted or obliterate; subapical fascia with anterior half obliterate, therefore narrow, to middle of termen, black lines ill-defined . . . . . *creserias*

***Psilacantha manifesta* spec. nov.**

(figs. 219-220, 237, 330)

♂ 18 mm. Head light fulvous, orbits and face whitish. Palpus white, apical third of median segment black with grey apex, terminal segment grey with black base. Thorax fuscous-grey, tip white, tegula light fulvous. Abdomen pale fuscous-grey, anal tuft whitish. Posterior tibia creamy, snow-white internally, outer spur black, a suffused black spot at base inside, pencil from base creamy.

Fore wing broad and short, extremely dilated to beyond middle, moderately narrowed thence, costa straight and very oblique anteriorly, angularly prominent beyond middle, gently concave posteriorly, apex subrectangular, termen almost angularly notched above, strongly prominent on vein 4. Pale ochreous, densely strewn with fulvous; markings dark ferruginous and cloudy, suffused grey. Anterior half of costa with five spots, first and third small, triangular; second larger, also triangular, continued by an interrupted, very oblique line across wing to cell; fourth and fifth spots slightly elongate, approximated, indicating transverse fascia, being represented only by an oblique series of very irregular fine longitudinal strigulae, encircled with pale ochreous ground colour; an irregularly angulate larger mark on  $\frac{1}{3}$  of fold; a larger cloudy grey spot above and beyond this; posterior, concave part of costa with one small and three larger longitudinal marks, alternating with minute points; a fulvous, oval spot in apex; a very oblique, curved series of short ferruginous strigulae before and below apex, interconnected anteriorly; this series is preceded by a broad interrupted band of grey-leadened suffusion from below costa to tornus, and followed by a narrow preapical leadened-grey streak. Cilia pale ochreous, basal half from apex to middle of termen bright fulvous, posterior half opposite apex and middle of termen barred with grey suffusions.

Hind wing bronze-fuscous, becoming paler, fuscous-grey towards base. Cilia glossy pale fuscous-grey, basal half darker fuscous.

♀ 19 mm. Very similar to the male, with exactly the same wing shape and markings, but evenly darker, suffused with greyish-purple throughout, except narrow pale edges to markings.

Hind wing darker purplish-fuscous, paler and semipellucet towards base, darker purplish towards apex. Cilia pale fuscous grey with a darker subbasal and a narrow pale basal line.

Male genitalia. Tegumen with moderately high, well-separated prominences. Uncus developed, a rounded flat lobe. Inner socius minute, with a single long bristle. Outer socius moderate, rounded, subpending, haired throughout. Gnathos with a distinct lower edge, inverted-trapezoidal. Henion rather broad, ill-defined. Valva long and slender, labis moderately pointed, pulvinus weak, marginal, neck of valva long. Cucullus gradually narrowed, slightly sinuate, prominence depressed, with a single spine; costa with two very long stout bristles.

Female genitalia. Sterigma, a large, broad cup, with moderate, slender, at top downcurved lateral processes; ostium proper, a smaller cup with a high frontal wall. Colliculum moderate, triangularly narrowed. Signa absent.

British New Guinea, Milne Bay, i.1899 (A. S. Meek), 1 ♂, holotype, genit. slide 6205; 9 ♂, 1 ♀, paratypes, genit. slide 7728; 1 ♀, allotype, genit. slide 7671 (BM, Rothschild Bequest; LM).

### *Psilacantha charidotis* (Durrant, 1915)

(fig. 234, pl. 14)

*Olethreutes charidotis* Durrant, 1915: 154 (♂, Dutch New Guinea).

*Sycacantha (Psilacantha) charidotis*; Diakonoff, 1966: 70, fig. 24 (genit. ♂ figured).

Distribution. New Guinea: Utaikwa River.

British New Guinea, Kumusi River (A. S. Meek), 1912-477, 2 ♂ (BM, LM).

A large and robust species with a strongly curved costa of the fore wings, prominent in the middle, and with unusual markings: a dark fuscous patch extending over the upper portion of the basal half of wing, this patch with lower edge emarginate below and filled out with light yellow; posterior half of costa narrowly infuscated; the remainder of wing light tawny-olive, strewn with brightly glossy, silvery, more or less crescentic spots; a large white patch below costal prominence to middle of wing breadth. Hind wing fuscous with a white dorsum. Head pale ochreous with a black vertex.

Male genitalia with a broad and bifid uncus. Socius is parietal: a thickened rim only. Otherwise similar to the *Sycacantha* type of genitalia, with a moderate prominence at the base of cucullus which is long and slender.

Posterior tibia snow-white, with long, rather thin projecting hairs above and beneath, a slender pale pencil from base above.

Hind wing with a slender dorsal roll from beyond base, in median portion with orangeish, glandular scales.

♀ 20-22 mm, apallotype. Very similar to the male, but only darker, light tawny yellowish ground colour replaced by dull fuscous with dark fuscous patches; on base of costa and along apex and termen, respectively; also the pale patches along posterior 2/3 of costa darker, suffused with fuscous-grey. Cilia dark fuscous.

Hind wing darker, dull fuscous, dorsum and base only slightly paler, not whitish, as

in male. Hind legs fuscous, normally scaled (in male, snow-white, with long, dense hair-scales). Cilia fuscous, from below apex to middle of termen whitish, throughout with a rather narrow, dark fuscous subbasal band and a pale basal line.

Female genitalia. Ostium wide, round, lamella postvaginalis gently sclerotized and evenly and finely aciculate, longer aciculate over a slight tumescent ring around border of ostium proper, which has smooth walls. Lamella antevaginalis, a semicircular thin edge, in front dilated into a slender trapeze, lateral lobes large, oblong-oval. Colliculum rather long, a broad tube, hardly dilated downwards, sides thickened throughout.

Northeast British New Guinea, Kumusi River, low elev., v-ix.1907 (A. S. Meek), 1 ♂; 1 ♀, apallotype, genit. slide 8741. Central West New Guinea, Snow Range, Upper Setekwa River, 2000-3000 ft, vii.1910 (A. S. Meek), 1 ♀.

### *Psilacantha creserias* (Meyrick, 1905)

(figs. 227-229)

*Platypeplus creserias* Meyrick, 1905: 585 (♂, Ceylon). — Clarke, 1955: 103.  
*Olethreutes creserias*; Clarke, 1958: 499, pl. 248 figs. 3-3a (holotype wing, genit. ♂ figured).  
*Sycacantha (Psilacantha) creserias*; Diakonoff, 1966: 70 (new subgen.).

Distribution. Ceylon.

The species may be redescribed as follows.

♂ 16.5 mm. Head fuscous mixed with creamy. Antenna fuscous. Palpus rather slender, with closely appressed scales; creamy, basal segment and base and upper edge of median segment except at apex, dark fuscous, terminal segment dark fuscous, with a creamy tip. Thorax fuscous, strongly mixed with creamy. Posterior tibia less richly haired than in other species, less densely haired on the inside; creamy, a small black hair pencil at inner side of base, spurs infuscated, tarsus dark fuscous, pale-ringed. Abdomen dark fuscous, venter pale grey, anal tuft pale ochreous.

Fore wing oblong-truncate, dilated, costa little curved anteriorly, strongly curved and prominent at  $2/3$ , apex subrectangular, termen gently concave above, straight in middle, vertical. Whitish-creamy, evenly strigulated and dusted throughout with light purplish-fuscous, denser so towards dorsum. Basal patch to before  $1/3$ , evenly darker marbled with fuscous-purplish, edge strongly angulate in middle, apparently obtuse (disc in both wings slightly rubbed), gently scalloped above and beneath; a blackish-purple, elongate-triangular spot on costa just before middle, suffused below with vinaceous, preceded by four semioval dark dots, alternating with minute lines; three elongate-oblique wedge-shaped spots on posterior third of costa and the apical spot; subapical fascia suffused, continuous, yellowish-ochreous strongly mixed with light purple; an undulate streak of unobscured pale ground colour preceding this fascia, running from below costa beyond middle to termen above tornus; this streak is preceded by a band of sparse leaden-grey strigulation; metallic subapical markings



almost entirely absent. Cilia deep purple around apex and along upper half of termen, whitish along lower half with a small grey bar in tornus and a larger dark grey patch on end of dorsum.

Hind wing light fuscous-purplish-grey, semipellucant, veins fulvous. Cilia colorous, a darker subbasal shade.

♀ 18 mm. Throughout tinged tawny. Wing of exactly the same shape as in male. Light tawny-ochreous, along costa purplish-orange with numerous leaden-bluish small markings; throughout suffused and marbled with light purple, basal patch indefinite; transverse fascia indicated by brighter tawny colour formed by rather broad streaks on veins edged on both sides by narrow brownish lines; this pattern rather obscured by additional brown and tawny dusting; this fascia followed by a rather broad field of leaden-purplish dusting, indistinctly cut by light tawny streaks along veins; subapical fascia moderate, purple, narrowly cut by pinkish-ochreous lines on veins, anteriorly excavate here and there by tawny; space beyond fascia pinkish-ochreous with some narrow bluish lines; costal spots and that in apex blackish-purple. Cilia bright reddish-ferruginous along upper part of termen and in apex, along lower half ochreous, partially suffused with fulvous above, with grey on dorsum.

Hind wing dark purplish-bronze, darker towards apex, thinly scaled towards base. Cilia fuscous with a pale fulvous hue.

Male genitalia. Uncus short, appearing bicornute. Inner socius small, triangular; outer socius of the same shape but longer and broader. Sacculus with a median patch of long, slender bristles, apical patch (Spc<sub>1</sub>) large and spreading over pulvinus; base of costa prominent, with a small patch of bristles; cucullus rather short, but with base much produced, down-curved and beset throughout with furcate ribbon-like bristles. Aedeagus rather long, with long flat and concave cornuti, with angulate bases.

Female genitalia. Colliculum funnel-shaped, upper edge broadly emarginate, in middle but gently rounded, almost horizontal, lateral projections present but very small and slender. Ductus bursae throughout strongly granulate. (Male deciduous cornuti present in the corpus bursae slender and long, with a dilated and rectangularly bent base). Signum absent.

Ceylon, Peradeniya, vii.1906 (Green), 1 ♂, genit. slide 5807; 1 ♀, genit. slide 5808 (Meyrick Collection, BM). These specimens, superficially similar to *Sycacantha inodes*, had been identified by Meyrick with "*Argyroploce albitibiana* Snell." Ceylon, Puttalam, 189. . (Pole), 1 ♂, 1 ♀, genit. slides 7688 and 7689, respectively (BM).

Assam, Khasias, Cherra Punji, iii.1895 (Doncaster), 1 ♀, genit. slide 7690 (BM).

### *Psilacantha spinosa* spec. nov.

(figs. 194, 243)

♂ 17-20 mm. Head dark fuscous, mixed with whitish-ochreous. Palpus dark fuscous, median segment with a whitish apex, terminal segment with a white dot at tip. Thorax dark fuscous, mixed and spotted with whitish-ochreous, tips of tegulae white.

Posterior tibia whitish-ochreous, smooth-scaled on the outer side, with dense appressed fine and long snow-white hairs on the inside, projecting in a rounded tuft beyond top of tibia; posterior tarsus, basal segment with a small white tuft at base above, concealed in tibial hairs. Abdomen fuscous, paler at base, apical tuft dark grey, eighth segment with paler coremata, venter white.

Fore wing rather broad, subtruncate, costa curved throughout, more so anteriorly, apex obtusely rectangular, termen straight above, rounded beneath. Leaden-grey, densely spotted with white. Markings dark fuscous. Basal patch to 1/3, edge straight along upper and lower thirds, in middle with a semicircular prominence; fuscous strongly suffused with whitish on upper half, edge on costa with a small blackish-fuscous triangular spot; two costal small dots on each side of this spot; transverse fascia very irregular, entire, a suffused subquadrate dark spot on costa; anterior edge of fascia more or less scalloped, emarginate in middle, posterior edge with three sharp teeth from below costa to middle, lower of these largest, horizontal and well-defined; lower third of edge rounded; band beyond this fascia evenly leaden-grey, narrowly white-edged; posterior half of costa blackish-fuscous, with five bright pairs of white marks, posterior pair vertical, delimiting black dot in apex; subcostal streak obscure, leaden, finely ochreous-edged; preterminal spot crescentic, dark fuscous along the gradually curved outer edge, elsewhere greyish-olive; anterior edge serrate; anterior half of dorsum rather darkly infuscated. Cilia dark brown, suffused with orange-ochreous, except opposite apex, around tornus pale grey, this colour turning on termen chestnut, on dorsum dark grey.

Hind wing purplish-fuscous, on basal half becoming paler fuscous-grey; dorsum with a narrow naked light yellowish roll along more than basal half, convex above, concealing a thickened fold or roll on the under side.

♀ 19-21 mm. Darker and more strewn with white on the basal half so as to obscure basal patch entirely; otherwise similar to the male, but the three teeth of the outer edge of transverse fascia narrower and less conspicuous. Hind wing also darker.

Male genitalia. Uncus shaped as a prominent lobe, excised and with small lateral cusps. Inner socius long and slender, slightly clavate, with long bristles at one side. Outer socius small, subtruncate. Gnathos rather narrow, henion weak. Labis obtusely pointed. Pulvinus, a small but well-defined dense group of hairs along margin. Cucullus base prominent, with one large and some eight very small spines. A few long spines along outer edge of sacculus. Aedeagus upon a very long caulis. Cornuti, a small sheaf of slender colourless spines.

Female genitalia. Ostium rather small, with a median lobe of frontal edge, flanked by moderate excisions; their edge sclerotized, as are rather long lateral processes with turned up points. Colliculum weak, two lateral fasciate, very unequal sclerites. Ductus bursae and part of corpus bursae granulate. No signum.

South Celebes, low country, 1896 (Doherty), 1 ♂, holotype, genit. slide 7696; 1 ♂, paratype; "Celebes, nr. Chambi (low country), 1896 (Doherty)", 1 ♂, paratype (BM).

Moluccan Is., Batian Id., 1892 (Doherty), 1 ♀, allotype, genit. slide 7695; 1 ♀, paratype (BM).

The species is characterized by its dark, grey and brown colouring and the well-defined dark apex. It resembles in colouring *S. inodes celebensis* subsp. nov., female, rather closely (not the male which is much lighter), but differs by markings: the pre-terminal band in that species has a characteristic horizontal mark anteriorly, opposite the place where *spinosa* has a similar mark on the posterior edge of the transverse fascia.

The genitalia in the two sexes are also quite distinct, and belong to the *complicitana* type.

Although the females are from the Moluccas and the males from South Celebes, the markings are so similar that I do not hesitate to bring them together.

***Psilacantha pryeri*** (Walsingham, 1900) comb. nov.

(pl. 2 figs. 1-3)

*Phaecasiophora pryeri* Walsingham, 1900: 136 (♂♀, Japan). — Inoue, 1954: 109 (Honshu, China). — Issiki, in Esaki, 1957: 71, pl. 11 fig. 350. — Inoue c.s., 1959: 262, pl. 175 fig. 30.

Distribution. Japan.

The genitalia of the holo- and allotype specimens in the British Museum have been studied recently by the late Dr. N. Obratzsov. They assign the species to the present genus. It is very probable that all the above cited references pertain to the present species, or they might pertain to it not fully.

*Phaecasiophora (Megasyca) obratzsovi* spec. nov., described above is very similar to the present species; it might have been confounded with *P. pryeri* more than once.

Superficially the only differences are: a more rounded fore wing with more contrasting, paler, rather whitish ground colour in *obratzsovi*, with the pale discal mark being a small, slender and oblique line in both species, but in *obratzsovi* it is somewhat irregularly suboval, shorter and also hardly paler than other markings, while in *pryeri* it is fasciate, more slender and rather paler than other markings. *P. pryeri* is also larger: 20 mm.

Male genitalia. Uncus broad, conical, truncate, with minute, acute lateral horns. The outer and inner socii both are parietal and situated in one line, the lower (outer) socius forming a slight prominence at its lower end. Tuba analis large. Valva constricted in middle, cucullus bifurcate, forming a large rounded ventral lobe, broader than dorsal part. Aedeagus straight, moderately dilated at the extremities. Cornuti, a sheaf of long straight spines.

The present *Psilacantha* species is unique as to the shape of the cucullus and the parietal socii. Judging from the shape of the uncus it might be related to *P. spinosa* spec. nov.

Japan, "Japan (Pryer, 1886)" (BM; Walsingham Coll. 70270, holotype ♂, and

70269, allotype ♀), genit. slides 11732 ♂ and 11682 ♀, respectively. Japan, 1886 (Pryer), "*Phaecasiophora pryeri* Wlsm. ♀, N. Obratzsov det. 1960, prep. no. 5659", 1 ♀, genit. slide 6359 (BM).

### **Monacantha** gen. nov.

Head with roughly appressed scales. Ocellus posterior. Proboscis vestigial. Palpus moderate, slender, little dilated posteriorly by roughish short scales beneath, median segment gently curved, terminal segment small, obtuse, drooping. Antenna minutely ciliate in male. Thorax without a crest.

Fore wing oblong-truncate, costa curved, apex rectangular, termen straight. Vein 2 from 2/3, 3 and 4 approximated, from angle, 5 approximated towards base, 6 parallel and remote, 7 separate, to termen, 8 very closely approximated towards base, 9 closer to 8, 10 from 2/3 distance between 11 and 9, 11 from middle of cell, chorda from beyond base of 10 to base of 7, median branch very weak, from towards base to base of 5.

Hind wing with a cubital pecten. 2 from beyond 2/3 of cell, 3 from angle, 4 and 5 approximated towards base, 6 and 7 closely approximated towards base; dorsum with a thickened narrowly oval flat lobe.

Male genitalia. Tegumen, uncus and aedeagus considerably sclerotized; tegumen rather broad and moderately high, with a broad top with dark lateral rims; uncus very long and slender, curved, top clavate but slender. Socius, a parietal round patch of very long fine bristles. Gnathos, a transverse band with a median dilatation, before this gently constricted and minutely scobinate; pending median dilatation with a pair of slender appendages running to anellus. Valva with a parietal pulvinus and basal prominence, sacculus with a dense Spc<sub>1</sub>. Cucullus shorter, cylindrical with a rounded top and a lateral process (cucullus angle), crowned with a dark large spine. Aedeagus sclerotized, without cornuti.

Type-species, *Monacantha astuta* spec. nov. (Hainan).

The genus has many points in common with *Sycacantha* Diakonoff, but the genitalia differ beyond the subspecific level, so that a generic status for this group seems more correct.

### Key to the species of *Monacantha*

1. Hind wing blackish-bronze, with white cilia along termen, tornus with a distinct rounded lobe in male . . . . . *trachymelas*
- Hind wing light grey or fuscous-grey, tornus without a lobe. . . . . 2
2. An oblique series of three inequal fuscous spots halfway between base and costal spot . . . . . *abdita*
- A single fuscous spot just above 1/4 of fold. . . . . *astuta*

**Monacantha abdita spec. nov.**

(figs. 253, 331)

♂ 18 mm. Head creamy, slightly mixed with fuscous. Palpus creamy, basal segment with a fuscous oblique streak, median segment with a fuscous basal half, upper edge infuscated throughout, a fine transverse subapical line. Thorax creamy mixed with fuscous. Abdomen fuscous. Posterior tibia snow-white, a creamy pencil from base, a large jet-black basal patch on the inner and upper side.

Fore wing broadly oval-truncate, costa curved throughout, apex obtuse, termen straight, vertical, moderately rounded beneath. Pale ochreous, marbled and marked with fuscous. Costa with a series of small dots. Basal patch indicated by a semioval spot at  $1/5$  and a transverse subrectangular slightly inward-oblique blotch below and beyond preceding at  $1/3$  of disc, limited by upper edge of cell; lower extremity of this blotch rounded, reaching below cell; transverse fascia broad, curved, moderately dilated downwards and formed of a darker triangular spot on middle of costa, a very irregular patch in disc with undulate anterior and posterior edges, a small inwards-oblique spot between and posteriorly of the preceding and some indefinite suffusion on dorsum; subapical band dark fuscous, broad, short, from well below costa to middle of termen, outer edge convex, inner long-dentate; a curved band separating preceding from apex; ochreous along costa, becoming dull grey below costa; posterior half of costa dark fuscous, cut by five pairs of moderate white strigulae, becoming less oblique posteriorly, ultimate pair inwards-oblique; these strigulae converging in the subapical grey streak; space beyond transverse fascia filled out with pale leaden-grey except light edges to markings. Cilia fuscous (rubbed).

Hind wing rather pale fuscous-grey, cilia concolorous with a pale basal line.

Male genitalia. As described with the subgenus above.

Southeast Borneo, 1891 (Doherty) (BM, Walsingham Coll. 40742), 1 ♂, holotype, genit. slide 6196.

The general appearance and markings are closely similar to those of the genus *Sycacantha* Diakonoff.

**Monacantha trachymelas spec. nov.**

(fig. 260)

♂ 22 mm. Head whitish, spotted with dark fuscous, more so between bases of antennae, elevated lateral tufts on vertex with a blackish spot before apex. Palpus whitish-creamy, median segment with small blackish marks at base, a narrow blackish subapical ring, upper side between this and base also blackish; terminal segment blackish-grey. Thorax creamy, marbled and strewn with fuscous and pale tawny. Posterior tibia white, strongly expanded by very long and dense hairs, projecting and rounded beyond top, a narrow pencil from base above, basal segment of posterior tibia enlarged, with loose white hairs above throughout. Abdomen dark brownish-fuscous, venter white, anal tuft light ochreous.

Fore wing broad, subtruncate, costa curved throughout irregularly: with a very obtuse angle at  $3/5$ , thence almost straight, apex subrectangular, termen gently convex above, rounded beneath. Creamy, densely marbled with dark purplish-fuscous, usual markings ill-defined. Costa blackish-purple, a suffused dark spot before middle including traces of a pair of slender marks; costa with some three greyish and thick pairs of marks at base and two pairs of slender, pure white marks before dark spot; costa beyond spot with five oblique and short pairs of marks, penultimate pair greyish and less distinct, all pairs running below into a rather broad bluish-leaden, yellow-edged line, curving down to opposite middle of termen; basal patch to  $1/3$ , centred with ground colour, its edge dark and serrate (this patch rather rubbed); transverse fascia ill-defined, a broad band of irregular marbling from dark costal spot, dilated and occupying posterior half of dorsum, but not reaching tornus; its posterior edge very irregular, including a round dot of ground colour just below upper angle of cell; pale space beyond fascia traversed by several minute zigzag leaden-coloured lines; preterminal fascia strongly curved, anteriorly deeply serrate and with two rounded excavations centred with leaden-grey: beyond middle of vein 6 and towards end of vein 4, respectively; veins beyond cell finely dark; an oval purple spot in apex; terminal edge narrowly white, with two vertical purple strigulae. Cilia dark leaden grey, with a purple basal third, paler around tornus, with a broad white bar.

Hind wing deep fuscous-purple, becoming paler towards base, dorsum below vein *ra* white, slightly dilated and shallowly concave on upper side. Cilia fuscous-purple with a darker subbasal band, cilia along termen and this band, white.

Male genitalia. Tegumen broadly rounded, shoulders not prominent. Uncus slender, moderately long (not reaching gnathos), sinuate, top slightly dilated. Socius, a moderate, triangular sclerotized plate. Gnathos sclerotized, but narrow, band-like, bases short-corrected. Henion slender. Labis strong, pointed. Pulvinus, an indefinite group of hairs, merging in the hairs below base of sacculus; this base rounded, little prominent, with one dark spine, costa with a subbasal prominence. Cucullus slender, gently curved and hardly sinuate. Costa slightly prominent. Aedeagus large, curved and sclerotized, cornuti not traceable; caulis long.

Female unknown.

Molluccan Is, Batian Id., 1879 (Doherty), 1 ♂, holotype, genit. slide 7704 (BM).

Northwest New Guinea, Kapaur, from sea level up to 2000 ft, xii.1896-ii.1897 (Doherty), 1 ♂, paratype, genit. slide 7732 (BM). Larger, darker and differently marked than *M. abdita* spec. nov., but with rather similar genitalia, only differing by a shorter, sinuate uncus, shorter socius, stronger prominence of costa, hardly prominent base of cucullus and a much larger aedeagus.

***Monacantha astuta* spec. nov.**

(fig. 254)

♂ 15-16 mm. Head fuscous, face whitish, sides of face dark fuscous. Palpus fuscous,

median segment with apical fourth and a longitudinal median streak creamy, terminal segment creamy with a suffused median dark fuscous ring. Thorax pale fuscous, regularly marbled with fuscous. Abdomen fuscous. Posterior tibia white, pencil from base creamy, curving over a jet-black basal spot.

Fore wing oblong, oval-truncate, costa curved throughout but more curved and prominent at  $2/3$ , less curved before middle. Pale tawny anteriorly, creamy posteriorly, strongly marbled with fuscous-brown, markings fuscous-brown, dark brown along costa. Anterior half of costa with some five dark brown spots alternating with minute dots; posterior half of costa dark brown, cut by five rather thick white strigulae in oblique pairs, posterior pair vertical; basal patch indicated by irregular dark brown marbling from anterior  $2/5$  of dorsum, in disc reaching to beyond  $1/3$  but not exceeding upper edge of cell; transverse fascia indicated by two dark brown larger and approximated dots on middle of costa, with a minute strigula in between, interconnected by fuscous suffusion, so as to form a dark triangular spot, hardly reaching across wing to cell; by some fuscous-brown marbling in disc and by a more continuous infuscation on dorsum before tornus, edged posteriorly with greyish; preapical fascia deep fuscous, rather short, well-defined; metallic streak extended, fuscous-lead, rather dull; beyond this a dark fuscous sinuate line descending from between penultimate and ultimate pairs of costal strigulae to before middle of termen; a fuscous spot in apex. Cilia pale fuscous-creamy, along upper half of termen and opposite apex with a dark fuscous basal half, along tornus with a couple of small dark bars.

Hind wing dull dark fuscous-brown; dorsum whitish, with a naked brownish prominent elongate-oval narrow lobe. Cilia concolorous with a pale basal line.

Male genitalia as described for the genus above.

Hainan Island, Porten, vii.1904, 1 ♂, holotype, genit. slide 6206; Mt. Wuchi, v.1903, 1 ♂, paratype, genit. slide 5798 (Rothschild Bequest, BM).

Superficially closely resembling a *Sycacantha* species in all particulars of markings.

## 7. SUBTRIBUS STATHEROTIDES NOV.

This largest and perhaps the most peculiar subtribe of the region is characterized by the pectinate paired signa; as an exception these are squamose or single or absent.

Male genitalia very diverse, of several types, showing different stages of the trend to simplification through loss of the gnathos, the uncus becoming broad and weak and sometimes disappearing, the valva becoming narrow and simple.

The subtribe is divided into twenty one genera.

In the present subtribe the perplexing variety of male genital structures compelled me to create a larger number of new genera than elsewhere. My opinion on this procedure is explained in the introduction to this paper (p. XII).

It may be useful to expound my concept of the interrelation of the genera more elaborately.

The large subtribe Statherotides is well characterized by the presence of usually two pectinate signa. Seldom they are small, squamose or absent; this situation can be found among the plesiomorphic, "old" forms closest related with the *Olethreutes* type. However, the squamose type shaped as large patches of flat fish scales-like patches in the wall of the bursa are principally different from the single scobinate type of signum. In my opinion they represent initial stages of the development of a true pectinate signum. Sometimes the squamose signum is single. The males of these genera (*Rhodacra* gen. nov., *Corethrarcha* gen. nov.) have a still complicated spinose valva and a queer uncus; the general trend of development towards simplification and reduction leads in different directions, radiating polyphyletically from the central *Statherotis* group.

*Proschistis* Meyrick, *Asaphistis* Meyrick, and *Statherotoxys* gen. nov. show a strong development of sclerotizations of the diaphragma around the gnathos in connection with a large tuba analis. *Hoplitendemis* gen. nov. with such a strong gnathos has very strong rigid socii, but a simplified valva instead — and no signa at all. *Dactylioglypha* gen. nov., has a most specialized gnathos and similarly rigid, but hooked socii and uncus — and normal signa. *Statherotoxys* gen. nov. is a small genus intermediate between the last mentioned and *Statherotis* Meyrick. This latter is a large central group, its three main groups of species showing the same trend of simplification within the genus: narrowing of the valva, disappearance of the gnathos, etc. On the other hand *Semniotes* gen. nov., *Cephalophyes* gen. nov. and *Pomatophora* gen. nov. have a complicated sacculus and a strong uncus, but *Dactylioglypha* gen. nov. excels by dilatation and furcation of the cucullus. *Metrioglypha* Diakonoff has also a rather short, but simple valva, a reduced gnathos and a weak uncus. The peculiar *Antirrhopa*, derivable from this, has lost the uncus altogether. Finally there is a group with slender valva, a simplified weak uncus and no gnathos: *Phaulacantha* gen. nov., showing a



direct connection with the preceding subtribe, *Sycacanthae*, *Statheromeris* being a connecting link with the central *Statherotis* group.

The remarkable genus *Statherotmantis* gen. nov., actually of palaeartic occurrence, and the only representative of the subtribe in that region, has the simple valva as in *Hoplitendemis* but a broad, hooked, bilobed and hairy uncus and a strong, complicated gnathos, both archaic characters.

#### Key to the genera of Statherotides

1. Uncus reduced to two socii-like hairy appendages or entirely absent. . . . . 2
- Uncus well-developed, single or bifid, if short then conical, rigid. . . . . 4
2. Valva with cucullus forming a spiny ventral process. . . . . *Statheromeris*
- Valva without such process, simple . . . . . 3
3. Gnathos developed, sclerotized . . . . . *Proschistis*
- Gnathos absent . . . . . *Antirrhopa*
4. Uncus weak, single or bifid, sometimes on a rigid base . . . . . 5
- Uncus normally developed or conical and rigid . . . . . 8
5. Uncus long, single or bipartite, on a rigid base . . . . . *Teleta*
- Uncus not on a rigid base, neither single, nor bilobed . . . . . 6
6. Valva with a bristly labis; sacculus with large, modified spines along ventral edge. . . . . *Triheteracra*
- Valva without an elevated labis,  $Spc_3$  sometimes developed as a long pencil . . . . . 7
7. Gnathos present, strong. Hind wing with veins 3 and 4 stalked. . . . . *Aterpia*
- Gnathos absent. Hind wing with 3 and 4 approximated . . . . . *Phaulacantha*
8. Gnathos strongly developed, complicated, usually sclerotized . . . . . 9
- Gnathos simple, band-like, sometimes absent . . . . . 15
9. Socii upcurved rigid hooks . . . . . *Dactylioglypha*
- Socii not thus or absent . . . . . 10
10. Socii pending, large and rigid structures . . . . . *Hoplitendemis*
- Socii moderate, sometimes porrected but not rigid. . . . . 11
11. Uncus long and slender, rigid . . . . . *Statherotoxys*
- Uncus broad or moderate . . . . . 12
12. Uncus extremely broad, two large lobes, hairy underneath. . . . . *Statherotmantis*
- Uncus not thus broad, single, nor shallowly notched . . . . . 13
13. Valvâ with two raised, spiny harpes towards base . . . . . *Pomatophora*
- Valva without harpes . . . . . 14
14. Hind wing with veins 3 and 4 separate, 3 distinctly before angle. Uncus large, broad, and clavate. . . . . *Asaphistis*
- Hind wing with 3 and 4 connate. Uncus moderate, narrowed. . . . . *Apeleptera*
15. Uncus well developed, T-shaped or bilobed with large lateral flaps. . . . . 16
- Uncus developed but simple, single or bifurcate . . . . . 17
16. Uncus slender, T-shaped . . . . . *Rhodacra*

- Uncus bilobed with large lateral flaps . . . . . *Corethrarcha*
- 17. Valva slender, curved, with a characteristic triangular, ventral process, more or less spinose or cucullus bifid. . . . . 18
- Valva without such process . . . . . 19
- 18. Valva slender with a triangular ventral process. . . . . *Statherotis*
- Valva broad, cucullus deeply clavate or furcate . . . . . *Dicephalarcha*
- 19. Sacculus with  $Spc_1$ , upon elevated harpe . . . . . *Semniotes*
- Sacculus with  $Spc_1$  spiny, but not elevated . . . . . 20
- 20. Uncus, a flat simple hook, sometimes densely haired; valva usually short, truncate . . . . . *Metrioglypha*
- Uncus furcate, densely haired underneath or with lateral arms; valva slender, long . . . . . *Cephalophyes*

**Statheromeris** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna slightly thickened in male, subserrulate, short-ciliate, ciliations over 1/2. Palpus moderate, subporrected, basal segment rough below, median sinuate, abruptly dilated beyond middle, with short, appressed scales, roughish only along lower edge posteriorly and along apex, terminal segment short, obtuse, drooping. Thorax with a slight posterior tuft. Abdomen normally scaled. Posterior tibia moderately thickened along anterior half only, throughout with closely appressed normal scales, a pencil from base above, appressed to upper part of inner side.

Fore wing truncate, rather broad, apex subobtuse, termen straight or gently rounded. Vein 2 from 3/4 of lower edge of cell, 3 from angle, 4 closer to 3, 7 separate, to termen, 9 actually from upper angle of cell, 8 very close to 9, 10 from halfway between 10 and 11, 11 from middle; chorda from halfway between 10 and 11, to below base of 7; median branch from towards base, to below base of 5, a dark patch of androconia in centre of underside of fore wing, on basal half of disc upperside in hind wing. Dorsal edge of hind wing with a narrow marginal fold. Posterior tibia simple.

Hind wing semioval, about 1, with a cubital pecten. Vein 2 from middle or slightly beyond middle, 3 and 4 connate from angle, 5 very closely approximated at base, 6 and 7 closely approximated towards base. Dorsum in male normal.

Male genitalia with uncus represented by a pair of socii-like pending and hairy appendages or entirely absent. Socius large, oblong, pending. Gnathos either a weak transverse band or absent. Valva of the characteristic *Statherotis* shape, with a triangularly projecting hook and obliquely rounded top of the cucullus, and an oblique ridge of moderate cucullus bristles.

Female genitalia. Ovipositor lobes (tips damaged) with a deep split in middle, lower half slender. Sterigma subtriangular, ostium wide, circular, occupying lower half; lamella postvaginalis sculptured, finely but densely punctulate, with a  $\pi$ -shaped median ridge and triangular lateral prominences at the end of legs of the  $\pi$ . Colliculum

very long, strong, sclerotized, both edges thickened. Signum one, a small pectination, three strong teeth upon a base of fine scobinations.

Type-species, *Statheromeris atrifracta* spec. nov. (North New Guinea).

The modification and reduction of the uncus as in *Statherotis* (single, but more or less deeply cleft), shows a tendency towards the situation in many Eucosmini and is contrary to the development in the genus *Statherotoxys*.

#### Key to the species of *Statheromeris*

1. Fore wing with oblique mark from  $1/3$  of costa, obtuse below, by far not reaching apical mark . . . . . 2
- Fore wing with oblique fasciate mark from costa curving apicad, pointed and touching subapical spot . . . . . *semaeophora*
2. Uncus simple, naked . . . . . *atrifracta*
- Uncus forming two hairy appendages . . . . . *solomonensis*

#### *Statheromeris atrifracta* spec. nov.

(figs. 261-262, 332)

♂ 13 mm. Head and palpus dark ashy-grey, palpus paler below and towards base, tufts on vertex whitish, suffused with grey. Antenna pale ochreous, scape pale fuscous. Thorax sordid pale grey with the faintest ochreous tinge, slightly strewn with darker grey, a large fuscous apical circular spot. Posterior tibia pale ochreous. Abdomen fuscous.

Fore wing oblong-suboval, subtruncate, costa gently curved, more so towards base, curved stronger towards apex. Apex subobtuse, termen gently sinuate above, vertical. Sordid whitish, slightly suffused with pale ochreous-grey on basal third, very faintly tinged pinkish on posterior two-thirds; markings fuscous and blackish-fuscous. Less than basal fifth of costa with three small unequal transverse marks, each indistinctly continued across wing by series of dark irroration, tending to form unequal blackish dots, two larger such dots on vein 12 beyond base, the largest blackish mark, subfasciate and vertical, just below fold before  $1/4$  of wing length; a large slightly clavate black-fuscous oblique patch, occupying less than second fifth of costa; upper posterior angle of patch to between veins 5 and 6 beyond their bases, lower posterior angle to above dorsum well beyond middle; edges of patch well-defined, posterior extremity rectangular; a moderate rounded-subquadrate blackish spot before apex well below costa and before termen, touching a smaller black subtriangular spot on middle of termen; posterior  $2/3$  of costa with some seven small dark obliquely transverse marks, second of these linear; two larger wedge-shaped and little oblique spots on costa before apex, posterior almost apical; ill-defined fuscous dusting strewn all over the wing, tending to form an inwards-oblique series of short interneural strigulae from lower edge of subapical patch to  $3/4$  of termen; a short dark line running into

tornus. Cilia (rubbed) whitish, mixed with dark fuscous. Underside with a central large elongate-oval blackish androconial patch.

Hind wing deep fuscous-bronze, glossy, semipelluculent, bases of scales being hyaline; an elongate-oval central field of modified, hair-like blackish androconia, similarly semipelluculent. Underside similarly coloured, androconial patch very faint. Cilia (worn) dark fuscous, with a whitish basal line.

Male genitalia. Similar to those of the preceding species, but uncus represented only by a small hood, ventral edges of which are densely haired and apparently homologous with the uncus halves in *solomonensis*. Valva very similar to that of the last mentioned species.

North New Guinea, Vogelkop Peninsula, foot of Arfak Mountains, Warnapi, 10 km N of Ransiki, 6 m, x.1948 (A. J. Kostermans), 1 ♂, holotype, genit. slide 4964 (LM).

♀ 14 mm. Closely resembling the male holotype (a much better preserved specimen). Head and palpus blackish-grey, tuft on vertex pale, vinaceous; palpus longer than in male. Thorax pale vinaceous. Abdomen dark fuscous, anal tuft whitish.

Fore wing somewhat longer, less dilated. Pale whitish tinged vinaceous, densely transversely strigulated with minute deeper vinaceous, ochreous and fuscous strigulae and dots, partly suffused with deeper vinaceous. Costa whitish, with numerous dark purple transverse strigulae, posteriorly more or less continued by suffused chestnut-brown oblique lines; two dark purple dots in place of basal patch: one above fold beyond base, another below fold, beyond 1/5, respectively; transverse dark patch as in male, its top followed by a blackish-leadened transverse strigulation extending from 2/3 of dorsum to apical patch; this patch similar but more defined than in male; an erect dark fuscous vertical mark from dorsum before tornus, reaching to vein 4 (rubbed in male). Cilia pale vinaceous, a twice interrupted band along basal third from apex to middle of termen, with three suffused dark bars.

Hind wing dark fuscous-purple, semipelluculent, with transverse striation throughout (transparent bases of scales); basal third of wing paler, more transparent. Cilia dark grey-fuscous with a pale basal line and a darker subbasal band.

Female genitalia as described with the genus above.

South New Guinea, Milne Bay (A. S. Meek), 1 ♀, allotype, genit. slide 7769A. A third specimen, a male, from N. New Guinea, Dorey, 1897 (Doherty), is probably conspecific but lacks the abdomen (BM).

Closely allied with the following species (*S. solomonensis* (Bradley)). Apparently showing a reduction of the tegumen part of the genitalia towards the situation in the tribe Eucosmini.

***Statheromeris solomonensis* (Bradley, 1957) comb. nov.**

(fig. 265)

*Argyroploce ancosema solomonensis* Bradley, 1957: 94, pl. 1 fig. 6 (♂♀, Rennell Id., Guadalcanal Id.; wings illustr.).

Distribution. Solomon Is.: Rennell Id., Guadalcanal Id.

♂ 12 mm. Head and palpus blackish-grey, only back of vertex slightly paler. Antenna pale fuscous, base blackish-grey. Thorax whitish with a faint pink tinge, anterior edge and shoulders blackish. Anterior tibia glossy pale grey. Abdomen glossy bronze-fuscous.

Fore wing oblong-subtruncate, costa moderately curved throughout, less so in middle, apex subobtuse, termen straight, vertical above, rounded beneath. Whitish tinged pale pink, strigulated more or less transversely and irregularly with pale ochreous, centred with blackish. Markings purplish-black. Black costal patch from the second fifth of costa, extending obliquely to well beyond middle of wing, lower angle traversing fold but not reaching dorsum; this patch slightly constricted at base, the inner edge being first concave, then broadly convex; another slight constriction below end, which is slightly convex; posterior edge convex in middle; wing before patch and along dorsum densely strigulated, elsewhere hardly strigulated; base of costa with three black dots; subapical patch elongate, broadly connected with more than median third of termen; two large oblique spots on costa before apex, anterior with lower half lead-coloured, posterior apical; costa before these spots with five small oblique marks, alternating with minute dots; two small black jots below costa beyond middle; a couple of more continuous dark lines preceding edges of markings. Cilia along upper two thirds blackish with a whitish basal line, along tornal third cilia pale ochreous with three suffused pale fuscous bars. Underside with a central androconial black patch.

Hind wing greyish-bronze, semipellucant, but less than in *S. atrifracta*, centre with blackish androconial patch, androconia less hair-like, more of a clavate shape. Cilia dark fuscous with a pale basal line. Underside simple, no trace of androconia.

Male genitalia. As described for the genus. Tegumen gradually tapering along upper half, with two pairs of strongly haired socii. Gnathos represented by a weak transverse membrane with an indefinite upper edge. Valva densely haired and bristled, lower part and series of cucullus bristles longer and weaker than in *S. atrifracta* spec. nov.

Solomon Is., Guadalcanal Island, Honiara, 4-10.x.1953, Rennell Island Expedition BM 1953 (J. D. Bradley), 1 ♂, paratype, genit. slide 6362.

Superficially this species slightly resembles *Statherotis ancosema* Meyrick, but actually belongs to a distinct genus.

***Statheromeris semaeophora* spec. nov.**

(fig. 268)

♂ 13 mm. Head grey. Palpus ashy-grey, terminal segment moderate, obtuse, darker grey. Thorax white, anterior fourth dark fuscous. Posterior tibia slender,

normal, with closely appressed smooth scales; white; pencil from base cream-coloured, slender, under  $1/2$ . Abdomen pale grey.

Fore wing suboval-truncate, moderately dilated, rather broad, costa rather curved anteriorly, less curved posteriorly, apex obtusely rectangular, termen straight, hardly convex above, rounded beneath. White, towards costa posteriorly slightly suffused with pink, sparsely strewn and dotted with fuscous, dorsal half moderately marbled with fuscous; markings dark fuscous. Base of costa with four short dark transverse marks; posterior  $2/3$  of costa with a narrow dark fuscous streak gradually dilated so as to occupy apex and upper fourth of termen; this streak cut by seven pairs of silvery-white transverse costal marks, eighth mark, a single marginal line along upper  $1/4$  of termen from just below apex; a broad, well-defined curved band from second fifth of costa running obliquely downwards to middle of wing, thence upwards, towards apex, gradually narrowed and constricted beyond cell, so forming a longitudinal clavate posterior oblong extremity before apex; a moderate obliquely triangular spot on termen below middle directed towards, but not touching, end of preceding clavate mark; a series of irregular suffused marks along dorsum. Cilia whitish, with a few dark bars on middle of termen, except on base and a slender dark mark above apex. Underside with a large androconial patch in centre, rather thinly scaled, except a dark longitudinal streak.

Hind wing dark blackish-fuscous, with a golden gloss, semipellucant, thinly scaled, scales forming fine transverse striation (bases of scales transparent), an irregular agglomeration of androconial scales along veins, with naked interneural patches forming an ill-defined central androconial patch. Cilia (imperfect) fuscous, with a pale basal line and a darker subbasal band.

Male genitalia. Resembling those of *Statheromeris atrifracta* spec. nov., but with a more rounded top of tegumen, a more slender and longer socius, a broader, band-like gnathos, dilated in middle triangularly, with a projecting, slender point. Valva very similar, but slightly narrower, especially the top of cucullus,  $Sp_1$  (on pulvinus) more extended but less dense. Aedeagus longer and narrower.

Bali Id., 1896 (Doherty), 1 ♂, holotype, genit. slide 7803 (BM). Closely related to *S. atrifracta* spec. nov., from the Arfak Mts., N. New Guinea.

#### **Phaulacantha gen. nov.**

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna in male simple (microscopically ciliated). Palpus rather long, curved and ascending, not appressed to face, thickened with short roughish scales but not dilated posteriorly, terminal segment short, obtuse, porrected. Thorax with a strong posterior tuft. Posterior tibia normally scaled, without pencil, scales rather long and roughish above and beneath.

Fore wing oblong, suboval-truncate, costa rather curved throughout, apex obtuse, termen hardly concave above, rounded beneath, little oblique. Vein 2 from  $3/4$ , 3

from angle, gently approximated to 4 at margin, 4 closer to 3, 7 separate, to termen, 7-9 tolerably equidistant, 8 from angle, 11 from middle, upper parting vein from close before 10 to below base of 7, cell very narrow, lower parting vein ill-defined, apparently from towards base to between 4 and 5.

Hind wing with cubital pecten, 2 from before  $2/3$ , 3 from angle, closely approximated to 4 at base, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather broad, high. Uncus broad, rounded, bilobed, apex notched, bristly on each side of notch. Socius rather large, a pending, oval lobe. Gnathos indefinite. Valva moderate along basal half, cucullus moderate, clavate, top rounded.  $Spc_1$  a round patch of slender spines, cucullus bristles, large spines of diverse size adjacent to  $Spc_1$ ;  $Spc_2$  a small group of weak fine bristles.

Female genitalia. Ninth segment moderately elongate, sclerotized. Sterigma densely aciculate, a moderate ring-like cup, lamella antevaginalis notched in front, lamella postvaginalis extended above into a slender funnel open in front, upper angles extended laterad. Colliculum short, bivalval. Signa, two large pectinations.

Type-species, *Argyroploce catharostoma* Meyrick (Java).

The eucosmine uncus and socii point to a relationship with *Sycacantha* Diakonoff, but the present genus is of a more simplified type. The male genitalia resemble those of the Palaearctic genus *Cymolomia* Lederer closely, except for the presence of a gnathos in that genus; the similarity must be only incidental, though, because *Cymolomia* has one small cornute signum.

#### Key to the species of *Phaulacantha*

1. Fore wing with a pale ochreous spot above middle of dorsum. Hind wing pale fuscous-grey, apex hardly darkened . . . . . *catharostoma*
- Fore wing without a pale ochreous subdorsal spot . . . . . 2
2. Larger species, 19 mm. Fore wing with dark colouring reaching lower half of terminal edge. Hind wing unicolorous light fuscous-grey (Formosa) . . . *acyclica*
- Smaller species, 14 mm. Fore wing with dark colouring not quite reaching terminal edge. Hind wing pale grey, apical fourth dark fuscous-grey (Borneo) . . . *metamelas*

#### ***Phaulacantha catharostoma* (Meyrick, 1921) comb. nov.**

(figs. 264, 266, 333)

*Argyroploce catharostoma* Meyrick, 1921: 157 (♂, Java, Assam). — Clarke, 1955: 77.

Distribution. West Java. Assam: Khasis.

Java, "W. Java, Preanger, 5000 vt., Sythoff, ♂" (in Snellen's hand), "M 96" (in Meyrick's hand), "TYPE" (pale blue label), holotype, ♂, genit. slide 3416; 1 ♂, with

a similar label. West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, vii.1949 (A. M. Neervoort), 2 ♂. The same locality, 18.xii.1940; viii.1950 (A. Diakonoff), 2 ♂. In total 6 ♂ (LM).

Assam, Khasi Hills, x.1906, 1 ♂, genit. slide 6456 (Meyrick Coll., BM). Assam, Margherita, 1889 (Doherty, Walsingham Collection 40068), "*Antithesia tegulana* Wlsm. Typ. ♂" (in Durrant's hand?) (BM). Indeed conspecific with the Javanese material, as Meyrick thought. The only very slight discrepancies which I am able to find are some of the bristles at the base of cucullus and the median dilatation of the valva being slightly larger in the holotype. That the uncus is slightly less constricted is due to less flattened position in the mount of the holotype. "*A. tegulana*" apparently is a manuscript name.

The specimen from Formosa, however, also attributed by Meyrick to the present species, appears to be distinct and is described below.

*P. catharostoma* (Meyrick) is easily recognizable: ground colour dark purplish-fuscous, costa with two pairs of white marks at 1/3, together forming a pale leaden-grey spot; basal patch, except on costa, strongly marbled with light leaden-grey spots; a pale ochreous spot on middle of dorsum, followed by a larger irregular patch of white and pale grey marbling, together with this forming a large subtriangular patch reaching to below costa and connected with a snow-white oblique spot filling out apex; a moderate leaden-grey erect mark in tornus. Tegulae with whitish spots. Anal tuft in male white, abdomen deep purple.

♀ 19 mm, apallotype. Very similar to the male type, but with the silvery white longitudinal streak below apex much obscured with grey and narrower, the large preterminal patch consequently being not oval as in male, but larger, subtriangular (broadest above). Genit. slide 7816.

Hind wing darker grey.

Male and female genitalia as described with the genus.

The apallotype is labelled thus: "Assam, Khasias Hills, Doherty, 1898-9, Wlsm. Coll. BM 1910-427", my identification labels and "gen. no. 7816", "BM Genitalia slide No. 16848 ♀".

#### *Phaulacantha acyclica* spec. nov.

(fig. 267)

♂ 19 mm. Very similar to *P. catharostoma* (Meyrick). Fore wing more dilated, leaden spot on 1/3 of costa much broader; dorsal spot marbled with leaden-grey throughout, also on costa; pale ochreous dorsal spot absent, replaced by a vertical streak of ground colour; apical spot much smaller, wedge-shaped, suffused towards costa with pale yellow, on costa with fuscous. Hind wing darker fuscous-bronze.

Male genitalia. Very similar to those of *P. metamelas* spec. nov., but differing as follows. Uncus smaller, less voluminous, its lobes less rounded. Socius shorter, smaller, less voluminous. Valva shorter, especially the sacculus half, spines at the base of cucullus much finer and denser than in *metamelas*.



Formosa, Kyuhabon, x.1926, S. I[ssiki], "*Argyroploce catharostoma* Meyr., det., ex Meyrick Coll.", 1 ♂, holotype, genit. slide 6457 (BM).

Closely allied to *P. metamelas* spec. nov.

***Phaulacantha metamelas* spec. nov.**

(fig. 263)

♂ 14 mm. Head and thorax dark fuscous (rather rubbed), face paler. Palpus little dilated, ascending; light grey mixed with darker grey, terminal segment darker grey. Abdomen dark fuscous, venter whitish, anal tuft snow-white.

Fore wing oblong-truncate, rather broad, moderately, dilated, costa little curved (apex damaged). Pale grey, marbled with darker grey, with pale blue submetallic transverse bands on costa, visible only in certain lights, markings blackish-fuscous. Basal patch to 1/3, its costal edge in middle with a pale metallic-blue transverse small spot, another similar spot on costa beyond patch, both ill-defined; this patch marbled in middle by paler, its edge below fold ill-defined; a cloudy dark round spot in centre of wing, connected with 3/5 of costa and extended as a subcostal moderate fascia running towards upper part of termen, but bending before this to tornus; a row of black dots along termen (other markings rubbed and illegible).

Hind wing light fuscous-grey, semipellucet, apical fourth blackish-fuscous, edge ill-defined, this colour fading out towards tornus. Cilia light fuscous-grey, with a pale basal line and a darker subbasal fascia.

Male genitalia resemble those of the preceding species. Tegumen high, slightly dilated upwards. Uncus larger, more porrect, stronger constricted at base. Valva similar, but  $Spc_1$  distinctly upon an elevated tumescence and with a patch of small hairs at extreme ventral margin of sacculus opposite this tumescence; bristling of valva in its middle less dense.

East Borneo, Tabang, Bengen River, 125 m, 20.xi.1956 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 6350 (LM). The unique specimen is, unfortunately, rather damaged, but recognizable and the genitalia are distinct.

***Dactylioglypha* gen. nov.**

Head with appressed scales, a flat, porrected tuft between antennae. Ocellus posterior. Proboscis vestigial. Palpus moderate, subascending, moderately thickened with scales roughish along lower edge and at apex above, terminal segment very short, or moderate. Thorax without crest. Posterior tibia and abdomen normal in male.

Fore wing without a fold, smooth, rather narrow, elongate-suboval, apex sub-obtuse, termen usually sinuate. Often basal patch reduced on costal half, transverse fascia broad, traversed by three digitoid horizontal streaks, an oblique terminal fasciate spot present; sometimes markings different (*tonica*). Vein 2 from 2/3, strongly sinuate posteriorly, 3 from angle, sinuate and curved upwards, veins 3-5 in

male approximated posteriorly, sometimes also vein 6 so approximated, or 5-7 tolerably parallel; in female only 3-4 slightly approximated posteriorly, 7 separate, to termen, 7-9 closely approximated at base, 11 from middle of cell; upper parting vein from close before 10 to between bases of 6 and 7, lower parting vein from towards base to above base of 4.

Hind wing with a cubital pecten, semioval, over 1. Vein 2 from beyond 2/3, 3 and 4 connate, seldom rather short-stalked, 5 closely approximated at base, 6 and 7 closely approximated towards base; in the male of the type-species, veins 6 and 7 are first converging then diverging, 6 curved downwards and continued to base of wing, forming a "parting vein" (median vein).

Male genitalia. Tegumen high. Uncus hooked, clavate, rather long, top strongly bristled and rounded. Socius slender, free, porrected, sparsely haired. Subscaphium strongly developed, porrect, soldered with tuba analis and forming a beaked large structure, in middle connected by a long, also rigid band-like diaphragma with anellus, which is less sclerotized. Valva slender, of diverse shape, more or less curved (*Dudua* type). Spc<sub>1</sub> wart-like, Spc<sub>2</sub> formed as a simple patch.

Female genitalia. Eighth sternite moderately sclerotized, sternite 7 emarginate. Ostium moderate, obliquely funicular, towards lamella postvaginalis often narrowed, edges aciculate, laterally thickened and prominent. Colliculum moderate. Signa, two equal or subequal moderately large pectinations.

Type-species, *Dactylioglypha avita* spec. nov. (East Papuan Is.).

A natural group with strongly specialized diaphragma structures and unusual uncus and socii. The valva is of a simple type resembling that of *Dudua*. The genus is intermediate between *Statherotoxys* and *Asaphistis*, indicating an off-shoot of the *Statherotis* stock, with a peculiar strong, apparently secondary development of the gnathos).

The characteristic pattern of the transverse fascia of the fore wing being traversed by three finger-shaped and curved streaks is not confined to the present genus but is also present in *Megalota* Diakonoff, which, judging from the genitalia, belongs to a quite different group of Olethreutini. Also some South African and Madagascan species of *Eccopsis* relationship which is again an altogether different group of the tribe, possess strikingly similar markings. Apparently this is a case of parallelism, the traversed transverse fascia with the terminal mark belonging to some basal pattern of forewing markings in the present tribe, in the same way as e.g., a combination of a basal patch, a central fascia, and a costal patch is characteristic for the entire sub-family Tortricinae.

Key to the species of *Dactylioglypha*

- 1. Fore wing with inwards-oblique dark and light transverse fasciae, converging on 5/6 of costa . . . . . 2
- Fore wing without such fasciae . . . . . 3

2. Fore wing with converging fasciae dark fuscous, pale lines whitish strongly contrasting; a horizontal well-defined sinuate strigula from middle of costa . . . *avita*  
 — Fore wing with dark and pale lines less contrasting, more suffused; horizontal strigula below costa posteriorly, absent . . . . . *tonica*
3. Fore wing with a transverse dark mark at 1/4 of costa and a larger inwards-oblique mark on 3/4 of dorsum . . . . . *mimas*  
 — Fore wing with a broad postmedian vertical transverse fascia . . . . . 4
4. Terminal fasciate mark thick, rather straight. Valva gradually curved without prominence . . . . . *zonata*  
 — This mark slender, sinuate. Valva bent, with a distinct prominence at base of cucullus . . . . . *pallens*

***Dactylioglypha tonica* (Meyrick, 1909) comb. nov.**

(figs. 278, 282)

*Argyroploce tonica* Meyrick, 1909: 606 (Ceylon, Assam). — Clarke, 1955: 311.  
*Olethreutes tonica*; Clarke, 1958: 556, pl. 277 figs. 1-1a (lectotype select; genit. fig.).  
*Lipsotelus tonica*; Issiki in Esaki, 1957: 68, no. 325, pl. 11 fig. 325.

Distribution. Ceylon. Assam: Khasis. Japan.

West Java, Mts. Gede-Panggrango, Tjisaroea Zuid Estate, 26.v.1947 (A. Diakonoff), 1 ♂, genit. slide 5955. East Java, Tengger Mts., Nongkodjadjar, 1300 m, 30.iv.1940 (A. M. R. Wegner), 1 ♀ (LM).

Malay Peninsula, Perak, 1890 (Doherty, Walsingham Coll. 40976), 1 ♂, genit. slide 6508 (BM).

Ceylon, Peradeniya, 6.iii.1914 (D. Rutherford), "*Argyroploce tonica* Meyr., no. 698", 1 ♀, genit. slide 6510 (BM). "Peradeniya, x.1910", 1 ♂, genit. slide 7989 (BM).

Assam, Margherita (Doherty, Walsingham Coll. 40029), 1 ♂, genit. slide 6509 (BM).

Japan, Taihoku, 6.xi.1923 (S. Issiki), 1 ♀, genit. slide 6507 (BM).

The species is easily recognizable by its characteristic markings.

Fore wing fuscous, with a deep blackish-purple triangular apical spot; about 5/6 of costa, just before the apical spot, distinctly prominent, whitish-marbled; a sheaf of whitish lines and fasciae from about median third of dorsum converging at that point of costa, thence a few of them recurved before apex and ending on upper third of termen. Cilia rather conspicuously tawny-orangeish.

Hind wing rather dark fuscous, paler on basal half with darker veins.

Male genitalia. Uncus long. Socius also long, porrect, top distinctly curved upwards. Henion + subscaepium very long, projecting far beyond socii, upper point broadly rounded. Valva moderately bent in middle, Spc<sub>1</sub>, a simple tumescence, Spc<sub>2</sub>, a moderate transverse ridge. Cucullus bristles forming a well-defined patch.

Female genitalia. Sterigma, a rounded tumescence with reticulate surface and a

broad median split, closed below and so forming a pear-shaped ostium-bursae; lateral lobes, so distinct in other species, are represented by triangular subobtuse prominences only.

***Dactyloglypha avita* spec. nov.**

(figs. 279, 283)

♂ ♀ 15 mm. Head and palpus pale fuscous, vertex darker fuscous with pale tips of scales. Thorax dark fuscous-grey, strewn with whitish. Posterior tibia grey, slightly thickened with smoothly appressed scales along basal half, a slender white pencil from base internally, reaching middle of tibia. Abdomen dark fuscous-grey.

Fore wing oblong-triangular, gradually dilated, costa almost straight to 5/6, a trifle concave in middle, curved before apex, apex obtusely rectangular, termen sinuate below apex, rounded-prominent along lower 3/4. Light leaden-grey, with a moderate gloss, slightly dusted with white, edges of markings white; markings fuscous-grey, dusted with whitish. Costa suffused with fuscous-grey, along anterior part with about eight whitish oblique lines; an oblique blackish-fuscous spot on middle of costa, below extended as a narrowed flagelliform horizontal subcostal stripe to 5/6; costa beyond this with five white strigulae, three anterior ones paired, apex blackish-fuscous; basal patch indicated by two equal horizontal stripes, one straight, subcostal, another broader, pointed, gently sinuate, slightly rising from dorsum beyond base; two sinuate, obliquely transverse fasciae: first from dorsum before middle, second from end of dorsum, converging at 3/4 of wing above its middle, so as to form a long point, continued below 5/6 of costa, thence abruptly angulate, to termen below apex, slightly extended along margin; both fasciae moderately dilated in middle, narrowed before their junction, a line from here to 2/3 of dorsum, parting space between fasciae, a zigzag dark mark before middle of termen, some four small dark marginal marks below this. Cilia dark fuscous with a blackish basal band edged on both sides with a minute pale line.

Hind wing deep purple, on basal half becoming paler purplish-grey. Cilia pale fuscous-grey, a pale basal line and a narrow purple subbasal band.

Male genitalia. Very similar to those of *D. tonica*, chiefly differing by the valva: sacculus with  $Spc_1$  and  $Spc_2$  both upon an elevated knob-like process (in *tonica*,  $Spc_2$  flat); cucullus with a distinctly prominent base (in *tonica* not prominent).

Female genitalia. More distinct from *D. tonica* than are the males. Sterigma much higher, extended vertically. Ostium, a high cup with excised ventral edge and sides extended upwards, then angulate downwards, sides triangularly projecting. Signa, two moderate pectinations, teeth slightly clavate and truncate.

East Papuan Is., Louisiades, St. Aignan Id., 1897 (Meek), 1 ♂, holotype, genit. slide 7990. New Guinea, Milne Bay (A. S. Meek), 1 ♀, allotype, genit. slide 7991. d'Entrecasteaux Is., Goodenough Id., 1897 (Meek, Walsingham Coll. 18166), 1 ♀, paratype (BM). Closely allied with *D. tonica* (Meyrick) but slightly larger and marked more distinctly. The female is quite distinct.

***Dactyloglypha mimas* spec. nov.**

(figs. 273-277)

♂ 15 mm. Head dark fuscous. Palpus white, basal segment, upper edge and an oblique apical streak of the median, and entire apical segment blackish-fuscous with a bright blue hue in certain lights. Thorax dull dark fuscous, finely dusted with paler, collar and a median transverse band not dusted, fuscous-grey, slightly glossy. Abdomen dark fuscous, venter whitish. Posterior tibia dull pale grey, on the inner side glossy white, with a short flat pale grey pencil from base.

Fore wing rather narrow, oblong-subtruncate. Anterior half of wing dark grey; basal patch to  $\frac{1}{3}$ , edge moderately angulate in middle, angulation truncate; this patch indicated by an irregular blackish large basal spot and by the broad posterior dark fuscous edge consisting of an oblique-triangular spot on  $\frac{1}{4}$  of costa, an irregularly-transverse spot in centre and small transverse strigulae on dorsum; posterior  $\frac{3}{4}$  of costa dark fuscous with seven contrasting white marks, anterior five short and indistinctly double, posterior two single, longer, crescentic; transverse fascia formed of four separate spots; an oblong-oval longitudinal spot below costa, light tawny with three transverse black crescents and with a long slender appendix, dark, curved downwards halfway between cell and termen; other spots dark fuscous: an elongate-semi-oval longitudinal spot in disc, a larger subquadrate patch on middle of dorsum, with angular top touching anterior end of preceding, and a smaller irregular spot on end of dorsum and in tornus; space between basal patch and parts of transverse fascia and between these parts entirely filled out with dark leaden-grey, except narrow whitish edges to markings; space beyond basal patch parted by a fuscous slender line rising obliquely from edge of basal patch just above dorsum, angulate above middle of disc, dilated and interrupted above this; a subquadrate large patch of whitish-grey ground colour filling out most of the space between cell and termen, with a leaden grey spot before lower third of termen, edged above by a narrow brown line; a dark fuscous marginal blotch from below base along upper half of termen; a conspicuous light ochreous streak from below  $\frac{3}{5}$  of costa to before apex, edged above and below by pale blue lines originating from costal white markings; apex with a brown spot edged with white below. Cilia ochreous, brownish opposite tornus, basal half brown along upper part of termen, a dark bar opposite brown line above leaden subtornal spot; apical half of cilia blackish opposite dark terminal patch.

Hind wing dark purplish-fuscous, becoming paler and semipelluculent towards middle and dorsum; a small oval patch of jet-black androconial scales on and around base of vein 2. Cilia ochreous, becoming brighter towards angle, becoming tawny, then brown, towards tornus, throughout with a fuscous-purplish subbasal band.

♀ 15 mm. Closely resembling the male, except for the following particulars. Edge of basal patch more defined, dorsal part larger, connected with central spot; basal part of transverse fascia broader, anterior spot larger, almost circular, posterior small, reticulate; subcostal portion of this fascia evenly brown, more fasciate, continued as a

suffusion to terminal patch; pale posterior area partly obscured by brownish suffusion and dark fuscous strigulae. Hind wing without dark patch in disc. Otherwise as male.

Paratype, ♀ has markings exactly similar to those of the holotype, but the entire wing is strewn with fine yellow-ochreous points (tips of scales), making dark markings less contrasting.

Male genitalia. Tegumen with a dilated top. Uncus long and curved, apical spine brush very dense, compressed and drooping. Socius, a short and high lobe, subquadrate. Henion and subscaphium weak, membranous. Tuba analis not extended, triangular and pointed in lateral aspect. Valva rather straight, broad at base, narrowed beyond middle; cucullus with numerous large spines along margin; cucullus bristles limited to a marginal group.  $Spc_1$  not modified,  $Spc_2$ , a small rounded tumescence.

Female genitalia. Sterigma well-developed, with a large trapezoidal lamella postvaginalis, with projecting lateral lobes. Ostium small, lamella antevaginalis absent. Colliculum moderate, less than twice height of sterigma: two slender sclerites. Signa, two moderate groups of flat teeth.

Malay Peninsula, Perak, Padang Rengas, low country, 1891 (Doherty), 1 ♂, holotype, genit. slide 6017 (Walsingham Coll. 40801); 1 ♀, allotype, genit. slide 6018 (Walsingham Coll. 40805); 2 ♀, paratypes (Walsingham Coll. 40804, 41121), genit. slide 7670 (BM, LM).

North Borneo, Kuching, Matang Road, 7.ii.1911, 1 ♀, paratype, genit. slide 5826 (LM).

### *Dactylioglypha zonata* spec. nov.

(figs. 272, 334)

♂ 14 mm. Head and thorax dark fuscous mixed with paler fuscous. Palpus dark fuscous, lower edge narrowly creamy, upper edge creamy with larger creamy spots, on top of basal segment and in middle and on top of median segment. Abdomen dark fuscous-grey, anal tuft dark fuscous. (Posterior legs missing).

Fore wing oblong-subtriangular, costa gently curved along basal half, straight beyond, bent and slightly prominent before apex, curved again beyond prominence, apex obtusely pointed, termen sinuate, almost vertical. Pale creamy, markings blackish-fuscous and brown, spaces between markings, except narrow edges to them, filled out with light purplish-grey. Basal patch represented by a large wedge-shaped patch, inwards-oblique, acute point from below  $1/3$  of costa, base along  $1/3$  of dorsum; costa with a moderate semioval oblique spot beyond  $1/5$ , preceded and followed by some small dark marks, extreme costal edge between these with white pairs of dots; irregular horizontal marks between semioval spot and basal patch; transverse fascia broad, little oblique, moderately dilated downwards, fuscous, strewn with paler, narrowly dark-edged, dark fuscous on costa; this fascia traversed by three digitoid streaks originating from space between basal patch of fascia, light grey-

purplish, strewn along their mid line by fuscous and pale-edged; first streak across upper third of fascia, semioval, upcurved; second streak narrower, submedian, more curved and joined to the first at the ends; a third, shorter streak from costa on middle of fascia, to its posterior edge below costa, narrowed and continued below costa posteriorly, curving down to termen below apex; two white points on costal edge, marking edges at origin of this streak; another more approximated pair of white points on prominence of costa, followed by two single white oblique lines, posterior of these almost vertical, crescentic; costa between these marks, and a spot in apex, dark fuscous, a white marginal point just below apex; a little curved brownish fasciate terminal spot, marked with dark fuscous lines, rising from upper  $1/3$  of termen towards  $2/3$  of costa, but not reaching transverse fascia; a brown line from costa before penultimate white costal line, curved downwards before apex to termen, thence marginal, to middle of termen; a slender curved horizontal line from opposite end of preceding. Cilia brownish and fuscous, with pale tips, a pale basal and a dark sub-basal line.

Hind wing dark brown-bronze at apex, becoming paler, thinner scaled towards base and semipellucant at base. Cilia fuscous with a dark bronze-brown subbasal band.

Male genitalia. Uncus with a thick base, less clavate. Socius curved upwards. Valva gradually curved, not bent, base of cucullus hardly thickened.  $Sp_1$  on a moderate knob.  $Sp_2$  in disc.

West Java, Mts. Gede-Panggrango, Tjisaroea Zuid Estate, iv.1950 (Liem Swie Liong), 1 ♂, holotype, genit. slide 5813 (LM).

***Dactylioglypha pallens* spec. nov.**

(fig. 271)

♂ 12.5 mm. Head light fuscous. Palpus pointed, light fuscous, median segment with a blackish subapical ring. Thorax dark fuscous, tegulae and apex light fuscous. Abdomen fuscous, base and anal tuft pale greyish-fuscous, venter paler.

Fore wing oblong-subtriangular, apex obtusely pointed, termen gently concave above, rounded beneath. Pale fuscous, with a purplish gloss, spaces between markings narrowly creamy-edged, markings fuscous. Basal patch obliquely wedge-shaped, acute apex reaching beyond  $1/3$  of wing; some dark markings between patch and costa; a rather small oblique-triangular spot just before  $1/4$  of costa preceded and followed by a smaller dot, each of these flanked by dark dots; transverse fascia broad, dilated on lower half, considerably constricted above middle, slightly narrowed again on dorsum; anterior edge gradually sinuate, continuous, posterior edge with a rising slender branch, merging into top of terminal fasciate mark and forming together with this a slender arch; transverse fascia cut by the usual three digitoid streaks which are broader than in *D. zonata* and more acute, but otherwise of about the same shape; anterior half of costal part of fascia and the horizontal, central part forming fuscous-

black marks, upper obliquely wedge-shaped, lower elongate-oval; three creamy oblique lines on costa before apex; apex dark, without white point; terminal mark slender, slightly sinuate, from upper  $1/4$  of termen; some small dark vertical strigulae in tornus. Cilia (imperfect) creamy, more or less infuscated, a pale basal and a darker subbasal line.

Hind wing light brownish-bronze, apical third dark, basal third semipellucid. Cilia creamy-fuscous, with a broad subbasal dark fuscous band.

Male genitalia. Uncus more clavate than in *zonata*: top large, rounded. Socius slender, straight. Valva bent below middle, not gradually curved, base of cucullus distinctly prominent,  $Spc_1$  wart smaller.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 18.xii.1940 (A. Diakonoff), 1 ♂, holotype, genit. slide 4955 (LM). Closely allied to the preceding, but paler, with different markings and genitalia.

#### *Statherotoxys* gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna slightly thickened in male, subserrulate, shortly ciliate, ciliations under  $1/2$ . Palpus rather long and slender, curved and ascending, basal segment roughish, median segment long, gradually curved, not dilated, roughish along lower edge and at apex, terminal segment porrect, short, obtuse. Thorax with a slight crest? (rubbed). Posterior tibia simple or strongly thickened with dense scales at the inner side forming a long projecting fringe above and a thick brush of modified broad scales below, in both cases a slender pencil from base above, appressed to inner side; posterior tarsus normal.

Fore wing subtruncate, rather broad, costa little curved, apex obtuse. Vein 2 from beyond  $2/3$ , 3 from angle, 3-5 well separated and about equidistant, 7 separate, to termen, 8 from upper angle of cell, 9 close to 8, 10 from beyond middle distance 9-11, 11 from slightly before middle, chorda from halfway between 10 and 11 to base of 7, median branch to between bases of 4 and 5.

Hind wing semioval, slightly over 1 or  $1\ 1/2$ , with a cubital pecten. Vein 2 from middle, 3 and 4 connate from angle, 5 moderately approximated at base, 6 and 7 approximated but still rather distant towards base; dorsum normal or with a downwards roll and with thickened, modified cilia.

Male genitalia. Tegumen high. Uncus well-developed, slender and hooked, top sometimes truncate, socii rather large, bristly and porrect. Gnathos with arms strong along basal half, forming together a slender bow medially, in middle with a thin but distinctly sclerotized upper rising single sclerite, being the subscaaphium, diversely shaped, and with a diversely shaped descending henion. Valva slender and simply clavate, without the ventral prominence;  $Spc_1$ , a patch of weak hairs, extended along inner edge of sacculus. Cucullus spines in a dense patch. Aedeagus moderate, anellus extended and cup-shaped.



Female genitalia unknown.

Type-species, *Statherotoxys hypochrysa* spec. nov. (N. Moluccan Is.).

An interesting intermediate form, being a link between the central *Statherotis* stock and *Dactyloglypha* gen. nov. (cf. below) which has the characteristic pectinate signa, but slender valvae and the peculiar, elaborate gnathos with a subscaphium and a huge henion and with further peculiar differences.

The species are astonishingly similar to *Statherotis* species and show the same specific differences of the male scent organs: while the type-species possesses brushy hind legs and the androconial spot on the hind wing upper side, making it quite similar to *Statherotis amoebaea* (Lower) (except for the slight androconial spot in *hypochrysa*), *Statherotoxys eurydelta* spec. nov. has normal legs and is very similar to *Statherotis leucaspis* (Meyrick).

#### Key to the species of *Statherotoxys*

1. Fore wing with a faint paler costal spot . . . . . 2
- Fore wing with a conspicuous snow-white costal spot . . . . . 3
2. Costal spot pinkish, darker edged and parted through middle by a subhorizontal streak from middle of costa. . . . . *acrorhaga*
- Costal spot light grey, more or less centred with fuscous and with white costal marks. Uncus top furcate . . . . . *latens*
3. Costal spot extending from 1/5 to 4/5 . . . . . *niphophora*
- Costal spot less extended . . . . . 4
4. Hind wing with a pale ochreous patch of smooth modified scent scales along tornus . . . . . *hypochrysa*
- Hind wing in male without such field, if present, concolorous and inconspicuous . . . . . 5
5. Costal patch exceeding 1/3 of wing breadth; hind wing with apex rounded . . . . . *eurydelta*
- Costal patch not exceeding 1/3 of wing breadth; hind wing in male pointed (in *pudica* tips damaged) . . . . . 6
6. Ostium U-shaped, lower end rounded, upper angles narrow (cf. fig. 295) . . . . . *hedraea*
- Ostium V-shaped, lower end narrow and pointed, upper angles dilated (cf. fig. 398) . . . . . *pudica*

#### *Statherotoxys eurydelta* spec. nov.

(fig. 281)

♂ 14.5 mm. Head and palpus dark brown-fuscous, posterior part of vertex and collar paler, brownish. Thorax fuscous-brown with purplish reflections. Abdomen light ochreous, tip whitish. Posterior tibia pale ochreous.

Fore wing oblong, suboval-truncate, costa gently curved anteriorly, rather abruptly more curved along posterior fifth, apex obtuse, termen straight, short

above, rounded beneath. Purplish-fuscous suffused with ferruginous-brown. An elongate-triangular white costal patch, extending from beyond  $1/3$  to beyond  $5/6$  of costa, top hardly exceeding upper edge of cell, with a minute notch. Along costal edge with some six small black almost marginal linear marks; this patch edged below throughout with warm ferruginous-brown suffusion; apparently some pale ochreous spots along termen and in tornus. Cilia fuscous (rubbed).

Hind wing smooth-scaled dull greyish-fuscous, apex deeper fuscous and less dull, this area well-defined by the course of vein 6 and upper part of 8 continued to cell; edge of wing especially in apex mixed with pale ochreous. Cilia pale ochreous.

Male genitalia. Uncus slender and long, longer than in preceding, top slightly dilated and emarginate. Gnathos, a triangular central plate with two short dilated arms, above giving rise to a cylindrical tuba analis with a round opening below top. Below gnathos with a strongly narrowed henion. Valva slender, cucullus bristles forming a large rounded-transverse patch, cucullus proper more clavate than in *S. hypochrysa*, spiny along lower edge, more constricted, but less densely clothed with spines and bristles. Aedeagus much broader.

Solomon Is., Shortlands Is. (C. Ribbe), 1 ♂, holotype, genit. slide 6413. (Walsingham Coll. 73203) (BM). This species looks exactly similar to *Statherotis leucaspsis* (Meyrick).

### ***Statherotoxys hypochrysa* spec. nov.**

(figs. 284, 335)

♂ 19 mm. Head light tawny, forehead dark fuscous-purplish, face paler. Palpus pale fuscous-grey, slightly strewn with dark fuscous, apex of median segment paler. Thorax pale greyish-tawny (rubbed). Abdomen dark fuscous, posterior half silvery-greyish. Posterior tibia pale ochreous-grey, glossy, thick brush of modified broad scales along basal half of tibia below blackish-purple.

Fore wing distinctly dilated, subtruncate (apex damaged right and left), costa considerably curved at base, gently concave beyond middle, termen broadly rounded. Rather light purple with a silky gloss; base of costal edge suffused with dull blackish; a large white depressed triangular costal spot, from beyond  $1/4$  to approximately  $3/4$ , with faint oblique purplish lines across costal edge (partly rubbed), top of triangle truncate, only slightly exceeding upper edge of cell; darker purple broad edge to costal spot rather abruptly dilated in centre of wing (well before top of costal spot) and apparently descending beyond fold; paler usual area at base and along dorsum ill-defined; ocelloid spot indicated by a slender, wedge-shaped almost erect spot, darkly parted in middle, with acute top rising above vein 7.

Hind wing glossy pale grey-fuscous, a broad dull streak of whitish modified thick scales along lower half of termen, dilated posteriorly, truncate at both ends and well-defined; this streak edged above and anteriorly by dark blackish-fuscous suffusion, extending over dorsum and becoming obliterate towards centre of wing; posterior

third of cell upperside with a round patch of black-purple thinly strewn androconia, extending beyond cell and becoming sparser below. Dorsum with a roll, open on under side. Cilia concolorous around apex, thickened and modified, glossy golden-white along termen, especially thick along the white streak, fuscous-grey along dorsum.

Male genitalia as described with the genus. Uncus moderately long. Tuba analis ill-defined, but forming a voluminous bladder-like structure. Subscaphium and henion apparently narrow (in mount and figure seen in profile). Valva slender, gradually but slightly curved, little clavate, densely spined throughout, especially towards lower edge, the patch of cucullus bristles not isolated. Aedeagus narrowed, rather slender.

Female unknown.

Northern Moluccan Is., Ternate Id., Ake Abdas, 1500 m, .ix-5.ix.1951 (native collector), 1 ♂, holotype, genit. slide 2183 (LM). The unique specimen is rather damaged except the very characteristic hind wings and legs which, together with the male genitalia allow of an identification and description. The insect shows a remarkable resemblance with *Statherotis amoebaea* (Lower).

***Statherotoxys acrorhaga* spec. nov.**

(fig. 294)

♀ 17.5 mm. Head purple-fulvous. Antenna deep purple. Palpus much dilated on posterior half, with rather closely appressed scales, basal half of median segment above, whitish, terminal segment moderate, exposed, subobtuse. Thorax purple-fuscous, with a pair of faint darker longitudinal sublateral stripes. Abdomen grey, venter whitish.

The species has a *Statherotis* appearance and is chiefly characterized by a deep purple fore wing with traces of longitudinal darker stripes; posterior 4/5 of costa occupied by a little contrasting, pale pinkish oblong-semioval patch, almost reaching apex and suffusedly edged below with darker purplish; this patch is parted through middle by an almost horizontal purplish rather suffused streak, its extremities gently curved upwards: to middle of costa and to apex, respectively; a deep purple suffused spot beyond base of dorsum; ocelloid spot round, pinkish, somewhat suffused (or rubbed?), with deep leaden-grey suffused horizontal marks; a series of pinkish spots along termen below apex, also mixed with leaden-grey. Cilia dark fuscous with a blackish basal third and a fine whitish line around tornus; cilia in tornus paler fuscous.

Hind wing subpellucent, dark fuscous, transversely striated (tips of scales dark), apical third darker and more opaque.

Cilia fuscous, with a pale basal line and a dark fuscous subbasal band.

Female genitalia. Lamella postvaginalis moderately constricted, its edge and that of ostium little thickened, coarsely aciculate; two lateral patches of denser acicula

above ostium. Colliculum slender, straight. Signa, two short pectinations, teeth rather rounded.

Ceylon, Maskeliya, 5.04 (Pole), holotype, ♀, genit. slide 6460 (Meyrick Coll., BM).

Rather resembling *Cephalophyes porphyrea* spec. nov. Very characteristic by the large, narrow pale costal patch, parted in two.

**Statherotoxys latens** spec. nov.

(fig. 423)

♂ 17 mm. Head and thorax grey-fuscous. Palpus whitish on basal half, dark grey on apical half. Posterior tibia with a slender stiff orange pencil from base, strongly dilated with long brushy scales above and especially below (damaged). Abdomen with basal half fuscous, apical half dark leaden-grey, valva black, edges and lower side white.

Fore wing rather broad, truncate, costa curved throughout, gradually curved anteriorly, rather abruptly curved at apex, apex subrectangular, termen gently sinuate, broadly rounded below. Rather dark fuscous, basal patch paler, greyish, edge angulate but suffused; an oblong-semioval costal spot, from 1/3 to well before apex, a pale grey oblique spot forming anterior edge wedge-shaped, well-defined, followed on costa by a similar fuscous spot, but shorter and truncate; spot beyond this suffused with rather obscure golden-ochreous; costal edge dark fuscous, cut by five double white and distinct transverse marks, rather equal and equidistant, becoming slightly less oblique posteriorly, a sixth mark single, very slender, vertical and subapical; indistinct vertical spot of ground colour representing ocelloid spot rather narrow and edged on both sides by a faint pale grey erected-triangular fold, anterior more oblique, both slightly curved and dark-parted; traces of a grey subcostal line joining ends of white markings and ending by greyish strigula on termen below apex. Cilia fuscous with a white basal line (imperfect).

Hind wing rather dull dark fuscous, becoming slightly paler on basal half, dorsum greyish, with a shallow submarginal gully on upper side. Cilia dark fuscous with a pale basal line (rubbed).

Male genitalia as described with the genus above.

Assam, Khasias, Cherra Punji, v.1895 (Dncstr), 1 ♂, holotype, genit. slide 6243 (BM). Extremely similar to *Cephalophyes porphyrea* spec. nov. from Java, but with surprisingly distinct genitalia. It is out of question that the abdomen might have been exchanged and pasted on again: it proved to be authentic.

**Statherotoxys hedraea** (Meyrick, 1905) comb. nov.

(figs. 279A-B, 295)

*Platypeplus hedraea* Meyrick, 1905: 584 (♂, Ceylon). — Clarke, 1955: 154.

*Olethreutes hedraea*; Clarke, 1958: 515, pl. 256 figs. 3-3b (lectotype ♂ design., genit., wings figured).

Distribution. Ceylon.

A distinct species with ferruginous-orange fore wing, marked with a conspicuous snow-white, oblong-semioval costal spot with acutely narrowed extremities and a slightly oblique, rounded-prominent top; this spot is slightly edged with darker brown suffusion and is narrowly blackish-edged along extreme costal edge, cut by several oblique white strigulae. Cilia orange.

Hind wing brownish or tawny-fuscous, suffused with dark grey along apical third.

Male genitalia. Uncus very slender, curved and sickle-shaped. Socius small. Gnathos a large triangular plate, distinctly sclerotized, with a rising slender point. Henion well-developed, a simple band. Valva slender, cucullus with an eccentrically curved top. Sacculus with a moderate patch of thin hairs; cucullus bristles forming a strong ridge obliquely across lower half of disc; cucullus strongly spined throughout, 3-4 large marginal spines. Aedeagus rather broad, short.

Female genitalia. Sterigma U-shaped, ostium wide, upper tips of the U triangularly dilated, reticulate. Lamella postvaginalis finely aciculate. Colliculum slender, straight and long. Signa, two moderate pectinations, with rather diversely shaped, usually long and a trifle outwards-bent teeth.

India, Assam, Khasis, xi and xii.1906, 2 ♀, genit. slide 8262 (Meyrick Coll.). Margherita, Assam, 1889 (Doherty), 1 ♂, 1 ♀, Walsingham Coll. 40103, 40104. N. Coorg, Dibidi, 27.iii.1907 (Newcome), 1 ♂, genit. slide 8261 (Meyrick Coll.) (BM).

Ceylon, v.1907 (Green), 2 ♀, genit. slides 6445, 6618 (Meyrick Coll.); Maskeliya, vi.1904 (Pole), 2 ♂, 1 ♀, genit. slides 8259 ♂, 8260 ♀ (BM).

Tenasserim, Mergui, 1888 (Doherty), 1 ♂, genit. slide 8263 (Walsingham Coll. 40374) (BM).

### *Statherotoxys niphophora* spec. nov.

(figs. 292-293)

♀ 15 mm. Head deep tawny, appearing almost blackish in certain lights. Antenna brownish, scape deep tawny. Palpus brownish-black. Thorax tawny with some ochreous tinge, posterior part of thorax purplish-fuscous. Abdomen light bronze-fuscous.

Fore wing oblong-subtruncate, moderately dilated, costa curved at base, almost straight in middle, hardly prominent before apex, apex rounded, termen hardly concave above, rounded beneath. Rather bright brown; more than central three-fifths of costa with an elongate narrow-semioval snow-white patch, reaching below upper third of disc, lower edge rectangularly notched beyond middle, concave beyond notch; this patch broadly edged below throughout with a band of deeper cinnamon-brown suffusion, becoming dark brown on costa; costal edge along white patch with three dark brown points, followed by four oblique small streaks, each of the latter alternating with a fine strigula; two shadowy dark vinaceous-brown streaks descending from below costa before apex and diverging, so as to form edges to a large subtriangular ocellus; these streaks slightly dilated on each vein, anterior streak

narrow and ill-defined, posterior gradually narrowed downward, curving outwards to termen above tornus, thence marginal to tornus. These lines include a wedge-shaped, ill-defined and paler-edged patch of leaden-grey suffusion; an equally faint subtriangular spot of glossy light purple above dorsum before ocellus; a pale ochreous narrow marginal line along upper half of termen; veins posteriorly narrowly brown; dorsum slightly infuscated. Cilia light fuscous and tawny, a pale ochreous basal and a fulvous subbasal line.

Hind wing glossy fuscous-bronze, becoming dark brown-bronze towards apex. Cilia concolorous, with a pale basal line and a darker subbasal shade.

Paratype, ♀, with thorax and lower half of fore wing tinged lighter orange-tawny, hind wing darker brown.

Female genitalia. Sterigma omega-shaped, of finely wrinkled structure. Colliculum, a long straight and slender tube formed by a pair of narrow sclerites. Ductus bursae simple. Corpus bursae finely granulate. Signa, fan-shaped groups of long, obtuse, flat teeth.

East Java, Tengger Mts., Nongkodjadjar, at light, 27.ii.1940, 1 ♀, holotype, genit. slide 5811; 8.v.1940, 1 ♀, paratype (A. M. R. Wegner). 2 ♀ (LM).

#### ***Statherotoxys pudica* spec. nov.**

(fig. 398)

♀ 14 mm. Very similar to *C. niphophora* spec. nov., but head and thorax darker tuscous-brown and fore wing with the white costal spot much smaller, from well beyond 1/4 to 3/4 of costa, posterior extremity slightly pointed below costa, anterior edge gently convex, posterior edge shorter, with an obtuse-angular notch before middle.

Female genitalia. Sterigma inverted-triangular, with a median split almost to base, lower half of split forming an erect-oval ostium; entire surface of triangle with strong reticulate structure. Colliculum long and slender, straight. Signa subequal, with not numerous teeth, central tooth much longer than the others.

Southeast Borneo, Riam Kiwa, 500-1000 ft, 1891 (Doherty), 1 ♀, holotype, genit. slide 6447 (Walsingham Coll. 40468 BM). Closely related with *C. niphophora* spec. nov., but smaller, with a much smaller white costal spot and with distinct genitalia.

#### ***Cephalophyes* gen. nov.**

Head with appressed scales, roughish tufted above face. Ocellus posterior. Proboscis very short. Antenna in male minutely fasciculate-ciliated. Palpus porrected, triangularly dilated with roughish scales beneath and less rough along apex, terminal segment moderate, subobtuse, exposed. Thorax without crest. Posterior tibia with smooth short scales, anterior half more or less strongly dilated with roughish hairs beneath, a truncate greyish pencil from base above to middle of tibia.

Fore wing oblong-truncate, an androconial central field on underside, formed by small purple scales, sometimes absent. Vein 2 from beyond  $2/3$ , 3 from angle, 4 slightly closer to 3, 7 free to termen, 7-9 equidistant, 8 from upper angle of cell, 10 from beyond middle of distance 11-9, 11 from middle; chorda from halfway 11-10, end curved upwards, to base of 7, median branch strong, to midway between bases of 4 and 5.

Hind wing with cubital pecten, a dark androconial central field above, sometimes absent. Vein 2 from  $2/3$ , 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather broad, uncus with a slender base, dilated, with lateral projections and a hairy triangular middle, or furcate, strongly haired in middle. Socius dense but rather small. Gnathos a membranous band. Valva slender, moderately sinuate, spiny throughout except apex of cucullus which is curved outwards.

Female genitalia. Sterigma wide, ring-like, aciculate, or pear-shaped with horizontal upper edges. Colliculum long, slender, bivalval. Signa, two large pectinations.

Type-species, *Cephalophyes porphyrea* spec. nov. (West Java).

Characteristic by the peculiar uncus. Apparently intermediate between *Metriclypha* Diakonoff and *Statherotis* Meyrick.

#### Key to the species of *Cephalophyes*

##### Males

- |  |                            |
|--|----------------------------|
| 1. Fore wing underside and hind wing upperside without androconial spots | <i>cyanura</i>             |
| — Fore and hind wings with androconial dark fields . . . . .             | 2                          |
| 2. Costal spot entirely suffused with grey and purple . . . . .          | <i>porphyrea porphyrea</i> |
| — Costal spot white, only centred with fuscous . . . . .                 | <i>porphyrea temperans</i> |

##### Females

- |                                      |                  |
|--------------------------------------|------------------|
| 1. Hind wing blackish-grey . . . . . | <i>porphyrea</i> |
| — Hind wing purple . . . . .         | <i>cyanura</i>   |

#### *Cephalophyes porphyrea porphyrea* spec. nov.

(figs. 285-288, 336)

♂ 16.5 mm. Head purplish-fuscous. Palpus dark grey, basal segment and base of median white, two transverse light grey marks: subbasal and subapical. Antenna fuscous. Thorax grey, anterior third darker brownish-fuscous, posterior third dark grey. Posterior femur grey, posterior tibia grey outwardly, white inwardly, pencil from base ochreous-greyish, black-tipped. Abdomen fuscous-black, tip snow-white.

Fore wing oblong-truncate, costa curved, apex obtusely pointed, termen gently sinuate, almost vertical. Lilac-grey, markings fuscous-blackish, dull. A moderate oblique streak from  $1/4$  of costa to middle of disc at  $1/3$ , slightly dilated there, thence

horizontal to beyond end of cell; a second, similar streak from before middle of costa, tolerably parallel, thence gradually and moderately curved to apex, reaching  $\frac{1}{3}$  across wing; space within second line (representing costal patch) filled out with paler and brighter lilac-pinkish, and traversed by two longer, more curved lines, alternating with two shorter bluish-grey lines, originating from four double minute white marks on costa; these lines more or less convergent below costa before apex; a faint inverted-V-shaped mark before termen, including ocellus, legs broad, little sinuate; space between this marking and end of first costal streak strongly sinuate, acute above, dilated beneath; a dark spot on  $\frac{2}{3}$  of fold; semioval suffused dark purple spot on base of dorsum; costal edge between dark markings with numerous oblique blackish strigulae, alternating with white marginal dots. Cilia deep purple-bronze with a pale basal line and a black subbasal streak.

Hind wing semipellucant, purple, central half with a rounded purple-black spot of modified rather thinly strewn scales. Cilia deep purple, with a pale basal line and fuscous-whitish apical third.

♀ 16.5-17 mm. Abdomen light bronze-fuscous. Ground colour purplish-lead, throughout regularly marbled with blackish-fuscous and mixed posteriorly, especially along edges of dark markings and in ocellus, with tawny-yellowish. First costal streak broader, from beyond  $\frac{1}{4}$  of costa, oblique above, gradually curved posteriorly, to  $\frac{2}{3}$  of wing, before end with a broad, inwards-oblique branch to dorsum beyond middle; a pale broad streak, above and edging first costal streak, originating from four white strigulae on  $\frac{1}{3}$  of costa, pale leaden anteriorly, white in middle, pale ochreous posteriorly, strongly narrowed to costa well before apex; this pale streak edges the costal patch proper instead of second dark costal streak which is absent; costal patch elongate, irregularly inverted-trapezoidal, deep orange-tawny, suffused with fuscous anteriorly, traversed by four blue lines originating from four double white costal strigulae, a fifth strigula single, almost vertical, before apex (in allotype lines pale lilac, ill-defined); anterior leg of inverted-V-shaped mark broken in several horizontal streaks between veins.

Hind wing semipellucant on basal half, apex and terminal broad edge suffused black, central dark spot (of androconia?) absent.

Male genitalia as described with the genus.

Female genitalia. Lamella antevaginalis aciculate, a round broad wall or ridge, gradually becoming lower, low along lamella postvaginalis. Colliculum slender, narrowed, moderate (shorter and more narrowed than in other species). Corpus bursae coarsely granulate. Signa very large.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, v.1949, 1 ♂, holotype, genit. slide 4968; ix.1949, 1 ♀, allotype, genit. slide 5810 (A. M. Neervoort). The same locality, 2.ix.1952, 1 ♀, paratype (A. M. R. Wegner) (LM). 1 ♂, 2 ♀. Allied with *C. cyanura* (Meyrick).

This and allied species show a remarkable superficial similarity with *Statherotis olenarcha* (Meyrick), from the same region.



**Cephalophyes porphyrea temperans** subsp. nov.

♂ 12 mm. Head and palpus purplish-fuscous, basal segment, base and lower edge except top of median segment and a small subapical dorsal mark, white. Thorax purplish-fuscous. Posterior tibia dark bronze-grey, lower fringe of hairs pale grey, inside of tibia snow-white. Abdomen fuscous, posterior half dark fuscous, a narrow white streak along posterior edge of sternites 7 and 8, anal tuft snow-white.

Fore wing oblong-subtruncate, slightly narrower than in the nominate form, costa less gradually curved, more so towards extremities. Markings very similar to those of *P. p. porphyrea*, costal spot pale as in females of that species, white below, pale lilac towards costa, including a fuscous oblique streak from middle of costa, preceded by two, followed by five pairs of minute white costal lines, alternating with fuscous wedge-shaped spots, continued below by suffused ochreous lines confluent in one horizontal streak edged on both sides with pale lilac-blue; fascia-edging costal spot dark brown (instead of fuscous), anterior band edging ocellus broad, posterior linear. On the underside an elongate-oval central black androconial field.

Hind wing rather paler than in *P. p. porphyrea*, brownish-bronze, semipellucant, a suboval central black androconial field, also semipellucant.

Male genitalia similar to those of the nominate form but with top of valva considerably less curved, more rounded, so being more similar to *C. cyanura* (Meyrick), but differing from that species in the same way as *P. p. porphyrea*, viz., with lateral lobes of uncus more projecting, more slender and clavate (in that species broad, short and rounded), while the valva is less densely bristled.

East Java, Tengger Mts., Nongkodjadjar, 1400 m, at light, 9.iii.1940 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 5809 (LM). Larger, markings more defined than in the nominate form: the shape of the cucullus is the only striking difference, but not sufficient for a specific separation of *temperans*.

**Cephalophyes cyanura** (Meyrick, 1909) comb. nov.

(figs. 289-291)

*Argyroploce cyanura* Meyrick, 1909: 598 (♂♀, Assam, Malaya). — Clarke, 1955: 108.  
*Olethreutes cyanura*; Clarke, 1958: 500, pl. 249 figs. 3-3a (lectotype select., Malaya, genit. fig.).

Distribution. Malay Peninsula: Gunong Ijan. Assam: Khasis.

The species is very close to the foregoing, extensively described *C. porphyrea* spec. nov. and differs chiefly by the absence of a dark androconial field in the centre of the hind wing of the male; besides, the costal spot is less extended in *cyanura*, the white colour, beginning at about 1/3 of the costa, while in *porphyrea* it originates well before 1/3 — and is also darkly suffused.

Male genitalia. Differ from those of *porphyrea* by more rounded lateral angles of the uncus which are not produced into transverse lobes, as in *porphyrea*.

Female genitalia. These differ only by the teeth of the signa being slightly shorter, more robust and more dilated at base than those in *C. porphyrea*.

Assam, Khasis, 1 ♀, genit. slide 6305 (BM).

### Metrioglypha Dianokoff, 1966

*Metrioglypha* Diakonoff, 1966: 41, figs. 46, 56, 62 (type-species, *Grapholitha vulgana* Walker, Ceram, by original designation).

*Astrobola* Diakonoff, 1966: 42, figs. 29, 70 (type-species, *A. circulata* Diakonoff = *thystas* Meyrick, New Guinea, Australia, by original designation). **Syn. nov.**

Head with roughly appressed scales, flat tuft on forehead. Antenna in male thickened, shortly fasciculate-biciliated, in female simple. Palpus curved, ascending or subascending, slightly dilated, roughish below. Thorax with a posterior crest. Posterior tibia thickened with bristly hairs above, with a pencil, sometimes this absent.

Fore wing with vein 2 from  $2/3$ , 3 from angle, 5 distant, 7 separate, to termen; 8 closer to 9, from angle, 10 from over  $1/2$  or from  $2/3$  between 9 and 11, 11 from about middle; chorda from midway 11-10 to above 6, median branch to above base of 4.

Hind wing with pecten, 2 from beyond middle, 3 and 4 almost connate from angle, 5 approximated at base, 6 and 7 closely approximated towards base; a patch of androconia on upper side over discoidal vein.

Male genitalia. Tegumen rather low. Uncus clavate, hooked. Socius large, hairy. Gnathos, a simple band or absent. Valva moderate, sinuate or curved and clavate, bristly, sacculus simple.  $Sp_1$  of short spines or bristly hairs.

Female genitalia. Sterigma cylindrical, a median split, open below with turned up upper lobes. Colliculum rod-like. Signa, two large pectinations.

### Key to the species of *Metrioglypha*

1. Fore wing with a central dark spot, either rising from dorsum or descending from costa . . . . . 2
- Fore wing without a distinct central brown spot darker than other markings, sometimes with a blackish-grey curved fascia instead of spot . . . . . 7
2. Fore wing with a large dark spot from middle of costa . . . . . *empalinopa*
- Fore wing with a central dark mark rising from dorsum . . . . . 3
3. Dark spot from dorsum curved outwards, top rounded, base not narrowed . . . . . 4
- Dark spot from dorsum rather irregular, its base distinctly narrowed . . . . . 6
4. Fore wing dark grey, markings less markedly light-edged, not conspicuous, a dark spot at  $1/4$  of costa elongate, reaching to fold . . . . . *aoriphora*
- Fore wing pale fuscous-grey or cinereous, with contrasting, pale-edged dark markings; dark spot on costa by far not reaching fold . . . . . 5
5. Fore wing ground colour fuscous-grey; curved dark fuscous spot from dorsum

- almost reaching apical dark suffusion . . . . . *vulgana*  
 — Fore wing ground colour cinereous; curved spot black, broad, not reaching apical suffusion . . . . . *crassa*  
 6. Cilia of fore wing pale fuscous mixed darker . . . . . *thystas*  
 — Cilia of fore wing fulvous. . . . . *habilis*  
 7. Fore wing with costal half suffused with dark fuscous, dorsal half ochreous *dualis*  
 — Fore wing not thus . . . . . 8  
 8. Fore wing blue-leaden-grey, without ochreous. . . . . *onychosema*  
 — Fore wing dark brown, strewn and marked with bright ochreous . . . *gemmarius*  
 — Fore wing pale ochreous, densely marbled and partly suffused with pinkish-orange-tawny; only terminal fourth with dark marks. . . . . *mellifera*

***Metrioglypha vulgana* (Walker, 1866)**

(figs. 298-299, 312-313, 337)

*Grapholitha vulgana* Walker, 1866: 1796 (♂, Ceram, type in BM).  
*Grapholitha confertana* Walker, 1863: 388 (♀, Ceylon, type lost).  
*Argyroploce claviculata* Meyrick, 1909: 600 (♂♀, Khasis, type lost).  
*Argyroploce confertana*; Meyrick, 1911: 278. — Diakonoff, 1966: 10-11.  
*Metrioglypha vulgana*; Diakonoff, 1966: 12, 42, figs. 14-15 (♂♀ genit., neur. figured, synon.; New Guinea).

Distribution. Ceram, New Guinea.

North New Guinea, Dorey (Manokwari), 1879 (Doherty), 1 ♀ (BM).

North Central New Guinea, Humboldt Bay, iv.1893 (Doherty), 1 ♂, genit. slide 7775, 1 ♀, genit. slide 7777 (BM). North W. New Guinea, Schouten Is., Biak, W. of Sorida, 28.vii.1952 (L. D. Brongersma c.s.), 1 ♂, genit. slide 6014; 11.ii.1952, 1 ♂, genit. slide 4972; 21.ii.1952, 1 ♀, genit. slide 6015. West Central New Guinea, Fakfak, 11.iv.1952 (at light) (L. D. Brongersma), 1 ♀, genit. slide 6598. Southeast New Guinea, Milne Bay (A. S. Meek), 2 ♂, genit. slide 7776, 2 ♀ (LM).

North Moluccan Is., Halmahera (= Almahera = Gilolo), 1892 (Doherty) (Walsingham Coll. 41202) 1 ♂, genit. slide 6016 (BM).

The elegant species may be briefly described thus.

Dark brown, densely and irregularly transversely strigulated with dark leaden-grey, each strigula or mark edged on both sides with white; markings dark fuscous-brown, marbled except on edges with light ochreous dusting. An obliquely-semioval dark brown mark on 1/4 of costa, another, inwards-oblique in disc beneath this; a large, outwards-curved subfasciate patch, occupying almost third fourth of dorsum, rising 2/3 across wing, outer edge notched in middle; posterior 2/3 of costa with seven white transverse marks, three anterior double, other single, very narrow; all these marks merging into a leaden-grey subcostal horizontal streak, edged on both sides with ochreous-tawny; dark fuscous-brown suffusion above and below this streak, also

filling out apex and upper half of termen, except a pale triangular terminal spot below apex; ocellar spot fasciate, whitish, cut by several dark brown strigulae. Cilia light tawny-fuscous with a dark suffusion along upper part of termen except below apex, and a black basal line.

Hind wing dark bronze-fuscous, blackish towards apex, rather paler fuscous-grey towards base, a suboval patch of purple-black androconia in cell.

Male genitalia. Socii semi-pending; gnathos absent. Valva subsinuate, top narrowed. Spc<sub>1</sub> of fine hairs.

Female genitalia as described with the genus.

***Metrioglypha aoriphora* spec. nov.**

(fig. 303)

♀ 16 mm. Head dark fuscous-grey, black in certain lights, face dark grey, sides black. Palpus with basal segment black, tip whitish, median segment at base and along upper edge black with closely appressed scales, elsewhere opalescent dark grey, whitish along lower edge and laterally towards apex, terminal segment dark grey. Thorax dark fuscous-grey, black laterally, a transverse narrow streak of whitish dusting before apex, tegula grey, shoulder black. Abdomen dark fuscous, venter pale grey.

Fore wing narrow, oblong, not dilated, costa hardly curved at extremities, apex rounded, termen sinuate and concave above, rounded beneath. Rather dark slaty-grey, strewn with dark fuscous, tending to form vertical strigulae. Basal patch not reaching  $\frac{1}{3}$ , dark fuscous, densely marbled with grey and light grey so that remain visible: two small dark dots on costa and a moderate blackish marginal spot beyond  $\frac{1}{4}$ , narrowed below, so as to form an oblique wedge across wing, with rounded top reaching to fold (being the upper half of edge of basal patch); and on dorsal half of basal patch several transverse irregular dark fuscous striae; posterior  $\frac{3}{4}$  of costa fuscous-black, cut with narrow white transverse marks, two anterior double and approximated, fifth also double, other single and slender, ultimate two converging; a straight light blue line below costa connecting the third with ultimate marks, edged above with ochreous; a rounded dark spot in apex limited below by a white strigula cutting termen and connected with blue line; an irregular dorsal patch, well-defined and formed by a round large spot between fold and dorsum and a sinuate much narrower branch from its top to end of cell; an erected-triangular vertical dark spot on dorsum before tornus, its narrow upper part interrupted several times and connected with the anterior end of a slightly sinuate longitudinal blackish mark, with a triangular base on upper half of termen. Cilia pale ochreous with a whitish basal and a fuscous subbasal band, cilia infuscated throughout opposite apex and lower  $\frac{2}{3}$  of termen.

Hind wing dark bronze-fuscous, basal  $\frac{3}{5}$  semipellucant.

Female genitalia. Sterigma truncate-funicular, upper edge ventrally (in front, in figure) with a slight notch aciculate throughout. Colliculum slender, rather short

(slightly longer than sterigma). Signa inequal, moderate patches of dentations, rather erected vertically.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 19.iii.1950 (A. Diakonoff, at light), 1 ♀, holotype, genit. slide 5825 (LM). The species is very similar to the more eastern *M. vulgana* (Walker), but differs by the genitalia and by minor characters of the wing pattern, as stated in the key to the species of the present genus.

***Metrioglypha crassa* spec. nov.**

(figs. 306-307)

♀ 15 mm. Head and thorax dark slaty-grey (palpi missing). Abdomen fuscous-grey.

Fore wing oblong-suboval, little dilated, costa gently curved anteriorly, straight in middle, apex obtusely pointed, termen sinuate above, rounded and prominent beneath. Rather dark slaty-grey, posteriorly rather strongly dusted with creamy. Posterior 3/4 of costa with white roundish pairs of marks. Basal patch indicated by a moderate triangular spot at 1/4 of costa; a thick, rounded-semioval erect and moderately outwards-curved patch from middle of dorsum reaching a little above middle, purple, finely creamy-edged above; posterior half of costa with a gradually dilated black streak, very narrow anteriorly, posteriorly forming an inverted-trapezoidal spot before apex, filling out apex and descending to middle of termen; a whitish marginal suffusion below apex; faint ochreous suffusion below costa posteriorly; wing beyond median patch coarsely and irregularly strewn and dusted with creamy, and transversely strigulated with black, except on dorsum posteriorly and in tornus which areas are deep bluish-grey; a small purplish spot on dorsum before tornus. Cilia blackish, whitish-tipped.

Hind wing deep blackish-purple, basal half paler, semipellucant, with dark veins. Cilia pale ochreous with a deep purple subbasal band.

Female genitalia. Sterigma finely aciculate, calyciform, upper edge oblique, sides pressed inside, so forming a posterior calyx with horizontal upper edge, communicating with an anterior ostium proper, with an oblique edge. Colliculum moderate and unusually robust and broad. Signa two long combs of teeth.

East Sula Is., Mangoli Id., xi.1897 (Doherty), 1 ♀, holotype, genit. slide 7778 (BM).

Nearly allied with *M. vulgana* (Walker), differing by the median and broader dorsal patch (in *vulgana*, postmedian) and by the genitalia.

***Metrioglypha onychosema* (Meyrick, 1911)**

(figs. 297, 314)

*Argyroploce onychosema* Meyrick, 1911a: 135 (♂, New Hanover). — Clarke, 1955: 225. — Diakonoff, 1966: 24, fig. 46 (lectotype design., genit. ♂ figured).

*Metrioglypha onychosema*; Diakonoff, 1966: 41, 42, figs. 46, 62 (genit. ♂, wing neuration, head figured).

Distribution. Bismarck Is. : New Hanover Id.

Bismarck Is., New Hanover Id., iii-iv.1923 (A.S. Meek), 1 ♀, without abdomen (BM). Northeast New Guinea, Jobie Id., 1893 (Doherty), 1 ♀, apallotype, genit. slide 7768 (BM).

Northwest New Guinea, Sorong, sea level, 8.vii-14.viii.1948 (M. A. Lieftinck), 1 ♀, genit. slide 3410 (LM).

The females appear to be similar to the males. The elegant small species has pale grey face and palpi, the vertex is dark bluish-grey. Ground colour of fore wing whitish-grey with a faint blue tinge. Basal patch to  $1/3$ , formed of numerous transverse zig-zagged lines; pale space beyond patch parted by a blackish line; posterior half of costa with a narrow black streak, cut by a few minute white lines; a spot below middle of costa and a large, curved and rather slender horn-shaped patch from middle of dorsum to well before apex; a less oblique erected spot in tornus; apex and termen below apex with a dark spot, cut in two by a fine grey line; dorsal half of wing rather darker bluish-grey. Cilia bright ochreous, tornus slightly suffused with this colour.

Hind wing purplish-black. Cilia bright ochreous around apex and along upper part of termen, dark fuscous elsewhere.

Female genitalia. Sterigma, a delicate, moderate, obliquely projecting tube, finely aciculate, aciculations rather concentric; ostium bursae wide, in front below forming a triangular broad excision; upper angles slightly thickened and rounded. Lamella postvaginalis forming moderate lateral aciculate lobes. Colliculum moderate, not narrowed. Signa, two moderate patches of flat teeth.

***Metrioglypha habilis* spec. nov.**

(figs. 300, 311)

♂ 11 mm, ♀ 13 mm. Head light ochreous mixed with fuscous. Palpus grey, median segment with whitish apex and two black oblique marks on upper edge. Thorax fuscous-grey. (Posterior tibia in male missing). Abdomen olive-grey, venter whitish.

Fore wing oblong-truncate, rather narrow, costa moderately curved throughout, apex obtusely rectangular, termen straight and vertical above, short, obliquely rounded beneath. Light slaty-grey, male rather suffused, except towards markings, with darker leaden-grey, female darker leaden-grey, finely dusted with paler and darker. Basal patch dark fuscous, to beyond  $1/3$ , edge oblique above (serrate in female), angulate in fold, below this excavate, patch except edge filled out with ground colour, including dark fuscous dots along costa, in fold, and a streak along base of dorsum; posterior half of costa with a dark fuscous streak, cut by three double and two single white marks; an oblique straight dark fuscous streak from middle of costa, directed towards upper third of termen, not reaching this, separated from costa by an also straight, anteriorly pointed, yellowish, light-blue-parted streak; ocelloid spot creamy, rather broad, cut by some four dark fuscous strigulae, edged anteriorly

by a pointed wedge-shaped leaden spot, posteriorly by a smaller round spot; these spots (of ground colour) slightly edged with creamy; a large obliquely-triangular dark fuscous-brown, yellow-edged patch on middle of dorsum, shaped as an elongate sub-equilateral triangle, standing on one acute angle, other acute angle connected with dark subcostal streak posteriorly; an irregular jet-black suffused spot opposite upper part of termen, termen orangeish. Cilia ochreous-orange, with a fine blackish basal line and a black apical band along upper half of termen, a black dot opposite apex.

Hind wing deep purple-bronze, gradually paler anteriorly, darker in female. Cilia concolorous, with a pale basal, and a dark subbasal line.

Male genitalia. Tegumen slender and high. Uncus long, rather slender, top hooked, slightly dilated. Socius moderate. Tuba analis broad and membraneous, gnathos weak, V-shaped, pointed below. Valva comparatively long, narrowed and slender, angulate at  $1/3$ .  $Spc_1$ , a round patch of dense small spines, cucullus bristles long, dense and curly,  $Spc_2$  small, only in disc below cucullus prominence.

Female genitalia. Sterigma thinly aciculate, semispherical, lamella post-vaginalis slightly extended laterally. Ostium shaped as an oval darker body in centre of sterigma, with an erect-8-shaped split. Colliculum rather long. Corpus bursae distinctly reticulate. Signa, two patches of flat teeth.

Celebes, nr. Chambi, low country, 1896 (Doherty), 1 ♂, holotype, genit. slide 7804; 1 ♀, allotype, genit. slide 7805; Celebes, low country, 1896 (Doherty), 4 ♀, paratypes (BM). Resembling *M. vulgana*, but distinctly marked, the dorsal patch having triangular shape, with a narrowed base. The genitalia are characteristic.

### *Metrioglypha mellifera* spec. nov.

(figs. 322-323)

♀ 14 mm. Head ochreous mixed with ferruginous. Palpus pale ochreous, median segment with a basal and a larger black spot on ventral half of apex, terminal segment dark grey. Thorax light tawny-fulvous, suffused crimson, marbled with ferruginous-fuscous. Abdomen tawny-grey, venter white, anal tuft blackish.

Fore wing oblong, rather narrow, costa gradually curved throughout, apex gently rounded, termen vertical, slightly concave above, rounded beneath. Pale ochreous, suffusedly marbled with fulvous-tawny. Basal patch over  $1/4$ , little suffused, edge a well-defined ferruginous line, obtusely angulate on upper edge of cell, thence straight and inwards-oblique; a ferruginous oblong spot in centre of patch just above fold, with three lines descending from it, median strong, parallel to edge of patch; costa dark fuscous with about 11 pairs of very short white marks; a subquadrate pale ochreous spot at  $1/3$ , edged darker; four posterior pairs emitting very oblique slender white lines, converging before apex with an inwards-oblique short line from ultimate marks and continuing to termen below apex; metallic lines absent; apex of wing dark brown; ocelloid spot dark brown, traversed by some four fulvous streaks, lower broad; this patch edged by two wedge-shaped light leaden-grey patches with pale

ochreous margins, anterior patch parted, posterior traversed by a fulvous line. Cilia ochreous, basal third suffused with blackish on lower half, deep ferruginous on apical half of termen, tips of cilia with large black spots opposite apex.

Hind wing deep purple-brown, semipelluculent towards base. Cilia pale grey-fuscous with a darker subbasal band and pale basal line, cilia along upper third of termen beyond band tinged yellowish.

Female genitalia. Very similar to those of *M. thystas* (Meyrick), but with sterigma forming a higher cylindre. Otherwise as in that species. Signa two, compressed patches of fish-scale-like flat teeth.

Australia, Queensland, "Cairns, F.P.D., .11.06" (in Meyrick's hand), E. Meyrick det. "*Argyroploce thystas*", Meyrick Coll. (BM), 1 ♀, holotype, genit. slide 8048. Larger than *M. thystas*, and differently coloured, with ochreous tinge predominating, while *thystas* is much darker.

***Metrioglypha thystas* (Meyrick, 1911) comb. nov.**

(figs. 308, 310)

*Argyroploce thystas* Meyrick, 1911a: 276 (♂♀, St. Aignan Id., Queensland). — Clarke, 1955: 311.

*Astrobola circulata* Diakonoff, 1966: 42, 44, figs. 29, 70 (♂, Sudest Id., genit., wing neur. figured). **Syn. nov.**

Distribution. New Guinea: St. Aignan Id., Sudest Id. Australia: Queensland.

Bali Id., 1896 (Doherty), 3 ♂, genit. slide 7806, 2 ♀, genit. slide 7807 (BM).

Rather light leaden-grey, markings dark fuscous-brown, basal patch not reaching 1/3, angulate, space beyond it interrupted at upper 1/3, parted on dorsal half by a dark line; dorsal patch very large, actually not isolated, extending over the whole wing and confluent with oblique subcostal dark fascia (as in *habilis*) and filling out termen and upper part of ocelloid spot; leaden-grey, wedge-shaped blotches flanking this spot: large, conspicuous, white-edged, posterior rather rounded, with a rising appendix on top. Cilia pale ochreous, with a blackish basal line, tips partly infuscated.

Hind wing with a dark purple-bronze edge, in middle and anteriorly somewhat lighter and sub-semipelluculent.

Male genitalia. Tegumen rather broad. Uncus robust, hooked, top arrowhead-shaped by dense curly dark bristles. Socius very small, parietal. Valva robust, sinuate, colliculum rather broad and rounded; Spc<sub>1</sub> large, extending over disc and connected with a small pulvinus, formed of a patch of short spines and above this one of long curly bristles. Cucullus prominence distinct, around which Spc<sub>2</sub>, formed of short thin bristles.

Female genitalia. Sterigma aciculate, a robust upright collar, upper edge sloping and slightly excised in middle; within this collar ostium cup-shaped, spheroidal. Colliculum rather long. Signa two flat patches of triangular, squamose teeth.



At present I am satisfied of the above synonymy; in 1966 no material of *M. thystas* was available to me.

***Metrioglypha empalinopa* spec. nov.**

(figs. 302, 304-305)

♂♀ 13 mm. Head fuscous-grey, vertex with a strong green iridescence in certain lights, face and forehead whitish. Palpus white, median segment suffused with pale ochreous above towards apex, with a strong green iridescence in certain lights, a broad subbasal and a narrower subapical black band, terminal segment black, whitish-tipped. Thorax with anterior half light grey with two narrow fuscous transverse bands, posterior half dark fuscous, tegula dark grey dotted with whitish-grey (tips of scales). Posterior tibia normally scaled, without a pencil. Abdomen fuscous-brownish, anal tuft with greyish-white opalescence in certain lights.

Fore wing rather narrow, oblong-truncate, costa little curved at base, straight in middle, more curved at apex, apex rounded, termen short, straight and vertical above, broadly rounded beneath. Grey, markings dark fuscous with fine whitish edges. Costa with some metallic-iridescent scales towards base, an elongate spot at  $1/4$ , formed by a small triangular and a larger wedge-shaped spot; these followed by a quadrate spot of grey ground colour at  $1/3$ ; upper half of wing beyond this spot dark fuscous, with a large semioval patch on its lower edge, with its posterior upper half limited by a quadrate costal spot; this patch reaching to vein 1b; less than posterior half of costa with a grey streak, acute anteriorly, not reaching apex, cut by three extremely fine white oblique lines from costal edge; a dark fuscous spot in apex, edged anteriorly by a curved vertical and a straight horizontal strigula; an obliquely-semioval obtuse spot on dorsum before tornus, an ill-defined inwards-oblique white band rising from its top and cut by several dark fuscous horizontal marks (obtuse spot and white band together representing ocelloid spot); a rounded silvery-grey spot in tornus, its white edge continued to the white strigulae around apex; a narrow interrupted fuscous line widely encircling dark dorsal spot; edge along termen and tornus bright ochreous. Cilia bright ochreous, along apex and upper  $2/3$  of termen with a ferruginous basal line, upper half of cilia around apex and along upper half of termen, dark grey.

Hind wing dark fuscous-bronze, slightly paler towards base, cilia whitish, with basal half faintly infuscated and, opposite apex, entirely pale fuscous, throughout with a subbasal faint fuscous band.

Male genitalia. Nearest to those of *M. onychosema* (Meyrick) but with a denser haired uncus, smaller but broader socius and broader inverted-trapezoidal band-like gnathos. Valva similar, but more rounded,  $\text{Sp}_1$  much more extended downwards,  $\text{Sp}_2$  larger.

Female genitalia. Ovipositor broken. Sterigma cylindrical, covered with dense long acicula, upper edge with a deep triangular notch in front, ostium proper circular,

encircled by a round aciculate tumescence, turning into lamella postvaginalis. Colliculum very long and slender, two-sheathed. Ductus bursae very long, signa small, dentate-subscobinate.

Central Java, Seneng and Telawa, teak forest, 40 m, 8.xii.1931, 1 ♂, holotype, genit. slide 5827; 1.x. and 8.xii.1931, 2 ♂; 11 and 12.viii.1933, 2 ♂ paratypes; Telawa, teak forest, 40 m, 12.viii.1933, 1 ♀, allotype, genit. slide 5828 (L. G. E. Kalshoven), bred from leaves of "lunda" (? *Vitis geniculata*), no. 296, and from unidentified plant "*Argyroploce confertana* Walk." (LM).

East Borneo, Balikpapan, 50 m, x.1950, Mentawir River (A. M. R. Wegner), 1 ♀, genit. slide 7505 (LM). The small species has the appearance of a *Dactylioglypha*, but has true *Metrioglypha* genitalia showing the close relation of the genera in the present group. From "*confertana*" it may be immediately distinguished by the costal, not dorsal, central patch.

***Metrioglypha dualis* spec. nov.**

(figs. 315, 321)

♂ 10-15 mm. Head light olive-ochreous, in female tinged orange. Palpus dark brown, median segment at apex above mixed with ochreous, terminal segment ochreous. Antenna ochreous, above with dark half-rings. Thorax bright ochreous, finely dusted with dark fuscous. Posterior tibia in male normally scaled. Abdomen dark fuscous.

Fore wing rather narrow, suboval-truncate, costa moderately curved throughout, apex obtusely rectangular, termen straight and slightly oblique above, rounded below. Costal half as far as fold, end of cell and vein 6 or vein 5 deep fuscous-brown, edge along fold well-defined, posteriorly suffused; costal oblique strigulae very faint, minute, whitish, only on posterior half of costa more or less continued by very faint dark grey streaks; remainder of wing rather bright ochreous-yellow, finely and evenly dusted by brown-fuscous; sometimes veins 5 and 6 dark-lined; a series of ill-defined dark fuscous moderate streaks on ends of veins before termen, a small horizontal whitish dash on margin just below apex. Cilia pale to bright ochreous, with a more or less suffused fuscous subbasal band, cilia above apex dark fuscous.

Hind wing semipelluculent dark purplish-fuscous. Cilia fuscous, with a pale ochreous basal line and a purplish subbasal band, tips of cilia whitish, opposite apex light ochreous.

Male genitalia. Tegumen high but robust, bases of pedunculi dilated on the inside. Uncus strongly narrowed, hooked. Socius rather large, flat. Tuba analis moderate, gnathos, a distinct V-shaped band, top and arms dilated. Valva robust, broad and rather short, labis large and smooth, costa with a projection at base. Spc<sub>1</sub>, together with pulvinus forming below a curved band, above, a rounded patch of long, thin bristles merging in cucullus bristles. Spc<sub>2</sub> absent. Cucullus curved, top obliquely truncate, a small ventral spine.

Female genitalia. Sterigma finely aciculate, conical, lamella post-vaginalis angularly extended at the upper angles. Ostium, an erect-oval opening in upper part of conus, split above and slightly continued below, its edges darkly thickened. Colliculum short and slender. Signa, oblong flat patches of squamose teeth.

Sumba Id., below 2000 ft, 1896 (Doherty), 1 ♂, holotype, genit. slide 7808. Bali Id., 1896 (Doherty), 1 ♀, allotype, genit. slide 7809. 2 ♂, 5 ♀, paratypes (BM).

A distinct species.

*Metrioglypha gemmarius* spec. nov.

(fig. 301)

♂ 12 mm. Head fuscous-black, mixed with bright ochreous, face and forehead white. Palpus with basal segment black, tip above and below white; median segment white, mixed with ochreous, lower edge posteriorly and apex black, terminal segment light ochreous. Thorax blackish-fuscous, with four narrow irregular transverse ochreous lines, shoulder with an ochreous dot. Posterior tibia dark grey, normally scaled. Abdomen black-bronze, venter dark grey, anal tuft bronze-grey.

Fore wing oblong-suboval, rather narrow, dilated, costa moderately curved towards extremities, apex rounded, termen straight and vertical above, very short, broadly rounded beneath. Dark brown with a faint purple gloss, rather sparsely strewn throughout with bright golden-ochreous irregular dots and points, partially becoming coalescent into larger spots and together tending to form sinuate transverse series; basal third of costa dark and not dotted; an elongate-semioval area along posterior  $2/3$  of costa, reaching  $1/3$  across wing, neither dotted, but with 6-7 short and slender bluish-white costal marks, anterior three marks continued as a bluish-metallic ochreous-edged wedge; all following marks except last slightly longer, but less distinct, running into a faint blue subcostal broad line, indistinctly edged on both sides with deep golden-bronze, posteriorly not reaching ultimate subapical costal strigula; posterior sixth of wing from apex to tornus forming a large, conspicuous ocelloid spot: bright ochreous, anteriorly limited by a vertical straight line of ground colour, upper half of which is preceded by irregular ochreous strigulation; this ochreous terminal field containing a large bright leaden-metallic vertical subtriangular patch, straight anteriorly, with two rounded prominences posteriorly, cut in middle by a horizontal strigula of ground colour, from anterior edge of leaden patch to termen, curved down posteriorly; a similar, thicker furcate dark brown mark above and beyond leaden patch, not reaching termen, its upper branch horizontal and slender; extreme margin of wing from costa to tornus narrowly dark brown. Cilia around apex and along upper half of termen glossy leaden-fuscous with an ochreous basal line, in middle of termen an ochreous bar, cilia along lower half of termen and in tornus bright ochreous with two brown blotches on base.

Hind wing dull purple-black, costa glossy pale silvery grey, with an expansile long

pencil of dark fuscous hairs, just beyond base of extreme edge of costa on upper side. Cilia glossy silvery-fuscous, with a purplish subbasal band.

Male genitalia. Uncus obtusely pointed. Socius, a long single row of bristles, parietal, sitting on a weak fold, above continued to uncus. Gnathos, a membraneous simple broad band. Valva broad and short, sinuate in middle,  $Spc_1$  rather extended; cucullus with top rounded, outer row of bristles, especially towards base, very large.

North Moluccan Is., Halmahera, Mt. Sembilan, 600 m, 27.ix-6.x.1951 (native collector), 1 ♂, holotype, genit. slide 5995 (LM). Judging from the genitalia, closely allied with *M. onychosema* (Meyrick), but with distinct valva and socii and differently coloured and marked fore wings.

#### *Antirrhopa* gen. nov.

Head with loosely appressed thick scales, spreading on vertex, over face forming a thick roughish tuft. Ocellus posterior. Proboscis short. Antenna in male short-ciliate. Palpus rather slender, with appressed scales, median segment curved upwards and dilated at apex, roughish along lower edge and along apex, terminal segment small, porrected. Thorax smooth. Posterior tibia normal, without a pecten. Abdomen normal.

Fore wing oblong-truncate, rather narrow, costa gently curved throughout, apex rounded-rectangular, termen hardly concave, almost straight and vertical, obliquely rounded below. Vein 2 from  $2/3$ , 3 from angle, 4 closer to 3, 5-7 tolerably parallel and distant, 7 free to termen, 8 from angle, 7-9 closely approximated, 10 from  $2/3$  distance 11-9, 11 from middle, chorda from almost midway between 10 and 11, to base of 7, median branch sinuate, to above base of 4.

Hind wing semioval, rather pointed, with a cubital pecten. Vein 2 from before  $3/5$ , 3 and 4 connate from angle, 5 approximated at base, 6 and 7 stalked.

Male genitalia. Tegumen high, with robust pedunculi with peculiarly dilated and subdenticulate bases. Uncus apparently present, forming together with socii a large bell-shaped covering of the tegumen, reaching downwards  $2/3$  height of pedunculi; and socii represented by hair-clothing along the inner side of the uncus. Tuba analis large and membraneous. Gnathos absent. Henion short, truncate above, passing into diaphragma. Valva small as compared with tegumen, rather slender, sinuate and simple; sacculus little modified,  $Spc_1$  formed by a dense patch of short and stout spines; cucullus densely haired, subclavate, top rounded. Aedeagus little curved, not narrowed, rather short.

Female unknown.

Type-species, *Antirrhopa grammateus* spec. nov. (Borneo).

A peculiar form with unique male genitalia which may be derived, though, from those of *Metrioglypha* Diakonoff. Therefore I place the genus here, in the presumption that the signa of the, so far unknown female, if present, will be of the pectinate type.

Key to the species of *Antirrhopa*

1. Fore wing uniform light purplish-grey, with dark marks only along costa . . . . .  
*melanapta*
- Fore wing whitish, marbled with fuscous, a dark fuscous central spot . . . . . 2
2. Tegumen broader, with a pointed top; bristles along inner side moderate, angles of tegumen at its legs (pedunculi) strongly projecting; valva sinuate, broader; Spc<sub>1</sub>, a compact group of converging spines . . . . .  
*orthopa*
- Tegumen narrower, top rounded; bristles along inner side long; lower angles of tegumen less pronounced; valva less sinuate, narrower; Spc<sub>1</sub>, a smaller, more elongate group of spines . . . . .  
*grammateus*

***Antirrhopa grammateus* spec. nov.**

(figs. 317, 338)

♂ 10.5 mm. Head blackish-fuscous, lower part of face and vertex posteriorly whitish-fuscous. Palpus blackish-fuscous, a triangular white spot on upper edge before apex, terminal segment white laterally. Thorax pale fuscous-grey, with two faint darker transverse lines and a blackish circular spot at apex filled out with fuscous, shoulder with a blackish-fuscous spot. Posterior tibia smoothly scaled, without pencil. Abdomen dark grey, anal tuft pale ochreous, venter grey-whitish.

Fore wing rather narrow, oblong-truncate, costa gently curved throughout, apex rectangular, termen straight and vertical above, slightly rounded-prominent beneath. Whitish, densely marbled and marked with blackish-fuscous. Basal patch ill-defined by strong marbling of ground colour, posterior edge emarginate, to beyond 1/3, on costa with two, on dorsum with three triangular dark spots, interconnected by three zigzag strigulae; a dark oblong dot from strigula above fold, a faint circular spot against middle of the outer edge of patch; a larger, wedge-shaped, dark, oblique costal spot immediately beyond basal patch and another, on middle of costa; first spot narrowly interrupted below, second merging into a large dark central patch, subcircular, reaching to above dorsum beyond middle; two anterior pairs of pale costal marks extended into a moderate pale patch; five posterior pale marks merging into a leaden-grey, subcostal line, narrowly edged above and beneath with tawny; ultimate costal white mark and that on termen encircling apex; dorsum and tornus rather paler than the rest of wing, tinged pale ochreous, less obscured by dark marbling and including a moderate triangular spot on dorsum before tornus; tornus pale, cut by two slender, dark bars with a pale leaden spot in between. Cilia (imperfect) pale ochreous mixed with grey and fuscous.

Hind wing bronze-fuscous, darker towards apex, apex with a minute whitish dot. Cilia fuscous with a pale basal line.

Male genitalia. Tegumen + uncus rather narrow and high, lower angles of uncus less prominent; hairs along inner side long and sparse. Valva less sinuate, lower angle of base of cucullus hardly prominent.

East Borneo, Samarinda, Muara Kaman, 50 m, xi.1950 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 4954; 1 ♂, paratype, genit. slide 7499 (LM).

A small species, surprisingly similar superficially to *Metrioglypha empalinopa* spec. nov.

***Antirrhopa orthopa* spec. nov.**

(fig. 316)

♂ 10.5 mm. The rather rubbed unique specimen is entirely similar to *A. grammateus* spec. nov. with the only difference that the central patch is broadly extended posteriorly as a horizontal streak or patch to upper part of termen. A similar streak is also present in the preceding species, but is narrower and interrupted.

Hind wing has a paler, semipelluculent basal half, while there is a snow-white small marginal line around apex.

Male genitalia. Tegumen with more robust pedunculi, globular, swollen bases. Tegumen + uncus part wider, more pointed, lower angles projecting, the whole arrowhead-like. Valva more sinuate, cucullus base distinctly projecting.

East Borneo, Samarinda, Muara Kaman, 50 m, xi.1950 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 5845 (LM).

***Antirrhopa melanapta* spec. nov.**

(fig. 316A)

♂ 14 mm. Head pale grey-tawny, tuft on forehead dark fuscous. Palpus rather long, ascending, dilated with closely appressed scales, terminal segment moderate, exposed, obliquely porrect; pale ochreous, median segment with an oblique subbasal transverse purple line continued around edge posteriorly, terminal segment purple-blackish; upper edge of palpus throughout grey. Thorax light tawny touched vinaceous. Posterior tibia smooth-scaled. Abdomen dark fuscous-bronze.

Fore wing oblong-truncate, hardly dilated, costa arched anteriorly, gently sinuate posteriorly, almost straight, apex obtusely angular, termen strongly rounded-prominent in middle, gently sinuate above, vertical. Rather light tawny-fuscous-vinaceous, faintly reticulated with ferruginous-purple and with a few purple specks, largest of these beyond base above middle; a slender, suboval dark chestnut mark in middle of costa, preceded by two very oblique chestnut strigulae, sometimes obliterate; posterior half of costa with a narrow gently dilated and well-defined streak, cut by some five white lines, very oblique anteriorly, becoming less oblique; posterior of these lines subapical, vertical, thicker and curved, continued to tornus by a whitish submarginal line parallel to termen; this line preceded by a series of ill-defined purplish dots between veins running submarginally through tornus to end of dorsum, thence very faintly continued to lower angle of cell and along closing vein (in holotype obliterate); a dark leaden, glossy but rather suffused transverse band just beyond

cell, from about vein 8 to tornus, little oblique, gently curved, becoming obliterate downwards, some indefinite fuscous suffusion along dorsum anteriorly. Cilia (imperfect) purple.

Hind wing purple-fuscous, becoming paler towards base, in paratype becoming semipellucant on basal  $3/4$ , with dark veins. Cilia purplish with a pale basal line.

Male genitalia. Tegumen rather low and broad, subtrapezoidal with prominent shoulders and thickened arms (pedunculi), which form rounded prominences above base, showing traces of dense scales or deciduous bristles. Uncus present, short, depressed, densely beset with strong bristly hairs. Socius long, pending, with finest bristles. Tuba analis very broad, sides subsclerotized. Gnathos, an indefinite plate. Valva moderate, strongly narrowed, with two excisions, top of sacculus prominent in between, posterior half of sacculus hairy throughout. Cucullus very narrow, beset throughout by not dense dark spines. Aedeagus sclerotized, moderate, gently narrowed. Cornuti, a patch of minute granulations.

Female unknown.

Sunda Is., Bali Id., 1896 (Doherty), 1 ♂, holotype, genit. slide 7802; 1 ♂, paratype (BM).

The species resembles rather "*Argyroploce glyceranthes* Meyrick from the Andaman Is., of which only one female is known, but is rather different as to details of colouring; I assigned *glyceranthes* to *Neopotamia* (subtribe Neopotamiae), judging from the female genitalia. Although the valva of the present species is peculiar and resembles actually that of a *Lobesia*, the tegumen part is very characteristic and basically similar to that in the other two species of *Antirrhopa*.

The name is a Greek adjective, meaning "touched with black".

#### Semniotes gen. nov.

Head with appressed scales, forming a small flat tuft between antennae, another, larger, over forehead. Ocellus posterior. Proboscis moderate. Antenna in male microscopically pubescent. Palpus moderate, ascending close to face, moderately dilated posteriorly by roughish scales beneath and at apex, terminal segment moderate, obtuse. Thorax with a small double posterior crest. Posterior tibia simple, without pencil.

Fore wing elongate-subtruncate, rather narrow, little dilated, apex rounded, termen notched. Vein 2 from beyond  $2/3$ , 3 from angle, 3 and 4 curved and approximated to 5 at margin, 4 remote from 5 at base, 6 curved downward at margin, 7 separate, to below apex, 8 from angle, 9 close to 8, 11 from middle, upper parting vein from halfway between 11 and 10, to between 6 and 7, lower parting vein from towards base, to above 4.

Hind wing with a cubital pecten. Vein 2 from just beyond middle, 3 and 4 separate or almost connate from angle, 5 approximated at base, 6 and 7 approximated towards base.

Male genitalia. Tegumen moderate. Uncus strong, rounded, base slightly constricted; heavily haired. Socius rather large, oval, long-haired. Gnathos ill-defined, membranous. Tuba analis traceable. Valva rather slender, curved, sacculus under 1/2, with a small basal process, bristly on top (Spc<sub>1</sub>?) and a club-shaped large and heavily spined Spc<sub>2</sub>. Cucullus dilated in middle of lower edge, base moderately prominent, cucullus bristles becoming short spines.

Female genitalia. Sterigma, a rounded sclerite with a central ostium and sculptured surface, with two round impressions representing lamella postvaginalis. Cucullus long, slender, and narrow, tubular. Signa two, oval patches of triangular flat and dense teeth.

Type-species, *Argyroploce halantha* Meyrick, 1909 (S. India, Assam, Java).

Dark-coloured species with narrow wings, colouring resembling that in *Dicephalarcha* species: paler, not marked dorsum, a dark basal patch, a pale wedge-shaped costal mark, dividing this from the central fascia which forms a large semioval spot; a large ocellus, and a system of fine pale costal lines posteriorly.

Belongs to the *Statherotis* Meyrick group and is related to *Dactylioglypha*, but not very close. An interesting feature is the presence of harpes, being elevated processes upon the disc of the sacculus. This is a plesiomorph character, indicating a connection between the subtribe Statherotides with the subtribe Olethreutae.

#### Key to the species of *Semniotes*

1. Costal mark broadly wedge-shaped, continued by a pair of lines across wing (Java) . . . . . *halantha*
- Costal mark rounded-semioval, hardly continued across wing (Borneo) . . . *abrupta*

#### ***Semniotes halantha* (Meyrick, 1909) comb. nov.**

(figs. 318-319, 339)

*Argyroploce halantha* Meyrick, 1909: 601 (♂♀, Palnis, Khasis). — Clarke, 1955: 152.  
*Olethreutes halantha*; Clarke, 1958: 512, pl. 255 figs. 3-3a (lectotype select., wings genit. ♂, figured).

Distribution. South India: Palni Hills. Assam: Khasi Hills.

The somewhat variable species may be redescribed as follows.

♂ ♀ 14-15 mm. Head ferruginous-fuscous, face fuscous, orbits whitish. Palpus grey, tip and lower edge of median segment white, terminal segment whitish. Thorax dark fuscous, tips of scales yellowish, an antemedian, a median and an apical transverse white band, anterior two interrupted in middle; collar and shoulder whitish; tegula with a white median transverse band and whitish tip. Abdomen fuscous-tawny, anal tuft fuscous-blackish.

Fore wing narrow, oblong-truncate, little dilated; costa curved at ends, straight in middle, apex rounded, termen notched on vein 5, rounded above and below this.



Basal patch just beyond  $1/3$ , edge angulate above middle, gently concave above angle, lower third of patch obliterate; two double white marks on costa towards base, giving rise to irregular whitish oblique bands traversing basal half of patch; a conspicuous sub-wedge-shaped white patch on  $1/3$  of costa, being space between basal patch and transverse fascia, in cell becoming grey and obliterate above fold; on costa white patch with two black tiny marks; transverse fascia with upper  $2/3$  forming a large semioval or inverted-trapezoidal patch limited by fold, upper third extending posteriorly as a horizontal band, filling out apex and extending along termen below notch; costa posteriorly with three strongly oblique pairs of narrow white lines and a fourth single line; a series of narrow, almost horizontal, bluish lines originating from preceding markings and converging, so as to form a faint almost horizontal dull bluish band, ending by a recurved white line to costa before apex; a vertical and two horizontal black and one white short mark in apex; ocellus large, paler, whitish or creamy, occupying posterior third of wing and  $2/3$  of its breadth, from dorsum in middle traversed by an inwards-oblique straight brownish band, cut by numerous black horizontal lines; dorsum with a series of strongly suffused vertical pale ochreous, brownish-tawny and dark grey bands, below fold suffused with creamy. Cilia above notch dark fuscous, below, pale orange-fulvous, throughout with a dark fuscous basal band, edged from costa to below notch with a fine white line.

Hind wing semipellucant, grey, apical third and terminal half opaque blackish-bronze, extreme apex orangeish, a streak along  $2/3$  of costa whitish. Cilia whitish, around apex pale fulvous-orange, throughout with a dark fuscous subbasal line, cilia along lower half of termen and in tornus infuscated.

Male and female genitalia, as described with the genus.

India, Assam, Shillong, Khasis Hills, 27.vi.1928 (Fletcher), 1 ♂, genit. slide 6470. Assam, Margherita, 1889 (Doherty) (Walsingham Coll. 40023, 40062, genit. slides 6471 ♂, 6472 ♀). S. India, Palni Hills, .06 (Campbell) (Meyrick Coll.), 1 ♀, genit. slide 6474. Shevaroy, Yergaud, 21.iv.-4.v.1913, "*Argyroploce halantha* Meyr." (in Meyrick's hand), 1 ♀, genit. slide 6473 (BM).

West Java, Mt. Gede, Tjibodas, 1400 m, 30.xii.1940 (A. Diakonoff), 1 ♂, genit. slide 4956. East Java, Tengger Mts., Nongkodjadjar, 1300 m, at light, 29.xi.1940, 1 ♀, genit. slide 4997, 1 ♂, 24.vi.1940; the same, Kletak Pass, 2000 m, 1 ♀, genit. slide 4996; the same, Mt. Toenggangan, 1300 m, 8.xi.1940 (A. M. R. Wegner) (LM).

#### ***Semniotes abrupta* spec. nov.**

(fig. 320)

♂ 15 mm. Head ferruginous, orbits laterally with a pale ochreous spot. Palpus with foot of basal segment and apical half of median white, elsewhere dark grey, terminal segment bluish-grey, white-tipped. Thorax dark fuscous, with faint and narrow greyish transverse bands: anterior, median and apical, shoulder and collar pale ochreous-pink. Abdomen fuscous-black.

Fore wing narrow, oblong-suboval, costa rather curved throughout, apex rounded, termen notched on vein 5, rounded above and below notch. Basal patch to beyond  $1/3$ , edge strongly angulate, angle obtuse, edge concave below costa, notched below angulation, patch obliterate below fold, except an elongate-oval prominence; this patch blackish on posterior third and below fold, elsewhere pale grey, with two black spots across costa beyond base and an oblique black streak originating from part of patch below fold and pointing towards base below costa, not reaching this; another similar parallel streak along base of dorsum; two faint spots of tawny suffusion below costa; space beyond basal patch forming an oval white spot on  $1/3$  of costa with three minute black marginal marks, and a grey transverse double streak from lower edge of white spot to fold; posterior part of costa narrowly black with three pairs of narrow oblique white lines and two single less oblique curved lines, posterior inwards-oblique and curved; a large suffusion, occupying more than third fourth of wing, darker infuscated in centre; this suffusion extended below costa to apex, thence along upper half of termen; pale and irregular, creamy and grey irroration, extending in an undulate band from below fold beyond basal patch, edging rounded patch below and extended beyond this so as to form a pale ocellus, edged on both sides with pale leaden, gradually dilated downwards, with upper (pale) half traversed by several dark horizontal strigulae but with lower half entirely a subtrapezoidal dark fuscous spot on end of dorsum; tornus filled out with leaden; a small triangular white spot occupying lower half of apical prominence, narrowly edged blackish; dorsum transversely streaked with leaden-grey and fuscous-tawny. Cilia (imperfect) pale tawny, becoming whitish around apex, a suffused black subbasal fascia, becoming broader and interrupted towards tornus.

Hind wing purple-black. Cilia tawny-whitish, with a pale basal line and a dark fuscous subbasal shade.

Male genitalia. Resembling those of *S. halantha* (Meyrick) but quite distinct. Tegumen and uncus similar. Gnathos membranous, broader. Valva more slender, without a ventral prominent angle at the base of cucullus.  $Spc_1$ , a brush of spines upon an erected subclavate process below base of costa, followed by a small knob, bristly on top;  $Spc_2$ , a not elevated patch.

East Borneo, Gunungsari, 95 m, 21.viii.1950 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 5823 (LM). Very similar and closely related to *S. halantha* (Meyrick) but with distinct genitalia and with minor differences of markings.

#### Teleta Diakonoff, 1966

*Teleta* Diakonoff, 1966: 71, figs. 72, 74-75 (type-species, *Olethreutes talaris* Durrant, New Guinea, by original designation).

Antenna slightly thickened, fasciculate-ciliated, cilia under  $1/2$ . Palpus rather long, ascending, dilated, rough along lower edge, terminal segment concealed, obtuse. Thorax with a posterior crest. Posterior tibia flattened laterally, strongly dilated by

long bristly scales, shorter below, longer above; a grey pencil from base  $3/4$  along tibia.

Fore wing with 2 from  $3/5$ , 3 from angle, 5 and 6 parallel, 7 separate, to termen, 8 closer to 7, from angle, 10 from  $1/3$ , 11 from middle; chorda from beyond middle to above 6, median branch to above 4; under side with oval patch of androconia.

Hind wing with pecten, 2 from beyond middle, 3 and 4 short-stalked, 5 approximated at base, 6 and 7 approximated towards base; upper side with oval patch of androconia: dorsum with a slight fold on underside.

Male genitalia. Tegumen high. Uncus long, clavate, curved, sometimes bilobed. Socius parietal or absent. Gnathos, a membraneous band. Valva with a pointed triangularly projecting sacculus and an obliquely clavate cucullus with a pointed ventral process.

Female genitalia with sterigma conical, with a median split, lower end dilated into a round ostium with a thickened edge. Colliculum moderate. Signa, two moderate pectinations.

At present I am satisfied that the two species synonymized by me before (1966) actually are distinct, of which the male genitalia bear witness. The reader is invited to compare figs. 326 and 329 closely.

#### Key to the species of *Teleta*

1. Uncus bilobed. Socius parietal . . . . . *talaris*  
 — Uncus simple, clavate. Socius not distinct . . . . . *xanthogastra*

#### *Teleta talaris* (Durrant, 1915)

(figs. 326, 340)

*Olethreutes talaris* Durrant, 1915: 155 (♂, Uta R.).

*Teleta talaris*; Diakonoff, 1966: 71, 73, figs. 72, 74-75 (*xanthogastra* Meyrick syn., ♂ genit. fig.).

Distribution. British New Guinea.

The species is characteristic by its rather light purplish-lilac ground colour; this colour in *T. xanthogastra* (Meyrick) is much paler, fuscous-whitish, and the dark markings therefore much more contrasting; furthermore, the fore wing is less dilated and narrower, the transverse fascia less robust, deeper incised on both sides, than in *xanthogastra*. Otherwise these two species are very similar, the androconial black spot is the same, as well as the brushes of the posterior tibiae; however, these are fulvous above in *talaris*, pale grey in *xanthogastra*. The yellowish-ochreous tinged abdomen is similar in the males.

***Teleta xanthogastra* (Meyrick, 1921)**

(figs. 327-329)

*Argyroploce xanthogastra* Meyrick, 1921: 856, figs. 327-329 (♂♀, Java). — Clarke, 1955: 327.  
*Teleta talaris*; Diakonoff, 1966: 71, 73 (nec *Olethreutes talaris* Durrant, 1915) (♂♀, lectotype *xanthogastra* selected, genit. ♂ figured).

Distribution. Java.

As stated above, it seems preferable to treat the present species as distinct from *T. talaris*. The differences of the genitalia are slight but still obvious.

A rather large species, 17-19 mm, from the mountains, with an olive-greenish fore wing, richly marked with greyish-fuscous. Costa throughout with transverse blackish strigulae more or less alternating with white pairs of markings. Basal patch deeper olive-fuscous, dotted with blackish-fuscous, edge serrulate and angulate. Median fascia indicated by a short oblique mark on costa before middle, continued as a large posteriorly extended lighter olive-green patch with a silvery-grey band to 2/3 of dorsum and a narrower similar branch, strongly sinuate, to tornus, so limiting a calyciform and a dentiform dark fuscous dorsal spot; a lighter, brownish-fuscous fasciate mark rising obliquely from lower part of termen and a similar apical spot.

Hind wing rather pale, semipelluculent fuscous-grey at base, becoming blackish-bronze towards apex and margin; a purple-black narrow androconial spot just below under edge of cell, from beyond base and below basal half of vein 2, not quite reaching vein 1c; dorsum with a submarginal fold on upper side and with strongly lengthened glossy greyish-white cilia.

Posterior tibia strongly dilated by very dense subappressed scales above and beneath, especially thick on inner edge where they form a shallow concavity, black on the inside, pale grey on the outside. A thick, concolorous pencil from base above, not reaching top of tibia. Posterior tarsus normal.

Male and female genitalia as described with the genus.

West Java, Sindanglaja, 1200 m, 1 ♂, lectotype, genit. slide 4984. Mts. Gede-Panggrango, Tjibodas, 1400 m, vi.1949 (A. M. Neervoort), 1 ♀, genit. slide 6240; the same locality, vii.1949, 1 ♂, 1 ♀; the same, 5.viii.1951 (Liem Swie Liong), 1 ♂, genit. slide 7610; the same, viii.1949, 1 ♀ (A. M. Neervoort). Mt. Malabar, Tjinjiroean, Government Cinchona Estate, 1700 m, xi-xii.1909 (H. W. van der Weele), 2 ♀ (LM). East Java, Mt. Ardjuno, 2000-3000 ft, 1896 (Doherty), 1 ♀ (BM).

***Pomatophora* gen. nov.**

Head with appressed scales, very long on vertex, forming a flat narrow tuft projecting between lower part of antennae over face. Ocellus posterior. Proboscis short. Palpus rather long and slender, subascending, reaching base of antenna, basal segment rough, median roughish along lower edge and at apex above, terminal seg-

ment moderate, slender, subobtusate and exposed. Thorax with a slight posterior tuft. Posterior tibia normally scaled.

Fore wing rather narrow, dilated, subtruncate, costa curved throughout, apex obtusely pointed, termen tolerably straight above, rounded beneath. Vein 2 from beyond middle, 3 from angle, 3-5 remote, 4 closer to 3, 5 and 6 slightly converging posteriorly, 7 separate, to termen, 8 from upper angle of cell, 9 close to 8, 10 from 3/5 distance between 9 and 11, 11 from middle, chorda absent, median branch from towards base, to above base of 4.

Hind wing semioval, about  $1\frac{1}{2}$ , with a cubital pecten. Vein 2 from middle of lower edge of cell, 3 and 4 very close together from angle, 5 approximated at base, 6 and 7 approximated towards base; dorsum normal.

Male genitalia. Tegumen high and narrow. Uncus pointed, rather long, flat and hooked, hairy underneath. Socius moderate, semiparietal. Gnathos absent. Valva robust and very broad, dilated; sacculus little modified, but pulvinus forming a clavate process crowned with dense spines, a second, longer and more slender process between this and costa. Cucullus not distinctly margined anteriorly, very broad, with a strong triangular ventral process and a rounded, depressed top; a large patch of very dense spines towards ventral edge anteriorly. Aedeagus rather long and slender, base slightly dilated.

Female unknown.

Type-species, *Pomatophora cudonis* spec. nov. (East Borneo).

An interesting form with the male characters suggesting a connection between *Statherotis* group with *Dicephalarcha* gen. nov., while the elevated processes at the base of the valva (harpes) indicate a connection with *Semniotes* gen. nov. The tuft of the vertex of head is a unique feature.

#### ***Pomatophora cudonis* spec. nov.**

(figs. 324, 341)

♂ 12 mm. Head fuscous, flat, tuft on vertex tipped with pale fuscous, its base frontally (above forehead) whitish, forehead and upper part of face dark purplish-fuscous, lower half of face whitish. Palpus whitish, median segment laterally with a basal, a median and an apical dark fuscous spot, terminal segment fuscous-grey, dark fuscous laterally. Thorax rather light fuscous-grey, metathorax dark fuscous. Abdomen dark fuscous-grey.

Fore wing oblong, rather narrow, costa curved, apex obtusely pointed, termen tolerably straight. Pale grey (rather rubbed), partially with a faint metallic bluish gloss, especially beyond cell. Costal edge dark fuscous, with two pairs of very narrow white transverse strigulae just before middle, followed by three pairs of very oblique snow-white conspicuous narrow lines, becoming faint and convergent below costa, a similar, triangular mark before apex, filled out with dark fuscous, anterior edge very narrow, posterior thicker, conspicuously snow-white. Basal patch apparently extend-

ing to  $1/3$ , dark fuscous; instead of a transverse fascia, a large slightly postmedian rounded patch, with lower edge obtusely angular, reaching vein 1b; an elongate-triangular dark fuscous spot on dorsum before tornus, with anterior edge twice as long as posterior, with edges slightly suffused; a faint fuscous transverse blotch from below costa not quite reaching top of triangle; this spot preceded by a pale grey field, faintly striated longitudinally; ocelloid spot vertical, strongly erected-pear-shaped, slaty-grey with white edges, top reaching vein 7. (Other markings rubbed and undiscernible).

Hind wing deep fuscous-purple, cell filled out with fine black androconia forming a suffused spot becoming darker dull purple-black below anteriorly but not reaching base of wing. Cilia (rubbed) fuscous with glossy whitish tip and a purple subbasal line.

Male genitalia as described with the genus.

Female unknown.

East Borneo, Tabang, Bengen River, 125 m, 8.ix.1956 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 6347 (LM). This, superficially rather obscure specimen, unfortunately is rubbed. Still the recognizable part of the markings suggests a transition from the primitive *Statherotis* type (without a pale costal spot) towards the *Dicephalarcha* group which surmise is also supported by the male genital characters.

#### *Statherotis* Meyrick, 1909

*Statherotis* Meyrick, 1909: 591 (type-species, *S. decorata* Meyrick, Ceylon, by original designation). — Fletcher, 1929: 208. — Clarke, 1958: 592, pl. 295 figs. 1-1c (neur., genit. ♂). — Diakonoff, 1966: 14, 42. — 1968: 54 (7 spp., key, 2 spp. redescr.).

Head with roughly appressed scales. Ocellus posterior, subinferior. Proboscis very short. Antenna ciliate in male, ciliations under 1. Palpus moderate, subporrected or slightly ascending, variably dilated towards apex by roughish scales above and beneath, terminal segment short, obtuse, exposed. Thorax with a diversely developed, mostly slight, posterior crest. Posterior tibia in male simple, or with a dense triangular tuft of hair-scales beneath, mostly with a differently coloured pencil of hairs from base of tibia above or inwardly. Abdomen in male sometimes with three pairs of coremata, being flat, fan-like projecting pairs of tufts from posterior edge of each 6th, 7th and 8th abdominal tergite; sometimes small tufts also on the 5th or only coremata on the 8th tergite.

Fore wing oblong-truncate, without a costal fold. Vein 2 from beyond middle, 3 from angle, 4 nearer to 3 at base, 5-7 subparallel, 8 and 9 stalked, connate or more or less closely approximated at base, sometimes remote, 10 closer to 11 than to 9, 11 from middle, chorda from before base of 10 to midway between 7 and 8, accessory cell very narrow; median branch from towards base to just above base of 4; underside of wing with a field of dark androconia along posterior half of lower edge of cell to beyond cell; sometimes androconia entirely absent.

Hind wing over 1, with a cubital pecten. Vein 2 from beyond middle, 3 from just before angle, 4 very close, from angle, appearing connate with 3, 5 closely approxi-

mated at base, 6 and 7 closely approximated towards base. Upper side with a central field of dark androconia, sometimes thinly strewn or entirely absent; dorsum in male sometimes modified, forming a fold or groove with diverse modified scent hairs; dorsum sometimes forming a projecting moderate lobe, mostly on underside with modified scent scales; cilia in tornus sometimes equally modified in male. In female hind wing normal.

Male genitalia with tegumen high and narrowed. Uncus clavate, usually hooked, hook sometimes deeply split, and covered with dense and long appressed bristles. Socius moderate or small, sometimes rounded. Gnathos diversely shaped, often sclerotized, pointed and projecting, sometimes broad, or reduced, or absent. Valva slender, sacculus ill-developed, with 2-3 patches of hairs and small bristles. Cucullus bristles diversely developed, usually long and forming an oblique transverse group. Cucullus proper: over 2/3, with a characteristic triangular hook above middle, top usually elongate and rounded. Aedeagus short.

Female genitalia. Ostium small, funicular, ventrally with a distinctly shaped split, laterally or latero-ventrally with lobes or processes, aciculate throughout. Colliculum dark, slender. Signa, two groups of diversely shaped dense pectinations.

The genus contains several species, mostly dark coloured with a conspicuous white or pale triangular costal spot. The males have rather uniform genitalia but can readily be distinguished by the presence or absence of secondary sexual characters: dark patches of androconia, tufted posterior tibiae and sometimes modified shape of the hind wings. The females, however, are similar to such an extent that I was not able to separate them further than two species groups, viz., that of *amoebaea* and that of *discana*. This situation is most disappointing but comparing of bred ♂♀ series of *S. leucaspis* (Meyrick) and *S. discana* (Felder & Rogenhofer) did not deliver a single tangible character for their separation. The males on the other hand can be easily separated with the following key. It is no wonder that several species have been confounded with the common species, *S. discana*, occurring throughout the Old World tropics.

The position and origin of the veins 8 and 9 in the fore wings is subject to variation even within the limits of species.

The new genera *Statherotoxys* and *Statheromeris* are closely allied to *Statherotis*, but differ by the slender, hooked uncus and not hooked cucullus and by the absence of a hooked uncus, respectively, while the markings are still entirely *Statherotis*-like and the absence or presence of secondary male characters are manifest in the available species in exactly the same extent as in the species of *Statherotis*, a striking parallelism.

Key to the species of *Statherotis*

Males

- i. Fore wing dark coloured, usually with a conspicuous paler triangular spot on middle of costa . . . . . 2

- Fore wing differently coloured . . . . . 17
- 2. Fore wing fulvous-crimson or tawny-brown, costal spot at least centred with greenish or pale green-ochreous . . . . . *tapinopa*
- Fore wing purplish-fuscous and grey, costal spot white . . . . . 3
- 3. Fore wing fulvous-crimson. Hind wing pale fuscous-grey, without androconia . . . . . *porphyrochlora*
- Fore wing tawny-brown and olive. Hind wing dark grey, in male a central dark fuscous androconial patch . . . . . 4
- 4. Hind wing modified, with a prominent and rounded tornal lobe . . . . . *antisema*
- Hind wing not modified, tornus sometimes thickened by modified scales but not lobate . . . . . 5
- 5. Fore wing without a pale costal spot, or this strongly obscured . . . . . 6
- Fore wing with a pale costal spot, when obscured along costa then edged below by a jet-black fascia . . . . . 7
- 6. Fore wing darkly marbled, without a pale costal spot. Gnathos with a broad point . . . . . *agitata*
- Fore wing not marbled, costal spot traceable, filled out with darker; gnathos slender. . . . . *discana* forma *saturata*
- 7. Fore wing with costal patch obscured along costa by usual dark costal markings, broadly edged below by a curved black fascia . . . . . *ancosema*
- Fore wing with costal patch not thus obscured, nor black-edged, or edge purple . . . . . 8
- 8. Fore wing with costal patch elongate-semi-elliptical; hind wing without androconia . . . . . *olenarcha*
- Fore wing with costal patch triangular or oblong-triangular . . . . . 9
- 9. Fore wing, costal patch strongly obscured on its upper half. Valva ventrally with two hooks . . . . . *aspidias*
- Fore wing, costal patch obscured only along costa, or suffused with pale crimson or not obscured at all. Valva ventrally with only one hook . . . . . 10
- Fore wing, costal patch evenly obscured with light grey throughout, sometimes also marked with light ochreous on posterior third. Valva with only one hook . . . . . 16
- 10. Fore wing underside and hind wing upperside with black androconial fields . . . . . 11
- Fore and hind wing without such fields . . . . . 12
- 11. Hind wing with a pencil of pale hairs from beneath costa on upper side, directed posterad . . . . . *tetrarcha*
- Hind wing without such pencil. . . . . 14
- 12. Posterior tibia normal . . . . . *discana*
- Posterior tibia with a dense triangular tuft of hairs beneath . . . . . 13
- 13. Fore wing with veins 8 and 9 stalked . . . . . *decorata*
- Fore wing with veins 8 and 9 remote . . . . . *holotricha*
- 14. Fore wing with a conspicuous pale spot in tornus; costal spot crimson-tinged, large and oblong. . . . . *transsecta* and *amoebaea leucotorna*



- Fore wing without a conspicuously pale tornal spot . . . . . 15
15. Posterior tibia above with dense expansible tuft of grey hairs . . . . . *amoebaea*
- Posterior tibia normal, without such tuft . . . . . *leucaspis*
16. Hind wing dark fuscous, with silvery-white costa; dorsum as far as vein 1a with well-defined edge, creamy . . . . . *discana cuneata*
- Hind wing pale grey, becoming dark grey along marginal third, a jet-black small streak of androconia along posterior fourth of lower edge of cell . . . . . *micrandra*
17. Fore wing pale ochreous with tawny-fuscous or fuscous markings . . . . . 18
- Fore wing green-tinged . . . . . 19
- Fore wing yellow-orange, partly infuscated . . . . . *iricolor*
18. Fore wing with a rounded large subterminal and a semioval subdorsal spot . . . . . *licnophora*
- Fore wing with an oblique submedian transverse fascia, dorsal half of wing beyond, and sometimes costal half before this fascia, infuscated . . . . . *abathodes*
19. Fore wing olive-green, white edges to markings conspicuous . . . . . *perculata*
- Fore wing bluish-green, without white edges to markings . . . . . *polychlora*
- Fore wing pale olive-ochreous, hardly green-tinged, white edges to markings not conspicuous . . . . . *batrachodes*

*Statherotis batrachodes* group of species

Uncus rather long and moderately broad, or with broad basal half and much narrower apical half. Socii large, oval, pending. Gnathos obliterate. Valva slender, cucullus long and clavate with a moderate ventral process with one spine. Elegantly coloured, often greenish tinged species without a white costal spot.

*Statherotis abathodes* spec. nov.

(figs. 375, 385)

♂ 18-19 mm. Head pale grey, a band between bases of antennae pale ochreous, a bilobed flat projecting tuft over face, pale ochreous, face white. Scape of antenna pale ochreous, apical third velvety black-purple. Palpus pale ochreous, median segment, upper edge with a narrow black streak towards base and a triangular spot beyond middle, a black spot before apex below. Thorax pale ochreous. Posterior tibia moderately thickened with smoothly appressed long and dense hair-scales, a pencil from base above exceeding  $\frac{3}{4}$  of tibia. Abdomen dark fuscous-grey, anal tuft snow-white.

Fore wing oblong-subtruncate, rather broad, dilated, costa moderately curved throughout, less curved in middle, apex pointed, termen sinuate, rounded below. A broad band occupying basal third of costa, gradually concave above and below, extending over posterior half of dorsum, tornus and lower third of termen; this band lilac-purplish, mixed with grey, median constricted third black mixed with greenish and ferruginous, with a narrowed band from its middle to middle of dorsum; costa with numerous blackish-ferruginous transverse strigulae, on posterior half forming

five wedge-shaped spots; a suffused subquadrate median mark; a ferruginous oblique streak in apex; upper concavity of dark band to below costa and vein 9 filled out with pale creamy-ochreous; an inwards-oblique white strigula along closing vein; basal half of dorsum as far as fold greenish-grey, slightly dusted with blackish; tornus lilac-purplish, mixed with ferruginous and green-grey, becoming paler above, ocelloid spot indicated by a paler greyish inwards-oblique indistinct patch with several interneural purple strigulae; apical half of wing halfway towards cell silvery-white, glossy; an oblique purple-greenish mark on middle of termen, with a narrow greenish curved fascia rising to and between bases of veins 7 and 8; a subterminal purple line from apical spot to below end of vein 6; upper half of terminal edge snow-white; edge of tornus irregularly whitish. Cilia along upper half of termen snow-white with a black bar in apex, elsewhere fuscous-grey, slightly barred with white.

Hind wing glossy fuscous-grey, end of costa snow-white, cubital pecten black, dense. Cilia pale grey with a darker submedian band, cilia along upper half of termen white, except this band, cilia opposite costal spot pure white.

Female, allotype, with dark band traceable, but much paler and suffused; ground colour even pale olive-greyish, densely marked with small brownish transverse strigulae, white subapical markings less contrasting and more limited; green tinge almost entirely disappeared; white discal strigula ill defined, cell followed by a round spot of fuscous suffusion.

Hind wing paler, dull fuscous-grey.

Male genitalia. Tegumen broad, narrower at base. Uncus regularly conical in contour, particulars entirely concealed by very dense bristles. Socius large, rounded-oval. Gnathos not defined, apparently entirely absent. Valva with a robust and broad basal third; cucullus slender and moderately curved; cucullus bristles dense, in an oblique patch; ventral process moderate, triangular, top of cucullus subclavate,  $Spc_1$  and  $Spc_2$  rather small, but distinct.

Female genitalia. Sterigma as in *S. batrachodes*, but cup more flattened, strongly aciculate-granulate, ostium bursae octagonal, edge above triangularly dilated; lamella postvaginalis extended, quadrate, strongly granulate, as high as the cup. Colliculum and signa as in *batrachodes*.

New Guinea, Stars Range, Ok Sibil, 1260 m, 21.vi.1959 (Netherlands Stars Range Expedition 1959), 1 ♂, holotype, genit. slide 6358; 1 ♂, paratype (LM). "Brit. N. Guinea, Aroa River (A. S. Meek)", 1 ♀, allotype, genit. slide 8020 (BM). A very distinct species.

### *Statherotis iricolor* (Meyrick, 1930) comb. nov.

(pl. 15 fig. 1)

*Proschistis iricolor* Meyrick, 1930: 601 (♀, New Guinea). — Clarke, 1955: 176. — 1958: 579, pl. 288 figs. 4-4c (holotype ♀ wings, genitalia figured).

Distribution. New Guinea: Mt. Goliath.

The holotype, a female, is from Central East New Guinea, Mt. Goliath, 5000-7000 ft (BM). The species is characteristically yellowish coloured and looks very different from other *Statherotis* species. However, closer study reveals an affinity to the greenish species of the *S. batrachodes* group, especially to *S. polychlora* spec. nov.

Fore wing brassy-yellowish, costa with eleven pairs of white marks in close pairs, except the ultimate two which are distant; these pairs separated by a brown costal dot and each two pairs alternating with a larger brownish subquadrate spot, reaching to cell; dorsum brownish-ochreous with lilac-greyish spots; a lilac-purple median streak, posterior half of dorsum with a series of transverse small bands, series ending in tornus; a round purplish patch beyond cell, with a narrowed stripe to apex; an inwards-oblique suboval white spot on upper angle of cell, preceded by a pair of round white spots at  $1/3$ , all narrowly ferruginous-edged.

Hind wing rather pale grey.

Female genitalia. Ostium rounded, lower edge narrow, partly double. Lamella postvaginalis trapezoidal, narrow, with a dark edge, laterally thickened and descending vertically as far as bottom of ostium orifice. Colliculum short, bivalval. Signa, two very large pectinations.

Apparently closely related to *S. polychlora*, of which only males are available, but certainly not conspecific.

♂ 19 mm, apallotype. Very similar to the female, only slightly differing in tinge and markings. Upper half of wing as far as lower edge of cell and course of vein 3 pale yellow, becoming orangeish towards termen, remainder of wing dark fuscous, towards yellow colour turning fulvous. Basal patch almost to  $1/3$ , fuscous; costa narrowly suffused blackish-fuscous, with nine small cretaceous-white marks, five anterior spots continued across wing as far as edge of cell, by silvery-white, little glossy, lines; sixth dot continued by a similar line, but strongly curved and vertical, to  $2/3$  of dorsum, preceded around lower angle of cell, and followed along median half, by a similar, parallel line each, posterior almost connected with another, diverging to tornus; one more such line along termen, almost marginal; the two ultimate costal dots interconnected below by a curved whitish line; a moderate, oblique spot on middle of costa, an inwards-oblique streak beyond closing vein, an oblong spot filling out cell except along edges, all fulvous-tawny. Cilia light yellow, dark fuscous in tornus.

Hind wing pale lilac-grey, an oblong-oval patch of purple-black, not dense scales in cell, in central third of wing. Cilia light fuscous-grey, with a faint whitish base.

Male genitalia. Tegumen high, uncus curved, rather short, subclavate, with a slender apical point, below this densely haired. Socii, moderate, flat lobes. Gnathos indicated as a little sclerotized, straight band, with a trapezoidal tuba analis upon its median half. Valva slender, sacculus  $1/3$ , moderately broad, cucullus narrower, curved throughout, with a median triangular prominence of lower edge and large terminal thorns, at each  $1/4$  and  $3/4$  of that edge. Aedeagus very short.

Central (Dutch) New Guinea, Mt. Goliath, 5000-7000 ft (Meek), 1 ♂, apallotype, genit. slide 8740. An interesting addition; the species proves to belong to the

greenish or yellow *batrachodes* group. Judging from the male genitalia, allied to *S. aspidias* (Meyrick) as well, but nearest to *S. perculata* spec. nov., from which it differs by a paler hind wing with a larger androconial field and by minor differences of the male genitalia, as seen from the figures.

***Statherotis perculata* spec. nov.**

(fig. 374)

♂ 17 mm. Head olive-green, face white. Antenna tawny-fuscous, scape olive-green. Palpus olive-green, top of basal segment whitish, median segment with a whitish spot in middle of lower edge and whitish apex, terminal segment pale opalescent green. Thorax rather bright ochreous, apical half snow-white, tegulae olive-green, left tegula with snow-white apical half. Abdomen glossy light purplish-grey. Posterior tibia glossy pale grey, a snow-white pencil of hair-scales from base at inner side, reaching 1/2 tibia.

Fore wing oblong-subtruncate, moderately broad (narrower than in *S. polychlora* spec. nov.), costa curved towards extremities, apex subobtusate, slightly prominent, termen sinuate, little oblique. Light olive-green, becoming slightly darker and tinged with brownish on lower half of disc. Costa with large, dark brown transverse marks, basal half with three marks alternating with minute dots, separated from each other by pairs of silvery-white transverse strigulae, crossing wing to upper edge of cell; third of these dark marks largest, submedian, wedge-shaped; posterior half of costa with four smaller, rounded dark brown marks, equally separated by pairs of silvery-white strigulae; a longitudinal brown suffusion traversing middle of wing slightly above centre and cut by a pair of diverging white dashes before middle, largest of these conspicuous, outwards-oblique; and cut by a pair of convergent, larger, olive-tinged pale marks on end of cell; a well-defined ochreous-yellow line from second dark (small) costal spot running along median branch to lower angle of cell; two large triangular marks on dorsum, at 1/4 and before middle, respectively, each formed by four convergent glossy whitish-grey strigulae, anterior triangle much more oblique; two loop-shaped inwards-oblique marks on 3/4 of dorsum and before tornus, formed of similar glossy pale greyish strigulae, anterior higher, its anterior leg obliterate on dorsum; two pairs of short vertical silvery-white strigulae: beyond cell and on termen above middle; a V-shaped white slender mark before apex, posterior arm continued to white dot on costa before apex; preterminal fourth of ground colour thus divided by the described light markings, so as to form an asymmetrical X-shaped mark, upper anterior leg short and clavate, upper posterior extended and filling out apex, lower posterior to termen and curved along this to tornus. Cilia light olive-green.

Hind wing rather dark fuscous-grey with bronze gloss, a patch of dense purple androconia filling out posterior half of cell. Cilia concolorous, with a whitish-grey gloss.

Male genitalia. Tegumen comparatively very broad. Uncus with a broad basal half and a half so broad apical bristly half.

Socii large, elongate-semioval. Gnathos indefinite, apparently obliterate. Valva with sacculus  $1/3$ , robust, cucullus rather slender, curved, cucullus bristles densely but finely spined; ventral process triangular, entirely bristled; cucullus top clavate, with a small second ventral spine halfway the top,  $Spc_1$  moderate,  $Spc_2$  very small.

New Guinea, Stars Range, Ok Sibil, 1260 m, 23.vi.1959 (Netherlands Stars Range Expedition 1959), 1 ♂, apallotype, genit. slide 6307 (LM). An elegant species, related to the following and less closely, to the preceding, as is evident from the genital characters.

***Statherotis batrachodes* (Meyrick, 1911) comb. nov.**

(figs. 356-357)

*Argyroploce batrachodes* Meyrick, 1911a: 274 (♀, Solomon Is., New Guinea, Queensland).—Clarke, 1955: 64.

*Statherotis batrachodes*; Diakonoff, 1966: 8, fig. 6 (lectotype selected: ♀, Sudest Id., genit. figured).

Distribution. Solomon Is.: Treasury Id. — New Guinea: Sudest Id., St. Aignan Id. — Bismarck Is.: New Britain. — Australia: Queensland.

There are six specimens in Meyrick Collection (BM), all females. The species is closely related to *S. abathodes* spec. nov. of which both sexes are available; therefore it is possible to place also *batrachodes* into *Statherotis* Meyrick with certainty.

The species resembles both *S. polychlora* and *perculata* closely, but is quite distinct, though. Ground colour ochreous-olive, turning brighter ochreous on lower half; a conspicuous white strigula along closing vein, with a horizontal appendix of lower end in cell; conspicuous and accentuated by a fuscous-grey shadow beyond cell, extending to middle of termen and well-defined above; apex with a wedge-shaped black spot, preceded by four similar smaller costal marks; larger subfasciate oblique blackish fasciae, at  $1/5$  and  $1/2$  of costa, respectively; otherwise intricate markings resembling those in *perculata*, but less contrasting, not silvery-white.

Hind wing dark grey.

Female genitalia. Sterigma aciculate, cup-shaped, lamella postvaginalis short, not extended upwards (caudad); ostium bursae, an inverted-cardiform opening in front of the cup, with thickened edges. Colliculum longer than sterigma, bivalval. Signa, two elongate large pectinations.

***Statherotis licnuphora* spec. nov.**

(fig. 325)

♀ 21 mm. Head pale ochreous, transverse tuft below bases of antennae infuscated. Palpus rather long, pale ochreous, dusted with fuscous, terminal segment long, moderately pending. Thorax fuscous-brown, marbled with pale ochreous. Abdomen pale fuscous-ochreous.

Fore wing oblong-triangular, dilated, costa gently curved throughout, apex obtusely pointed, termen rounded. Pale ochreous, tinged tawny, markings fuscous-brown (rather strongly rubbed). Costa as far as cell brown, cut into several rectangular spots by nine thick pairs of whitish transverse marks, arranged thus: one postbasal, thick; three somewhat more approximated between this and middle of costa, the two ultimate converging below costa; five along posterior half of costa, first and second of these approximated; basal patch to before  $1/4$  of costa, its edge oblique, with a projection in middle; transverse fascia median, formed of broad band across middle of costa, abruptly dilated in middle of disc into a large, subcircular fuscous patch not quite reaching dorsum, its lower half formed of an inverted-crescentic darker fuscous large spot, broader than upper half of fascia, posteriorly extending with an acute point well beyond cell and connected with dorsum by a light tawny fuscous suffusion; a fuscous spot on  $1/4$  of costa dilated, so as to form a semicircular subcostal spot, connected anteriorly with transverse fascia; an erect-clavate thick spot on dorsum before tornus; a larger erect-oval spot before upper  $2/3$  of termen, connected with two ultimate dark costal spots and with apex, and also with the middle of termen. Cilia pale ochreous, mixed with fuscous (imperfect).

Hind wing pale tawny-fuscous with a golden gloss, gradually becoming darker towards apex, paler towards base. Cilia glossy pale grey-fuscous with a white basal line.

Female genitalia. Sterigma rather differing from the usual type; the cup-shaped ostium is reduced to a narrow edge to the ostium bursae and only the sides are extended, so as to form transverse aciculate lobes with a rounded lateral edge. Colliculum moderate, distinctly of two sheaths. Signa, moderate patches of flat obtuse teeth. Lobes of ninth sternite thickened and aciculate throughout.

West Java, Mt. Gede, Kandang Badak, 2400 m, 31.v.1922 (L. J. Toxopeus), 1 ♀, holotype, genit. slide 5856 (LM).

Although this species is larger and of a different colour than the two preceding, the general pattern of the markings is so similar, that a close relationship is obvious. The genitalia are not too similar, though. The unknown male would have provided the additional data as to the exact position of this form.

***Statherotis tapinopa* spec. nov.**

(figs. 377-378, 450C)

♂ 17 mm. Head light olive, becoming light fulvous in certain lights. Palpus light olive, middle segment with an oblique, transverse, median dark fuscous streak. Thorax light olive, mixed with whitish and light ochreous, becoming darker in certain lights, tip and tips of tegulae whitish. Posterior tibia not dilated, light grey, a white pencil from base above, reaching to middle of tibia. Abdomen grey, anal tuft tinged light ochreous.

Fore wing dilated, costa gradually curved, apex rather pointed, termen sinuate. As

far as fold, rather dark brown-fuscous, with 9 almost confluent, broad, silvery-white pairs of costal marks; an ill-defined whitish inverted-crescentic large patch below median third of costa, united anteriorly with third and fourth pairs, posteriorly with fifth to seventh pairs of costal marks, so forming a large, semioval costal patch, containing along costal edge spots of ground colour, largest rhomboidal, just before middle; a silvery-white subcrescentic vertical strigula just before termen from below apex to end of vein 3, followed except at extremities by a minute brown terminal line; dorsum about as far as fold, greenish-olive speckled with ochreous, a blackish suffused streak along posterior half of fold, another along dorsal edge. Cilia (imperfect) yellowish, becoming olive-green in tornus.

Hind wing fuscous-grey, more or less bronze-tinged, especially towards apex, a black, suffused longitudinal androconial patch in cell and slightly beyond cell; dorsum moderately corrugated, edge with a slight thick roll, open above. Cilia concolorous, on dorsum whitish, in tornus lengthened.

Male genitalia. Very similar to those of *S. porphyrochlora* spec. nov., but uncus longer, with a less abruptly dilated base; valva slightly broader, more gradually curved; cucullus gently dilated below top.

New Guinea, Owingarra (A. S. Meek), 1 ♂, holotype, genit. slide 8022 (BM). Closely allied to *S. porphyrochlora* spec. nov., together forming a natural group with slender uncus.

♀ 19 mm. Head and thorax (rather rubbed) similar to male. Palpus longer (rubbed), otherwise similar. Abdomen dark grey-fuscous, anal tuft pale ochreous.

Fore wing broader and more dilated, apex pointed and prominent, termen strongly sinuate, rounded and prominent beneath. Strongly rubbed specimen, only marginal markings partly discernible; these are closely resembling the markings in male. The slight differences of colouring are: dark markings on basal half of costa ferruginous instead of black; longitudinal yellow streak replaced by broader and ill-defined orange suffusion; upper half of wing beyond cell rather suffused with dark brown; whitish markings probably similar, but almost entirely rubbed.

Hind wing glossy bronze-fuscous, slightly paler than in male. Cilia concolorous.

Female genitalia. Sterigma erect-triangular, V-shaped, aciculate. Ostium bursae proper with upper part, a simple split with thickened edges, lateral lobes large, rising, with horizontal upper edges; lower half of ostium wide, edges densely aciculate, turned sideways, bottom somewhat dilated. Colliculum shorter than in *S. batrachodes* (Meyrick), with a frontal split. Signa large, several combs of flat teeth, longest in middle, gradually decreasing in size, and forming smaller and smaller scale-like scobinations.

New Guinea, Stars Range, Tenma Sign, 1800 m, 22.vi.1959 (Netherlands Stars Range Expedition 1959), 1 ♀, allotype, genit. slide 6596 (LM). Very probably conspecific. The specimen is strongly rubbed.

*Statherotis porphyrochlora* spec. nov.

(fig. 317A, pl. 15 figs. 2-3)

♂ 17 mm. Head rather deep fuscous-olive, face white. Antenna light tawny-ochreous, flagellum dark-striped above, scape deep fuscous-olive. Palpus tawny-orangeish, edges suffused with blackish, terminal segment whitish. Thorax fuscous-olive, pale anteriorly and at the sides, tegula mixed with white and light fulvous scales, collar except on dorsum and cheeks light fulvous. Posterior tibia normal, rather smooth-scaled, a slender pencil from base above reaching to middle of tibia white. Abdomen pale grey.

Fore wing oblong-subtriangular, dilated, costa distinctly curved throughout, apex pointed, termen concave above, convex and rounded-prominent beneath, hardly oblique. Bright pinkish-fulvous touched with light crimson and partly suffused with darker, purple-fulvous. Costa suffused with deeper purplish, with four pairs and two single marginal dots silvery-white, pairs depressed; first pair faint, giving rise to a very oblique band of faint silvery-white dusting, gently dilated below; second to fourth pairs of white marks merging below costa in a large, elongate-triangular subcostal patch with truncate top, pale olive-green, transversely strigulated and marbled with silvery white, more or less edged at the sides by deeper purplish-crimson suffusion; dorsum from beyond base to tornus and posteriorly to above fold suffused with deep fuscous-olive-green, indistinctly marbled with whitish, on dorsal edge infuscated; a narrow silvery-white glossy line along concavity of upper half of termen; a series of faint pale dots before its lower half. Cilia pale olive-green, darker around tornus.

Hind wing pale bronze-grey, cilia concolorous, with a pale basal line and whitish tips.

Male genitalia. Tegumen rather high, gradually narrowed. Uncus also narrowed, slender, top hooked and bristly below. Socius moderate, oblong-oval, pending. Gnathos indefinite. Tuba analis flat, upper half bipartite, below this slender vertical sublateral folds. Valva long and narrow, sacculus  $\frac{1}{3}$ , cucullus prominent at base, densely bristled, with a process with a single spine above middle of lower edge, top oblong. Aedeagus short, curved and narrowed.

British New Guinea, Owingarra (A. S. Meek), 1 ♂, holotype, genit. slide 8023 (BM). An elegantly coloured insect; superficially it resembles *Asaphistis hemicyclica* (Diakonoff).

♀ 18 mm. Markings very similar to those in the male, but the ground colour somewhat different: costal half dark brown, basal half deep olive-green, marbled with fuscous; costal patch exactly as in the male. Hind wing slightly darker fuscous.

Female genitalia. Ostium erect-oval, lower two-thirds of its edge thickened and aciculate, tips of this portion rounded-prominent; remainder of this edge less than twice as narrow and formed of two almost converging small ridges. Lamella post-vaginalis aciculate, broad, inverted-triangular, upper edge notched in middle, side angles rounded. Colliculum darkened, narrowed below, irregularly plicate, bivalval. Signa, two large pectinations.



"British New Guinea", Biagi, Mambare River, i-iv.1906 (A. S. Meek), 1 ♀, allotype, genit. slide 8743 (BM).

***Statherotis polychlora* spec. nov.**

(figs. 383-384)

♂ 16 mm. Head greyish-green-blue, face light ochreous. Antenna fuscous, finely ringed with pale ochreous, scape thickened, ochreous. Palpus grey-green, slightly suffused with ochreous, more so along lower half, median segment with two black dots on upper edge: basal and suprmedian, respectively. Thorax light ochreous, tegulae and apical crest greenish. Abdomen grey-fuscous, woolly haired. Posterior tibia grey, normally scaled.

Fore wing rather broad, oblong-truncate, dilated, costa without a fold, moderately curved anteriorly, straight posteriorly, apex subobtuse, slightly prominent, termen slightly sinuate, vertical, long. Rather light greyish-green-blue, paler towards base, darker posteriorly. Costa with a series of rectangular transverse marks of diverse size, black along costal edge, below this suffused with moss-green; first black mark fasciate, beyond base, continued by a quickly dilating zigzag fuscous-green fascia to 1/5 of dorsum and forming a subtriangular patch there; second and third costal marks large, subquadrate, before 1/4 and before middle, respectively; submedian of these marks preceded on costa by a small black dot and connected below with a large moss-green central patch, strewn with brown and partly, with ochreous, in middle containing a longitudinal dark brown suffused streak and within this, an elongate-U-shaped, partly interrupted pale yellow line; this central patch rather well-defined, subtriangular, acute point on middle of dorsum, upper anterior angle of patch connected with first quadrate costal spot by paler green suffusion; upper posterior angle irregularly truncate and followed by an oval whitish spot; posterior half of costa with five smaller black marks, first minute, three following subquadrate, separated from each other by snow-white costal edge parted finely by black; ultimate mark apical, larger, moss-green, below narrowly connected with a fasciate moss-green transverse mark before termen, sinuate and narrowed below, to termen between ends of veins 3 and 4; an obliquely rising and slightly outwards-curved subclavate moss-green spot on dorsum before tornus, preceded on dorsum by a similarly coloured round dot; glossy silvery small marks before upper half of termen and faintly edging markings here and there. Cilia rather pale greyish-blue-green, somewhat less blue than ground colour of wing, faintly barred with yellow in and above tornus, apex with a dark green bar, edged with white above, with yellow below; base of cilia narrowly whitish.

Hind wing rather dark, grey-fuscous, with a purple gloss, thinly scaled, a patch of also rather thin purple-black androconia in posterior half of cell. Cilia fuscous-grey, without purplish tinge, with a pale basal line.

Female very similar to the male, only the ground colour, below costa especially, slightly paler and more unicolorous, the green central spot slightly larger, the snow-white oblique mark towards end of cell also larger. Hind wing slightly paler.

Male genitalia. Tegumen high and rather narrow, shoulder rounded. Uncus long, base thickened, hook narrower, little bristled. Socius, a moderate, pending lobe, lateral edge free only on lower half. Gnathos membranous, a slender transverse bar. Valva slender, curved, sacculus  $1/4$ , with a prominence on costa,  $Spc_1$  and  $Spc_2$  small; cucullus bristles, a transverse dense patch, ventral process moderate, free top rather long and slender. Resembling the genitalia of the preceding species, but with a narrower tegumen and a much longer uncus.

Female genitalia. Sterigma, a finely aciculate moderate tube, truncate above, gently dilated downwards, lower extremity rounded. Ostium, a wide split, narrowed above, rounded below, not reaching upper end of sterigma tube. Colliculum slender, two-sheathed, dilated downwards (anterad). Signa, two long combs of pectinations.

New Guinea, Stars Range, Ok Sibil, 1260 m, 11.vi.1959 (Netherlands Stars Range Expedition 1959), 1 ♂, holotype, genit. slide 6306 (LM).

Biagi, Mambare River, 5000 ft, i-iv.1906 (A. S. Meek), 1 ♀, allotype, genit. slide 8016; 1 ♂, paratype, genit. slide 8742 (BM). An elegant species with the appearance of a Schoenotenid.

*Statherotis amoebaea* group of species

Uncus broad and short, with a broad slightly constricted base and narrowed, cleft top, densely haired underneath. Socii large, oval. Gnathos broad, anus narrow, constricted laterally, point broadly triangular. Valva slender, cucullus long, subclavate or clavate, with a moderate ventral process with one spine.

*Statherotis tetrarcha* (Meyrick, 1920) comb. nov.

*Argyroploce tetrarcha* Meyrick, 1920: 349 (♂, Queensland). — Clarke, 1955: 306.  
*Olethreutes tetrarcha*; Clarke, 1958: 552, pl. 275 fig. 3.

Distribution. Australia: Queensland.

This species may be readily discriminated from its male congeners by the peculiar feature of the male hind wing, originally described thus: "a downward-direct fringe-tuft of grey-whitish hairs from beneath costa at  $1/3$ ". It is a patch of long hairs which arise from a small oval area of the wing membrane in the cell on the upperside of the wing and project back towards the posterior margin of the wing. Besides, between the base of the hind wing and the anal angle there is a dense tuft of modified cream-coloured scent scales.

*Statherotis catharosema* spec. nov.

(fig. 364)

♀ 15.5 mm. Head fuscous-purple. Palpus fuscous-purple, with a blackish median band or spot. (Thorax entirely denuded). Abdomen fuscous.

Fore wing oblong-subtriangular, distinctly dilated, costa curved throughout gradually, apex moderately but distinctly pointed, termen hardly sinuate, almost straight, oblique. Dark purple, apparently marked as in *S. amoebaea* (but anterior and dorsal portions of wing badly rubbed). Costal patch small, cretaceous white, occupying markedly less than median third of wing, both angles extended just below costa, especially anterior angle, anterior edge slightly concave above, posterior straight, top of patch convex, as long as sides, not exceeding  $1/3$  of disc; this patch along costa with five dark dots.

Hind wing bronze-purple, semipellucant, becoming rather thin-scaled towards base.

Female genitalia. Resembling those in *S. amoebaea* with signa smaller, but very similar: large fan-like pectinations. The sterigma, however, is distinct: with rounded-prominent semispheroidal sides and a large triangular frontal cleft.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 5.viii.1951 (Liem Swie Liong), 1 ♀, holotype, genit. slide 5976 (LM). The genitalia show close similarity with those of *S. amoebaea*, and also superficially the unique female holotype reminds one of the last mentioned species; however, it has narrower wings and, especially, a small white costal spot, situated on the middle of the costa.

***Statherotis transecta* spec. nov.**

(figs. 368, 369)

♀ 19 mm. Head dark grey. Palpus dark grey, becoming pale grey towards base. Thorax dark grey. Abdomen dark bronze-fuscous, venter whitish.

Fore wing oblong, oval-subtruncate, costa gently curved throughout, more so at apex, apex obtuse, termen gently convex, vertical, gradually rounded below. Deep purple and black, base, dorsum and tornus bluish-grey, with numerous fine zigzag transverse purple strigulae, costal spot from  $2/5$  to  $4/5$ , pale tawny-pinkish, becoming deeper pinkish towards costa, costal edge dark purple, with five pairs of short transverse snow-white marks; anterior two pairs continued along edge of spot, so as to form a white wedge, finely parted by tawny; top of spot slightly notched, its anterior edge tolerably straight and more oblique than posterior, which is concave; posterior extremity of spot with a small subcostal appendix; three bluish-metallic thin lines from costa, first cutting costal spot, all converging into one streak below costa before apex, to upper third of termen between the white points on terminal edge, each presented by a black point; broad dark edge to costal spot black anteriorly, becoming deep purple posteriorly, anterior half broader, with a small branch to a dark tooth in  $1/4$  of dorsum, top continued to dorsum beyond middle, posterior end slender and strongly curved to termen below middle; ocelloid patch large, represented by two erected wedge-shaped marks, anterior more oblique, grey, parted by purple; posterior wedge-shaped spot leaden-blue, with anterior half suffused with white; the wedges separated by a slender, slightly inwards-oblique purple fascia. Cilia purple, around tornus white.

Hind wing rather dull fuscous-black, becoming black towards apex, paler, fuscous towards base. Cilia whitish-grey, with a dark fuscous subbasal line.

Female genitalia. Sterigma, a rather high cup, aciculate throughout, with lateral edges moderately extended, so as to form triangular short lobes. Colliculum moderately long, narrow. Signa, enormous combs of several rows of teeth.

South Moluccan Is., West Obi, Obi Lake, 160-260 m, vii-xi.1953 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 5988 (LM).

Although the single specimen may be mistaken for the female of *S. amoebaea leucotorna* subsp. nov., the shape of the dark edge to costal spot and especially the very distinct genitalia allow of its separation. The present species is also related to the green-coloured new species of the *batrachodes* group, but is looking similar to the darkly coloured species of the *amoebaea* group.

***Statherotis amoebaea amoebaea* (Lower, 1896) comb. nov.**

(figs. 343, 345-346, 366, 370, 372)

*Dichelia amoebaea* Lower, 1896: 161 (Queensland).

*Argyroploce amoebaea*; Meyrick, 1911a: 281 (♂♀, Solomon Is., New Guinea, Queensland; short redescription).

Distribution. Queensland. Solomon Is., New Guinea.

The holotype is a female. Lower's description makes no reference whatever to the characteristic large and pale ocellus, present in both sexes of *S. a. leucotorna* subsp. nov., the reason, why I doubt Meyrick's identification of *amoebaea* and refer the material from the Moluccan Islands to the new subspecies.

The typical *amoebaea* may be redescribed as follows.

♂ 12-18 mm. Head and thorax purplish-grey. Palpus lighter grey, with bluish opalescence, in certain lights appearing dark fuscous on upper edge; terminal segment moderate, longer than in *discana*. Abdomen dark purple. Posterior tibia grey, dark grey on the inside, dilated and extended, especially on the inner side, with long appressed hairs; a broad pencil of stiff pale ochreous hairs, from below base above, appressed to upper part of inner side, reaching to end of tibia. Posterior tarsus with basal segment thickened with grey hair-scales.

Fore wing rather broad, suboval, costa curved throughout (curved at apex more than in other species), apex slightly rounded, termen gently concave below, apex rounded below, almost vertical. Deep purple; white costal spot larger than in *discana*, from beyond  $\frac{2}{5}$  of costa to beyond  $\frac{3}{4}$ , posterior extremity not extended in a streak, top only slightly notched, rather obtuse; this spot rather suffused throughout with pinkish, below costal edge forming a rosy streak, costal edge with five pairs of very short white marks, two anterior pairs continued along anterior edge of patch so as to form a slightly paler wedge, parted by a faint fuscous line; dark edge to spot well-defined along lower margin which is straight anteriorly and posteriorly (not convex);

grey area rather confluent and conspicuous, finely marbled with purple, with a larger purple zigzag mark from  $1/4$  of dorsum; ocellar spot indicated by an inwards-oblique wedge-shaped fasciate spot of ground colour, crossed with ill-defined grey bars; pale lines on costa beyond white spot narrow and faint, grey.

Hind wing deep purple-fuscous, rather narrow and pointed, slightly under 1, basal third and dorsum (also cell ra) thinly scaled, grey.

♀ 14.5-17 mm. In all respects similar to the male. The dark edge to white spot even more defined and forming a straight-edged triangle, its posterior curved appendix running to termen, slender, the ocellar grey area extending even further towards costa than in male.

Hind wing as in male but slightly lighter, grey area occupying basal half of wing but less transparent.

The two specimens redescribed are from New Ireland, xi and xii.1924 (BM).

Male genitalia. Tegumen rather broad, high. Uncus broad, with constricted base and narrowed top which is widely cleft, with moderate double brush of bristles. Socius large, oval, fleshy. Gnathos with narrow long arms, constricted above middle, point pending, broadly triangular, more or less truncate. Valva narrow and long, cucullus prominence rather narrow, top of cucullus long, with an oval smooth costal edge. Aedeagus pointed. Two males are figured (figs. 370 and 372) to show very slight variability.

Female genitalia. Little differing from those of *S. leucaspis*. Lamella antevaginalis rather robust throughout (as in genit. slide 5984). Lateral lobes of the ostium longer and more pointed. Colliculum broader and slightly shorter. Signa somewhat larger.

Judging from the genitalia of the male the present group of species is rather remote from that of *S. discana*, in spite of the great superficial similarity of colouring and markings; the female genitalia, however, are very similar.

*S. amoebaea* shows considerable variation to which it is not possible to assign any importance above that of population variability, at least so long no extensive and good preserved series from different localities are available. The females from Fergusson Id., Sudest Id. and from Choiseul (all rather worn) have somewhat paler tornal area.

Bismarck Is., New Ireland, xii.1923-1.1924 (A. F. Eichhorn), "*Argyroploce amoebaea* Lower, 6/5, E. Meyrick det., Meyrick Coll.", 1 ♂, genit. slide 5981 (fig. 372); the same, "6/6", 1 ♀, genit. slide 5982; the same, "6/1", xi.1923, 1 ♀ (without abdomen), "*Argyroploce schreberiana* L., 2/1, E. Meyrick det., Meyrick Coll." (!); no locality, 1 ♂, "*Argyroploce discana* Feld., 6/1, E. Meyrick det., Meyrick Coll." "New Britain, Talasea, A.F.E., 2.25" (in Meyrick's hand), "*Argyroploce amoebaea* Low. E. Meyrick det. Meyrick Coll. 6/1" (sic), 1 ♀ (without abdomen) (BM).

New Guinea, d'Entrecasteaux Islands, Goodenough Island (Meek), 1897, Walsingham Coll. 18159, 1 ♂, genit. slide 5983; Walsingham Coll. 18160, 1 ♂, genit. slide 5985; Fergusson Island, 21.xi.-18.xii.1894 (Meek, Walsingham Coll. 17437), 1 ♀, genit. slide 5984; and 17438, 1 ♀ (no abdomen). E. Papuan Is., Louisiades, St. Aignan Id.,

1887 (A. S. Meek), 1 ♂ (BM). NW. New Guinea, Sorong, 8.vii.-14.viii.1948 (M. A. Lieftinck), 3 ♀ (LM).

Solomon Is., Shortlands Is. (C. Ribbe), 1 ♀, genit. slide 6414. "Choiseul, Solomon Is., ASM.05" (in Meyrick's hand), "6/2" and "6/4", 2 ♂, genit. slides 5991 and 5987 (BM).

East Java, Nongkodjadjar, 1300 m, Mt. Toenggangan, 23.iii.1940, 1 ♂, genit. slide 5973. Nongkodjadjar, 1300 m, 16.iv.1940, 1 ♀, genit. slide 5974 (A. M. R. Wegner) (LM). The costal patch is slightly greyish-suffused and the wing slightly narrower.

The females from New Britain, Goodenough Id., and from Sorong in N. New Guinea, have a small, pure white, and more triangular costal patch.

***Statherotis amoebaea leucotorna* subsp. nov.**

(fig. 371)

?*Argyroploce amoebaea* Meyrick, 1911a: 281 (nec Lower, 1896) (Solomon Is., New Guinea, Queensland).

♂ 18 mm. Head blackish-grey, face below whitish. Palpus dark slaty-grey, apical and frontal edges suffused with black, dorsal edge whitish-grey with a median black spot. Thorax dark fuscous-grey. Abdomen blackish-grey, three pairs of tufts below apex slaty grey, venter pale grey. Posterior tibia slaty-grey, pencil from base pale ochreous.

Fore wing oblong-suboval, moderately dilated, costa curved throughout more so towards extremities, apex obtusely rectangular, termen straight above, rounded beneath. Leaden-grey with some purple tinge, densely and finely marbled with fuscous; an elongate pale triangular costal patch, extending from about 1/3 to 5/6 of costa, including some six white very short oblique pairs of costal marks, cutting a blackish costal streak; remainder of patch white, with an oblique pale greyish-ochreous band from the third pair of costal marks, parallel to anterior edge of patch, not quite reaching posterior edge; this band preceded by a narrow light ochreous line from between first and second pairs of costal marks to middle of anterior edge of patch; patch beyond band very pale crimson-pink, with two very oblique patches of pale orange suffusion from between costal pairs of marks; edges of patch well-defined, its top very obtusely notched; this patch broadly edged with fuscous-black, broader anteriorly, top reaching fold; a large whitish-ochreous triangular spot rising from tornus almost to vein 7, forming ocellus, cut from top to base by a partially interrupted fuscous-black streak just beyond and parallel to anterior edge of ocellus; posterior half of ocellus filled out except along a narrow edge, with fine leaden metallic marbling with a few fuscous lines; two oblique leaden lines, from posterior end of costal patch and from costa halfway this and apex, converging in middle, to 1/3 of termen; three whitish marginal points along upper third of termen. Cilia deep fuscous-purple, towards tornus becoming ochreous-whitish.

Hind wing deep fuscous-bronze with a purple gloss, deeper towards apex, less than basal half paler and thinly scaled, costal streak greyish-white. Cilia glossy greyish-white, a broad subbasal dark fuscous band, dilated in tornus, absent along base.

Male genitalia. Tegumen elongate. Uncus broad, top abruptly narrowed and bifid, each half with a long dense brush of hairs on lower surface. Socius large, flattened-oval, broad. Gnathos with arms horizontal at bases, then curving down and forming a broad triangular transverse portion. Tuba analis broad and distinct. Valva slender, cucullus bristles forming a separate basal patch, cucullus ventrally with a conical process, above this rather slender, elongate-oval; sacculus with a larger patch of bristles at margin and a smaller group more towards disc. Aedeagus short, curved and pointed, caulis rather long.

Moluccan Is., Buru, below 1000 ft, 1892 (Doherty), 41238, holotype, ♂, genit. slide 5979; the same data, 41239, 41240, genit. slide BM 84, ♂, 41241; 41242, allotype, ♀, genit. slide BM 85, 41243-41245. Amboyna, 1892 (Doherty) 41348, ♀ (without abdomen). In total 7 ♂ 2 ♀ (Walsingham Collection, BM).

This robust subspecies is characterized by the large pale ocellus, the pinkish-tinged costal patch, and the dark abdomen in the male.

***Statherotis leucaspis* (Meyrick, 1902) comb. nov.**

(figs. 349-353, 361)

*Eucosma leucaspis* Meyrick, in Gardiner, 1902: 126 (♂, Minikoi Id.). — 1906: 136 (Ceylon). — Clarke, 1955: 185. — Diakonoff, 1970: 48 (lectotype designated).

*Argyroplote leucaspis*; Meyrick, 1909: 592. — 1911a: 270 (Seychelles). — Fletcher, 1917: 229. — 1921: 60, pl. 13 fig. 2 (Pusa, Nagpur, Khasis, Kandy; life history, food plants). — 1932: 30 (Pusa, food plant).

*Olethreutes leucaspis*; Clarke, 1958: 524, pl. 261 figs. 4-4a (genit. ♂, from Assam, figured).

Distribution. Maldives Is.: Minikoi Id. Ceylon. ? Seychelles. ? India.

Food plant. *Nephelium litchi* (= *Litchi chinensis*, Sapindaceae).

Maldives Is., holotype, ♂, "Minikoi, Gardiner, 20.vi.1900" (printed label), "*Eucosma leucaspis* Meyr., type" (written, in Meyrick's hand), genit. slide 6498. Two paratypes, ♂, with the same printed locality, collector, and date labels (CME).

Ceylon, Pundaloya, 3500-4500 ft, 1897 (Green), 2 ♂, genit. slide 5993. — 1893 (Pole), 1 ♂ (BM).

Central Java, Seneng near Semarang, teak forest, 40 m, ii-iii and vii-xii.1931, 1932, bred from leaves of "tjoekilan" (? *Allophylus Cobbe*) and "kesambi" (? *Schleichera oleosa*), 5 ♂, 3 ♀, genit. slides 4597 ♂, 6540 and 6543 ♀ (L. G. E. Kalshoven). West Java, Buitenzorg (250 m), 24.viii.1948 (Liem Swie Liong), 1 ♀, genit. slide 6538 (LM).

Marshall Is., "625 no. 1601" (Mathew, BM), 1 ♂.

Ellis Is., "625, no. 1602" (Mathew, BM), 1 ♂, genit. slide 5994.

The species is very similar to *S. discana*, but the males are very distinct by the absence of any androconial structures.

♂ 13.5-14 mm. The general tinge is less purple, but more fuscous, somewhat lighter. Lighter and more confluent is the usual marbling on base, along dorsum and before tornus; the blackish broad edge to costal patch is somewhat more constricted beyond middle; the white costal patch itself is slightly larger, sometimes reaching below almost to middle of wing, its top more truncate, the fine notch being more shifted anterad, the top beyond this notch less rounded, more truncate, the ultimate pair of white costal marks continued as a distinct small oblique streak, so forming the posterior extremity of patch, being more distinct, pale leaden or lilac-grey and more oblique; two single costal strigulae thicker, more distinct, white.

Hind wing of a more normal shape, less pointed, termen normally prominent between veins 5-2, dorsum slightly extended but hardly beyond the normal, cell 1a less excavated and forming a kind of a more shallow gulley, but this is present nevertheless, whitish. Posterior tibia normally scaled, not dilated, grey, pencil from base present, greyish-white, somewhat shorter than in *discana*.

♀ 12-15 mm. Entirely similar to male, also the hind wing. Sometimes tornal area rather conspicuously paler.

Male genitalia. Very similar to those of *S. discana*. It is not well possible to identify the mounts without the insects. The slight differences are as follows. Tegumen and valva broader, more robust. Uncus more densely haired. Gnathos sometimes more truncate and slightly longer. Valva broader, rather distinctly so, the ridge at the base of cucullus more prominent, the group of bristles just below it very dense; especially the apical half of the cucullus is broader. Aedeagus broader.

Female genitalia with lateral lobes flanking ostium longer and pointed. Signa smaller, of diverse size, subequal, teeth slightly or distinctly clavate.

The species is closely allied with *S. discana*.

#### *Statherotis discana* group of species

Uncus rather long, moderately broad, clavate, top cleft, densely long-bristled on the upper side. Socii slender, elongate. Gnathos slender, more or less pointed and pending or weak and rising. Valva rather broad, cucullus with a subtriangular top and a broad triangular ventral process.

#### *Statherotis discana discana* (Felder & Rogenhofer, 1874) comb. nov.

(figs. 354, 359, pl. I fig. 7)

*Tortrix* (?) *discana* Felder & Rogenhofer, 1874: pl. 137 fig. 41 (♂, Amboina).  
*Argyroplote discana*; Meyrick, 1911a: 280 (Solomon Is., Moluccas, Hainan). — Meyrick, in De Joannis, 1929: 720 (Tonkin, food plant). — Fletcher, 1932: 28 (also Java and China; N. Kanara). — Kalshoven, 1950: 394 (*Nephelium* food plant). — Bradley, 1957: 94. — Diakonoff, 1966: 14, fig. 21 (genitalia holotype figured). — 1968: 56, figs. 79, 530 (♂ genit. described, figured).



Distribution. Moluccan Is.: Amboina (type locality). Solomon Is.: Choiseul. Hainan Id. Tonkin. Java. India: N. Kanara. Renell Id., Philippine Is.

Food plants. *Litchi*, leaves (in Tonkin). *Nephelium* (Java) (Sapindaceae).

As is already remarked in the discussion of genus *Statherotis*, species with general markings of "*Tortrix*" *discana* Felder & Rogenhofer have caused considerable confusion. The present species has been recorded from Ambon (Amboina) Id.; the name is based on a good, coloured figure. Besides, we are fortunate to have the type specimen available: Felder's types have been purchased by Lord Walsingham and the type of *S. discana* is now in the British Museum. It was therefore possible to identify the material concerned with certainty. Meyrick (1911) published a good but rather terse description of the species. It seems worth while to present a complete redescription.

♂ 14-16 mm. Head and thorax purplish-grey, slightly dusted with paler grey. Palpus slightly paler grey, without purple tinge. Abdomen and anal tuft blackish-fuscous, venter glossy white. Thorax sometimes pale and pinkish. Posterior tibia pale grey, normally scaled, slightly roughish with bristly appressed scales above, hardly dilated, a snow-white pencil of hairs from base, appressed to inner side.

Fore wing oblong-subtruncate, its shape slightly variable with termen varying from almost straight to gently sinuate, always about vertical. Deep purple or fuscous-purple, densely and finely marbled with slaty-grey, except a broad edge to the costal patch; this edge from 1/3 of costa, encircling the patch but not quite reaching costa beyond patch, being cut there by a couple of grey lines, slightly narrowed beyond top of costal patch and continued as a down-curved attenuated fasciate appendix, to below middle of termen; costal patch of slightly variable shape, shorter or longer, slightly oblique, anterior edge being straight and longer, posterior edge concave; top of patch either pointed or variably truncate, usually finely split or notched anteriorly, not reaching middle of disc; white, usually suffused with pinkish towards costa posteriorly and along costa always with a purple narrow streak cut by five white pairs of transverse small marks; two or three single fine marks on costa beyond patch, emitting grey lines which converge on upper third of termen. Grey-marbled area of wing sometimes paler, with marbling extended and confluent, the ocelloid patch with five distinct horizontal purple strigulae. Usually two triangular spots of grey marbling, flanking this patch, with four or five grey horizontal lines. Cilia deep purple, with a pale grey spot opposite tornus and a narrow whitish basal line.

Hind wing subtriangular, over 1, apex rather narrow, termen hardly prominent between veins 3 and 4, tornus with a triangular ventral prominence with a small apical spine; free part of cucullus moderately narrowed, usually with a gradually rounded costal edge and top. The shape of cucullus and its width below and above the ventral prominence may vary slightly which is confusing.

Female genitalia. Sterigma with lateral lobes of ostium bursae rather short, flat-

tened and dilated at the top. Colliculum moderately long and slender. Signa rather large, inequal, rather rounded, teeth obtuse, not clavate.

Material studied: males.

West Java, Buitenzorg (Bogor), 250 m, 6-11.vi.1935, bred from leaves of *Nephelium lappaceum* (rambutan) (C. Franssen), 10 ♂ in LM, 1 ♂ in BM (genit. slides 649, ♂, 8.vi.1935; 4594, ♂, 7.vi.1935). The same locality and food plant, 4.iii.-13.iii. and 18.-26.iii (R. Awibowo), "*Hastula discana*". Collected at light: i, v and ix of 1948, 1949 and 1952, 7 ♂ (F. C. Drescher, A. M. R. Wegner, A. C. V. van Bommel) (LM). "Batavia, 1892" 1 ♂, and "Buitenzorg, 1893" (Snellen Coll., LM). West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, ix.1948, 1 ♂ (A. M. Neervoort) (all LM).

Bangka, Soengailiat, x.1947 (LM).

Malaya, Negri Sembilan, on leaves of rambutan (G. H. Corbett) (BM, 2 ♂, one named by Meyrick) (redescribed here).

Moluccan Islands, Ternate, 1892 (Doherty), Walsingham Coll. 41425. Almahera (= Halmaheira = Gilolo), 1892 (Doherty), 41216 (det. Durrant), without abdomen. Buru, below 1000 ft, 1893 (Doherty), Walsingham Coll. 1149. Batian, 1892 (Doherty), 1 ♂ (BM).

North New Guinea, Geelvink Bay, Ron Id., vii.1897 (Doherty), 3 ♂. d'Entrecasteaux Is., Fergusson Id., 23-31.xii. 1894 (Meek), 2 ♂. E. Papuan Is., Louisiades, St. Aignan Id., 1897 (Meek), 1 ♂. SW. New Guinea, Kapaur, sea level-2000 ft, 1.xii. 1890-e.ii.1897 (Doherty).

Celebes, near Chambi, low country, 1896 (Doherty), 2 ♂.

Hainan, (R.), .08 (Meyrick Coll.), genit. slide 6542 (BM).

Solomon Is., Shortlands Is. (C. Ribbe), 1 ♂, genit. slide 5992 (Walsingham Coll. 43124), "*Tortrix Discana* Feld." (written in ink, old label) (BM).

Formosa, Tainan, 7.iv.1906 (A. E. Wileman), genit. slide 5989 (BM).

The males are rather slender and are immediately recognizable by the black androconial patches, one in the centre of the fore wing underside, another in the centre of the hind wing upperside, combined with the hind tibiae being normal and not dilated by hair-tufts. The veins 8 and 9 in the fore wing are separate, only moderately approximated towards base.

As is stated above, I was not able to find any tangible differences of the females of this and the foregoing species, *S. leucaspis* (Meyrick), so that I am compelled to record the doubtful female specimens separately, below the bred material which certainly belongs to *S. discana*.

Material studied: females.

West Java, Buitenzorg (Bogor) bred from leaves of *Nephelium lappaceum* (rambutan), 8.vi.1935 (C. Franssen), genit. slide 6541; 27.ii.1938, 2 ♀ (C. Franssen), genit. slide 6545; the same, 7.vi.1935, 1 ♀, 8.vi.1935, 11.vi.1935, 3 ♀; 28.vii.1920 (pupated 19.vii.), also 13.xii and 24.xii.1920, 3 ♀; the same, 14.i and 17.iii.1920 (R. Awibowo). 5.vii.1919, 1 ♀. 3 ♀ with only "*Hastula discana* Feld.". Tjiomas near Buitenzorg,

[600 m], 14.ix.1935, from leaves of rambutan, 1 ♀ (P. van der Goot), genit. slide 4596 (LM).

Material of females of uncertain identity:

West Java, Buitenzorg (Bogor), collected at light: 3.v.1949, 31.i.1951 and 10.iv.1956, 3 ♀ (F. C. Drescher). "1919", 2 ♀ (W. Roepke). Batavia, 1880 and 1892, 2 ♀ (Snellen Coll.) (LM).

Formosa, Kanshirei, 28.ix.1906 (no abdomen), Takow, 27.viii.1904, 2 ♀ and 6.ix.1904 (A. E. Wilemann) (BM).

***Statherotis discana* forma ♂ ♀ *saturata* nov.**

(figs. 269-270, 347-348)

♂ ♀ 13-16 mm. Head and thorax purplish-fuscous. Palpus light ashy-grey, with two faint oblique dark grey transverse marks across upper edge. Abdomen dark grey-fuscous, in male segments 5-7 with spoon-shaped pale grey tufts of scales above and laterally, segment 8 with two dense grey lateral triangular tufts; tergites 3-4 blackish.

Fore wing oblong-truncate, gently dilated, more so in male, costa curved, apex obtusely pointed, termen gently sinuate above, rounded beneath, vertical. Light purplish-grey, transversely strigulated suffusedly with fuscous, markings dark fuscous. Basal patch indefinite, base of costa with two oblique, blackish strigulae, running to fold; a broad, dark fuscous oblique straight band from 1/3 of costa touching fold just beyond its middle, angulate there and running to below costa just before apex; this band with upper edge rather well-defined, lower edge broadly suffused, angulation moderately dilated; so enclosed triangular costal patch not conspicuous, light purplish-grey, obscured by some six oblique transverse costal strigulae, some alternating with minute marginal marks; posterior extremity of angulate band emitting two fuscous streaks, anterior moderate, slightly inwards-oblique, to dorsum well before tornus, posterior narrow, attenuated, along lower half of termen to above tornus; ternal third of wing thus divided in two inverted-wedge-shaped spots, anterior not reaching dorsum, posterior representing ocellus; these spots sometimes paler-edged with light ochreous (paratype, ♀), usually not edged, of purplish-grey ground colour, and then not conspicuous; both wedges with rounded tops and narrowly parted by a dark fuscous line. Cilia (imperfect) pale ochreous or pale fuscous with a dark subbasal band.

Hind wing in male fuscous-brown, central half with a semipellucent patch of purplish-black androconia, dorsum pale ochreous with thick and long whitish-ochreous cilia. Cilia elsewhere brownish-fuscous. Hind wing in female semipellucent fuscous-grey, apical third opaque, dark bronze-brown with a purple gloss.

Male genitalia similar to those of *S. discana* (Felder & Rogenhofer).

Female genitalia. Sterigma aciculate, cup-shaped, slightly constricted in middle, with a broad median split, upper angles extended and pointed. Otherwise similar to *S. discana*.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, vii.1949 (A. M. Neervoort), 1 ♂, holotype, genit. slide 5790. Bogor (Buitenzorg), 250 m, 18.vi.1948 (A. M. R. Wegner), 1 ♀, allotype, genit. slide 5791; paratypes: the same locality, vii.1921, bred from leaves of *Nephelium lappaceum* (rambutan), "*Argyroploce discana* Feld., Meyr. det.", 1 ♂, 1 ♀. The same locality. 18.iii-26.iii, and 18.iii.1929, the same food plant (Awibowo), 2 ♂, genit. slide 4595, 3 ♀; the same locality, 1919 (S. Leefmans), "*Hastula discana* Feld.", 1 ♂; 20.vi.1948 (A. Diakonoff), 1 ♀, paratype; the same, 11.viii.1956 (F. C. Drescher), 1 ♀. The same locality, 5.vi.1935, on leaves of *Eugenia polyantha* (L. G. E. Kalshoven), 1 ♂, "*Argyroploce crocospila* Meyr. n. sp." (LM). In total 6 ♂, 7 ♀.

The type of "*Argyroploce*" *crocospila* Meyrick, in the British Museum, is from Sumatra. That species belongs to the Eucosmini.

***Statherotis discana cuneata* subsp. nov.**

♂ 14 mm. Head, palpus and thorax fuscous-purplish, strongly dusted with light grey. Abdomen fuscous-grey, venter lighter. Posterior tibia white, normally scaled, pencil from base slender, white.

Fore wing oval-truncate, slightly dilated, costa little curved, apex obtuse, termen straight above, rounded beneath, vertical. Fuscous-purplish, base, dorsum and tornus strongly dusted with light grey and with vertical undulate fuscous transverse strigulae. Costal spot from about 1/3 to 3/4, posterior end with a slender appendix; light grey, with a faint pinkish gloss, costal edge fuscous-purplish, cut by the five pairs of whitish marks; dark edge to spot broad along anterior edge, twice obtusely notched, deeper notched opposite top of spot; anterior dark edge cut before termen by acute top of very high tornal triangle, ocelloid spot proper being a slender slightly inwards-oblique fascia, above merging in end of dark edge to costal spot; anterior edge to ocelloid spot also a long and slender triangle, more inwards-oblique; both triangles parted by purplish; a sixth pair of white marks on costa beyond spot; a slender whitish oblique transverse line before apex, from costa to termen. Cilia fuscous-purplish, dusted with grey, a white basal and a fuscous-purple subbasal line. Underside with a rectangular spot of dark purple androconia, occupying the central third of wing length and breadth.

Hind wing glossy-white along costa, and white and semitransparent along dorsum as far as vein 1b; disc from base of cell and end of vein 2 as far as vein 1b, pale fuscous; remainder of wing rather thinly strewn with dark purple, beyond cell tending to form fine transverse strigulation, veins dark purple, lower half of cell and base of vein 2 densely strewn with dark purple androconia. Cilia snow-white, around tornus and along termen lengthened; cell 1a with a longitudinal concavity on the upper side.

Male genitalia similar to those of the nominate form.

East Java, Tengger Mts., Tretes, 900 m, 13.ii.1940, e 1. Salam leaves (*Eugenia polyantha*) (A. Diakonoff), 1 ♂, holotype, genit. slide 5975 (LM).

Differs from the nominate form by the wedge-shaped androconial field in the hind wing, and by the white, instead of grey, posterior tibia.

***Statherotis micrandra* spec. nov.**

(fig. 386)

♂ 12.5 mm. Head dark fuscous-grey, face and forehead pale grey. Palpus rather long, sinuate; dark grey, basal segment, upper edge and oblique subapical band of median and tip of terminal segment, pale grey. Thorax whitish-grey. Posterior tibia whitish, with sparse, loose, fine and long hairs above and beneath, pencil from base above slender, to beyond middle. Abdomen light grey, venter whitish.

Fore wing oblong-suboval, costa moderately curved, more so at extremities, apex obtusely pointed, subrectangular, gently projecting, termen being sinuate, shortly concave above, broadly rounded beneath. Deep purple. Costa towards base with two pairs of whitish transverse marks; a large oblong-triangular, well-defined pale dove-grey-whitish costal patch, from beyond  $1/3$  to  $3/4$ , finely edged throughout with whitish, paler on lower half, suffused with deeper dove-grey above and posteriorly; this patch containing five pairs of costal white marks of diverse length, narrowly parted and more broadly separated by purple, this colour so forming four dark costal spots, second of these, just before middle of pale patch, fasciate and oblique, almost reaching centre of patch; posterior end of this patch continued as a slender subcostal strigula, curved downwards, to upper third of termen, dove-grey; patch below costa posteriorly slightly suffused with yellowish; three slender single white strigulae across costa posteriorly; becoming more vertical, posterior almost apical, continued to middle of termen and just submarginal, thence marginal to above tornus; a pale leaden-grey ocelloid spot in tornus and a few similar small spots along dorsum. Cilia (imperfect) dark purple, in tornus whitish.

Hind wing rather narrow, pointed, tornus projecting, with a subtriangular, sub-obtuse lobe; pale grey-fuscous, thinly scaled but rather opaque, apical fourth gradually becoming suffused with dark purplish-fuscous; dorsum below vein 1b, whitish, with thin long whitish hairs. A short slender streak of deep purple androconia on upper side below and along posterior part of lower edge of cell and beyond it along base of vein 4, slightly clavate posteriorly. Cilia concolorous, with a pale basal line and a darker subbasal band.

Male genitalia of the *S. discana* type. Uncus rather long and broad, rectangular, with a truncate top, darkly haired. Socius small, suboval. Gnathos, a slender transverse band with mesally, a strong, pointed and concave trowel-shaped plate, point obliquely downwards. Valva with  $Spc_1$  (pulvinus) bristles short and sparse,  $Spc_2$  a compact small patch just below cucullus bristles, these in a strong oblique transverse series. Cucullus with a triangular process with a single spine; cucullus top broad. Aedeagus small, appearing submembraneous.

Northeast New Guinea, Geelvink Bay, Ron Id., vii.1897 (Doherty), 1 ♂, holo-

type, genit. slide 7772 (BM). The unique specimen with the dorsum of both fore wings rather rubbed, but very distinct by the small androconial group in the hind wing. Belongs to the *S. discana* group.

***Statherotis ancosema* (Meyrick, 1932)**

(fig. 259)

*Argyroploce ancosema* Meyrick, 1932: 310, fig. 370 (♂, Lautoka). — Clarke, 1955: 46.

*Statherotis ancosema*; Diakonoff, 1966: 55.

*Olethreutes ancosema*; Clarke, 1958: 484, pl. 241 figs. 1-1a (type and genit. figured).

Distribution. Fiji Islands.

This elegant species represents a differently marked group, with the pale costal patch almost entirely resorbed by the general pale ground colour, but the dark edge of this patch, already noticeable in the preceding group of species, now extended into a diversely shaped jet-black curved or oblique fascia or a costal black blotch. *S. ancosema* with still visible, although subcostal, whitish spot, encircled below by a black fascia, represents the intermediate form on the verge between the two groups.

Male genitalia are very similar to those of *S. discana* but with an acutely triangular top of cucullus and a pending and triangular gnathos, stronger than in *discana*.

***Statherotis holotricha* spec. nov.**

(figs. 365, 373)

♂ 16.5 mm. Head, palpus, and thorax purplish-fuscous, face pale grey; tegulae with bases of scales pale ochreous; apex of thorax strewn with darker (tips of scales). Posterior tibia glossy dark grey, strongly dilated in middle below by a triangular dense and brushy tuft of scales, blackish on the inner side, with pencil from base pale ochreous, appressed to that side. Abdomen dark black-fuscous, anal tuft large and globular, dark grey, tufts of valvae brown; venter grey.

Fore wing with veins 8 and 9 remote; subtriangular-ovate; dilated, costa rather curved throughout, apex moderately rounded, termen hardly concave, little oblique, rather long. Dark purplish-fuscous, partially transversely strigulated with lilac-grey, rather dull, giving rise to intricate strigulated and marbled pattern, paler than ground colour: on basal fourth of wing, along dorsum, and with an obliquely-acute triangular spot, arising from third fourth of dorsum; a triangular white costal spot, from before 2/5 to before 4/5, anterior edge straight, posterior concave, top short-truncate by the course of vein 7, posterior angle slightly produced just below costa; this patch edged below by a broad suffused band of dark fuscous-purple, uninterrupted colour; patch on costa with five short pairs of white strigulae, below costa slightly suffused with greyish-pink; two faint pale transverse lines on costa before apex, ultimate tending to form a crescentic greyish preapical line to termen; a verti-

cally rising suffused pale grey patch in tornus and on lower end of termen, drop-shaped, top acute, centred with darker grey. Cilia (worn) dark purplish, with a pale ochreous basal line, in tornus cilia pale ochreous, with dark tips. Underside with a jet-black androconial field.

Hind wing deep fuscous-bronze, with some ochreous tinge, little glossy, rather opaque (only extreme bases of scales being transparent); a large black-purple androconial patch on basal half, androconia elongate, almost hair-like, denser and darker black between lower edge of cell and vein 1c; tornus of wing forming a moderate, extended lobe, with edge, dorsum as far as vein 1a and underside throughout covered with modified, dense pale golden-ochreous scales. Cilia elsewhere fuscous with a pale basal line.

Male genitalia. Tegumen narrower than in allied species. Uncus also rather narrow, clavate and long-haired. Gnathos arms transverse, strong, with thickened edges, hook rising, rather broad, with a median split of the inner side. Socii very slender. Valva rather broad, top of cucullus less elongate, ridge of cucullus bristles thick, in 2-3 parallel rows, patch of bristles below ridge, weak.

♀ 16.5 mm. Fore wing narrower, termen slightly sinuate. Costal patch larger, slightly more elongate, occupying more than third and fourth fifths of costa, apex obliquely notched, broader than in male; patch on costa at its 1/3 with a larger dark dot, beyond this suffused throughout with pale ochreous-pink. Hind wing and tibia normal.

Female genitalia (terminal portion missing). Signa, large unequal pectinations (left smaller). Teeth obtusely pointed, bases broad.

Southwest Celebes, Bantimurung Falls, 50 m, 9-18.viii.1949 (A. Diakonoff), 1 ♂, holotype, genit. slide 5977; 1 ♀, allotype, genit. slide 5978 (LM).

Closely allied with *S. discana* but with a narrower top of tegumen and with uncus and socii narrower and longer.

### *Statherotis antisema* spec. nov.

(figs. 360, 362-363, 387)

♂ 14 mm. Head and thorax rather light fuscous-grey. Palpus paler grey, darker grey opalescent in certain lights. Abdomen dark fuscous, anal tuft mixed with pale grey. Posterior tibia glossy pale grey, simple, not tufted, but roughish below.

Fore wing with veins 8 and 9 separate in the two sexes; truncate, rather broad, dilated, broadest at 2/3, costa curved throughout, apex subobtuse, termen sinuate, long, vertical, rounded below. Rather light purplish-grey, strewn with fuscous. Costal patch from well before middle of costa to 3/4, light grey, posteriorly slightly infuscated, along costa fuscous and with five pairs of white marks; anterior edge straight, strongly oblique, posterior shorter, concave, top short-truncate, with a small vertical incision anteriorly; patch surrounded by a broad dark fuscous edge, rather suffused and ill-defined below, its top apparently reaching to dorsum; costa beyond

patch with two leaden, single small transverse strigulae, first oblique, second almost vertical; these strigulae and a third, originating from the ultimate mark on costal patch, converging so as to form a single faint streak apparently to  $1/3$  of termen; ocellus suffused, light slate-grey, ill-defined. Cilia (worn) fuscous with a pale basal line.

Hind wing modified, slightly shortened, termen angularly inbent on vein 2, thus giving rise to a large tornal almost circular lobe. Dark fuscous from costa to vein 2, below this brighter brownish-bronze, clothed with slightly modified scales; dorsum glossy yellowish-white, with dense, smooth scales. Tornal lobe from below very densely clothed as far as vein 1c with modified short glossy pale ochreous scales. Cilia (worn) whitish-fuscous, around lobe white, along dorsum white, very dense, lengthened towards base of wing.

♀ 15.5 mm. Similar to male but wing narrower, oblong-suboval. Costal patch longer, but of the same general shape, paler: white, only on upper half suffused with light grey and with rather bright ochreous; ocellus slightly more contrasting. Hind wing normal but narrower than in other species; dark bronze-fuscous, becoming thinner scaled towards base, only dorsum to beyond vein 1a semipellucent. Cilia pale grey with a dark fuscous subbasal band.

Male genitalia. Belong to the *S. discana* type, but differ as follows. Gnathos with a pending rather broad and elongate point. Uncus with long and dense hairs. Valva relatively broad, especially cucullus much broader than in *discana*, process broadly triangular, top short and obliquely rounded; cucullus bristles extremely long, cucullus base projecting, triangular. Aedeagus very short.

Female genitalia. Sterigma strongly aciculate throughout. Ostium moderate. Upper median parts of sterigma produced, so as to form long porrect lobes, rigid and with rounded tops, distinctly longer than in allied species. Signa rather small, spines moderate, with rounded tops.

East Borneo, 125 m, Tabang, Bengen River, 3.ix.1956, 1 ♂, holotype, genit. slide 5971; the same locality, 31.x.1956, 1 ♀, allotype, genit. slide 5972 (LM). The male is very distinct by the modified hind wings.

Solomon Is., 1 ♂, genit. slide 5992.

*Statherotis aspidias* (Meyrick, 1909) comb. nov.

(figs. 424A-B)

*Argyroploce aspidias* Meyrick, 1909: 599 (♂♀, Khasis). — Clarke, 1955: 56.

*Statherotis aspidias*; Clarke, 1958: 595, pl. 296 figs. 2-2a (lectotype ♂ design., wings, genit. figured).

Distribution. Assam: Khasis.

Fore wing deep purple marbled with pale bluish-lead, this colour tending to form series of parallel coarse double transverse striae; these striae form a large basal patch with outer edge convex and very oblique, from  $1/5$  of costa to before middle of



dorsum; two broad, ill-defined double bluish-leadene striae slightly inwards-oblique and dilated downwards, forming the edges of ocelloid spot; a large semioval white spot on middle of costa not reaching middle of disc, centred with purple, along costal half posteriorly suffused with dark grey, six pairs of slender bluish-white costal marks, seventh single, subapical.

Hind wing deep purplish-fuscous, becoming grey towards base.

Male genitalia. Tegumen rather high and narrow. Uncus with a broad base, hook short and moderately broad. Socius elongate-oval, moderate. Gnathos, a distinct, sclerotized transverse band, narrowed in middle, with slender arms, forming a pending trapezoidal hook. Valva with sacculus ending in two distinct prongs, upper apparently being homologous with the hook of cucullus in other *Statherotis*, lower, with the row of cucullus bristles.

Female genitalia. Ninth sternite forming a stiff high collar. Ostium bursae aciculate on the outer side, ovoid, with an open frontal split. Lamella postvaginalis aciculate, with several shallow transverse ridges. Colliculum long and very slender, narrowed downwards. Signa, two large pectinations.

Assam, Khasis, 1 ♀, genit. slide 8046 (BM).

### *Statherotis olenarcha* (Meyrick, 1931)

(figs. 358, 367)

*Argyroploce olenarcha* Meyrick, 1931: 136 (♀, Formosa). — Clarke, 1955: 224.

*Olethreutes olenarcha*; Clarke, 1958: 532, pl. 265 fig. 1.

*Statherotis olenarcha*; Diakonoff, 1968: 55, 56, 302, figs. 74, 532 (Philippine Is., redescr. ♂, fig genit.).

Distribution. Formosa; Philippine Is.

The species is closely allied with *S. amoebaea* (Lower), differing by the shape of the costal spot, which is extended along costa posterad and almost reaches apex. It is pinkish-tinged and contains faint costal transverse strigulae of the usual shape and the origin of the transverse fascia, pale and obliterate in cell. The hind wing is without androconia, fuscous-grey with black veins and apex.

Male genitalia. Uncus, broad, bilobed. Socius large and rounded. Gnathos broad but weak, constricted in middle and at the sides.

Female genitalia unknown.

Only the holotype, ♀ (without abdomen, BM) and the male from the Philippines (USNM) are known to me. The species superficially has a striking resemblance with "*Argyroploce*" *cyanura* Meyrick.

Neallotype (apallotype), ♀, genit. slide 5986 is from Sudest Id. (Papuan Is., BM).

The present specimen may be the opposite sex of *S. olenarcha* (Meyrick):

♀ 12 mm. Head and thorax dark ashy-grey. Thorax fuscous. Abdomen fuscous (mouldy).

Fore wing moderately dilated, costa gently curved throughout. Rather dark purplish-fuscous but strongly rubbed. Costal spot large, from before  $1/3$  to almost  $5/6$ , white, posteriorly rather suffused with pink on upper half. Hind wing fuscous-grey, cilia concolorous.

Female genitalia. Sterigma shaped as a small aciculate cup, as high as wide, with dilated extreme upper edge, and in front, two projecting small triangular lobes, closely pressed together and probably concealing split-shaped ostium. Lamella postvaginalis forming a moderate trapezoidal sclerite dorsally of the above described cup. Colliculum slender and moderate. Signa large, elaborate, subequal combs.

New Guinea, Sudest Id., .05 (A. S. Meek), 1 ♀, apallotype, genit. slide 5986 (Meyrick Coll., BM).

*Statherotis decorata* group of species

Uncus rather long, simple, top cuspidate. Socii little bristled, slender and rather long, clavate. Gnathos inverted-T-shaped.

*Statherotis decorata* Meyrick, 1909

(figs. 309, 342, 344)

*Statherotis decorata* Meyrick, 1909: 591 (♂, Ceylon). — Clarke, 1955: III. — 1958: 592 pl. 295 figs. 1-1c (type and genitalia figured).

Distribution. Ceylon.

A rather variable species, judging from an additional series in the BM from Ceylon, with the costal pale spot more or less obscured by fulvous suffusions of diverse intensity, and with dark interspaces of the white costal strigulae well-defined. The fore wing with veins 8 and 9 stalked along basal half only in lectotype; in nr. 8034 these stalked only at the extreme base; fore wing broad and dilated, with termen distinctly sinuate and slightly outwards-oblique, lower half being strongly rounded and prominent; costal spot large, almost semicircular; ocelloid spot indicated by white dusting, fasciate and extending from top of costal patch to tornus, containing two black marks.

The female, apallotype, hereby designated, is in all respects similar to the male lectotype, with a large, semioval costal spot well-defined and reaching from  $1/3$  of costa to before apex.

Hind wing rather light purplish-fuscous, termen and tornus as far as vein 1c light ochreous-tawny; androconial field extended, blackish-grey, little contrasting dark scales being rather thinly strewn.

The male posterior tibiae characteristic: beneath with long, projecting ochreous scales, forming a broad triangular tuft before middle and grey expansible hair-pencil from base lying on inner side of this.

Male genitalia. Uncus rather narrow, clavate and strong. Gnathos very broad, top dilated and almost T-shaped, with a rounded edge. Socius moderate, pending, with a small naked lobe above its base. Valva oblong, cucullus of the usual shape, with a ventral prominence, disc thinly strong-bristled; base of cucullus with bristles in an oblique ridge which forms a second ventral prominence (distinct in left valva, fig. 344).

Female genitalia. Sterigma aciculate, forming two erect semioval concave plates at the sides of the ostium, separated from this by deep curved folds, so as to give the structure the shape of the letter M. Colliculum dark, moderate. Signa pectinate, with rather blunt teeth.

Ceylon, Madulsima, iii.1906 (Green), 1 ♀, apallotype, genit. slide 8055 (Meyrick's Coll., BM). Pundaloya, 3500-4500 ft, vii.1897 (Green) (Walsingham Coll.), 'genit. slide 8034.

#### *Statherotis agitata* (Meyrick, 1909)

*Proschistis agitata* Meyrick, 1909: 589 (♂♀, Ceylon). — Clarke, 1955: 39.

*Statherotis agitata*; Clarke, 1958: 595, pl. 296 figs. 1-1a (lectotype select., genit. fig.).

Distribution. Ceylon.

This inconspicuous species does not have the characteristic *Statherotis* appearance, but the male genitalia show very close affinity to the type-species *S. decorata*.

Male genitalia. Uncus moderate, clavate. Gnathos broad and sclerotized. Valva with the characteristic cucullus with a triangular hook and rounded slightly clavate top, but without the transverse comb of spines (cucullus bristles).

The species is closely allied to the preceding, but has the costal pale patch so much obscured, that it is almost obliterate; the brownish and purple species is easily distinguished from *S. decorata* by the absence of androconial fields in the male. The genitalia, however, show the close relation. The ground colour is reddish-fuscous, strigulated with black and mixed with white; edge of basal patch indicated only on costa; transverse fascia blackish and broken up, less defined except a larger prostrate-semioval transverse spot below middle of disc; a dark rather broad suffusion on costa before apex, more or less distinctly connected with dorsum posteriorly.

Hind wing fuscous, without an androconial field.

Male genitalia very similar to those of *S. decorata*, the characteristic broad and T-shaped uncus is very similar. Valva narrower, with base of cucullus not projecting.

Female genitalia not known to me.

#### *Dicephalarcha* gen. nov.

Head with appressed scales forming a flat rounded tuft projecting over face. Ocellus posterior. Antenna moderately thickened in male, fasciculate-ciliated, ciliations

under 1. Palpus subascending, median segment abruptly dilated with roughish scales above and beneath, terminal segment moderate, curved, obtuse. Thorax without a crest. Posterior tibia in male normal.

Fore wing oblong, narrow, termen usually concave above, rounded beneath. Vein 2 from beyond 3/5 of cell, 3 from angle, curved upwards and approximated to 4 at margin, 7 separate, to termen, 8 from upper angle of cell, 9 closely approximated, 10 halfway between 9 and 11, 11 from beyond middle of cell; upper parting vein from well before 11 to base of 7, lower parting vein from towards base of cell to base of 4.

Hind wing with a cubital pecten, 2 from beyond middle, 3 from angle, 4 closely approximated, almost connate, 5 strongly curved and closely approximated at base, 6 and 7 stalked.

Male genitalia with uncus curved, bilobed or furcate, sometimes clavate, with lobes porrected. Socius usually large, flattened. Valva slender, dilated, top cleft in a rounded separate and hairy cucullus and a narrow, usually naked ventral process. Spc<sub>1</sub> present, diversely developed.

Female genitalia. Sterigma, an aciculate funnel. Colliculum a slender tube. Ductus and corpus bursae simple. Signa, two patches of flat, scale-like and obtuse teeth.

Type-species, *Dicephalarcha sicca* spec. nov. (Java).

A natural group of small species, sometimes greenish-coloured. Markings usually formed by a large central oval spot, not reaching dorsum, or by traces thereof, emitting a sinuate streak to termen with a branch to end of dorsum. Ground colour often glossy whitish or silvery.

Four of the species recorded below were attributed previously to "*Argyroploce*".

Key to the species of *Dicephalarcha*

1. Fore wing with costal half suffused continuously and much darker than dorsal half, marked sometimes only with white pairs of strigulae . . . . . 2
- Fore wing with costal half either not markedly darker or if darker then not continuously so . . . . . 4
2. Colouring considerably varying but dark costal area always with median third extended and semioval or subtriangular, reaching down to fold or to below fold; cucullus with base of dorsal arm broader than that of ventral . . . . . 3
- Colouring sometimes strongly variable, but costal area somewhat less abruptly prominent below, or if so, then triangular over only median fourth of lower edge  
*herbosa*
3. Dark costal patch extending downwards below fold; upper arm of cucullus clavate . . . . . *sicca*
- Dark costal patch extending to fold, upper arm of cucullus very broad, narrowed  
*dependens*
4. Fore wing yellowish, finely marbled throughout with dark brown. . . . . *monometalla*
- Not thus . . . . . 5

5. Fore wing olive-green, marbled with whitish-green . . . . . *acupicta*  
 — Fore wing with darker, light marked costa, not green . . . . . 6  
 6. Fore wing with ground colour blue-metallic mixed with white . . . . . *anemodes*  
 — Fore wing rather light tawny-ochreous, costal spot much reduced, tornus light,  
 without spot or this spot oblique, fasciate . . . . . 7  
 7. Dark tornal spot absent . . . . . *dimorpha*  
 — Dark tornal spot oblique and fasciate . . . . . *atava*

***Dicephalarcha dependens* (Meyrick, 1922) comb. nov.**

(fig. 396)

*Argyroploce dependens* Meyrick, 1922: 524 (♂, China). — Clarke, 1955: 113. — Viette, 1952: 150.

Distribution. S. China: Shanghai.

A moderate species of the characteristic facies: narrow-winged, with a dark brown suffused costa from base to apex, marked only with a few slender white pairs of costal strigulae, and with about the median third of lower edge of the dark suffusion extended downward in a somewhat paler, grey-fuscous, rounded-triangular prominence reaching to fold just beyond middle of wing; the remainder of fore wing rather bright ochreous-tawny, strewn with dark brown points; ocelloid spot indicated by a series of four irregular small strigulae; base of dorsum with a moderate blackish suffused streak. Cilia concolorous.

Hind wing light bronze-fuscous, deeper brown-bronze towards apex, paler, greyish towards base.

Male genitalia with socii rather short; gnathos well-developed. Valva robust, cucullus with ventral process rather slender, top (dorsal process) very broad, rounded, slightly narrowed. Spc<sub>1</sub>, a moderate dense group of short spines; cucullus bristles in a small dense patch.

The holotype is preserved in the Paris Museum (genit. slide 3743).

***Dicephalarcha sicca* spec. nov.**

(figs. 391, 397, 444)

♂ 14-15 mm. Head pale fuscous-olive, face white. Palpus whitish-ochreous touched with pink, median segment laterally with a dot above base, an oblique median and an apical irregular line, blackish. Thorax light fuscous-olive, with a bright iridescent-green hue in certain lights, apex with a dark fuscous spot (sometimes absent). Abdomen dark fuscous, anal tuft paler. Median tibia slightly thickened by bristly hair-scales, posterior tibia normal.

Fore wing oblong-truncate, narrow, little dilated, costa curved at base, almost straight in middle, apex rounded, termen concave and vertical above, gently prominent and rounded beneath. Ground colour limited, rather dull pale bluish-lead-

Markings dark fuscous, except on costa and termen more or less suffused with light olive-green; narrowly white-edged. Basal patch over  $1/5$ , from costa to fold, on costa with four pale blue small marks, below fold obliterate; a sinuate subcostal line, almost horizontal, from beyond middle of costa to termen below apex, dilated and light blue anteriorly, narrow and white posteriorly; posterior half of costa dark fuscous, with four more narrow white costal lines, tolerably equidistant, becoming less oblique posteriorly, running into subcostal line, ultimate of these encircling a black spot in apex; a large, suboval patch occupying more than central third of wing, from costa to below fold, anteriorly not distinctly divided from basal patch and extending over second fourth of costa and with a pair of bluish costal streaks at  $1/3$  of costa; this patch continued to and extended along upper half of termen by a curved streak, convex above; concavity below this streak more suffused with olive and emitting from its middle an inwards-oblique straight streak to end of dorsum, dilated below and sometimes transversely lined with darker; light ground colour on dorsum much marbled or transversely streaked with fuscous and olive, in tornus forming an isolated ocellus, triangularly narrowed above and almost reaching to subcostal line, in middle traversed by a fuscous line. Cilia creamy, along upper half of termen with a dark fuscous subbasal streak, in tornus more or less clouded with leaden-grey.

Hind wing dark brownish-bronze, blackish towards apex. Cilia creamy with a pale base, basal half suffused with fuscous.

♀ 14-14.5 mm. Similar to male, but with markings entirely bright light olive-green, except on terminal third of wing where they are mixed with blackish-fuscous; upper half of termen suffused with light ochreous; basal and central patches interconnected below costa; costa narrowly blackish with contrasting whitish strigulae. Cilia light ochreous, subbasal streak brownish.

Hind wing as in male, but anterior half paler and semipellucant.

Male genitalia. Tegumen slender and high. Uncus deeply furcate, lobes shortly rough-bristled at the top. Socius large, epaulette-like. Cucullus lobe broad, rather short, slightly clavate; ventral lobe long, pointed.  $Spc_1$  is a large patch of dense, short and stout spines; cucullus bristles forming a contiguous dense patch of longer spines. Aedeagus broad.

Female genitalia. Sterigma, a laterally compressed aciculate short tube, appearing as an erect oval. Colliculum moderately long and slender, narrowed, tubular and sclerotized. Signa, two moderate patches of obtuse stout teeth.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 18.xii.1940 (A. Diakonoff), 1 ♂, holotype, genit. slide 4970, 1 ♂, paratype, 1 ♀, paratype, genit. slide 4995. The same locality, 15.vii.1951, 5.viii.1951 (Liem Swie Liong), 3 ♂, and 2.ix.1952, genit. slide 7604 (A. M. R. Wegner), paratypes. East Java, Tengger Mts., Nongkodjadar, 1300 m, 6.iv.1940, 1 ♀, allotype, genit. slide 4965; 24.iii.1940, 1 ♀, paratype (A. M. R. Wegner). 5 ♂, 3 ♀ (LM).

A larger species with less contrasting and more strigulated ground colour.

**Dicephalarcha herbosa** (Meyrick, 1909) comb. nov.

(figs. 395, 399)

*Argyroploce herbosa* Meyrick, 1909: 600 (♂♀, Assam). — Clarke, 1955: 157.  
*Olethreutes herbosa*; Clarke, 1958: 519, pl. 258 figs. 1-1a (lectotype select., figs., genit. ♂).

Distribution. Assam: Khasi Hills.

♂ 10-13 mm. Head and thorax pale olive-greenish, mixed with fuscous, apex fuscous. Palpus grey, apex and upper edge posteriorly pale ochreous, lower edge anteriorly pale grey. Abdomen fuscous-grey.

Fore wing oblong-truncate, little dilated, costa curved at base and apex, hardly curved in middle, apex obliquely rounded, termen straight, hardly concave above, rounded beneath. Costal half of wing dark fuscous, becoming dark slaty-grey towards costal edge; extreme costal edge narrowly white along posterior 2/3, anteriorly emitting a few short white transverse strigulae, posteriorly with five very oblique longer lines, whitish becoming leaden-grey, penultimate line less oblique, ultimate vertical; a triangular elongate tawny spot along upper half of termen, including one white and two black dots; lower half of wing pale bluish-grey, strongly suffused and marbled with fuscous-olive along 3/4 of dorsum; a triangular olive-grey broad projection from middle of dark upper half of wing, reaching halfway towards dorsum and whitish-edged; area in tornus forming a large oval ocellus of pale ground colour, including an oval fuscous spot on dorsum before end, connected with costal dark colour by a pale-edged inwards-oblique streak traversed by several horizontal dark fuscous lines. Cilia light ochreous, with a dark fuscous subbasal band, interrupted in tornus.

Hind wing dark grey becoming blackish towards apex. Cilia pale grey, with an ill-defined subbasal shade, cilia along upper half of termen from below apex pale grey with white posterior half and a more distinct dark subbasal band.

♀ 13 mm. Similar to male, but upper half of wing more olive-green, without dark fuscous suffusion, costa blackish.

Javanese material has the green colour paler, green-yellowish, with dark fuscous part more conspicuous.

Male genitalia. Tegumen broad. Uncus with a shallow excision not reaching middle, each lobe densely spinose on the underside. Socius large, oval, flattened. Valva deeply cleft, colliculum clavate, slender at origin, lower process long, almost naked. Spc<sub>1</sub>, a patch of not dense moderate spines, cucullus bristles, a larger and denser patch of spines mixed with bristles.

Female genitalia. Sterigma, a laterally compressed aciculate tube, wider and less compressed and with a deeper frontal excision than in *D. sicca*. Signa small, obtuse large teeth, serrulate along the edge.

South Celebes, Mt. Lompobatang, Borong Rapoa, 850 m, 19-24.viii.1949, 1 ♂ genit. slide 4998, 1 ♀, genit. slide 4999 (A. Diakonoff).

Moluccan Islands, Halmahera, Mt. Sembilan, 600 m, 27.ix-6.x.1951 (native collector), 1 ♂, genit. slide 5953.

Central Java, Telawa near Semarang, teak forest, 40 m, 26.vii.1931, 2 ♂, genit. slide 5796; 2.vii.1931, 1 ♂; 29.viii.1934, 1 ♀, genit. slide 5824 (L. G. E. Kalshoven). The Celebes material is slightly larger, otherwise identical to the Javanese.

East Borneo, Tubang, Bengen River, 125 m, 18.ix.1956 (A. M. R. Wegner), 1 ♂, genit. slide 6351 (LM).

Bali Id., 1896 (Doherty), 1 ♂, genit. slide 7821 (BM).

*Dicephalarcha monometalla* spec. nov.

(fig. 390)

♂ 12 mm. Head yellowish, base of antenna blackish, face whitish-yellow. Palpus pale yellow, median segment with a subbasal and a suprmedian blackish ring, terminal segment rather long, blackish, tip yellow. Thorax yellowish strongly mixed with black. Posterior tibia normally scaled, without pencil; pale ochreous, dark grey outwardly, except articulations. Abdomen dark fuscous, anal tuft pale ochreous.

Fore wing truncate, moderately dilated, broadest at  $2/3$ . Bright ochreous-yellow, markings formed by strong dark brown marbling and by pale blue-lead spots; costa dark brown with white, short thick pairs of oblique marks: some two suffused pairs at base, two well-defined, before middle, five slender single along posterior half, ultimate vertical. Basal patch almost to middle, edge strongly angulate just above middle; dark brown, strongly spotted and marbled with ground colour; transverse fascia postmedian, equally marbled except an oblique dark brown streak from middle of costa forming top of fascia; lower part of fascia broad, tolerably vertical; anterior edge ill-defined, concave along upper  $1/3$ , deeply excavate below this, convex on dorsum; posterior edge very oblique above, zigzagged and vertical along lower  $3/4$ ; fascia almost interrupted in middle; ocelloid patch large, vertical, pale leaden-blue, interrupted below middle, dilated below, base not reaching tornus; this patch flanked anteriorly by a vertical series of short horizontal marks broadly edged on both sides with ground colour, on the posterior side only by a short vertical strigula above, horizontal strigula in middle; a thick longitudinal bar above ocelloid spot, furcate posteriorly; a streak of ground colour below posterior half of costa, centred with a series of longitudinal pale leaden-blue marks; a short vertical dark brown strigula just below and before apex, edged posteriorly by white, a dark brown continuous marginal strigula from costa, around apex to above tornus. Cilia bright ochreous with a continuous dark brown basal line, from costa around apex to tornus.

Hind wing dark purple, paler on central half, semipellucant, finely transversely striated (dark tips of scales). Cilia concolorous, along upper half of termen with whitish apical half, throughout with a pale basal line and a darker subbasal band.

Male genitalia. Tegumen slender, top dilated and rounded. Uncus short, porrect, top bifid. Socius small, shifted high; gnathos a slender band, darker at the sides. Valva



long, rather narrow,  $Spc_1$ , a moderate rounded patch of short spines; cucullus bristles in a large, attenuated patch, broadest at base; cucullus oblong-clavate, ventral process triangular, projecting. Aedeagus slender, attenuated, juxta cardiform, large and concave.

Female unknown.

North New Guinea, Dorey, 1897 (Doherty), 1 ♂, holotype, genit. slide 7885 (BM).

***Dicephalarcha acupicta* spec. nov.**

(figs. 392-394)

♂ 15 mm. Head dull light fuscous-olive, face white. Palpus with basal half whitish, apical half pale olive, dotted with fuscous. Thorax glossy light fuscous-olive, mixed on tegulae with whitish, posterior tuft brighter olive. Abdomen pale golden-ochreous.

Fore wing narrow, oblong-truncate, costa gently curved anteriorly, more curved along posterior half, apex subrectangular-subobtuse, termen convex along more than upper half, rounded beneath. Glossy silvery-white, marbled and reticulate with dull light and darker olive-green. Costa along anterior  $4/5$  narrowly fuscous-blackish, with numerous glossy white pairs of marks throughout; basal patch represented by a darker oblique blotch in disc, before base of costa, parallel to base of dorsum, to  $1/4$  of wing, thence to  $1/3$  of dorsum; central patch represented by its broad lower edge only forming a somewhat irregular band, rectangularly bent and reaching below middle of fold, from  $1/4$  to  $3/4$  of costa, with a broad furcate branch from below  $3/4$  of costa, with arms to termen above tornus and to apex, respectively; streak from middle of its anterior edge to end of dorsum less defined, with fine dark brown dots along its edges; spaces between these markings more or less suffused and marbled with olive-green, except along second fourth of costa as far as  $1/3$  of disc; this area whitish, traversed by four oblique dark fuscous lines descending from costa; a series of black strigulae along dorsal edge. Cilia pale olive with a white basal line and a suffused greenish subbasal band.

Hind wing pale greyish-purple, glossy. Cilia concolorous, with a pale basal line.

♀ 17 mm. Similar to male, but thorax deeper olive-green. Ground colour pale olive, except two spots in a horizontal pair in cell posteriorly and two more round spots on termen below apex, silvery-white. Markings as in male but darker olive-green, less defined and more confluent. Cilia darker greyish-olive, an olive subbasal band, base paler.

Hind wing as in male, but posterior half darker purple, especially towards apex, basal half slightly pellucid. Cilia greyish, with a darker subbasal band, pale basal line and pale ochreous suffusion opposite apex.

Male genitalia. Tegumen moderately broad. Uncus trapezoidal, hairy, with lobes porrected, at top hammer-like. Socius small, oval. Valva broader and shorter than in other species, cucullus very broad, ventral lobe shorter, with a subapical patch of

bristles.  $Sp_1$  and cucullus bristles weak, slender and dense, in a single elongate patch outside of a triangular prominence in disc. Aedeagus small and slender.

Female genitalia. Sterigma shaped as a broad funnel, ostium proper heart-shaped and aciculate. Colliculum narrow and weak. Signa two, patches of flat teeth.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 18.xii.1940, 1 ♂, holotype, genit. slide 5855; 19.iii.1950, 1 ♀, allotype, genit. slide 5822 (A. Diakonoff) (LM). An elegant greenish species with less defined markings. Ten years and the World War II had to pass before I could collect the sex partner of this species.

Judging from the male genitalia, the species is less closely related to the two foregoing.

***Dicephalarcha atava* spec. nov.**

(figs. 388-389)

♀ 14 mm. Head dark fuscous, face ochreous, vertex mixed with ochreous. Palpus rather long, sinuate and porrected. Basal segment dark fuscous, median light ochreous, with a pure white basal and a black subbasal ring, and a black patch along lower edge except base and extreme apex and a black transverse mark beyond middle of upper side; terminal segment ochreous with a black base. Thorax dark fuscous, densely strewn with light ochreous-olive. Abdomen blackish-bronze, venter paler.

Fore wing oblong, rather narrow, costa little curved, more curved at apex, apex rounded, termen straight, short and vertical, obliquely rounded below. Fuscous, finely strigulated throughout with tawny-olive (tips of scales!), marbled with light grey on basal third and along dorsum; basal patch indicated by some dark spots above fold and on dorsum only; posterior  $2/3$  of costa appearing darker, with faint and short whitish marks on extreme margin; two anterior pairs continued as an oblique moderate, fasciate, leaden-grey spot to upper edge of cell; four following pairs of costal marks with very oblique dull leaden-grey streaks, forming a single subcostal fascia, to termen below apex, not conspicuous; a transversely-oval, well-defined dark fuscous patch in centre of wing, above connected with dark costal suffusion, reaching below fold halfway to dorsum, with a narrow, pale grey marginal line; this patch preceded by an indistinct curved subcostal patch and a triangular spot below this on  $2/5$  of dorsum; an oblique-semioval dark spot on end of dorsum; tornus rather pale whitish. (Cilia rubbed).

Hind wing semipellucet fuscous-grey, apical third purplish-black, basal third almost transparent. Cilia dark purplish-fuscous, with a pale basal line and a dark subbasal narrow fascia.

Female genitalia. Sterigma, a peculiar, prostrate-cylindrical densely aciculate sclerite, open in front. Colliculum two-sheathed, rather long, slender and strong. Signa, two rather corrugated scobinations with rounded teeth.

North Moluccan Is., Batjan Id., Watjana, 25.vi.1953 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 5958 (LM). A somewhat obscure insect with a characteristic *Dicephalarcha* pattern of fore wing, but with unusual simple scobinate signa. Un-

fortunately there are no males available. This species might be an interesting intermediate between the scobinate and pectinate groups. The signa resemble those in *Lipsotelus* closely.

**Dicephalarcha anemodes** (Meyrick, 1912) comb. nov.

*Argyroploce anemodes* Meyrick, 1912: 873 (♀, Ceylon). — Clarke, 1955: 46.  
*Olethreutes anemodes*; Clarke, 1958: 484, pl. 241 figs. 2-2b (lectotype select., fig. genit. ♀).

Distribution. Ceylon.

A somewhat puzzling species with deviating colouring. Ground colour metallic blue-leadened strongly mixed with white, the dark costal suffusion purple-fuscous, extending from about 1/4 of costa to before apex, below a large rounded prominence reaching almost to dorsum, and including a triangular spot of ground colour before middle of costa; apex enclosed by two white striae; tornal area not obscured, ocelloid spot edged on both sides with metallic blue. Hind wing dark fuscous.

Female genitalia with a lozenge-shaped transverse sterigma, including above middle a round ostium. Signa, two, small.

Without males the position of the species is somewhat uncertain.

**Dicephalarcha dimorpha** (Meyrick, 1909) comb. nov.

*Argyroploce dimorpha* Meyrick, 1909: 606 (♂♀, Assam). — Clarke, 1955: 117.  
*Olethreutes dimorpha*; Clarke 1958: 503, pl. 250 figs. 4-4a (lectotype select., fig. genit. ♂).

Distribution. Assam: Khasi Hills.

The central spot is much reduced. The valva is shallowly excised. The socii and the uncus are small.

A small species with narrow wings and a bright tawny-ochreous ground colour, costal and central spot are much reduced; costal edge narrowly dark brown, cut by numerous pairs of oblique slender costal strigulae; tornal fifth of wing pale ochreous; wing marbled throughout with grey.

Hind wing dark purplish-fuscous on apical half, becoming semipellucent and paler grey on basal half, transversely striated throughout (tips of scales being darker).

Male genitalia. Uncus single, narrowed. Socius rather short. Gnathos well-developed. Valva rather slender, cucullus only shallowly excised, ventral process short and rounded, with an apical spine.

Clarke's illustration of the wings of the holotype (in BM) is too dark.

**Apeleptera** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna in male ciliate, ciliations about 1. (Palpi missing.) Thorax smooth. (Posterior legs missing).

Fore wing oblong-subtriangular, apex obtuse, termen convex. Vein 2 almost from 3/4, 3 from angle, curved and parallel to 4, 4 closer to 3, 5-7 parallel, 7 to termen, 7-9 equidistant, 9 from angle, 10 from halfway 9 to 11, 11 from 3/5, chorda from before 10 to base of 7, median branch from towards base to base of 5.

Hind wing with cubital pecten, 2 from beyond middle, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 strongly approximated towards base, 8 parallel and close to basal 2/3 of upper edge of cell.

Male genitalia. Tegumen rather high, conical. Uncus short, semicylindrical, with rounded top, with rough surface. Socius parietal, a long slender series of fine bristles. Gnathos well-developed, a semioval bow with a rounded median appendix, supporting a long tuba analis. Valva very slender, curved, apex slightly clavate, cucullus rounded. Spc<sub>1</sub>, a moderate oblique discal series. Spc<sub>3</sub> represented by a long fan-like patch of bristly hairs. Aedeagus moderate, clavate.

Female unknown.

Type-species, *Argyroploce semnodryas* Meyrick, 1936 (Formosa: Taihoku).

Closely related to *Asaphistis* Meyrick, from which it differs by the connate veins 3 and 4 in the hind wing and by the reduced, simple uncus. The separate vein 3 in *Asaphistis*, originating from before angle of cell in the hind wings, is such an important character, that I am compelled to separate the present species. Its facies and markings resemble those of *Hoplitendemis* gen. nov.

### *Apeleptera semnodryas* (Meyrick, 1936)

(figs. 379-380)

*Argyroploce semnodryas* Meyrick, 1936: 613 (♂, Formosa). — Clarke, 1955: 284.

*Olethreutes semnodryas*; Clarke, 1958: 548, pl. 273 figs. 1-1a (type ♂, wings, genit. figured).

Distribution. Formosa.

Holotype, ♂, cited and figured by Clarke (loc. cit.), in the BM.

A moderate species, superficially very similar to one of the *Semniotes* species: with a suboval forewing, purplish, with slender long whitish costal marks and a broad, also whitish, submedian fascia, not reaching dorsum, genty dilated downwards and finely marked with darker strigulae.

Hind wing fuscous-grey.

### *Asaphistis* Meyrick, 1909

*Asaphistis* Meyrick, 1909: 590 (type-species, *Asaphistis praeceps* Meyrick, Assam, by original designation). — Fletcher, 1929: 25 (syn. of *Proschistis* Meyrick). — Clarke, 1958: 304, pl. 151 figs. 1-1c (type-species, neurat., genit. figured).

*Metaschistis* Diakonoff, 1953: 49 (type-species, *Metaschistis sappiroflua* Diakonoff, New Guinea, by original designation). — 1969: 2 (syn. of *Asaphistis*).

I am satisfied of the above synonymy, in spite of veins 8 and 9 in *Asaphistis prae-*

*ceps* being stalked, while they are always separate (but closely approximated towards base) in "*Metaschistis*" species. This discrepancy deceived me when describing that genus, as I did not have any *Asaphistis* material at hand at the time. A characteristic feature for all species is the vein 3 in the hind wings originating from before angle of cell. On the other hand *Asaphistis* is distinct from *Proschistis* Meyrick, contrary to the concept of T. B. Fletcher. It is closely related, though. *Proschistis* is treated after *Asaphistis*, below.

The male genitalia are also characteristic: with a broad rounded or subquadrate uncus and a long and slender gnathos, usually forming a prominent point; this is above connected with a subscaphium, shaped as an obliquely rising rod, along the lower surface of a very thin and membraneous sack-like, spatious tuba analis (so thin as to be untraceable in mounts); at the lower surface gnathos is connected with anellus by a henion, in its middle extended so as to form an erect-oval or a transverse more or less sclerotized plate, a unique development. Socii are very small, parietal, high up the sides of the uncus, or absent. Valva characteristic, long and rather narrow, with a gradually rounded cucullus, more or less dilated; sometimes there is a tooth about the middle of costa.  $Spc_3$  is developed into a long brush of diverse length of moderate stiff hairy bristles from beyond base; cucullus bristles extend basad, so as to form a long and narrow brush opposite  $Spc_3$ , the bases of the two well-separate and defined. Aedeagus usually long, slender and curved.

Female genitalia diversely shaped. Sterigma usually a weak plate of diverse shape, its upper edge aciculate and split in middle, this split giving rise to a small or moderate ostium, usually shaped as an open gully, seldom closed above. Sometimes sides of sterigma form prominent long angles below and rise above high (*hemicyclica*), so meeting the more or less sclerotized lateral parts of the eighth sternite. Another shape of sterigma (*haematina*) is caused by a strong development of its median lower part into a pending "lip". Signa are double or there is only one signum, of a pectinate type or parietal and almost of the scobinate type, but still with very flat small teeth. Finally signum may be entirely absent (*cretata*). Ductus bursae usually has a slender colliculum and also a tubular cestum. This feature shows a connection of the genus with *Corethrarcha* gen. nov. The ductus bursae is so strengthened and armed, without doubt, because of the long aedeagus.

The signa of the true pectinate type seemed a great novelty at the time of description of "*Metaschistis*". At present the whole extensive subtribe *Statherotides* appears to possess these structures.

#### Key to the species of *Asaphistis*

1. Fore wing pale: white or pale fuscous with blackish markings: in apex, along dorsum, sometimes at base (two melanistic specimens are entirely suffused dark grey and blackish) . . . . . 2
- Fore wing not thus . . . . . 8

- 2. Fore wing ground colour pure white, usually a subquadrate black spot on middle of costa . . . . . 3
- Fore wing ground colour not pure white, costal spot absent . . . . . 6
- 3. Fore wing, costal spot absent . . . . . *asema*
- Fore wing, costal spot present . . . . . 4
- 4. Fore wing apex and termen entirely jet-black, only costal edge with two white points and a few white bars along termen . . . . . *nobilis*
- Fore wing apex black, more or less marbled with white . . . . . 5
- 5. Black spot on middle of costa large; black patch along dorsum dilated posteriorly . . . . . *praeceps*
- Dark grey spot on middle of costa small; dark grey patch along dorsum not dilated posteriorly . . . . . *protosema*
- 6. Hind wing whitish or very pale fuscous . . . . . *phanerops*
- Hind wing light fuscous-grey or fuscous-tawny . . . . . 7
- 7. Hind wing light fuscous-tawny; fore wing markings fuscous . . . . . *cretata*
- Hind wing light fuscous-grey; fore wing markings dark grey-black . . . . . *catarrhactopa*
- 8. Fore wing ground colour blackish or dark grey . . . . . 9
- Fore wing ground colour not thus . . . . . II
- 9. Fore wing with blue-metallic or blue iridescent markings . . . . . IO
- Fore wing without blue markings . . . . . *lucifera*
- IO. An oblique, blue-metallic postmedian fascia . . . . . *sappirotlua*
- An iridescent blue patch beyond upper angle of cell . . . . . *gypsopa*
- II. Ground colour pinkish, light fulvous or ochreous-tawny . . . . . I2
- Ground colour not so . . . . . I3
- 12. A large white semioval costal spot . . . . . *hemicyclica*
- A suffused purple streak from middle of costa to dorsum beyond base . . . . . *purpurascens*
- Even ochreous-tawny with dark fuscous costa . . . . . *maturicolor*
- 13. Deep purple, posteriorly pale pink spots . . . . . *haematina*
- Dark anthracite-purple, basal half pale ochreous . . . . . *hemicaenodes*

**Asaphistis phanerops spec. nov.**

(figs. 4I3-4I4)

♂ 16-18 mm. Head creamy. Antenna light fuscous finely black-ringed, scape blackish. Palpus rather long, porrected; black, base below with a white spot, median segment with a large white spot towards apex above, terminal segment blackish, upper side and tip creamy. Thorax creamy, laterally and in front black, tegula creamy with a black base. Abdomen pale fuscous, base and anal tuft white.

Fore wing with veins 8 and 9 separate, closely approximated towards base; oblong, dilated, moderately broad, costa curved throughout, apex pointed, termen

sinuate, little oblique. White with a creamy golden hue, sparsely strewn with fuscous and pale tawny; markings dark fuscous, marbled with black. A blotch along less than basal fourth of costa reaching below upper edge of cell and well connected by dense marbling with a large elongate-semioval patch along median three fifths of dorsum; a white dot above middle of dorsal patch; basal fifth of dorsum with a semioval spot of pale ground colour; a round pure white ocellus in tornus; a small subtriangular black spot on costa before middle, preceded by one, followed by two black dots, each alternating with minute black points; a triangular apical patch occupying posterior fourth of costa and extending to termen above tornus; two white costal dots; anterior edge of this patch strongly suffused and marbled with blackish, in middle somewhat broadly prominent, emitting a few blackish lines which more or less connect it with the dorsal patch; apex and termen with a black line, containing minute white points between veins. Cilia dark grey with a suffused subbasal blackish band, interrupted towards tornus, cilia in tornus whitish, a white patch over posterior half of cilia opposite upper half of termen.

Hind wing glossy pale fuscous. Cilia concolorous with a pale base and a darker subbasal shade.

♀ 19.5 mm. Similar to male, slightly differing only thus. Markings moderately mixed with dark leaden-grey, ground colour slightly suffused with yellowish; a larger, yellowish, round spot above middle of dorsal patch; apical patch narrowed, preceded in middle of disc by coarse blackish irroration; ocellus with a few vertical black lines.

Hind wing slightly darker, apex darker suffused, posterior half with traces of vertical series of cloudy dark spots. Abdomen grey, venter pale grey.

Male genitalia. Uncus broad, flap-like, bilobed, lobes moderately pointed. Socius elongate, parietal, narrow. Subscaphium long, porrect, curved downwards in middle, then rising again. Diaphragma sclerite (henion) elongate-oval, longitudinal. Valva moderate, costa with a large median cusp, cucullus moderately curved and rounded, sacculus with a narrow row of bristles, narrowed basally and finishing abruptly opposite a bristly  $Sp_2$  (this slender row represents partly cucullus bristles, partly  $Sp_1$ ). Aedeagus narrow, long, little curved, with dilated base and top.

Female genitalia. Lamella antevaginalis, an erected-subtrapezoidal plate, upper edge with an oval excision with a dark edge. Ductus bursae with a long tubular cestum. Signum, a large ill-defined patch of small numerous flat teeth.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 18.xii.1940 (A. Diakonoff), 1 ♂, holotype, genit. slide 4952. The same locality, 26.xii.1937 (L. J. Toxopeus), 1 ♂, paratype (abdomen missing). The same, x.1949 (A. M. Neervoort), 2 ♂, paratypes (LM). The same locality, 15.viii.1909 (Bryant & Palmer), 1 ♀, allotype, genit. slide 5854; 1 ♂, paratype. Buitenzorg, 250 m, v.1909 (Bryant & Palmer), 1 ♂, paratype, genit. slide 5340. 6 ♂, 1 ♀ (USNM). Allied to *A. cretata* (Diakonoff) and *A. praeceps* Meyrick.

***Asaphistis cretata* (Diakonoff, 1953) comb. nov.**

(figs. 407, 415)

*Metaschistis cretata* Diakonoff, 1953: 103, fig. 314 (♂, New Guinea).

Distribution. New Guinea, Snow Range.

The species is very similar to *A. catarrhactopa*, but the extended markings are chestnut brown; basal patch over  $1/4$  of costa; pale spot along dorsum limited to less than  $1/4$ ; the dark, elongate-trapezoidal patch along dorsum containing a well-defined white dot before middle. Hind wing light fuscous-brownish.

♀, apallotype, 19 mm. A rubbed specimen, with dark markings slightly faded. Similar to the male in all particulars to such an extent that I do not hesitate to regard it as sex partner.

West Java, "Panggrango, 3000 m", Mts. Gede-Panggrango, 1 ♀, apallotype, genit. slide 5858 (LM).

Female genitalia. Sterigma little developed, indicated only as an elevated, not limited, inverted-trapezoidal slender sclerite, with a slender emargination of upper edge, representing ostium. Colliculum moderate, tubular. Cestum equally tubular, more sclerotized, clavate. Signum absent.

Male genitalia are very similar to those in *A. phanerops* spec. nov. but differ as follows. Uncus rounded-subclavate, less broad, denticulate-scobinate throughout, gnathos less sinuate. Valva with  $Spc_3$  less than  $2 \times$  length of free top of cucullus (in *phanerops* over  $2 \times$  its length); base of the marginal roll of sacculus with a subtriangular lobe, above this  $Spc_1$ , forming a small dense patch of bristles (in *phanerops* this patch not isolated, included in a large longitudinal patch of cucullus bristles).

***Asaphistis catarrhactopa* (Meyrick, 1938) comb. nov.**

(figs. 416, 422)

*Argyroploce catarrhactopa* Meyrick, 1938: 512 (♂♀, New Guinea). — Clarke, 1955: 76.*Olethreutes catarrhactopa*; Clarke, 1958: 492, pl. 245 figs. 4-4a (type ♂ wings, genit. figured).

Distribution. New Guinea: Cyclops Mts.

With rather broad, dilated wings and a distinctly sinuate termen. Snow-white, strongly suffused and marked with black so that only the white costal markings and a more or less continuous irregular band from before base curving down to tornus remain; in male this band interrupted at  $2/3$ , in female band contiguous to a round white dot on upper part of discoidal vein.

Hind wing rather light grey.

Male genitalia. Resembling those of *A. phanerops* spec. nov., but uncus subclavate, top moderately narrowed, gnathos shorter and stronger, with a clavate top. Valva gradually dilated, straight, cucullus less curved, costa with a shorter tooth,  $Spc_3$



shorter, from about  $1/4$  to  $2/3$  of lower edge of valva, narrower on disc;  $\text{Sp}_1$  a group of smaller, sparse spines; henion smaller (in both these species it is shaped as a sclerotized oval plate).

Female genitalia. Sterigma, an erected and inverted-trapezoidal plate, with slight reticulate structure and aciculate towards upper part which has a moderate excision of upper edge, being the ostium, forming a moderate vertical gulley. Colliculum moderate, narrow, followed by a slender tubular cestum, gently dilated posteriorly. Signum, one patch of slight denticulations.

New Guinea, Papua, Cyclops Mts., Mt. Tafa, 8500 ft, ii.1934 (L. E. Cheesman) (BM) "*Argyroploce catarrhactopa* Meyr., Allotype ♀" (Stringer's hand), 1 ♀, genit. slide 6513; 1 ♂, genit. slide 7818 (BM).

Philippine Is., Mindanao, 1896 (Woodforde, Walsingham Coll., 16129), 1 ♀, genit. slide 7815. Negros Id., 6000 ft, 1896 (Whitehead, Walsingham Coll. 16050), 1 ♀ (BM).

*Asaphistis nobilis* spec. nov.

(fig. 417)

♀ 18 mm. Head white, face dark grey. Palpus jet-black outwardly, white inwardly (except terminal segment), a white spot at apex of median segment above towards inner side. Thorax white, collar and shoulder narrowly black. Abdomen pale leaden-grey, glossy.

Fore wing elongate-triangular, costa curved throughout, apex obtusely pointed, termen moderately sinuate, slightly oblique. Creamy-white with a golden gloss, markings black, mixed with dark metallic blue. Basal patch to less than  $1/4$  of costa, with a double bluish costal mark in middle of patch, gently concave, oblique; this patch connected with elongate dorsal patch which is well-defined, upper edge gently concave, posterior end reaching just above lower edge of cell, posterior edge convex, a blue transverse mark before end; another, broadly edged on both sides with white, at  $1/3$ ; costa with a subquadrate median spot, preceded and followed by three points; this spot obscured by a fuscous-tawny suffusion; an oblong area of pure white ground colour across end of cell, not creamy-tinged and containing a round black dot followed by a few points; apical patch moderate, less than  $1/4$  of costa, edge sinuate, convex above, this patch containing a large costal and another terminal, dark bluish spot, almost touching before apex, and two costal white dots; ocellus white, with three parallel, curved and interrupted blackish strigulae. Cilia black, posterior half barred with grey, cilia in tornus white, barred with black.

Hind wing rather dark glossy-grey, faintly marbled transversely with darker, becoming paler towards base. Cilia light grey, a white basal line and a darker subbasal shade.

Female genitalia. Sterigma not sclerotized, but extended, slightly bulbous and finely punctulate. Ostium shaped as a small orifice with an elevated lip-like ridge on each

side, lower ridge below; from these a slightly elevated undulate ridge or fold runs transversely to each shoulder of the sternite; these structures are finely aciculate (in *A. phanerops* transverse ridges are absent, while the ostium is larger).

Northeast New Guinea, Eastern Highlands, Mt. Wilhelm, 3000 m, Pengagl Camp, 19.iv.1965 (Van Balgooy), 1 ♀, holotype, genit. slide 5934 (LM). Allied to *A. cretata* (Diakonoff) but smaller and brighter coloured, and to *phanerops* spec. nov. but with markings black-blue and with distinct genitalia.

***Asaphistis maturicolor* spec. nov.**

(fig. 449)

♂ 20 mm. Head dark fuscous. Palpus dark fuscous, marbled, especially along dorsal side, with blackish; long, slender, little dilated, subporrected, terminal segment very short, exposed, pending. Thorax dark grey-fuscous, shoulders, sides and tegulae whitish with a faint ochreous tinge. Posterior tibia moderately dilated with appressed white hairs. A slight whitish pencil from base above, reaching beyond middle of posterior tibia. Abdomen pale fuscous-grey, base and anal tuft paler.

Fore wing with vein 8 to apex; subtriangular, broad, dilated, costa gradually curved throughout, apex pointed, termen sinuate above, slightly rounded beneath, little oblique. Light tawny, faintly marbled with whitish along middle; costal fourth suffused with deep coffee-brown, with some 10-11 pairs of transverse dark leaden-grey rather faint marks, gradually becoming more oblique and shorter posteriorly, nowhere reaching cell; dark suffusion continued below apex so as to occupy upper half of termen, limited by an oblique series of contiguous whitish rings, filled out with pale grey, rising from termen above tornus as far above as vein 8; an interrupted ferruginous terminal line; irregular blackish-fuscous marks scattered between cell and dorsum, largest of these oval, just below end of cell; a row of black marginal half-round dots along dorsum; extreme base of wing whitish, followed by a dark dot just above middle, with some ferruginous suffusion. Cilia becoming ochreous on lower half of termen, a black bar in each apex and tornus.

Hind wing light fuscous-grey, semipellucant, dark tips of scales giving rise to fine transverse striation; posterior half with ill-defined, slightly zigzag blackish transverse bands (being marbling of underside showing through). Cilia concolorous, a pale basal line, a darker subbasal band; cilia around tornus and along dorsum unicolorous whitish.

Male genitalia. Tegumen high, narrowed. Uncus, a thick rather short hook, with spines underneath top. Socius rather short, pending. Gnathos indefinite, but tuba analis large, conical, ventral side visible as far as middle of tegumen height. Valva rather long, moderate, sacculus about 1/3, Spc<sub>1</sub> on slightly raised pulvinus, a patch of bristles on edge of basal opening. Spc<sub>2</sub> absent, Spc<sub>3</sub>, rather short hairs, extending from beyond base to 2/3 of valva; cucullus densely covered with flat bicuspid spines, similar to those in *Xenolepis* gen. nov., top of valva naked. Aedeagus short, curved, sitting in an ovoid juxta.

Central West New Guinea, Mt. Goliath, 6-7000 ft, about 139° long., ii.1911 (A. S. Meek), 1 ♂, holotype, genit. slide 6576. Rossel Id., 2100 ft, xii.1915 (W. F. Eichhorn), 1 ♂, paratype (BM). The remarkable clothing of the cucullus with furcate hairs shows an affinity of *Asaphistis* Meyrick with *Xenolepis* gen. nov., the only examples of these characteristic scales within the subfamily Olethreutinae. The present species is closely allied with *A. praeceps* Meyrick.

***Asaphistis gypsopa* (Diakonoff, 1953) comb. nov.**

(figs. 409-410)

*Metaschistis gypsopa* Diakonoff, 1953: 96, 101, figs. 311, 312 (♀, New Guinea).

Distribution. New Guinea, Snow Range.

A large, obscurely coloured insect, fuscous, dusted and dotted with black, and partially suffused with blue-grey and with white. Costa with some 8-9 pairs of short white ill-defined marks, merging in an ill-defined white subcostal suffusion from base to 4/5, gradually dilated posteriorly and interrupted at middle of costa; the part of suffusion beyond interruption larger and less obscured; a smaller rounded and more defined white spot well above tornus; a white dot on upper angle of cell, followed by black spots and a rather bright grey-blue suffusion to middle of termen, narrowly interrupted by fuscous; a row of ill-defined black dots along termen.

Hind wing glossy pale grey.

Male unknown.

Female genitalia. Sterigma subquadrate, rather weak, short-aciculate, with upper edge prominent in middle, ostium a small median notch, with a short gully. Signum absent.

Still unique.

***Asaphistis haematina* (Diakonoff, 1953) comb. nov.**

(figs. 403-403A)

*Metaschistis haematina* Diakonoff, 1953: 98, figs. 318, 319 (♀, New Guinea).

Distribution. New Guinea, Snow Range.

Again a species of quite different colouring and markings. The broad, dilated fore wing is pale ochreous tinged vinaceous, and on posterior third suffused with pale pinkish. Markings are deep purple, turning almost black on costa which is cut by the usual six or seven pairs of transverse strigulae, very slender and bluish-white. Basal patch hardly to 1/5, outer edge oblique; below patch continued as a narrowed dorsal streak to tornus; an ill-defined transverse-oval patch in centre of wing, paler and more fuscous, anterior edge ill-defined, this patch connected by a deep vinaceous-

purple bar with apex, with a black spot posteriorly; a moderate deep purple inwards-oblique mark above dorsum before tornus and a larger marginal fasciate spot along lower half of termen.

Hind wing pale fuscous, becoming dark fuscous-grey towards costa and apex, paler with a golden gloss towards base.

Female genitalia. Sterigma shaped as a large pending plate or lip, finely aciculate throughout, constricted in middle, edges above middle thickened, lower half sub-cardiform, top with a short, curved point. Ductus bursae entirely membranous, without colliculum. Signa rather small.

Still unique.

***Asaphistis hemicapnodes* (Diakonoff, 1953) comb. nov.**

(fig. 405)

*Metaschistis hemicapnodes* Diakonoff, 1953: 96, 97, fig. 323 (♂, New Guinea)

Distribution. New Guinea: Snow Range.

An elegant, large species, with broad dilated fore wings. Dull greyish-purple, anterior half of wing from costa to below fold with a large, pale ochreous well-defined spot, finely marbled with pale tawny, along costa marked with purple, a couple of purple transverse marks towards base of wing; this patch with posterior edge strongly rounded and prominent, lower edge with a moderate inverted-trapezoidal projection in middle; edge of patch dull deep purple; two pale ochreous spots posteriorly, dusted with purple: before apex and above dorsum before tornus, respectively.

Hind wing pale greyish-ochreous.

Male genitalia. Tegumen triangular. Uncus only moderately broad. Socius small. Gnathos with long, slender, porrect arms and a clavate point with a circular top. Valva gradually dilated, broadest beyond middle, sacculus with a long submarginal pecten of short and dense spines, followed by a parallel postmarginal pecten of stiff hairs. Aedeagus gradually curved, moderate.

Female unknown.

The holotype is still unique; no additional material has become available.

***Asaphistis hemicyclica* (Diakonoff, 1953) comb. nov.**

(figs. 411-412)

*Metaschistis hemicyclica* Diakonoff, 1953: 96, figs. 304, 305 (♀, New Guinea).

Distribution. New Guinea: Snow Range.

A very distinct species, bright orange-fulvous, gradually suffused with purple towards base, with a large almost semicircular white spot, occupying more than median third of costa, moderately marbled with ground colour.

Hind wing pale ochreous-grey.

Female genitalia. Eighth + ninth segments modified, forming a sclerotized cylinder, funicular above; sterigma proper shaped as a triangular porrected and aciculate plate, its lateral angles connected by rising strong bars with the sides of the 8th + 9th tergite; base of lobus analis supported by a curved strong rod. Signum one, a moderate pectination, tending to become a scobination.

***Asaphistis purpurascens* (Diakonoff, 1953) comb. nov.**

(fig. 404)

*Metaschistis purpurascens* Diakonoff, 1953: 99, fig. 321 (♀, New Guinea)

Distribution. New Guinea, Snow Range.

An elegantly marked species with a strongly dilated fore wing with a considerably curved costa and a subfalcate apex. Pale ochreous, along costa and on basal half suffused with pale pink. Costa with small dark dots; a straight streak of dark fuscous dusting from dorsum beyond base to middle of costa, where it is extended into a cloudy dark wedge-shaped spot; a round patch of pale ochreous ground colour occupying almost the whole posterior half of wing, marbled with dark fuscous and cut by a dark fuscous bar from termen below apex; a silvery-white oblique small mark on upper angle of cell.

Hind wing pale ochreous with a pinkish tinge.

Female genitalia. Sterigma, a transverse suboval plate, upper angles slightly extended, upper edge in middle deeply emarginate and forming a fold or a gulley, reaching below middle of plate, with thickened aciculate edge. Colliculum moderate, narrow, pointed below.

***Asaphistis sappiroflua* (Diakonoff, 1953) comb. nov.**

(figs. 400-402, 402A)

*Metaschistis sappiroflua* Diakonoff, 1953: 100, figs. 315-317, 320 (♂, New Guinea)

Distribution. New Guinea, Snow Range.

Fore wing rather narrow, dilated. Dark fuscous, markings glossy metallic leaden-blue. Costal markings vertical, rather distinct, not very slender. A streak along basal half of dorsum, an outwards-oblique fasciate, well-defined spot, from middle of costa, reaching 2/3 across wing towards termen above tornus, lower end rounded; a rounded spot in tornus, another on middle of termen.

Hind wing glossy light bronze.

Male genitalia. Uncus rounded. Socius small. Gnathos with a high rising subscaphium and an erect-oval upper part of henion. Aedeagus long, slender, curved and not dilated. Valva with a low tooth in middle of costa. Spc<sub>1</sub> a sheaf of long hairs. Spc<sub>3</sub> not

very dense, reaching beyond middle of valva. Cucullus bristles forming a rather long thin bundle in disc.

Female genitalia. Sterigma, a rounded-quadrate plate with a median split of upper margin with edges pressed together, so as to form a round ostium bursae upon a cone-like fold; upper tips of median split extended; lower edge of sterigma prominent in middle. Colliculum, an isolated splinter-like sclerite. Cestum tubular, gently dilated. Signa small.

Still only two specimens known.

#### *Asaphistis praeceps* Meyrick, 1909

*Asaphistis praeceps* Meyrick, 1909: 500 (♂, Assam). — Clarke, 1955: 256. — 1958: 304, pl. 151 figs. 1-1c (lectotype select., genit. fig.).

Distribution. Assam: Khasis.

A distinctly marked black and white species similar to *A. catarrhactopa* (Meyrick), but with distinct male genitalia. Apparently related with *A. maturicolor* spec. nov.

Male genitalia. Uncus shape similar to that in *A. asema* spec. nov. but uncus long, slender and pointed, produced. Valva narrowed, hardly curved, broadest at a point before its middle, sacculus naked; cucullus bristles, a large compact patch occupying the whole lower half of cucullus and formed apparently of bifid spines; Spc<sub>3</sub> long and rather thin, along about median third of valva; lower edge of sacculus emarginate in middle.

Female genitalia unknown.

#### *Asaphistis lucifera* (Meyrick, 1909) comb. nov.

*Proschistis lucifera* Meyrick, 1909: 589 (India: Palni Hills). — Clarke, 1955: 192. — 1958: 580, pl. 289 figs. 1-1b (holotype, ♀, wings and genit. figured).

Distribution. South India: Madras: Palni Hills.

India, Madras, Palni Hills, 5000 ft (Campbell), 1 ♂, apallotype, without abdomen (BM).

The male apallotype, 22.5 mm, most unfortunately without abdomen, may be described as follows.

Head black, high tuft on vertex slightly mixed with white laterally and in middle. Thorax white, strewn with dark grey, anterior third black, a curved subapical transverse fascia extending over tegulae, apex laterally black. Fore wing oblong-subtriangular, costa curved at extremities, apex rather pointed, termen sinuate, little oblique. Dark grey diversely dusted with white, markings black. Basal patch only on lower half, ill-defined, indicated by three semioval black spots; costa black, with eight double inequal white transverse marks, partially obscured by grey dusting, a single

white dot beyond base; a prostrate-rhomboidal central black patch, from  $1/3$  to  $3/4$ , its upper half broken into three subquadrate spots; this patch including before posterior end an inwards-oblique, snow-white transverse spot, above and below cut by edges of cell; its top connected with a V-shaped mark formed by the 5th and 6th costal pairs of marks and the subcostal interconnection; two subapical pairs less distinctly interconnected below costa; a large subtriangular black patch before termen, connected with apex and tornus, leaving a snow-white terminal fascia, hardly interrupted by black dusting; an outwards-oblique spot of ground colour between end of cell and tornus, not reaching this latter; three rounded black spots along middle part of dorsum. Cilia white barred with black, opposite apex and tornus, black.

Hind wing very pale ochreous-greyish with a silky gloss. Cilia pale fuscous with a subbasal and an apical light fuscous band.

Male genitalia remain unknown (abdomen missing).

Posterior tibia smooth on the outside, dilated with sparse loosely appressed long scales above and beneath, denser and roughly appressed on the inside, especially towards base, but without a pencil.

*Asaphistis protosema* spec. nov.

(fig. 406)

♂ 13 mm. Head pale, whitish-fuscous, forehead deeper infuscated. Scape of antenna whitish at base. Palpus deep grey-fuscous, basal segment with a black apex, median segment with a subbasal and a subapical black ring, tip whitish, terminal segment long, greyish-white, with a suprmedian black band. Thorax pale whitish-fuscous, laterally suffused with black, shoulder blackish. Abdomen pale fuscous-grey, venter whitish, anal tuft pale ochreous.

Fore wing oval-truncate, costa moderately curved, more so anteriorly, apex subobtuse, termen gently sinuate, little oblique. White, in disc slightly strewn, and beyond cell in centre slightly suffused, with pale olive; markings black, spotted with slaty-grey. Basal patch on costa not reaching  $1/4$ , edge oblique, top excavate, below cell extended to dorsum before tornus, edge well-defined, including two groups of slaty-grey spots, each preceded by an irregular white mark, anterior of these with upper edge extending to base of wing; transverse fascia indicated by an oblong rectangular mark just before middle, preceded and followed by a couple of fine strigulae; posterior third of costa with four black spots alternating with strigulae, median pair of spots interconnected by black suffusion which forms an oblique band to lower part of termen and is narrowed in middle; some oblique series of short black strigulae scattered over posterior third of wing. Cilia white, along lower half of termen suffused black except along basal third.

Hind wing rather dark fuscous-grey, finely striated, apex marbled with black, base whitish, semipellucant. Cilia fuscous with a white basal line and whitish tips along upper half of termen.

Male genitalia. Somewhat similar to those of *A. asema* spec. nov., but with a longer, suboval gnathos. Valva shorter, cucullus more curved in middle, cucullus bristles in a well isolated large subcostal patch;  $Spc_3$  of two parts: anterior short and dense, from beyond base to middle, posterior formed of twice as long spiny bristles upon a naked edge; ridge or series of short appressed and dense spines much shorter.

Central East New Guinea, Stars Range, Ok Sibil, 1260 m, 2.vi.1959 (Netherlands Stars Range Expedition 1959), 1 ♂, holotype, genit. slide 6594 (LM). A small distinctly marked species.

***Asaphistis asema* spec. nov.**

(fig. 408)

♂ 18 mm. Head rather dark brown, mixed with purple and with paler tawny; face edged with whitish suffusion, vertex mixed with ochreous-whitish. Thorax pale ochreous, anteriorly black, top of tegula white. Abdomen ochreous-white, dorsum infuscated. Otherwise similar to the preceding, and probably with similar markings, but fore wing almost entirely rubbed.

Male genitalia. Uncus oblong, top rounded, bristly. Gnathos very short, triangular, membranous. Socius absent. Valva broad, little curved, not narrowed. Cucullus bristles in a moderate ill-defined tuft, merging into hair cover of cucullus,  $Spc_3$  short, dense, extending from beyond base to  $2/3$ , on edge of disc followed by a dense series of closely appressed modified short spines, this series extending over sacculus and dilated there.

Java, Mt. Gede, 4500 ft (Bryant & Palmer) (USMN), 1 ♂, male, genit. slide 5341.

***Hoplitendemis* gen. nov.**

Head with appressed scales, a moderate flat tuft on forehead. Ocellus posterior. Proboscis vestigial. Antenna in male subserrulate, ciliated, ciliations under 1. Palpus moderate, ascending, closely appressed to face, median segment dilated throughout with appressed scales, roughish along lower edge and at apex, terminal segment short, porrected. Thorax with a moderate, posterior crest. Anterior tibia and femur in the two sexes darkly coloured, contrasting with the colour of other legs (probably these dark parts are exposed in resting attitude of the insect). Anterior femur dilated with scales, roughish along lower edge and at base. Posterior tibia with upper edge flattened, forming a gully in which is concealed a slender pencil of hairs from base with short glossy smoothly appressed scales, only towards apex forming a coloured triangular flat tuft above, extending over elongated basal segment of tarsus.

Fore wing with a large prominent marginal tuft of scales beyond base of dorsum; rather narrow, oblong-suboval. Vein 2 from beyond  $2/3$ , 3 from angle, curved, 3 and 5 approximated to 4 at margin, 7 separate, to termen, 8 from angle, 9 very closely approximated towards base, 10 from midway, 11 from middle, upper parting vein from before 10 to midway between 7 and 8, accessory cell narrow.



Hind wing with a cubital pecten. Vein 2 from well beyond middle, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 very closely approximated towards base, almost soldered.

Male genitalia. Tegumen high. Uncus, moderate, conical, ventrally with a small patch of bristles. Socius extremely large, reaching middle of tegumen, rigid, pending, inner edge with an obtuse prominence, lower arm broad and curved; gnathos, a transverse strong band, emarginate in middle above, with a long clavate rigid median appendix. Valva narrow,  $Spc_1$  represented by a single large spine, lower edge of cucullus throughout with large sparse spines, a group of these in disc medially. Aedeagus small.

Female genitalia. Ovipositor large, with a dorsal cleft. Lobes of ninth sternite with peculiar numerous flat lamellae. Sterigma diversely shaped. Ductus bursae and bursa copulatrix simple.

Type-species, *Hoplitendemis pogonopoda* spec. nov. (Java).

The development of the socius suggests a relationship with *Eudemis* Hübner, but the complicated gnathos and simple valva remove it from the subtribe Sorolophae and place it in the neighbourhood of *Dactylioglypha* gen. nov., in the subtribe Stattherotides.

#### Key to the species of *Hoplitendemis*

1. Pale submetallic transverse mark before middle of costa outwards-oblique, subparallel to submetallic strigulae across 3/5 of costa; edge of basal patch acutely angulate. Apical tuft of posterior tibia yellow inside . . . . . *centraspis*
- Pale submetallic transverse mark almost vertical, not parallel to submetallic marks across 3/5 of costa; edge of basal patch obtusely angulate. Apical tuft on posterior tibia inside concolorous, whitish-fuscous. . . . . 2
2. Socius with a median internal rounded and subserrate prominence. Sterigma small . . . . . *erebodes*
- Socius with this process depressed. Sterigma large . . . . . *pogonopoda*

#### *Hoplitendemis pogonopoda* spec. nov.

(figs. 381, 426-427)

♂ 15-17 mm. Head and palpus dark fuscous, palpus with base of terminal segment greyish; terminal segment short, porrected in male, moderate, subascending in female. Thorax fuscous, scales tipped with white, anteriorly a suffused blackish-fuscous band extending over shoulder, posterior half of tegula light grey mixed with fuscous. Posterior tibia glossy whitish-grey, tuft at apex white, suffused with pale ochreous. Abdomen dark fuscous, venter and anal tuft pale grey.

Fore wing oblong-suboval, moderately dilated, costa curved anteriorly, more curved before apex, apex obtuse, termen gently rounded, moderately oblique. Grey-

ish-white, densely clouded, marbled and suffused with dark fuscous, the ground colour only forming sparse dots and small oval marks along central third of wing; centre of disc slightly dusted whitish. Space between markings filled out with rather faint pale bluish-lead, little glossy (in faded specimens turning pale fuscous) forming transverse bands, each finely parted by dark fuscous; basal patch hardly reaching  $1/3$ , blackish at base, dusted finely with whitish throughout (tips of scales); extreme base and a transverse narrow subbasal band not reaching dorsum, pale bluish-lead, edge of patch vertical, with a rounded prominence above fold, its shape slightly variable; a broad almost vertical bluish-lead band beyond this, forming on costa before middle a distinct, almost vertical wedge-shaped spot (remainder of band being fainter); transverse fascia broad, straight, upper half strongly projecting in an equilateral triangle posteriorly; bluish-lead edging forming several indistinct oblique lines from costa beyond middle, originating from two faint double whitish marginal marks; at  $1/3$  of wing breadth furcating, so as to form a broad double blue-lead band to dorsum beyond  $2/3$  and another along lower half of termen to tornus. Cilia fuscous mixed with whitish, a pale basal line and a black subbasal band.

Hind wing pale bronze-fuscous, semipelluculent, paler towards base and  $3/4$  of costa.

Male genitalia as described with the genus.

♀ 17 mm. Similar to the male, but posterior tibia without a tuft.

Female genitalia as described with the genus. Sterigma, a rounded-trapezoidal sclerite, ostium in its centre, small, round, short-cylindrical, with finely aciculate wall.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 15.viii.1951 (Liem Swie Liong), 1 ♂, holotype, genit. slide 4971, 1 ♂, paratype; same locality and date (A. M. R. Wegner), 2 ♂, paratypes, genit. slide 5831; same locality, vi.1949 (A. M. Neervoort), 1 ♂, paratype, genit. slide 2708. East Java, Tengger Mts., Nongkodjadar, 27.iv.1940 (A. M. R. Wegner), 1 ♀, allotype, genit. slide 5969.

Sumatra, Fort de Kock, 920 m, iii.1922 (E. Jacobson), 1 ♂, paratype without abdomen.

New Guinea, 15.v.1935, on Cambodja cotton, no. 651, "*Argyroploce hoplista* Meyr., E. Meyrick det." "no. 24" (Beumée, Inst. for Plant Diseases), 1 ♂, paratype, genit. slide 5830 (LM).

The Sumatran specimen looks exactly similar and must be conspecific. "*Argyroploce*" *hoplista* Meyrick from Sumatra is a quite different species of the tribe Eucosmini.

### **Hoplitendemis erebodes spec. nov.**

(figs. 428-429)

♂♀ 13-14 mm. Head and thorax dark purple-fuscous, head appearing grey in certain lights, tips of scales paler. Palpus dark purple-fuscous, median segment with a sub-apical whitish ring, terminal segment with a whitish base. Anterior femur and tibia purplish-black, femur with a long fringe at base. Posterior tibia in male with a de-

pressed tuft extending over the whole tibia and the basal segment of tarsus. Abdomen dark fuscous.

Fore wing narrow, oblong-suboval, costa gently curved throughout, considerably curved at apex, apex obtusely rectangular, termen in male slightly notched in middle, gently rounded above and below notch, termen in female gently rounded, scarcely notched. Dark fuscous, markings sparsely strewn with pale grey scales, leaving only ill-defined bands of bluish-lead colour. Basal patch slightly over  $1/3$  of wing, edge obtusely angulate; two pairs of undulate bluish oblique lines from costa beyond base, obliterated towards dorsum; ground colour beyond patch forming a broad wedge-shaped rather pale mark on  $2/5$  of costa, little oblique, continued as an indistinct and irregular band to  $2/5$  of dorsum, narrowly dark-parted throughout; three white marginal dots on  $2/3$  of costa, a narrow, very oblique blue line originating from the third, abruptly dilated below costa, thence vertical, furcate at  $1/3$ ; branches thick, dark-parted, anterior slightly inwards-oblique to dorsum before tornus, posterior curved, partly encircling a dark ocellus; more distinct pale grey dusting on lower half of transverse fascia. Cilia dark fuscous-purple, with a narrow whitish basal line and a blackish subbasal band.

Hind wing dull dark purplish-fuscous, in male becoming blackish towards apex; paler towards base, basal  $3/4$  of costa whitish. Cilia in male light greyish-fuscous with a dark fuscous subbasal band, in female fuscous, along upper half of termen glossy fuscous-whitish with a fuscous subbasal band, opposite apex cilia black in both sexes.

Male genitalia. Very similar to those of *H. pogonopoda* spec. nov. but with inner angle of socius forming a separate rounded lobe, and with a smaller top of the median appendix of transtilla.

Female genitalia. Sterigma shaped as a trapezoidal weak aciculate fold (lamella antevaginalis), concealing ostium which is ovoid. A small, narrowed colliculum is present.

West Java, Garoet,  $\pm$  700 m, 10.viii.1931, no. S. 578 (L. G. E. Kalshoven), "386", "salam" (*Eugenia polyantha*), on leaves of ebony tree, "*Argyroploce ebenina* Meyr., det Meyr." "32" "24", 1 ♂, holotype, genit. slide 5970, 1 ♀, allotype, genit. slide 5816; 1 ♂, 2 ♀, paratypes (L. G. E. Kalshoven) (LM). Dr. Kalshoven kindly furnished the following additional data: 8-14.viii.1931, in Psyllid galls on leaves of *Eugenia* spec., probably *E. polyantha* (fam. Myrtaceae).

Smaller than *pogonopoda*, with narrower, less dilated, more rounded and darker wings; the tufting on the upper side of posterior tibia in the male reaches to base. The genitalia are also distinct.

"*Argyroploce ebenina* Meyrick is a somewhat similarly coloured dark species with much broader wings, belonging to the *Hedya* group (Olethreutae).

**Hoplitendemis centraspis spec. nov.**

(fig. 425)

♂ 16 mm. Almost exactly similar to *A. hoplista*\*, except that the edge of the basal patch in the fore wing is much more angulate, its angle acute, the pale submetallic mark on costa before middle thus being distinctly more outwards-oblique (in *hoplista* almost vertical). The light yellow triangular tuft of hairs on upper edge of tibia is distinctly larger, reaching basad to middle of tibia (in *hoplista* not reaching middle). A trifle larger and more robust. Otherwise similar to *hoplista* except for the male genitalia.

Male genitalia. As in the type-species but unculus longer, socius with a subapical additional internal prong. Gnathos large, a dorsal inverted-trapezoidal transverse plate with notched lower edge, median appendix strong, top smaller, rounded. Valva with a single pointed cusp as *Spc*<sub>1</sub>, opposite this a rounded sclerotized rib; central patch of spines absent.

South Celebes, Mt. Lompobatang, Borong Rapoa, 800 m, 19-24.viii.1949 (A. Diakonoff), 1 ♂, holotype, genit. slide 5829 (LM).

The male genitalia have a unique development of the gnathos and the socii. In this respect there is some resemblance of the dentate structures of the same region, viz., the sides of the tegumen, in *Pelatea* of the subtribe Olethreutae. The evidence of the signa is lacking, as these sclerites are entirely wanting.

**Proschistis Meyrick, 1907**

*Proschistis* Meyrick, 1907: 731 (type-species, *P. zaleuta* Meyrick, Ceylon; by monotypy). — 1909: 589. — Fernald, 1908: 49. — Fletcher, 1929: 185 (*Asaphystis* syn.). — Clarke, 1958: 576 (type-species illustrated).

*Sporocelis* Meyrick, 1907: 732 (type-species, *S. marmaropa* Meyrick, Ceylon; by monotypy). — Fernald, 1908: 49. — Fletcher, 1929: 208. — Clarke, 1958: 591, pl. 294 figs. 1-1c. **Syn. nov.**

Head with appressed scales. Ocellus posterior. Proboscis very short. Antenna fasciculate-long-ciliated in male, ciliations 1-3. Palpus moderate or rather long (in *marmaropa* projecting the length of head), porrected, median segment strongly dilated posteriorly with rough scales above and beneath, terminal segment rather long, subclavate, porrected and exposed. Posterior tibia in male normal, without pencil.

Fore wing oblong or subtriangular, pointed, termen sinuate. Vein 2 from 3/4, 3 from angle, 7-9 closely approximated from upper angle of cell, 7 to termen, 10 from beyond middle distance 9-11, 11 from before middle; chorda from midway 11-10 to base of 7, median branch to below base of 5.

Hind wing semioval, pointed, vein 2 from beyond middle or 2/3, 3 and 4 connate from angle, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather broad, strongly narrowed. Uncus absent. Socii apparently semioval transverse sclerotized plates at the bases of the gnathos. Gnathos, a

\*) cf. p. 277.

slender M-shaped rod. Valva moderate, little curved, sacculus not dilated, about  $1/2$ ; Spc<sub>1</sub>, a moderate patch of bristles at base of costa; Spc<sub>2</sub>, a large transverse blade-like patch of strong bristles upon an elevated ridge; Spc<sub>3</sub>, marginal, from beyond base to middle of valva, starting and ending with a stronger spine-tuft. Cucullus moderately clavate, bristled. Aedeagus very short.

Female genitalia. 8th segment subtubular, sclerotized. Sterigma, a strongly aciculate cup with smooth, dark, petal-like lateral sclerites. Ostium slender, long, funnel-shaped, coarsely punctulate. Colliculum slender, rather long. Cestum present, a dark semitubular sclerite. Signum single, a scobination with distinct spines on it (scobinate-dentate type).

A genus with which Meyrick himself seems to have been at a loss. He confused *Asaphistis* Meyrick, a distinct genus, with *Proschistis*, and later synonymized it erroneously. *Proschistis* is a perfectly distinct genus, judging from the male and female genitalia of the type-species; it has a single scobinate signum. Other differences of *Proschistis* are the closely approximated veins 7-9 in the fore wing, with 8 from angle (in *Asaphistis* vein 9 is more distant from 8), the origin of vein 2 (from  $2/3$  rather than  $3/4$ ) and especially the normally connate veins 3 and 4 in the hind wing: *Asaphistis* has the peculiar feature of vein 3 originating distinctly from before angle, separate from 4 which originates from the angle instead.

*Sporocelis* Meyrick is a synonym, the type-species, *S. marmaropa* Meyrick differing from *Proschistis* only as follows. The wing is less oblong and more triangular, with vein 4 less approximated to 3; other minor differences of venation which one might notice when comparing Clarke's fig. 1 of pl. 287, with 1a of pl. 294, are due to slight inaccuracies of these figures. So in the former, median branch ends slightly too low (actually, just below base of 5), in the latter, too high (the same origin, as in *Proschistis*) and in the hind wing of "*Sporocelis*" veins 6 and 7 are approximated towards base, not stalked, while vein 3 is connate with 4, from angle, and not separate, from before angle, as depicted in the above mentioned fig. 1a, pl. 294.

I assign "*Proschistis*" *unicolor* Meyrick to the Statherotides; it is allied to *Statherotis polychlora* spec. nov. "*Proschistis*" *invida* Meyrick has peculiar male genitalia, assigning the species to the genus *Pelatea* Guenée, known from the Palaearctic region.

*Proschistis stygnopa* Meyrick is not figured by Clarke (1958). The unique type lacks the abdomen; it may be allied to *P. agitata*, according to Meyrick, which species, however, is a true *Statherotis*.

A genus of large, distinctly coloured species. Allied with *Asaphistis* Meyrick.

#### Key to the species of *Proschistis*

1. Fore wing with a semioval pale costal spot . . . . . *amphibola*
- Fore wing without such spot . . . . . 2
2. Fore wing oblong-truncate, apex subrectangular; whitish, marked with blackish . . . . . *zaleuta*

- Fore wing dilated, broadest at  $3/4$ , apex rather pointed . . . . . 3  
 3. Rather densely dusted with black, basal patch and central fascia well-defined,  
 black . . . . . *marmaropa*  
 — Pale lilac-grey, less densely and minutely dusted with black; a suffused black spot  
 on middle of costa . . . . . *polyochtha*

***Proschistis zaleuta* Meyrick, 1907**

(figs. 418-419, 445)

*Proschistis zaleuta* Meyrick, 1907: 731 (♂♀, Ceylon). — Fernald, 1908: 49 (*zaleuta* err.), 68 (type of *Proschistis*). — Fletcher, 1929: 185 (type of *Proschistis*). — Clarke, 1955: 330. — 1958: 576, pl. 287 figs. 1-1c (lectotype select., wings, neurat., head, genit. ♂ figured).

Ceylon, Maskeliya, . . 04 (Pole), 1 ♀, genit. slide 6517 (Meyrick Coll., E. Meyrick det., 10/10). The same data, 189. . (Pole), 1 ♂ (Walsingham Coll.), without abdomen. Ceylon, 1903 (Mckwd) and (locality illegible), 7000 ft, v.1902 (Mckwd), 1 ♂, 1 ♀, without abdomens, unspread (Walsingham Coll.) (BM).

The species is robust, rather narrow-winged, with whitish ground colour, almost entirely obscured by blackish-fuscous, except a triangular spot in apex and an oblique transverse band from below  $3/4$  of costa to dorsum before tornus; basal patch indefinite, transverse fascia broad and dark, irregular, anterior edge cut in middle to centre of fascia by a whitish bar; the whole wing strongly and obliquely strigulated with blackish, all markings much obscured. Males with broader and more triangular fore wing.

Hind wing dark grey, cilia grey-fuscous with a pale basal line. Posterior tibia in male smooth, only in middle with little elevated spiny scales, without pencil.

Male and female genitalia as described with the genus above.

***Proschistis marmaropa* (Meyrick, 1907) comb. nov.**

(fig. 424)

*Sporocelis marmaropa* Meyrick, 1907: 732 (♂♀, Ceylon). — Clarke, 1955: 197. — 1958: 591 pl. 294 figs. 1-1c (lectotype select., wings, neurat., head, genit. ♂ figured).

Distribution. Ceylon.

Ceylon, Maskeliya, viii.1905 (De Mowbray), 1 ♂, genit. slide 8039; xi.1906 (Alston), 1 ♂, genit. slide 8040 (BM).

As said above in the discussion of the genus, this species has shorter and broader fore wing with the costa prominent at  $3/4$ , apex appearing more pointed, termen slightly less sinuate than in the type-species. The colouring is dark bluish-leadengrey, rather dull, marked with deep purple. Basal patch to  $1/4$  with a rounded edge; transverse fascia narrower than in the lectotype, almost entirely divided in three parts, costal subtriangular, median and dorsal irregularly rounded; costa with oblique strigulae, more compact before apex; a curved subterminal fascia, more or less extending along termen; irregular spots in a preterminal series, rising from tornus.

Hind wing rather dark semipellucent bronze-grey. Cilia concolorous.

Male genitalia. Very similar to those of *P. zaleuta* Meyrick. Uncus truncate. Socius forming a rigid porrect arm with a rounded top, sparsely haired (in Clarke's photograph of the lectotype, fig. 1c, pl. 294, socii visible in frontal projection only, as dark spots). Gnathos strong, sclerotized, with slender arms and a porrect, pointed and beak-like hook. Valva moderately curved, with a simple oval cucullus. Sacculus over 1/2, with an oblique transverse elevation (harpe), bearing a strong dark  $Spc_1$ , longer at the ends, shorter and less dense along median part of harpe.  $Spc_3$  strong and dense, marginal, along posterior 3/4 of sacculus. Aedeagus rather short, anellus with a sub-lateral, subapical patch of strong bristles on each side.

Female genitalia unknown.

A very distinct species.

***Proschistis polyochtha* spec. nov.**

(figs. 443A-443C)

♂ 13-13.5 mm, ♀ 12-16 mm. Head pale fuscous, vertex mixed with white, a bifid white tuft over forehead. Palpus white, basal segment with a median, median segment with a basal, a postmedian, and an apical black ring. Thorax greyish-white, densely marbled and strewn with light and dark fuscous. Abdomen light grey, venter whitish. Posterior tibia normal, with loosely appressed scales, without pecten.

Fore wing broad, triangular, strongly dilated, costa curved from base to apex, apex almost rectangular, termen hardly convex above, vertical, rounded beneath. Pale whitish-grey, partly with light leaden-bluish opalescence, densely marbled throughout with purplish-fuscous. Basal patch ill-defined, only strongly curved edge perceptible at 1/4, with four dark scallops; transverse fascia formed by a rather broad, tolerably vertical band of denser fuscous marbling in middle of wing, sometimes fainter on lower 2/3, in holotype suffused with blackish-purple on upper third; costal third before this fascia lighter, less obscured by marbling; posterior half of costa with five small marginal white marks, obliquely continued below costa by thick leaden-bluish straight streaks; apex and upper 2/3 of termen with coarse dark fuscous marbling (holotype) or a continuous fuscous attenuated shadow. Cilia glossy pale grey, with a black subbasal band and black apical third.

Hind wing semipellucent, dark fuscous-purple, paler on basal 2/3, cilia greyish with a pale basal line and a dark fuscous subbasal band.

Male genitalia. Tegumen broad, with narrow legs, triangularly dilated at the bases. Uncus a rectangular thickening with rounded angles, moderately bristled. Socius absent. Gnathos sclerotized and rigid, trifid: a median pending point with clavate top and sinuate arms; at their bases long curved additional arms, also pending and clavate. Transtilla, a subtrapezoidal transverse band, membranous, with sclerotized lower edge. Valva moderate, oblong, costa gently concave in middle; sacculus not modified,  $Spc_1$  a flattened aciculate pad; a digitoid small harpe at the end of sacculus;

cucullus bristles including a large, round, dense cluster of fine spines and two smaller tufts ventrally of this.  $Spc_2$  of fine sparse hairs along basal half of valva.

Female genitalia. Eighth segment forming a coloured high collar. Ostium bursae indicated only by a slender U-shaped slightly aciculate edge; lamella postvaginalis punctulate. Colliculum short and slender. Cestum a short slight tube. Signum one, small, scobinations turning to dentations in centre.

Northeast New Guinea, Geelvink Bay, Ron Id., 1897 (Doherty), 1 ♂, holotype, genit. slide 7788; 1 ♀, paratype, genit. slide 7790. Ron Id., vii.1897 (Doherty), 1 ♂ (without abdomen and left hind wing). East Papuan Is., d'Entrecasteaux Is., Goodenough Id., 1897 (Meek), 1 ♀, allotype, genit. slide 7789 (Walsingham Coll. 18164); 1 ♂, paratype (without abdomen, 18165). South New Guinea, Milne Bay (A. S. Meek), 1 ♀, paratype, (without abdomen) (BM).

A characteristic insect, by the broad, triangular fore wings resembling a *Choreutis*.

### *Proschistis amphibola* spec. nov.

(figs. 420-421)

♀ 18 mm. Head dark fuscous-brown, densely dusted with light grey. Palpus dark fuscous-brown with a purple gloss, towards apex of median segment above dusted with pale grey. Abdomen opalescent grey-purple.

Fore wing oblong-truncate, moderately dilated, costa gently curved, apex moderately rounded, termen sinuate, hardly oblique. Deep chestnut-brown with a vinaceous tinge, towards dorsum lighter tawny-brown. Basal patch and dorsum as far as fold densely strewn with pale blue-metallic scales with a silky gloss, with four small transverse marks on base of costa; ocelloid spot indicated by a large inverted-furcate mark formed of the same bluish scales, with anterior leg abruptly dilated below, posterior leg double, the stem curved outwards, top dilated on dorsum below apex: a large white semioval spot, occupying almost median half of costa, marked with bright tawny; a curved, oblique median patch from costa, some marbling beyond this and a slender strigula from costa before the patch; extreme edge of costa on patch also suffused with tawny and marked with six pairs of usual white marks. Cilia dark fuscous-brown, posterior half bluish-metallic.

Hind wing glossy pale fuscous-grey, posterior half suffused with darker fuscous-grey-bronze. Cilia fuscous-grey, tips glossy whitish.

Female genitalia. Eighth sternite finely aciculate. Sterigma aciculate throughout, lamella antevaginalis, a transverse tumescence, lamella postvaginalis, a subquadrate plate with thickened upper angles, median edge extended upwards and pointed. Colliculum strong. Signa pectinate, well-developed.

New Guinea, Papua, Maneau Range, Mt. Dayman, 1500 m, N slope, 8.vii.1953 (G. M. Tate, 4th Archbold Expedition to New Guinea, 1953), 1 ♀, holotype, genit. slide 6684 (LM). A distinct species, with markings somewhat resembling those of *Asaphistis hemicyclica* (Diakonoff) from the Snow Mountains.



## Species incertae sedis

The following species, assigned by Clarke (1958) to *Proschistis* have been described by Meyrick either in that or in different other genera. Being satisfied that they do not belong to the last mentioned genus, but not being able to place them better at the moment, I prefer to put them together under the above heading. Of the following four species two are represented by females only, while the male genitalia of the other require a closer study than I am able to carry out right now.

**Polychrosis inflicta** Meyrick, 1920: 347 (♀, India: Bombay).

*Proschistis inflicta*; Clarke, 1958: 579, pl. 228 figs. 2-2c (lectotype designated, wings, genit. ♀ figured).

**Proschistis invida** Meyrick, 1909: 590 (♂♀, Assam: Khasis). — Clarke, 1958: 579, pl. 288 figs. 3-3a (lectotype design., wings, genit. ♂ figured).

**Argyroploce sideroxyla** Meyrick, 1931: 133 (♀, Formosa).

*Proschistis sideroxyla*; Clarke, 1958: 580, pl. 289 figs. 4-4c (holotype wings and genit. ♀ figured).

**Proschistis stygnopa** Meyrick, 1935: 580 (♂, China: Tienmushan). — Clarke, 1958: 580, pl. 290 fig. 5 (lectotype designated, wings figured).

**Triheteracra** Diakonoff, 1971

*Triheteracra* Diakonoff, 1971: 197 (type-species, *T. melanoxenina* Diakonoff, S. Thailand; Ceylon. By original designation).

The following is the original description:

"Head with appressed scales. Ocellus posterior. Proboscis moderate. Antenna minutely ciliate, not thickened in male. Palpus rather long and slender, closely appressed to face, ascending, median segment roughish along lower edge, gently narrowed towards apex, reaching upper edge of eye, terminal segment slender, subobtusely exposed and obliquely ascending. Thorax smooth. Posterior tibia normally scaled, with smoothly appressed scales above and beneath. Abdomen normal.

"Fore wing oblong-truncate, rather long, gradually dilated, costa gently curved throughout, more so at apex, apex rounded, termen straight, hardly oblique. Vein 2 from beyond 3/5, 3 from angle, approximated to 4 at margin, 3, 4, 5 equidistant and approximated at base, 6-7 parallel, straight and horizontal, 7 to termen, 8 from upper angle of cell, 9 closely approximated, 10 from 2/3 distance 9-11, 11 from middle; chorda weak anteriorly, from before 10, to below base of 7, median branch distinct, to between bases of 4 and 5.

"Hind wing with a cubital pecten, broad, oval, rounded-subtriangular, dorsum slightly extended and corrugated; concave above, along veins 1a and 1b respectively, with a slight projecting tornal lobe. Vein 2 from beyond middle, 3 and 4 connate, 5 closely approximated at base, 6 and 7 closely approximated towards base.

"Male genitalia. Tegumen with a subtriangular top, rounded-dilated laterally. Uncus arrowhead-shaped, broad, with spines under extreme top. Socius large, a weak

tumescence. Gnathos membraneous, arms and a large median vertical split are distinct, above the split a ventral membraneous appendage. Valva robust, sacculus with a triangular prominence at apex,  $Spc_3$  represented by a series of huge short and pointed spines, followed by a dense group of slender bristles, then by a sheaf of very long spines, folding at basal  $1/4$  as a pen-knife; cucullus triangularly narrowed, top rounded. Costa with a flattened base on which a flat patch of short spines. Aedeagus moderate, with dilated base.

"Type species, *T. melanoxenía* spec. nov. (S. Thailand, Ceylon).

"In spite of a well-developed uncus, a sclerotized tuba analis, being an unusual feature, and a peculiarly armed ventral edge of the sacculus, the brush-like pads at the place of the labides and the well-developed gnathos indicate a relation of the present genus with *Proschistis*."

### *Triheteracra melanoxenía* Diakonoff, 1971

*Triheteracra melanoxenía* Diakonoff, 1971: 198, figs. 2, 15 (♂, S. Thailand, type-locality; Ceylon).

Distribution. South Thailand. Ceylon.

♂ 14 mm. Head anthracite-purple-black. Thorax anthracite-black, tegulae with light purplish reflections. Abdomen dark purple, anal segment dark purple, inside glistening white.

Fore wing as described with the genus. Black, lower  $2/3$  suffused with dark bluish-grey, transversely strigulated with black, median position of wing posteriorly indistinctly pale pinkish or ochreous; markings ill-defined, dark bluish-grey. Basal patch indefinite, a couple of rounded grey spots along middle; a transverse, almost vertical grey fascia at  $2/5$ , parted by black, ill-defined below; a large rounded patch in tornus, rising  $2/3$  across wing, formed by two ill-defined upright grey blotches, anterior spindle-shaped, posterior erected-triangular, with an acute top; these patches separated and surrounded above by pale pinkish ground colour; a straight little oblique slender grey line from costa beyond middle to top of rounded tornal patch; a pale slender just submarginal line from apex to middle of termen, furcate above. Cilia dark purple.

Hind wing glossy, pale fuscous-purple, semipellucant, veins appearing darker; dorsum from halfway  $1b$  to  $1a$  pure white, slender pencils of light ochreous-orange hairs along vein  $1a$  and along third of dorsum, the last forming a concavity. Cilia dark fuscous, along tornus and on dorsum snow-white.

Male genitalia as described for the genus above.

Female unknown.

South Thailand, 20 km E of Krabi; 1-10.v.1962 (G. Friedel), 1 ♂, holotype, genit. slide 7436 (MM).

Ceylon, Matale, 189. . 10 (Pole), 1 ♂, paratype, genit. slide 7888 (BM).

**Rhodacra** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis weak. Antenna in male simple. Palpus with loosely appressed scales, subascending, median segment dilated towards apex, terminal segment very short, concealed in scaling of median. Thorax smooth. Posterior tibia slightly thickened with smoothly appressed scales, with a narrow groove on upper side of base in which fits a moderate stiff pencil of hair-scales from base. Abdomen normal.

Fore wing oblong-subtruncate, distinctly dilated, costa little curved, apex obtuse, termen gently convex below base, distinctly prominent and slightly angulate in middle, rounded below. Vein 2 from 2/3, 3 from angle, 4 closer to 3, 5 remote, 3-5 distinctly approximated on margin, vein 3 being slightly sinuate and curving upwards posteriorly, 7 separate, to termen, 8 from upper (rectangular) angle of cell, 9 close to 8, 10 from 2/3 distance 11-9, 11 from about middle; chorda from well before base of 10, to base of 7, median branch to halfway between 4 and 5.

Hind wing with a cubital pecten, semioval, 1 1/2, vein 2 from beyond middle, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base. Dorsum in male modified, with a thickened short marginal roll on the underside and a moderate additional pecten of hairs along basal half of vein 1a.

Male genitalia. Tegumen moderate, shoulders rounded. Uncus slender, T-shaped. Socius moderate, pending. Gnathos membranous, ill-defined, its edge inverted-trapezoidal. Valva slender, long, sinuate; sacculus with a raised harpe, on its edge a small  $Spc_2$  in middle, and  $Spc_1$ , a separate patch of longer bristles, beyond this; top of sacculus with a process, with a dense patch of bristles becoming strong spines along the posterior edge, cucullus 1/2, separated by a deep primary excision, spindle-shaped, bristly, with spines along lower portion of prominent middle part, base naked and constricted. Vinculum slender. Caulis moderate. Aedeagus short.

Female genitalia. Sterigma reticulate, sub-semioval, with erected upper angles, sides slightly impressed, lower half sculptured. Ostium proper forming a median prominent short cone, open above. Colliculum moderate. Ductus bursae long, tortuous. Corpus bursae ovoid, rather small. Signa, two very large, unequal patches of pointed squamae.

Type species, *Argyroploce pyrrhocrossa* Meyrick (Assam).

A specialized genus with very distinct uncus and valva, showing connections of the present tribe with other groups of genera, e.g. the *Hedya* group.

**Rhodacra pyrrhocrossa** (Meyrick, 1912) comb. nov.

(figs. 432-434, 446, 450A-B)

*Argyroploce pyrrhocrossa* Meyrick, 1912: 874 (♂♀, Assam). — Clarke, 1955: 267.

*Olethreutes pyrrhocrossa*; Clarke, 1958: 543, pl. 27 figs. 1-1a (lectotype select., figured).

Distribution. Assam: Khasis.

The species may be briefly characterized as follows. Head and palpus dark fuscous densely mixed with pale ochreous (tips of scales). Thorax similar, but mixed with bright ochreous. Abdomen dark fuscous. Fore wing fuscous with apical halves of scales pale, therefore appearing densely dusted with pale and light ochreous and partly with bright ochreous. Costal edge dark fuscous with numerous oblique and slender white strigulae; ultimate strigula vertical, connected by a silvery-white sub-costal line with the pair of marks on costa beyond middle; a dark fuscous longitudinal median patch from base of dorsum to middle of wing, densely strewn with bright ochreous, a paler yellowish-white subquadrate spot beyond cell, broadly connected with middle of termen and marked with silvery small lines; edge of wing in apex and along upper half of termen with a narrow whitish line. Cilia conspicuously light crimson, above apex blackish.

Hind wing blackish-purple, basal half dark fuscous-grey. Modifications of dorsum as described with the genus above.

Male and female genitalia described above.

"Formosa, Taihoku, S.J. 10.25", 1 ♂, genit. slide 6454 (the genitalia are exactly similar to those of the lectotype from Assam). "Assam, Khasi Hills, 11.06", 1 ♀, genit. slide 6455 (Meyrick Coll., BM).

#### **Corethrarcha** gen. nov.

Head with appressed scales, roughly spreading on crown. Ocellus posterior. Proboscis very short. Antenna in male simple. Palpus moderate, ascending, not appressed to face, median segment dilated towards apex, slightly rough along lower edge and at apex above, terminal segment short, porrect, subobtuse. Thorax with a slight double posterior crest. Hind tibia smoothly short-scaled, with a short closely appressed pencil of hairs from base. Abdomen normal.

Fore wing oblong-suboval, apex obtusely pointed, termen sinuate. Vein 2 from  $2/3$ , 3 from angle, sinuate and approximated to 4 at margin, 4 nearer to 3, less approximated to 5 posteriorly, 5 slightly rising, 7 separate, to termen, 8 from angle, 7-9 tolerably equidistant, 11 from slightly before middle of cell; upper parting vein from well before 10 to midway between 6 and 7, lower parting vein from towards base to base of 4.

Hind wing with a cubital pecten, vein 2 from beyond  $2/3$ , 3 from angle, separate, 4 closely approximated, 5 approximated at base, 6 and 7 closely approximated towards base; dorsum with a strong, spindle-shaped roll.

Male genitalia. Tegumen broad and high. Uncus broad, top hooked and emarginate, sides with large, porrected lobes, strongly haired inside. Socius rigid, porrected, moderately broad and slightly curved down. Gnathos paired, a membraneous inbent fold on each side, with thickened lower edge. Valva slender, sacculus crowned with a round large prominence, covered with very dense slender bristles; cucullus clavate, rather narrow. Aedeagus moderate.

Female genitalia. Eighth and ninth segments short-haired throughout. Sterigma, a large triangular sclerite, its upper edge thickened and forming a median split, also with thickened edge which is long-pileate throughout. Colliculum moderate. Ductus bursae with a strong tubular and thick-walled cestum. Signa two (in mount one concealed behind the other), large patches of fish-scale-like teeth.

Type-species, *Argyroploce rupifera* Meyrick (Assam).

Apparently a strongly specialized member of the *Statherotis* group, with a unique and peculiar uncus. The signa are of the apomorph pectinate type. The sterigma suggests a relation with *Semniotes* gen. nov. The presence of a cestum is a novel feature in the present group.

***Corethrarcha rupifera* (Meyrick, 1909) comb. nov.**

(figs. 430-431, 447)

*Argyroploce rupifera* Meyrick, 1909: 602 (♂♀, Assam). — Clarke, 1953: 274.

*Olethreutes rupifera*; Clarke, 1958: 544, pl. 71 figs. 1-1a (lectotype select., genit. figured).

Distribution. Assam: Khasis.

East Borneo, Balikpapan, 50 m, Mentawi River, x.1950 (A. M. R. Wegner), 1 ♂, genit. slide 4969 (LM). In all details agreeing with the topotypical material.

Assam, Khasi Hills, xii.1906 (E. Meyrick det., in Meyrick coll., 11/10), 1 ♂, genit. slide 6468 (BM).

Male and female genitalia as described with the genus.

A moderate, distinctly marked species. Whitish-ochreous, strigulated and marbled with glossy silvery-grey, except white edges to markings, and with fine dark fuscous strigulae more or less parallel to those edges. Markings dark fuscous, extended. Basal patch to beyond 1/4, edge with a truncate prominence above middle, costal part of patch almost obliterate; anterior third of costa with five dark spots; posterior third suffused with dark fuscous and filling out apex, cut by some six white lines. Transverse fascia very broad, postmedian formed of three spots: costal, oblique, obtusely angulate below, acute posteriorly; median spot, crescentic, fasciate, connected posteriorly with top of a triangular mark on termen below apex; and a large dorsal, whale-shaped patch: semipyriiform anteriorly, with rising oblique cusp before tornus; ocelloid patch large, silvery, with white edges and a few dark fuscous strigulae.

Hind wing semipellucet bronze-fuscous, towards apex suffused with black and becoming opaque.

***Statherotmantis* gen. nov.**

Head with appressed scales. Ocellus posterior. Proboscis short. Palpus rather narrow, curved and subporrected, median segment slender at base, dilated towards apex, scales rough at apex and along lower edge, terminal segment small, exposed,

drooping. Thorax apparently without a crest. Posterior tibia in male not dilated, sometimes with a small fringe of bristly, roughish scales along basal half of under side only, sometimes with a short pencil from base above.

Fore wing subtriangular, rather strongly dilated, rather broad, costa curved throughout, apex rounded. Vein 2 from beyond  $2/3$ , 3 from angle, 4 closer to 3, 5 and 6 parallel and distant, 7 free to termen, 8 from upper angle of cell, 9 rather close to 8, 10 from well beyond distance 9-11, 11 from middle; chorda strong, from midway between 11 and 10 to between 6 and 7, median branch from towards base to below 5.

Hind wing semioval, over 1, with a cubital pecten, sometimes with a dorsal roll. Vein 2 from middle, 3 and 4 closely approximated from angle, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen broad, moderately high. Uncus flat, sometimes shaped as a large bilobed hood, densely haired along edge or underneath. Socius large, thick, pending. Gnathos strong, diversely shaped, usually a transverse strong bar, in middle dilated vertically, with a single hook above and extended into one or two lateral processes below. Valva small and slender, constricted in middle, sometimes with a transverse ridge. Aedeagus small.

Female genitalia. Eighth tergite extended into a large collar. Sterigma moderate, subtrapezoidal, ostium a small cup in its middle with more or less excised edge. Colliculum slender, long. Signa, two pectinations.

Type-species, *Proschistis pictana* (V. Kuznetsov) (Kuril Is.).

This interesting genus is the only representative of the subtribe from the border of tropical and temperate Palaearctic Asia.

#### Key to the species of *Statherotmantis*

1. Hind wing in male with a roll; posterior tibia with a pencil of hairs, reaching to  $1/4-1/3$  of tibia. Hind wing dark grey, fuscous grey or pale grey . . . . . 2
- Hind wing in male without a roll, posterior tibia without a pencil. Gnathos without a median process (females unknown) . . . . . *shicotana*
2. Sterigma larger, trapezoidal . . . . . *pictana*
- Sterigma smaller, subcrescentic. . . . . *peregrina*

***Statherotmantis shicotana* (V. Kuznetsov, 1969) comb. nov.**

(fig. 435)

*Proschistis shicotana* V. Kuznetsov, 1969: 357, fig. 7 (♂, Kuril Is.).

Distribution. Kuril Is.: Shicotan.

The species may be redescribed thus.

♂ 12 mm. Head and thorax dark fuscous. Antenna purplish-fuscous. Palpus rather dark grey, upper edge darker grey. Abdomen light grey, anal tuft white.

Fore wing oblong-subtruncate, rather narrow, costa distinctly curved throughout, apex moderately rounded, termen straight above, rounded below, distinctly oblique. Vein 9 further distant from 8 than in *S. pictana*, 10 from  $2/3$  distance 9-11, 11 from slightly before middle. Dark fuscous-purple (rather rubbed) with ill-defined and little contrasting leaden-grey or leaden-bluish patches or streaks. A large semioval white costal patch, from beyond  $2/5$  of costa to beyond  $5/6$ , and not quite to middle of disc, with lower edge subserrulate; on costa this patch with some six small dark purple marks, a blue-leaden streak from posterior end of costal patch below costa, to upper third of termen; ocelloid patch indicated by two unequal paler, leaden-bluish marks, narrowed above, anterior from dorsum before tornus curved outwards and upwards to below vein 6 and almost meeting the second mark which is outwards-oblique, the space between these marks being oval and broader than the wedge-shaped marks; a round bluish-leaden mark on middle of fold. Cilia dark purple with white basal half (imperfect).

Hind wing pale fuscous with a silky gloss. Cilia pale fuscous with a broad subbasal darker fuscous band.

Male genitalia. Uncus, a thick and broad hood, with dense hair-pencils underneath. Gnathos strong, arms naked, slightly bent mesad. Valva with sacculus  $1/2$ , concave, almost naked, ending in a concave transverse lobe; cucullus narrower, flat, simple, sparsely bristled, with a pair of marginal spines.

Female unknown.

Japan, Katayama Mino, 12.v.1919 (K. Takeuchi), 1 ♂, genit. slide 7588 (BM). Closely allied with *S. pictana* (V. Kuznetsov), but smaller, with narrower wings and more oblique termen.

***Statherotmantis pictana* (V. Kuznetsov, 1969) comb. nov.**

(figs. 436A-B, 437)

*Proschistis pictana* V. Kuznetsov, 1969: 355, figs. 5-6 (♂♀, Kuril Is.).

Distribution. Kuril Is.: Kunashir.

Foodplant. Probably *Actinidia* (Dileniaceae).

♂ 16 mm. Head dark fuscous, face whitish. Antenna dark fuscous, pale ringed. (Palpus broken). Thorax dark fuscous-grey, with a purple median band, tegulae purple except tips. Abdomen fuscous, anal tuft pale ochreous-fuscous.

Fore wing oblong-subtriangular, dilated, costa gently curved throughout, apex rounded, termen straight above, rounded beneath. Dark grey, transversely strigulated and dotted with dark purple; a large semioval costal spot from  $2/5$  to beyond  $4/5$ , white, posterior  $2/3$  suffused with pale yellow; costal edge along patch dark purple, traversed by six double white costal marks, each pair finely parted by dark purple; posterior two pairs confluent and single, convergent below and continued by a leaden-blue strigula to  $1/3$  of termen, furcate before termen; a single white vertical

mark on costa before apex, leaden-blue below; costal patch edged by a moderate dark purple band, posteriorly extending to apex and termen; ocelloid patch large, formed by two erect slightly inwards-oblique wedge-shaped light leaden-blue spots, reaching to vein 6, parted by dark purple and with indistinct horizontal paler lines; upper third of termen with three small white dots. Cilia purple and dark grey, basal third deep purple, cilia in tornus more mixed with grey.

Hind wing rather light greyish-fuscous, suffused with fuscous-purplish towards apex. Cilia glossy white with a fuscous subbasal band and pale ochreous basal line.

Male genitalia. Uncus small, round and depressed. Socius long and voluminous, reaching below arms of gnathos. Gnathos with dorsal arm small, bifid; lower transverse part oval, with rounded upper processes and large, concave rounded lower processes at the sides. Valva with a median constriction.

Female genitalia. Sterigma trapezoidal, ostium small, cup-shaped, upper edge in front with three teeth; no lateral appendages.

Japan, Honshu, Sapporo, 14.vi.1919 (S. Issiki), 1 ♂, genit. slide 6412 (BM).

***Statherotmantis peregrina* (Falkovitch, 1966) comb. nov.**

(fig. 438)

*Proschistis peregrina* Falkovitch, 1966: 211, fig. 4 (♀, Primorski region).

Distribution. Primorski region (Maritime Province of the Far East).

Very similar to *S. pictana*, but the costal spot is somewhat more ochreous-tinged and tegulae with a pinkish transverse line. Otherwise as *pictana*; it can be separated with certainty only with the genital characters.

Male genitalia. The differences have already been indicated sub *S. pictana* (V. Kuznetsov). Gnathos with a single and longer median process, emarginate above and below, base wider than top. Lower part broadly oval with a single trapezoidal process at each side.

Female genitalia. Resembling those of *S. shicotana*, but sterigma subcrescentic, concave above, with slightly pointed ends and a conical tumescence in middle, with pear-shaped lateral folds or appendages. Colliculum somewhat shorter than in *pictana*.

***Aterpia* Guenée, 1845**

(figs. 439-441, pl. 8 figs. 4-6)

*Aterpia* Guenée, 1845: 161 (type-species, *A. anderreggana* Guenée, by monotypy). — Fernald, 1908: 29 (syn. of *Olethreutes* Hübner). — Fletcher, 1929: 27 (syn. of *Argyroplote* Hübner). — Obraztsov, 1951: 276-278 (*Esia* Heinrich syn.); 1960: 461. — Hannemann, 1961, in Dahl: 186. *Esia* Heinrich, 1926: 109, figs. 56, 202 (type-species, *Olethreutes approximana* Heinrich, North America, by original designation). **Syn nov.**  
[Nec *Aterpia* Clarke, 1958, cf. *Celypha*].



Head with roughly appressed scales, tuft on vertex raised. Ocellus posterior. Proboscis vestigial. Antenna in male filiform, short-ciliated. Labial palpus projecting over width of eye beyond face, porrected, strongly dilated with roughish scales above and beneath, terminal segment slender, pointed, slightly drooping. Thorax without a crest. Posterior tibia normally scaled, without a pencil.

Fore wing moderately broad, costa little curved, apex pointed, termen straight, moderately oblique. Vein 2 from beyond  $2/3$ , 3 from angle, approximated to 4 at margin, 4 nearer to 3, 5-7 tolerably parallel, 7 separate, to termen, 8 from upper angle of cell, 9 from  $3/4$ , 10 from  $2/3$ , 11 from middle of cell, chorda long, from beyond base of 11 to base of 7, median branch to below base of 5.

Hind wing semioval, over 1, with cubital pecten. Vein 2 from before  $2/3$ , 3 and 4 short-stalked, 5 moderately approximated at base, rather distant, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen triangularly narrowed. Uncus rather small, flat, rounded. Socii absent or large pending flaps, densely covered with modified spines (*palliata* Meyrick). Gnathos well-developed, sclerotized, transverse band with a pending spoon-shaped process. Tuba analis slender, long and rigid. Valva moderate, gently sinuate, sacculus  $1/2$ , outer edge sometimes angulate, Spc<sub>1</sub> large, merging in cucullus bristles which are dense but not modified, cucullus edge diversely projecting; Spc<sub>3</sub> usually present, sometimes not dense, marginal with one or two very long pencils (*corticana* Denis & Schiffermüller). Aedeagus curved, caulis sclerotized.

Female genitalia. Sterigma dark, large and deeply aciculate, semi-funicular, back side being absent (lamella postvaginalis indefinite, membranous); upper edge deeply excised; lamella antevaginalis darker and denser aciculate than the rest. Colliculum almost indefinite, a small sclerite to the right. Cestum present, a simple, spindle-shaped pale yellowish tube. Signa absent.

A small natural group of three closely allied Palaearctic species with quite different appearance, and two also very different looking tropical species. They are characterized by the presence of a well-developed sclerotized gnathos, as described above, and not less characteristic tubular cestum. Although *A. palliata* (Meyrick) possesses moderate pending socii clothed with modified scales, other characters are similar to those of the type-species. The small but distinctly pectinate signum of *palliata* assigns the genus to the present tribe. I regard the Palaearctic species being the plesiomorphic forms, developed from the *Statherotis*-like plesiomorphic stock: originally with two pectinate signa (*mensifera* Meyrick), then with one small signum, other minute or vestigial (*palliata*), finally without signa.

#### Key to the tropical species of *Aterpia*

1. Fore wing with a dark purple triangular median spot on costa, its top followed by a round point . . . . . *mensifera*
- Less than basal half of fore wing whitish, remainder deep purple with metallic marks . . . . . *palliata*

***Aterpia palliata* (Meyrick, 1909) comb. nov.**

(figs. 442-443)

*Argyroploce palliata* Meyrick, 1909: 595 (♂♀, Assam). — Clarke, 1955: 233.  
*Olethreutes palliata*; Clarke, 1958: 532, pl. 265 figs. 1-1a (lectotype design., wings, genit. ♀ figured).

Distribution. Assam: Khasis.

Assam, Khasi Hills, 1906 (D.), 2 ♀, genit. slides 6450 and 6451, respectively (Meyrick Coll., BM). India, Assam, Khasias Hills, 1898-9 (Doherty) (Walsingham Coll.), 1 ♂, genit. slide 8037, 1 ♀, genit. slide 7817 (BM).

A distinct species, easily recognizable by the silvery-white, little obscured ground colour and the blackish-fuscous posterior half of fore wing, almost unicolorous except the fasciate pale leaden or whitish ocelloid spot, sometimes extended as a subterminal streak to below apex. Hind wing pale grey.

Male genitalia. Tegumen high, uncus short and rounded. Socii large and densely clothed with modified, short and thick bristles; socii situated on lateral lobe-like dilatations of tegumen. Gnathos darkly sclerotized, V-shaped, with a slender pending point, bases thickened. Valva rather slender, gently curved, top rounded. Spc<sub>1</sub> dense and strong, Spc<sub>2</sub> absent, Spc<sub>3</sub> marginal, along basal half of valva, rather long, but moderately dense.

Female genitalia. Ostium wide, U-shaped, edges dark, upper angles thickened, rectangular, aciculate. Colliculum moderate, very slender. Cestum, a semitubular sclerite. Signa two, small and unequal, pectinate-scobinate.

The female genitalia show a relationship with the *Cephalophyes* group.

***Aterpia mensifera* (Meyrick, 1916) comb. nov.**

(fig. 448)

*Argyroploce mensifera* Meyrick, 1916: 19 (♂, Darjeeling). — Clarke, 1955: 202.  
*Olethreutes mensifera*; Clarke, 1958: 527, pl. 262 figs. 3-3a (holotype wings, ♂ genit. figured).

Distribution. India: Sikkim: Darjeeling.

Male genitalia. Uncus broad and blunt. Socius very small, parietal. Gnathos well-developed, a sclerotized double band. Valva robust and sinuate, with a very strong, dark Spc<sub>1</sub>, subcostal, extended over posterior half on upper part of sacculus; base of cucullus prominent; Spc<sub>3</sub> marginal and long, from basal angle of sacculus to prominence of cucullus.

♀ 20 mm, apallotype. Head light ochreous-fuscous. Palpus light tawny. Thorax light tawny, partly infuscated (imperfect). Abdomen pale fuscous.

Fore wing oblong-subtriangular, dilated, costa considerably curved throughout, less curved in middle, apex pointed, termen sinuate, vertical. Pale fuscous, finely but

regularly reticulate throughout with brownish, on posterior third, except on termen, becoming whitish, closely transversely strigulated. Basal patch ill-defined, formed by a denser fuscous suffusion to  $\frac{1}{4}$ , edge indefinite; a large, deep purplish-fuscous, dull, triangular costal patch, paler on upper third, occupying its median third and slightly shifted beyond middle; this patch well-defined, minutely edged with light; its anterior edge straight and oblique, top truncate just below middle of disc, followed by a round small spot of the same colour, just beyond cell; posterior edge of patch somewhat irregular, subserrulate, moderately rounded-prominent above middle; some rather bright orangeish-tawny dusting and larger dots preceding and following top of patch; space between patch and dorsum denser and coarser striated fuscous-tawny; apex and termen denser suffused fuscous, appearing finely striate (tips of scales); costa posteriorly with about six approximated blackish spots, alternating larger and smaller; some five blackish spots along tornus. Cilia pale grey-fuscous (rubbed) with darker tips.

Hind wing whitish-grey, marbled with pale fuscous. Cilia pale fuscous, a darker subbasal shade and a creamy basal line.

Female genitalia. Sterigma aciculate, shaped as a moderate split, upper half wider, flanked by crescentic thick edges narrowed above; lower half narrower, flanked by semispherical tumescences. Colliculum very narrow and short. Cestum present, a semitubular dark sclerite. Signa, two small pectinations.

Upper Burma, Hpimaw Fort, near Myitkyina, 8000 ft (Capt. A. E. Swann), 1 ♀, apallotype, genit. slide 7736 (BM). A very distinct species, as to markings and colouring remarkably alike the Australian *Megalota helicana* (Meyrick), but only superficially.

8. SUBTRIBUS *Neopotamiae* NOV.

A group of large and robust species with the general appearance of *Argyroploce* and with a series of plesiomorphic characters beside some recent adaptations.

Signa with a tendency to hypertrophy, two, sometimes one, of three types.

- (1) Signa two, unequal, usually one extremely large and robust: a sclerite with asteroid processes and a basal excision with thick edge.
- (2) Signa two, large, about equal, of diverse shape: banana peel, oblong basket, etc., or sack-shaped with two tops.
- (3) Signum one, pseudo-cornute, basal plate usually extended, thorn hypertrophied, of odd shapes, clavate, bifid, quadrate, etc., sometimes thorn absent.

Scent organ present as a rule, a dorsal roll of hind wing, sometimes with additional brushes or tufts on dorsum, and a hairy strongly extended posterior tibia with pencil; sometimes additional scent brushes on sides of first abdominal segment and on tergites 1-3.

Male genitalia with tendency to development of a long, hairy and bristly labis at the base of costa of the valva; uncus often very large, bifid or bilobed; sacculus sometimes with asymmetrical  $Spc_1$ ,  $Spc_2$  and  $Spc_3$ , often all three present.

Key to the genera of *Neopotamiae*

- 1. Sacculus without a raised harpe or labis . . . . . 2
- Sacculus with a raised harpe or labis, usually large and spiny, seldom small and naked . . . . . 5
- 2. Sacculus evenly covered with dense, converging spines; henion and subscaphium large; signa, two flat, hollow horns . . . . . *Pseudohedya*
- Sacculus less densely and regularly bristled; henion narrow, subscaphium, if large, then flat, submembraneous; signa of very unequal size or shaped like equal cog-wheels . . . . . 3
- 3. Sacculus with subcostal harpe small, pointed and naked, discal harpe, a bristled tumescence. Signa hollow cones or pocket-like . . . . . *Nyctidea*
- Sacculus with large harpe or harpes, if absent then valva with narrowed sacculus or cucullus . . . . . 4
- 4. Subscaphium moderate; signa shaped like equal cog-wheels . . . . . *Meiligma*
- Subscaphium large, flat, submembraneous; signa unequal, one big, clavate, another small, oblong; hind wing in male with notched termen . . . . . *Apsidophora*
- 5. Tegumen + uncus + socii united, extremely broad . . . . . *Megalota*
- Tegumen, uncus and socii not thus united, nor extended . . . . . 6
- 6. Uncus shaped as two separate, very long and slender processes. Signa, large unequal sclerites . . . . . *Costosa*

- Uncus not so shaped . . . . . 7
- 7. Signa, inequal usually enormous sclerites of diverse shape. Valva sinuate, long and slender, a large labis and usually a large marginal  $Spc_3$ . . . . . *Neopotamia*
- Signa not so large. Valva broader . . . . . 8
- 8. Valva strongly narrowed in middle, cucullus clavate; uncus hooded, not hooked. Signa large, semioval and hollow . . . . . *Pseudosciaphila*
- Valva not so strongly narrowed, slender or broad, but not clavate. Signa two, crescentic, hollow or flattened . . . . . 9
- 9. Cucullus slender, its base hardly prominent, with a moderate  $Spc_3$ ; labis raised, oval, broad. Signa semioval, hollow . . . . . *Saliciphaga*
- Cucullus with a broad base, this base distinctly projecting ventrally, with a very large  $Spc_3$ ; labis not distinctly raised, if so, then slender. Signa semioval, compressed . . . . . 10
- 10. Socii normal, weak, moderate, pending. Uncus single, harpe, a low tumescence along base of cucullus only; outer angle strongly prominent, with a spine and a slender long  $Spc_3$ ; aedeagus moderate, curved . . . . . *Phaecadophora*
- Socii long, rigid, subporrect. Uncus bilobed, with two brushes of spines; harpe not raised or raised and slender; outer angle of cucullus base moderately prominent (or valvae symmetrical), without a spine;  $Spc_3$  only on one side. very large; aedeagus short . . . . . *Temnolopha*

#### **Neopotamia gen. nov.**

Head with appressed scales, a long appressed tuft between bases of antennae. Ocellus posterior. Proboscis short. Antenna minutely ciliated in male and female. Palpus rather long, subascending, gently sinuate, median segment gradually dilated towards apex with roughish hairs above and beneath, terminal segment moderate, exposed, subobtusate. Thorax with a posterior crest. Hind tibia moderately dilated with dense scales, flattened dorso-ventrally, upper edge with moderate appressed scales; without a pencil of hairs from base.

Fore wing elongate-subtruncate or subtriangular, costa curved, apex rectangular, termen gently rounded, almost vertical. Vein 2 from  $3/5$  or from beyond  $3/5$ , 3 from angle, 3-5 tolerably equidistant, 7 separate, to termen, 8 from angle, 9 from  $1/3$  distance between 8 and 10, 11 from slightly before middle, chorda from halfway 10 and 11, to halfway 6-7; median branch from about halfway 11 and base, to below 5.

Hind wing with a cubital pecten, 2 from beyond middle, 3 and 4 connate from angle or short-stalked, 5 closely approximated at base, 6 and 7 closely approximated towards base; in male dorsum with edge slightly folded over and thickened, sometimes only along less than its dorsal third, with a short marginal lobe, with upper surface impressed longitudinally and forming a shallow trench filled with short, modified scales.

Male genitalia resembling those of the Palaearctic *Orthotaenia* Stephens. With a

long and strong  $Spc_3$ ,  $Spc_2$  on top of a long process, originating from the ventral edge of valva, but curved across disc towards its dorsal edge. Valva slender and sinuate, with  $Spc_1$  present. Uncus single and slender. Socius large, or very large, triangular, or quadrate, pending. Gnathos, a broad transverse membrane with a median split, sometimes diversely sclerotized, seldom strong.

Female genitalia. Lobes of eighth sternite aciculate. Sterigma rather large, semi-spheroid or trapezoid, aciculate or granulate, a diversely shaped median vertical split, below dilated into the ostium. Colliculum moderate, subcylindrical. Ductus and corpus bursae simple. Signa two, large irregular flat sclerites, one much smaller than the other, each with a semioval dark ridge, edging a semioval excision.

Type-species, *Neopotamia leucotoma* spec. nov. (Java).

Superficially nearest to the Palaearctic genus *Orthotaenia* Stephens, differing by the presence of  $Spc_3$ , by the absence of a spinose gnathos and especially by the peculiar signa. Allied to *Megalota* Diakonoff (uncus very broad, bilobed). The neuration is characterized by the presence of a median branch in the fore wing, by sometimes stalked veins 3 and 4 in the hind wing, which is an aberrant character, and by closely approximated veins 6 and 7. The genus is an advanced off-shoot of the subtribe. The gnathos is in diverse stages of development: submembranous in *N. leucotoma* spec. nov. and allies, strong and sclerotized in *N. cryptocosma* spec. nov.

#### Key to the species of *Neopotamia*

1. Fore wing with a costal patch . . . . . 2
- Fore wing without a costal patch . . . . . 7
2. Costal patch not reaching the orange-suffused apex . . . . . *ioxantha*
- Costal patch reaching extreme apex . . . . . 3
3. Costal patch extending from apex to basal 1/4 or to before base; apex without a pale oblique mark . . . . . *orophias*
- Costal patch extending from apex to base . . . . . 4
4. Apical wedge white, much lighter than dorsum and tornus . . . . . 5
- Apical wedge creamy, gradually merging into light ochreous-tawny colour of dorsum and tornus, or there is no separate apical wedge. . . . . 6
5. Fore wing narrower, costal patch well-defined, dark, obliquely strigulated with pale grey; apical wedge sharply cut by black marginal line; dorsum grey . . *divisa*
- Fore wing broader, costal patch often ill-defined, brownish; apical wedge not or hardly cut by dark line; dorsum tawny . . . . . *leucotoma* (part)
6. Apical wedge creamy, gradually merging into light ochreous-tawny colour of dorsum and tornus . . . . . *calogona*
- Apical wedge not perceptible, dorsum, tornus and apex unicolorous light tawny-orange . . . . . *ochracea*
7. Small species, 14 mm, without light markings, sometimes a round grey spot in tornus . . . . . *glyceranthes*

- Larger species, 21-25 mm, apex or tornus with a light spot . . . . . 8  
 8. Apex with a white wedge . . . . . *leucotoma* (part)  
 — Tornus with a white and orange patch . . . . . 9  
 9. Tornus pale ochreous, dorsum not paler . . . . . *tornocroca*  
 — Tornus tawny-orange, dorsum light-ochreous . . . . . *cryptocosma*

***Neopotamia orophias* (Meyrick, 1907) comb. nov.**

(figs. 455-457, pl. 1 fig. 8)

*Eucosma orophias* Meyrick, 1907: 732 (♂♀, Simla, Khasis). — Clarke, 1955: 227.

*Olethreutes orophias*; Clarke, 1958: 532, pl. 265 figs. 2-2a (lectotype select.: Simla; genit. and wings figured).

Distribution. Darjeeling: Simla. Assam: Khasis.

India, Punjab, Simla, viii.1898, 1 ♂, genit. slide 7784, 2 ♀. genit. slide 7785; v. 1897, 1 ♂, genit. slide 7796, 1 ♀ (BM); Bhim Tal, 9.vi.1925, "*Argyroploce orophias* Meyr." (in Meyrick's hand), "Pres. by Sir R. Maxwell, BM 1951-22", genit. slide 7648. Punjab, Dharmasala, 1897 (Hocking) (Walsingham Coll. nos. 23130 and 23194), 2 ♀ (BM).

The robust species is characterized by the darkly coloured large triangular patch, occupying about posterior 4/5 of the costa, the top reaching below fold; in female there is sometimes a second suffused deep purplish triangular spot on basal fifth of costa but not quite reaching base, with top rounded; the patch is reddish-brown, variably dusted or suffused with whitish-grey; dorsum whitish-grey, beyond costal patch forming two obliquely rising wedge-shaped spots, before and in tornus, terminal area filled out with fulvous.

Hind wing rather light golden-bronze, cilia whitish; dorsum in male with thin long hairs; at base with a slender pointed and rolled lobe reaching to middle.

Posterior tibia whitish, dilated with long fine subappressed hairs along basal half only, pencil from base absent; basal segment of tarsus with a small smooth tuft above.

Male genitalia. Tegumen broad above, shoulders rounded. Uncus, a slender bifurcate hook. Socius weak but large, with long fine hairs. Gnathos absent. Tuba analis membraneous, bivalval. Valva slender, moderately sinuate,  $Spc_1$  on a sinuate and clavate harpe, spiny on upper, bristly on lower side.  $Spc_2$  delicate, marginal, from middle of sacculus to beyond base of cucullus;  $Spc_3$  large, towards base of valva. Aedeagus pear-shaped, juxta cup-shaped, on a long caulis.

Female genitalia. Sterigma, a broad half ring with sloping sides, densely punctulate. Ostium triangular-subtrapezoidal, edges thickened. Colliculum rather short. Signa unequal: one large, with an irregularly broken edge, another small, with a crescentic body.

*Neopotamia leucotoma* spec. nov.

(figs. 451-452, 510)

♂ 12-15 mm. Head fuscous-brown, tips of scales paler. Palpus light fuscous-tawny, lower edge broadly tawny-whitish-edged. Thorax fulvous-tawny, tegula with a ferruginous median transverse band. Posterior tibia in male strongly thickened with smoothly appressed long hair-scales, at apex on the inside curving upwards and forming a thick rounded pad; pencil from base apparently absent. Basal segment of posterior tarsus not tufted. Abdomen dark fuscous.

Fore wing oblong-subtriangular, costa curved throughout, apex rectangular, termen straight above, little rounded beneath. Ferruginous-brown, with slight purplish and fulvous reflections, sometimes lower half of wing and tornus pale ochreous-fuscous, more or less suffused with tawny. Costa suffused with deep ferruginous-brown, with 11 pairs of greyish costal marks, ultimate pair pale ochreous, more distinct; a streak of similar suffusion from base of wing above fold, to below lower angle of cell, thence straight to apex, so forming edge to dark colour; dorsum greyish-fuscous evenly suffused with tawny, a few faint brownish dots; a wedge-shaped whitish spot in lower half of apex, pointing basad; veins beyond cell streaked with ferruginous; two almost vertical series of ferruginous dots beyond cell, followed by a series of dark brown thicker strigulae along veins; a vertical, wedge-shaped dark brown mark along median third of termen, point down, top with a small, whitish mark before termen; a small pale ochreous vertical strigula along closing vein; a narrow interrupted dark brown line along termen, conspicuous along light markings. Cilia brown, with ochreous-white bars opposite subapical spot and terminal pale dot.

Another male, paratype, somewhat paler, evenly fuscous-tawny-brown, only strigula on end of cell larger, some orange suffusion before middle of termen; a third male, paratype (rather rubbed), with light area pale ochreous-whitish.

♀ 12-13 mm. Similar to male, but light area darker than costal half of wing, purplish-brown, subapical wedge-shaped mark and mark on end of cell creamy, conspicuous. Another female, paratype, with brighter ochreous-tawny head, thorax and extreme base of fore wing, remainder of wing suffused with deep purple.

Hind wing varying from brownish-fuscous (holotype), to paler greyish-fuscous (allotype).

Male genitalia. Tegumen with rounded top. Uncus long and slender, with a clavate top, with a transverse bar. Socius rather large, triangular and projecting. Gnathos not traceable, tuba analis small, bivalval. Valva twice sinuate, base of sacculus and base of cucullus dilated. Spc<sub>1</sub> upon a long harpe, crossing disc of valva and curving back again, spiny on top. Spc<sub>2</sub> along excision and around cucullus prominence. Spc<sub>3</sub> basal, long. Aedeagus moderate.

Female genitalia. Sterigma large, a broad aciculate plate, ostium pear-shaped, split above narrow. Colliculum broad. Large signum irregularly rounded.

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, ix.1949, 1 ♂, holotype,



genit. slide 3054; vi.1949, 1 ♂, paratype, 1 ♀, allotype, genit. slide 5851. Mt. Malabar, Tjinjiruan Government Quinine Estate, 1700 m, xii.1909 (H. W. van der Weele), 1 ♂, paratype, genit. slide 5967 (LM). Mt. Gede, Tjibodas, 1909 (Bryant & Palmer), 1 ♂, 1 ♀, paratypes. Buitenzorg, 250 m, 1909 (Bryant & Palmer), 1 ♂, genit. slide 5327, 4 ♀, all paratypes (USNM). Very near to *N. orophias* (Meyrick), differing by a shorter pale mark in disc, a usually more conspicuous pale subapical mark and by the male genitalia which have a much more prominent angle of the base of cucullus, and a longer, curved and spiny harpe (subbasal process).

A variable species; in three specimens the costal part of the big patch is suffused with bright reddish-fulvous and traversed with numerous oblique leaden-metallic striae, originating from white costal marks, in two other specimens the entire costal patch is occupied by reddish-fulvous colour with leaden striae; in these two specimens the costal patch is traceable only by its lower edge. An elegant, large species.

***Neopotamia ioxantha* (Meyrick, 1907) comb. nov.**

(figs. 458-460)

*Enarmonia ioxantha* Meyrick, 1907: 139 (♂♀, Assam). — Clarke, 1955: 175.

*Olethreutes ioxantha*; Clarke, 1958: 523, pl. 260 figs. 4-4b (lectotype select., wings, genit. ♂ figured).

Distribution. Assam: Khasis.

Assam, Khasis, Cherra Punji, 1894 (Native, Dncstr.), 2 ♂, genit. slides 7786, 7797; 3 ♀, genit. slides 6525, 7787 (Walsingham Coll., BM). Assam, Khasi Hills, 1906, D. (Meyrick Coll., BM), 2 ♂, genit. slides 6475, 7649, 1 ♀, 7650 (BM).

A smaller species with broader wings. The costal triangle is deep ferruginous-red, more or less suffused with paler lilac except along lower edge; this patch extending from base to distinctly before apex; dorsal streak rather dark grey with a pointed or rounded prominence at 1/4, rising above middle of wing; a bright orange suffused spot in apex, more or less filling out termen and tornus and extending over posterior part of costa, sometimes cut twice by deep fuscous-brown suffusion below middle of termen and in tornus; pairs of costal markings distinct throughout, white.

Hind wing blackish-fuscous, semipelluculent with darker veins on anterior 2/3, dorsum in male with a large triangular lobe to middle, forming a deep roll in which a thick flat brush of creamy scales from base. Posterior tibia in male dilated with long closely appressed light grey scales, roughish at apex, whitish inside, pencil from base absent. Basal segment of posterior tarsus tufted above.

Male genitalia. Tegumen narrowed. Uncus long, slender and hooked, top clavate, with two prongs. Socii absent. Gnathos perceptible at the sides only, its arms slender, submembraneous, passing into a broad hyaline tuba analis. Valva narrow but robust, Spc<sub>1</sub>, on a long curved harpe, Spc<sub>2</sub> and Spc<sub>3</sub> both marginal and united; a small separate spine cluster upon cucullus prominence, directed downward, separated by

primary excision. Aedeagus curved. The male abdomen adorned with three thick patches of modified purple scales, one on each of the tergites 3, 4 and 5 and a smaller brush of dark scales on each side of segment 1.

Female genitalia. Sterigma, a moderate cardiform body split almost to base, ostium erect-oval, top of sterigma constricted, forming two aciculate wing-like folds. Seventh sternite deeply excised. Colliculum long and slender. Large signum banana peel-shaped, small signum semioval.

*Neopotamia calogona* spec. nov.

(figs. 453-454)

♂♀ 22-23 mm. Head tawny, on vertex mixed with dark brown. Palpus light tawny, apex of median segment slightly darker, upper edge with two purplish dots or transverse bars. Thorax tawny-brown, apex suffused with purplish. Posterior tibia fuscous, spurs and inside ochreous, slightly thickened with appressed fine hairs, bristly on the inside, pencil from base absent. Abdomen fuscous.

Fore wing oblong-subtruncate, costa gradually curved, apex obtusely pointed, slightly prominent, termen gently concave, vertical above, rounded beneath. A blackish-purple elongate-triangular patch occupying costa from base to apex and reaching with top below fold; edge of patch anteriorly gently concave, slightly notched at  $1/3$ , slightly serrulate but almost straight posteriorly; a faint tawny-fulvous suffusion extending over upper half of patch below costa; nine pairs of oblique pale bluish-grey strigulae from hardly perceptible flat whitish costal marks, traversing patch over costal third of wing breadth; dorsal part of wing light creamy-grey, suffused with darker fuscous-grey; a cloudy blackish spot on end of dorsum, another, below middle of termen, space between them filled out with orangeish-ochreous and pale leaden-bluish; a whitish well-defined triangle, occupying upper half of termen beyond costal patch, slightly lined with orangeish along veins, with a fine, white, sub-marginal streak and a sharp purple marginal line from around apex to tornus. Cilia creamy along upper half of termen, dark fuscous-grey with creamy basal line elsewhere.

Hind wing semipelluculent purplish-bronze, with dark veins, basal  $2/3$  paler; dorsum in male with pale ochreous hairs, with a roll, concealing blackish pencil of long hairs from base, cilia elsewhere dark fuscous with a pale basal line; in female dorsum normal.

Male genitalia. Tegumen sclerotized and robust, except at basal fourth, gently constricted at upper  $1/4$ . Uncus small and short, a sharp hook. Socii complicated, from base of uncus to middle of tegumen, upper half split in two descending patches, outer patch slender, below triangular. Gnathos and tuba analis together forming a rising triangular plate. Valva very slender, moderately excised,  $Sp_1$  on a harpe shorter and more raised than in *N. divisa*,  $Sp_2$  from base to just above base of cucullus.

Female genitalia. Sterigma moderate, semioval, flattened in front, granulate

throughout, ostium round, its edges finely aciculate, V-shaped, above ostium additional tumescences on each side of wall. Colliculum rather short and slender. Large signum with semicircular base and one long prong, small signum semioval, comparatively large.

West Java, Mts. Gede-Panggrango, Tjisaroea-Zuid Estate, 1000 m, 4.xii.1948 (M. A. Lieftinck), 1 ♂, holotype, genit. slide 3406 (LM). The same mountains, Tjibodas, 1400 m, 15.viii.1909 (Bryant & Palmer), 1 ♂, genit. slide 5328; 1 ♀, allotype, genit. slide 5852 (USNM); 2 ♀. — 2 ♂, 3 ♀. Closely allied to *N. divisa*, but quite distinct by markings and especially by the genitalia.

*Neopotamia divisa* (Walsingham, 1900) comb. nov.

(figs. 461-462, 508, pl. 3 fig. 1)

*Phaecedophora divisa* Walsingham, 1900: 132, no. 924 (12) (♀, Assam).

*Argyroploce acrosema* Meyrick, 1909: 601 (♂, Assam). — Clarke, 1955: 36. **Syn. nov.**

*Olethreutes acrosema*; Clarke, 1958: 480, pl. 239 figs. 1-1a (lectotype ♂ selected, genit., wings figured).

Distribution. Assam: Naga Hills; Khasis.

Assam, Khasis, Cherra Punji, v.1894 (Native, Doncaster), 2 ♂, genit. slide 7795; 1 ♀, genit. slide 6511. Assam, Naga Hills, 1890 (Doherty), Walsingham Coll. 40228, ♀, holotype, genit. slide 11681 (BM).

The species has a narrower fore wing than in *N. orophias*, while the dark purple-brown triangular patch extends over the whole costa and is obliquely transversely strigulated with slender double pale grey lines, originating from costal pairs of marks; the dorsal streak is grey, as the lines, with a dark fuscous spot on dorsum before tornus, edged white anteriorly; above this an orange spot, with black lines along veins; a round dark purplish-brown dot on middle of dorsum, and between this and apex; a well-defined light wedge, pale orange anteriorly, white posteriorly, sharply cut by a purple line along terminal margin.

Hind wing rather dark bronze-grey, semipellucant, with darker veins. Posterior tibia in male thickened with closely appressed grey hair-scales, at top on the inside curving upwards and forming a laterally compressed angular smooth tuft (not rounded, as in *N. leucotoma*); basal segment of posterior tarsus with a smooth raised tuft in middle above.

Male genitalia. Tegumen with upper 2/3 robust and sclerotized throughout, edge moderately constricted in middle and below top. Uncus very small, a slender hook. Socii very large, densely and coarsely bristled and also scaled, descending almost to 2/3. Gnathos entirely united with a broad tuba analis, together forming a pair of angulate plates, with a deep median split and submedian dark ridges. Valva very slender, Spc<sub>1</sub> upon a long, digitoid and clavate harpe, obliquely crossing sacculus and projecting beyond it. Valva with a large primary excision. Cucullus very slender, base

thickened and prominent,  $Spc_2$  from middle of excision,  $Spc_3$  extending to middle of cucullus. Aedeagus broad and short.

Female genitalia. Sterigma large and bispherical, with strong reticulate structure. Ostium forming a deep and broad frontal excision, with thickened edge, aciculate along top; lamella antevaginalis, a curved small lip. Colliculum moderate, bivalval. Signa inequal, large one with four long points and deep basal emargination, small one, transverse.

*Neopotamia cryptocosma* spec. nov.

(fig. 463)

♂ 18 mm. Head pale ochreous. Palpus pale fuscous-grey, basal half obliquely whitish. Thorax pale ochreous, slightly suffused with brownish, on posterior half infuscated. Posterior tibia thickened with appressed long scales on both sides, less thickened along upper and lower edges, apex rounded; glossy whitish, curled tuft at apex infuscated; pencil from base above white, very short; basal segment of posterior tarsus with snow-white tuft above. Abdomen pale ochreous, anal tuft fuscous.

Fore wing oblong, rather broad, moderately and gradually dilated, costa curved, apex pointed, termen gently sinuate, moderately oblique. Anterior half as far as fold deep purple, edge ill-defined; posterior half ferruginous, turning reddish-orange towards margins of wing; dorsum as far as fold pale ochreous, slightly suffused with dark fuscous at  $1/3$  (apparently forming an inwards-oblique broad suffused streak), dorsal edge with a series of elongate marginal dark fuscous marks, posterior just before tornus, jet-black; anterior (purple) half of costa with four oblique pairs of thick leaden-bluish-grey, submetallic marks, reaching to upper edge of cell; posterior (orange) half of costa with five slender, single pale leaden-blue very oblique strigulae, anterior continued as a subcostal striga to before apex, other strigulae parallel, obtusely pointed, just not touching subcostal line, ultimate strigula vertical and short; closing vein with a pale tawny dull streak; an oblique longitudinal patch of dark purple suffusion from beyond end of cell to apex; ocelloid spot indicated by broad somewhat irregular whitish-metallic vertical marks on both sides, apparently forming together an almost complete large circle above tornus. Cilia (strongly worn) apparently fuscous, with orange basal third.

Hind wing very pale grey-purplish, glossy, becoming bronze on apical fourth, golden whitish on dorsal half; dorsum modified; vein 1b forming a thickened smooth ridge above, cell 1b, except towards margin of wing, clothed with very dense glossy smoothly appressed fine hairs, longer directed marginad, short directed discad; extreme margin of dorsum along basal half forming a naked brown edge; at the base of dorsum upper side a smooth circular jet-black patch of hairs, inner edge of this patch forming a light grey pencil of hairs, directed caudad and not reaching tornus which is whitish. Cilia bronze-fuscous, turning whitish towards tornus.

Male genitalia. Tegumen high and rather broad. Uncus rounded and broad, simple,

forming below and in front two elongate voluminous subrigid socii, densely covered, especially along edges, with short black hairs. Gnathos dark, very large, subcardiform, upper edge and lower extended point both emarginate. Valva slender, sinuate, sacculus with  $Spc_1$  upon a pointed, mesad-curved process of costa; cucullus with a long spiny basal process, top of cucullus clavate;  $Spc_3$  moderate, from middle of edge of sacculus. Aedeagus short, upon a cup-shaped anellus on a long caulis.

India, Sikkim, 7000 ft, vii.1896 (Pilcher), 1 ♂, holotype, genit. slide 7899 (BM). Both fore wings are considerably rubbed, but the unique modification of the dorsum in the hind wings and the male genitalia make this species very distinct.

***Neopotamia tornocroca* spec. nov.**

(figs. 464-465)

♀ 23 mm. Head fuscous, face whitish. Palpus light fuscous (partly denuded). Thorax light fuscous (partly denuded). Abdomen fuscous.

Fore wing oblong, costa little curved anteriorly, straight in middle, stronger curved before apex, apex rounded, termen gently rounded. Pale grey, markings extended, dark fuscous and partially bright tawny. Basal patch dark fuscous, its middle part in both wings rubbed, but with traces of bluish-grey pale suffusion; edge of patch oblique to middle, thence horizontal, just below cell to above end of dorsum, vertical to end of dorsum, rather well-defined; transverse fascia formed by an oblique band with parallel edges, from just before middle of costa, merging into end of dorsal suffusion; this band rather bright tawny, in middle and posteriorly suffused with darker brown, on lower half containing an upright crescentic pale grey mark, edged with dark fuscous; lower end of this suffusion extended between (dark marked) veins 5-6 to termen; band of pale grey ground colour as broad as, and parallel to transverse band, separating this from apical area, towards costa becoming bluish-grey, a dark dot on costa; apical area dark brown, suffused anteriorly with tawny-orangeish between veins 8-10, on costa with three pairs of thick greyish marks and marbled throughout with leaden-grey spots, but veins dark; three more distinct and paler leaden roundish spots along upper half of termen; a conspicuous white tornal spot, limited by dorsal suffusion and vein 5, with upper posterior half suffused with tawny-orange. Cilia dark fuscous, mixed with leaden, a pale basal line and an irregular blackish basal third, cilia along tornus pale tawny.

Hind wing light grey-bronze, glossy. Cilia grey, with a whitish basal and a dark grey subbasal line.

Female genitalia. Sterigma rather simple: lamella antevaginalis, a semicircular broad verruculose band, finely aciculate and with a smooth dark outer edge. Colliculum long, bivalval throughout, hardly dilated above. Corpus bursae granulate. Signa, two unequal semicircular banana-peel-shaped large sclerites.

India, Sikkim, 7000 ft, viii.1896 (Pilcher), 1 ♀, holotype, genit. slide 7684 (BM). A very distinct species.

**Neopotamia glyceranthes** (Meyrick, 1928) comb. nov.

*Argyroploce glyceranthes* Meyrick, 1928: 445 (♀, Andaman Is.). — Clarke, 1955: 148.  
*Olethreutes glyceranthes*; Clarke, 1958: 511, pl. 254 figs. 4-4c (holotype ♀, wings and genitalia figured).

Distribution. Andaman Is.

The small, obscurely marked species has an almost tortricine appearance by the broadly truncate fore wing with a strongly sinuate, vertical termen. It does not resemble any of its congeners, but the genitalia are very similar, e.g. to those of *ioxantha*. The fore wing is unicolorous light fuscous-purplish with some lilac-grey suffusion forming a large erect-oval blotch in tornus, slightly opalescent dove-grey along centre, fuscous at the sides; termen with a series of interneural submarginal black points.

Hind wing dark fuscous, semipellucid and paler on basal 3/4.

**Neopotamia ochracea** (Walsingham, 1900) comb. nov.

*Phaeacadophora* (?) *ochracea* Walsingham, 1900: 133, no. 924 (13) (♀, Corea)

Distribution. Corea: Gensan.

Rather similar to *N. divisa* (Walsingham) but differing by the dark brown costal patch, with a suffused reddish subcostal stripe posteriorly and similarly unicolorous dorsum, tornus and apex which are light tawny-orange, without any markings or suffusion. The costal patch with the lower edge notched at 1/3, notch oblique; posterior edge of this patch slightly concave throughout, while more or less distinctly convex in all other species of the genus. The female holotype is unique.

**Costosa** Diakonoff, 1968

*Costosa* Diakonoff, Jan., 1968: 80 (type-species, *C. allochroma* Diakonoff, Mindanao).  
*Rhodonympha* Diakonoff, May, 1968: 71 (type-species, *Eucosma rhodantha* Meyrick, Assam).  
**Syn. nov.**

Although the two above mentioned type specimens have rather diverse superficial appearance, I am now satisfied that they are congeneric. A third species of this remarkable and natural group is described below. However strange the male genitalia may appear, the valva shows a resemblance with the genus *Megalota* Diakonoff, but the signa are widely different and similar to those in *Neopotamia* Diakonoff, the nearest relative of the present genus.

Head with dense rough scales, sometimes a short projecting tuft on forehead, vertex slightly keeled. Ocellus posterior. Proboscis short, naked. Antenna minutely ciliate. Palpus moderate or long, porrected or subascending, median segment short and rather slender, sinuate, dilated towards apex by short, appressed scales, terminal

segment short, concealed, obtuse and drooping. Thorax with a double posterior crest. Posterior tibia in male dilated by dense, appressed scales, sometimes projecting in an apical tuft, with a pencil from base. In female tibia normal.

Fore wing with cell abruptly narrowed towards base. Vein 2 from beyond  $2/3-3/4$ , 3 from angle, 4 approximated or 3-5 equidistant, 7 to termen, 11 from beyond middle, chorda strong, from between 10 and 11 to base of 7, median branch running close along upper edge of cell, thence sinuate to just below base of 5 (*allochroma*) or ill-defined (*rhodantha*).

Hind wing over 1, with a cubital pecten; 2 from before to beyond middle, 3 and 4 short-stalked or 3 from angle, 4 separate, 5 closely approximated at base, 6 and 7 closely approximated towards base. Dorsum rolled in a slender, not entirely closed tube.

Male genitalia with a bipartite long and porrect uncus, arms slender, naked. Socii parietal, or subparietal, large, oval, densely haired. Gnathos, an aciculate or punctulate transverse trapezoidal band. Valva with a broad sacculus, bearing a long hairy or spiny subbasal harpe, sometimes asymmetrical, an elevated and rounded or fold-like hairy pulvinus and sometimes a marginal short process. Cucullus long and curved, sometimes clavate or with a median process of lower edge.

Female genitalia with sterigma extended, finely aciculate, lamella antevaginalis large, vertical, with a pair of median lobes; ninth tergite sometimes swollen and aciculate. Colliculum short and slender, two-sheathed. Signa inequal, one very large like a banana-peel, another small, spindle-shaped.

#### Key to the species of *Costosa*

1. Fore wing with basal half pale olive, apical half bright magenta . . . . . *rhodantha*  
— Fore wing not so coloured . . . . . 2
2. Fore wing with apical sixth well-defined ochreous-whitish; without leaden-grey transverse markings . . . . . *allochroma*  
— Fore wing with terminal fourth ochreous-orange, extreme apex paler; a pale leaden-grey transverse fascia at  $1/3$  and some strigulae . . . . . *aphenia*

#### *Costosa rhodantha* (Meyrick, 1907) comb. nov.

(figs. 466-469)

*Eucosma rhodantha* Meyrick, 1907: 138 (♂, Khasi Hills). — Clarke 1955: 271. — Diakonoff, 1967: 74, figs. 5-8 (head, venation, genit. ♂♀ figured; new genus).

*Olethreutes rhodantha*; Clarke, 1958: 543, pl. 270 figs. 3-3a (holotype ♂ wings, genit. figured).

*Rhodonympha rhodantha*; Diakonoff, 1967: 74, figs. 5-8 (head, venation, genit. ♂♀ figured; new genus).

Distribution. Assam: Khasis.

A species, remarkable by its unique colouring: with the apical half of the fore wing strikingly bright magenta. No other Microlepidopteron which I know does possess this remarkable colour. The body and the basal half of the fore wings as well as the extreme apex, are pale ochreous-olive, the latter marked with white below.

The hind wing is rather light fuscous-bronze.

Male genitalia. The halves of the uncus are sinuate. Socii very densely haired and with some three long and strong bristles each. Harpe very long and slender, spiny along the inner side. Valva, a curved process at the top of sacculus (which is not defined otherwise). Aedeagus moderate; cornuti, several slender spines.

Female genitalia. Sterigma huge, aciculate, with two submedian longitudinal folds. Colliculum small.

Assam, Khasi Hills, 6000 ft, vi.1889 (Doherty), 1 ♂, genit. slide 6505, 1 ♀, genit. slide 6506; the same locality, 1898-9 (Doherty) (Walsingham Coll., BM 1910-17), 1 ♂ (BM, LM).

Ceylon, Pattipola, v.1911 (Walsingham Coll.), 1 ♀ (BM).

#### *Costosa aphenia* spec. nov.

(figs. 471-473)

♂♀ 15-18 mm. Head with upper half pale fuscous-tawny or yellowish, on lower half turning orange. Palpus orange. Thorax pale fuscous-tawny and olivaceous, posterior tuft highly raised and widely spreading, whitish-olive. Abdomen dark fuscous. Posterior tibia in male pale ochreous partially suffused with dark grey towards base outside; strongly thickened with long roughly appressed scales, roughish on the inner side, with a sublateral gully in which is concealed a pencil from base, exceeding top of tibia, projecting caudad and slightly curved upwards. Posterior tarsus tawny, normal.

Fore wing oblong, moderately broad, costa gradually curved, apex moderately rounded, termen almost straight, hardly convex, rounded below. Deep reddish-fulvous, towards base except on costa and towards termen except in tornus, suffusedly becoming bright orange-yellow; a large triangular crimson-ferruginous patch, on costa from  $2/5$  to  $4/5$ , top reaching down to fold beyond middle, edges strongly suffused; posterior  $3/4$  of dorsum as far as fold suffused with deep olive-fuscous; rather dull pale violet-leadened marbling forming a double transverse band at  $2/5$ , narrowed on upper edge of cell, and on fold, running to  $3/5$  of dorsum, emitting a broad oblique blotch to dorsum beyond base, and an irregular marbling rising from  $3/5$  of dorsum to vein 4; a small marginal blotch in tornus; a double oblique mark on costa beyond middle, with a few irregular dots below this; one or two slender costal marks at  $3/4$ ; all costal marks narrowly white on extreme costal margin; extreme apex and upper third of termen glossy whitish-yellow. Cilia whitish-yellow around apex, along upper half of termen and along posterior part of dorsum, crimson-purple elsewhere.

Hind wing in male deep bronze with some yellowish-golden tinge, on basal third in male becoming dull fuscous-grey, with a brushy paler cubital pecten, a similar, longer



pecten along base of vein 1b, forming a thick brush along the whole length of vein 1a, light fuscous-grey, towards margin of wing expanded and becoming dark fuscous, dorsal margin forming a deep cavity, open posteriorly, anteriorly covered with an almost semispheroidal marginal short roll with very long and dense cilia. Cilia pale ochreous with a dark fuscous subbasal band, along dorsum and tornus cilia dark fuscous. Hind wing in female bronze, becoming paler and semipelluculent on basal third.

Sometimes ferruginous-crimson suffusion more extended and forming a spot on middle of termen.

Male genitalia. Uncus sclerotized, an inverted-trapezoidal plate, its upper angles forming very long, naked horns, the lower part densely haired and representing the socii. Gnathos, apparently a slender transverse rod. Valva with a short, well-defined socius, separated by a deep primary excision, edge hairy throughout. Pulvinus, a rounded transverse ridge. Cucullus long, curved, not narrowed, densely hairy. Labis very large, reaching to socii, upper half densely haired, lower with a median spiny arm. Aedeagus rather long, with bulbous base.

Female genitalia. Ninth segment swollen dorsally and aciculate. Sterigma moderate, subconical, with a deep median split, dilated below, so as to form a subcardiform ostium proper with thickened edge, aciculate throughout; upper angles of sterigma extended laterad in a thick rounded band, densely aciculate. Signa inequal, one, a huge semioval sclerite, another, a small subcrescentic sclerite in a round field of scobinations.

New Guinea, Milne Bay (A. S. Meek), 1 ♂, holotype, genit. slide 7674; 1 ♀, allotype, genit. slide 7675; 1 ♂, 3 ♀, paratypes (Walsingham Coll., BM). — Biagi, Mambare River, 5000 ft, 1-iv.1906 (A. S. Meek), 1 ♂. — Northeast British New Guinea, Kumusi River, low elevation, v-ix.1907 (A. S. Meek), 1 ♂ (BM).

### *Costosa allochroma* Diakonoff, 1968

(fig. 470)

*Costosa allochroma* Diakonoff, 1968: 81 (♂, Philippine Is.)

Distribution. Philippine Is.: Mindanao.

Rather similar to the preceding, but without any leaden markings and with the apical sixth of fore wing ochreous-whitish and well-defined; lower part of terminal edge suffused with reddish-purple (in *C. aphenia*, pale leaden). Hind wing dorsum less modified, the entire hind wing paler.

Male genitalia very distinct from those of *C. aphenia*. Uncus horns much shorter and truncate (perhaps damaged).

### *Meiligma* gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna moderate-

ly thickened, subserrulate, minutely ciliated in male; filiform, minutely ciliated in female. Palpus moderate, median segment strongly dilated towards apex, triangular, with closely appressed scales, somewhat roughish along apex, hardly so along lower edge, terminal segment smooth, truncate, slightly pending; palpus in female longer, median segment appearing less truncate than in male but more cuspidate, the apical edge being much more oblique, terminal segment obtuse, in lateral aspect concealed. Thorax with an obliquely rising moderate crest. Posterior tibia in male normally scaled, scales somewhat loose above and beneath.

Fore wing oblong-truncate, little dilated, termen sinuate; without a costal fold. Vein 2 from well beyond  $2/3$ , 3 from angle, 4 closer to 3, 5 and 6 remote and diverging towards base, 7 separate to termen, close to 8 from upper angle of cell, 9 rather close to 8 at base, 10 widely remote, from about  $1/2$  distance 10-11, 11 from middle, chorda from before base of 10 to above base of 6, accessory cell being long and narrow, median branch from towards base to below base of 5.

Hind wing with a cubital pecten, under 1, oblong-subtrapezoidal. Vein 2 from beyond middle, 3 and 4 close together from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen large and high. Uncus represented by a membranous triangular hood, clothed with long hairs. Lateral lobes at the lower side of this, densely haired, being the socii. Gnathos large, well-developed, with long narrowed arms, mesially a rectangular part without a hook, connected with large but thin folded sclerites being sclerotized lower portion of tuba analis (subscaphium). Valva slender and simple, sacculus not modified,  $1/3$ , with a weak  $Spc_1$  and a denser  $Spc_2$ ; cucullus long and slender, in middle narrowed, at base a large area of spines. Aedeagus short, curved; caulis rather short. Henion, a long rod, connected to gnathos.

Female genitalia. Sterigma large, inverted-conical almost semispherical, with a frontal split, at the lower end of this a lobe at each side, darkly aciculate; lamella antevaginalis laterally with squamose structure. Colliculum moderate, slender. Corpus bursae rather spindle-shaped. Signa two, peculiar: shaped as cog-wheels, each with a semioval basal concavity.

Type species, *Meiligma impigris* spec. nov. (Sumatra, New Guinea).

A peculiar genus, apparently a specialized off-shoot of *Statherotis*-branch, but with signa at once assigning the genus to the present subtribe.

### *Meiligma impigris* spec. nov.

(figs. 474-475, 481, 511)

♂♀ 12 mm. Head dark ashy-grey, marbled with lighter grey. Palpus purplish-fuscous, apex of median and the entire terminal segment dark grey, marbled with lighter grey. Thorax dark ashy-grey, marbled with lighter and indistinctly transversely striated with dark fuscous, crest dark fuscous. Abdomen dark fuscous to light tawny-fuscous, venter pale grey, basal half whitish.

Fore wing oblong, subtruncate, little dilated, costa without fold, considerably curved at base, straight posteriorly, apex subobtusate and prominent, termen distinctly sinuate, strongly rounded and prominent beneath. Pale ashy-grey, anteriorly with a faint bluish tinge, posteriorly faintly lilac-tinged and somewhat darker, in holotype darker grey and marbled with white. Markings dark fuscous, fuscous and blackish. Costa throughout with numerous small oblique markings; three larger markings: just beyond base, before  $1/4$  and at  $2/3$ , respectively; basal patch represented by the two anterior of these larger costal marks, by a dark fuscous streak along base of dorsum and by a twice interrupted, slightly dilated transverse oblique streak from the second costal mark to  $1/4$  of dorsum; in holotype first streak broader, and reaching to base of costa, dark grey with black spots, second streak represented by an irregular black mark in and below fold at  $1/4$  and a small dorsal striga below it; transverse fascia well-defined, median, narrow on costa, broader on dorsum, strongly triangularly dilated posteriorly in middle; anterior edge of fascia gently concave, little oblique, with a rounded moderate prominence along about its second fourth; posterior edge of fascia oblique along upper half, slightly inwards-oblique, almost vertical, on lower half, a posterior process in middle, in holotype slightly upturned; this fascia black on upper, fuscous-bronze on lower half; a black subapical costal spot, inverted-trapezoidal, anterior edge sometimes notched; anterior lower angle of this patch connected with a black oblique transverse striga not quite reaching larger mark on  $2/3$  of costa, more or less obliterate below or traceable to termen above tornus; an oblique black fasciate mark before termen, resting on middle of terminal edge; a black strigula before apex, apex grey; a small triangular or fasciate-triangular leaden-grey spot on dorsum before tornus, resting obliquely on its angle. Cilia pale grey-fuscous, suffused with blackish-grey opposite apex and middle of termen, and with a black basal line, except in tornus.

Hind wing rather dark bronze-fuscous, paler towards base, with brighter bronze reflections towards edge; basal  $2/3$  of costa glossy white. Cilia concolorous with a pale fuscous basal and a blackish-fuscous subbasal line.

Male and female genitalia as described with the genus.

South Sumatra, Pangkalan Balai, near Palembang, Japanese prisoners of war camp, 50 m, bred from leaves of unnamed tree (?*Schima noronhae*), 14.v.1944 (Diakonoff), 1 ♂, holotype, genit. slide 5844; 1 ♀, allotype, genit. slide 6301.

West New Guinea, Schouten Is., Biak, W. of Sorido, 10.v.1952 (L. D. Brongersma), 1 ♂, paratype, genit. slide 6314 (LM).

### **Phaecadophora** Walsingham, 1900

*Phaecadophora* Walsingham, 1900, 6: 130 (type-species, *P. fimbriata* Walsingham, 1900, Japan, Assam). — Fletcher, 1929: 170 (syn. of *Argyroploce*). — Clarke, 1958: 571 (distinct genus). Diakonoff, 1968: 56 (*Temnolopha* Lower syn.).

*Argyroploce* (partim): Fletcher, 1929: 22.

Head with appressed scales, roughly spreading on vertex, a roughish tuft over fore-

head. Ocellus posterior. Proboscis rather short. Antenna in the two sexes short-ciliate, in male slightly thickened. Palpus porrected, sinuate, median segment dilated towards apex by smoothly appressed scales, terminal segment short, obtuse and almost concealed. Thorax smooth. Posterior tibia in male normal or strongly dilated with dense scales above and beneath, compressed laterally, at its apex on the inside forming a cavity, naked inside; also male tarsus sometimes strongly dilated by dense scales above, equally compressed, basal joint dilated, concave and clothed with very short scales on the inner side. Abdomen in male normal or with sternites V and VI with a scent organ, being two submedian dense brushes of scales, directed mesad and tips touching along the median line.

Fore wing oblong-suboval, costa moderately curved throughout, apex obtusely pointed, termen gently concave, almost straight above, obliquely rounded beneath. Vein 2 from 3/5, 3 from angle, 3-5 separate and equidistant, 5-6 diverging at base, 7-8 closely approximated at base, 7 to termen, 9 approximated to 8, 11 from middle, chorda strong, from 2/3 distance 11-10, to halfway between bases of 6 and 7, median stem to below base of 5.

Hind wing about 1 1/2, with a cubital pecten; a pecten of long white hair-scales along middle of cell 2 upper side. Vein 2 from middle, 3 and 4 connate from angle, 5 almost connate with 4, closely approximated at base, 6 and 7 closely approximated towards base. Dorsum in male not modified and simple or modified and with a scent organ, being a narrow fold along margin on underside, followed by a deeper and wider thickened fold on the upperside, clothed with smooth modified scales, in which fold fits the long pencil of hairs from the base of vein 1b; 1c apparently well-developed throughout.

Male genitalia with a high-triangular tegumen and a slender hooked uncus with bristles under the top. Socius pending, moderate, heavily bristled. Gnathos membranous and very weak. Valva robust, sacculus about 1/2, sinuate and naked, Spc<sub>1</sub> conical, cucullus bristles forming a strong and straight transverse ridge, at end of this a long and slender Spc<sub>3</sub>; cucullus slightly sinuate, pointed, bristly. Aedeagus extremely short.

Female genitalia with a tubular ostium, lamella postvaginalis forming a semicircular cap over ostium. Colliculum strongly sclerotized, abruptly narrowed below. Signa peculiar, of modified scobinate type: two equal double-folded semioval plates.

There are three closely allied species from China, Assam and the Australian region, respectively. The genus is allied with *Temnolopha*, with which it is connected by *T. biguttata* spec. nov., but distinct by the genitalia in the two sexes and by minor differences. It is also allied with *Saliciphaga* Falkovitch from the eastern Palaearctic region.

#### Key to the species of *Phaecadophora*

1. Fore wing with darker longitudinal streaks; dorsum darker brown, edged above with a pale undulate line; often a dark triangular spot on end of dorsum *fimbriata*
- Fore wing with very slender longitudinal lines, dorsum not darker; seldom a longi-

tudinal median dark brown streak, or a series of dark brown costal dots or a dark quadrate spot at 3/4 of dorsum. . . . . *acutana*

***Phaecedophora fimbriata* Walsingham, 1900**

(figs. 477-480, 512)

*Phaecedophora fimbriata* Walsingham, 1900b: 130 (♂♀, Japan, topotype, Assam, Pegu). — Clarke, 1958: 571, pl. 254 figs. 3-3b (*metactenis* syn.; lectotype design., wing and genitalia ♂ figured). — Diakonoff, 1968: 57 (*aeolotechna* syn.).

*Argyroploce metactenis* Meyrick, 1909: 597 (♂, Assam). — Clarke, 1955: 204. — 1958: 527, 571 (syn. of *fimbriata*; lectotype design., wing and genitalia ♂ figured).

*Argyroploce eucrossa* Meyrick, 1914: 49 (♂, Formosa). — Clarke, 1955: 134. **Syn. nov.**

*Argyroploce aeolotechna* Meyrick, in Caradja & Meyrick, 1935: 60 (♂♀, China, Lungtan). — Clarke, 1955: 122.

*Eudemis fimbriata*; Issiki in Esaki, 1957: 69, pl. 11 fig. 328.

*Phaecedophora aeolotechna*; Clarke, 1958: 571, pl. 251 figs. 3-3b (lectotype design., genit. ♂, wing illustr.).

*Phaecedophora aeolotechna*; Diakonoff, 1968: 57 (emend.; syn. of *fimbriata* Walsingham). **Syn. nov.**

*Argyroploce leucocteis* Diakonoff, 1953a: 112, fig. 324 (♂, New Guinea, 2800 m). **Syn. nov.**

Distribution. Japan (typical locality). East Pegu. Assam. Formosa. China. New Guinea.

Comparison of the genitalia of the two sexes revealed the above synonymy. A characteristically coloured and marked species of wide distribution is concerned. Apparently the superficial, otherwise but limited, variability of the material has led to confusion and repeated redescriptions. The male genitalia, however, are quite similar and constant. Only the female genitalia no. 7413 of a specimen from Java show a slight discrepancy with the female from Papua, but the difference is too slight to be decisive.

Assam, Khasi Hills, 1906, D., 1 ♀, genit. slide 6812 (BM) (Meyrick Coll.).

Formosa, holotype of *Argyroploce eucrossa* Meyrick, 1 ♂, genit. slide 7518, labeled as follows: "Typus" (red, printed label), "7.vii." (printed), "Kozempo, Formosa, H. Sauter 1911" (printed), "F.63" (in Meyrick's hand), "Meyrick det." (printed), "Dtsch. Ent. Inst." (printed), "*A. eucrossa* Meyr." (in Indian ink.) (DEI).

Japan, 1886 (Pryer), ♂, genit. slide 6813 (Walsingham Coll.) (BM).

New Guinea, Snow Range, Moss Forest Camp, 5 km NE of Lake Habbema, 2500 m (L. J. Toxopeus), holotype of *A. leucocteis* Diakonoff, ♂, genit. slide 810 (LM). Papua, Sogeri Plateau, 1600', Bisianumu, 17.viii.1957 (G. P. Holland), 1 ♂ (without abdomen), 1 ♀, genit. slide 7412 (OM).

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, iv.1949 (A. M. Neervoort), 1 ♀, genit. slide 7413 (LM).

An elaborate description of the holotype of *P. fimbriata* has been made by Walsingham. Briefly the species may be described thus.

Tawny with numerous fine longitudinal stripes, more distinct beyond cell, of the

same colour as the equally numerous pairs of costal marks; these are continued by similar but moderately oblique stripes, converging at about  $1/3$  of termen; costal edge narrowly, dorsum broadly suffused with dark brown, a faint pale edge of a triangular spot on middle of dorsum; three dark brown marginal strigulae in middle of dorsum, continued on cilia as dark bars.

Hind wing dark purplish-bronze, basal half greyish, subpellucous, with dark veins.

Male genitalia. Tegumen high, narrowed. Uncus slender, moderate, top hooked. Socius small. Valva twice sinuate, costa convex in middle. Cucullus bristles in a strong transverse ridge, cucullus prominence with a long pencil of strong bristly spines.  $Spc_3$  diversely developed.

Female genitalia. Sterigma, a single circular elevation around ostium, with long aciculae, in front narrowed or entirely obliterate. Signa large, two double-folded plates, semioval along lower, irregularly serrate along upper edge.

The resemblance with "*Argyroploce*" *paragramma* Meyrick (an Eucosmid, *Cryptophlebia* Walsingham) was noticed by Meyrick, for "*eucrossa*" and by Diakonoff, for "*leucocteis*".

#### *Phaecadophora acutana* Walsingham, 1900

(figs. 443D-E, pl. 3 figs. 2-3)

*Phaecadophora* (?) *acutana* Walsingham, 1900: 131 (♀, Japan).

*Olethreutes acutana*; Inoue, 1954: 107, no. 602.

Distribution. Japan (Kyushu).

Japan, Kyushu, prov. Osuma, Takakumayana, 13.ix.1895, 1 ♂, genit. slide 6332, BM; Prov. Satsuma, Kiira, 28.vii.1895, 1 ♀, genit. slide 8110; "Osumi, Kanoya, 9.x.1895" (BM).

Formosa, Arizan, 7500 ft, 8.ix.1906 (A. E. Wileman), 1 ♂, genit. slide 7647, 8169; "Osumi, Tatumizu, 9.v.1895", 1 ♀, genit. slide 8170 (all coll. A. E. Wileman) (BM).

Male genitalia. Tegumen narrowed. Uncus long, slender, base spindle-shaped, top clavate. Socius small, oval. Valva moderately broad, twice sinuate; sacculus with weak pulvinus hairs,  $Spc_2$ , a weak or moderate group of small bristles, submarginal and towards cucullus bristles;  $Spc_3$ , a moderate sheaf under process of cucullus. Cucullus bristles in a strong transverse ridge; cucullus gently curved, rather short.

Female genitalia. Sterigma, an aciculate, semispheroid body with a broad median erect impression, ending below in round, dark-rimmed ostium. Colliculum long and slender. Signa two, inequal, rather small, double-folded oval sclerites.

#### *Megalota* Diakonoff, 1966

*Megalota* Diakonoff, 1966: 52, figs. 34-37, 61 (type-species, *Polychrosis fallax* Meyrick, Assam, by original designation).

Head with appressed scales. Antenna short-ciliate. Palpus moderate, subascending,

median segment strongly dilated by roughish scales above and beneath, terminal segment short, obtuse, thorax with crest. Hind tibia in male thickened with dense scales on the inside, concealing a thick tuft of hairs in middle of tibia, a pencil from base above, concealed in a dorsal groove.

Fore wing broad, dilated. Vein 2 from  $2/3$ , 3 from angle, approximated to 4 at margin, 4 closer to 5, 7 separate to termen, 8 approximated, from angle, 9 rather close to 8, 10 from halfway, 11 from middle of cell.

Hind wing subtrapezoidal, under 1, with a cubital pecten, 2 from  $2/3$ , 3 from angle, 3-5 equidistant, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen very broad, rectangular. Uncus, two broad or long-pointed hairy lobes. Socii and gnathos absent. Valva long and narrow, sacculus under  $1/2$ ,  $Spc_1$  and  $Spc_2$  approximated and opposed, or one of these spine clusters absent, an additional sheaf of spines just below basal prominence of cucullus. Labis present and large, either at base of costa or in middle of base of valva, sometimes hairy and with spines on top. Aedeagus crescentic, sometimes with a dorsal spine. Cornuti not deciduous, several diverse spines.

Female genitalia. Sterigma strong, a high ring with a triangular split in front with thickened edges. Colliculum, a broad cylinder with a frontal split and thickened edges. Signum, a pair of large flat teeth upon a scobinate basal plate.

The genus is a specialized off-shoot of the present subtribe, introducing its atypical group with a hypertrophied pseudo-cornute single signum.

Of the six species known at present, *M. anceps* (Meyrick) stands rather isolated.

#### Key to the species of *Megalota*

1. Fore wing with transverse fascia entire, dark, costal patch included in this and not conspicuously darker than fascia . . . . . 2
- Fore wing with transverse fascia so much obliterate below costa, as to form a conspicuous dark costal patch, sometimes only this remaining. . . . . 3
2. A well-defined, slender, erected spot on end of dorsum . . . . . *solida*
- No spot on end of dorsum . . . . . *fallax*
3. Transverse fascia obliterate, except a well-defined triangular costal spot and a dot beyond, on a line below it . . . . . 4
- Transverse fascia traceable to dorsum . . . . . 5
4. A well-defined triangular costal spot with a dot beyond its top; other markings absent . . . . . *helicana*
- A small, semioval, less defined costal spot and a sigmoid horizontal line below it . . . . . *anceps*
5. A well-defined subtriangular dark spot on end of dorsum . . . . . *vera*
- No such spot . . . . . *geminus*

**Megalota anceps** (Meyrick, 1909)

(figs. 486, 507)

*Polychrosis anceps* Meyrick, 1909: 588 (♂♀, Ceylon). — Clarke, 1955: 45.*Lobesia anceps*; Clarke, 1958: 464, pl. 231 figs. 3-3a.*Megalota anceps*; Diakonoff, 1966: 54.

Distribution. Ceylon.

Ceylon, Puttalam, 1892 (Pole), 1 ♂, genit. slide 7868 (Walsingham Coll., BM), 1 ♀, genit. slide 6518.

Male genitalia. Tegumen short and broad; uncus soldered with tegumen, forming two large triangular, acutely pointed lobes, hairy on the inside. Gnathos ill-defined, membranous, straight. Valva elongate-oval, slender, a very large, erect labis at base, densely short-spined on narrowed top. Spc<sub>1</sub>, a small tuft of bristles beyond base of labis, on edge of sacculus; sacculus long, almost 3/4, ending in a rounded tumescence with a bunch of long spines (Spc<sub>2</sub>). Cucullus short, narrowed, bristly.

Female genitalia. Eighth segment elongate, moderately sclerotized. Sterigma cardiiform, submembranous, only upper angles beset with long acicula. Ostium and colliculum very wide and strong, forming a spindle-shaped irregular tube. Signum, scobinate basal plate, with a group of unequal teeth in centre.

The smaller species (11.5 mm) resembles *M. fallax* (Meyrick) most, having a semi-circular dark brown costal spot. The crescentic mark, however, is situated in the centre of wing and well separated from the lower edge of the somewhat smaller costal patch; the preterminal streak clavate and slightly curved, less than in *M. vera*, but without a down-curved anterior appendix; instead there are a couple of minute dark irregular isolated marks; the basal patch pale, pretornal mark ill-defined.

Hind tibia normal, a very slight short stretch of subappressed short scales along basal fourth above; no pencil; grey fuscous, with minute transverse striation (tips of scales dark), becoming slightly paler towards base. Cilia concolorous with a distinct dark basal line.

**Megalota fallax** (Meyrick, 1909)

(figs. 487, 489-490)

*Polychrosis fallax* Meyrick, 1909: 587 (♂♀, Assam). — Clarke, 1955: 140.*Argyroploce fallax*; Meyrick, in collection (lectotype ♂ design., wings, genit. figured).*Lobesia fallax*; Clarke, 1958: 467, pl. 232 figs. 4-4a.*Megalota fallax*; Diakonoff, 1966: 17, 54 (type-species).

Distribution. Assam: Khasi Hills.

A slightly smaller species, very similar to *M. vera* Diakonoff. In the specimens available to me the differences are rather obvious. Costal patch semicircular (instead of triangular), crescentic mark almost straight, horizontal, anteriorly connected with



spot; preterminal mark a simple oblique and straight streak, with top pointed but not curved downwards. Apex with a dark dot preceded by two wedge-shaped costal dots.

Hind wing pale tawny, along apical half faintly infuscated.

Posterior tibia pale ochreous, hardly dilated, with somewhat roughish appressed bristly scales above, with a subdorsal groove; along inner side of groove scales modified: large, glossy white, rounded and closely appressed.

Male genitalia. Very similar to those of *M. vera* Diakonoff, differing by higher and more slender tegumen with longer lobes, labis shorter and more clavate, with two or usually more apical teeth;  $Spc_2$  shorter, more compact, only in middle of sacculus, cucullus bristles in a dense marginal sheaf. Aedeagus longer, one large and two small cornuti.

Female genitalia. Described with the genus.

India, Bengal, Calcutta, 1858, "on Paris nast. at 4000 ft" (Atkinson), 1 ♂, genit. slide 5355 (BM).

#### *Megalota vera* Diakonoff, 1966

(figs. 488, 492-493)

*Megalota vera* Diakonoff, 1966: 54, fig. 34 (♂, Bismarck Is.).

Distribution. Bismarck Is.: New Hanover.

Bali Id., 1896 (Doherty), 1 ♂, genit. slide 7840 (Walsingham Coll., BM); 1 ♀, without abdomen.

Moluccan Is., Halmahera, Tolewang, 50 m, 12-25.x.1951 (native collector), 1 ♀, apallotype, genit. slide 5957.

North New Guinea, Humboldt Bay, iv.1893 (Doherty), 1 ♂, genit. slide 7850.

Bismarck Is., New Hanover, iii.1923 (A. S. Meek), 1 ♀, genit. slide 7831 (worn specimen).

Australia, Queensland, Toowong, 1896 (Dodd) (Walsingham Coll. 7683 ♂, 7679 ♀), genit. slides 7656 ♂, 7657 ♀ (BM).

A larger species with conspicuous dark upper portion of the transverse fascia. In the present genus this fascia is usually obliterate below fold, while above fold it is represented by a triangular costal patch and a crescentic longitudinal spot below this, diversely situated and sometimes connected with the costal patch.

In the present species these markings are dark fuscous and well-defined, the crescentic mark being slightly outwards-oblique and connected by its anterior "horn" with the triangular costal patch, sometimes even appearing as an outwards-curved posterior extension of its top. Another important specific feature is the preterminal mark being pale and strongly curved, concave below, with posterior end situated above the top of erected pretornal dorsal mark; there is a small black dot in apex.

Hind wing in male evenly pale tawny, in female light fuscous; dorsum in male with a small submarginal fold above, below followed by a short thick closed roll.

Hind tibia in male pale ochreous; considerably dilated by dense closely appressed scales, curly at apex, and with a deep subdorsal groove throughout, open only along posterior half and concealing a pencil from base.

Male genitalia. Tegumen lower, lobes broader. Labis long, with two thick apical spines.  $Spc_2$  large, marginal. Cucullus more slender and longer than in *M. fallax*. Aedeagus shorter, with one or two cornuti.

Female genitalia of apallotype. Seventh ventrite enlarged and sclerotized, shoulders spherical. Lamella antevaginalis forming a dark cylinder, more or less constricted; lamella postvaginalis, two semicircular plates touching along median line, their inner upper angles thickened, triangular. Colliculum subhyaline, thick and spindle-shaped. Signum, a compressed scobination of variable size.

***Megalota helicana* (Meyrick, 1881) comb. nov.**

(figs. 494-496)

*Penthina helicana* Meyrick, 1881: 645 (♀, N.S. Wales, Queensland).

*Argyroploce helicana*; Meyrick, 1911a: 272 (♂ also recorded).

Distribution. Australia: New South Wales, Queensland.

Study of the genitalia of a male and female of this distinctly marked species revealed to my surprise that it should be assigned to the present genus. The material studied is from:

Queensland, Toowong, 1896 (Dodd), from Walsingham Collection, nos. 9962 and 9963, respectively; genit. slides 7658 ♂ and 7659 ♀ (BM).

Male genitalia are very close to those of *M. vera* Diakonoff and differ as follows. Uncus lobes larger, more rounded. Valva with labis very similar but much less densely haired;  $Spc_1$  dense, transverse, as in *vera*, but shifted more costad and more anterad from the prominence of the base of cucullus which is smaller;  $Spc_2$  submarginal below and close to  $Spc_1$  but directed downwards and in a single moderate sheaf (instead of extending far basad). Aedeagus with two moderate spines.

Female genitalia also similar to those of *M. vera* Diakonoff but hardly sclerotized, edge of ostium narrow, lobes of lamella postvaginalis more slender, longer and curved. Signum smaller.

The species shows a puzzlingly close resemblance to the Central Asiatic species *Aterpia mensifera* (Meyrick). Pale grey, touched with tawny, evenly scattered with fuscous fine specks. Costa with a series of small subtriangular dots, alternating with short and thick, not contrasting pairs of strigulae: a blackish-fuscous triangular spot on middle of costa, truncate top not reaching middle of disc and pointing towards 1/3 of dorsum; posterior lower angle followed by a round dot, connected with that angle by a minute horizontal line.

Hind wing light fuscous-grey.

**Megalota solida** spec. nov.

(figs. 509A-B)

♀ 13.5 mm. Head pale fuscous-tawny, face pale ochreous. Palpus pale ochreous, with a suffused oblique submedian and a subapical transverse blackish streak. Thorax dark bronze-fuscous with a pale tip, collar pale fuscous-tawny but appearing blackish in certain lights, tegula pale fuscous-tawny, coarsely dusted with dark fuscous. Abdomen pale grey, dark fuscous-grey at base, blackish towards apex, venter pale grey.

Fore wing oblong-suboval, costa considerably curved throughout, less so in middle, apex rather obtuse, termen gently concave, almost straight, little oblique. On basal third whitish with a faint purplish hue, on apical third brighter, light creamy-ochreous. Markings dark purplish-fuscous, partly marked with black. Basal patch strongly reduced, some roundish suffused spots in disc and a moderate inwards-oblique streak being the lower part of edge of patch, rising from  $\frac{1}{4}$  of dorsum to  $\frac{1}{4}$  of wing length; space beyond patch obscured except edges, dilated on dorsum; anterior part of costa with some five small spots alternating with points; transverse fascia broad and compact, dark purplish-fuscous, on costa and in middle blackish; digitoid lines much darker than space before fascia, indistinct, except very narrow edges being filled out with purplish-grey-fuscous; first streak hardly traceable, second little curved, third triangularly dilated below in middle; anterior edge of fascia straight continuous and slightly outwards-oblique, posterior parallel, slightly irregular; terminal mark semi-oval, with acute points, resting on termen below middle, a brown line from  $\frac{1}{6}$  of costa running below and before apex to termen, little curved, receiving a short branch from costa before apex and connected also with a small apical spot; terminal area marbled with light purplish-grey, except narrow edges to markings.

Hind wing dark brown-bronze, hardly paler at base, rather dull. Cilia concolorous, with a pale basal line.

Female genitalia. Ninth segment sclerotized. Eighth sternite moderately sclerotized, somewhat concealed behind emarginate seventh sternite and curved sides of eighth tergite. Ostium large, open, sclerotized; lamella antevaginalis deeply emarginate, small; lamella postvaginalis forming two large upright lobes. Colliculum indicated by two small sclerites. Signum, a denticulate round thickening.

South Celebes, Bantimurung, 9-18.viii.1949 (A. Diakonoff), 1 ♀, holotype, genit. slide 5812 (LM).

Bali Id., 1896 (Doherty), 1 ♀, paratype, genit. slide 7836 (BM).

The paratype from Bali may be tersely described thus.

♀ 14 mm. Head and thorax whitish-ochreous. Palpus pale ochreous, median segment in middle of upper and lower edge infuscated. Abdomen grey-fuscous.

Fore wing subtruncate, rather broad, costa gradually curved along basal half, rather straight posteriorly, curved again before apex, apex obtusely rectangular, termen straight above, rounded beneath, little oblique. Ochreous-whitish, finely

strewn with dark fuscous, markings dark fuscous, partially dull dark grey-bluish. Basal patch ill-defined, only lower 2/3 indicated by fuscous dusting, top of edge angulate above fold, lower half of edge serrate (in right wing only a central oblique longitudinal stripe distinct); anterior half of costa pale, with three dark dots alternating with minute transverse marks; transverse fascia broad, entire, dark fuscous, anterior edge almost vertical, gently convex in middle, concave above and below this; posterior edge of fascia with three deep narrow and acute intrusions of ground colour, on costa, above and below middle, the upper two strongly suffused and so obscured by dark ashy-grey, with faint anthracite-bluish tinge; these markings reach 2/3 across fascia and divide it in three parts: upper, crescentic, narrowed posteriorly, median more oblique, narrow and clavate and a large dorsal blotch, almost reaching to tornus and rounded there; posterior half of costa with three dark dots alternating with minute strigulae and a larger oblique dark mark in apex; preterminal fascia moderately oblique, broad and short, truncate; space beyond transverse fascia and in tornus with several thin zigzag dark fuscous lines; thin fuscous lines from costal spots curving down to termen, an interrupted marginal line along termen and marginal dots around tornus. Cilia light ochreous; tips slightly infuscated, an interrupted fuscous submedian band.

Hind wing rather dark bronze-fuscous, towards base becoming slightly lighter; costa glossy silvery. Cilia fuscous with a pale basal line and a darker fuscous submedian band.

Female genitalia. Ovipositor small, seventh, eighth and ninth segments sclerotized. Seventh sternite swollen, but less than in *M. vera*. The plates of lamella postvaginalis much larger mesially forming a tubular covering of ostium, with two convergent triangular dark sclerites; lamella antevaginalis low and hardly developed. Colliculum, a hardly sclerotized thickening. Signum, a simple scobination, scales rounded and slightly thickened.

#### ***Megalota geminus* spec. nov.**

(fig. 491)

♂ ± 14 mm. Head and face pale fuscous. (Palpi broken). Thorax glossy pale fuscous, with a somewhat darker suffused premedian transverse band. (Posterior tibiae missing). Abdomen light fuscous.

Fore wing (presumably) oblong-truncate, costa curved at base, termen rounded below (apices in both wings missing). Light fuscous-grey, dusted with darker fuscous-grey. Basal patch formed of fuscous-blackish marbling, to 1/4, obliterate on costal half except two small black dots on costa well beyond base; edge of patch below scalloped, oblique, concave below fold, with a rounded prominence on dorsum; transverse fascia formed by a blackish semicircular spot on middle of costa, anteriorly connected with one end of a smaller and oblique crescentic spot in middle of disc; an almost vertical, twice as narrow, grey band to dorsum beyond middle.

Hind wing dark fuscous-grey, showing fine transverse striation by tips of scales being dark, bases semipellucet; dorsum normal. Cilia concolorous, with a whitish basal line.

Male genitalia. Similar to those of *M. anceps* (Meyrick) but differing by a less broad tegumen + uncus, a more distinctly bilobed cucullus with a long pencil of bristles upon the ventral lobe, a slender and long  $Spc_2$  (shorter and conical in *anceps*) and especially, by a more slender labis, less dilated at base, but spinose over the apical half (in *anceps* only upon the top).

Bali Id., Sunda Is., 1896 (Doherty), 1 ♂, holotype, genit. slide 7838 (BM). The unique specimen is rather damaged, but the genitalia are very distinct.

### *Temnolopha* Lower, 1901

*Temnolopha* Lower, 1901: 72 (type-species, *T. mosaica* Lower, 1901, Queensland). — Clarke, 1958: 599. — Diakonoff, 1968: 57 (syn. of *Phaecedophora* Walsingham).

*Argyroploce* (partim); Meyrick, 1911a: 263 (nec Hübner, 1826) (*Temnolopha* syn.). — Fletcher, 1929: 22, 218 (*Temnolopha* syn.).

I am now satisfied that the present genus is distinct from *Phaecedophora* Walsingham.

Head with appressed scales, a high, appressed tuft on vertex. Ocellus posterior. Proboscis developed. Antenna in male moderately thickened, short-ciliate, ciliations under  $1/3$ , in female antenna hardly thickened, pubescent. Palpus porrected and sinuate, median segment strongly sinuate posteriorly, terminal segment about  $1/4$ , pointed, semipending. Thorax with a double posterior crest, a long pencil of spreading scales from shoulder below base of fore wing in male. Posterior tibia without pencil; slightly thickened throughout in male by appressed scales.

Fore wing oblong-subtruncate, costa curved anteriorly, almost straight posteriorly, apex rounded-rectangular, termen straight, vertical above, rounded beneath. Vein 2 from  $2/3$ , 3 from angle, 4 approximated, 5-7 tolerably parallel and distant, 7 to termen, 8 from angle, straight, 9 from  $1/4$  distance 8-10, 11 from middle, chorda from beyond base of 10 to base of 7, median stem from towards base to above base of 4.

Hind wing with a cubital pecten; semioval, under  $1/2$ , costa on upper side thickened with smoothly appressed scales; underside with a small androconial spot over lower angle of cell (dark scales). Dorsum with a slight submarginal fold, open on the underside. Vein 2 from slightly before  $2/3$ , 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Uncus clavate and hooked, bristled below. Socius long, pending, subrigid, densely haired. Gnathos narrow and membraneous. Valva broad; sacculus broader than cucullus, slightly asymmetrical, with three pairs of normal brushes of bristles and right valva with three single asymmetrical brushes.

Female genitalia with a rounded and sclerotized sterigma, its upper portion aciculate, with two rounded prominences and a triangular median split below these, or sterigma tubular and rising above edge of sternite VIII. Colliculum, a strong tube. Cestum, an oval plate with a second narrow sclerite or cestum short-tubular. Signum

of modified scobino-cornute type, process flattened, quadrate or slender and flanked with a small thorn.

So far three species are known. The genus is allied with *Phaecadophora* Walsingham, and, more closely, with the Palaearctic *Aterpia* Guenée with the type-species *A. anderreggana* Guenée. *Temnolopha* differs chiefly by a single, clavate uncus, large subrigid socii, an elevated costal harpe, and a short aedeagus; besides, the signum and the colliculum in *Aterpia* are lacking or weak.

#### Key to the species of *Temnolopha*

1. Valva with a labis. Fore wing with a black central patch, gradually attenuated posteriorly, to termen below apex . . . . . *biguttata*
- Valva without a labis. Fore wing, dark central spot brown, not reaching termen 2
2. Fore wing apex with a moderate black dot; ocelloid spot whitish, subbasal dorsal spot more sinuate, top rising . . . . . *mosaica*
- Fore wing apex with a very small black spot, ocelloid spot grey; subbasal dorsal spot more prostrate, top more inwards-oblique . . . . . *matura*

#### *Temnolopha sponditis* (Meyrick, 1918) comb. nov.

(fig. 476)

*Argyroploce sponditis* Meyrick, 1918: 50 (♂, Cape, Natal). — Clarke, 1955: 292.

Distribution. South Africa.

The genitalia of this species prove its generic position, so that it may be recorded in passing here.

Two males were available to me: "Mpeta, Loanga River, R., .3.95", genit. slide 6626; and "Pinetown, Natal, L. .1.09"; both specimens are from the Meyrick Collection, with small labels in Meyrick's hand (BM).

#### *Temnolopha mosaica* Lower, 1901

(figs. 497-498, 513)

*Temnolopha mosaica* Lower, 1901: 72 (♂♀, Queensland). — Clarke, 1958: 599, pl. 298 figs. 1-1a (*clydonias* syn.).

*Argyroploce mosaica*; Meyrick, 1911a: 273.

*Cydia clydonias* Meyrick, 1907: 734 (♂♀, Ceylon, Siam). — 1909: 437. — Clarke, 1955: 94. — 1958: 496, pl. 298 figs. 1-1a (lectotype select., genit. ♂ illustr.).

*Phaecadophora mosaica*; Diakonoff, 1968: 57, fig. 531 (Philippine Is.).

Distribution. Australia: Queensland. Ceylon. Siam. Camboja. Java. Philippine Is.

South Celebes, low country, 1896 (Doherty), 1 ♀.

Moluccan Is., Batian Id., 1892 (Doherty), 1 ♂ (BM).

Central Java, Telawa, teak forest, 45 m, 18.viii.1935-6.xi.1935, no. 1598, bred from leaves of "poetranjifa" (?) (L. G. E. Kalshoven), 6 ♂, genit. slide 6686, 6 ♀, genit. slide 6687. — Seneng, teak forest, the same altitude and collector, 6.xi.1931 and 8.i.1932, bred from leaves of "lawas" (? *Alpinia*: Zingiberaceae), 1 ♂, 1 ♀ (LM).

The species is moderately variable, paler or darker, due to an even greyish suffusion of the pale ground colour. The series from Java may be shortly described thus. Ground colour light leaden-grey, markings tawny-olive, finely edged with whitish-ochreous and well-defined. Basal patch reduced to a conspicuous subbaso-dorsal darker fuscous spot, pear-shaped and sinuate, prostrate, with a parallel paler slender streak above it; central fascia reduced to an ill-defined dark grey suffusion on costa beyond middle, and a mushroom-shaped mark from dorsum beyond middle to above middle of disc, with a bifid top, anterior half being rounded, posterior concave; a small posterior process from above base; a curved-clavate terminal spot, upon a slender stalk from middle of termen, below edged by a white round suffusion (sometimes grey); a black dot in apex.

Hind wing light fuscous-grey, a broad marginal band from apex to tornus, dark purplish-fuscous.

Male and female genitalia as described with the genus.

A widely distributed rather polyphagous species, feeding on lower plants as well as on shrubs and trees. The markings are very characteristic.

***Temnolopha matura* spec. nov.**

(figs. 499-500)

♀ 17 mm. Head purplish-fuscous. Palpus grey becoming whitish towards base, median segment towards apex touched with purplish; with four narrow horizontal black lines, median broadest, basal very slender; terminal segment unicolorous. Thorax pale purplish-grey, a large apical dark fuscous patch, including posterior tuft and contiguous to another larger but paler fuscous patch, black-edged and occupying the remainder of thorax except laterally. Abdomen purple-fuscous, venter yellowish.

Fore wing oblong-truncate, costa gently curved anteriorly, almost straight posteriorly, apex rounded-rectangular, termen straight, hardly sinuate above, shortly rounded beneath. Leaden-grey, becoming pale grey towards tornus; markings of diverse shades of dark fuscous, narrowly edged with pale ochreous. Anterior half of costa with three small semioval oblique marks, increasing in size posteriorly and alternating with minute strigulae; an oblique tusk-shaped spot on middle of costa directed posteriorly, point curved upwards; posterior part of costa with four unequal spots, anterior small and fasciate, second largest, two ultimate subtriangular; a black spot in apex; basal patch obliquely wedge-shaped, hardly traversing fold, with a series of irregular marks above it; transverse fascia below costal tusk irregularly T-shaped, its upper edge parallel to lower edge of tusk; ocelloid patch large, pale and unicolorous, encircled except below by an almost oval erect mark, dilated at base anteriorly and at top, black-edged; an interrupted dark fuscous terminal line originating from ultimate costal mark. Cilia grey-fuscous, a basal and a submedian pale ochreous line, cilia between these darker except in tornus.

Hind wing dark fuscous-purple, thinly scaled, becoming semipellucent and paler on basal half. Cilia concolorous with a pale basal line and a darker submedian band.

Female genitalia with sterigma darkly sclerotized and tubular, rising above edge of 7th sternite, edge of ostium erect-oval and gently thickened; 8th sternite sclerotized, excised, also 7th sternite emarginate. Colliculum strong, tubular, narrowed at base. Cestum a short, weak tube. Signum cornutoid, modified: horns, one long, flattened, another short, thorn-shaped, on a single scobinate base.

East Borneo, Tabang, Bengen River, 125 m, 12.ix.1956 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 7411 (LM).

Closely allied to *T. mosaica* Lower, but differing considerably by the female genitalia, and also by darker tinge, leaden ground colour, and dark fuscous, instead of olive-coloured markings, with a more defined and larger costal (tusk-shaped) spot.

***Temnolopha biguttata* spec. nov.**

(fig. 706)

♂ 13 mm. Head dark ferruginous-brown, tips of scales ochreous, tuft between antennae and another over forehead also ochreous. Palpus light ochreous, base whitish, more than median half and underside of terminal segment suffused with purplish-black. Thorax dark brown, shoulder purple-fuscous, apex of thorax with a dark fuscous spot. Abdomen black, anal tuft dark grey, venter grey-white towards base. Posterior tibia normally scaled, not thickened, without pencil.

Forewing oblong-semioval, costa gently curved throughout, apex rounded-rectangular, termen straight, little oblique above, rounded beneath. Dark purple-fuscous (rather rubbed, markings on basal half indistinct, description combined from right and left wings). Basal patch indicated by an inwards-oblique light yellow streak (this perhaps double) at 1/4, on costa somewhat extended by about three pairs of light costal strigulae; a straight leaden metallic thick line from costa beyond middle to termen just below apex, posteriorly narrowly edged with whitish above and beneath; costa above this line with six narrow white transverse strigulae becoming more crescentic and vertical posteriorly; terminal fifth of wing irregularly clouded with pale yellow; an ovoid leaden erect spot, its base occupying tornus, not reaching middle of termen; this patch finely edged with whitish above and twice traversed by darker faint lines; this mark preceded by an inwards-oblique finely yellowish-edged, wedge-shaped spot from 4/5 of dorsum, leaden-metallic and parted longitudinally by ground colour; space between tops of spots with a whitish strigula. Cilia (imperfect) purple, suffused with ochreous and mixed with leaden-grey.

Hind wing purple-black, becoming lighter purple on basal half and semipellucent at base. Cilia purplish. There is no trace of a dorsal roll.

Male genitalia. Tegumen high and slender, uncus long, strong, top hooked and bristly. Gnathos, a well-developed subcircular narrow hoop. Valva robust but narrow-



er than in the type-species. Sacculus under  $1/2$ , with a patch of bristles at base, a long  $\text{Sp}_1$  (longer than in *P. fimbriana*), followed by a small  $\text{Sp}_2$ . Cucullus bristles of diverse size, very dense, in a broad transverse ridge;  $\text{Sp}_3$  much broader but shorter than in *fimbriana*. Cucullus about similar, but longer. Aedeagus longer.

Female unknown.

East Borneo, Tabang, 125 m, Bengen River, 22.x.1956 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 6349 (LM).

#### Nyctidea gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis moderate. Antenna in male not thickened, minutely ciliated. Palpus rather long, ascending but not appressed to face, tip exceeding upper edge of eye; with short closely appressed scales, roughish along lower edge, rather slender, median segment spindle-shaped, terminal segment smooth, moderate, obtusely pointed and rising. Thorax with a posterior crest. Posterior tibia strongly dilated, triangular-oval, less so extended on the inside, smooth outwardly, by very long hair-scales appressed from base, of different lengths, very brush-like on the inside; pencil from base above to  $2/3$ , posterior tarsus with basal segment long-tufted above. Abdomen normal.

Fore wing oblong, dilated and rather broad, costa little curved, apex obtuse, termen straight above, rounded beneath. Vein 2 from  $3/4$ , 3 from angle, curved and approximated to 4 at margin, 4 close to 3, 4-7 subparallel, 7 to termen, 8 from angle, 7-9 tolerably equidistant, 10 from  $2/3$  distance 11-9, 11 from middle; chorda from halfway 11-10 to base of 7, median branch to below 5.

Hind wing in male broadly semioval, slightly over 1, with a cubital pecten; apex rounded, dorsum with a short downward roll along basal half, anal veins with pencils of hairs throughout, a thick dark hair-pencil from extreme base of dorsum. Vein 2 from beyond middle, 3 from angle, 3-5 equidistant and separate, 6 and 7 closely approximated towards base; marginal third of wing on the underside thickly clothed with modified scales. Hind wing in female of normal shape, oblong-suboval with neuration as in male, but scaling of underside normal.

Male genitalia. Tegumen rather broad, robust, shoulders rounded. Uncus long, hooked, top clavate with thick bristles underneath. Socii semirigid, semioval porrected lobes, bristly along edge only. Gnathos sclerotized, interrupted in middle, ends triangular, dilated. Tuba analis long and slender. Valva oblong, bent in middle, moderately broad; pulvinus large; sacculus little modified, with a moderate globular, harpe(-like)  $\text{Sp}_1$  in disc; partly concealed in cucullus bristles which are thin except along posterior half of spiny outer edge; top of cucullus double, ventral hairy, dorsal slightly longer, rounded and naked. Aedeagus short, sclerotized.

Female genitalia. Sterigma rather large globular, finely aciculate and with a median split on upper half, opposed by a slender dorsal process (lamella postvaginalis proper); or sterigma, a corrugated aciculate trapezoidal plate. Colliculum moderate

and slender. Signa paired and equal, pocket-shaped, with oval base and flattened bicuspid or slightly hooked top.

Type-species, *Nyctidea cyanitis* spec. nov. (Moluccas, New Guinea).

A genus of considerable interest, as, judging from the genitalia, it is the closest relative of the African genus *Eccopsis* Zeller, 1852, chiefly differing by the shape of the socii, by the female sterigma (the signum in that genus is single, but very similar), more forwards-shifted origin of vein 10 in fore wing — and by completely different colouring and entire facies of *Nyctidea*.

The peculiar signa assign this group to a separate position somewhere beside the *Statherotis* group of genera. The genus *Eccopsis* Zeller might belong to this group as well, in spite of having a single signum.

#### Key to the species of *Nyctidea*

1. Deep blackish-purple, apex not tinged crimson . . . . . *cyanitis*  
— At least apex of wing narrowly tinged with crimson, coppery or fulvous. . . . . 2
2. Hind wing purple-black with basal half almost transparent with black veins; ground colour rather dark leaden-grey . . . . . *syngena*  
— Hind wing dark purple, with basal half opaque or sub-semipellucet . . . . . 3
3. Ground colour pale slaty-grey with silvery reflections . . . . . *saloris*  
— Ground colour ferruginous and crimson . . . . . *mataea*

#### *Nyctidea syngena* spec. nov.

(figs. 501-502)

♀ 18 mm. Head leaden-blue, narrow edge to tufts on vertex tawny in certain lights, face ochreous. Palpus very slender, with closely appressed scales, lower edge hardly roughish, median segment with a small obtuse tuft at apex above, terminal segment short, obtuse, obliquely porrect; deep purple, upper edge of median segment light tawny. Thorax grey-fuscous, marbled with lighter, with faint purple reflections, tegula light ochreous-tawny. Abdomen blackish-fuscous, venter grey-fuscous.

Fore wing oblong-suboval, dilated, costa almost straight anteriorly, posterior fourth curved, apex rounded and slightly prominent, termen gently rounded, little oblique, faintly notched below apex. Slaty-grey dusted with white, with strong blue reflections, partly transversely strigulated by tawny-fuscous. Basal patch indicated by a regularly curved vertical, rather narrow fascia at 2/5, becoming obliterate on dorsum, preceded by a similar line; a longitudinal purplish spot beyond base of wing; costa narrowly purple with short whitish pairs of strigulae; slightly more than posterior half of costa with a deep coffee-brown streak to apex reaching below to vein 8, edged below by a narrower bright tawny streak which is extended in centre of disc into a round large patch slightly mixed with black; anterior edge of this dark colouring well-defined emarginate below costa; round patch connected by slender zigzag

fuscous strigula with  $2/3$  of dorsum; ocelloid spot only represented by a slightly inwards-oblique, irregular zigzagged fascia, formed of longitudinal small interneural dark lines of diverse length, edged anteriorly by a white line; extreme apex with an orange marginal streak, dilated on notch of margin; two ochreous-orange parallel lines below posterior end of costa, almost converging in apex; termen and posterior part of tornus filled out with deeper leaden-blue, reticulate with dark brown lines. Cilia pale tawny with a white basal line and two parting dark fasciae, cilia opposite apex purple.

Hind wing hyaline, costa whitish-grey, marginal fourth from apex to tornus suffused with dark purple, all veins dark purple. Cilia fuscous in apex, pale ochreous along upper half of termen, glossy whitish elsewhere, throughout with a fuscous sub-basal band.

Female genitalia. Sterigma aciculate, large, strongly corrugated and moderately flattened, subtrapezoidal, with rounded upper and extended lower angles, and a median frontal split of upper half. Colliculum not exceeding sterigma. Seventh sternite with a broad excision in which a pair of submedian concentric aciculations. Signa pocket-like, smooth, with slightly curved and dilated tops.

New Guinea, E. Papuan Is., Louisiades, St. Aignan Id., 1897 (Meek), 1 ♀, holotype, genit. slide 7699 (BM). The species resembles a *Dudua aprobola* (Meyrick) but is quite different by the colouring, the subhyaline hind wings and the genitalia. The lack of males makes the identification somewhat uncertain, but all the female characters and the genitalia fit closely in the concept of the present genus.

#### *Nyctidea mataea* spec. nov.

(fig. 505)

♀ 15 mm. Head and palpus light ferruginous. Thorax whitish-grey with a lilac tinge, partly suffused with ferruginous. Abdomen rather dark fuscous, venter pale ochreous.

Forewing rather narrow, dilated, oblong-suboval, costa gently curved throughout, more so at apex, apex subobtuse, termen concave above, prominent and rounded beneath, short. Light crimson mixed with bright fulvous-ferruginous. Basal patch indicated by a deep ferruginous, interrupted and oblique transverse band beyond base, basal  $1/4$  of wing rather spotted light pink or crimson and bright fulvous; anterior  $2/5$  of costa narrowly dark fuscous, finely and sparsely strigulated with pale bluish-grey; a transverse patch of not interrupted bright fulvous colour, downwards turning light crimson, at  $1/3$  of wing; transverse fascia indicated by an oblique suffused deep ferruginous purple patch in middle of costa, to lower angle of cell; this patch preceded by a pale blue-grey transverse blotch from costa to cell, originating with two pairs of short white costal marks; patch followed by two more oblique slender single blue lines, white on costal edge, followed by a single shorter similar mark before  $3/4$ ; costa posteriorly chestnut-brown, thin suffusion gradually narrowed to-

wards apex; emitting a subapical straight, bright golden-fulvous fascia to termen above middle; dorsum suffused with dark purple anteriorly turning light purple-grey in tornus; bright crimson colour forming an oval ill-defined spot beyond cell; a double whitish line cutting off apex and extended above tornus so as to form an ill-defined round patch of whitish-pinky marbling, indicating ocelloid spot. Cilia (imperfect) concolorous.

Hind wing dark fuscous; becoming blackish towards base, with a coppery or crimson gloss along edge. Cilia whitish grey with a dark grey subbasal band and white tips, around apex cilia suffused with crimson.

Female genitalia. Sterigma rather darkly sclerotized. Ostium rising, inverted-conical, a ventral split with angles rounded; this cone flanked by prostrate-suboval tumescences, with stronger upper edge. Colliculum short, bivalval. Signa subequal, inverted pear-shaped with truncate top and base, slightly flattened (shaped as somewhat flattened funnel with truncate base, open above).

Northwest New Guinea, Sorong, sea-level, 8.vii-14.viii.1948 (M. A. Lieftinck), 1 ♀, genit. slide 3407 (LM). Superficially very similar to *Dudua anaprobola* (Bradley), but actually belonging to the present genus. The crimson and fulvous colour and the pale blue costal markings are very distinct.

*Nyctidea cyanitis* spec. nov.

(figs. 503, 506, 518C-D)

♂ ♀ 17-18 mm. Head with vertex, collar and thorax grey-fuscous with an anthracite gloss, face and palpus dull black-purple. Posterior tibia haired as described with the genus; outwardly glossy vinaceous-bronze, inwardly dull blackish, tuft on tarsus glossy pale fuscous, rest of tarsus dark grey. Abdomen black.

Fore wing oblong-triangular, costa gently curved, apex and termen rounded, termen moderately oblique. Deep purple, markings glossy leaden-bluish, well-defined. Basal patch oblique, somewhat extended along dorsum to  $1/3$ , edge with a sharp tooth above middle, concave and very oblique above this, sinuate below, a narrow, outwards-convex transverse fascia before middle, edges parallel to fold, below fold fascia with an anterior tooth and dilated posteriorly, strigulated with fuscous and connected with thick anterior edge of ocelloid patch, which is similarly outwards-curved and rises  $2/3$  across wing, ocelloid patch further indicated by a large comma-shaped spot in tornus, its posterior end continued upwards before termen and forming the posterior edge of ocelloid patch; posterior half of costa with some five minute pale oblique strigulae and a leaden-blue small oblique spot before apex. Cilia deep purple.

Hind wing in male fuscous-tawny, suffused fuscous-grey along edge, broad, apex rounded, marginal third on underside thickened with modified scales, dorsum as described with the genus. Hind wing in female narrower, oblong, subsemioval more pointed, normally scaled, dark purple-fuscous, becoming semihyaline with dark veins on basal half.

Male genitalia as described with the genus.

Female genitalia with a globular aciculate sterigma, with a split of upper half of ventral edge and a small rising process of dorsal edge, colliculum slender, moderate, exposed. Signa bicuspidate.

Moluccan Is., Halmahera Id., Akilano, 50-100 m, 9-12.ix.1951 (native collector), 1 ♂, holotype, genit. slide 5951 (LM). Batian Id., 1892, 4 ♀, paratypes, genit. slides 7717 and 7718 (BM).

Southwest New Guinea, Kapaur, sea level - 2000 ft, 1.xii.1896 - e.ii.1897 (Doherty), 2 ♂, paratypes, genit. slides 7739, 7741; 1 ♀, allotype, genit. slide 7740 (BM).

A dark species of striking appearance, somewhat resembling *Dudua hesperialis* Walker. Unfortunately the entire series is rather damaged and partly rubbed. The New Guinea material has greenish instead of bluish markings, but this may partly be due to rubbing; the genitalia are identical.

*Nyctidea saloris* spec. nov.

(fig. 553)

♂ 15 mm. Head black, vertex pale blue-green. Palpus black, upper edge paler. Thorax pale ochreous (apparently discoloured), with two narrow black transverse bands. Posterior tibia moderately dilated by loose, fine long hairs above, white, pencil from base black, posterior tarsus not tufted.

Fore wing oblong-suboval, dilated, costa gently curved throughout, apex rounded and prominent, termen gently curved, oblique. White, densely strewn with milky blue-green scales, becoming lilac-leadens towards costa and tornus, marbled and dusted with fuscous. Basal patch over 1/3, indicated along costa by blackish suffusion, opalescent pale green in certain lights, gradually turning olive in centre of disc and fading out on dorsal third; this patch centred by ground colour; transverse fascia obliterate and replaced by a black suffused streak along more than posterior half of costa, turning dark brown towards and in apex; this black streak with a well-defined and oblique anterior edge, lower edge slightly suffused and concave, streak narrowed towards apex, with two oblique whitish lines from costa before apex; apex ferruginous, traversed by penultimate white line; costal black streak more or less connected anteriorly with a large subtriangular spot in disc, formed of fuscous and tawny marbling, top halfway between fold and 2/3 of dorsum; tornal area suffused with leaden-lilac, marbled with chestnut, with a few black points, and edged anteriorly with white; this edge strongly serrate along lower half. Cilia (damaged) chestnut and purplish, a fine white basal line.

Hind wing semipellucant, blackish-fuscous on marginal third, paler fuscous elsewhere; dorsum as far as vein 1b greyish with an oblique suffused white spot before tornus, with long grey hairs throughout, a moderate marginal roll not reaching tornus. Cilia fuscous with glossy white apical half and a dark subbasal shade.

Male genitalia. Tegumen moderate, rather broad, top broadly rounded, semispheroid. Uncus, a small rounded prominence with modified, bristle-like scales. Socius slender, moderately long. Gnathos subhyaline, partly rigid, transverse arms in middle converging into a long point. Valva rather short and broad; pulvinus rather large, digitoid, bristly; sacculus dilated, at top angularly projecting in a sharp point, from the outer side with a dense  $Spc_3$ ; another pencil of bristles on outer face of cucullus; a marginal row of dark spines along sacculus posteriorly and along cucullus.

Female genitalia unknown.

Southwest New Guinea, Kapaur, sea-level - 2000 ft, 1.xii.1896-e.ii.1897 (Doherty), 1 ♂, holotype, genit. slide 7759 (BM). Distinctly coloured species, with the shape and the markings of the fore wing very similar to those of *N. syngena* spec. nov. Although the male genitalia show differences from those of the type-species, their general build is in my opinion similar.

#### *Apsidophora* gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis developed. Antenna in male moderately thickened, short-ciliate. Palpus moderate, curved, subascending, with loosely appressed scales, terminal segment exposed, short, obtuse. Thorax without a crest. Posterior tibia smooth-scaled outwardly, with long, closely appressed hair-scales above, inner side concave, with appressed hair-scales, a thick pencil from base above.

Fore wing oblong, rather broad, costa little curved anteriorly, more so posteriorly, apex subrectangular, slightly rounded, termen straight and vertical above, rounded below. Vein 2 from  $3/5$ , 3 from angle, 4 close to 3, 7 separate, to termen, 7-9 equidistant, 10 from beyond middle distance 9-11, 11 from before middle, chorda from halfway 11-10, to below 7, median branch to base of 5.

Hind wing with cubital pecten; modified in male, over 1, triangular and pointed, with a prominent tornus, thick enlarged cilia along prominence, dorsum rolled, filled with modified scales, a slender lanceolate lobe from base reaching top of tornus, short modified scales filling space between veins 3-4, forming an open groove on underside. Vein 2 from  $4/5$ , 3 and 4 connate, rather short, 5 approximated at base, 6 and 7 closely approximated towards base.

Hind wing in female normal, semioval, pointed, about 1; 2 from  $2/3$ , 3 and 4 stalked, 5 approximated, 6 and 7 separate, moderately approximated towards base.

Male and female genitalia, as described with the species.

Type-species, *Apsidophora purpurorbis* spec. nov. (Celebes, Malaya, New Guinea).

A characteristic genus with the male genitalia rather *Hedya*-like, but with a broad uncus and enlarged socii. The signa, however, assign it to the present subtribe, in the vicinity of *Nyctidea* gen. nov. The male possesses an elaborate dorso-tibial scent organ, extending over tornus.

*Apsidophora purpurorbis* spec. nov.

(figs. 504, 641, 649A)

♂ 20 mm. Head rather dark fuscous, slightly mixed with ochreous-tawny, face paler. Antenna fuscous, finely dark-banded above, ciliations 1/2. Palpus pale ochreous, median segment becoming tawny towards apex, laterally above with a suffused black stripe, extreme upper edge narrowly white. Thorax fuscous strewn with tawny-ochreous. Posterior tibia sordid pale ochreous, with loose hairs above, a concolorous slender pencil from base to middle. Abdomen with slender black expansile coremata on the 7th segment; purple-fuscous, venter whitish-fuscous.

Fore wing broad, suboval, costa curved throughout, apex rounded, termen gently sinuate above, rounded beneath. Rather light purplish-grey, becoming darker towards base and costa because of rather coarse dark fuscous suffusion; costa throughout suffused with dark fuscous, this suffusion with lower edge ill-defined on anterior half, on posterior half narrowed in middle and well limited by a gently curved pinkish-crimson or orange line; this half with five very faint tawny pairs of transverse markings below merging in a crimson line, this line curved down and reaching upper 1/3 of termen; some faint transverse purplish marks across 1/4 of disc; a large deep brown-purple semicircle, with upper edge from middle of dorsum to 1/3 of termen, pale ochreous-edged and well-defined; lower edge slightly suffused, from 3/4 of dorsum, to termen just above tornus; the so limited almost circular tornal spot of ground colour with posterior half faintly encircled by a light ochreous line, finely parted throughout by purple. Cilia dark grey-fuscous-purple, slightly barred with black.

Hind wing broadly subtriangular, apex pointed, termen with a triangular notch opposite vein 2, thence forming a broad oval lobe, dorsum obliquely rounded. Veins modified. Dorsal area very extended, broader from dorsum to cell than the wing above cell, with three distinct anal veins; dorsum rolled and thickened, densely hairy, and with a slender rigid pencil-like lobe, projecting beyond end of roll and dorsal cilia; these cilia along the tornal lobe modified: long and very dense; veins 2-5, shortened and anomalous because of the wing beyond cell being strongly corrugated, forming a concavity in cell 2, in which on the upper side a thick brush of hair-scales; cilia above notch normal, but costal area above vein 7 also rather dilated; hind wing with apical third deep purplish-brown, lower half of cell light fuscous, brush of hairs beyond cell fuscous anteriorly, pale fuscous posteriorly, including a triangular black tuft, lower half of wing paler brown-purple, dorsum pale fuscous, an orange-golden suffused spot at the end of vein 1c. Cilia pale grey, around lobe dark fuscous mixed with pale ochreous, on underside of lobe pale yellow.

♀ 17-18 mm. Similar to the male, but hind wing less acutely pointed, termen gently concave below apex, curved along median third, concave again on end of vein 2, tornus somewhat irregularly rounded. Abdomen dark fuscous with a pale ochreous venter.

Male genitalia. Tegumen high, uncus hooked, clavate. Socius large, a semicircular

prominent lobe, densely haired. Gnathos ill-defined, tuba analis large and membranous. Valva long and slender, sinuate, sacculus with a marginal patch, two supra-marginal patches of spines, and a discal  $\text{Sp}_1$ . Cucullus bristles forming a more or less isolated  $\text{Sp}_2$  of robust spines. Aedeagus rather long, cylindrical.

Female genitalia. Sterigma, a moderate quadrate plate, with slightly extended upper angles, concave above, reticulate throughout, with an aciculate vertical split-like ostium in centre with two oblique small ridges. Colliculum slender and rather short. Signa inequal, large signum: clavate, upon a somewhat flattened oval base, small signum: an oblong sclerite with one edge dark and thickened, other edges serrulate.

West Celebes, Lindoe Paloe, 3700 ft, iv.1937 (J. P. A. Kalis), 1 ♂, holotype, genit. slide 5846 (Rothschild Bequest, BM).

Northeast New Guinea, Geelvink Bay, Ron Id., (Doherty) 1897, 1 ♀, allotype, genit. slide 7744; 3 ♂, 4 ♀, paratypes. Southwest New Guinea, Kapaur, sea-level-2000 ft, 2.xii.1896-2.ii.1897 (Doherty), 1 ♀, paratype. Milne Bay (A. S. Meek), 2 ♂, paratypes, genit. slide 7761 (BM).

Malay Peninsula, Singapore Id., i.1899, 1 ♂, paratype, genit. slide 7762 (BM).

A very distinct species with a strikingly modified hind wing in the male.

The generic assignment of the present species is somewhat dubious. The peculiar signa point towards a relationship with the subtribe *Olethreutae*, but the male genitalia have little in common with that group, so that I prefer to place the species in the *Neopotamiae* at the present.

### *Saliciphaga* Falkovitch, 1962

*Saliciphaga* Falkovitch, 1962: 193, figs. 5-6 (type-species, *Penthina acharis* Butler, by original designation).

Head with closely appressed scales. Ocellus small, posterior. Proboscis moderate. Antenna in male filiform, short-ciliate. Palpus rather long, subascending, median segment strongly dilated with closely appressed scales, loose along lower edge, terminal segment moderately long, exposed, slender, subacute, rising. Thorax without a crest. Posterior tibia normally scaled, without a pencil.

Fore wing oblong-suboval, apex rounded, termen little rounded above, strongly so below. Vein 2 from slightly beyond  $2/3$ , 3 from angle, 4 closer to 3, 7 to termen, 8 from angle, very close to 7, 9 more distant, 10 from well before middle distance 11-9, 11 from middle, chorda from well before base of 10 to base of 7, median branch to base of 5 or just below it.

Hind wing broadly semioval, 1  $1/2$ , with pecten; vein 2 from beyond  $2/3$ , 3 from angle, 4 separate, close at base, 5 closely approximated at base, 6 and 7 closely approximated towards base. Dorsum without roll.

Male genitalia. Tegumen narrowed, shoulder much rounded. Uncus hooked, with a slender, clavate top, bristly underneath. Socius rather small, pending. Gnathos membranous, narrow. Valva slender, subangulate, sacculus with  $\text{Sp}_1$  spiny, upon an



elevated broad and curved subcostal harpe, pulvinus moderately bristled,  $Spc_2$  a strong submarginal and submedian sheaf,  $Spc_3$  below process of cucullus, a rather strong sheaf; cucullus evenly bristled. Aedeagus small.

Female genitalia. Sterigma, in type-species, a weak rounded sclerite with truncate upper edge, along lower edge strongly corrugated and aciculate, ostium erect-oval, with collar-like lateral rims. Colliculum rather short. Signa two, large, robust, boat-shaped.

A less specialized member of the subtribe with the subcostal harpe only moderately developed. This might be the type from which large and complicated, hypertrophied harpes of *Neopotamia*, *Megalota*, *Costosa*, etc. have originated — as well as the huge signa of the *Neopotamia* type.

There are two species occurring in the Far East, China and Japan. The food plants are *Salix* species, and in Japan, *Populus*.

### *Saliciphaga acharis* (Butler, 1879)

(figs. 448A-C)

*Penthina acharis* Butler, 1879: 80, pl. 60 fig. 9 (Japan).

*Argyroploce* (?) *acharis*; Walsingham, 1900: 242. — Kennel, 1913: 368 (Corea, Japan).  
Matsumura, 1931: 1062.

*Olethreutes acharis*; Rebel, in Staudinger & Rebel, 1901: 108. — Inoue, 1954: 105, no. 582.

*Hedia acharis*; Issiki, in Esaki, 1957: 74, pl. 12 fig. 371. — Inoue c.s., 1959: 263, pl. 170 fig. 7.

*Saliciphaga acharis*; Falkovitch, 1962: 193, figs. 5,6 (genit. ♂♀ figured).

Distribution. Amur region. Corea. Japan: Hokkaido, Honshu, Yesso, Kiushu.

A distinct species with characteristic markings: light fuscous-tawny, basal half with numerous transverse undulate fuscous strigulae on paler ground and some horizontal lines in terminal part of wing; a large white erected-semioval spot on end of cell, posterior edge suffused and extended by a few horizontal white lines; including a black point above lower extremity.

Hind wing rather light brownish-fuscous, with paler basal half. Cilia white.

The second species is *S. caesia* Falkovitch, 1962, from Ussuri region, which is larger, evenly slaty-grey with two transverse light tawny bands and the white discal spot reduced to an erect semicrescent. Hind wings darker.

Male genitalia resembling those of *S. acharis* closely, but with a longer uncus, higher harpe, more extended  $Spc_2$  and double  $Spc_3$ . Female genitalia with sterigma smaller and hardly sclerotized.

Japan, Kiushiu, 1890 (Leech, Walsingham Coll. 60798), 1 ♂, genit. slide 8092; no. 60805, 1 ♀ (BM).

Siberia, Station Ussuri, 8.vii.1911 (P. Somov) (LM).

**Pseudohedya** Falkovitch, 1962

*Pseudohedya* Falkovitch, 1962a: 192, figs. 3-4 (type-species, *Grapholitha gradana* Christoph, by original designation).

Head with appressed scales, roughish on vertex. Ocellus posterior. Proboscis short. Antenna short-ciliate in male. Labial palpus curved and ascending, median segment with closely appressed scales, rough along lower edge only, less rough at apex, apex not reaching base of antenna; terminal segment very short, exposed, subobtuse and porrected. Thorax without a crest. Posterior tibia normally scaled, without a pencil, with a slight subdorsal groove only.

Fore wing oblong-subtruncate, apex subobtuse, termen straight, little oblique. Vein 2 from 2/3, 3 from angle, 4 closer to 3, 7 free, to termen, 8 from angle, 9 rather close to 8, 10 from before middle distance 11-9, 11 from middle; chorda straight, from midway 11-10, to base of 7.

Hind wing broadly semioval, over 1, with pecten. Vein 2 from just before 2/3, 3 and 4 very short-stalked from angle, 5 approximated at base, 6 and 7 closely approximated towards base; dorsum without roll, with long dense cilia and long hairs spread over upper side of anal cells.

Male genitalia. Tegumen gradually narrowed. Uncus robust, hairy, oval. Socii parietal, ill-defined. Tuba analis supported by a large rising, subtriangular and concave subscaphium, ending in a slender free process. Henion robust, concave. Valva with a triangular broad sacculus, closely beset with short strong spines; cucullus clavate, hairy.

Female genitalia. Sterigma, a simple triangular sclerite with notched top which is the ostium. Colliculum slender, moderately long. Signa two, unequal, robust, cornute, without proper basal plates.

The genus in my opinion is not close to *Hedya* as its author surmises, but is closer to the new genus *Semniotes*, judging from the developments of the diaphragma (subscaphium, strong henion), while the large and robust signa assign the genus to the present subtribe.

There are three very distinct species, confined to the Far East and Japan (Manchurian subregion): the type-species, *P. retracta* Falkovitch, 1962, and more remote *P. cincta* Falkovitch, 1962, all from Ussuri region (type locality) and also from Japan.

***Pseudohedya gradana*** (Christoph, 1881)

(figs. 447A-C)

*Grapholitha gradana* Christoph, 1881: 419. — Rebel, in Staudinger & Rebel, 1901: 120.

*Laspeyresia gradana*; Walsingham, 1900: 432. — Kennel, 1921: 649. — Matsumura, 1931: 1072. — Esaki, 1932: 1466. — Obratzsov, 1959: 193.

*Enarmonia gradana*; Inoue, 1954: 93 (Hokkaido, Honshu, Ussuri). — Issiki, in Esaki, 1957: 57, pl. 8 fig. 256. — Inoue c.s., 1959: 259, pl. 174 fig. 18.

Distribution. Ussuri Region, Japan.

Japan, Mitsukuri, 1905 (Busck) (Walsingham Coll. 32648), genit. slide 6631 BM (BM).

Ussuri Region, Jakovlevka, 20.vii.1926 (A. Djakonov & N. Filipjev), 2 ♂, genit. slide 8083 (LM).

### *Pseudohedya cincinna* Falkovitch, 1962

*Pseudohedya cincinna* Falkovitch, 1962b: 357, fig. 5 (♂, Ussuri).

Distribution. Ussuri region: environs of Vladivostok (Okeanskaya).

Japan, Kuzu, Sinano, 21.vii.1919 (K. Takeuchi), 1 ♂ (Coll. Issiki). Sapporo, 27.vii.1916 (T. Isshiki), 1 ♂ (without abdomen and right pair of wings) (BM). Compared with a ♂ topotypical specimen from Wladivostok, Okeanskaya, 27.vii.1963 (Falkovitch).

### *Pseudosciaphila* Obratzsov, 1966

(pl. 9 figs. 4-6)

*Sciaphila* Pierce & Metcalfe, 1922 (type-species, *Phalaena Tortrix branderiana* Linnaeus, by original designation), nec *Sciaphila* Treitschke, 1829 (7): 233 (type species, *Phalaena Tortrix wahlbomiana* Linnaeus, by subsequent designation of Duponchel, 1834).

*Pseudosciaphila* Obratzsov, 1966: 144 (nom. nov.; type-species, *Phalaena Tortrix branderiana* Linnaeus, by original designation). — Bentinck & Diakonoff, 1968: 173, pl. 25 fig. 15, pl. 26 fig. 1, pl. 93 figs. 260a-c.

Head with appressed scales, roughish on crown. Ocellus posterior. Antenna fasciculate-ciliated. Palpus subascending; rather long, median segment exceeding 3/4 height of eye, moderately dilated and rather slender, with closely appressed scales, roughish along lower edge and apex, terminal segment short, exposed, rather pointed. Thorax without a crest. Posterior tibia normally scaled, with closely appressed scales above and beneath, without pencil. Adbomen normal.

Fore wing oblong-suboval and clavate, apex moderately rounded, termen straight above, little oblique. Vein 2 from beyond 2/3, 3 from angle, 3-5 tolerably equidistant, 7 separate, to termen, 8 from angle (? , angle indefinite), closer to 7 than to 9, 10 from 3/4 distance 11-10, 11 from distinctly before middle, chorda from well before 10, to base of 7, median branch from towards base to halfway bases of 4 and 5.

Hind wing broadly semioval, over 1, vein 2 from middle, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 moderately approximated towards base.

Male genitalia. Tegumen very slender, subclavate. Uncus broad oval. Socii sub-circular, strongly bristled below. Gnathos a transverse subsclerotized band. Tuba analis long, slender. Valva with a strongly dilated sacculus, densely spined on outer

half,  $\text{Sp}_3$  moderate, subbasal. Colliculum almost spoon-shaped, on a long slender stalk. Aedeagus moderate, curved, narrowed towards extremities.

Female genitalia of the type-species. Sterigma strong, aciculate, a central short cylindre with semioval lateral plates. Colliculum rather short bivalval. Signa two, larger: a subcrescentic band, smaller: a double semicrescent (boat-shaped).

A characteristic genus, distinct by the male genitalia and by the basad shifted origin of vein  $\text{II}$  in the fore wing. The signa assign it doubtless to the present tribe.

The single tropical species which is being assigned to *Pseudosciaphila* tentatively, has only one subcrescentic signum, but the origin of vein  $\text{II}$  is similar, and so is the basical build of the sterigma.

***Pseudosciaphila rhachistis* spec. nov.**

(figs. 484-485)

♀ 12.5 mm. Head rather light fuscous, face whitish. Palpus rather long, strongly dilated; grey-fuscous, base obliquely white, median segment with a dorsal dark grey triangular spot. Thorax dark fuscous-grey, a median pale tawny-fuscous transverse band, edged and divided in two by three blackish lines. Abdomen fuscous.

Fore wing oblong-subtriangular, moderately dilated, broadest at  $3/4$ , costa gently curved, more so posteriorly, gently prominent at  $3/4$ , apex obtuse, termen straight, oblique. Light leaden-grey, partly dotted with suffused white spots, strongly reticulate by dark fuscous. Basal patch indefinite, transverse fascia just beyond middle, deep leaden-grey, occupying about  $1/4$  of wing length; anterior half of fascia marked with three subparallel oblique blackish-fuscous marks, slender and rather irregular, upper from costa to upper angle of cell, median just below middle of disc, with a slender anterior appendix above, third mark slender, across fold; end of cell between tops of first and second marks whitish-olive; a triangular spot rising from dorsum before tornus, centred with ground colour, a pale mark occupying about the sixth seventh of costa, formed by two pairs of white costal marks, surrounded by pale tawny-orange; suffused blackish interneural streaks, reaching termen, upper apical, some including black dots. Cilia grey mixed with paler, a conspicuous creamy basal band, followed by a black subbasal band.

Hind wing pale fuscous, cilia whitish-fuscous with a white basal line and somewhat darker fuscous subbasal band.

Female genitalia. Eighth segment, a strong ring. Sterigma, a little modified lamella postvaginalis, with at the sides, dark oval tumescences. Ostium not modified, colliculum a simple moderate dark tube, aciculate inside. Receptaculum seminis rather close to bursa. Signum peculiar, a slender, light, crescentic sclerite.

India, Pusa, larva boring top shoots of *Tasticia gandarussa*, 16.xi.1921, pupated 24.xi, emerged 4.xii.1921 (Rangi) [T. B. Fletcher Coll.], "*Polychrosis acanthis* Meyr., Meyrick det. 1924", 1 ♀, holotype, genit. slide 6521 (BM). The identification is erroneous, for this purely Olethreutine female cannot be conspecific with *acanthis* Meyrick,

as that species is a *Matsumuraesis* and belongs to the tribe Eucosmini.

The generic position is uncertain without the knowledge of the males. I place the species in *Pseudosciaphila* tentatively. It has similar neuration, sterigma of a similar structure and only one crescentic signum.

9. SUBTRIBUS *Bactrae* FALKOVITCH, 1962 (STAT. NOV.)

Bactrini Falkovitch, 1962c: 884 (tribe of "Olethreutidae").

A characteristic and compact group of small species, often with narrow and pointed fore wings.

Signum usually one, a concave or basket-shaped sclerite with diversely developed scobinations on the outside.

Scent organ invariably absent, the dorsum of the hind wing and the posterior tibia simple.

Male genitalia usually with a well-developed uncus, along the edge beset with strong downwards-directed spines. Valva simple, often with a large basal harpe or with a separate valvula.

Female genitalia often with a little modified, rather simple sterigma.

Hind wing in the two sexes often with veins 6 and 7 stalked.

The group was first separated in 1962 by Falkovitch, on the account of the total absence of the scent organs, but in a slightly different sense, viz., as a tribe of the "subfamily" Olethreutinae sensu Heinrich, 1926. Now I adopt it as a subtribe of the tribe Olethreutini.

Key to the genera of *Bactrae*

- 1. Uncus bipartite . . . . . *Parabactra*
- Uncus single . . . . . 2
- 2. Uncus well-developed, rigid, spiny along edge underneath. . . . . *Bactra*
- Uncus fleshy and weak, broad and rounded, or oblong-trough-shaped. . . . . 3
- 3. Uncus erected-trough-shaped; gnathos band-like. . . . . *Henioloba*
- Uncus broad, rounded and weak; gnathos absent . . . . . 4
- 4. Sacculus with a single large pencil-like  $Spc_3$ . . . . . *Bubonoxena*
- Sacculus without  $Spc_3$ , often with rigid spines . . . . . 5
- 5. Fore wing veins 7 and 8 stalked, seldom closely approximated; disc of valva with additional, bristly lobes . . . . . *Cyclacanthina*
- Fore wing veins 7 and 8 separate; disc of valva without bristly lobes . . . . . *Syntozyga*

*Syntozyga* Lower, 1901

*Syntozyga* Lower, 1901: 70 (type-species, *S. psammotalla* Lower, 1901, Australia, by monotypy). — Meyrick, 1911a: 256 (syn. of *Polychrosis* Ragonot; diagn.). — Fletcher, 1929: 214. — Diakonoff, 1954a: 15, 58 (distinct from *Polychrosis* Ragonot = *Lobesia* Guenée). — 1968: 66 (near *Bubonoxena* Diakonoff).  
*Eleuthodema* Bradley, 1957: 95, figs. 74, 75 (type-species, *Polychrosis pedias* Meyrick, India).  
Syn. nov.

This interesting genus has been sunk as synonym of "*Polychrosis* Ragonot", of which Meyrick had but a vague concept. He separated "*Lobesia* Guenée" incorrectly, chiefly because of the surmised absence of a tibial pencil and afterwards put together under the name "*Polychrosis*" a series of quite heterogenous elements, simply on the ground of the veins 6 and 7 in the hind wing being connate or stalked. This is indeed a peculiar character and most valuable, but present in several, not related groups. On the other hand the character separating the veritable *Lobesia* group, of which *Polychrosis* Ragonot is a synonym, is the unique position of veins 9 and 10 in the fore wing being remote at base and convergent towards costa. This character has been neglected by Meyrick.

The genus may be redescribed thus. Head with appressed scales roughly spreading on vertex. Ocellus posterior. Proboscis vestigial. Antenna in male hardly thickened, subserrulate, short-ciliate, cilia in rings (giving impression of serrulation). Palpus moderately long, subascending, porrected beyond the width of eye, median segment little curved, with appressed scales, rather slender, roughish at apex and base, terminal segment slender, subobtuse, partly exposed. Thorax with a posterior crest. Abdomen normal. Posterior tibia normally scaled, without a pencil.

Fore wing oblong-suboval, costa curved at extremities, apex rounded, termen tolerably straight. Vein 2 from well beyond  $3/4$ , 3 and 4 connate from angle, 5-7 subparallel, 7 free, to termen, 8 from upper angle of cell, 7-9 equidistant and rather approximated, 10 from halfway distance 9-11, 11 from middle, chorda and median branch absent.

Hind wing oblong-semioval, with a cubital pecten, vein 2 from beyond  $2/3$  to  $4/5$ , 3 from slightly before angle, 4 separate, from angle, 5 moderately approximated at base, 6 and 7 stalked; vein 8 apparently free from angle, basal part of upper edge of cell obliterate.

Male genitalia. Tegumen rather broad, top broadly rounded, thinly long-haired. Uncus absent. Gnathos a transverse delicate band, or not perceptible. Tuba analis very delicate. Vinculum well-developed, triangular. Valva with a strongly dilated sacculus part, deeply concave, with a thickened and sclerotized edge, adorned with a few large cusps or thorns, thinly bristled over disc;  $Spc_1$  diversely developed, a group of strong spines towards costa. Cucullus slender, digitoid, thinly long-haired. Aedeagus curved and slender, of diverse length.

Female genitalia with the 8th sternite sclerotized and slightly extended. Sterigma, a rounded and prominent, aciculate thickening around the central large ostium bursae. Colliculum rather short, bivalvous. Ductus bursae and corpus bursae simple.

A group of closely allied species of small size and characteristic markings, as described under the species. The genus is the nearest ally of *Bactra* Stephens.

#### Key to the species of *Syntozyga*

1. Fore wing with a well-defined obliquely-triangular dark spot on end of dorsum;

- if absent then the wing more or less suffused and dusted with light ferruginous . . . . . 2
- Fore wing without a well-defined spot on end of dorsum, without a ferruginous tinge . . . . . 4
2. Fore wing usually narrower, in ♀ markings sometimes suffused, then a distinct russet or ferruginous suffusion, markings or dusting; costal dark spot usually with an outwards-oblique small appendix. . . . . 3
- Fore wing with well-defined fuscous markings, always without any russet tinge; costal patch triangular, without appendix, a dark point or strigula before or below its top. . . . . *stagonophora*
3. Larger, brighter marked. Edge of valva below cuspidate top of sacculus concave  
*macrosperma*
- Smaller, markings duller. Edge of valva below cuspidate top of sacculus convex  
*pedias*
4. Fore wing with a large costal spot to middle of disc . . . . . 5
- Fore wing whitish, thinly dotted, costal patch hardly twice as broad as other dark costal dots . . . . . *bicuspis*
5. Fore wing ground colour densely dotted fuscous; costal patch without an oblique appendix below . . . . . *psammetalla*
- Fore wing ground colour not so dotted, markings well-defined, costal patch with a sinuate slender oblique appendix below . . . . . 6
6. Antenna in male ciliated, 1; central fascia entire; cucullus top strongly projecting  
*sedifera*
- Antenna in male simple; central fascia interrupted in middle; cucullus top with a trifid large thorn . . . . . *anconia*

***Syntozyga sedifera* (Meyrick, 1911) comb. nov.**

(pl. 5 fig. 1)

*Polychrosis sedifera* Meyrick, 1911a: 256 (♂, Queensland). — Diakonoff, 1954a: 58 (not *Polychrosis*). — Clarke, 1955: 282.

Distribution. Queensland.

Male genitalia. Similar to those of *S. psammetalla*, but tegumen narrower, cucullus longer,  $Spc_1$  smaller; sacculus with a large spiny process at top, a series of three strong spines beyond base and a long  $Spc_3$ . Aedeagus long, sinuate, narrowed.

Female genitalia unknown.

Australia, Queensland, Cairns, iii.1907 (F.P.D.) (in Meyrick's hand), lectotype ♂, hereby designated, genit. slide 15770 (Meyrick Coll., BM).



**Syntozyga psammetalla** Lower, 1901

(figs. 534-535, 543)

*Syntozyga psammetalla* Lower, 1901: 70 (♂, Cooktown).*Polychrosis psammetalla*; Meyrick, 1911a: 258, no. 364 (Queensland; December and January).

Distribution. Australia: Queensland.

East Sumba, 0-25 m, Melolo, v-vi.1949 (E. Sutter & A. M. R. Wegner), 2 ♂, genit. slides 7382 and 7539 (LM).

Australia, "Townsville, Queensland, F.P.D., 17.1.01" (in Meyrick's hand, Meyrick Collection, BM), 1 ♂, genit. slide 1751 (BM). Queensland, 25 mi. N of Emerald, 20.iv.1955 (I.F.B. Common), 1 ♂, genit. slide 7874. New South Wales, Tabuloon, 29.xii.1912, 1 ♀, genit. slide 7903 (CSIRO).

Lesser Sunda Is., SW Timor, 1500-3000 ft, xi-xii.1891 (Doherty), 1 ♂, genit. slide 7847. Bali Id., 1896 (Doherty), 2 ♂, genit. slides 7837, 7860 (Walsingham Coll., BM).

Male genitalia. Valva with sacculus broadly excavate, with a thick outer edge upon which three spines, increasing in size basad; Spc<sub>1</sub>, an elongate, marginal patch of rather long spines. Cucullus more or less narrowed apicad.

Female genitalia. Sterigma, a delicate, truncate cylinder, upper edge with a few strong spines and a small cardiform aciculate prominence in front with upper edge notched; an aciculate membraneous collar at the foot of sterigma. Colliculum long and broad, submembraneous except a small sclerite at its end. Signa absent.

**Syntozyga anconia** (Meyrick, 1911) comb. nov.

(figs. 536, 541, 551-552, pl. 5 fig. 2)

*Polychrosis anconia* Meyrick, 1911a: 257 (♂, Queensland). — Diakonoff, 1954a: 57 (not *Polychrosis*). — Clarke, 1955: 45.

Distribution. Queensland.

Australia, Queensland, Toowong, 1896, no. 7807 (Dodd), 1 ♂, genit. slide 1771 ("*Polychrosis sedifera* Meyr., teste Meyr."); the same, 22.ii.1897 (Dodd) (Walsingham Coll. 19455, "*Polychrosis anconia* M."), 1 ♂, genit. slide 1772 (BM). Queensland, Cunningham's Cap, 3000 ft, 19.iii.1950 (I.F.B. Common), 1 ♂, genit. slide 7907. Toowoomba, 3.xi.1906, 1 ♀, genit. slide 7909 (CSIRO).

Male genitalia. Tuba analis voluminous. Valva with sacculus very broad, subquadrate at base, edge thickened, with a couple of huge spikes at top and another in middle of lower edge, with a series of hairs or bristles in between; Spc<sub>1</sub>, a group of very long but sparse bristles and a single smaller spike. Cucullus not narrowed, subclavate. Aedeagus long and rather slender, curved beyond base only.

Female genitalia. Sterigma, a strong and dark, prominent body, subquadrate in

frontal (ventral) aspect, sides concave, bottom gently emarginate, upper edge with a rounded and concave, gully-like thickening, bristly at the sides above and densely covered throughout with small isolated groups of acicula. Signa absent.

*Syntozyga pedias* (Meyrick, 1920) comb. nov.

(figs. 515, 531-533, 537, 546)

*Polychrosis pedias* Meyrick, 1920: 347 (♀, Bengal). — Clarke, 1955: 237.

*Lobesia pedias*; Clarke, 1958: 472, pl. 235 figs. 2-2b (holotype, ♀, wings & genit. figured).

*Eucosma familiaris* Meyrick, 1921: 153 (♂♀, Java). — Clarke, 1955: 140. Syn. nov.

Distribution. India: Bengal. Java.

♂ 9.5-11 mm. Head pale ochreous, vertex dull pale tawny. Palpus pale tawny-ochreous, median segment beyond middle laterally suffused with brighter tawny, terminal segment rather long, rising, tawny with a pale ochreous tip. Thorax light tawny, apical tuft pale ochreous, with at base a dark brown spot on each side. Abdomen light glossy grey, venter whitish-grey.

Fore wing dilated, suboval-truncate, costa moderately curved along anterior  $2/3$ , more curved posteriorly, apex obtuse, termen straight, hardly concave in middle. Rather variable. A fresh specimen (genit. slide 2138) is redescribed. Costa with numerous unequal short dark brown strigulae alternating with light colour, whitish anteriorly, creamy posteriorly. Basal patch to before  $1/3$ , edge somewhat suffused, tawny, strewn with pale greyish, marbled with fulvous and transversely strigulated and dotted with dark purple-fuscous; space beyond basal patch on costal half whitish, with a narrow pale fulvous parting line; lower half of this space rather strongly suffused posteriorly with dull light tawny-orange; transverse fascia formed by a dark ferruginous-fuscous or dark fuscous cuspidate and oblique fasciate spot from middle of costa, with point slender and constricted, two short teeth above point on posterior edge; lower half of fascia formed by a single acute dentoid small spot on  $3/4$  of dorsum, slightly inwards-oblique; a sinuate and not distinct light tawny fascia from  $2/3$  of costa to lower half of dorsum, narrow above, constricted above middle, gradually dilated below; light tawny strigulae from posterior dark costal dots, penultimate submarginal, dark brown; space around dentoid mark and beyond transverse fascia suffused with grey, with a silky gloss, except along costa. Cilia grey.

Hind wing rather dark fuscous, dull and opaque, paler towards base, a narrow and pale ochreous-golden suffused marginal streak. Cilia pale grey-fuscous, basal third deeper grey-fuscous.

The diversely coloured specimens (Bogor, 8.ix.1955), are of whitish ground colour strongly strigulated with dark fuscous but less suffused with grey, markings dark fuscous, a smaller orangeish-tawny suffusion on middle of dorsum. This colouring is apparently the same as the original colouring of the lectotype which is strongly faded.

♀ 9-13.5 mm. Head pale ochreous, vertex suffused with tawny. Palpus light tawny,

suffused with brighter tawny laterally, terminal segment with a brown ring. Thorax pale fuscous mixed with pale ochreous, fulvous and dark fuscous, tegula deeper fulvous-mixed. Abdomen pale fuscous, glossy, dotted with tawny-fuscous, anal tuft ochreous, venter pale ochreous.

Fore wing oblong-subtruncate, costa curved throughout, apex subobtusate, termen straight, oblique, rounded below. Pale fuscous, transversely strigulated with little contrasting light fulvous colour, pale ground colour appearing as numerous roundish dots; markings bright ferruginous. Basal patch to about  $1/3$ , edge well-defined, obtusely prominent above middle, notched below middle, ferruginous, towards edge lighter fulvous; transverse fascia rather irregular, formed by an oblique slightly clavate fasciate spot, its lower end comma-like, concave outwardly and reaching just below base of vein 6; lower half of patch more than three times as broad, formed of two slightly diverging cuspidate erect spots at the sides, on dorsum beyond  $1/2$  and beyond  $3/4$ , respectively, reaching to middle of disc, interconnected, and connected with costal spot by purplish-grey suffusion, extending along posterior edge of fascia to costa; costa throughout with numerous, short purplish-brown transverse marks, alternating with creamy strigulae; terminal edge slightly dusted with brownish. Cilia glossy pale fuscous-grey, basal half suffused with tawny.

Hind wing rather pale fuscous-grey, glossy, becoming paler on basal half, cilia glossy pale fuscous-grey; darker fuscous but faint antemedian and subapical bands and a pale ochreous basal line.

Sometimes specimens darker, more or less suffused with greyish, making markings less contrasting.

Male genitalia. Tegumen moderately broad, slightly constricted. Gnathos, a slender, straight band. Valva with a very broad, deeply concave, almost cup-shaped sacculus half, edge of sacculus moderately thickened, sclerotized, ending in a strong inwards-directed cusp (this cusp changes its shape rather with the valva being more or less pressed open). Cucullus rather slender, only top narrowed. Aedeagus short.

Female genitalia. Sterigma, a rounded, strongly aciculate flattened body, lamella postvaginalis part with long and narrowed lateral rising processes. Ostium bursae proper, annular, an aciculate low collar. Colliculum bivalval. Eighth segment elongate and sclerotized.

West Java, "Java, 1894", "M 126", 1 ♂, genit. slide 5647 (Collection Piepers & Snellen). Buitenzorg (= Bogor), 250 m, "1894 ♀", "M 127", lectallotype, genit. slide 7480; 23.vi.1940, 1 ♂, genit. slide 2138; 9.v.1950 (T. Ineng), 1 ♀; 6.ix.1955, 1 ♂, genit. slide 7483 (F. C. Drescher) (LM).

West Java, Buitenzorg, 250 m, 22.v.1949 (F. C. Drescher), 1 ♀, genit. slide 2139; furthermore: 4.ix.1948; 20, 27.ii, 13.iv, 19.vii.1949, 16.x.1951 and 2.viii.1955 (F. C. Drescher, E. J. Beeltje, A. M. R. Wegner), 8 ♀. 1 ♀, genit. slide 7513 (F. C. Drescher); 21.viii.1948, 10.ix.1948, 14.vi.1949, genit. slide 8024 (F. C. Drescher), 3 ♀. Bandoeng, 700 m, 21.xii.1939, 20.xii.1940, 2 ♂, genit. slide 7479 (A. Diakonoff). Central Java, Pekalongan, sea level (Van Deventer), 1 ♂, genit. slide 7495, lectotype of

*Eucosma familiaris* Meyrick, 1921, hereby selected; 1 ♂, genit. slide 7478 and 1 ♂, without abdomen (all the same collector) (Coll. Piepers & Snellen). Rembang, sea level, "M 127", 1 ♂. East Java, Pasoeroean, 5 m, 3.ii.1941, 1 ♂; 10.iii.1941, 1 ♂, genit. slide 7482 (A. Diakonoff). Tretes, 900 m, 2.ii.1940, 1 ♂, genit. slide 7489 (A. Diakonoff). Mt. Ardjoeno, 1 ♂, genit. slide 7490 (Hekmeyer). Mt. Ardjoeno, Tretes, 900 m, 2.ii.1940 (A. Diakonoff), 1 ♀, genit. slide 7514. Mt. Smeroe, S. slope, Ranoe Daroengan, 820 m, 27.vi.1939 (A. Diakonoff), 1 ♀, genit. slide 7515 (LM).

Bali, Batoeriti, 1000 m, 10.iii.1941 (P. C. J. Kalis), 1 ♂, without abdomen (BM).

Malay Peninsula, Kuala Lumpur, 18.xii.19.1 (C. Boden Kloss), 1 ♀, genit. slide 7538 (BM).

Southeast Borneo, Ampah, 0-20 m, iv-v.1948 (Liem Swie Liong), 1 ♂, genit. slide 7500 (LM).

Celebes, Maros, 40 m, 1 ♀, genit. slide 7497 (Piepers?), 14 ♂, 2 ♀ (LM).

Northwest New Guinea, Schouten Is., Biak Id., N of Sorido, 25.xii.1952, 1 ♀, genit. slide 7954. Sorido, 26.vii.1952, 1 ♀, genit. slide 7952. Fakfak, 11.iv.1952 (all by L. D. Brongersma), 1 ♀, genit. slide 7955 (LM).

Thailand, Cheng Mai, 9.xii.1957 (L. D. Brongersma), 1 ♀, genit. slide 7484 (LM).

#### *Syntozyga macrosperma* Diakonoff, 1971

*Syntozyga macrosperma* Diakonoff, 1971: 188, fig. 14 (♂, S. Thailand).

Distribution. South Thailand.

Male genitalia. Similar to those of *S. pedias* (Meyrick). Tegumen obtusely pointed, except point densely haired. Gnathos ill-defined, a horizontal narrow band. Valva with a broad and rounded sacculus, unarmed except a large cusp at top, edge concave below cusp, with a corona of long spiny bristles; cucullus slender, subclavate, a patch of short spines on base of sacculus cusp upper side.

The species is allied with *S. pedias* (Meyrick) but is larger and more brightly marked. The genitalia are distinct, with a typically concave edge of the valva below the cuspidate top of the sacculus.

#### *Syntozyga stagonophora* spec. nov.

(fig. 548)

♂ 11-14.5 mm. Head light ochreous-tawny, face whitish, a thick tuft on forehead. Palpus light ochreous-tawny, median segment on the outside with a median roundish dark fuscous suffused spot. Thorax light ochreous-tawny. Abdomen pale ochreous.

Fore wing oblong-suboval, rather narrow, costa gently curved, more so on basal half, apex obtusely pointed, termen moderately oblique. Pale ochreous, more or less densely strewn with fuscous-tawny points and small transverse strigulae. Markings tawny-fuscous, strigulated with darker or dark fuscous. Basal patch to beyond 1/4;

light fuscous-tawny, rather regularly strigulated throughout with fine dark fuscous lines, more or less parallel to edge; a dark fuscous-brown streak along costa with a pair of light marks in middle; edge of patch vertical on costa, angulate in middle, with a small tooth above angle, an extension along dorsum; a marginal, darker fuscous, well-defined spot occupying angle of patch, to halfway dorsum; a couple of dark fuscous short strigulae above dorsum; costa beyond patch with a small triangular dot flanked by minute transverse lines; transverse fascia formed by a well-defined subtriangular dark brown spot, cut by a pair of thick fuscous-lead, dull oblique stripes; anterior edge of patch sinuate, top to below  $\frac{1}{3}$  of disc, connected by a minute zigzagged strigula with a well-defined, inwards-oblique short streak below middle of disc, pale-edged; an oblique, subtriangular fuscous spot on dorsum before tornus, upper edge angularly excised, top rounded and curved posterad; thin patch sometimes almost connected with oblique discal strigula by light tawny suffusion also extending towards terminal spot; this spot moderate, well-defined, fuscous-tawny, inverted-pear-shaped, its slender stalk to termen above tornus; posterior part of costa with two triangular brown dots, alternating with minute lines; a dark dot in apex, below extended into a fasciate inwards-oblique, submarginal mark, to opposite half of termen, sometimes interrupted; dorsum and tornus with darker transverse strigulae. Cilia pale ochreous with a median and an apical light tawny band, pale tawny between these.

Hind wing dark fuscous, thinly dark-scaled but opaque. Cilia pale ochreous, a sub-basal fuscous band, apical third of cilia pale grey.

Male genitalia. Tegumen sclerotized. Uncus simple, membraneous, conical. Valva with a large sclerotized sacculus part ( $\frac{3}{4}$ ) which is concave longitudinally, ventral edge deeply emarginate at base, beyond this with a thick patch of spines along edge and on disc and a moderate apical spine. Cucullus semioval, rather broad, about  $\frac{1}{4}$ , rising from disc of valva, finely haired only. Aedeagus curved, moderate. Juxta, a large cup.

Female unknown.

Ceylon, Hambantota, sea level, 1893 (Pole), 1 ♂, holotype, genit. slide 7869; 8 ♂, paratypes, 1893, 1894 (Pole), genit. slides 7835, 7876; Puttalam, 1892 (Pole), 1 ♂, paratype; Nawalapitiya, 2000 ft, 1896 (Pole), 1 ♂, paratype (BM).

The species superficially is extremely similar to *Bubonoxena ephippias* (Meyrick) and was therefore probably overlooked by Meyrick. The chief differences of the markings are: the more slender, fasciate and not pear-shaped terminal mark, and the discal mark usually being connected with top of costal spot, in *ephippias*.

### *Syntozyga bicuspis* spec. nov.

(fig. 530)

♂ 12 mm. Head whitish-ochreous, mixed with a few dark fuscous scales. Palpus whitish-ochreous, median segment externally with two oblique dark fuscous stripes.

Thorax whitish-ochreous, slightly strewn with dark fuscous. Posterior tibia whitish-ochreous. Abdomen pale ochreous.

Fore wing oblong-suboval, costa gently curved anteriorly, straight posteriorly, apex obtusely pointed, termen tolerably straight, oblique, wing broadest in middle, not dilated thence. Whitish, markings dark fuscous. Basal patch indicated by fine punctulation on basal  $1/6$ , edge oblique; an almost vertical, erect-oval spot at  $1/4$ , from vein  $12$  to  $1b$ , gently constricted in middle, paler-centred; costa with a series of wedge-shaped dots, alternating with slender transverse lines, dots becoming larger posteriorly; transverse fascia slender, formed by an oblique, moderate streak to middle of wing, parallel-sided, top rounded; lower half of fascia twice as broad, formed by a paler tawny-fuscous subquadrate spot on dorsum beyond middle, upper edge obliquely limited by fold; three dots on posterior half of costa continued by slender strigulae to below costa; a round dot in apex, an oblique wedge-shaped spot with acute point resting on  $2/3$  of termen, upper edge rounded; minute dark dusting scattered all over wing, more distinct along termen and tornus; a moderate spot on  $1/3$  of dorsum. Cilia (imperfect) whitish with a dark fuscous subapical band.

Hind wing pale, dusted with brownish-fuscous. Cilia whitish, with a dark fuscous median band.

Male genitalia. Resembling those of *S. psammetalla* but without  $Spc_1$ ; valva triangular, top of sacculus being produced into a triangular, acute cusp; disc of valva beset by equal rather strong spiny bristles; a patch of smaller bristles, contiguous with the first, covering sacculus prominence except at edges; cucullus short and broad, pointed. Aedeagus curved; juxta very large, boat-shaped.

South India, Harsleykonda, 1908 (no. 262) (Campbell), 1 ♂, holotype, genit. slide 7875 (BM).

A pale species, resembling *S. stagonophora* spec. nov., but with a fasciate costal mark (instead of triangular) and a more slender terminal spot. The genitalia are very distinct.

### **Bubonoxena** Diakonoff, 1968

*Bubonoxena* Diakonoff, 1968: 65 (type-species, *B. spirographa* Diakonoff, Luzon Id.).

Head with roughly appressed scales and a small tuft on forehead, face smooth. Ocellus posterior. Proboscis very short. Antenna in male slightly thickened and serrulate, pubescent. Palpus subascending, basal segment rough; median segment moderately long, slender anteriorly, abruptly and strongly dilated, triangular, posteriorly, rough along apex, terminal segment slender, subobtuse, moderate. Thorax without a crest. Hind tibia without pencil.

Fore wing elongate, rather narrow, apex subobtuse, termen gently rounded, oblique. Vein 2 from  $3/5$ , 3 from angle, 4 closer to 3, 5-7 tolerably parallel and distant, 7 to termen, 8 from angle, 7-9 equidistant and rather close together, 10 from  $3/4$ , 11 from before middle, chorda and median branch absent.



beyond the top of costal part of fascia; in one specimen this mark is absent. (In *B. ephippias* the homologous part of transverse fascia is either absent or shaped as a longer and more sinuate small strigula).

Male genitalia. Cucullus thick, moderately, but gradually narrowed towards top, its outer edge simple, without a triangular process (as in *ephippias*); central patch of spiny bristles smaller, well defined and rounded.  $Spc_3$  somewhat shorter than in *ephippias*; a labis-like prominence of base of costa with a group of small bristles (in *ephippias* minute).

Females unknown.

North Celebes, Minahassa, Aer Tembaga, vii.1948 (J. Westenberg), 1 ♂, genit. slide 7501 (LM).

West Sumatra, Fort de Kock, 920 m, ii, vi, ix.1921 (E. Jacobson), 3 ♂, genit. slides 7476 and 7613 (LM).

### *Bubonoxena ephippias* (Meyrick, 1907)

(figs. 518F, 540, pl. 1 fig. 9)

*Chrosis ephippias* Meyrick, 1907: 731 (♂♀, Ceylon, India). — Diakonoff, 1954: 57 (nr. *Lobesia*). — Clarke, 1955: 128.

*Polychrosis ephippias*; Meyrick, 1909: 587. — 1918: 11 (S. Africa). — 1924: 547 (Rodriguez Id.). — Fletcher, 1932: 26, pl. 17 figs. a-d (life history, stages, in India).

*Bubonoxena ephippias*; Diakonoff, 1968: 68, figs. 81, 99, 801-802 (lectotype selected; wings, genit. ♂♀, figured).

Distribution. Ceylon (type locality), India, ?South Africa, ?Rodriguez Id. (the two last mentioned localities have to be verified).

Food plant. *Commelina bengalensis* (Commelinaceae).

Male genitalia. Valva with sacculus triangular and strongly projecting crowned with a long, slender pencil of bristles; disc of cucullus with a circular patch of spines gradually becoming longer below centre anteriorly; cucullus narrowed, ventrally with a process bearing a smaller pencil of deciduous bristles.

Female genitalia. Sterigma darkly aciculate, lamella postvaginalis inverted-triangular, two patches of acicula at the sides; lamella antevaginalis triangular, densely aciculate, except on two submedian stripes. Colliculum broad and long, narrowed. Signum absent.

Ceylon, Hambantota, sea level, 1894 (Pole), 4 ♂, genit. slides 7857, 7880, 7881, 7914; 2 ♀, genit. slides 7870, 7882. Nawalapitiya, 2000 ft, 1897 (Pole), 3 ♀, genit. slides 7866 and 7877; Bogawantalawa, vi.189.. (Pole), 1 ♀; Pundaloya, 3500-4500 ft, 189.. (Green), 1 ♂, genit. slide 7832; Kandy, vii.1909, 1 ♂, genit. slide 7861 (BM).

India, Bombay, Bandra, 4, 8 and 13.viii.1902, respectively, (BM 1906-12), 3 ♂, genit. slides 7854, 7863. Calcutta, "*Chrosis ephippias* Meyr.", 1 ♂, genit. slide 1926. Bombay, Bassein Fort, "A. m.", x.1909, 1 ♂, genit. slide 1935. Mysore, Belgaum, vi.1896 (Watson Coll., BM 97-192), 2 ♀, very dark, genit. slide 7731. Bihar, Pusa, 26. vii.1917 (Fletcher), 1 ♂, genit. slide 7904 (BM).



**Bubonoxena endaphana** Diakonoff, 1968

(fig. 518E)

*Bubonoxena endaphana* Diakonoff, 1968: 66, 67, figs. 66, 539 (♀, Philippine Is., genit., wings figured).

Distribution. Philippine Is.: Luzon.

The species is very similar to *B. ephippias* (Meyrick) but has markedly narrower fore wing and very distinct genitalia. The female holotype is still unique.

Female genitalia. Rather similar to those of *B. transversa* spec. nov., but aciculae shorter, ostium smaller, higher than broad, flanked by two pairs of transverse, sub-oval tumescences.

**Bubonoxena transversa** spec. nov.

(figs. 538-539)

♀ 11.5 mm. Head pale ochreous, vertex slightly mixed with fuscous, face whitish. Palpus pale fuscous. Thorax dark fuscous; tegula strongly infuscated except along edge. Abdomen pale ochreous-fuscous.

Fore wing oblong, costa curved, apex moderately pointed, termen sinuate, little oblique. Greyish-white densely dusted grey-fuscous, along costa tinged pale ochreous. Basal patch to 1/4, suffused slightly deeper tawny-fuscous, marbled dark fuscous, especially along edge; this edge obtusely pointed, concave above and beneath; five pairs of thick pure white marks along posterior half of costa; transverse fascia divided in a dark fuscous, whitish-edged costal triangle, with truncate top to middle of wing; and a pair of obliquely longitudinal dark fuscous, whitish-edged marks, upper slender, almost touching costal spot, lower more posterior, inwards-oblique, resting on dorsum before tornus; less than tornal half of wing suffused with darker grey-fuscous; an apical spot, ochreous, densely dusted dark fuscous and a similar subfasciate terminal mark, whitish-edged, obliquely clavate, top becoming pale ochreous, stalk short, curved, to dorsum just above tornus. Cilia pale fuscous, with a pure white basal line, broad at apex, gradually narrowed towards tornus, and a subbasal ochreous band, mixed with fuscous.

Hind wing moderately pointed, termen sinuate above; dark fuscous becoming, paler towards base. Cilia light ochreous with a pale basal line and a subbasal and subapical suffused fuscous band.

Female genitalia. Sterigma strongly plicate, with long, dense aciculae, lamella antevaginalis forming two transverse tumescences touching mesially below ostium; this is shallowly cup-shaped, outer edge aciculate entirely, lamella postvaginalis with a band of short aciculae; ostium flanked by narrowed transverse aciculate folds.

India, Assam, Cherra Punji (native collector), "*Polychrosis ephippias* Meyr." (in Fletcher's hand), 1 ♀, holotype, genit. slide 7948 (BM). Apparently closely allied to

*B. ephippias* but with quite distinct genitalia, the main pair of tumescences being transverse, instead of longitudinal.

### *Cyclacanthina* gen. nov.

Head with dense, appressed scales. Ocellus posterior. Proboscis short. Antenna in male gently thickened, short-ciliate. Labial palpus subascending, gently sinuate, median segment strongly dilated with roughish scales, expanding towards apex, projecting eye-breadth beyond eye, terminal segment slender, subacute, obliquely ascending and exposed, smooth. Thorax with a slight posterior crest. Posterior tibia normal, without pencil. Abdomen normally scaled.

Fore wing oblong-truncate, costa curved throughout, apex subobtuse, termen gently concave above, rounded below. Vein 2 from  $2/3$ , 3 from angle, 4 almost connate, 5 and 6 remote and parallel, 7 and 8 stalked, seldom closely approximated, 7 to termen, 9 connate at base with stalk of  $7 + 8$ , 10 from beyond middle of distance  $11-9$ ,  $11$  from before middle, chorda and median branch absent.

Hind wing with a cubital pecten, vein 2 from well beyond  $2/3$ , 3 from distinctly before angle, 4 from angle, 5 moderately approximated at angle, 6 and 7 long-stalked, basal part of upper edge of cell obliterate.

Male genitalia. Tegumen very broad, pointed in middle, shoulders rounded. Vinculum strong, quadrate or conical. Valva broad, oval, sacculus with a sclerotized, band-like edge ending in a short cusp, sometimes with a strong bristly  $Spc_1$ ;  $Spc_2$  diversely developed, often a circular membranous elevated edge (harpe) upon which one or more whorls of spines; cucullus dilated, sometimes broadly rounded.

Female genitalia. Eighth segment moderately elongate and sclerotized. Sterigma aciculate, forming a tumescence around ostium. Ductus and corpus bursae simple.

Type-species, *Cyclacanthina episema* spec. nov. (Java, Soemba, Ceylon).

A group of small species with modest colouring and *Eucosma*-like markings. The genus is nearly allied with *Syntozyga* Lower, but differs by the stalked veins 7 and 8 in the fore wing, by the development of the male harpe and by the broad cucullus. This novel form is also closely related with *Bactra* Stephens, differing by the stalked veins 7 and 8 and by the absence of a bristled uncus.

### Key to the species of *Cyclacanthina*

The species of this genus again cannot be discriminated without the use of genital characters; they are variable and very similar, not only resembling each other closely, but also the species of *Bubonoxena* Diakonoff.

### Males

1. Valva with outer (ventral) edge gradually curved; an additional lobe below middle of disc . . . . . *monosema*

- Valva with outer (ventral) edge emarginate; an additional lobe above middle of disc . . . . . 2  
 2. Lobe of disc short, triangular, central . . . . . *episema*  
 — Lobe of disc oblong, submarginal . . . . . *negligens*

## Females

1. Ostium, a slender sclerotized not aciculate ring . . . . . *monosema*  
 — Ostium a strongly sclerotized and aciculate subtrapezoidal plate . . . *episema*

**Cyclacanthina monosema** spec. nov.

(figs. 549, 550)

♂ 9.5-11 mm. Head light ochreous, dense tufts on vertex touched with tawny. Palpus pale ochreous, median segment dark fuscous-brown externally except along edge, terminal segment dark fuscous; median segment with apical tuft below, produced into an acute point. Abdomen pale ochreous.

Fore wing with veins 7 and 8 closely approximated; oblong-suboval, costa curved throughout, apex pointed, termen gently sinuate above, rounded below. Light ochreous, rather strongly obscured by short dark brown minute strigulae, strewn all over the wing, by paler tawny, fine, more continuous strigulae and some greyish suffusion. Basal patch rather ill-defined, darker fuscous-tawny, strewn with blackish-brown along costa and in four parallel series along lower half of outer edge, so as to form a darker, sometimes fuscous-suffused oblique spot, rising from dorsum beyond base, reaching middle of wing; edge of patch angulate; costal patch dark brown, slightly postmedian, triangular, top narrowly connected with a cloudy tawny-fuscous patch on termen before tornus, more or less extended by tawny suffusion to middle of dorsum, by greyish suffusion almost to terminal mark; costa posteriorly pale, with two distinct wedge-shaped oblique dark dots, alternating with minute lines, a round dot in apex, continued below by a slender preterminal dark strigula; terminal mark oblique, fasciate, gently dilated downwards (decidedly broader than in *B. ephippias*), touched with tawny. Cilia pale ochreous, a fuscous bar opposite apex, a subbasal slender brown band, tip mixed with brownish.

Hind wing pale ochreous, thinly and regularly strewn with tawny brownish scales, so appearing pale tawny-greyish. Cilia light ochreous with a subbasal, well-defined brownish band, cilia opposite apex clouded with grey.

Male genitalia. Tegumen and uncus membraneous. Gnathos slender, sclerotized, in middle above with a trapezoidal dilatation. Valva simple, oval;  $Spc_1$ , a single long spine, a few short bristles at base; costa in middle with three long spines;  $Spc_2$ , a strong, harpe-like conical prominence beset with strong spines; another harpe, a transverse hairy median ridge across disc, a single spine at ventral end, two thickened knobs bristly at top, at dorsal end. Cucullus ill-defined, finely bristled, marginal.

Ceylon, Nawalapitiya, 2000 ft, 1895 (Pole), 1 ♂, holotype, genit. slide 7859; 2 ♂, paratypes, genit. slides 7858 and 7864 (BM).

A small species with a fasciate, not pear-shaped terminal mark and distinct genitalia. One specimen is whitish, with strongly reduced markings.

♀ 11-13 mm. Palpus long, 3-4 × diameter of eye, median segment triangular, pointed, terminal segment entirely concealed, light ochreous-tawny. Thorax light ochreous-tawny. Abdomen pale ochreous.

Fore wing as in male but narrower, termen more sinuate. More fulvous-tinged, stronger marbled and suffused with light tawny and on posterior third, with lilac-grey. Basal patch ill-defined. Costal spot in one paratype reduced to an oblique, clavate streak, end dilated posterad and rounded: fuscous-brown or chestnut-brown; dorsal spot well-defined, inwards-oblique, top rounded, tawny-fulvous; terminal spot fasciate and clavate, dilated above, orange-fulvous; apical patch larger, dark brown.

Otherwise as in male. Hind wing as in male.

Female genitalia. Eighth segment moderately elongate, cylindrical. An- and post-apophyses slender and long. Sterigma, a sclerotized simple ring, with upper half dilated, forming a transverse band, concave above; ostium punctulate inside. Colliculum very short, bivalval, hyaline. Ductus bursae short. No signa.

Ceylon, Nawalapitiya, 2000 ft, 1895 (Pole), 1 ♀, allotype, genit. slide 7851; 2 ♀, paratypes, genit. slides 7871 and 9879 BM (BM). Supposedly the sexes belong together. Future collecting will prove this.

### *Cyclacanthina negligens* spec. nov.

(fig. 545)

♂ 9-9.5 mm. Head whitish-ochreous. Palpus whitish-ochreous. Median segment with two oblique transverse brown strigulae; terminal segment long (about 1/2 median), infuscated except tip and base. Antenna rather thickened, whitish-ochreous. Thorax whitish-ochreous with a faint grey opalescence, a small fuscous dot on shoulder and before tip of tegula. Abdomen whitish-ochreous, strewn with light fuscous, anal tuft light ochreous, glossy.

Fore wing oblong-semioval, posterior half narrowed, costa considerably curved throughout, apex obtusely pointed, termen straight, more oblique than in preceding species, rounded below. Whitish, markings fuscous. Basal patch to beyond 1/4, marginal 1/3 forming a tolerably continuous band, outer edge gently rounded, with a small notch above dorsum; anterior 2/3 of patch pale with two dark fuscous lines; costal half of transverse fascia hardly angulate, obliquely clavate, posterior tooth broader than in other species; hardly any grey or purple suffusion on costa beyond this spot; posterior half of costa with five subequal wedges, ultimate apical; preterminal fascia light fuscous, short, anteriorly pointed, anterior half being obliterate; dorsal markings usually dissolved in marbling or dusting, seldom lower half of trans-

verse fascia indicated by a light tawny suffusion, connected with upper part by dark marbling; sometimes a faint acutely wedge-shaped mark on dorsum before tornus; pale ground colour rather densely strigulated with fuscous. Cilia (imperfect), pale ochreous.

Hind wing semipellucant, whitish, dusted with light fuscous. Cilia concolorous with a fuscous suffused submedian band.

Male genitalia. Tegumen with a slightly produced, pointed top.  $\text{Sp}_1$  formed by a row of proximal long bristles and a sheaf of distal stout spines. Harpe shaped as an auricular impression encircled by strong bristles.  $\text{Sp}_2$ , a group of short thin bristles. Sacculus thickened, top triangularly projecting, a tooth at the foot of  $\text{Sp}_2$ .

Female unknown.

West Java, Buitenzorg, 250 m, 13.v.1950 (T. Ineng), 1 ♂, holotype, genit. slide 7481; the same locality and collector, 3.v.1950 and 8.v.1950, 2 ♂, paratypes, genit. slide 7525.

Southwest Celebes, Maros, 40 m [Piepers], 1 ♂, paratype, genit. slide 7474 (LM).

A small species, paler than the other two and with a longer terminal segment of the palpi.

***Cyclacanthina episema* spec. nov.**

(figs. 517, 542, 544)

♂♀ 11-12 mm. Head whitish-ochreous. Palpus whitish-ochreous, dorsal half of median segment dusted with dark brown, except an oblique median streak; terminal segment dusted with dark brown except tip. Antenna pale ochreous, with a dark brown streak at base anteriorly. Thorax whitish-ochreous, strewn with dark brown. Posterior tibia pale ochreous. Abdomen whitish, infuscated, anal tuft pale ochreous.

Fore wing oblong-subtruncate, dilated, costa strongly curved throughout, apex obtusely pointed, termen straight and little oblique above, rounded beneath. Pale ochreous or whitish-ochreous, markings fuscous-brown. Basal patch marbled with fuscous, edge obtusely angulate, notched below middle, often replaced by three transverse lines, more distinct on costa, and by an obliquely-quadrate dark fuscous spot at 1/5, fading out below and hardly reaching upper edge of cell; this followed on costa by two dark transverse dots; posterior half of costa dark fuscous, with five pairs of broad white marks, thinly parted; two anterior pairs smallest, more approximated to each other, third and fourth pairs largest, ultimate pair subapical; transverse fascia indicated by a broad obliquely transverse spot reaching to middle of cell, its lower half extended posteriorly into a pointed process, space above process filled out with purplish-lilac; lower half of fascia indicated by a suffusion along posterior half of dorsum, forming a light tawny triangular spot anteriorly, limited by fold, and a circular spot of sparse dark fuscous marbling posteriorly, rising to middle of disc (often partly obliterate, with a longitudinal dark jot along its upper edge only remaining); an oblique regularly curved pale tawny band from dark costal mark between

2nd and 3rd pairs of costal strigulae, to lower  $\frac{1}{3}$  of termen; a fuscous spot in apex, descending along upper  $\frac{1}{4}$  of termen. Cilia ochreous-whitish, with a suffused, light tawny submedian fascia and tips partly mixed with fuscous.

Hind wing semipelluculent, fuscous. Cilia pale ochreous, with a fuscous median and an apical suffused band.

Male genitalia. Tegumen with a slightly emarginate and rounded top.  $Spc_1$ , a distal straight row of long robust spines, with some irregular teeth and one long spine proximally; harpe, a sclerotized smooth ridge ending in a few short spines;  $Spc_2$ , a sheaf of long robust spines upon a rounded tumescence. Cucullus clavate.

♀ 11 mm. Head and palpus similar to those in male, palpus stronger dilated posteriorly. Thorax rather densely dusted with fuscous, a faint median band, tips of tegulae and tips of scales of the posterior tuft light fulvous. Abdomen fuscous, anal tuft pale ochreous.

Fore wing narrower, slightly narrowed from middle, costa less curved, termen more sinuate. Basal patch indicated by its edge, further pale and marbled with darker; three transverse undulate lines, filling out the space between patch and transverse fascia; costal patch dark brown and ferruginous, almost contiguous to the dorsal part of transverse fascia which is darker posteriorly, with three rising teeth-like small processes; preterminal oblique fascia slender, together with costal wedge-shaped spots and apical spot bright ferruginous, as in submedian band of the cilia. The entire wing much more ferruginous-tinged than in the male and almost entirely filled out with transverse strigulation. Hind wing darker fuscous, cilia pale with a distinct submedian and a subapical fuscous band.

Female genitalia. Eighth segment, a sclerotized high collar. Sterigma lyra-shaped: dilated and rounded below, with a thickened and strongly aciculate edge, upper portion not thickened, sclerotized, nor aciculate. Colliculum cylindrical, moderately long.

East Java, Tengger Mts., Nongkodjadar, 1300 m, at light, 5.iv.1940 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 7524, 1 ♀, allotype, genit. slide 7498; the same locality and collector, 23.iv.1940, 1 ♂, paratype, genit. slide 7475; 10.iii.1940-6.v.1940 and 10.xi.1940-28.xii.1940, 17 ♂, paratypes. Gempol near Malang, 500 m, 2.ii.1940 (A. Diakonoff), 1 ♂, 1 ♀, genit. slide 1463, paratypes. Mt. Smeroe, Southern slope, Ranoe Daroengan, 820 m, 21.i.1940 (A. Diakonoff), 1 ♂, paratype (LM).

West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, at light, x.1949 (A. M. Neervoort), 1 ♂, paratype, genit. slide 7511; the same locality and collector, xi.1948 and ix.1949, 2 ♂, paratypes. "W. Java, Preanger, 5000 ft. (Sythoff)", 3 ♂, paratypes, two studied and identified by E. Meyrick as "*Polychrosis ephippias* Meyr.", with identification nos M 77 and M 78 (genit. slide 7512), respectively (LM).

West Soemba, Waimangura, 450 m, viii.1949 (E. Sutter & A. M. R. Wegner), 1 ♂, paratype, genit. slide 7541 (LM).

The specimens from West Java are sometimes slightly larger and darker, but there are no other differences.

Ceylon, Kandy, 1600 ft, 189.. (Pole), 1 ♀, genit. slide 7878 (BM). A slightly aberrant specimen.

### Parabactra Meyrick, 1910

*Parabactra* Meyrick, 1910b: 72 (type-species, *Epibactra arenosa* Meyrick, by original designation). — Fletcher, 1929: 161. — Diakonoff, 1950: 293. — Clarke, 1958: 568, pl. 283 figs. 1a-3a (4 spp., bionom., illustr.).

*Epibactra* Meyrick, 1909 (nec Ragonot, 1894): 582 (type-species, *E. arenosa* Meyrick; preocc.). — Fletcher, 1929: 71.

Palpi porrected, median segment dilated with roughish scales above and beneath, rather long and slender. Thorax without a crest.

Fore wing with vein 2 from  $2/3$ , 3 from angle, 4 closer to 3, 7 and 8 stalked, 7 to termen, 9 closely approximated at base, 10 from just before middle of distance 9-11, 11 from about middle.

Hind wing with 2 from before  $3/4$ , 3 from well before angle, 4 and 5 closely approximated from angle, 6 and 7 short-stalked or closely approximated towards base.

Male genitalia. Tegumen broad and short. Uncus very broad, top bilobed, lobes pointed. Socii absent. Gnathos, a slender, pending, inverted-trapezoidal rod. Valva simple, sacculus  $1/2$  or shorter, top prominent, rounded and bristly. Cucullus long, slender and narrowed, little haired. Aedeagus moderate, straight, base bulbous; cornuti, a sheaf of straight spines.

Female genitalia not studied.

A peculiar genus of three species, endemics of Ceylon. They resemble *Bactra* species closely, but the characteristic male genitalia show that the relationship is only slight.

Note. Not having any new data nor material of the three species at hand, I abstain from giving a key or further treating them here.

### Bactra Stephens, 1834

*Bactra* Stephens, 1834: 124 (type-species, *Tortrix lancealana* Hübner, [1796-1799] Holarctic region).

Palpus rather long and slender, longer in female, terminal segment exposed, pointed. Fore wing narrow, pointed, vein 7 free to termen, 8 from angle, 11 from middle, chorda to base of 7.

Hind wing with veins 3 and 4 separate or connate, veins 6 and 7 usually stalked, seldom connate.

Male genitalia. Uncus strong, curved, with a fringe of spines. Tegumen spherical. Valva narrow, sacculus constricted, sometimes with a separate lobe at the base of costa (valvula). Cornuti, a few spines, or absent.

Female genitalia. Sterigma usually funnel-shaped, more or less sclerotized, the length of sclerotized portion in relation with the length of the aedeagus of the male. Signum one, basket-shaped, scobinate sclerite.

The genus is divided into five distinct subgenera, of which one occurs in Africa

(*Spinobactra* Diakonoff), another in New Zealand (*Noteraula* Meyrick). In the South Asiatic region there occur *Bactra* Stephens, *Chiloides* Butler and *Nannobactra* Diakonoff.

For the full synonymy and literature may be referred to my 1956 paper (p. 2). This genus has been treated extensively in a series of papers so that there is no need to return to them in the present place (Diakonoff, 1959b, 1962, 1963a and 1964). Neither do I give a key to the species, for most of them cannot be distinguished by the superficial characters of colouring, markings, etc., while I have figured the genitalia of the two sexes — as far as available — of every species of the World fauna (except Australia, which has been treated preliminarily; a full survey of this fauna of *Bactra* may appear at some later time). The following records are only additions to the data in the above cited papers.

#### ***Bactra (Bactra) simplissima* (Diakonoff, 1953)**

*Endothenia simplissima* Diakonoff, 1953: 94, fig. 368 (♀, New Guinea).

Distribution. New Guinea, Snow Range.

Unfortunately the unique female specimen does not have a signum. This sclerite is very similar, when present, in the genera *Endothenia* and *Bactra*, but it seems to be always present in the former. Furthermore, the very narrow, pointed wings of our species and its sandy-ochreous colouring without any markings show that the species is a *Bactra*, to which genus it is now transferred. It seems to be closely allied with *B. kostermansi* Diakonoff, from the Vogelkop Peninsula, N. New Guinea.

#### ***Bactra (Bactra) metriacma* Meyrick, 1909**

*Bactra metriacma* Meyrick, 1909: 582 (♂♀, Ceylon). — Diakonoff, 1950: 288, pl. 5 fig. 19, pl. 7 fig. 31 (lectotype select., genit. ♂♀ figured). — Clarke, 1955: 205. — 1958: 312, pl. 155 figs. 4-4a (lectotype wings, genit. ♂ figured).

*Bactra (Bactra) metriacma*; Diakonoff, 1964: 14, fig. 8 (♂ genit. figured, Ceylon).

Distribution. Ceylon.

Ceylon, Maskeliya, viii.1902 (Mckwood), 1 ♂, genit. slide 7911 (BM). This is apparently an endemic species, local and not common.

#### ***Bactra (Bactra) bactrana* (Kennel, 1901)**

*Semasia bactrana* Kennel, 1901: 269 (♀, recte ♂, Malaga, tops of shoots of *Lavatera*; Margelan). Rebel, in Staudinger & Rebel, 1901: 262, no. 2029ter. — 1916: 514 (South Spain).

*Bactra bactrana*; Falkovitch, 1970: 68.

*Bactra graminivora* Meyrick, 1922: 521 (♂♀, Bengal). — Fletcher, 1932: 24, pls. 14, 15 figs. a-d (biology, food plants). — Diakonoff, 1950: 287, pl. 6 fig. 24, pl. 7 figs. 34, 36 (lectotype designated, genitalia ♂♀ figured). — Amsel, 1958: 76 (N. Arabia).

*Bactra cyperana* Amsel, 1951: 68, fig. 4 (♂, Morocco).

*Bactra mediterraneana* Agenjo, 1952: 99, pl. 4 figs. 32-33, pl. 12 figs. 6-7 (♂♀, Spain).



*Bactra (Bactra) graminivora*; Diakonoff, 1956a: 18, fig. 10. — 1959b: 179, figs. 6-7. — 1962: 21, figs. 1e, 18-20, 30, pl. 3 figs. 17-20. — 1964: 18 (Spain: Algeciras; N. Africa; Madagascar).

Distribution. Central Asia, N. Africa, Spain, Madagascar.

Food plant. *Lavatera* (Malvaceae, South Spain).

Assam, Khasis, Shillong, 5000 ft, 21.viii.1928 (T. B. Fletcher), 1 ♂, genit. slide 7900 (BM).

Ceylon, Puttalam, x.1894 (Pole), 1 ♂, genit. slide 7931.

Pakistan, "Karachi, Swinhoe", 1 ♂, genit. slide 1922 (BM).

### ***Bactra (Bactra) furfurana* forma *lacteana* Caradja, 1916**

*Bactra lanceolana* var. *lacteana* Caradja, 1916: 62.

*Bactra gozmanyana* Toll, 1958: 65, figs. 1, 2, pl. 2 figs. 1, 5; pl. 3 fig. 8. — Diakonoff, 1962: 31.

*Bactra (Bactra) lacteana*; Diakonoff, 1962: 45, pl. 18.

*Bactra (Bactra) furfurana* forma *lacteana*; Diakonoff, 1972: 146 (Mongolia).

Distribution. Palaearctic region. Hungary, Poland, Holland, Germany, Austria, U.S.S.R., China; apparently not in Great Britain.

Japan, Osaka, "S.F., 6.8.18" (in Meyrick's hand), 1 ♂, genit. slide 6417 (Meyrick Coll., BM).

### ***Bactra (Chiloides) angulata* Diakonoff, 1956**

*Bactra (Chiloides) angulata* Diakonoff, 1956a: 21-24, figs. 26-27 (♂♀, Central Java, East Borneo, Halmahera, Palau Is.). — 1956b: 524 (S. Dutch New Guinea). — 1964: 25, figs. 16-17 (N. New Guinea, Ceylon).

Distribution. Java. East Borneo (type-locality), Halmahera, Palau Is., New Guinea. Ceylon.

Bali Id., 1896 (Doherty), 1 ♀, genit. slide 7930.

Ceylon, Hambantota, sea level 189.. (Pole), 1 ♂, genit. slide 7939 (BM).

The present species and the closely related *B. (C.) capnopepla* Turner prove to occur together. I am still satisfied, however, that they are distinct.

Male genitalia with the uncus rather long and hooked (but not extremely slender as in *capnopepla*); the valva with valvula without spines below the corona; cucullus without spines along the ventral edge; base of sacculus gradually rounded; bristles upon disc of sacculus in a single horizontal row (cf. *capnopepla*).

### ***Bactra (Chiloides) capnopepla* Turner, 1946**

*Bactra capnopepla* Turner, 1946: 211 (♂, Queensland).

*Bactra (Chiloides) patris* Diakonoff, 1956: 24, fig. 22 (♂, Java).

*Bactra (Chiloides) capnopepla patris*; Diakonoff, 1964: 25, fig. 15.

Distribution. Queensland, Java.

Ceylon, Hambantota, sea level, 189.. (Pole), 1 ♂, genit. slide 7935 (BM).

Cf. sub *B. (C.) angulata* Diakonoff.

Male genitalia distinct by long and very slender, hooked uncus, spined ventral edge of cucullus and somewhat angulate base of sacculus, while bristles on disc of sacculus are arranged in a patch, instead of in a single row (as in *angulata*).

***Bactra (Chiloides) venosana* (Zeller, 1847)**

*Aphelia venosana* Zeller, 1847: 738.

*Phoxopterus venosana*; Herrich-Schäffer, 1847: 244.

*Bactra venosana*; Rebel, in Staudinger & Rebel, 1901: 113.

*Bactra (Chiloides) venosana*; Diakonoff, 1968: 64, fig. 536 (with full references & synonymy).

Distribution. Throughout southern Asia to Hawaii, Australia and Fiji. North Africa. Asia Minor. South Europe.

Food plant. *Cyperus rotundus* (Cyperaceae).

Ceylon, Hambantota, sea level, 189.. (Pole), 4 ♂, 1 ♀. Nawalapitiya, 2000 ft (Pole), 3 ♂, genit. slide 7940. Puttalam (Pole), 1 ♀ (BM).

India, Bengal, Calcutta (Swinhoe), 1 ♀, slide 1924 (AMNH); Sind (Swinhoe), "*Bactra lanceolana* Hbn.", 1 ♀, genit. slide 1923 (AMNH). Calcutta, .58 (Atk.), 1 ♂, genit. slide 6424 (Meyrick Coll., BM). Pusa, 8.1916 (T.B.F.), 1 ♀, genit. slide 6420, "pupa on *Cyperus rotundus*" (Meyrick Coll., BM). North Coorg, Dibidi, 6.iii.1907 (Newcome), 1 ♂, genit. slide 6423 (Meyrick Coll., BM).

China, Shanghai, 12.ix.1932 (C.), 1 ♀, genit. slide 6422 (Meyrick Coll., BM).

***Bactra (Chiloides) chariessa* Diakonoff, 1964**

*Bactra (Chiloides) chariessa* Diakonoff, 1964: 36, fig. 22 (♂, Ceylon, India).

Distribution. Ceylon. India: Nilgiris. Sikkim.

Type-locality: Ceylon: Haldamuttan.

Timor Id. (= Timur), low country, xi-xii.1891 (Doherty), 1 ♂, genit. slide 7928 (BM).

Ceylon, Anuradhapura, "F.M.M." xii.1909 (in Meyrick's hand, Meyrick Coll.), 1 ♂, genit. slide 6421; Maskeliya, ii.1906 (De Mowbray), 1 ♀, apallotype, genit. slide 6425 (BM).

♀ 10 mm, apallotype. Head, palpus and thorax pale ochreous, tip of palpus and vertex slightly mixed with pale fuscous. Abdomen pale whitish-ochreous. Fore wing narrow and pointed, whitish-ochreous, markings light tawny. A series of small oblique costal marks; dark fuscous marginal dotting around apex; an ill-defined median longitudinal streak of tawny marbling from base, including a white round spot on end of cell; a few dark points along dorsum; veins beyond cell finely streaked with tawny. Cilia whitish-ochreous.

Hind wing whitish-ochreous, very faintly infuscated along extreme margin of costa before apex, in apex and along upper part of termen hardly perceptible. Cilia whitish-ochreous.

Female genitalia. Similar to those of *B. (C.) coronata* Diakonoff, but differing as follows. Edge of lamella postvaginalis narrower paraboloid; lamella antevaginalis with only a slender hyaline edge, the halves regularly oval, mesially separated to well below middle, median upper portions less thickened. Colliculum shorter, narrowed, originating at lower level of lamella antevaginalis, not at about its upper level (as in *coronata*). Signum, a small scobinate saucer.

I am pleased finally to have found the sex partner of the male of this species, six years after its description.

#### *Bactra (Chiloides) coronata* Diakonoff, 1950

*Bactra coronata* Diakonoff, 1950: 286, pl. 5 fig. 17 (♂, West Java).

*Bactra (Chiloides) coronata*; Diakonoff, 1956: 33, figs. 34-36. — 1958: 63, fig. 535 (Philippine Is.). — 1964: 39 (throughout Java, E. Borneo, Philippine Is., ?Kangean Is., ?Sicily). — 1968: 63 (Philippine Is.).

Distribution. Java, Borneo, Kangean Is., Philippine Is. The record of Sicily is certainly due to a labelling error.

Lesser Sunda Is., Timor Id. (= Timur), low country, xi-xii.1891 (Doherty), 4 ♀, genit. slides 7929, 7936, 7937 (one specimen without abdomen) (BM).

#### *Bactra (Chiloides) leucogama* Meyrick, 1909

*Bactra leucogama* Meyrick, 1909: 584 (♂♀, Ceylon). — Diakonoff, 1950: 287, pl. 6 fig. 22, pl. 7 fig. 33 (lectotype designated, genit. ♂♀ figured). — 1964: 39 (Ceylon, Formosa). — Clarke, 1955: 185. — 1958: 312, pl. 153 figs. 2-2a (lectotype wings, genit. figured).

*Bactra (Chiloides) leucogama*; Diakonoff, 1956: 45, figs. 39-41 (redescr., genit. ♂♀ figured, S. Celebes). — 1964: 39 (Ceylon, Formosa).

Distribution. Ceylon. South Celebes. Formosa.

Ceylon, Nawalapitiya, 2000 ft, vi.1894 (Pole), 1 ♂, genit. slide 7932 (BM).

#### *Bactra (Chiloides) copidotis* Meyrick, 1909

*Bactra copidotis* Meyrick, 1909: 584 (♂♀, Ceylon). — Diakonoff, 1950: 286, pl. 6 fig. 26, pl. 8 fig. 37 (lectotype ♂ selected, genit. ♂♀ figured; *phenacistis*, *commensalis* syn.). — Clarke, 1955: 100. — 1958: 308, pl. 153 figs. 1-1a, 2-2a (lectotype wings, genit. ♂ figured).

*Bactra phenacistis* Meyrick, 1909: 585 (♂♀, Ceylon). — Diakonoff, 1950: 286 (lectotype select.; syn. of *copidotis*). — Clarke, 1955: 246.

*Bactra commensalis* Meyrick, 1922: 522 (♂♀, Bengal, Bombay). — Diakonoff, 1950: 286 (lectotype select., syn. of *copidotis*). — Clarke, 1955: 96. — 1958: 307, pl. 152 figs. 3-3a (distinct species).

*Bactra (Chiloides) copidotis*; Diakonoff, 1964: 43, figs. 23-25, 27 (genit. ♂♀ figured; India: Nilgiris, Pykava, Pusa).

Distribution. Ceylon. Bengal. Nilgiris.

India, Ootacamud, 7-8000 ft (Walsingham Coll., BM), 1 ♂, genit. slide 7905.

**Bactra (Chiloides) cerata** (Meyrick, 1909)

*Polychrosis cerata* Meyrick, 1909: 587 (♂♀, Ceylon, Assam). — Clarke, 1955: 79.

*Bactra cerata*; Diakonoff, 1950: 285, pl. 6 fig. 7 (genit. ♂), pl. 8 fig. 39 (gen. ♀; lectotype select.). — Clarke, 1958: 307, pl. 152 figs. 1-1a.

*Bactra (Chiloides) cerata*; Diakonoff, 1964: 47, figs. 29, 30 (redescr., genit. ♂♀).

Distribution. Ceylon, Assam.

Lesser Sunda Is., Portuguese Timor, 1892 (Doherty), 1 ♂, genit. slide 7884 (BM).

West Central New Guinea, Fak Fak, low country, 11.vi.1952 (L. D. Brongersma), 1 ♂, genit. slide 7939 (LM).

**Bactra (Chiloides) tornastis** Meyrick, 1909

*Bactra tornastis* Meyrick, 1909: 586 (♂♀, Ceylon, Coorg). — Diakonoff, 1950: 289, pl. 5 fig. 18 (lectotype select., genit. ♂ figured). — 1963a: 355 (Africa). — 1964: 56, figs. 31, 35 (*gretae* syn.). — Clarke, 1955: 312. — 1958: 315, pl. 156 figs. 3-3a (lectotype wings, genit. ♂ figured).

*Bactra gretae* Diakonoff, 1959b: 185, fig. 11 (♀, Pakistan, genit. figured).

*Bactra (Chiloides) tornastis*; Diakonoff, 1964: 56 (redescr., ♂♀, *gretae* syn.).

Distribution. Ceylon; India: Coorg, Bombay; Gujarat, Ahmedabad; S. India. Pakistan: Mauripur. Central Africa: Nubia.

India: Bombay, Bandra, 28.vii.02, 1 ♂, 1 ♀, genit. slides 7904 ♂, 7915 ♀ (BM).

Ceylon, Nawalapitiya, 2000 ft, 189.. (Pole) (Walsingham Coll., BM), 1 ♀, genit. slide 7906 (BM).

**Bactra (Nannobactra) minima** Meyrick, 1909

*Bactra minima* Meyrick, 1909: 586 (♂, Barberyn Id. off Ceylon). — Diakonoff, 1950: 288, pl. 6 fig. 25 (lectotype selected, genitalia descr. & figured).

*Bactra (Nannobactra) minima*; Diakonoff, 1956: 55, figs. 52, 53 (genit. ♂♀; *B. phaeopis* syn.). — 1964: 77, figs. 57-58 (*B. anpingiana* Strand syn.).

*Bactra phaeopis* Meyrick, 1911a: 254 (♂♀, Sudest Id., N. Guinea). — Diakonoff, 1950: 288, pl. 6 fig. 28, pl. 8 fig. 41 (lectotype select., genit. ♂♀ figured).

*Bactra anpingiana* Strand, 1900: 192 (Formosa).

Distribution. Ceylon, Barberyn Id. (typical locality), Formosa, New Guinea, Sudest Id., Solomons Is., Guam Id.

Timor Id. (= Timur), low country, xi-xii.1891 (Doherty), 1 ♀, genit. slide 7938 (BM).

Philippine Is., Luzon Id., Manila, xii.1945 (H. Hoogstraal), 2 ♂, genit. slides 5761 and 5762 (CM).

**Henioloba** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna short-ciliate in male, subserrulate, simple in female. Labial palpus subascending, 1 1/2 ×

diameter of eye, with appressed scales, median segment roughish along edges and at apex, little dilated, terminal segment moderate, about  $1/4$ , obtuse. Thorax without a crest. Posterior tibia normally scaled, without a pencil.

Fore wing oblong-suboval, rather narrow, costa and apex curved, termen straight above, rounded beneath, short. Vein 2 from beyond  $2/3$ , 3 from angle, curved and closely approximated to 4 at margin, 4 closer to 3, 7 free to termen, 8 from upper angle of cell, 9 close before angle, 10 from middle distance 9-11, 11 from middle of cell; chorda from  $2/3$  distance 11-10, to just below base of 7, median branch to halfway 4-5.

Hind wing with a cubital pecten; vein 2 from beyond middle, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 stalked; dorsum in male normal, a pecten of short hairs along vein 1a, except posteriorly.

Male genitalia. Tegumen dilated: narrower at base. Uncus moderate, subtruncate, curved, gradually narrowed, bristly on both sides under top. Socii absent. Gnathos, a broad gently sclerotized band, inverted-trapezoidal, upper edge emarginate, upper angles slightly projecting, lower angles rounded and minutely denticulate. Tuba analis slender. Henion represented by its lower free half projecting as a clavate lobe. Valva simple, rather short; pulvinus extended into a bristly semicircle;  $Spc_1$  absent. Cucullus dilated, rounded, spiny on ventral edge. Aedeagus short, broad.

Female genitalia. Sterigma rather small, an oblique aciculate tube, in front with a triangular ostium bursae, flanked by slightly prominent lobes. Colliculum rather broad, robust. Signa, two patches of regular granulations.

Type-species, *Henioloba bifacis* spec. nov. (E. Papuan Is., Tenimber Id., Moluccan Is., New Guinea).

A peculiar group with striking resemblance to certain *Metrioglypha* species in all superficial particulars, except for the distinctly stalked veins 6 and 7 and the male genitalia of the present genus. Perhaps there is a relation with *Macraesthetica* Meyrick, 1932, from the Hawaiian Is.

As the armature of the valva and the stalked veins 6 and 7 suggest a relationship with *Bactra* Stephens, I place the genus tentatively in the present tribe.

#### Key to the species of *Henioloba*

1. Dorsum ochreous-tinged, paler than costa, but not strongly so, without large spots . . . . . *bifacis*  
 — Dorsum slaty-grey, well-defined, narrowly yellow-edged and much paler than costa, with a more or less defined dark spot at  $1/3$  and before end of dorsum . . . . . *spelaeodes*

#### *Henioloba bifacis* spec. nov.

(figs. 518A-B, 527, 554)

♂♀ 11-14 mm. Head brown, strongly mixed with ochreous. Palpus bright ochreous, basal segment black except apex, median segment with a black basal and a narrower

supramedian ring, the latter extended along lower edge, terminal segment black at base. Thorax grey-fuscous, strongly dusted with ochreous. Abdomen dark grey, venter whitish.

Fore wing oblong, suboval, rather narrow, costa curved throughout, more so before apex, apex obtuse, termen straight, hardly convex, almost vertical and short above, rounded beneath. Dark fuscous-brown, with a purplish tinge, strewn with fine ochreous-yellow points; less than dorsal half light grey transversely strigulated by zigzag fuscous lines and denser strewn with ochreous-yellow. Basal patch ill-defined, its middle indicated by an angulate purplish line not reaching dorsum, its edge (in allotype) by a moderate fascia at  $1/4$ , constricted below costa, angulate above fold, lower half very inwards-oblique, not reaching dorsum (this edge indefinite in holotype); transverse fascia in holotype indefinite on upper half, on lower half forming an angular projection of dark colour into paler dorsal area in middle, halfway towards dorsum; in female this fascia separated from basal patch by a grey costal blotch and forming a dark suffused spot along posterior  $3/5$  of costa to before apex and an almost separated rectangular-triangular spot in centre of wing, one acute angle almost resting on dorsum before middle; ocelloid spot inwards-oblique, more or less suffused with yellow-ochreous, with 3-4 dark purplish horizontal lines, flanked by a wedge-shaped anterior and by a rounded posterior purplish marbled, grey spot; costa with a series of slender oblique marks, short and yellowish on anterior half, longer and whitish on posterior, below costa becoming faint, greyish; dorsum yellowish, obscured by blackish suffusion and with an oblique subhorizontal whitish strigula below apex, posteriorly traversed by three black dots. Cilia bright ochreous-yellow, sometimes suffused with blackish opposite middle of termen, except at base and with a light purplish basal line around apex and along termen.

Hind wing blackish-purple on basal half in male, on basal  $2/3$  in female, semi-pelluculent, paler greyish. Cilia whitish with a purple subbasal shade, opposite apex purplish throughout, along upper fourth of termen, ochreous.

Male and female genitalia, as described with the genus.

Lesser Sunda Is., Tenimber Id. (= Timor Laut Id.), 1892 (Doherty), 2 ♂, 8 ♀, paratypes, genit. slides 7810 ♂, 7811 ♀ (BM).

Moluccan Is., Halmahera Id. Gani, 1897 (Doherty), 1 ♂, paratype (without abdomen). Banda Id., 1892 (Doherty), 1 ♀. Great Banda Id., 26.ix.1898 (H. Kühn), 2 ♂, paratypes, genit. slide 6589; 1 ♀ (BM).

North New Guinea, Humboldt Bay, iv.1893 (Doherty), 1 ♂, paratype, genit. slide 7824 (BM).

East Papuan Is., Louisiades, St. Aignan Id., 1897 (Meek), 1 ♂, holotype, genit. slide 7812, 1 ♀, allotype, genit. slide 7813, 3 ♂, 1 ♀, paratypes, genit. slide 8047 ♂ (one without abdomen) (BM).

The small, dark species is characterized by the yellowish termen with a round grey tornal spot and the white subapical strigula. Resembles *Semniotes* species superficially.

**Henioloba spelaeodes** (Meyrick, 1931) comb. nov.

(figs. 530A, 555A)

*Argyroploce spelaeodes* Meyrick, 1931: 131 (♂♀, Bismarck Is.). — Clarke, 1955: 289.

Distribution. Bismarck Is.: New Ireland, St. Matthias Id.

Lectotype, ♂, hereby designated: St. Matthias Id., June-July, 1923 (A. F. Eichhorn) (printed label, Meyrick Coll., 3/2 BM), genit. slide 8051. A female paratype, undoubtedly conspecific, from the same collection, 3/3 New Ireland, November, 1923 (same collector), genit. slide 8052.

Larger and more robust than *H. bifacis* spec. nov. with more distinct markings, but otherwise rather similar. The dorsal half of wing is lighter grey, costa posteriorly more suffused with deep fuscous-brown; the area around tornus is light yellow, as in *bifacis*, but more contrasting; a semicircular well-defined brown spot on 1/3 of dorsum is lacking in that species.

Hind wing rather dark purplish-fuscous, slightly paler on basal half, darker in female.

Male genitalia. Tegumen high, uncus long, gradually narrowed; socii, small prominences at its base. Gnathos well-defined, V-shaped and pending, arms angulate in middle. Valva semioval, dilated in middle, gradually rounded and broader than in *bifacis*, pulvinus with a vertical comb of dense but short spines, merging in the series of cucullus bristles; continued into dense marginal bristles. Aedeagus moderate.

Female genitalia. Sterigma, a round simple impression; lamella postvaginalis finely aciculate. Ostium oval, with a raised aciculate collar or edge. Colliculum moderately long, narrowed, bivalval. Signum one, a slight scobination with small, rounded teeth.

## 10. SUBTRIBUS ENDOTHENIAE NOV.

Signum one, a basket-shaped sclerite with diversely developed scobinations on the outside.

Scent organ usually absent entirely; where present: a slight dorsal roll and a diversely developed dark tibial pencil.

Male genitalia with a well-developed, clavate uncus, along the edge underneath with strong spines. Valva narrow, clavate, curved, with a strong thickened and dentate harpe at base of sacculus. Aedeagus stout, conical, short, with cornute of diverse number and size.

Female genitalia. Sterigma often large, 8-shaped. Colliculum of diverse length.

The tribe is very close to Bactrae: the male genitalia and the signum are practically similar. However, the presence of a scent organ in many Palaearctic species, and the entirely different facies of the insects seem to warrant a separation of this small but natural group.

A simple genus, apparently of Palaearctic origin, with a few small stragglers in the South Asiatic region.

### Key to the genera and subgenera of Endotheniae

- 1. Hind wing with veins 6 and 7 stalked . . . . . *Endothenia (Endothenia)*
- Hind wing with veins 6 and 7 separate . . . . . 2
- 2. Veins 6 and 7 remote and almost parallel; socius normal . . . . .  
*Endothenia (Neothenia)*
- Veins 6 and 7 closely approximated towards base. Socii strong, rigid, pointed and angulate, with sparse hairs. . . . . *Molybdocrates*

### *Endothenia* Stephens, 1852

(fig. 514)

*Endothenia* Stephens, 1852: 28 (type-species, [*E. gentiana* Hübner = ]*Tortrix gentianaeana* Hübner, by subsequent designation of Fernald, 1908). — Fernald, 1908: 35 (syn. of *Olethreutes* Hübner). — Heinrich, 1926: 100, fig. 48 (*Orthotaenia* Stainton syn.). — Fletcher, 1929: 77 (valid genus; syn.: *Taniva*, *Tia*, *Hulda* Heinrich).

*Orthotaenia* Stainton, 1859 (nec Stephens, 1829): 260, 262 (type-species, *Tortrix antiquana* Hübner, by monotypy). — Heinrich, 1926: 100.

Head with dense, appressed scales. Ocellus posterior. Proboscis very short. Palpus broadly dilated posteriorly by roughish scales above and beneath, subascending, terminal segment short, pending, subobtusate, exposed. Thorax without a crest. Posterior tibia moderately dilated by closely appressed hair-scales, a dark pencil from base above.



Fore wing oblong-subtruncate, dilated. Vein 2 from  $3/4$ , 3 from angle, 4 distant but closer to 3, 5 remote, parallel to 6, 6 and 7 approximated at base, 7 free to termen, 8 from angle, 9 rather close to 8, 10 from  $2/3$  distance 11-9, 11 from middle, chorda from midway 11-10, to base of 7, median branch very weak, to below base of 5.

Hind wing semioval, with pecten, 2 from  $2/3$  of cell, 3 from angle, 4 closely approximated at angle, 5 approximated at angle, but far distant, 6 and 7 stalked or distant and almost parallel, discoidal between 4 and 6 + 7 very weak, dorsum in male sometimes with a slight submarginal slender fold.

Male genitalia. Tegumen usually triangular. Uncus strong, clavate, sometimes hooked, underneath along edge or throughout with strong spines. Socius thick and conical or weak, sometimes parietal. Gnathos absent. Valva long and slender, often clavate and curved, with a rigid thick base upon which a thickening, crowned by a transverse spine-crest or comb. Aedeagus conical, often very large, cornuti sometimes absent.

Female genitalia. Sterigma erect-oval or 8-shaped, separated in two by a transverse band. Colliculum small, bivalval, characteristic. Ductus bursae rather short. Signum one, basket-shaped.

A characteristic genus, remarkable by the peculiar male genitalia with the spiny, clavate uncus. In spite of the presence of a tibial pencil in the male, it is closely related to *Bactra* Stephens.

The Nearctic species differ from the Palaearctic in having the veins 6 and 7 in the hind wing remote at base and almost parallel; however, the male genitalia are similar in all respects. It seems logical, though, to separate the Nearctic species as a distinct subgenus: *Neothernia* subgen. nov., with type-species, *Sciaphila hebesana* Walker, 1862 (North America).

The southern Asiatic species have a facies very similar to that of the Palaearctic species, but mostly are much smaller.

#### Key to the species of *Endothernia*

1. Pale ochreous or whitish, with limited dark markings. . . . . 2
- Grey, dark grey or fuscous, pale markings usually forming a postmedian transverse band . . . . . 4
2. White, blackish markings: a spot on middle of costa, in apex, on middle of dorsum and a pair longitudinal (horizontal) opposite middle of termen . . . . . *trizona*
- Pale ochreous, terminal mark very oblique or absent . . . . . 3
3. Yellowish-ochreous, markings limited to margins . . . . . *lutescens*
- Pale ochreous, a cloudy triangle on costa, a dot in apex, a very oblique slender mark on termen etc. . . . . *bacillata*
4. A well-defined, slightly curved complete pale band at  $5/6$  . . . . . 5
- Pale markings either suffused, ill-defined or limited to costal half of wing . . . . . *citharistis*

5. Pale band light grey, upper half including a sinuate, white-edged blackish line . . . . . *micans*  
 — Pale band whitish, without such blackish line . . . . . *banausopsis*\*

**Endothenia micans** spec. nov.

(figs. 525-526)

♀ 11 mm. Head fuscous, somewhat darker between bases of antennae, forehead pale grey, face white. Palpus sinuate, subascending, little dilated, median segment roughish above and beneath, whitish, median segment with suffused subapical ring, terminal segment grey with a paler tip. Thorax pale tawny-fuscous, collar darker, with a blackish edge. Abdomen dark fuscous, venter whitish.

Fore wing oblong-truncate, costa little curved at extremities, straight in middle, apex rounded, termen gently rounded, moderately oblique. Pale ochreous, densely suffused and marbled with dark fuscous, strewn all over with rather large roundish spots of glossy silvery-leadened metallic scales. Pale ochreous ground colour much obscured, remaining as a horizontal series of pale suffused spots along base of upper edge of cell, a faint curved transverse band in middle and a broad, conspicuous fascia from  $3/4$  of costa to tornus gently curved, convex outwardly and containing a strongly sinuate subsigmoid fuscous line, three marginal spots on upper half: one small, subcostal on posterior edge, two larger below this, on anterior edge, and a large clavate ocelloid spot, silvery-leadened, narrowed downward; an oblique series of some three spots before apex preceded and followed by a fuscous line; a subapical ochreous line and a series of ochreous dots along termen; costa with very short whitish marks: two pairs close together at  $1/3$  and five pairs along posterior half. Cilia dark brown-fuscous.

Hind wing brownish-fuscous, basal half pale, semipellucant. Cilia whitish-grey, along upper  $2/3$  of termen with a brown-fuscous basal  $2/3$ .

Female genitalia. Sterigma aciculate, large, broadly funnel-shaped, lamella antevaginalis with scalloped upper edge; colliculum, a broad straight tube, narrowed along lower third. Signum large, basket-shaped.

East Java, "Tengger (Mts.), 3000 ft, 1894, ♂" (in Snellen's hand), 1 ♀, holotype, genit. slide 5843 (LM). The specimen has been named by Meyrick "*Argyroploce vinculata* Meyr.", but markings and the genitalia assign the species to the present genus.

**Endothenia citharistis** (Meyrick, 1909) comb. nov.

(figs. 519-522, 529, 529A)

*Argyroploce citharistis* Meyrick, 1909: 595 (♂♀, N. Coorg; Khasis; Burma). — Clarke, 1955: 91.

Distribution. India: N. Coorg; Assam: Khasis. Burma.

\*) This Chinese species is not further treated in the present paper.

A small dark species, blackish-fuscous with a whitish subapical pale band. Hind wing with veins 6 and 7 stalked.

♂♀ 9.0-9.5 mm. Head and palpus pale grey, dusted with fuscous, base of palpus whitish. Thorax pale grey, finely dusted with fuscous, anterior third suffused with blackish. Posterior tibia pale grey, with a whitish-grey slender pencil from base above. Abdomen pale grey, posterior half of dorsum dark grey, anal tuft grey, white at the sides, venter creamy.

Fore wing moderately broad, dilated and broadest at  $2/3$ , costa gently curved anteriorly, more so posteriorly, apex obtuse, termen gently convex, oblique. Light bluish-grey strongly marbled with dark fuscous, on posterior half suffused with tawny-fuscous with a fine transverse striation throughout, bases of scales being paler. Basal patch in male indefinite, in female indicated by some fuscous suffusion from beyond extreme base of wing, edge indefinite; some three unequal blackish spots on anterior half of costa, median largest; transverse fascia rather ill-defined, darker fuscous, on costa beyond middle, forming a semioval blackish spot, its middle obliquely traversed by two bluish lines from minute white costal dots; lower half of fascia irregularly marked with blackish-fuscous, its posterior edge with a slender obliquely rising tooth from above dorsum; ground colour on posterior half of wing rather leaden-grey, markings faintly pale-edged; costa posteriorly with two larger silvery-white pairs of short marks and a third greyish single mark; dark costal spots before and between the paired marks, respectively, obliquely continued across wing as tawny-fuscous fasciae to below middle and to  $1/4$  of termen, respectively, becoming dark fuscous on posterior half; a dark fuscous spot in apex, separated by a pale line. Ocelloid spot represented by a larger wedge-shaped patch of unobscured, finely pale-edged leaden-grey ground colour, posteriorly touched tawny. Cilia grey with a creamy basal line and a dark fuscous subbasal band, this band with small white blotches along its posterior half.

Hind wing light fuscous, darker infuscated on posterior half, especially in apex and along vein 1a. Cilia pale fuscous with a darker subbasal band.

Male genitalia. Tegumen short and spherical. Uncus robust, strongly clavate and densely spined in front, with a pair of peculiar naked, clavate appendages in middle of lateral side, apparently articulating; these may be homologues of hami (as defined by Diakonoff, 1948: 521 for Schoenoteninae). Socius, a parietal thickening. Valva with cucullus rather broad, slightly clavate, sacculus with a large transverse harpe with a T-shaped top, spined in front, hairy on opposite side. Aedeagus moderate, conical.

Female genitalia. Sterigma undefined, also ostium indefinite. Colliculum, a moderate, bivalval tube, ductus bursae rather short; signum, a triangular scobinate sclerite.

Central Java, Telawa, teak forest, 40 m, bred from leaves of ? "boenga", (? *Lagerstroemia* spec. (Lythraceae)), nos 673, 673b, 687 and 690, 10, 14 and 19.vii.1934; 17, 19-20 and 27.vii and 11, 15, 19 and 22.viii.1934, 1 ♂, 19.viii.1934, genit. slide 6985 (fig.); 1 ♀, 17.viii.1934, genit. slide 7181; 1 ♂, 19.viii.1934, genit. slide 7180, 1 ♀, 15.viii.1934, genit. slide 6964 (fig.). In total 9 ♂ and 4 ♀ (L. G. E. Kalshoven) (LM).

East Soemba, Mau Marru, vii.1949 (H. Sutter & A. M. R. Wegner), 1 ♂, genit. slides 5848, 7540 (BMS, LM).

India, Assam, Khasi Hills, x.1906 (printed and written in Meyrick's hand), 1 ♂, genit. slide 8045, "also fr. Moulmein, Burma, Febr." (in Meyrick's hand) (Meyrick Coll. 12/10); 1 ♀, the same (Meyrick Coll. 12/10), no abdomen. North Coorg, Dibidi, 29.ii.06 (Newcome), 1 ♀, genit. slide 8044 (Meyrick Coll. 12/5); 1 ♂, the same (Meyrick Coll. 12/9), no abdomen (BM).

The species is considerably variable, some males and females alike being darkly suffused and having a melanistic appearance.

The species has been identified by Meyrick as "*Argyroploce ebenina* Meyr."!

***Endothenia trizona* spec. nov.**

(fig. 524)

♂ 8 mm. Head and palpus rather dark slaty-grey, fore-head pale grey, face sordid whitish. Antenna with scape and base of flagellum dark grey, flagellum elsewhere sordid whitish; thickened. Thorax white, anteriorly dark grey, apex with a dark grey spot. Abdomen grey, dorsum black, except base and apex.

Fore wing oblong-subtruncate, costa gently curved throughout, apex obtusely pointed, termen straight, oblique. White, along edges faintly sprinkled or suffused with pale fuscous, markings fuscous and blackish-fuscous. Anterior half of costa infuscated, with four or five moderate longitudinal and almost horizontal (hardly oblique) marks; a conspicuous black spot along less than third fourth of costa, elongate-triangular, lower edge slightly suffused, costal edge with one pair of white marks; posterior part of costa with two black very oblique marks alternating with small points, interspaces white, a wedge-shaped, almost horizontal spot in apex, surrounded by fuscous suffusion tending to form lines along veins posteriorly; a horizontal streak from middle of disc on lower edge of cell, to middle of termen, interrupted at 2/3; dorsal third dusted with dark fuscous, darker posteriorly, not reaching tornus, and interrupted by an ill-defined white spot at 1/3 of dorsum, gently convex posteriorly. Cilia greyish, with a white base and a series of black subbasal spots along basal half.

Hind wing dark grey. Cilia pale grey with a darker subbasal band.

Male genitalia. Tegumen rounded. Uncus moderate, clavate, spined in front and towards sides, upper spines directed frontad, lower directed downwards. Valva long and slender, gradually curved; sacculus prominence, depressed-triangular, with a single small tooth in the middle. Aedeagus large, cylindrical, pointed.

Moluccan Islands, West Obi, Obi Lake, 160-260 m, vii-ix.1953 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 5950 (LM).

***Endothenia lutescens* spec. nov.**

(fig. 523)

♂ 12 mm. Head and thorax pale grey. Palpus rather dark grey, minutely dusted with whitish. Abdomen fuscous-ochreous.

Fore wing suboval, dilated, costa curved at base, straight in middle, strongly curved before apex, apex obtusely pointed, termen straight hardly convex, oblique, broadly rounded below. Whitish-ochreous, irregularly suffused throughout with pale tawny-ochreous, faintly indicating a basal patch to  $1/3$  with angulate edge and a transverse fascia; two streaks of fuscous suffusion along costa, occupying its basal and median fourth, respectively; two similar but longer and broader streaks along dorsum; a narrow streak along posterior part of costa between ends of veins 7 and 9, extended over cilia. Cilia pale ochreous, basal half barred with black opposite ends of veins 4 to 7.

Hind wing rather light grey-fuscous, cilia pale ochreous with a subbasal fuscous band.

Male genitalia. Tegumen spherical, strong. Uncus sclerotized and rounded, apparently transverse top with strong marginal spines becoming larger downwards. Socii broad, triangular, appressed. Gnathos broad, V-shaped. Valva narrow, with a triangularly thickened short sacculus (projecting upwards in mount), with a group of short spines on posterior side. Cucullus long and slender, thinly haired, top pointed. Eighth sternite with two rather thick processes.

Southwest Timor, 1500-3000 ft, xi-xii.1891 (Doherty), 1 ♂, holotype, genit. slide 7848 (BM). Distinct by yellowish general tinge, suboval wings and absence of discal markings.

***Endothenia bacillata* spec. nov.**

(fig. 528)

♂ 12.5 mm. Head and thorax whitish, touched pale grey. Palpus whitish, median segment in centre laterally infuscated, terminal segment infuscated entirely. Posterior tibia normally scaled. Abdomen pale ochreous.

Fore wing oblong-subtriangular, dilated and truncate, costa gently curved at base, more so before apex, slightly concave in middle, apex obtusely pointed, termen sinuate, oblique. Whitish, densely dusted and transversely strigulated with fuscous-grey. Basal half of costa with some three dark dots, alternating with minute short marks; a round dark spot just above fold beyond  $1/4$ ; transverse fascia rather pale, formed of fine reticulation, gently outwards-curved, including a series of dark fuscous oblong spots along costa, a thick streak along upper edge of cell, a narrower, anteriorly furcate mark along lower edge of cell, all against anterior margin of fascia; posterior third of costa with two oblong marginal spots and a larger apical dark spot; a rather narrow well-defined, darker edged terminal fascia, from below costal mark at  $3/4$ , to termen just below middle. Cilia dark fuscous with a whitish basal streak.

Hind wing pale grey-fuscous with darker veins, especially vein 1b, edge of wing in apex and along upper part of termen irregularly glossy whitish. Cilia glossy whitish with a greyish subbasal band and tips.

Male genitalia. Tegumen moderate, rather depressed and spherical. Uncus long

and slender, slightly hooked, top not dilated, with a small group of spines underneath. Socii rather long, rigid, porrect, to beyond middle of uncus. Gnathos strong, a slender V-shaped band. Valva moderate, sinuate, sacculus with a narrow oblique, transverse band of fine hairs, thickened below ( $Spc_1$ ) and an oval small group of seven thick spines upon a short costal harpe (process), cucullus with an angularly prominent densely short-spined base. Aedeagus large, conical, sclerotized. Eighth sternite with slender, pointed processes.

Bali Id., "Malaysia, Sunda Is.", 1896 (Doherty), 1 ♂, holotype, genit. slide 7846; 1 ♂, paratype, genit. slide 7845 (BM). A small pale species, resembling a *Bactra*, but with broader wings.

#### *Molybdocrates* gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Palpus curved and ascending, moderately dilated with appressed roughish scales beneath, terminal segment short, exposed. Thorax without a crest. Posterior tibia in male with dense closely appressed scales outside, with appressed but thick scales on the inner side, a groove above concealing a pencil from base; basal segment of posterior tarsus elongate, with a moderate pecten of hair-scales above.

Fore wing oblong-oval, dilated, apex rounded. Vein 2 from beyond middle, 3 from angle, 4 closer to 5, 5 and 6 running rather close together but diverging at base, 6-9 tolerably equidistant, 7 to termen, 10 from about midway between 9 and 11, 11 from before middle, chorda very short, from before base of 10 to 7, median branch to 5.

Hind wing with cubital pecten; in male triangular, pointed, with a rounded moderate tornal lobe, base of dorsum forming a slender rolled and projecting free lobe. Vein 2 from  $2/3$  of cell, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen moderately high, triangular. Uncus bilobed, strong, hooded lobes, densely bristled underneath. Socii very strong, hooked, pressed together, with strong sparse bristles. Gnathos membranous, ill-defined. Valva sinuate and clavate, harpe, a strongly prominent rigid and naked point.  $Spc_1$  dense, marginal from harpe. Cucullus bristles scattered, three large marginal ones together on ventral edge. Aedeagus moderate, little curved.

Female genitalia sclerotized. Sterigma, a transverse plate with rounded upper angles and acutely prominent lower angles. Ostium bursae in its centre, upper and lateral edges slightly thickened, lower simple, semioval. Colliculum, a broad dark rather spindle-shaped tube, with partly granulate wall. Signum large, basket-shaped, outer surface with regularly arranged flat scale-like scobinations.

Type-species, *Molybdocrates opulenta* spec. nov. (Moluccan Is.).

A peculiar genus with plesiomorph male genitalia. The signum reminds one of that in *Bactra* and *Endothenia*. The type-species is brilliantly marked, with a specialized hind wing in male. The male genitalia are characteristic, and in fact, resemble those of *Endothenia* type, but are strongly specialized.

Key to the species of *Molybdocrates*

1. Sterigma much broader than high, colliculum longer than sterigma is high. . . .  
*opulenta*  
 — Sterigma only slightly broader than high, colliculum as long as sterigma is high  
*vinculata*

***Molybdocrates opulenta* spec. nov.**

(figs. 64-65, 83, pl. 1 fig. 10)

♂ 18 mm, ♀ 16 mm. Head fuscous, a light ochreous suffused band across vertex, face whitish. Palpus pale ochreous, spotted with fuscous. Thorax fuscous. Abdomen dark grey-fuscous, paler at base, anal tuft bright ochreous.

Fore wing oblong-suboval, costa rather curved anteriorly, gently prominent at  $3/4$ , apex very obtusely rounded, but visible, termen curved, rather vertical, rounded beneath. Whitish, appearing tawny by close and fine transverse striation formed by bases of scales (tips pale), moderately marbled and transversely strigulate with yellowish-fuscous, strongly suffused with dark fuscous and scattered with numerous, inequally rounded or oval, brilliant silvery-lead metallic spots, narrowly edged with dull yellow-fuscous. Basal patch indefinite, edge indicated by a zigzagged oblique streak of darker fuscous suffusion at  $1/4$ , basal  $2/3$  of patch entirely filled out with smaller, round, leaden spots; transverse fascia indicated by a blackish-fuscous suffusion on middle of costa, limited by median branch, median half of dorsum from below cell evenly dark fuscous; an oblique-oval leaden spot on  $1/3$  of costa, an irregular rather widely scattered group of about 10 round leaden spots from below this to above middle of dorsum; a small isolated leaden spot on costa beyond middle; a transverse, subrhomboidal group of five larger brilliant spots from below costa at  $3/4$  to above fold and a single smaller spot above end of vein 1b; a large vertical erected leaden blotch representing ocelloid spot; a submarginal series of two transverse spots below posterior end of costa and before apex, a minute point between and above these; posterior half of costa with six whitish-ochreous small dots, becoming larger and more distinct posteriorly, two pairs of very short indistinct pale strigulae at  $1/3$  of costa. Cilia dark fuscous-grey, basal half from costa to middle of termen, blackish.

Hind wing deep bronze-fuscous, with a paler cell and base. Cilia fuscous-grey with a blackish subbasal band, cilia along upper half of termen whitish with a fuscous-black subbasal slender band. Hind wing shape in male, as described with the genus above.

Male and female genitalia as described with the genus.

Moluccan Is., Batian Id., 1897 (Doherty), 1 ♂, holotype, genit. slide 7686 (head missing), 1 ♀, allotype, genit. slide 8025; 1 ♂, 1 ♀, paratypes (♀ without abdomen) (BM). That both females are smaller than the males must be incidental. A very distinct species by its brilliant metallic spots.

**Molybdocrates vinculata** (Meyrick, 1916) comb. nov.

(figs. 505A-B)

*Argyroploce vinculata* Meyrick, 1916: 21 (♂♀, Australia). — Clarke, 1955: 325.

Distribution. Australia.

This little-known species was described after only a couple of specimens many years after these had been collected.

Queensland, Toowong, 1.iii.1897, bred from *Polyalthia nitidissima* (Dodd), "*Argyroploce vinculata* Meyr., teste Meyr." (in Meyrick's hand) (Walsingham Coll. 19786, BM), 1 ♀, genit. slide 8070.

The obscure insect has the appearance of a *Gatesclarkeana*: tawny, densely clouded and suffusedly marked with deep purple-fuscous and strewn with blue metallic spots, spread irregularly over basal third of wing, in an irregular transverse band at 3/4 and in a neat submarginal series from beyond middle of costa, before apex, to above tornus; ocelloid spot indicated by another group of metallic spots; costal edge narrowly pale yellow with dark marks.

Hind wing bronze-fuscous, at base becoming pale bronze.

Female genitalia. Sterigma extremely large but otherwise of the characteristic *Molybdocrates* shape. Ostium wide, lamella antevaginalis, a low cylindre, lamella postvaginalis band-like, arched paired process of upper edge very small. Colliculum, a large subplicate cone. Signum single, very large, basket-shaped.



## II. SUBTRIBUS LOBESIAE

Lobesiini Falkovitch, 1962c: 883 (tribus nov.).

Signa two, small, cornute, subequal, or absent.

Scent organ: moderately developed hair-brushes on posterior tibia, with pencil and diversely shaped dorsal roll of hind wing, often with development of large separate lobes, resulting in considerable modifications of shape of hind wing. Sometimes additional paired scent pockets upon first abdominal sternite.

Male genitalia with a slender long valva; tegumen diversely shaped, uncus usually absent.  $Spc_1$ ,  $Spc_2$  and  $Spc_3$  often present. Gnathos often present, bicornute.

Fore wing with characteristic tendency towards veins 9 and 10 to be widely remote at base and converging towards margin of costa; a pterostigma often present.

### Key to the genera of Lobesiae

1. Socii large, pending, rigid, tops darkly sclerotized and naked; fore wing with chorda from before 9 . . . . . *Podognatha*  
— Socii of diverse size, usually weak pads, bristled throughout; fore wing with chorda from before 10 or indistinct . . . . . 2
2. Hind wing with vein 3 separate, from before angle of cell; valva densely clothed with modified, bifid bristles . . . . . *Xenolepis*  
— Hind wing with vein 3 not from before angle; valva with normal bristles. . . . . 3
3. Socii parietal, united in middle into a transverse band; gnathos with a slender median process. . . . . *Theorica*  
— Socii separate, thickened and pending pads; gnathos sometimes with lateral prongs . . . . . 4
4. Valva slender, gently narrowed, sacculus without excision. Uncus clavate, hooked, with spines . . . . . *Didrimys*  
— Valva distinctly clavate, sacculus with one or two excisions; uncus weak or vestigial . . . . . 5
5. Hind wing in male very small, vein 2 from before angle of cell . . . . . *Engelana*  
— Hind wing in male of normal size, vein 2 from beyond middle of cell . . . . . 6
6. Fore wing usually with veins 9 and 10 distant at base, converging towards margin.  $Spc_3$  is absent. . . . . *Lobesia*  
— Fore wing with 9 and 10 parallel, not distinctly converging towards margin.  $Spc_3$  present, sometimes very long . . . . . *Endopiza*

**Podognatha** Diakonoff, 1966

*Podognatha* Diakonoff, 1966: 59, 61, figs. 42, 48 (type-species, *P. tamius* Diakonoff, Bismarck Is., by original designation).

Proboscis moderate. Head with a slight frontal tuft. Antenna in male ciliate, ciliations under 1. Palpus rather long,  $1\frac{1}{2} \times$  eye, sinuate and subascending, slender at base, strongly dilated posteriorly, terminal segment subobtusate. Posterior tibia in male with a dark pencil from base above.

Fore wing dilated, obtusely pointed. Vein 2 from 2/3, 3 from angle, 4 separate, 7 to termen, 8 close to 7, 9 more remote, 9 and 10 not converging posteriorly, 10 from halfway distance 9-11, 11 from middle, chorda from halfway 9 and 10 to 7, median branch to well above 4.

Hind wing with pecten, modified in male, narrowed, under 1, tornus with a rounded and a receding lobe, and a pointed long roll. Vein 2 from 3/5, 3 and 4 very short-stalked, from angle, 5 almost connate, 6 and 7 closely approximated towards base. Dorsum with a shortened, rounded lobe and a long rolled, stiff lobe.

Male genitalia. Tegumen rather broad, shoulders rounded. Uncus slender and hooked, top with a group of long spines. Socii strong, rigid and pending, converging, basal half thinly haired, apical sclerotized, lobate. Gnathos traceable only in the middle, a weak pad. Valva long and slender, basal half broader, sacculus indefinite, with a subapical hooked harpe, and an apical group of three black stout thorns. Cucullus bristly. Aedeagus extremely small.

A strange, isolated form. The hind wing suggests a relationship with *Lobesia* Guenée, but the neuration of the fore wing is basically different and distinct. The genitalia are very peculiar. Mysteriously, the type-species is so similar to *Thysanocrepis crossota* (Meyrick), as to be superficially alike. My statement in the original description of the genus, that it is related to *Thysanocrepis* is of course incorrect: only the above mentioned superficial similarity of the two species was meant.

An interesting intermediate form, in my opinion clearly showing a connection between the preceding subtribe with the present. The thorny uncus suggests a close relationship with *Endothenia* Stephens, but the slender and long valva with only a small subbasal harpe and the spiny  $Spc_3$ , shifted from the base of sacculus to its ventral edge, point to a close relation to *Theorica* Diakonoff and through this, to *Lobesia* Guenée. The heavy rigid socii, however, as well as the modified male hind wing, assign the species to the present subtribe and not to *Endothenia*. The genus is considerably less specialized than *Lobesia*, without the abdominal scent pouches, nor a pterostigma, while the veins 10 and 11 in the fore wing are not converging towards the costal margin.

**Podognatha tamias** Diakonoff, 1966

(figs. 556-557)

*Podognatha tamias* Diakonoff, 1966: 61, figs. 42, 48 (♂, Bismarck Is.).

Distribution. Bismarck Is.: New Ireland.

As is said above, the species is resembling *Thysanocrepis crossota* (Meyrick) almost completely — except the male genitalia. For a brief description may simply be referred to that species.

Male genitalia. Uncus long, hooked, with long spines on under side of the top. Gnathos absent. Socii large and heavy, converging mesially, thinly haired, tops reniform, sclerotized and naked. Valva long and slender, moderately curved, with a slight primary excision and a slender curved subbasal harpe.  $Spc_2$  a small marginal group of stout spikes. Cucullus long, slender, spiny and clavate.

Females are not available.

**Theorica** Diakonoff, 1966*Theorica* Diakonoff, 1966: 58, figs. 31, 33, 38, 54 (type-species, *Argyroploce lamyra* Meyrick, New Guinea, by original designation).

Proboscis short. Antenna shortly fasciculate-ciliated in male. Palpus subascending, dilated, clavate, with roughish edge, terminal segment subobtusate. Thorax with crest. Posterior tibia thickened on the inside with a subdorsal groove and a very long pencil from base, exceeding tibia, an additional curled pencil from base internally.

Fore wing strongly dilated in male, less so in female. Vein 2 from beyond middle, 3 from angle, at margin parallel, 7 to termen, 8 distant, from angle, 9 more remote, 10 from middle distance 9-11, 9 and 10 converging towards edge, chorda from before 10 to 7, median branch to 4.

Hind wing strongly modified in male, narrow, with a strong, constricted tornal lobe and another long and slender lobe from base of dorsum, veins shortened, 2 from 4/5, 3 and 4 stalked, from angle, 5 closely approximated at base, 6 and 7 moderately approximated towards base; hind wing in female normal but narrow, under 1, veins as in male but not shortened.

Male genitalia slender and much elongate. Uncus rounded, a median series of three spines underneath. Socii united, parietal: a curved band of hairs. Gnathos with a rising median process. Valva long and slender, sacculus and base of cucullus together forming a modified oval corrugated field.  $Spc_2$ , apparently a very dense cluster of dark scale-like bristles. Base of cucullus at margin with stout spines. Aedeagus very long and slender, anellus broad.

Female genitalia. Sterigma weak, granulate, forming a strongly bulbous moderate ring; in front: a cardiform small plate, excised above. Colliculum, ductus and corpus bursae delicate. No signa.

Allied to *Lobesia* but distinct chiefly by absence of scent pockets in the basal abdominal sternite of the male and of a pterostigma and by less obvious convergence of veins 10 and 11 towards costa in the fore wing. A monotypic genus.

**Theorica lamyra** (Meyrick, 1911)

(figs. 558-561)

*Argyroplocé lamyra* Meyrick, 1911a: 268 (♂♀, New Guinea). — Clarke, 1955: 181. — Diakonoff, 1953: 106, 112 (New Guinea). — 1955: 174. — 1966: 20, 59, figs. 31, 33, 38, 54 (lectotype design., neurat., genit. ♂♀ figured).

*Theorica lamyra*; Diakonoff, 1966: 59 (type-species).

Distribution. New Guinea.

New Guinea, Milne Bay (A. S. Meek) (BM), 1 ♂.

Papuan Is., d'Entrecasteaux Is., Goodenough Id., 1897 (Meek) (BM), nos. "18169, 18170, 18171 Wlsm.", 2 ♂, 1 ♀.

An elegant species, superficially slightly resembling *Gatesclarkeana erotias* (Meyrick), and sometimes confounded with it. There is a pronounced sexual dimorphy, the male having a narrower hind wing with a conspicuous dorsal lobe; but also in the female the hind wing is unusually narrow and pointed, while the fore wing is broader than the hind wing, but narrow at base. In *G. erotias* (Meyrick) the sexual dimorphy is not so evident, the male, in fact, with its pointed abdomen, resembling the female, and the broad fore and hind wings being of normal shape.

Except for the peculiar shape of the wings, the species is recognizable by its bright crimson ground colour, finely marbled with brown and with numerous rounded light leaden-grey spots. The hind wing is dark fuscous, becoming semipelluculent and pale fuscous towards base in female, on basal half, in male.

**Lobesia** Guenée, 1845

*Lobesia* Guenée, 1845: 297 (type-species, *Asthenia reliquana* Hübner, 1825 (= *Tortrix permixtana* Hübner, 1811, nec Denis & Schiffermuller, 1775), by subsequent designation of Fernald, 1908).

*Polychrosis* Ragonot, 1894: 209 (type-species, *Phalaena Tortrix botrana* Denis & Schiffermuller, 1775 = *Phalaena vitisana* Jacquin, 1788, by original designation). — Obraztsov, 1953: 86 (synonymy).

*Lomaschiza* Lower, 1901: 68 (type-species, *L. physophora* Lower, 1901, by monotypy). — Meyrick, 1911a: 256 (synonymy).

*Byrsoptera* Lower, 1901: 77 (type-species, *B. xylistis* Lower, 1901, by monotypy). — Meyrick, 1911a: 256 (synonymy).

*Steriphotis* Meyrick, 1911a: 259 (type-species, *S. peltophora* Meyrick, 1911 = *Lomaschiza physophora* Lower, 1901, by original designation). — Diakonoff, 1954: 14 (synonymy).

A detailed account of the South Asiatic species of *Lobesia* can be found in my papers of 1954 and 1956b, whence may be referred for full synonymies of species, etc.

Key to the subgenera of *Lobesia*\*

1. Socius with  $Spc_1$  and  $Spc_2$  extended, forming basally converging longitudinal patches of spines . . . . . *Harmosma*\*
- Socius with  $Spc_1$  and  $Spc_2$  not thus extended or united . . . . . 2
2. Socius, a large flap of modified scales; gnathos ill-defined . . . . . *Lomaschizodes*\*
- Socius normally bristled or very small . . . . . 3
3. Gnathos membranous, sometimes ill-defined . . . . . 4
- Gnathos sclerotized, often scobinated . . . . . 6
4. Gnathos, a transverse narrow band, seldom with a median projection . . . . . 5
- Gnathos, a median plate. . . . . *Polychrosis*\*
5. Sacculus with a large  $Spc_2$  upon a projecting lobe, separated from  $Spc_1$  by a marginal excision. . . . . *Lobesiodes*\*
- Sacculus with  $Spc_1$  and  $Spc_2$  more or less united, not separated by a marginal excision. . . . . *Lobesia*
6. Gnathos, a single strong rising process; sacculus with a high transverse ridge; aedeagus with apical spines . . . . . *Apolobesia*\*
- Gnathos with two median processes, if one, then short and grooved in middle between scobinations . . . . . *Lomaschiza*

Subgenus *Lomaschiza* Lower, 1901

*Lomaschiza* Lower, 1901: 68 (type-species, *L. physophora* Lower, by monotypy).  
*Lomaschiza*; Diakonoff, 1954: 19 (subgenus).

***Lobesia (Lomaschiza) rhombophora* Diakonoff, 1954**

*Lobesia (Lomaschiza) rhombophora* Diakonoff, 1954: 28, figs. 8, 14 (♂♀, Java)

Distribution. Java.

Food plants. *Sesamum indicum* Linnaeus (Pedaliaceae); *Perilla* spec. (Labiatae); *Bridelia stipularis* (Euphorbiaceae); ?*Blumea balsamifera* and *Pluchea indica* Less. (Compositae).

West Java, Bogor, 250 m, iii.1943 (bred from leaves of *Sesamum indicum* Linnaeus (widjen) (Kawada), 1 ♀, genit. slide 7596 (LM).

***Lobesia (Lomaschiza) melanops* Diakonoff, 1956**

*Lobesia (Lomaschiza) melanops* Diakonoff, 1956: 521, fig. 4 (♀, Misool Id.).

Distribution. New Guinea: Misool Id.

New Guinea, Ron Id., vii.1897 (Doherty), 1 ♂ (no abdomen) (BM).

\*) As I have elaborated on the genus *Lobesia* elsewhere (Diakonoff, 1953), the subgenera marked with an asterisk are not treated in this paper.

**Lobesia (Lomaschiza) fetalis** (Meyrick, 1920)

*Polychrosis fetalis* Meyrick, 1920: 346 (♂, Bengal).

Distribution. India: Bengal. Java, Sumatra.

Ceylon, Puttalam, 1896 (Pole), 1 ♀, genit. slide 7980.

India, Bengal, Pusa, bred from calyx of *Leuca carara* (sic), 1.ix.1919 (Ranji), 1 ♂ (T. B. Fletcher Coll.) (BM).

New Guinea, Port Moresby, x.1887-i.1888 (Kowald), 1 ♀, genit. slide 7985.

**Lobesia (Lomaschiza) genialis** Meyrick, 1912

*Lobesia genialis* Meyrick, 1912: 869 (♂, Ceylon).

Distribution. Ceylon.

South India, Coimbatore, bred from *Lantana* fruits and leaves, 28.vi.1916 (A.G.R.) and 4.i.1917 (Y. Ramakrishna Rao), respectively (T. B. Fletcher Coll., BM).

**Lobesia (Lomaschiza) elasmopyga** spec. nov.

(fig. 563)

♀ 10 mm. Head pale fuscous. Palpus pale fuscous, on upper edge and along apex of median segment mixed with dark fuscous, apical segment grey-fuscous, paler tipped. Thorax light fuscous, in middle with a transverse whitish band, apex dark fuscous, edge of metathorax white. Abdomen pale ochreous.

Fore wing suboval, dilated, broadest at  $3/4$ , costa hardly curved at base, straight beyond, hardly prominent at pterostigma, apex moderately pointed, termen curved, moderately oblique, dorsum strongly curved towards base which is narrow. Whitish, strewn with pale fuscous-grey scales tending to form transverse striation. Basal patch to before  $1/3$ , narrowly suffused with fuscous and tawny at base, with a median narrow fuscous transverse line, continuous, outwards-curved and slightly oblique; edge dark fuscous, interrupted, only indicated by a triangular small mark on costa and a lozenge-shaped larger transverse spot in fold, connected by a strigula with  $1/3$  of dorsum, both marks faintly edged with orange; transverse fascia entire, gently oblique, faintly outwards-curved, dilated downwards to middle, with a short point posteriorly, thence hardly narrowed, to  $3/5$  of dorsum; space between this and basal patch parted by a dark irregular line; preterminal spot triangular, oblique, one extended angle to  $2/3$  of dorsum; pterostigma with a short longitudinal streak, edged again by a dark line and followed by a slender oval looped line on costa; apex with a dark dot. Cilia fuscous (worn).

Hind wing rather narrow, 1, semioval, pointed; light tawny-fuscous, dark tips of scales causing finest transverse striation and dusting, except towards base. Cilia pale fuscous.

Female genitalia. Sterigma large, an inverted-subtrapezoidal aciculate plate, with lower half rounded, upper half extended horizontally, with a pair of moderate submedian emarginations and a pair of smaller lateral ones, so as to form a median triangular lobe, two smaller rounded submedian lobes and two slightly erected, rounded final lateral processes. Ostium in lower rounded part flanked by several lateral folds and crowned by a bilobed curved median fold.

New Guinea, Port Moresby, x.1887-i.1888 (Kowald), 1 ♀, holotype, genit. slide 7977 (BM).

**Lobesia (Lomaschiza) candida spec. nov.**

(fig. 562)

♂ 9 mm. Head and palpus pale ochreous, median segment of palpus infuscated. Thorax pale ochreous-fuscous (imperfect). Posterior tibia with a slight pencil. Abdomen pale ochreous.

Fore wing oblong-suboval, costa straight, with an oblong, thick pterostigma, apex rounded, termen convex, strongly oblique, flatly rounded below, hardly with any tornus. Pale ochreous mixed and strewn with tawny and fuscous, finely transversely striated (bases of scales paler). Basal patch darker fuscous, to 1/3, edge rounded, obtuse top below fold; transverse fascia indicated by a suffused dark fuscous spot from pterostigma, at 2/3 of costa, almost to fold, slightly inwards-oblique, lower edge indefinite; wing beyond this slightly deeper tawny; costa posteriorly with a row of small pale marks. Cilia fuscous (imperfect).

Hind wing triangular, pointed, apex and termen as far as vein 5 forming a slender lobe, termen slightly excised on end of fold, tornus rather prominent; semi-pellucent pale grey-fuscous, apical lobe opaque pale fuscous-tawny. Cilia pale ochreous.

Male genitalia. Very similar to *L. rhombophora* Diakonoff from Java, but differing chiefly by an ill-defined tuba analis and a shorter, rounded patch of small scobinations of the subscaphium (gnathos). Sacculus similar, but cucullus longer, with an apical obliquely-longitudinal patch of bristles.

Female not available.

Tenimber Id., vi-vii.1892 (Doherty), 1 ♂, genit. slide 6601. Rather damaged specimen, but genitalia distinct (BM).

**Lobesia (Lomaschiza) physophora (Lower, 1901)**

*Lomaschiza physophora* Lower, 1901: 69 (♂♀, Queensland).

Distribution. Australia: Queensland.

Food plants. *Clerodendron tomentosum* (Verbenaceae). *Petalostigma quadriloculare* (Euphorbiaceae).

Tenimber Id. (Timor Laut Id.), 1892 (Doherty), 1 ♀, genit. slide 7978 (BM).

New Guinea, Port Moresby, x.1887-i.1888 (Kowald), 1 ♀, genit. slide 7972 (BM).

**Lobesia (Lomaschiza) acroleuca** spec. nov.

(fig. 555, pl. 1 fig. 11)

♂ 13 mm. Head pale ochreous, on vertex mixed with bronze-fuscous. Palpus pale ochreous, with a bronze-fuscous suffused median transverse band. Thorax pale ochreous, infuscated anteriorly, apical tuft large, dark fuscous. Posterior tibia pale ochreous; pencil absent. Abdomen pale fuscous.

Fore wing oblong-suboval, gently dilated, broadest at 4/5, apex rather pointed, termen gently rounded, oblique. Less than basal 2/3 rather dark greyish-fuscous, dusted with blackish, so giving size to four equidistant inwards-oblique but ill-defined wedge-shaped marks from costa, anterior basal, posterior at 2/3 of costa; two ultimate marks converging in a faint dark oblong-oval patch, extending across posterior third of cell, outwards oblique, projecting beyond lower angle of cell, with posterior edge rather well-defined; posterior third of wing silvery-white, densely suffused with very pale ochreous-tawny, becoming brighter golden towards costa, along anterior edge and on large but ill-defined terminal patch, with a broad base on lower half of termen; edge of patch finely dusted fuscous, its top almost reaching costa, but indefinite; anterior edge of pale area obtusely projecting into fuscous part and reaching end of cell, above traversing base of vein 9, below that of vein 2. Cilia pale tawny, with a light basal line and a fulvous submedian band, cilia in tornus pale ochreous; two blackish elongate marks on costa before apex, a fuscous slender spot in apex.

Hind wing pale grey and semipellucid, posterior half opaque and suffused with pale fuscous-golden. Cilia pale fuscous, base suffused, whitish.

Male genitalia. Tegumen rounded, broad. Socii indefinite. Gnathos membraneous, rather broad, with a transverse fold, but not narrowed in middle. Valva slender, edge of sacculus well-defined and sclerotized, prominent in middle above, top free and curved outwards, crowned with  $Spc_2$  of diverse bristles, two anterior large and strong;  $Spc_1$  indicated by two spines in middle of sacculus edge (in right valva only); primary excision deep; cucullus edge with a rounded prominence with a patch of long, strong spines; cucullus gently clavate, top moderately rounded. Aedeagus slender and of moderate length.

East Java, Tengger Mts., Nongkodjadar, 1300 m, 15.iii.1940, at light (A. M. R. Wegner), 1 ♂, holotype, genit. slide 506; the same mountains, Kletak Pass, 2000 m, 17.x.1940, at light (A. M. R. Wegner), 1 ♂, paratype (LM).

A peculiar species with unusual markings and projecting top of sacculus.

Subgenus **Lobesia** Guenée, 1845

*Lobesia* Guenée, 1845: 297 (type-species, *Asthenia reliquana* Hübner, 1925 = *Tortrix permixtana* Hübner, 1811 (nec Denis & Schiffermuller, 1775), by subsequent designation of Fernald, 1908).

*Lobesia*; Obratsov, 1953: 89 (subgenus).



**Lobesia (Lobesia) aeolopa** Meyrick, 1907

*Lobesia aeolopa* Meyrick, 1907: 976 (♂♀, India, Ceylon).

Distribution. India: Bombay. Ceylon. Java.

Ceylon, Nawalapitiya, 2000 ft, 189.. (Pole), 2 ♀, genit. slides 7979, 7983 (BM).

New Guinea, Port Moresby, x.1887-i.1888 (Kowald), 1 ♀, genit. slide 7984 (BM).

**Lobesia (Lobesia) clavosa** spec. nov.

(fig. 586)

♂ 10.5 mm. Head and palpus light tawny-ochreous, face and inner side of palpus whitish. Thorax bright ochreous-tawny. Posterior tibia whitish, upper edge thick with appressed scales and a dense light fuscous pencil from base above, reaching to top of tibia. Abdomen light glossy grey, anal tuft tinged ochreous.

Fore wing oblong-suboval, costa gradually curved, apex and termen rounded, termen oblique. Pale ochreous, glossy, all narrow parts of ground colour faintly parted with greyish. Markings dull light tawny slightly tinged with olive, along costa and here and there along margins sparsely dotted with dark fuscous. Basal patch to before 1/4, edge indicated by a rather narrow band, angulate below middle, preceded by a broad band of ground colour which is parted twice by narrow light tawny lines; similar line, straight above, sinuate below fold, parting space between basal patch and central fascia, halves of this space parted again by minute greyish lines; central fascia median, well-defined, spindle-shaped, on dorsum twice as broad as on costa where it is very narrow; this fascia emitting from middle of posterior edge a narrow line, rising to 3/5 of costa and gently dilated upwards; a slender, erected-triangular mark on end of dorsum; a moderately outwards-oblique suboval terminal spot, on a slender stalk to end of termen, extended as a marginal line to tornus, and almost connected with two divergent wedge-shaped marks on costa before apex; an oval apical spot, with a short slender extension along termen. Cilia pale fuscous, below apex and in tornus indistinctly barred with pale ochreous.

Hind wing rather narrow, oblong-subtrapezoidal, pointed, dorsum normal; glossy grey-fuscous, cilia concolorous.

Male genitalia. Of the characteristic subgen. *Lobesia* type, very similar to the genitalia of *L. (L.) aeolopa* Meyrick, but with a shorter aedeagus (intermediate between those of *aeolopa* and *lithogonia* Diakonoff), a smaller primary excision, a more extended but less dense  $Spc_1 + Spc_2$ , not prominent lower angle of the base of cucullus and a less rounded and more curved top of cucullus than in *L. (L.) aeolopa* Meyrick. The pattern of the fore wing, especially the shape of the central fascia and the terminal spot are equally characteristic. Basal abdominal pouches large, elongate-oval.

Samoa Is., Tutuila Id., Fagatogo, 12.viii.1940, e.l. "ex *Irema*?" (O. H. Swezey), exuvium pinned below specimen, 1 ♂, holotype, genit. slide 6693; 1 ♂, paratype (USNM).

**Lobesia (Lobesia) atrata** spec. nov.

(figs. 578-580)

♀ 9.5 mm. Head whitish-ochreous, antenna slightly darker, flagellum ringed with dark brown. Palpus light ochreous, median segment strongly strewn with blackish-fuscous. Thorax pale ochreous, moderately suffused with pale fuscous. Abdomen glossy dark fuscous, venter pale grey.

Fore wing narrow, gradually dilated, broadest at 5/6, apex rounded, termen rounded, oblique. Whitish, touched with ochreous, slightly strewn with ochreous-tawny; upper half of wing as far as fold and from beyond base to beyond cell, suffused with black and traversed by three oblique, broad, double, dark leaden-grey spots, median largest, paler; ground colour along lower and posterior edges of this suffusion irregularly marked with rather bright ochreous-tawny; a small erect slender mark on end of dorsum; a very large, pear-shaped preterminal bright tawny spot, with darker edge except below, from vein 2 to vein 7, by a stalk connected with costa at 5/6; apex of wing beyond this spot filled out by the same tawny colour but separated from spot by a curved series of subquadrate pale ochreous, leaden-centred dots, leaden centres becoming larger upwards; this band running from costa before apex to termen above tornus; costa just before apex with an oblong blackish dot extending over cilia. Cilia light ochreous-fulvous, narrowly barred with purplish, a pale basal and a purplish subbasal line.

Hind wing and cilia light grey.

In right wing dark suffusion forming a more conspicuous black spot at 3/4, from costa to fold, with a slender posterior appendix, curved upwards and a thicker small bar along end of fold.

Female genitalia. Lamella antevaginalis with upper edge straight, lower, triangularly emarginate; ostium long, sclerotized, rising and rigid, tubular, gently dilated at base and in middle. Signa absent.

Marianas Is., Guam Id., Piti, 7.ix.1936, at light (O. H. Swezey), 1 ♀, holotype, genit. slide 6692 (USNM).

Judging from the ostium, allied with *L. (L.) lithogonia* Diakonoff, from Java, but ostium much shorter, excision of lamella antevaginalis rounded in that species.

**Lobesia (Lobesia) lithogonia** Diakonoff, 1954

*Lobesia (Lobesia) lithogonia* Diakonoff, 1954: 49, figs. 20, 21, 26 (♂ ♀, W. Java, E. Sumatra, SE. Borneo).

Distribution. West Java. East Sumatra. Southeast Borneo.

Ceylon, Nawalapitiya, 2000 ft, 189.. (Pole), 2 ♂, genit. slide 7971; 1 ♀, genit. slide 7982.

South Moluccan Is., Batian Id., viii.1897 (Doherty), 1 ♀, genit. slide 7969.

Tenimber Id. (Timor Laut Id.), 1892 (Doherty), 1 ♂, genit. slide 7970.  
 New Guinea, Hydrographer Mts., 2500 ft, 1.1918 (Eichhorn Bros.), 1 ♂, genit. slide 8121. (All BM).

**Endopiza** Clemens, 1860 stat. nov.

*Endopiza* Clemens, 1860 (nec *Endopisa* Guenée, 1845); 359 (type-species *Endopiza viteana* Clemens, by present designation).

*Polychrosis* Heinrich, 1926 (partim; nec Ragonot, 1894): 87 (type-species, *Tortrix botrana* Schiffermüller = Denis & Schiffermüller, by original designation of Heinrich, 1926).

*Paralobesia* Obraztsov, 1953: 92 (type-species, *Coccyx anderreggiana* Herrich-Schäffer). — Diakonoff, 1954: 14 (bionom.) **Syn. nov.**

Male genitalia. Tegumen conical, top bilobed. Uncus absent. Gnathos sclerotized laterally, with a median process connected with tuba analis. Sacculus with primary excision, Spc<sub>1</sub>, Spc<sub>2</sub> usually present; Spc<sub>3</sub> always present, usually strongly developed and marginal, in type-species moderate and submarginal.

Female genitalia. Similar to those of *Lobesia* Guenée.

A single Palaearctic and 16 Nearctic species. The male genitalia show a relationship with *Xenolepis* gen. nov., Spc<sub>3</sub> in the type-species being moderate and submarginal, as in that genus, but the modified bristles of that genus are lacking in *Paralobesia*.

Note. The type-species of "*Endopiza*?" Clemens, 1860, apparently has never been designated; this is effected above. The concept that the genus-group name *Endopiza* Clemens is invalid, being preoccupied by *Endopisa* Guenée, 1845, the type of which, as designated by Fernald (1908: 32), is *Pyralis nigricana* Fabricius, belonging to *Laspeyresia* Hübner, is incorrect, according to the Article 56(a) of the Rules. Therefore *Paralobesia* Obraztsov, 1953, falls as a junior subjective synonym.

**Xenolepis** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis vestigial. Antenna in male minutely ciliate. Palpus moderate, subascending, median segment strongly dilated, triangular, roughish below and at apex, terminal segment short, obtuse, drooping. Posterior tibia smoothly scaled, in male with a small pencil from near base above, partly concealed in a compressed subdorsal groove.

Fore wing oblong-subtruncate, dilated, apex obtuse. Vein 2 from 3/4, 3 from angle, curved and approximated to 4 at margin, 4-5 equidistant, 7 separate, to termen, 8 from angle, 7-9 very close at base, 10 from middle distance 9-11, distinctly converging towards 9 below costa, but towards and on costa 9 and 10 parallel, 11 from middle, chorda long, from halfway 10-11 to below base of 7, median branch to below 5.

Hind wing with a cubital pecten, 2 from 2/3, 3 from before angle, 4 from angle, 5 closely approximated at base, 6 and 7 approximated towards base; hind wing in male modified, moderately pointed, termen below vein 1c, which is thickened and strong, with a deep narrow slit reaching 3/4 towards base, ciliated along both sides, wing

below this slit forming a broad, triangular lobe, gently notched at apex, tornus angular, dorsum with a slender thickened groove along basal third; hing wing in female oblong-subtrapezoidal, of normal shape.

Male genitalia. Resembling those of *Cymolomia* Lederer, but with a short, conical, little differentiated uncus, beset on both sides with strong bristles. Socius moderate or rather small, pending. Gnathos membraneous and ill-defined, a narrow transverse band. Tuba analis voluminous, with a ventral beak-like submembraneous, porrect part. Valva long and rather broad, gently curved, top slightly constricted. Sacculus short, under  $1/4$ , with a thick conical pulvinus;  $Spc_1$ , a large and dense, appressed sheaf of bristles, directed basad;  $Spc_2$  submarginal, projecting far beyond edge; colliculum evenly beset over the whole disc with peculiar furcate scale-like bristles (often occurring in Schoenotenini, in some Aegeriidae and in a few other groups); a few short marginal spines posteriorly. Aedeagus rather long, curved, without cornuti.

Female genitalia. Sterigma V-shaped, aciculate, base tubular. Colliculum rather long. Signa absent.

Type-species, *Polychrosis gabina* Meyrick, 1909 (Assam).

A peculiar form with a characteristically shaped and clothed valva. The modified male hind wing and the tendency of veins 9 and 10 in the fore wing to be widely separated at base, but converging towards margin, point towards a relationship with *Lobesia*. However, the abdominal scent pouches in the male are absent and the furcate flat bristles are unique in the tribe, but for one exception: *Asaphistis maturicolor* spec. nov. But this is a close and veritable relation indeed, proving a direct connection between *Xenolepis* gen. nov. and *Asaphistis* Meyrick and through this also a connection between the two subtribes in question: Lobesiae and Statherotides, respectively.

#### Key to the species of *Xenolepis*

1. A whitish-leadened submedian band and an ocelloid spot much paler than other markings; male with anterior leg white, tarsus black; tornal lobe broad. . . . . *dolichoschiza*  
 — Only a whitish suffused spot at  $3/4$  of disc above middle; male anterior leg tawny, tornal lobe narrow . . . . . *gabina*

#### ***Xenolepis gabina* (Meyrick, 1909) comb. nov.**

(figs. 564-566, 582)

*Polychrosis gabina* Meyrick, 1909: 588 (♂♀, Khasis). — Clarke, 1955: 145.

*Lobesia gabina*; Clarke, 1958: 468, pl. 233 figs. 3-3a (lectotype select., wings, genit. ♂ figured).

Distribution. Assam: Khasis.

A moderate species with a leaden-grey or lilac ground colour, marbled and partly suffused with fuscous and purplish. Posterior  $3/4$  of costa with very short white pairs

of marks; basal patch to before  $1/3$ , marbled with deep purple; edge dentate, longest tooth in fold; transverse fascia indefinite, indicated by a strongly sinuate light ochreous band marked with several purple-black transverse streaks; one largest on costa, three more in disc posteriorly, an irregular spot in fold; in male these streaks dissolved in numerous irregular slender marks; subcostal streak before apex rather faint, olive, becoming blue posteriorly and containing a curved series of four black longitudinal marks; a vertical fasciate spot rising from dorsum before tornus, crowned with whitish above middle of disc, twice constricted below, base filled out by ground colour; apex and termen to tornus with a broad fuscous marginal streak. Cilia grey with a blackish basal band edged above with a white line.

Hind wing in male rather dark purplish-fuscous, subhyaline on base and above split; in female deep purple with a hyaline basal half, broad bands of purple suffusion along veins 1b and 1c. Cilia whitish.

Male genitalia. Uncus pointed. Socius rather long. Gnathos narrow, tuba analis with a beak-like process. Sacculus with pulvinus conical, bristly;  $Spc_1$  with edge not so well-defined, not extended along outer edge.

Female genitalia, as described with the genus.

Assam, Khasi Hills, iii.1907, 1 ♂, genit. slide 6520; xii.1906, 1 ♀, genit. slide 6519 (BM).

### *Xenolepis dolichoschiza* spec. nov.

(figs. 569-571)

♂ 13 mm. Head dark fuscous-grey, face whitish, collar with bluish reflections. Palpus fuscous-grey, median segment white at apex below and along lower edge. Thorax blackish-fuscous, tegula, paler fuscous, with faint green reflections in certain lights. Anterior tibia loosely long-haired, snow-white, anterior tarsus smooth, snow-white at base, tip jet-black (apparently fore leg exposed when in rest). Posterior tibia smoothly scaled, pencil from base smoothly appressed and partly concealed. Abdomen blackish-fuscous, anal tuft inside whitish.

Fore wing oblong-subtruncate, costa gently curved, more curved at  $3/4$ ; apex obtuse, termen gently rounded, vertical. Light leaden-grey, leaden-lilac or leaden-blue, markings dark fuscous, partially broadly edged with whitish. Basal patch to  $2/5$ , edge strongly angulate and well-defined, gently concave below costa, rounded-prominent in fold, concave below fold to above dorsum; this patch strongly marbled with ground colour on basal  $2/3$ ; transverse fascia narrow on middle of costa, thence obliquely dilated posteriorly and forming a gently downwards-dilated large patch occupying posterior  $2/5$  of dorsum to middle of tornus, anterior edge straight and vertical, with a downwards-directed vertical long tooth from costa; posterior edge of patch from upper angle of cell to middle of tornus, tolerably straight and gently outwards-oblique, with a rising acute tooth from middle of this distance, edged with white; this fascia cut twice by ground colour: horizontally, at  $1/3$ , obliquely, at  $2/3$ ;

ocelloid spot spindle-shaped, glossy silvery-lead, cut by 3-4 dark lines, second line circular; and edged on both sides with white; costa before middle with two pairs of thick straight marks, along third fourth with four slender oblique single marks; posterior fourth of costa dark fuscous, edged below by pale blue line, followed below by a dark fuscous suffused streak from  $3/4$  of costa to termen above middle. Cilia dark fuscous-grey, becoming pale grey around tornus, throughout with a dark fuscous basal band.

Hind wing dark purple-fuscous along marginal fourth, sparsely scaled along second fourth, lower half of cell and cell 2, hyaline, veins infuscated; apex of wing rounded-prominent, upper half of termen rounded, forming the narrow split below vein 1c almost to base, anal lobe large, oblong-triangular, top slightly curved downward, extreme apex of termen notched, tornus angularly prominent; dorsum with a thick marginal roll not reaching tornus. Cilia grey, around apex and upper part of termen with a dark fuscous basal band.

Male genitalia. Similar to those of *X. gabina*, but differing thus. Uncus broader, more triangular. Socius small. Gnathos moderately sclerotized, central rising part (or tuba analis) with a transversely prolonged base, T-shaped. Valva very much like that in *gabina*, but  $Sp_1$  more distinctly edged and circular anteriorly, posteriorly narrowly extended along outer edge of cucullus; pulvinus more rounded and depressed.

♀ 12-13 mm. Paler fuscous, ground colour pale leaden-grey, less contrasting. Markings similar to those in the male, but paler fuscous, there is an ocellus-like small agglomeration of pale dots in the transverse fascia: at  $2/3$  of wing well below costa.

Hind wing normally shaped, rather oblong-suboval, black as far as upper edge of cell, below this with a black marginal third, remainder hyaline with narrow black veins, only fold (vein 1c) with a broader black streak, dorsum slightly dusted with black; in the specimen from Celebes black colour strongly extended, hyaline only an oblong, oval-clavate area above and below basal half of vein 2.

Female genitalia. Sterigma V-shaped, very similar to that in *X. gabina*, but less robust, sides smaller, less aciculate, lamella antevaginalis smaller but stronger, distinctly constricted in middle. Corpus bursae similar.

North Moluccan Is., S. Batian Id., sea level, Watiana, 25.vi.1953 (A. M. R. Wegner), 1 ♂, paratype, genit. slide 5952 (LM).

East Sula, Mangoli Id., xi.1897 (Doherty), 1 ♂, holotype, genit. slide 7770 (BM).

South Celebes, low country, 1896 (Doherty), 1 ♀, paratype, genit. slide 7774 (BM).

New Guinea, Milne Bay (A. S. Meek), 1 ♂, paratype, 1 ♀, allotype, genit. slide 7771. E. Papuan Is., Louisiades, St. Aignan Id., 1897 (Meek), 1 ♂, paratype (BM).

An elegant, small species with a striking shape of the hind wing and with a slightly varying hue of the ground colour: from leaden-grey to leaden-lilac and leaden-blue.

**Engelana** Diakonoff, 1968

*Engelana* Diakonoff, 1968a: 69, figs. 1-4 (type-species, *Argyroploce anisoptera* Meyrick, 1921, by original designation).

Head with loosely appressed scales. Ocellus posterior. Proboscis short. Antenna minutely pubescent in male. Palpus short, less than middle of eye, ascending, appressed to face, with closely appressed scales, median segment hardly roughish along lower edge, dilated only at truncate, roughish top; terminal segment very short, sub-concealed. Thorax smooth. Posterior tibia with a brush from base above, posterior tarsus with basal segment long-tufted above.

Fore wing broad and short, dilated, suboval, termen long and oblique. 2 from 2/3, 3 from angle, 7 free, to termen, 8 closer to 7, 10 from halfway 9-11, 11 from before middle, chorda long, median branch to base of 5.

Hind wing in male modified, shortened, 2 from 5/6, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base, 8 from middle of upper edge of cell.

Male genitalia of the type of subgenus *Lobesia* (*Lobesia*), but with stronger socii, reduced and paired gnathos and simple sinuate valva without a ventral excision and without spine clusters on sacculus.

Female unknown, but probably with a normal hind wing.

The genus is closely allied with *Lobesia* Stephens, but differs by short palpi, male genitalia and peculiar neuration of the hind wing.

**Engelana anisoptera** (Meyrick, 1921)

(fig. 574)

*Argyroploce anisoptera* Meyrick, 1921: 157 (♂, Java). — Clarke, 1955: 47.  
*Engelana anisoptera*; Diakonoff, 1968a: 71 (type-species).

Distribution. Java.

The unique specimen known has strikingly small hind wings, oblong-suboval and rather pointed, about 4/5 as broad as fore wings, but much shorter. The colouring and markings remind one of a *Gatesclarkeana* species, the rather dark leaden-grey ground colour is densely marbled and strigulated with deep purple; transverse fascia rather direct, slightly postmedian and broad, little darker than other markings, but with a large slightly supramedian, round spot, excentric, open posteriorly and centred with ground colour; a slender vertical mark in tornus and an irregular and more oblique one on termen, both well-defined.

Hind wing fuscous-grey.

Male genitalia, as described with the genus.

Only one specimen, holotype, labelled: "M 91" (in Meyrick's hand) "W. Java, Buitenzorg, 1893, ♂" (in Snellen's hand). Genit. slide 4994 (LM). The type is in good condition.

**Didrimys** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna in male moderately thickened and flattened, short-biciliate, ciliations under  $1/2$ . Labial palpus moderate, subporrect, median segment tolerably straight, gradually dilated towards apex with closely appressed scales, roughish along lower edge and at apex, terminal segment short, thick, obtuse. Thorax with a posterior crest. Posterior tibia in male strongly extended and dilated by roughly projecting scales above and beneath, sometimes with thick smooth tufts at apex above, with a pencil of long scales from base above; basal segment of posterior tarsus with a pecten of projecting scales above.

Fore wing rather broad, subtruncate, vein 2 from slightly beyond  $2/3$  of cell, 3 from angle, 4 close to 3, 5 remote, almost parallel to 6, 7 separate, to termen, 8 from angle, 7-9 rather closely approximated, 10 from  $1/2$  distance 9-11, 11 from middle, chorda from well before 10 to base of 7, median branch from towards base to below base of 5.

Hing wing with a cubital pecten, vein 2 from beyond middle, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen high and rather slender. Uncus with a pointed basal half, in front of which a double cloak-like fold represents the uncus top proper, adorned with dense spines apically. Socius of diverse size, pending; uncus and socii together with dense, very long bristles. Gnathos formed by two transverse lobes, interconnected by some membranous tissue, each lobe aciculate, crowned at the end (mesad) by a long, erect, aciculate cusp. Valva slender, curved, with a slight "neck", gently sinuate.  $Spc_1$ , a small group of short spines;  $Spc_2$  with a low prominence crowned with an isolated cluster of spines. Aedeagus short.

Female genitalia. Sterigma moderate, a truncate-conical sclerite, with upper edge incised in front and at the sides, densely aciculate throughout. Colliculum bivalvular, narrowed, of moderate length. Signum single, a gently curved, flattened hook.

Type-species, *Platypeplus harmonica* Meyrick, 1905 (Ceylon).

A genus of *Lobesia* relationship, judging from the well-developed gnathos. The slender and rather simple valva points toward *Dudua*. Therefore the present genus appears to be intermediate between these two genera, being quite distinct by the peculiar gnathos.

The species have a similar appearance, with the basal half of wing being much paler than the apical, both halves with a dense marbling. The males show slight differences in the scaling and colouring of the hind tibia.

Key to the species of *Didrimys*

1. Posterior half of fore wing distinctly tinged ferruginous or fulvous, sometimes only orange-tawny below end of fold; with paler marks (except along costa), usually ochreous to orange or grey. . . . . 2
- Posterior half of fore wing for the greater part dark fuscous, without any ferru-



- ginous tinge, paler marks whitish . . . . . *scaristis*
2. Posterior tibia in male smooth, glossy-white, on the inside mixed with black, knee black . . . . . *harmonica*
- Posterior tibia in male with appressed scales, outside light tawny-fuscous, inside without any black, knee whitish . . . . . 3
3. Posterior half of wing fulvous; postbasal band pale grey . . . . . *philocompsa*
- Posterior half of wing obscured with a rather dark fuscous suffusion throughout, only below end of fold orange-tawny; postbasal band less contrasting, suffused with dark grey . . . . . *unicolor*

*Didrimys harmonica* (Meyrick, 1905) comb. nov.

(figs. 567-568, 573, 577, 583)

*Platyepplus harmonica* Meyrick, 1905: 584 (♂, Ceylon). — Clarke, 1955: 153.

*Argyroploce harmonica*; Diakonoff, 1949: 136 (*philocompsa* syn.). — 1953: 107, 112 (N. Guinea).

*Argyroploce crocospila* Meyrick, 1939: 50 (♀, Java, leaves of *Eugenia*). — Clarke, 1955: 104. Syn. nov.

*Olethreutes crocospila*; Clarke, 1958: 548, pl. 248 figs. 4-4c (holotype ♀, wings, genit. figured).

Distribution. Ceylon, Java, New Guinea.

Food plant. *Eugenia aquarea* Burm. (Myrtaceae, leaves).

West Java, "Java (L. G. E. Kalshoven), *Argyroploce harmonica* Meyr., det. H. Stringer", 1 ♀, genit. slide 6613. "Leaf roller of "djamboe bol" (*Psidium guajava*), pupated 30.ix, emerged 10.x.1919, Bogor", 1 ♂. The same locality, bred from leaves of "salam", 25.iv.1921 (L. G. E. Kalshoven), 2 ♂. Central Java, teak forest, 40 m, Telawa, Seneng, bred from leaves of "salam" (?*Eugenia polyantha*) and "klampoh" (?*Eugenia subglauca*), xii, i and ii, 1931, 1932, 1935 (L. G. E. Kalshoven), 2 ♂, 6 ♀, genit. slides 6615 ♂, 6617 ♀, 7633 ♀, 6769 ♀. East Java, Mt. Ardjoeno, Tretes, 900 m, bred from leaves of "salam" (A. Diakonoff), 1 ♂, genit. slide 7767; 1 ♀.

East Borneo, Balikpapan, 50 m, Wain River, xi.1950 (A. M. R. Wegner), 1 ♀, genit. slide 7460.

West New Guinea, Schouten Is., Biak Id., 12.viii.1952 (L. D. Brongersma c.s.), 1 ♂, genit. slide 6590, 1 ♀, genit. slide 6368. (All LM).

Ceylon, Kandy, 1910, ♀, genit. slide 7794 (BM).

The present and the following species (*philocompsa* Meyrick) are easy of recognition but extremely similar to one another. The basal half of the fore wing is whitish or pale grey, with darker ashy-grey or blackish marbling, while the posterior, slightly larger half of wing is ferruginous, fulvous or vinaceous tinged, with intricate darker markings in the same tinge and usually with a black, suffused, somewhat irregular spot just below middle of costa.

The posterior tibia of the male is strongly thickened and smooth, with snow-white scales mixed on the inside with jet-black scales, a jet-black triangular spot on knee above, pencil from base blackish; snow-white fringe of upper edge of tibia forming a

large triangular smooth tuft at apex above, with its tip rounded, continued in a similar oblong tuft above basal segment of posterior tarsus.

Male genitalia as described with the genus. The uncus is very characteristic, as also is the gnathos, with aciculate robust horns.

Female genitalia, as described with the genus.

"*Argyroploce crocospila*" Meyrick proves to be a synonym. The species has been described after a single female specimen, now in the British Museum; it has been figured by Clarke (1958). Besides, I have one specimen of the same lot, with a no. 24 label (being the number of the sending of material to Meyrick for identification) and labelled thus: "824" (in pencil), "Djamboe bol (blad)", "Buitenzorg, 5.vi.1936, Dr. Kalshoven, S 757", "*Argyroploce crocospila* Meyr., n.sp., det. Meyrick", "24" (red ink).

This is without doubt a second specimen of the same lot as the type; this unofficial syntype has been sent to and identified by Meyrick, but it was omitted from the description. The abdomen is lacking, but the specimen is conspecific with *harmonica*.

#### *Didrimys philocompsa* (Meyrick, 1921)

(figs. 572, 575)

*Argyroploce philocompsa* Meyrick, 1921: 158 (♂, Java). — Clarke, 1955: 247 (holotype supposedly lost).

Distribution. Java: Buitenzorg.

♂♀ 11-15 mm. Superficially exactly similar to *D. harmonica* (Meyrick) and differing only by the scaling and colouring of the posterior tibia and tarsus in the male and by the male genitalia.

Posterior tibia pale fuscous externally, except the fringe of modified white scales along upper edge, less dense and looser and not forming a distinctly rounded large triangular tuft at apex, also white tuft on posterior tarsus looser than in that species; on the inside tibia whitish, without black scales, knee and pencil from base above, whitish.

Male genitalia. Tegumen with shoulders broader and more rectangular. Uncus more triangular; with a broader base, top curved, with a deep median split, each half at tip with 2-3 strong spines. Socius more slender. Gnathos, a more slender, trapezoidal band, widely open above, horns slender, distant and smooth. Spc<sub>1</sub> and Spc<sub>2</sub> smaller, a patch of bristles on and outside edge of base of sacculus absent.

Female genitalia not differing from those in *harmonica*.

"West Java, Buitenz. 1893, ♂" (in Snellen's hand), "N 97" (in Meyrick's hand), 1 ♂, holotype, genit. slide 7632; the same Snellen's labels, 1 ♀, apallotype, genit. slide 7766; 1 ♂, paratype, bred from leaves of *Eugenia polycephala*, 18.iii.1938 (Franssen), genit. slide 5817. Central Java, teak forest near Semarang, 40 m, Seneng, 20.

ii.1932 (L. G. E. Kalshoven), bred from "salam" (? *Eugenia polyantha*) leaves, 1 ♀, genit. slide 6614; the same region, Telawa, 28.ii.1935, bred from leaves of "Klampoh" (? *Eugenia subglauca*) (L. G. E. Kalshoven), 1 ♂, genit. slide 7768 (LM).

The species has been confounded with *D. harmonica* (Meyrick), which is understandable, as they occur together and superficially are almost entirely alike. Meyrick confounded the species sometimes also with *Theorica lamyra* (Meyrick) and even with *Gatesclarkeana* species.

***Didrimys scaristis* (Meyrick, 1911) comb. nov.**

*Argyroploce scaristis* Meyrick, 1911a: 270 (♂, New Guinea). — Clarke, 1955: 276. — Diakonoff, 1966: 28, pl. 1 fig. 1 (holotype genit. ♂ figured; referred to new genus; also from Bismarck Is.).

Distribution. New Guinea; Bismarck Is.

No additional material has been studied except the holotype and one male from Witu Id., New Britain.

The species has the same general appearance as *D. harmonica*: with the basal half of wing much paler than the apical half, but this apical half is dark fuscous, without any warm ferruginous or reddish tinge, paler along dorsum, while the pale markings are of the whitish ground colour, as also is the ground colour of the cilia. The hind wings are dark fuscous — instead of fuscous-brown, as in *D. harmonica*.

Male genitalia. Very similar to those of *harmonica* but tegumen slightly more narrowed, socius more slender, gnathos halves with the thickened basal portion more slender. Valva differing only by less developed  $Spc_1$  while the characteristic small separate patch of spines in the middle of the "cucullus spines" group, isolated and distinct in *harmonica*, is vestigial.

***Didrimys unicolor* spec. nov.**

(fig. 576)

♀ 14 mm. Head light fuscous strewn with whitish. (Palpi missing). Thorax purplish-fuscous, dusted with paler. Abdomen dark grey, venter paler.

Fore wing rather broad, dilated, costa gently curved throughout, apex rounded, termen gently convex, almost vertical above, rounded beneath. Dark slaty-grey, markings dark purplish-fuscous. Basal patch to 1/4, edge rounded; transverse fascia broad, from before middle to 3/4 of costa, edges slightly suffused, anterior tolerably vertical and straight, posterior vertical along upper 3/4, thence inwards-oblique; this patch purple-fuscous, including two pairs of pale costal marks and filled out on its constricted dorsal part below fold, with orange-ochreous; preterminal fascia deep purple-fuscous, rather slender and somewhat irregular, from dorsum before tornus to 4/5 of costa, strongly constricted below middle, and with a straight oblique branch from beyond top on costa to below middle of termen; three pairs of silvery-white marks on

costa posteriorly, apex with a purple spot. Cilia (imperfect) purple with a pale basal line.

Hind wing dark purple-fuscous, semipellucant, paler on basal 2/3. Cilia (imperfect) purplish.

Female genitalia. Sterigma moderate, edge of ostium formed by a smooth circular rod, open frontally, in front and laterally surrounded by an aciculate wall, dilated gradually dorsad, extreme angles diverging. Colliculum short and slender. Signum rather small, a sinuate, flat horn with oval top.

Celebes, nr. Chambi (low country), 1896 (Doherty), 1 ♀, holotype, genit. slide 7773 (BM). A small species, distinct by genitalia and rather uniform, little contrasting markings.

12. SUBTRIBUS OLETHREUTAE NOV.

Signa two, seldom one, cornute or only scobinate, small or moderate, subequal, sometimes absent.

Scent organ of tibio-dorsal type, diversely developed hairs of posterior tibia, sometimes also of basal segment of tarsus, and a roll of the hind wing often complicated with folds, extra lobes and diverse hair scales.

Male genitalia, with a diversely developed, but robust, hooked uncus. Gnathos, often a submembraneous transverse band. Valva long and slender, gently curved; sacculus usually simple, Spc<sub>1</sub> and Spc<sub>2</sub> diversely developed. Often there is a tendency towards the development of a strong labis and of additional harpes, on which Spc<sub>1</sub> and Spc<sub>2</sub>.

The subtribe connects directly with the *Saliciphaga* group from the subtribe Neopotamia, differing chiefly by less developed labis and normal, cornute signa. Also the *Eccopsis* group, of Aethiopian origin, belongs here.

Other representatives are characterized by the cucullus getting dilated, sometimes sub-bifid posteriorly (*Argyroploce (Phiaris)* group) or the sacculus angularly projecting or becoming extended generally, with strong ridges and spines, with large Spc<sub>1</sub> and Spc<sub>2</sub> (*Argyroploce (Argyroploce)* Hübner group, *Olethreutes* Hübner, *Celypha* Hübner, etc.) or with a slender valva with sometimes a subbasal process of lower edge of sacculus (*Selenodes* group).

A large group of several genera differing in presence or absence of a gnathos, of socii, etc.

Key to the genera of Olethreutae

- 1. Fore wing with vein 8 stalked . . . . . 2
- Fore wing with vein 8 separate . . . . . 3
- 2. Fore wing with 8 stalked with 9 . . . . . *Palaeomorpha*
- Fore wing with 8 stalked with 7 . . . . . *Rhopaltriplasia*
- 3. Uncus absent, tegumen very broad, bifid, with dark and rigid, dentate and hooked apical lobes . . . . . *Pelatea*
- Tegumen not thus . . . . . 4
- 4. Hind wing with veins 3 and 4 stalked . . . . . 5
- Hind wing with veins 3 and 4 separate . . . . . 7
- Hind wing with veins 3 and 4 connate . . . . . *Stalagmocroca*
- 5. Uncus large, strongly clavate . . . . . *Antaeola*
- Uncus hooked or short, not so broadly clavate . . . . . 6
- Uncus bifid . . . . . *Oestropha*
- 6. Uncus broad and short, bilobed or notched in middle . . . . . *Cymolomia*
- Uncus narrow, hooked . . . . . *Archilobesia*

- 7. Gnathos strong, spiny along lower side throughout . . . . . 8
- Gnathos present or absent but without spines . . . . . 9
- 8. Hind wing sometimes with 7 and 8 stalked; valva with a spiny process . . . . .  
*Orthotaenia*
- Hind wing with 7 and 8 approximated; valva slender, without process. . . . .  
*Pristerognatha*
- 9. Socii rigid . . . . . 10
- Socii normal, weak pending pads, not rigid . . . . . 12
- 10. Socii, very long, sclerotized, movable vertical rods hairy at top only . . . . .  
*Capricornia*
- Socii not so long and slender, haired throughout . . . . . 11
- 11. Uncus short, subtruncate; socii massive, pending, with high "shoulders"; valva  
with a slight tumescent labis . . . . . *Gonomomera*
- Uncus moderate, conical, socii rigid, but normally shaped, pointed; valva with-  
out labis, with three slightly tumescent groups of spines . . . . . *Rudisociaria*
- 12. Valva with one or more raised harpes or labides. Uncus usually with spines on  
underside of top. . . . . 13
- Valva without raised harpes or a labis . . . . . 14
- 13. Hind wing vein 3 from well before angle; labis slender, spiny at the top. Uncus  
long, broad at base. Valva very slender . . . . . *Ophiorrhabda*
- Hind wing vein 3 from angle; labis diversely shaped, usually large and thick,  
seldom depressed but then heavily spined and cucullus broad and rounded.  
Uncus long and slender. Valva broad . . . . . *Metendothenia*
- 14. Fore wing broad, truncate, costa sinuate, prominent in or beyond middle, con-  
cave before apex, apex pointed, termen sinuate. . . . . *Lipsotelus*
- Fore wing differently shaped . . . . . 15
- 15. Valva with a free lateral process at the ventral edge of sacculus . . . . . 16
- Valva without such process (if top of sacculus projecting then curved over disc) 17
- 16. Process of sacculus dentate . . . . . *Apotomis*
- Process of sacculus not dentate . . . . . *Selenodes*
- 17. Uncus long, slender, furcate and granulate . . . . . *Oxysemaphora*
- Uncus not so shaped. . . . . 18
- 18. Valva broad and rather short, oblong-oval, sacculus not separated, Spc, very  
large . . . . . *Stictea*
- Valva diversely shaped, but not regularly oval, usually sacculus much broader,  
or a constriction in middle of valva present . . . . . 19
- 19. Cucullus distinctly clavate, valva being constricted in or beyond middle, no  
spiny processes beyond constriction . . . . . 20
- Although sacculus is broad, cucullus is not clavate, valva being without con-  
striction; if uncertain then usually a spiny process beyond (pseudo-)constric-  
tion . . . . . 22
- 20. Sacculus very broad, edge thickened, ending in a free process curved over disc  
*Euobraztsovia*

- Sacculus not so armed . . . . . 21
- 21. Top of sacculus with a simple triangular prominence, followed by a small group of spines . . . . . *Piniphila*
- Top of sacculus rounded, with a dense row of short curved spines . . . . .  
*Pseudohermenias*
- 22. Sacculus usually strongly dilated, with several long sheaves of bristles; valva with strong, unequal spines . . . . . *Celypha*
- Sacculus, if strongly dilated, without long pencils of bristles . . . . . 23
- 23. Gnathos well-developed, usually forming one or two denticulate tumescences . 24
- Gnathos membraneous or vestigial . . . . . 25
- 24. Gnathos with one or two median, pending, shortly denticulate tumescences. . .  
*Dudua*
- Gnathos with two lateral aciculate tumescences, more or less separated in middle  
*Lasiognatha*
- 25. Valva with a slender, gently curving cucullus, its basal bristles usually forming an oblique patch across disc, connected with a projecting labis-like  $Spc_1$ ;  $Spc_2$  mostly marginal and large . . . . . *Hedya*
- Valva with diversely shaped cucullus, usually except normal fine bristles also with unequal spines, often these upon one or two lateral processes above middle of valva, often sacculus dilated and with two opposite concavities;  $Spc_2$ , a small sheaf;  $Spc_3$  absent . . . . . *Olethreutes*

#### *Hedya* group of genera

Tegumen high, narrowed. Uncus present, usually slender, diversely shaped. Socii developed, pending. Valva with a tendency to form an oblique transverse patch of bristles or spines, not elevated, seldom prominent on proximal end; sacculus usually with long  $Spc_3$ .

The first four genera have veins 3 and 4 in the hind wing stalked.

#### **Oestropa** gen. nov.

Head with appressed scales, roughly spreading on vertex and between antennae. Ocellus posterior. Proboscis very short. Antenna in male thickened, short-ciliate, ciliations 1/4. Palpus porrected, gently sinuate, dilated towards apex of median segment with appressed scales, roughish at base, terminal segment moderate, exposed, obtuse. Thorax with a slight posterior crest. Posterior tibia in male apparently normal, without a pencil. Abdominal scent organ represented only by a slender crescentic fold across the 3rd sternite, without any modified scales.

Fore wing oblong-suboval, costa gently curved throughout, apex pointed, termen gently concave, sinuate, rounded beneath. Vein 2 from 3/5, 3 from angle, closer to 4, 3-5 separate, 5-7 tolerably parallel and distant, 7 to termen, 8 from angle, 9 from

1/3, 11 from middle, chorda weak anteriorly, from beyond base of 11, to just below base of 7.

Hind wing semioval, over  $1\frac{1}{2}$ , with a cubital pecten. Vein 2 from well beyond middle, 3 and 4 stalked from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base. Dorsum in male with a slender marginal roll on under-side.

Male genitalia. Tegumen high, narrowed, uncus broad and deeply bilobed, lobes pointed, talon-like, subrigid and densely bristly, giving rise to socii, at their inner side two wedge-shaped sclerotized processes, probably fragments of uncus proper. Gnathos, a distinct band, slightly dilated in middle. Valva robust, sacculus strong, with a bristly pointed harpe at middle of its edge, a moderate  $Spc_1$ , followed by a large  $Spc_3$ , and a narrow second harpe at the costal end of cucullus, crowned by  $Spc_2$ . Cucullus densely bristled throughout, an additional dense pecten of bristles below costa and a large patch of spines on the lower side, beyond base of  $Spc_3$ . Aedeagus very short, anellus broad, cup-shaped.

Female genitalia. Seventh sternite sclerotized and forming two large oval submedian spots. Sterigma represented only by a heart-shaped ostium with a thickened and aciculate edge. Colliculum, a long slender tube with irregularly thickened wall. Signa two, small, cornute.

Type-species, *Argyroploce scorpiastis* Meyrick, 1912 (Assam).

A characteristic genus, nearest allied with *Antaeola* gen. nov. and forming a direct connection between this and *Temnolopha* Lower, thus tying up the subtribe Olethreutae with the peculiar, hypertrophied forms which I brought together in the subtribe Neopotamiae, a specialized off-shoot of the apomorphic Olethreutini.

The genus differs from both *Antaeola* and *Temnolopha* by the peculiar bifid uncus and the simpler gnathos. With the first it has in common the stalked veins 3 and 4 in the hind wing.

#### Key to the species of *Oestropha*

1. Pale narrow streak from termen to cell traceable to the extreme base of wing, although interrupted on end of cell; uncus narrower . . . . . *scolopendrias*
- Pale streak broader, obliterate in basal third of cell; uncus broader, labis narrower and longer. . . . . *scorpiastis*

#### *Oestropha scorpiastis* (Meyrick, 1912) comb. nov.

(figs. 649B, 655-657)

*Argyroploce scorpiastis* Meyrick, 1912: 871 (♂♀, Assam). — Clarke, 1955: 281.

*Olethreutes scorpiastis*; Clarke, 1958: 547, pl. 272 figs. 1-1a (lectotype, ♂, designated, figured).

Distribution. Assam: Khasis.

Male genitalia. Tegumen moderate, top emarginate. Uncus absent. Socius, a large



curved, rigid and pointed lobe, pending, with a strong subbasal tooth on the inner side. Gnathos, a weak transverse band. Valva moderately angulate, slender; sacculus ill-defined; a spiny obtuse labis present, with opposite this, and more basad, a second pointed and less bristly process.  $Spc_3$ , a sheaf of very long bristles, preceded by a marginal patch of short bristles and followed by a large patch of medium bristles, both these patches marginal; cucullus bristled throughout, more densely towards base below costa. Caulis short. Aedeagus curved, small.

Female genitalia. Seventh sternite enlarged, triangular, top deeply emarginate. Sterigma small, cup-shaped, situated in emargination, lamella postvaginalis also emarginate above, front of ostium shortly produced. Colliculum slender, elongate. Corpus bursae moderate. Signa, two subequal small thorns on round bases, granulate throughout.

Assam, Khasi Hills, xi.1906, ♂, genit. slide 6452; ♀, genit. slide 6453 (BM).

#### **Oestropa scolopendrias** (Meyrick, 1912) comb. nov.

*Argyroploce scolopendrias* Meyrick, 1912: 871 (♂, Nilgiris, India). — Clarke, 1955: 280.

*Olethreutes scolopendrias*; Clarke, 1958: 547, pl. 272 figs. 1-1a (type: wings and ♂ genit. illustr.).

Distribution. India: Nilgiris.

Male genitalia. Very similar to those in *O. scorpiastris* Meyrick, but differing by a narrower top of uncus with shorter socii, broader and shorter sacculus with the additional bristle patch as long (not shorter) as  $Spc_3$ , no bristles at the angulation of lower edge of sacculus beyond base, distinctly shorter and robuster cucullus, etc.

The dorsal roll and the tibial pencil are exactly similar to those in *scorpiastris* male.

The female is unknown.

Superficially the species is very similar to *O. scorpiastris*.

#### **Antaeola** gen. nov.

Head with appressed scales, dense and roughly spreading on vertex and with a dense, parted tuft between antennae in male. Ocellus posterior. Proboscis short. Palpus subporrected, dilated with scales posteriorly, roughish along lower edge and apex, terminal segment moderate, exposed, spindle-shaped and subobtuse. Thorax with a posterior crest. Posterior tibia in male with a slight, closely appressed pencil from base to  $1/2$ .

Fore wing oblong-subtruncate, apex subrectangular, termen sinuate. Vein 2 from  $2/3$ , 3 from angle, 4 closer to 3, 6 and 7 rather distant, 7 to termen, 8 from upper angle of cell, 9 rather close to 8 (from  $3/4$ ), 10 from beyond middle of distance 11-9, 11 from just beyond middle, chorda long, from halfway 11-10, to above base of 6, median branch to below base of 5.

Hind wing semioval, over 1, with pecten, 2 from  $2/3$ , 3 and 4 stalked from angle, 5

closely approximated at base, 6 and 7 closely approximated towards base. Dorsum with a slight marginal roll towards base.

Male genitalia. Resembling those in *Hedya*, but more robust, cucullus shorter, sacculus broader, its base subquadrate. Uncus long, hooked, top spoon-shaped. Socius weak, parietal. Gnathos subhyaline, but large, triangular, with a truncate top. Cucullus bristles in an oblique transverse ridge. Spc<sub>1</sub>, a rather strong, isolated group at its end (below costa), Spc<sub>2</sub> discal, partly on pulvinus which is elevated; Spc<sub>3</sub> large, marginal anteriorly projecting. Aedeagus rather slender, moderate, curved.

Female genitalia. Sterigma slender, cardiform-funicular, aciculate; colliculum slender. Signa two, cornute.

Type-species, *Argyroploce antaea* Meyrick, 1912 (Ceylon).

The genus is closely allied to *Dudua* Walker and *Archilobesia* Diakonoff at one side and to *Oestropa* gen. nov., at the other. It is characteristic by spatulate uncus and well-developed, although subhyaline gnathos. There is only one species, superficially resembling those of *Oestropa*.

***Antaeola antaea* (Meyrick, 1912) comb. nov.**

(figs. 649C, 650-652)

*Argyroploce antaea* Meyrick, 1912: 872 (♂♀, Ceylon). — Clarke, 1955: 47.

*Olethreutes antaea*; Clarke, 1958: 484, pl. 241 figs. 3-3a (lectotype selected, wings, genit. ♂ figured).

Distribution. Ceylon.

The species has a characteristic pattern of longitudinal paler and darker lines upon a tawny ground colour, as was said above. The costal edge is dark brown, cut by numerous very oblique usual pale strigulae; a pale subcostal streak is traversed by slender and almost horizontal lines of light tawny ground colour, originating from between the costal strigulae and merging in a median light tawny area, including 2-3 slender dark brown lines between cell and termen; a whitish suffused streak along fold to end of cell, thence irregular, with three branches: above each vein 3 and 2, and below vein 1c; a dark brown suffusion on dorsum beyond base and a series of marginal brown dots along its posterior half, termen with a series of marginal dark brown strigulae.

Hind wing rather dark brownish-grey, with pale grey, glossy cilia.

Male and female genitalia, as described with the genus.

Ceylon, Kandy (Green), x.1906, 1 ♂, genit. slide 6458; ii.1910, 1 ♀, genit. slide 6459 (Meyrick Coll., BM).

***Cymolomia* Lederer, 1859**

(pl. 6 figs. 1-3)

*Cymolomia* Lederer, 1859: 374 (type-species, *Sciaphila hartigiana* Saxesen, by monotypy). —

Rebel, in Staudinger & Rebel, 1901: 109. — Heinrich, 1906: 305 (*Exartema* Clemens syn.). — Fernald, 1908: 38, 59. — Kennel, in Spuler, 1910: 269. — Bentinck & Diakonoff, 1968: 155.

Head with appressed scales, roughly spreading on vertex. Ocellus posterior. Proboscis vestigial. Antenna minutely ciliate in male. Palpus subascending, moderately curved, dilated posteriorly, scales roughish below and along apex, terminal segment short, subobtuse, drooping. Thorax with a posterior crest. Posterior tibia with dense closely appressed long hair-scales above, a long pencil from base, partly concealed.

Fore wing with 2 from 3/4, 3 from angle, 4 closer to 3, 7 separate, to termen, 8 from upper angle of cell, 7-9 equidistant, 10 from 2/3 distance 11-9, 11 from before middle, chorda from before 10 to base of 7, median branch to base of 5.

Hind wing about  $1\frac{1}{2}$ , subtrapezoidal, 2 from before 3/5, 3 and 4 stalked from base, 5 closely approximated at base, 6 and 7 closely approximated towards base; edge of dorsum with a downcurved roll, projecting posteriorly in a small pointed lobe.

Male genitalia. Uncus rather short or long, bilobed and hooked (*phaeopelta*). Socius moderately broad, pending. Gnathos membranous or absent. Valva long and slender, sinuate, sacculus little dilated, pulvinus extended and bristly, Spc<sub>1</sub> sometimes present (*phaeopelta*), Spc<sub>2</sub> small or moderate; cucullus simple. Aedeagus moderate, narrowed.

Female genitalia. Sterigma annular, or a round aciculate plate. Colliculum slender, bivalval. Signum one, cornute, sometimes horn granulate.

A hitherto monotypic Palaearctic genus of *Hedya* relationship, very characteristic by the stalked veins 3 and 4 in the hind wing and by the single, cornute signum. The occurrence of two tropical species is surprising, but doubtless. The slight discrepancies of minor superficial structure in *Cymolomia phaeopelta* (Meyrick), as against the Palaearctic type-species, *C. hartigiana*, as indicated below, are of no importance as compared with the similarity of the important characters of venation, genitalia of the two sexes and even the facies.

#### Key to the South Asiatic species of *Cymolomia*

1. Fore wing bright fulvous, basal half of dorsum with an oblong olive-grey spot  
*phaeopelta*  
 — Fore wing glossy vinaceous-brown, with dark brown markings . . . *violenta*

#### *Cymolomia phaeopelta* (Meyrick, 1921) comb. nov.

(figs. 653, 659-660)

*Argyroploce phaeopelta* Meyrick, 1921: 149 (♂♀, Java). — Clarke, 1955: 244.

Distribution. Java: Preanger district. Assam.

Foodplant. *Schima noronhae* (Theaceae).

West Java, lectotype, ♂, hereby selected: "W. Java, Preanger 5000 ft. Sythoff"

(in Snellen's hand, Snellen Coll.), genit. slide 3415, "M 84" (in Meyrick's hand), "Type" (green), my lectotype label. Syntypes: [West Java], "Poetjoek rollers van poespa, Tjinjirean, [1700 m], xii.1919" [= top leaf rollers of *Schima noronhae*], 2 ♂, 1 ♀. West Java, Sindanglaja, 1000 m, bred from leaves of *Schima noronhae*, 16.x.1935 (L. G. E. Kalshoven), 1 ♂, 2 ♀. West Java, Mt. Salak, 600 m, 2.vi.1926, bred from leaves of *Schima noronhae* (L. G. E. Kalshoven), 3 ♀. Buitenzorg, 250 m, 1919 (S. Leefmans), 1 ♀, genit. slide 5861 (LM).

East Borneo, Balikpapan, 50 m, Wain River, xi.1950 (A. M. R. Wegner), 1 ♂ (LM).

Fore wing light fulvous with a slight gloss, markings bright chestnut-brown. Slightly less than basal half of dorsum as far as fold occupied by an oblong-oval whitish-ochreous patch, coarsely strewn with black; other markings chestnut: a basal patch to 1/4, a broad vertical transverse fascia narrowed towards both ends, an irregular narrow and zigzagged preterminal fascia from end of dorsum to 3/4 of costa, thence emitting a similarly curved band to below middle of termen. In male basal patch extended as far as transverse fascia which is much more constricted above and beneath.

Hind wing purplish-fuscous, becoming slightly paler and sub-semipellucant towards base. In male hind wing paler, dorsum with a moderate roll filled out with fine and long paler ochreous hairs; cilia along lower part of termen and around tornus also modified, ochreous-white, thick and long. Posterior tibia hardly thickened, with smoothly appressed scales, a smooth subdorso-median groove, concealing a pencil of hairs from base.

Male genitalia. Tegumen high and slender. Uncus, a clavate long hook, top trapezoidal, bristly below, long-haired above. Socius short and thick. Gnathos absent, tuba analis broad and membranous. Valva with a moderately broad sacculus, hardly constricted, cucullus long and slender, gently curved. Spc<sub>1</sub>, a patch of strong, long spines; pulvinus short-haired; Spc<sub>2</sub> shifted basad and marginad. Aedeagus small, pear-shaped.

Female genitalia. Sterigma a moderate, transversely oval sclerite with a thickened and aciculate upper edge and sides of a split-like central ostium bursae. Colliculum long and slender. Signum one, a round denticulate horn on a moderate basal plate.

The lectotype is slightly faded and tinged more chestnut than ferruginous. Otherwise in all respects similar to the later collected material.

In male dorsum on upper side with a broad and shallow thickened groove, clothed throughout with not dense snow-white hairs. Cilia elsewhere whitish in male, snow-white in tornus and along dorsum; cilia in female pale grey with a blackish subbasal line.

Hind tibia in male pale ochreous, with closely appressed long hair-scales above, concealing a deep longitudinal groove in which fits a slender pencil of hairs, pale ochreous, jet-black at its base.

*Cymolomia vinolenta* spec. nov.

(fig. 658)

♂ 12 mm. Head fuscous, sides of a double tuft on forehead mixed with pinkish-white. Antenna dark fuscous, a blackish spot at base of flagellum above, scape tipped with pinkish-white. Palpus fuscous, median segment with a dark grey dilated median band, beyond this an orangeish spot towards apex above, terminal segment black. Thorax dark grey-fuscous with a vinaceous tinge, tegula with a faint transverse band in middle of whitish dusting. Posterior tibia grey outwardly, silvery-white inwardly, with a thick snow-white pencil from base above and inwardly, reaching beyond middle. Abdomen dark brown, becoming grey-fuscous towards base, blackish towards middle, venter pale grey except anal tuft.

Fore wing oblong-subtruncate, moderately dilated, broadest at  $3/4$ , costa moderately curved throughout, apex rounded, termen gently convex, little oblique. Rather dark leaden-grey with a lilac tinge, hardly glossy, markings extended, deep vinaceous-fuscous, faintly edged with orange. Basal patch to beyond  $1/3$ , acutely angulate, edge concave above and beneath; transverse fascia moderate above, from middle of costa, oblique, strongly constricted at  $1/3$ , just above constriction narrowly connected with preterminal mark; lower  $2/3$  of fascia strongly dilated, almost semicircular, from dorsum before middle to tornus, on dorsum posteriorly containing a faint double oblique patch of ground colour, not edged with orange; preterminal mark wedge-shaped, acute top connected with transverse fascia, end to termen below middle, lower edge with an acute downwards-directed appendix in middle; top of this connected by a dark line, furcate at end, with tornus; costa with snow-white elongate marginal marks: two at  $2/5$ , hardly paired, five along posterior half, third of these almost paired, other single, ultimate preapical, slender, faint; a black spot in apex; markings along termen narrowly edged blackish. Cilia around apex and along upper half of termen light glossy grey with black basal third, cilia elsewhere unicolorous grey, a narrow white basal line from costa to above tornus.

Hind wing semipelluculent pale fuscous gradually becoming dark fuscous-purple towards apex, finely transversely striated (tips of scales black). Cilia pale grey-fuscous, with a dark fuscous subbasal band, cilia opposite apex darker infuscated.

East Java, Tengger Mts., S slope of Mt. Smeroe, Ranoe Daroengan, 820 m, primary rain forest, 30.v.1941 (A. Diakonoff), 1 ♂, holotype, genit. slide 5860 (LM).

It is a surprise to find a second representative of this Palaearctic genus in tropical mountain jungle. But the species agrees in all particulars of external structure and genitalia closely with the European type-species. The only difference is the broader and shorter uncus. The ventral spined prominence of the cucullus is shifted somewhat more apical.

*Archilobesia* Diakonoff, 1966

*Archilobesia* Diakonoff, 1966: 45, figs. 7, 17-20 (type-species, *Argyroploce drymoptila* Lower, 1920, Queensland, by original designation).

Head with appressed scales, a raised crest above forehead, tufted at the sides. Ocellus posterior, subinferior. Proboscis short. Antenna in male moderately thickened, short-ciliate. Palpus less than  $2\times$  breadth of eye, ascending, appressed to face, triangularly dilated, roughish below and at apex; terminal segment truncate. Thorax with a posterior crest. Posterior tibia with appressed scales and groove above, with a pencil from base.

Fore wing suboval in male, pointed, termen oblique. 2 from  $3/5$ , 3 from well before angle, 4 from angle, 7 separate, to termen, 7-9 equidistant, 10 from halfway 9-11, 11 from middle, chorda from halfway 10-11 to between bases of 8 and 7, median branch to above base of 4.

Hind wing with pecten, in male modified, with concave middle of termen and shortened veins. 2 from  $4/5$ , 3 and 4 very short, stalked from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base, dorsum with a narrow marginal roll from well beyond base.

Male genitalia. Very similar to those of *Dudua* Walker differing chiefly by bilobed uncus (as in some *Didrimys* species) and especially the gnathos: transversely oval, aciculate at the sides and below. Valva long, slender and sinuate, sometimes with an  $Spc_3$ .

Female genitalia. Sterigma an open, broad, and short funnel, finely aciculate edge notched back and front. Colliculum long and slender. Signa two, small, cornute.

The genus shows parallel development of sexual dimorphism exactly similar to the situation in *Lobesia* Guenée, with a modified hind wing in the male, but without abdominal scent pouches. Although the wing neuration is very similar to that in *Lobesia*, the male genitalia decidedly are still of the *Dudua* type. The genus is an intermediate between the two subtribes, but rather belongs to the Olethreutae.

#### Key to the species of *Archilobesia*

1. Darker. Sterigma with lamella postvaginalis broad, rounded, emarginate in middle; colliculum very long . . . . . *formosana*  
 — Paler. Sterigma with lamella postvaginalis emarginate so far, as to form oblong rounded lobes . . . . . *chresta*  
 — Paler. Sterigma small, lamella postvaginalis shallowly emarginate only, its lobes very short. . . . . *drymoptila*

#### *Archilobesia drymoptila* (Lower, 1920)

(fig. 581)

*Argyroploce drymoptila* Lower, 1920: 58 (♂, Queensland). — Diakonoff, 1966: 14, figs. 7, 17-20 (genit. ♂, ♀, head, wing neuration).

*Archilobesia drymoptila*; Diakonoff, 1966: 45 (type-species, new genus).

*Argyroploce crossoleuca* Meyrick, 1933: 420 (♀, Java). — Clarke, 1955: 105.

*Olethreutes crossoleuca*; Clarke, 1958: 500, pl. 249 figs. 1-1b (lectotype selected, wings, genit. ♀ figured). Syn. nov.

*A. crossoleuca* has been described after two females, which may be the reason that

Meyrick did not realise the true affinity of the species with Lower's *drymoptila*. The species is sexually dimorphous, ♂ with modified hind wings. The shape and the neurotation are modified in the same way as in some *Lobesia* species.

The subspecies of *Archilobesia* have also the peculiarity that the male genitalia are extremely similar, almost identical, whereas the female genitalia show clear-cut differences — a situation, to a lesser degree analogous with that in certain species of *Lobesia* Stephens. Revising *A. drymoptila* (1966) I compared males and females from Formosa with males from Queensland (female genitalia of the latter material were not available) and did not separate them. The only difference in the males was: short  $Spc_3$  hairs in Formosa male and long  $Spc_3$  in the male from Kuranda, Queensland.

The male of the present subspecies, apallotype, 14 mm, has the colouring and markings similar to those of the female, but slightly darker, with the crescentic pale mark on the end of cell more contrasting. In the two sexes there are two pale rising marks, from dorsum just before tornus, and from base of termen, respectively; in *A. drymoptila* (Squally Id., New Guinea), there is a dark mark in tornus instead, while in *formosana* the tornal markings are less distinct and the fore wing is darker with a pale median streak from above end of dorsum to base of wing.

Male genitalia of *crossoleuca*. Entirely similar to those of *A. drymoptila* (Meyrick), the  $Spc_3$  is of intermediate size between those in *drymoptila* and *formosana*.

Female genitalia of *crossoleuca*. Seventh sternite with strongly roughened surface, deeply punctulate, edge emarginate. Sterigma, a small, dark, strongly aciculate cylinder with excised dorsal wall, deeper emarginate ventral wall and rounded base. Colliculum slender, more than twice as long as sterigma is high. Signa two, equal, sclerotized moderate plates with slender dark mammillate points.

The subspecies of *A. drymoptila* Lower are as follows.

*Archilobesia drymoptila drymoptila* (Lower, 1920), ♂, Australia: Queensland. New Guinea: Squally Is. (BM).

***Archilobesia drymoptila crossoleuca* (Meyrick, 1933) comb. et stat. nov., ♂♀**  
(figs. 587-588)

Central Java, Telawa, teak forest area, 7.viii.1935, no. 1555, 1 ♂, apallotype, genit. slide 6249; the same, 17.x.1931, no. 667, 1 ♀ (without abdomen); the same, 28.xii.1934, no. 956, 1 ♀, genit. slide 6248; the same, 29.xii.1934, no. 956, 1 ♂. (All collected by Dr. L. G. E. Kalshoven) (LM). Lectotype, ♀, the same locality, bred from leaves of supposedly *Glochidion*, genit. slide 7272 (BM).

***Archilobesia formosana* spec. nov.**

*Archilobesia drymoptila* Diakonoff, 1966: 16, fig. 7 (nec Lower, 1920).

Holotype, ♀, genit. slide 5999, from Formosa, Taihoku (S. Issiki), 5.ii.1933 (Meyrick Coll., BM).

Now that bred conspecific material of females of *A. drymoptila* (Lower) from Java has been studied, it is obvious that the above cited female specimen from Formosa, illustrated by me in 1966, belongs to a new species.

Female genitalia. Sterigma, a wide and high, aciculate cup, with the edge deeply and widely excised in front. Colliculum long and slender. Signa two, small, cornute.

The three abdomen-less males and the holotype are very similar to *A. drymoptila*, but decidedly darker coloured. The species is intermediate between the former and *A. chresta* spec. nov.

***Archilobesia chresta* spec. nov.**

(figs. 602-603)

♀ 14 mm. In all respects extremely similar to *A. drymoptila* (Lower), but generally more fuscous-tawny instead of fulvous. Costal markings more slender and longer than in that species, fore wing broader, termen distinctly sinuate (in *drymoptila* gently convex); the pale silvery subapical terminal spot is preceded by a longitudinal whitish linear mark, absent in that species altogether. Otherwise quite similar to the female of *A. drymoptila*.

Female genitalia. Sterigma originally cup-shaped, but with the frontal half  $\frac{1}{3}$  the height of the dorsal half, both lamella post- and antevaginalis excised in middle, the former so showing two large slightly diverging rounded lobes, darkly aciculate throughout.

New Guinea, d'Entrecasteaux Is., Fergusson Id., 1-9.x.1894 (Meek) (Walsingham Coll., BM), 1 ♀, holotype, genit. slide 8068.

***Rhopaltriplasia* gen. nov.**

Head with appressed scales, forming a dense tuft against bases of antennae and a rough projecting flat tuft on forehead. Ocellus posterior. Proboscis vestigial. Antenna in male simple. Palpus long, porrected, slender at base, strongly dilated posteriorly, rhomboidal, very flat laterally, rough at apex above and along posterior half of lower edge, terminal segment moderate, cylindrical, obtuse. Thorax apparently without a crest (rubbed). Posterior tibia normal.

Fore wing oblong-truncate, apex pointed, termen sinuate; large black androconial fields in centre of underside. Vein 2 from  $\frac{2}{3}$ , 3 from angle, 3-5 considerably approximated at margin, also 6 approximated, 7 and 8 stalked, from angle, 7 to termen, 9 from before angle, 10 from before  $\frac{2}{3}$  distance between 11 and 9, 11 from middle.

Hind wing pointed-semioval, with a cubital pecten; in cell, below cell and along dorsum black central androconial fields on the upper side. Vein 2 from well beyond  $\frac{2}{3}$  of cell, 3 and 4 stalked from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base, 8 short.

Male genitalia. Tegumen high, dilated and thickened on upper  $\frac{2}{3}$ , shoulders



broadly rounded. Uncus, a slender hook, end flattened dorso-ventrally. Socius small, clavate, suborrect. Gnathos huge, forming a strong triangular rising hook with pointed, triangular lower angles. Tuba analis concealed by the hook of gnathos. Valva elongate-oval, sacculus apparently  $2/3$ , a closely appressed longitudinal patch of flat sickle-shaped spines, with tops converging; cucullus, a naked process with a complicated trifold top with a ventral inwards-pointing horn. Aedeagus with a spherical base. A long corema at base of ninth segment upon an articulating rod.

Type-species, *Acroclita trimelaena* Meyrick, 1922 (Burma: Thaton).

A novel form of obscure affinity. In spite of the rather unusual neuration in the fore and hind wings, the genus is a true member of the Olethreutini, judging from the extensive tegumen and uncus and the large patch of spines.

#### Key to the species of *Rhopaltriplasia*

Superficially the two known species are very similar.

1. Valva oblong-oval; cucullus clavate, two rounded bodies with a curved appendix below. . . . . *trimelaena*
- Valva broad, subrectangular; cucullus, a rectangular hook, with curved appendix below. . . . . *anamilleta*

#### *Rhopaltriplasia anamilleta* spec. nov.

(fig. 720)

♂ 10-11 mm. Head pale fuscous. Palpus whitish, with a faint grey, oblique, transverse streak on median segment. Thorax and abdomen pale fuscous-greyish. Posterior tibia whitish.

Fore wing oblong-truncate, rather narrow, broadest in middle, costa considerably curved throughout, apex obtusely pointed and prominent, termen sinuate, rounded and prominent beneath. Whitish, strewn with light fuscous, tending to form transverse strigulation anteriorly and on lower half of wing, upper half rather densely infuscated. Costa with pairs of thick white transverse strigulae, very short and ill-defined along basal fourth, five oblique distinct pairs along posterior  $3/4$ ; apex with a round blackish spot edged anteriorly by a single vertical white mark; an ill-defined bluish-white patch on middle of dorsum, slightly opalescent, being the black patch on underside showing through wing, not obscured by fuscous dusting; a triangular darker fuscous spot on end of termen, edged posteriorly with white; ocelloid spot ill-defined, posterior area filled out with light pearl-grey, a black terminal line preceded by a white one, a small white bar below apex. Cilia whitish with a subbasal pale fuscous band, tips mixed with pale fuscous, cilia around apex darker fuscous with a white basal line. Underside with a large black androconial field on central third of wing, from slightly above dorsum to chorda, slightly narrowed anteriorly.

Hind wing slightly over 1, oblong-semioval, pointed; pale fuscous-greyish, except

on basal third suffused with vinaceous, with a silky gloss; three thickened dull black androconial fields across median third, becoming broader downwards: first, slender, along upper edge of cell, second, suboval, in middle, third, largest, occupying lower third of termen and tornus; these spots irregularly extended on both sides along veins. Cilia pale greyish, with a subbasal fuscous fascia, cilia around third dark spot blackish.

Male genitalia. Tegumen and uncus very similar to those in the type-species, *socius* larger. Gnathos similar but longer, sclerotized. Valva very distinct, sacculus very large, basal opening to middle, disc triangularly dilated, on the underside with a broad median band of narrow long spines with sclerotized bases; apex of sacculus abruptly constricted; cucullus very small, geniculate, a transverse arm ending in a short obtuse point on anterior side.

Female genitalia unknown.

New Guinea, Geelvink Bay, Ron Id., vii.1897 (Doherty) (BM), 1 ♂, holotype, genit. slide 7925, 1 ♂, paratype. An interesting second species of this queer genus, immediately recognizable by the androconia of the hind wing, similar to those of *R. trimelaena* (Meyrick), but *R. anamilleta* is easily discriminated from that species by the genitalia.

***Rhopaltriplasia trimelaena* (Meyrick, 1922) comb. nov.**

(fig. 722)

*Acroclita trimelaena* Meyrick, 1922: 521 (♂, Burma). — Clarke, 1955: 317. — 1958: 284, pl. 141 figs. 2-2a (holotype wings, genit. ♂ figured).

Distribution. Burma.

The unique holotype is from Burma, Thaton, iii (T. B. Fletcher), genit. slide 6949 (made by Clarke, BM).

The small species, attributed by Meyrick to *Acroclita*, has whitish fore wings finely striated by tips of scales being dark grey. The costa is dark fuscous with white marks. The basal patch and transverse fascia are indicated by some dark dusting; a dark preterminal spot; posterior submetallic edge of ocelloid spot continued to 3/4 of costa, angulate above.

Hind wing similar to that of *R. anamilleta* spec. nov., as described there.

Male genitalia as described with the genus.

Female genitalia unknown.

***Dudua* Walker, 1864**

*Dudua* Walker, 1864: 1000 (type-species, *D. hesperialis* Walker, 1864, by monotypy, Sarawak). — Walsingham, 1900b: 134 (? distinct genus). — Fernald, 1908: 68 (cites Walsingham). — Fletcher, 1929: 71 (syn. of *Argyroploce*). — Diakonoff, 1971: 190 (*Platyplus* syn.).

*Platyplus* Walsingham, in Moore, 1887: 495 (type-species, *Eccopsis aprobola* Meyrick, 1886,

by original designation (Tonga)). — Fletcher, 1929: 179 (syn. of *Argyroplote* Hübner). — Clarke, 1958: 572 (distinct genus).

*Platypeplum* Walsingham, 1899: 105 (emend.). — Fletcher, 1929: 179.

*Hedya* (*Platypeplus*); Diakonoff, 1968: 44, 46 (subgen.).

Head with loosely appressed scales. Ocellus posterior. Proboscis very short. Antenna in male slightly thickened, shortly fasciculate-biciliated. Palpus rather long, with closely appressed scales; roughish along lower edge, gradually but slightly narrowed posteriorly, curved and ascending, median segment reaching middle of eye height, terminal segment very short, obtuse, porrected. Thorax with a posterior crest; pleura with broad modified glossy scales. Posterior femur with brushy fringe along lower edge of basal half (or throughout), posterior tibia strongly dilated with rough scales above and beneath.

Fore wing elongate, oval or subtruncate. Vein 12 often thick, also 11 robust, 2 from 2/3, 3 from angle, strongly curved and approximated to 4 at margin, 4 closer to 3, 5-7 remote and subparallel, 7 to termen, 8 close to 7 from angle, 9 close to 8, 10 from before 1/3 distance 9-11, chorda strong, from halfway between 10 and 11 to just below 7, median branch obliterate, except a short posterior part, ending halfway between 4 and 5.

Hind wing often modified in male, with or without a roll and a tornal lobe. Vein 2 from 2/3, 3 and 4 connate, from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base; a long hair-pencil from base, upper side below 1c; dorsum forming a thick roll and a fold in which a thick tuft of scales (in type-species).

Male genitalia. Tegumen high and rather narrow. Uncus rather broad, flat, top more or less hooked and rounded, sometimes shoulders of tegumen distinct as small lateral prominences. Socius rather large, elongate-oval, pending. Gnathos characteristic: a rather narrow transverse band of a more or less constant shape; upper edge often emarginate, median portion forming a single or a double, densely aciculate pending tumescence. Valva usually long and slender, curved, sacculus moderately thickened, with a harpe-like lobe at base of costa, bearing  $Spc_1$  of diverse shape, sometimes this sheaf of spines sessile;  $Spc_2$  diversely developed.

Female genitalia with a slender calyciform sterigma, finely aciculate and open frontally, edges thickened, upper angles slightly extended. Colliculum slender. Signa, two short finely denticulate thorns on round basal plates.

The generic name *Dudua* Walker, 1864, has recently been restored (Diakonoff, 1971) for the present group, superseding *Platypeplus* Walsingham, 1887, with the following remarks (p. 191):

"A genus of wide distribution in South Asia and occurring throughout the tropics. The common species, *D. aprobola* (Meyr.) comb. nov., is spread throughout the region at issue and forms slightly varying local populations which, however, cannot be successfully separated in subspecies. Otherwise specific differences are considerable and constant, especially with the males, where scent organs and shape of the hind wing, besides the genitalic peculiarities, provide good characters for separation.

"The female genitalia, on the contrary, are uniform and present but slight specific differences.

"The aciculate characteristic gnathos separates the present tropical genus sufficiently from the Palaearctic genus *Hedya* Hb. which possesses a simple band-like and broad, submembranous gnathos. Therefore I prefer to abandon my concept of "*Platypeplus*" being a subgenus of *Hedya* (Diakonoff, 1968)."

The species have been arranged following the male genital characters, but this arrangement is preliminary.

*D. tetanota* (Meyrick) takes a rather isolated position, having a not bilobed gnathos and a peculiar projecting basal edge of cucullus.

#### Key to the species of *Dudua*

1. Markings limited to a large triangular costal spot over 2/3 of costa, sometimes dark dots above tornus and along costa . . . . . 2
- Markings not thus limited . . . . . 3
2. Ground colour white, dark points on costa and termen . . . . . *piratodes*
- Ground colour fuscous, no marginal dark dots . . . . . *tectigera*
3. Ground colour olive-green with silvery markings . . . . . *chlorohygra*
- Ground colour not thus . . . . . 4
4. Tornus, dorsum and sometimes disc whitish, darker marbled . . . . . 5
- Tornus, dorsum and disc not thus, usually not paler . . . . . 12
5. Apex with dark suffusion, usually preceded by a whitish transverse streak, not reaching costal edge . . . . . 6
- Apex without a suffusion, not darker than remainder of wing . . . . . 8
6. Fore wing long, narrow and rounded, dark dorsal spot at 3/4, rounded (in darker specimens absent, a similar spot beyond base of dorsum instead) . . . *aprobola*
- Fore wing moderately long and narrow, densely marbled and suffused throughout with blackish, dorsal spot indefinite, only a white patch in tornus *scaeaspis*
- Fore wing broader, subtriangular, dorsal spot paler, larger, subtornal, triangular 7
7. Preterminal pale part of fore wing pure white, dorsum suffused with grey. . . . . *ptarmicopa*
- Preterminal pale part of fore wing more or less grey-marked; dorsum sometimes mixed with white . . . . . *charadraea*
8. Fore wing without a darker costal spot, throughout tinged brownish . *eumenica*
- Fore wing with a more or less suffused dark costal spot, ground colour paler or darker grey-fuscous . . . . . 9
9. Ocelloid spot fasciate, well-defined, not reaching costa, with a long apical appendix, curving down before apex, along termen . . . . . 10
- Ocelloid spot constricted in middle in two separate spots; appendix forming a separate spot before and along termen or these spots ill-defined and ground colour whitish throughout . . . . . *anaprobola*

10. A large (21 mm) pale grey-fuscous species, with dark costal spot and ocelloid spot oblique and serrulate, apical appendix extremely thin above . . . *perornata*  
 — Smaller species (14-16 mm), darker, suffused with fuscous . . . . . 11
11. Posterior broad edge of ocelloid spot distinctly paler than anterior edge . . .  
 . . . . . *cyclographa*  
 — Posterior and anterior edges of ocelloid spot similar . . . . . *ultima*
12. Dark spot before base of dorsum not less conspicuous than costal patch, and well-defined . . . . . 13  
 — Dark spot before base of dorsum less conspicuous than costal patch, or strongly suffused or absent . . . . . 15
13. Dorsal spot oblong-semioval, large, almost to base. . . . . *carpophora*  
 — Dorsal spot round, smaller . . . . . 14
14. Costal patch, when extending below middle of wing, directed to 3/4 of dorsum, strongly narrowed below . . . . . *microsema*  
 — Costal patch directed towards dorsum before tornus, suffused below, less distinctly narrowed . . . . . *brachytoma*
15. Extreme apex or upper half of termen, with cilia, pale orange-ochreous. *tetanota*  
 — Entire termen and tornus variably light orangeish-ochreous, but apex with a fuscous-brown small mark and a subapical streak; costal patch preceded by a pale spot, paler than ground colour, in dark specimens, cretaceous white . .  
 . . . . . *phyllanthana*  
 — Not thus . . . . . 16
16. Dark fuscous species with almost blackish distinct costal patch . . . . . 17  
 — Paler greyish species, marbled with darker, costal patch more or less suffused, not conspicuous . . . . . 19
17. A very dark fuscous species with two bluish or blue-lead metallic transverse bands, traceable at least on costa . . . . . *hesperialis*  
 — Without metallic bands . . . . . 18
18. Costal patch subtriangular, point constricted, appendiculate . . . . . *proba*  
 — Costal patch almost round, point obtuse . . . . . *crossotoma*
19. Fore wing with apex and termen rounded; no trace of ochreous markings in disc . . . . . *lamproterma*  
 — Fore wing with apex obtusely rectangular, termen subconcave; an ill-defined fuscous-ochreous spot in centre of disc . . . . . *metacyma*

***Dudua tetanota* (Meyrick, 1909) comb. nov.**

(figs. 605, 607-608)

*Argyroploce tetanota* Meyrick, 1909: 602 (♂♀, Assam). — Clarke, 1955: 306.

*Olethreutes tetanota*; Clarke, 1958: 552, pl. 275 figs. 2-2b (lectotype selected, wings, genit. ♂ figured).

Distribution. Assam: Khasi Hills.

Hainan Id., Youboi, vi.1904, 1 ♂, genit. slide 7694 (Rothschild Coll., BM).  
 South Celebes, Bantimurung, 30 m, 9-18.viii.1949 (A. Diakonoff), 1 ♂, genit. slide 3409 (LM). The same island, low country, 1896 (Doherty), 1 ♀ (BM).

India, Assam, Khasias Hills, 1898-99 (Doherty), 1 ♀, genit. slide 7750 (Walsingham Coll., BM).

The species resembles *D. aprobola* closely, but is much larger, 23-24 mm, and has a rather deep lilac-purple ground colour, not paler on dorsum; the costal patch is narrower, more fasciate, dark costal streak with white lines broader; there is a characteristic preterminal vertical series of slender black interneural strigulae; this band finely white-edged at the sides and much narrowed downwards; apex with a small tawny spot, termen below this whitish, with black interneural points, in female these points extending into tornus and finely white-edged.

Hind wing deep bronze-fuscous, semipellucant dark grey with darker veins on basal half, in male somewhat narrower, moderately pointed. Tornus rounded, dorsum as far as vein 1a thickly covered with broad, modified, glossy whitish scales and with a thick, appressed pencil of fuscous hairs from base of wing, dorsal edge with a narrow marginal fold not reaching tornus. Posterior tibia with smoothly appressed pale grey-fuscous scales except above, where it is densely clothed with roughly raised blackish, bristly scales; pencil from base above, black.

Male genitalia. Rather differing from the ordinary *Dudua* type and characteristic. Tegumen with sloping shoulders, uncus rather broad, truncate, hooked. Socius moderate, broad. Gnathos, a long band with lower half aciculate throughout, slightly prominent along median half below, but without the double tumescence. Valva long and slender, Spc<sub>1</sub> upon a raised pad, rather compact; Spc<sub>2</sub>, an oval, moderate, well-defined patch; Spc<sub>3</sub> present, a pecten of long fine bristles, from end of Spc<sub>2</sub>, to about lower 1/4 of cucullus. Cucullus with a basal pointed transverse process, above this gradually narrowed towards top.

Female genitalia. Resembling those of *D. aprobola*. Ostium proper slender, erected-calyciform, moderately constricted, split running almost to base, lamella postvaginalis forming a subrhomboidal, rounded plate behind, not below, the ostium, finely reticulate, this structure becoming coarser downward, lower edges finely thickened, gently dilated laterad. Colliculum moderate, slender. Signa robust, rather obtuse, granulate thorns.

#### *Dudua hesperialis* Walker, 1864

(figs. 584, 610)

*Dudua hesperialis* Walker, 1864: 1000 (♂, Borneo). — Walsingham, 1900b: 134. — Fernald, 1908: 68. — Fletcher, 1929: 71.

Distribution. Borneo: Sarawak.

Borneo, Sarawak, holotype, genit. slide 24 (BM).

Moluccan Is, Obi Major Id., ix.1897 (Doherty), 1 ♂, genit. slide 7738 (BM).

The somewhat rubbed specimen of which the genitalia are identical with those of the holotype, may be redescribed as follows.

♂ 18 mm. Head and thorax dark fuscous, palpus purplish. Fore wing deep purple, dull, with an irregular, transverse leaden-grey fascia at  $2/5$  and another from below costa, at  $2/3$ ; a submarginal band of the same colour along termen, these markings with a moderate watery gloss (in the holotype they are tinged blue).

Hind wing deep fuscous-bronze, with a triangularly pointed apex and a large thick tornal lobe from vein  $1c$ ; dorsal edge with modified, thickened and short cilia, forming a deep submarginal roll, containing brightly glossy golden-grey scales, long and dense along the basal half of the concavity of the roll which is open mesially. Posterior tibia dilated with long grey hairs, projecting triangularly below, appressed above, pencil from base slender, grey, fitting in a white cavity.

Male genitalia. Tegumen moderate with sloping shoulders. Uncus rather broad, hardly constricted, top gently rounded, hooked. Socius broad, moderate. Gnathos with median third aciculate throughout, rounded below, emarginate above. Valva long and slender,  $Spc_1$  on a constricted pad, compact and triangular;  $Spc_2$  strong, dense, also triangular, strongly narrowed towards centre of disc of sacculus, on outer edge not reaching far. Cucullus gently sinuate, slightly constricted under the top which is rounded and naked.

Female genitalia unknown.

A female specimen in the British Museum, identified as this species, from Yatsuma, Ryuchu, Japan, v.1886, Leech, no.20012, "cenotype", genit. slide 6365 ♀ (BM), cannot be conspecific, for its signa are distinctly Eucosmine.

### *Dudua piratodes* (Meyrick, 1930) comb. nov.

(fig. 593)

*Articolla piratodes* Meyrick, 1930: 601 (♂, N. Guinea). — Clarke, 1955: 250.

*Argyroploce syndeltias* Meyrick, 1938: 512 (♂, N. Guinea). — Clarke, 1955: 301.

*Platypeplus piratodes*; Clarke, 1958: 572, 575 (*syndeltias* syn.; types, ♂, wings and genit. figured).

Distribution. New Guinea: Owingarra, Mt. Tafa.

West Central New Guinea, Wissel Lakes, Paniai, 1750 m, 8.ix.1939 (Dardi), 1 ♂; ix-xi.1939 (H. Boschma), 1 ♂, genit. slide 2039 (LM).

South New Guinea, Papua, Mt. Tafa, 8500 ft, ii.1934 (E. Cheesman), 1 ♂; Owingarra (A. S. Meek), 1 ♂ (BM).

A very distinct large species with snow-white fore wing and jet-black markings, being an oblong streak along basal  $2/3$  of costa, with a triangular process of lower edge beyond base and a large similar process at end, sometimes continued as a comma-

shaped leaden-grey posterior appendix; a few black points on costa posteriorly, along dorsal edge and one single larger dot on termen above tornus.

Hind wing pale grey or grey-fuscous, becoming paler towards tornus, in male subtrapezoidal, rather broad, little pointed, tornus gently rounded, dorsum with a narrow thickened roll, moderately haired and not reaching tornus.

Male genitalia. Tegumen high and slender, shoulders ill-defined tumescences. Uncus slender, constricted and clavate, curved. Socius moderate, weak. Gnathos with aciculate part slightly elongate. Valva with sacculus gradually passing into cucullus, the primary incision being almost absent.  $Spc_1$  short and depressed, sessile, curving across disc and gradually passing into cucullus spines; an additional patch of weak spines filling out the space under  $Spc_1$ ;  $Spc_2$  of fine bristles, reaching to disc of sacculus and merging in the above mentioned additional patch of bristles, along outer edge of sacculus hardly extending to  $1/3$  and quickly thinning out.

Female genitalia were not available to me.

***Dudua tectigera* (Meyrick, 1910) comb. nov.**

(figs. 591-592, 598)

*Argyroploce tectigera* Meyrick, 1910: 436 (♂, Java). — Clarke, 1955: 303.

*Platypeplus tectigera*; Clarke, 1958: 575, pl. 286 figs. 4-4a (holotype ♂, wings and genitalia figured).

Distribution. Java: Bandoeng.

West Java, Mts. Gede - Panggrango, Tjibodas, 1400 m, 1949, 1 ♂, genitalia slide 3411; viii.1949, 1 ♀, genitalia slide 5850; v, vi. x.1949 (A. M. Neervoort), 3 ♂, 4 ♀. Preanger, 5000 ft, 1894 (Sythoff), 1 ♀ (Snellen Coll.). East Java, Tengger Mts., Nongkodjadjar, Mt. Pandjangan, 1300 m, 12.iii, 28.iv.1940, 16.i, 15.ii.1941 (A. M. R. Wegner), 4 ♂, 4 ♀ (all LM).

♂♀ 17-22 mm. The species is easily recognizable by the rather pale fuscous-grey, uniform ground colour and a large, purple, triangular costal patch, extending from base to over  $3/4$ , lower edge approximately limited by the fold, posterior edge, by end of cell; the lower angle of patch has a slender appendix, descending over fold but not reaching dorsum.

Hind wing rather light fuscous, in male rather pointed, oblong-triangular, tornus broadly rounded, dorsum with a thickened and densely light-haired roll, limited by vein 1a. Posterior tibia of the male hardly thickened, with closely appressed scales, large, smooth and appressed pencil from base, above glossy purple.

Male genitalia. Resemble those of *D. aprobola*. Tegumen rather broad, shoulders rounded. Uncus broad, rounded. Socius rather long, fleshy, finely bristled. Gnathos, aciculate part oblong, halves almost semicircular. Valva moderate, sacculus gently narrowed (primary incision hardly indicated),  $Spc_1$  sessile, elongate, hardly crossing



disc and reaching cucullus bristles; these not much differentiated;  $\text{Spc}_2$  long, from middle of disc of sacculus to  $1/3$  of outer edge of cucullus.

Female genitalia. Seventh sternite rather pointed on each side of excision. Sterigma inverted-subovoid, with top gently flattened, base slightly rounded, edges about regularly thick along their whole length. Colliculum slender and short (under  $2 \times$  sterigma). Signa rounded and thick. Seventh sternite less deeply emarginate than in *D. aprobola*.

***Dudua charadraea* (Meyrick, 1909) comb. nov.**

(figs. 609, 612-613, 633)

*Argyroploce charadraea* Meyrick, 1909: 594 ( $\delta^2$ , Ceylon). — Clarke, 1955: 82.

*Platypeplus charadraea*; Clarke, 1958: 572, pl. 285 figs. 2-2a (lectotype select., wings, genit  $\delta$  figured).

Distribution. Ceylon.

West Java, Buitenzorg, [250 m], 1894 (Snellen Coll.), 1  $\delta$ , genit. slide 7641. East Java, Tengger Mts., Nongkodjadjar, 1300 m, at light, 7.ii.1940, 1  $\delta$ , genit. slide 7629; 22.ii.1941 (A. M. R. Wegner), 1  $\delta$ , 18 mm (abdomen missing).

Central West Sumatra, Fort de Kock, 920 m, iii.1922 (E. Jacobson), 1  $\delta$ , 16 mm (abdomen missing). (All LM).

Ceylon, Puttalam, 1911, 1  $\delta$ , genit. slide 7754; 20 mm (BM).

The species is nearly allied with *D. aprobola*, but can easily be separated by an inwards-oblique white wedge-shaped mark from  $3/4$  of costa, its point usually separating a grey-fuscous, erect-triangular mark on  $2/3$  of dorsum from the large, grey-fuscous costal patch, which is triangular, but suffused anteriorly; sometimes greyish suffusion connects this patch along costa with base of wing.

Male genitalia. Differ from those of *aprobola* by a higher tegumen with small triangular "shoulders", viz. prominences at the base of uncus. Uncus rather broad and rounded, slightly hooded. Valva longer, sacculus longer and more slender,  $\text{Spc}_1$  less regularly triangular, more elongate, followed by a curved slender series of loose spines across disc to angle of cucullus; beneath these, a small characteristic group of spines in disc;  $\text{Spc}_2$ , thin, hairy bristles along outer edge of base of cucullus, not touching disc of sacculus, on the outside reaching  $1/3$  length of cucullus. Cucullus longer and narrower than in *aprobola*, gently curved and attenuated, top rounded.

Female genitalia. Seventh sternite little excised. Ostium proper calyciform to funnel-shaped: gradually narrowed downwards, split almost to base; upper edge truncate. Lamella postvaginalis absent altogether. Colliculum slender. Signa very small.

**Dudua perornata** spec. nov.

(figs. 614-615)

♀ 20 mm. Head whitish, fuscous-ochreous tinged. Palpus fuscous, terminal segment blackish. Thorax pale fuscous, shoulder with a dark fuscous spot, tegula and apex of thorax whitish. Abdomen greyish.

Fore wing oblong-truncate, costa curved at extremities, almost straight in middle, apex obtusely pointed, slightly prominent, termen gently concave above, rounded beneath, oblique. Whitish, marbled and partly suffused with dark fuscous. Basal patch to  $1/3$ , ill-defined, edge darker fuscous, angulate, obliterate on lower half; transverse fascia black, a rounded spot beyond middle, obliquely connected by a moderate band with middle of costa, narrowed and irregular on lower half, to  $3/5$  of dorsum; posterior edge of fascia well-defined above: obliquely concave below costa, thence forming a prominence with a notched top, thence strongly receding and suffused; two pairs of short white lines on  $2/5$  of costa; posterior half of costa right beyond transverse fascia with five pairs of thick, purplish-white lines, delimiting four well-defined blackish, triangular costal spots; these lines running into a lilac and orange, white-edged subcostal streak, ending on termen below apex; apex with an orange dot; preterminal striga dark fuscous, strongly zigzagged, obliterate below, white-edged on both sides, to dorsum before tornus; this striga included in a large, erect-oval patch of pale purplish-grey ground colour; an elongate dark mark on middle of termen, connected by a faint dark line with top of preterminal striga and edged white anteriorly. Cilia dark grey-fuscous, with several whitish parting lines, tips blackish, a basal, creamy and a subbasal, dark fuscous line, cilia in tornus whitish.

Hind wing fuscous-grey-bronze; moderately glossy, with dark veins. Cilia concolorous, a pale basal line and a darker fuscous subbasal band.

Female genitalia. Sterigma slender, almost cylindrical and small, upper angle hardly produced, upper edge rather deeply emarginate; base only slightly dilated; ostium bursae forming a deep triangular excision, reaching down almost to base of sterigma. Colliculum long and slender. Corpus bursae large. Signa, two small thorns, basal plates round.

Probably nearest allied to *D. charadraea* (Meyrick) but larger and less strongly marked. There are no males available.

South Celebes, Bontain, 3000-6000 ft, 1896 (Doherty), 1 ♀, holotype, genit. slide 7760; SW. Celebes, Mt. Lompobatang, Parangbobo Goa, 5000 ft, v.1938 (J. P. A. Kalis) (BM 1938-610), 1 ♀, paratype (BM).

**Dudua metacyma** spec. nov.

(fig. 595)

♂ 20 mm. Head and palpus dark fuscous-brown. Thorax (rubbed) pale fuscous, mixed with dark fuscous-brown, tegula with a large round fuscous brown spot,

posterior half whitish. Posterior tibia with smoothly appressed scales, pencil from base fuscous; pale ochreous, fuscous above. Abdomen glossy pale grey, dorsum darker grey, venter whitish-grey, with a pink suffusion, anal tuft whitish-grey.

Fore wing oblong-subtruncate, costa little curved, more so at extremities, apex obtuse, termen almost straight, hardly concave above, rounded beneath. Pale ochreous, much obscured by fuscous-brown and dark fuscous marbling and suffusion. Basal patch not reaching  $1/3$ , ill-defined, indicated by a small dark dot at base of costa, an oblong dark fuscous spot at  $1/4$  of costa, a spot in fold slightly beyond this, connected by a fuscous-brown or purplish suffusion on dorsum, ending with a large tooth posteriorly, just above  $1/3$  of dorsum; transverse fascia moderate, a transverse erected-oval patch, dark fuscous-brown, narrowed on costal edge, gradually narrowed towards dorsum, but rather faint below fold, containing a longitudinal pair of bright orange oval spots just above lower edge of cell which interrupt patch, except a slender median stalk; posterior half of costa with five pairs of slender pale ochreous lines; an irregularly zigzagged, downwards-narrowed direct mark on dorsum before tornus, descending from below subcostal line; tornal area and ocelloid spot rather pale, whitish-ochreous (rubbed); termen above with a pale ochreous marginal streak. Cilia (damaged) fuscous.

Hind wing dull grey-fuscous, dorsum as far as vein 1b pale fuscous-whitish strewn with fuscous, dorsal margin with a glossy grey-whitish roll not reaching tornus. Cilia light fuscous-grey, glossy, with a subbasal dark fuscous band.

Male genitalia. Tegumen with shoulders hardly traceable. Uncus moderate, spindle-shaped. Socius rather long and narrow. Gnathos weak, but the two hemispheres large, deeply cleft. Sacculus rather broad at base,  $Spc_1$  robust and dense in middle, less dense on upper third, of weak bristles on lower third; cucullus spines forming a narrow ridge towards  $Spc_1$ ;  $Spc_2$  reaching to  $1/3$  of outer margin and continued in a spiny ridge across disc to close below middle of  $Spc_1$ , these two spine clusters running close and parallel to each other, with only a narrow but distinct interspace.

Female genitalia unknown.

South Celebes, Mt. Lompobatang, 850 m, Borong Rapoa, 19-24. viii.1949 (A. Diakonoff), 1 ♂, holotype, genit. slide 3408.

West Central New Guinea, Wissel Lakes, Paniai, 11.ix.1939 (H. Boschma), 1 ♂, paratype, genit. slide 6593 (LM).

A large species, probably nearest to *D. charadraea* (Meyrick).

### *Dudua proba* spec. nov.

(fig. 599)

♂ 19 mm. Head purple-fuscous, mixed with vinaceous-tawny, raised tufts on vertex blackish-purple, forehead and face densely rough-haired; back of vertex slightly mixed with vinaceous. Palpus ferruginous-brown, terminal segment small, dark

purple. Thorax purple-fuscous finely dusted with whitish, edge to collar whitish, a submedian black transverse band, apical tuft strongly raised, dull purple-ferruginous, tawny inside, tegulae more coarsely dusted with white (tips of scales). Posterior tibia hardly dilated, with smoothly appressed, silky golden-ochreous scales, above fuscous, pencil from base above fuscous. Abdomen fuscous, venter paler, anal tuft pale ochreous.

Fore wing oblong-subtruncate, dilated, costa gently curved throughout, more so posteriorly, apex obtuse, termen almost straight, hardly convex above, rounded beneath. Dark purplish-fuscous, with a strong anthracite gloss. Basal patch dark fuscous, finely strewn with lighter, tawny, not reaching to  $1/3$ , edge gently convex above, concave below fold, along second fourth suffused, extended posteriorly and indefinite; dorsum of patch slightly dusted with dark purple; transverse fascia represented by a large dark fuscous patch from middle of costa, upper part narrower and oblique, quickly dilated into an inwards-oblique transverse blotch to fold, with small outwards-oblique posterior appendix; anterior edge of patch suffused, posterior well-defined, with an acute tooth on upper, another on lower angle of cell; posterior half of costa dark fuscous, cut into five semioval spots by as many oblique pairs of purplish-grey lines, converging in a similar double subcostal line, parted by dark fuscous; preterminal area occupied by a deep purple, strongly zigzagged vertical fascia, ending on dorsum before tornus, excavated anteriorly in middle, with a curved small branch towards termen below apex, and another, from middle, descending towards tornus; apex and termen to above tornus suffused with fuscous-reddish. Cilia deep anthracite-grey, finely dusted with paler, basal fourth deep purple, with a fine white basal line.

Hind wing rather light unicolorous fuscous-bronze, glossy, cilia bronze-grey with a pale basal line, dorsum as far as vein *rb*, but not reaching it, sparsely clothed with dark fuscous modified scales, dorsal edge with a concolorous roll not reaching tornus.

Male genitalia. Tegumen with rounded-prominent shoulders. Uncus thick, oval, with a bilobed flat top. Socius moderate. Gnathos weak, ill-defined, except a single aciculate, inverted-trapezoidal body. Valva with a moderate sacculus and a rather broad, suboval cucullus; *Spc*<sub>1</sub>, compact but not dense, of rather long slender spines, rather separated from cucullus spines which are dark, upon a rounded prominence; *Spc*<sub>2</sub> of fine hairs, dense in disc, sparse outwardly.

Female unknown.

South Celebes, Mt. Lompobatang, 850 m, Borong Rapoa, 19-24.viii.1949 (A. Diakonoff), 1 ♂, holotype, genit. slide 3413 (LM). Bontain, 3000-6000 ft, 1896 (Doherty), 1 ♂, paratype, genit. slide 7756 (BM).

A darkly coloured species with less contrasting markings and the costal patch larger than in the *aprobola* group, but smaller than in *D. tectigera* (Meyrick), which is the nearest relative. It is also characterized by a single median body of the gnathos.

**Dudua carpophora** spec. nov.

(fig. 611)

♂ 20 mm. Head and palpus deep purple, face bronze-vinaceous. Antenna pale tawny-fulvous, scape deep purple. Thorax deep purple mixed with ferruginous, tegula tawny-fulvous with coppery reflections, collar coppery, apical crest deep purple, mixed with ferruginous, metathorax pale ochreous. Posterior tibia glossy grey, with closely appressed hair-scales, inside whitish-grey smooth, with a triangular black spot at base above, pencil from base of very fine long grey hairs, concealed in cavity. Abdomen purple becoming whitish towards base, venter ochreous-grey, anal tuft ochreous.

Fore wing oblong-suboval, moderately and gradually dilated, broadest at  $4/5$ , costa little curved anteriorly, more curved posteriorly, apex obtusely pointed, termen gradually rounded throughout, not oblique. Pale ochreous, strongly suffused and obscured by fuscous, except on anterior third below costa; anterior third of wing below costa suffused with light tawny; costal edge deep purple-fuscous, its posterior two-thirds dilated by a dark fuscous suffusion, so as to form an ill-defined large triangular patch, with point reaching below fold beyond middle of wing, posterior angle broadly extended along costa to apex; this colour becoming paler on lower half of wing; a dull deep purple semioval patch on dorsum from beyond base to beyond  $2/5$ , edge well-defined but slightly irregular; a small blackish dorsal suffusion connecting this patch with base of wing; three rather faint and broad, purplish-lilac transverse fasciae, first entire, from beyond  $2/5$  of costa to middle of dorsum, slightly outwards-convex; second and third wedge-shaped, slightly inwards-oblique, forming broad edges to ocelloid patch which is represented by a fascia of ground colour with 4-5 black lines, becoming shorter upwards; posterior half of costa with five slender and rather faint oblique lines, white on costa, leaden and converging below costa, not reaching apex. Cilia deep purple-fuscous, gradually turning pale ochreous in tornus.

Hind wing triangular, pointed, bronze-purple, on basal half becoming semi-pellucid, with dark veins, costa whitish, dorsum extended but without ternal lobe, sparsely curved with purplish scales, dorsum with a long spindle-shaped roll with pale ochreous, long cilia. Cilia elsewhere glossy pale fuscous.

Male genitalia. Tegumen slender, shoulders projecting, rectangular. Uncus moderate, oval. Socius weak, moderate. Gnathos with tops of tumescences rather pointed. Sacculus broader than cucullus;  $Spc_1$  sessile, a comb, with only a couple of large spines between this and cucullus bristles.  $Spc_2$  large, but of very fine hairs, forming a dense patch in lower half of disc of sacculus, and thinly extending along outer edge to before middle. Cucullus moderate, oblong-oval.

Moluccan Is., Batian Id., 1897 (Doherty), 1 ♂, holotype, genit. slide 7747 (BM).

The species is easily recognizable by the shape of the fore wing and by the markings. Superficially it resembles somewhat *D. aprobola*, but the genitalia show a closer relationship to *D. piratodes*.

**Dudua aprobola** (Meyrick, 1886) comb. nov.

(figs. 617-619, 640A-B)

*Eccopsis aprobola* Meyrick, 1886: 275 (♂♀, Tonga). — Clarke, 1955: 51.*Platypeplus aprobola*; Walsingham, in Moore, 1887: 495, pl. 208 fig. 2 (Ceylon, Tahiti). — Swinhoe, in Cotes & Swinhoe, 1889: 698, no. 4759. — Clarke, 1958: 572, pl. 285 figs. 1-1a (holotype, wings and genit. figured). — Diakonoff, 1961: 68, fig. 24 (neurulation; Seychelles).*Platypeplum aprobolum*; Walsingham, 1900 [1899]: 569 (emend.).*Argyroploce aprobola*; Meyrick, 1910: 218 (India: Orissa, Travancore). — 1911a: 275 (New Guinea, Queensland; *Temnolopha metallota* Lower syn.). — 1911c: 269 (Seychelles Is.; Amirante Is.; Chagos Is.). — 1914: 49 (Formosa). — Fletcher, 1917: 219, 230, 267. — 1921: 57, 200 (all over India; five food plants, stages descr.). — Meyrick, in De Joannis, 1929: 719 (Tonkin). — Fletcher, 1932: 27, pl. 18 figs. 1-3 (food plants, distribution). — Kalshoven, 1950: 394 (two food plants in Java). — Diakonoff, 1953: 106. — 1960: 133 (Canton).*Hedya* (*Platypeplus*) *aprobola*; Diakonoff, 1968: 46, fig. 523 (Philippine Is.).*Temnolopha metallota* Lower, 1901: 7310 (Australia).*Dudua aprobola*; Diakonoff, 1971: 191 (S. Thailand).

Distribution. Widely distributed throughout tropical Asia, the Pacific Area and the Mascarene region, easily spread with cultivated plants. Recorded from India, Ceylon, Seychelles, Amirante Is., Chagos Is., Java, Tonkin, Formosa, New Guinea, Queensland, Tonga (type-locality), Tahiti, Society Is. and Austral Is.

Food plants. In India bred from *Rosa*, *Mangifera indica*, *Lantana camara*, *Dahlia*, *Nephelium litchi*, *Cassia tora* and *Polyalthia longifolia*, *Lagerstroemia flos-reginae*, *Loranthus* (flowers), *Salix tetrasperma*, *Schleichera trijuga*. In Java bred from *Lagerstroemia* and *Mangifera*. The larvae roll young leaves or sometimes live in flowers.

West Java, Ujung Kulon Peninsula, Tjigeunteur, 15.vii.1952 (A. M. R. Wegner), 1 ♂. "Java, 1878, ♂", "Coll. Ribbe, also from N. Britain" (in Dutch, in Snellen's hand). "Java, Batavia [low country], 1888", 1 ♀. "W. Java, ♀, 1894". "Java, Buitenzorg [250 m], 1891", 1 ♀. The same locality, iii. 1931 (L. G. E. Kalshoven), 2 ♀, genit. slide 7625; 18.vi.1932 (R. Sunarjo), 1 ♀. Mt. Guntur, 500 m, 27.vii.1926 (L. G. E. Kalshoven), "*Argyroploce aprobola* Meyr., det. H. Stringer, 1938", 1 ♂. Central Java, teak forest, 40 m, Seneng and Gedangan, 27.ii.28; 30.vii, 9-10.viii, 9.ix.1931, bred from leaves of "kedajaan" (? *Panicum Crus gallii*), "getasan" (? *Buchanania arborescens*), "kesambi" (? *Schleichera oleosa*), *Lagerstroemia* (Fr. A. Th. H. Verbeek, L. G. E. Kalshoven), genit. slides 2572 ♀, 3257 ♂, 3261 ♀ and 3582 ♀, 7 ♂ 10 ♀. (All LM).

Central West Sumatra, Fort de Kock, 90 m, iv.1921 (E. Jacobson), 1 ♂, genit. slide 3609, 1 ♀ (LM).

Bali, 1896 (Doherty), 4 ♂, 5 ♀, genit. slides 7745 ♂, 7753 ♀ (BM).

South Celebes, Makassar [Piepers], 1 ♂, genit. slide 2539 (LM).

Northwest New Guinea, Sorong, 8.vi-14.vii.1948 (M. A. Lieftinck), 1 ♂; Kota Nica, viii.1958 (R. T. Simon Thomas), 6 ♀ (LM).

Papua, Sogeri Plateau, Bisianumu, 1600 ft, viii.1957 (G. P. Holland, CM), 1 ♂, genit. slide 7624.

Admiralty Is., Manus, ix-x.1913 (Meek's Expedition), 1 ♀ (BM).

S. New Guinea, Milne Bay (A. S. Meek), 1 ♂, genit. slide 7763 (BM). This robust male shows more than the usual variation. It is darker, with dark grey-fuscous hind wing, of which dorsum and dorsal cilia are also dark grey-fuscous as against whitish in the typical specimens. The genitalia, however, are similar. Perhaps this is a distinct local race. More material is necessary to find this out.

Moluccan Is., Batian Id., 1892 (Doherty), 1 ♂ (BM).

Thailand, Key Phen Dao, 8.xii.1951, 1 ♀; Bangkok, 21-27.xii.1957, 1 ♀ (L. D. Brongersma) (LM).

Tambora Id., 3000 ft, 1896 (Doherty), 1 ♂ (BM).

Ceylon, Puttalam (Pole), 2 ♀ (BM).

Australia, Queensland, Cedar Bay S. of Cooktown (Meek), 2 ♂, 1 ♀, genit. slides 7757 ♂, 7758 ♀ (Walsingham Coll., BM).

China, Canton, genit. slide 7645 ♀ (LM).

Mascarene Region, Seychelles Is. genit. slide 3262 ♀ (LM).

A moderately variable species, as to the size, shape and markings. The fore wing is usually narrow, dilated, apex and termen strongly rounded, termen oblique. The ground colour is pale grey or white, more or less marbled with dark blue-grey on apical half, more or less mixed with fuscous tending to form coarse transverse marbling anteriorly; costa narrowly deep purple, cut with numerous oblique, fine, white lines. Basal patch indefinite, often indicated by a purple-black narrow erect mark on about 1/6 of dorsum, edged with white; transverse fascia formed by a large deep fuscous suboval oblique spot from middle of costa, with more or less serrate edges, hardly reaching to middle of disc, its lower half triangular, well-defined, leaden-grey, more or less connected with a purple-black, conspicuous, small mark on 3/4 of dorsum, subtriangular and often broken in a couple of fragments; a leaden-grey-bluish, rather pale spot of variable size, usually filling out most of space between fascia and apex, not reaching either; lateral edges of this spot regularly serrate; spot parted by a glossy white line, with a series of black interneural points on either side of parting; tornus usually with a white spot.

Hind wing in male triangular, apex gradually acute, dorsum and lower half of termen broadly rounded, dorsal roll with a deep fold on upper side, with dense fine creamy hairs; fuscous, becoming deep bronze-fuscous towards apex, grey on costa, dorsum and fold creamy; cubital pecten long and dense, fuscous. Cilia glossy grey-fuscous, along dorsum dense, creamy.

Male genitalia. Tegumen rather weak and fleshy, uncus subclavate, subtruncate, underneath with lateral finely haired thickenings. Socius long, continuing the thickening of the uncus, densely but very finely haired. Gnathos with aciculate median part suboval, its halves rounded below. Valva with sacculus slender,  $Spc_1$  sessile, triangular, with a couple of larger spines beyond it in disc;  $Spc_2$  of very fine hairy bristles, from middle of disc of sacculus, to almost halfway edge of cucullus; cucullus bristles in a small dark rounded patch on cucullus prominence only, other bristles

pale. Cucullus short and broad, irregularly suboval, top slightly truncate, upper angle naked and rounded.

Female genitalia. Ostium proper slender and triangular, the lower part being entirely obliterate; upper part moderately thickened and concave above; lamella post-vaginalis formed behind and partly below the ostium, broad and semicircular, with fine radial folds. Colliculum very narrow. Seventh sternite deeply emarginate. Signa less robust than in *D. tetanota*.

The species is recognizable by the large costal and small dorsal parts of the transverse fascia, by the pale tornus, the narrow fore wing, etc.

It seems not practicable to separate regional subspecies, as the differences rather overlap.

***Dudua phyllanthana* (Meyrick, 1881) comb. nov.**

(figs. 613A-B)

*Antithesia phyllanthana* Meyrick, 1881: 641 (♂♀, Queensland). — Clarke, 1955: 248.

Distribution. Queensland.

Food plant. *Phyllanthus Ferdinandi* (Euphorbiaceae).

A variable species, paler or darker fuscous, with rather distinct darker markings, forming three incomplete transverse fasciae; anterior of these being the edge of basal patch, with lower half concave; a slender central fascia, originating from a suffused dark median costal patch and almost divided in three parts; and a subterminal narrow fascia not reaching dorsum; tornus usually much paler ochreous, this colour occupying termen to below apex; the dark costal patch preceded by a pale, mostly cretaceous white spot at 1/3.

Hind wing rather dark fuscous-brown, with a strong golden gloss and dark veins. Cilia pale ochreous, with a sharp dark subbasal line and fuscous suffusion along lower half of termen.

Male genitalia unknown to me.

Female genitalia so characteristic, that even without the males I do not hesitate to assign the species to the present genus. Sterigma, a rounded, deeply wrinkled body with slightly prominent lateral angles, aciculate over its upper half; with ostium erected-oval, wider above and thick-edged. Ductus bursae coiled once. Signa two, short, finely dentate horns. (Genit. slide 8041).

Judging from the genitalia, nearest to *D. aprobola* (Meyrick), but superficially quite distinct.

***Dudua eumenica* (Meyrick, 1929) comb. nov.**

*Argyroploce eumenica* Meyrick, 1929: 496 (♂, Marquesas Is.). — Clarke, 1955: 134.

*Platypeplus eumenica*; Clarke, 1958: 572, pl. 285 figs. 3-3a (holotype, wings, ♂ genit. figured).

Distribution. Marquesas Is.



A moderate species of typical *Dudua* appearance but warm brownish throughout, with a vinaceous tinge, instead of grey or fuscous, as is usual with the species of the present genus. The markings are reduced to a series of dark and slender costal strigulae, those on middle of costa, being the edges of obliterate transverse fascia, the longest; there is a series of some five dark horizontal strigulae in ocelloid spot and a darker semioval spot below centre of disc and another, ill-defined, towards base of dorsum.

Hind wing whitish with marginal third suffused grey, dorsum with a fold, tornus rounded-prominent, also middle of termen with a distinct round prominence.

Male genitalia. Similar to those of *D. aprobola*, but with a slightly longer and more curved cucullus and stronger  $\text{Spc}_1$  as well as the spine tuft at the outer angle of the base of cucullus; also sacculus longer and more robust. Uncus longer, hooked, more slender.

***Dudua lamproterma* spec. nov.**

(figs. 616, 622-623)

♂♀ 16-19 mm. Head and thorax fuscous-grey. Palpus fuscous. Abdomen dark fuscous, anal tuft pale inside. Posterior tibia moderately thickened, with smoothly appressed, rather long hair-scales, converging on a narrow mediadorsal slit in which also disappears pencil from base; light greyish-fuscous.

Fore wing oblong-subtruncate, dilated, costa gradually curved anteriorly, straight posteriorly, considerably curved before apex, termen gently convex, almost straight, rounded beneath. Light ashy-grey, with slight silvery gloss, suffused with dull darker slaty-grey, markings fuscous. Basal patch to beyond  $1/3$ , edge rather straight and oblique to fold, thence with a deep round excavation, receding on dorsum; formed of dark ground colour with only a few transverse dark fuscous strigulae, and an irregular rather thick edge, central fascia forming a transversely-oval fuscous-grey spot just beyond middle, connected with dorsum; subterminal spot fasciate, little narrowed, fuscous, traversed throughout by several purplish strigulae, its top with a slender hook, curving down towards termen below apex and along this downwards to middle; upper half of termen suffused with fulvous. Costa dark fuscous-brown, with oblique distinct pairs of white strigulae.

Hind wing in male modified: rather unicolorous dark grey, cubital pecten white, dorsum and cilia long, pale ochreous, with a strong roll; cilia from apex to below end of vein 2 modified, glossy, short and thick, polished; apex distinctly pointed, termen gently concave and oblique to end of vein 5, thence obliquely rounded to below 2, tornus forming a moderate broad lobe, a trifle angular on end of vein 1b; cilia along this lobe normal, pale fuscous-grey.

Hind wing in female normal, subtrapezoidal-semioval, moderately broad, fuscous-grey-bronze, paler than in male.

Male genitalia. Tegumen with rounded shoulders. Uncus broad, suboval, tip notched. Socius fleshy and long. Gnathos as in *D. crossotoma*.  $\text{Spc}_1$  crossing over to

cucullus bristles, spines in middle of disc strong,  $Spc_2$  extending across disc to the end, as in *crossotoma*. Cucullus narrower, tip more pointed and almost naked. Aedeagus short and slender, with a dilated flat base.

Female genitalia. Sterigma as in *D. tectigera*: simply rounded, but in middle of sides with dark prominences. Lamella postvaginalis indicated by fine aciculation, so showing close relationship with *D. crossotoma* indeed.

East Papuan Is., d'Entrecasteaux Is., Fergusson Id., 7-20.xi.1894 (Meek), 1 ♂, holotype, genit. slide 7742, 1 ♀, allotype, genit. slide 7743. Louisiades, St. Aignan Is., 1897 (Meek), 1 ♂, paratype, genit. slide 7764 (BM).

Unfortunately all three specimens are not in perfect condition. They are rather fuscous-greyish, with little contrasting markings and rather rounded, dilated fore wing. At first I took them for pale specimens of *D. crossotoma*, judging from the modified hind wing in the male. However, the genitalia showed slight differences and besides, the markings, however imperfect, and the shape of the fore wing, were different. Close comparison of the male hind wings revealed that they are modified in a similar way in both these species, but are distinct. In *D. crossotoma* the apex is produced but more rounded, the lobe of the median third of the termen is more flattened in middle, the whole wing narrower than in *lamproterma*, the cilia shorter.

***Dudua microsema* spec. nov.**

(figs. 621, 624-625)

♂ 14-15 mm. Head fuscous, vertex and scape of antenna deep purple, face, pale grey. Palpus grey, upper edge light grey. Thorax light fuscous, marbled with darker. Posterior leg in male white, femur with a long fine fringe of scales, tibia moderately thickened with appressed scales, dark fuscous above, pencil from base blackish. Abdomen dark leaden grey, anal tuft light grey, whitish inside, venter white towards base.

Fore wing oblong-suboval, costa slightly curved anteriorly, more curved posteriorly, apex rounded-rectangular, termen almost straight, little oblique above, rounded beneath. Dull slaty-grey, slightly and finely dusted with fuscous, with a faint blue gloss in certain lights. Basal patch to beyond 1/3, rather ill-defined, grey-fuscous, darker along costa, with two faint and interrupted dark fuscous transverse bands; edge gently convex above, notched below fold; an oblong-oval purple-black spot just above dorsum, a trifle inwards-oblique, in middle of dorsum of basal patch; transverse fascia represented by an about hexagonal, slightly oblique, dark fuscous patch from just beyond middle of costa, where it is strongly narrowed, below cell becoming faint; limited by fold, thence faint and narrow to 2/3 of dorsum; costal space before patch with two, beyond, with five pairs of fine white transverse marks, posterior ones becoming very oblique and merging into a tawny subcostal strigula marked with blue and with a pair of blackish marks; two ultimate pairs of costal marks brownish and ill-defined; terminal area filled out with very fine fuscous-brown and whitish dusting,

forming a straight and vertical slender fascia to end of dorsum, gently narrowed downwards and finely white-edged, slightly dark-striped; another fascia marginal; an ill-defined, wedge-shaped mark of ground colour between them, rising just above middle of wing, representing the ocelloid patch. Cilia fuscous, with a darker basal third, set off by a basal and a submedian whitish line, cilia in tornus whitish-grey.

Hind wing fuscous-bronze or fuscous-purple, rather unicolorous, paler than in the following species (*D. brachytoma*). Cilia light grey-fuscous with a pale basal line and a darker subbasal narrow band; dorsum as far as vein 1a extended and sparsely long-haired with appressed dark fuscous-grey hairs, dorsal edge upper side with a deep narrow, naked and hyaline cavity, dorsal cilia dense, long, pale ochreous.

♀ 16-17 mm. Similar to male but darker, dorsal spot less contrasting, subcostal fascia more orange-coloured and the ground colour deeper bluish-grey.

Hind wing normal.

Male genitalia. Very similar to those in *D. brachytoma* and differing thus. Shoulders of tegumen a trifle more slender. Uncus thicker. Gnathos of more normal *Dudua*-shape: broader, with larger ventral prominences; lateral denticulations forming transverse horizontal bands. Sacculus narrower,  $Spc_1$  longer, its spines more gradually becoming longer, space between these and cucullus bristles sparsely spined; the elements of  $Spc_2$  more separated, the marginal part rather less dense; cucullus distinctly different, with a swollen costa, and a single upper point, while lower angle is broadly rounded. Aedeagus rather cylindrical.

Female genitalia. Ostium small, broad and short, below narrowing triangularly; upper edge very gently inbent in middle, convex on both sides. Colliculum rather short. Signa moderate.

South Celebes, Bontain [Range], 3000-6000 ft, 1896 (Doherty), 1♂, holotype, genit. slide 7746, 1♀, allotype, genit. slide 7749, 7♂, 11♀, paratypes (BM). Mt. Lompobatang, 850 m, Borong Rapoa, 19-24.viii.1949 (A. Diakonoff), 1♂, paratype, genit. slide 7644 (LM).

A species of moderate size, rather resembling *D. aprobola* but more darkly and uniformly marked. It is closely allied with *D. brachytoma* spec. nov., from Java, from which it differs chiefly by the male genitalia.

#### ***Dudua brachytoma* spec. nov.**

(fig. 606)

♂ 16 mm. Head and thorax fuscous-grey, forehead darker fuscous, metathorax whitish. Palpus glossy, grey, with whitish reflections. Posterior tibia moderately thickened by closely appressed scales, thickest above; white, dark fuscous above, posterior femur white, with raised fringe of marginal scales. Abdomen fuscous.

Fore wing oblong-suboval, moderately dilated, costa little curved at base, straight in middle, more curved towards apex, apex rounded, termen rounded, moderately oblique. Rather dark, dull purplish-fuscous-grey, in certain lights with faint bluish

and purplish reflections, markings dark fuscous. Basal patch to  $1/3$ , edge rather well-defined, tolerably convex (less regular in left wing!), excavate in fold, about vertical; this patch containing an oval, moderate, deep purple spot, just above dorsum, beyond  $1/5$ ; transverse fascia from just before middle, forming a somewhat oblique, transverse, fasciate spot, gradually dilated to above middle of disc, anterior edge straight and oblique, posterior rather strongly rounded to fold, in fold fascia strongly constricted, thence moderate, with parallel edges, to  $2/3$  of dorsum; posterior half of costa with five short snow-white pairs of oblique transverse marks, quickly merging in a subcostal broad olive-ochreous line, very finely parted by metallic blue; this line becoming fuscous and ill-defined before apex; ocelloid patch large, edged on both sides by thick, gently converging bands of ground colour, slightly dilated downwards; patch crossed by six or seven dark purple lines; two minute white points on termen below apex. Cilia grey-fuscous, with two pale parting lines and darker basal third, cilia in tornus pale fuscous-grey.

Hind wing deep triangular, moderately pointed; fuscous-bronze becoming slightly paler greyish towards base, dorsum with a slender sharp fold below vein  $1c$ , from this fold to margin densely clothed with long appressed hairs, a deep roll on under side, closed on upper side; pencil from base blackish.

Male genitalia. Tegumen high, with pointed triangular shoulders. Uncus rather long, hooked, spindle-shaped, top dilated. Socius short. Gnathos sclerotized, a long, gently curved band with dilated sides, finely denticulate outwardly below; median prominences small but distinct. Valva with sacculus irregularly constricted.  $Spc_1$  small, of short bristles, passing over into cucullus bristles;  $Spc_2$  peculiar, a small patch of spines in disc and a rather short brush of fine hairs under the cucullus prominence, upper edge of  $Spc_2$  well-defined, in middle notched. Cucullus with an abruptly dilated and obliquely truncate top, triangularly prominent above and beneath and with a small spine. Aedeagus moderate, narrowed.

West Java, Buitenzorg, 1894, 1 ♂ (Snellen Coll., in Snellen's hand), 1 ♂, holotype, genit. slide 3608. A unique specimen, introducing the group of species with a cucullus and a gnathos of a rather modified shape.

### ***Dudua cyclographa* spec. nov.**

(figs. 596-597)

♀ 14-15 mm. Head and palpus fuscous, vertex and forehead grey. Thorax fuscous-grey, extreme tips of scales light vinaceous, giving to thorax a purplish tinge. Abdomen dark grey.

Fore wing oblong-suboval, costa gently curved throughout, apex obtuse, termen straight and slightly oblique above, rounded beneath. Leaden-grey with bluish reflections. Basal patch to just beyond  $1/3$ , formed by rather regular, transverse, deep fuscous-purplish strigulation, more or less interconnected, edge tolerably straight and oblique to fold, a deep oval excavation thence, on dorsum edge vertical;

transverse fascia formed by a rather slender, oblique, dark fuscous spot from just before middle of costa, below costa abruptly extended posteriorly and forming an acute tooth; below this, spot lighter and oval, in middle of disc constricted, almost interrupted, once again in fold, and again above dorsum, parts forming more or less rhomboidal spots, to dorsum beyond middle; a straight, direct, purple fascia from below costa to end of dorsum, little zigzagged, but almost interrupted in middle of anterior edge, top with a slender curved appendix to upper  $1/4$  of termen, thence slightly dilated, to above tornus; broad streaks of leaden ground colour on each side of preterminal fascia conspicuous, finely white-edged, forming a whitish tornal patch; posterior half of costa with five pairs of white lines, three posterior ones appearing single. Cilia leaden-grey, with a purple subbasal band and white basal line.

Hind wing rather light greyish-bronze, cilia fuscous, with a darker subbasal band and paler basal line, cilia along tornus white.

Female genitalia. Sterigma rather large, broad above, gradually narrowed downwards, tumbler-shaped, top almost flat, opening broadly triangular on upper half, narrow split-like below, not reaching base. Colliculum slender. Signa rather thick and obtuse.

East Borneo, Balikpapan, Mentawi River, 50 m, x.1950 (A. M. R. Wegner), 1 ♀, holotype, genit. slide 5820. The same island, Balikpapan, Wain River, 50 m, xi. 1950 (A. M. R. Wegner), 1 ♀, paratype, genit. slide 5821 (LM).

Moluccan Is., Halmahera Id., Tolerang, 50 m, 12-25.x.1951 (native collector), 1 ♀, paratype, genit. slide 7642 (LM).

### ***Dudua chlorohygra* spec. nov.**

(figs. 600-601)

♀ 20 mm. Head and thorax olive-green, vertex of head suffused with white (thorax partly discoloured ochreous). Palpus with median segment strongly dilated posteriorly by closely appressed scales, projecting below in an acute point, terminal segment rather long, slender, porrect; deep olive-green, basal segment and lower half of median white, edge well-defined, horizontal. Abdomen blackish, tinged olive, venter pale grey.

Fore wing long and rather narrow, costa little curved except at base, almost concave in middle, apex pointed, termen deeply sinuate over upper  $2/3$ , prominent and rounded along lower third. Bright olive-green, partly suffused with deep olive and with an ill-defined fasciate and dilated tawny suffusion, running from base to tornus. Markings on upper half of wing glossy silvery-white, on lower half, rather dark dull bluish-grey. Anterior third of costa deep olive, with some four very short transverse marks; a distant pair of larger vertical marks before middle of costa, space between them filled out with deep olive; similar pair at  $2/3$ , its dark filling, oval; followed by a smaller, semioval and another, wedge-shaped, dark olive spot, edged on both sides by silvery-white; posterior marking subapical, sending an irregu-

lar interrupted strigula to middle of termen; fragments of three obliquely V-shaped marks below anterior third of costa, hardly connected with costal marks; a large triangular silvery-white spot, suffused above and beyond anterior edge with ground colour, at  $3/4$  of disc, lower edge well-defined, top to middle of wing; irregular clavate sublongitudinal striga in middle of disc, forming lower edge of a V-shaped deep olive mark above middle; an irregular sublongitudinal pale grey mark forming ocelloid spot; less than anterior  $3/4$  of lower half of wing with four inwards-oblique, rather irregular pairs of grey stripes, anterior pair shortest and separate, second pair parallel, third and fourth more oblique, united above and beneath and forming irregularly oval spots; posterior of these cut below by dorsal edge; dorsal half of wing between markings deep olive; termen with a silvery-white marginal line from below apex to above tornus. Cilia along terminal concavity, white with greyish tips, along terminal prominence, tawny-ochreous mixed with olive.

Hind wing rather dark purple-grey, becoming blackish towards margin and apex, with darker veins and a fine transverse dark striation (tips of scales).

Female genitalia. Seventh ventrite deeply excised. Sterigma a simple semioval plate filling this excision, finely punctulate throughout, upper edge with semioval submedian short lobes, ostium situated below middle of plate. Colliculum dark, narrowed, moderate. Ductus bursae short and narrow. Signa, two small semispherical granulations.

India, Sikkim, 7000 ft, vi.1896 (Pilcher), 1 ♀, holotype, genit. slide 8021 (BM). An elegant and distinct species, deceivingly resembling a green *Statherotis*, e.g. *S. polychlora* spec. nov. or *S. iricolor* (Meyrick), but actually belonging in the *Hedya* group. Its generic position is somewhat dubious, though, without the data on male genitalia.

#### *Dudua scaeaspis* (Meyrick, 1937) comb. nov.

*Argyroploce scaeaspis* Meyrick, 1937: 182 (♂, China). — Clarke, 1955: 277.

*Platypeplus scaeaspis*; Clarke, 1958: 575, pl. 286 figs. 3-3a (holotype wings, genit. ♂ illustr.).

Distribution. China: Likiang.

Allied with the preceding species, but easily distinguished by the dark grey colouring of the fore wing extending over apex and upper half of termen, so as to leave only a cretaceous-white tornal spot, traversed by a grey stripe parallel to termen, followed anteriorly by a row of black dots.

Male genitalia. Uncus long, slender, hooked, with a pointed top. Socius moderate. Gnathos of the usual shape, prominences of the lower edge rounded and depressed. Valva long and slender,  $Spc_1$  moderate, dense and triangular,  $Spc_2$  small, in middle of lower edge of socius; cucullus hardly prominent, spines in a dense rounded-triangular patch.  $Spc_3$  very thin; along base of cucullus only.

Female genitalia not known to me.

**Dudua ptarmicopa** (Meyrick, 1936)

*Argyroploce ptarmicopa* Meyrick, 1936: 612 (Formosa, China).  
*Platyepplus ptarmicopa*; Clarke, 1958: 575, pl. 286 figs. 3-3a (lectotype ♂ design., wings, genit. figured).

Distribution. Formosa. China: Mt. Omei.

The species is in all respects very similar to *D. charadraea* (Meyrick), so that a description may be omitted. The basal  $3/4$  of the fore wing are evenly darker in the present species, while the uncus is more truncate,  $Spc_1$  is somewhat more extended downwards along the base of valva and is hardly continued across disc of valva to the outer angle of the base of cucullus, as is the case in *charadraea*.

The species is closely allied with *D. charadraea* (Meyrick).

**Dudua ultima** spec. nov.

(fig. 620)

♂ 16 mm. Head and thorax fuscous (thorax rather rubbed). Palpus dark fuscous. Abdomen pale grey, with very long pale grey lateral hair-pencils appressed to the sides.

Fore wing oblong-suboval, costa gently curved, apex and termen rounded. Pale purple-lead-grey, with a slight gloss. Markings dark fuscous. Basal patch formed of dense zigzag transverse strigulae, edge strongly convex and oblique, in fold reaching beyond  $2/5$ , rather strongly serrate, on dorsum becoming obliterate; transverse fascia beyond middle: a large inwards-oblique fuscous spot in disc, from below costa to fold, connected by an oblique rather slender dark fuscous streak with costa just beyond middle, below fold with a vertical moderate stalk abruptly dilated along dorsal edge; costal pairs of marks sharply white on edge but quickly becoming pale purple-blue; a transverse subterminal mark little zigzagged, forming a suboval spot, narrowly connected with dorsum before tornus; an oblique, little curved branch to termen below middle; subcostal streak purplish-blue, curving down to before middle of termen. Cilia dark fuscous with a purplish subbasal band and a pale basal line, in tornus cilia grey-white.

Hind wing broad, trapezoidal, dark bronze-fuscous, cilia concolorous, with a darker subbasal band; dorsum rather dark grey, with long hairs on upper side from both edges of the roll, reaching to tornus.

Male genitalia. Extremely similar to those of *D. charadraea*, but differing as follows. Uncus broader, with two small apical lobes; socius broader, voluminous.  $Spc_1$  more elongate, less dense, connection with cucullus bristles across disc formed of quite large spines, in middle attached in two rows, those of the lower row turned downwards, but not forming a separate discal group as in that species;  $Spc_2$  less extended outwards, markedly concentrated around cucullus prominence.

Nicobar Is., ii-viii.1904 (G. Rogers), 1 ♂, holotype, genit. slide 7755 (BM). The

small and rather dark species is characterized by similarity of genitalia with those of *charadraea* and by difference of colouring, shape of the hind wing and especially by the lateral hair pencils of the abdomen.

***Dudua anaprobola*** (Bradley, 1953) comb. nov.

(fig. 594)

*Argyroploce anaprobola* Bradley, 1953: 109, figs. 5, 8 (♂♀, Fiji).

*Olethreutes anaprobola*; Bradley, 1961: 125. — 1962: 255.

*Hedya (Cellifera) cellifera* Diakonoff, 1968 (nec Meyrick, 1912): 47, fig. 73. (♂ only!, Philippine Is.).

Distribution. Fiji Is. Philippine Is.

This species, although a characteristic *Dudua*, possesses a row of big flat spines along the outer side of the sacculus. Because of this character I erected a new subgenus, *Cellifera*, of the genus *Hedya*, for this species (1968) which I misidentified as "*Argyroploce cellifera* Meyrick, 1913. The reason for this error is the great similarity of the colouring and markings of *D. anaprobola* (Bradley) and *Lasiognatha cellifera* (Meyrick). In my 1968 paper I figured under the name "*Hedya (Cellifera) cellifera*" the male of *anaprobola* — and the female of true *cellifera*, both from the Philippine Islands; this female is also figured by Clarke (1958) while the male genitalia of the last mentioned two species, which are quite distinct, have never been illustrated before.

Although the large spines along the edge of sacculus in *D. anaprobola* are peculiar, in other respects the male genitalia are of a true *Dudua* type. Therefore erection of a subgenus for the present species appears to me at present superfluous.

Light fuscous-brown, strongly marbled. Basal patch darker, edge oblique, with a truncate prominence below middle; transverse fascia indicated by a large fuscous-blackish patch from middle of costa, oblique and rather narrow above, dilated in middle of disc and reaching to cell, anterior edge with two short and obtuse, posterior edge with two longer and more pointed projections, on upper and lower edge of cell, respectively; a vertical fasciate spot from below costa posteriorly to dorsum before tornus, constricted to a line in middle; an oblong submarginal spot before middle of termen.

Hind wing whitish with darker veins, suffused with grey towards apex.

Male genitalia. Uncus rather long, hooked. Socius long. Gnathos with two depressed aciculate prominences. Sacculus with  $Spc_1$  small but dense, passing into cucullus bristles, pulvinus also bristled;  $Spc_2$  replaced by a series of large marginal spindle-shaped spines from angle to below middle of cucullus.

Female genitalia. Sterigma inverted-calyciform, with a triangular split above, lamella postvaginalis slightly extended laterally, with a slightly notched middle of upper edge. Signa, two small thorns.

New Hebrides, Aneytium, Red Crest, 1200 ft, 3 mi NE of Anelgauhat, vi.1955 (J. D. Bradley), 1 ♂ (BM).



**Dudua crossotoma** (Meyrick, 1931) comb. nov.

(figs. 589-590, 604)

*Argyroploce crossotoma* Meyrick, 1931: 129 (♂♀, Bismarck Is.). — Clarke, 1955: 105.  
*Platypeplus crossotoma*; Diakonoff, 1966: 13, figs. 39, 79.

Distribution. Bismarck Is.

Admiralty Is., Manus, ix-x.1913 (Meek's Expedition, BM), 1 ♂, genit. slide 2889.  
 New Guinea, Dampier Id., ii-iii.1914 (Meek's Expedition, BM), 1 ♂, genit. slide 6578. (fig. 589 is after a ♀ paratype from New Hanover, genit. slide 6009).

Fore wing oblong, hardly dilated, costa before apex obliquely and gently truncate, apex appearing pointed, termen straight and oblique. Ground colour purplish-slaty grey, markings deep purple. Basal patch represented by a few scattered dark points; a large triangular spot just beyond middle of costa, reaching just below fold, with anterior edge convex, posterior irregularly serrate; this spot connected by a dark suffusion along costa with a fasciate slightly zigzagged spot before apex and termen, descending vertically to tornus, lower half abruptly narrowed and twice as slender as upper half; a spot along upper half of termen.

Hind wing pale fuscous-grey, in male modified, apex rounded, termen concave above, rounded and gently prominent in middle, tornus strongly rounded and lobate; cilia very short, thickened and glossy, around lobe long and glossy, whitish; dorsum with a narrow roll, concealing a long fuscous pencil from base, projecting at end. Posterior tibia fuscous, with long, closely appressed hairs above; pencil from base ochreous, appressed.

Male genitalia. Very similar to those of *D. aprobola*. Tegumen more slender. Uncus more rounded. Socius more slender, gnathos similar, tumescences slightly longer,  $Sp_1$  of two kinds of bristles, small anteriorly, larger posteriorly, the latter running into cucullus bristles;  $Sp_2$  of weak hairs, but extended anteriorly and filling out disc of sacculus, not perceptible on outer edge; cucullus more slender and more similar to that in *D. charadraea*.

Female genitalia. Seventh sternite with upper angles rounded, deeply emarginate. Sterigma constricted in middle, with lateral granulate small thickenings, upper edge emarginate. Signa with rather large round basal plates.

**Lasiognatha** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna short-ciliate in male. Palpus moderate, sinuate, subascending, median segment dilated with appressed scales, roughish below and along apex, terminal segment short, obtuse. Posterior tibia moderately dilated with long appressed scales, a slender pencil of hairs from apex above, concealed in a longitudinal groove.

Fore wing with vein 2 from  $2/3-3/4$ , 3 from angle, 7 free to termen, 8 from angle, 11 from middle, chorda from before 10 to base of 7, median branch to below 5.

Hind wing broadly semioval or subtrapezoidal, over 1, with a cubital pecten, and a dorsal roll. Vein 3 from angle, free or connate with 4, 5 approximated at base, 6 and 7 approximated towards base.

Male genitalia. Tegumen high and slender, narrowed. Uncus long, hooked, clavate, bristly under the top. Socius large, pending, densely haired. Gnathos, a membranous transverse band with thickened lower angles, clothed with fine bristles or aciculate throughout, tuba analis rising, usually well-developed. Valva long and slender, curved or with a narrowed sacculus. Pulvinus well-developed as a spiny patch,  $Spc_1$  absent or included in cucullus bristles,  $Spc_2$  absent, or a large marginal tuft. Aedeagus very short, with a thick base or aedeagus large.

Female genitalia closely resembling those in *Didrimys*: sterigma, an elevated thick and aciculate ring, open in front. Colliculum rather short, bivalval. Signum, one very large curved and flat horn.

Type-species, *Lasiognatha quartaria* spec. nov. (Sumatra, Java). The gender is feminine.

The genus belongs to the *Hedya* group and differs chiefly by the peculiar signum and the presence of aciculate or bristly gnathos, together with well-developed socii.

A small group of four very distinct, diversely marked species.

#### Key to the species of *Lasiognatha*

1. Fore wing pale with a black postmedian round spot . . . . . *mormopa*  
— Not thus . . . . . 2
2. Fore wing with apical quarter darker, tawny . . . . . *quartaria*  
— Not thus . . . . . 3
3. Fore wing pale ochreous with a pinkish tinge, spots representing transverse fascia brownish, tinged green . . . . . *cellifera*  
— Fore wing, pale slaty grey with blackish markings . . . . . *deceptor*

#### *Lasiognatha mormopa* (Meyrick, 1906) comb. nov.

(figs. 585, 629-630, 634)

*Platypeplus mormopa* Meyrick, 1906: 136 (♂, Ceylon). — Clarke, 1955: 211.

*Argyropluce mormopa*; Meyrick, 1926: 152 (Sarawak). — Meyrick, in De Joannis, 1929: 719 (Tonkin). — Fletcher, 1932: 31 (India: Travancore, Karwar; Ceylon, Borneo, Tonkin). — 1939: 31 (Travancore, Ceylon, Karwar).

*Olethreutes mormopa*; Clarke, 1958: 531, pl. 264 figs. 2-2a (lectotype selected, wings, genit. ♂ figured).

*Hedya (Platypeplus) mormopa*; Diakonoff, 1968: 46, 301, fig. 520 (Philippine Is.).

Distribution. India, Ceylon, Tonkin, Borneo, Philippine Is.

Food plant. *Jambosa vulgaris* (Myrtaceae).

West Java, Buitenzorg, 250 m, 9.v.1950 (T. Ineng), 1 ♂, genit. slide 7630. Dramaga near Buitenzorg, 10.xi.1937 (A. Diakonoff), 1 ♂, no abdomen. Mts. Gede-

Panggrango, Tjibodas, 1400 m, x.1949 (A. M. Neervoort). Garoet, 720 m, 12.viii.1931, bred from galls in stems of "salam" (? *Eugenia polyantha*) (L. G. E. Kalshoven), genit. slide 7631 ♀. Mt. Goentoer, 500 m, 29.vii and 13.viii.1926, bred from stem galls on "salam", 1 ♂, 1 ♀. Bandjar, 40 m, 18, 22.vii and x.1933 (L. G. E. Kalshoven). "Java, 1878, ♂" (Snellen Coll.).

Central West Sumatra, Fort de Kock, 90 m, ix, xii, iv and v. 1921, 1926 (E. Jacobson). In total 16 ♂, 10 ♀.

South West Celebes, Pangean near Maros, 2000 ft, iii.1938 (J. P. A. Kalis), 1 ♂. (All LM).

The species is characteristically marked: whitish, finely and densely marbled with pale fuscous and with a single large jet-black spot on middle of costa, reaching to fold beyond middle, rounded and with a small posterior appendix pointing towards middle of termen.

Hind wing pale fuscous, dorsum with a marginal grooved roll and with extremely dense long white cilia, towards dorsum of wing spreading fan-wise.

Posterior tibia strongly expanded with roughly projecting white scales, tuft from base also white, partly reposing in a subdorsal cavity; basal segment of posterior tarsus also with a long, white tuft.

Male genitalia. Very similar to those of *L. cellifera* but uncus hooked, slightly constricted below not cardiform top, bristly on underside. Socius large, compressed, rather rigid and pointed. Gnathos very similar, but not only triangular angles aciculate, also a transverse band-like median portion aciculate throughout, although less densely.

Sacculus less constricted, pulvinus with very short spines, cucullus bristles in middle of their row forming a separate dense patch.

Female genitalia. As in *L. cellifera* but sterigma reticulate, with lateral horn-shaped appendages and an additional thickened round wall. Colliculum narrowed. Signum very large.

### *Lasiognatha cellifera* (Meyrick, 1912) comb. nov.

(figs. 631-632, 637)

*Polychrosis cellifera* Meyrick, 1912: 869 (♂♀, Ceylon, India). — Fletcher, 1921: 53 (bred from *Eugenia jambolana*). — 1932: 25, pl. 16 figs. 1-4 (stages figured). — Clarke, 1955: 78.

*Argyroploce cellifera*; Meyrick, 1931: 129 (*codonectis* syn.). — Fletcher, 1921: 53. — 1932: 25, footnote. — 1939: 25.

*Argyroploce codonectis* Meyrick, 1927: 339. — 1939: 129. — Fletcher, 1932: 28 (Coorg, Malaya, Andaman Is.; food plants).

*Olethreutes cellifera*; Clarke, 1958: 495, pl. 246 figs. 1-1b, 2-2b.

*Hedya (Cellifera) cellifera*; Diakonoff, 1968: 47, figs. 95, 525 (♀ only! Philippine Is.).

Distribution. Ceylon, India: Pusa, Coorg, Malaya.

Food plants. *Eugenia malaccensis* and *E. aquaea* shoots and leaves. *Eugenia jambolana*, boring in fruits, rolling top leaves.

Variably marked but usually with a basal patch, represented by a dark median band and a well-defined edge, which is oblique and denticulate above with a tooth just above fold and concave below fold; transverse fascia rather narrow, oblique above, downcurved from below costa, not quite reaching dorsum; fasciate preterminal mark rather zigzag, direct; a small dark mark on middle of termen.

Hind wing light grey to darker fuscous-grey.

Male genitalia. Tegumen slender. Uncus with a cardiform top, extreme tip notched. Socius large. Gnathos, a membraneous band with projecting submedian corners, densely clothed with aciculae. Tuba analis broad and simple, upright. Valva slender, with a narrowed neck, Spc<sub>1</sub> and Spc<sub>2</sub> apparently absent, pulvinus a small patch of bristles; cucullus spines weakly developed, cucullus slender, gently curved, top rounded. Aedeagus large and thick, cornuti not perceptible.

Female genitalia. Entirely similar to those in *Didrimys* gen.nov. Sterigma, a depressed aciculate ring, low and split frontally (ventrally), with thickened bases. Colliculum rather short. Signum, a huge flattened horn. Wall of corpus bursae finely reticulate.

North Sumatra, Medan, bred from leaves of *Nephelium lappaceum*, xii.1943 (Fulmeck), 1 ♀, genit. slide 7612; 1 ♂, genit. slide 4593; 1 ♂, bred from leaf of ? *Brownia*, genit. slide 7458 (LM).

East Java, Pasoeroean, 5 m, e.l. ix.1940, bred from leaves of *Eugenia cumini* (Myrtaceae) (A. Diakonoff), 1 ♂, genit. slide 7457. Banjoe Biroe near Pasoeroean, over 5 m, e.l. leaves of *Eugenia* spec., 28.x.1939 (A. Diakonoff), 1 ♀ (LM).

India, Mahableshwar, 6.v.1930 (Pres. by Sir R. Maxwell), 1 ♀, genit. slide 7638. U.P., Dehra Dun (C.), i.1926 (Meyrick coll.), 1 ♀, genit. slide 7637 (BM).

Malay Peninsula, Kuala Lumpur, 6.ix.1934, larvae on leaves of *Eugenia aquaea* (G. H. Corbett & B. A. R. Gater), 1 ♂, genit. slide 7636 (Meyrick Coll., BM).

Philippine Is., Luzon, Los Baños, 10.x.1920, Acc. No. E 90 Coll. of Agr. Univ. P. I. (USNM), 1 ♂, genit. slide 4580; 11.ix.1910, 1 ♀, gen. slide 7634; 14.ix.1920, 1 ♀, genit. slide 5037 (USNM). Los Baños, Philippines (B.), ix.1930 (Meyrick Coll.), 1 ♀, genit. slide 7635 (BM). This material has been collected together with that of the superficially very similar species, *Dudua anaprobola* (Bradley).

### *Lasiognatha quartaria* spec. nov.

(figs. 626-628, pl. 1 fig. 12)

♂♀ 16.5-20 mm (holotype 19 mm). Head light fuscous, tips of scales whitish-grey, face whitish-grey. Palpus whitish-fuscous, edges of scales narrowly white, giving appearance of a whitish irroration. Antenna light tawny, in male short-ciliate. Thorax pale olive-fuscous, tips of scales paler; a pair of ill-defined and suffused darker fuscous oblique longitudinal lines, originating from shoulder and converging towards top of thorax; tuft on apex paler, whitish-olive. Abdomen pale fuscous-grey, venter white, except apex. Posterior tibia in male snow-white, strongly dilated by roughly

projecting hair-scales above and beneath, posterior tibia in female grey-fuscous, little dilated.

Fore wing elongate-truncate, little dilated; in male costa moderately curved throughout, apex rounded, termen straight and vertical above, rounded beneath; in female costa less curved, apex more obtuse, termen shorter, rounded below. Pale greyish-fuscous-olive, strewn with small and faint, dark olive-fuscous dots of diverse size, tending to form ill-defined marbling or transverse strigulation. A strongly suffused blackish-fuscous longitudinal patch towards dorsum, not reaching edge of wing; costa throughout with dark brown and slender transverse marks of diverse size and a large wedge-shaped mark beyond  $1/4$ , indicating edge of basal patch; a large light cinnamon-brown rounded-triangular patch occupying the third and fourth fifths of costa, well-defined, acute point reaching below fold at  $3/5$  of its length; upper half of posterior edge of this patch extended as a paler olive-brown suffusion, so as to fill out apex and upper half of termen, its lower edge somewhat irregular; this posterior portion of patch strewn with dark fuscous points, some three close together below  $3/4$  of costa, faintly connected by a silvery, oblique line with edge of wing; entire margin of cinnamon patch sharply accentuated by a glossy olive-silvery line, dilated into a pale patch on costa and above tornus; above latter traversed with several zigzag brown lines; edge of termen minutely dotted with dark brown. Cilia pale grey with a pale ochreous basal line.

Hind wing dark bronze-fuscous, glossy, normal in male. Cilia concolorous, a pale ochreous basal line and a narrow blackish subbasal band.

Female exactly similar to the male but with shorter and more truncate fore wings and slightly darker hind wings.

Male genitalia. Tegumen slender and high. Shoulder strongly projecting, rounded. Uncus clavate, rather long, top spiny beneath. Socius moderate, oval, pending. Gnathos, two separate, transverse bodies, finely aciculate. Valva rather slender, curved at base, bent before middle, dilated, lower edge angular beyond.  $Spc_1$  small, bristles short. Base of sacculus hairy.  $Spc_2$ , a bunch of long hairs. Another such bunch along the primary incision. Cucullus, lower half with a triangular area of strong spines, becoming smaller towards lower edge.

Female genitalia. Sterigma, a semioval moderate sclerite with acutely extended upper angles, upper edge concave, surface strongly wrinkled. Ostium bursae elongate-ovoid, erect, top rather pointed. Colliculum moderate, with a median longitudinal split. Corpus bursae transversely ovoid, punctulate, punctulations spreading over lower part of ductus bursae. Signum single, a small sclerotized prominence.

Sumatra, West Coast, Fort de Kock, 920 m, vi.1921 (E. Jacobson), 1 ♂, holotype, genit. slide 4950; the same locality and collector, ii and iv.1921, iii, 1922 and 1962, 4 ♂, 2 ♀, paratypes (one ♀ with the right pair of wings missing) (E. Jacobson).

West Java, Buitenzorg, 1921 (W. C. van Heurn), 1 ♂, paratype. The same locality, iv.1944, bred from leaves of *Bauhinia* (Caesalpinaceae) (R. Awibowo), 2 ♂, 1 ♀, paratypes (LM).

**Lasiognatha deceptor** (Diakonoff, 1966) comb. nov.

(fig. 639)

*Platyepplus deceptor* Diakonoff, 1966: 64, fig. 41 (♂, Bismarck Is.).

Distribution. Bismarck Is.: New Britain.

West New Guinea, Schouten Is., Biak Id., 14.iv.1952 (L. D. Brongersma c.s.), 1 ♂, genit. slide 6367; the same locality, 12.viii.1952 (L. D. Brongersma c.s.), 1 ♀, apallotype, genit. slide 6368 (LM).

The species is light grey with well-defined blackish markings. The basal patch is indicated by a small quadrate spot at 1/4 of costa and two transverse marks below it, median angulate, representing the prominent middle of patch; the transverse fascia is formed by a large cloudy blackish patch at 2/3, adjacent to costa and reaching 3/4 across wing; an erect pointed mark on dorsum before tornus, narrowly continued to below costa, thence turning off to termen below middle.

Hind wing dark grey with blackish apex and whitish costa, dorsum with a thickened broad fold on the under side and a split-like narrow fold along the upper side, smooth and sclerotized inside.

Posterior tibia thickened with scales on the inner side, roughish above, longer and rough beneath, a pencil of long scales from base above; tarsus normal.

♀ 15 mm, apallotype. Rather rubbed, otherwise very similar to male. Fore wing broader, costa being more curved before apex, termen longer, more sinuate. The blackish spot before apex larger, erect-semioval, touching acute point of dorsal spot which is also broader; terminal fasciate mark narrowly connected with slender curved appendix from apex of preapical spot. Hind wing darker, purplish-bronze. Otherwise similar to the male.

Male genitalia. Uncus long, top arrowhead-shaped. Socius rather large, hairs ascending along lower surface of uncus. Gnathos, two transverse pads, long-aciculate above. Tuba analis long. Valva rather slender, constricted, sacculus over 1/3. Spc<sub>2</sub>, a small submarginal patch of short spines; cucullus not dilated, densely spined, top pointed and naked. Aedeagus short and broad.

Female genitalia. Sterigma dark, densely aciculate, lamella postvaginalis with lateral, ear-like processes, lamella antevaginalis with a narrow split in middle, at the sides strongly rounded. Ostium with an elevated edge. Colliculum narrowed, slender, rather short. Signum, one slender, strong and flattened thorn.

**Hedya** Hübner, 1825

(fig. 646, pl. 7 figs. 1-3)

*Hedya* Hübner, 1825: 380 (type-species, *Phalaena Tinea salicella* Linnaeus, by subsequent designation of Fernald, 1908). — Stephens, 1834: 89 (subgenus of *Antiithesia* Stephens). — Fernald, 1908: 10, 56. — Hannemann, 1961: 182 (C. European spp.). — Bentinck & Diakonoff, 1968: 156 (Dutch spp.).

*Episagma* Hübner, 1825: 383 (type-species, *Phalaena Tortrix schreberiana* Linnaeus = *Phalaena dimidiana* Clerck, by subsequent designation of Fernald, 1908). — Fernald, 1908: 11, 56 (syn. of *Olethreutes*).

*Pendina* Treitschke, 1829: 227 (type-species, *Phalaena Tinea salicella* Linnaeus = *Phalaena Tortrix salicana* Denis & Schiffermüller, by subsequent designation of Stephens, 1834). — Stephens, 1834: 87 (type design.). — Duponchel, 1834: 21 (type design.). — Curtis, 1835: 567 (type design.). — Westwood, 1840: 107.

*Penthina* Treitschke, 1830: 21 (nom. emend.) (type as above).

The genus may tersely be characterized as follows. With head and venation as in *Olethreutes* Hübner but male genitalia very similar to those of *Dudua* Walker. However, they are differing basically by the absence or strong reduction of gnathos, which is membranous, indefinite and represented only by more or less hyaline short arms supporting laterally the large, but similarly membranous and weak, tuba analis. The valva is long, slightly curved and slender, usually without any elevated processes and labis, but as an exception, with these, and then with the bristling of the cucullus extending in a longitudinal arm along anterior part of costa to its base. Further, there is a tendency towards the development of diverse marginal  $Spc_3$ , sometimes quite large, as in *Dudua*; the ventral edge of top of cucullus is sometimes naked. Uncus is diversely shaped, usually slender and hooked, often with bristles underneath, showing a connection with *Metendothenia* gen. nov., and with diversely developed, often parietal, socii which may be absent. *H. exsignata* spec. nov. is more distant from the other species, having a broader uncus.

Sterigma of diverse size, an aciculate cylindre, or ball, with upper edge of lamella postvaginalis not or shallowly, of lamella antevaginalis, deeply, excised. Colliculum of diverse length, bivalval. Signa two, moderate to small, cornute.

For the present, a group of numerous, somewhat heterogenous species. Future addition of species may help in better defining the genus and perhaps in subdividing it.

#### Key to the South Asiatic species of *Hedya*

1. Distinct longitudinal streaks, originating from middle of termen . . . . . 2
- No longitudinal streaks from termen . . . . . 3
2. A white streak from above middle of termen to cell. . . . . *leucalox*
- A dark fuscous clavate fascia from middle of termen, sinuate and reaching middle of wing . . . . . *daeduchus*
3. Ground colour tinged crimson, extreme apex whitish, cilia pale with a black basal line. . . . . *iophaea*
- Not thus . . . . . 4
4. Ocelloid spot edged with leaden-metallic, sometimes only along its upper half or entirely glossy bluish-grey . . . . . 5
- Without metallic markings . . . . . 6
5. A submetallic dot on apex of cell, crowned and followed by a whitish, irregular spot . . . . . *inornata*

- A glossy pale purplish spot on 1/3 of costa . . . . . *ebenina*  
 6. Fuscous with suffused markings; a white dot on end of cell . . . . . 7  
 — Not thus . . . . . *anaplecta*  
 7. Fore wing oblong-truncate, moderately dilated. Cilia of hind wing in male normal . . . . . *exsignata*  
 — Fore wing subtriangular, considerably dilated. Cilia of hind wing in male towards base of dorsum blackish. . . . . *fibrata*  
 — Pale purplish-grey, with an angulate purplish transverse fascia. . . . *atrifraga*

Note. — The Japanese species *Hedya auricristana* (Walsingham) comb. nov. is treated on page 443 but not included in this key.

### **Hedya atrifraga** Diakonoff, 1968

(fig. 654)

*Hedya (Hedya) atrifraga* Diakonoff, 1968: 45, figs. 67, 524 (♂, Philippine Is.)

Distribution. Philippine Is.: Mindanao.

Light slaty grey fore wing with lilac opalescence, below costa posteriorly suffused with tawny-orange; with orange-brown and dark fuscous markings. Costa blackish, with seven pairs of white marks; basal fourth blackish, a subbasal spot of ground colour; below this, wing suffused and dotted fuscous; a blackish, moderate transverse fascia from middle of costa to dorsum before middle, angulate in middle, thence straight, inwards-oblique; a terminal spot, dark, oblique, to below costa before apex.

Hind wing dark grey.

Male genitalia. Uncus rather broad, hooked, pointed. Socius rather small. Gnathos vestigial. Valva moderately broad, curved, sacculus edge concave,  $Sp_1$  a strong sheaf (in right valva probably damaged on costa),  $Sp_2$  small but strong, round and submarginal; colliculum evenly bristled, apex rounded.

The unique type specimen is from Philippine Is., Mindanao, Zamboanga del Sur, 11 km NW of Milbuk, 390 m, 5.viii.1958 (H. S. Milliron) (USNM). The exact position within the genus of this somewhat rubbed specimen is obscure.

### **Hedya daeduchus** spec. nov.

(fig. 638)

♂ 14 mm. Head fuscous-grey, appearing dark grey in certain lights. Palpus white, median segment with apical 2/3 infuscated, middle of dorsum, a transverse subapical streak and apex below dark fuscous, apex above pale ochreous, mixed fuscous, terminal segment pale ochreous. Thorax fuscous-grey, suffused with dark fuscous anteriorly and on apex. Posterior tibia smooth-scaled, pale grey, a strong pencil from base above to 2/3, pale ochreous. Abdomen fuscous, striped above with dark fuscous, anal tuft whitish, venter white.



Fore wing suboval, costa gradually curved throughout, apex subobtusely, moderately prominent, termen sinuate and vertical above, broadly rounded along lower 2/3. Fuscous-grey on upper half, fuscous on lower, pale grey posteriorly. Anterior fourth of costa grey, with three dark brown triangular dots alternating with minute transverse lines; posterior 3/4 of costa with nine snow-white small and short pairs of oblique transverse strigulae, alternating with deep brown, wedge-shaped marks and minutely parted by deep brown, anterior halves of the two ultimate pairs of marks obliterate; dark brown mark on middle of costa fasciate, rather narrow and obliquely continued across wing, so as to reach the upper side of top of a complicated clavate and curved mark, concave above, subhorizontal, slender stalk curving downward to termen just below middle and slightly extended there; this stalk dark fuscous-brown; body of mark with lower half blackish-fuscous, upper half rather dark grey, centre with a spindle-shaped white longitudinal mark; this mark extending along posterior half of wing; basal patch indicated by a dark brown subtriangular spot below fold, posterior edge inwards-oblique and continued as a short process to 1/3 of disc above fold; upper half of basal patch reduced to a subcostal series of dark fuscous longitudinal strigulae; a crescentic finely brownish-parted pale ochreous mark above dorsum, concave below, edging basal patch, and curving towards tornus along fold; ocelloid spot obliquely semioval, depressed, broad edges pale silvery-grey finely whitish-edged on both sides, not quite touching at rounded top, centre pale tawny; a slightly curved, grey streak below posterior third of costa, curving downwards and becoming pale silvery-grey, pale-edged posteriorly to upper third of termen which has a slender white marginal line; apex with a fuscous spot with a slender appendix below. Cilia (imperfect) pale grey with a narrow white basal line, suffused with dark fuscous opposite end of median clavate mark.

Hind wing grey, slightly darker towards apex.

Male genitalia. Resembling those of *H. leucalox* spec. nov. but with a broader, more depressed and triangular tegumen, uncus broadly triangular at base, with a slender naked apex. Socius large, parietal. Gnathos weak, a subangulate narrow band, tuba analis moderate. Valva gently sinuate, sacculus short: 1/3, Spc<sub>1</sub> an undefined group of sparse bristles, Spc<sub>2</sub> moderate, marginal, from middle of edge of sacculus as far as basal part of cucullus. Cucullus gently curved, hardly dilated, top simple, rounded. Aedeagus tubular, small, short.

Southwest Celebes, Mt. Lompobatang, Borong Rapoa, 50 m, 19-24.viii.1949 (A. Diakonoff), 1 ♂, holotype, genit. slide 5819 (LM). A distinct species with elegant markings. Allied with *H. leucalox* spec. nov., from New Guinea.

### *Hedya iophaea* (Meyrick, 1912)

(fig. 640)

*Argyroploce iophaea* Meyrick, 1912: 873 (♂♀, Ceylon). — Clarke, 1955: 174.

*Olethreutes iophaea*; Clarke, 1958: 523, pl. 260 figs. 2-2a (lectotype ♂ design., wings, genit. figured).

## Distribution. Ceylon.

This small, variably coloured species is redescribed below. The specimens from Java and Borneo concerned are darkly suffused but their genitalia do not show any difference from those of the holotype; in the latter the uncus and the top of left valva are broken off.

♂ 9-12 mm. Head and palpus white, vertex faintly tinged pale ochreous. Thorax glossy white, sparsely spotted with very pale fuscous-ochreous, apex and extreme tips of tegulae fuscous-black. Posterior tibia with long loosely appressed fine hairs, silvery-whitish-grey, glossy, pencil from base above to apex, pale ochreous. Abdomen glossy pale grey, infuscated except base, apex and venter.

Fore wing oblong-truncate, costa straight in middle, only slightly curved at base, hardly curved at apex, apex obtuse, termen short, straight, gently inbent opposite veins 3 and 4, obliquely and shallowly rounded beneath. Anterior half of wing deep purple, with a white round basal spot, slightly mixed pale ochreous posteriorly; edge of the dark colour suffused, moderately concave, from costa before apex to dorsum beyond  $1/3$ ; lower half of this dark part with suffused and partly confluent pale greyish-blue spots, arranged in not distinct horizontal rows; posterior half of costa with five pairs of pale ochreous, small, transverse marks, below costal edge becoming blue, oblique lines; posterior half of wing deep crimson, scattered except anteriorly with numerous, roundish, whitish-lilac or pinky spots; posterior part of dorsum and tornus with an oval fuscous spot, its posterior half obscured by a triangular metallic-blue patch in tornus, preceded by an inwards-oblique, crimson-parted fasciate pale bluish-lead, oval spot; dark area emitting a horizontal, narrow streak along lower part of cell to its end, including a series of bluish dots; apex and termen with a yellowish-white submarginal fascia, gently dilated upwards, followed by a deep purple marginal line from apex to above tornus. Cilia whitish-ochreous, with a subbasal and an apical pale tawny band, cilia above apex and in tornus dark leaden-grey.

Hind wing grey-fuscous with a golden gloss, cilia paler with a fuscous subbasal band.

The Borneo specimen is similar, but slightly rubbed, and with paler hind wings.

Male genitalia. Tegumen slender, narrowed. Uncus hooked, top clavate, with long spiny bristles. Socius absent. Gnathos, a slender band, only laterally traceable, in middle occupied by a large tuba analis with bilobed top. Valva long and rather slender, curved, sacculus  $1/3$ ,  $Spc_1$  entirely connected with cucullus bristles and rather small.  $Spc_3$  marginal, along top of sacculus and base of cucullus. Top of cucullus pointed, edge naked. Aedeagus moderate, rather slender.

West Java, Bantam, Doengoes Iwoel, 100 m, 4.xi.1952 (A. M. R. Wegner), 1 ♂, genit. slide 7375.

East Borneo, Balikpapan, Wain River, 50 m, xi.1950 (A. M. R. Wegner), 1 ♂, genit. slide 7520 (LM).

**Hedya leucalox** spec. nov.

(fig. 643)

♂ 14 mm. Head fuscous, strongly mixed with creamy, a flat pale tuft on forehead, face white with a round median fuscous spot. Palpus with basal half white, its edge oblique (horizontal), top black strongly mixed with creamy, upper dorsal angle appearing lilac in certain lights, terminal segment whitish, slender, little exposed. Thorax dark grey mixed with creamy. Abdomen glossy pale fuscous.

Fore wing subtruncate, rather narrow, costa curved throughout, apex pointed and slightly prominent, termen sinuate, vertical. White, partly tinged creamy. Anterior fourth of costa white, with four black dots, remainder of costa whitish, with six oblique, dark fuscous, transverse marks alternating with slender lines, submedian mark larger, two ultimate marks broader, wedge-shaped; the whole wing densely dusted with purple on basal third, gradually turning fuscous-brown posteriorly; a white suffused subcostal streak from base to  $4/5$ , including a very oblique black strigula before  $1/3$ , beyond middle slightly edged brownish below; another white streak along posterior half of upper edge of cell and vein 7, finely parted throughout by slender brownish line following these veins; this streak dilated and pure white along posterior half of vein 7, and edged above with a dark brown streak; a suffused fuscous-brown streak in cell, along its posterior half, continued to before termen, gradually dilated posteriorly and edging white streak below; extending halfway to vein 4; a dark streak below each vein 3 and 4 halfway cell and termen; dorsum suffused with purple and fuscous; termen below apex white, thence with a series of slender dark fuscous marginal strigulae, edged with white, along tornus to end of dorsum. Cilia whitish, with a subbasal fuscous band and a narrower subapical band, opposite end of dark median streak entirely suffused with dark fuscous except narrow basal line.

Hind wing dark fuscous-grey with a bronze gloss, finely transversely striated (pale bases of scales). Cilia fuscous, a pale basal line and a darker fuscous subbasal band.

Male genitalia. Uncus dilated in middle (top missing?). Socius parietal, rather small. Tuba analis voluminous, gnathos a slender, rhomboidal plate with sides of upper edge and middle of lower slightly thickened. Valva robust, sacculus narrowed, with an oblong  $Spc_1$  united with cucullus bristles and a long and strong marginal  $Spc_2$  from beyond base almost to top of sacculus. Aedeagus short.

Central East New Guinea, Stars Range, Ok Sibil, 1260 m, 21.vi.1959 (New Guinea Netherlands Stars Range Expedition 1959), 1 ♂, holotype, genit. slide 6357; 1 ♂, paratype (LM). Distinct by parallel longitudinal striation of the fore wing.

**Hedya anaplecta** (Meyrick, 1909) comb. nov.

*Argyroploce anaplecta* Meyrick, 1909: 598 (♂♀, Ceylon). — Clarke, 1955: 45.  
*Olethreutes anaplecta*; Clarke, 1958: 483, pl. 240 figs. 3-3a (lectotype ♂ design., wings, genit. figured).

Distribution. Ceylon.

The species may be tersely characterized thus. The fore wing is "blackish fuscous, suffusedly striated with purplish-lead, except a thick streak from 1/4 of costa to middle of termen and another slightly curved from middle of costa to apex; ... ocellus ... sprinkled with whitish, two or three white specks on termen beneath apex".

Hind wing dark fuscous, in ♂ thinly scaled and subopaque except at apex. Posterior tibia tufted with white scales.

Male genitalia. Similar to those of *H. exsignata*, but with a broader and shorter tegumen, narrower uncus and smaller socii. Valva narrower, coarser but less densely spined, especially along the base.

The collecting locality is Maskeliya, Ceylon.

#### ***Hedya fibrata* (Meyrick, 1909) comb. nov.**

*Argyroploce fibrata* Meyrick, 1909: 597 (♂♀, Assam). — Clarke, 1953: 141.  
*Olethreutes fibrata*; Clarke, 1958: 511, pl. 254 figs. 2-2a (lectotype ♂ design., wings, genit. figured).

Distribution. Assam.

The fore wing is more dilated and rather more pointed than is usual in the genus, so resembling the shape of the wing in *Proschistis marmaropa* (Meyrick). Posterior tibia and also basal segment of tarsus clothed above with white hair-scales. Fore wing red-brown, sprinkled with blackish, tending to form longitudinal streaks on veins, dorsal third more streaked with black suffusion and marked whitish between streaks; bluish-lead oblique striae from costa posteriorly, sometimes obsolete.

Hind wing dark grey, in ♂ dorsal fold enclosing pencil of long blackish hairs, yellowish towards base.

Male genitalia. Rather deviating from the normal *Hedya* build. Uncus very short and rounded. Socius subparietal. Valva sinuate, cucullus being rather constricted at base and curved, with a gently dilated and rounded top; cucullus bristles forming a well-defined slender transverse series, parallel to a similar, but shorter and denser  $Spc_1$ ;  $Spc_3$  slender, curved and pencil-like.

This species may prove to belong to *Phaecedophora* Walsingham but the evidence of the female genitalia is lacking so far. The collecting locality are Khasi Hills in Assam.

#### ***Hedya exsignata* (Meyrick, 1916) comb. nov.**

(fig. 642)

*Argyroploce exsignata* Meyrick, 1916: 19 (♂, S. India). — Clarke, 1955: 139.  
*Olethreutes exsignata*; Clarke, 1958: 508, pl. 253 figs. 4-4a (lectotype ♂ design., wings, genit. figured).

Distribution. South India: Palni Hills, 6000 feet.

This obscure species, somewhat resembling a *Proschistis*, may fully be redescribed thus.

♂ 19 mm. Head blackish-fuscous, tips of scales light ochreous, tuft on vertex thick, forehead with a flat transverse tuft. Palpus grey-fuscous, with a slender supra-median white streak across median segment, terminal segment rather long, exposed. Thorax light fuscous-grey, an angulate black supramedian transverse streak (pointed cephalad), tegula pale fuscous except shoulder. Posterior tibia pale ochreous-grey, normally scaled, without pecten. Abdomen dark fuscous-grey.

Fore wing oblong-subtruncate, costa slightly curved at base, hardly curved in middle, gently rounded and prominent at  $3/4$ , almost straight before apex, apex pointed, termen sinuate, vertical. Rather dark blackish-fuscous, appearing paler and transversely striated (paler bases of scales); costa with nine broad, ochreous-isabel pairs of light transverse streaks, becoming greyish and less defined below costa; two pairs approximated, oblique, beyond base; two following, also approximated but less oblique, at  $1/3$ ; fifth and sixth pairs also approximated but short; next three pairs distant, ultimate subapical; a series of glossy pale fuscous-grey double transverse bands: anterior oblique, apparently connected with third and fourth pairs of costal marks, to  $1/3$  of dorsum; second postmedian, strongly inwards-oblique, furcate on middle of dorsum, apparently connected with four median pairs of costal marks, and by a horizontal strigula in cell almost connected with preceding streak; a white round dot on discoidal vein; a pear-shaped figure formed by double paler greyish glossy streak, descending from last pair of costal spots and enclosing ocelloid spot; termen with a series of marginal snow-white interneural points. Cilia fuscous-grey with a paler basal and a supramedian band.

Hind wing light fuscous-grey with a strong golden gloss, finely transversely striated, bases of veins being paler. Cilia pale fuscous-grey with a light ochreous basal line and a darker grey subbasal band.

Male genitalia. Uncus broad and short, tegumen narrow. Socius moderate, free, oval and pending. Gnathos indefinite, tuba analis conical, weak. Valva very similar, but sacculus narrower, cucullus bristles spread in a large, sparse patch, without marginal prominence.  $Spc_3$  very weak and thin; top of cucullus hooked. Aedeagus rather large.

South India, Madras, Palni Hills, 6000 ft, "T.B.F. cop. 9.21" (= T.B. Fletcher, Meyrick Coll., in his hand), "*Proschistis lucifera* Meyr., E. Meyrick det., in Meyrick Coll.", 1 ♂, holotype, genit. slide 6514 (BM). Slightly rubbed but distinct.

### **Hedya ebenina** (Meyrick, 1916) comb. nov.

(figs. 644-645)

*Argyroploce ebenina* Meyrick, 1916: 20 (♂♀, Kanara). — Clarke, 1955: 122.

*Olethreutes ebenina*; Clarke, 1958: 504, pl. 251 figs. 4-4a (lectotype design., wings, genit. ♂ figured).

Distribution. India: Karwar (Kanara).

Food plant. *Diospyros* (Ebenaceae), leaves.

A small, dark species: glossy deep bluish-lead, thinly marbled with black and with a black spot extending over upper third of posterior 5/6 of wing and including a silvery-grey, quadrate spot on 1/3 of costa.

Male genitalia. Tegumen high and rather narrow, narrowed above middle, shoulders distinct. Uncus slender, pointed. Socii indefinite. Valva slender, sacculus with a slight  $Spc_1$ , on pulvinus,  $Spc_3$  strong and dark but spines short, in type specimen left valva with a bunch of sparse long spines, absent in the right valva. Cucullus bristles with a short projection in middle of disc, and extending basad on costa.

Female genitalia. Sterigma rather large, compressed-ovoid, short-aciculate throughout, aciculations forming several horizontal ribs. Ostium funnel-like, emarginate in front. Colliculum very slender, as long as sterigma. Signa, two small, somewhat compressed obtuse horns.

India, "Karwar, Kanara, RM., bred 4.7.13" (in Meyrick's hand), "Meyrick det., in Meyrick Coll., *Argyroploce ebenina* Meyr., 8/4", genit. slide 6448, 1 ♀ (BM).

#### ***Hedya inornata* (Walsingham, 1900)**

*Argyroploce inornata* Walsingham, 1900: 240, no. 963 (1) (♂♀, Japan).

*Olethreutes inornata*; Inoue, 1954: 106, no. 594.

*Hedya inornata*; Issiki, in Esaki, 1957: 74, no. 367 (*crassiveniana* syn.). — Inoue c.s., 1959: 263, pl. 176 fig. 6 (*crassiveniana* syn.).

*Penthina crassiveniana* Kennel, 1900: 244 (♀, Ussuri).

*Olethreutes crassiveniana*; Inoue, 1954: 104 no. 581 (Hokkaido, Honshu).

Distribution. Japan (Hokkaido, Honshu). Ussuri region.

Japan, Jazankei 18.vii.1956 (T. Oku), 3 ♂, genit. slides 8155, 8160 (LM). Manchuria, Sidemi, 1882 (M. Jankowski, Paravicini Coll., BM). "Japan, 1886 (Pryer)" (Walsingham Coll. 70165, paratype), 1 ♀, without abdomen. Ussuri Region, Vinogradovka, 11-12.vii.1929 (Djakonov & Filipjev), 1 ♀, genit. slide 8097; the same, 26.vii.1929, 1 ♂. Amur Region, 40 km W of Svobodny (Sukhareva, Kuznetsov), 1958, e l. on leaves of *Quercus mongolica*, 4.vii.1958, 1 ♂, genit. slide 8084. Maritime distr., Sedanka, 11.vii.1963 (M. Falkovitch), 1 ♀ (LM).

A large, motley marked species, with anterior half strongly marbled, grey and white. Costa with a row of distinct white strigulae, edge of basal patch and upper 2/3 of transverse fascia dark fuscous, the latter posteriorly with two acute teeth above middle; a characteristic X-shaped fine white mark following upper tooth, in its turn followed by a dark fuscous round spot; ocelloid spot fuscous, striped with black, flanked by two broad grey fasciae.

Hind wing pale grey-fuscous at base, becoming dark grey-fuscous towards apex.

Male genitalia. Tegumen high, uncus long and very slender, top triangular, front

emarginate. Socius small semioval, pending. Gnathos narrow, dilated triangularly at the sides. Valva narrow, long, sinuate,  $Spc_3$  long, beyond base;  $Spc_1$  elongate, two touching sheaves; cucullus bristles forming a long, pending "second  $Spc_3$ " at the marginal prominence. Cucullus curved. Aedeagus very small.

Female genitalia. Sterigma aciculate, strongly sclerotized are: small cup-shaped ostium proper with diverging supports, strongly narrowed downwards. Colliculum long and slender. Signa two, small, cornute.

**Hedya auricristana** (Walsingham, 1900) comb. nov.

(pl. 4)

*Argyroploce auricristana* Walsingham, 1900: 237, no. 933 (♂♀, Japan).

*Olethreutes auricristana*; Inoue, 1954: 104, no. 579 (Japan).

*Aphania auricristana*; Issiki, in Esaki, 1957: 73, pl. 12 fig. 361 (Japan).

*Aphanina auricristana*; Inoue c.s., 1959: 263, pl. 176 fig. 2 (light part too pale).

Distribution. Japan (Honshu, Shikoku, Kinshu).

Japan, 1886 (Pryer), nos. 70139, 70140, 70141; 1892 (Leech), no. 60488 (Walsingham Coll., BM); holotype, genit. slide 6327 (BM).

China, Tien Mu-Shan, 5300 ft, vi.1932, genit. slide 7651 (in Meyrick's hand, Meyrick Coll., BM).

A robust insect with characteristically convex costa. Basal 2/3 of wing tawny-olive, with darkly infuscated costa and scattered pale bluish dots; the apical third white with zigzagged pale silvery transverse bands, apex suffused with tawny olive, a black point before upper 1/3 of termen. Cilia fuscous.

Hind wing brownish-fuscous, cilia whitish.

Male genitalia. Tegumen rather robust. Uncus broadly triangular, base ill-defined. Socii long-haired, parietal, merging into hairs on top of uncus. Tuba analis, dilated, rising and rigid. Gnathos membraneous, edge well-defined, a transverse band with rounded ends. Valva moderately broad, cucullus bristles in a broad transverse patch, moderately prominent ventrally and slightly spinose there; cucullus clavate, top rounded, a ventral process below top with three large spines. Aedeagus large, massive.

**Gonomomera** gen. nov.

Head with appressed scales, roughly spreading on crown. Ocellus posterior. Proboscis short. Antenna minutely ciliated in male. Palpus moderate, subascending, sinuate, appressed to face, posterior part porrected; median segment abruptly dilated with roughish scales at apex above, terminal segment moderate, subacute, porrect and slightly curved. Thorax apparently with a crest. Posterior tibia in male thickened with scales, smoothly appressed outwardly, very long above, roughly expanded inwardly, modified broad scales below; a thick and smooth long pencil from base above.

Fore wing elongate-semioval, apex and termen rounded. Vein 2 from  $2/3$  of cell, 3 from angle, not approximated to 4 at margin, 4 remote but closer to 3, 7 separate, to termen, 8 closely approximated towards base, 9 close to 8, from angle, 10 from  $2/5$  distance between 11 and 9, 11 from slightly before middle of cell; chorda from before 10 to base of 7, median branch from towards base to below base of 5.

Hind wing with a cubital pecten; broadly semioval, over 1. Vein 2 from  $3/5$ , 3 separate from angle, 5 closely approximated at base, 3-5 tolerably equidistant, 6 and 7 closely approximated towards base; dorsum in the male holotype of the type-species damaged on both sides, the presence of a dorsal roll not certain.

Male genitalia. Tegumen high. Uncus short, semiconical, truncate on the front side, top densely haired. Socius long, pending, angularly projecting at base, thinly bristled. Gnathos, a broad semioval plate. Valva moderately broad, gradually curved, gradually and slightly dilated, cucullus pointed; Spc<sub>1</sub>, an oblique series of bristles, Spc<sub>2</sub> upon a basad-turned prominence. Aedeagus moderate.

Female genitalia. Seventh sternite large, slightly sclerotized, upper edge incised in middle. Lamella antevaginalis rounded-oval, long-aciculate, upper and lower edge excised in middle, ostium concealed. Ductus bursae narrow, long and sclerotized throughout, resembling a cestum; apparently descending into corpus bursae. Signa two, equal, flattened, appressed thorns upon oval scobinate basal plates.

Type-species, *Argyroploce halixanta* Meyrick, 1910 (Borneo: Pulu Laut).

A monotypic genus.

Superficially resembling *Eudemis* Hübner but actually belonging in the present subtribe and forming a connection between the *Hedya* group and the *Metendothenia* group of genera. It is differing from the latter by the short uncus and the little developed but already distinctly indicated elevation of the pulvinus which is strongly extended and not differentiated from a labis, in *Metendothenia*.

### *Gonomomera halixanta* (Meyrick, 1910) comb. nov.

(figs. 724, 729)

*Argyroploce halixanta* Meyrick, 1910a: 435 (♂, Borneo). — Clarke 1955: 152.

*Olethreutes halixanta*; Clarke, 1958: 512, pl. 255 figs. 4-4a (holotype wings, genit. ♂, figured).

Distribution. South Borneo: Pulu Laut.

♀ 18 mm, apallotype. In all respects similar to the male, except for the terminal fifth of the fore wing being slightly more defined anteriorly, slightly less constricted below the large circular, black, preterminal spot which is also more defined, being finely edged with white, except below posteriorly; this white colour turning pale bluish, filling out the terminal area, except below round patch, which is irregularly extended downwards, but not reaching a well-defined, erect-oval, dark spot in tornus; the broad pale central band white, containing two large patches of rather well-defined, grey-olive suffusion, separated by a white horizontal streak above middle;



lower patch limited below by fold, infuscated above posteriorly. Hind wing as in male but without a dorsal roll.

Female genitalia as described with the genus.

Southwest New Guinea, Kapaur, 0-2000 ft, 1.xii.1896-e. ii.189.. (Doherty), 1 ♀, apallotype, genit. slide 7748 (BM). Although remote from the type locality, the present female specimen is so similar to the male holotype, that I do not hesitate to identify it as the sex partner.

The holotype specimen is very similar to the above described female. It is 18 mm and originates from Puloe Laoet (Pulo Laut), an island E. of S. Borneo, the date label reads ".6.91" (in Meyrick's hand); genit. slide 7200 (BM).

#### **Metendothenia** gen. nov.

Head with appressed scales. Ocellus posterior. Proboscis very short. Antenna in male sometimes thickened, biciliate, ciliations under 1 or short-ciliate, antenna in female sometimes slightly flattened below, short-ciliate. Palpus moderately long, projecting width of eye or less, rather slender, with subappressed short scales, median segment diversely dilated towards apex, terminal segment obtuse, exposed. Thorax without a crest; sometimes an extremely long pencil of slender hair-scales originating on underside of shoulder, just under edge of tegula, reaching caudad parallel to body and covering vein 1c along its basal 2/3, where this vein bears a corresponding brush of moderate, appressed scales, sometimes this shoulder pencil is shorter, reaching (in spread specimens) hardly to dorsum of hind wing. Median leg sometimes with inner spur and tibia above with very long, spreading, dense black hair-scales. Posterior tibia mostly moderately thickened above with appressed scales, with a subdorsal groove in which fits a whitish pencil from base above, sometimes tibia not thickened, pencil very small and short. Sometimes coremata on 7th segment in male.

Fore wing oblong-ovate, costa strongly curved at base, hardly curved in middle, apex and termen rounded. Vein 2 from 2/3, 3 from angle, close to 4, 5 more distant, 7 free, to apex of termen, 8 from upper angle of cell, 9 approximated to 8, 10 from 1/3-1/2 distance 11-9, 11 from middle or from before middle; chorda from well before 10 to base or to below base of 7, median branch ill-defined, to below base of 5.

Hind wing with pecten, semioval, pointed; 2 from 2/3, 3 and 4 separate, connate or short-stalked, from angle, 5 closely approximated at base, 6 and 7 very closely approximated towards base; dorsum usually with a marginal roll, sometimes with an entirely free slender lobe from base rolled into a pointed tube or with several deep longitudinal folds, tornus with modified scales and cilia; sometimes dorsum normal.

Male genitalia. Tegumen high, usually shoulders rounded. Uncus long, slender, more or less clavate, usually spiny underneath. Socius large or moderate or absent, sometimes triangular. Gnathos weak. Valva robust, variably shaped, sacculus usually dilated and complicated, seldom asymmetrical; with a large diversely shaped, often tumescent and hairy labis, sometimes with large spines at base and several large

spines opposite this (Sp<sub>c2</sub>); left valva usually with dense additional bristles of Sp<sub>c2</sub> and of cucullus bristles. Aedeagus sometimes sclerotized, slender, seldom tuba analis sclerotized.

Female genitalia. Eighth and seventh segments sclerotized, sterigma complicated, rose-like, of a series of peripheral semicircular lobes of both seventh and eighth sternites; aciculate; ostium, a central large opening, lamella antevaginalis in middle keeled; colliculum dark, slender, tubular, slightly narrowed. Signum single, a moderate scobination, with in middle one tooth or a bunch of flat teeth, centre of bunch apparently hollow.

Type-species, *Metendothenia emmita* spec. nov. (Celebes, Bali, Moluccas).

Belongs to the higher Olethreutini, and through *Ophiorrhabda* represents a connection of *Olethreutes* group, especially of the *Hedya* relationship, with Endotheniae and perhaps with African *Eccopsis* and also points out a relationship with the subtribe Neopotamia. The species are of a moderate size and often have oval wings and pinkish or orange marginal suffusion. The males of two species are in possession of the peculiar subscapular scale-pencil, in combination with the thickened scaling along the underside of vein 1c; the males of the other two have only a short shoulder pencil, while two more possess the cylindrical dorsal lobe instead.

The genus has characteristic genitalia, showing two trends of speciation: (1) a peculiar extension and hypertrophy of the labis region, with a strong and dilated sacculus (*emmita*, *rhodambon*, *hilarocroca*) or: (2) a dilatation and rounding of the cucullus instead, more or less at the expense of the sacculus and labis which are less extended (*spumans*, *metacycla*). The genus must be ancient, judging from its wide distribution: one common Palaearctic species and another, Nearctic, are assigned to *Metendothenia*. The species are highly diverse of appearance, but quite similar, regarding the genital structures. In this respect the present genus resembles *Asaphistis* Meyrick which also has a series of species with widely different aspect, but closely allied on account of the wing venation and genitalia.

The closely allied African *Eccopsis* Zeller also shows something of the same pattern, but the pale field is altogether light tawny which destroys the birds droppings resemblance.

Key to the South Asiatic species of *Metendothenia*

- 1. A raised pecten of white hairs along fold upper side . . . . . *spumans*
- No hair pecten along fold on the upper side of fore wing. . . . . 2
- 2. Fore wing with a pale costal patch . . . . . *calopa*
- Fore wing without a pale costal patch . . . . . 3
- 3. Ground colour light pink or pale ochreous, transverse fascia deep purple or purple-fuscous (sometimes interrupted) . . . . . 4
- Ground colour deep purple, or purple-lilac or fuscous; transverse fascia interrupted or absent . . . . . 6
- 4. Ground colour light pink, transverse fascia deep purple. . . . . *hilarocroca*



subclavate top; underside of basal  $2/3$  of vein 1c with long appressed dark brown hair-scales. Cilia grey with fuscous base.

Male genitalia. Very similar to those of *M. emmilta* spec. nov. Tegumen lower. Valva without hairy prominence in middle of edge of sacculus. Labis more conical, less broad, with anteriorly a separated small patch of bristles;  $\text{Spc}_1$  on right valva: only two spines,  $\text{Spc}_2$ : two long marginal spines; cucullus bristles represented by two strong spines; left valva with  $\text{Spc}_1$  being two sheaves of spines,  $\text{Spc}_2$  similar to that at left, but longer, cucullus bristles similar, but opposite to them: a semitransverse and semimarginal very dense  $\text{Spc}_3$ .

Female genitalia as described with the genus.

Moluccan Is., Batian, vii.1897 (Doherty), 1 ♂, holotype, genit. slide 7961. The same, but without indication of the month, 1 ♀, allotype, genit. slide 7890 (BM).

A very distinct, elegant species.

***Metendothenia emmilta* spec. nov.**

(fig. 665)

♂ 12 mm. Head with closely appressed short scales; vinaceous-fuscous, face smooth, white. Palpus white, upper edge internally and inner side of terminal segment, black, in female palpus white, terminal segment brownish. (In paratype face, creamy, palpus grey, median segment with white top). Thorax brown, pecten whitish, the long pencil from shoulder pale ochreous. Posterior tibia grey, normally scaled pencil from base above  $1/3$ , black. Abdomen dark fuscous, anal tuft pale fuscous.

Fore wing oblong-oval, costa strongly curved at base, almost straight in middle, apex and termen rounded, termen vertical. Deep ashy-grey, slightly strewn with dark brown, markings dark coffee-brown, amply but indistinctly edged with pale ochreous, costa and termen suffused with rosy-pink; less than basal half of wing of grey ground colour, irregularly strewn with dark dull brown, basal patch brown but ill-defined, to about  $1/3$ , angulate; a large dark brown semioval patch from before middle of dorsum to well in tornus, reaching above middle of wing, top slightly depressed; a small, acute curved-wedge-shaped and very oblique mark on costa beyond middle (in paratype longer); an oblique, oblong-oval smaller mark before upper part of termen (in paratype connected with median patch and appearing angulate); less than basal half of wing grey; anterior half of costa with a few unequal dark dots; posterior half with a dark brown fascia, continued, uninterrupted, around apex and along termen, to tornus; pale space between markings beyond cell rather light ochreous, instead of grey, densely marbled with thin dark brown lines. Cilia black, mixed with pink and white.

Hind wing dark brown, becoming paler on basal third of disc, dorsum in male thickened, with a deep narrow submarginal groove above, margin above smooth, light grey, forming a spindle-shaped roll not quite reaching tornus which is thickly grey-scaled; basal  $2/3$  of vein 1c on underside with a thick clothing of long appressed

brown scales (apparently coming in contact with the long pencil from shoulder). Cilia white with dark fuscous basal half, cilia along dorsum light fuscous.

Male genitalia. Tegumen with rounded shoulders. Uncus with a single apical row of spines, one spine on each side underneath. Socius large, oval. Valvae asymmetrical, right sacculus with a slender hairy process before middle, a slight excision beyond middle, followed by a triangular prominence; Spc<sub>1</sub>, two groups of strong spines at foot of labis; Spc<sub>2</sub>, two large submarginal spines above excision; right valva with Spc<sub>1</sub> single, dense; Spc<sub>2</sub> of three large spines, opposite these a strong marginal Spc<sub>3</sub> of three brushes; a transverse pecten of dark spines at the base of sacculus. Aedeagus sclerotized, top deeply cleft, lower edge finely denticulate. Juxta bilobed.

Female unknown.

Bali Id., Sunda Is., 1896 (Doherty), 1 ♂, holotype, genit. slide 7827 (BM).

South Celebes, low country, 1896 (Doherty), 1 ♂, paratype, genit. slide 7826 (BM).

Unfortunately both specimens are somewhat rubbed. Their genitalia are identical.

***Metendothenia hilarocroca* spec. nov.**

(fig. 664)

♂ 12 mm. Head orange, vertex fuscous, face pale ochreous. Palpus bright ochreous with a subbasal and a pair of marginal postmedian black marks. Thorax (rubbed) ochreous mixed with dark purple-fuscous; without a pencil from below shoulder. Posterior tibia pale grey, with smoothly appressed scales, somewhat bristly above, a slender pencil from base above, reposing in a mediodorsal shallow groove along basal 3/4 of tibia. Abdomen fuscous, venter white at base, anal tuft ochreous inside.

Fore wing subtruncate, dilated, costa considerably curved throughout, apex rounded, termen moderately convex, vertical, rounded beneath. Bright ochreous, marked with deep fuscous-purple and with metallic dark leaden-grey. Costa with a series of inequal, rather irregular small marks, alternating with minute strigulae; very irregular fine dotting and strigulation below costa; basal patch more or less interrupted, to beyond 1/3, occupying lower 2/3 of wing, deep fuscous-purple with a small point in fold and a contiguous vertical dot on dorsum; a series of leaden-grey more or less continuous roundish metallic spots, starting by a slender zigzag line at 1/3 of costa to middle of dorsum, narrowly edged anteriorly, broadly edged posteriorly, with ground colour; transverse fascia entire, from middle of costa, upper third slightly outwards-oblique, gently narrowed below costa, dilated into a quadrate blotch three times as wide on lower 2/3 of disc; this fascia deep fuscous-purple, along posterior third of dilated part including two horizontal fasciate and one round grey metallic spot, dividing upper part of purple colour into two narrow horizontal streaks; rounded grey spot just above fold encircled by purple; posterior part of costa with four marginal marks, two posterior fasciate, ultimate in apex; a more or less interrupted purplish terminal line and a well-defined oblique free preterminal streak; above this, an ob-

lique series of four, below streak, a vertical series of two metallic dots. Cilia (imperfect) purple, mixed with bright ochreous, especially in tornus.

Hind wing bronze-fuscous, paler, basal fourth still paler and partly semipellucant; dorsum modified: with a moderate excavation in middle, and a separate lobe reaching almost to tornus, forming a rigid spindle-shaped, closed and pointed tube. Cilia fuscous (imperfect).

Male genitalia. Tegumen rather broad, shoulders round. Uncus long, clavate, a sheaf of spines underneath, base of uncus thickened and denticulate. Socius long, pointed. Gnathos, a slightly sclerotized rounded plate. Valvae symmetrical, with sacculus moderate, without postbasal prominence, labis obliquely ovoid,  $Spc_1$  implanted upon its top;  $Spc_2$ , two,  $Spc_3$  absent.

Female genitalia unknown.

South Celebes, low country, 1896 (Doherty), 1 ♂, holotype, genit. slide 7829, 1 ♂, paratype, genit. slide 7828 (BM). The species is somewhat more remote from the other species by symmetrical genitalia and the presence of a dorsal lobe, instead of a shoulder pencil; also the shape of the fore wing is less specialized. But the general structure of the genitalia and other particulars assign the present species to the same genus.

**Metendothenia mesarotra** (Meyrick, 1911) comb. nov.

(figs. 667-668, 670, 732)

*Argyroploce mesarotra* Meyrick, 1911: 273 (♀, Solomon Is.). — Clarke, 1955: 203. — Diakonoff, 1966: 20, fig. 65 (genit. ♀).

*Polychrosis organica* Meyrick, 1920: 348 (♀, Ceylon, type without abdomen). — Clarke, 1955: 227. **Syn. nov.**

*Lobesia organica*; Clarke, 1958: 471, pl. 234 fig. 2 (holotype: wings figured).

*Argyroploce stibaropa* Meyrick, 1933: 420 (♂, Java). — Clarke, 1955: 295. **Syn. nov.**

*Olethreutes stibaropa*; Clarke, 1958: 551, pl. 274 figs. 3-3a (holotype, wings, genit. ♂ figured).

Distribution. Solomon Is.: Choiseul. Ceylon: Kandy. Java: Telawa.

Bali Id., 1896 (Doherty), 1 ♂, genit. slide 7841 (BM).

Solomon Is., "Choiseul, A.S.M., .05" (in Meyrick's hand, Meyrick Coll., BM), syntype, ♀, genit. slide 7856.

After a close comparison of the material at hand and photographs of the types, as published by Clarke, I am satisfied of the above synonymy. The present male and female specimens are identical in all possible details, only except for a somewhat more blackish-suffused transverse fascia in the male. The abdomen of the type of "*P. organica*" is lost, but the colouring, markings and entire facies of the unique specimen are congruent with those of the male from Bali.

Male genitalia. Tegumen high and robust. Uncus slender, hooked. Socius voluminous, broadly triangular. Gnathos absent. Valva with more than basal half robust;  $Spc_1$  absent;  $Spc_2$  dense, below base of cucullus, projecting; a large, clavate and spiny

harpe from beyond base of costa; cucullus slender, curved, long-bristled. Aedeagus slender, curved and long.

Female genitalia. Sclerotized throughout. Sterigma, a strong clavate and aciculate body with a prostrate-8-shaped transverse split; funnel-shaped ostium passing into large and strong cylindrical colliculum, irregularly branching at end. Signum one, a strongly scobinate basal plate, without a thorn.

*Metendothenia fidelis* spec. nov.

(fig. 669)

♂ 15 mm. Head and palpus pale ochreous, tuft on vertex laterally and median segment of palpus slightly mixed with dark fuscous. Thorax light fuscous (imperfect). Posterior tibia normally scaled, without pecten. Abdomen pale ochreous.

Fore wing oblong-subtruncate, costa gently curved, apex rectangular, termen vertical, slightly concave above, rounded beneath. Ochreous-whitish strongly strewn with small fuscous strigulae and points; markings dark fuscous. Anterior half of costa with four triangular small dots, alternating with minute transverse strigulae, basal patch indefinite; transverse fascia broad, formed of a semicircular postmedian costal patch, anterior half dark fuscous, posterior lighter, containing a pair of pale costal marks; a dark fuscous, wedge-shaped horizontal spot in middle of wing, with base somewhat extended vertically, sides concave; and an ill-defined fuscous, suffused, elongate larger patch on dorsum before tornus, partly extending to tornus, concave above, rounded posteriorly; these three parts of fascia more or less interconnected along the anterior edge by greyish-fuscous suffusion; terminal mark moderate, oblique and spindle-shaped, a series of small strigulae between this mark and fascia; posterior fourth of costa with two slender, oblique costal strigulae, anterior continued by an interrupted, slender and sinuate, oblique line to termen above middle; a dark dot in apex; a dark fuscous, interrupted marginal line along termen to tornus. Cilia (imperfect) pale ochreous.

Hind wing dark fuscous, appearing transversely strigulated (dark tips of scales). Cilia pale ochreous with a fuscous subbasal band; dorsum with a slender short and shallow marginal roll at base, not quite closed.

Male genitalia. Tegumen robust and high, with rounded, tumescent shoulders. Uncus with a bunch of long spines underneath, not bilobed. Socius long, rigid, porrected. Gnathos ill-defined, a slender transverse band. Valva with dilated sacculus (2/3), ending in a subcostal and a ventral triangular prominence, beset with strong spines, left valva with a slender long  $Spc_3$  on the outside, but no  $Spc_1$ ; right valva with an  $Spc_1$  of moderate slender bristles and a large  $Spc_3$ ; cucullus rounded, hairy. Aedeagus moderate, curved, apparently without cornuti.

Female genitalia unknown.

Bali Id., 1896 (Doherty), 1 ♂, holotype, genit. slide 7839 (Walsingham Coll., BM).

Portuguese Timor, 1892 (Doherty), 1 ♂, paratype, genit. slide 7843 (BM).

Superficially resembling *M. mesarotra* (Meyrick), but smaller.

*Metendothenia spumans* spec. nov.

(fig. 672)

♂ 16 mm. Head light tawny, face white below, dark fuscous above. Palpus rather slender and long; pale tawny, upper edge pale ochreous, terminal segment dark brown, pale-tipped. Thorax dark fuscous-brown, tegula with coarse blackish loose scales at apex, a white median transverse streak. Posterior tibia strongly dilated with dense, subappressed scales above and beneath, smooth on outer side, inner side with a supralateral white longitudinal glabrous concavity, containing in its centre a flat pencil of black scales, originating from caudal end of concavity; a thick brush of long black scales along lower side of tibia; posterior tarsus with basal segment strongly elongate, above with short bristly appressed scales. Median leg with inner spur and tibia above, with a fringe of very long and dense black spreading scales; basal segment of median tarsus elongate. Abdomen black, venter pale grey.

Fore wing suboval-truncate, dilated and broadest at  $4/5$ , costa gently curved, apex obtusely pointed, termen along upper half vertical and sinuate, along lower half rounded and oblique. Basal patch to  $1/3$ , dark fuscous touched with vinaceous, slightly marbled black, an inverted-triangular erect light vinaceous-tawny spot, minutely edged with white, anteriorly edged with black; edge of basal patch straight and vertical, only a small projection in middle, followed by a slight excavation below fold; middle of wing chalky white, along costa suffused and elsewhere suffusedly marked, with ashy-grey; five dark fuscous small dots along costa; an obliquely triangular ashy-grey spot between lower angle of cell and fold; a long dense comb of white scales just below and parallel to median part of fold, directed upwards and appressed to wing; irregular suffused marbling below costal suffusion; apical fifth of costa suffused with blackish-fuscous, two sinuate subparallel, almost continuous series of blackish suffused dots, from  $1/5$  of costa and before apex, respectively, first vertical above, then curving towards lower third of termen, thence before this to tornus, second crossing obliquely before apex to middle of termen, thence submarginal to tornus; apex dark fuscous; some three black dots along dorsum. Cilia (damaged) fuscous.

Hind wing dull dark fuscous-brown, becoming paler in cell, costa with thick clothing of glossy ashy-grey scales; dorsum grey, with a couple of deep folds. Cilia fuscous with a pale basal line; in tornus modified to a thick globular brush of broad scales, cilia along dorsum very long and dense, glossy black.

Male genitalia chiefly as described with the genus.  $Spc_1$  small, on a low labis.  $Spc_2$ , a moderate but not dense patch. Sacculus prominence obtusely angular, almost glabrous. Edge of sacculus without prominence.

Female unknown.

South New Guinea, Papua, Sogeri Plateau, Bisianuma, 1600 ft, 27.vii.1957 (G. P. Holland, OM), 1 ♂, holotype, genit. slide 6600.

A novel form, with peculiar genitalia and scaling of the median and posterior legs. The white centre of wing, the thickened legs and the black-fringed dorsum make the species easy of recognition.



**Metendothenia metacycla** spec. nov.

(fig. 666)

♂ 11 mm. Head fuscous, transverse tuft above face darker fuscous, face pale grey. Palpus fuscous. Thorax dark purplish-fuscous, marbled with pale grey. Posterior tibia dilated with dense appressed scales above and beneath, grey on the outside, glossy white on the inside, curled at apex, slightly projecting above, more projecting below; a median longitudinal shallow concavity, containing a flat, elongate-oval light ochreous pencil of scales; posterior tibia with basal segment moderately elongate, strongly thickened, grey, with loosely appressed scales above. Median leg normal, without hair fringe. Abdomen dark grey, venter paler.

Fore wing oblong-suboval, costa slightly and gradually curved throughout, apex obtuse, termen vertical and concave above, rounded-prominent below. Dark fuscous, an ill-defined grey median transverse band, separating a darker basal patch, slightly marbled with purplish-fuscous; a pale-ochreous ill-defined circular patch in tornus and along termen, rising over  $3/4$  across wing and edged above by a gradually curved dark fuscous line, just not reaching middle of termen; anterior edge of pale patch ill-defined, irregularly infuscated; apex pale ochreous. Cilia (imperfect) fuscous, with a purplish-fuscous basal third.

Hind wing light fuscous-brown, finely transversely striated. Cilia around apex light fuscous with dark fuscous basal line, cilia elsewhere glossy pale yellow.

Male genitalia. Very similar to those of the type-species. Uncus longer. Socii absent. Tuba analis large. Gnathos indicated as a brownish, hardly perceptible attenuated band.  $Spc_1$  larger, upon a higher labis.  $Spc_2$  minute, four bristles. Costa with a slight haired prominence. Edge of sacculus angular posteriorly. Cucullus smaller, semi-circular, base emarginate, with at one end, a bristled process, at the other, ventrally, a couple of short spines. Aedeagus short, with a spherical base. Juxta smaller.

Female unknown.

South New Guinea, Port Moresby, x.1887-i.1888 (Kowald), 1 ♂, holotype, genit. slide 7891 (BM).

**Metendothenia calopa** spec. nov.

(fig. 671)

♂ 17 mm. Head grey, strewn with light grey. Palpus rather dark leaden-grey. Thorax purplish-grey, tips of scales light leaden-grey. Posterior tibia glossy pale grey, smoothly scaled, but basal  $2/3$  thickened with roughly appressed bristly scales above and beneath; pencil from base above slender, white. Abdomen pale glossy grey.

Fore wing broad, subtriangular, dilated, costa curved, less curved posteriorly, apex obtusely pointed, termen gently sinuate, vertical. Deep ferruginous-red, partly suffused with darker ferruginous. Basal fifth, dorsum as far as fold, ocelloid spot and dotting above and beyond its top, glossy pale metallic blue. A large creamy-white

semioval costal patch occupying slightly less than median half of costa, well-defined, lower edge beyond middle with a small acute oblique tooth, directed to middle of dorsum; posterior  $2/3$  of upper half of patch suffused with grey-ochreous, darker anteriorly, narrowed posteriorly; costal edge of patch narrowly dark grey with five pairs of slender white marks, second and third pairs distant, space between them darker ochreous-grey, fasciate and oblique, to centre of patch; ocelloid spot inverted-onion-shaped, with thick edges, parted throughout by ground colour, anterior half of spot rather surrounded by paler ochreous suffusion; top of ocelloid spot narrowly erected into a parted point, to vein 7; this point (as said above) followed by a rounded group of pale metallic blue dots. Cilia fulvous, tips mixed with pale metallic blue (imperfect).

Hind wing pale grey with a golden gloss, anal area moderately infuscated; an oval central patch of dark purple androconia on upper side; anal area as far as vein 1b forming a rounded lobe. Cilia pale golden-fuscous, a suffused subbasal darker fuscous band, tips partly whitish.

Male genitalia. Tegumen sclerotized on upper half. Uncus slender, spindle-shaped, tip extended in a slender point, thickened part hairy. Socius moderate, parietal. Gnathos, a slender band upon which a large tuba analis, submembraneous, with a sclerotized median stripe. Diaphragma densely punctulate in centre. Valva rather broad, robust, sinuate; Spc<sub>1</sub> a subcostal group of thin bristles, with 2-3 heavy spines and a transverse patch of short bristles. Spc<sub>2</sub> marginal, divided in two groups; cucullus bristly, with marginal spines. Aedeagus curved, pointed.

"British New Guinea, Owgarra (A. S. Meek)", 1 ♂, genit. slide 8016 (BM).

**Metendothenia atropunctana** (Zetterstedt, 1840) comb. nov.

(pl. 8 figs. 1-3)

*Penthina atropunctana* Zetterstedt, 1840: 977, no. 2 (Lapland).

*Tortrix dimidiana* Sodoffsky, 1830 (nec Clerck, 1759): 73, pl. 1.

*Penthina ochromelana* Guenée, 1845: 152 (Southern France).

*Hedya atropunctana*; Hannemann, 1961: 182, 184, fig. 184, pl. 18 fig. 16 (genit. ♂, adult illustrated).

Distribution. Palaearctic region.

Food plants. Between spun leaves of *Betula*, *Tilia*, *Myrica*, *Alnus* and many other trees and shrubs.

The common species, hitherto assigned to the genus *Hedya* Hübner, is widely different from the type-species of that genus and is a characteristic representative of the present one. It seems to be closely allied with the following Nearctic species.

The colouring and markings are: basal half dark purple marbled with grey, apical half white, marbled with grey, with a conspicuous black dot in white field, on end of cell. These markings which many Palaearctic Olethreutini have in common, are a close imitation of birds droppings. They must have developed secondarily and parallel

in species of different genera. Remarkably, the tropical Olethreutinae show only a slight imitation of this colour pattern: it is by far less conspicuous, white parts usually being tinged pink or tawny and less contrasting. The *Statherotis* type of markings: dark purple, with a white costal spot, must belong in the same category.

Male genitalia. A long and narrow uncus, top bristly underneath. Socius strong, triangular. Gnathos (omitted in the figure of Pierce and Metcalfe) inverted-T-shaped, transverse bar rounded at sides, finely denticulate, the stalk forming the rigid and slender tuba analis. Valva with a spiny, moderate labis, a small elevated bristly pulvinus and a distinct discal  $Spc_2$ ; cucullus long and slender, subclavate, with projecting base. Aedeagus long, narrowed.

Female genitalia. Sterigma aciculate, tulip-shaped, subcylindrical, sometimes gently constricted below top, lamella postvaginalis with a median excision. Colliculum short, narrowed. Signa, two semispherical small scobinations.

#### *Metendothenia separatana* (Kearfott, 1907) comb. nov.

*Olethreutes separatana* Kearfott, 1907: 13 (sex?). — 1910: 539. — Forbes, 1924: 455.

*Penthina dimidiana*; Fernald, 1882: 31, no. 190.

*Olethreutes dimidiana*; Fernald, in Dyar, 1903: no. 5034. — Kearfott, 1905: 207 (sex?).

*Argyroploce separatana*; Barnes & McDunnough, 1917: no. 4825.

*Hedia separatana*; Heinrich, 1926: 162, figs. 263, 416 (genit. ♂♀, distrib.).

Distribution. Western United States to Canada: Ontario and Manitoba.

Food plants. "Wild black cherry (*Prunus*), larkspur, thorn".

Superficially the species is very similar to the Palearctic *M. atropunctana*, but the genitalia are distinct.

Male genitalia. Compared with *atropunctana*: uncus shorter, gnathos with a weak transverse part. Valva more robust, cucullus broader, sacculus with a more elevated triangular labis, a spiny transverse ridge along base of cucullus and asymmetrical projecting marginal  $Spc_3$ .

Female genitalia. Sterigma smaller, a narrower, double-walled cylindre. Otherwise as in *atropunctana*.

#### *Ophiorrhabda* Diakonoff, 1966

*Ophiorrhabda* Diakonoff, 1966: 47, figs. 23, 73 (type-species, *Argyroploce ergasima* Meyrick, Woodlark Id., by monotypy).

Head with appressed scales, tufted on forehead. Antenna in male short-ciliated. Palpus curved and ascending, median segment roughish below and on top, tip of terminal segment truncate. Thorax with a strong posterior crest. Posterior tibia with loosely projecting scales above and beneath, a pencil from base above to middle of tarsus.

Fore wing broad, subtruncate; vein 2 from 2/3, 3 from angle, approximated to 4 at

margin, 4 closer to 3, 7 separate to termen, 8 distant, from angle, 9 closer to 8, 11 from middle, chorda from before 10 to 7, median branch to below 5.

Hind wing over 1, broadly triangular, with a cubital pecten; dorsum with a long roll and a tornal triangular lobe; a slight pecten of hairs along base of vein 8; 2 from 2/3, 3 from before angle, 4 from angle, 5 approximated, 6 and 7 approximated towards base.

Male genitalia. Uncus long, rather broad beyond base, narrowed, hooked. Socius large, densely haired. Gnathos weak, only bases of arms or median edges of arms distinct. Valva very slender,  $Spc_1$  small, sometimes far up the cucullus; sometimes a curved labis;  $Spc_2$  small, at base of cucullus prominence; pulvinus, another, dense sheaf of bristly hairs in disc opposite  $Spc_1$ . Aedeagus moderate, curved; cornuti, two patches of short spines.

Female genitalia with a variably shaped aciculate sterigma and unequal socii or a single large socius of the clavate type.

A moderately variable genus of *Hedya*-relationship, characterized by brushy socii, long, hooked, often broad uncus and very slender long valva with an elevated and curved labis and three to four spine clusters, pulvinus being sometimes also bristled.

#### Key to the species of *Ophiorrhabda*

1. Deep purplish-fuscous, with transverse bands of whitish spots, centred with leaden . . . . . *favillosa*
- Pale ochreous tinged pinkish or vinaceous, markings dark. . . . . 2
2. Markings deep moss-green . . . . . *dryoptycha*
- Markings blackish, transverse fascia below middle with an orange spot . . . . . *ergasima*

#### *Ophiorrhabda dryoptycha* (Meyrick, 1922) comb. nov.

(figs. 673-675)

*Argyroploce dryoptycha* Meyrick, 1922: 81 (♂, Java). — Clarke, 1955: 121.

*Olethreutes empherana* Bradley, 1961: 125, pl. 5 fig. 2, pl. 8 figs. 4-7 (♂♀, Guadalcanal). **Syn. nov.**

Distribution. East Java. Solomon Is.: Guadalcanal.

Guadalcanal, Honiara, 8-18.ix.1955, 1 ♂, holotype, genit. slide 4859 (BM). The type specimen has been kindly sent for examination by Mr. J. D. Bradley.

East Java, "Hekmeyer, Ardjoeno" (printed, Snellen Coll.), 1 ♂, holotype, without tip of abdomen; 1 ♀, identical label, specimen also without abdomen. West Java, Bogor (Buitenzorg, 250 m), 6.xii.1921 (A. M. R. Wegner), 1 ♀, genit. slide 7455 (LM).

Central West Sumatra, Fort de Kock, 920 m, v.1921 (E. Jacobson), 1 ♀, without abdomen (LM).

An elegant species with pale ochreous, pinkish-tinged ground colour, densely transversely strigulated with vinaceous and dark fuscous, markings deep moss-green, edged with dark fuscous. Basal patch indicated only by its edge which is wedge-shaped and hardly reaches dorsum, outer margin scalloped; transverse fascia represented by a large rounded-triangular patch slightly beyond middle, paler anteriorly, deeper moss-green and darkly infuscated posteriorly, with a faint angulate pale interruption below middle, posterior end of this interruption forming an oblique pale dash across upper angle of cell; lower end of this patch much narrowed, pale-edged, reaching halfway between fold and dorsum; preterminal fascia dull fuscous-brown, narrow, slightly bent and constricted in middle, with a narrow dark edge and transverse strigulae throughout, top with a branch to middle of termen, strongly constricted in middle; costa posteriorly suffused with deep greenish, five pairs of strigulae rather thick, pale pinkish, ultimate pair before apex conspicuous, apex with a dark dot. Cilia vinaceous.

Hind wing vinaceous-bronze, with darker veins, cilia with a pale base and darker subbasal band. Dorsum in male with a thick roll, paved with deep purple, short modified scales and on both sides with long cilia which form a pencil. Posterior tibia whitish, with long loose tuft of hairs above, pencil from base white, basal segment of posterior tarsus equally tufted above.

Male genitalia. Tegumen high, narrowed. Uncus rather long, hooked, top oval, with a sheaf of dense bristles underneath. Socius moderate, rather thick. Gnathos membraneous, only laterally perceptible, tuba analis long. Valva slender, gently sinuate, not constricted, Spc<sub>1</sub> small, between cucullus bristles, Spc<sub>2</sub> small and dense, shifted rather basad and marginad; Spc<sub>3</sub>, a slender pencil; cucullus slender, gradually narrowed. Aedeagus bent, cornuti, two parallel patches of short spines.

Female genitalia. Sterigma large, an inverted-subtrapezoidal sclerite, densely and coarsely aciculate, with a broad split in middle, open below, rounded above; colliculum slender. Signum, a large flat hook.

### *Ophiorrhabda ergasima* (Meyrick, 1911)

(fig. 676)

*Argyroploce ergasima* Meyrick, 1911a: 271 (♂, New Guinea). — Clarke, 1955: 131. — Diakonoff, 1966: 16, fig. 23 (holotype genit. illustr.).

*Ophiorrhabda ergasima*; Diakonoff, 1966: 47, figs. 23, 73.

Distribution. New Guinea.

The species superficially resembles a *Gnathmocerodes* very closely, except for a different hind wing. Pale tawny-vinaceous, marbled with dark fuscous-grey. Basal patch indicated by three dark spots, one larger, triangular, on 1/4 of costa and two smaller rounded spots, opposite this, in fold and on dorsum, respectively; a large transverse blackish patch just beyond middle, indistinctly divided in a larger costal

and a smaller discal half by a zigzag longitudinal paler line, limited by fold, top of this patch below fold small, orange; preterminal mark long, slender, fasciate, well-defined, toothed above dorsum anteriorly, excavate in middle, top curving posteriorly with a slender branch to middle of termen, purplish. Posteriorly half of costa with five pairs of marks of ground colour; apex with a dark dot. Cilia pale vinaceous, barred with purplish, a narrow purplish subbasal line.

Hind wing dark grey, semipellucant, with darker veins; a triangular large tornal lobe; dorsum with a deep roll, split open on upper side and containing a slender pencil of hairs from base. Posterior tibia extended by white hairs, with pencil from base above glossy snow-white. Abdomen light fuscous, venter whitish at base, anal tuft white inside.

Male genitalia as described with the genus.

My figure of the male genitalia of 1966 is slightly corrected here.

Bali Id., 1896 (Doherty), 1 ♂, genit. slide 7733. A well-preserved specimen (BM).  
Australia, Geraldton near Cairns (Meek), 1 ♂, genit. slide 7622 (BM).

***Ophiorrhabda favillosa* spec. nov.**

(figs. 677-678)

♂ 19 mm. Head brown-fuscous, forehead with small lateral dark grey tufts. Palpus dark fuscous-grey, top of basal and of median segment each with a whitish subdorsal spot, apex of median segment blackish, terminal segment entirely sordid pale ochreous. Thorax dark fuscous with purplish-coppery gloss, with two transverse bluish-white bands, narrowly edged blackish on both sides and almost interrupted in middle, anterior band continued over tegulae; apical tuft blackish laterally. Posterior tibia with an enormous compact and smooth brush of scales, situated mesodorsally, with edges projecting far beyond sides and top of tibia, inner side becoming concave posteriorly; grey, snow-white on the inside, except along edges; metathorax along posterior edge below with a fringe of white scales; posterior tarsus with elongated basal segment rather thickened by closely appressed scales. Abdomen, sixth segment with two lateral flat coremata, seventh segment with two latero-dorsal ones, together forming a fan-shaped rising grey crest around the brushy, also grey, ninth segment, in which are concealed two dorso-lateral short white coremata of the eighth segment.

Fore wing oblong-truncate, moderately dilated, broadest at  $3/4$ , costa gently curved anteriorly, more curved and prominent at  $3/4$ , straight before apex, apex sub-rectangular, subobtuse, termen straight, almost vertical above, rounded beneath. Rather deep purplish-grey-fuscous, markings formed by irregular transverse bands of small round white spots, centred by grey or bluish-lead. Irregular sparser dotting on base, edge pointed in middle; a little oblique transverse fascia at  $2/5$ , moderately convex outside; a double row of spots along lower edge of cell; a large, more contrasting inverted-v-shaped mark edging ocelloid spot, anterior leg slightly inwards-oblique, posterior leg broader, outwards-convex and with a short tooth above; top of mark

reaching to vein 9 below  $3/4$  of costa; costa with eight transverse bluish-white thin marks: one pair, subbasal, two approximated pairs, at  $1/3$ , three whiter pairs, at  $2/3$ , posterior more distant, two single marks beyond these; faint curved subcostal silvery lines from posterior costal marks, more or less interrupted, to termen, a slender line encircling apex. Cilia deep grey-fuscous, with a creamy basal line.

Hind wing light ochreous-grey with a golden gloss, semipellucid and appearing transversely striated, veins darker. Cilia fuscous with a pale ochreous basal line and pale ashy-grey apical half.

Male genitalia. Tegumen high and slender. Uncus curved, top rounded, bristled, middle moderately dilated. Socius parietal, long. Gnathos, a membraneous band, sides narrowed. Tuba analis short and slender. Valva long, curved, rather narrow, sacculus under  $1/2$ , simple,  $Spc_1$  a small group of bristles; cucullus clavate, base with a transverse comb of spines, projecting below, two more projections between base and top, each with a strong spine. Aedeagus moderate, subcrescentic.

Female unknown.

West Java, Telaga Warna Lake, near Puntjak Pass, 1450 m, 22.i.1950 (Liem Swie Liong), 1 ♂, holotype, genit. slide 7609. Mt. Gede, Tjibodas, 1400 m, iv.1953 (Manis), 1 ♂, paratype. Mt. Panggrango, Tjisaroea-Zuid Estate, 1000 m (A. M. R. Wegner), 1 ♂, paratype (LM). A distinct species with uniform but somewhat variable, contrasting markings.

### **Lipsotelus** Walsingham, 1900

*Lipsotelus* Walsingham, 1900: 569 (type-species, *L. lichenooides* Walsingham, by original designation). — Fernald, 1908: 47, 63. — Fletcher, 1929: 128 (syn. of *Argyroploce* Hübner).

Head with roughly appressed scales. Ocellus posterior. Proboscis short. Antenna, minutely ciliate, in male slightly thickened, in female normal. Palpus ascending, appressed to face, dilated throughout with loose scales beneath, basal segment rather long, median curved, reaching upper edge of eye, terminal segment short, obtuse, porrected. Thorax with a slight posterior crest. Posterior tibia in male moderately dilated with appressed spiny scales, thick, long and soft on the inside, a concavity above, concealing a thick pencil from base.

Fore wing dilated, costa with a strong rounded prominence beyond middle, concave beyond this, apex pointed and prominent, termen deeply sinuate, rounded and prominent below. Vein 2 from almost  $3/4$  (well beyond  $2/3$ ), 3 from angle, approximated to 4 at margin, 4 closer to 3, 5 and 6 straight, distant and parallel, 7 separate, to termen, 8 from apex, 9 from  $2/3$  distance 10-8, 10 from  $2/3$  distance 11-9, 11 from middle of cell, chorda from about halfway 11-10, to base of 7, median branch to just below base of 5.

Hind wing semioval, over 1, with a cubital pecten. Vein 2 from  $2/3$ , 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen high and rather narrow. Uncus long, robust, sometimes dilated in middle and at top, this more or less emarginate; densely bristled, except in middle, bristles communicating with those of socii. Socius moderate, pending, sometimes semiparietal. Gnathos, a weak band. Tuba analis weak, dilated above. Valva long and slender, subsinuate, sacculus slender, moderately constricted towards top; cucullus long, little curved, base angularly prominent, sometimes with spine; or not prominent, then with a projecting spine in middle of lower margin of sacculus. Spc<sub>2</sub> diversely developed; cucullus bristles spread or strong, in a single row. Aedeagus short and broad, anellus forming a large sclerotized ring.

Female genitalia. Sterigma large, concave-semioval or spherical, finely aciculate, ostium on top or ventro-apically, colliculum of diverse length; base of ductus bursae swollen and partly sclerotized, forming a semispherical strong cestum. Signa, two semicylindrical aciculations.

A group of characteristic species, striking by their unusual shape of fore wing with deeply sinuate costa and termen. The colour is often deep fuscous-brown and rather dark lichen-green, so that the name of the type-species is well chosen. The species are very similar and can with certainty be separated with the genital characters only. The genus belongs to *Hedya* and *Olethreutes*, but is closely related to neither, representing a natural and distinct unit. Superficially the species resemble the genus *Kennelia* Rebel, belonging to the tribe Eucosmini.

#### Key to the species of *Lipsotelus*

It is not possible to discriminate the variable species with the aid of the colouring alone, therefore I am compelled to use the genital characters.

1. Males . . . . . 2
- Females . . . . . 5
2. Outer edge of sacculus with a prong; cucullus base not angulate . . . . . 3
- Outer edge of sacculus without a prong, cucullus base angulate . . . . . 4
3. Cucullus bristles large, in a straight, transverse row . . . . . *xyloides*
- Cucullus bristles not modified; Spc<sub>1</sub>, a long pencil . . . . . *armiger*
4. Uncus little emarginate; Spc<sub>2</sub> bristles long; cucullus prominence without an apical spine . . . . . *anacanthus anacanthus*
- Uncus distinctly emarginate; Spc<sub>2</sub> bristles more slender, shorter; cucullus prominence with an apical spine . . . . . *anacanthus amicus*
5. Sterigma spherical . . . . . 6
- Sterigma, a concave suboval plate . . . . . 7
6. Sterigma, darkly aciculate. Signa with coarse strong dentations; cestum small . . . . . *armiger*
- Sterigma not so dark. Signa two, oblong, fine scobinations; cestum large . . . . . *xyloides*
7. Sterigma slightly broader below than above, ostium above pointed, colliculum





darker than in holotype, but becoming paler towards base. Cilia more suffused with fuscous-grey, basal half becoming blackish around apex.

♀ 21-23 mm. Head fulvous and olive-greenish, forehead with a dark, purplish band. Palpus purple, basal half pure white, upper edge of median segment with a white spot below apex and a black dot above base. Thorax vinaceous-fuscous, apical half greenish-black, a pair of paler, subapical lichen-coloured spots (whitish-blue-green). Abdomen dark fuscous or brown.

Fore wing narrower, sinuation of costa more exaggerated, prominence postmedian. Colouring variable. Allotype, purplish-fuscous, becoming olive-tinged along anterior half. Markings blackish-brown and lichen-coloured. An irregular blackish mark on costa just beyond base; a subtriangular patch on middle of costa, strongly constricted in middle; apex with a rounded dark spot preceded by a smaller dot on costa, separated by a whitish small line; dorsum to fold irregularly marbled with blackish pale lichen colour and deeper olive-green; ill-defined groups of glossy paler grey-lead spots (tips of scales), scattered towards costa and forming an oblique band from top of costal prominence to tornus, and towards apex, visible in certain lights. Otherwise similar to male, except the cilia in hind wing being ochreous-tinged, brighter and orangeish towards apex.

One ♀ paratype similar to holotype, pale tawny, suffused with whitish, dorsum dark brown, a few dark discal markings, but cilia in hind wing more ochreous. Two other ♀ paratypes brighter ochreous and strongly marbled throughout with purplish-fuscous and with lichenous pale round spots towards dorsum.

Male genitalia. Uncus not excised on top. Valva with a slightly curved narrow median part and a strongly prominent, acutely triangular angle; edge of cucullus, except the usual spines on disc also with a series of short curved thorns.  $Spc_1$ , an obliquely-longitudinal patch of long slender spines, situated almost parallel to lower edge of sacculus, which is unarmed; spines at base of this edge unusually long.

Female genitalia. Sterigma large and broad, upper edge tolerably straight, inbent only on each side of ostium; lateral folds broad, folds of upper edge narrowed mesially. Ostium large and erected, slightly constricted above middle. Colliculum moderate, hardly exceeding height of sterigma. Cestum robust. One signum large, another about 1/3 of first.

West Java, Mt. Tjisoeroe, Djampang Tengah, xii.1934 (L. J. Toxopeus), 1♂, holotype, genit. slide 2640 (head missing). The same locality, date and collector, 2 ♀, paratypes, genit. slide 5936. West Java, Tjisaroera-Zuid Estate, 1000 m, 23.iv.1950 (A. M. R. Wegner), 1 ♀, allotype, genit. slide 5935. Mt. Gede-Panggrango, Tjibodas, 1400 m, 9.iii.1952, (A. M. R. Wegner), 1 ♀, paratype (LM).

Slightly smaller than *L. armiger* spec. nov., from Borneo, but easily distinguished by the genitalia, especially by the absence of a subbasal thorn of the sacculus; also the dark markings on the basal half of wing are absent in the present species.

**Lipsotelus anacanthus amicus** subsp. nov.

(figs. 695-697)

♂ 24 mm. Head dark grey-greenish. Palpus pure white, posterior half of median segment grey, with a white subapical mark from posterior edge, terminal segment grey; a minute black spot above base of median segment. Thorax fuscous, tegulae fuscous-greenish.

Fore wing narrower and longer than in the nominate form. Costa fuscous, extreme edge light ochreous; marked throughout with large oblique blackish marks. Dark fuscous, irregularly dusted and suffused with pale whitish-green along upper half, with darker bluish-green on lower half towards base; termen and a large area in tornus less suffused; leaden-metallic marks scattered irregularly, especially distinct: a preterminal band and an oblique series from middle of costal prominence, ending in a large rounded patch on closing vein; also a series below costa not reaching basal third of wing; apical spot fuscous finely whitish-edged. Cilia anthracite-black, with fuscous-olive basal half, a whitish-olive median parting line. Cilia along lower part of termen and in tornus fuscous-olive.

Hind wing purple, hardly paler towards base, costal third whitish. Cilia tawny-bronze.

♀ 22 mm. Tawny-fuscous, sprinkled with ferruginous, with dark ferruginous scattered small marks; a whitish-olive streak along basal half of costa except its edge; indistinct olive suffusion on lower 3/5 of wing, with several erect-oval pale lichenous spots, finely edged with ferruginous; the usual metallic marks bluish-lead, not conspicuous. Hind wing as in male.

Male genitalia very similar to those of the nominate form, differing only by minor points: a deeper emarginate top of uncus, valva narrower in the narrowest part ("stalk") and also cucullus narrowed; Spc<sub>1</sub> spines shorter; ultimate thorn of cucullus larger, etc.

Female genitalia. Sterigma large, semioval, but more depressed than in *L. a. calens* subsp. nov., with upper edge rather straight, angles rounded. Ostium broader and shorter, top not compressed laterally. Colliculum as in *L. a. calens*, signa more robust. Cestum slightly longer.

India, Pegu, Karen Hills, Thandsung, 500 ft, 1890 (Doherty) (Walsingham Collection 40917), 1 ♂, holotype, genit. slide 6644. 1 ♀, allotype, no. 40918, genit. slide 6645 (BM). The late Dr. Obraztsov kindly drew my attention to this material.

**Lipsotelus anacanthus insulae** subsp. nov.

(figs. 680-681)

♀ 22 mm. Head and thorax light tawny, face pale ochreous. Palpus white, apical half fuscous-grey, median segment with a subapical white transverse line and a minute black point above base. Abdomen fuscous.

Fore wing broader than in *L. anacanthus* spec. nov., with costal prominence less strong, costa beyond this less deeply concave, termen sinuate, concave above, broadly rounded and prominent below, but less prominent than in *anacanthus*. Anteriorly rather bright ochreous, posteriorly turning tawny-fuscous; a large, ill-defined, semi-circular central area, occupying dorsum from  $2/5$  to before tornus and rising over  $3/4$  across wing, pale greenish, finely and regularly reticulated with fuscous-grey; beyond this area reticulation becoming reduced to sparse small strigulae and dots and not reaching anterior half of costa; costal edge narrowly bright tawny-fulvous, marked with pairs of pale ochreous strigulae alternating with dark purple-brown dots; a round greyish spot in apex; terminal line fine, interrupted throughout into series of short strigulae. Cilia pale tawny-fuscous, with a darker grey-fuscous basal half.

Hind wing deep purple-fuscous. Cilia sordid whitish, with a broad fuscous-black subbasal band, and a fine pale basal line.

The series consisting of eight females is uniform; the specimens vary slightly only in the degree of grey suffusion. All make the impression of being finely and regularly reticulated.

Female genitalia. Sterigma rather small, semioval, upper edge tolerably straight, with narrow folds; lateral extremities of these folds appearing dilated, mesially each fold forming a deep concavity flanking top of ostium; ostium large, moderately broad (actually intermediate between *calens* and *amicus*), moderately narrowed upward but not so compressed as in *calens*. Colliculum short, not exceeding height of sterigma. Cestum annular, narrow, oblique. Signa equal, smaller than in *calens*.

Hainan Island, Mt. Wuchi, v.1903, 1 ♀, holotype, genit. slide 6203 (BM); 7 ♀, paratypes, genit. slide 6202 (BM, LM).

#### ***Lipsotelus anacanthus calens* subsp. nov.**

(fig. 689)

♀ 21 mm. Head and thorax fuscous-vinaceous. Palpus white with fuscous-vinaceous apical half of median segment which has a white subapical and a black subbasal mark, terminal segment fuscous-vinaceous.

Fore wing shaped as in *L. anacanthus*. Fuscous-vinaceous with a purplish gloss, strewn with whitish-lilac below basal half of costa, strewn with pale fulvous towards termen; costa with a series of small purple dots, a dark purple dot on closing vein; a suffused roundish spot towards middle of cell, another, longitudinal, beyond cell; dorsum from beyond base to before end of fold lichenous-green, marbled with ferruginous and deeper olive-green. Cilia bright fulvous with a whitish median line.

Hind wing dark purplish-fuscous; cilia grey-fuscous, becoming ochreous towards apex, a dark fuscous antebasal band.

Female genitalia. Sterigma large, broadly semioval, lower edge rounded, upper edge moderately convex, with narrow folds; lateral folds moderate, abruptly narrow-

ed downwards. Ostium erected-ovoid, top rather laterally compressed. Colliculum long, exceeding pregenital sternite. Signa large, equal.

Assam, Khasi Hills, iv.1907 (Meyrick Coll., BM), 1 ♀, holotype, genit. slide 6647. The female genitalia differ sufficiently for the separation of this subspecies.

**Lipsotelus lichenoides** Walsingham, 1900

(fig. 688)

*Lipsotelus lichenoides* Walsingham, 1900: 569, 570 (♂♀, Tenasserim)

Distribution. Tenasserim: Mergui.

In the extensive description of this species the type specimens are simply indicated thus: "Type ♂♀, Mus. Wlsm." The collection numbers are not indicated, contrary to the custom of Lord Walsingham.

In the type collection of the British Museum there are two "type" specimens: a male, marked "Type, ♂" from Riam Kiwa, in SE Borneo; this cannot be the type, of course; and a "Type ♀", from Mergui in Tenasserim. Since no topotypical males are available, I herewith select this female lectotype: It is labelled as follows: "Mergui, Tenasserim, 1888, Doherty, 40370", "Walsingham Collection, 1910-427, 40370", "*Lipsotelus lichenoides* Wlsm., Type ♀". Genit. slide 6194 BM (BM).

The original male syntype seems to be lost.

Female genitalia. Very similar to those of *L. anacanthus amicus* subsp. nov. from Pegu, India, but differing by a smaller sterigma as compared with the large ostium, and especially, by the short colliculum, not exceeding the height of sterigma. Also the cestum and the signa are smaller.

I expect the unknown male of this species to have the valva of a constricted type, with prominent cucullus and unarmed sacculus, without a prong, similar to the valva in *L. a. anacanthus* from Java.

The male specimen from Riam Kiwa is not conspecific but related to *L. xyloides* spec. nov., with valva not constricted and sacculus with a prong. To the same new species I assign the other female from Mergui, Tenasserim (Walsingham Coll. 40369). The species is described below.

**Lipsotelus armiger** spec. nov.

(figs. 682-684)

♂ 23 mm. Head olive-fuscous, face pale ochreous-olive. Palpus white, posterior half of median segment light fuscous-olive, a darker grey oblique median band with a fine line above, a black dot above base dorsally; terminal segment light fuscous-olive, anterior edge dark grey. Thorax orange-tawny; becoming grey-green towards apex, tegula grey-green, tip pale ochreous. Abdomen probably dark fuscous. Posterior tibia grey-fuscous above, pale ochreous below.

Fore wing oblong-truncate, strongly dilated from base, costa straight anteriorly, with a large semioval prominence beyond middle, slightly convex posteriorly, apex rounded, prominent, termen strongly sinuate, rounded-prominent along lower 2/3. Grey-whitish-green, markings deeper mossy green and blackish. Costa with a whitish-green spot at base, with a blackish streak beyond this to 3/4, narrow along prominence, containing an irregular grey-whitish spot before 1/4 and a series of faint pale marginal marks; posterior fourth of costa narrowly tawny with two black dots; an outwards-concave transverse fascia at 2/5, angulate basad below fold, ochreous-green-olive, rather obscured by dark fuscous marbling; base of wing tinged with diverse hues of green; transverse fascia indicated only by a group of dark fuscous dots from well below costal prominence to dorsum before tornus, surrounded by olive suffusion; remainder of wing slightly opalescent whitish-olive or greenish in certain lights, indistinctly strewn with minute dark marks, tending to form a series of fine vertical parallellines, descending to tornus; termen narrowly black, interrupted by whitish on veins; apex with a tawny, white-edged spot. Cilia grey-olive, with an incomplete whitish parting line, in tornus cilia black.

Hind wing deep blackish-purple, becoming darker towards apex, lighter towards dorsum. Cilia fuscous with a darker subbasal band and a pale basal line around apex and along upper part of termen, becoming unicolorous fuscous towards dorsum.

Male genitalia. Tegumen high, of *Hedya* type. Uncus rather long, top short-bilobed, long-bristled throughout. Valva slender and long, sinuate, without projecting angle of cucullus which is regularly spined throughout. Sacculus with a slender slightly sinuate prong; Spc, an obliquely-longitudinal patch of moderate bristles.

Southeast Borneo, Riam Kiwa, 500-1000 ft, 1891 (Doherty), genit. slide 5326 BM (Walsingham Collection 40391). A black-edged label with: "*Lipsotelus lichenoides* Wlsm., Cat. East Aust. Lep. Het. Oxf. Mus. 1900, p. 570, TYPE ♂." (BM).

As discussed under *L. lichenoides* Walsingham, the present male specimen, placed with a topotypical female as "types" under the label of that name, cannot be the male type. The female is designated lectotype of *L. lichenoides* above, while the male is described here as a new species.

♀ 22 mm. Head and thorax light fuscous-tawny. Palpus pale tawny, basal segment and basal half of median whitish, a black dot on upper and lower edge well below apex, terminal segment suffused with dark brown. Thorax fuscous brown, tegulae paler.

Fore wing shaped as in *L. lichenoides*. Pale fulvous-tawny strewn with fuscous points, tending to form transverse series; dorsum more densely suffused. (Further markings indefinite, the wing being rubbed). Hind wing fuscous-purple, towards dorsum rather thinly scaled.

Female genitalia. Sterigma moderate, conical-spheroidal, aciculate throughout. Ostium bursae apical. Colliculum about twice as long as sterigma is high. Cestum small. Signa two, equal, moderate.

Tenasserim, Mergui, 1888 (Doherty) (Walsingham. Coll. 40369), 1 ♀, allotype, genit. slide 6646 (BM).

**Lipsotelus xyloides spec. nov.**

(figs. 685-687)

♂ 21 mm. Similar to one of the preceding species (*L. anacanthus* spec. nov.) and similarly variable, but the entire series more brownish-tinged (perhaps due to discoloration?). The situations of the costa in the fore wings are similar to that in *anacanthus*, but slightly more pronounced in the male, less so, in the female (contrary to *anacanthus*).

Head, thorax light tawny, face pale ochreous, basal half of tegula deeper tawny. Palpus white, posterior half grey, median segment with a whitish subapical transverse band and a subbasal black dot. Abdomen brown.

Fore wing shaped as mentioned above. Pale ochreous-tawny, scattered with fine longitudinal brown strigulae and with ill-defined roundish grey-lilac faintly glossy spots, tending to form oblique fasciae, especially from top of costal prominence to tornus; costal edge deep tawny, with several whitish transverse lines, along apical third alternating with dark brown round dots; anterior half of wing from middle of costa to centre, thence to tornus, suffused with deep brown, more or less mixed with leaden-grey, tending to form round spots; a lighter tawny marbling below fold, from base, not reaching end of cell; an irregular and ill-defined leaden-grey vertical transverse fascia rising from dorsum before tornus, forming a round suffused spot in middle of disc, followed by a narrow vertical mark in tornus; a narrow deep brown terminal line from below apex, interrupted at  $2/3$  of termen. Cilia tawny, with a deeper tawny basal half.

Hind wing brown-fuscous, with hardly any purple tinge, becoming paler towards base from middle. Cilia ochreous with a deep fuscous subbasal band, becoming altogether grey-fuscous along basal half of termen and dorsum.

♀ 20-21 mm. Allotype: similar to male, but unicolorous, rather deep fulvous-tawny. Posterior third of costa dark brown-fuscous, cut by tawny lines, posterior of these whitish. A curved transverse series of fine dark brown longitudinal strigulae from below costa before middle, running around and beyond cell to dorsum before tornus; a leaden-grey irregular fascia from below middle of costal prominence to tornus, converging with two or three ill-defined lines or bands of leaden-grey before termen; terminal edge narrowly tawny-whitish, contrasting with brown marginal line which is interrupted along lower fourth of termen and in tornus.

Hind wing darker than in male, with a more distinct purple gloss.

Paratype, ♂, genit. slide 5937, dark brown colour limited to dorsum; paratypes, ♀, sometimes also with dorsum suffused with dark brown; paratype, ♀, genit. slide 6200, with costa, apex and termen dark brown instead, with extended, anthracite-leaden markings; remainder of wing light ochreous-tawny.

Male genitalia. Uncus rather broad, not constricted below top but gently narrowed, edge scalloped. Socius long, semi-parietal, exceeding height of uncus. Valva gradually narrowed from base to top, without a constricted "stalk"; Spc<sub>1</sub>, a small rounded

patch of moderate spines in disc; patch of bristles at base of sacculus large; cucullus bristles formed by a transverse comb of long spines; sacculus with a triangular prong, its top, moderately long and slightly curved. Cucullus very gently sinuate.

Female genitalia. Sterigma moderate, appearing not plate-shaped as in other species, but more conical, ostium funnel-shaped, as top of this cone. Lamella post-vaginalis rounded-triangular, with thickened lateral folds; lamella antevaginalis with a subcrescentic upper part. Colliculum wide, but short, hardly exceeding height of lamella antevaginalis, with a subcrescentic upper part. Cestum large, complete, tubular. Signa moderately large, equal.

North west Borneo, Sarawak, environs of Kuching, Matang Road, 7.vi.1910, 1 ♂, holotype, genit. slide 5938; 5.xii.1909, ♀, allotype, genit. slide 6201; paratypes, 1 ♂, 12.xi.1907, genit. slide 5937; 1 ♀, 12.iii.1911, genit. slide 6200; 4 ♀, xi-xii.1907 (LM).

A distinct species, characteristic by tawny colour and by the genitalia in the two sexes. Allied with *L. lichenoides* Walsingham.

#### *Apotomis* group of genera

Tegumen sturdy, less slender. Uncus moderate, often obtuse and short. Socii large, densely bristled. Gnathos sometimes thorny. Valva often much constricted and clavate, with a submedian strong ridge or cone, diversely scobinate, more or less prominent distally.

Hind wing sometimes with veins 6 and 7 stalked.

#### **Orthotaenia** Stephens, 1829

(pl. 7 figs. 4-6)

*Orthotaenia* Stephens, 1829: 181 (type-species, *Phalaena Tortrix undulana* Denis & Schiffermuller, by subsequent designation of Westwood, 1840). — Curtis, 1831: 171. — 1837: 200. — Guenée, 1845: 28. — Stephens, 1852: 71, 95. — Fernald, 1908: 23, 57 (syn. of *Olethreutes* = *Argyroplote*) — Walsingham, 1914: 245. — Hannemann, 1961: 203 (German spp.). — Benthinck & Diakonoff, 1968: 171 (Dutch occurrence).

[Nec Fletcher, 1929: 156: *Orthotaenia* Curtis, 1831, type-species, *Retinia pinicolana* Doubleday (= *R. turionella* Curtis nec Linnaeus), by subsequent designation of Curtis, 1831.]

Male genitalia. Tegumen broad; uncus small, hooked. Socii large, pending. Gnathos strong, with a median point and spines underneath. Valva long and slender, a large spiny process at end of sacculus; cucullus slender, clavate.

Female genitalia. Sterigma a moderate cardiform opening; colliculum a large dark tube. Signum single, scobinate, small.

The distribution of the species of this genus is Palaearctic. They are omitted from further discussion.

#### **Pristerognatha** Obraztsov, 1960

(figs. 690-691)

*Pristerognatha* Obraztsov, 1960: 468 (type-species, *Sericoris penthinana* Guenée, by original designation). — Hannemann, 1961: 203 (German sp.).



Male genitalia. Tegumen high; uncus hooked, rather long. Socii pending. Gnathos, a strong band with dense spines along the whole underside. Valva long and slender; sacculus rather narrow; cucullus normally spined.

Female genitalia. Sterigma erected-V-shaped, with dilated tops. Colliculum weak. Signum, a small scobination (or absent).

This is also a Palaearctic genus and may remain further untreated.

### Apotomis Hübner, 1825

*Apotomis* Hübner, 1825: 380 (type-species, *A. turbidana* Hübner = *A. corticana* Hübner, by subsequent designation of Fernald, 1908). — Fernald, 1908: 10, 36 (syn. of *Olethreutes* Hübner, type design.: *A. corticana*). — Hannemann, 1961: 187 (German spp.). — Bentinck & Diakonoff, 1968: 159 (Dutch spp.).

*Aphania* Hübner, 1825: 386 (type-species, *A. scriptana* Hübner, by subsequent designation of Fernald, 1908). — Fernald, 1908: 13, 57 (syn. of *Olethreutes* Hübner). — Fletcher, 1929: 18. — Clarke, 1958: 300.

*Limma* Hübner, 1825: 380 (type-species, *Tortrix inundana* Denis & Schiffermuller, by subsequent designation of Fernald, 1908). — Fernald, 1908: 10, 56 (syn. of *Olethreutes* Hübner). — Fletcher, 1929: 127.

*Antithesia* Stephens, 1829: 172 (type-species, *Apotomis corticana* Hübner, by subsequent designation of Westwood, 1840). — Westwood, 1840: 107 (type design.). — Fernald, 1908: 22, 57 (syn. of *Olethreutes* Hübner). — Fletcher, 1929: 17.

*Brachytaenia* Stephens, 1852: 25 (type-species, *Tortrix semifasciana* Haworth, 1811, by monotypy). — Fernald, 1908: 35, 57 (syn. of *Olethreutes* Hübner). — Fletcher, 1929: 35.

With the superficial characters of *Olethreutes* Hübner, but with vein 11 in the fore wing usually from middle of cell.

Hind wing with veins 3 and 4 connate from angle.

Male genitalia. Tegumen high and well-developed. Uncus moderate, little sclerotized, rather weak, slightly bristled on and under top. Socius large, very densely bristled, pending and appressed. Gnathos, a slender weak transverse band. Valva sinuate, very slender at base, long, cucullus clavate, top of sacculus with a strong rounded process, clothed with thorns. Other spine clusters absent.

Female genitalia. Sterigma moderate, oval, or reduced to ostium which is pear-shaped, with moderately thickened edge. Ductus bursae punctulate throughout, colliculum indicated by concentric structure. Signa two, small semispherical knobs.

A group of closely allied species, most numerous in the Holarctic region, but occurring all over the world. In South Asia only a few stragglers.

### Key to the *Apotomis* species treated

1. Ground colour before apex forming a white band or patch, paler than space beyond basal patch; anterior edge of central fascia indefinite. . . . . 2
- Ground colour before apex and termen not much paler than space beyond basal patch; central fascia triangular, with top on end of cell or on dorsum, anterior edge well-defined . . . . . 3
2. Dark marginal streak from apex reaching tornus; no black spot on base of dorsum  
*cuphostra*

- Dark marginal streak from apex not reaching tornus; a black well-defined spot on base of dorsum . . . . . *lactefacies*
- Dark marginal streak indefinite, confluent with other markings, which do not reach tornus; spot on base of dorsum indefinite . . . . . *generosa*
- 3. A slender terminal spot, fasciate, to 3/4 of costa; central fascia to dorsum; basal patch indefinite. . . . . *trigonias*
- Terminal spot thick and clavate, not reaching costa; central fascia only to fold; basal patch dark and well-defined on costal half . . . . . *formalis*

**Apotomis trigonias spec. nov.**

(fig. 725)

♂ 14 mm. Head dirty white, vertex pale grey. Palpus pale grey; median segment rough along edges; terminal segment darker; pointed. Thorax pale grey, a subapical and a broader postmedian dark fuscous-grey transverse band; apical tuft white, grey anteriorly; tegula with a dark basal and a larger apical spot. Posterior tibia little thickened, with closely appressed scales, dilated and concave above, pecten from base to apex, pale ochreous, black at base. Abdomen pale fuscous-grey.

Fore wing oblong-truncate, costa moderately curved, almost straight in middle, apex obtusely rectangular, termen concave above, gently rounded below, hardly prominent. White with a silky gloss. Basal patch to 1/3, ill-defined, of suffused grey marbling, with some darker spots on costa, edge above oblique, below obscured by a patch of grey suffusion along median half of dorsum, which is tending to form vertical darker grey strigulae; transverse fascia well-defined, forming an almost vertical median triangle, with anterior edge slightly concave, posterior slightly projecting below middle; this fascia occupying median third of costa, narrowed almost to a point on dorsum, upper half grey with faint paler spots along costa, lower half brownish-fuscous; this fascia including a jet-black horizontal dash in upper half of cell posteriorly and a dot on closing vein; three grey spots on costa posteriorly, ultimate apical, two preceding continued across wing by suffused grey rather straight fasciae, gently dilated posteriorly, upper to termen below apex, lower to and along lower half of termen; a third parallel but narrow line from end of transverse fascia on costa to tornus; abruptly curved inwards at end; a grey triangular spot on end of dorsum. Cilia (imperfect) white, except on basal third suffused and barred with dark grey.

Hind wing fuscous-grey with a bronze gloss, apex darker, base paler. Cilia light fuscous-grey with a pale basal line.

Male genitalia. Uncus long, slender, hooked. Socius large, triangular. Tuba analis darkly sclerotized. Gnathos small, weak, spindle-shaped, median part constricted. Sacculus triangular, Spc<sub>1</sub>, a sheaf of short strong spines; apical process of sacculus curved, with one downwards-directed thick spine; cucullus simple, reniform, moderately curved.

East Java, Tengger Mts., Nongkodjadar, 1300 m, Mt. Toenggangan, 21.x.1940

(A. M. R. Wegner), 1 ♂, holotype, genit. slide 7640 (LM). Very distinct by the presence of a spiny  $Spc_1$ .

***Apotomis lacteifacies* (Walsingham, 1900) comb. nov.**

*Argyroploce lacteifacies* Walsingham, 1900: 236, no. 931 (2) (♂, Japan).

*Olethreutes lacteifacies*; Inoue, 1954: 105 (Japan: Hokkaido, Honshu).

*Aphania lacteifacies*; Issiki, in Esaki, 1957: 73, pl. 12 fig. 360 (Japan; fig. too dark).

*Aphanina lacteifacies*; Inoue c.s., 1959: 263, pl. 176 fig. 1 (sic; Japan).

Distribution. Japan (Hondo).

"Japan, 1886 (Pryer)" Walsingham Coll. 70152 and 70151, 1 ♂ and 1 ♀, respectively. Honsyu, Kinki, Nisinomya, 22.vi.1949, 4.vii.1949 (S. Issiki), 1 ♂, 1 ♀, genit. slides 8096 and 8095, respectively (BM).

White, with cloudy, pale slaty grey spots on costa and dorsum, more or less confluent, the costal spot subtriangular, spotted with darker grey, the dorsal, oblong, towards base with an irregular black spot; apex marbled with slaty grey.

Hind wing grey-fuscous.

Male genitalia. Uncus rather fleshy, bristled. Socius large, pending, triangular, thinly scaled. Gnathos sclerotized, ring-shaped, with a rising and produced point in middle. Transtilla present, a slender band with down-curved ends. Valva deeply excised before middle; sacculus with a prominent bristly apical process,  $Spc_1$ , a patch of short dark spines halfway process and base; cucullus clavate. Aedeagus short, cornuti numerous, very small.

Female genitalia. Ostium wide, round, edge band-like; sterigma, a weak plate around this. Colliculum long, narrowed. Signa, two moderate scobinations.

The male genitalia are rather different from those of the type-species, but in my opinion the species should be assigned to *Apotomis* Hübner nevertheless.

***Apotomis generosa* (Meyrick, 1909) comb. nov.**

*Argyroploce generosa* Meyrick, 1909: 594 (♂♀, Assam). — Clarke, 1955: 146.

*Aphania generosa*; Clarke, 1958: 300, pl. 149 figs. 2-2a (lectotype ♂ designated, wings, genitalia figured).

Distribution. Assam: Khasi Hills.

A moderate, dark species, with characteristic *Apotomis* markings somewhat reduced and rather variable, in the lectotype as follows: a broad, whitish oblique transverse fascia at 3/4, to termen above tornus, preceded by a short similar and parallel, suffused streak on end of dorsum; a short whitish median streak from base.

Hind wing pale yellow-ochreous, partly infuscated, more so in female.

Male genitalia. Tegumen much higher than broad, robust. Uncus moderate, obtuse, little differentiated. Socius large, curved-oval. Gnathos slender, trapezoidal. Valva

narrow, long and clavate, sacculus with a moderately prominent  $\text{Sp}_{c2}$ , at  $1/3$  of length of valva. Aedeagus moderate, slender, curved.

Female genitalia not studied.

***Apotomis formalis* (Meyrick, 1935) comb. nov.**

*Polychrosis formalis* Meyrick, 1935: 57 ( $\delta$ , China). — Clarke, 1955: 143.

*Lobesia formalis*; Clarke, 1958: 468, pl. 233 figs. 2-2a (lectotype  $\delta$  design., wings, genit. figured).

Male genitalia. Tegumen high and rather narrow. Uncus slender, pointed. Socii moderate. Gnathos with lower edge sclerotized. Valva long and very slender,  $\text{Sp}_{c3}$  well-developed.  $\text{Sp}_{c1}$  larger,  $\text{Sp}_{c2}$  small, marginal, both upon elevated short harpes, well-separated. Cucullus slender, clavate, curved. Aedeagus much narrowed, rather long.

Females unknown.

Fore wing white with grey or fuscous basal patch, mixed with darker, edge obtusely angulated in middle; upper half of central fascia forming a dark fuscous trapezoidal blotch over median  $1/3$  of costa; wing between markings more or less marbled and suffused with grey or fuscous; lower half of central fascia indicated by paler fuscous suffusion; some three dark spots on costa posteriorly, last apical; an oblique dark fuscous terminal mark.

Hind wing grey-fuscous.

***Apotomis cuphostra* (Butler, 1879) comb. nov.**

*Penthina cuphostra* Butler, 1879: 80, pl. 60 fig. 8 (sex?, Japan).

*Aphania cuphostra*; Issiki, in Esaki, 1957: 73, pl. 12 fig. 358 (Japan). — Inoue, 1954: 109.

Distribution. Japan (Honshu).

A robust species with the characteristic *Apotomis* pattern: grey, marbled with darker fuscous and white and with a broad subterminal white band; this band emitting a downcurved slender process into upper half of median fascia and another towards upper part of termen; the latter process thus separating a pale fuscous streak, rising from middle of termen to vein 7 posteriorly and containing two black horizontal marks.

Hind wing subpellucent fuscous-grey, dusted with darker, veins darker.

Male genitalia. Characteristically *Apotomis*-like. Uncus slender. Socius moderate, oval-triangular. Transtilla straight, very weak, at the ends finely scobinate. Socius process large, spiny on top and along anterior edge, cucullus clavate and sinuate. Aedeagus long, slender, narrowed and curved; cornutus, a single strong and long spine.

Female genitalia not available.

Japan, Tyubu-Nagano, Utukusigahara, 18.v.1953 (T. Rodama), 1  $\delta$ , genit. slide 8095 (KM).

**Pseudohermenias** Obraztsov, 1960

(pl. 9 figs. 1-3)

*Pseudohermenias* Obraztsov, 1960: 471 (type-species, *Phalaena (Tortrix Coccyx) claustraliana* Saxesen, by original designation). — Hannemann, 1961: 203 (German spp.). — Bentinck & Diakonoff, 1968: 172 (Dutch occurrence).

Male genitalia. Tegumen broad and rather short; uncus a broad hook. Socii pending. Gnathos, a rigid, smooth transverse band. Valva with a dilated sacculus,  $Spc_2$  a dense marginal series of curved short spines. Cucullus strongly constricted, clavate.

Female genitalia. Sterigma, a short dark tube. Colliculum rather broad. Signum single, small, cornute.

A Palaearctic genus.

**Selenodes** Guenée, 1845

(pl. 10 figs. 1-3)

*Selenodes* Guenée, 1845: 26 (type-species, *S. dalecarliana* Guenée, by subsequent designation of Fernald, 1908). — Fernald, 1908: 29, 57 (type design., syn. of *Olethreutes*). — Fletcher, 1929: 202 (syn. of *Argyroploce*). — Falkovitch, 1966: 222 (*Selenodes hamtchadala* spec. nov.).

*Olethreutes*; Hannemann, 1961: 207, fig., no. 425.

Head with appressed scales, moderately spreading on crown, a small tuft on forehead. Ocellus posterior. Proboscis diversely developed. Antenna in male moderately thickened and subserrulate, short-ciliate, or ciliations under 1. Palpus moderate, porrected, median segment triangularly dilated posteriorly, roughish along top and lower edge, terminal segment moderate, slightly drooping, obtuse. Thorax without a crest. Posterior tibia moderately thickened by closely appressed hair scales above, a dark pencil from base not reaching top of tibia.

Fore wing suboval, rather broad, apex more or less rounded. Vein 2 from before  $2/3$ , 3 from angle, 4 closer to 3, 7 separate, to termen, 7-9 tolerably equidistant, 8 from angle, 11 from before middle, chorda from  $2/3$  between 11 and 10, to just below base of 7, median branch from towards base to base of 5.

Hind wing with cubital pecten, 2 from  $2/3$ , 3 and 4 separate, 3 from angle (in the following species, 3 and 4 connate), 5 moderately approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen of *Olethreutes* type. Uncus rather broad, not dilated, top rounded and notched. Socius moderate, elongate-oval, pending, its outer edge soldered to tegumen. Gnathos, a membraneous band, its extremities sclerotized. Valva long and rather slender, sacculus over  $1/2$ , with a submedian strong spike, posterior half with  $Spc_{1+2}$ , a large discal patch of spines, a marginal series of long scythe-like spines. Cucullus obliquely oval. Aedeagus sclerotized, with an upcurved apical strong hook or gully.

Female genitalia. Sterigma gently sclerotized, inverted-trapezoidal, ostium proper ovate, with a frontal longitudinal split with thickened, aciculate edge. Colliculum not longer than ostium. Signa absent, indicated by two fields of condensations of normal structure.

Type-species, *Selenodes dalecarliana* Guenée, 1845 (Palearctic region).

An off-shoot of the *Olethreutes* group, characterized by a distinct valva and sclerotized, armed aedeagus. Superficially the single South Asiatic species slightly resembles a Tortricid (as also does the type-species!).

***Selenodes caryocryptis* (Meyrick, 1932) comb. nov.**

(figs. 726, 731)

*Tortrix caryocryptis* Meyrick, 1932: 342 (♂, Kashmir). — Clarke, 1955: 75.

*Olethreutes caryocryptis*; Clarke, 1958: 492, pl. 245 figs. 1-1a (holotype, ♂, wings, genit. figured).

Distribution. Kashmir.

The fore wing is fuscous with chestnut-brown markings of tortricine type which deceived the original author; these markings are as follows: an ill-defined transverse band at 1/3; a transverse fascia, moderately broad and almost vertical, slightly post-median, with irregularly serrate edges and marked with black; a broad band along about terminal fourth, suffused with dark fuscous before apex and in tornus.

Hind wing dark grey, costal half pale.

Male genitalia, as described with the genus. Female unknown.

Kashmir, Gulmarg, 8800 ft, June (T. B. Fletcher), a single specimen in BM.

As Clarke's photograph of the genitalia of the unique type-specimen did not show sufficient details of the armature of the valva, the genitalia have been remounted and slightly more flattened, as can be seen in my figures.

*Olethreutes* group of genera

Tegumen high, narrowed. Uncus present, usually slender and hooked. Socii moderate. Valva with a tendency to form an oblique transverse ridge, diversely spined, sometimes with a free apical process; sacculus diversely sculptured, flat, concave or double concave with a vertical transverse ridge. Spc diversely shaped.

***Euobraztsovia* Diakonoff, 1966**

*Euobraztsovia* Diakonoff, 1966: 39, figs. 12-13, 57 (type-species, *Argyroploce chionodelta* Meyrick, by original designation).

Proboscis vestigial. Antenna moderately thickened in male, pubescent. Palpus curved and ascending, median segment rather long, not dilated, roughish below, terminal segment moderate, obtuse. Thorax with crest. Posterior tibia in male normal, without a pencil.

Fore wing suboval, termen sinuate. Vein 2 from beyond middle, 3 from angle, sinuate and approximated at margin, 7 separate to termen, 8 from angle, 9 close to 8,

10 from beyond middle distance 9-11, 11 from middle of cell, chorda from halfway 11-10 to 7, median branch to 4.

Hind wing with pecten, 2 from beyond middle, 3 from angle, 4 separate, 5 gradually approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather short, with broad legs, narrowed. Uncus and socii together forming an arrowhead-shaped body, with truncate top. Gnathos apparently absent. Valva with basal half broad,  $Spc_1$  of short spines, sacculus with a clavate free top;  $Spc_2$  marginal, to beyond base of cucullus. Base of cucullus with a curved ridge, ending in a spiny marginal prominence, cucullus curved, clavate, narrow, with strong spines.

Female genitalia. Eighth segment elongate, darkly sclerotized and granulate throughout, in front strongly emarginate and with a long and a short process on each side. Colliculum narrow. Signa cornute, on scobinate basal plates.

The genus stands rather isolated among the cornute genera, but might be closest to *Dudua* Walker.

#### *Euobraztsovia chionodelta* (Meyrick, 1911)

(figs. 699-703)

*Argyroploce chionodelta* Meyrick, 1911a: 274 (♂, Queensland). — Clarke, 1955: 84. — Diakonoff, 1966: 8, figs. 12-13.

*Euobraztsovia chionodelta*; Diakonoff, 1966: 40, figs. 12-13, 57 (type-species; genit. ♂, ♀, wing neuration and head figured).

Distribution. Australia: Queensland.

Bismarck Is., St. Matthias Id., vi.1923 (A. F. Eichhorn), 1 ♂, 1 ♀, (without abdomen and hind wings).

East Papuan Is. d'Entrecasteaux Is., Fergusson Id., 1-9.x.1894 (Meek), 1 ♂ (BM).

West New Guinea, Schouten Is., Biak Id., 8.iv.1952 (L. D. Brongersma c.s.), 1 ♀, genit. slide 6597. Central New Guinea, Stars Range, Ok Sibil, 1200 m, v.1959 (Netherl. Stars Range Expedition, 1959) (LM).

Rather dark grey, marbled with dark fuscous, basal patch to 1/3, transverse fascia indicated by a black subtriangular spot on middle of costa and some marbling below this; a snow-white triangular patch before middle of dorsum, pointed top reaching to middle of wing, in female sometimes absent; a round or upright-oval, snow-white spot in tornus, reaching above middle of wing, including a pair of grey points.

Hind wing pale fuscous-greyish.

Male genitalia. Tegumen broad below, narrowed. Uncus pointed, together with pending socii forming a triangular body, top with membraneous prominences. Gnathos, a short membraneous band. Valva sinuate, sacculus portion broad, with a clavate apical process;  $Spc_1$ , a moderate sheaf; a curved ridge running at foot of cucullus bristles, ending in a ventral process. Cucullus slender, curved, top rounded.

Female genitalia. The entire genital segment rigidly sclerotized, with short lateral

lobes. Sterigma proper transverse, with a V-shaped excision and rounded prominence at the sides. Colliculum moderate, narrowed. Signa, two short horns with round basal plates.

**Stictea** Guenée, 1845 stat. nov.

(fig. 647, pl. 10 figs. 4-6)

*Stictea* Guenée, 1845: 27 (type-species, *Tortrix flammeana* Frölich [= *Phalaena Tortrix mygindiana* Denis & Schiffermüller], by original designation).

Hitherto regarded as a synonym of *Olethreutes* Hübner; the type-species is sufficiently distinct to warrant a separation.

With the characters of *Olethreutes* Hübner, but with distinct male genitalia, the valva having a gradually rounded sacculus, only slightly broader than cucullus, without any external concavities; instead there is a complicated excavation in the disc of sacculus, partly covered by a ventral process with a thorn and there is also a marginal  $Spc_3$ , extending along less than median half of the valva. Not a single *Olethreutes* known to me at present possesses a similar, peculiar valva; if there are one or more  $Spc_3$ , these are isolated bunches or sheaves of long bristles or bristly hairs (in a few North American *Olethreutes* species).

In the female, the strongly extended sterigma is also unusual. Signa are absent.

There is only one Palaearctic species, *Stictea mygindiana* (Denis & Schiffermüller).

*Olethreutes* sensu stricto group of species

In order to identify a few stragglers of this group, occurring in tropical Asia, I was compelled to investigate and revise the generic status of the complex of Holarctic species, assigned to this group. However, the steps taken are tentative; we shall be able to survey the entire group only after having investigated the genital characters of every species of the world fauna, which is still far from being achieved.

The present "*Olethreutes-Argyrofloce*" group forms the core of the tribe Olethreutini. The large number of species belonging to the "highest", i.e. most apomorphic, Olethreutini have long been assigned by older authors either to "*Argyrofloce*" or to "*Olethreutes*". The superficial characters of these species are uniform to a high degree and their classification remained vague and unsatisfactory until the introduction of the genital characters, first by Pierce and Metcalfe (1922), followed by Heinrich (1926). It then became possible to separate a number of obviously distinct genera first: the diagnoses of *Polychrosis* Ragonot, *Bactra* Stephens, *Apotomis* Hübner, *Olethreutes* Hübner, *Eudemis* Hübner, *Argyrofloce* Hübner, *Phiaris* Hübner, and *Celypha* Hübner have been re-defined by Pierce and Metcalfe, among the British species. To *Olethreutes* Hübner seven species were assigned. When revising the North American species, Heinrich adopted only the first four of the above genera (*Apotomis* under the name *Aphania* Hübner), but re-defined "*Hedia*" Hübner, *Sciaphila* Treitschke, *Phaecasio-*



*phora* Grote and *Episimus* Walsingham and added to the old *Olethreutes* complex not less than nine genera of his own. With respect to the *Olethreutes-Argyroploce* group proper, Heinrich abandoned *Argyroploce* Hübner, but used *Exartema* Clemens instead, and combined heterogeneous forms in his "*Olethreutes*".

Meyrick suppressed the name *Olethreutes* Hübner on behalf of *Argyroploce* Hübner which is incorrect, since *Olethreutes* dates from 1822 and has not less than three years' priority above *Argyroploce*. The validity of the genus-group name *Olethreutes* Hübner is beyond any doubt, as it is a monotypic genus, with the type-species *Phalaena arcuella* Clerck, 1759.

Somewhat less clear is the position of the generic name *Argyroploce* Hübner, 1825, of which the type-species is *Phalaena Tortrix arbutella* Linnaeus, as far as I was able to ascertain, by the subsequent designation of Fernald, 1908.

The crux of the present problem, however, is the question whether *arcuella* and *arbutella* are congeneric. Contrary to Meyrick's opinion, several modern authors (Heinrich, Obraztsov, Hannemann) followed Pierce & Metcalfe (1922) and declared that these two species are generically distinct, the differences considered being present only in the structure of the male genitalia, in particular, in the shape of the valva.

I have studied several Palaearctic species and compared them closely with the excellent figures of the genitalia of the Nearctic ones, published by Heinrich (1926). After due consideration, I finally arrived at the following conclusion.

It is true that the valvae of *arcuella* and *arbutella* appear to differ considerably. However, each of these species represents an extreme form. Although initially it seems easy to separate and characterize a number of "*Argyroploce*" species (with the valva derivable from that of *arbutella*), these species show considerable plasticity of the structure of the sacculus, in the sense that the characteristic *arbutella* appearance becomes shallow and less and less defined at the supposed opposite end of the series of those species.

On the other hand, it was difficult to distinguish the species of the veritable "*Olethreutes*" type, because of their being rare, *arcuella* having been the only representative for a long time; it was only recently that Falkovitch (1959, 1960) described two closely allied species from the Far East. The characteristics of *arcuella* are of a more generalized and little pronounced type, which makes the separation of this group hazardous. Besides, a number of species apparently represent an intermediate type between *arcuella* and *arbutella* types, to a certain degree merging into one another.

Therefore I finally preferred to maintain the one-genus concept for this group, under the generic name *Olethreutes* Hübner, 1822, of which *Argyroploce* Hübner, 1825, is a junior synonym. A separation of even a subgenus under the latter name, applied to the whole Holarctic fauna, proves to be artificial and impracticable, and therefore unsatisfactory.

**Olethreutes** Hübner, 1822

(fig. 648, pl. 11 figs. 1-3)

*Olethreutes* Hübner, 1822: 58-67, 69 (type-species, *Phalaena arcuella* Clerck, by monotypy). — Fernald, 1908: 3, 54.

*Argyroploce* Hübner, 1825: 379 (type-species, *Phalaena Tinea arbutella* Linnaeus, by subsequent designation of Fernald, 1908: 9, 56).

*Phiaris* Hübner, 1825: 381 (type-species, *Tortrix micana* Hübner [= *Sericoris olivana* Treitschke], by subsequent designation of Fernald, 1908: 11, 56).

*Roxana* Stephens, 1834: 118 (type-species, *Phalaena arcuella* Clerck, by monotypy). — Fernald, 1908: 27, 54.

*Mixodia* Guenée, 1845: 26 (type-species, *Pyralis schulziana* Fabricius, by subsequent designation of Fernald, 1908: 29, 57).

*Melodes* Guenée, 1845: 27 (type-species, *Phalaena arcuella* Clerck, by subsequent designation of Fernald, 1908: 19, 57). — Fernald, 1908: 30, 54.

*Exartema* Clemens, 1860: 356 (type-species, *E. permundana* Clemens, by subsequent designation of Fernald, 1908). — Fernald, 1908: 39, 59 (type designation; syn. of *Cymolomia* Lederer). — Walsingham, 1900: 129.

*Loxoterma* Busck, 1906: 305 (type-species, *Tortrix latifasciana* Haworth [= *Tortrix aurofasciana* Haworth], by original designation), pl. 12 figs. 1-3.

*Exartema* Heinrich, 1926, nec Clemens, 1860 (type-species, *Exartema nitidana* Clemens, by original designation).

The following is the diagnosis of *Olethreutes arcuella* Clerck.

Head with appressed, rather short scales. Ocellus posterior. Proboscis vestigial. Antenna in male moderately ciliated. Palpus ascending, close to face, median segment curved, with loosely appressed long hair-scales, rather loosely projecting along edge, terminal segment slender, porrected. Thorax without crest. Posterior tibia with normal, smoothly appressed scales, only above slightly raised, a slender pencil in shallow groove from base submedially.

Fore wing with 2 from 2/3, 3 from angle, 4 closer to 3, not approximated at margin, 7 separate, to termen, 7-9 about equidistant, 8 from angle, 10 from 2/3 distance 11-9, 11 from before middle, chorda from halfway 10-9, to base of 7, median branch to half-way 5 and 4; dorsum with a slender marginal roll.

Male genitalia are elaborated below.

Female genitalia. Sterigma diversely shaped, a large transverse, triangular or sub-oval plate, ostium a large, median split from upper edge, with thickened and aciculate edges, more or less U-shaped with thickened base. Signum, a small semispherical scobination, or absent.

Here follows a description of *O. arbutella* (based on material from France).

Head with appressed scales. Ocellus posterior. Proboscis vestigial. Antenna in male short-ciliate. Palpus porrected, triangularly dilated by rather closely appressed scales, terminal segment very short, almost concealed. Thorax smooth. Posterior tibia with moderate roughish appressed scales above, less dense beneath, with a slender pencil from base to middle of tibia.

Fore wing with vein 2 from 2/3, 3 from angle, 4 closely approximated at base, not approximated at margin, 7 free to termen, 7-9 tolerably equidistant, 10 from beyond

middle of distance 11-9, 11 from middle of cell, chorda from halfway 11-10, to just above base of 7.

Hind wing  $1\frac{1}{2}$ , semioval-trapezoidal, with a cubital pecten. Vein 2 from  $\frac{2}{3}$ , 3 and 4 short- or very short-stalked in male, connate in female, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia discussed below.

For the purpose of further subdivision of *Olethreutes*, I divided the Palaearctic representatives into four subgenera according to the distinct structure of the sacculus of the valva. This division was facilitated by the recent assignment of four rather obscure elements of "*Argyroplote*" into distinct genera, viz., *Piniiphila* Falkovitch (type-species: *bifasciana* Haworth = *Sericoris decrepitana* Herrich-Schäffer, from "*Olethreutes*"), and *Selenodes* Guenée (*S. dalecarliana* Guenée), both by Falkovitch. Of *Capricornia* Obraztsov (*Carpocapsa boisduvaleana* Duponchel) and *Celypha* Hübner (*Phalaena Tortrix striana* Denis & Schiffermüller), both by Obraztsov (1960), from "*Argyroplote*". *Celypa* (lapsus) has been already introduced by Pierce & Metcalfe (1922).

On the other hand, I am unable to accept the generic separation of *Paracelypha* Obraztsov from *Olethreutes*, because the only difference is that the median keel of the sacculus is covered throughout with small identical spines (pl. 12 figs. 4-6); in my opinion, it represents a subgenus. Furthermore, the name *Paracelypha* should be suppressed in favour of *Syricoris* Treitschke, 1845. Nor is there a place in the following survey for the generic name *Argyroplote* Hübner, 1825, as has already been stated.

Male genitalia (fig. 635, pl. 11 figs. 1-3) with sacculus thickened, seldom simple (*arcuella* type), mostly strongly corrugated, with a deep internal concavity and another external concavity opposite this, separated from each other by a sinuate ridge or keel, from ventral edge towards base crossing to costa of valva near base of cucullus; this keel with strong unequal spines at one or both extremities, seldom in middle; ventral edge of sacculus sometimes with a digitoid moderate process, spiny on top, located either at base, in middle or at top of marginal concavity of sacculus; sacculus edge seldom strongly prominent and seldom with a large rigid column-like median process (*arbutella* type, fig. 636).

Female genitalia. Sterigma diversely shaped, usually a large sclerite with lateral tumescences, above forming more or less pointed projections. Signum, a small scobination, or absent.

Heinrich (1926) tried to separate North American "*Exartema*" from *Olethreutes* on the basis of the presence of a dorsal lobe in the male hind wing in all *Exartema* species. However, this is a secondary character, subject to considerable variation; it has no generic value. As to the male genitalia, "*Exartema*" is closely related with *Olethreutes arbutella* (Linnaeus), and several "*Exartema*" species show a series of transitions from this type (with an exaggerated, triangularly extended sacculus) to that of *O. aurofasciana* (Haworth), with flatly rounded sacculus, another extreme. Heinrich's concept of *Exartema* actually is somewhat different from the original one of Clemens, since

his type-species, *E. nitidana*, is closely allied too but distinct from the actual type-species of the original *Exartema* Clemens, 1860, viz., *E. permundana* Clemens.

This genus is a large one to which most species of the *Olethreutes* group belong. A preliminary list of the Holarctic species, as far as I was able to ascertain them, follows. Presumably many more species will be assigned to the present genus in the course of time.

Hoping to have an opportunity to deal with the Palaearctic species of *Olethreutes* at a later date, I have abstained from listing them at present; but contrariwise, not expecting to have a chance to return to the Nearctic species, I deem it useful to attach a list of them below.

When treating the spelling of the species-group names concerned I have followed my own opinion as to the orthography of these names in the Tortricidae, which I have set out in an earlier paper in Dutch (Diakonoff, 1967). A translation of the following paragraphs (p. 172) may be useful here.

"However, all names with predetermined suffixes, which were used by Linné and came into vogue with the classical authors, who followed him, for instance *-ana* for the Tortricidae, *-ella* for the Tineidae, *-alis* for the Pyralidae, *-ata* or *-aria* for the Geometridae, etc., are not existing Latin words and are therefore not true adjectives but only barbarisms, or, as is the official term, "combinations of letters". Therefore, in accordance with Art. 32 of the Code, this kind of names, viz., their suffixes, should not be changed, but should be used in the original spelling. Thus, it should be "*Archips oporana*" not "*oporanus*".

"It is remarkable that sufficient attention has not been drawn so far to the character of these species-group names which, as is generally known, are very numerous, especially for the Palaearctic Lepidoptera. Even such specialists as the late Obraztsov and also Hannemann have tried to apply rule 30 to these species-group names; names changed by them as to the endings now fall under the category of "incorrect subsequent spelling". Bradley wisely did not do this, but he also failed to indicate his reason for it".

Consequently I do not in all cases treat the Tortricid species-group names with suffixes *-na* or *-ana* (sometimes *-ella*) as adjectives. Where they are not correct Latin words, I regard them merely as letter combinations, following the "Recommendations on the Formation of Names" of the International Rules, V (26): "An arbitrary combination of letters, used as a name in the species-group, should be treated as an indeclinable noun". Accordingly "*arcuata*" = arch-like, is a correct Latin adjective, but *arcuana*, *arcuatana* or *arcuella*, *arcuatella*, are no more than barbarisms. Only true adjectives should follow the gender of the genus-group name concerned (Art. 30), while the barbarisms, i.e. letter combinations, should remain unchanged, in the original spelling. For example, when transferring *Exartema mediopartitum* Walsingham to *Olethreutes* (gender: feminine) I use the spelling *Olethreutes mediopartita* (Walsingham), arguing that *Exartema* is neuter and *mediopartitum* is the neuter of a true Latin

adjective, meaning "parted through the middle". But when transferring *Exartema fraternanum* McDunnough, I wrote *Olethreutes fraternanum* (McDunnough), because "*fraternanum*" is not an adjective, and the correct word would have been "fraternum" (neuter of "fraternus"), etc. *Eccopsis olivaceana* Fernald, becomes *Olethreutes olivaceana* (Fernald): being a barbarism it is left in the original spelling which happens to have a feminine ending in this case.

Key to the South Asiatic subgenera of *Olethreutes*

1. Sacculus more or less distinctly excavated internally and externally, with in between a sinuate oblique ridge . . . . . 2  
— Sacculus with basal half more or less flattened, without ridge. . . . . 4
2. Sacculus deeply split longitudinally in two parts, dorsal spiny, ventral naked, with an apical spiny process . . . . . *Bisopa*  
— Sacculus not so deeply split, ventral part diversely shaped but not so strongly isolated; cucullus not distinctly clavate . . . . . 3
3. Transverse ridge of sacculus evenly covered with small dense bristles . . . *Syricoris*  
— Transverse ridge bristled either at base or at top, bristles large, unequal . . . . .  
*Olethreutes* (partim)
4. Cucullus more or less dilated at basal half, dilatation often with a process, usually crowned with a group of spines, seldom with a single spine; sacculus without process; hind wing usually with veins 3 and 4 connate . . . . . *Phiaris*  
— Cucullus dilated only at extreme base, without process; sacculus with a rounded apical process, crowned with a pencil-like  $Spc_3$ ; hind wing with veins 3 and 4 separate . . . . . *Olethreutes* (partim)

Subgenus *Olethreutes* Hübner, 1822 stat. nov.

(figs. 635, 636, 648, pl. 11 figs. 1-3; pl. 12 figs. 1-3)

*Olethreutes* Hübner, 1822: 58-67, 69 (type-species, *Phalaena arcuella* Clerck, by monotypy). — Fernald, 1908: 3, 54.

*Argyroploce* Hübner, 1825: 379 (type-species, *Phalaena Tinea arbutella* Linnaeus, by subsequent designation of Fernald, 1908: 91).

*Roxana* Stephens, 1834: 118 (type-species, *Phalaena arcuella* Clerck, by monotypy). — Fernald, 1908: 27, 54.

*Melodes* Guenée, 1845: 27 (type-species, *Phalaena arcuella* Clerck, by subsequent designation of Fernald, 1908: 19).

*Exartema* Clemens, 1860: 356 (type-species, *Exartema permundana* Clemens, by subsequent designation of Fernald, 1908: 39). — Walsingham, 1900: 129.

*Loxotermia* Busck, 1906: 305 (type-species, *Tortrix latifasciana* Haworth [= *Tortrix aurofasciana* Haworth], by original designation). — Heinrich, 1926: 129, fig. 390, pl. 12 figs. 1-3.

*Exartema* Heinrich, 1926: 128, figs. 11, 14, 18, 42, 204, nec Clemens, 1860 (type-species, *Exartema nitidana* Clemens, by original designation).

A list of Nearctic species of the subgenus *Olethreutes*

*Olethreutes (Olethreutes) monetiferana* (Riley, 1881) comb. nov., Trans. St. Louis Acad. Sci., 4: 317 (*Exartema*).

*Olethreutes (Olethreutes) nitidana* (Clemens, 1860) comb. nov., Proc. Acad. Nat. Sci. Philadelphia, 1: 356 (*Exartema*).

*Olethreutes (Olethreutes) foedana* (Clemens, 1865) comb. nov., Proc. Ent. Soc. Philadelphia, 5: 135 (*Sericoris*).

*Olethreutes (Olethreutes) furfuranum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 38 (*Exartema*).

*Olethreutes (Olethreutes) olivaceana* (Fernald, 1882) comb. nov., Trans. Amer. Ent. Soc., 10: 71 (*Eccopsis*).

*Olethreutes (Olethreutes) fraternanum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 39 (*Exartema*).

*Olethreutes (Olethreutes) subnubila* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 110 (*Exartema subnubilum*).

*Olethreutes (Olethreutes) electrofusca* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 110 (*Exartema electrofuscum*).

*Olethreutes (Olethreutes) rusticanum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 38 (*Exartema*).

*Olethreutes (Olethreutes) zelleriana* (Fernald, 1882) comb. nov., Trans. Amer. Ent. Soc., 10: 29 (*Eccopsis*).

*Olethreutes (Olethreutes) footiana* (Fernald, 1882) comb. nov., Bull. Buffalo Soc. Nat. Sci., 4: 53 (*Eccopsis*).

*Olethreutes (Olethreutes) atrodentana* (Fernald, 1882) comb. nov., Trans. Amer. Ent. Soc., 10: 71 (*Eccopsis*).

*Olethreutes (Olethreutes) punctanum* (Walsingham, 1879) comb. nov., Illustr. Lep. Het. Brit. Mus., 4: 37 (*Exartema*).

*Olethreutes (Olethreutes) cornanum* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 112 (*Exartema*).

*Olethreutes (Olethreutes) inornatana* (Clemens, 1860) comb. nov., Proc. Acad. Nat. Sci. Philadelphia, 1: 357 (*Exartema*).

*Olethreutes (Olethreutes) clavana* (Walker, 1863) comb. nov., List Lep. Het. Brit. Mus., 28: 395 (*Carpocapsa*).

*Olethreutes (Olethreutes) mediopartita* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 113 (*Exartema mediopartitum*).

*Olethreutes (Olethreutes) exoleta* (Zeller, 1875) comb. nov., Verh. zool.-bot. Ges. Wien, 25: 270 (*Exartema exoletum*).

*Olethreutes (Olethreutes) bicoloranum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 40 (*Exartema*).

*Olethreutes (Olethreutes) tenebrica* (Heinrich, 1926) comb. nov., Bull. U.S. Nat. Mus., 132: 144, fig. 74 (*Exartema tenebricum*).

*Olethreutes (Olethreutes) quadrifida* (Zeller, 1875) comb. nov., Verh. zool.-bot. Ges. Wien, 25: 268 (*Exartema quadrifidum*).

*Olethreutes (Olethreutes) tilianum* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 113 (*Exartema*).

- Olethreutes (Olethreutes) sciotanum* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 115 (*Exartema*).
- Olethreutes (Olethreutes) trepidula* (Heinrich, 1926) comb. nov., Bull. U.S. Nat. Mus., 132: 147, fig. 81 (*Exartema trepidulum*).
- Olethreutes (Olethreutes) nigranum* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 115 (*Exartema*).
- Olethreutes (Olethreutes) hippocastanum* (Kearfott, 1907) comb. nov., Bull. Amer. Mus. Nat. Hist., 23: 155 (*Exartema*).
- Olethreutes (Olethreutes) merrickana* (Kearfott, 1907) comb. nov., Bull. Amer. Mus. Nat. Hist., 23: 156 (*Exartema*).
- Olethreutes (Olethreutes) corylana* (Fernald, 1882) comb. nov., Trans. Amer. Ent. Soc., 10: 71 (*Eccopsis*).
- Olethreutes (Olethreutes) ochrosuffusanum* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 117 (*Exartema*).
- Olethreutes (Olethreutes) brunneopurpurata* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 118 (*Exartema brunneopurpuratum*).
- Olethreutes (Olethreutes) ferrugineanum* (Riley, 1881) comb. nov., Trans. St. Louis Acad. Sci., 4: 317 (*Exartema*).
- Olethreutes (Olethreutes) fagigemmaeana* (Chambers, 1878) comb. nov., Canad. Ent., 10: 74 (*Exartema*).
- Olethreutes (Olethreutes) sericoranum* (Walsingham, 1879) comb. nov., Illustr. Lep. Het. Brit. Mus., 4: 36 (*Exartema*).
- Olethreutes (Olethreutes) melanomesum* (Heinrich, 1923) comb. nov., Proc. Ent. Soc. Washington, 25: 119 (*Exartema*).
- Olethreutes (Olethreutes) valdanum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 38 (*Exartema*).
- Olethreutes (Olethreutes) versicolorana* (Clemens, 1860) comb. nov., Proc. Acad. Nat. Sci. Philadelphia, 1: 357 (*Exartema*).
- Olethreutes (Olethreutes) brevirostratum* (Heinrich, 1926) comb. nov., Bull. U.S. Nat. Mus., 132: 154 (*Exartema*).
- Olethreutes (Olethreutes) permundana* (Clemens, 1860) comb. nov., Proc. Acad. Nat. Sci. Philadelphia, 1: 356 (*Exartema*).
- Olethreutes (Olethreutes) submissanum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 40 (*Exartema*).
- Olethreutes (Olethreutes) nananum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 39 (*Exartema*).
- Olethreutes (Olethreutes) malana* (Fernald, 1882) comb. nov., Trans. Amer. Ent. Soc., 10: 72 (*Eccopsis*).
- Olethreutes (Olethreutes) appendicea* (Zeller, 1875) comb. nov., Verh. zool.-bot. Ges. Wien, 25: 275 (*Exartema appendiceum*).
- Olethreutes (Olethreutes) concinnana* (Clemens, 1865) comb. nov., Proc. Ent. Soc. Philadelphia, 5: 134 (*Sericoris*).

*Olethreutes (Olethreutes) concinnana terminanum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 41 (*Exartema terminanum*).

*Olethreutes (Olethreutes) fasciatana* (Clemens, 1860) comb. nov., Proc. Acad. Nat. Sci. Philadelphia, 1: 357 (*Exartema*).

*Olethreutes (Olethreutes) troglodanum* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 57 (*Exartema*).

*Olethreutes (Olethreutes) exaeresima* (Heinrich, 1926) comb. nov., Bull. U.S. Nat. Mus., 132: 160 (*Exartema exaeresimum*).

*Olethreutes (Olethreutes) ferriferanum* (Walker, 1863) comb. nov., List Lep. Het. Brit. Mus., 28: 343 (*Sciaphila?*).

The following species seem to be closely allied with *O. arcuella* Clerck.

*Olethreutes (Olethreutes) cosmundana* Kearfott, 1907, Trans. Amer. Ent. Soc., 33: 16.

*Olethreutes (Olethreutes) costimaculana* (Fernald, 1882), Trans. Amer. Ent. Soc., 10: 70 (*Penthina*).

*Olethreutes (Olethreutes) mengelana* (McDunnough, 1922), Canad. Ent., 54: 43 (*Argyroploce*).

It is less easy to interpret Heinrich's "*Olethreutes*" species after his photographs of the male genitalia, instead of his accurate drawings of "*Exartema*" species, available for the above list; therefore not all of his following "*Olethreutes*" could be identified with certainty.

*Olethreutes (Olethreutes) albiciliana* (Fernald, 1882) comb. nov., Trans. Amer. Ent. Soc., 10: 70 (*Sericoris*).

*Olethreutes (Olethreutes) chalybeana* (Walsingham, 1879) comb. nov., Illustr. Lep. Het. Brit. Mus., 4: 34 (*Sericoris*).

*Olethreutes (Olethreutes) bipartitana* (Clemens, 1860) comb. nov., Proc. Acad. Nat. Sci. Philadelphia, 1: 346 (*Antithesia*).

*Olethreutes (Olethreutes) deprecatoria* Heinrich, 1926 comb. nov., Bull. U.S. Nat. Mus., 132: 177 (*Olethreutes*).

*Olethreutes (Olethreutes) nordeggana* (McDunnough, 1922) comb. nov., Canad. Ent., 54: 46 (*Argyroploce*).

#### ***Olethreutes (Olethreutes) mori* (Matsumura, 1900) comb. nov.**

*Exartema mori* Matsumura, 1900: 196 (♂♀, Hokkaido, Honshu). — Inoue, 1954: 108, no. 609 (Hokkaido, Honshu). — Issiki, in Esaki, 1957: 70, pl. 11 no. 343 (*japonicum* Walsingham syn.). — Inoue c.s., 1959: 262, pl. 175 fig. 25 (*japonicum* syn.).

*Exartema japonicum* Walsingham, 1900: 126, no. 924 (4) (♂♀, Japan). — Inoue, 1954: 108, no. 612.

Distribution. Japan (Hokkaido, Honshu).

Food plant. *Morus alba* L. (a serious pest).



Japan, Tohoku, Hatimandai, 17.vii.1939 (S. Iosiki), 1 ♂, slide 8089; Tyubu-Gifu, Takayama, 22.vii.1954 (T. Kodama), 1 ♀ (KM). Kyushu, Hikosan, 24.v.1956 (T. Oku), 1 ♀ (LM).

Maritime district, Ussuriisk, 5.vii.1959, e l., 1 ♂, slide 8087; the same, 12.xii.1959 e l., 1 ♀ (M. Falkovitch) (LM).

An elegant species with warm brown ground colour, especially distinct on lower half of transverse fascia. Basal patch strongly marbled with whitish, dark grey; submedian and postmedian fasciae conspicuous, whitish-grey, first narrowed downwards, second extended, mostly pure white; postmedian ("central") fascia dark fuscous on upper half, a semioval dark spot on end of dorsum, anteriorly or on both sides flanked by grey suffusion, a curved fascia from middle of termen, grey; a dark fuscous dot in apex; costal strigulae greyish-white, rather short.

Hind wing fuscous-grey.

Male genitalia. Tegumen high, with shoulders. Uncus slender, hooked, top furcate. Socius rather small, oval. Gnathos membraneous, straight; tuba analis, long and slender. Valva with a thick rounded sacculus and slender, curved cucullus, Spc<sub>3</sub> one long slender sheaf; lower half of cucullus entirely with strong spines.

Female genitalia. Sterigma T-shaped, with ostium a strong free obliquely rising tube, originating from the base of the T; this tube moderately dilated above and below middle and with a split along the ventral side, dilated towards base. Colliculum absent. Cestum, a moderate median ring. Signum one, a scobinate rounded prominence.

The female genitalia are peculiar, but their principal shape is the same as in the type-species.

#### South Asiatic species

#### *Olethreutes (Olethreutes) niphodelta* (Meyrick, 1925)

(fig. 723)

*Argyroploce niphodelta* Meyrick, 1925: 143 (♂, Assam). — Clarke, 1955: 217.

*Olethreutes niphodelta*; Clarke, 1958: 531, pl. 264 figs. 3-3a (holotype wings, genit. ♂ figured).

Distribution. Assam: Shillong.

A very distinct, brightly marked species, dark purple-fuscous with black reflections, costa and dorsum with white dots; white triangular spot before middle; apical fourth of wing white, preceded by lilac-brown blotch on lower half of wing.

Hind wing grey; veins 3 and 4 connate, vein 8 from base, parallel to 4/5 of upper edge of cell which is obliterate basally; discoidal strongly concave.

Proboscis developed. Antenna in male gradually thickened towards base and gently serrulate, minutely ciliated. Crest on thorax double. Posterior tibia dilated with dense appressed and long scales above, short hairs beneath, a long hair-pencil from base above.

Male genitalia. Tegumen high, truncate and rather broad. Uncus long, conical, top hooked, appearing triangular. Socius long, broad at base, narrowed, curved and pend-

ing towards end. Gnathos indicated by lateral small transverse sclerites, otherwise submembraneous, apparently obliterate in middle. Valva long, narrow, curved; sacculus  $1/2$ , simple,  $Spc_1$  a patch of spread spines; cucullus densely covered with fine bristles, base obtusely prominent, with a suprabasal process bearing a single hooked spine. Aedeagus stout, moderate. Cornuti, a large sheaf of long spines.

Only the long, pending *socii* and the little-defined  $Spc_1$  are somewhat different from those of the type-species; therefore it seems perfectly justifiable to assign the species to *Olethreutes* Hübner.

***Olethreutes (Olethreutes) nubicincta* spec. nov.**

(figs. 708-709, 712)

♂ 14-16 mm. Head dark fuscous, rough tuft on vertex, mixed lighter and darker fuscous. Antenna fuscous, narrowly lighter ringed. Palpus fuscous, slightly dusted with darker, apex of median and entire terminal segment paler. Thorax light greyish-fuscous, slightly dusted with dark fuscous, tegula tinged brown with pale ochreous tip. Posterior tibia pale ochreous, with a slender short ochreous pencil from base above. Abdomen light fuscous, anal tuft pale ochreous.

Fore wing oblong-truncate, dilated, costa gently curved throughout, apex moderately pointed, termen straight (hardly sinuate), oblique, rather long. Pale ochreous, suffused with grey-purplish, except narrow edges to markings, finely transversely strigulated by dark fuscous, markings dark fuscous. Anterior half of costa with three small and two larger, triangular spots; basal patch represented by an oblique clavate marking from  $1/5$  of dorsum, rounded there, thence narrow, sinuate and fasciate, towards middle of costa but not exceeding upper edge of cell; a broad, well-defined and vertical transverse fascia, dark fuscous slightly suffused with tawny below anteriorly, anterior edge excavate below costa, thence almost straight, posterior edge with three equidistant large dentations: at  $1/4$ , in middle and in fold, median largest; space before fascia finely marbled with grey, posterior edge of fascia suffused with purplish-grey; posterior half of costa with four dark dots, last apical, second and third emitting grey curved streaks; an erect-oval spot on dorsum before tornus, a wedge-shaped large oblique mark rising from lower half of termen, a dark dot in apex followed by an oblique strigula on termen. Cilia (rubbed) dark fuscous with a pale basal line.

Hind wing light fuscous, thinly scaled. Cilia concolorous, with a darker subbasal band.

Male genitalia. Tegumen high, uncus absent. Socius voluminous, clavate, with a narrow base, densely short-spined throughout. Gnathos, a faint transverse bar. Valva narrow and long, sacculus with a triangular prominence in middle, another more obtuse, at top, opposite this a larger prominence of the costa,  $Spc_1$  with strong spines; a rounded prominence beyond top of sacculus with a dense curved  $Spc_2$ ; outer edge of sacculus posteriorly and its disc at end finely long-bristled. Aedeagus very long and slender, curved.

♀ 17-18 mm. Similar to the male but strongly suffused throughout with dark fus-

cous. Palpus longer and rougher, forewing broader, more dilated, costa more curved, apex more pointed, termen distinctly sinuate. Entirely evenly suffused with rather dark purple-grey, strongly obscuring markings of which the dorsal patch and the transverse fascia are distinct, fuscous-black and strongly suffused; costal markings reduced to small brown dots or absent, pretornal and terminal spots very faint, no dot in apex.

Hind wing deeper fuscous-purplish.

Female genitalia. Eighth segment sclerotized and densely aciculate throughout. Sterigma small and simple, an aciculate oval plate. Colliculum dark and short, a rather narrow bivalval tube. Ductus bursae gradually tortuous along upper third. Signum minute, denticulate.

West Java, Preanger, 5000 ft (Sijthoff), 1 ♂, holotype, genit. slide 5842. West Java, Mts. Gede-Panggrango, Tjibodas, 1400 m, 18.xii.1940 (A. Diakonoff), genit. slide 7450, 1 ♂, paratype. The same locality, viii.1949, 1 ♀, allotype, genit. slide 4990; iv.1949, 1 ♀, paratype, genit. slide 4559 (both, A. M. Neervoort). West Java, Tjampea near Buitenzorg, 150 m, 27.xii.1941 (A. Diakonoff), 1 ♂, paratype (LM).

#### ***Olethreutes (Olethreutes) notata* Walsingham, 1900**

*Olethreutes notata* Walsingham, 1900: 129, no. 924(9) (♂♀, Japan). — Inoue, 1954: 104, no. 577 (Hokkaido, Honshu).

Distribution. Japan: Yesso, Hokkaido, Honshu.

Japan, Yesso Id., 1882 (Pryer), "*Olethreutes notata* Wals., paratype" (BM), 1 ♂, 1 ♀, genit. slides 8156, 8157 (BM).

A distinct species, purplish-black with costal edge and less than basal half finely dotted with bright ochreous; a series of oblique, slightly curved short metallic blue-silvery streaks across wing. Cilia opposite apex and upper part of termen pale ochreous.

Hind wing black with whitish cilia.

Male genitalia. Tegumen rather broad. Uncus abruptly narrowed, very slender. Socius moderate, pending. Gnathos sclerotized at the sides only, forming suboval sclerites, in middle obliterate, tuba analis large. Valva with a large sacculus, cucullus slender; cucullus bristles together with  $Spc_1$  forming a large continuous oblique pecten.  $Spc_3$ , a broad sheaf;  $Spc_2$ , a small discal patch of bristles.

Female genitalia. Sterigma inverted-triangular with rounded angles, ostium, a median oval split, its lower half with a flat ring-shaped rim. Colliculum short. Signum one, a small elevated scobination.

#### ***Olethreutes (Olethreutes) euryopis* (Meyrick, 1937)**

*Argyroploce euryopis* Meyrick, 1937: 182 (♂, China). — Clarke, 1955: 136.

*Olethreutes euryopis*; Clarke, 1908: 508, pl. 253 figs. 3-3a (holotype ♂ wings, genit. illustrated).

Distribution. China.

The species is resembling a *Phaulacantha catharostoma* (Meyrick). Ochreous-white,

with blackish-grey, dusted with whitish; basal patch rather oblique, central fascia oblique and dilated, interrupted below costa and constricted on fold; space between basal patch and fascia greyish; four spots along costa posteriorly and apex suffused with ochreous, termen dark grey.

Hind wing grey.

Male genitalia. Sacculus strongly dilated, impressed in middle with an additional ridge within this, with a bristly  $Spc_2$ , lower angle of sacculus projecting, with a short sheaf of  $Spc_3$  bristles.  $Spc_1$  forming an oblique strong costal ridge; cucullus bristles forming a stellate prominent cluster of recurved spines.

Female unknown.

The unique type specimen originates from Likiang, China (BM).

***Olethreutes (Olethreutes) cerographa* (Meyrick, 1907)**

(figs. 280, 296)

*Argyroploce cerographa* Meyrick, 1907: 977 (♂, Ceylon). — Clarke, 1955: 80.

*Olethreutes cerographa*; Clarke, 1958: 496, pl. 247 figs. 1-1a (lectotype ♂ design., wings, genit. figured).

Distribution. Ceylon.

A small species with a dilated, rather pointed wing with a long, oblique termen; rather pale olive-fuscous ground colour and a conspicuous but suffused deep fuscous spot on middle of costa and a smaller apical spot; basal patch deep fuscous; transverse fascia in disc dissolved into a group of small dark dots not reaching dorsum; ocelloid spot oval, of ground colour, its outer edge formed by a well-defined white and silvery line, edged anteriorly with grey, strongly outwards-convex, sinuate in middle of disc; costa pale ochreous with dark suffused dots. Cilia glossy grey, white in tornus, around apex and opposite upper half of termen, with a dark fuscous basal line.

Hind wing semioval, pointed; bronze-fuscous gradually becoming paler towards base. Cilia glossy pale grey.

Male genitalia. Tegumen moderate, uncus rather weak, finely bristled (in holotype broken off, in the present paratype possibly damaged), rounded. Socii moderate, pending. Gnathos membraneous with upper edge indefinite, laterally distinct dark oblique rims; tuba analis membraneous. Valva long and slender, sacculus with a rather extended bristly  $Spc_1$ , cucullus with a spiny ridge; narrowed in middle, top clavate. Aedeagus rather short.

Female genitalia. Sterigma subquadrate, ostium + colliculum, a sclerotized funnel in its middle. (Bursa missing).

A small species of obscure relationship, placed here tentatively.

Ceylon, Maskeliya, ix.1906 (Pole), 1 ♂ and ix.1910, 1 ♀, Meyrick coll. (BM), genit. slides 6461 ♂, 6462 ♀.

**Olethreutes (Olethreutes) lobocasis** (Meyrick, 1936) comb. nov.

*Argyroploce lobocasis* Meyrick, 1936: 156 (♂, China). — Clarke, 1955: 190.

*Exartema lobocasis*; Clarke, 1958: 395, pl. 196 figs. 4-4a (holotype wings, genit. ♂ figured).

Distribution. China: Taishan.

A whitish, sparsely marked species. The holotype is somewhat rubbed. The light fuscous markings with an olive tinge are as follows. Basal patch angulate, of several transverse lines, point to  $1/4$ , preceded by similarly angulate line; central fascia somewhat suffused, constricted above middle, containing several spots and stripes of ground colour, posterior edge much serrate; posterior half of costa with some four pairs of large white marks narrowly parted and edged with fuscous; terminal spot rather large, oblique, subfasciate; ocelloid spot ill-defined, with traces of yellow suffusion.

Hind wing whitish, posterior half infuscated.

Male genitalia. Characteristically of the type of the present subgenus. Valva slender and curved, sacculus deeply impressed from outside, with an  $Spc_3$  of strong spines; transverse ridge of spines strong; cucullus with strong marginal spines.

Female genitalia unknown.

Subgenus **Phiaris** Hübner, 1825 stat. nov.

*Phiaris* Hübner, 1825: 381 (type-species, *Tortrix micana* Hübner [= *Sericoris olivana* Treitschke], by subsequent designation of Fernald, 1908). — Fernald, 1908: 11, 56 (type design., syn. of *Argyroploce* Hübner). — Pierce & Metcalfe, 1922: 49, pl. 17 (partim) (genit. ♂♀ British spp.).

*Mixodia* Guenée, 1845: 26 (type-species, *Pyralis schulziana* Fabricius, by subsequent designation of Fernald, 1908). — Fernald, 1908: 29, 57 (type design., syn. of *Argyroploce* Hübner).

*Olethreutes* Heinrich, 1926 (nec Hübner, 1822): 166, figs. 13, 40 (partim).

With superficial characters of the nominate genus, but with the male genitalia as follows: sacculus with basal half more or less flattened, without an oblique transverse elevation or ridge; cucullus more or less dilated at basal half, dilatation often with a lateral process, usually crowned with a bunch of spines, seldom with a single spine; sacculus without a ventral process.

Female with a single semiglobular scobinate signum.

The genitalia of a number of Palaearctic species have been depicted by Pierce & Metcalfe (1922), under the generic name *Phiaris* Hübner; and by Hannemann (1961), partly as *Argyroploce* Hübner, partly as *Olethreutes* Hübner. The genitalia of North American species have been illustrated by Heinrich (1926) as *Olethreutes*.

Here belong a number of Palaearctic species, hitherto assigned to the nominate subgenus.

A list of Palaearctic species of the subgenus *Phiaris*

*Olethreutes (Phiaris) olivana* (Treitschke, 1830), in Schmett. Eur., 8: 15 (*Sericoris*). — Pierce & Metcalfe, 1922: 50, pl. 17 (*Phiaris*). — Hannemann, 1961: 212, nr. 440.

*Olethreutes (Phiaris) palustrana* (Zeller, 1846) in *Isis*: 230 (*Sericoris*). — Pierce & Metcalfe, 1922: 50, pl. 17 (*Phiaris*). — Hannemann, 1961: 212, nr. 441.

*Olethreutes (Phiaris) metallicana* (Hübner [1796-1799]) in *Samml. Eur. Schmett.*, *Tortr.*: pl. 11 fig. 68 (*Tortrix*). — Pierce & Metcalfe, 1922: 49, pl. 17 (*Phiaris metallicana* Hübner). — Hannemann, 1961: 212, nr. 442.

*Olethreutes (Phiaris) schulziana* (Fabricius, 1777), in *Gen. Ins.*: 293 (*Pyralis*). — Pierce & Metcalfe, 1922: 50, pl. 17 (*Phiaris*). — Hannemann, 1961: 213, nr. 443.

*Olethreutes (Phiaris) schaefferana* (Herrich-Schäffer, 1847), *Syst. Bearb. Schmett. Eur.*, *Tortr.*: pl. 20 figs. 144, 145; 1851, 4: 211 (*Sericoris*). — Hannemann, 1961: 213, nr. 444.

*Olethreutes (Phiaris) turfosana* (Herrich-Schäffer, 1848), *Syst. Bearb. Schmett. Eur.*, *Tortr.*: pl. 30 figs. 220, 221; 1851, 4: 217 (*Sericoris*). — Hannemann, 1961: 213, nr. 445.

*Olethreutes (Phiaris) puerilana* (Heinemann, 1863), *Schmett. Deutschl. Schweiz*, 2 (1): 122 (*Sericoris*). — Hannemann, 1961: 213, nr. 446.

*Olethreutes (Phiaris) scoriana* (Guenée, 1845), *Ann. Soc. ent. France*, (2) 3: 158 (*Sericoris*). — Hannemann, 1961: 213, nr. 447.

*Olethreutes (Phiaris) stibiana* (Guenée, 1845), *Ann. Soc. ent. France*, (2) 3: 158 (*Sericoris*). — Hannemann, 1961: 215, nr. 448.

*Olethreutes (Phiaris) obsoletana* (Zetterstedt, 1840), *Ins. Lapp.*: 980, nr. 14 (*Tortrix*). — Pierce & Metcalfe, 1922: 49, pl. 17 (*Phiaris irriguana* Herrich-Schäffer). — Hannemann, 1961: 208, nr. 431 (*Olethreutes*).

#### A list of the Nearctic species of the subgenus *Phiaris*

With the use of the not too distinct photographic illustrations of Heinrich (1926) I am tentatively assigning the following species to the present subgenus.

*Olethreutes (Phiaris) sordidana* (McDunnough, 1922), *Canad. Ent.*, 54: 43 (*Argyro-ploce*).

*Olethreutes (Phiaris) galaxana* Kearfott, 1907 comb. nov., *Trans. Amer. Ent. Soc.*, 33: 9 (*Olethreutes*).

*Olethreutes (Phiaris) constellatana* (Zeller, 1875) comb. nov., *Verh. zool.-bot. Ges. Wien*, 25: 279 (*Sericoris*).

*Olethreutes (Phiaris) coruscana* (Clemens, 1860) comb. nov., *Proc. Acad. Nat. Sci. Philadelphia*, 1: 346 (*Antithesia*).

These four species have a peculiarly modified top of the sacculus with a short process and belong together; they are not very closely related with the here following true *Olethreutes (Phiaris)* species.

*Olethreutes (Phiaris) astrologana* (Zeller, 1875) comb. nov., *Verh. zool.-bot. Ges. Wien*, 25: 281 (*Sericoris*). Also this species stands separate.

*Olethreutes (Phiaris) intermistana* (Clemens, 1865) comb. nov., Proc. Acad. Nat. Sci. Philadelphia, 5: 140 (*Mixodia?*).

*Olethreutes (Phiaris) septentrionana* (Curtis, 1831) comb. nov., in Ross, Second Voyage N.W. Passage, Appendix: 74 (*Orthotaenia*).

*Olethreutes (Phiaris) inquietana* (Walker, 1863) comb. nov., List Lep. Het. Brit. Mus., 28: 378 (*Paedisca*).

*Olethreutes (Phiaris) puncticostana major* (Walsingham, 1895) comb. nov., Trans. Ent. Soc. Lond.: 502 (*Penthina*).

*Olethreutes (Phiaris) polluxana* (McDunnough, 1922), Canad. Ent., 54: 46.

*Olethreutes (Phiaris) mengelana* (Fernald, 1894) comb. nov., Ent. News, 5: 131 (*Sericoris*).

*Olethreutes (Phiaris) osmundana* (Fernald, 1879) comb. nov., Canad. Ent., 11: 156 (*Penthina*).

#### *Olethreutes (Phiaris) agnota* spec. nov.

(fig. 713)

♂ 12.5 mm. Head and thorax fuscous-grey. Palpus pale fuscous-grey. Posterior tibia normally scaled, whitish, pencil from base moderate, in a subdorsal deep groove, jet-black, not reaching apex. Abdomen light fuscous.

Fore wing dilated, moderately broad, costa gently curved, apex obtusely pointed, termen gradually convex, long, oblique. White, suffused with dove-grey except posteriorly, strigulated, marbled and marked with fuscous-black and scattered with sparse dark grey-blue and lilac round spots, irregularly white-edged. A semioval spot on basal third of dorsum, not reaching above upper edge of cell, towards base of wing mixed with white; a broad transverse fascia from well beyond middle of costa to posterior third of dorsum, slightly narrowed on costa, formed of fuscous-black coarse marbling, towards edges with grey-blue faint spots, these edges irregular; space between base of wing and fascia gradually spotted and marbled with fuscous-black and suffused with pale bluish-grey; dorsum with a couple of darker transverse marks between patch and fascia; wing beyond fascia pure white, with four black costal dots alternating with minute black strigulae; paler fuscous suffusion in apex and along upper 2/3 of dorsum, with an oblique transverse branch from middle of termen to upper 1/4 of transverse fascia. (In paratype which is darker but more rubbed, the oblique branch more extended, anteriorly curving down so as to isolate a rounded white ocelloid patch; fuscous suffusion also along lower part of termen and in tornus). Cilia white with a black subbasal band (imperfect; in paratype blackish entirely).

Hind wing pale yellowish-ochreous with a golden gloss. Cilia concolorous; a narrow separate tubular rolled lobe from base of dorsum; pointed and slightly curved inwards, greyish or pale grey-ochreous with a whitish top.

Male genitalia. Similar to those of *C. cespitana* (Hübner) (the common Palaearctic

species, reaching the northern parts of South Asia), but with uncus much broader, shallowly bilobed, socius slender and subparietal, above continued into uncus. Gnathos, a membraneous band, dilated in middle above, so forming a gently sclerotized tuba analis. Valva slender, sacculus 1/2, top projecting;  $Sp_{c1}$ , a subcostal group of strong spines, connected by larger similar spines with those of the cucullus, also ventral process strongly spined, top of cucullus slender. Aedeagus short, curved.

India, Assam, Naga Hills, Golaghat, vi.1890 (Doherty), 1 ♂, holotype, genit. slide 7897 (right pair of wings missing); the same Hills, Kohima, v.1889 (Doherty), 1 ♂, paratype, genit. slide 7896 (somewhat faded and slightly rubbed) (BM). A small species, distinct by markings, especially the pale terminal part, dark edged and cut in two by fuscous.

#### Subgenus *Syricoris* Treitschke, 1829 stat. nov.

(pl. 12 figs. 4-6)

*Syricoris* Treitschke, 1829: 230 (type-species, *Olethreutes conchana* Hübner = *Phalaena rivulana* Scopoli, by subsequent designation of Fernald, 1908). — Fernald, 1908: 19, 57 (type designation ascribed to Duponchel, 1835; syn. of *Argyroploce*).

*Paracelypha* Obraztsov, 1960: 477 (type-species, *Phalaena rivulana* Scopoli, by original designation). **Syn. nov.**

With the external characters of *Argyroploce* Hübner, especially similar to the group C of "*Exartema*" sensu Heinrich, from North America. However, the numerous species of *Olethreutes* characterized by an externally concave sacculus with a sinuate keel, crossing from the ventral side anteriorly to the dorsal side posteriorly, have spines of diverse sizes at the top and often at the base of this keel, but only *S. rivulana* has the whole surface of the keel evenly armed with numerous small equal spines. This unique feature is in my opinion sufficient for the subgeneric separation of *Syricoris* Treitschke.

Only one Palaearctic species, *Olethreutes (Syricoris) rivulana* (Scopoli, 1763).

#### Subgenus *Biscopa* subgen. nov.

With the superficial characters of the nominate genus, but with the male genitalia as follows: sacculus extended, divided by a suboblique deep fold from base of cucullus; sacculus extended, forming a massive rigid process, crowned with a long pencil or group of spines or bristles; cucullus distinctly clavate; otherwise as the nominate subgenus.

Female genitalia with a moderate tubular ostium, flanked by wing-shaped sclerites. Signum single, scobinate.

Type-species, *Pyralis bipunctana* Fabricius.

A small group of Holarctic species.



**Olethreutes (Biscopa) bipunctana** (Fabricius, 1794)  
(figs. 704-705)

*Pyralis bipunctana* Fabricius, 1794: 250, no. 32

Distribution. Palaearctic region.

Foodplants. In spun leaves of *Vaccinium*, ?*Pyrola* and ?*Rhododendron*.  
Male and female genitalia as described with the subgenus.

**Olethreutes (Biscopa) hedrotoma** (Meyrick, 1938)

*Argyroploce hedrotoma* Meyrick, 1938, in Caradja & Meyrick, 1938: 1 (♂, China: Likiang). — Clarke, 1955: 154.

*Olethreutes hedrotoma*; Clarke, 1958: 515, pl. 256 figs. 4-4a (lectotype select., genit., wing ♂ illustr.).

Distribution. China.

The male genitalia differ from those of the preceding species by more slender cucullus, not haired ventral process, larger socii and differently shaped sacculus.

**Olethreutes (Biscopa) glaciana** (Möschler, 1860)

*Sericoris glaciana* Möschler, 1860: 380 (Labrador).

*Penthina dealbana* Walker, 1863: 374 (North America).

*Sericoris fuscibana* Zeller, 1875: 284.

*Argyroploce castorana* McDunnough, 1922: 54.

This species, widely distributed over the North-American continent, from Canada to California, is closely related to the type-species, *O. (B.) bipunctana* (Fabricius). The male genitalia differ by a longer and slightly constricted cucullus, with a longer and deeper fold above sacculus.

The food-plants seem to be unknown.

**Olethreutes (Biscopa) andromedana** Barnes & McDunnough, 1917

*Olethreutes andromedana* Barnes & McDunnough, 1917: 223 (Florida).

*Zomaria andromedana*; Heinrich, 1926: 113, figs. 198, 410 (genit. ♂♀ illustr.).

The male genitalia resemble those of *O. (B.) rosaochreana*, but the socii start lower down the top of uncus, the cucullus is broader and shorter and the sacculus has a small  $Spc_1$  and a large  $Spc_2$ . The female sterigma shows a closer affinity to the type-species, with broad flap-like lateral sclerites; the colliculum is also longer than in *rosaochreana* and more resembling that in *bipunctana*.

The species is described from Florida where the larvae feed on leaves of *Andromeda* (Ericaceae).

**Olethreutes (Biscopa) rosaochreana** Kearfott, 1907

*Olethreutes rosaochreana* Kearfott, 1907: 11 (Florida).

*Argyroploce rosaochreana*; Barnes & McDunnough, 1917: no. 6852.

*Zomaria rosaochreana*; Heinrich, 1926: 113, figs. 200, 409 (genit. ♂♀ illustr.).

This and the preceding species belong in the present genus and are not congeneric with the type-species of the genus *Zomaria* Heinrich, 1926 (*Z. interruptolineana* (Fernald)).

*O. (B.) rosaochreana* Kearfott occurs in Florida.

The male genitalia differ from all preceding species by long, semiparietal socii, starting immediately below the top of uncus.  $Spc_1$  is short and thick and there is a rounded  $Spc_2$ . The female sterigma has semimembraneous wing-like lateral appendages; the signum is small.

Species of *Olethreutes* sensu Heinrich, 1926, incertae sedis

*Olethreutes griseoalbana* (Walsingham, 1879), Illustr. Lep. Het. Brit. Mus., 4: 38 (*Exartema*), original spelling.

*Olethreutes auricapitana* (Walsingham, 1879), Illustr. Lep. Het. Brit. Mus., 4: 33 (*Sericoris*).

*Olethreutes agilana* (Clemens, 1860), Proc. Acad. Nat. Sci. Philadelphia, 1: 359 (*Endopiza?*).

**Rudisociaria** Falkovitch, 1962

(fig. 698)

*Rudisociaria* Falkovitch, 1962: 195, figs. 7-8 (type-species, *Grapholitha (Sericoris) expeditana* Snellen, by original designation).

Head with closely appressed scales, tuft between antennae slightly concave. Ocellus posterior. Proboscis short. Antenna in male rather long-ciliated, ciliations under 1/2. Palpus subascending, median segment strongly, triangularly dilated, rough along edges, terminal segment small, laterally concealed. Thorax with a posterior crest. Posterior tibia in male with a small pencil from base, reaching halfway towards median pair of spurs.

Fore wing triangular, dilated, costa little curved, top rounded, termen oblique. Vein 2 from beyond 3/5 of cell, 3 from angle, 3-5 equidistant at base and apex, 7 separate to termen, 8 from angle, closer to 7, 10 from beyond middle of distance 11-9, 11 from middle, chorda from halfway 11-10 to base of 7, median branch to base of 5.

Hind wing over 1, with pecten, vein 2 from beyond 2/3, 3 from angle, separate from 4, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen narrowed. Uncus rather short, conical, clavate. Socii rigid, sclerotized, pointed and pending, naked or weak, bristly pending pads. Valva long, sacculus robust, with a rounded edge,  $Spc_1$  a weak group of bristles towards

centre; top of sacculus with a short curved subventral process with dense spines, continued in a strongly curved series along an elevated ridge below costa;  $Spc_2$ , a very dense group of bristles in the curve of that ridge. Cucullus slender, clavate, top bristled.

Female genitalia. Sterigma, an oval transverse sclerite, upper angles produced in small acute triangles, flanking a small ostium. Colliculum very short. Signum, a small scobination.

Related to *Piniphila* Falkovitch, and judging from the rigid, pointed and drooping socii, perhaps representing a link between the Olethreutae and *Eccopsis* Zeller (S. Africa, Neopotamia). However, in the second species of the genus, *R. velutina* (Walsingham), from Japan, the socii are ordinary, weak and bristly pads. *Rudisociaria* is probably also allied with *Celypha* Hübner.

Material studied: male lectotype, "Imashina, Amur, 31/5/77", "Museum Leiden, *Olethreutes expeditana* Snell.", "Lectotype 1958, *Olethreutes expeditana* Sn., selected by N. S. Obratsov", genit. slide 2637. Apparently this lectotype has never been published and is legalized by the present publication.

#### *Rudisociaria velutina* (Walsingham, 1900) comb. nov.

*Exartema velutinum* Walsingham, 1900: 125, no. 291 (2) (♂♀, China, Korea, Japan). — Inoue, 1954: 108 (Honshu, Shikoku, Kyushu, Korea, China). — Isiki, in Esaki, 1957: 71, pl. 11 fig. 347.

Distribution. China (Mupin). Korea. Japan (Honshu, Shikoku, Kyushu).

The second species of the genus which becomes known is blackish-fuscous with a dense pattern of pale silvery-grey glossy spots, spread rather densely over the wing but conspicuous only in certain lights, a submedian somewhat irregular band of whitish ground colour is tinged on its lower half with distinct light ochreous except the anterior edge; a second pale area of whitish-grey ground colour occupies the terminal fourth, but in the Ussuri specimens often is limited by a suffused dark subtriangular patch on termen, more or less extending over apex. Hind wing light fuscous, darker in male.

Male genitalia. Tegumen, uncus, and gnathos as in the type-species but socius weak and pending. Valva as in the type-species, rather broad, with only at the top a close and contiguous group of smaller spines, apparently being the  $Spc_2$ , extending from pulvinus to and over cucullus prominence, and obliquely across this, a pecten of large long spines, representing the cucullus bristles; cucullus very slender, clavate.

Ussuri Region, Vladivostok, Okeanskaya Biological Station, 20.vii.1963, 1 ♂, genit. slide 8091; 24.vii, 1 ♀ (Falkovitch) (LM).

**Piniphila** Falkovitch, 1962

(pl. 11 figs. 4-6)

*Piniphila* Falkovitch, 1962: 196, figs. 9-10 (type-species, *Sevicoris decrepitana* Herrich-Schäffer, by monotypy).

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna in male moderately ciliate. Palpus porrected, dilated with appressed scales, terminal segment exposed. Thorax with a posterior crest. Posterior tibia with a pencil from base to middle of tibia.

Fore wing rather narrow, little dilated, pointed, termen straight, oblique. Vein 2 from well beyond  $2/3$ , 3 from angle, 3-5 equidistant, 7 separate, to termen, 8-9 rather distant, 8 from angle, 10 from  $3/4$  distance 11-9, 11 from beyond middle, chorda from beyond middle distance 10-9, to just below base of 7, median branch to base of 5.

Hind wing over 1, with pecten semioval-pointed, vein 2 from  $2/3$ , 3 from angle, 4 close to 3, 5 approximated at base, 6 and 7 closely approximated towards base; basal half of dorsum with a slight downward roll.

Male genitalia. Tegumen narrowed. Uncus conical, membraneous. Socius small, parietal. Gnathos with tuba analis inverted T-shaped, weak and hyaline. Valva with a simple but rather strong and throughout moderately sclerotized sacculus, with a simple sub-marginal ventral  $Sp_1$  and a blunt triangular naked process at apex. Cucullus clavate, with a narrow stalk and a group of two spines at base ventrally. Aedeagus strong, broad, cylindrical and sclerotized, lower angle of orifice produced, with a small tooth. Cornuti, a row of strong spines (about 12).

Female genitalia. Sclerotized; ostium, an irregular cup, upper angles of lamella postvaginalis produced laterad and descending as thin subquadrate irregular sclerites on each side of ostium; colliculum very wide and strong, irregularly plicate. Signum, one moderate, semispheroid scobination.

There is a single, common Palearctic species.

The genus differs from *Olethreutes* Hübner, 1822, by a weak uncus and chiefly by the peculiarities of the valva and also by the peculiar colliculum.

Material studied: a long series of Dutch examples of *P. decrepitana*.

In the present species the socii are entirely naked except at base and not haired, as in Falkovitch's figure. Otherwise the genitalia are identical.

**Capricornia** Obraztsov, 1960

(fig. 721)

*Capricornia* Obraztsov, 1960: 474 (type-species, *Carpocapsa boisduvaleana* Duponchel, by original designation). — Hannemann, 1961: 208 (German sp.).

Male genitalia. Tegumen high. Uncus very short. Socii long, rigid, movable, vertical rods. Gnathos absent. Valva *Olethreutes*-like, long and slender, base of cucullus projecting and with strong spines; cucullus narrow, with a subbasal process.

**Celypha** Hübner, 1825

*Celypha* Hübner, 1825: 382 (type-species, *Phalaena Tortrix striana* Denis & Schiffermüller, by subsequent designation of Fernald, 1908: 11, 56 (syn. of *Argyroploce*)). — Stephens, 1834: 131 (subgenus of *Sericoris* Treitschke). — 1852: 71 (syn. of *Orthotaenia*). — Fernald, 1908: 11, 56 (syn. of *Argyroploce* Hübner, design. ascribed to Stephens). — Pierce & Metcalfe, 1922: 50 (*Celypa*, laps., Brit. spp., genit.). — Obraztsov, 1944: 310, 311. — 1960: 461. — Hannemann, 1961: 216 (with five Palaearctic species).

*Euchromia* Stephens, 1829: 183 (nec *Euchromia* Hübner, 1819) (type-species, *Tortrix purpurana* Haworth [= *Phalaena rufana* Scopoli, 1763], by subsequent designation of Westwood, 1840). — Fernald, 1908: 24, 57.

*Celyphoides* Agenjo, 1955: 9 (nomen nudum).

*Celyphoides* Obraztsov, 1960: 480 (type-species, *Tortrix (Sericoris) flavipalpana* Herrich-Schäffer, by original designation). Syn. nov.

Head with appressed scales. Ocellus posterior. Proboscis short. Antenna in male short-ciliated. Palpus porrected, median segment strongly dilated with roughly appressed scales, projecting in a small tuft at apex below, rough along edges, terminal segment moderate, rather slender, exposed, slightly drooping. Thorax without a crest. Posterior tibia with a thick hair-pencil from base above, reaching beyond middle of tibia.

Fore wing oblong-truncate, apex rounded, termen gently concave. Vein 2 from beyond 2/3, 3 from angle, 4 closely approximated, 7 free, to termen, 7-9 rather equidistant, remote, 8 from (indistinct) upper angle of cell, cell edge between 9-7 oblique, 10 from 2/3, 11 from middle; chorda from beyond middle distance 11-10, to base of 7, median branch to base of 5.

Hind wing with pecten. Vein 2 from 2/3, 3 from angle, 4 approximated at base, 5 approximated at base, 6-7 closely approximated towards base.

Male genitalia. Similar to those of *Olethreutes* Hübner, but with sacculus strongly extended, thickened, with a strong submarginal  $Sp_3$  of large spines, a diversely developed  $Sp_2$ , often forming a conical brush, and at the apex of sacculus sometimes short and before its middle; outward concavity of sacculus absent. Cucullus slender, clavate, with a strong transverse bunch of long cucullus spines. Aedeagus of diverse length, curved, often long.

Female genitalia. Sterigma large, a diversely shaped, round or inverted-trapezoidal plate, ostium in its centre or at upper edge, elevated; colliculum sometimes strong, tubular.

A group of Palaearctic species with superficial characters and facies similar to those of *Olethreutes* Hübner, but with large, thickened and densely spined sacculus.

There is no reason for separating *flavipalpana* and *caespitana* as a distinct genus *Celyphoides* Obraztsov on the only ground of the spine brush  $Sp_2$  being small and covered by a flat cusp, concealing small spines; the spine cluster  $Sp_2$  is diversely developed in *Celypha* and the "*Celyphoides*" type is only a modification of the usual brush. However, there is also a biological difference and therefore I retain *Celyphoides* as a subgenus.

The species are of "*Olethreutes* Hübner" appearance; in the Palaearctic region

the representatives of the nominate subgenus live on roots of Compositae; and one species lives in leaf mines on Mistletoe (*Viscum*); the species of the subgenus *Celyphoides*, on the contrary, live between spun leaves of diverse dicotyledonous plants (*Calluna*, *Thymus*, *Sarothamnus*).

#### Key to the subgenera of *Celypha*

1. Spc<sub>2</sub>, a large round brush of long, thin bristles. Larva in roots of Compositae or mining in *Viscum* (in Palaearctic region) . . . . . *Celypha*  
 — Spc<sub>2</sub>, a small patch of bristles in a cavity, protected by triangular cusp. Larva in spun leaves of diverse plants *Celyphoides*

#### Subgenus *Celypha* Hübner, 1825

*Celypha* Hübner, 1825: 382 (type-species, *Phalaena Tortrix striana* Denis & Schiffermüller, by subsequent designation of Fernald, 1908). — Stephens, 1834: 131 (subgenus of *Sericoris* Treitschke). — 1852: 71 (syn. of *Orthotaenia* Stephens). — Fernald, 1908: 11, 56 (syn. of *Argyroploce* Hübner, designation ascribed to Stephens). — Pierce & Metcalfe, 1922: 50 (*Celypa*, laps.; Brit. spp., genit.). — Obratsov, 1944: 310, 311. — 1960: 461.

*Euchromia* Stephens, 1829: 183 (nec Hübner, 1819: 121; nom. praeocc.) (type-species, *Phalaena rufana* Scopoli, by subsequent designation of Fernald, 1908). — Fernald, 1908: 24 (type design., ascribed to Westwood; syn. of *Argyroploce*). — Fletcher, 1929: 87 (syn. of *Argyroploce*; cited only as from 1834).

With the characters of *Olethreutes* Hübner, but sacculus thick, surface convex, smooth or with a moderate impression on posterior half only; Spc<sub>2</sub>, a large and dense brush, Spc<sub>3</sub> upon a marginal prominence, Spc<sub>1</sub> small, sometimes absent.

#### *Celypha (Celypha) sistrata* (Meyrick, 1911) comb. nov.

(figs. 714-716)

*Argyroploce sistrata* Meyrick, 1911b: 228 (♂♀, Transvaal, Natal). — Clarke, 1955: 287.

*Olethreutes sistrata*; Clarke, 1958: 548, pl. 273 figs. 2-2a (lectotype ♂ design., Natal; wings, genit. figured).

Distribution. South Africa: Transvaal, Natal.

South Africa, "Zoutpansberg, Transvaal, C.I.S., 13.12.09" (in Meyrick's hand), E. Meyrick det., in Meyrick Coll., 1 ♂, genit. slide 6624; "Barberton, Transvaal, A.I.D., 18.1.11" (the same labels), 1 ♀, genit. slide 6625 (BM).

Dark grey-brown or dark purplish-grey, basal patch very small purple-black, edge concave; two purple-black round spots obliquely across middle of wing, finely edged with silvery-metallic; posterior fourth pale ochreous, containing an oblong suffused spot of ground colour in apex and a darker small terminal spot; entire wing scattered with pale leaden-metallic round spots.

Hind wing pale grey in male, darker fuscous-grey in female with a golden gloss. Cilia in male whitish, in female fuscous-grey.

Male genitalia. Tegumen rather low and rounded. Uncus short, slender. Socius large, covering shoulder of tegumen and extending over lower surface of uncus. Gnathos, a simple band, dilated at the sides. Valva with a thick sacculus with a subquadrate impression above middle, pulvinus moderately bristled, with a small prominence;  $Spc_2$  densely short-spined;  $Spc_1$  represented by two huge spines. Cucullus bristles little developed, anteriorly modified so as to form an oblong-oval patch of long hairs. Cucullus slender, subclavate.

Female genitalia. Sterigma moderate, triangular. Colliculum with two lateral dilations, broad, sclerotized, asymmetrical. Signum large, a coarse scobination.

***Celypha (Celypha) capnodesma* (Meyrick, 1922) comb. nov.**

(fig. 717)

*Argyroploce capnodesma* Meyrick, 1922: 525 (♂, China).

*Olethreutes capnodesma*; Razowski, 1960: 388, fig. 14 ("lectotype" ♂ designated, genit. figured).

Distribution. China: Shanghai.

A rather brightly orange-ochreous species, closely marbled and transversely strigulated with light brown, markings suffused warm light brown. Basal patch reduced to marbling; central fascia slightly submedian, interrupted at  $1/3$  and more narrowly, below middle, connected by a horizontal patch of brown marbling with a suffused darker vertical fasciate blotch before termen.

Hind wing rather dark tawny-fuscous, darker infuscated towards apex.

Male genitalia already sketched and briefly described by Razowski. Sacculus huge,  $Spc_1$  a large brush, followed by a bundle of strong spines upon a prominence; a third sheaf of spines smaller, submarginal. Cucullus bristles in a dense transverse patch, long and slender (cucullus tops on both sides missing). Socii together with a short uncus forming a single inverted-V-shaped piece. Cornuti apparently absent.

The lectotype, selected by Razowski, is from China, Shanghai, genit. slide 3741 (made by Razowski) (PM).

**Subgenus *Celyphoides* Obraztsov, 1960 stat. nov.**

*Celyphoides* Agenjo, 1955: 9 (nomen nudum).

*Celyphoides* Obraztsov, 1960: 480 (type-species, *Tortrix (Sericoris) flavipalpana* Herrich-Schäffer, original designation).

With the characters of the nominate subgenus, but with  $Spc_2$  a small patch of spines and hairs in a concavity, protected by a large triangular cusp.

Larva, where known, in spun leaves of diverse dicotyledonous plants.

***Celypha (Celyphoides) constructa* (Meyrick, 1922) comb. nov.**

(figs. 679, 718)

*Argyroploce constructa* Meyrick, 1922: 526 (♂♀, Punjab). — Clarke, 1955: 99.*Aterpia constructa*; Clarke, 1958: 304, pl. 151 figs. 2-2a (lectotype ♂ design., wings, genit. figured).

The species is closely resembling the common Palearctic *C. (C.) cespitana* Hübner, but is smaller and has an oval well-defined apical spot which is distinctly separated from the terminal spot or fascia by the convergent pale lines originating from costal marks. This apical spot in *cespitana* is larger and suffused and is broadly connected with the upper edge of the terminal fasciate spot.

♂♀ 14 mm. Head whitish, mixed with light fuscous-grey. Palpus triangularly dilated, top roughish; whitish, outwardly with fuscous-black spots, except at apex above. Thorax ochreous-whitish, marbled with dark fuscous. Posterior tibia without pencil. Abdomen dark fuscous, venter whitish.

Fore wing oblong-subtriangular, moderately dilated, costa little curved, apex rather rounded, termen straight, oblique. Glossy ochreous-whitish, markings extended, fuscous-brown to dark fuscous touched olive. Basal patch to beyond 1/4, edge serrate, convex, more or less notched four times, deeper notched in female, marbled with light tawny and with whitish except posteriorly; transverse fascia median, dark, moderate, on costa narrow, on dorsum about 1½ as broad, above middle posteriorly with two rather long acute processes; dorsum with a slightly oblique semioval rising dark spot just beyond fascia; posterior half of costa with five pairs of glossy white long marks, two anterior pairs slender, all five and a slender white terminal line from below apex converging on middle of termen; an oblong-suboval fasciate and curved terminal spot, well-defined, more spindle-shaped in male; ground colour before fascia with three undulate transverse strigulae, in termen finely parted by a single small line; ground colour along posterior edge of transverse fascia sometimes rather dusted with fuscous. Cilia whitish, dark fuscous basal band, above this cilia suffused with dark fuscous, except along upper third of termen.

Hind wing fuscous-grey, thinner scaled and paler towards base; cilia glossy pale fuscous, a dark fuscous subbasal band.

Male genitalia. Tegumen narrowed, uncus rather broad, top emarginate. Gnathos, a narrow curved transverse band, slightly aciculate at the sides (exactly as in *C. (C.) cespitana*). Valva broad, sacculus at apex with a lateral separate and truncate process. Costa forming another triangular process (similar to that in *Metendothenia*). Spc<sub>2</sub>, a small group of bristles in a cavity protected by a triangular cusp, Spc<sub>3</sub> shifted to its base, a short and pointed sheaf of bristles. Cucullus bristles weak, continued over process of costa. Aedeagus short.

Female genitalia. Sterigma moderate, spherical and clavate, aciculate throughout, lateral edges broad and thick, ostium bursae flanked with cavities, causing upper edge of lamella postvaginalis to acquire an S-shape. Colliculum long, broad and straight. Signum small, aciculate.



India, "Murree, Punjab, D., 7500', 6.18" (in Meyrick's hand); these are original syntypes: 1 ♂, genit. slide 7661, 1 ♀, genit. slide 6466 (figured), 1 ♀, genit. slide 7662 (BM).

***Celypha (Celyphoides) cespitana* (Hübner, 1822)**

*Olethreutes cespitana* Hübner, 1822: 59.

*Orthotaenia gramineana* Curtis, 1831: pl. 364.

*Rhyacionia flavofasciana* Westwood & Humphreys, 1845: 145, pl. 89 fig. 134.

*Tortrix umbrina* Werneburg, 1858: 155.

*Sericoris instrutana* Clemens, 1865: 135.

*Sericoris poana* Zeller, 1875: 282.

*Celypha cespitana*; Pierce & Metcalfe, 1922: 52, pl. 17.

*Celypha cespitana*; Obraztsov, 1944: 311, figs. 1, 2.

*Celyphoides cespitana*; Agenjo, 1955: 9. — Obraztsov, 1960: 484 (with complete synonymy).

Japan, Sapporo, S. I. [ssiki], 4.vii.1919, 1 ♂, genit. slide 6467 (BM).

**Oxysemaphora gen. nov.**

Head with appressed scales. Ocellus posterior. Proboscis developed. Antenna thickened in male and slightly laterally compressed, short-ciliated. Palpus rather long, subascending, sinuate and gradually dilated towards top of median segment, roughish along lower edge and at apex, terminal segment moderate, pointed. Thorax with a posterior crest. Posterior tibia moderately thickened by closely appressed scales above and beneath, without pencil.

Fore wing oblong, pointed, apex slightly produced, termen gently concave, oblique. Vein 2 from 2/3, 3 from angle, diverging posteriorly, 3-5 equidistant, 6 parallel, 7 separate, to termen, 7-9 approximated and equidistant, sinuate at base, 8 apparently from angle, 10 distant, before 2/3 distance between 11 and 9, 11 from before 1/3, upper accessory cell narrow, upper parting vein weak except origin, from 3/4 distance between 11 and 10, to base of 7, lower parting vein from towards base to just above base of 5.

Hind wing without a cubital pecten, pointed-semioval, slightly over 1. Vein 2 from middle, 3 from angle, 4 separate, 5 approximated at base, 4 closer to 3, closing vein indefinite, 6 and 7 closely approximated towards base, vein 8 soldered to more than 2/3 of upper edge of cell; a naked oval patch at base of cell. Dorsum with a fold covered with long hairs.

Male genitalia. Tegumen high and broad, slightly dilated apically, top broad. Uncus long, curved, top furcate, denticulate. Socius very large, pending and mesiad-curved, with long, dense bristles. Gnathos indicated by a slender horizontal ridge, interrupted by tuba analis. Valva with broader sacculus, under 1/2; cucullus long, slender, haired, gradually curved, base only slightly prominent, a suprabaasal very large clavate spike. Aedeagus stout and short, anellus forming a broad collar, caulis long.

Female unknown.

Type-species, *Polychrosis chionolitha* Meyrick, 1938 (Central North New Guinea: Cyclops Mts.).

A remarkable new form, very distinct by the absence of a cubital pecten. Also the long, furcate uncus and the club-shaped spike of the valva are characteristic to a great extent. The general shape of the genitalia suggests a connection with *Hedya*; other features also make this conspicuous insect not difficult to attribute to the present subtribe. Unfortunately we do not know anything about the characters of the female.

***Oxysemaphora chionolitha* (Meyrick, 1938) comb. nov.**

(figs. 727, 730)

*Polychrosis chionolitha* Meyrick, 1938: 511 (♂, N. Guinea). — Clarke, 1955: 84.

*Lobesia chionolitha*; Clarke, 1958: 467, pl. 232 figs. 1-1a (holotype wings, ♂ genit. figured).

Distribution. New Guinea: Papua.

A very conspicuous and distinct species. Black "with peacock gloss or iridescence"; three pairs of white spots on costa towards apex, connected with a white subcostal spot; four or five variable silvery-white spots along dorsum, an oblique-dentoid triangular acute spot on dorsum before middle, concave posteriorly.

Hind wing grey.

Male genitalia, as described with the genus.

Females unknown.

Papua, Mt. Tafa, 8500 ft, xi.1934 (L. E. Cheesman) (BM 1934-321), holotype, 2 paratypes (BM).

***Pelatea* Guenée, 1845**

(fig. 382, pl. 6 figs. 4-6)

*Pelatea* Guenée, 1845: 27 (type-species, *Tortrix klugiana* Freyer, by monotypy). — Lederer, 1859: 330. — Fernald, 1908: 30, 59 (author: Guenée). — Fletcher, 1929: 166 (syn. of "? *Eucosma*"; author: Lederer). — Hannemann, 1961: 182.

Head with appressed scales, roughly spreading on vertex, a projecting tuft over forehead. Ocellus posterior. Proboscis short. Antenna slightly thickened in male, finely subserrulate, short-ciliate. Palpus subascending, reaching upwards over 3/4 of eye, median segment triangularly dilated with appressed scales, roughish along lower edge and at apex, terminal segment smooth, rather pointed or obtuse, subconcealed or exposed and slightly drooping; palpus in female longer. Thorax with a slight posterior crest. Posterior tibia without (type-species) or with, a short pencil from base, 1/3 the length of tibia. Abdomen normal.

Fore wing elongate, costa gently curved throughout, apex rather rounded, termen straight or gently concave, moderately oblique. Vein 2 from 3/4 in type-species, or

from 2/3, 3 from angle, 3-5 equidistant or 4 closer to 3, 5-7 straight, 7 separate, to termen, 8 from angle, 10 from 2/3 distance 11-9, chorda from well beyond base of 11 to base of 7, median branch to halfway bases of 5 and 4.

Hind wing with a cubital pecten, broad, almost semicircular, vein 2 from 2/3, 3 and 4 connate from angle, 5 closely approximated, at base, 6 and 7 closely approximated towards base. Dorsal edge without a roll.

Male genitalia with a broad, robust tegumen, sclerotized, top truncate, in type-species bilobed, lobes curving downwards and diverging, with large marginal teeth. Uncus small, membranous or absent. Valva slender, narrowed, top rounded, cucullus moderately narrowed in middle, diversely bristled, a transverse patch of dense bristles towards base. Aedeagus short, straight, without cornuti.

Female genitalia with a swollen and extended eighth segment, densely punctulate throughout, sometimes with rounded lateral prominences. Ostium, a short funnel, almost a collar. Ductus bursae often short. Signum one, or absent.

A genus of the usual Olethreutine appearance, but with a unique tegumen. Judging from this feature I do not hesitate to include the following species, in spite of the slight discrepancies of neurulation. The single Palaearctic species has an exceptionally long chorda, originating from about 1/3 of distance between the bases of veins 11 and 10, an unusual position, while in *P. assidua* this origin lays at about 3/4 of this distance. The male genitalia of the two species, however, are very similar in basal structure.

***Pelatea assidua* (Meyrick, 1914) comb. nov.**

(fig. 707)

*Argyroploce assidua* Meyrick, 1914: 49 (♂♀, Formosa). — Clarke, 1955: 56

Distribution. Formosa.

Lectotype, hereby designated: ♂, "Typus", "Suisharyo, Formosa, H. Sauter, x.11", "Meyrick det.", "Dtsch. Entomol. Institut Eberswalde" "*A. assidua* Meyr." (written), genit. slide 7516 (DEI).

Formosa, Kyuhabon, "S.I.[ssiki], 10.26" (in Meyrick's hand) "*Argyroploce assidua* Meyr., S. Meyrick det.", in Meyrick Coll., 1 ♂, genit. slide 6464. "Suisharyo, Formosa, Sauter, x.11" (printed), "*Argyroploce assidua* Meyr. E. Meyrick det.", in Meyrick Coll., 1 ♀, genit. slide 6465 (BM).

Very similar to the above recorded *Olethreutes (O.) nubicincta* spec. nov. With delated fore wing, costa curved, apex pointed, termen sinuate. Light ashy-grey, finely strewn with purplish, markings fuscous-purple. Costa dark purple with short and slender but bright white strigulae; transverse fascia median, strongly suffused, edges irregular; a dark dot in apex, a crescentic fasciate spot on middle of termen. Female rather darker.

Hind wing grey-fuscous.

Male genitalia. Tegumen extremely broad, almost quadrate, truncate, top membranous. Uncus absent; lateral edges of tegumen on the inner side strongly sclerotized, sinuate; each edge with a subapical patch of very long hairs, below this patch a marginal row of stout teeth; the interpretation of these parts, strongly reminding one of the tegumen in certain Carposinidae, eludes explanation. In my opinion the teeth are homologous to the subapical teeth in the type-species (pl. 6 fig. 4) the reason why I assign *assidua* to *Pelatea*. If that is correct, then the hair patches above them represent socii. Valva slender and narrow, sacculus little modified, cucullus broadest at base, with a dense transverse patch of bristles at base, narrowed, slightly constricted, top rounded. Aedeagus short, narrowed.

Female genitalia with the 8th segment sclerotized and densely aciculate, sterigma a very small oval aciculate plate; colliculum a moderate tube. Ductus bursae long and slender, upper portion with tortuous structure. Signum single, scobinate.

#### **Palaeomorpha gen. nov.**

Head roughly scaled, vertex with roughly spreading hair-scales. Ocellus posterior. Proboscis vestigial. Palpus moderate, subascending with appressed scales, roughly projecting along lower edge, moderately dilated posteriorly, terminal segment rather small, slender, smooth, subclavate. Antenna in male subserrulate, minutely ciliated. Posterior tibia without pencil, with rather long appressed fine hairs above.

Fore wing suboval, pointed, costa moderately curved throughout, termen gently sinuate, long, oblique. Vein 2 from  $2/3$ , simply curved, 3 from angle, curved, but little approximated to 4 at margin, 4 closer to 3, 8 and 9 stalked, 7 very close to stalk, to termen below apex, 10 closer to  $8 + 9$ , 11 from middle; chorda extremely short, from before 10 to halfway 10 and 9, median branch not traceable.

Hind wing just over 1, semioval, pointed; with a cubital pecten. Vein 2 from  $2/3$ , 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 stalked, closely approximated towards base.

Male genitalia. Tegumen moderately narrowed and rounded, with a small median prominence; uncus absent. Socius moderate, subparietal, bristly, connected with top of tegumen by a row of bristles. Gnathos, a membranous transverse band. Valva complicated, sacculus deeply excavated (broken at the right side) with a bristly lower angle and a long, free arm, densely spined along outer edge;  $Spc_1$  long and stiff; cucullus slender, clavate. Aedeagus moderate, spindle-shaped.

Type-species, *Palaeomorpha jacobsoni* spec. nov. (Sumatra).

A peculiar archaic form, judging from the neururation. An ancient off-shoot of the *Olethreutes* stock.

#### **Palaeomorpha jacobsoni spec. nov.**

(figs. 719, 728)

♂ 9 mm. Head black, forehead and face white. Palpus black, apical half white,

terminal segment greyish below. Thorax pale slaty-grey, apical half dusted black, tuft blackish, shoulder black, tegula black with apical  $2/3$  white. Abdomen fuscous-grey, venter white, anal segment fuscous-grey.

Fore wing pointed-semioval, costa slightly curved throughout, apex subobtusate, termen long, tolerably straight, oblique. White, between basal patch and transverse fascia marbled with pale orangeish-yellow, except towards costa; markings fuscous-black, on termen greyish. A basal patch to  $1/5$ ; indistinctly strigulated with black; edge moderately oblique, somewhat irregularly excavated above and below fold; central fascia indicated by a large semicircular spot, extending over more than third fourth of costa, more or less connected by interrupted dark strigulae with dorsum before tornus; some three dark spots on costa posteriorly, ultimate apical, alternating with two small points; a pale greyish-olive oblique blotch rising from termen below middle to below costa; a few dark points along terminal edge. Cilia whitish touched with grey, a white basal and a grey subbasal line.

Hind wing whitish, semipelluculent, slightly dusted with greyish-fuscous, more so towards margin, especially towards apex. Cilia pale grey with a white base and a grey subbasal band.

Male genitalia, as described with the genus.

West Central Sumatra, Fort de Kock, 920 m, 1924 (E. Jacobson), 1 ♂, holotype, genit. slide 6616; the same locality, iv.1922 (the same collector), 1 ♂, paratype (LM).

Dedicated to the eminent Dutch collector of insects in Sumatra, Dr. Edward Jacobson.

#### *Stalagmocroca* gen. nov.

Head with appressed scales, a transverse tuft on vertex. Ocellus posterior. Proboscis absent. Antenna in male moderately thickened throughout, subserrulate and minutely ciliate. Palpus moderate, little thickened, basal segment with a projecting scale-tuft, median segment moderately dilated with closely appressed scales, short roughish scales along lower edge, a moderate tuft at apex above, terminal segment short, smooth, porrect and obtuse. Thorax with a posterior crest. Posterior tibia normal.

Fore wing broadly subtruncate, apex and termen rounded. Vein 2 from  $2/3$ , 3 from angle, 4 remote from 5, 5 and 6 almost parallel, 7 separate, to termen, 8 rather approximated at base, 9 from angle, 10 from about middle between 11 and 9, 11 from middle of cell, chorda from beyond middle of distance between 11 and 10, to below base of 7.

Hind wing oblong-semioval, under 1, with a cubital pecten. Vein 2 from beyond middle, 3 and 4 connate from angle, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia, of a complicated and unusual type. Tegumen broad and rather short, upper half triangular. Uncus partition indefinite, uncus hook slender, pointed. Socii absent. Gnathos indefinite. Valva short, sacculus  $1/2$ , twice as broad as cucullus, rounded-quadrate, with a strong mesiad-curved hook at the outer lower angle, Spc<sub>1</sub>

a horizontal series of extremely long fan-wise spreading hair-scales; harpe, a moderate rising process across base of cucullus which is semioval, lower edge more curved, a broad pencil of long hairs at base of outer side. Aedeagus large, forming several convergent folds. A huge rising and telescoping tube probably is tuba analis.

Female genitalia, as described with the species.

Type-species, *Argyroploce sandycota* Meyrick, 1912 (Ceylon: Hakgala).

A remarkable, specialized form of obscure relationship.

***Stalagmocroca sandycota* (Meyrick, 1912) comb. nov.**

(fig. 732)

*Argyroploce sandycota* Meyrick, 1912: 872 (♂, Ceylon). — Clarke, 1955: 276.

*Olethreutes sandycota*; Clarke, 1958: 544, pl. 271 figs. 2-2a (holotype wings and genit. ♂ figured).

Distribution. Ceylon: Hakgala.

Ceylon, 189. . (Pole) (Walsingham Coll.), 1 ♂, genit. slide 7926, 1 ♀, genit. slide 7927; 2 ♂; Puttalam, ii.189. . (Pole) (Walsingham Coll.), 1 ♂ (BM).

♀ apallotype, 9 mm. In all respects similar to the male, but with the basal half of wing somewhat paler, orange-yellowish, instead of orange-red.

Female genitalia. Sterigma slender and small: ostium, a slender hyaline short tube; lamella postvaginalis with upper edge acutely angulate, back wall of ostium with an aciculate longitudinal tumescence. Signum, one small thorn upon a round basal plate.

The small elegant species is easily recognizable by its bright orange-red ground colour, divided in numerous round spots by blackish-grey marbling, with dark spots at 1/4 and 2/3 of costa and an oblique curved fascia, connecting the latter spot with middle of termen.

Hind wing is dark grey becoming whitish at base.

## ADDENDUM

Two species of Meyrick, belonging to the subtribe Olethreutae have been erroneously omitted from the text, although they do occur in the list on p. 525; they may be added here.

**Dudua hemigrapta** (Meyrick, 1931) comb. nov.

*Argyroploce hemigrapta* Meyrick, 1931: 133 (♀, Formosa). — Clarke, 1955: 156.

*Olethreutes hemigrapta*; Clarke, 1958: 516, pl. 257 figs. 2-2c (wings, genit. holotype ♀, figured).

Distribution. Formosa.

The species is closely allied and very similar to *D. aprobola* (Meyrick); it is very probable that this species from Formosa, of which a single female is available, is but a local form of *aprobola*. Without the evidence of the characteristics of the male, however, it is not possible to ascertain this. The female genitalia are similar to those of *aprobola*.

**Olethreutes (Olethreutes) hemiplaca** (Meyrick, 1922)

*Argyroploce hemiplaca* Meyrick, 1922: 525 (♂, Shanghai). — Clarke, 1955: 156.

*Argyroploce albipalpis* Meyrick, 1931: 140 (♂ ♀, China). — Clarke, 1955: 40.

*Olethreutes hemiplaca*; Clarke, 1958: 516, pl. 257 figs. 3-3a (lectotype design., wings, ♂ genit. figured).

*Olethreutes hemiplaga* (sic); Razowski, 1960: 388, fig. 15 (genit. ♂ type figured).

Distribution. China.

Clarke synonymized *hemiplaca* and *albipalpis*; judging from his photograph of the male genitalia of the latter species and from the sketch of those of the male of the former, published by Razowski (1960), as well as from a close comparison of the original descriptions of the species, I am satisfied that Clarke is quite correct.

The species has a characteristic olethreutine facies; ground colour white, basal patch and the upper half of central fascia dark grey-fuscous, touched with black, the lower half of central fascia limited to a grey suffusion on dorsum; four or five dark strigulae running across apex of wing. Hind wing grey.

Male genitalia. Seem to be nearest to those of *O. (O.) bipartitana* Clemens, from North America, with very similar valva, with a characteristic, long  $Spc_3$ , but with a more slender uncus.

SYSTEMATICAL LIST OF THE TREATED SOUTH ASIATIC OLETHREUTINI\*)

Tribus Olethreutini Obraztsov, 1946

1. Subtribus Gatesclarkeanae n.

<i>Gatesclarkeana</i> Diak., 1966	<i>G. pachnodes</i> (Meyr., 1911)
<i>G. idia</i> sp. n.	<i>G. eothina</i> sp. n.
<i>G. erotias</i> (Meyr., 1905)	<i>G. confracta</i> sp. n.
<i>G. batianensis</i> sp. n.	<i>Asymmetrarcha</i> g. n.
<i>G. moderatrix</i> sp. n.	<i>A. xenopa</i> sp. n.
<i>G. domestica</i> sp. n.	<i>A. torquens</i> sp. n.
<i>G. senior</i> Diak., 1966	<i>A. iograpta</i> (Meyr., 1907)

2. Subtribus Gnathmocerodides n.

<i>Heteroschistis</i> Diak., 1966	<i>G. (G.) tonsoria</i> (Meyr., 1909)
<i>H. actaea</i> (Meyr., 1911)	<i>G. (G.) lecythocera</i> (Meyr., 1937)
<i>Gnathmocerodes</i> Diak., 1968	<i>G. (G.) petrifraga</i> (Diak., 1968)
<i>Agnathmacera</i> g. n.	<i>G. (G.) euplectra</i> (Low., 1908)
<i>G. (A.) labidophora</i> sp. n.	<i>Dynatorhabda</i> g. n.
<i>Gnathmocerodes</i> Diak., 1968, stat. n., sg.	<i>D. cremnocrates</i> (Meyr., 1932)

3. Subtribus Rhodocosmariae n.

<i>Rhodocosmaria</i> g. n.	<i>R. operosa</i> (Meyr., 1911)
<i>R. occidentalis</i> sp. n.	

4. Subtribus Zomariae n.

<i>Zomaria</i> Heinr., 1926	<i>E. parasema</i> (Meyr., 1911)
<i>Z. frustulosa</i> sp. n.	<i>E. aversa</i> sp. n.
<i>Actinocentra</i> g. n.	<i>Thysanocrepis</i> Diak., 1966
<i>A. aliena</i> sp. n.	<i>T. crossota</i> (Meyr., 1911)
<i>Eubrochoneura</i> Diak., 1966	

5. Subtribus Sorolophae n.

<i>Sorolopha</i> Low., 1901	<i>S. a. oxygona</i> (Diak., 1968) stat. n.
<i>cyclotoma</i> group	<i>S. prasimias</i> (Meyr., 1916)
<i>S. archimediass archimediass</i> (Meyr., 1912)	<i>S. nucleata</i> sp. n.
	<i>S. auribasis</i> sp. n.

\*) Type-species with purely Palaearctic distribution, and some other species from outside South East Asia, therefore not treated but only mentioned in this paper, are placed in brackets. Nearctic and Palaearctic *Olethreutes* species, only listed in text, are omitted from this list.



- S. timiochlora* sp. n.  
*S. authadis* sp. n.  
*S. cyclotoma* Low., 1901  
*S. dictyonophora* sp. n.  
*S. elaeodes elaeodes* (Low., 1908)  
*S. e. parachlora* ssp. n.  
*S. e. temenopsis* (Meyr., 1936) stat. n.  
     *liochlora* group  
*S. liochlora* (Meyr., 1914)  
*S. eurychlora* sp. n.  
*S. euochropa* sp. n.  
*S. arctosceles* (Meyr., 1931)  
*S. phyllochloa* (Meyr., 1905)  
*S. cervicata* sp. n.  
*S. rubescens* sp. n.  
*S. agalma* sp. n.  
     *herbifera* group  
*S. herbifera* (Meyr., 1909)  
*S. autoberylla* (Meyr., 1932)  
*S. compsitis* (Meyr., 1912)  
*S. epichares* sp. n.  
*S. semiculta* (Meyr., 1909)  
*S. doryphora* sp. n.  
*S. argyropha* sp. n.  
*S. artocincta* sp. n.  
*S. callichlora* (Meyr., 1909)  
*S. hydrargyra* (Meyr., 1931)  
*S. melanocycla* sp. n.  
*S. caryochlora* sp. n.
- S. chortodes* (Diak., 1968)  
*S. plumboviridis* sp. n.  
*S. plinthograpta* (Meyr., 1931)  
     *sphaerocopa* group  
*S. sphaerocopa* (Meyr., 1929)  
*S. asphaeropa* sp. n.  
*S. aeolochlora* (Meyr., 1916)  
     *bryana* group  
*S. bryana* (Feld. & Rog., 1874)  
*S. homalopa* (Diak., 1968)  
*S. margaritopa* (Diak., 1953)  
*S. atmochlora* (Meyr., 1930)  
*S. metastena* sp. n.  
*S. dyspeista* sp. n.  
     *stygiaula* group  
*S. mniochlora* (Meyr., 1907)  
*S. agana* (Falk., 1966)  
*S. bathysema* sp. n.  
*S. camarotis* (Meyr., 1936)  
*S. stygiaula* (Meyr., 1933)  
*S. englyptopa* (Meyr., 1938)  
*S. agathopsis* (Meyr., 1927)  
*Eudemopsis* Falk., 1962  
     *E. purpurissatana* (Kenn., 1901)  
     *E. pompholycias* (Meyr., 1935)  
*Eudemis* Hb., 1825  
     [*E. porphyrana* Hb., [1796-1799]]  
     *E. gyrotis* (Meyr., 1909)  
     *E. centritis* (Meyr., 1912)

## 6. Subtribus Sycacanthae n.

- Prophaecasia* g. n.  
     *P. anthion* sp. n.  
*Sisona* Snell., 1902  
     *S. albitibiana* Snell., 1902  
*Phaecasiophora* Grote, 1873  
     *Phaecasiophora* Grote, 1873, sg.  
     *P. (P.) confixana* (Walk., 1863)  
     *P. (P.) niveiguttana* Grote, 1873  
     *P. (P.) diluta* sp. n.  
     *P. (P.) turmaria* (Meyr., 1931)
- P. (P.) astrosema* (Meyr., 1909)  
*P. (P.) jubilans* Diak., 1959  
*P. (P.) attica* (Meyr., 1907)  
*P. (P.) pertexta* (Meyr., 1920)  
*P. (P.) diserta* (Meyr., 1909)  
*P. (P.) guttulosa* sp. n.  
*P. (P.) caryosema* (Meyr., 1931)  
*Megasyca* Diak., 1959, sg.  
     *P. (M.) fernaldana* Wals., 1900  
     *P. (M.) leechi* sp. n.

- P. (M.) cornigera cornigera* Diak., 1959  
*P. (M.) c. birmensis* Diak., 1959  
*P. (M.) latior* Diak., 1959  
*P. (M.) walsinghami* Diak., 1959  
*P. (M.) pyragra* sp. n.  
*P. (M.) ectropa* sp. n.  
*P. (M.) obratzovi* sp. n.  
*Sycacantha* Diak., 1959  
     *thermographa* group  
     *S. thermographa* sp. n.  
     *S. diatoma* Diak., 1966  
     *S. catharia* sp. n.  
     *S. exedra* (Turn., 1916)  
     *S. versicolor* sp. n.  
     *S. tornophanes* (Meyr., 1930)  
     *S. maior* sp. n.  
     *S. concentra* sp. n.  
     *S. caryozona* sp. n.  
     *S. incondita* sp. n.  
     *inodes* group  
     *S. praeclara* sp. n.  
     *S. escharota* (Meyr., 1910)  
     *S. rivulosa* (Diak., 1953)  
     *S. cinerascens* sp. n.  
     *S. formosa formosa* Diak., 1971  
     *S. f. rutila* ssp. n.  
     *S. siamensis* Diak., 1971  
     *S. inodes inodes* (Meyr., 1911)  
     *S. i. perspicua* Diak., 1968  
     *S. i. celebensis* ssp. n.  
     *S. i. rubida* Diak., 1971  
     *S. homichlodes* sp. n.  
     *S. ostracachtys* sp. n.  
     *S. subiecta* sp. n.  
     *S. solemnis* sp. n.  
     *S. complicitana complicitana*  
         (Walk., 1863)  
     *S. c. elegans* ssp. n.  
     *S. dissita* sp. n.  
     *S. potamographa* Diak., 1968  
     *S. choanantha* Diak., 1971  
     *S. inopinata* sp. n.  
     *S. hilarograptia* (Meyr., 1933)  
     *S. rhodocroca* sp. n.  
     *S. rufescens* sp. n.  
     *S. occulta* sp. n.  
     *S. crocamicta* sp. n.  
     *S. quadrata* sp. n.  
     *S. tapaenophyes* sp. n.  
     *S. amphimorpha* sp. n.  
*Psilacantha* Diak., 1966 stat. n.  
     *P. manifesta* sp. n.  
     *P. charidotis* (Durr., 1915)  
     *P. creserias* (Meyr., 1905)  
     *P. spinosa* sp. n.  
     *P. pryeri* (Wals., 1900)  
*Monacantha* g. n.  
     *M. abdita* sp. n.  
     *M. trachymelas* sp. n.  
     *M. astuta* sp. n.

7. Subtribus *Statherotides* n.

- Statheromeris* g. n.  
     *S. atrifracta* sp. n.  
     *S. solomonensis* (Bradley, 1957)  
     *S. semaeophora* sp. n.  
*Phaulacantha* g. n.  
     *P. catharostoma* (Meyr., 1921)  
     *P. acyclica* sp. n.  
     *P. metamelas* sp. n.  
*Dactylioglypha* g. n.  
     *D. tonica* (Meyr., 1909)  
     *D. avita* sp. n.  
     *D. mimas* sp. n.  
     *D. zonata* sp. n.  
     *D. pallens* sp. n.  
*Statherotoxys* g. n.  
     *S. eurydelta* sp. n.

- S. hypochrysa* sp. n.  
*S. acrorhaga* sp. n.  
*S. latens* sp. n.  
*S. hedraea* (Meyr., 1905)  
*S. niphophora* sp. n.  
*S. pudica* sp. n.
- Cephalophyes* g. n.
- C. porphyrea porphyrea* sp. n.  
*C. p. temperans* ssp. n.  
*C. cyanura* (Meyr., 1909)
- Metrioglypha* Diak., 1966
- M. vulgana* (Walk., 1866)  
*M. aoriphora* sp. n.  
*M. crassa* sp. n.  
*M. onychosema* (Meyr., 1911)  
*M. habilis* sp. n.  
*M. mellifera* sp. n.  
*M. thystas* (Meyr., 1911)  
*M. empalinopa* sp. n.  
*M. dualis* sp. n.  
*M. gemmarius* sp. n.
- Antirrhopa* g. n.
- A. grammateus* sp. n.  
*A. orthopa* sp. n.  
*A. melanapta* sp. n.
- Semniotes* g. n.
- S. halantha* (Meyr., 1909)  
*S. abrupta* sp. n.
- Teleta* Diak., 1966
- T. talaris* (Durr., 1915)  
*T. xanthogastra* (Meyr., 1921)
- Pomatophora* g. n.
- P. cudonis* sp. n.
- Statherotis* Meyr., 1909
- batrachodes* group
- S. abathodes* sp. n.  
*S. iricolor* (Meyr., 1930)  
*S. perculata* sp. n.  
*S. batrachodes* (Meyr., 1911)  
*S. licnuphora* sp. n.  
*S. tapinopa* sp. n.  
*S. porphyrochlora* sp. n.
- S. polychlora* sp. n.  
     *amoebaea* group  
*S. tetrarcha* (Meyr., 1920)  
*S. catharosema* sp. n.  
*S. transsecta* sp. n.  
*S. amoebaea amoebaea* (Low., 1896)  
*S. a. leucotorna* ssp. n.  
*S. leucaspis* (Meyr., 1902)
- discana* group
- S. discana discana* (Feld. & Rog., 1874)  
  
*S. d. forma saturata* n.  
*S. d. cuneata* ssp. n.  
*S. micrandra* sp. n.  
*S. ancosema* (Meyr., 1932)  
*S. holotricha* sp. n.  
*S. antisema* sp. n.  
*S. aspidias* (Meyr., 1909)  
*S. olenarcha* (Meyr., 1931)
- decorata* group
- S. decorata* Meyr., 1909  
*S. agitata* (Meyr., 1909)
- Dicephalarcha* g. n.
- D. dependens* (Meyr., 1922)  
*D. sicca* sp. n.  
*D. herbosa* (Meyr., 1909)  
*D. monometalla* sp. n.  
*D. acupicta* sp. n.  
*D. atava* sp. n.  
*D. anemodes* (Meyr., 1912)  
*D. dimorpha* (Meyr., 1909)
- Apeleptera* g. n.
- A. semnodryas* (Meyr., 1936)
- Asaphistis* Meyr., 1909
- A. phanerops* sp. n.  
*A. cretata* (Diak., 1953)  
*A. catarrhactopa* (Meyr., 1938)  
*A. nobilis* sp. n.  
*A. maturicolor* sp. n.  
*A. gypsopa* (Diak., 1953)  
*A. haematina* (Diak., 1953)  
*A. hemicapnodes* (Diak., 1953)

- A. hemicyclica* (Diak., 1953)  
*A. purpurascens* (Diak., 1953)  
*A. sappiroflua* (Diak., 1953)  
*A. praeceps* Meyr., 1909  
*A. lucifera* (Meyr., 1909)  
*A. protosema* sp. n.  
*A. asema* sp. n.  
*Hoplitendemis* g. n.  
*H. pogonopoda* sp. n.  
*H. erebodes* sp. n.  
*H. centraspis* sp. n.  
*Proschistis* Meyr., 1907  
*P. zaleuta* Meyr., 1907  
*P. marmaropa* (Meyr., 1907)  
*P. polyochtha* sp. n.  
*P. amphibola* sp. n.  
*Triheteracra* Diak., 1971  
*T. melanoxenina* Diak., 1971  
*Rhodacra* g. n.  
*R. pyrrhocrossa* (Meyr., 1912)  
*Corethrarcha* g. n.  
*C. rupifera* (Meyr., 1909)  
*Statherotmantis* g. n.  
*S. shicotana* (Kuzn., 1969)  
*S. pictana* (Kuzn., 1969)  
*S. peregrina* (Falk., 1966)  
*Aterpia* Gn., 1845  
 [ *A. anderreggana* Gn., 1845 ]  
*A. palliata* (Meyr., 1909)  
*A. mensifera* (Meyr., 1916)

## 8. Subtribus Neopotamiae n.

- Neopotamia* g. n.  
*N. orophias* (Meyr., 1907)  
*N. leucotoma* sp. n.  
*N. ioxantha* (Meyr., 1907)  
*N. calogona* sp. n.  
*N. divisa* (Wals., 1900)  
*N. cryptocosma* sp. n.  
*N. tornocroca* sp. n.  
*N. glyceranthes* (Meyr., 1928)  
*N. ochracea* (Wals., 1900)  
*Costosa* Diak., 1968  
*C. rhodantha* (Meyr., 1907)  
*C. aphenia* sp. n.  
*C. allochroma* Diak., 1968  
*Meiligma* g. n.  
*M. impigris* sp. n.  
*Phaecadophora* Wals., 1900  
*P. fimbriata* Wals., 1900  
*P. acutana* Wals., 1900  
*Megalota* Diak., 1966  
*M. anceps* (Meyr., 1909)  
*M. fallax* (Meyr., 1909)  
*M. vera* Diak., 1966  
*M. helicana* (Meyr., 1881)  
*M. solida* sp. n.  
*M. geminus* sp. n.  
*Temnolopha* Low., 1901  
 [ *T. sponditis* (Meyr., 1918) ]  
*T. mosaica* Low., 1901  
*T. matura* sp. n.  
*T. biguttata* sp. n.  
*Nyctidea* g. n.  
*N. syngena* sp. n.  
*N. mataea* sp. n.  
*N. cyanitis* sp. n.  
*N. saloris* sp. n.  
*Apsidophora* g. n.  
*A. purpurorbis* sp. n.  
*Saliciphaga* Falk., 1962  
*S. acharis* (Butl., 1879)  
*Pseudohedya* Falk., 1962  
*P. gradana* (Christ., 1881)  
*P. cinninna* Falk., 1962  
*Pseudosciaphila* Obr., 1966  
 [ *P. branderiana* (Linn., 1758) ]  
*P. rhachistis* sp. n.

9. Subtribus **Bactrae** (Falk., 1962)

- Syntozyga* Low., 1901  
*S. sedifera* (Meyr., 1911)  
*S. psammetalla* Low., 1901  
*S. anconia* (Meyr., 1911)  
*S. pedias* (Meyr., 1920)  
*S. macrosperma* Diak., 1971  
*S. stagonophora* sp. n.  
*S. bicuspis* sp. n.
- Bubonoxena* Diak., 1968  
*B. spirographa* Diak., 1968  
*B. ephippias* (Meyr., 1907)  
*B. endaphana* Diak., 1968  
*B. transversa* sp. n.
- Cyclacanthina* g. n.  
*C. monosema* sp. n.  
*C. negligens* sp. n.  
*C. episema* sp. n.
- Parabactra* Meyr., 1910  
 [*P. arenosa* (Meyr., 1909)]
- Bactra* Steph., 1834  
*Bactra* Steph., 1834, sg.
- B. (B.) simplissima* (Diak., 1953)  
*B. (B.) metriacma* Meyr., 1909  
*B. (B.) bactrana* (Kenn., 1901)  
*B. (B.) furfurana* forma *lacteana*  
 Car., 1916
- Chiloides* Butl., 1881, sg.  
*B. (C.) angulata* Diak., 1956  
*B. (C.) capnoplepla* Turn., 1946  
*B. (C.) venosana* (Zell., 1847)  
*B. (C.) chariessa* Diak., 1964  
*B. (C.) coronata* Diak., 1950  
*B. (C.) leucogama* Meyr., 1909  
*B. (C.) copidotis* Meyr., 1909  
*B. (C.) cerata* (Meyr., 1909)  
*B. (C.) tornastis* Meyr., 1909
- Nannobactra* Diak., 1956, sg.  
*B. (N.) minima* Meyr., 1909
- Henioloba* g. n.  
*H. bifacis* sp. n.  
*H. spelaeeodes* (Meyr., 1931)

10. Subtribus **Endotheniae** n.

- Endothenia* Steph., 1852  
*Endothenia* Steph., 1852, sg.  
*E. (E.) micans* sp. n.  
*E. (E.) citharistis* (Meyr., 1909)  
*E. (E.) trizona* sp. n.  
*E. (E.) lutescens* sp. n.
- E. (E.) bacillata* sp. n.  
 [*Neothenia* sg. n.]
- Molybdocrates* g. n.  
*M. opulenta* sp. n.  
*M. vinculata* (Meyr., 1916)

11. Subtribus **Lobesiae**

- Podognatha* Diak., 1966  
*P. tamius* Diak., 1966
- Theorica* Diak., 1966  
*T. lamyra* (Meyr., 1911)
- Lobesia* Gn., 1845  
*Lomaschiza* Low., 1901, sg.  
*L. (L.) rhombophora* Diak., 1954  
*L. (L.) melanops* Diak., 1956
- L. (L.) fetialis* (Meyr., 1920)  
*L. (L.) genialis* Meyr., 1912  
*L. (L.) elasmopyga* sp. n.  
*L. (L.) candida* sp. n.  
*L. (L.) physophora* (Low., 1901)  
*L. (L.) acroleuca* sp. n.
- Lobesia* Gn., 1845, sg.  
*L. (L.) aeolopa* Meyr., 1907

- L. (L.) clavosa* sp. n.  
*L. (L.) atrata* sp. n.  
*L. (L.) lithogonia* Diak., 1954  
*Endopiza* Clem., 1860  
 [ *Endopiza viteana* Clem., 1860 ]  
*Xenolepis* g. n.  
*X. gabina* (Meyr., 1909)  
*X. dolichoschiza* sp. n.

- Engelana* Diak., 1968  
*E. anisoptera* (Meyr., 1921)  
*Didrimys* g. n.  
*D. harmonica* (Meyr., 1905)  
*D. philocompsa* (Meyr., 1921)  
*D. scaristis* (Meyr., 1911)  
*D. unicolor* sp. n.

12. Subtribus *Olethreutae* (Falk., 1962)

- Hedya* group  
*Oestrofa* g. n.  
*O. scorpionastis* (Meyr., 1912)  
*O. scolopendrias* (Meyr., 1912)  
*Antaeola* g. n.  
*A. antaea* (Meyr., 1912)  
*Cymolomia* Led., 1859  
 [ *C. hartigiana* (Sax., 1840) ]  
*C. phaeopelta* (Meyr., 1921)  
*C. vinolenta* sp. n.  
*Archilobesia* Diak., 1966  
*A. d. drymoptila* (Low., 1920)  
*A. d. crossoleuca* (Meyr.,  
 1933) stat. n.  
*A. formosana* Diak., 1966  
*A. chresta* sp. n.  
*Rhopaltriplasia* g. n.  
*R. anamilleta* sp. n.  
*R. trimelaena* (Meyr., 1922)  
*Dudua* Walk., 1864  
*D. tetanota* (Meyr., 1909)  
*D. hesperialis* Walk., 1864  
*D. piratodes* (Meyr., 1930)  
*D. tectigera* (Meyr., 1910)  
*D. charadraea* (Meyr., 1909)  
*D. perornata* sp. n.  
*D. metacyma* sp. n.  
*D. proba* sp. n.  
*D. carpophora* sp. n.  
*D. aprobola* (Meyr., 1886)  
*D. phyllanthana* (Meyr., 1881)

- D. eumenica* (Meyr., 1929)  
*D. lamproterma* sp. n.  
*D. microsema* sp. n.  
*D. brachytoma* sp. n.  
*D. cyclographa* sp. n.  
*D. chlorohygra* sp. n.  
*D. scaeaspis* (Meyr., 1937)  
*D. ptarmicopa* (Meyr., 1936)  
*D. ultima* sp. n.  
*D. anaprobola* (Bradley, 1953)  
*D. crossotoma* (Meyr., 1931)  
*Lasiognatha* g. n.  
*L. mormopa* (Meyr., 1906)  
*L. cellifera* (Meyr., 1912)  
*L. quartaria* sp. n.  
*L. deceptor* (Diak., 1966)  
*Hedya* Hb., 1825  
*H. atrifraga* Diak., 1968  
*H. daeduchus* sp. n.  
*H. iophaea* (Meyr., 1912)  
*H. leucalox* sp. n.  
*H. anaplecta* (Meyr., 1909)  
*H. fibrata* (Meyr., 1909)  
*H. exsignata* (Meyr., 1916)  
*H. ebenina* (Meyr., 1916)  
*H. inornata* (Wals., 1900)  
*H. auricristana* (Wals., 1900)  
*Gonomomera* g. n.  
*G. halixanta* (Meyr., 1910)  
*Metendothenia* g. n.  
*M. rhodambon* sp. n.

- M. emmitla* sp. n.  
*M. hilarocroca* sp. n.  
*M. mesarotra* (Meyr., 1911)  
*M. fidelis* sp. n.  
*M. spumans* sp. n.  
*M. metacycla* sp. n.  
*M. calopa* sp. n.  
*M. atropunctana* (Zett., 1840)  
*M. separata* (Kearf., 1907)  
*Ophiorrhada* Diak., 1966  
*O. dryoptycha* (Meyr., 1922)  
*O. ergasima* (Meyr., 1911)  
*O. favillosa* sp. n.  
*Lipsotelus* Wals., 1900  
*L. anacanthus anacanthus* sp. n.  
*L. a. amicus* ssp. n.  
*L. a. insulae* ssp. n.  
*L. a. calens* ssp. n.  
*L. lichenoides* Wals., 1900  
*L. armiger* sp. n.  
*L. xyloides* sp. n.
- Apotomis* group
- Orthotaenia* Steph., 1829  
 [ *O. undulana* (D. & Sch., 1776) ]  
*Pristerognatha* Obr., 1960  
 [ *P. penthinana* (Gn., 1845) ]  
*Apotomis* Hb., 1825  
*A. trigonias* sp. n.  
*A. lacteifacies* (Wals., 1900)  
*A. generosa* (Meyr., 1909)  
*A. formalis* (Meyr., 1935)  
*A. cuphostra* (Butl., 1879)  
*Pseudohermenias* Obr., 1960  
 [ *P. clausthaliana* (Sax., 1840) ]  
*Selenodes* Gn., 1845  
 [ *S. dalecarliana* Gn., 1845 ]  
*S. caryocryptis* (Meyr., 1932)
- Olethreutes* group
- Euobraztsovia* Diak., 1966  
*E. chionodelta* (Meyr., 1911)
- Stictea* Gn., 1845  
 [ *S. mygindiana* (D. & Sch., 1776) ]  
*Olethreutes* Hb., 1822  
*Olethreutes* Hb., 1822, sg.  
 [ *O. (O.) arcuella* (Clerck, 1759) ]  
 [ *O. (O.) arbutella* (Linn., 1759) ]  
*O. (O.) mori* (Mats., 1900)  
*O. (O.) niphodelta* (Meyr., 1925)  
*O. (O.) nubicineta* sp. n.  
*O. (O.) notata* Wals., 1900  
*O. (O.) euryopis* (Meyr., 1937)  
*O. (O.) cerographa* (Meyr., 1907)  
*O. (O.) lobocasis* (Meyr., 1936)  
*Phiaris* Hb., 1825, sg. stat. n.  
*O. (P.) agnota* sp. n.  
*Syricoris* Tr., 1829, sg.  
 [ *O. (S.) rivulana* (Scop., 1763) ]  
*Biscopa* sp. n.  
 [ *O. (B.) bipunctana* (F., 1794) ]  
*O. (B.) hedrotoma* (Meyr., 1938)  
 [ *O. (B.) glaciana* (Möschl., 1860) ]  
 [ *O. (B.) andromedana* Barn. & McDunn., 1917 ]  
 [ *O. (B.) rosachreana* Kearf., 1907 ]  
*Rudisociaria* Falk., 1962  
 [ *R. expeditana* (Snell., 1882) ]  
*R. velutina* (Wals., 1900)  
*Piniphila* Falk., 1962  
 [ *P. decrepitana* (Herr.-Schäff., 1848) ]  
*Capricornia* Obr., 1960  
 [ *C. boisduvaleana* (Dup., 1836) ]  
*Celypha* Hb., 1825  
*Celypha* Hb., 1825, sg.  
*C. sistrata* (Meyr., 1911)  
*C. capnodesma* (Meyr., 1922)  
*Celyphoides* Obr., 1960, sg. stat. n.  
 [ *C. flavipalpata* (Herr.-Schäff.) ]  
*C. constructa* (Meyr., 1922)  
*C. cespitana* (Hb., 1822)  
*Oxysemaphora* g. n.  
*O. chionolitha* (Meyr., 1938)

*Pelatea* Gn., 1845

[*P. klugiana* (Freyer, 1836)]

*P. assidua* (Meyr., 1914)

*Palaeomorpha* g. n.

*P. jacobsoni* sp. n.

*Stalagmocroca* g. n.

*S. sandycota* (Meyr., 1912)

#### ADDENDUM

Subtribus *Olethreutae* (Falk., 1962)

*Dudua hemigrapta* (Meyr., 1931)

*Olethreutes* (*O.*) *hemiplaca* (Meyr., 1922)



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APPENDIX I

A list of South Asiatic species of *Argyroproce* sensu Meyrick

The present list is derived from the J. F. G. Clarke's "Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick", vol. 3, 1958. Omitted are African and American species. The annotations indicate: (1) the page of that monograph; then, Clarke's eventual new assignment of the species; (2) the tribe of the Olethreutinae (L = Laspeyresiini, E = Eucosmini, O = Olethreutini); (3) the subtribe, abbreviated, and (4) the genus. The headings are the genera as used by Clarke. *Bactra* is omitted (cf. remark on p. 351).

				<i>Acroclita</i> Lederer
<i>trimelaena</i>	284	O	Ol.	<i>Rhopaltriplasia</i> n.
				<i>Aphania</i> Hübner
<i>generosa</i>	300	O	Ol.	<i>Apotomis</i> Hb.
				<i>Asaphistis</i> Meyrick
<i>praeceps</i>	304	O	Stath.	<i>Asaphistis</i> Meyr.
				<i>Aterpia</i> Guenée
<i>constructa</i>	304	O	Ol.	<i>Celypha</i> ( <i>Celyphoides</i> ) Hb.
				<i>Bactra</i> Stephens
<i>harmonia</i>	311	O	Lob.	<i>Lobesia</i> ( <i>Harmosma</i> ) Gn.
<i>leucogama</i>	312	O	Bactra	<i>Bactra</i> ( <i>Chiloides</i> ) Steph.
				<i>Endothenia</i> Stephens
<i>banausopis</i>	332	O	End.	<i>Endothenia</i> Steph.
				<i>Exartema</i> Clemens
<i>lobocasis</i>	395	O	Ol.	<i>Olethreutes</i> Hb.
				<i>Lobesia</i> Stainton
<i>acanthis</i>	464	L	—	<i>Matsumuraeses</i> Iss.
<i>aeolopa</i>	"	O	Lob.	<i>Lobesia</i> Gn.
<i>anceps</i>	"	O	Neop.	<i>Megalota</i> Diak.
<i>chionolitha</i>	467	O	Ol.	<i>Oxysemaphora</i> n.
<i>clarisecta</i>	"	O	Lob.	<i>Lobesia</i> Gn.
<i>dryopelta</i>	"	O	Lob.	<i>Lobesia</i> Gn.

<i>fallax</i>	467	O	Neop.	<i>Megalota</i> Diak.
<i>fetialis</i>	468	O	Lob.	<i>Lobesia</i> Gn.
<i>formalis</i>	,,	O	Ol.	<i>Apotomis</i> Hb.
<i>gabina</i>	,,	O	Lob.	<i>Xenolepis</i> n.
<i>genialis</i>	,,	O	Lob.	<i>Lobesia</i> Gn.
<i>glebifera</i>	471	O	Lob.	<i>Lobesia</i> Gn.
<i>organica</i>	,,	O	Ol.	<i>Metendothenia mesarotra</i> (Meyr.)
<i>orphica</i>	,,	O	Lob.	<i>Lobesia</i> Gn.
<i>orthomorpha</i>	,,	O	Lob.	<i>Lobesia</i> Gn.
<i>pedias</i>	472	O	Bactrae	<i>Syntozyga</i> Low.
<i>peplotoma</i>	,,	O	Lob.	<i>Lobesia</i> Gn.
<i>rhipidoma</i>	475	O	Lob.	<i>Lobesia</i> Gn.
<i>serangodes</i>	,,	O	Lob.	<i>Lobesia</i> Gn.
<i>transtrifera</i>	,,	O	Lob.	<i>Lobesia</i> Gn.

*Macraesthetica* Meyrick

<i>rubiginis</i> Wals.	476	O	Ol.	<i>Macraesthetica</i> Meyr.
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*Metachorista* Meyrick

<i>ursula</i>	479	belongs to the Schoenoteninae		
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*Olethreutes* Hübner

<i>acrosema</i>	480	O	Neop.	<i>Neopotamia divisa</i> (Wals.)
<i>aeolantha</i>	,,	O	?	incertae sedis
<i>aeolochlora</i>	,,	O	Sor.	<i>Sorolopha</i> Low.
<i>aeraria</i>	483	E	—	—
<i>agathopis</i>	,,	O	Sor.	<i>Sorolopha</i> Low.
<i>anaplecta</i>	,,	O	Ol.	<i>Hedya</i> Hb.
<i>ancalota</i>	,,	E	—	<i>Rhctogonia</i> Diak.
<i>ancosema</i>	484	O	Stath.	<i>Statherotis</i> Meyr.
<i>anemodes</i>	,,	O	,,	<i>Dicephalarcha</i> n.
<i>antaea</i>	,,	O	Ol.	<i>Antaeola</i> n.
<i>astrosema</i>	487	O	Syc.	<i>Phaecasiophora</i> Grote
<i>attica</i>	,,	O	,,	<i>Phaecasiophora</i> Grote
<i>autoberylla</i>	,,	O	Sor.	<i>Sorolopha</i> Low.
<i>branchiodes</i>	488	E	—	—
<i>callichlora</i>	491	O	Sor.	<i>Sorolopha</i> Low.
<i>callicratis</i>	,,	E	—	—
<i>camarotis</i>	,,	O	Sor.	<i>Sorolopha</i> Low.
<i>caryactis</i>	,,	E	—	<i>Ancylis</i> Hb.
<i>caryocryptis</i>	492	O	Ol.	<i>Selenodes</i> Gn.
<i>caryosema</i>	492	O	Syc.	<i>Phaecasiophora</i> Grote
<i>catarrhactopa</i>	,,	O	Stath.	<i>Asaphistis</i> Meyr.



<i>cellifera</i>	495	O	Ol.	<i>Lasiognatha</i> n.
<i>cenchropis</i>	"	E	—	? <i>Cryptophlebia</i> Wals.
<i>centritis</i>	"	O	Sor.	<i>Eudemis</i> Hb.
<i>cerographa</i>	496	O	Ol.	<i>Olethreutes</i> Hb.
<i>clydonias</i>	"	O	Neop.	<i>Temnolopha mosaica</i> Low.
<i>clytocarpa</i>	"	L	—	<i>Loboschiza</i> Diak.
<i>compsitis</i>	"	O	Sor.	<i>Sorolopha</i> Low.
<i>conchopleura</i>	499	?O	—	incertae sedis
<i>constructa</i>	"	O	Ol.	<i>Celypha</i> ( <i>Celyphoides</i> ) Hb.
<i>corthyntis</i>	"	E	—	<i>Kennelia</i> Reb.
<i>cremnocrates</i>	"	O	Gnathm.	<i>Dynatorhabda</i> n.
<i>craserias</i>	"	O	Syc.	<i>Psilacantha</i> Diak.
<i>crocospila</i>	548	O	Lob.	see <i>harmonica</i>
<i>crossoleuca</i>	500	O	Ol.	<i>Archilobesia drymoptila crossoleuca</i> (Meyr.)
<i>cyanura</i>	"	O	Stath.	<i>Cephalophyes</i> n.
<i>dimorpha</i>	503	O	Stath.	<i>Dicephalarcha</i> n.
<i>diserta</i>	504	O	Syc.	<i>Phaecasiophora</i> Grote
<i>eaolotechna</i>	"	O	Ol.	<i>Phaecadophora fimbriata</i> Wals.
<i>ebenina</i>	"	O	Ol.	<i>Hedya</i> Hb.
<i>englytopa</i>	507	O	Sor.	<i>Sorolopha</i> Low. (= <i>englytopa</i> , err. typ.)
<i>erotias</i>	"	O	Gatescl.	<i>Gatesclarkeana</i> Diak.
<i>escharota</i>	508	O	Syc.	<i>Sycacantha</i> Diak.
<i>euedra</i>	"	O	?Ol.	incertae sedis
<i>eurypis</i>	"	O	Ol.	<i>Olethreutes</i> Hb.
<i>exsignata</i>	"	O	Ol.	<i>Hedya</i> Hb.
<i>fibrata</i>	511	O	Ol.	<i>Hedya</i> Hb.
<i>glyceranthes</i>	"	O	Neop.	<i>Neopotamia</i> n.
<i>gyrotis</i>	512	O	Sor.	<i>Eudemis</i> Hb.
<i>halantha</i>	"	O	Stath.	<i>Semniotes</i> n.
<i>halixantha</i>	"	O	Ol.	<i>Gonomomera</i> n.
<i>hapalaspis</i>	515	O	Ol.	incertae sedis
<i>harmonica</i>	"	O	Lob.	<i>Didrimys</i> n.
<i>hedraea</i>	"	O	Stath.	<i>Statherotoxys</i> n.
<i>hedrotoma</i>	"	O	Ol.	<i>Olethreutes</i> ( <i>Biscofa</i> ) subg.n.
<i>hemigrapta</i>	516	O	Ol.	<i>Dudua</i> Walk.
<i>hemiplaca</i>	"	O	Ol.	<i>Olethreutes</i> Hb.
<i>herbifera</i>	"	O	Sor.	<i>Sorolopha</i> Low.
<i>herbosa</i>	519	O	Stath.	<i>Dicephalarcha</i> n.
<i>hilarograpta</i>	"	O	Syc.	<i>Sycacantha</i> Diak.
<i>hoplista</i>	"	L	—	? <i>Matsumuraeses</i> Iss.
<i>hyalitis</i>	520	L	—	—

<i>informalis</i>	„	E	—	—
<i>iograpt</i>	523	O	Gatescl.	<i>Asymmetrarcha</i> n.
<i>iophaea</i>	523	O	Ol.	<i>Hedya</i> Hb.
<i>ioxantha</i>	„	O	Neop.	<i>Neopotamia</i> n.
<i>isodoxa</i>	524	?O	—	incertae sedis
<i>lecythocera</i>	„	O	Gnathm.	<i>Gnathmocerodes</i> Diak.
<i>leucaspis</i>	„	O	Stath.	<i>Statherotis</i> Meyr.
<i>liochlora</i>	559	O	Sor.	<i>Sorolopha</i> Low.
<i>litigosa</i>	527	E	—	<i>Peridaedala</i> Meyr.
<i>mensifera</i>	„	O	Stath.	<i>Aterpia</i> Gn.
<i>microplaca</i>	„	E	—	—
<i>milichopsis</i>	528	E	?	incertae sedis
<i>miltographa</i>	„	E	—	—
<i>mixanthes</i>	„	L	—	<i>Enarmonia</i> Hb.
<i>mniochlora</i>	„	O	Sor.	<i>Sorolopha</i> Low.
<i>mormopa</i>	531	O	Ol.	<i>Lasiognatha</i> n.
<i>niphodelta</i>	„	O	Ol.	<i>Olethreutes</i> Hb.
<i>oedalea</i>	„	L	—	<i>Thymioptila</i> Diak.
<i>olenarcha</i>	532	O	Stath.	<i>Statherotis</i> Meyr.
<i>orophias</i>	„	O	Neop.	<i>Neopotamia</i> n.
<i>palliata</i>	„	O	Stath.	<i>Aterpia</i> Gn.
<i>paragramma</i>	560	E	—	<i>Tetramoera</i> Diak.
<i>pertexta</i>	535	O	Syc.	<i>Phaecasiophora</i> Grote
<i>phyllochlo</i>	„	O	Sor.	<i>Sorolopha</i> Low.
<i>platycremna</i>	536	O	Ol.	<i>Apotomis</i> Hb.
<i>plinthograpt</i>	539	O	Sor.	<i>Sorolopha</i> Low.
<i>poetica</i>	„	E	—	—
<i>pompholycias</i>	„	O	Sor.	<i>Eudemopsis</i> Falk.
<i>prasini</i>	540	O	Sor.	<i>Sorolopha</i> Low.
<i>protocyma</i>	„	E	—	<i>Kennelia</i> Reb.
<i>purpurissatana</i> Kenn.	„	O	Sor.	<i>Eudemopsis</i> Falk.
<i>pyrrhocrossa</i>	543	O	Stath.	<i>Rhodacra</i> n.
<i>rhodantha</i>	„	O	Neop.	<i>Costosa</i> Diak.
<i>rupifera</i>	544	O	Stath.	<i>Corethrarcha</i> n.
<i>sandycota</i>	„	O	Ol.	<i>Stalagmocroca</i> n.
<i>scolecias</i>	„	O	?	incertae sedis
<i>scolopendrias</i>	547	O	Ol.	<i>Oestrofa</i> n.
<i>scorpiastis</i>	„	O	Ol.	<i>Oestrofa</i> n.
<i>semiculta</i>	„	O	Sor.	<i>Sorolopha</i> Low.
<i>semnodryas</i>	548	O	Stath.	<i>Apeleptera</i> n.
<i>solaris</i>	„	?L	—	—
<i>stibaropa</i>	551	O	Ol.	<i>Metendothenia mesarotra</i> (Meyr.)
<i>stygiaula</i>	552	O	Sor.	<i>Sorolopha</i> Low.

<i>tetanota</i>	„	O	Ol.	<i>Dudua</i> Walk.
<i>tetrarcha</i>	552	O	Stath.	<i>Statherotis</i> Meyr.
<i>threnodes</i>	555	E	—	—
<i>thymelopa</i>	„	E	—	—
<i>tonica</i>	556	O	Stath.	<i>Dactylioglypha</i> n.
<i>tonsonia</i>	„	O	Gnathm.	<i>Gnathmocerodes</i> Diak.
<i>tornophanes</i>	„	O	Syc.	<i>Sycacantha</i> Diak.
<i>trophiodes</i>	559	L	—	? <i>Matsumuraeses</i> Iss.

*Phaecadophora* Walsingham

<i>eaolotechna</i>	571	O	Neop.	<i>Phaecadophora fimbriata</i> Wals.
<i>fimbriata</i> Wals.	„	O	Neop.	<i>Phaecadophora</i> Wals.

*Platypeplus* Walsingham

<i>aprobola</i>	572	O	Ol.	<i>Dudua</i> Walk.
<i>charadraea</i>	„	O	Ol.	<i>Dudua</i> Walk.
<i>eumenica</i>	„	O	Ol.	<i>Dudua</i> Walk.
<i>piratodes</i>	„	O	Ol.	<i>Dudua</i> Walk.
<i>ptarmicopa</i>	575	O	Ol.	<i>Dudua</i> Walk.
<i>scaeaspis</i>	„	O	Ol.	<i>Dudua</i> Walk.
<i>tectigera</i>	„	O	Ol.	<i>Dudua</i> Walk.

*Proschistis* Meyrick

<i>zalenta</i>	576	O	Stath.	<i>Proschistis</i> Meyr.
<i>inflicta</i>	579	O	?	incertae sedis
<i>invida</i>	„	?	—	„ „
<i>iricolor</i>	„	O	Stath.	<i>Statherotis</i> Meyr.
<i>lucifera</i>	580	O	Stath.	<i>Asaphistis</i> Meyr.
<i>nniopyrrha</i>	„	O	Stath.	<i>Dicephalarcha</i> n.
<i>sideroxyla</i>	„	O	?	incertae sedis
<i>stygnopa</i>	„	O	?	„ „

*Sporocelis* Meyrick

<i>marmaropa</i>	591	O	Stath.	<i>Proschistis</i> Meyr.
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*Statherotis* Meyrick

<i>decorata</i>	592	O	Stath.	<i>Statherotis</i> Meyr.
<i>agitata</i>	595	O	Stath.	<i>Statherotis</i> Meyr.
<i>aspidias</i>	„	O	Stath.	<i>Statherotis</i> Meyr.
<i>catharota</i>	„	E	—	—
<i>relapsa</i>	„	E	—	—

*Temnolopha* Lower

<i>mosaica</i> Low.	599	O	Neop.	<i>Temnolopha</i> Low.
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## APPENDIX II

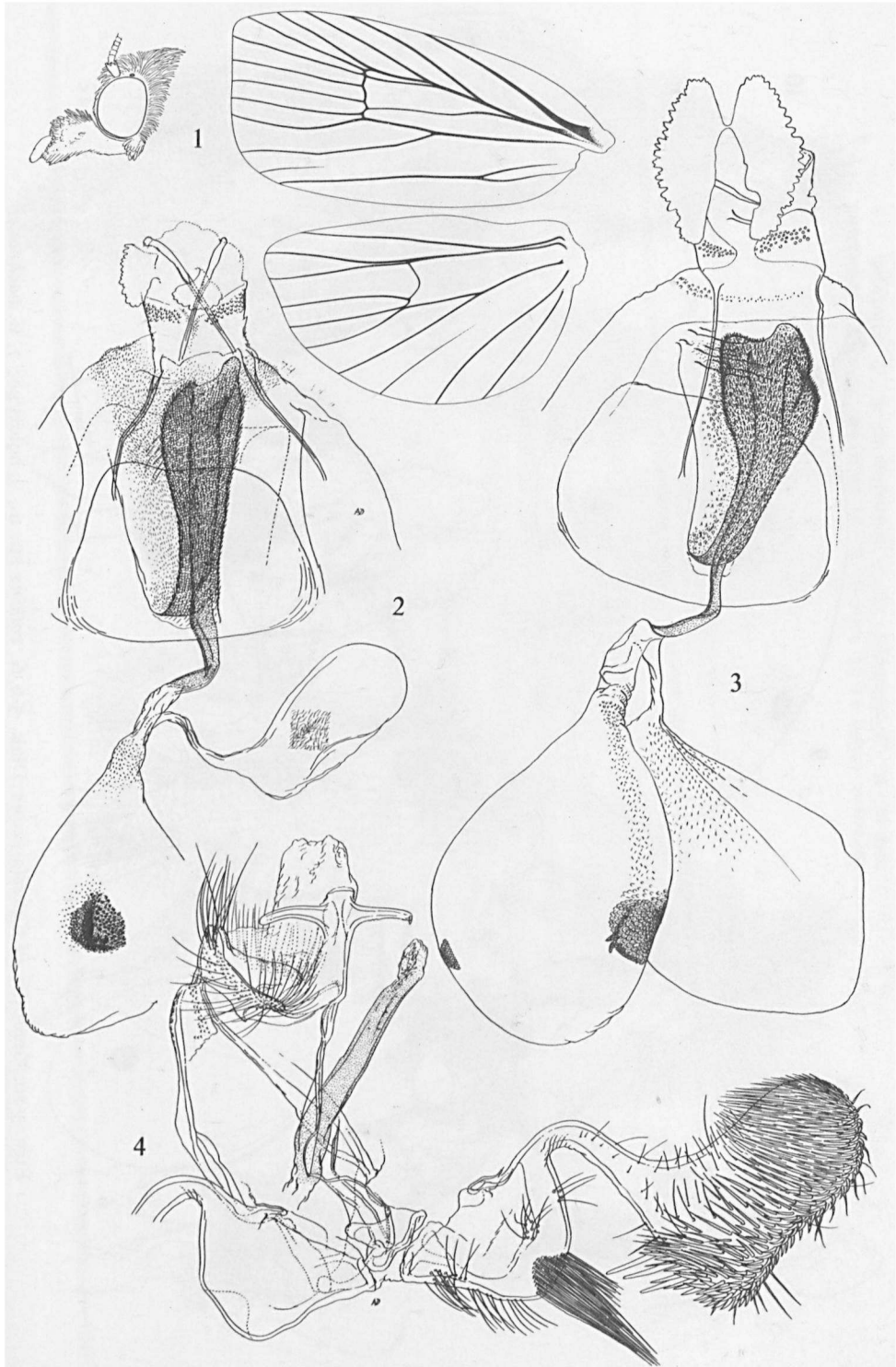
### The dates of publication of Kennel's "Die Paläarktischen Tortriciden"

The important monograph of Dr. J. Kennel, "Die Palaearktischen Tortriciden", appeared in several issues in vol. 21, part 54, of the journal *Zoologica*, Stuttgart. The dates of publication of these separate issues are not mentioned on the pages of the original work, nor are they exact on the covers of the five issues. Therefore it seems useful once and for all to lay down these dates. I am greatly obliged to Dr. H. J. Hannemann, Zoologisches Museum der Humboldt-Universität, Berlin, D.D.R., for the following list and for his permission to publish it.

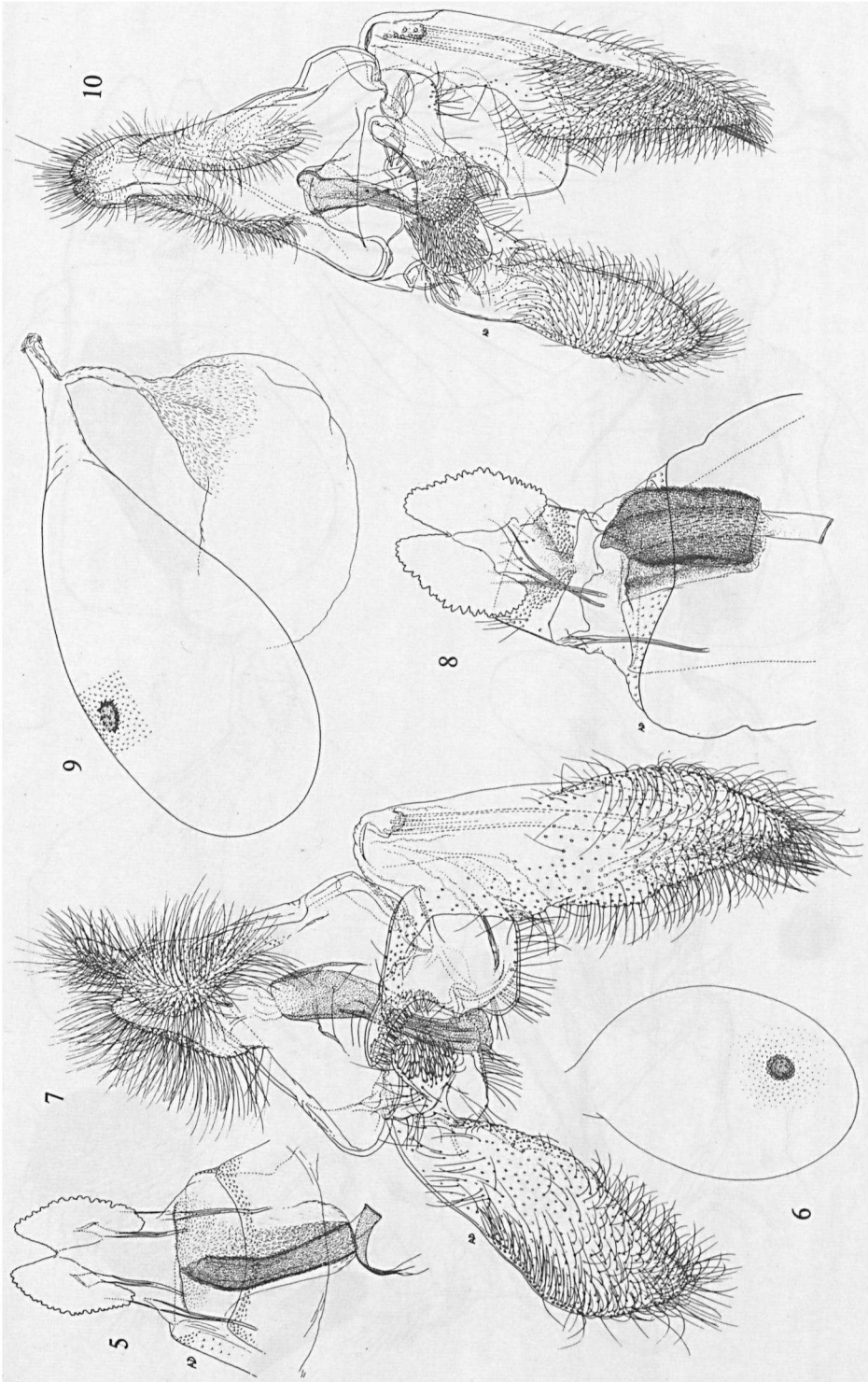
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Lieferung 4	1916 p. 397-546, t. 17-20
Lieferung 4a	1921 p. 545-727, t. 21-24 + Index p. 728-742.

# FIGURES

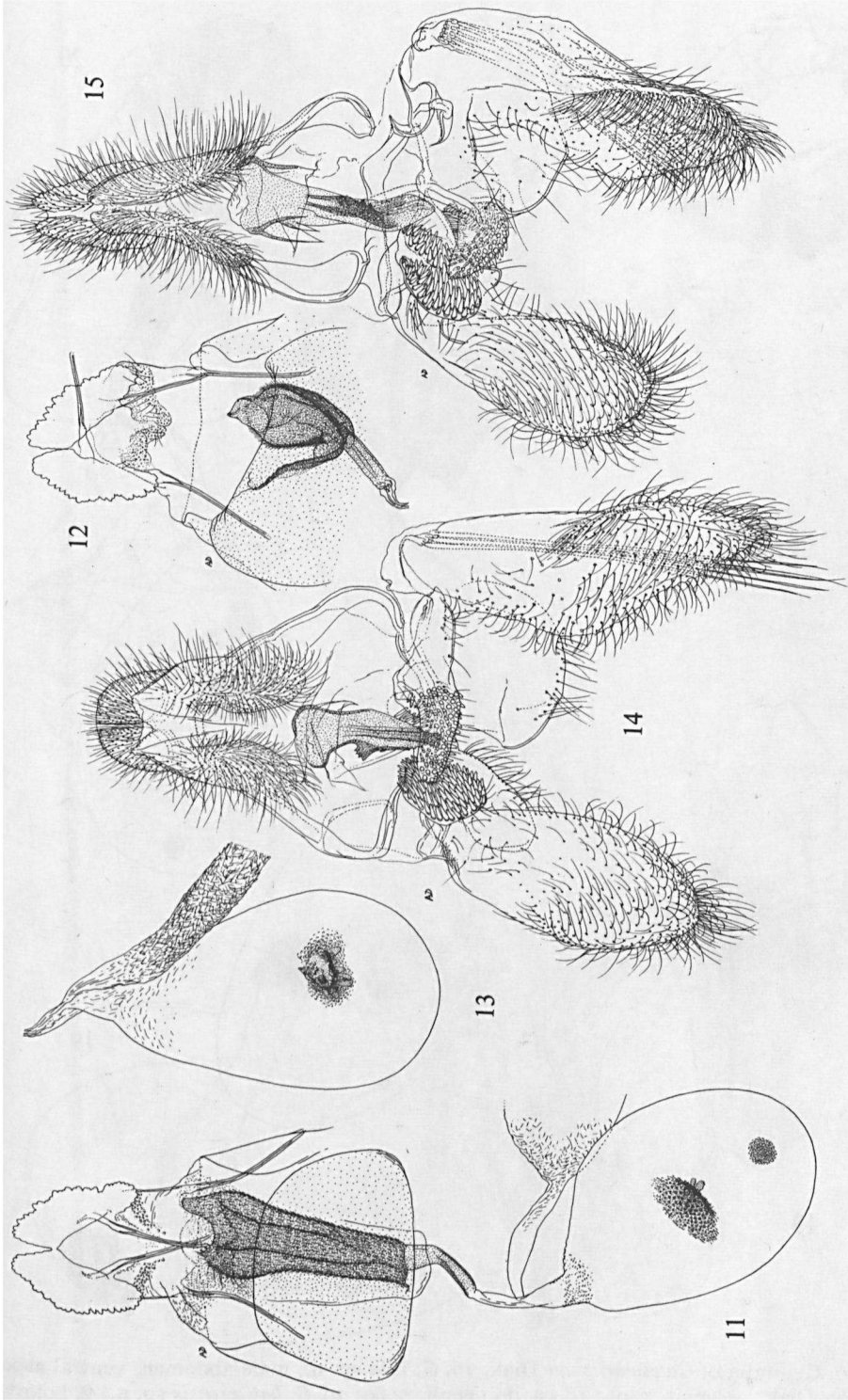
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Figs. 1-3. *Gatesclarkeana* Diak. 1, *G. senior* Diak., sketch of head and of neurulation; 2, ♀ genitalia of *G. idia* sp. n., Java, genit. 7410A; 3, the same of *G. erotias* (Meyr.), Ceylon, genit. 7782. Fig. 4. *Gnathmocerodes* (*G.*) *euplectra* (Low.), ♂, genit. 8053. (Figs. 1-2, after Diakonoff, 1968.)

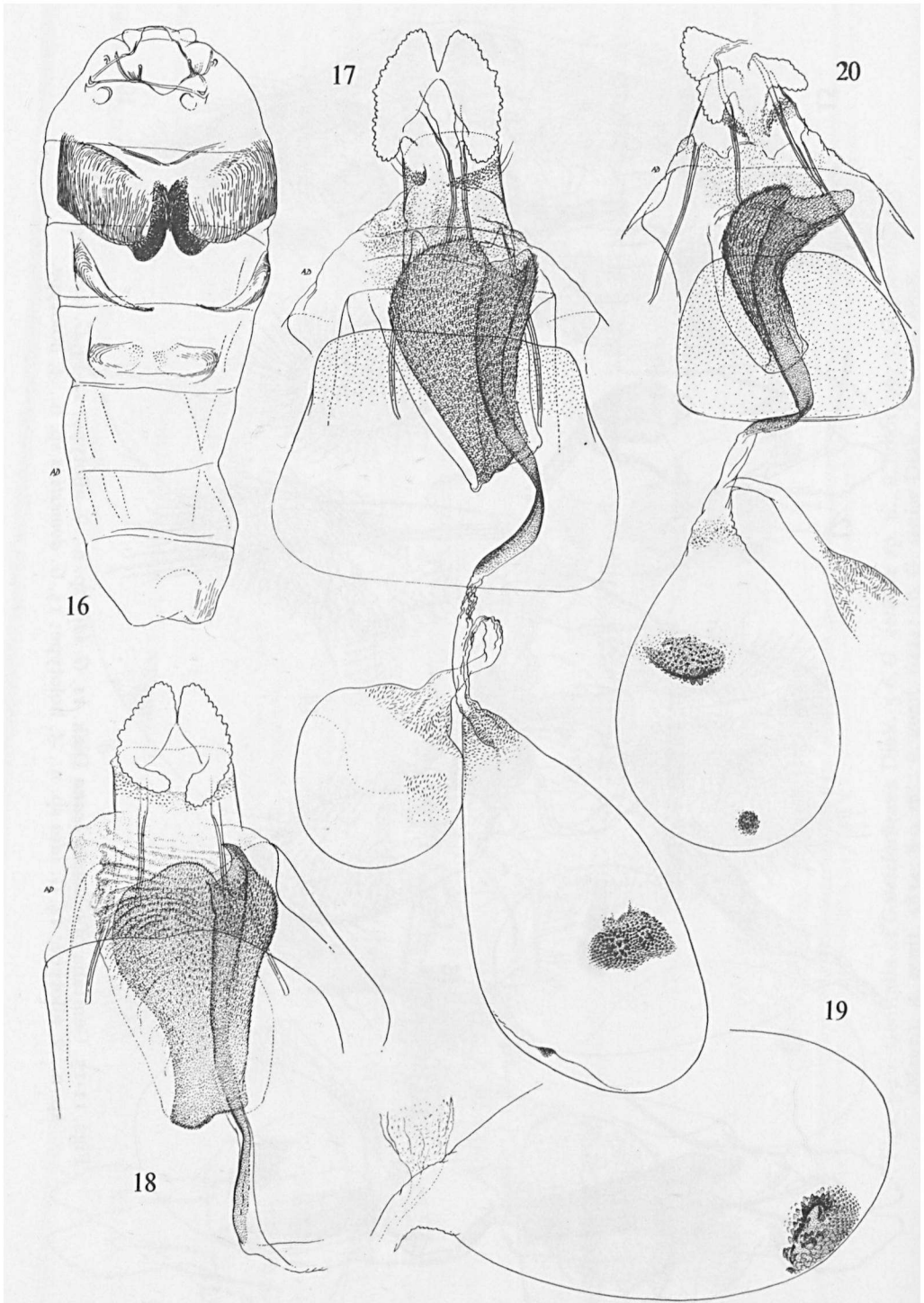


Figs. 5-10. Genitalia of *Gatesclarkeana* Diak. 5-6, *G. eothina* sp. n., ♀, holotype; 7, *G. pachmodes* (Meyr.), ♂, genit. 5834; 8-9, do., ♀, genit. 6444; 10, *G. senior* Diak., ♂, genit. 5818.



Figs. 11-15. Genitalia of *Gatesclarkeana* Diak. 11, *G. idia* sp. n., ♀, allotype; 12-13, *G. domestica* sp. n., ♀, allotype; 14, *G. idia* sp. n., ♂, holotype; 15, *G. domestica* sp. n., ♂, holotype.





Figs. 16-20. Genitalia of *Gatesclarkeana* Diak. 16, *G. idia* sp. n., male abdomen, ventral aspect; 17, *G. senior* Diak., ♀, genit. 7401; 18-19, do., genit. 5960; 20, *G. batianensis* sp. n., ♀, holotype.

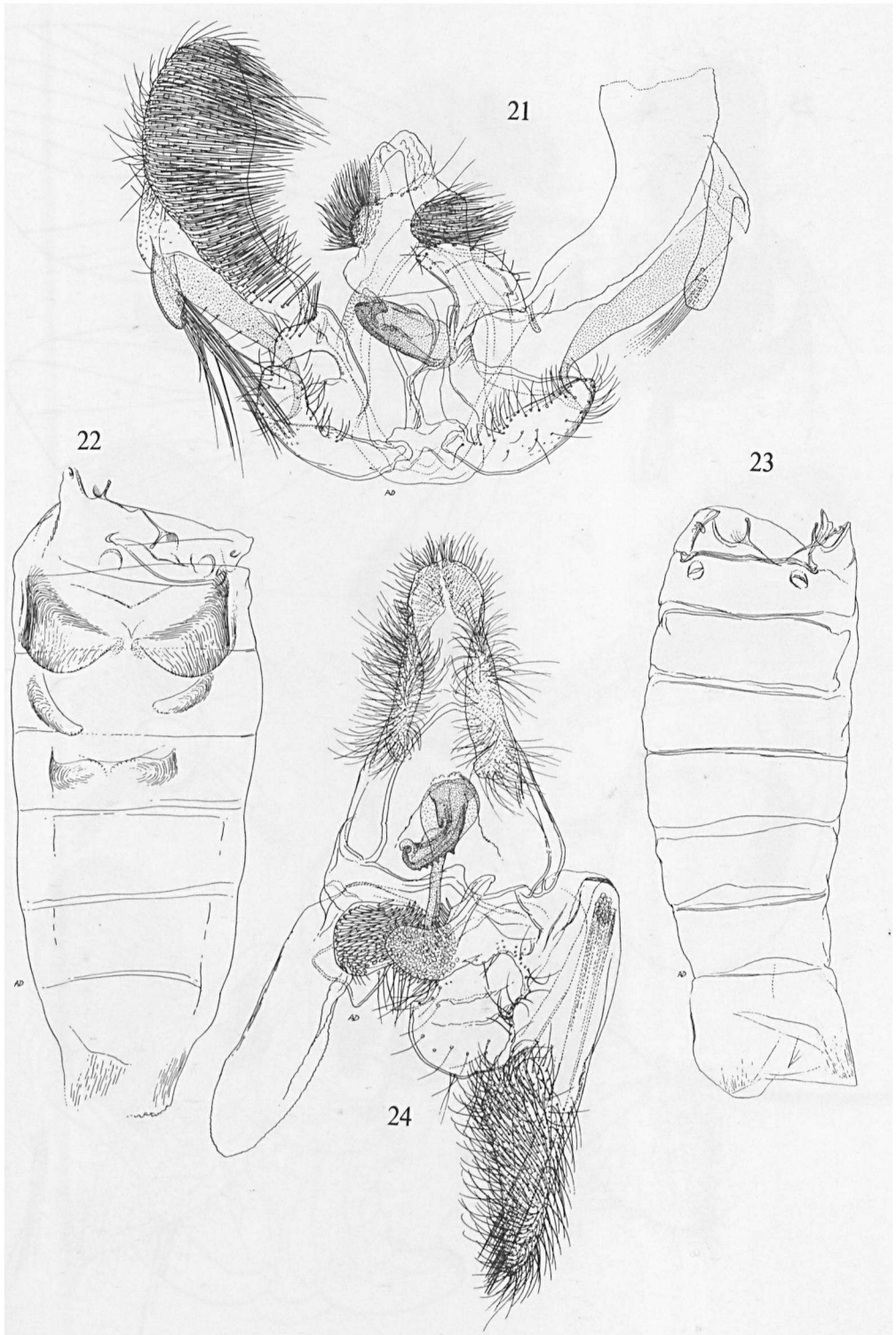


Fig. 21. Male genitalia of *Asymmetrarcha iograpti* (Meyr.), ♂, genit. 6500. Figs. 22-24. *Gatesclarkeana* Diak. 22, *G. domestica* sp. n., ♂, abdomen, ventral aspect; 23, do., of *G. senior* Diak., ♂; 24, do., male genit. 5818.

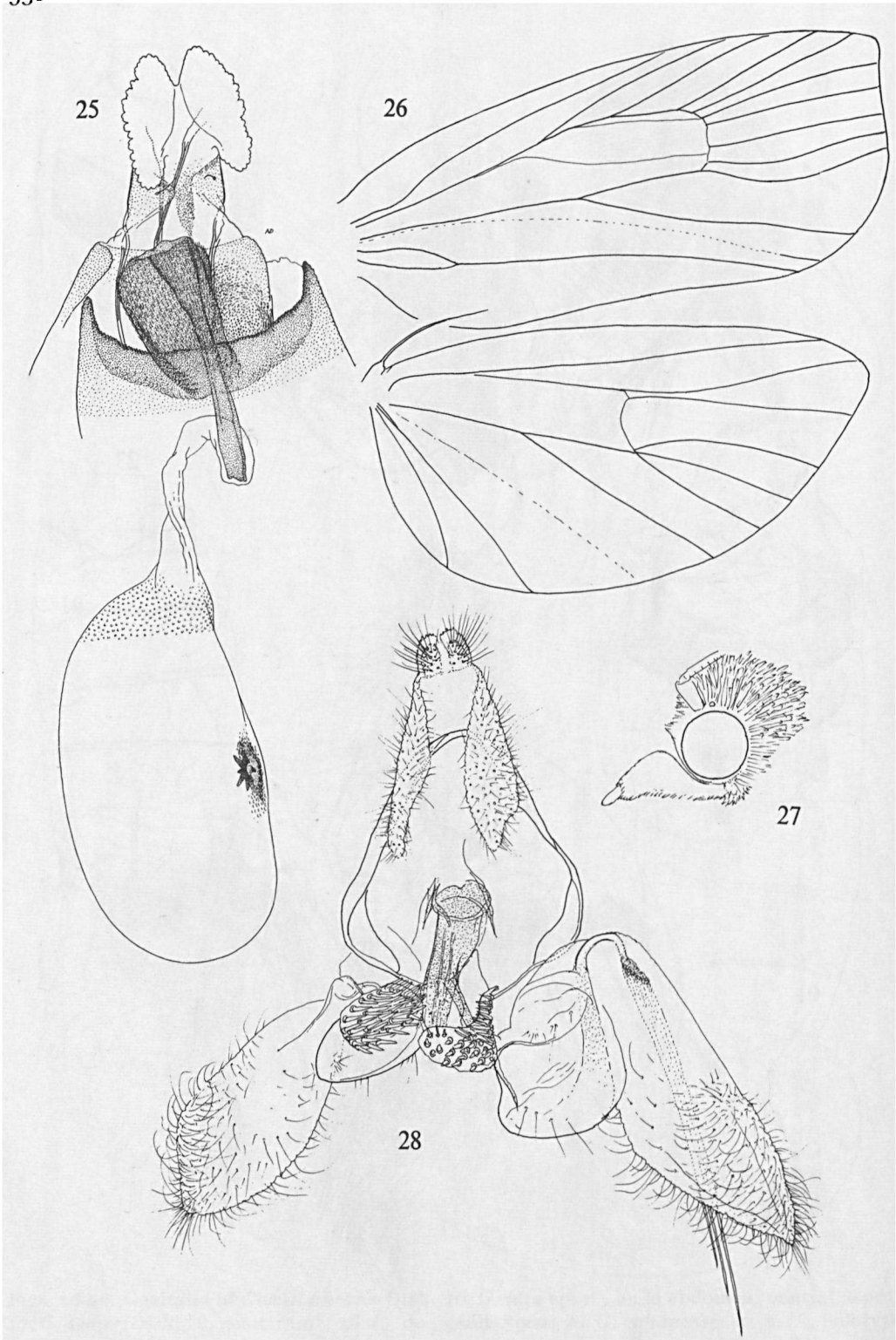
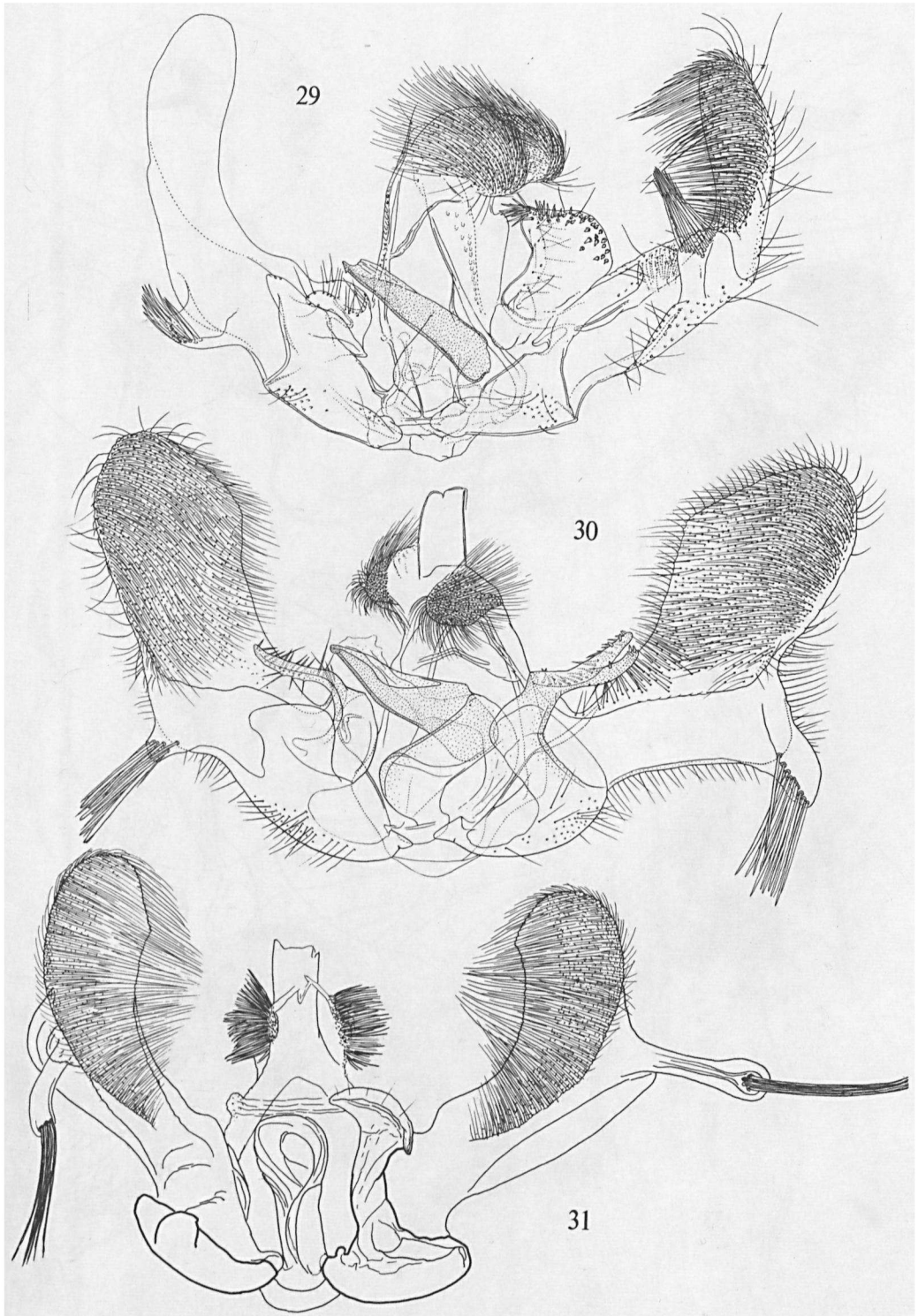
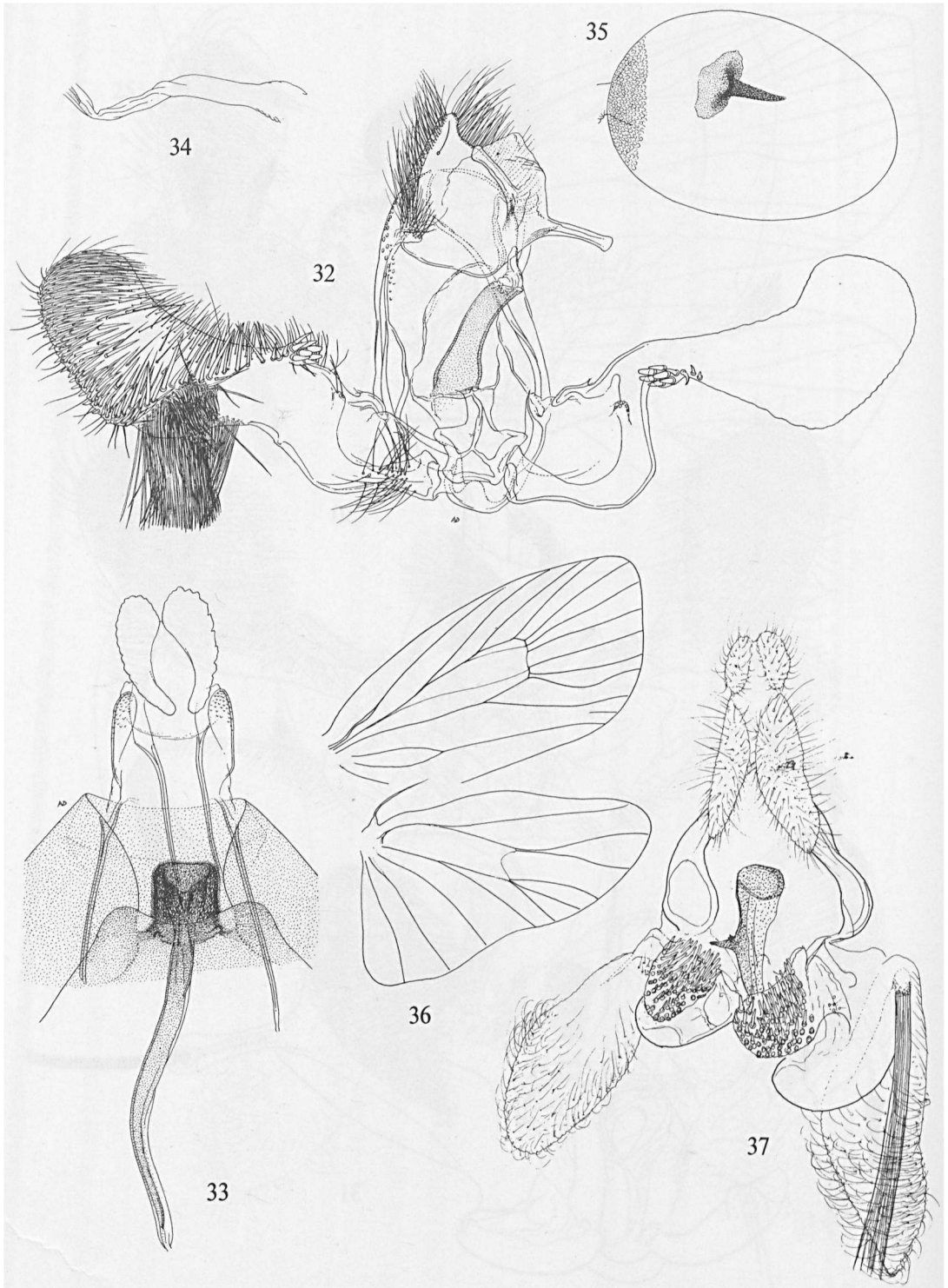


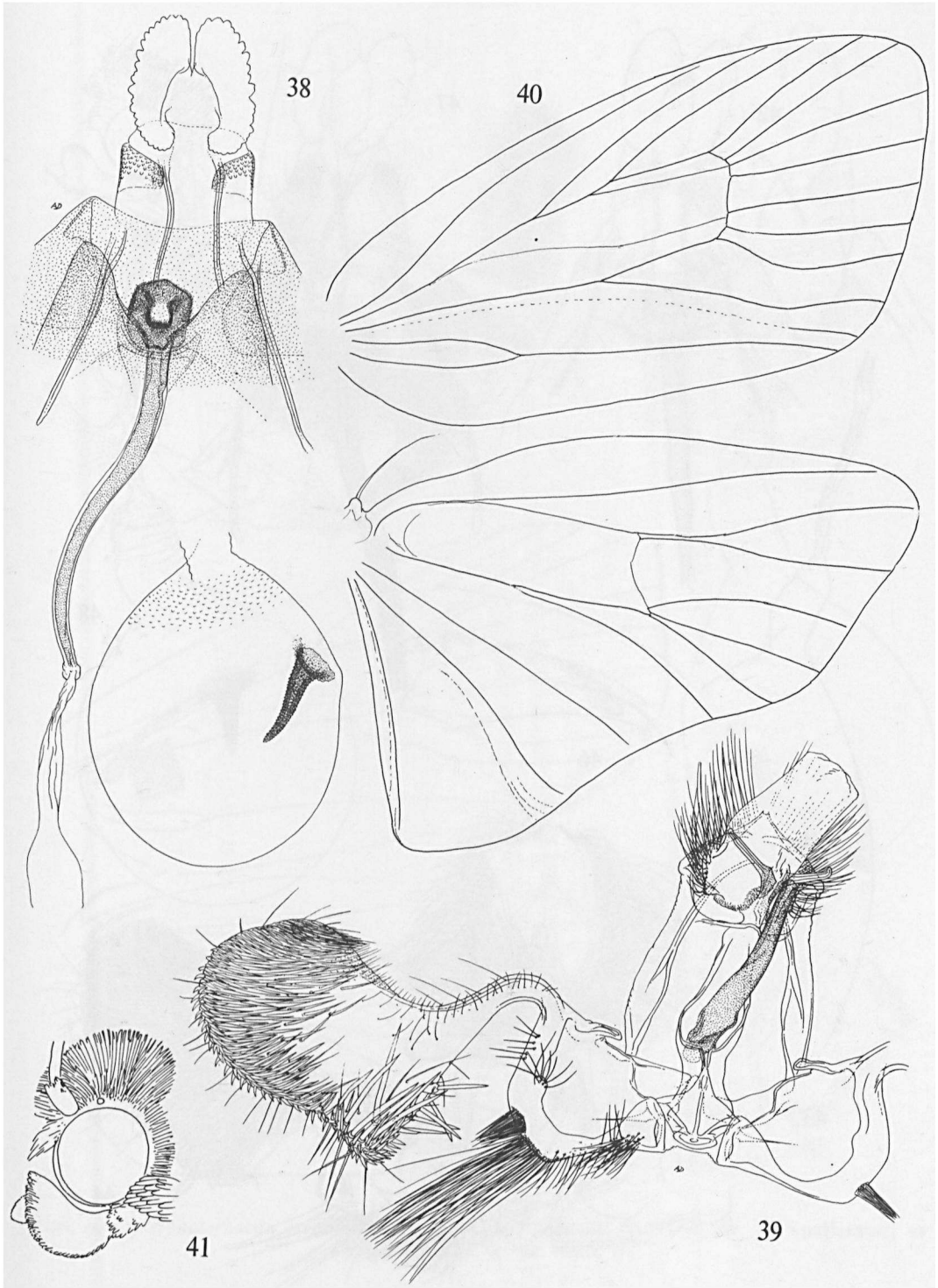
Fig. 25. Female genitalia of *Gatesclarkeana confrica* sp. n., holotype. Figs. 26-27. *Asymmetrarcha iograptia* (Meyr.), sketch of wing venation and head. Fig. 28. *G. erotias* (Meyr.), ♂, genit. 8029 (Ceylon).



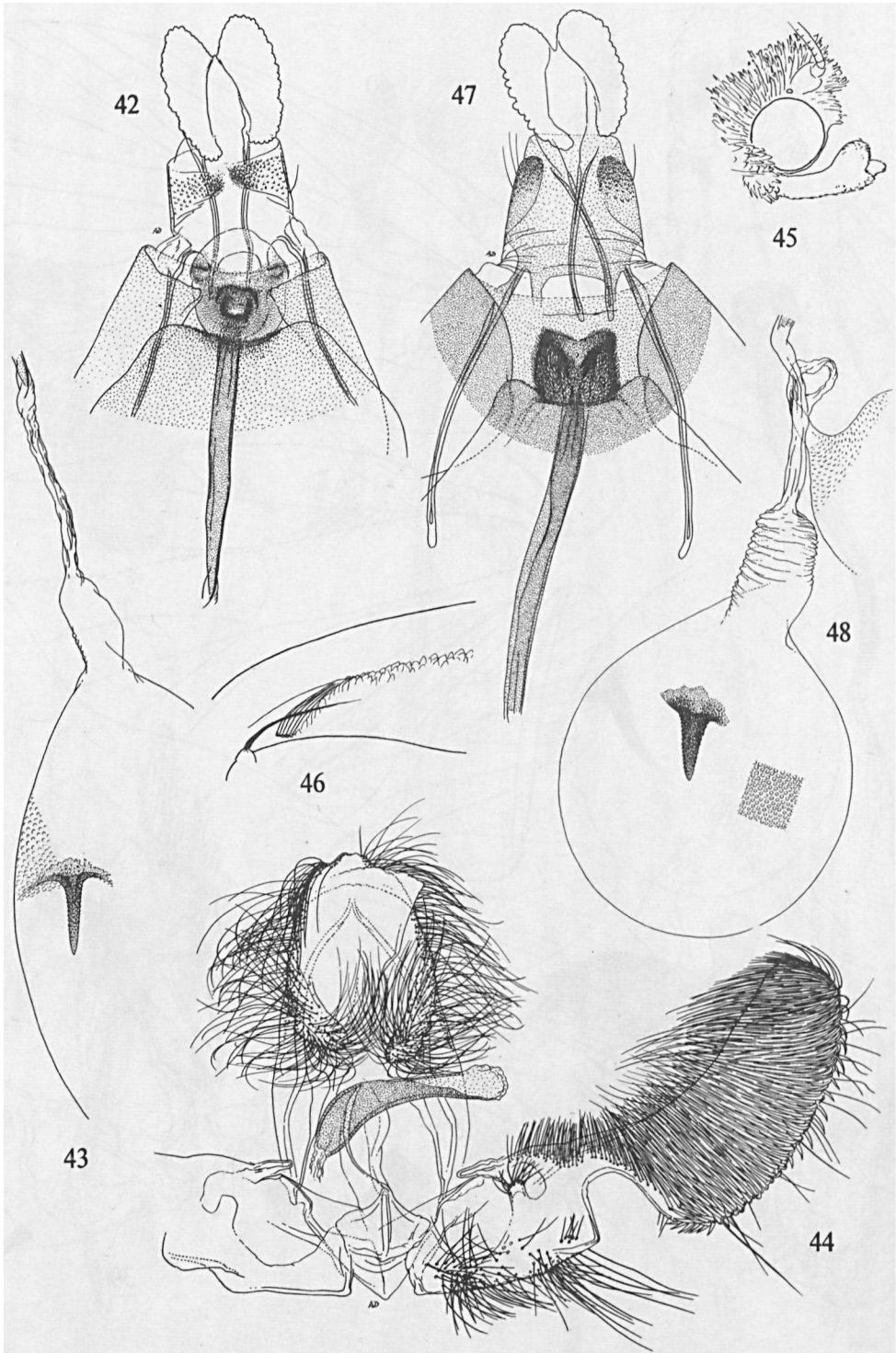
Figs. 29-31. Male genitalia of *Asymmetrarcha* g. n. 29, *A. torquens* sp. n., holotype; 30, *A. xenopa* sp. n., holotype; 31, *A. iograptia* (Meyr.), holotype (BM).



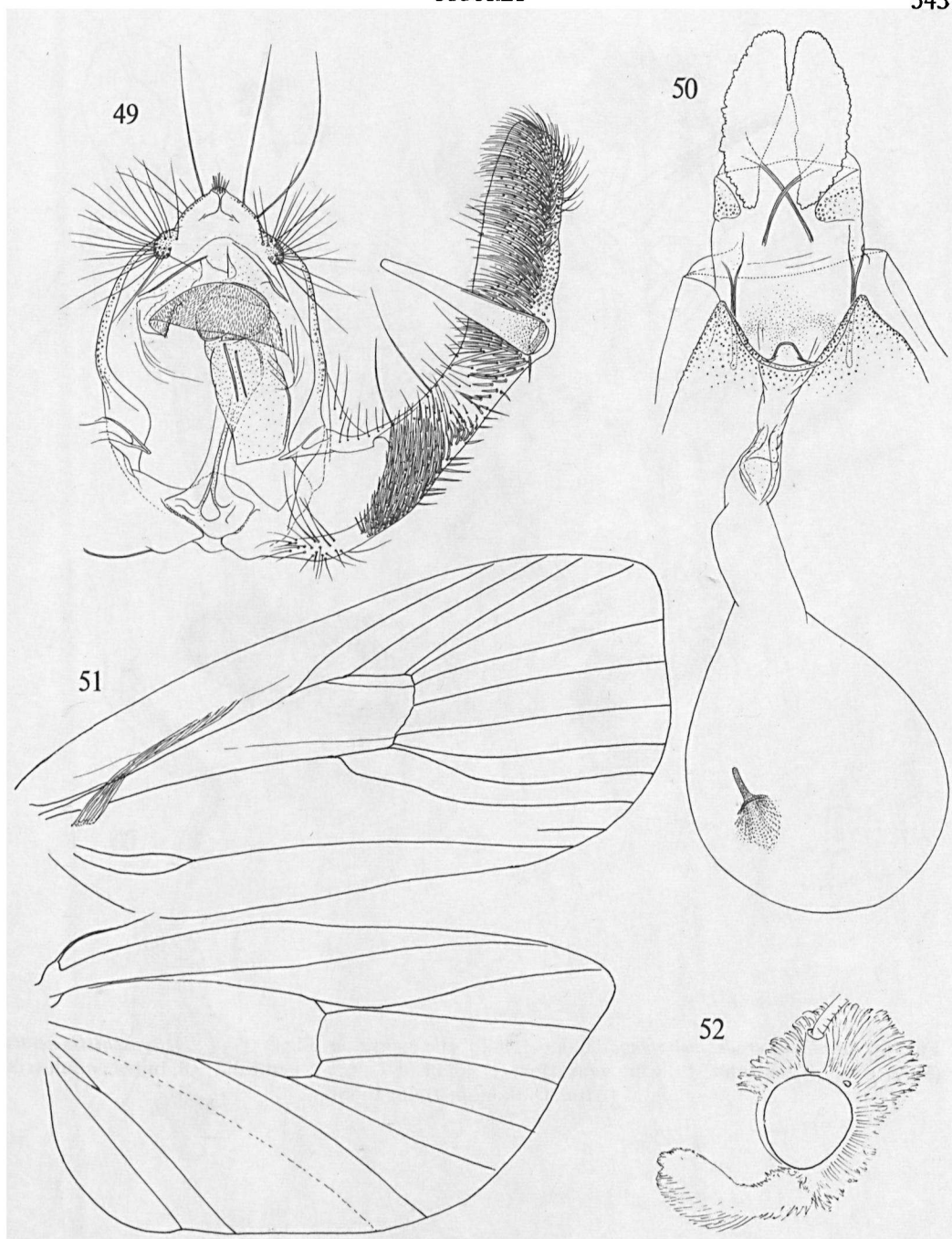
Figs. 32-35. *Gnathmocerodes lecythocera* (Meyr.). 32, ♂, genit. 4589; 33, ♀, genit. 4584; 34, do., ductus bursae; 35, do., bursa copulatrix. Fig. 36. *Gnathmocerodes (Agnathmacera) labidophora* sp. n., wing neuration, ♂. Fig. 37. *Galesclarkeana moderatrix* sp. n., ♂, holotype, genitalia.



Figs. 38-41. *Gnathmocerodes (A.) tonsoria* (Meyr.). 38, ♀, genit. 4586; 39, ♂, genit. 4585; 40, wing neuration; 41, head.



Figs. 42-45. *Gnathmocerodes (A.) labidophora* sp. n. 42, ♀, allotype, genitalia; 43, do., bursa copulatrix; 44, ♂, holotype, genitalia; 45, head. Fig. 46. *Dynatorhabda cremnocrates* (Meyr.), ♂, frenulum. Figs. 47-48. *G. lecythocera* (Meyr.), ♀, genit. 6989; 47, sterigma etc.; 48, bursa copulatrix.



Figs. 49-52. *Dynatorhabda cremnocrates* (Meyr.). 49, ♂, genit. 6308; 50, do., ♀, apallotype; 51, wing neuration, ♂; 52, head, ♂.



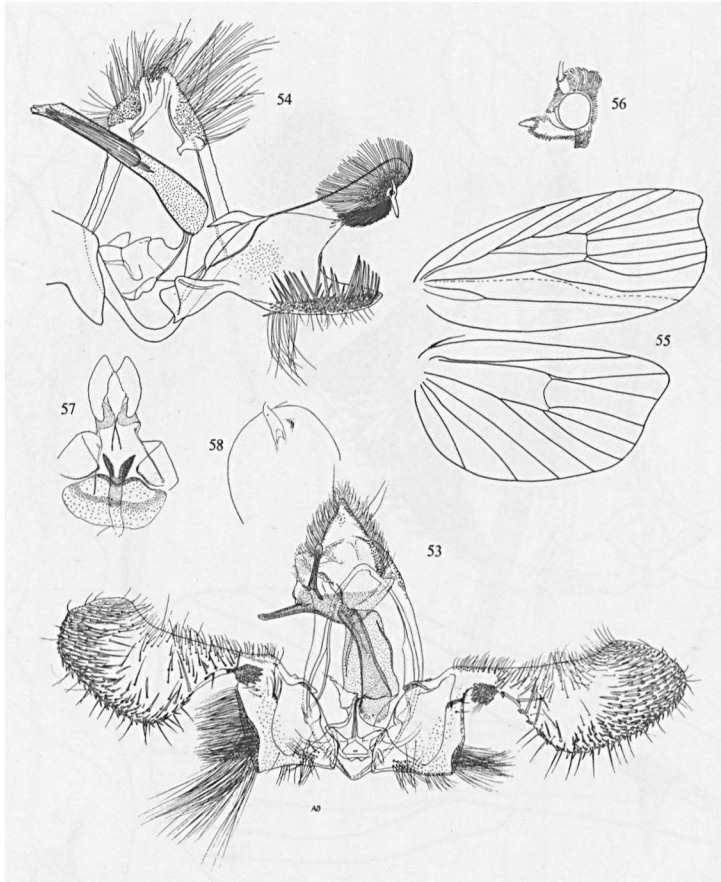
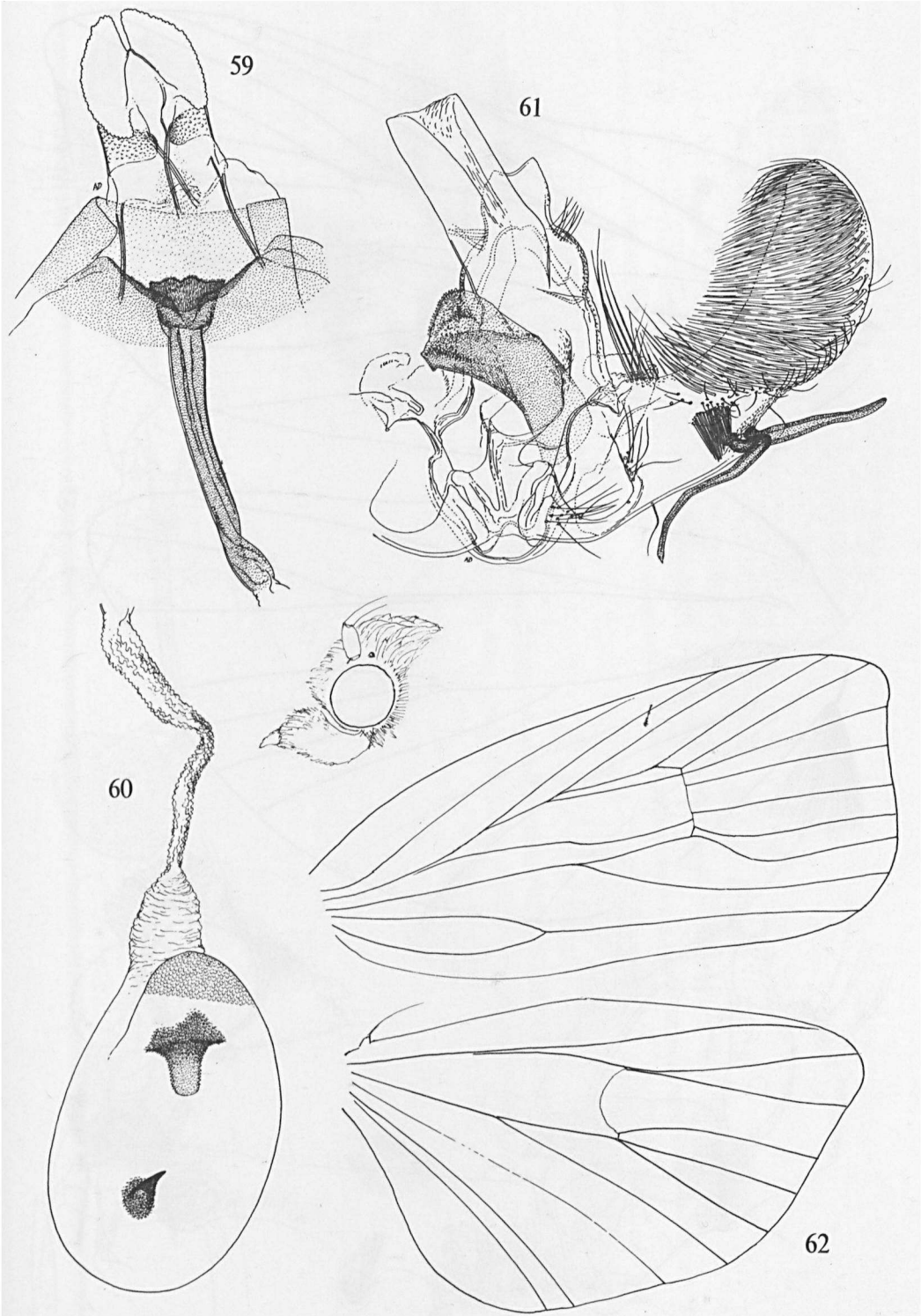


Fig. 53. *Gnathmocerodes petrifraga* Diak., ♂, holotype, genitalia. Figs. 54-58. *Heteroschistis actaea* (Meyr.). 54, ♂, genitalia; 55, wing neuration, ♂; 56, head, ♀; 57, ♀, genitalia; 58, bursa copulatrix. (After Diakonoff, 1966, 1968).



Figs. 59-61. *Rhodocosmaria occidentalis* sp. n. 59, ♀, allotype, genitalia; 60, do., bursa; 61, do., ♂, holotype, genitalia. Fig. 62. *R. operosa* (Meyr.), ♂, head and wing neuration.

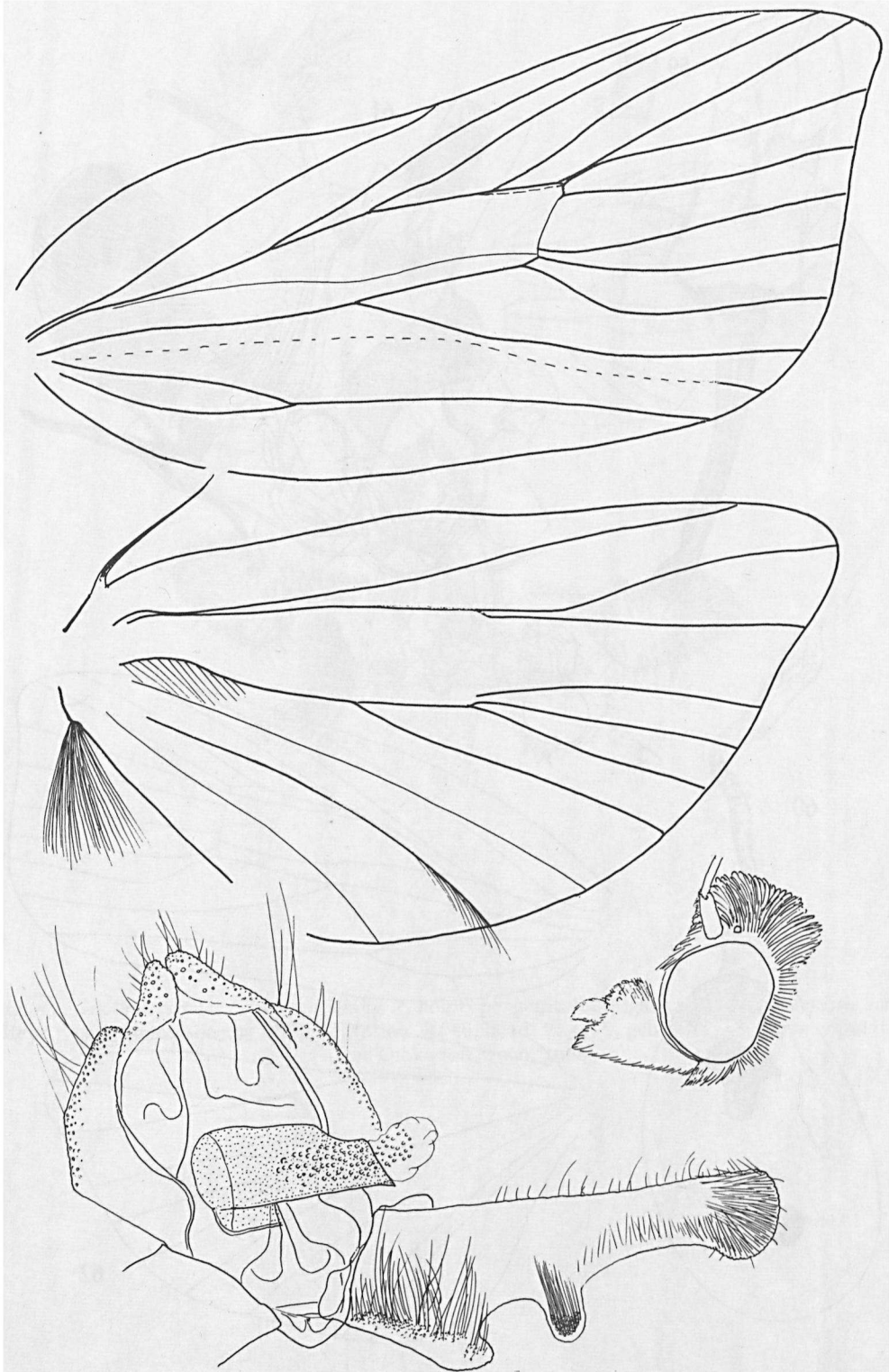
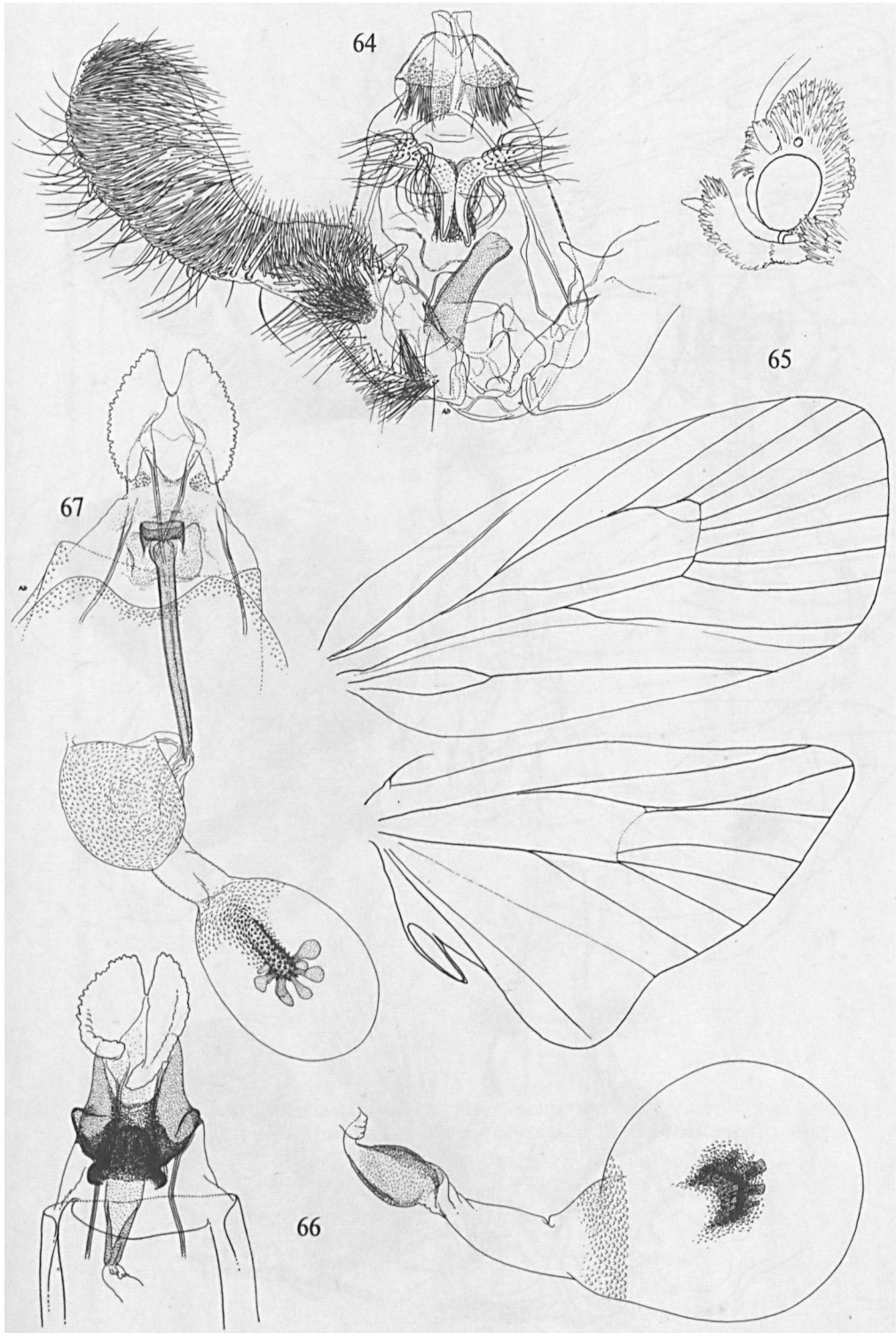


Fig. 63. *Thysanocrepis crossota* (Meyr.), ♂: sketch of wing neuration and head, and genitalia (After Diakonoff, 1966, slightly modified).



Figs. 64-65. *Molybdocrates opulenta* sp. n., ♂, holotype. 64, genitalia; 65 head and wing neuration. Fig. 66. *Thysanocrepis crossota* (Meyr.), ♀, apallotype, genitalia. Fig. 67. *Eubrochoneura aversa* sp. n., ♀, holotype, genitalia.

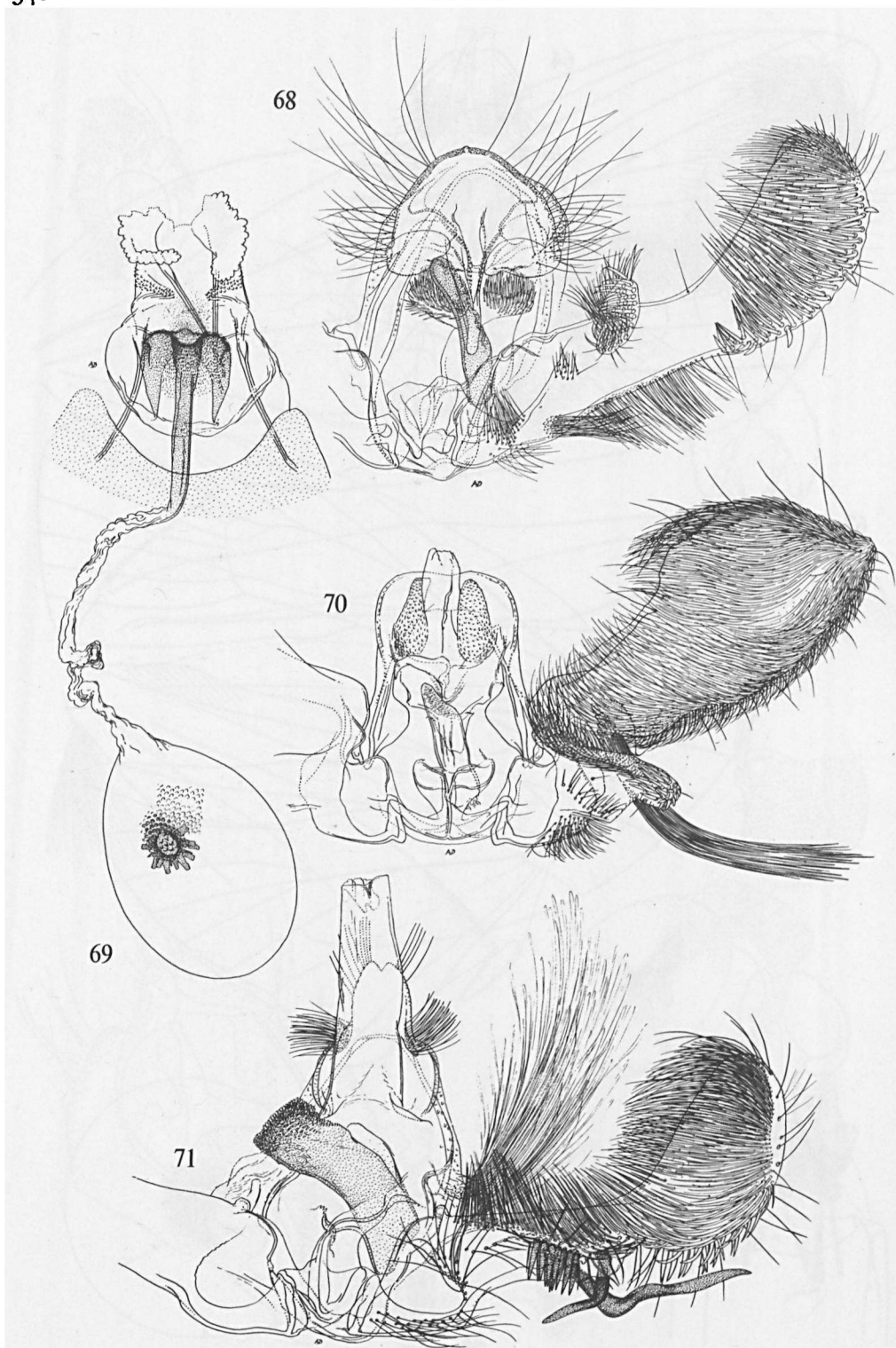
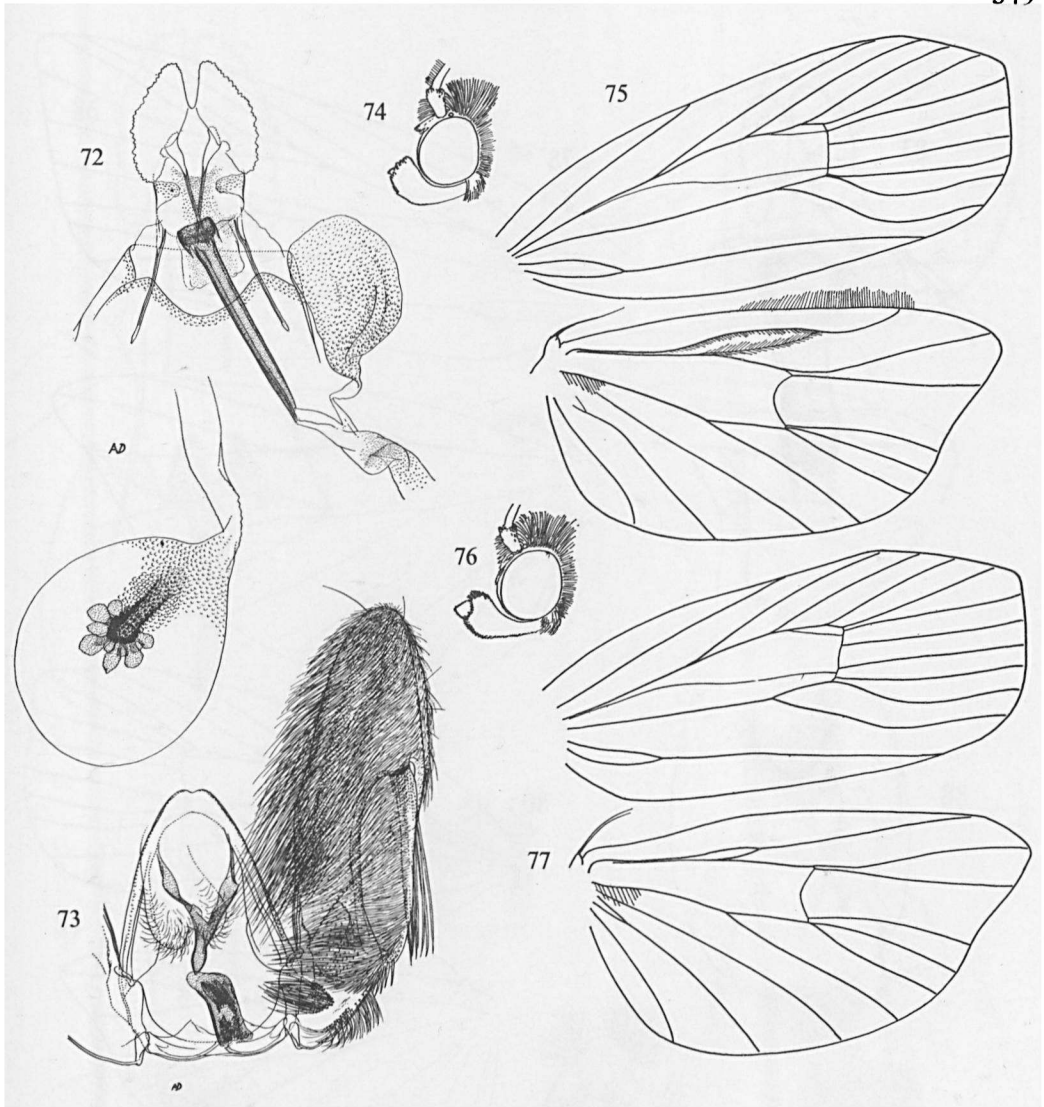
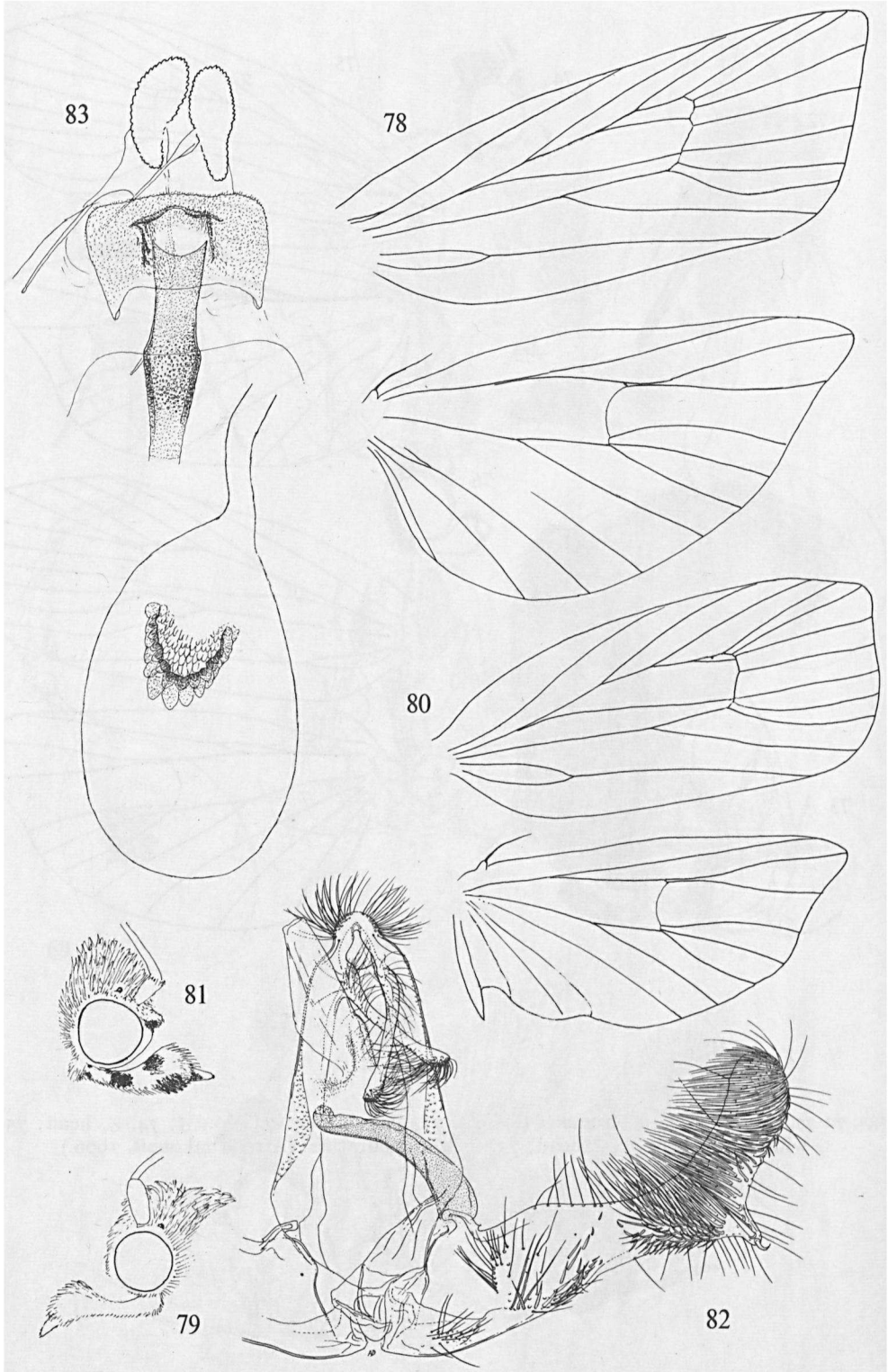


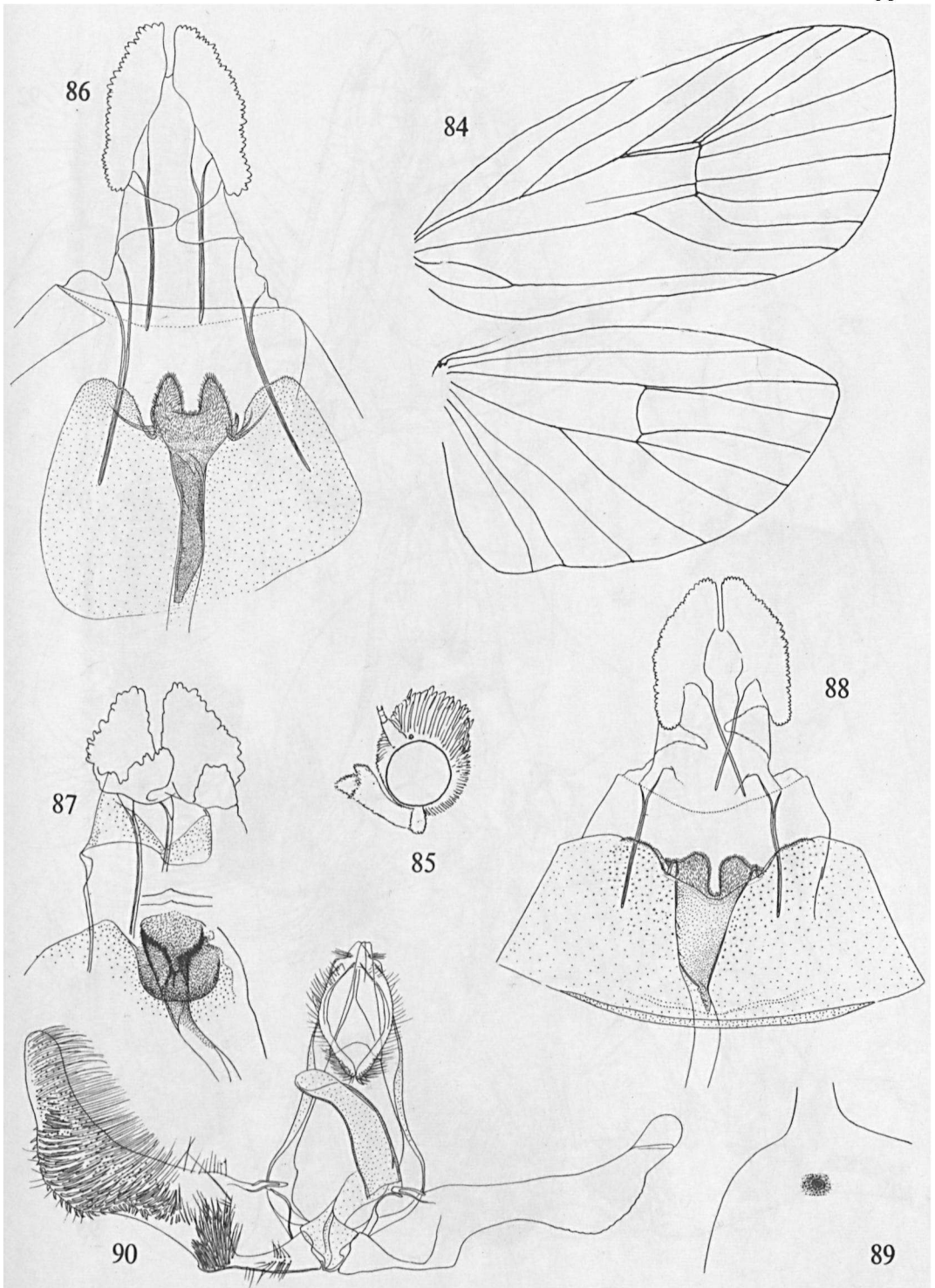
Fig. 68. *Actinocentra aliena* sp. n., ♂, holotype, genitalia. Figs. 69-70. *Zomaria frustulosa* sp. n., genitalia. 69, ♀, allotype; 70, ♂, holotype. Fig. 71. *Rhodocosmaria operosa* (Meyr.), ♂, genit. 6478.



Figs. 72-77. *Eubrochoneura parasema* (Meyr.). 72, ♀, genitalia; 73, do., ♂; 74, ♂, head; 75, wing neuration; 76, ♀, head; 77, ♀, wing neuration. (After Diakonoff, 1966.)

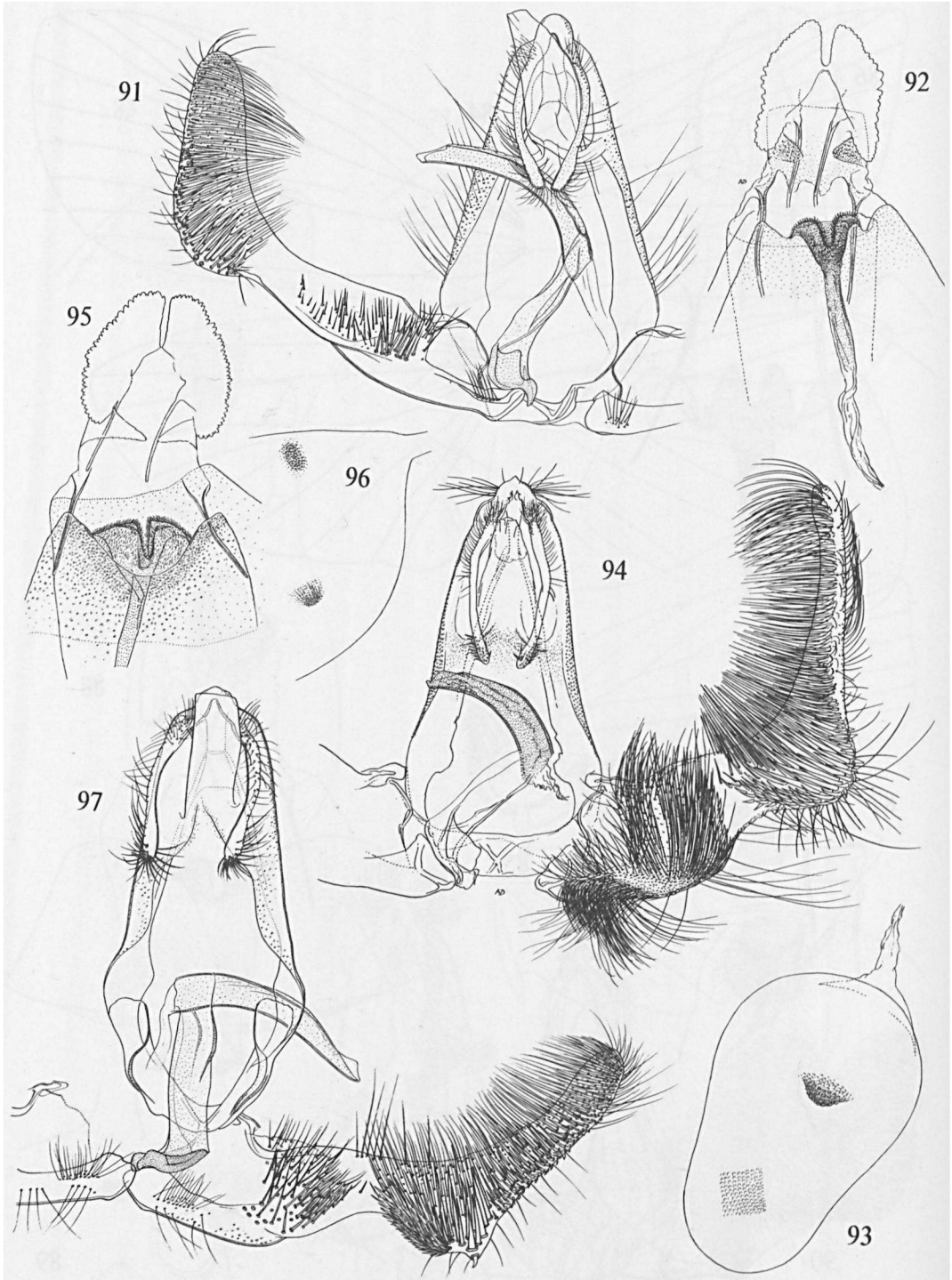


Figs. 78-79. *Actinocentra aliena* sp. n., ♂. 78, wing neuration; 79, head. Figs. 80-81. *Zomaria frustulosa* sp. n., ♂. 80, wing neuration; 81, head. Fig. 82. *Sorolopha auribasis* sp. n., ♂, holotype, genitalia. Fig. 83. *Molybdocrates opulenta* sp. n., ♀, allotype.

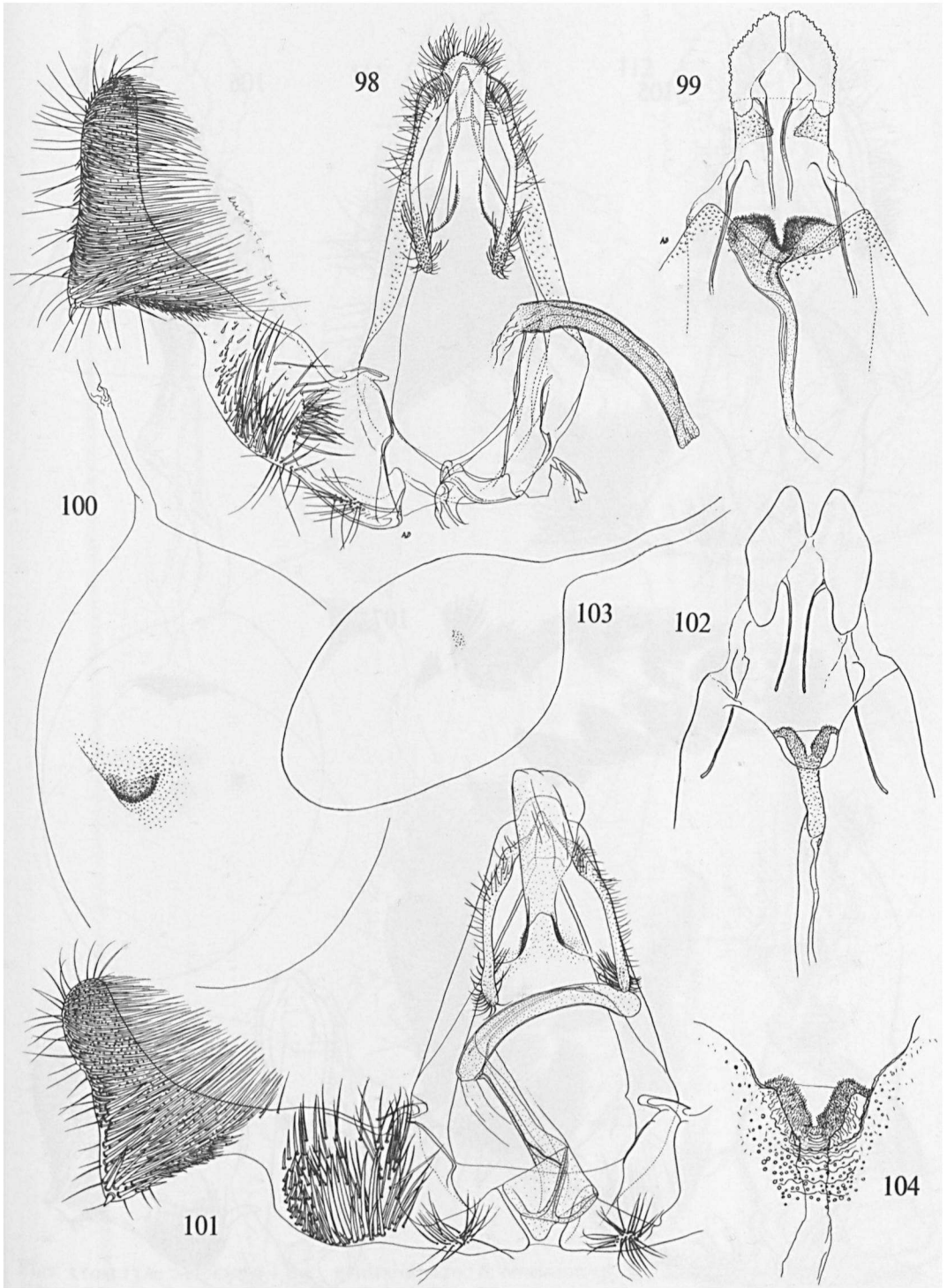


Figs. 84-90. *Sorolopha* Low. 84, *S. elaeodes* (Low.), ♂, wing neuration; 85, do., head; 86, *S. archimedi* (Meyr.), ♀, genit. 4601; 87, *S. authadis* sp. n., ♀, paratype, genit. 8015; 88, *S. dictyonophora* sp. n., ♀, holotype, genitalia; 89, do., bursa; 90, *S. archimedi* (Meyr.), ♂, genit. slide 4600.

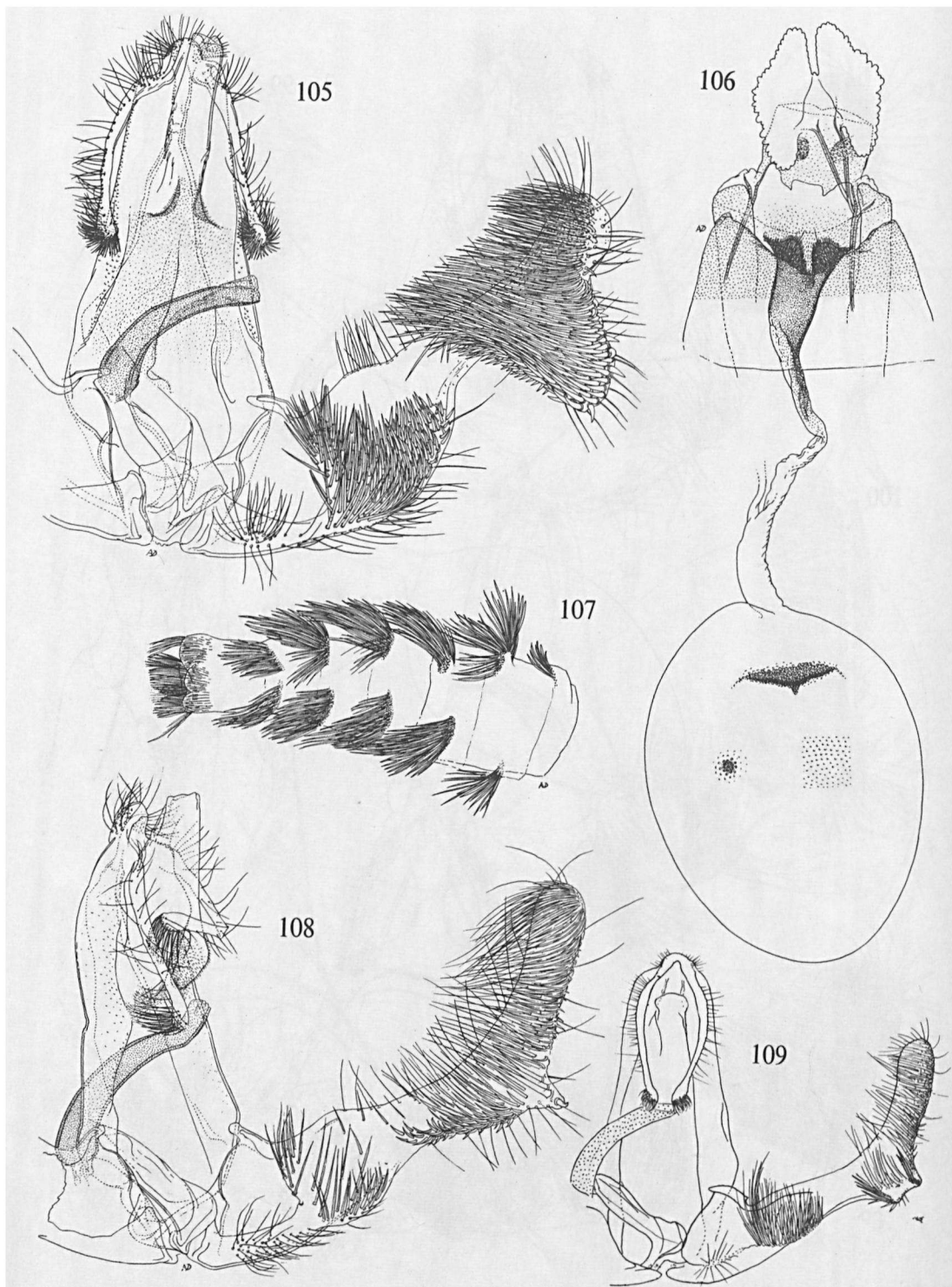




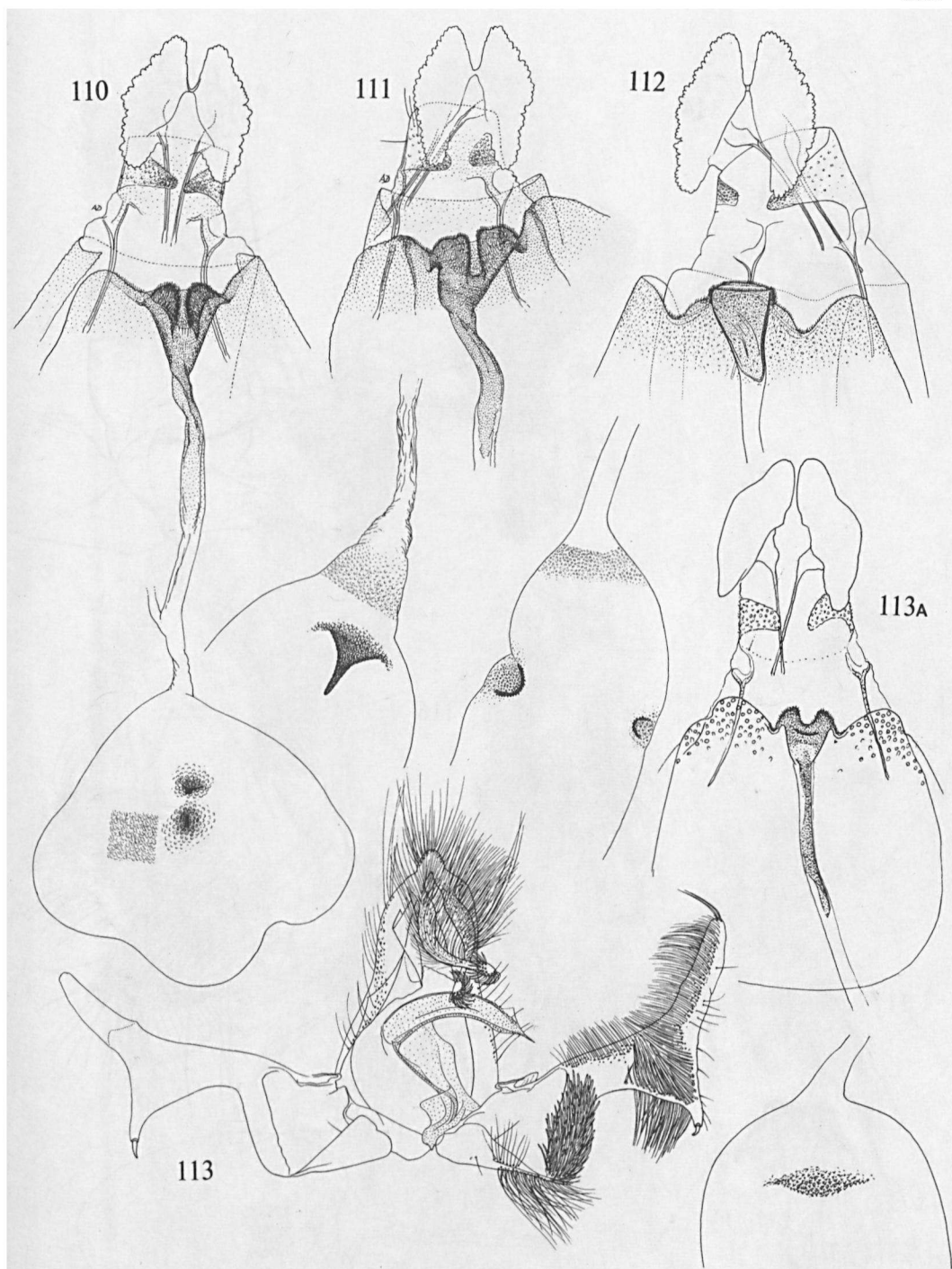
Figs. 91-97. *Sorolopha* Low., genitalia. 91, *S. timiochlora* sp. n., ♂, holotype; 92, *S. prasinias* (Meyr.), ♀, genit. 8005; 93, the same, bursa; 94, *S. cyclotoma* Low., ♂, genit. 6355; 95, *S. liochlora* (Meyr.), ♀, genit. 4634; 96, do., bursa; 97, do., ♀, slide 4633.



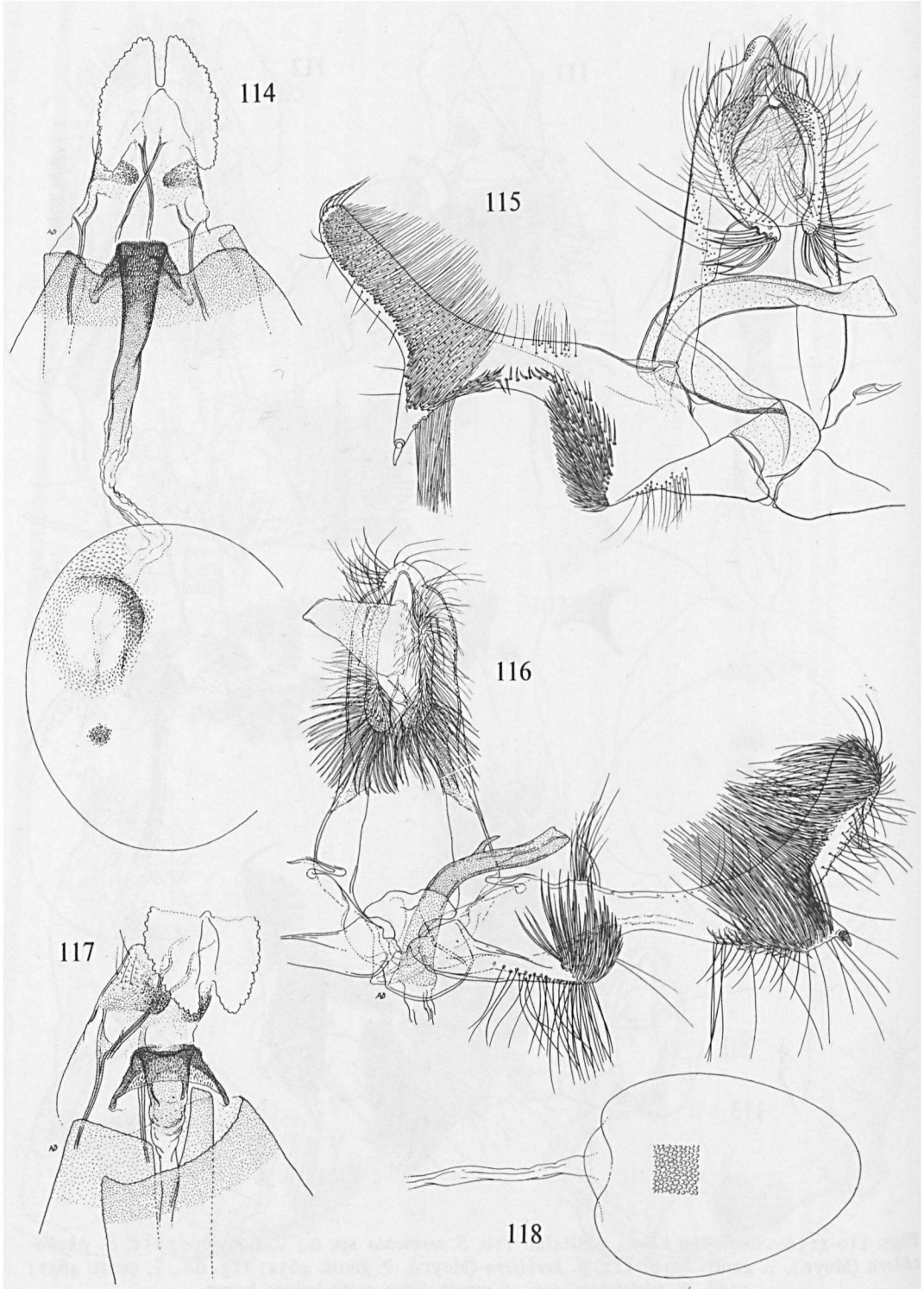
Figs. 98-104. *Sorolopha* Low., genitalia. 98, *S. euochropa* sp. n., ♂, holotype; 99, *S. eurychlora* sp. n., ♀, holotype; 100, do., bursa; 101, *S. arctosceles* (Meyr.), ♂, slide 6273; 102, *S. elaeodes* (Low.), ♀; 103, do., bursa; 104, do., sterigma, enlarged. (Figs. 102-104, after Diakonoff, 1966.)



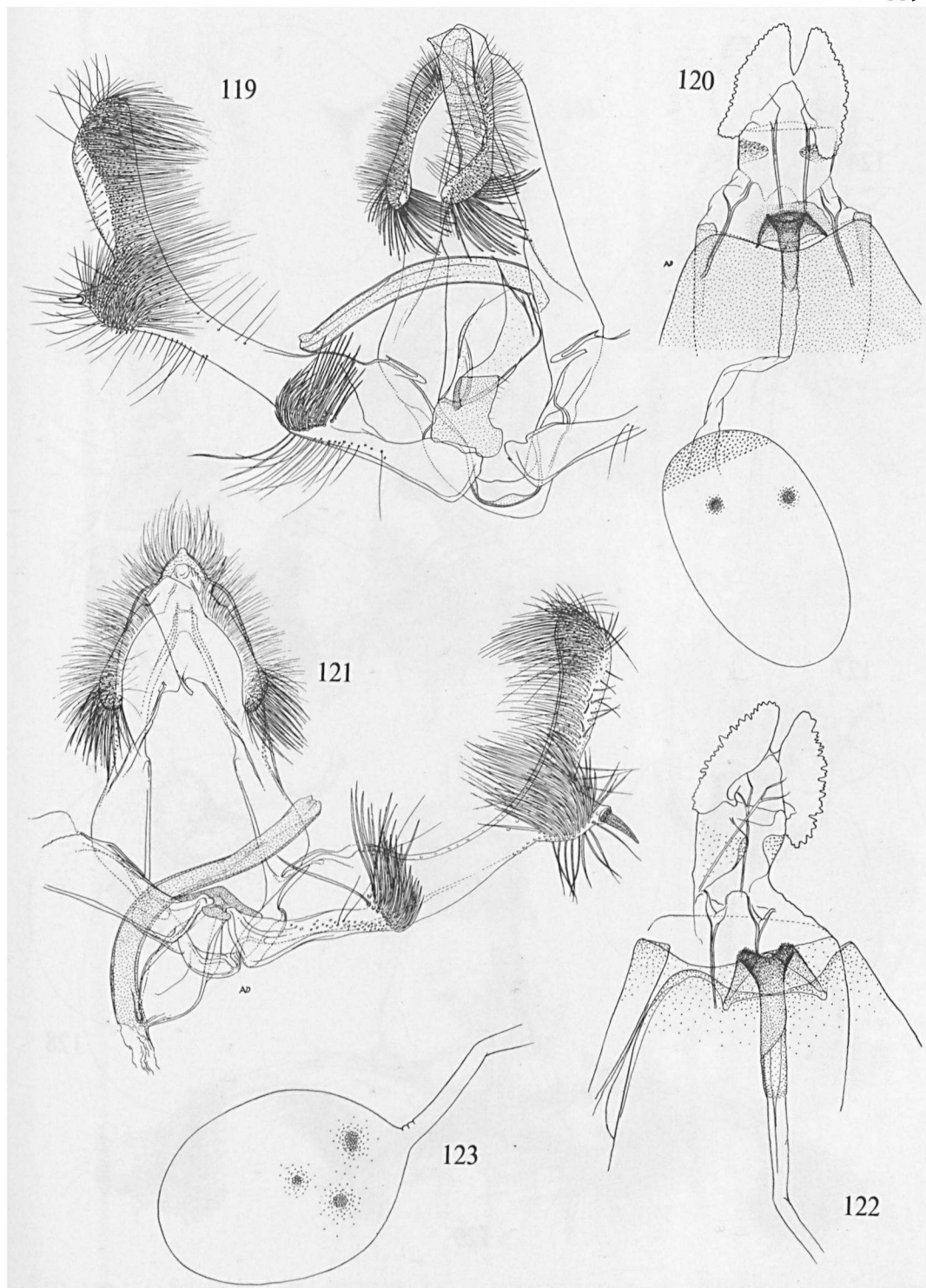
Figs. 105-109. *Sorolopha* Low., genitalia. 105, *S. agalma* sp. n., ♂, holotype; 106, *S. nucleata* sp. n., ♀, holotype; 107, *S. chortodes* (Diak.), ♂, abdomen; 108, *S. rubescens* sp. n., ♂, holotype; 109, *S. elaeodes* (Low.), ♂. (Figs. 107, 109, after Diakonoff, 1968, 1966, respectively.)



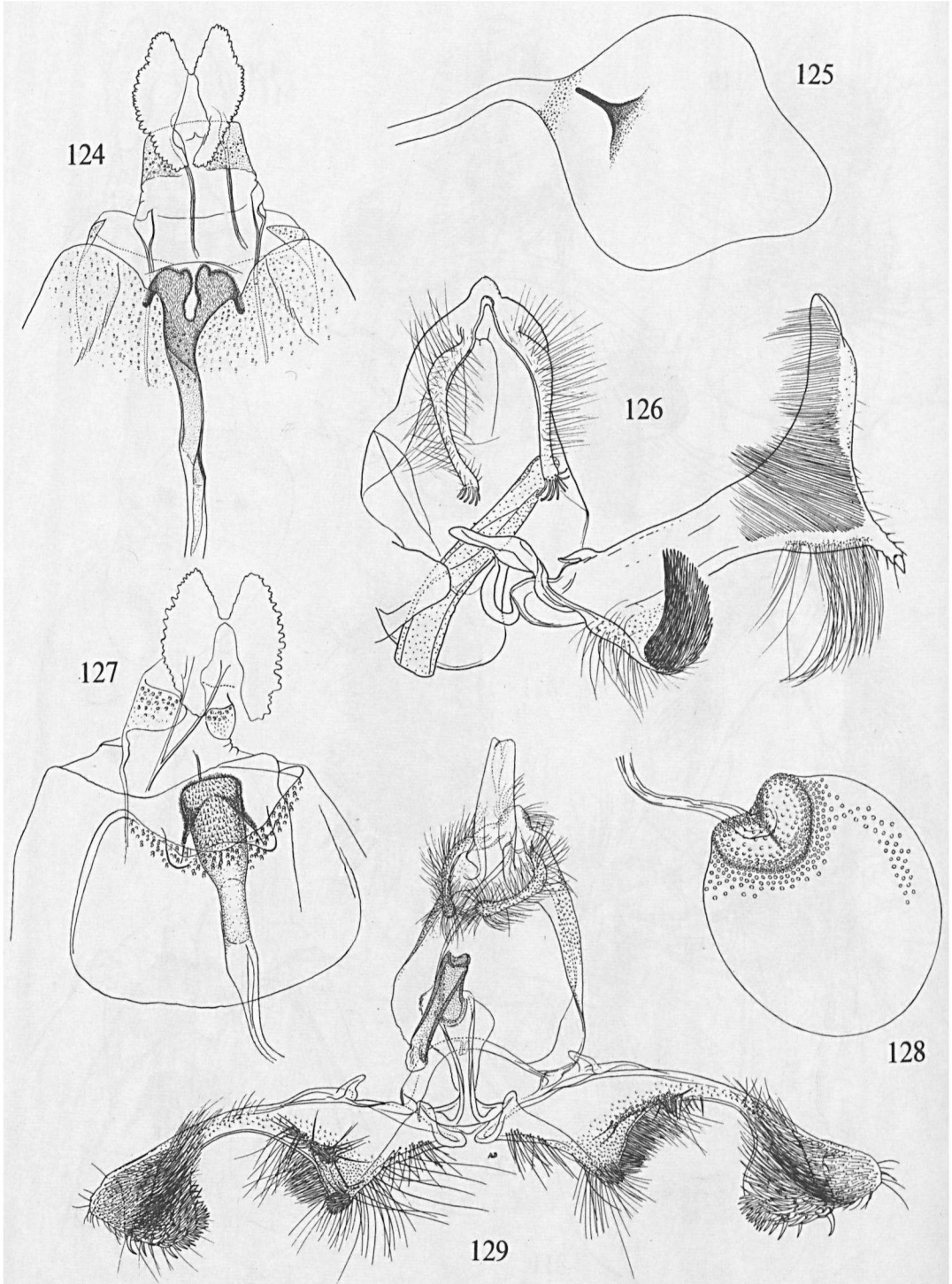
Figs. 110-113A. *Sorolopha* Low., genitalia. 110, *S. cervicata* sp. n., ♀, holotype; 111, *S. phyllochloa* (Meyr.), ♀, genit. 8010; 112, *S. herbifera* (Meyr.), ♀, genit. 4632; 113, do., ♀, genit. 4631; 113A, *S. cyclotoma* Low., ♀, genit. 8202, with below, bursa.



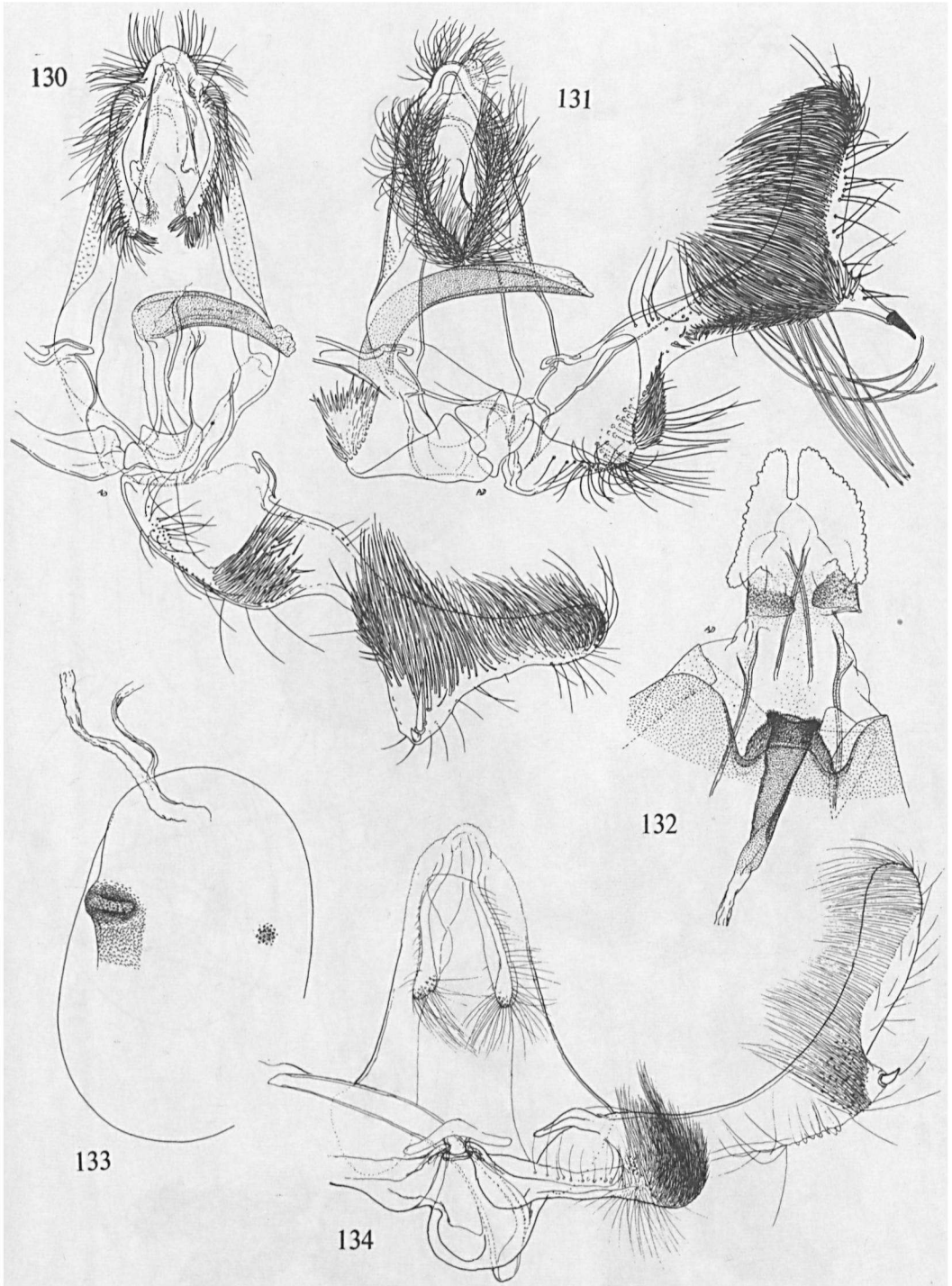
Figs. 114-118. *Sorolopha* Low., genitalia. 114, *S. semiculta* (Meyr.), ♀, genit. 8001; 115, *S. autoberylla* (Meyr.), ♂, genit. 6265; 116, *S. epichares* sp. n., ♂, holotype; 117, do., ♀, allotype; 118, do., bursa.



Figs. 119-123. *Sorolopha* Low., genitalia. 119, *S. argyropha* sp. n., ♂, holotype; 120, *S. doryphora* sp. n., ♀, holotype; 121, *S. semiculta* (Meyr.), ♂, genit. 5839; 122, do., ♀, genit. 7994; 123, do., bursa.

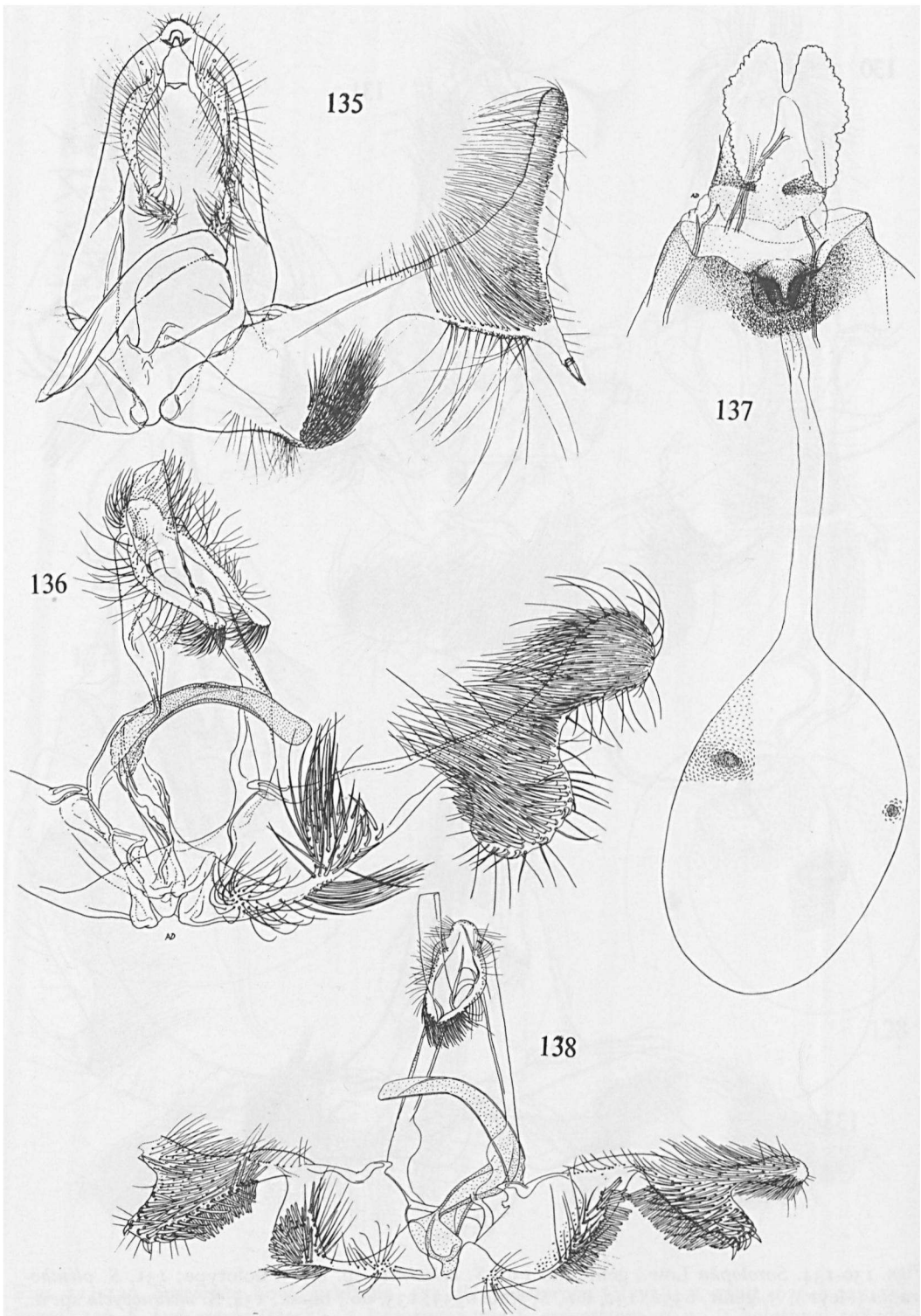


Figs. 124-129. *Sorolopha* Low., genitalia. 124, *S. sphaerocopa* (Meyr.), ♀, genit. 6264; 125, do., bursa; 126, *S. hydrargyra* (Meyr.), ♂, lectotype; 127, *S. caryochlora* sp. n., ♀, holotype; 128, do., bursa; 129, *S. chortodes* (Diak.), ♂, holotype. (Figs. 126, 129, after Diakonoff, 1966, 1968.)

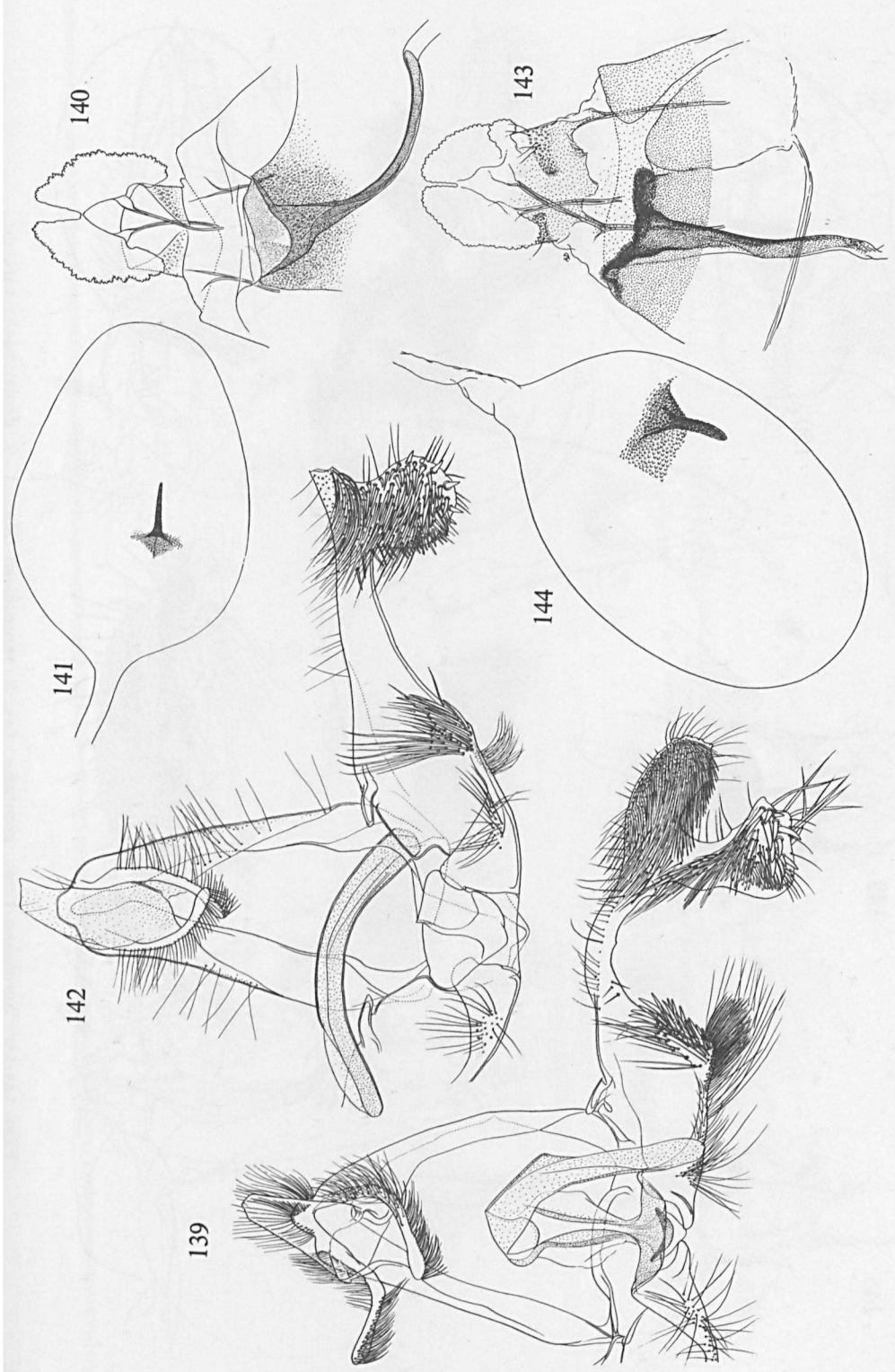


Figs. 130-134. *Sorolopha* Low., genitalia. 130, *S. artocincta* sp. n., ♂, holotype; 131, *S. plinthographa* (Meyr.), ♂, genit. 6352; 132, do., ♀, slide 6353; 133, do., bursa; 134, *S. melanocyclus* sp. n., ♂, holotype.

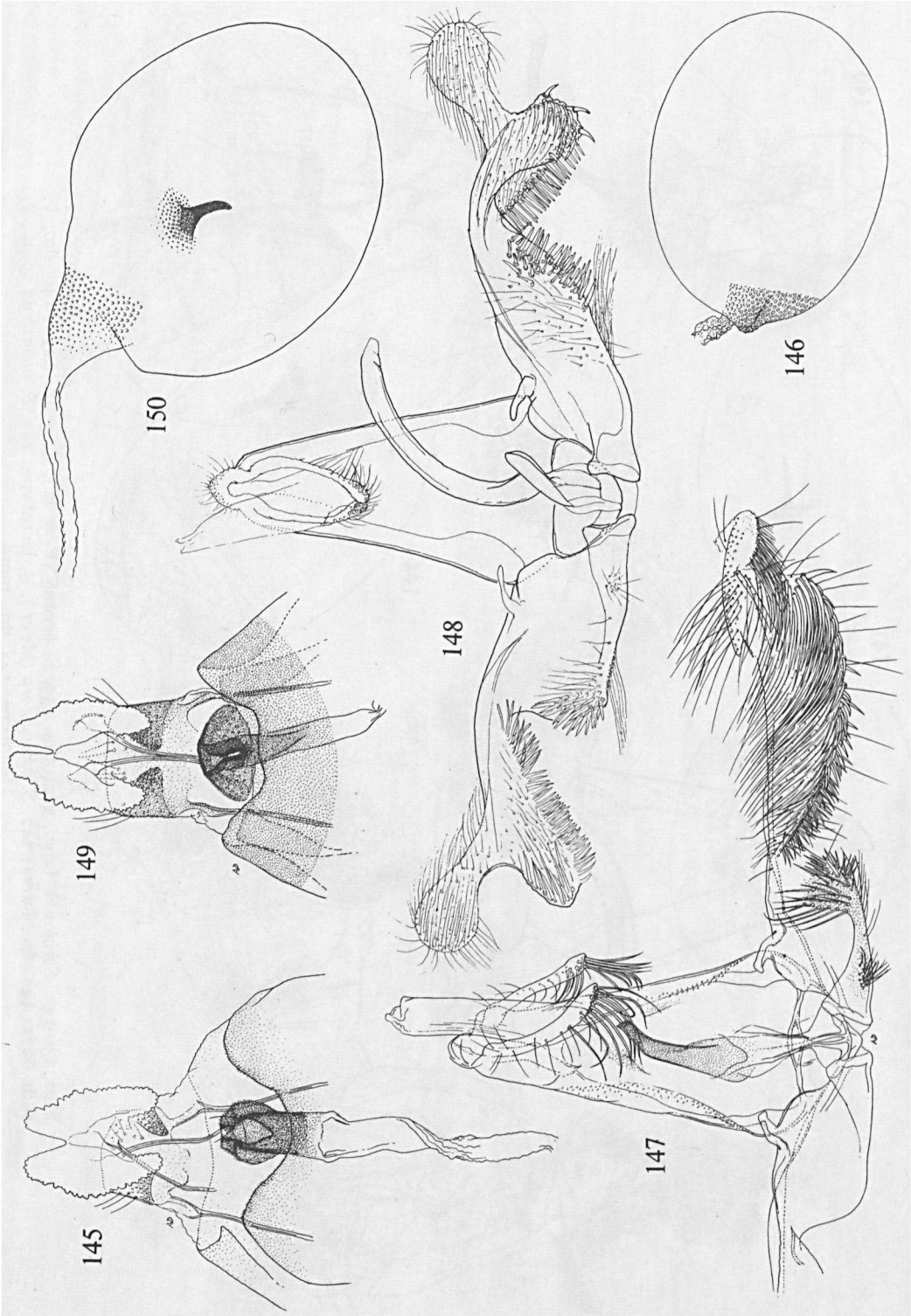




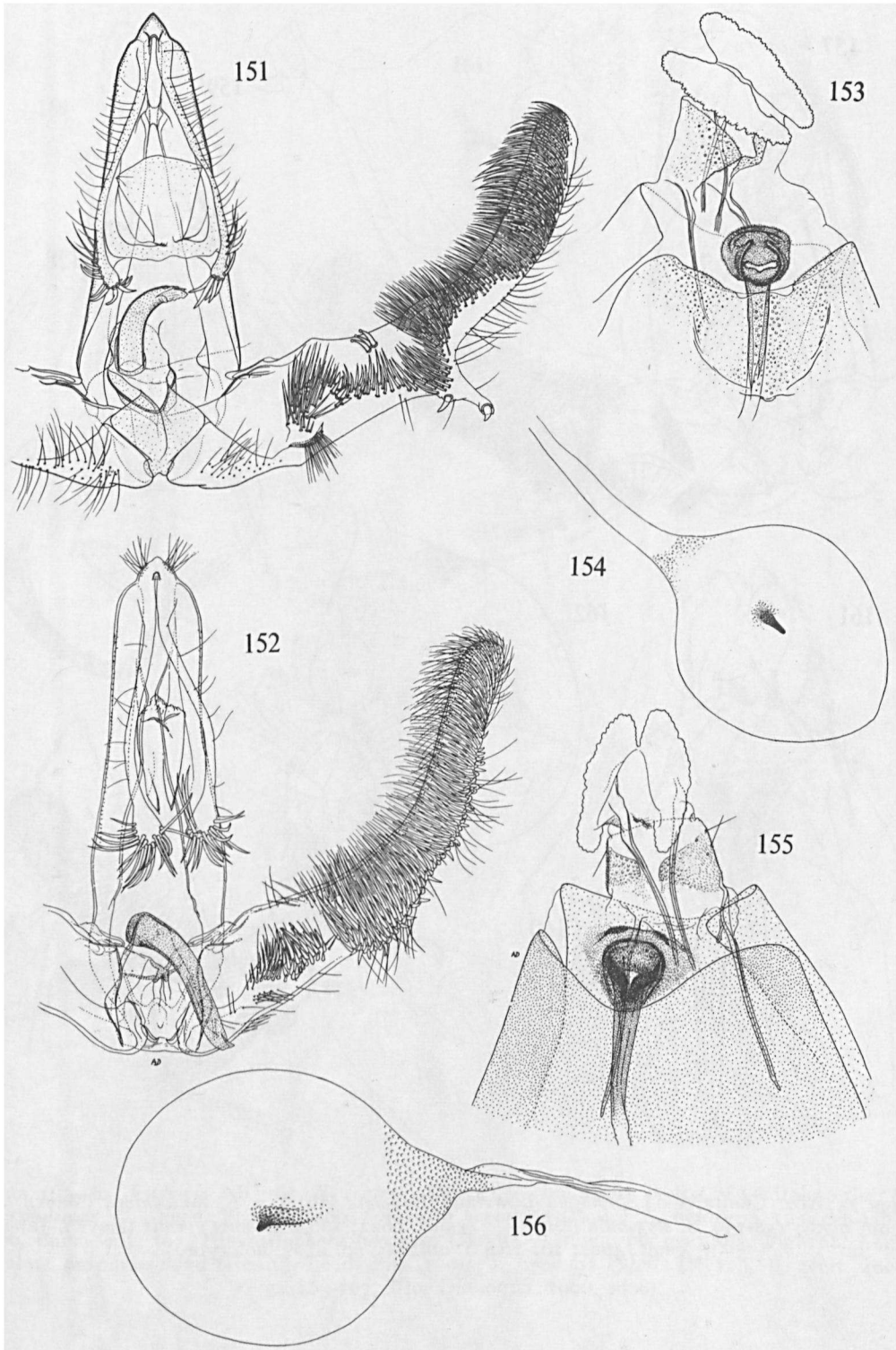
Figs. 135-138. *Sorolopha* Low., genitalia. 135, *S. plumboviridis* sp. n., ♂, holotype; 136, *S. aeolochlora* (Meyr.), ♂, genit. 7997; 137, do., ♀, genit. 8003; 138, *S. sphaerocopa* (Meyr.), ♂, genit. 4635.



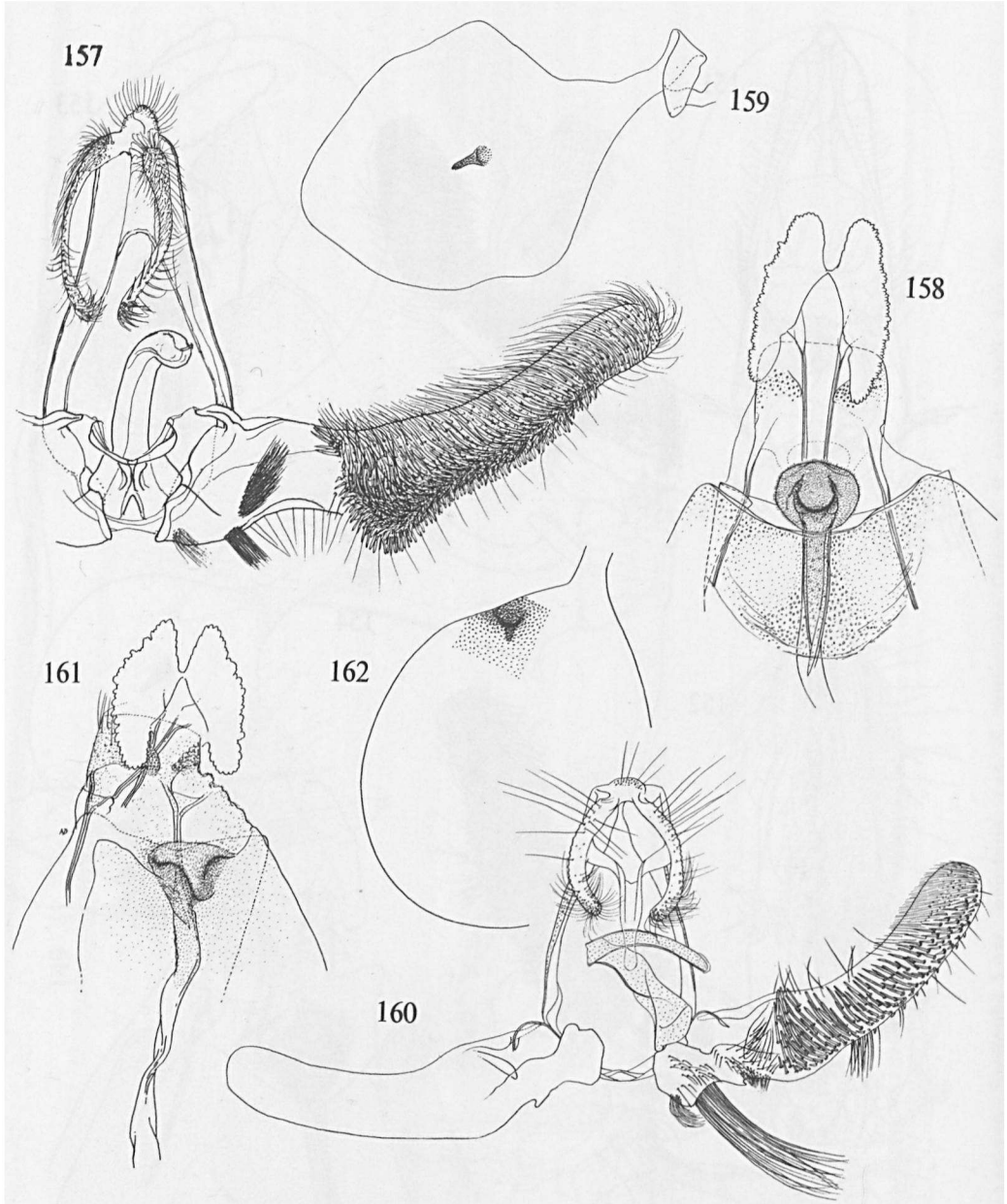
Figs. 139-144. *Sorolopha* Low., genitalia. 139, *S. bryana* (F. & R.), ♂, genit. 6271; 140, do., ♀, slide 6272; 141, do., bursa; 142, *S. atmochlora* (Meyr.), ♂, lectotype; 143, *S. metastena* sp. n., ♀, holotype; 144, do., bursa.



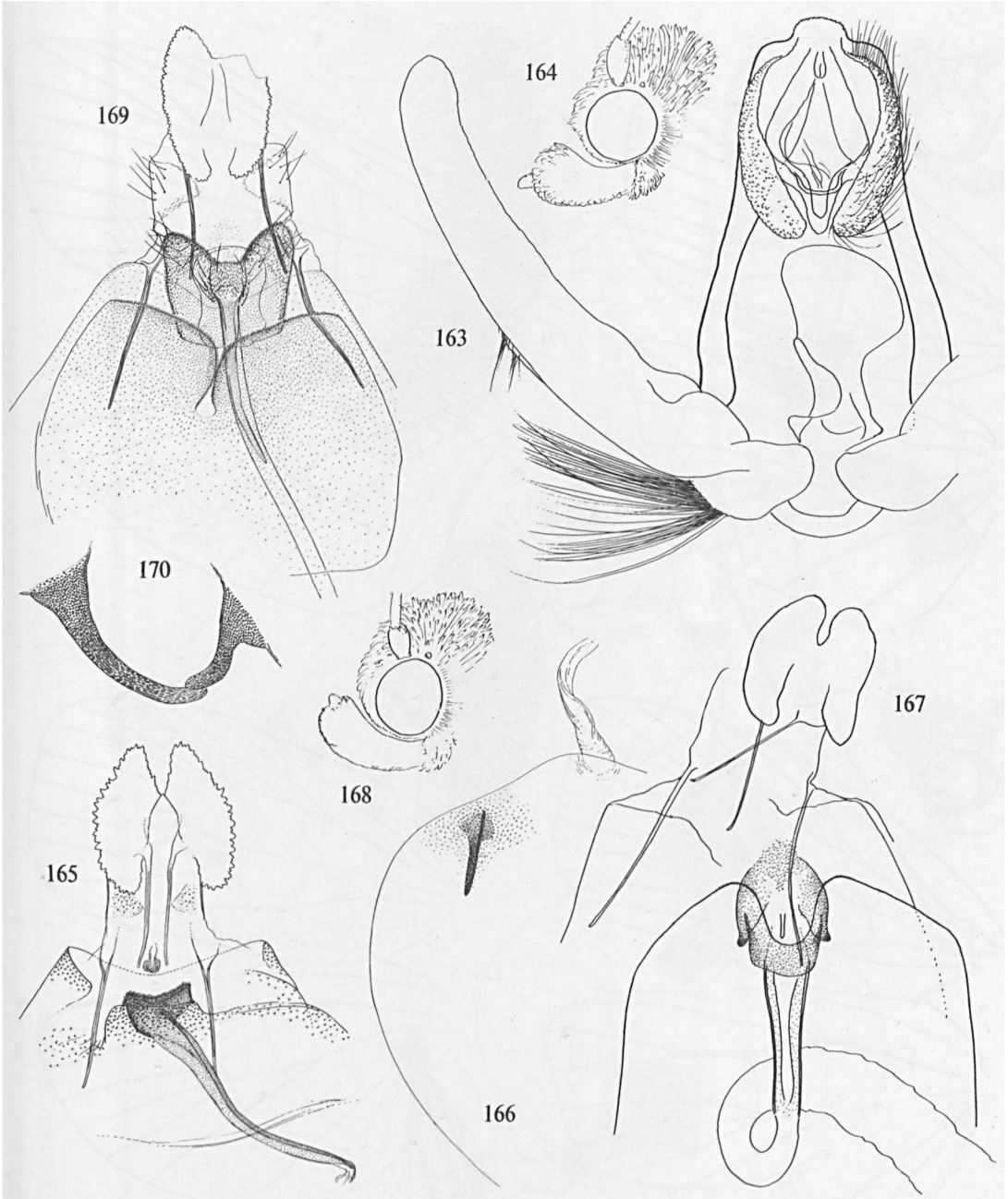
Figs. 145-150. *Sorolopha* Low., genitalia. 145, *S. mniochlora* (Meyr.), ♀, genit. 7958; 146, do., bursa; 147, *S. dyspeista* sp. n., ♂, holotype; 148, *S. asphaeropa* sp. n., ♂, holotype; 149, *S. camarotii* (Meyr.), ♀, genit. 6354; 150, do., bursa.



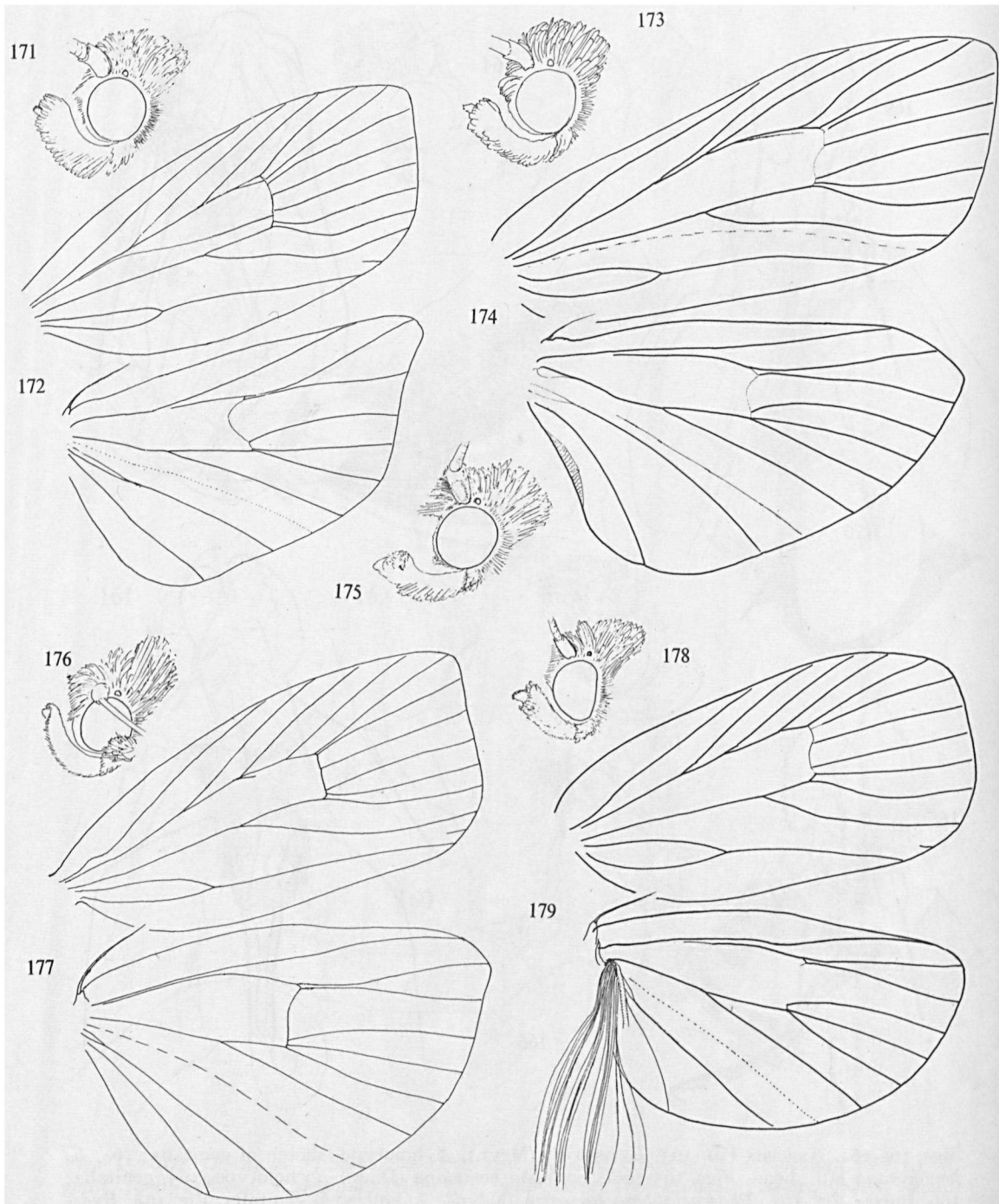
Figs. 151-156. *Sorolopha* Low., genitalia. 151, *S. stygiaula* (Meyr.), ♂, genit. 6267; 152, *S. bathysema* sp. n., ♂, holotype; 153, *S. stygiaula* (Meyr.), ♀, genit. 6268; 154, do., bursa; 155, *S. englyptopa* (Meyr.), ♀, genit. 4992; 156, do., bursa.



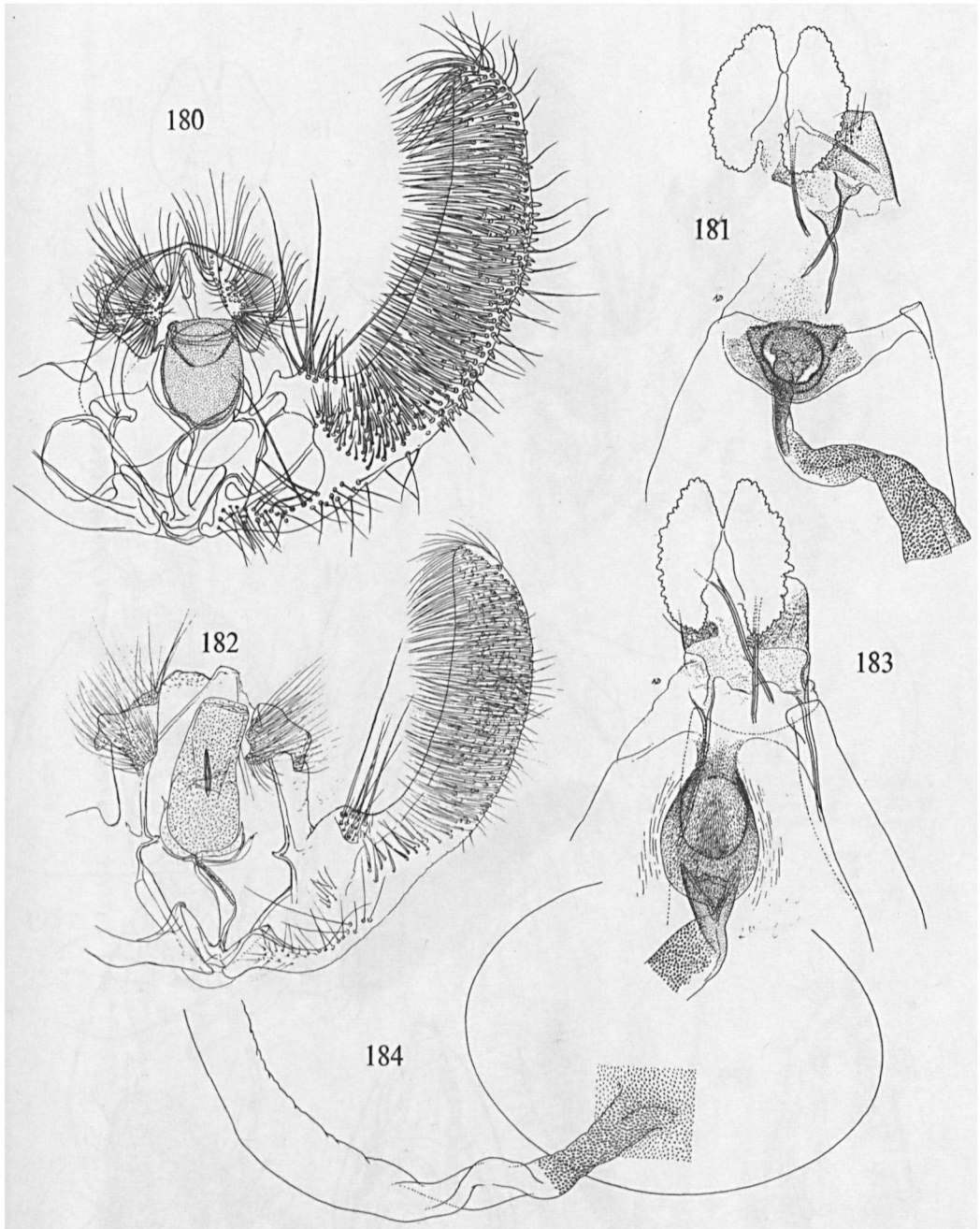
Figs. 157-162. Genitalia of *Sorolopha* Low. and *Eudemis* Hb. 157, *S. mnioclora* (Meyr.), ♂, genit. 7956; 158-159, *S. stygiaula* (Meyr.), ♀, genit. 6622; 160, *Eudemis gyrotis* (Meyr.), Japan, ♂; genit. 4602; 161-162, *S. authadis* sp. n., ♀, holotype.



Figs. 163-164. *Eudemis* Hb. 163, *E. centritis* (Meyr.), ♂, holotype, sketch of genitalia; 164, *E. porphyrana* Hb., head. Figs. 165-166. *Sorolopha homalopa* (Diak.), ♀, holotype. 165, genitalia; 166, bursa. Fig. 167. *Phaecasiophora turmaria* (Meyr.), ♀, holotype, genitalia. Fig. 168. *Eudemopsis purpurissatana* (Kenn.), head. Figs. 169-170. *Eudemis gyrotis* (Meyr.), ♀, genit. 4603. (Figs. 165-167, after Diakonoff, 1966, 1968).

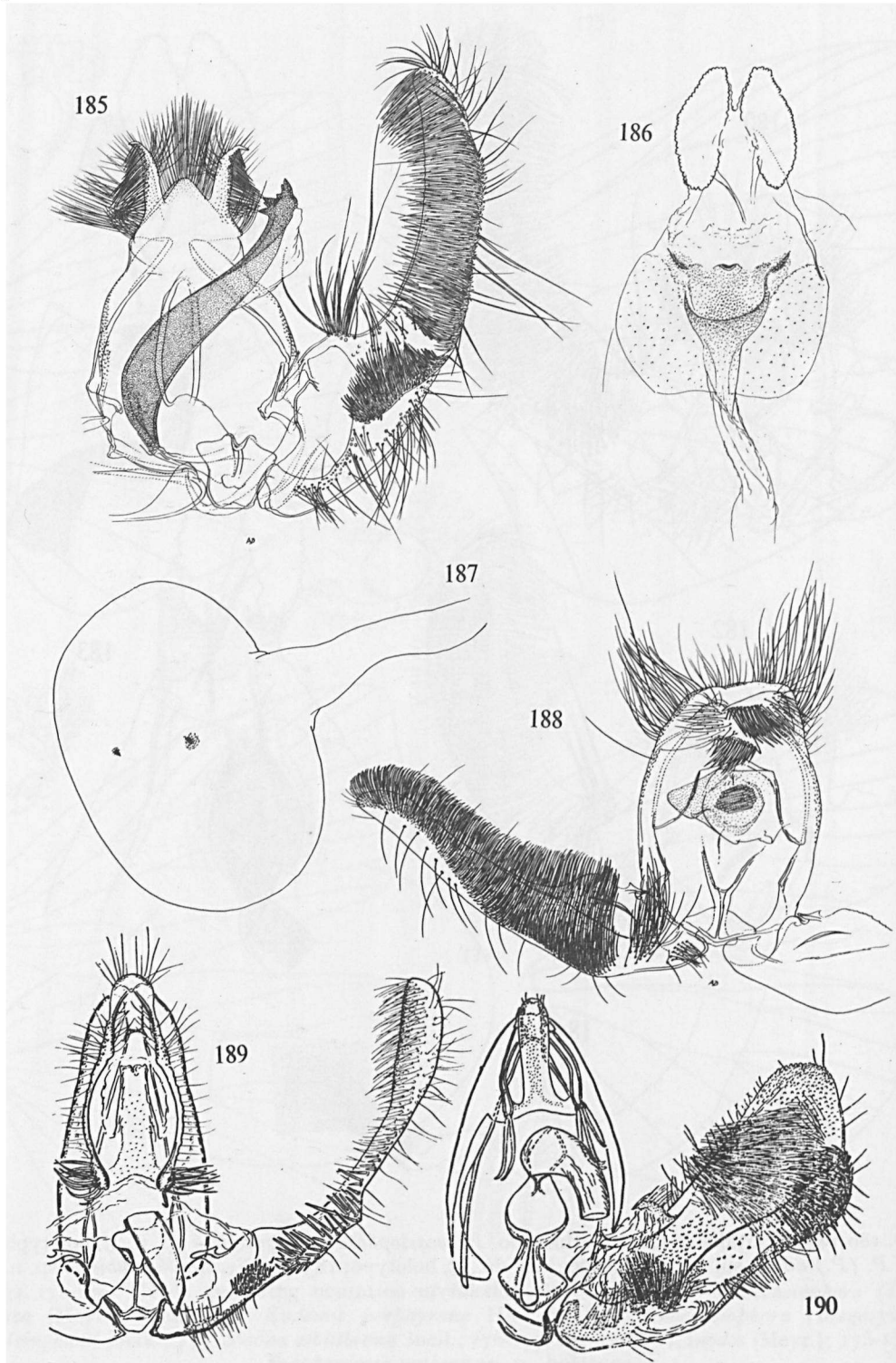


Figs. 171-179. Heads and wing neuration of Olethreutini, males. 171, *Phaecasiophora* (*P.*) *attica* (Meyr.), head; 172, *Eudemis porphyrana* Hb.; 173-174, *Phaecasiophora* (*Megasycia*) *walsinghami* Diak.; 175, *Sisona albitibiana* Snell.; 176-177, *Sycacantha i. inodes* (Meyr.); 178-179, *Prophaecasia anthion* sp. n., holotype.

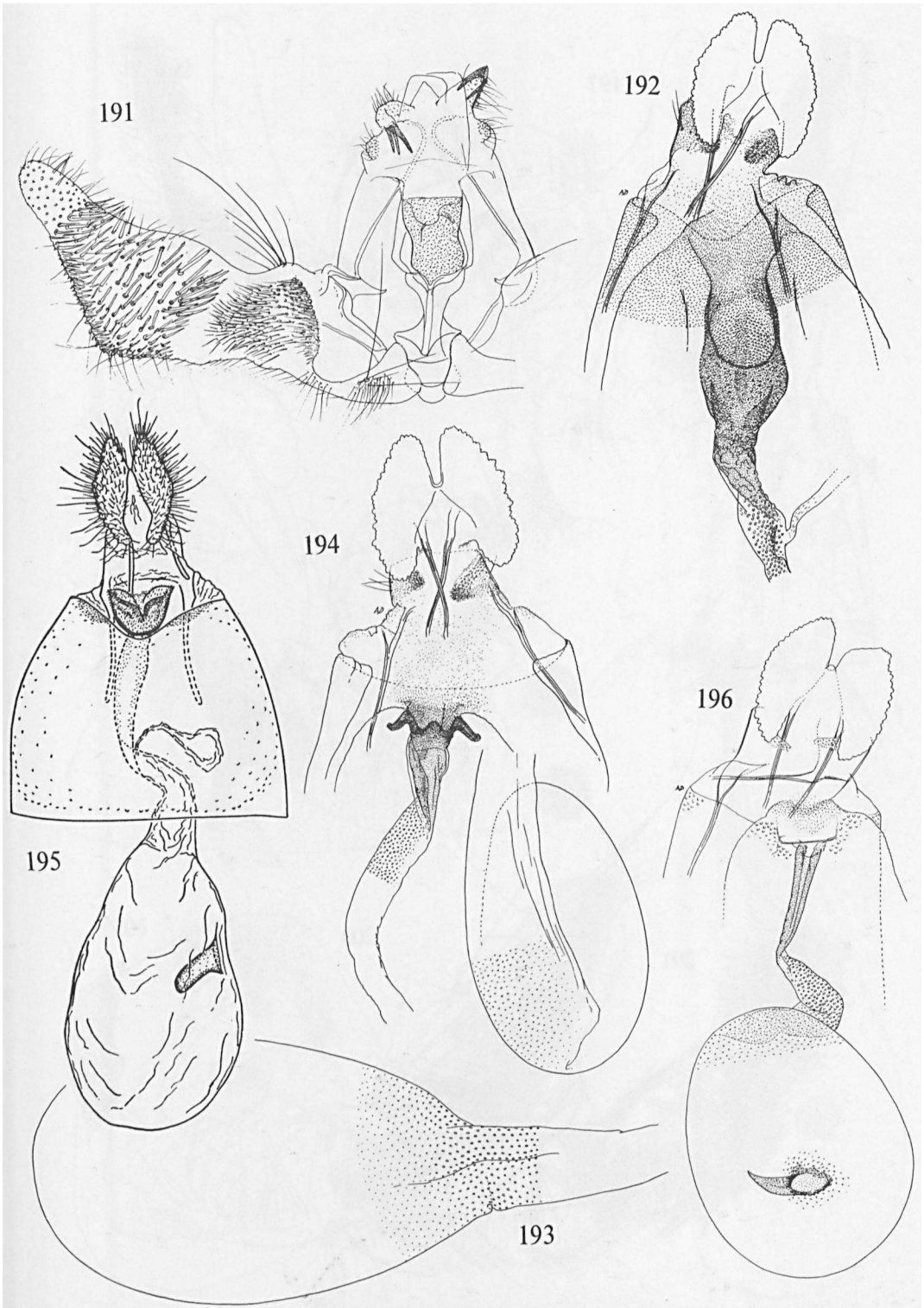


Figs. 180-184. Genitalia of Olethreutini. 180, *Phaecasiophora (P.) guttulosa* sp. n., ♂, holotype; 181, *P. (P.) diluta* sp. n., ♀, allotype; 182, do., ♂, holotype; 183-184, *Sycacantha subiecta* sp. n., ♀, holotype.

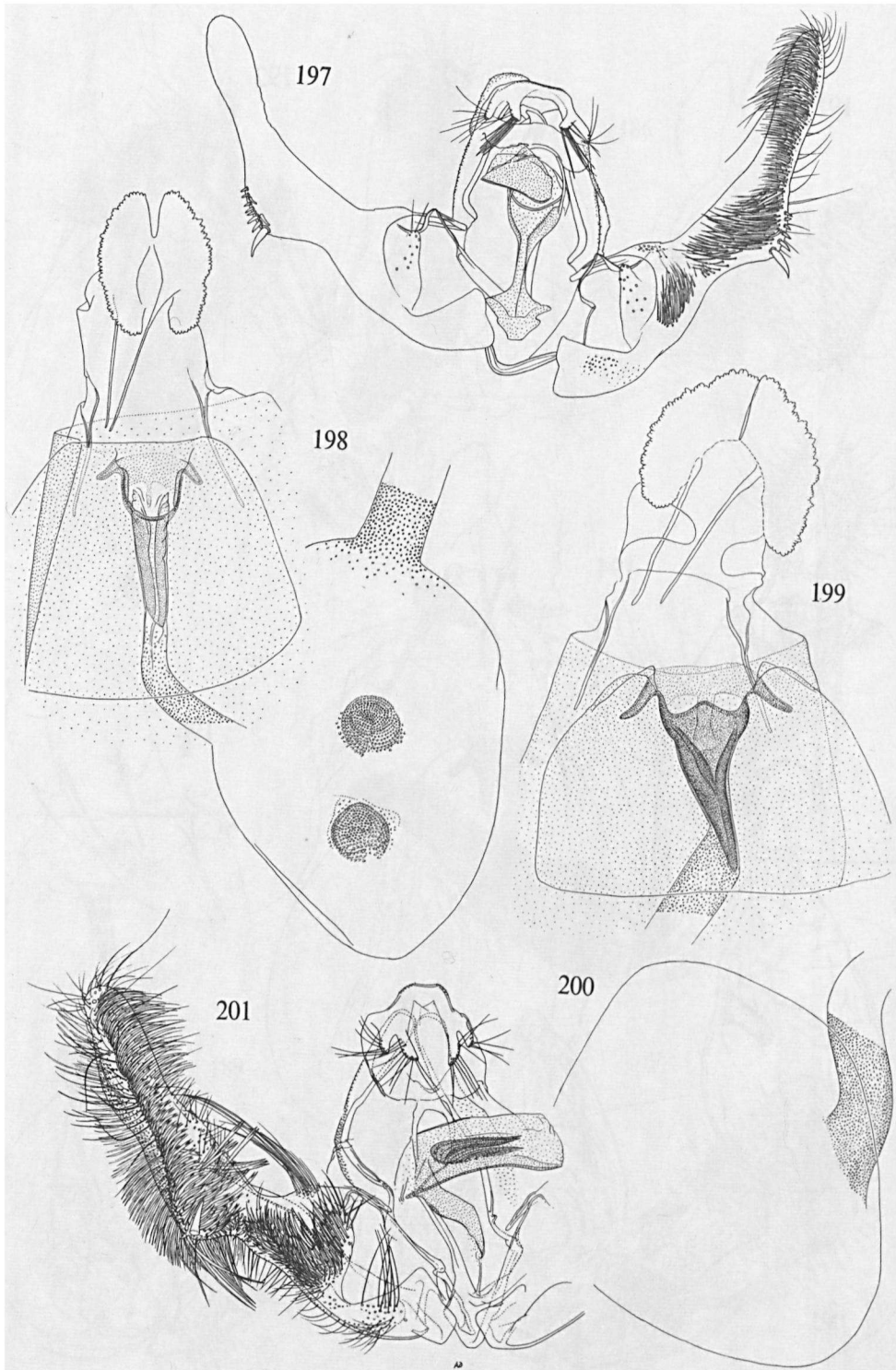




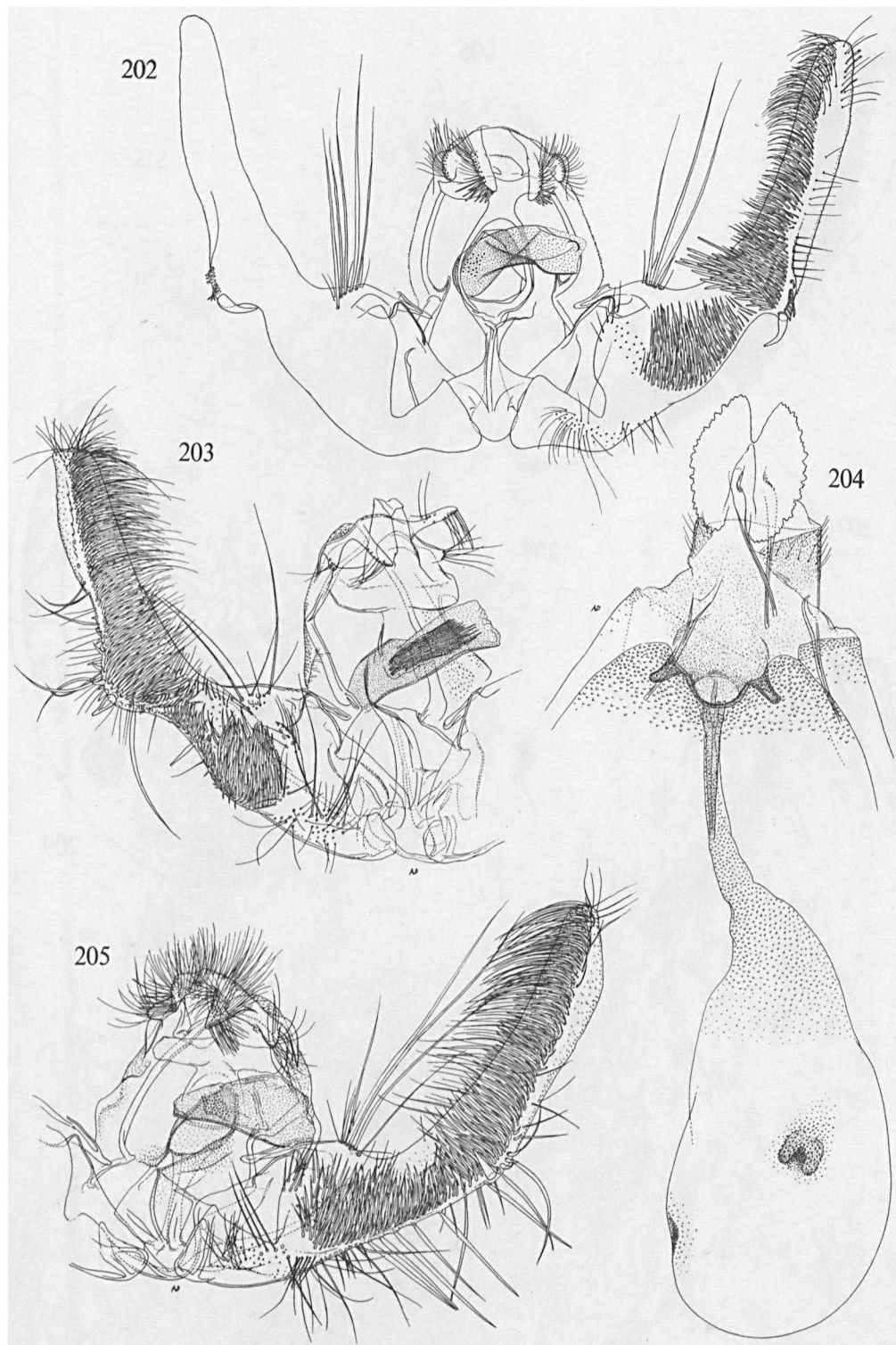
Figs. 185-190. Genitalia of Olethreutini. 185, *Phaecasiophora (Megasyca) pyragra* sp. n. holotype; 186-187, *Phaecasiophora (P.) atlica* (Meyr.), ♀, genit. 6512; 188, *Prophaecasia anthic* sp. n., ♂, holotype; 189, *Sorolopha agana* (Falk.), ♂, holotype; 190, *Eudemopsis purpurissatana* (Kennel.), ♂, (Figs. 189-190, after Falkovitch, 1962, 1966.).



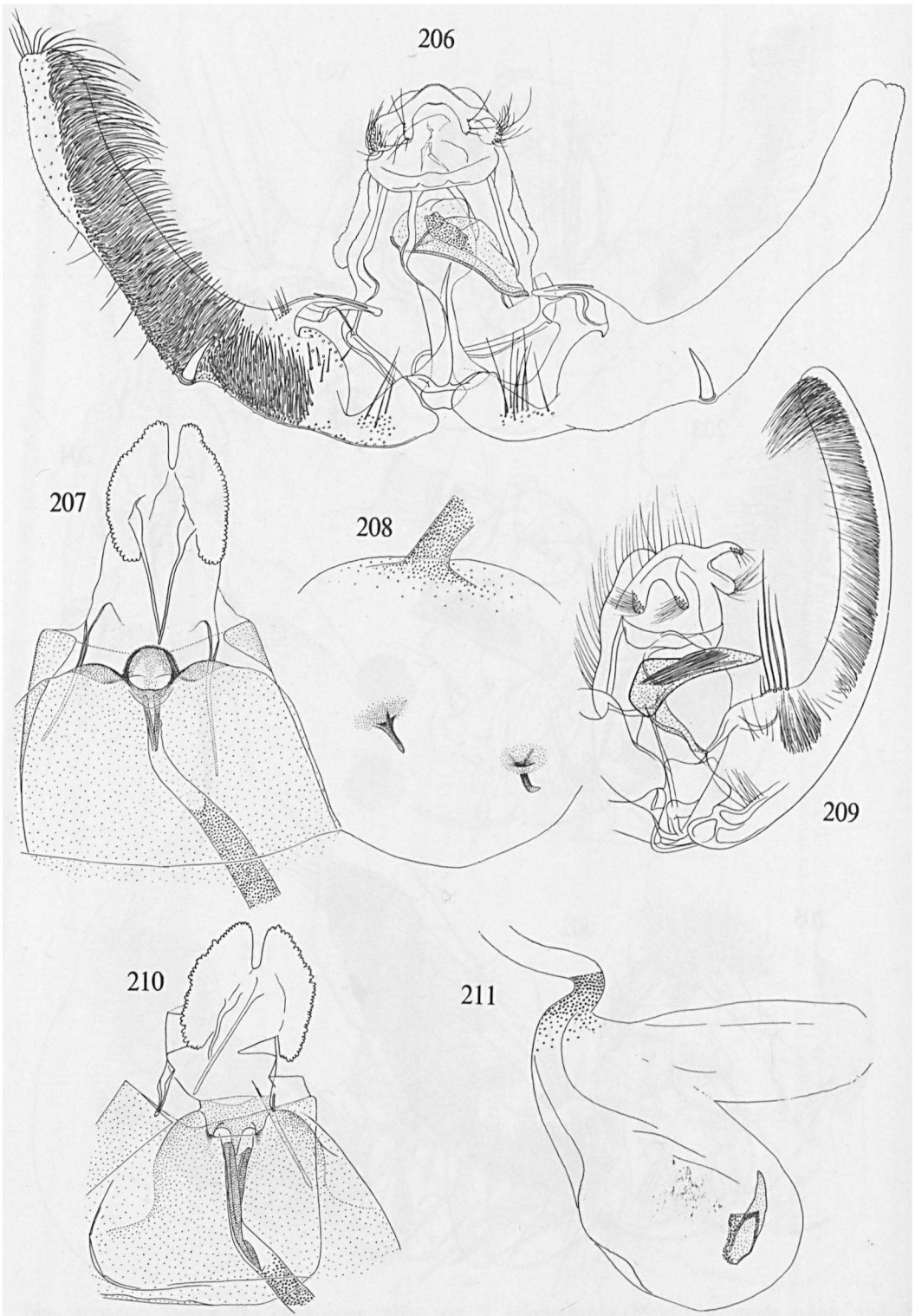
Figs. 191-196. Genitalia of Olethreutini. 191, *Phaecasiophora (Megasyca) ectropa* sp. n., ♂, holotype; 192, *Sycacantha inodes rubida* Diak., ♀, paratype (Thailand, MM); 193, do., bursa; 194, *Psilacantha spinosa* sp. n., ♀, holotype, with bursa; 195, *Eudemopsis purpurissatana* (Kennel.), ♀; 196, *S. hilarograptia* (Meyr.), ♀, genit. 5797. (Fig. 195, after Falkovitch, 1962, figs. 192-193, after Diakonoff, 1971).



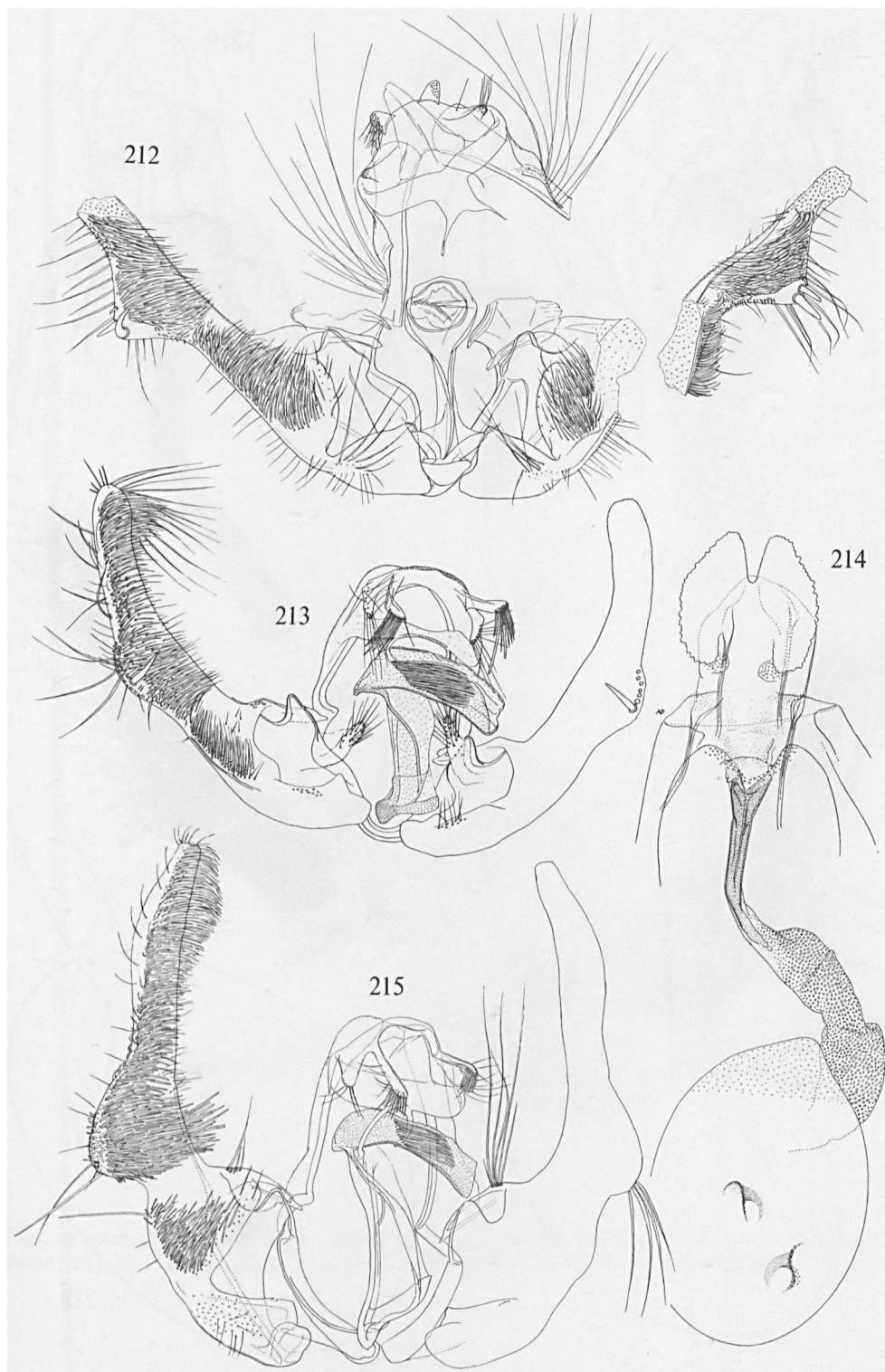
Figs. 197-201. *Sycacantha* Diak., genitalia. 197, *S. hilarografta* (Meyr.), ♂, genit. 2768; 198, *S. complicitata elegans* sbsp. n., ♀, allotype, with bursa; 199, *S. occulta* sp. n., ♀, holotype; 200, do., bursa; 201, *S. inodes celebensis* sbsp. n., ♂, holotype.



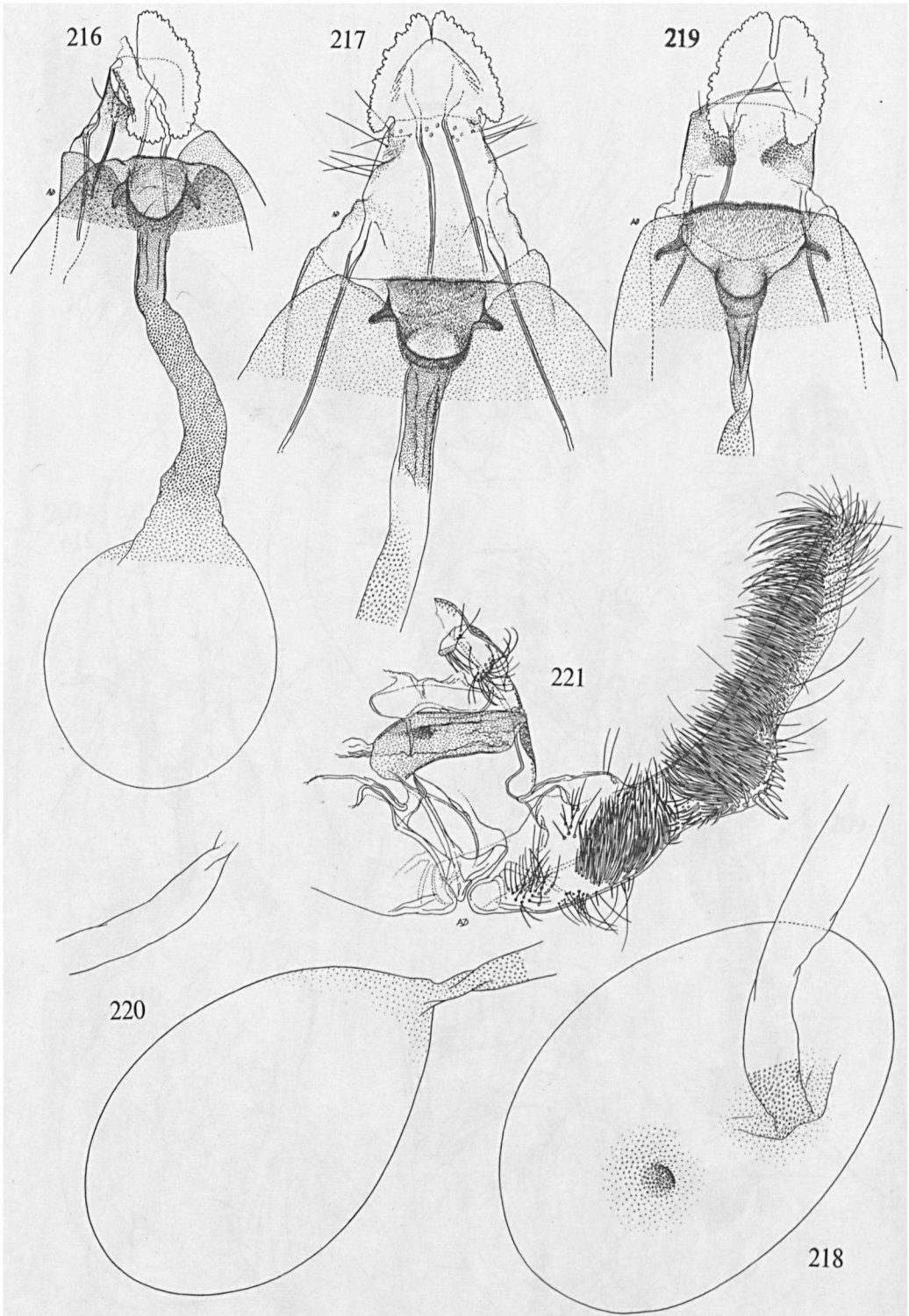
Figs. 202-205. *Sycacantha* Diak., genitalia. 202, *S. versicolor* sp. n., ♂, holotype; 203, *S. complicitana* (Walk.), ♂, genit. 5800; 204, do., ♀, apallotype; 205, *S. thermographa* sp. n., ♂, holotype.



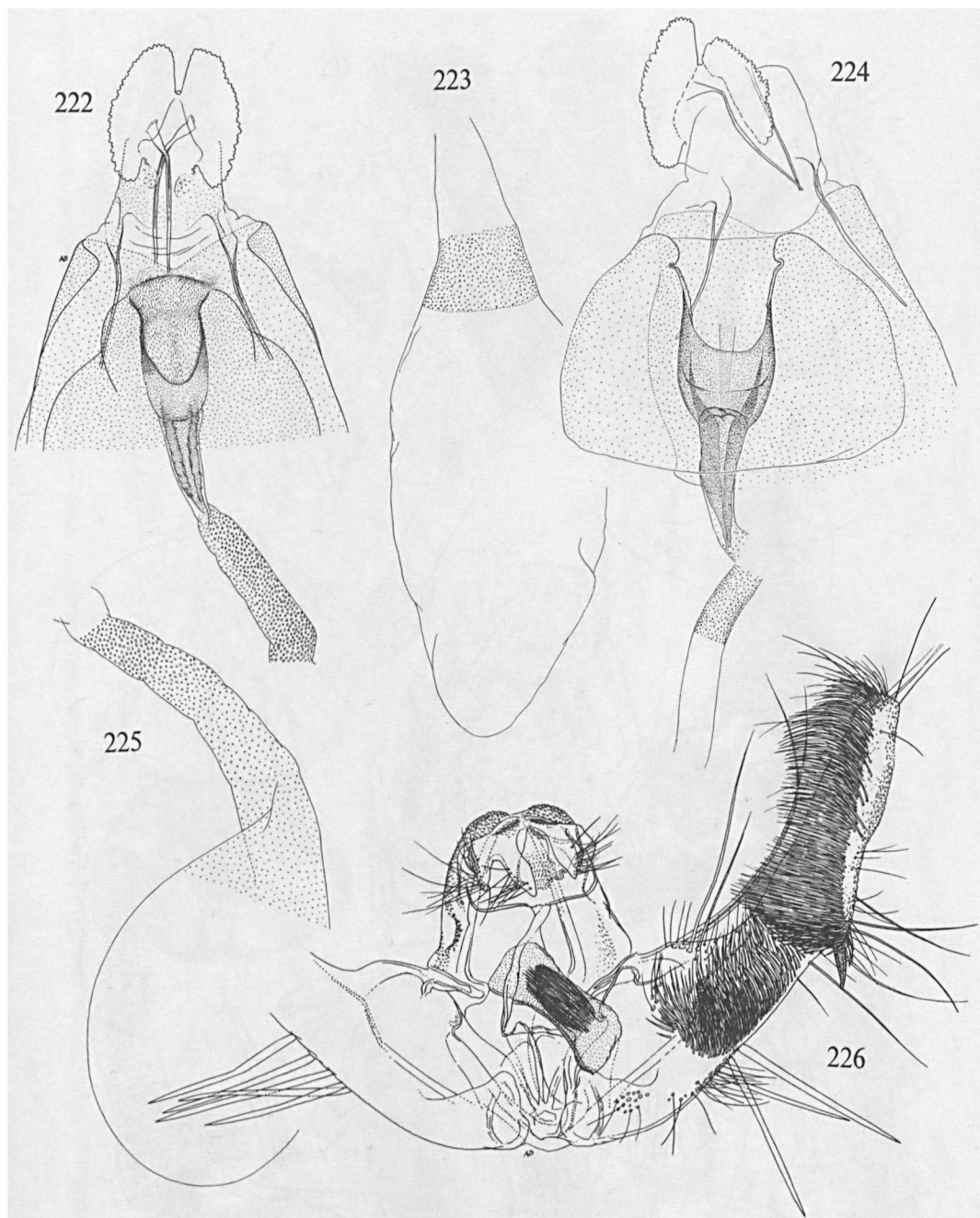
Figs. 206-211. *Sycacantha* Diak., genitalia. 206, *S. cinerascens* sp. n., ♂, holotype; 207, do., ♀, allotype; 208, do., bursa; 209, *S. rivulosa* (Diak.), ♂, holotype; 210, *S. incondita* sp. n., ♀, holotype; 211, do., bursa. (Fig. 209, after Diakonoff, 1953.)



Figs. 212-215. *Sycacantha* Diak., genitalia. 212, *S. maior* sp. n., ♂; 213, *S. formosa rutila* sbsp. n., ♂, holotype; 214, do., ♀, allotype; 215, *S. rufescens* sp. n., ♂, holotype.

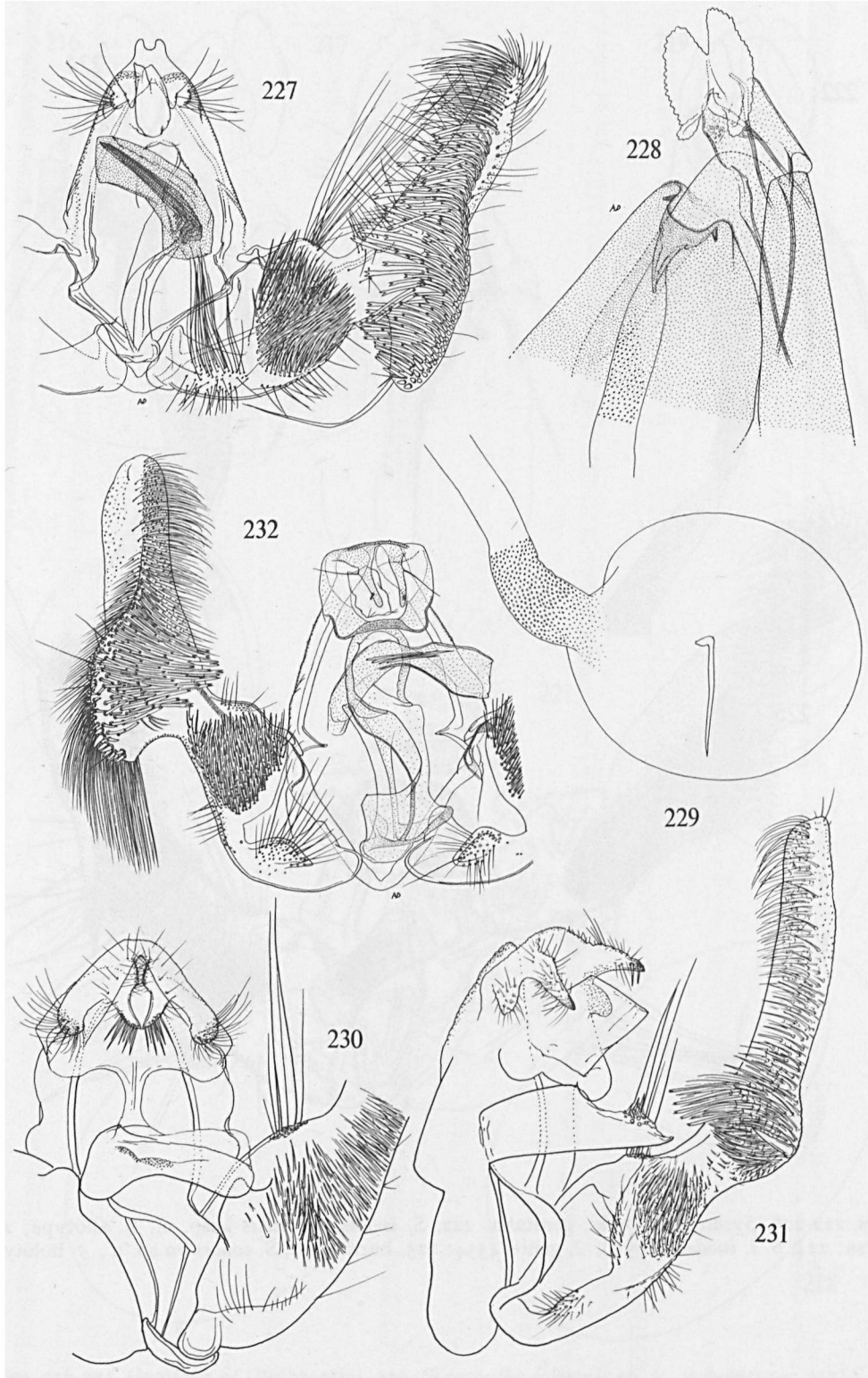


Figs. 216-221. Genitalia of Olethreutini. 216, *Sycacantha solemnis* sp. n., ♀, holotype; 217, *S. concentra* sp. n., ♀, holotype; 218, bursa; 219, *Psilacantha manifesta* sp. n., ♀, allotype; 220, bursa; 221, *S. amphimorpha* sp. n., ♂, holotype.



Figs. 222-226. *Sycacantha* Diak., genitalia. 222, *S. inodes celebensis* sbsp. n., ♀, allotype; 223, bursa; 224, *S. i. inodes* (Meyr.), ♀, genit. 4554; 225, bursa; 226, *S. concentra* sp. n., ♂, holotype.

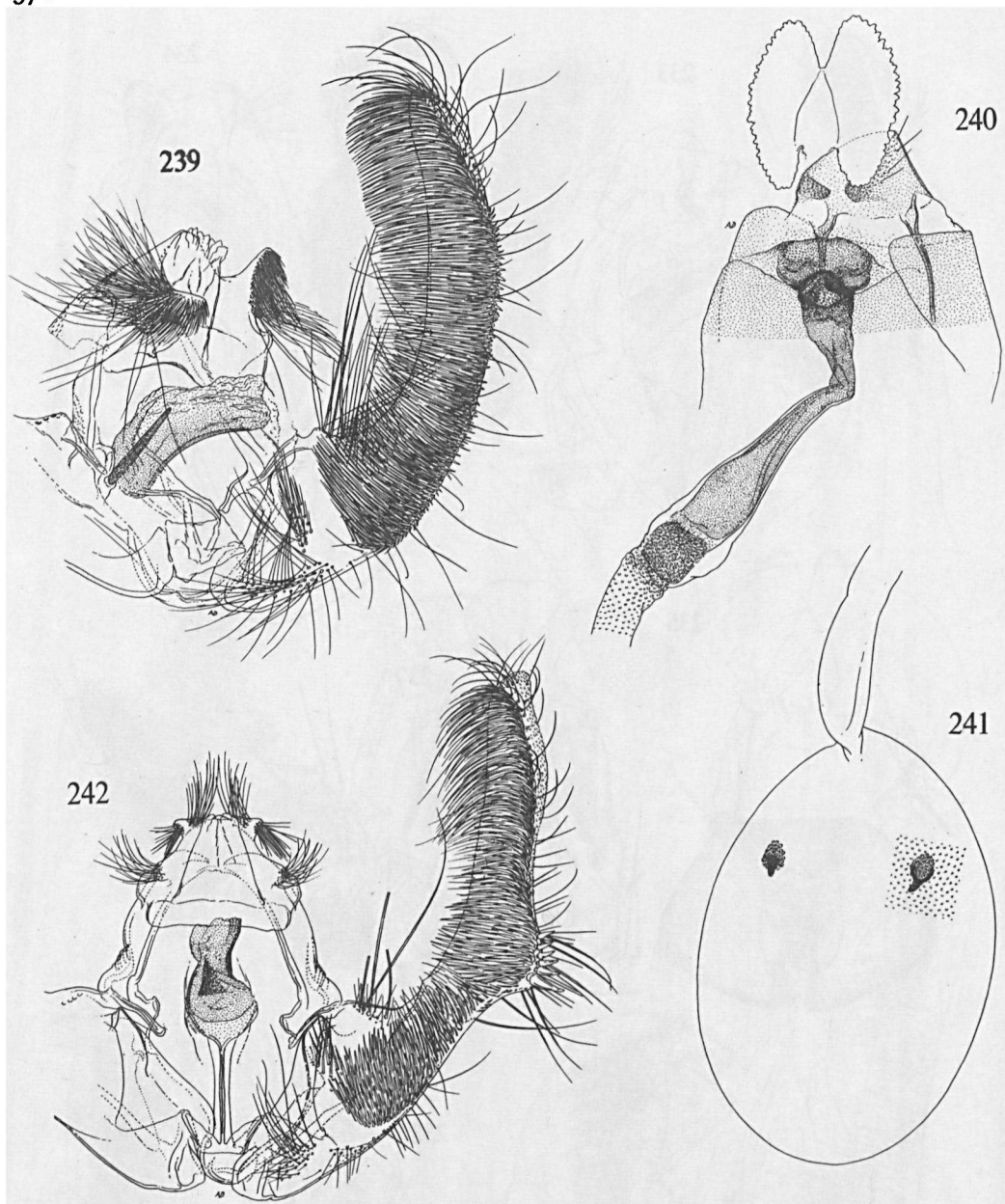




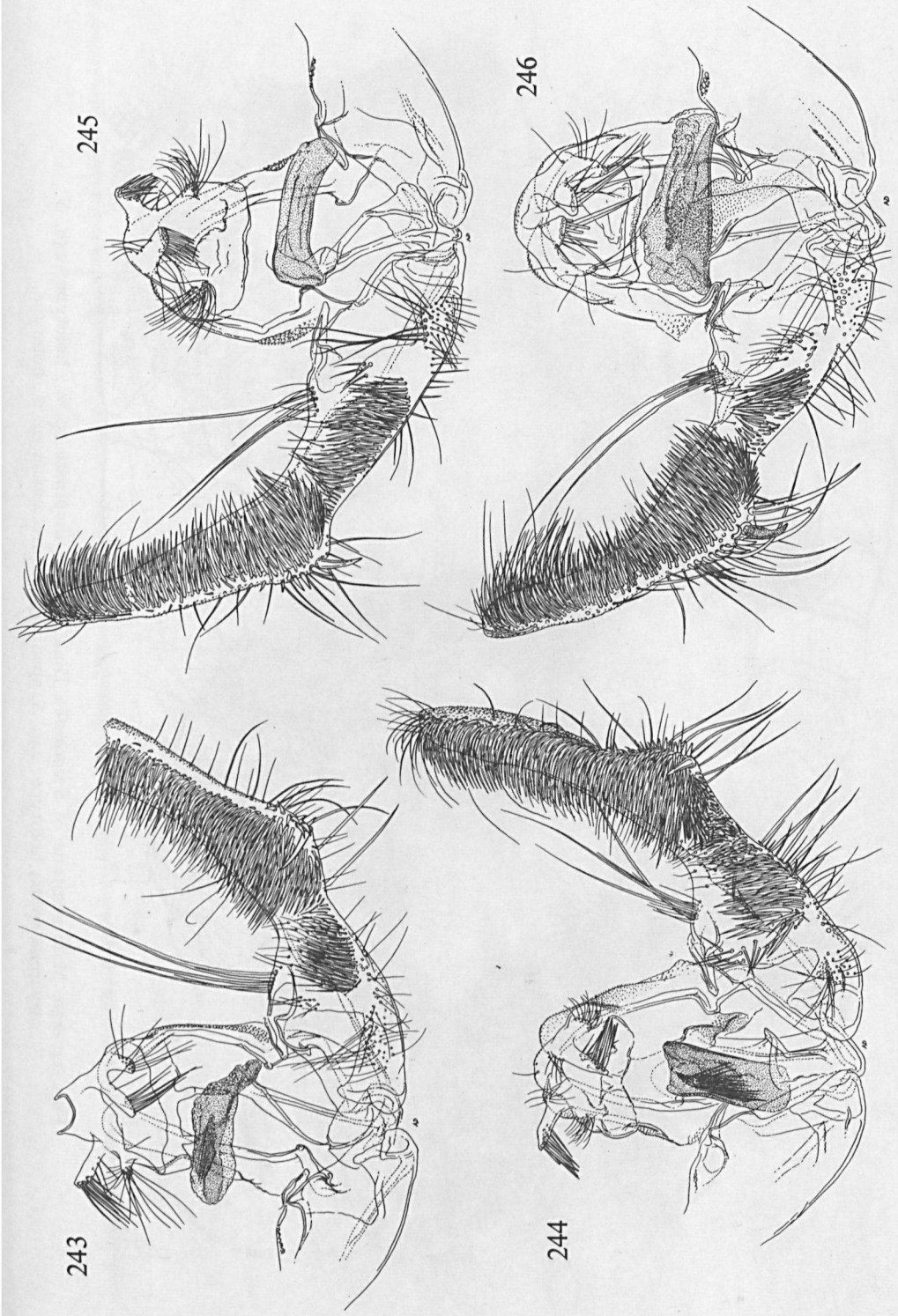
Figs. 227-232. Genitalia of Olethreutini. 227, *Psilacantha creserias* (Meyr.), ♂, genit. 5807; 228, do., ♀, genit. 5808; 229, do., bursa; 230, *Sycacantha exedra* (Turner), ♂, genit. 6042; 231, *S. diatoma* Diak., ♂, holotype; 232, *S. quadrata* sp. n., ♂, holotype. (Figs. 230-231, after Diakonoff, 1966).



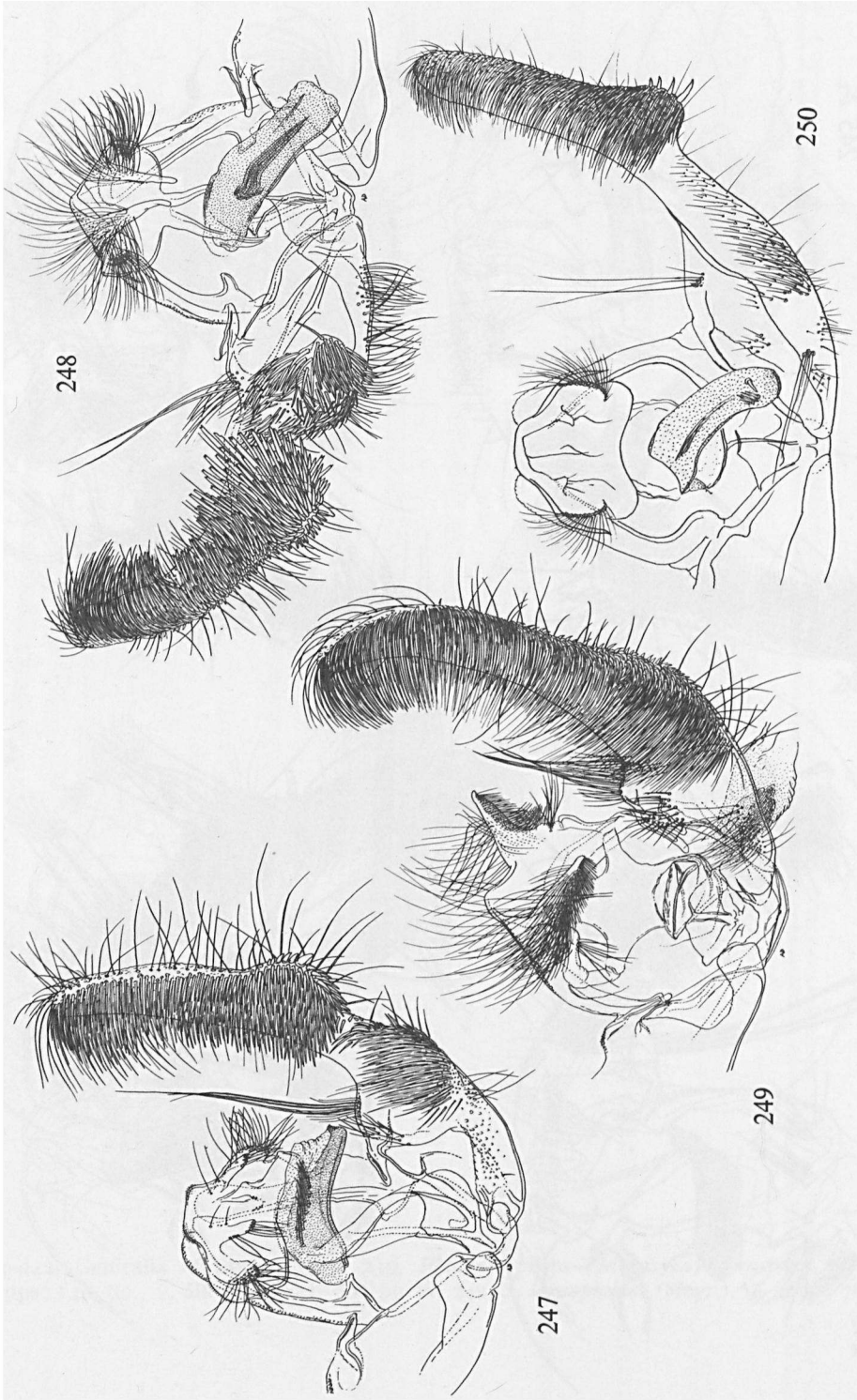
Figs. 233-238. Genitalia of Olethreutini. 233, *Sycacantha i. inodes* (Meyr.), ♂, genit. 4552; 234, *Psilacantha charidotis* (Drnt.), ♂, holotype, fragment; 235, *S. homichlodes* sp. n., ♀, holotype; 236, bursa; 237, *P. manifesta* sp. n., ♂, holotype; 238, *S. potamographa* Diak., ♂, holotype (Figs. 233, 237, 238, after Diakonoff, 1966, 1968.)



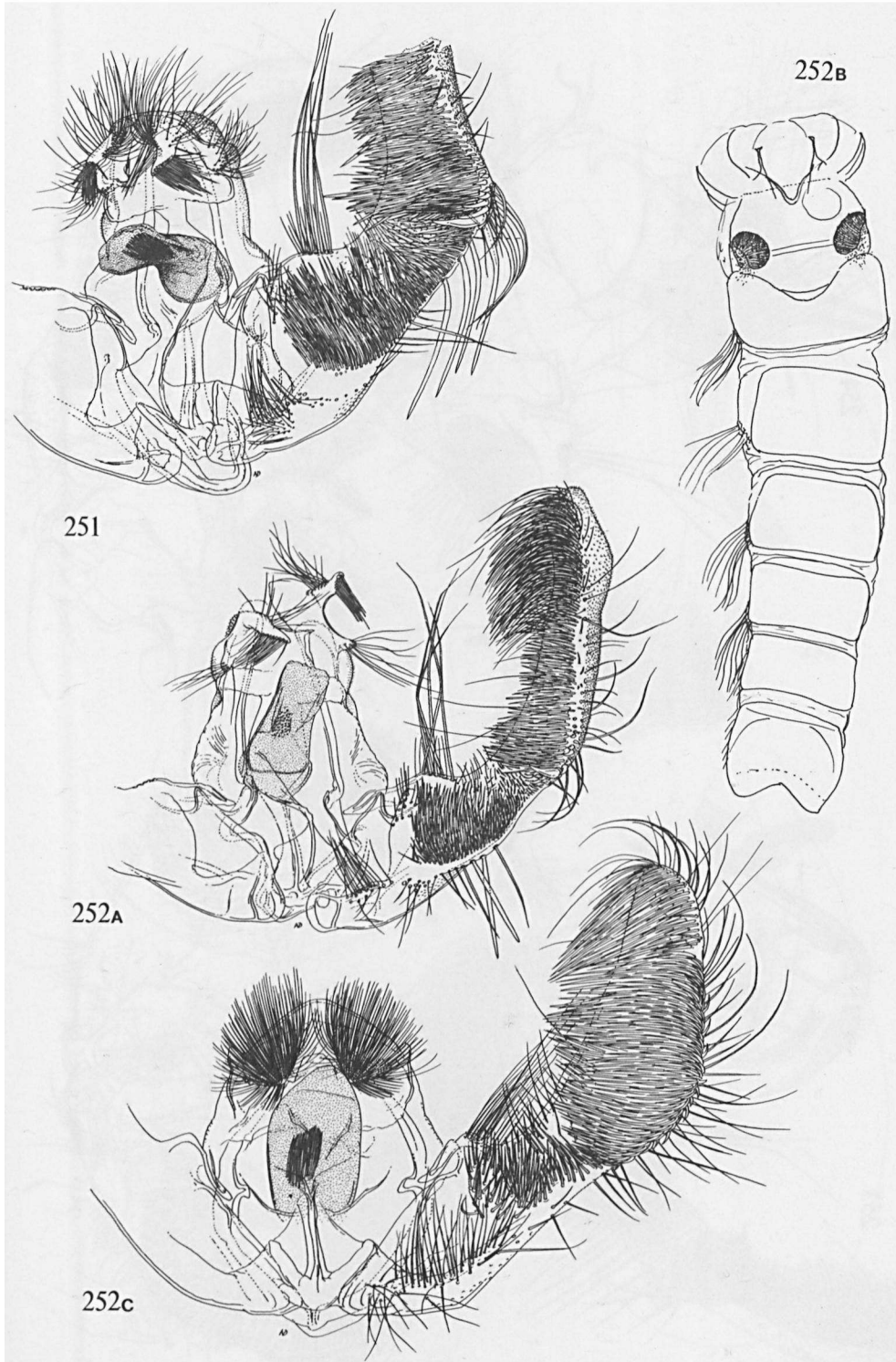
Figs. 239-242. Genitalia of Sycacanthae. 239, *Phaecasiophora (Megasyca) obraztovi* sp. n., ♂, holotype; 240, do., ♀, allotype; 241, do., bursa; 242, *S. tornophanes* (Meyr.), ♂, genit. 7670.



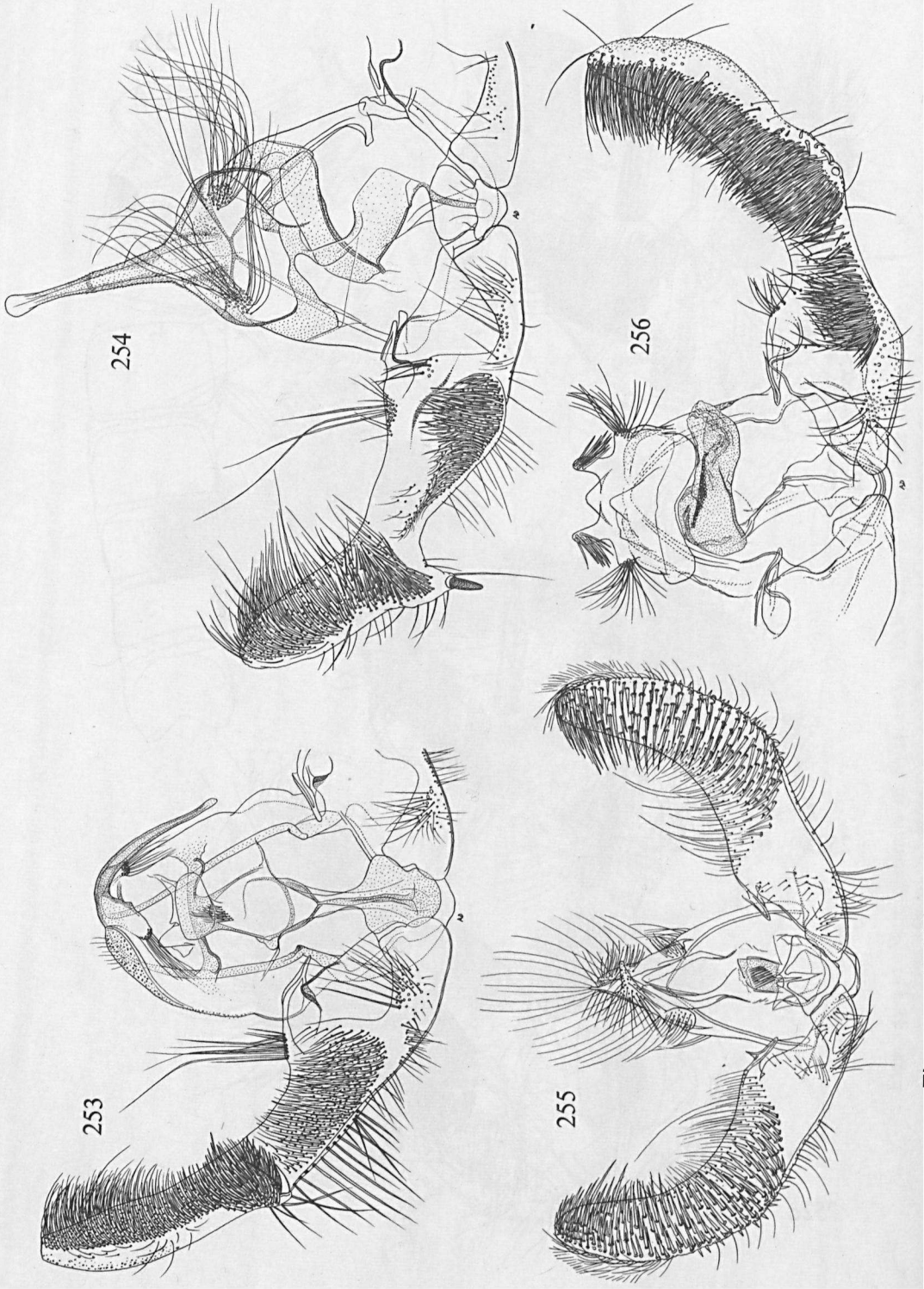
Figs. 243-246. Male genitalia of *Sycacantha* Diak. and *Psilacantha* Diak. 243, *P. spinosa* sp. n., holotype; 244, *S. praeclara* sp. n., holotype; 245, *S. escharota* (Meyr.), genit. 7679; 246, *S. rhodocroca* sp. n., holotype.



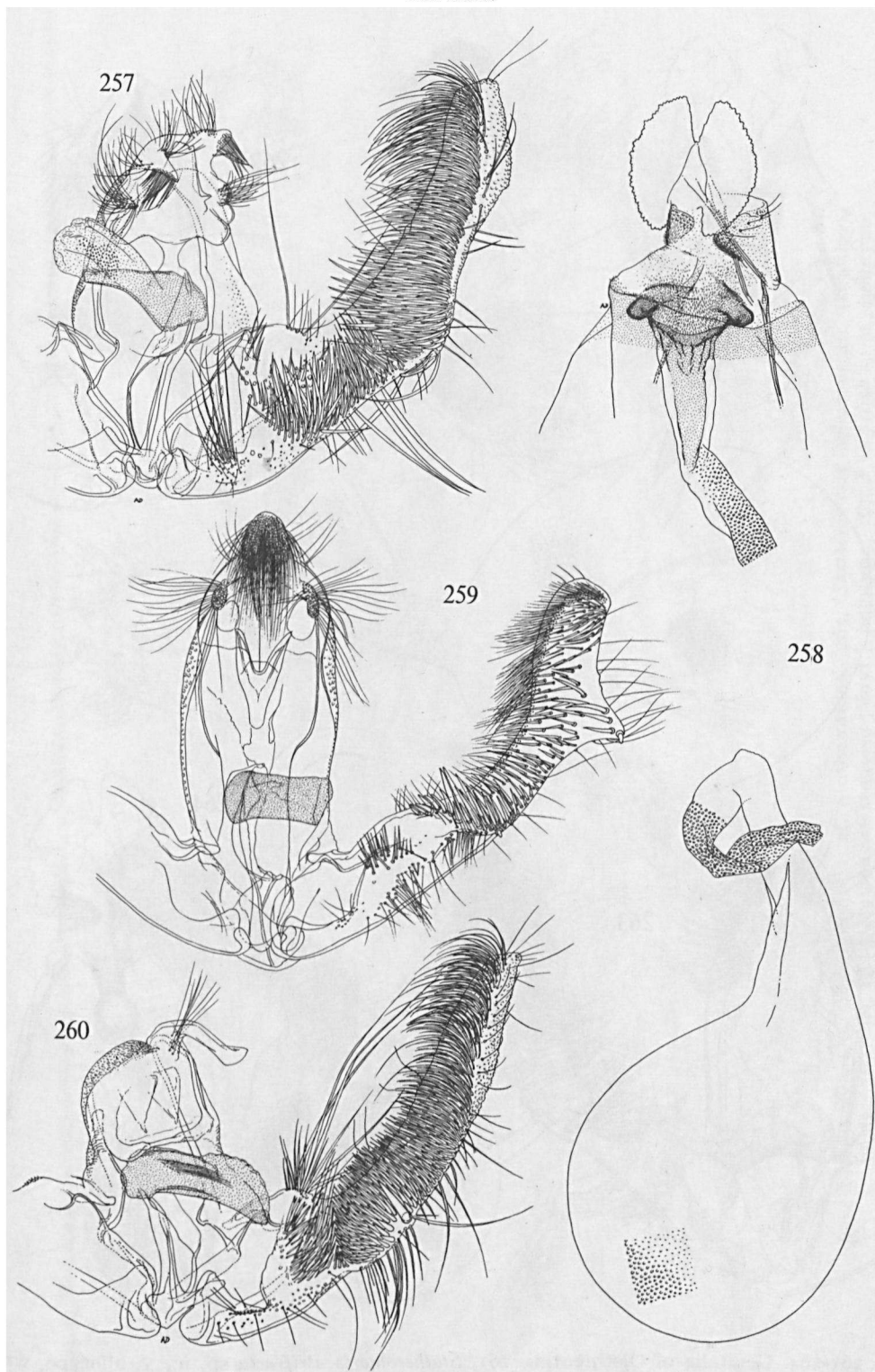
Figs. 247-250. Male genitalia of *Sycacantha* Diak. 247, *S. inopinata* sp. n., holotype; 248, *S. caryozona* sp. n., holotype; 249, *S. spec.*; 250, *S. crocamicia* sp. n., holotype.



Figs. 251-252C. Male genitalia of *Sycacantha* Diak. and *Phaecasiophora* Grote. 251, *S. dissita* sp. n., holotype; 252A, *S. ostracachtys* sp. n., holotype; 252B, do., base of abdomen with scent pouches; 252C, *Phaecasiophora (P.) attica* (Meyr.), ♂, genit. 6512.

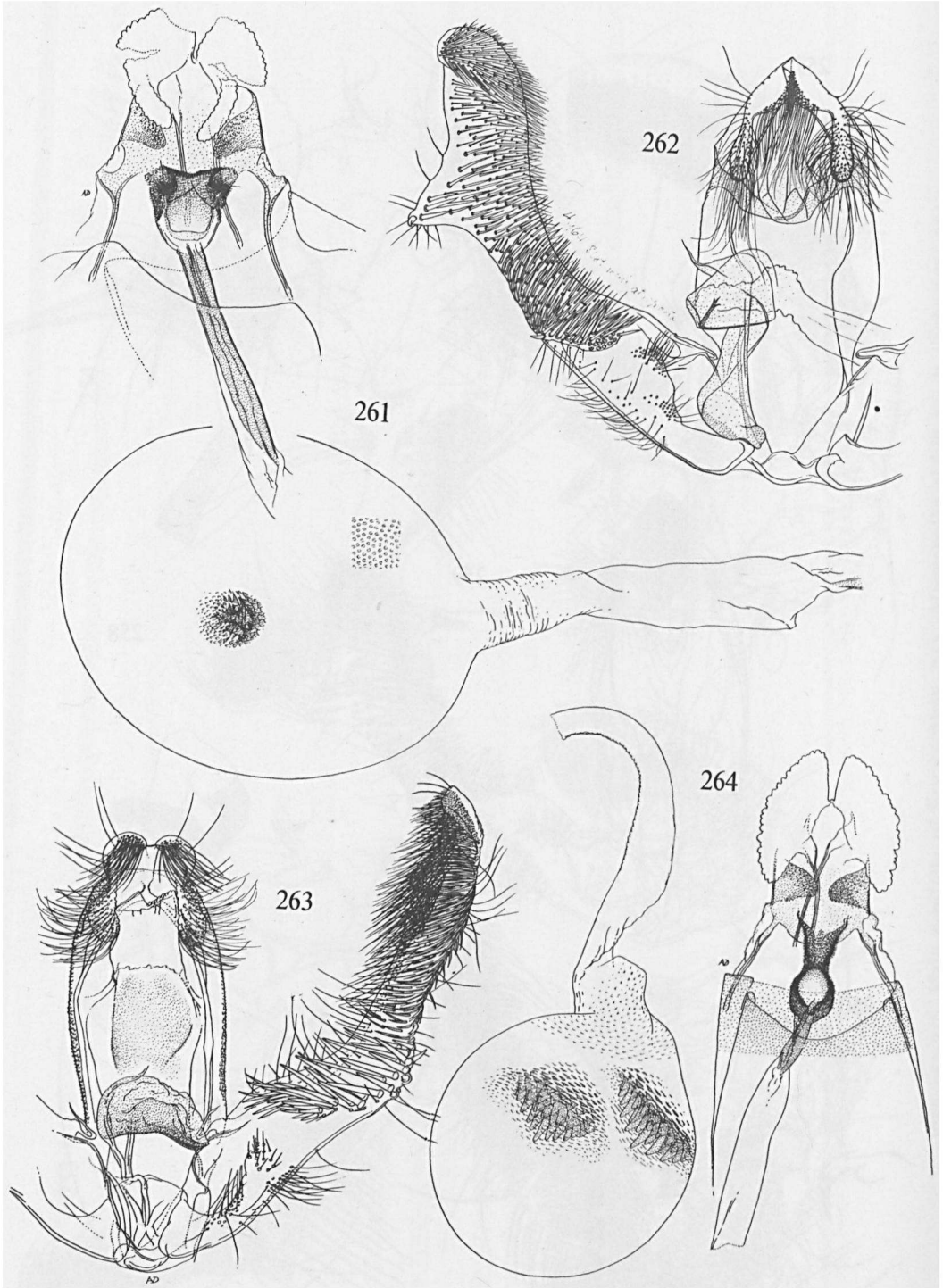


Figs. 253-256. Male genitalia of Sycantheae. 253. *Monacaniha abdita* sp. n., holotype; 254. *M. astuta* sp. n., holotype; 255. *Sisona albitibiana* Snell., lectotype; 256. *Sycananiha iapaenophyes* sp. n., holotype.

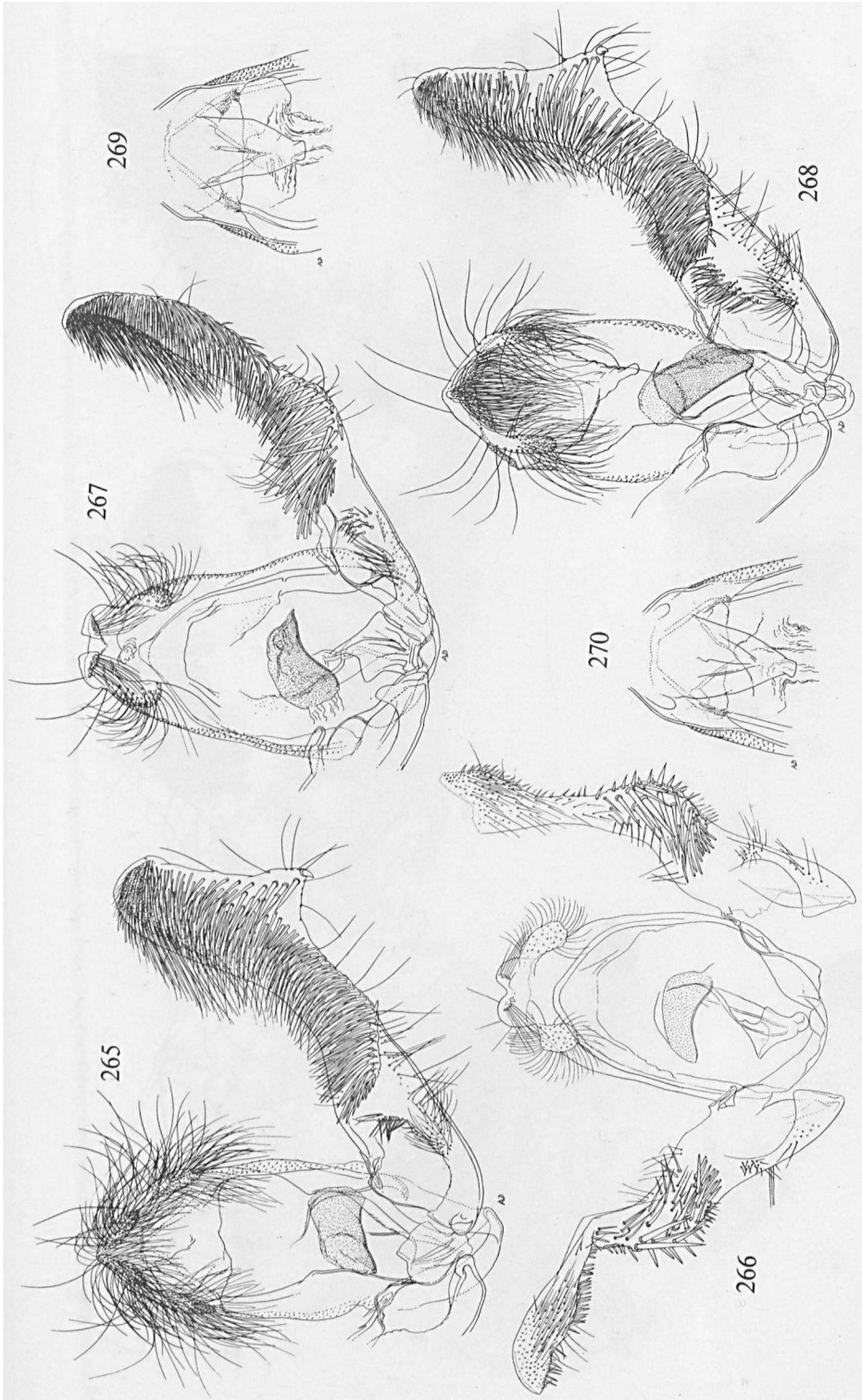


Figs. 257-260. Genitalia of Sycacanthae etc. 257, *Sycacantha catharia* sp. n., ♂, holotype; 258, *S. inopinata* sp. n., ♀, allotype, with below, bursa; 259, *Statherotis ancosema* (Meyr.), ♂, genit. 6304; 260, *Monacantha trachymelas* sp. n., ♂, holotype.

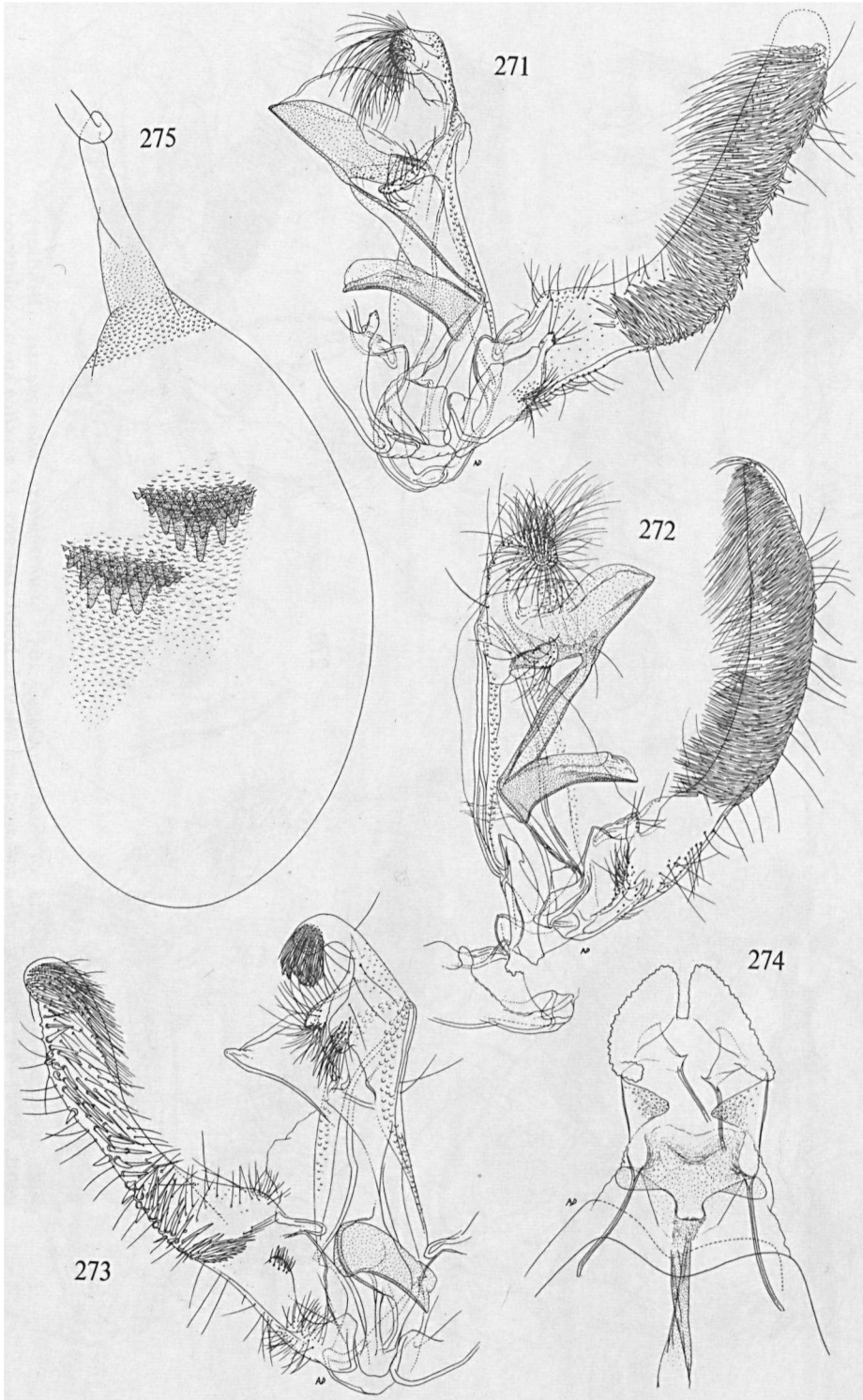




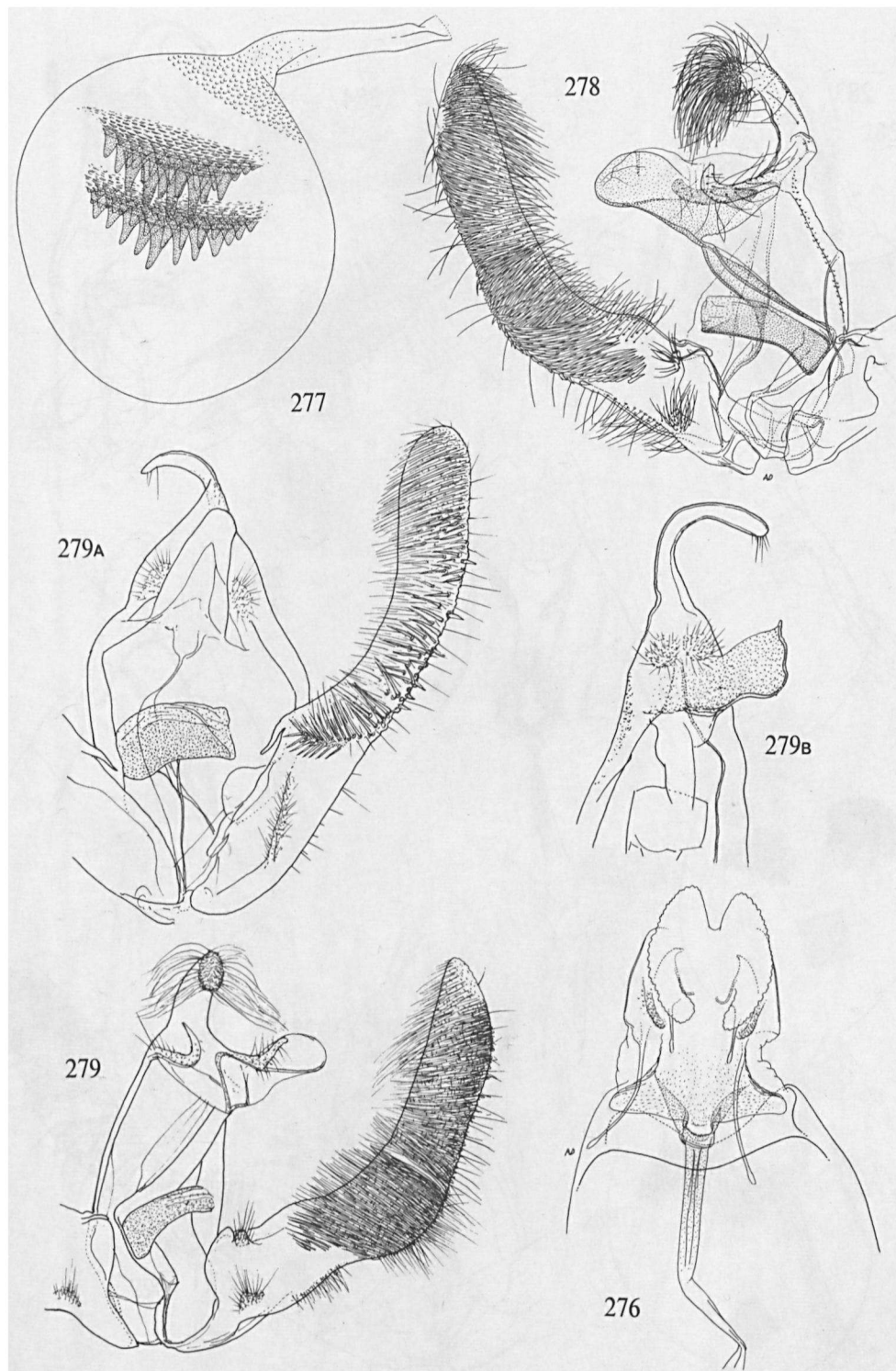
Figs. 261-264. Genitalia of Olethreutini. 261, *Statheromeris atrifracta* sp. n., ♀, allotype with bursa; 262, do., ♂, holotype; 263, *Phaulacantha metamelas* sp. n., ♂, holotype; 264, *P. catharostoma* (Meyr.), ♀, apallotype.



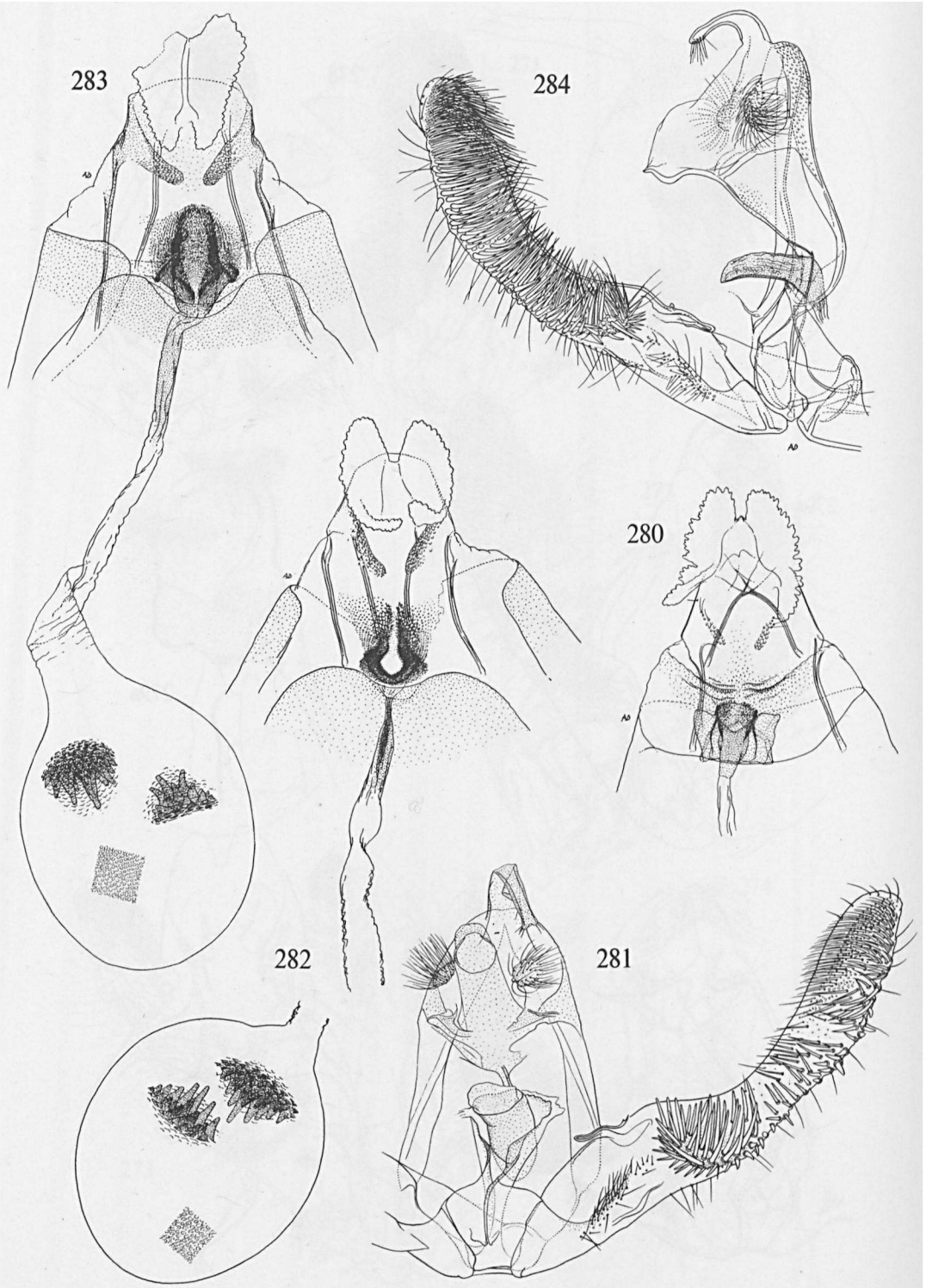
Figs. 265-270. Male genitalia of Statherotides. 265, *Statheromeris solomonensis* (Bradley), genit. 6362; 266, *Phaulacantha catharostoma* (Meyr.), holotype; 267, *P. acyclica* sp. n., holotype; 268, *Statheromeris semaeophora* sp. n., holotype; 269, gnathos region of *Statherotis discana saturata* forma n., genit. 4595, Tjibodas; 270, do., genit. 5790, Bogor.



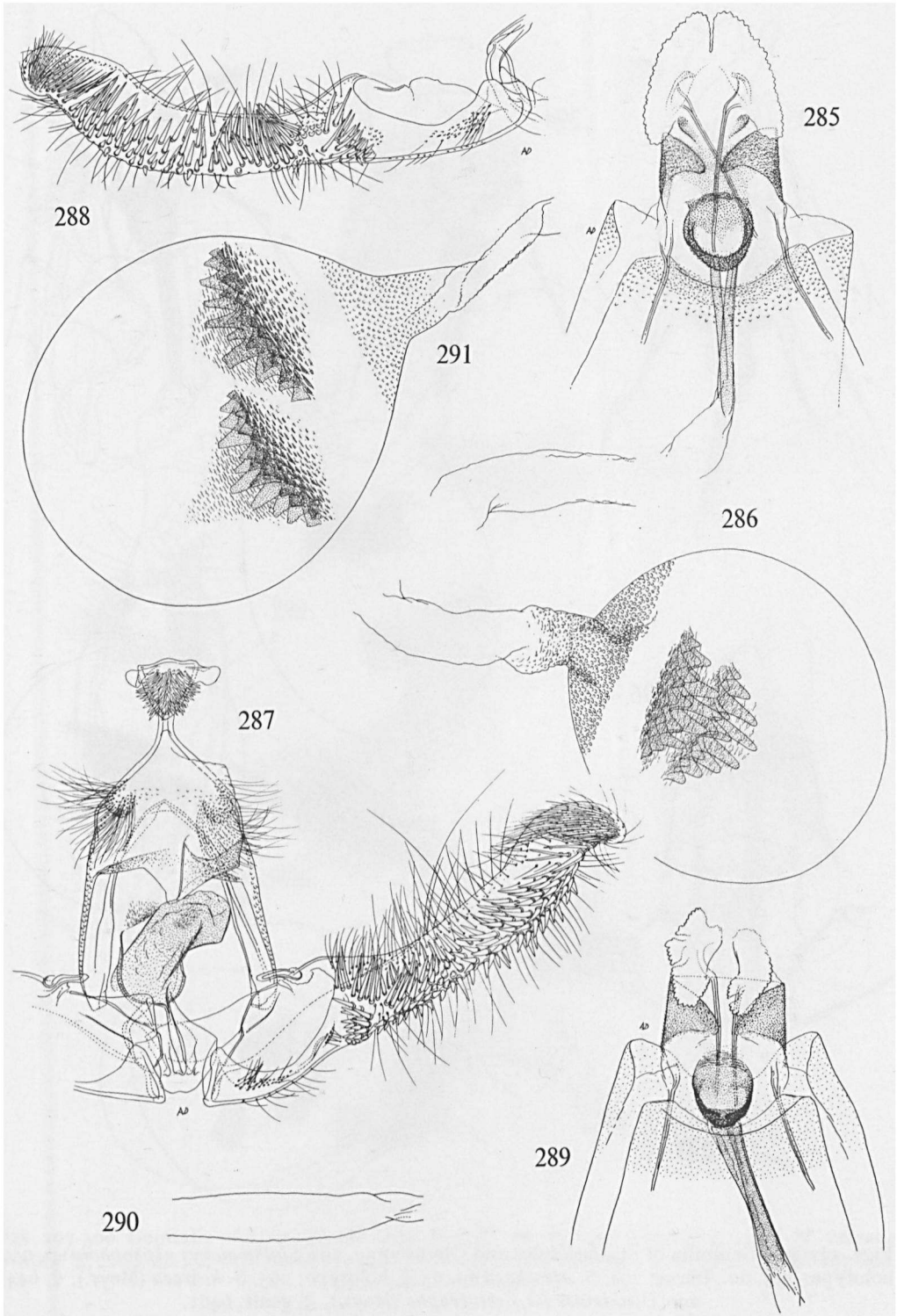
Figs. 271-275. Genitalia of *Dactylioglypha* g.n. 271, *D. pallens* sp. n., ♂, holotype; 272, *D. zonata* sp. n., ♂, holotype; 273, *D. mimas* sp. n., ♂, holotype; 274-275, do., ♀, allotype, with bursa.



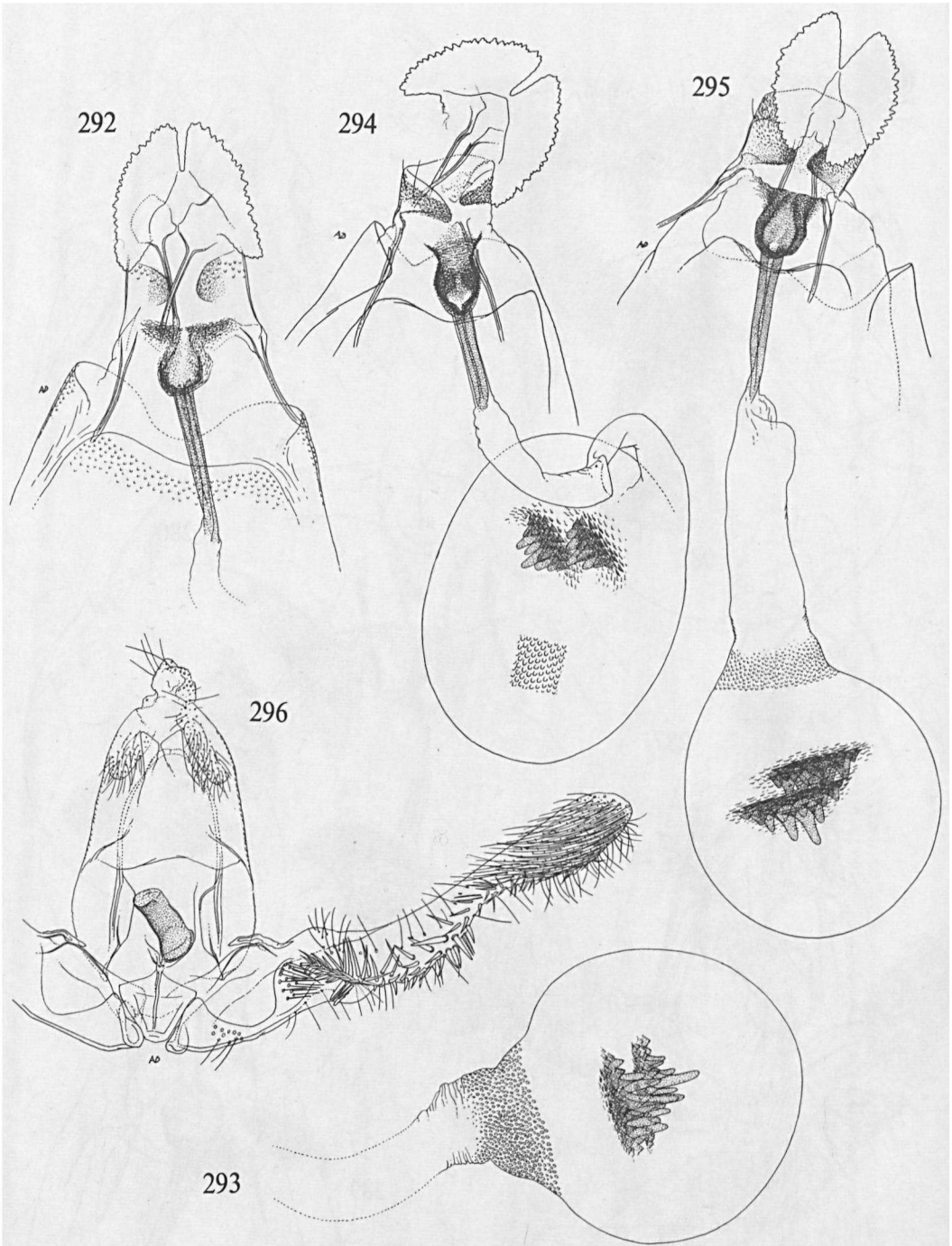
Figs. 276-279B. Genitalia of Statherotides. 276, *Dactyloglypha mimas* sp. n., ♀, paratype, genit. 5826; 277, do., bursa; 278, *D. ionica* (Meyr.), ♂, genit. 5955; 279, *D. avita* sp. n., ♂, holotype; 279A, *Statherotoxys hedraea* (Meyr.), ♂, genit. 8261; 279B, do., ♂, genit. 8259, showing gnathos in sublateral aspect.



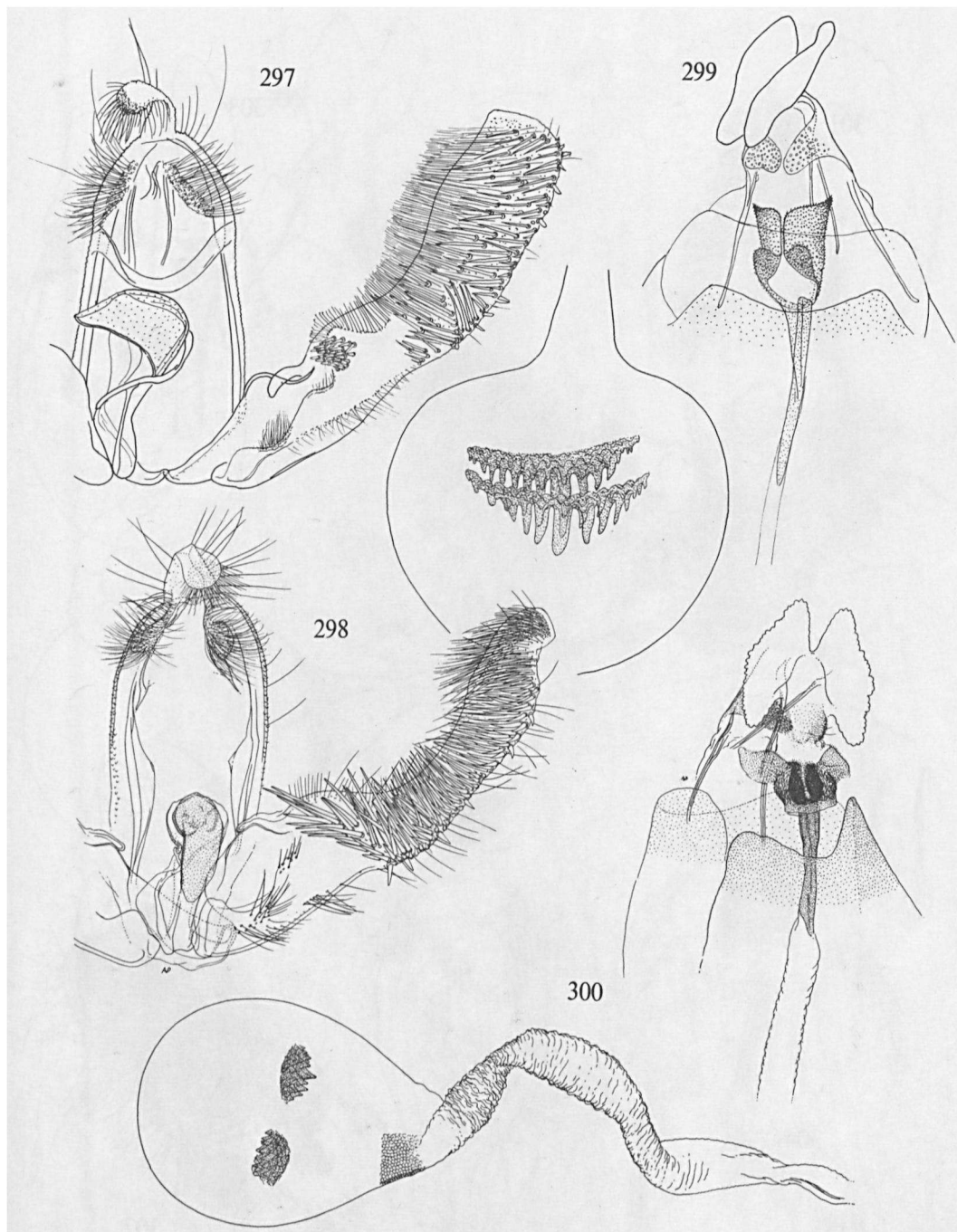
Figs. 280-284. Genitalia of Statherotides and Olethreutae. 280, *Olethreutes (O.) cerographa* (Meyr.), ♀, genit. 6462; 281, *Statherotoxys eurydelta* sp. n., ♂, holotype; 282, *Dactyloglypha tonica* (Meyr.), ♀, with bursa, genit. 6510; 283, *D. avita* sp. n., ♀, allotype; 284, *S. hypochrysa* sp. n., ♂, holotype.



Figs. 285-291. Genitalia of *Cephalophyes* g.n. 285-286, *C. porphyrea* sp. n., ♀, allotype; 287, do., ♂, holotype; 288, do., left valva; 289, *C. cyanura* (Meyr.), ♀, genit. 6305; 290, do., part of ductus bursae; 291, do., bursa.

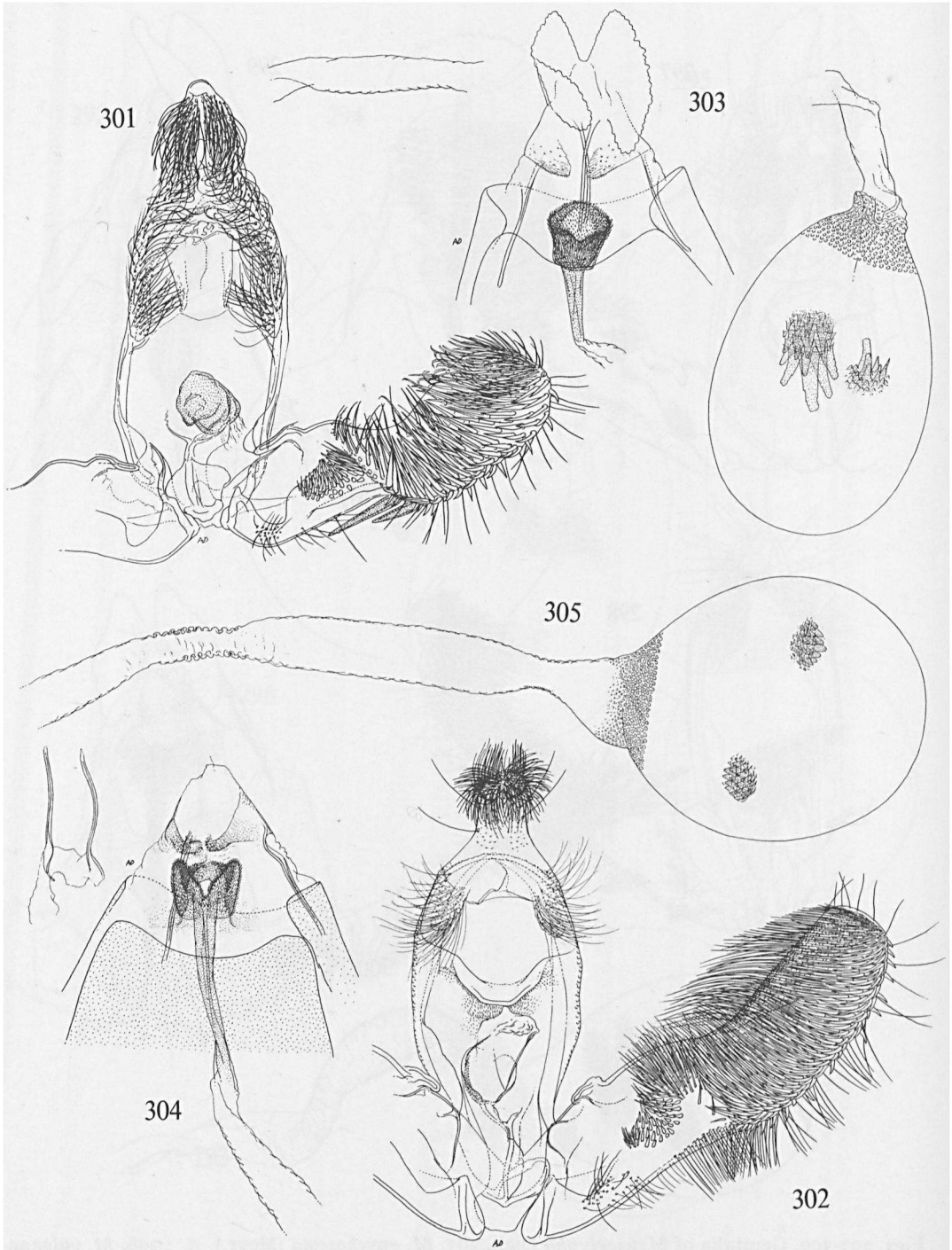


Figs. 292-296. Genitalia of Statherotides and Olethreutae. 292, *Statherotoxys niphophora* sp. n., ♀, holotype; 293, do., bursa; 294, *S. acrorhaga* sp. n., ♀, holotype; 295, *S. hedraea* (Meyr.), ♀, 6445; 296, *Olethreutes (O.) cerographa* (Meyr.), ♂, genit. 6461.

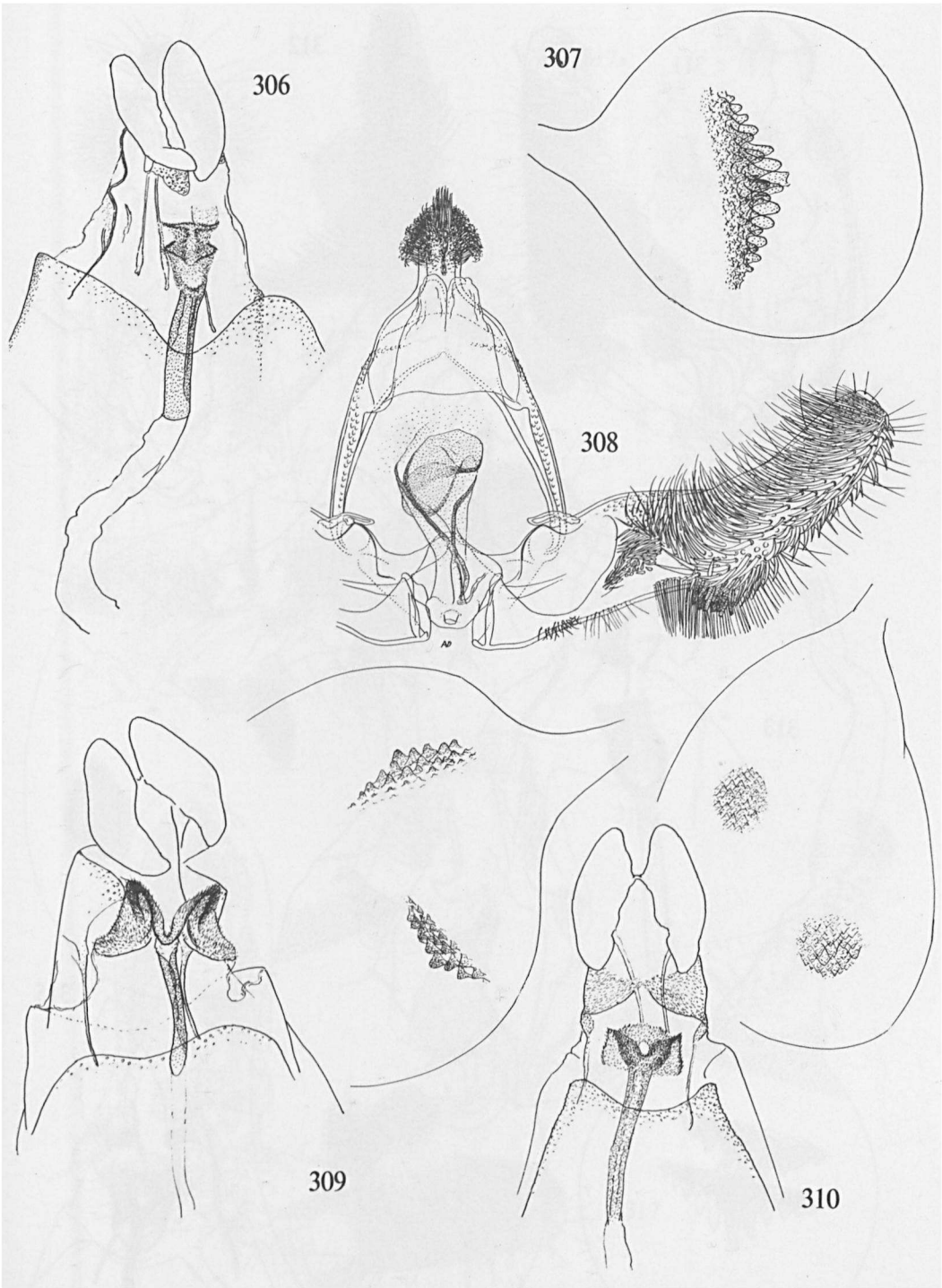


Figs. 297-300. Genitalia of *Metrioglypha* Diak. 297, *M. onychosema* (Meyr.), ♂; 298, *M. vulgana* (Walk.), ♂; 299, do., ♀, with bursa; 300, *M. habilis* sp. n., ♀, allotype, with bursa. (Figs. 297-299, after Diakonoff, 1966.)

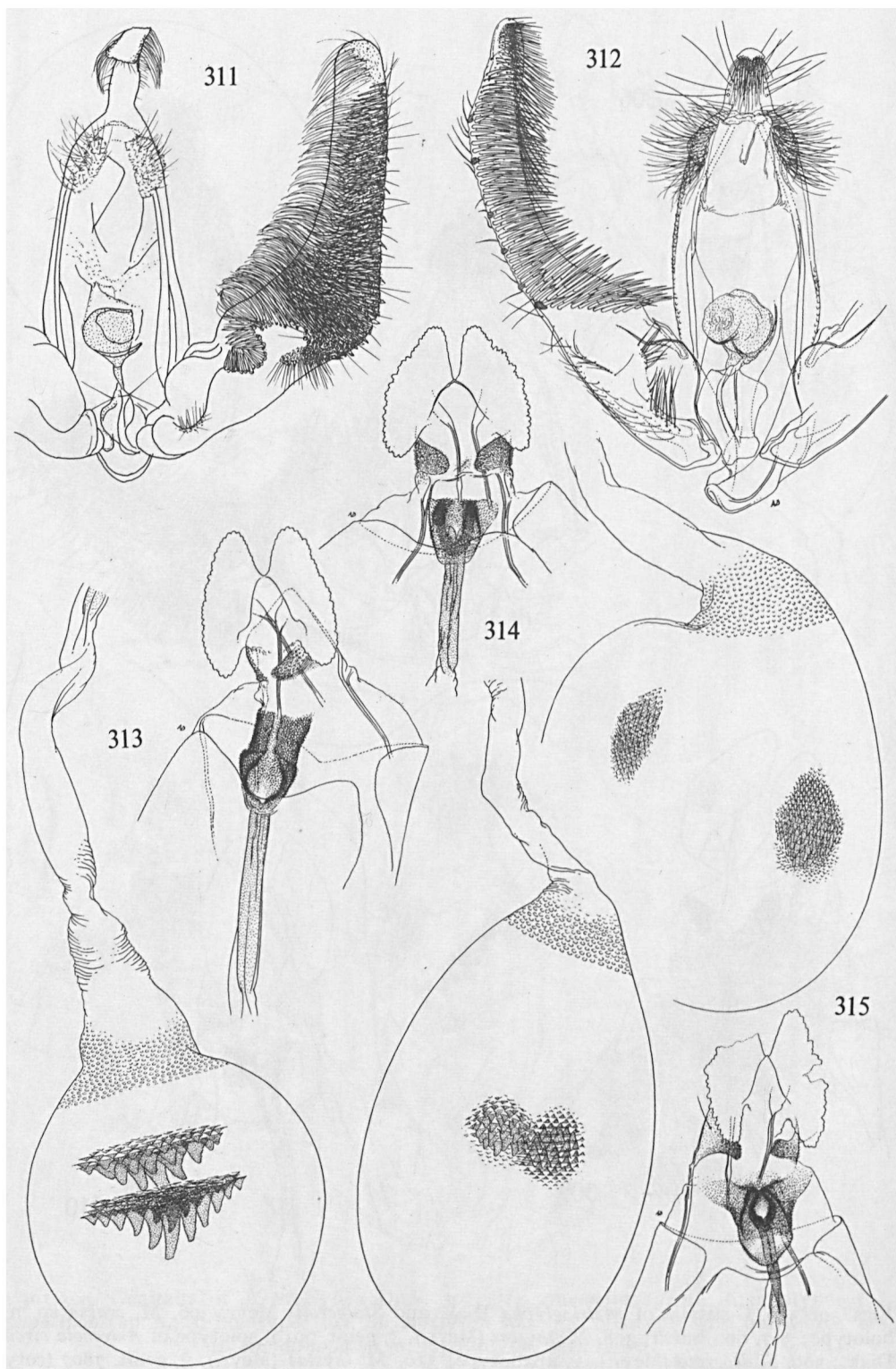




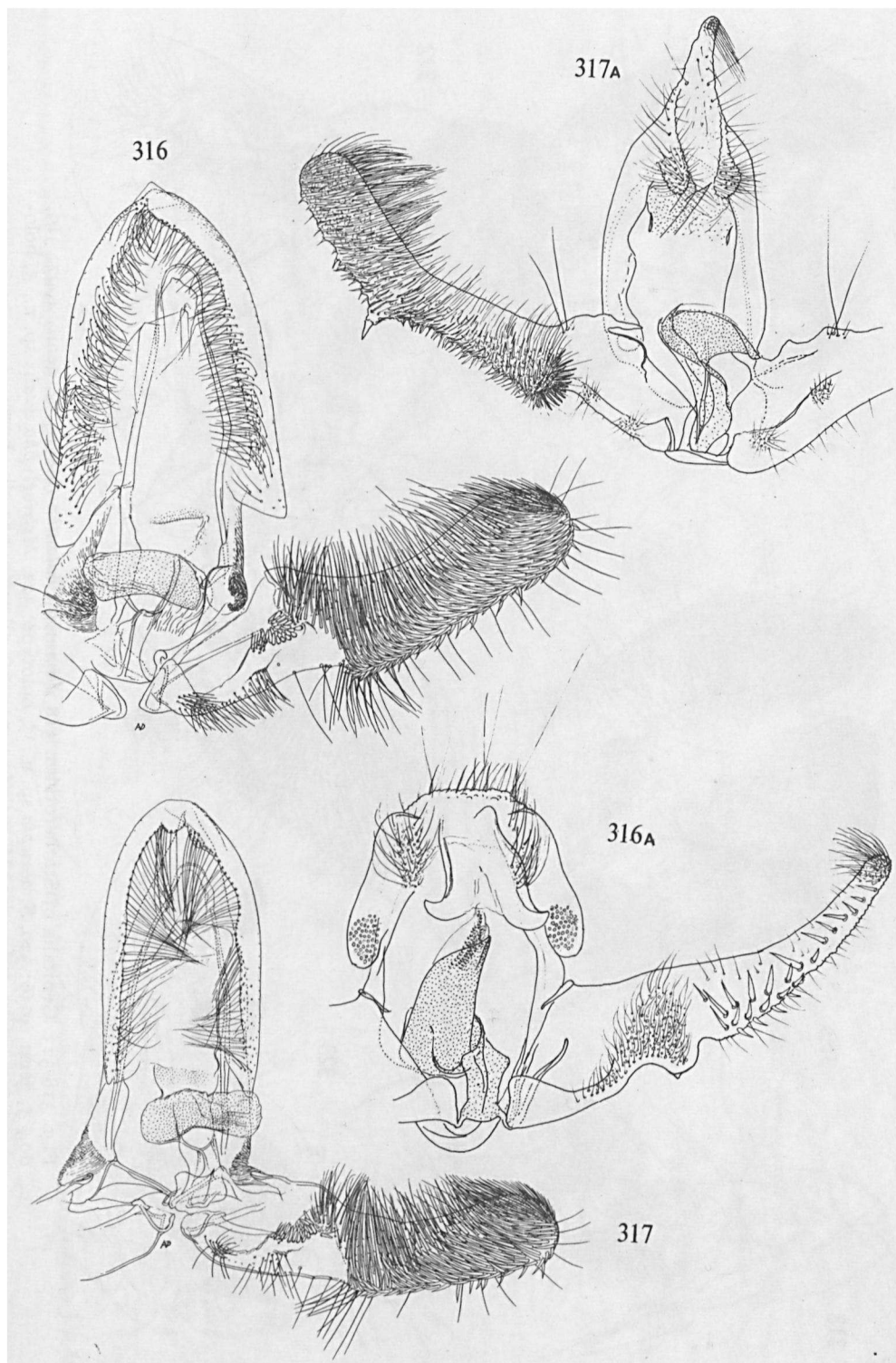
Figs. 301-305. Genitalia of *Metrioglypha* Diak. 301, *M. gemmarius* sp. n., ♂, holotype; 302, *M. empalinopa* sp. n., ♂, holotype; 303, *M. aoriphora* sp. n., ♀, holotype, with bursa; 304-305, *M. empalinopa* sp. n., ♀, allotype, with bursa.



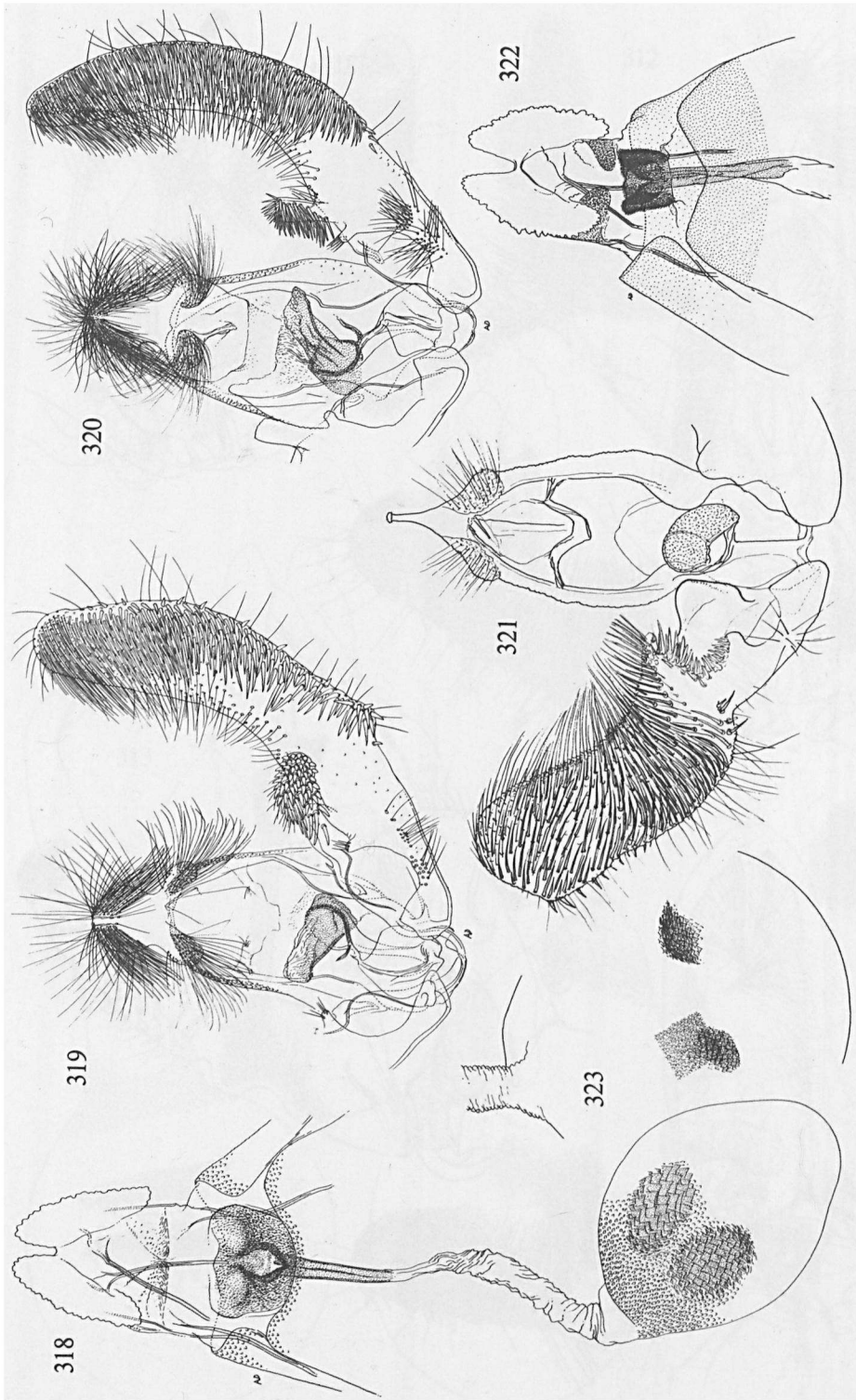
Figs. 306-310. Genitalia of *Metrioglypha* Diak. and *Statherotis* Meyr. 306, *M. crassa* sp. n., ♀, holotype; 307, do., bursa; 308, *M. thystas* (Meyr.), ♂, genit. 6010, holotype of *Astrobola circulata* Diak.; 309, *S. decorata* (Meyr.), ♀, apallotype; 310, *M. thystas* (Meyr.), ♀, genit. 7807 (cotype). (Fig. 308, after Diakonoff, 1966).



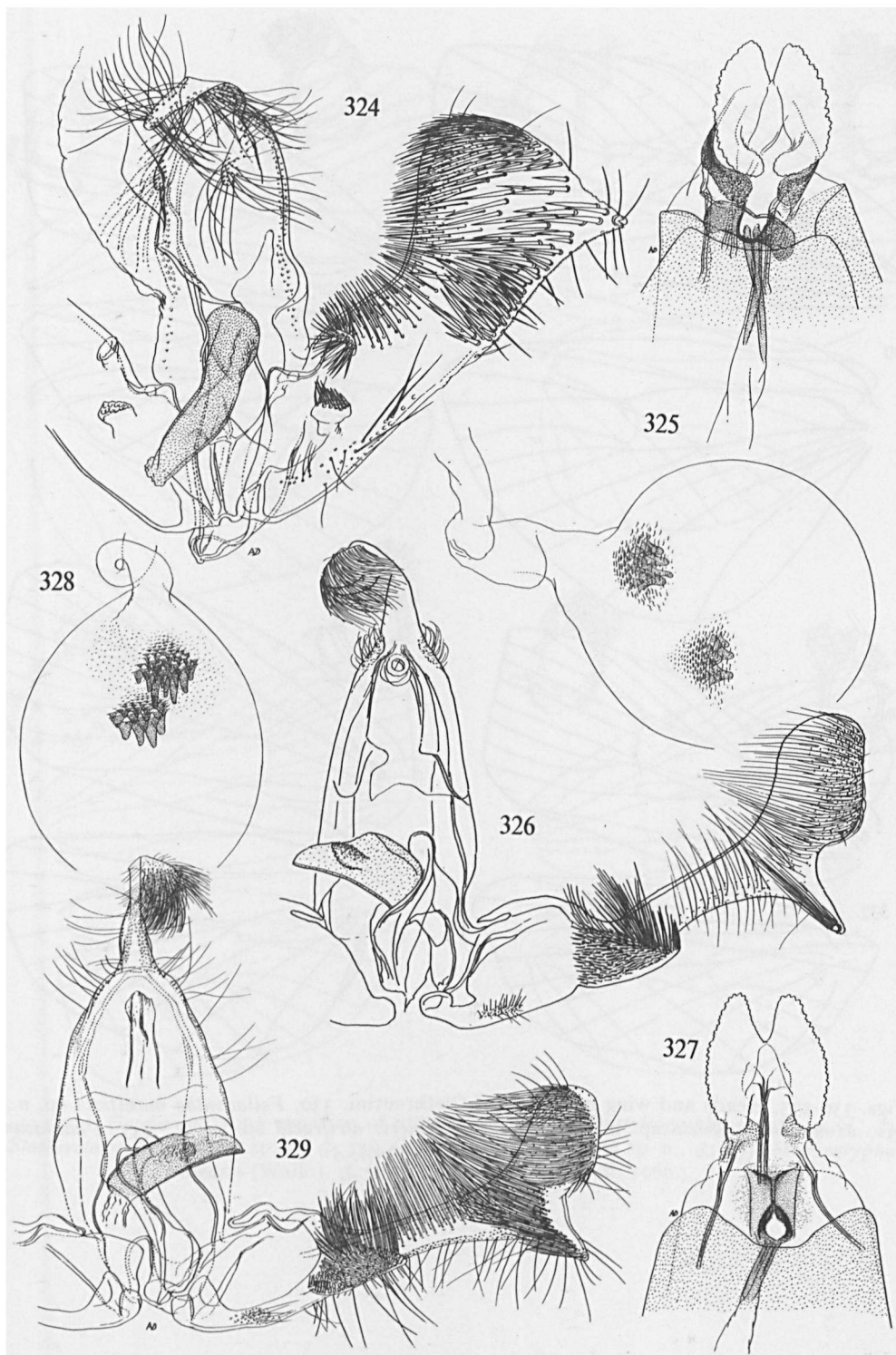
Figs. 311-315. Genitalia of *Metroglypha* Diak. 311, *M. habilis* sp. n., ♂, holotype; 312, *M. vulgana* (Walk.), ♂, genit. 4972; 313, do., ♀, genit. 7777; 314, *M. onychosema* (Meyr.), ♀, genit. 7768; 315, *M. dualis* sp. n., ♀, allotype.



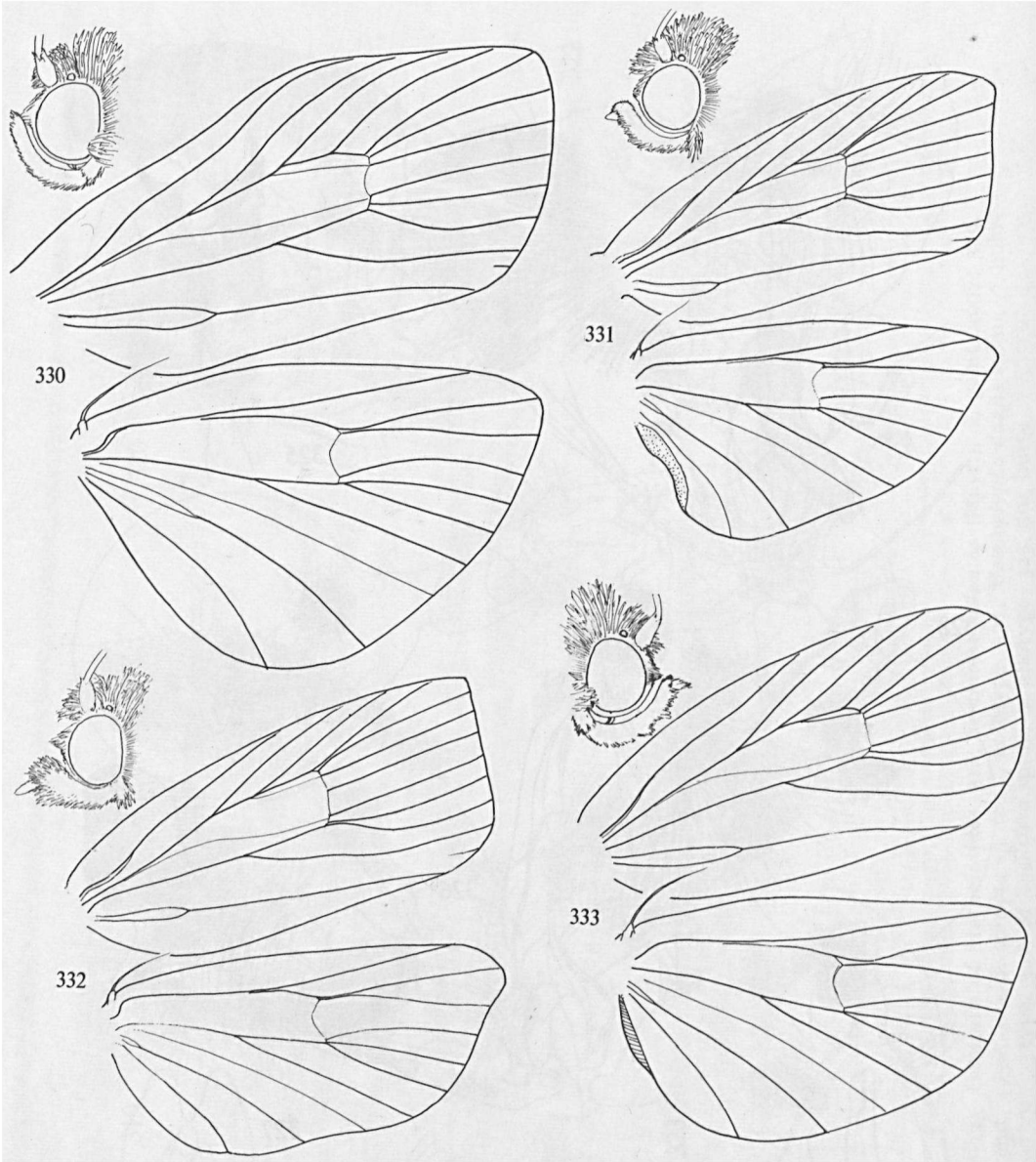
Figs. 316-317A. Genitalia of *Antirrhopa* g. n. and *Statherotis* Meyr. 316, *A. orthopa* sp. n., ♂, holotype; 316A, *A. melanapta* sp. n., ♂, holotype; 317, *A. grammateus* sp. n., ♂, holotype; 317A, *S. porphyrochlora* sp. n., ♂, holotype.



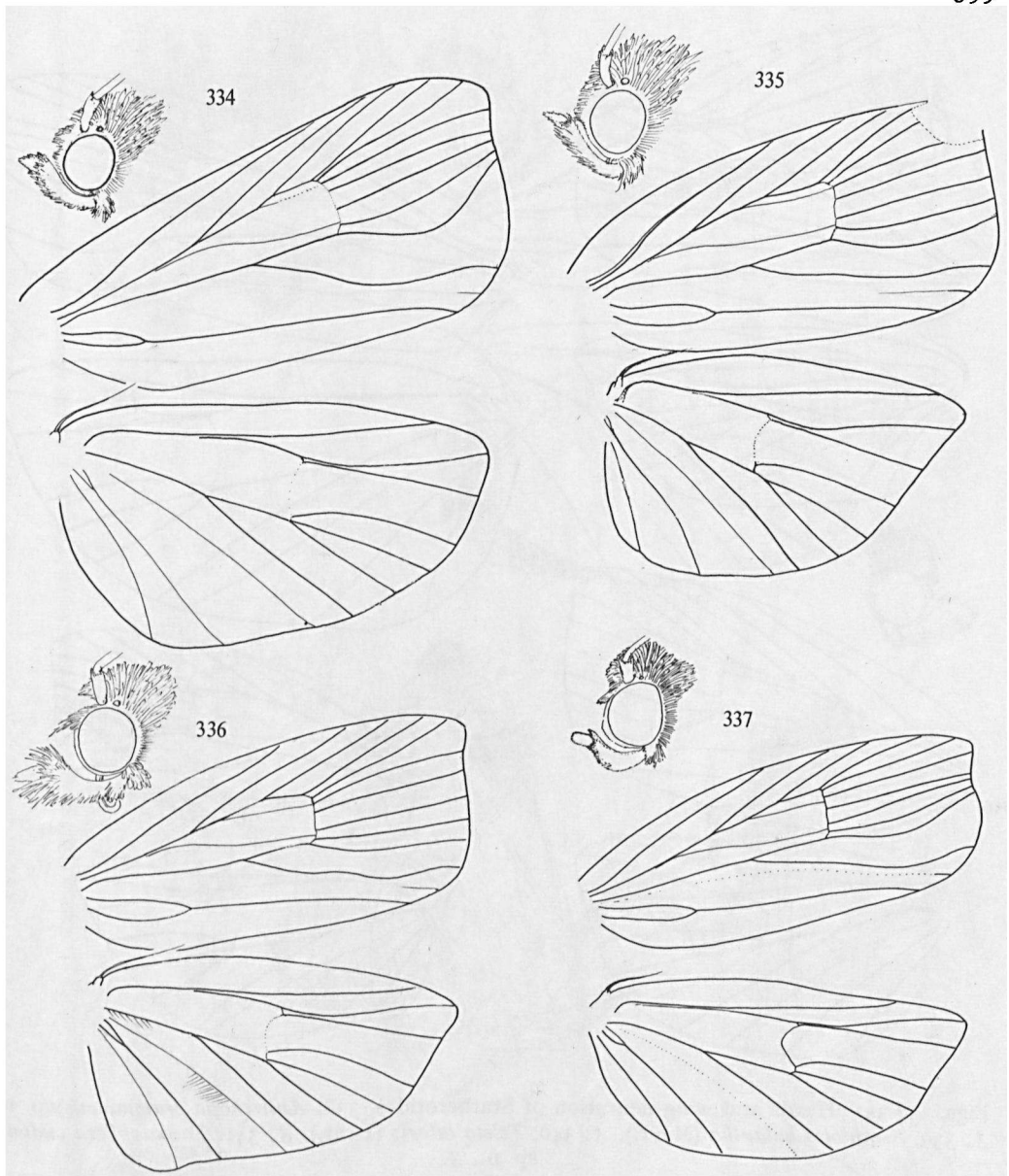
Figs. 318-323. Genitalia of Statherotides. 318, *Semniotes halanitha* (Meyr.), ♀, genit. 4997; 319, do., ♂, genit. 4956; 320, *S. abrupta* sp. n., ♂, holotype; 321, *Metrioglypha dualis* sp. n., ♂, holotype; 322, *M. melifera* sp. n., ♀, allotype; 323, do., bursa.



Figs. 324-329. Genitalia of Statherotides. 324, *Pomatophora cudonis* sp. n., ♂, holotype; 325, *Statherotis licnuphora* sp. n., ♀, holotype, with bursa; 326, *Teleta talaris* (Drnt.), ♂, holotype; 327-328, *T. xanthogastra* (Meyr.), ♀, apallotype, with bursa; 329, do., ♂, lectotype. (Figs. 326, 329, after Diakonoff, 1966).

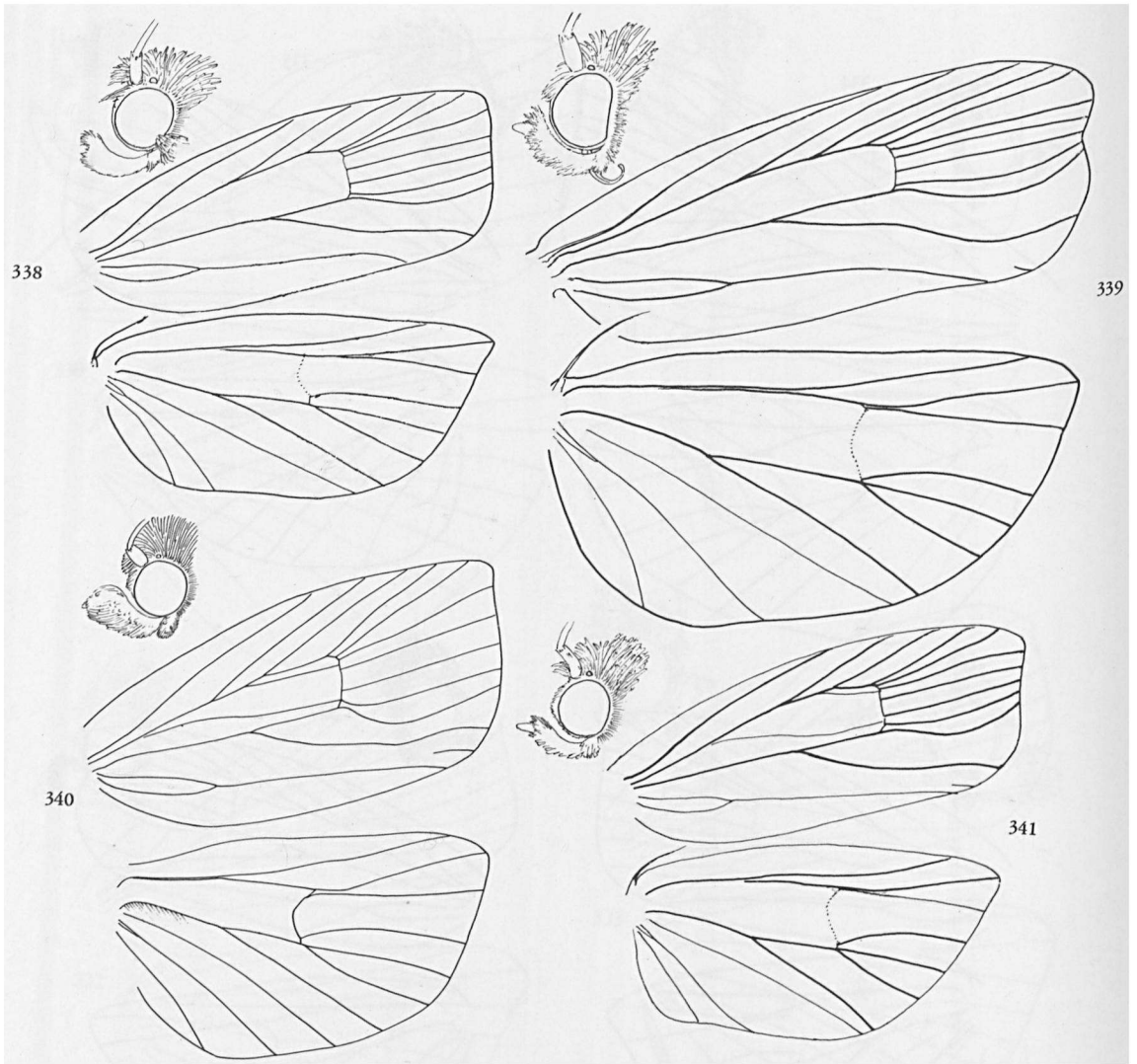


Figs. 330-333. Heads and wing neuration of Olethreutini. 330, *Psilacantha manifesta* sp. n., ♂; 331, *Monacantha abdita* sp. n., ♂; 332, *Statheromeris atrifracta* sp. n., ♂; 333, *Phaulacantha catharostoma* (Meyr.), ♂.

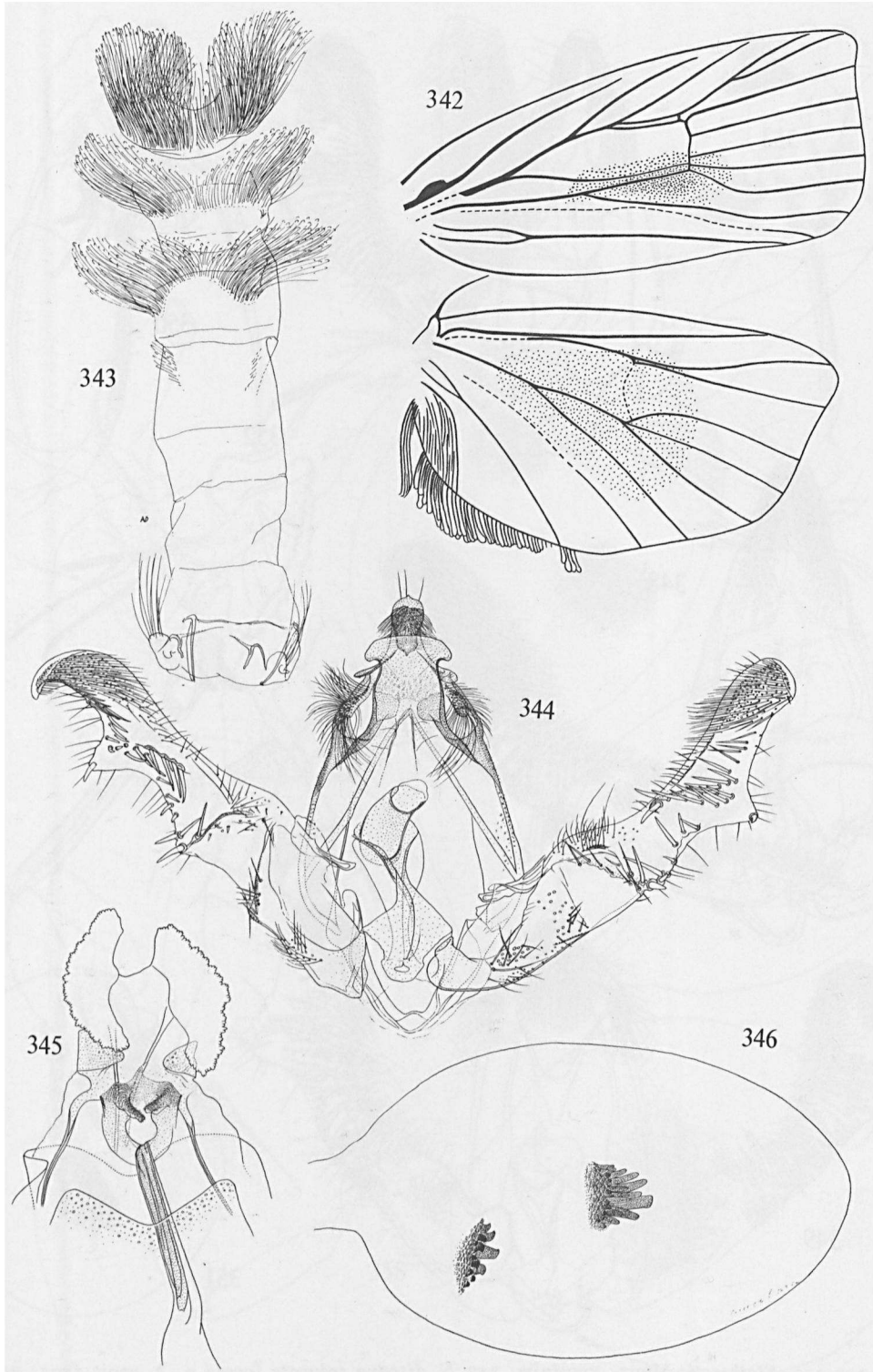


Figs. 334-337. Heads and wing venation of Statherotides. 334, *Dactyloglypha zonata* sp. n., ♂; 335, *Statherotoxys hypochrysa* sp. n., ♂; 336, *Cephalophyes porphyrea* sp. n., ♂; 337, *Metrioglypha vulgana* (Walk.), ♂. (Fig. 337, after Diakonoff, 1966.)

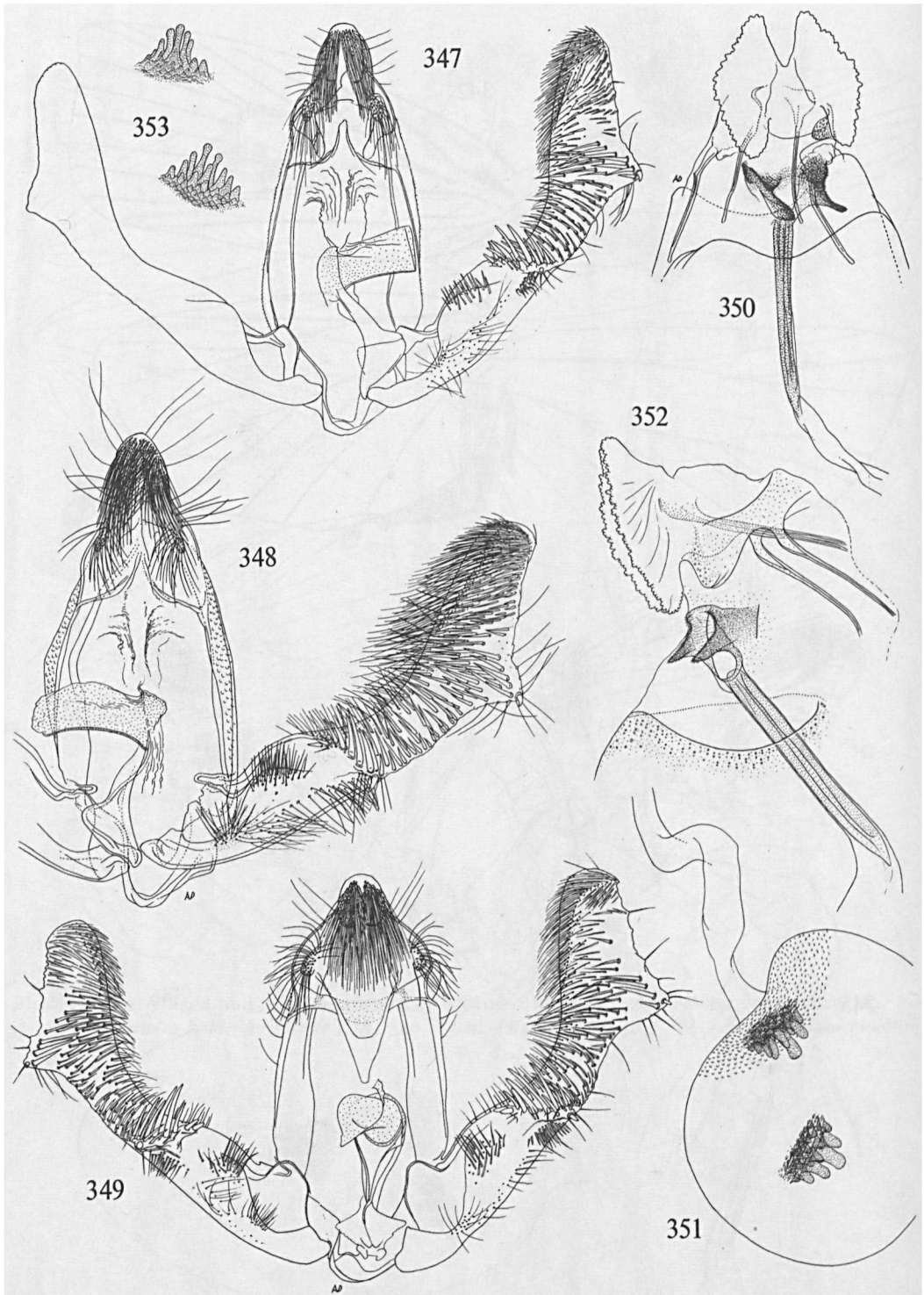




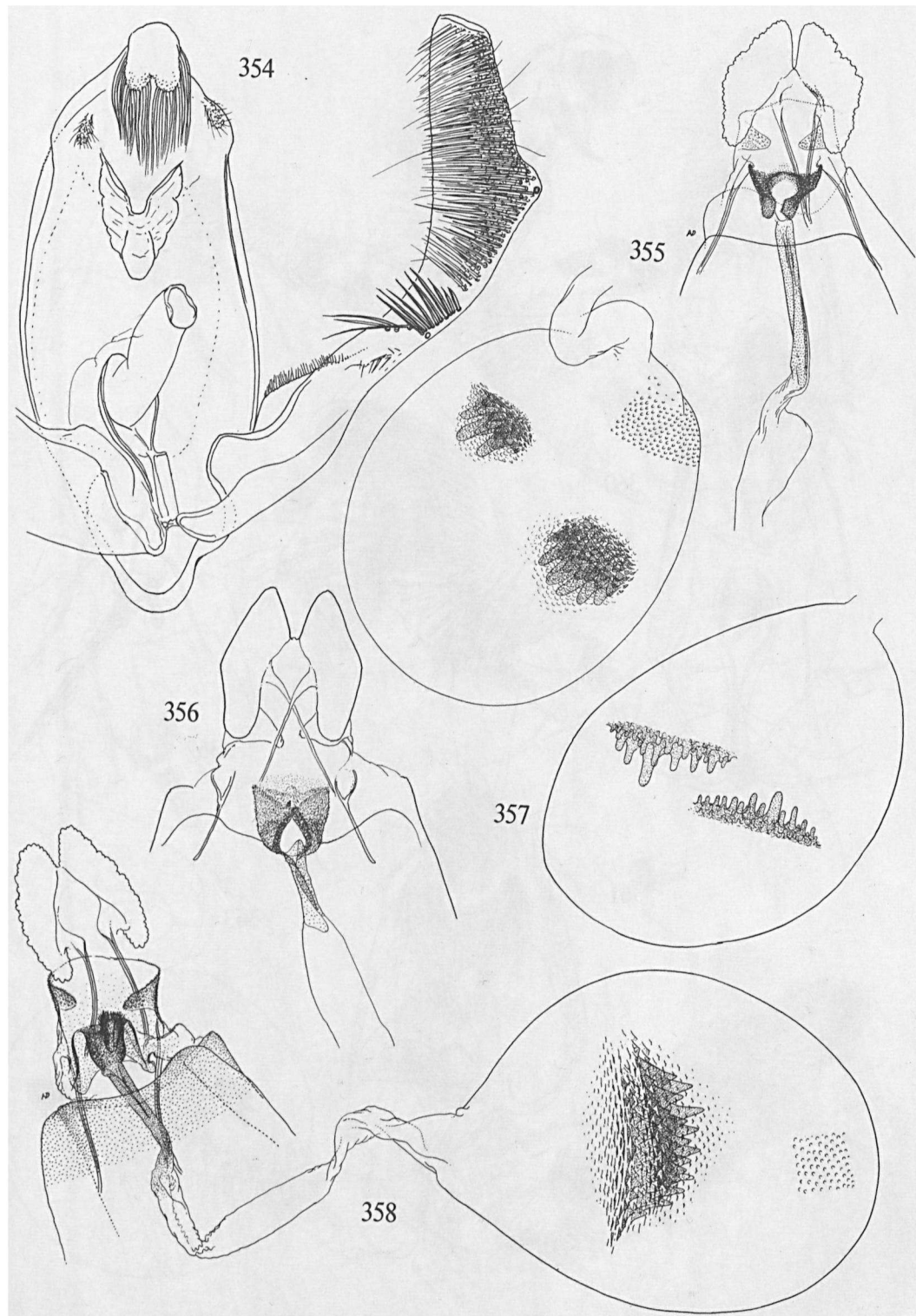
Figs. 338-341. Heads and wing neuration of Statherotides. 338, *Antirrhopa grammateus* sp. n., ♂; 339, *Semniotes halantha* (Meyr.), ♂; 340, *Teleta talaris* (Drnt.), ♂; 341, *Pomatophora cudonis* sp. n., ♂.



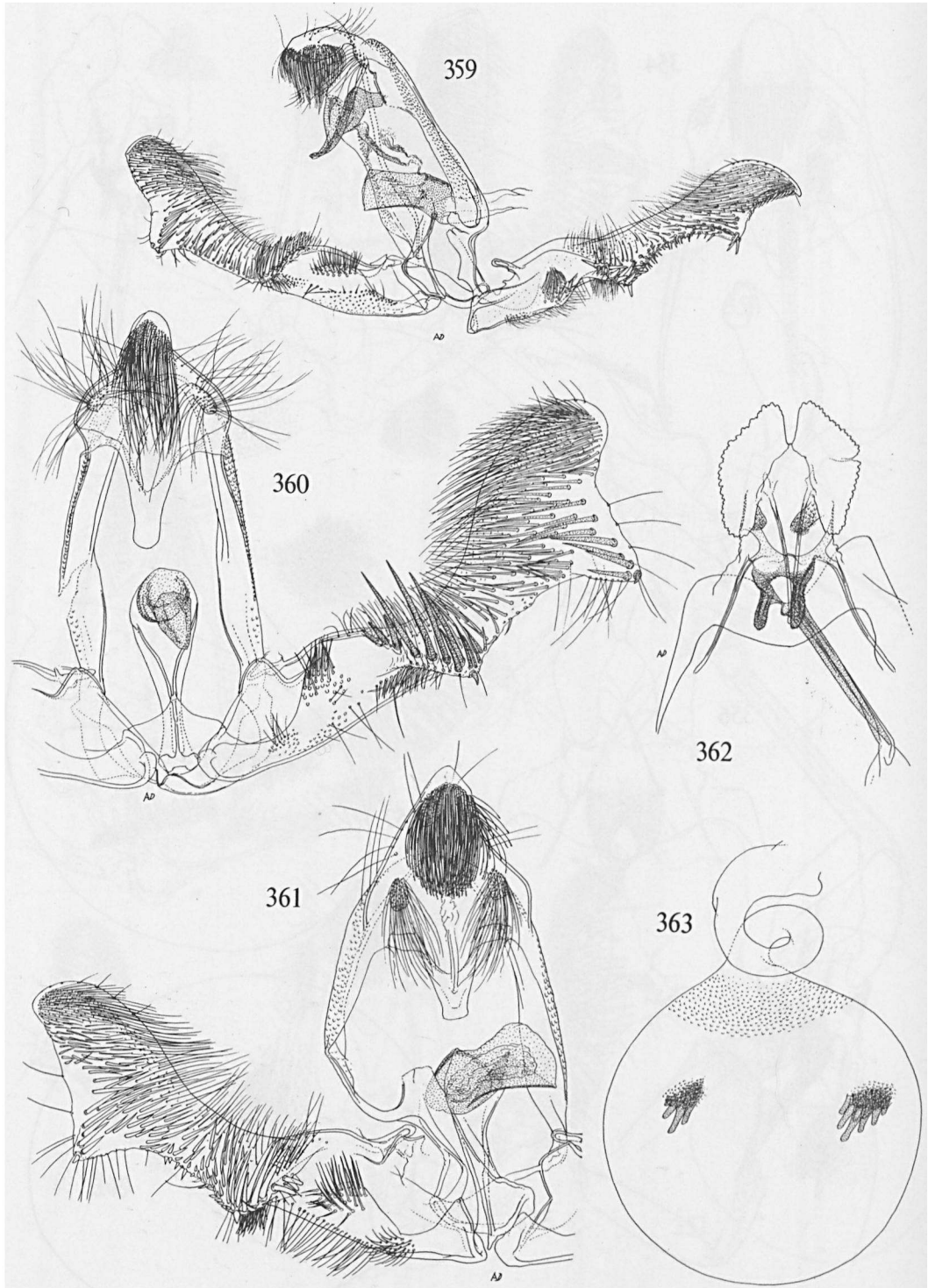
Figs. 342-346. *Statherotis* Meyr. 342, *S. decorata* Meyr., wing neuration; 343, *S. amoebaea* (Low.), abdomen with coremata; 344, *S. decorata* Meyr., ♂, genitalia, holotype; 345-346, *S. amoebaea* (Low.), ♀, genit. 5984 and bursa, (Fig. 342, after Clarke, 1958.)



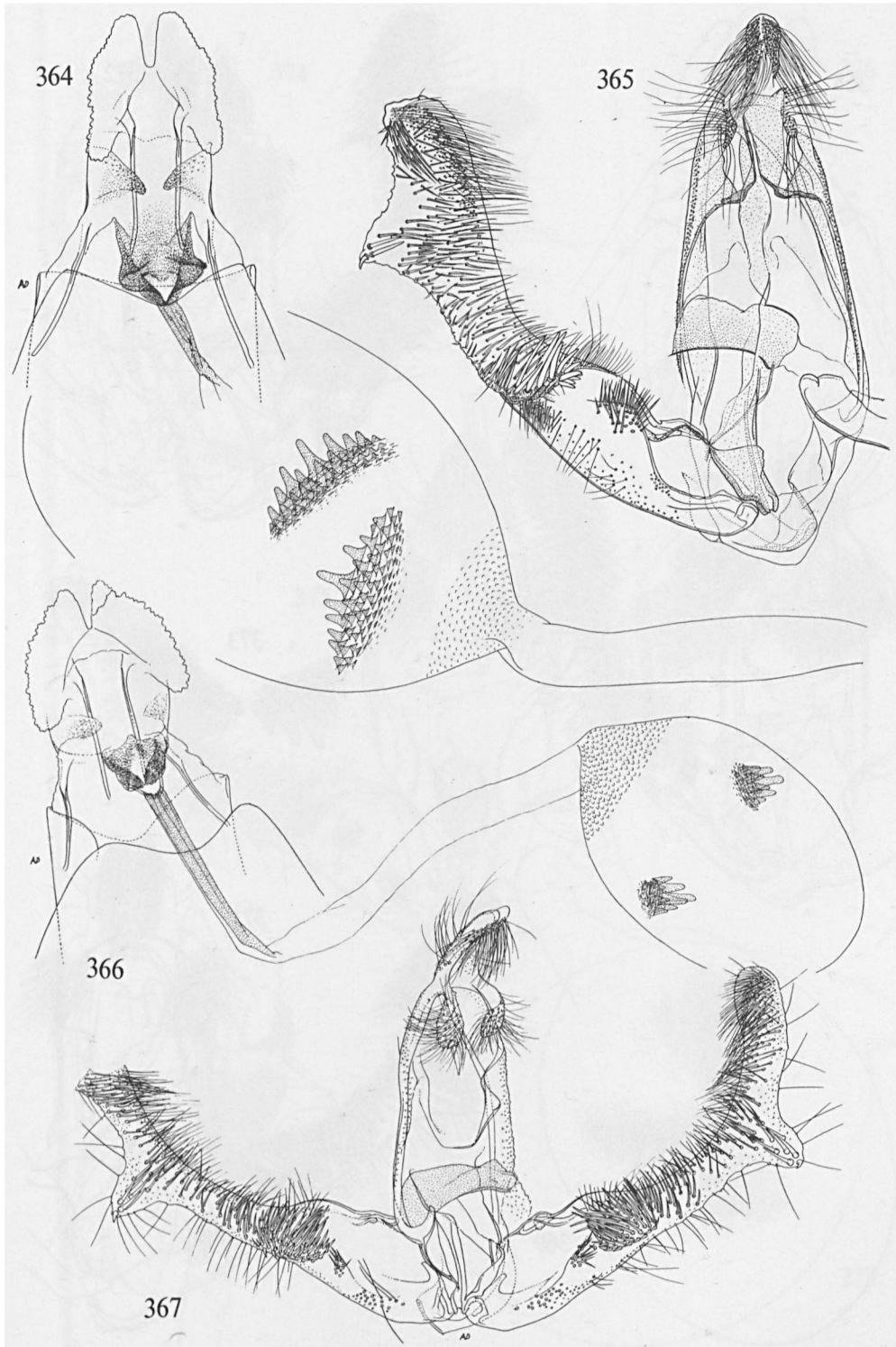
Figs. 347-353. *Statherotis* Meyr., genitalia. 347, *S. discana saturata* forma n. ♂, genit. 4595; 348, do., holotype, ♂; 349, *S. leucaspis* (Meyr.), ♂, genit. 4597; 350, do., ♀, slide 5980; 351, do., bursa; 352, do., ♀, genit. 6543; 353, do., signa.



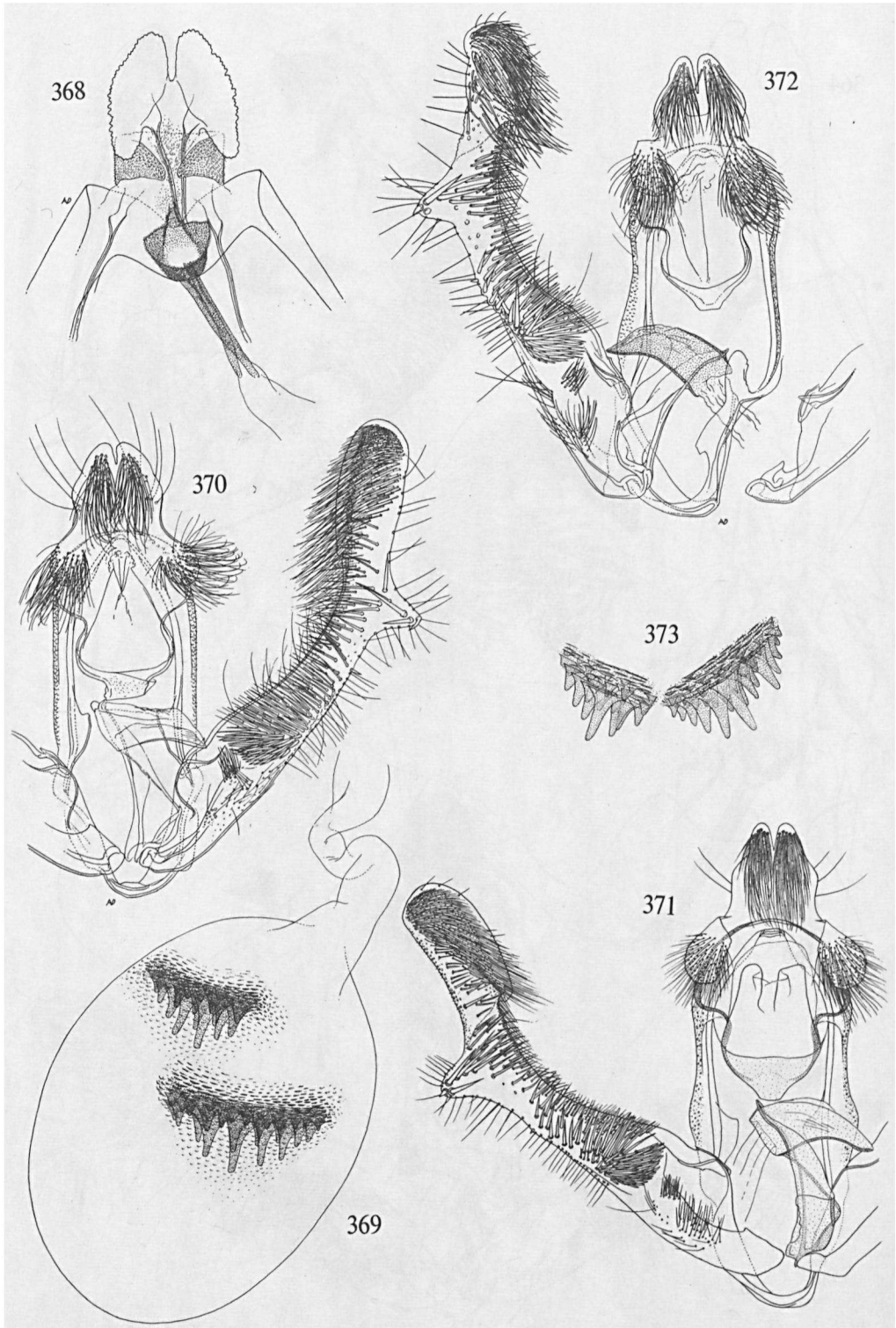
Figs. 354-358. *Statherotis* Meyr., genitalia. 354, *S. discana* (F. & R.), ♂, holotype; 355, do., *saturata* f. n., allotype; 356-357, *S. bathrachodes* (Meyr.), ♀, lectotype; 358, *S. olenarcha* (Meyr.), ♀, apallotype. (Figs. 356-357, after Diakonoff, 1966.)



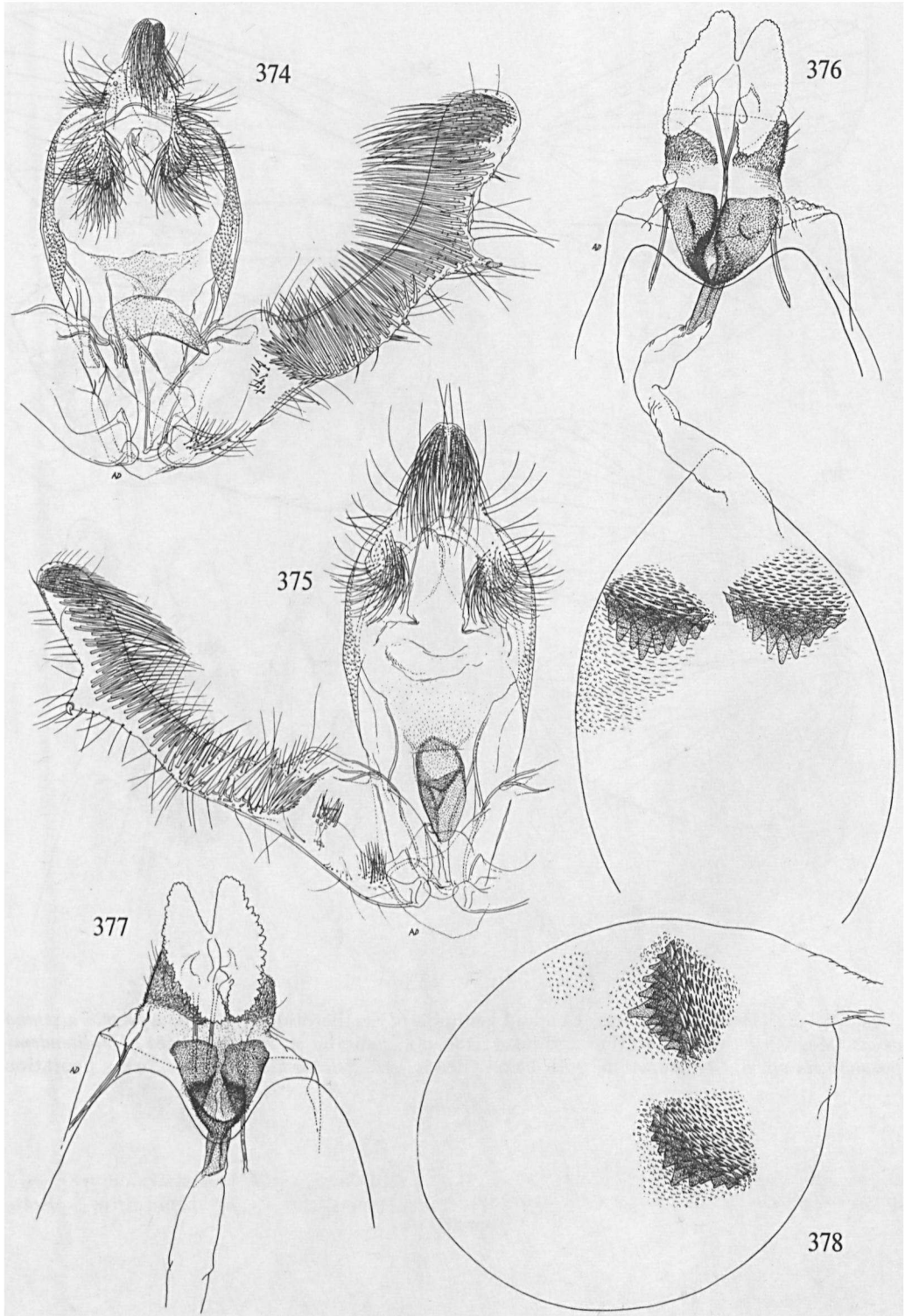
Figs. 359-363. *Statherotis* Meyr., genitalia. 359, *S. discana* (F. & R.), ♂; 360, *S. antisema* sp. n., ♂, holotype; 361, *S. leucaspis* (Meyr.), ♂, holotype; 362, *S. antisema* sp. n., ♀, allotype; 363, do., bursa. (Fig. 359, after Diakonoff, 1968.)



Figs. 364-367. *Statherotis* Meyr., genitalia. 364, *S. catharosema* sp. n., ♀, holotype; 365, *S. holotricha* sp. n., ♂, holotype; 366, *S. amoebaea* (Low.), ♀, genit. 5974; 367, *S. olenarcha* (Meyr.), ♂. (Fig. 367, after Diakonoff, 1968.)

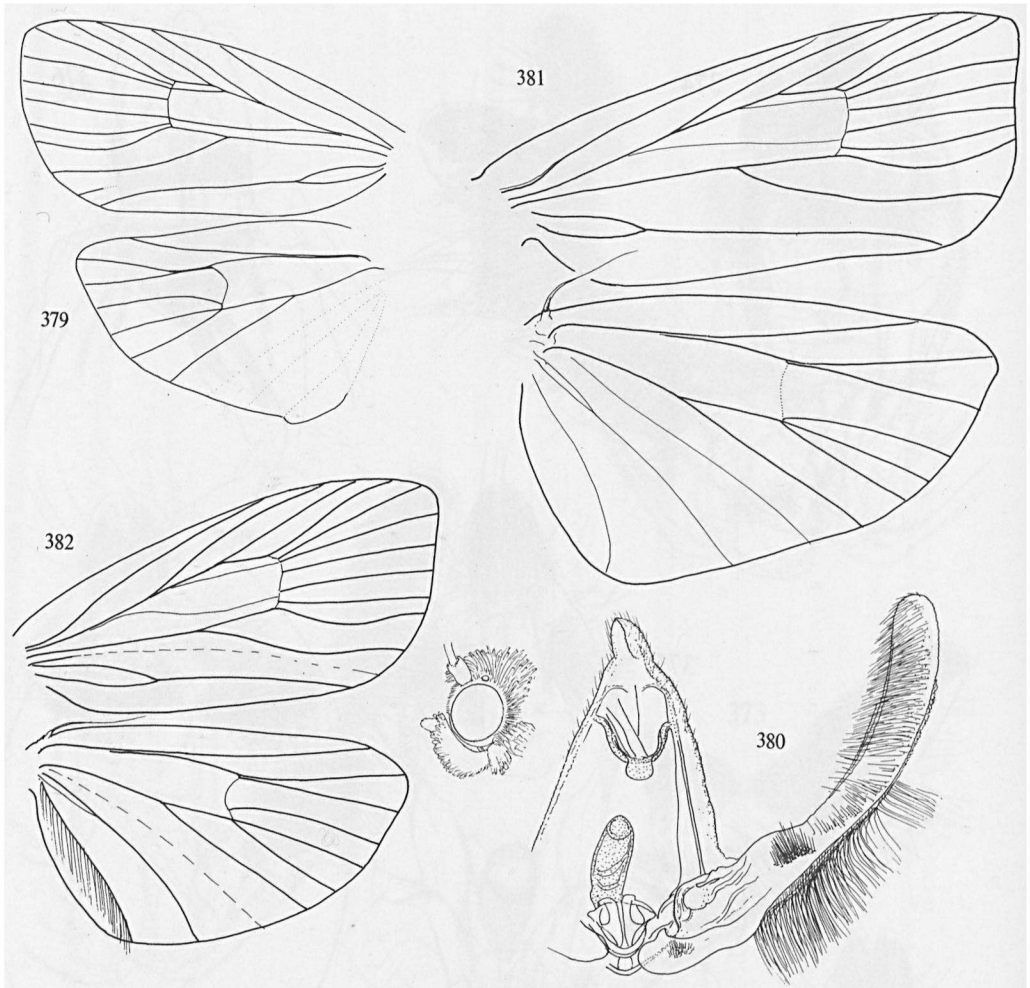


Figs. 368-373. *Statherotis* Meyr., genitalia. 368, *S. transsecta* sp. n., ♀, holotype; 369, do., bursa; 370, *S. amoebaea* (Low.), ♂, genit. 5973 (Java); 371, *S. a. leucotorna* sbsp. n., ♂, holotype; 372, *S. amoebaea* (Low.), ♂, genit. 5981 (New Ireland); 373, *S. holotricha* sp. n., ♀, allotype, signa.

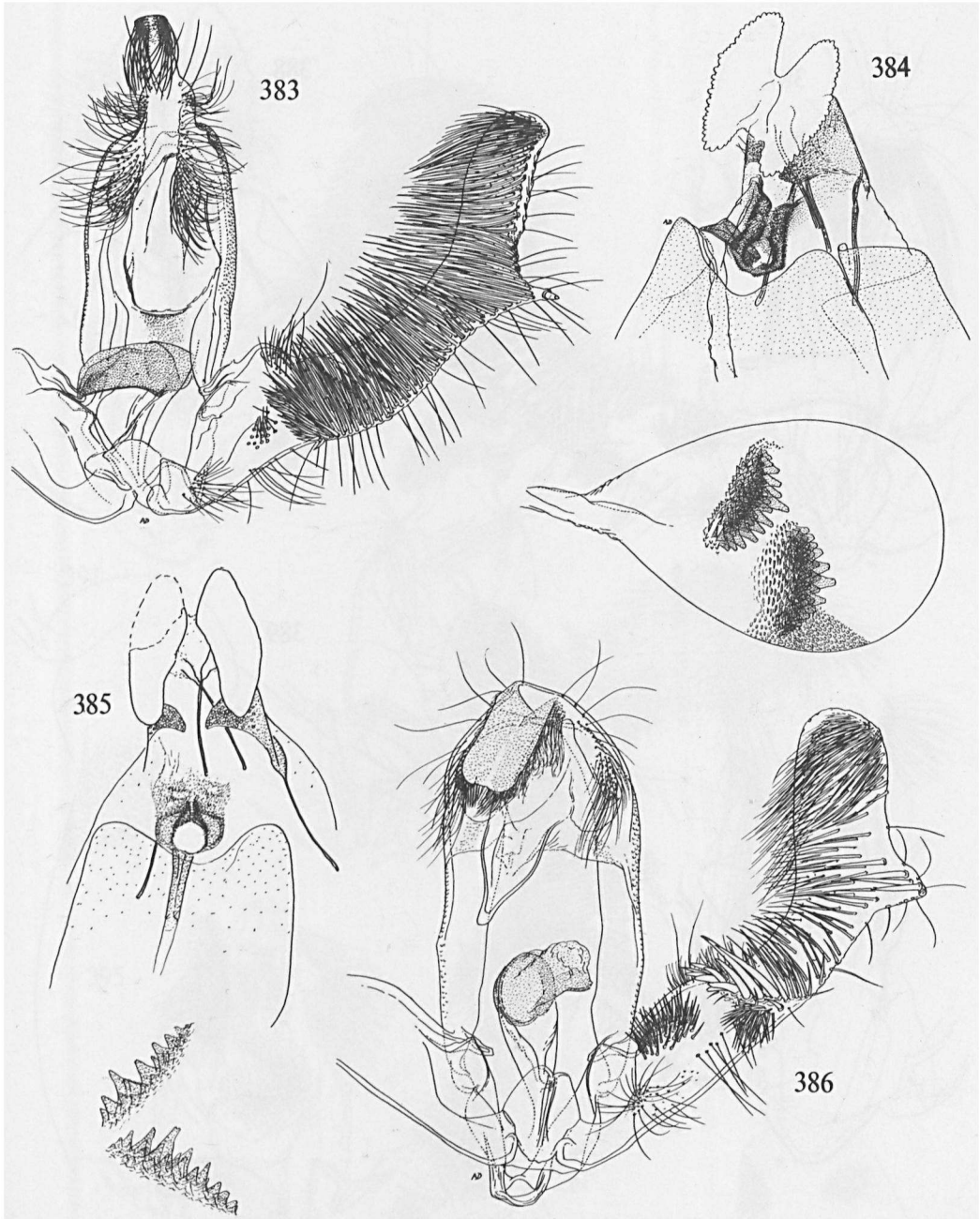


Figs. 374-378. *Statherotis* Meyr., genitalia. 374, *S. iricolor* (Meyr.), ♂, apallotype; 375, *S. abathodes* sp. n., ♂, holotype; 376, *S. spec.*, ♀, genit. 6359; 377-378, *S. tapinopa* sp. n., ♀, allotype.

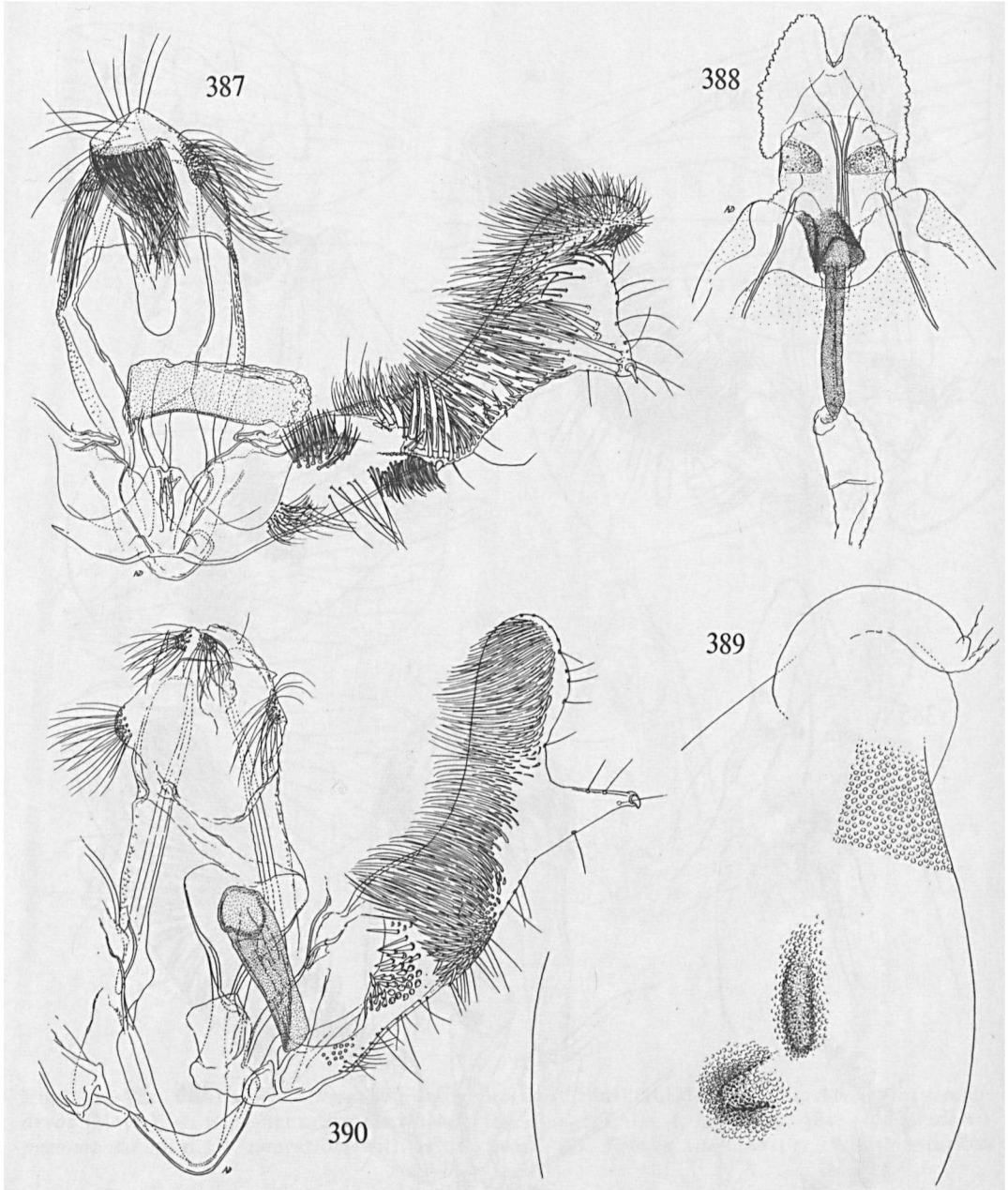




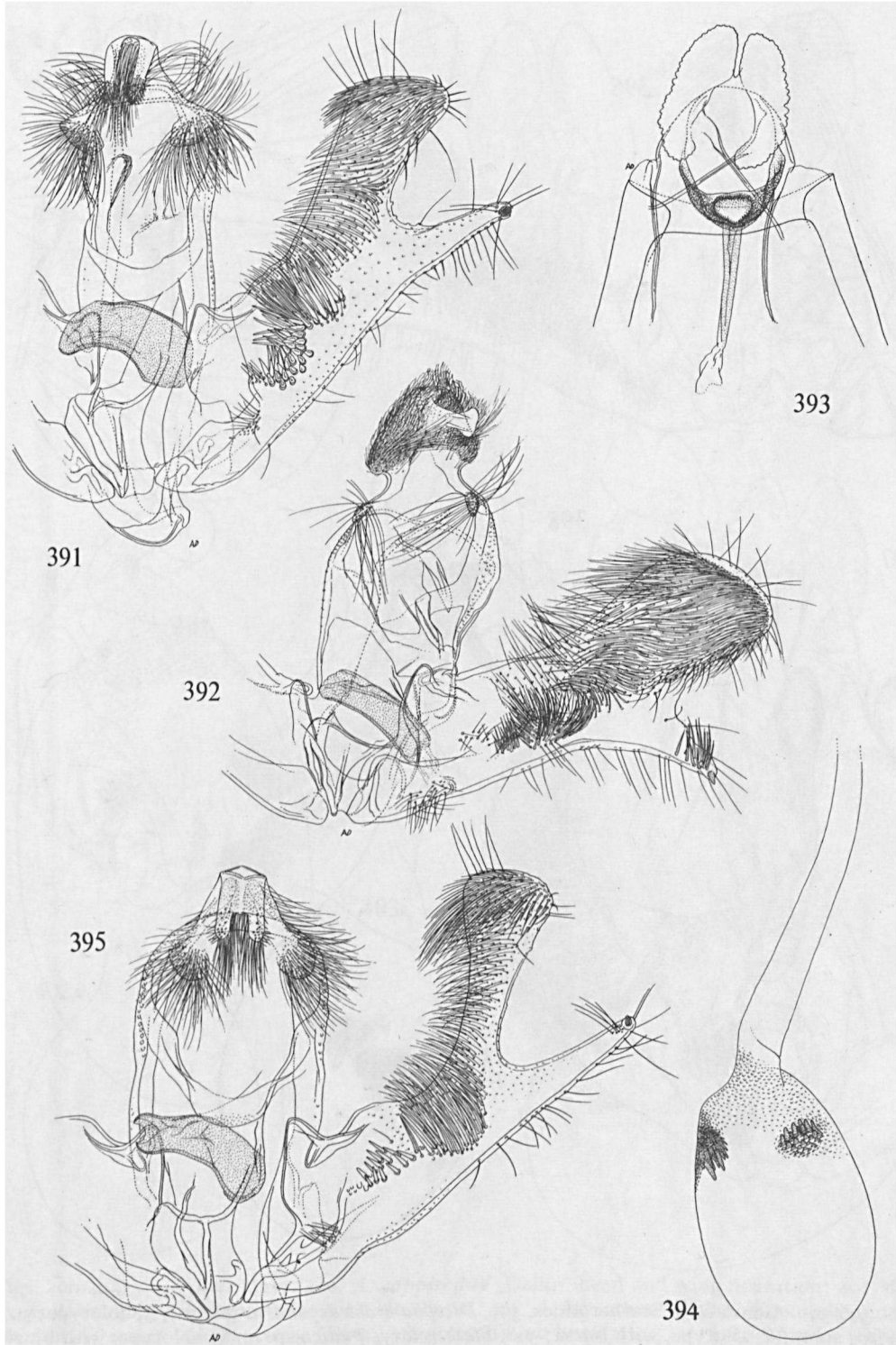
Figs. 379-382. Heads, wing neuration and genitalia of Statherotides etc. 379, *Apeleptera semnodryas* (Meyr.), ♂, wing neuration and head; 380, do., genitalia ♂, holotype; 381, *Hoplitendemis pogonopoda* sp. n., ♂, neuration, with below, head; 382, *Pelatea klugiana* Frr., wing neuration.



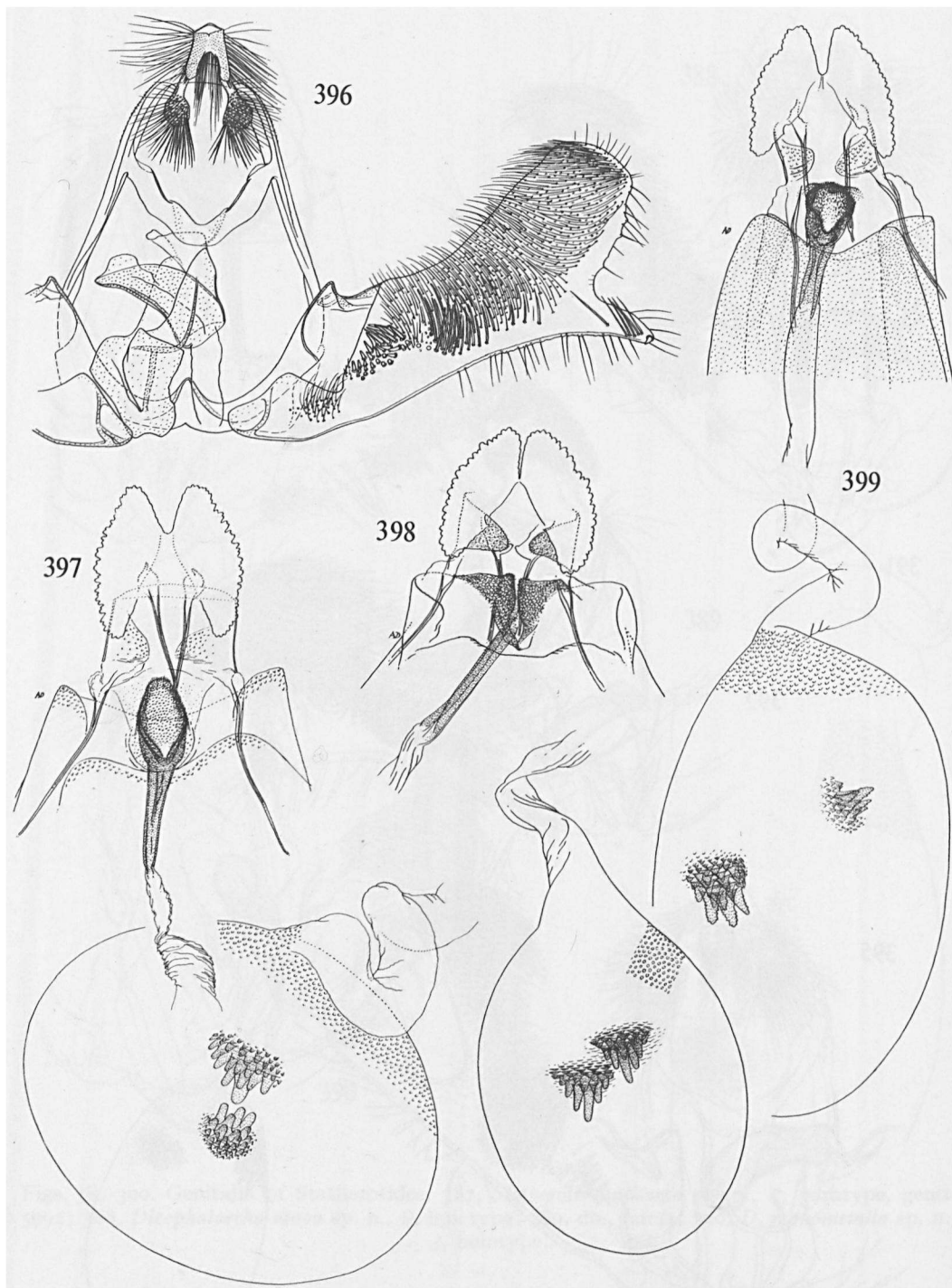
Figs. 383-386. *Statherotis* Meyr., genitalia. 383, *S. polychlora* sp. n., ♂, holotype; 384, do., ♀, allotype, with bursa; 385, *S. abathodes* sp. n., ♀, allotype, with signa; 386, *S. micrandra* sp. n., ♂, holotype.



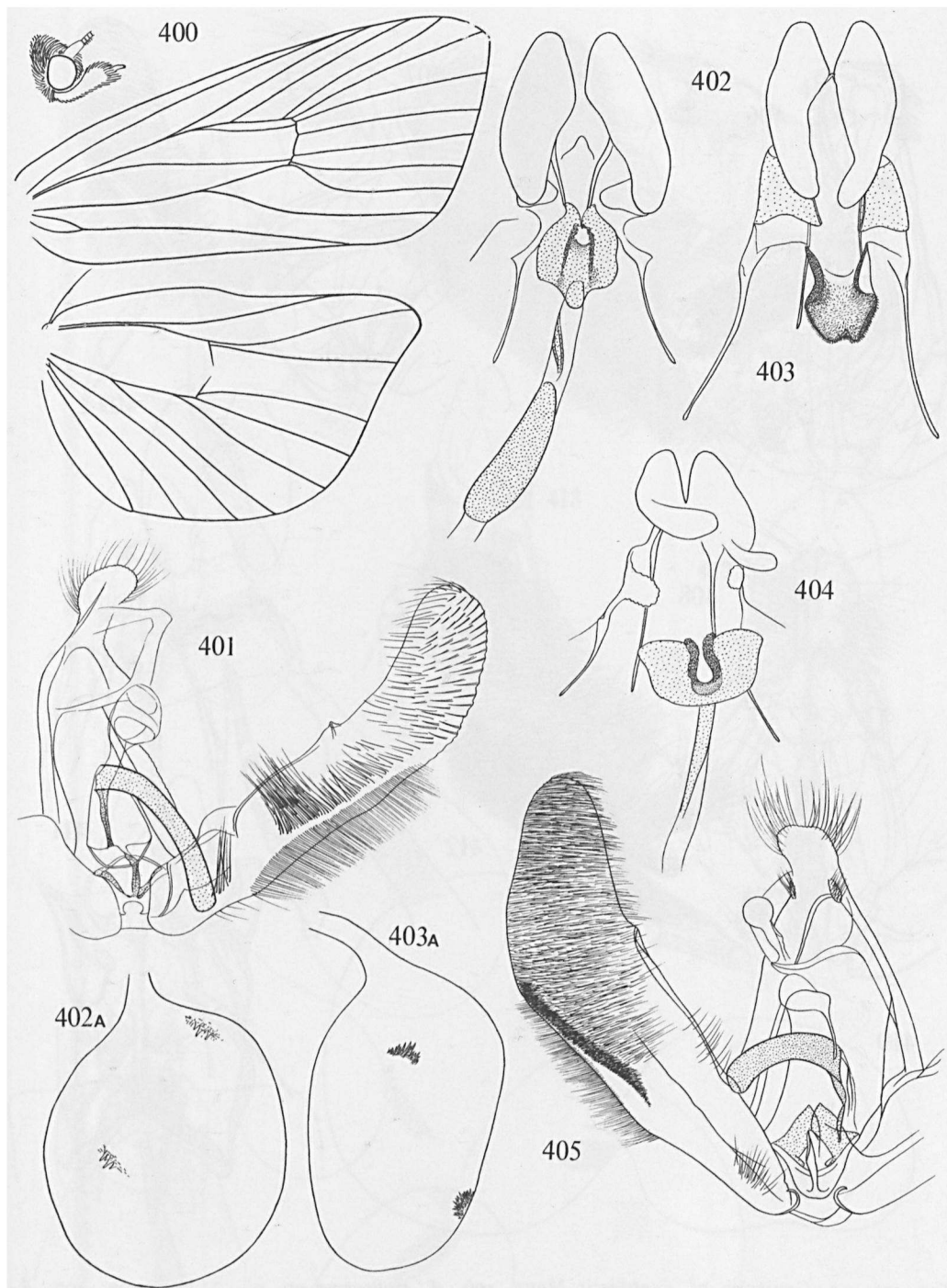
Figs. 387-390. Genitalia of Statherotides. 387, *Statherotis antisema* sp. n., ♂, paratype, genit. 5992; 388, *Dicephalarcha atava* sp. n., ♀, holotype; 389, do., bursa; 390, *D. monometalla* sp. n., ♂, holotype.



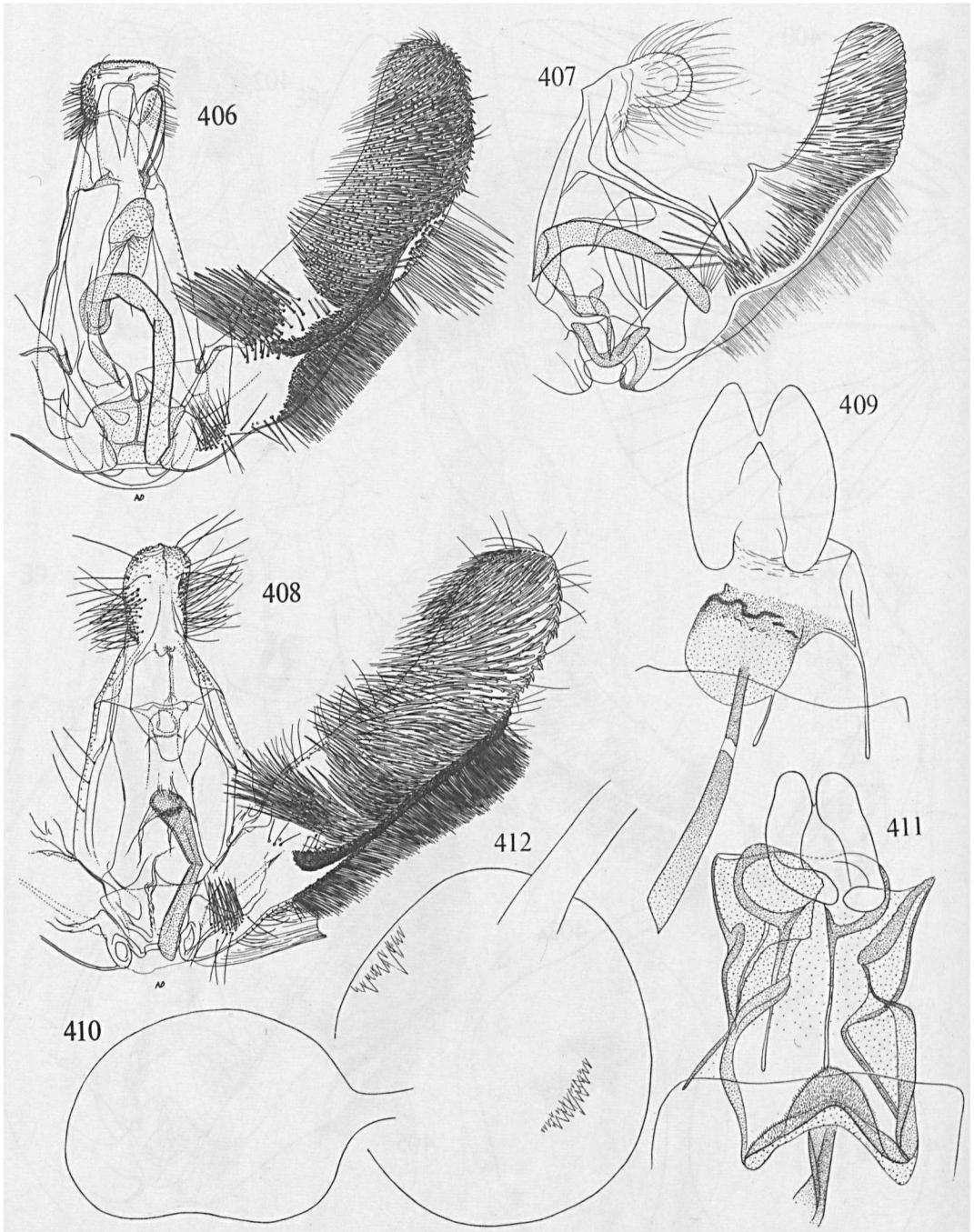
Figs. 391-395. Genitalia of *Dicephalarcha* g. n. 391, *D. sicca* sp. n., ♂, holotype; 392, *D. acupicta* sp. n., ♂, holotype; 393, do., ♀, allotype; 394, do., bursa; 395, *D. herbosa* (Meyr.), ♂, holotype.



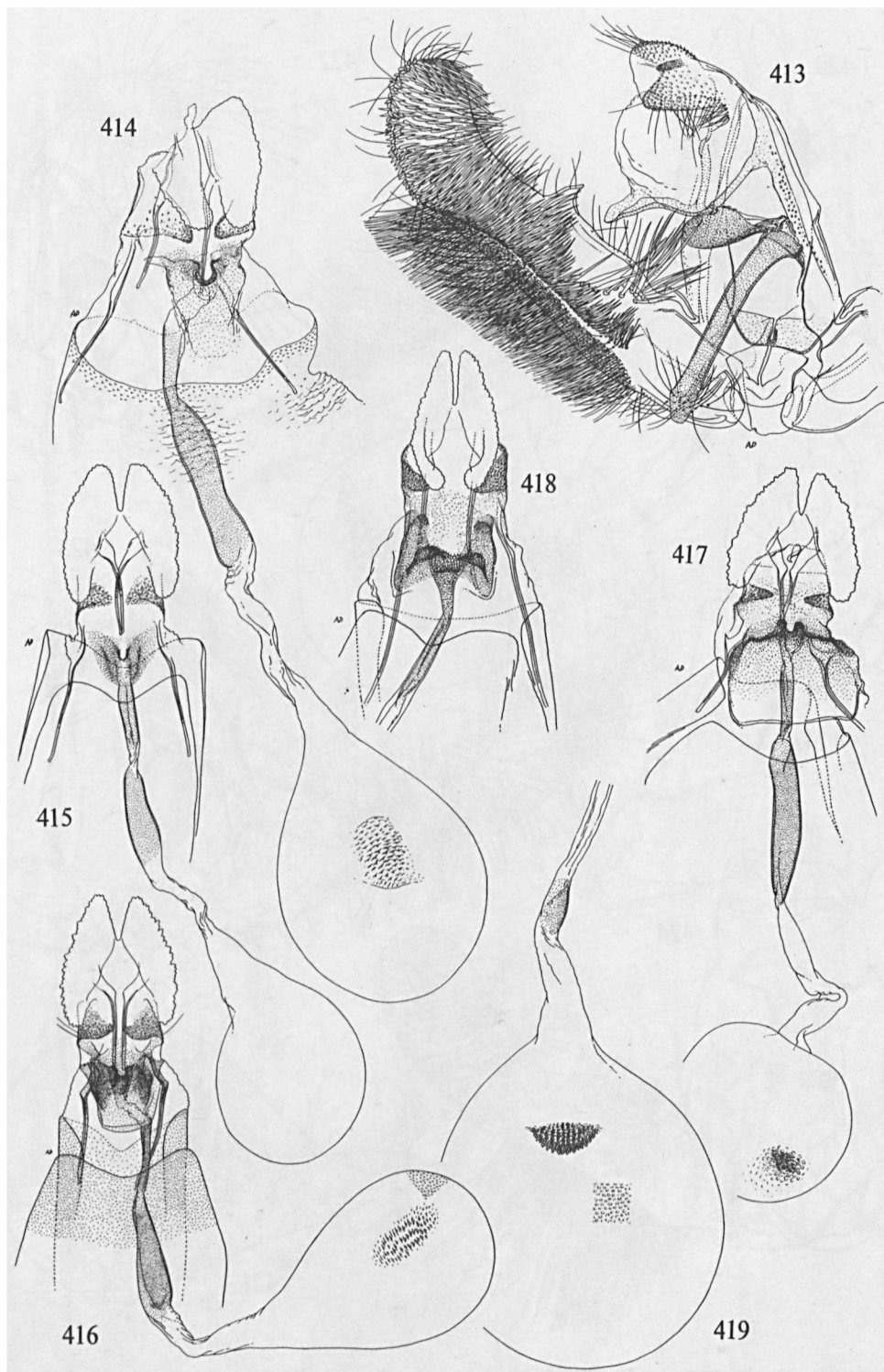
Figs. 396-399. Genitalia of Statherotides. 396, *Dicephalarcha dependens* (Meyr.), ♂, holotype; 397, *D. sicca* sp. n., ♀, allotype, with bursa; 398, *Statherotoxys pudica* sp. n., ♀, holotype, with bursa; 399, *D. herbosa* (Meyr.), ♀, allotype, with bursa.



Figs. 400-405. *Asaphistis* Meyr. 400, *A. sappiroflua* (Diak.), head and wing neuration; 401, do., ♂, genitalia; 402, do., ♀, genitalia; 402A, do., bursa; 403, *A. haematina* (Diak.), ♀, genitalia; 403A, do., bursa; 404, *A. purpurascens* (Diak.), ♀, genitalia (no bursa); 405, *A. hemicapnodes* (Diak.), ♂, genitalia. (After Diakonoff, 1953.)

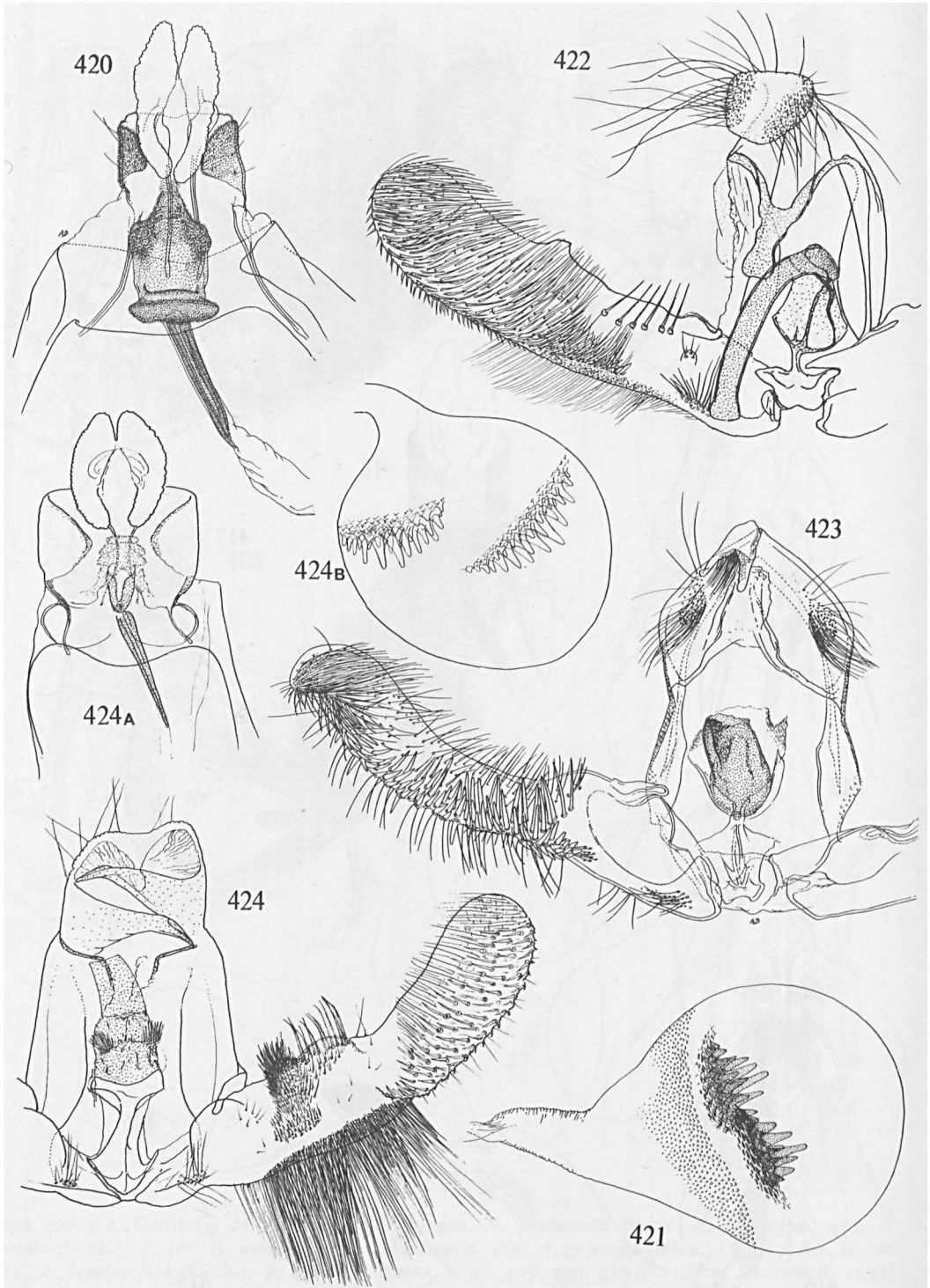


Figs. 406-412. Genitalia of *Asaphistis* Meyr. 406, *A. protosema* sp. n., ♂, holotype; 407, *A. cretata* (Diak.), ♂; 408, *A. asema* sp. n., ♂, holotype; 409, *A. gypsopa* (Diak.), ♀; 410, do., bursa; 411, *A. hemicyclica* (Diak.), ♀; 412, do., bursa. (Figs. 407, 409, 410-411, after Diakonoff, 1953).

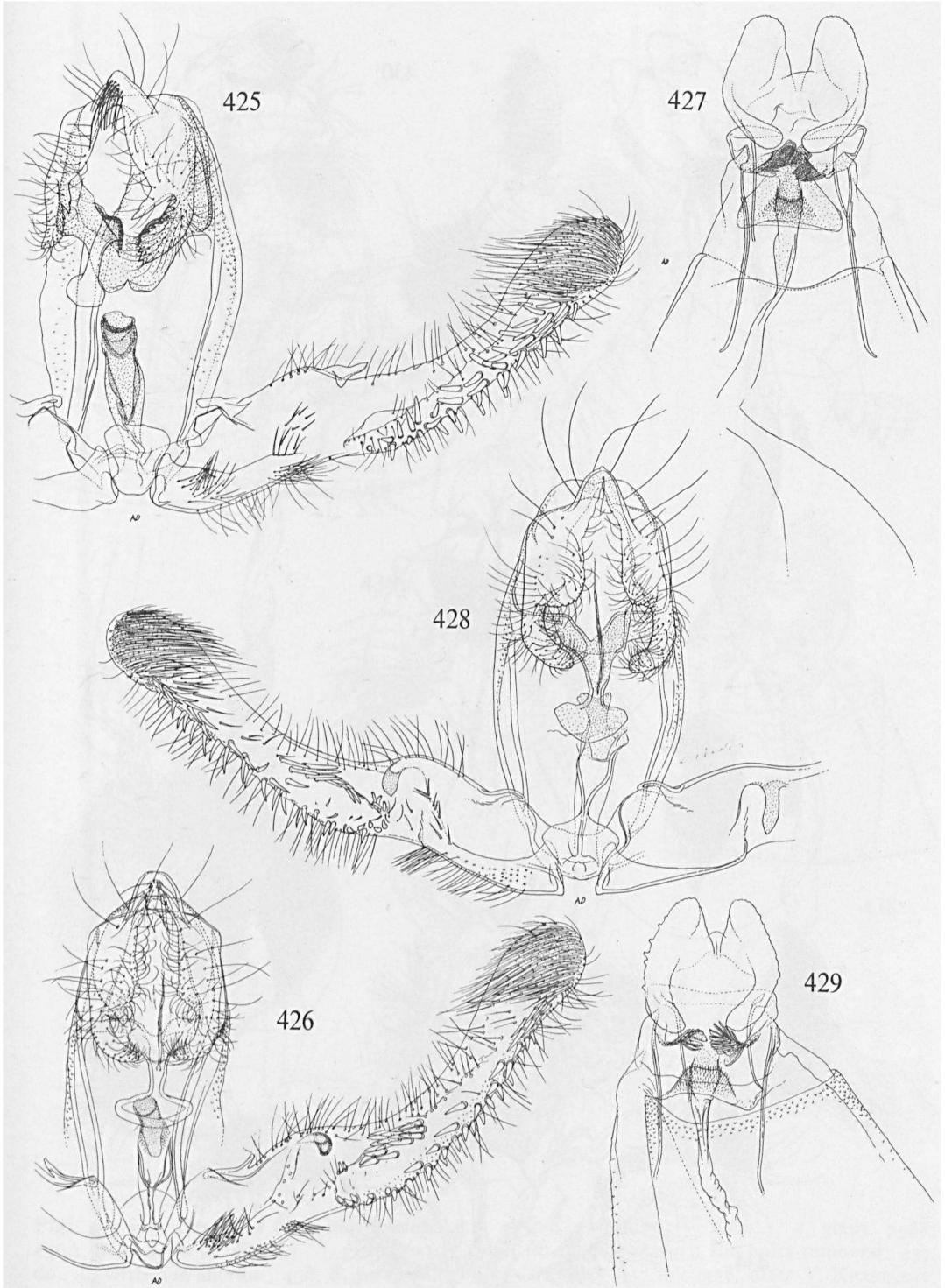


Figs. 413-419. Genitalia of Statherotides. 413, *Asaphistis phanerops* sp. n., ♂, holotype; 414, do., ♀, allotype; 415, *A. cretata* (Diak.), ♀, apallotype; 416, *A. catarrhactopa* (Meyr.), ♀, genit. 6513; 417, *A. nobilis* sp. n., ♀, holotype; 418-419, *Proschistis zaleuta* Meyr., ♀, genit. 6517.

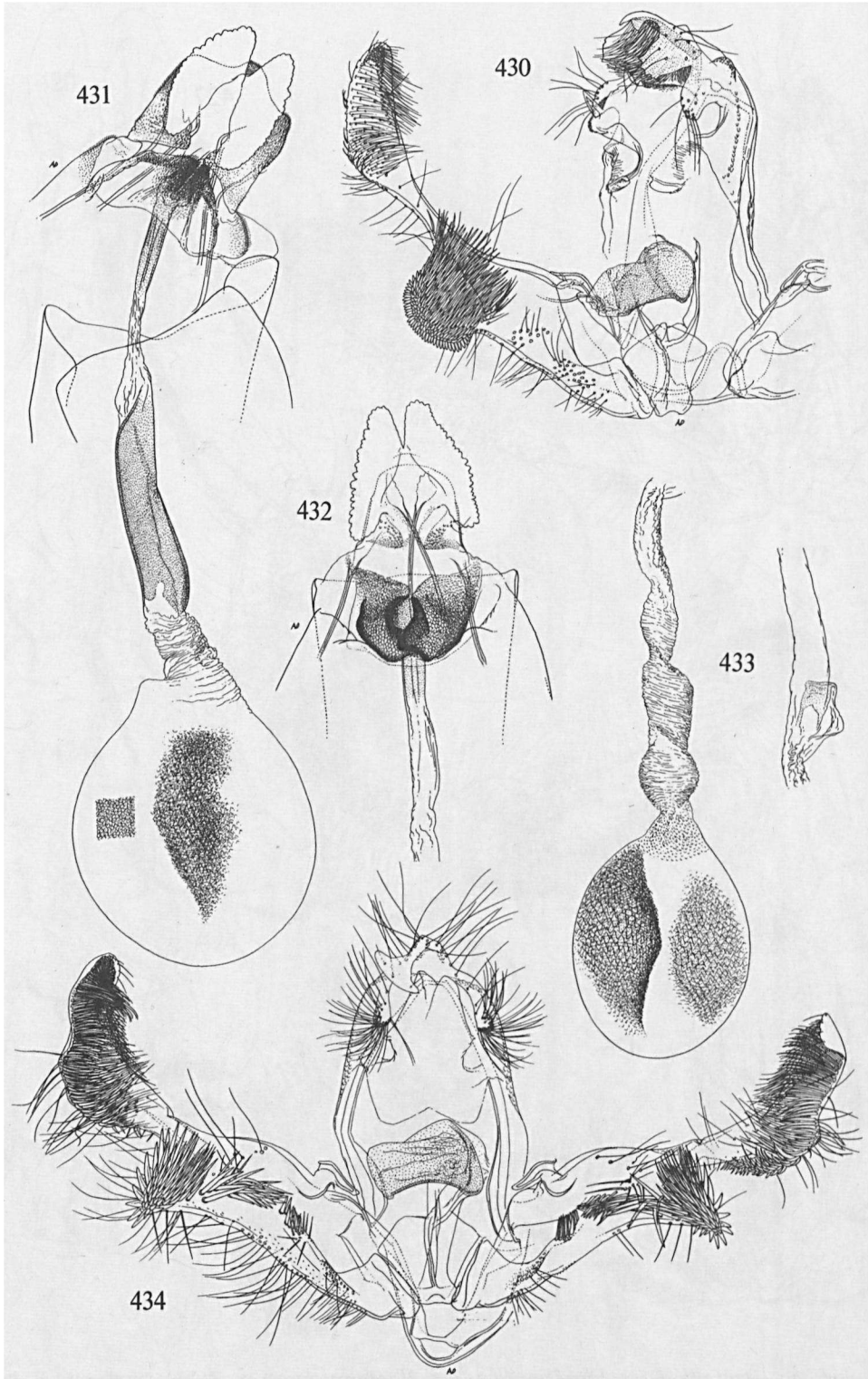




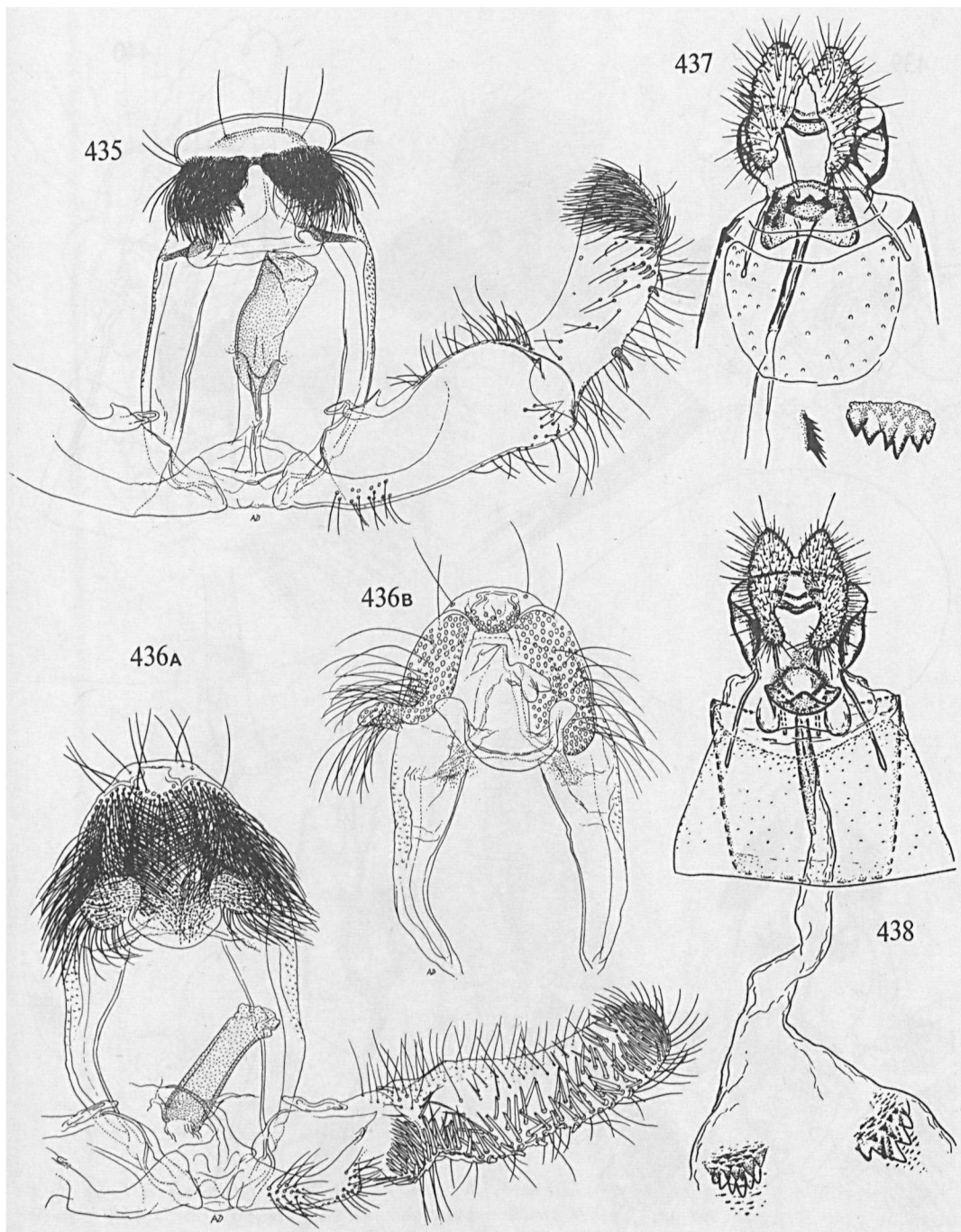
Figs. 420-424B. Genitalia of Statherotides. 420-421, *Proschistis amphibola* sp. n., ♀, holotype; 422, *Asaphistis catarrhactopa* (Meyr.), ♂, genit. 7818; 423, *Statherotoxys latens* sp. n., ♂, holotype; 424, *Proschistis marmaropa* (Meyr.), ♂, genit. 8039; 424A-424B, *Statherotis aspidias* (Meyr.), ♀, genit. 8046.



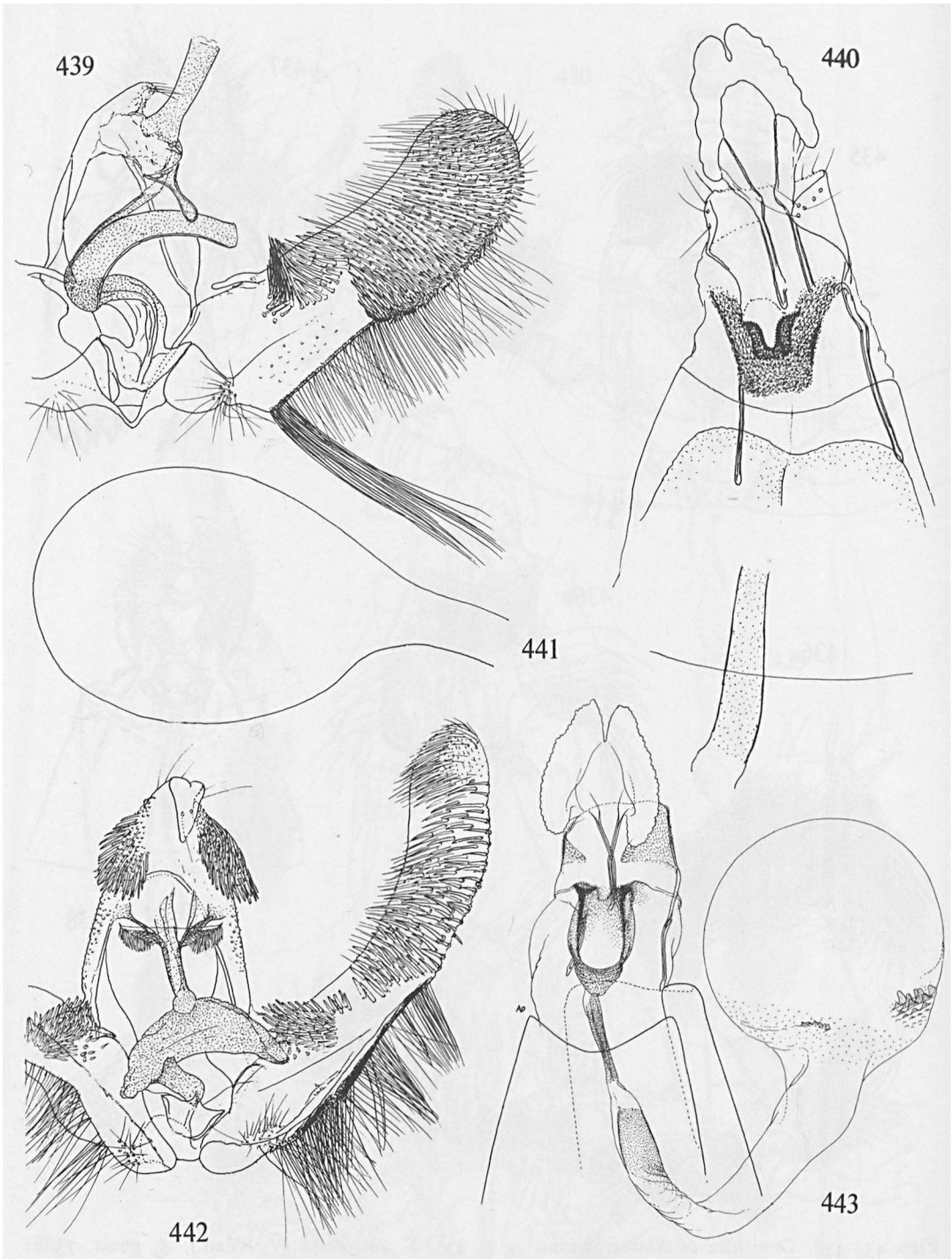
Figs. 425-429. Genitalia of *Hoplitendemis* g.n. 425, *H. centraspis* sp. n., ♂, holotype; 426, *H. pogonopoda* sp. n., ♂, holotype; 427, do., ♀, allotype; 428, *H. erebodes* sp. n., ♂, holotype; 429, do., ♀, allotype.



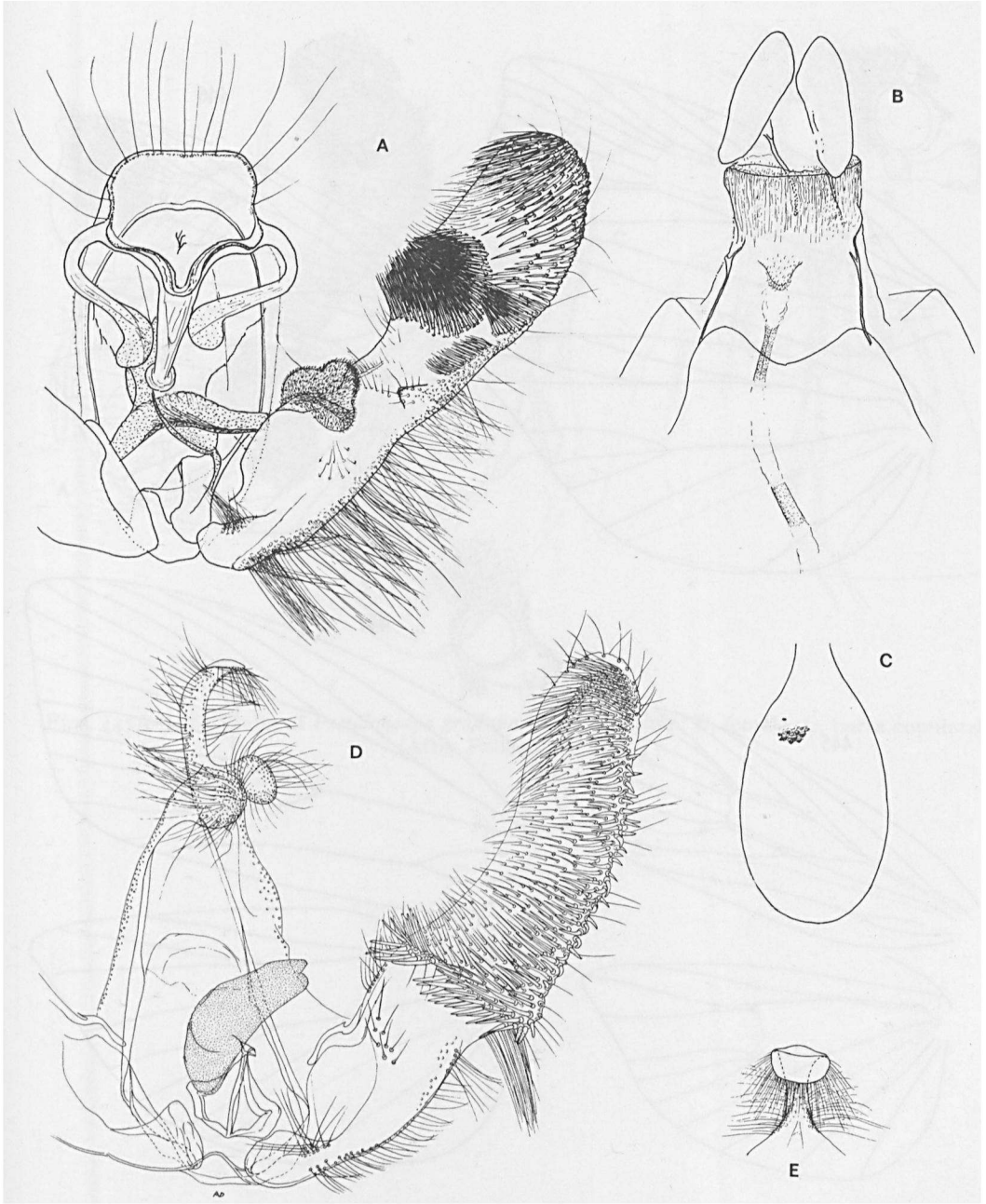
Figs. 430-434. Genitalia of Statherotides. 430, *Corethrarcha rupifera* (Meyr.), ♂, genit. 4969; 431, do., ♀, genit. 6468; 432, *Rhodacra pyrrhocrossa* (Meyr.), ♂, genit. 6454; 433, do., ♀, genit. 6455; 434, do., bursa copulatrix and median part of ductus bursae (right).



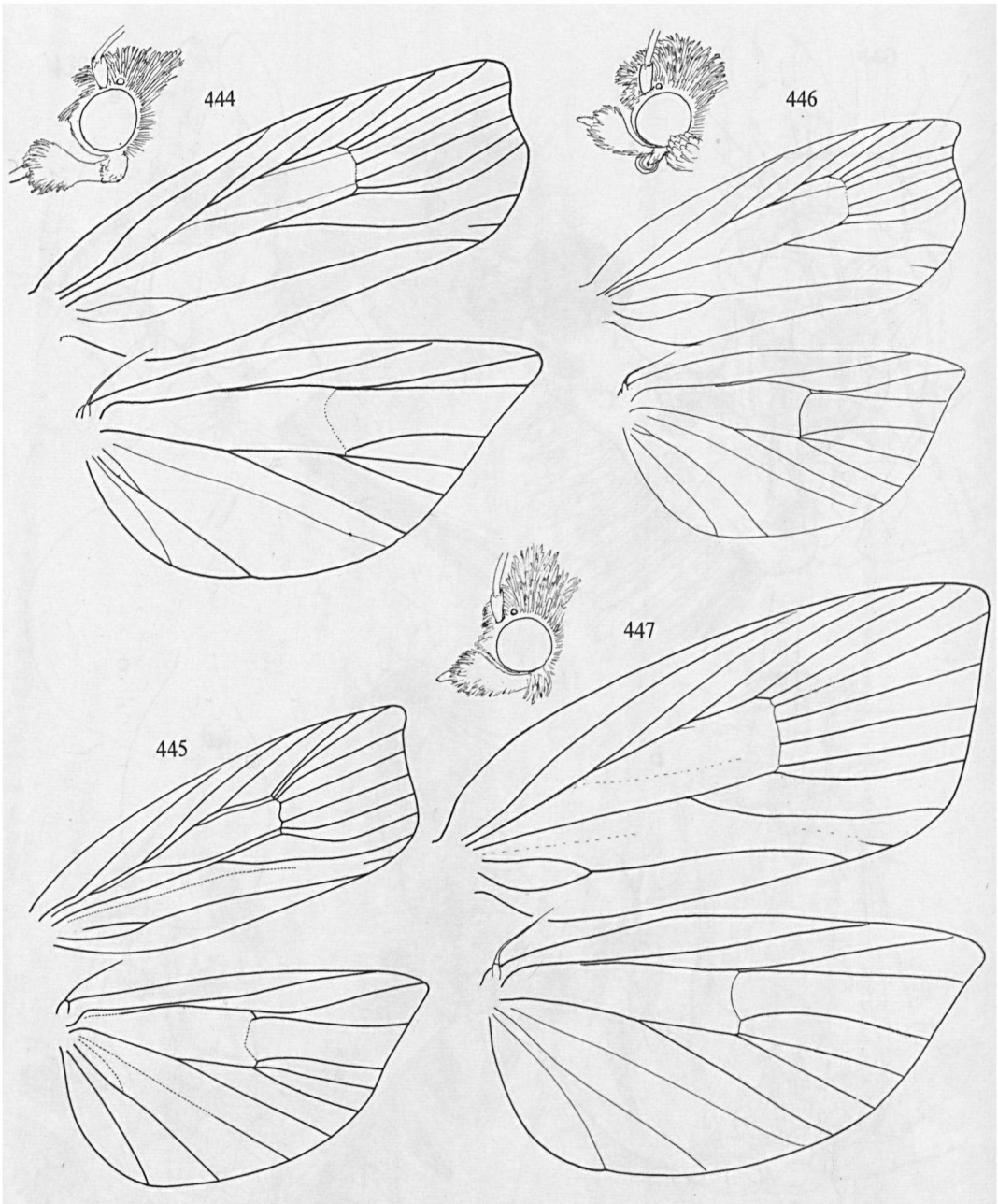
Figs. 435-438. Genitalia of *Statherotmantis* g.n. 435, *S. shicotana* (V. Kuzn.), ♂, genit. 7588; 436A, *S. pictana* (V. Kuzn.), ♂, genit. 6412; 436B, do., tegumen with the hairs removed; 437, do., ♀, with one signum; 438, *S. peregrina* (Falk.), ♀. (Figs. 437 and 438, after V. Kuznetsov, 1969, and M. Falkovitch, 1966, respectively.)



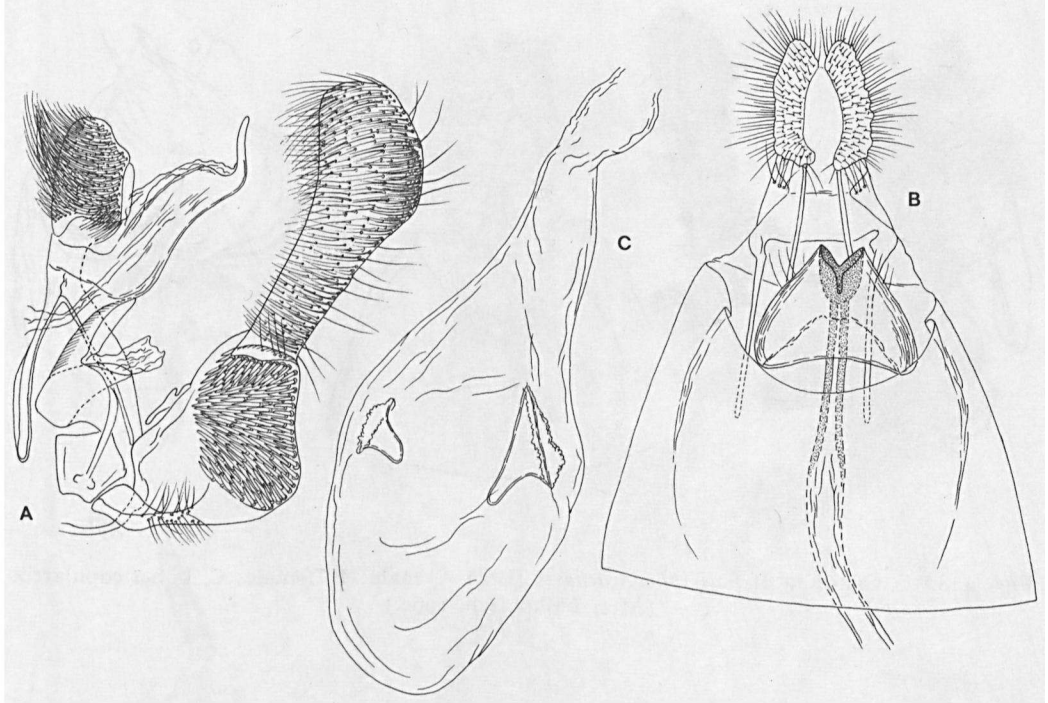
Figs. 439-443. Genitalia of *Aterpia* Gn. 439, *A. anderreggana* Gn., ♂, slide 8108; 440, do., ♀, slide 8109; 441, do., bursa; 442, *A. palliata* (Meyr.), ♂, slide 8037; 443, do., ♀, slide 6451.



Figs. 443A-E. Genitalia of Neopotamia etc. A, *Proschistis polyochtha* sp. n., ♂, holotype; B, do., ♀, allotype; C, do., bursa; D, *Phaeacadophora acutana* Wals., ♂, genit. 7647; E, do., uncus in frontal aspect, genit. 8169.

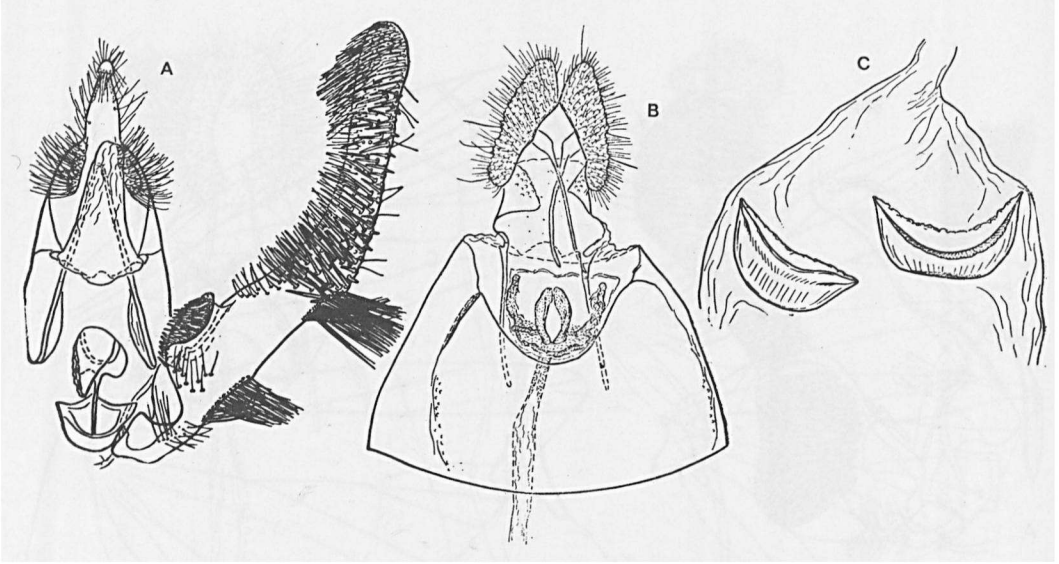


Figs. 444-447. Heads and wing neuration of Statherotides. 444, *Dicephalarcha sicca* sp. n., ♀; 445, *Proschistis zaleuta* Meyr., ♂; 446, *Rhodacra pyrrhocrossa* (Meyr.), ♂; 447, *Corethrarcha rupifera* (Meyr.), ♂.

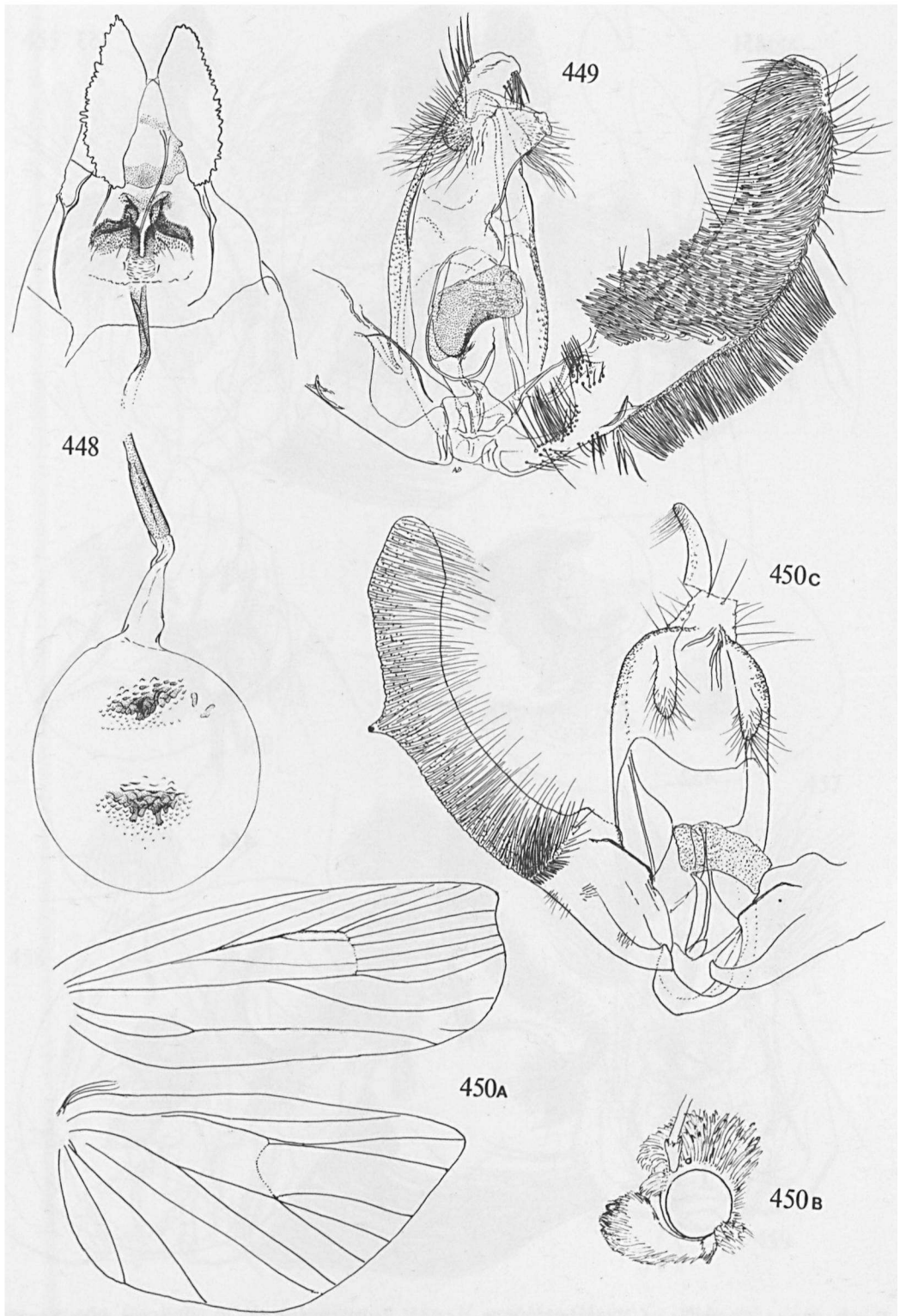


Figs. 447A-C. Genitalia of *Pseudohedya gradana* Christ. A, male; B, female; C, bursa copulatrix. (After Falkovitch, 1962.)

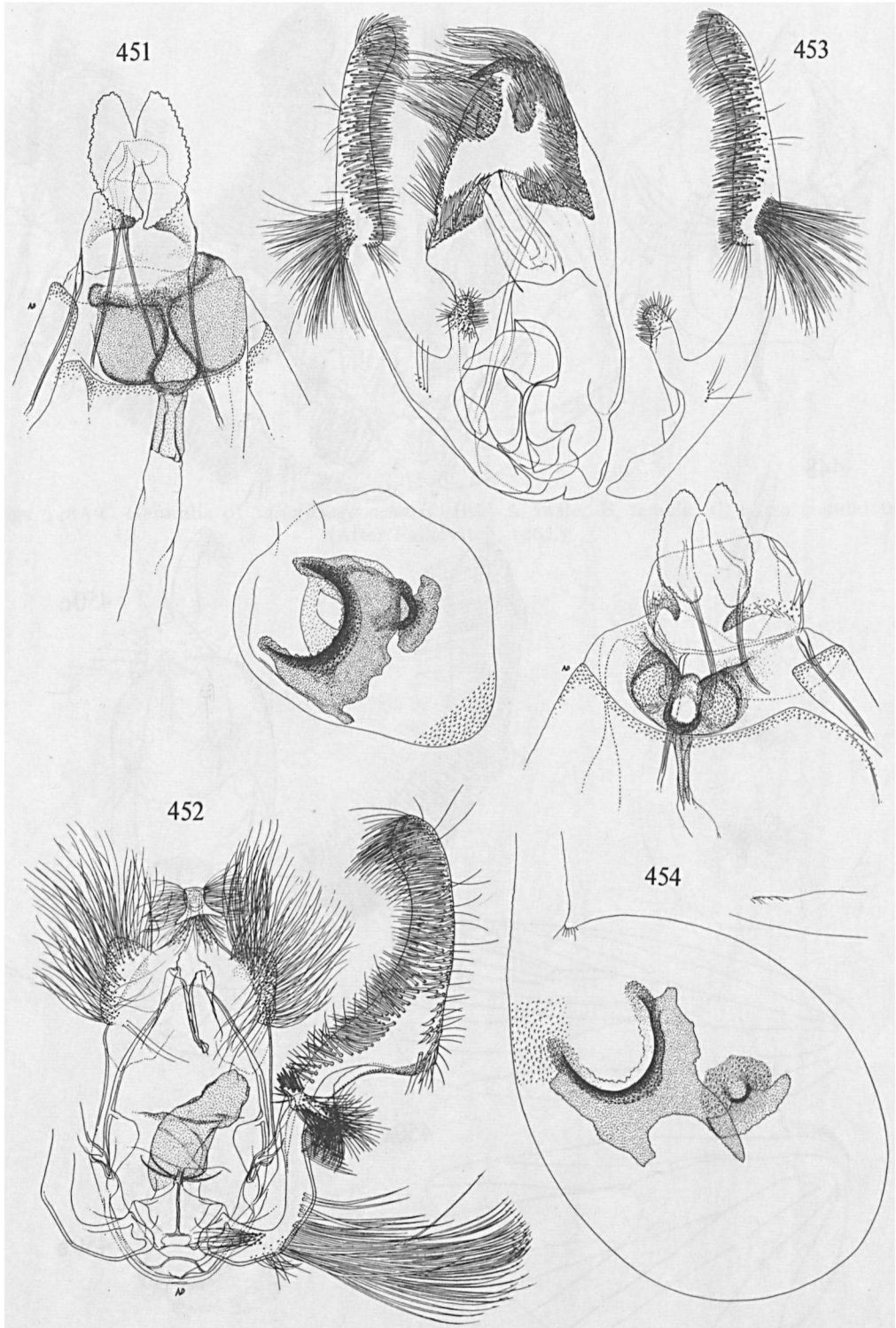




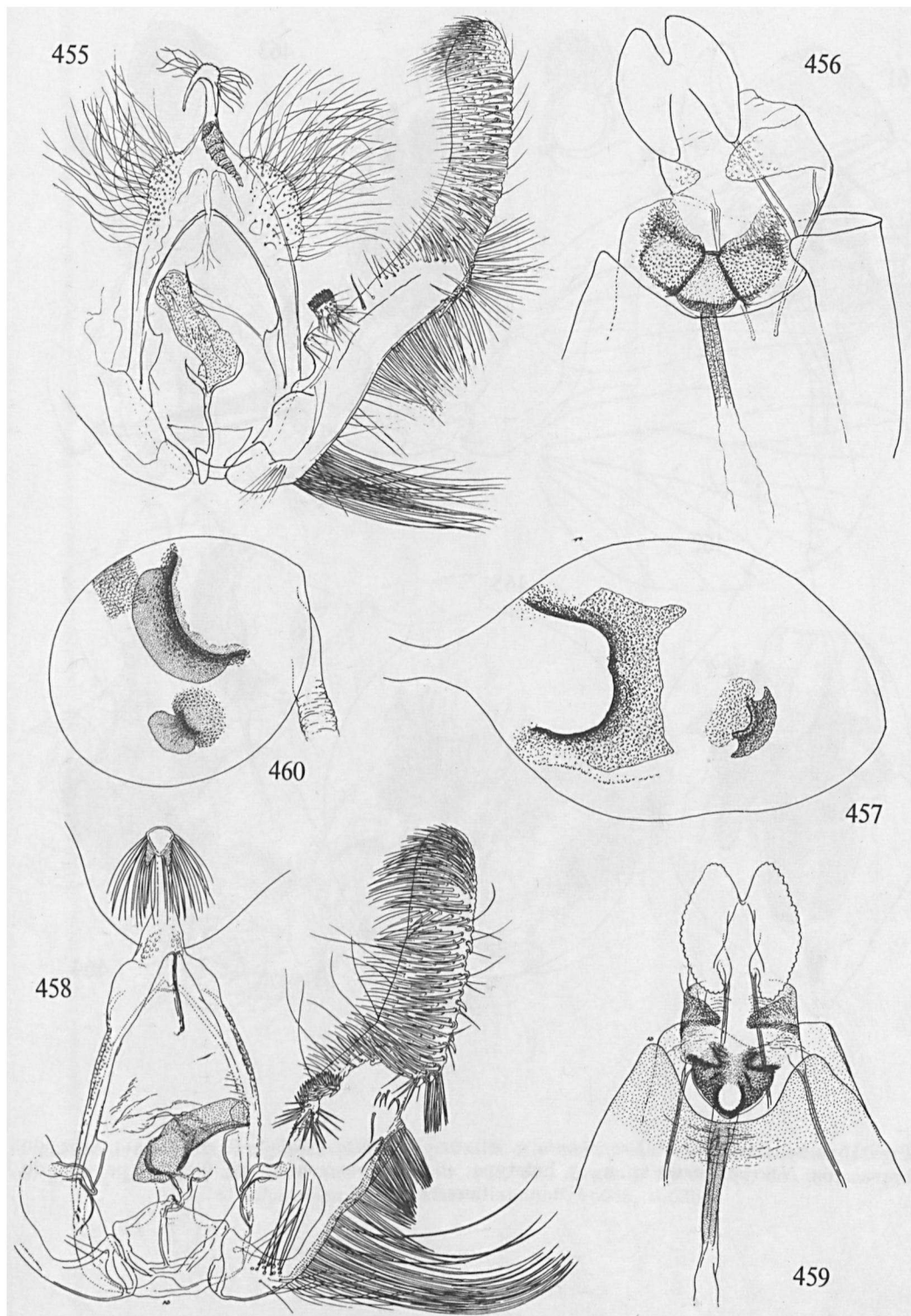
Figs. 448A-C. Genitalia of *Saliciphaga acharis* (Btl.) A, male; B, female; C, bursa copulatrix.  
(After Falkovitch, 1962.)



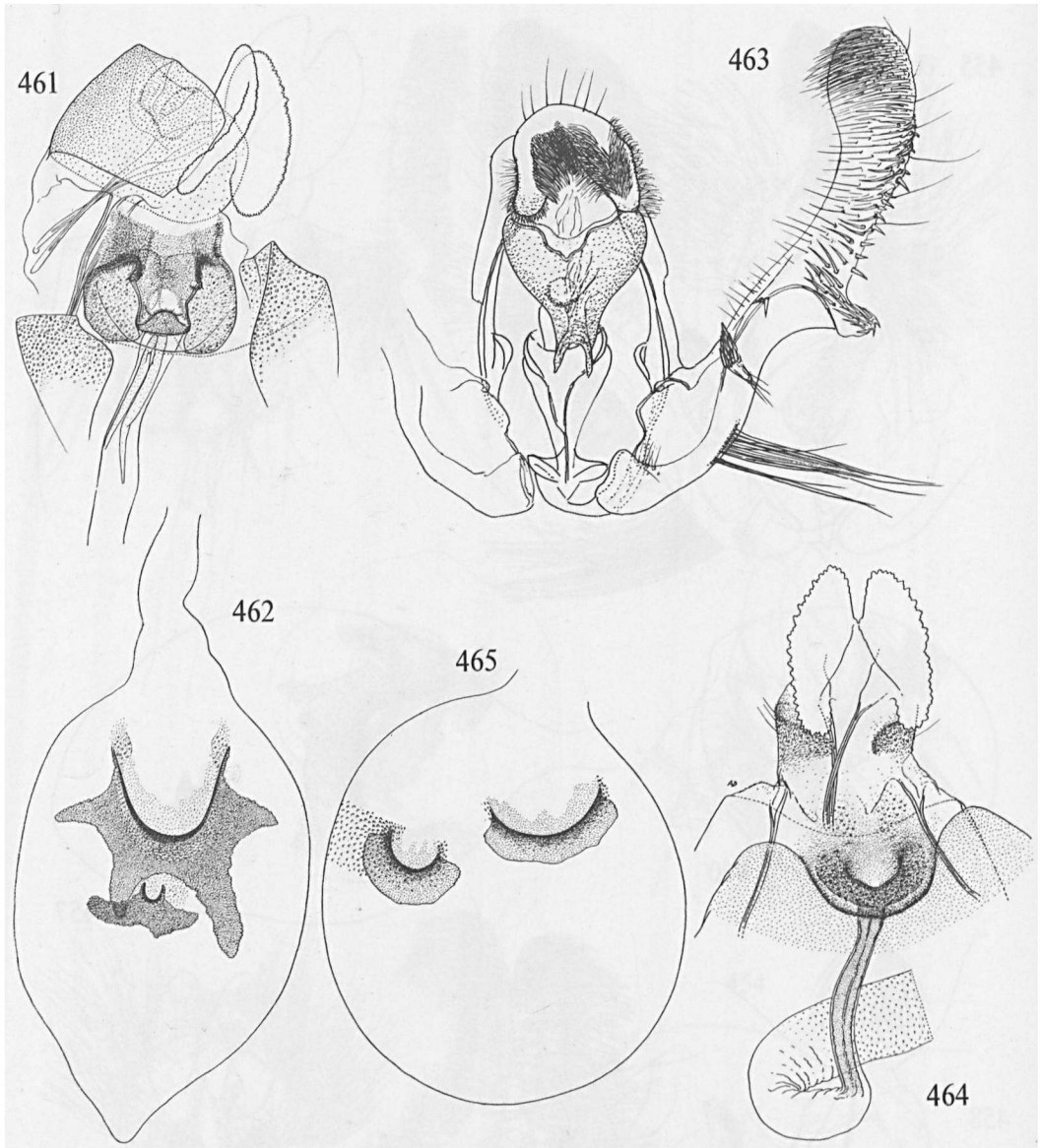
Figs. 448-450C. Head, neuration and genitalia of Statherotides. 448, *Aterpia mensifera* (Meyr.), apallotype, genitalia; 449, *Asaphistis maturicolor* sp. n., ♂, holotype; 450A, *Rhodacra pyrrhocrossa* (Meyr.), wing neuration; 450B, do., head; 450C, *Statherotis tapinopa* sp. n., ♂, holotype.



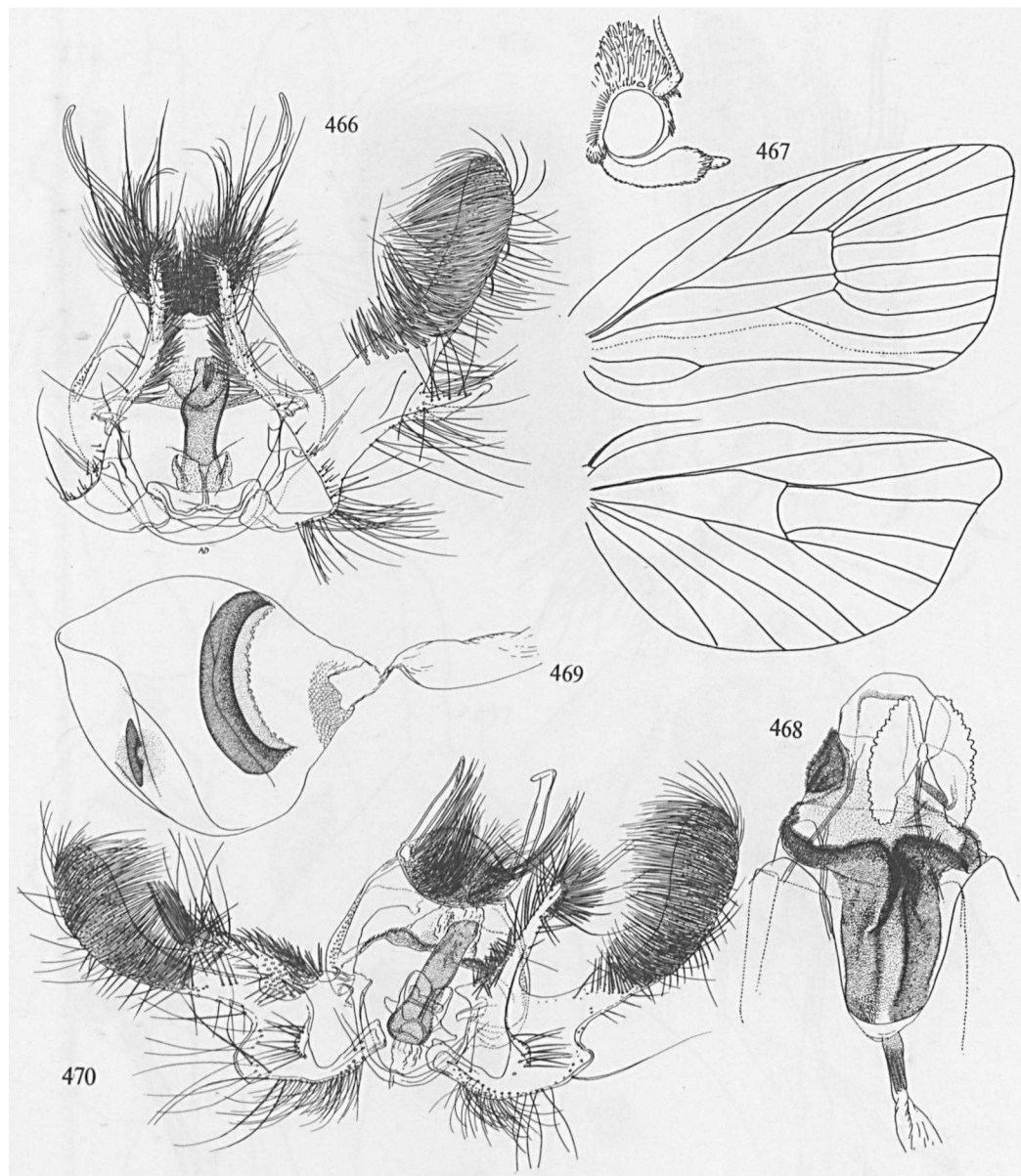
Figs. 451-454. Genitalia of *Neopotamia* g. n. 451, *N. leucotoma* sp. n., ♀, allotype, with bursa; 452, do., ♂, paratype, genit. 5327; 453, *N. calogona* sp. n., ♂, holotype; 454, do., ♀, allotype.



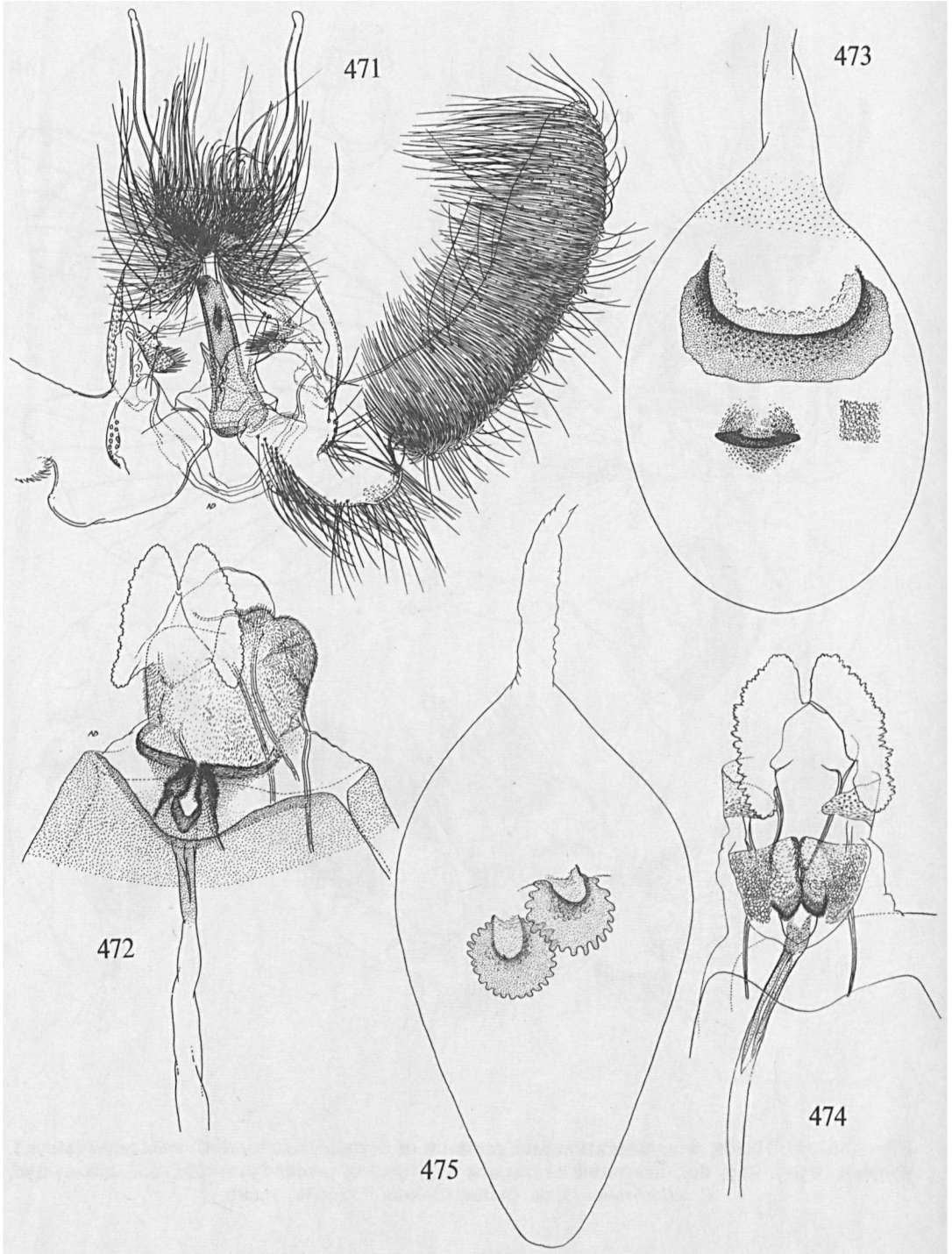
Figs. 455-460. Genitalia of *Neopotamia* g. n. 455, *N. orophias* (Meyr.), ♂, slide 7784; 456, do., ♀, genit. 7785; 457, do., bursa; 458, *N. ioxantha* (Meyr.), do., ♂, slide 7786; 459, do., ♀; 460, bursa, genit. 6525.



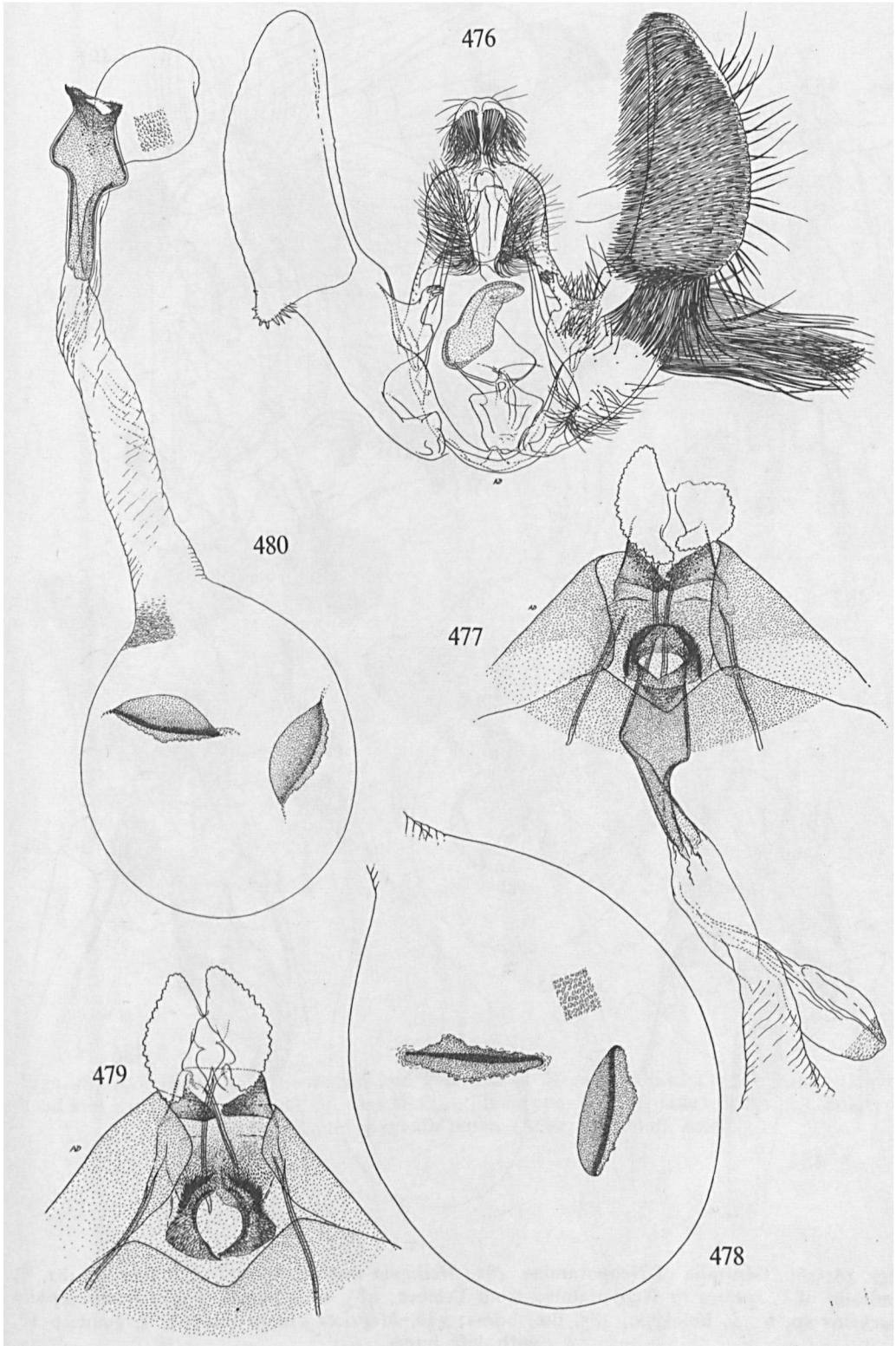
Figs. 461-465. Genitalia of *Neopotamia* g. n. 461, *N. divisa* (Wals.), ♀, genit. 6511; 462, do. bursa; 463, *N. cryptocosma* sp. n., ♂, holotype; 464, *N. tornocroca* sp. n., ♀, holotype; 465, do. bursa.



Figs. 466-470. Heads, wing neuration and genitalia of *Costosa* Diak. 466, *C. rhodantha* (Meyr.), ♂, genit. 6505; 467, do., head and neuration; 468, do., ♀, genit. 6506; 469, do., bursa; 470, *C. allochroma* Diak. (After Diakonoff, 1968a, 1968b.)

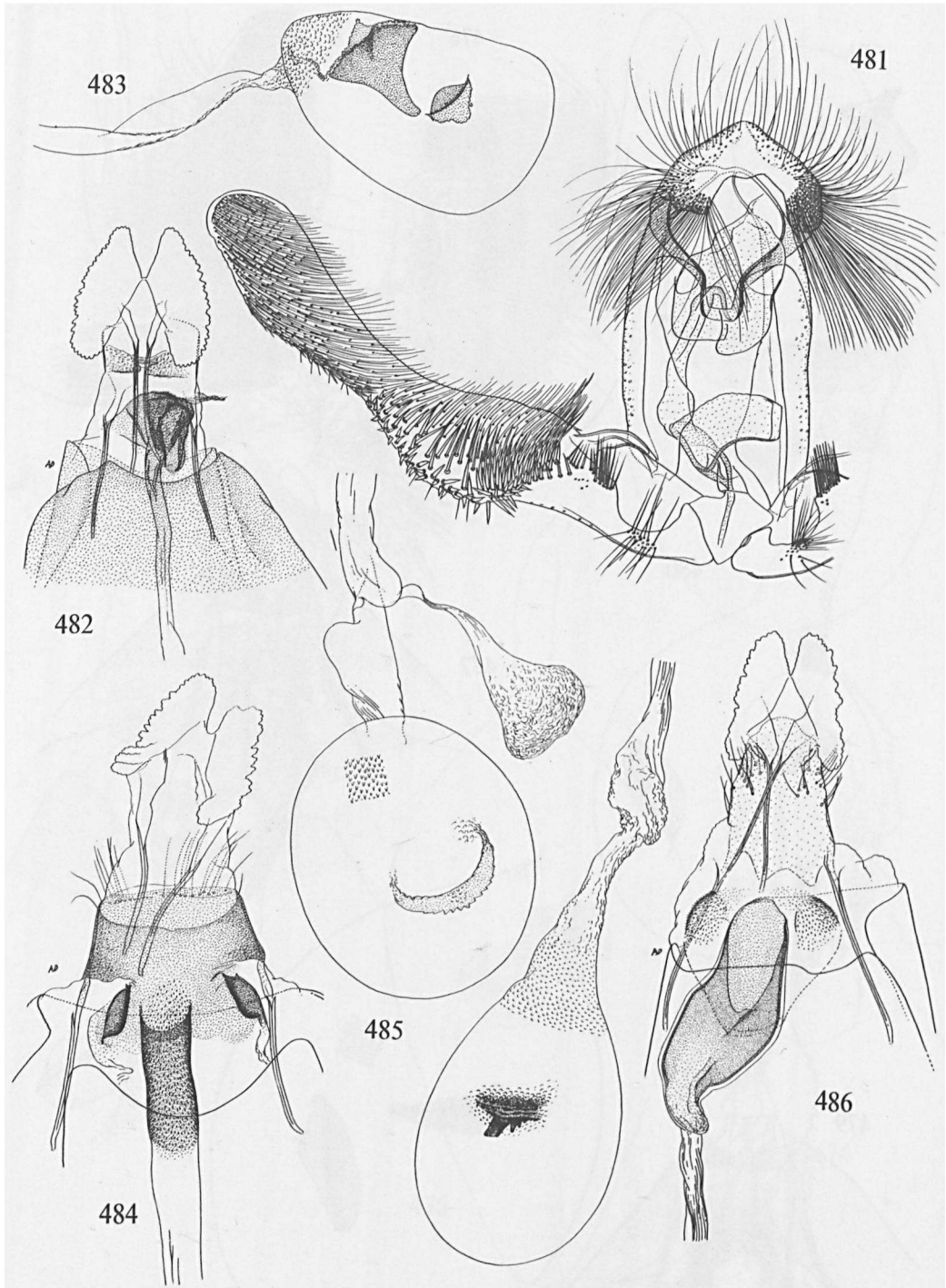


Figs. 471-475. Genitalia of Neopotamiae. 471, *Costosa aphenia* sp. n., ♂, holotype; 472, do., ♀, allotype; 473, do., bursa; 474, *Meiligma impigris* sp. n., ♀, allotype; 475, do., bursa.

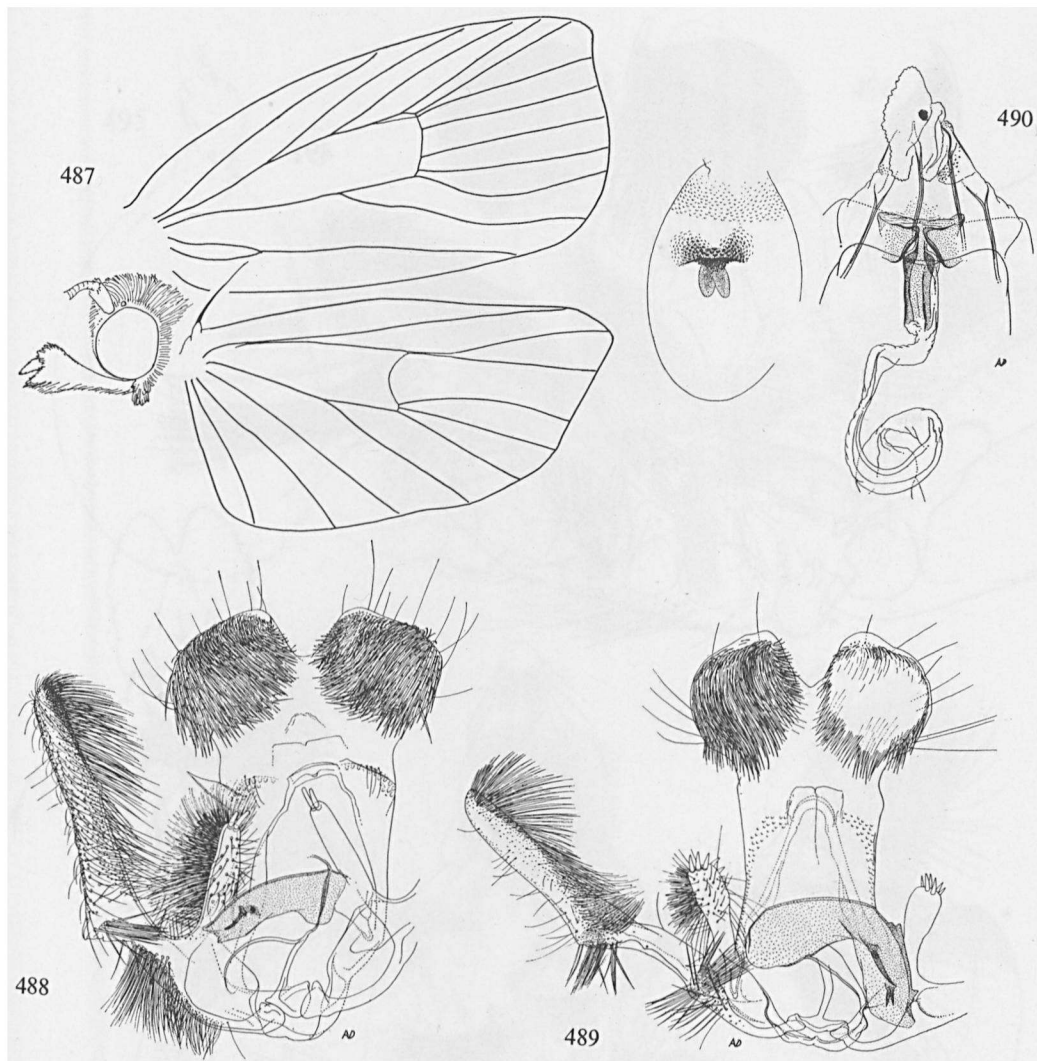


Figs. 476-480. Genitalia of *Temnolopha* Low. and *Phaecadophora* Wals. 476, *T. sponditis* (Meyr.) comb. n., ♂, genit. slide 6626; 477, *P. fimbriata* Wals., ♀, genit. 7412; 478, do., bursa; 479, do., ♀, genit. 7413; 480, do., bursa.

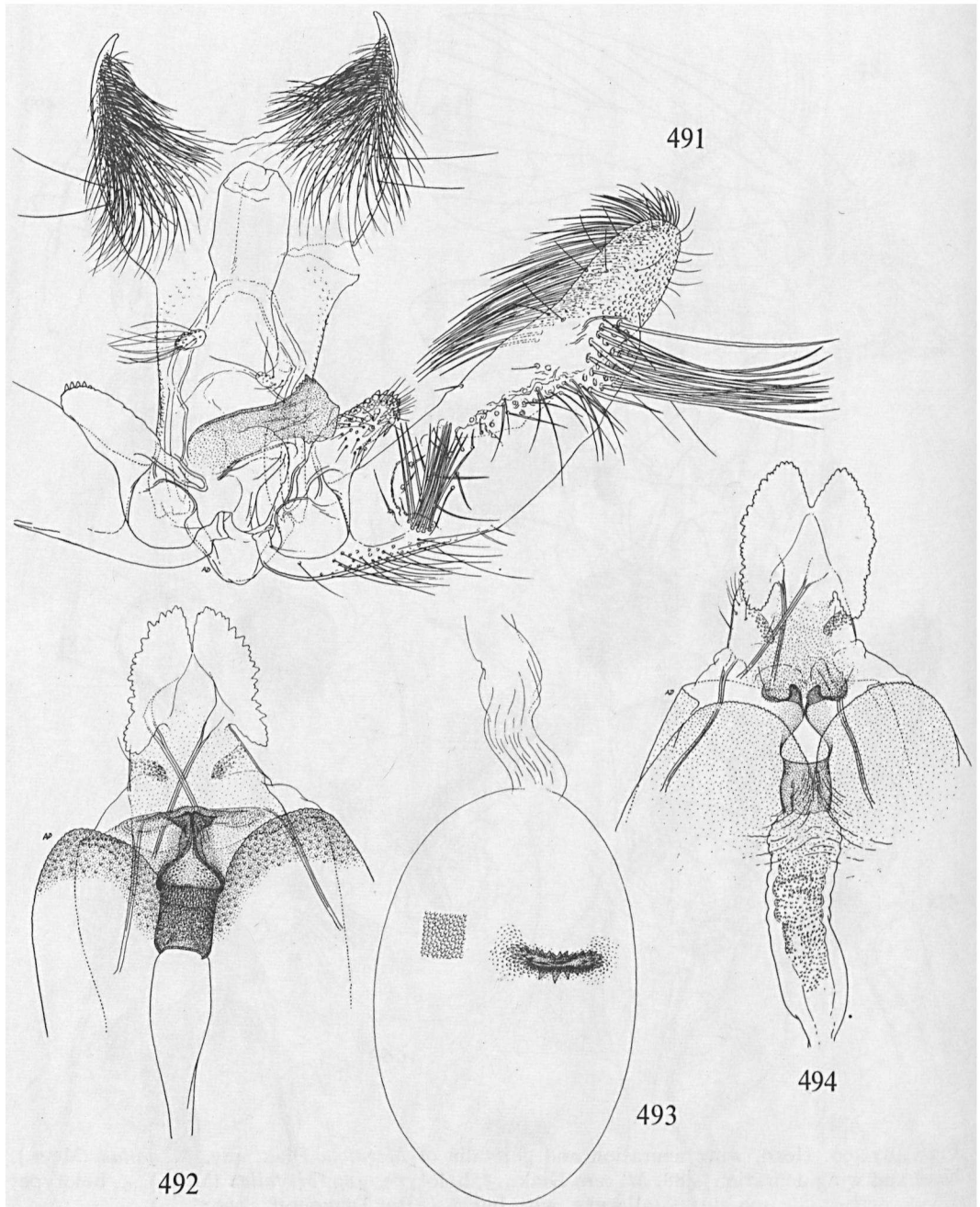




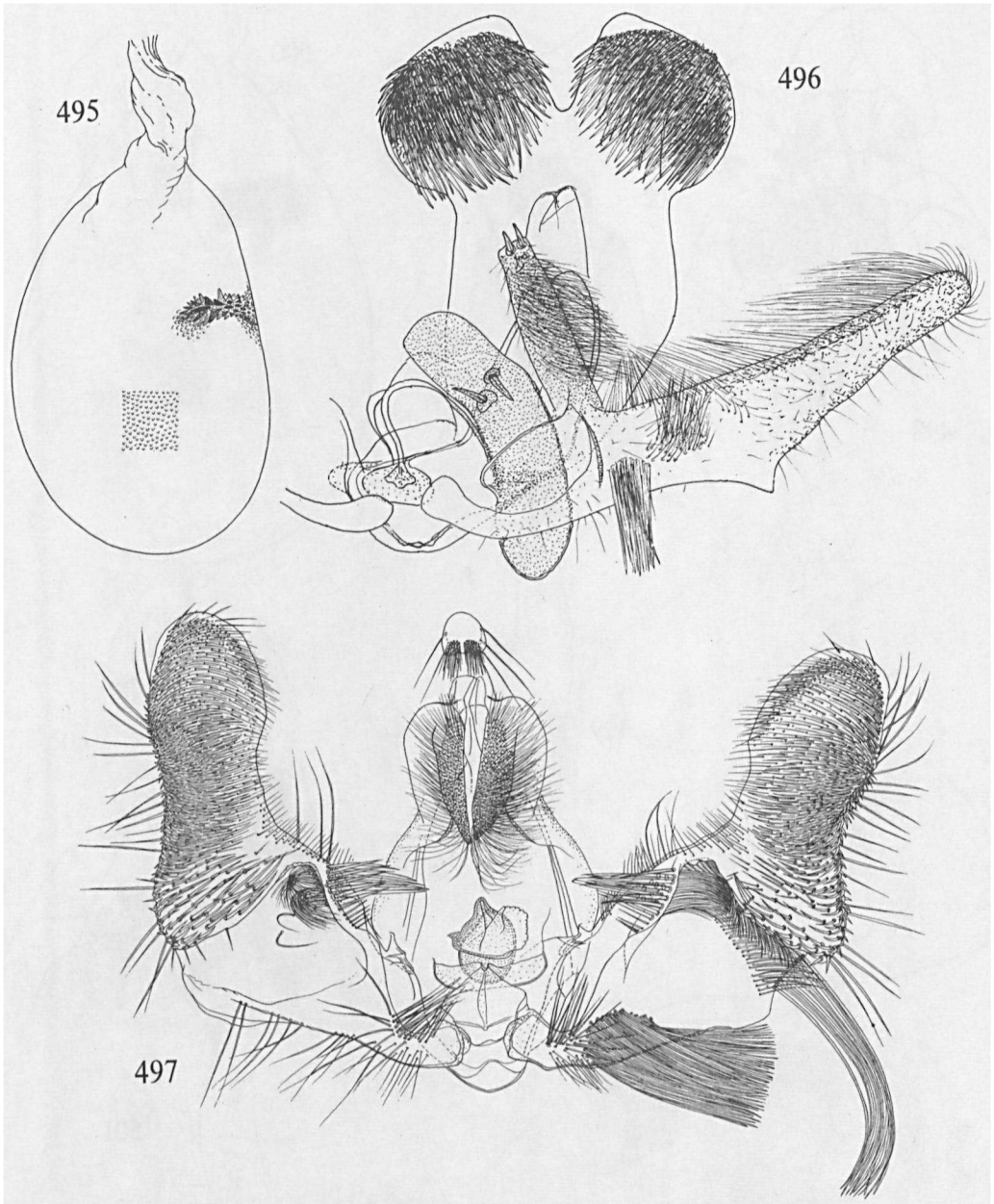
Figs. 481-486. Genitalia of Neopotamiae. 481, *Meiligma impigris* sp. n., ♂, holotype; 482, ♀, genitalia of a species of Neopotamiae from Celebes; 483, do., bursa; 484, *Pseudosciaphila rhachistis* sp. n., ♀, holotype; 485, do., bursa; 486, *Megalota anceps* (Meyr.), ♀, genit. 6518, with, left, bursa.



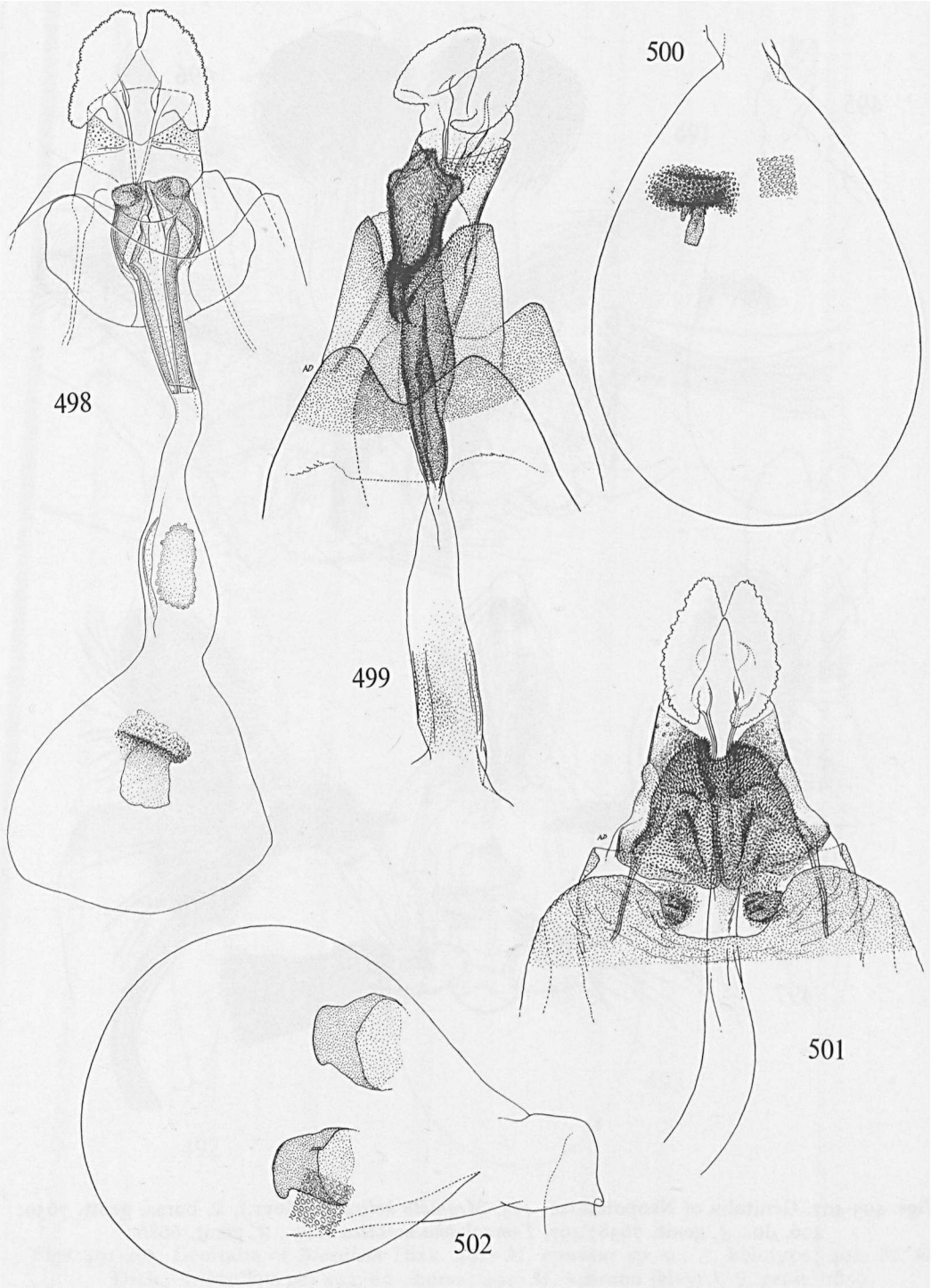
Figs. 487-490. Head, wing neuration and genitalia of *Megalota* Diak. 487, *M. fallax* (Meyr.), head and wing neuration; 488, *M. vera* Diak., ♂, holotype; 489, *M. fallax* (Meyr.), ♂, holotype; 490, do., ♀, allotype, with bursa. (After Diakonoff, 1966).



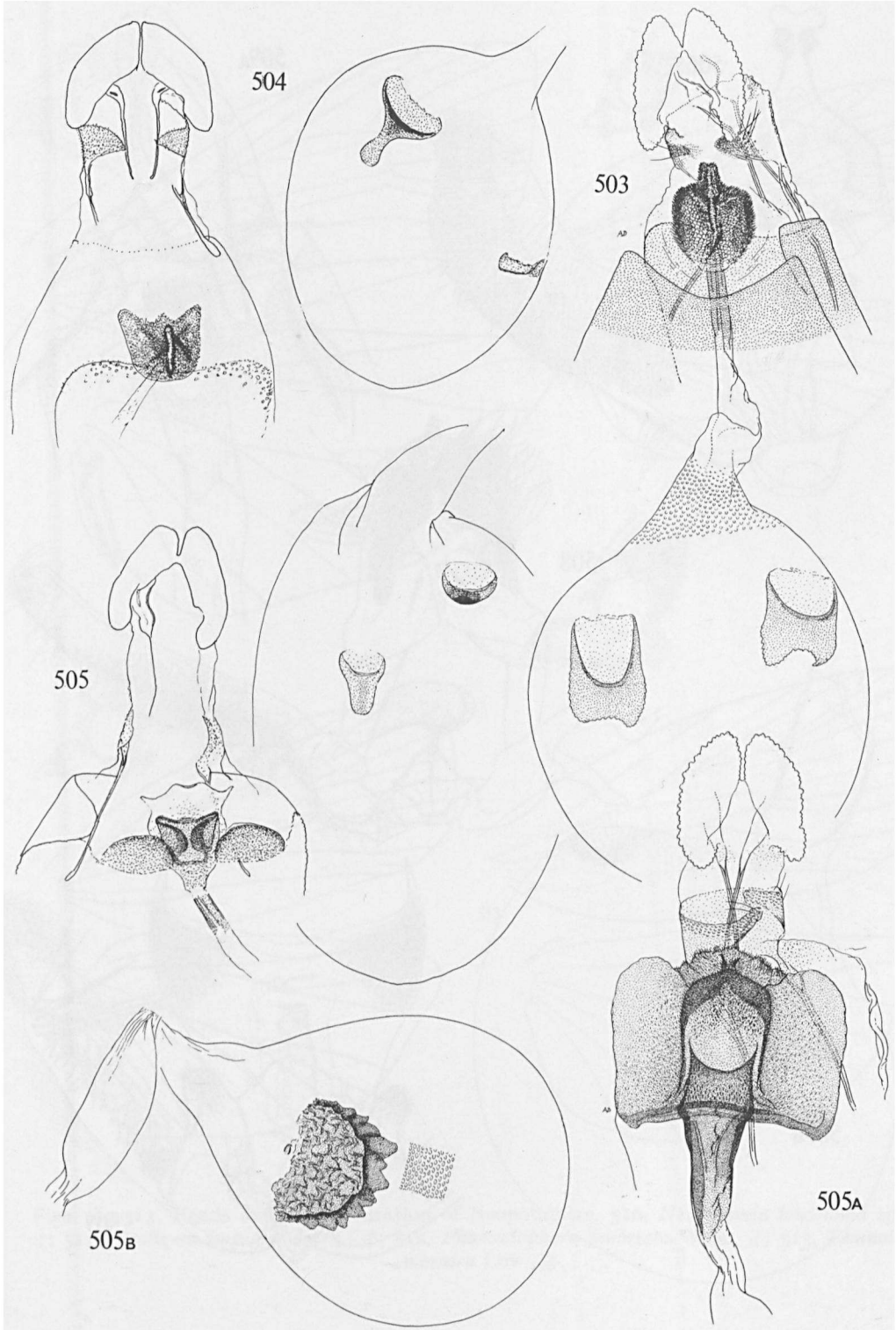
Figs. 491-494. Genitalia of *Megalota* Diak. 491, *M. geminus* sp. n., ♂, holotype; 492, *M. vera* Diak., ♀, apallotype; 493, do., bursa; 494, *M. helicana* (Meyr.), ♀, genit. 7659.



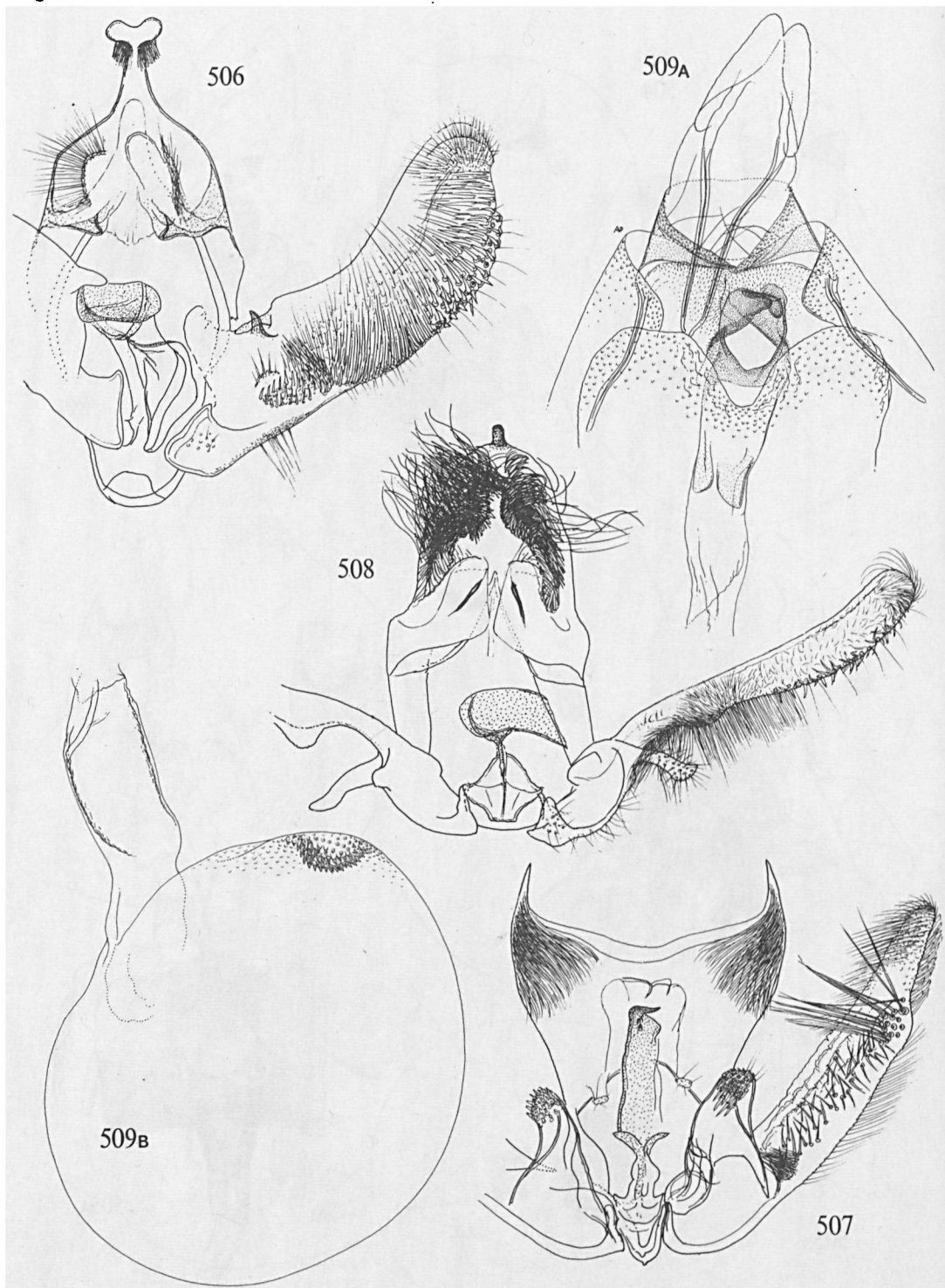
Figs. 495-497. Genitalia of Neopotamiae. 495, *Megalota helicana* (Meyr.), ♀, bursa, genit. 7659; 496, do., ♂, genit. 7658; 497, *Temnolopha mosaica* Low., ♂, genit. 6686.



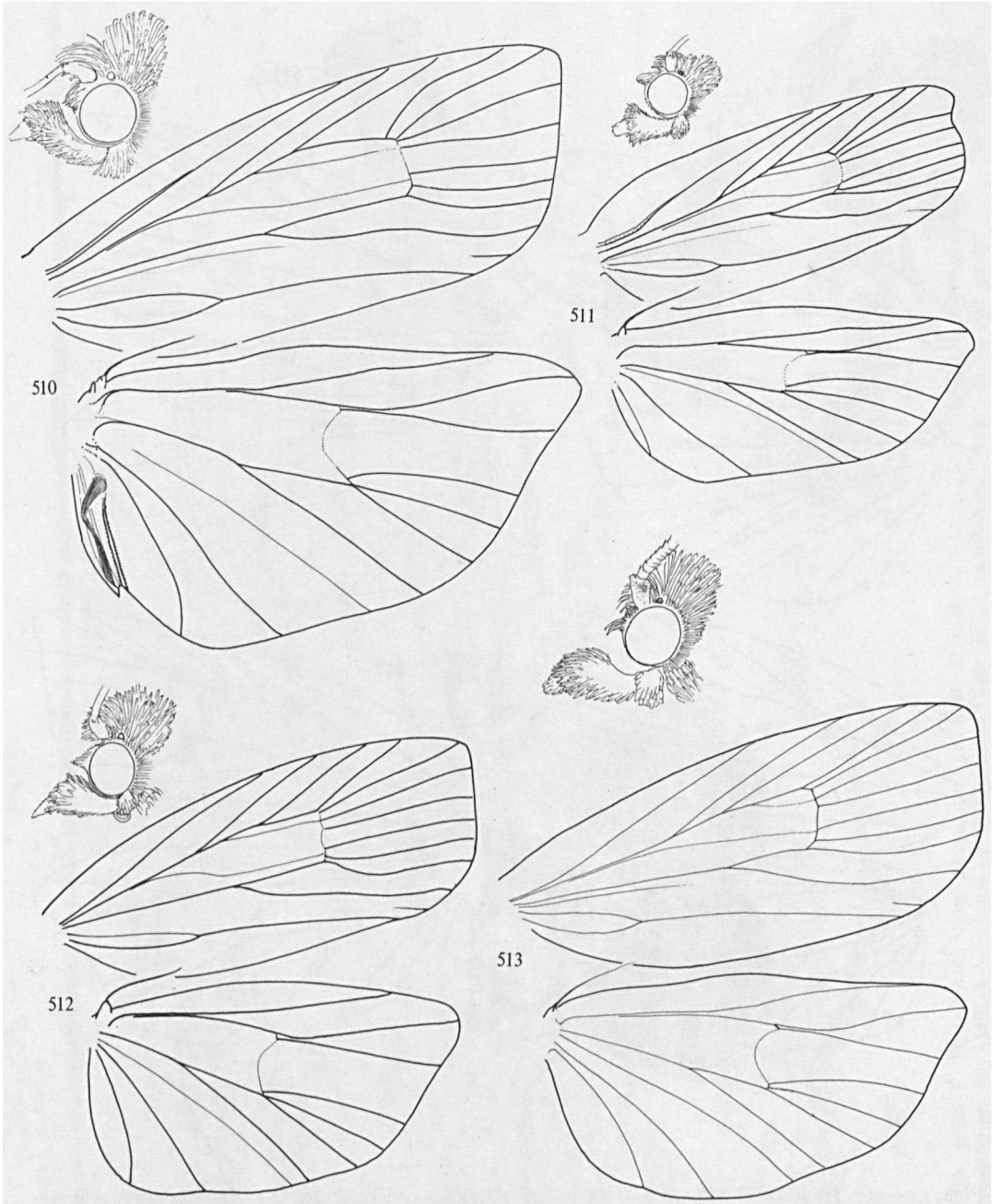
Figs. 498-502. Female genitalia of Neopotamia. 498, *Temnolopha mosaica* Low., genit. 6687; 499, *T. matura* sp. n., allotype; 500, do., bursa; 501, *Nyctidea syngena* sp. n., holotype; 502, do., bursa.



Figs. 503-505B. Female genitalia of Neopotamiae etc. 503, *Nyctidea cyanitis* sp. n., allotype; 504, *Apsidophora purpurorbis* sp. n., ♀, allotype; 505, *N. mataea* sp. n., holotype, with bursa; 505A, *Molybdocrates vinculata* (Meyr.), genit. 8070; 505B, do., bursa.

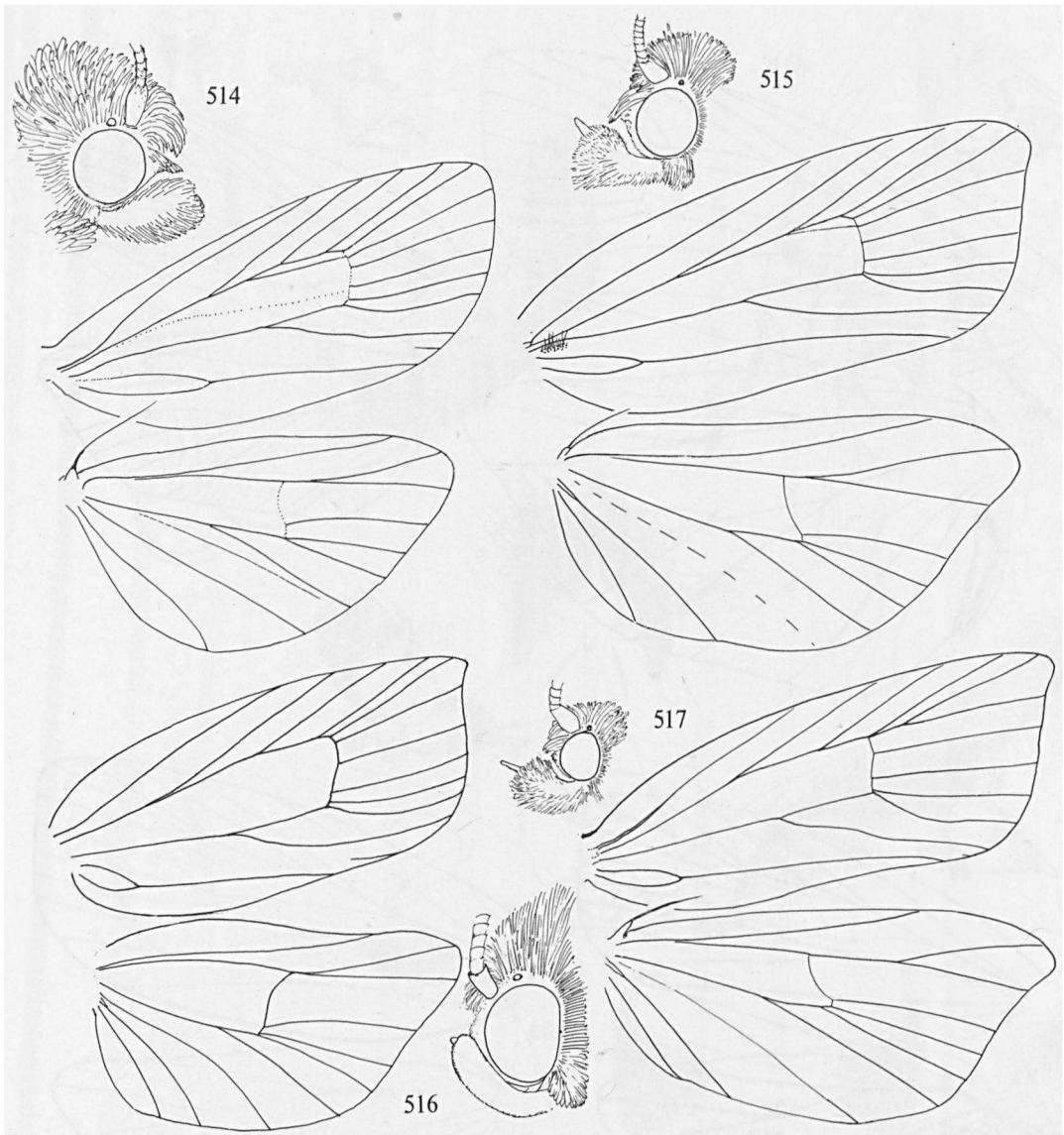


Figs. 506-509B. Genitalia of Neopotamiae. 506, *Nyctidea cyanitis* sp. n., ♂, holotype; 507, *Megalota anceps* (Meyr.), ♂, genit. 7868; 508, *Neopotamia divisa* (Wals.), ♂, genit. 7795; 509A, *Megalota solida* sp. n., ♀, holotype; 509B, do., bursa.

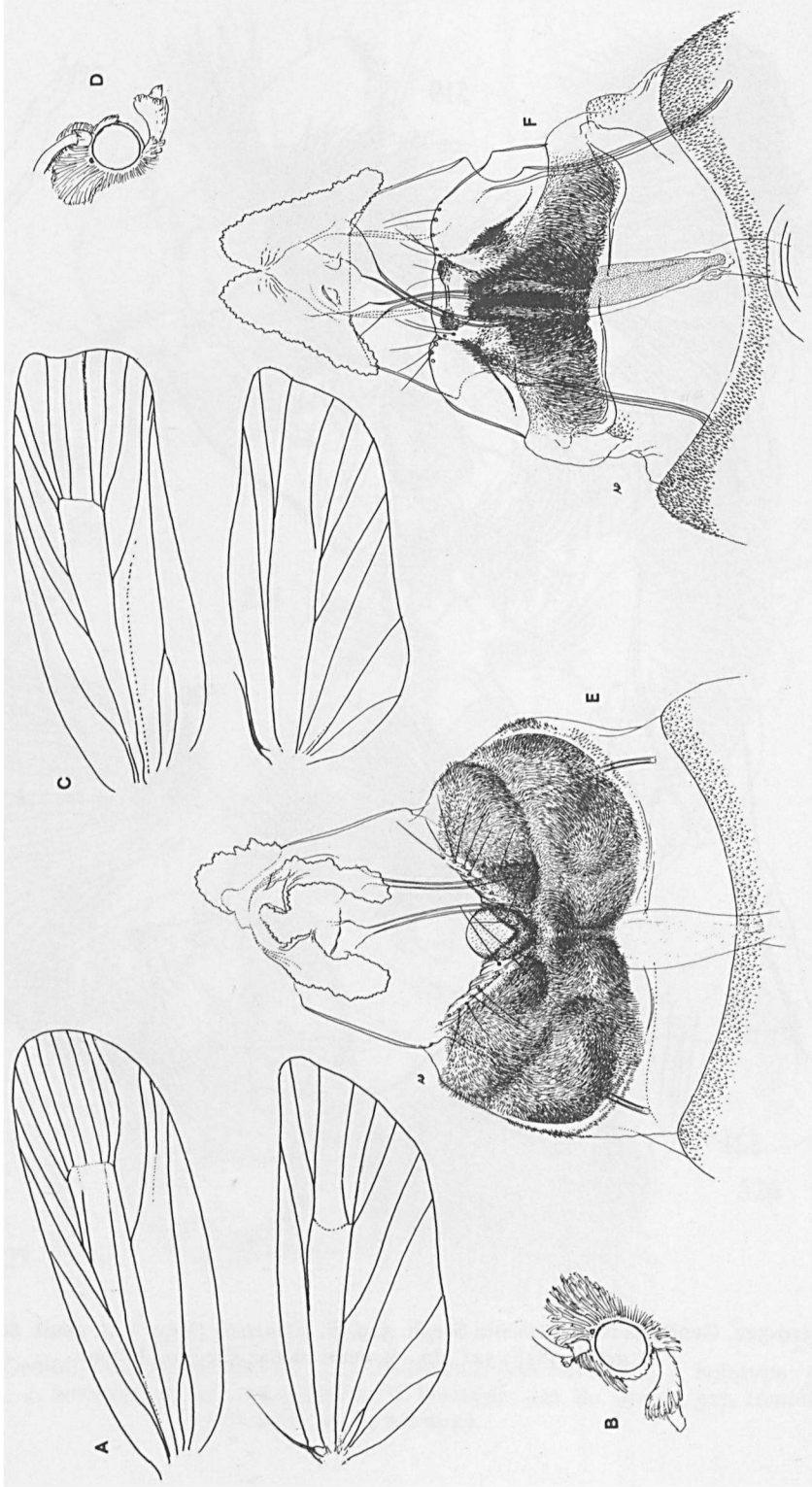


Figs. 510-513. Heads and wing neuration of Neopotamiae. 510, *Neopotamia leucotoma* sp. n., ♂; 511, *Meiligma impigris* sp. n., ♂; 512, *Phaeacadophora fimbriata* Wals., ♂; 513, *Temnolopha mosaica* Low., ♂.

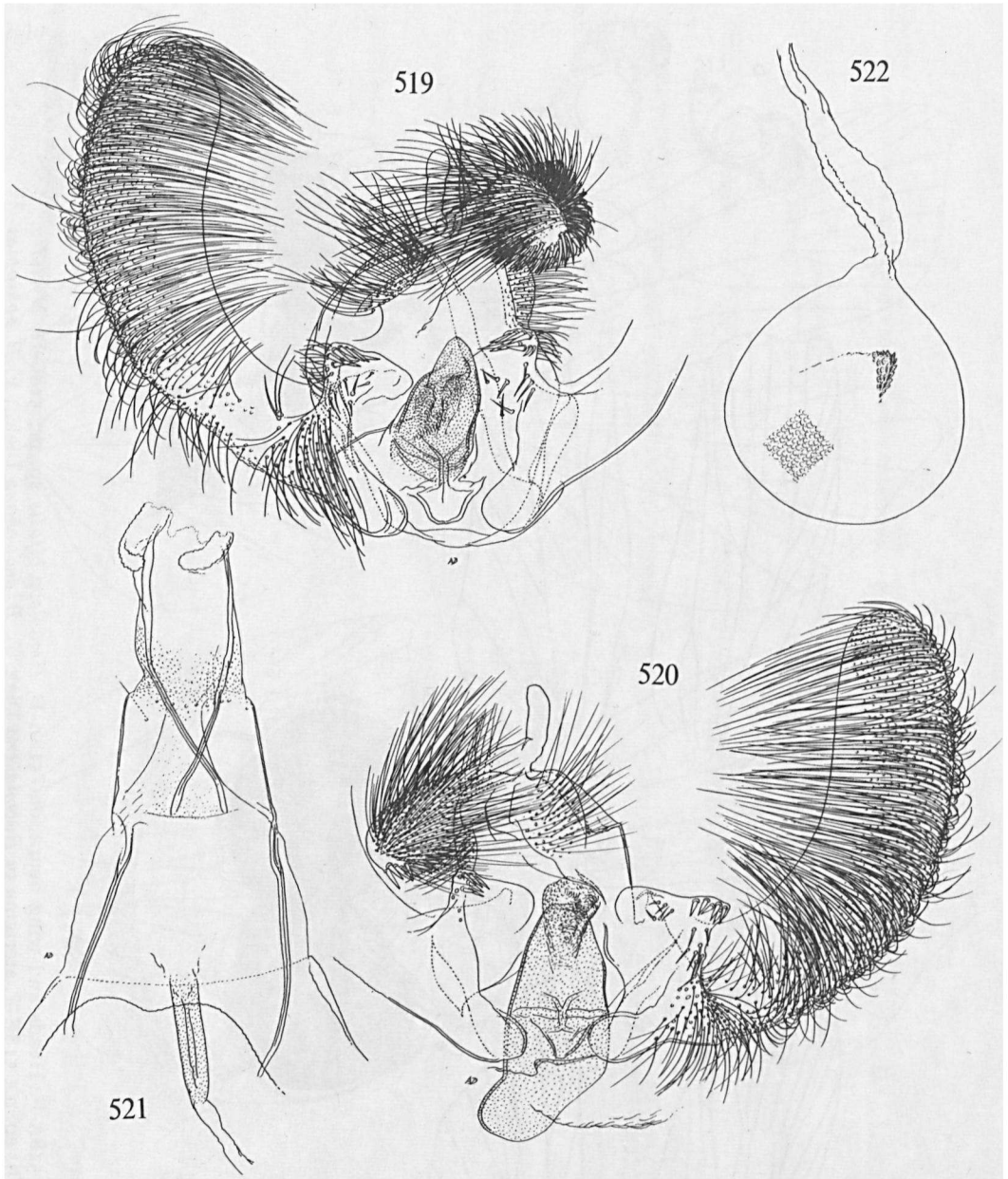




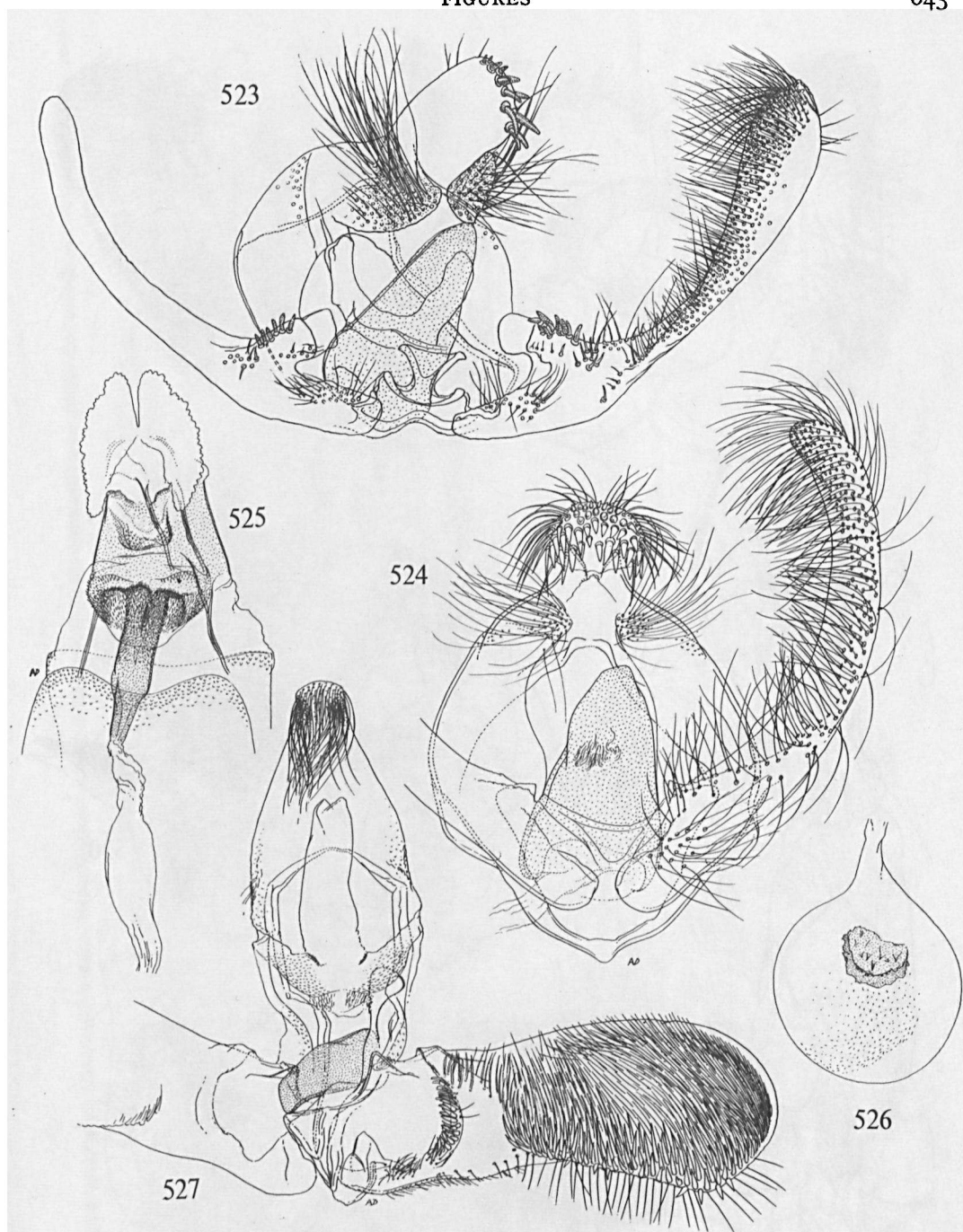
Figs. 514-517. Heads and wing neuration of Endotheniae and Bactrae. 514, *Endothenia gentianaana* (Hb.), ♂; 515, *Syntozyga pedias* (Meyr.), ♂; 516, *Bubonoxena spirographa* Diak., ♂; 517, *Cyclacanthina episema* sp. n., ♂.



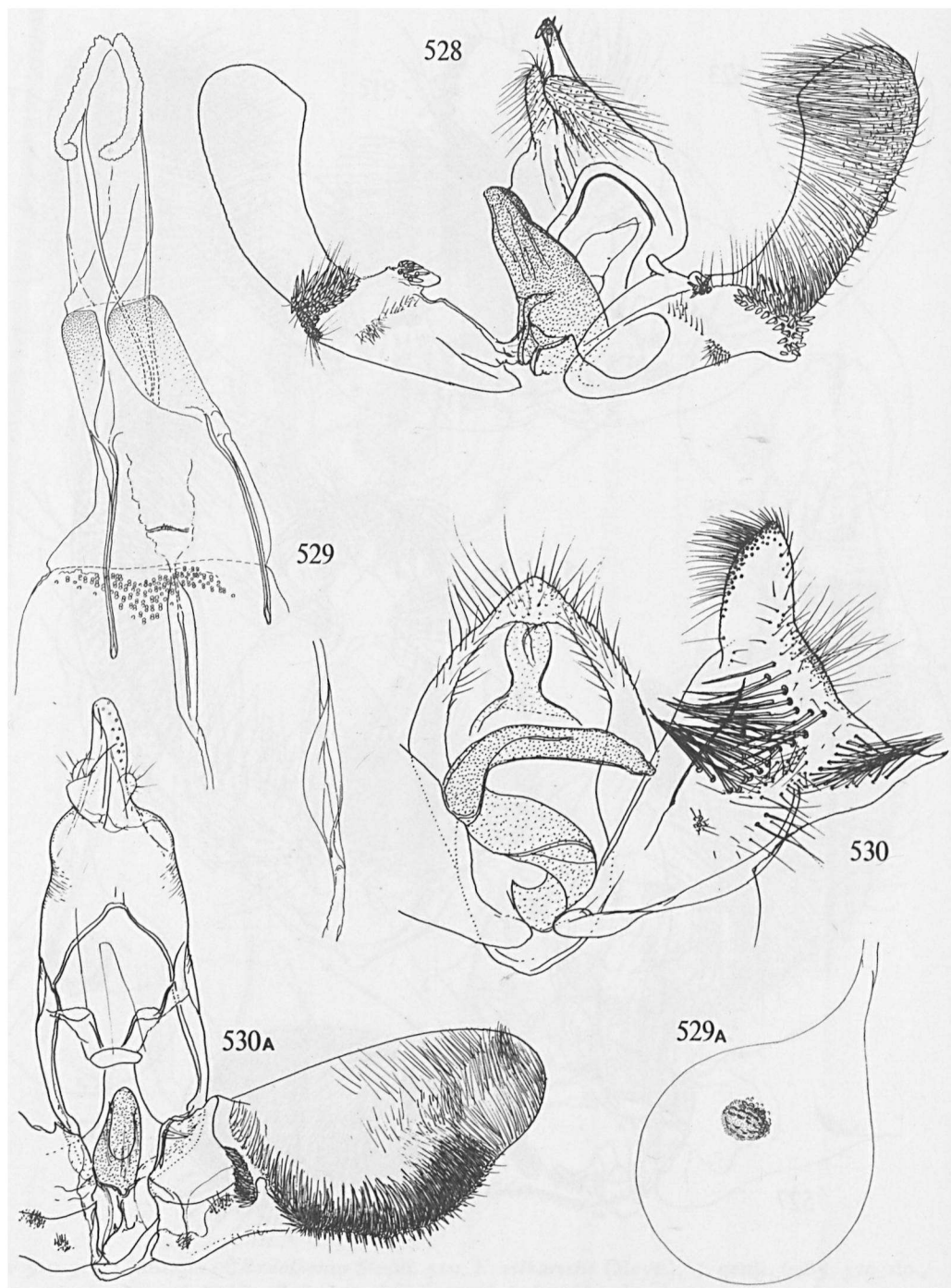
Figs. 518A-F. Heads and wing neuration. 518A-B, *Hemiloba bifacis* sp. n.; 518C-D, *Nyctidea cyanitris* sp. n.; 518E-F, sterigma of *Bubomoxena Diak.* F, *B. endaphana Diak.*; F, *B. ephippias* (Meyr.). (Figs. 518E-F, after Diakonoff, 1968.)



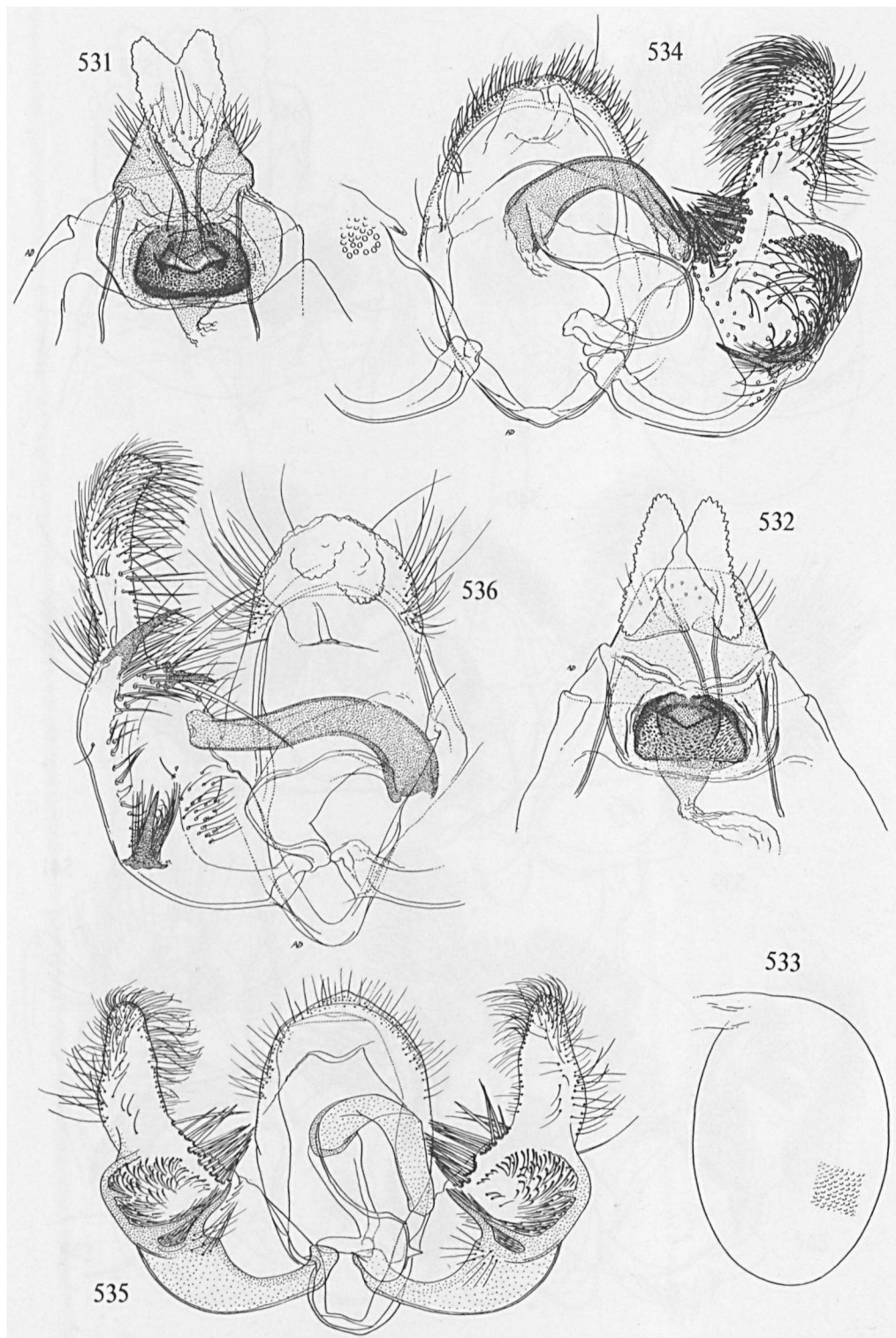
Figs 519-522. Genitalia of *Endothenia* Steph. 519, *E. cilharistis* (Meyr.), ♂, genit. 6985; 520, do., ♂, genit. 5848; 521, do., ♀, genit. 6964; 522, do., bursa.



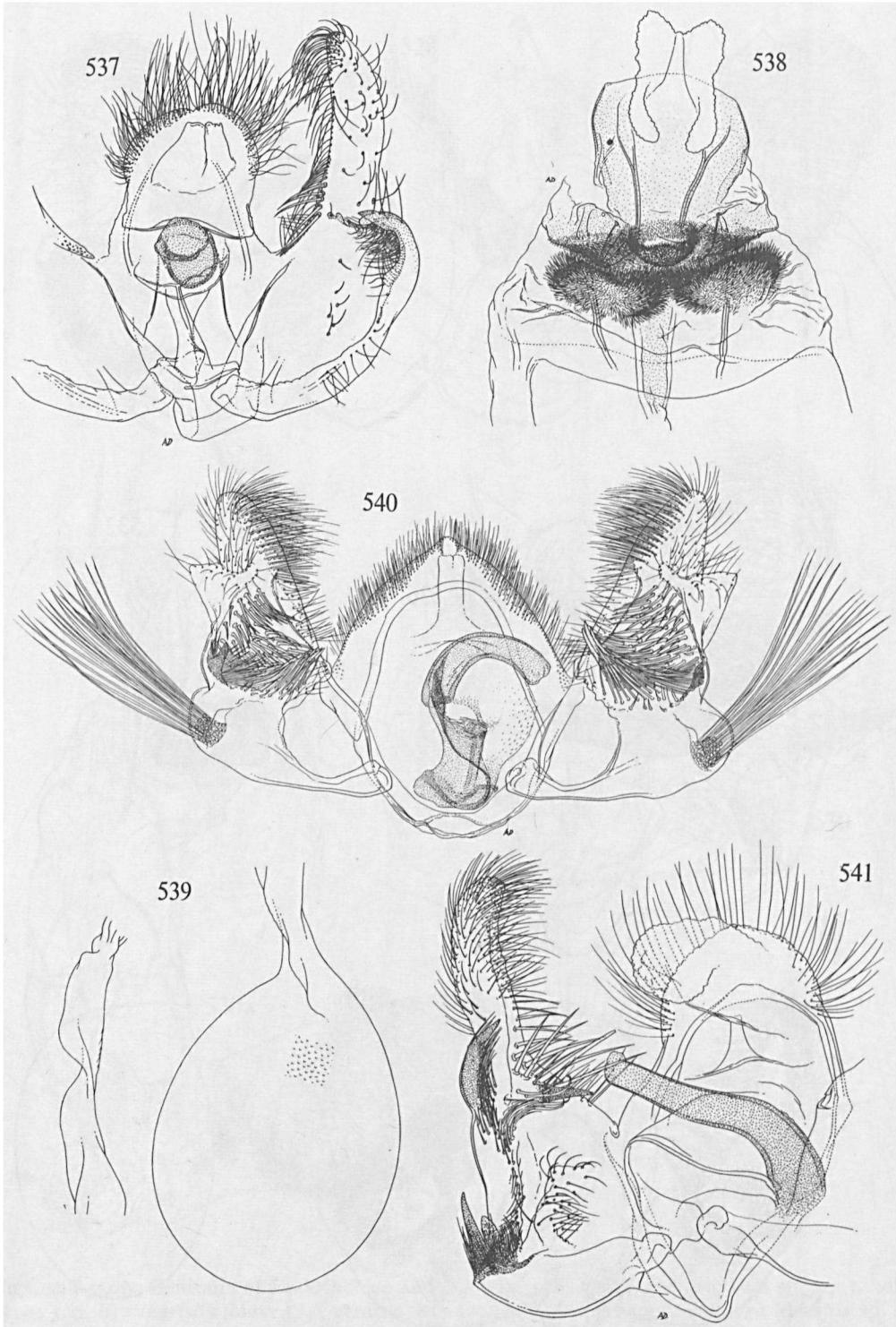
Figs. 523-527. Genitalia of Endotheniae etc. 523, *Endothenia lutescens* sp. n., ♂, holotype; 524, *E. trizona* sp. n., ♂, holotype; 525, *E. micans* sp. n., ♀, holotype; 526, do., bursa; 527, *Henioloba bifacis* sp. n., ♂, holotype.



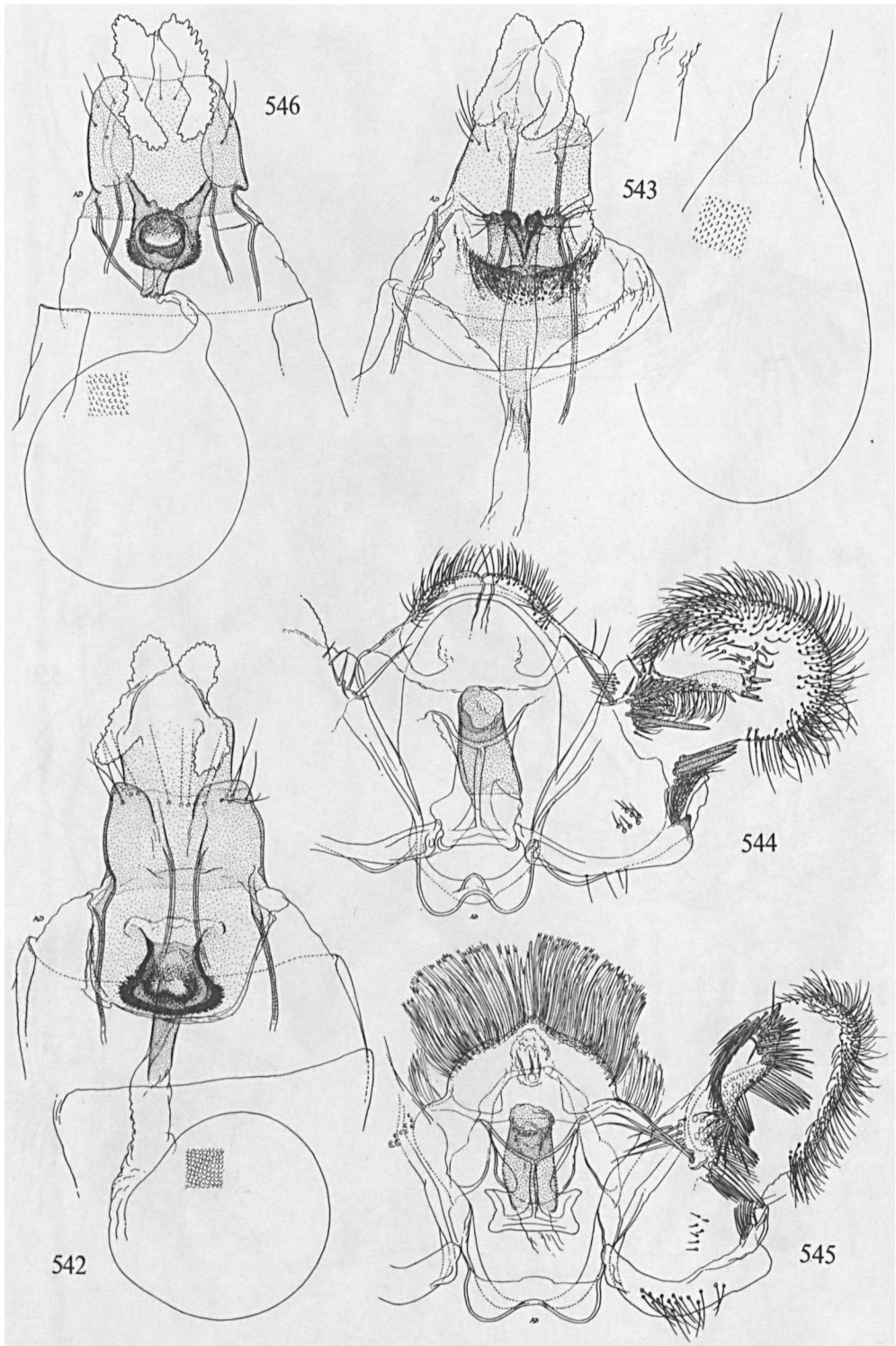
Figs. 528-530A. Genitalia of Endotheniae and Bactrae. 528, *Endothenia bacillata* sp. n., ♂, holotype; 529, *E. citharistis* (Meyr.), ♂, genit. 7181; 529A, do., bursa; 530, *Syntozyga bicuspis* sp. n., ♂, holotype; 530A, *Heniolooba spelaeodes* (Meyr.), ♂, lectotype.



Figs. 531-536. Genitalia of *Syntozyga* Low. 531, *S. pedias* (Meyr.), ♀, genit. 7484; 532, do., ♀, genit. 2139; 533, do., bursa; 534, *S. psammetalla* Low., ♂, genit. 7539 (Sumba); 535, do., ♂, genit. 1751 (Queensland); 536, *S. anconia* (Meyr.), ♂, genit. 1771.

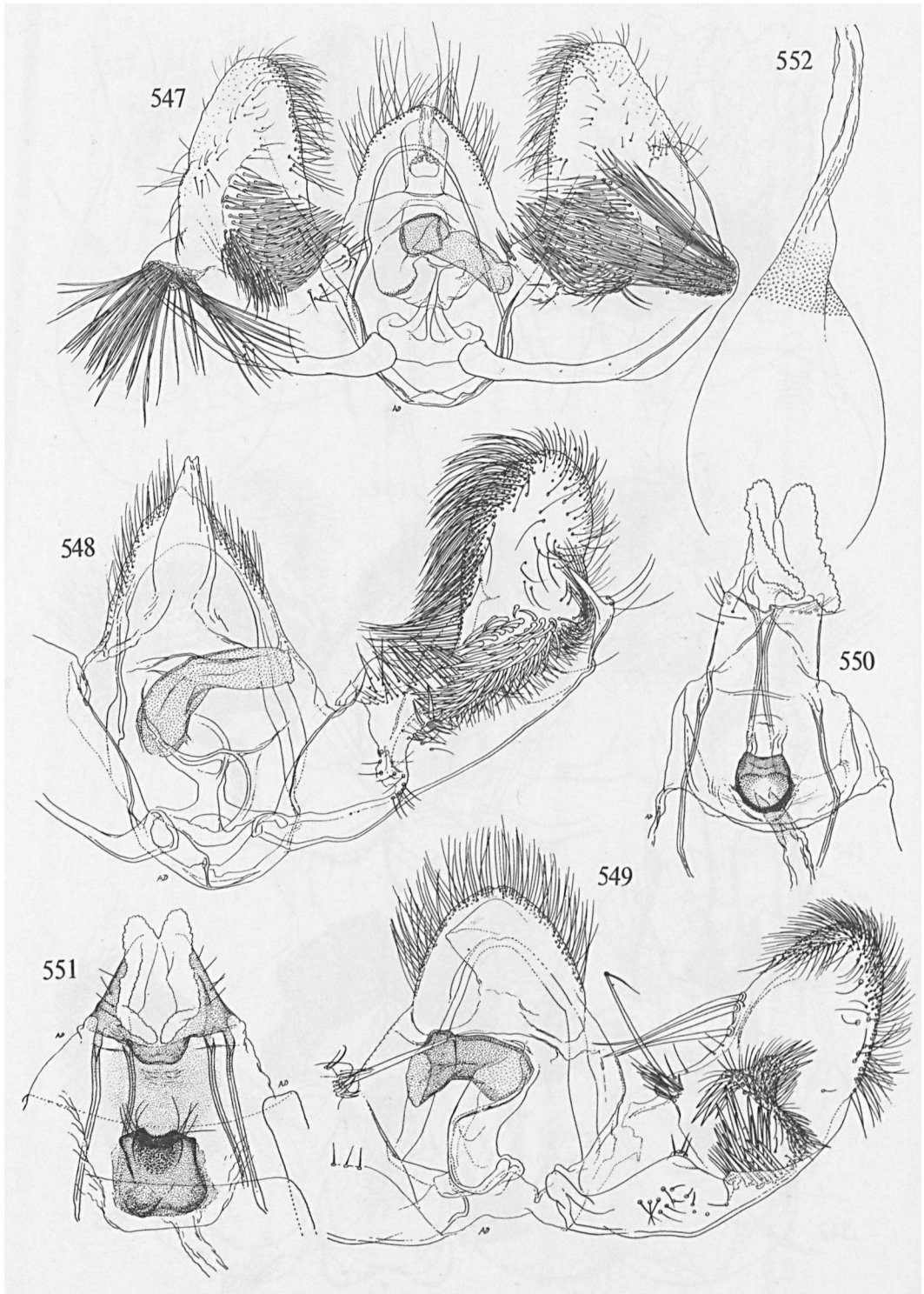


Figs. 537-541. Genitalia of Bactrae. 537, *Syntozyga pedias* (Meyr.), ♂, genit. 7495; 538, *Bubonoxena transversa* sp. n., ♀, holotype; 539, do., bursa; 540, *B. ephippias* (Meyr.), ♂; 541, *S. anconia* (Meyr.), ♂, genit. 1772. (Fig. 540, after Diakonoff, 1968).

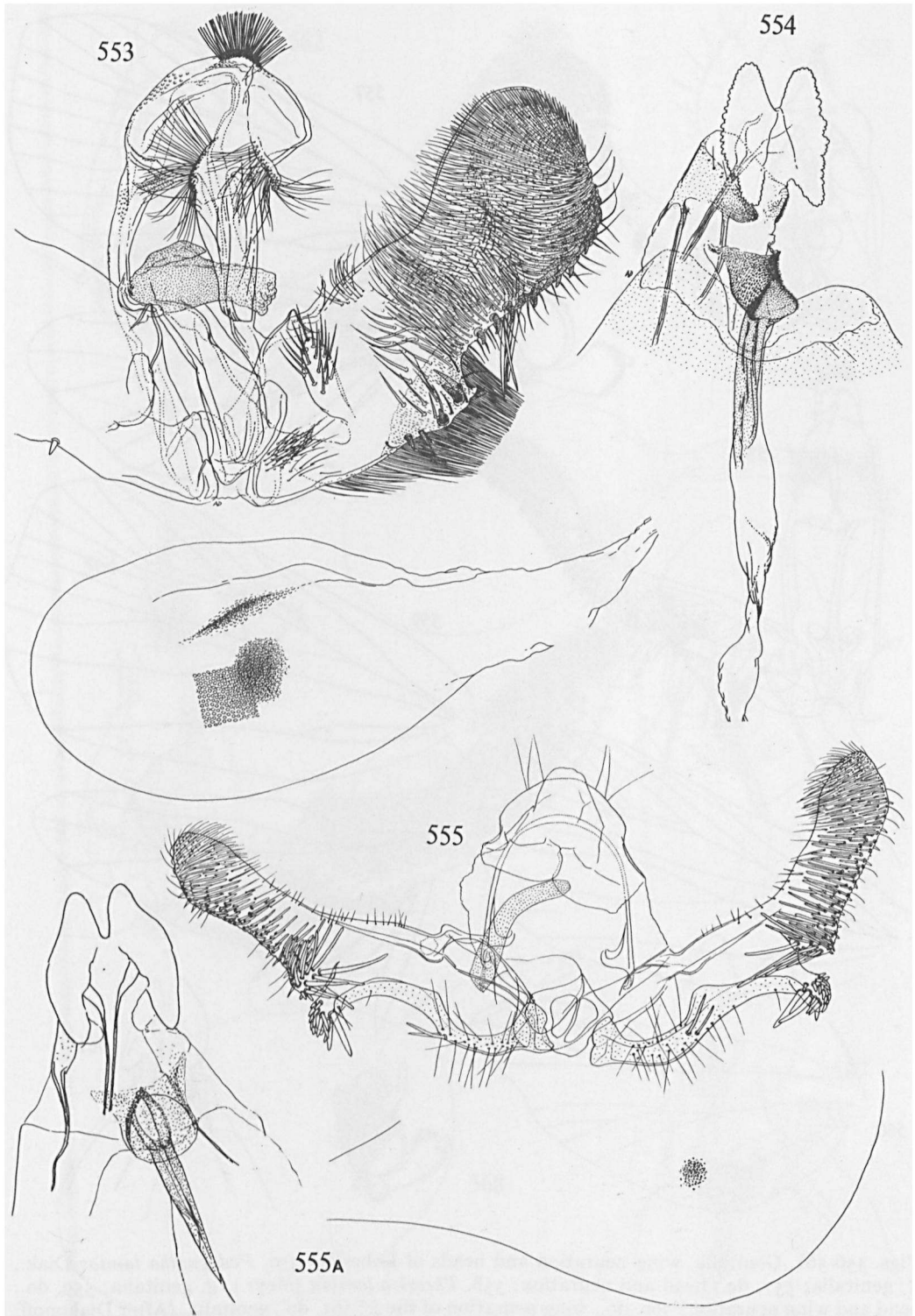


Figs. 542-546. Genitalia of Bactrae. 542, *Cyclacanthina episema* sp. n., ♀, allotype; 543, *Syntozyga psammetalla* Lower, ♀, genit. 7903; 544, *C. episema* sp. n., ♂, holotype; 545, *C. negligens* sp. n., ♂, holotype; 546, *S. pedias* (Meyr.), ♀, genit. 7480.

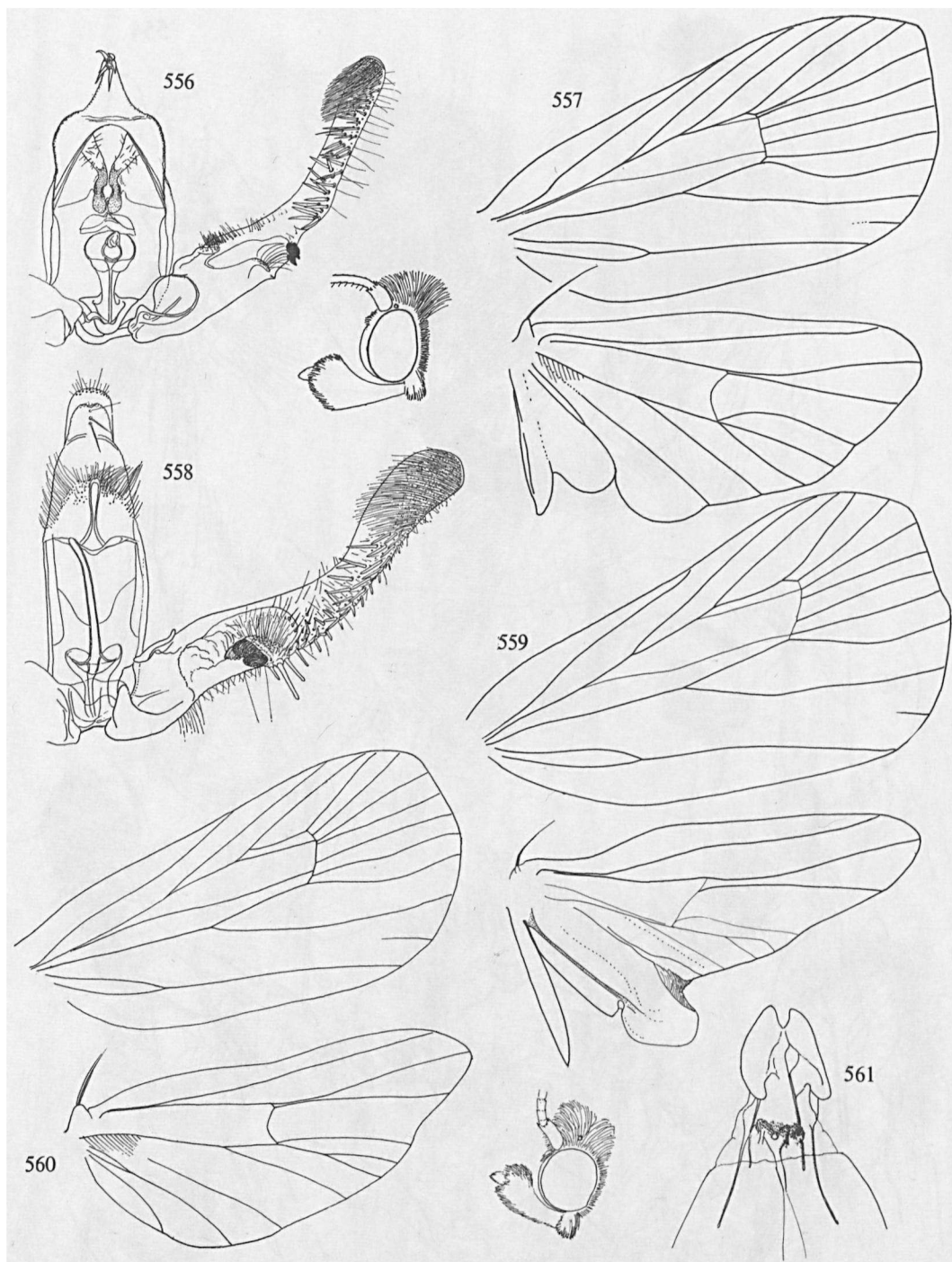




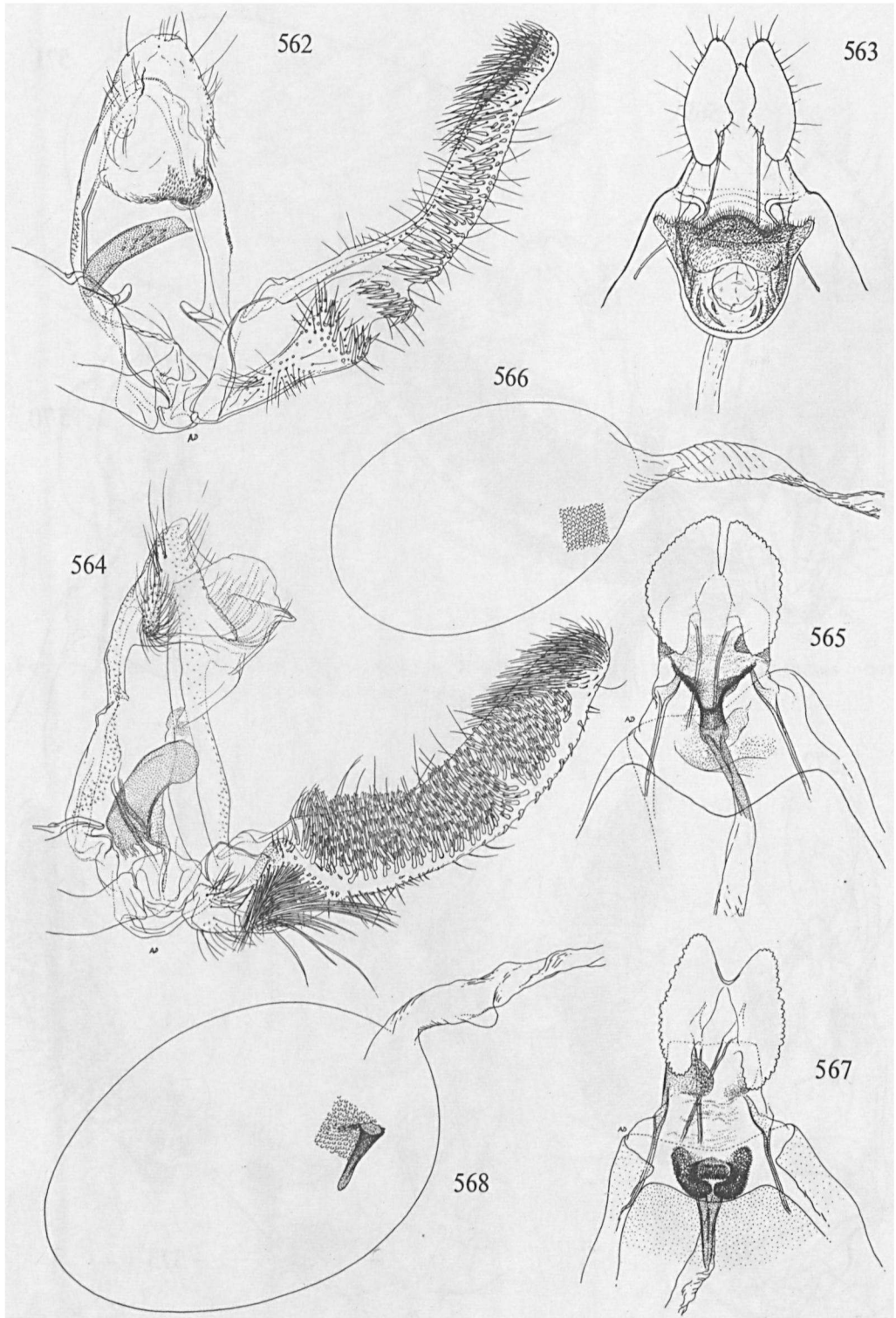
Figs. 547-552. Genitalia of Bactrae. 547, *Bubonoxena spirographa* Diak., ♂, holotype; 548, *Syntozyga stagonophora* sp. n., ♂, holotype; 549, *C. monosema* sp. n., ♂, holotype; 550, do., ♀, allotype; 551, *S. anconia* (Meyr.), ♀, genit. 7909; 552, do., bursa. (Fig. 548, after Diakonoff, 1968).



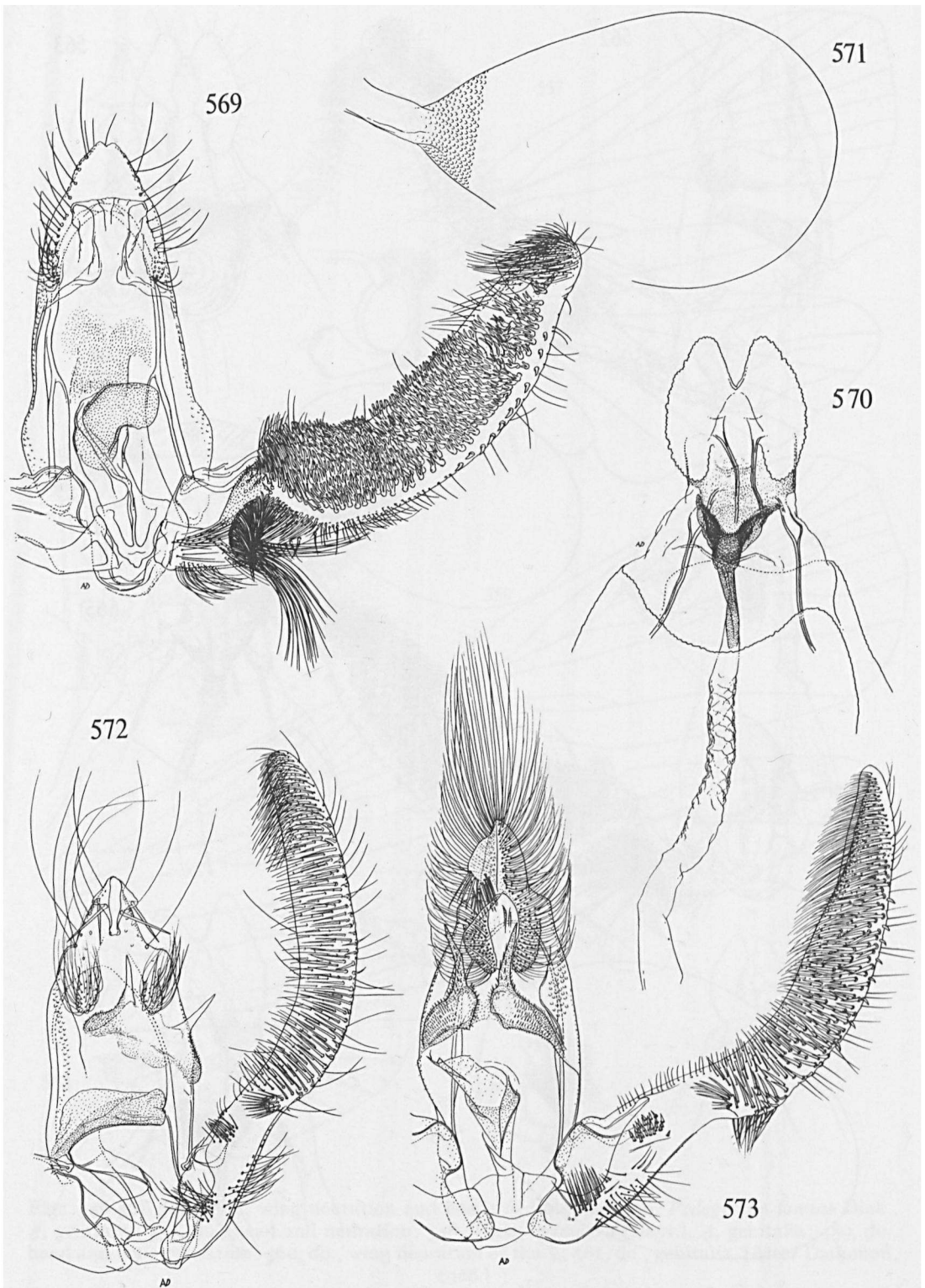
Figs. 553-555A. Genitalia of Olethreutini. 553, *Nyctidea saloris* sp. n., ♂, holotype; 554, *Henioloa bifacis* sp. n., ♀, allotype, with below, left, bursa; 555, *Lobesia (Lomaschiza) acroleuca* sp. n., ♂, holotype; 555A, *H. spelaeodes* (Meyr.), ♀, with bursa.



Figs. 556-561. Genitalia, wing neuration and heads of Lobesiae. 556, *Podognatha tamius* Diak., ♂, genitalia; 557, do., head and neuration; 558, *Theorica lamyra* (Meyr.), ♂, genitalia; 559, do., head and wing neuration; 560, do., wing neuration of the ♀; 561, do., genitalia. (After Diakonoff, 1966.)



Figs. 562-568. Genitalia of Lobesiae. 562, *Lobesia (Lomaschiza) candida* sp. n., ♂, holotype; 563, *L. (Lomaschiza) elasmopyga* sp. n., ♀, holotype; 564, *Xenolepis gabina* (Meyr.), ♂, genit. 6520; 565, do., ♀, genit. 6519; 566, do., bursa; 567, *Didrimys harmonica* (Meyr.), ♀, genit. 6368; 568, do., bursa.



Figs. 569-573. Genitalia of Lobesiae. 569, *Xenolepis dolichoschiza* sp. n., ♂, holotype; 570, do., ♀, allotype; 571, do., bursa; 572, *Didrimys philocompsa* (Meyr.), ♂, genit. 5817; 573, *D. harmonica* (Meyr.), ♂, genit. 6590.

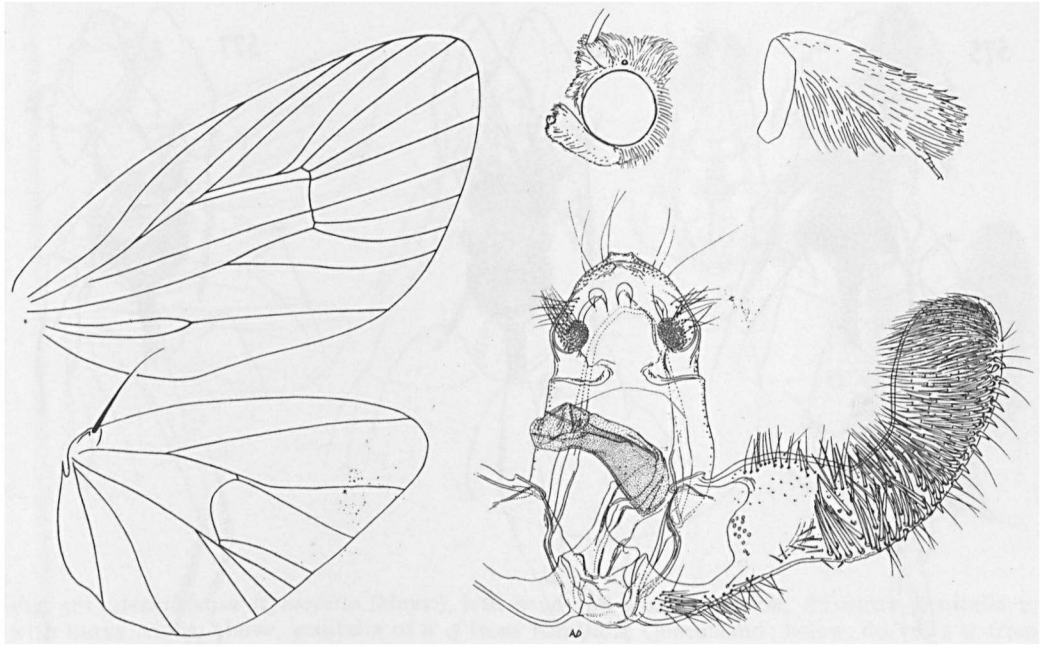
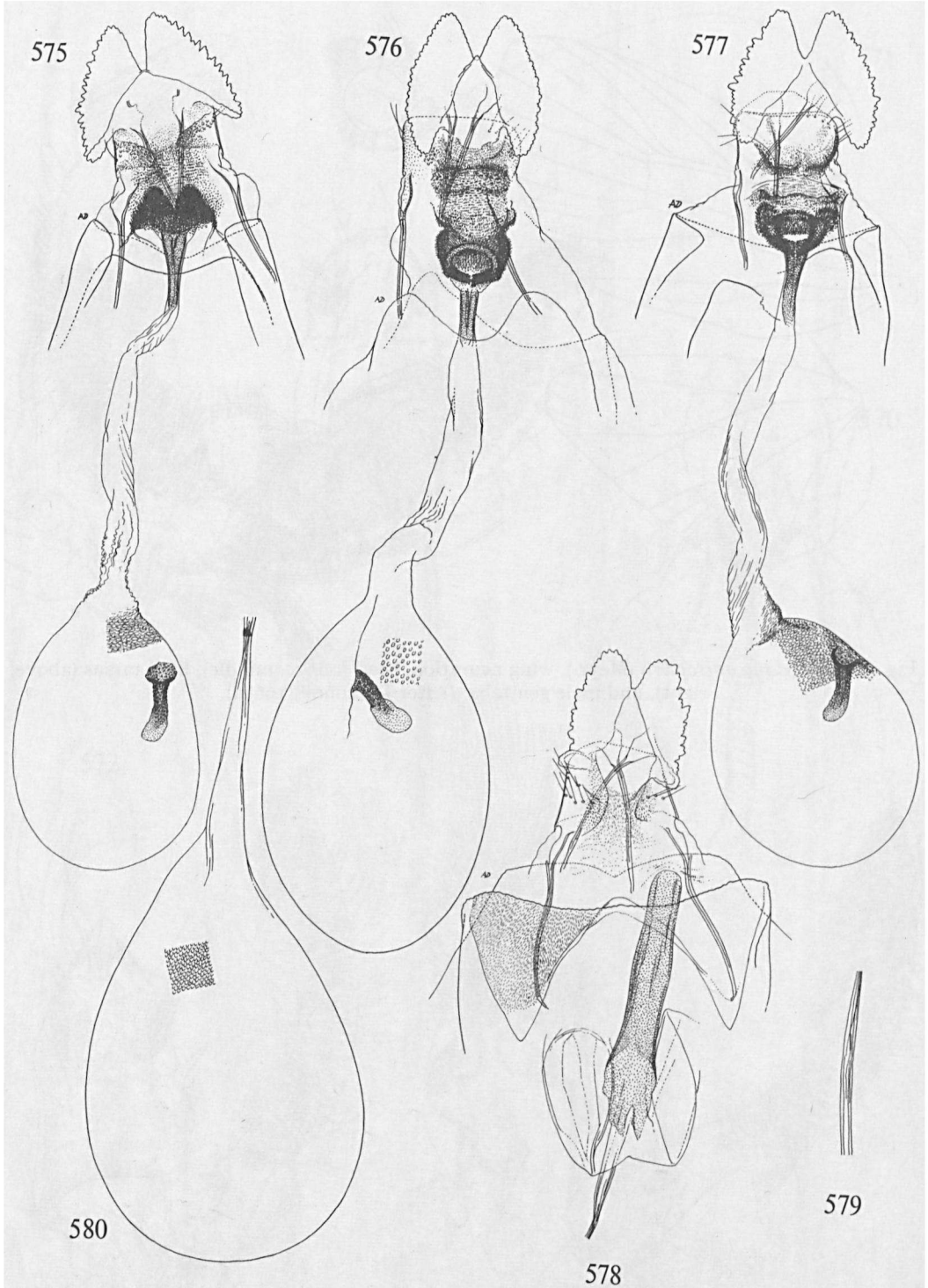


Fig. 574. *Engelana anisoptera* (Meyr.), wing neuration, head (above, middle), hind tarsus (above, right), and male genitalia. (After Diakonoff, 1968a).



Figs. 575-580. Female genitalia of *Lobesiae*. 575, *Didrimys philocompsa* (Meyr.), genit. 6614; 576, *D. unicolor* sp. n., holotype; 577, *D. harmonica* (Meyr.), genit. 6617; 578, *Lobesia (Lobesia) atrata* sp. n., holotype; 579, do., part of ductus bursae; 580, do., bursa.

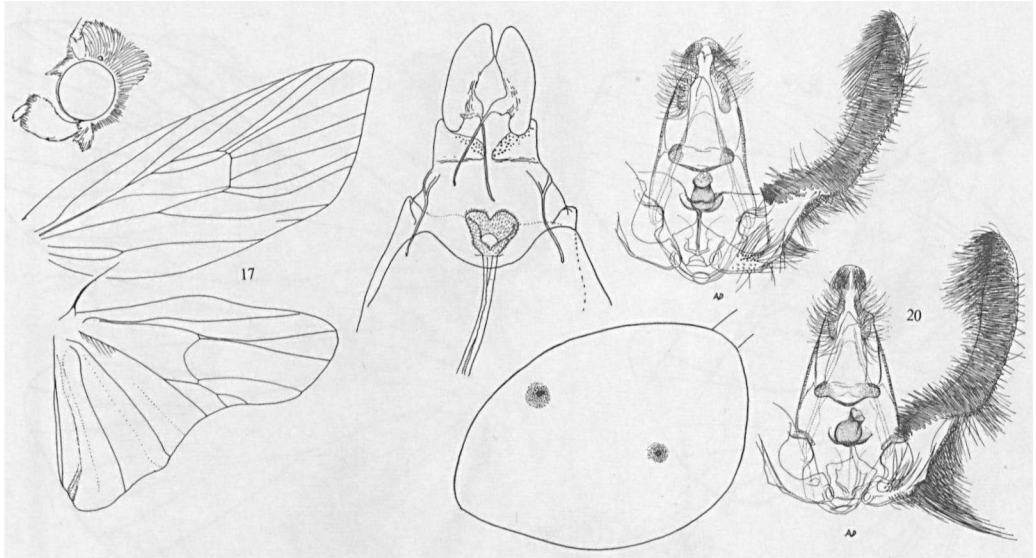
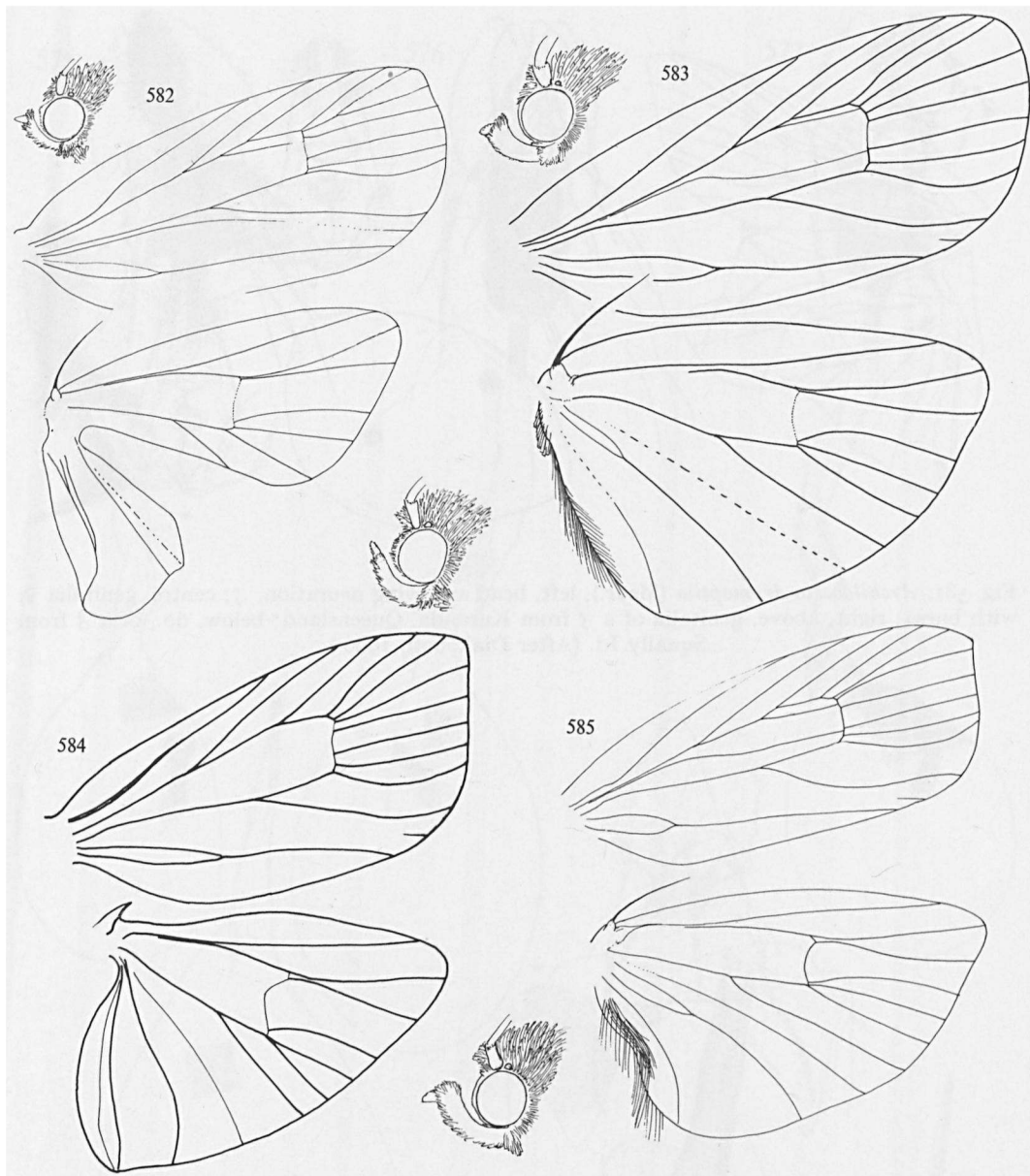
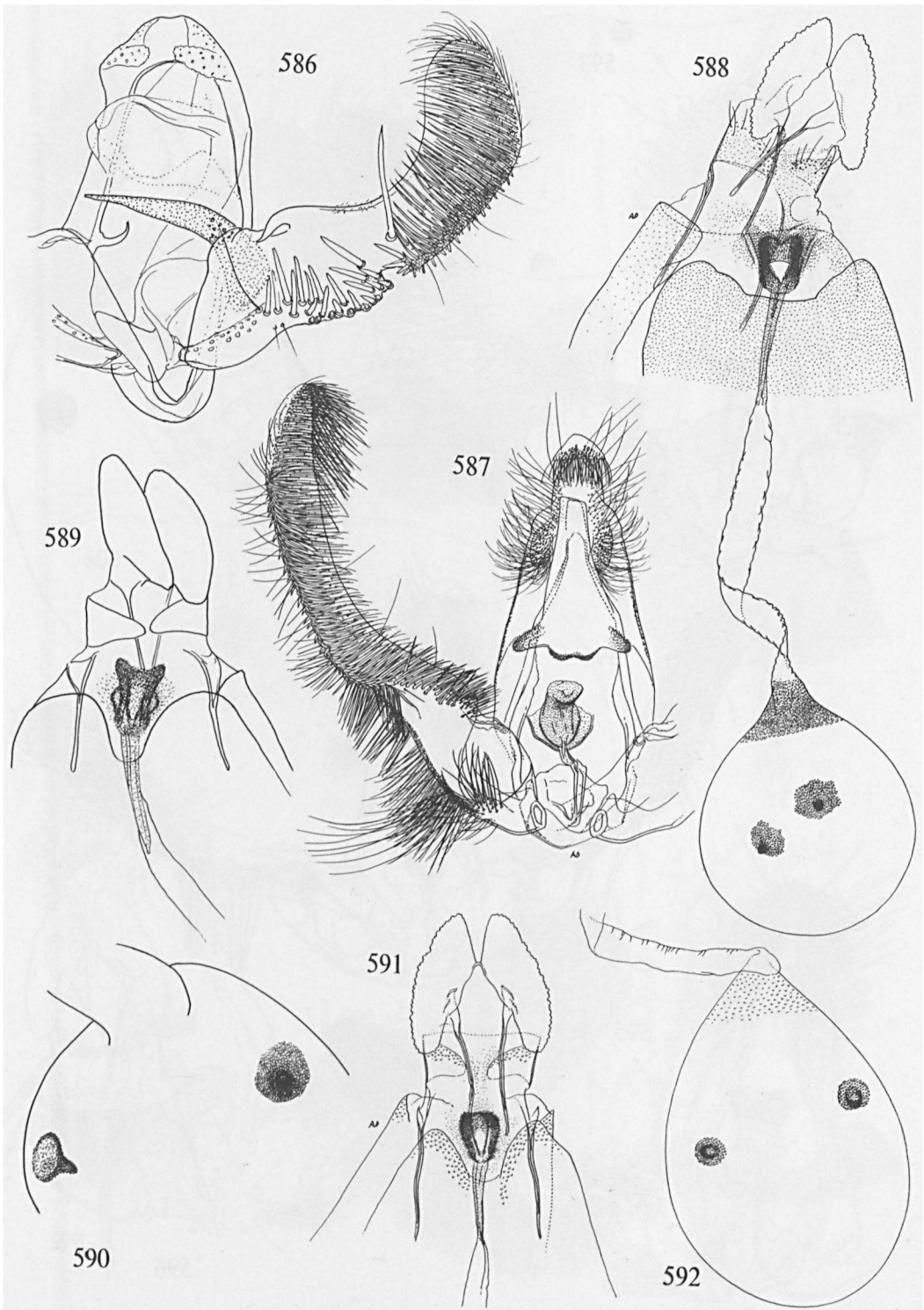


Fig. 581. *Archilobesia drymoptila* (Meyr.), left, head and wing neuration, ♂; centre, genitalia ♀, with bursa; right, above, genitalia of a ♂ from Kuranda, Queensland; below, do., of a ♂ from Squally Id. (After Diakonoff, 1966.)

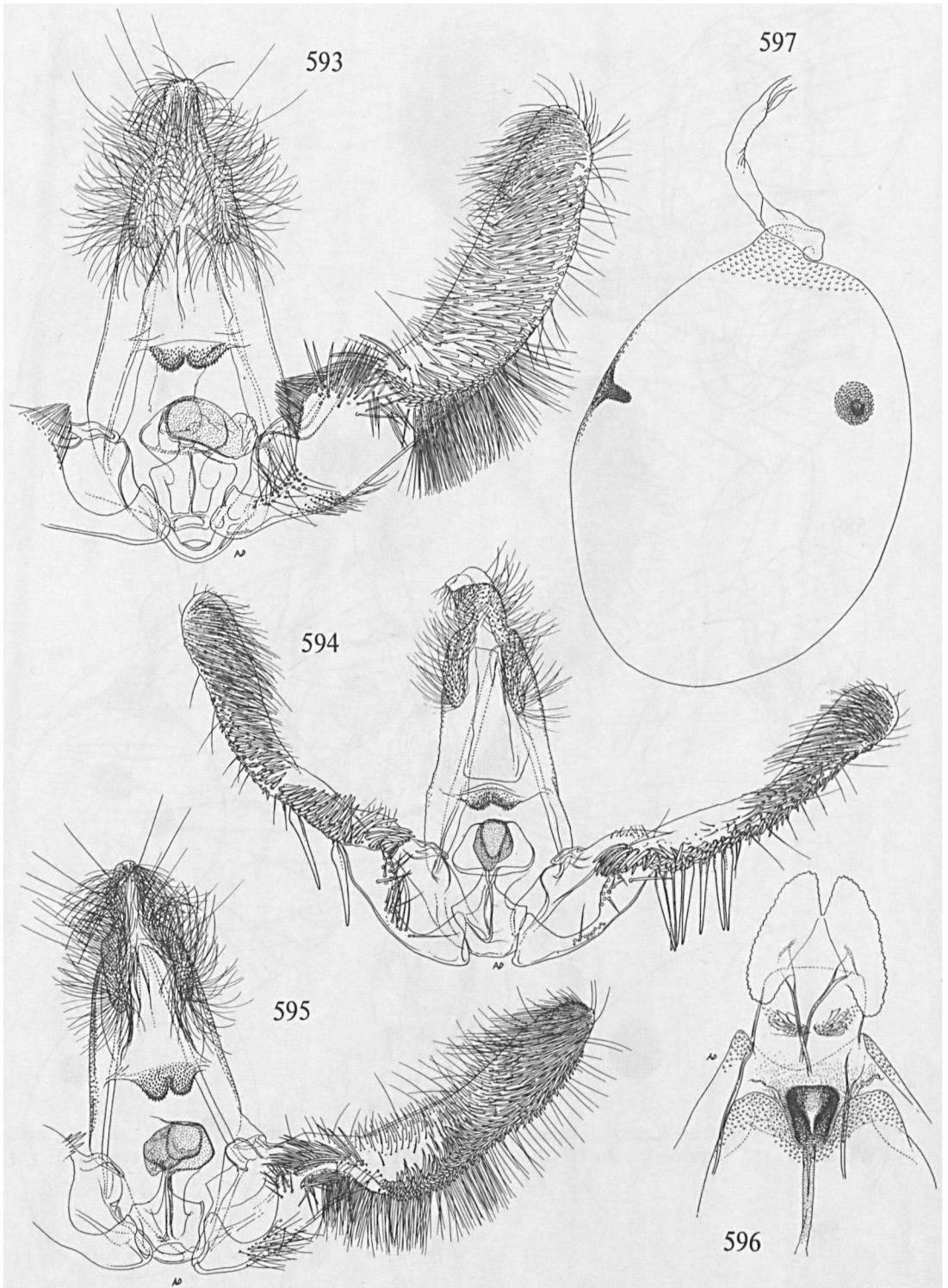




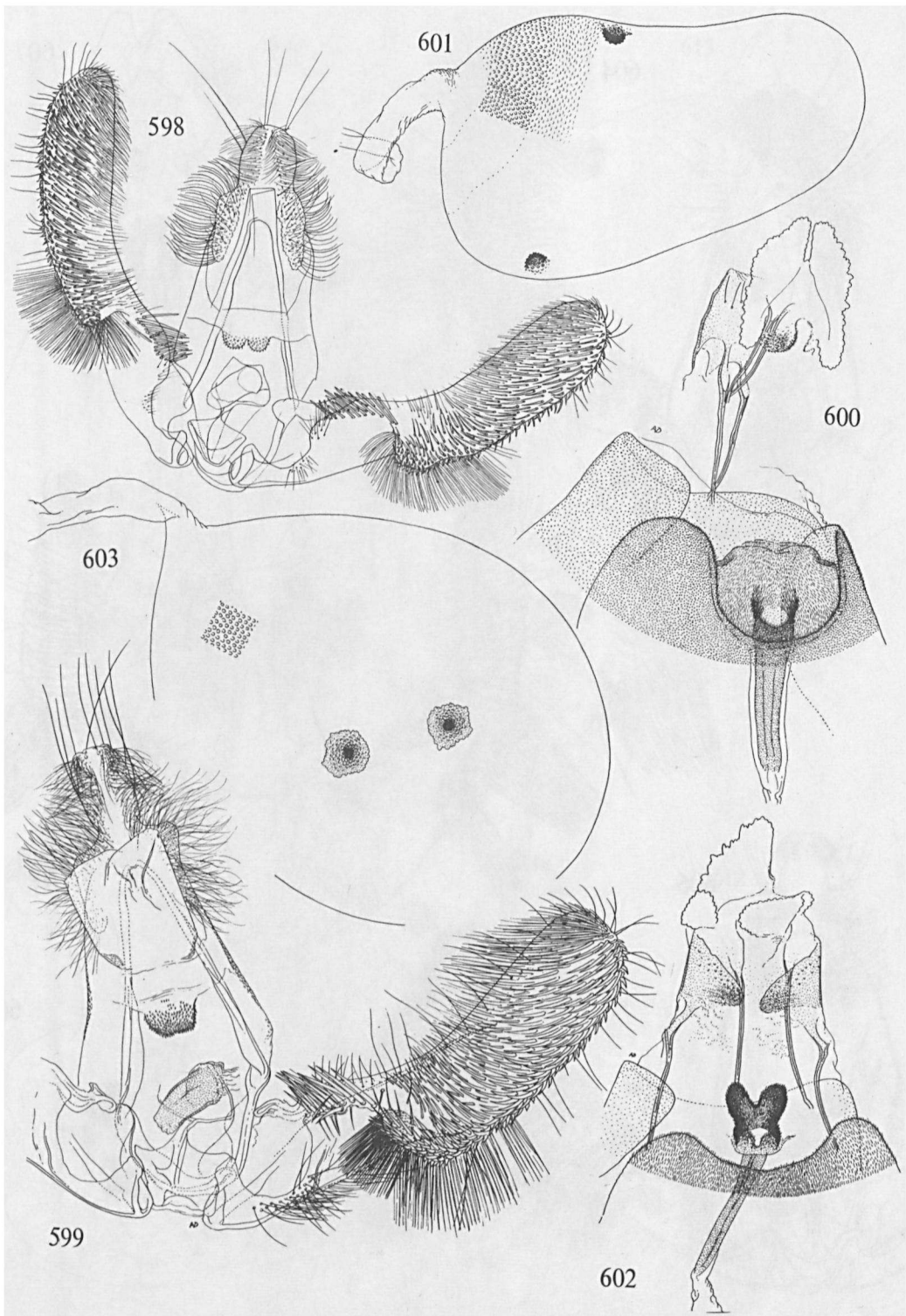
Figs. 582-585. Heads and wing neuration of male Olethreutini. 582, *Xenolepis gabina* (Meyr.); 583, *Didrimys harmonica* (Meyr.); 584, *Dudua hesperialis* Walk., holotype; 585, *Lasiognatha mormopa* (Meyr.).



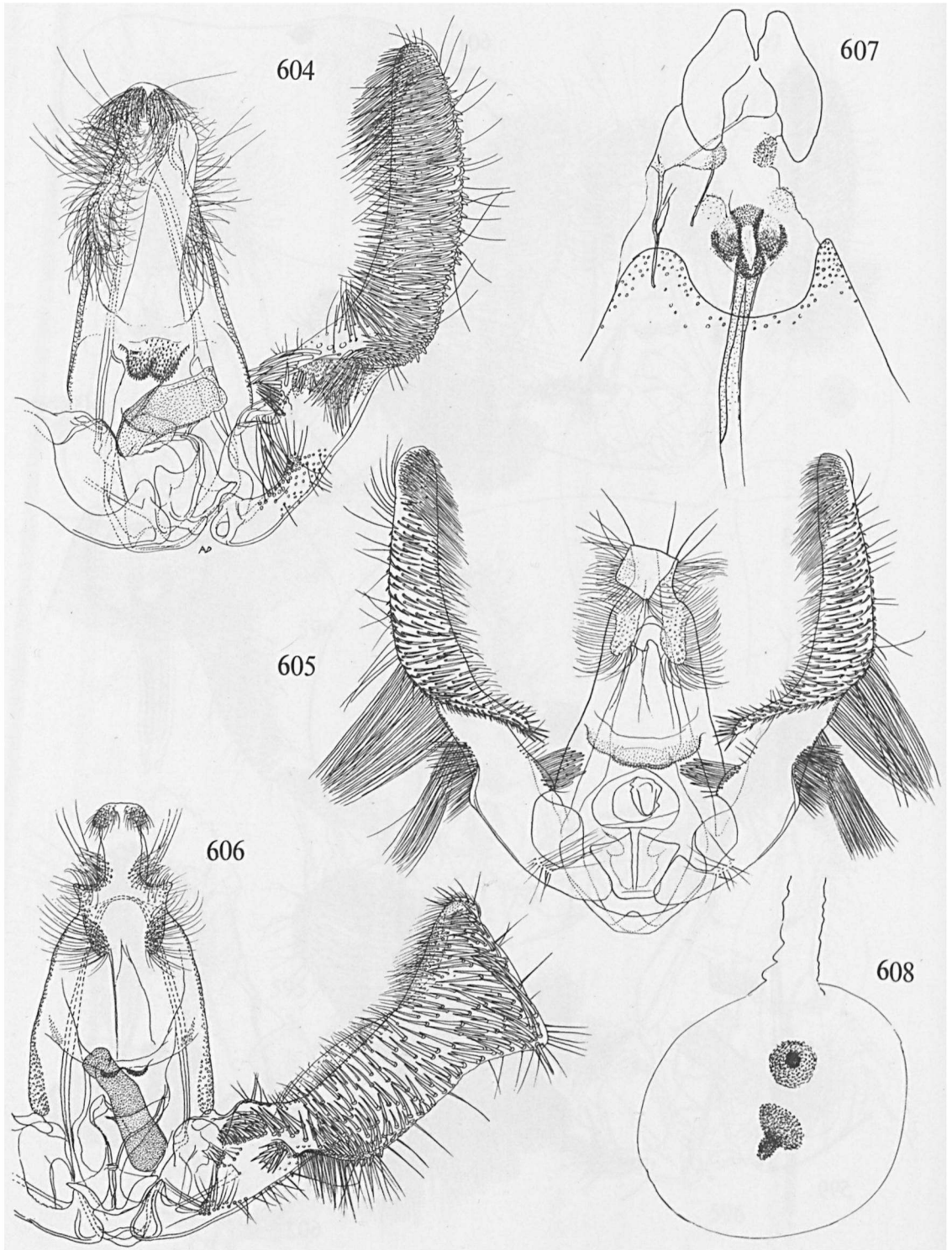
Figs. 586-592. Genitalia of Olethreutini. 586, *Lobesia (Lobesia) clavosa* sp. n., ♂, holotype; 587, *Archilobesia drymoptila crossoleuca* (Meyr.), ♂, genit. 6249; 588, do., ♀, genit. 6248; 589, *Dudua crossotoma* (Meyr.), ♀; 590, do., bursa; 591, *D. tectigera* (Meyr.), ♀, genit. 5850; 592, do., bursa. (Figs. 589, 590, after Diakonoff, 1966).



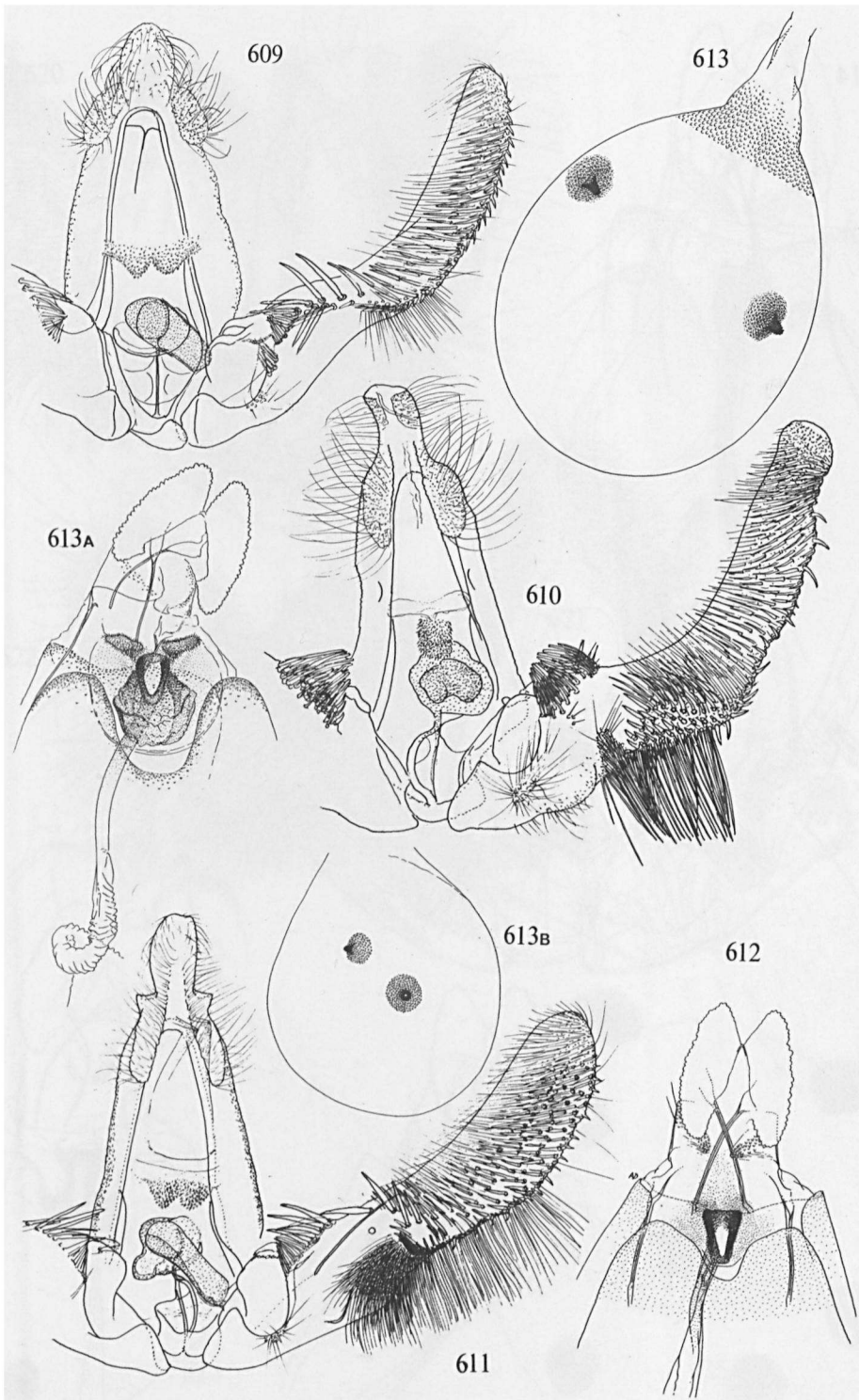
Figs. 593-597. Genitalia of *Dudua* Walk. 593, *D. piratodes* (Meyr.), ♂, genit. 2039; 594, *D. anaprobola* (Bradley), ♂; 595, *D. metacyma* sp. n., ♂, holotype; 596, *D. cyclographa* sp. n., ♀, holotype; 597, do., bursa. (Fig. 594, after Diakonoff, 1968).



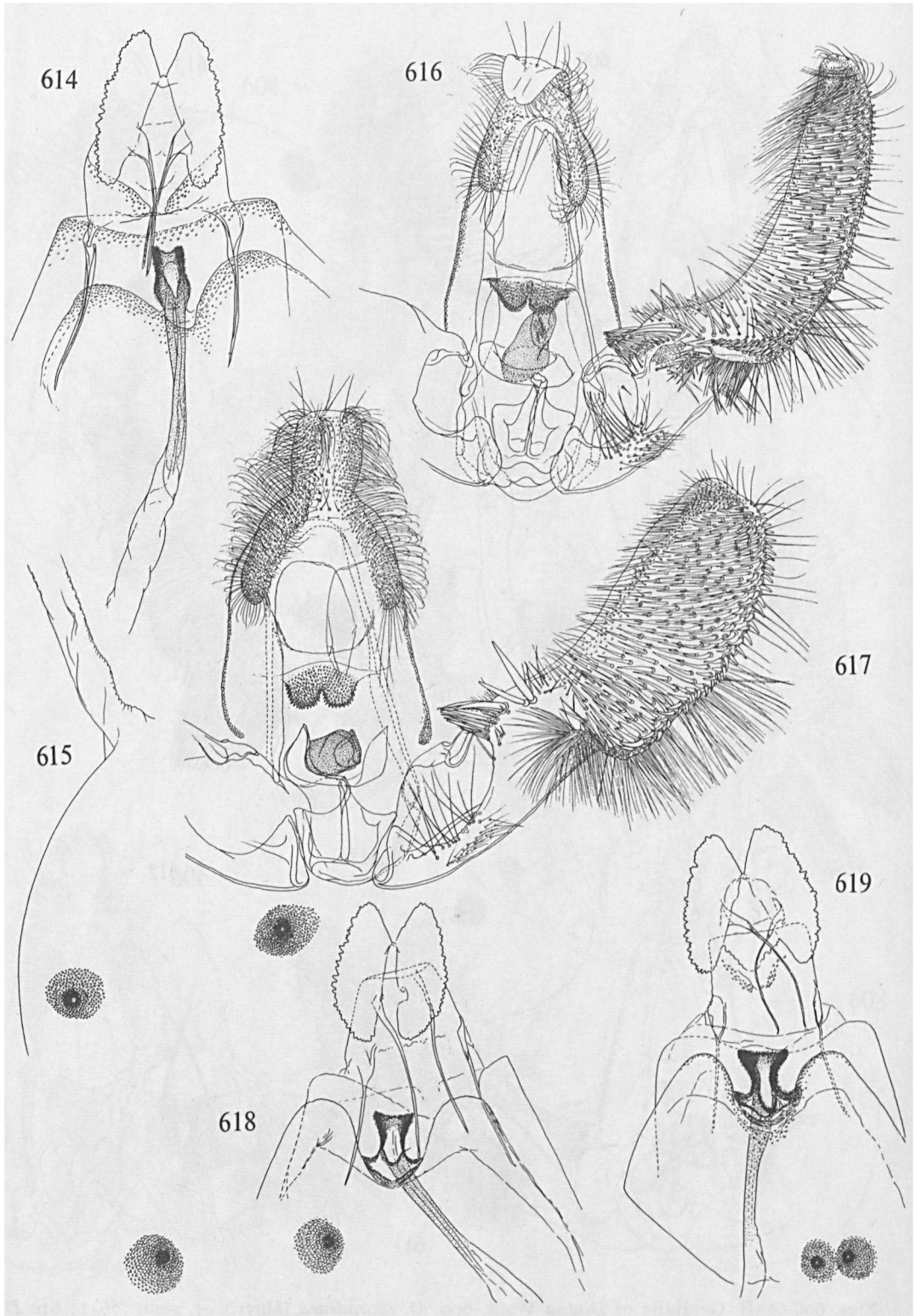
Figs. 598-603. Genitalia of Olethreutae. 598, *Dudua tectigera* (Meyr.), ♂, genit. 3411; 599, *D. proba* sp. n., ♂, holotype; 600, *D. chlorohygra* sp. n., ♀, holotype; 601, do., bursa; 602, *Archilobesia chresta* sp. n., ♀, holotype; 603, do., bursa.



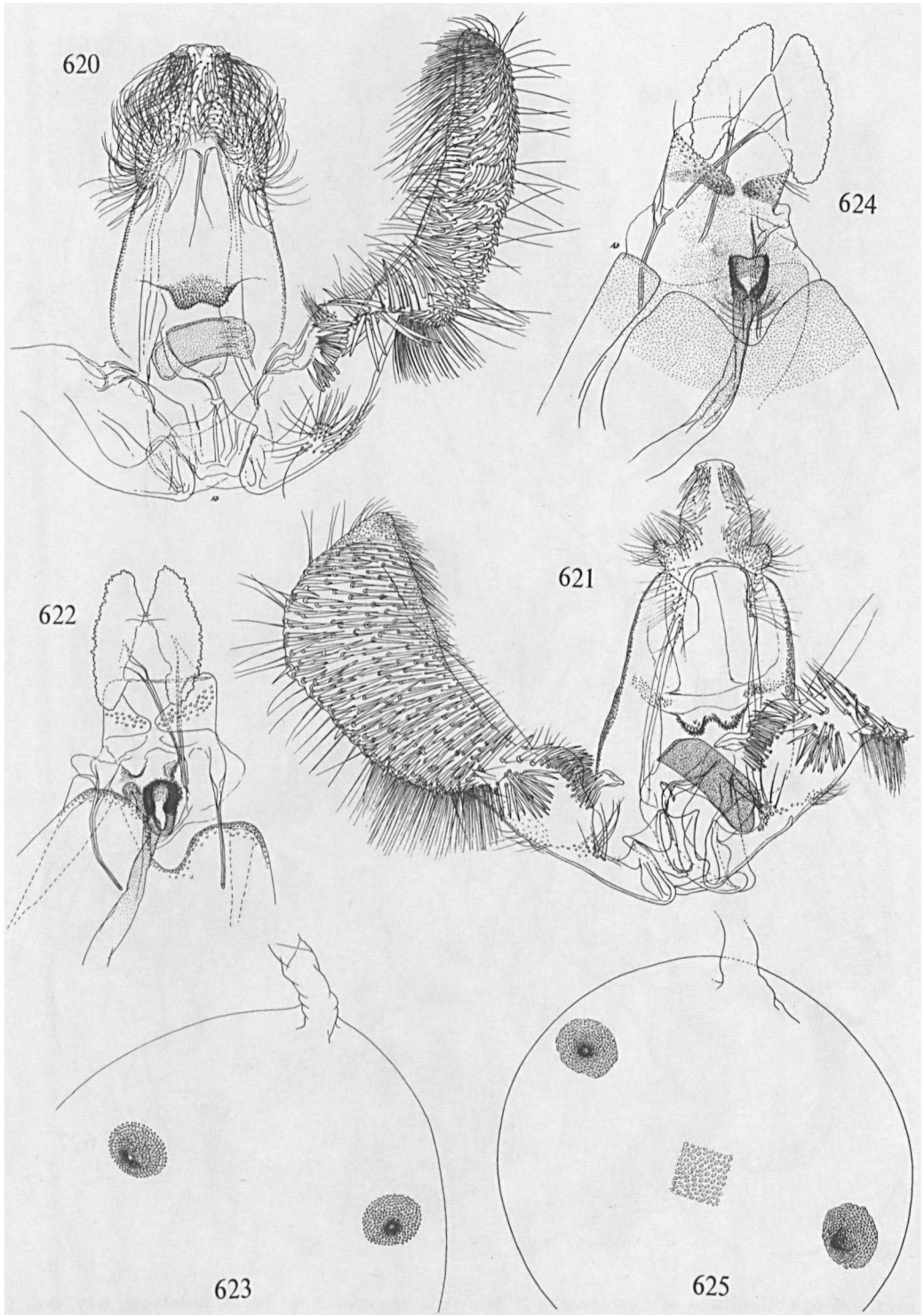
Figs. 604-608. Genitalia of *Dudua* Walk. 604, *D. crossotoma* (Meyr.), ♂; 605, *D. tetanota* (Meyr.), ♂, genit. 3409; 606, *D. brachytoma* sp. n., ♂, holotype; 607, *D. tetanota* (Meyr.), ♀, genit. 7750; 608, do., bursa. (Fig. 604, after Diakonoff, 1966.)



Figs. 609-613B, Genitalia of *Dudua* Walk. 609, *D. charadraea* (Meyr.), ♂, genit. 7641; 610 *D. hesperialis* Walk., ♂, genit. 7738; 611, *D. carpophora* sp. n., ♂, holotype; 612, *D. charadraea* (Meyr.), ♀, genit. 7754; 613, do., bursa. 613A, *D. phyllanthana* (Meyr.), ♀, genit. 8041; 613B, do., bursa.

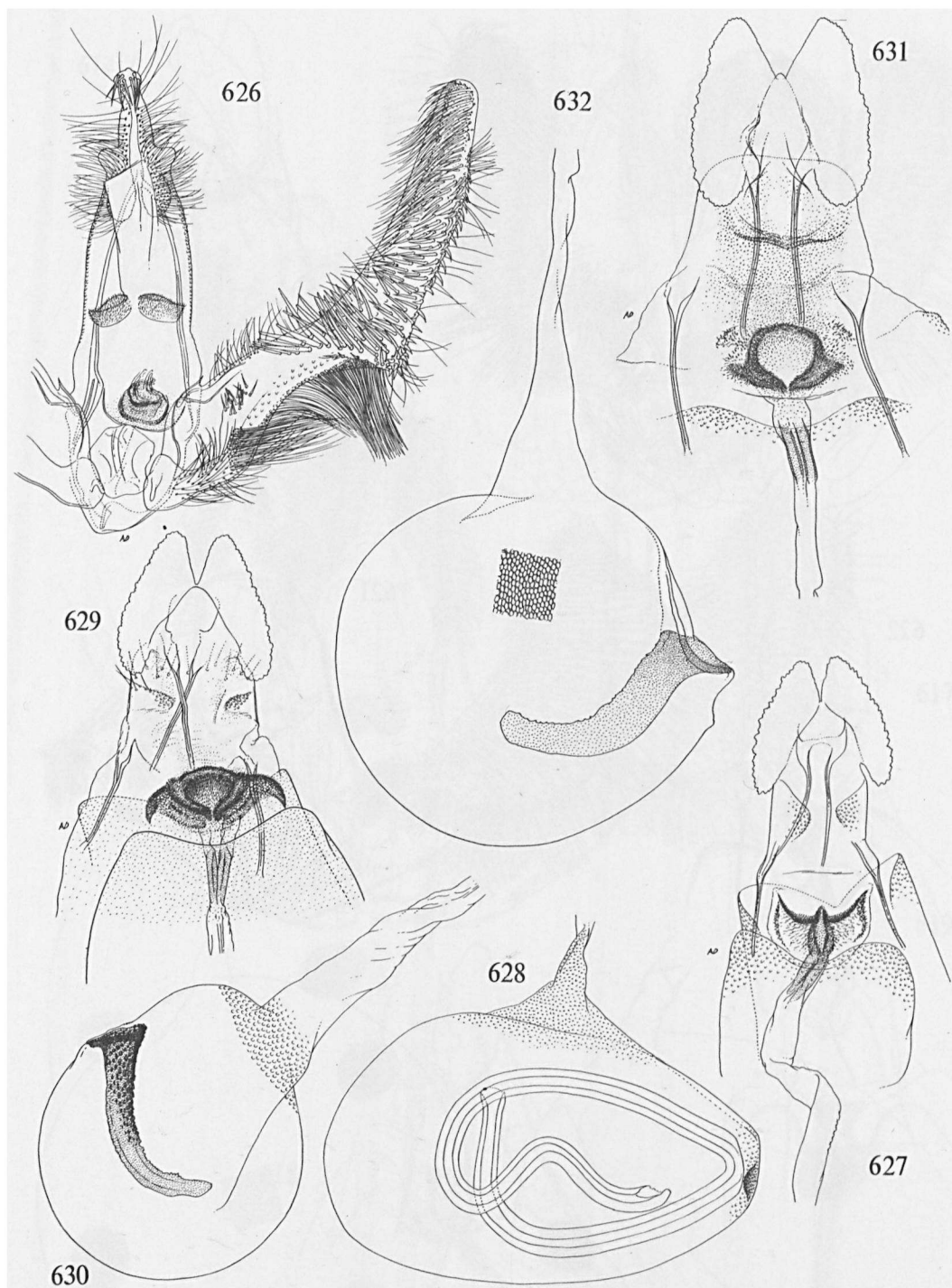


Figs. 614-619. Genitalia of *Dudua* Walk. 614, *D. perornata* sp. n., ♀, holotype; 615, do., fragment of bursa; 616, *D. lamproterma* sp. n., ♂, holotype; 617, *D. aprobola* (Meyr.), ♂, genit. 7745; 618, do., ♀, with signa, genit. 3262 (Seychelles Is.); 619, do., genit. 7645 (Canton).

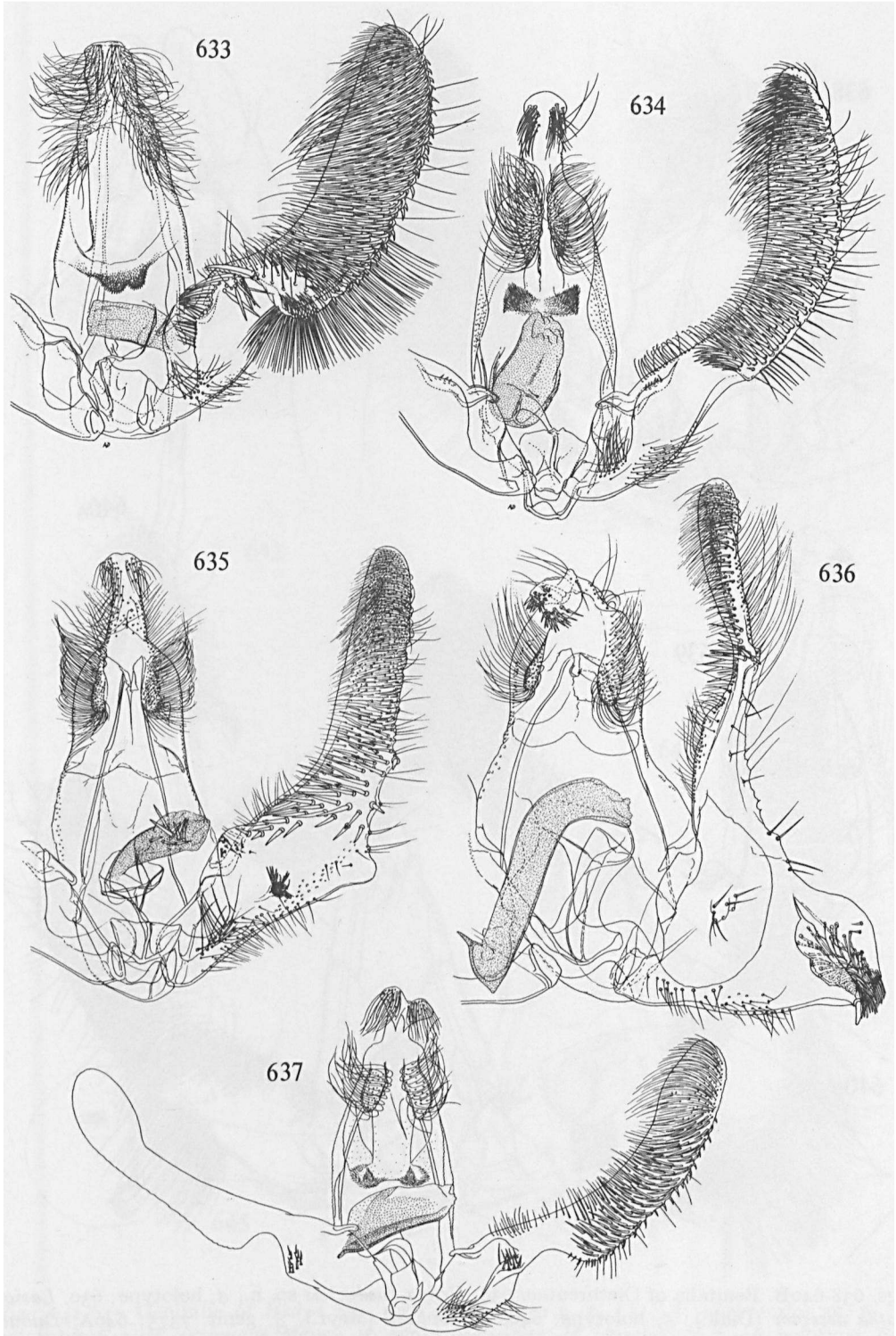


Figs. 620-625. Genitalia of *Dudua* Walk. 620, *D. ultima* sp. n., ♂, holotype; 621, *D. microsema* sp. n., ♂, holotype; 622, *D. lamproterma* sp. n., ♀, allotype; 623, do., bursa; 624, *D. microsema* sp. n., ♀, allotype; 625, do., bursa.

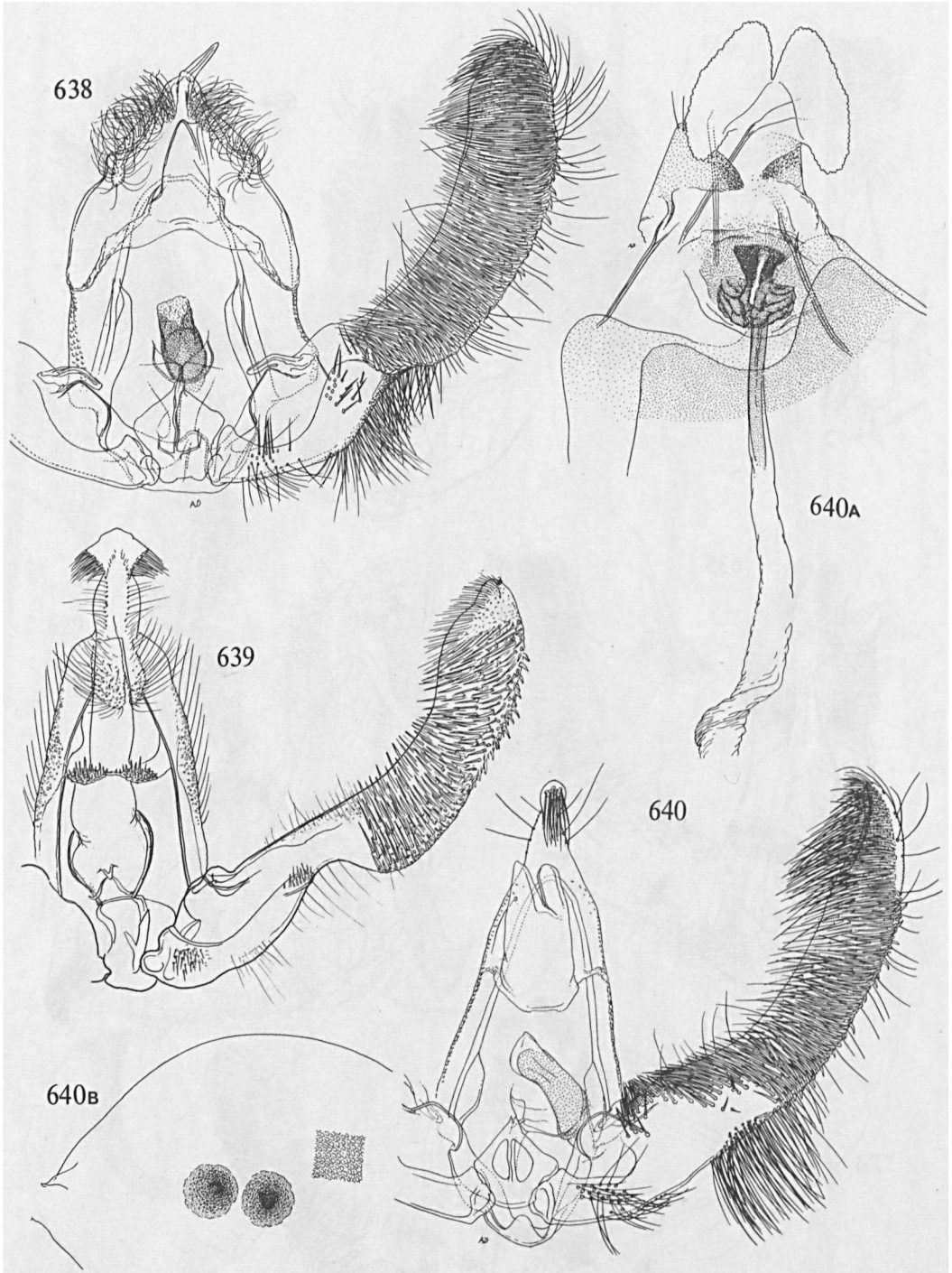




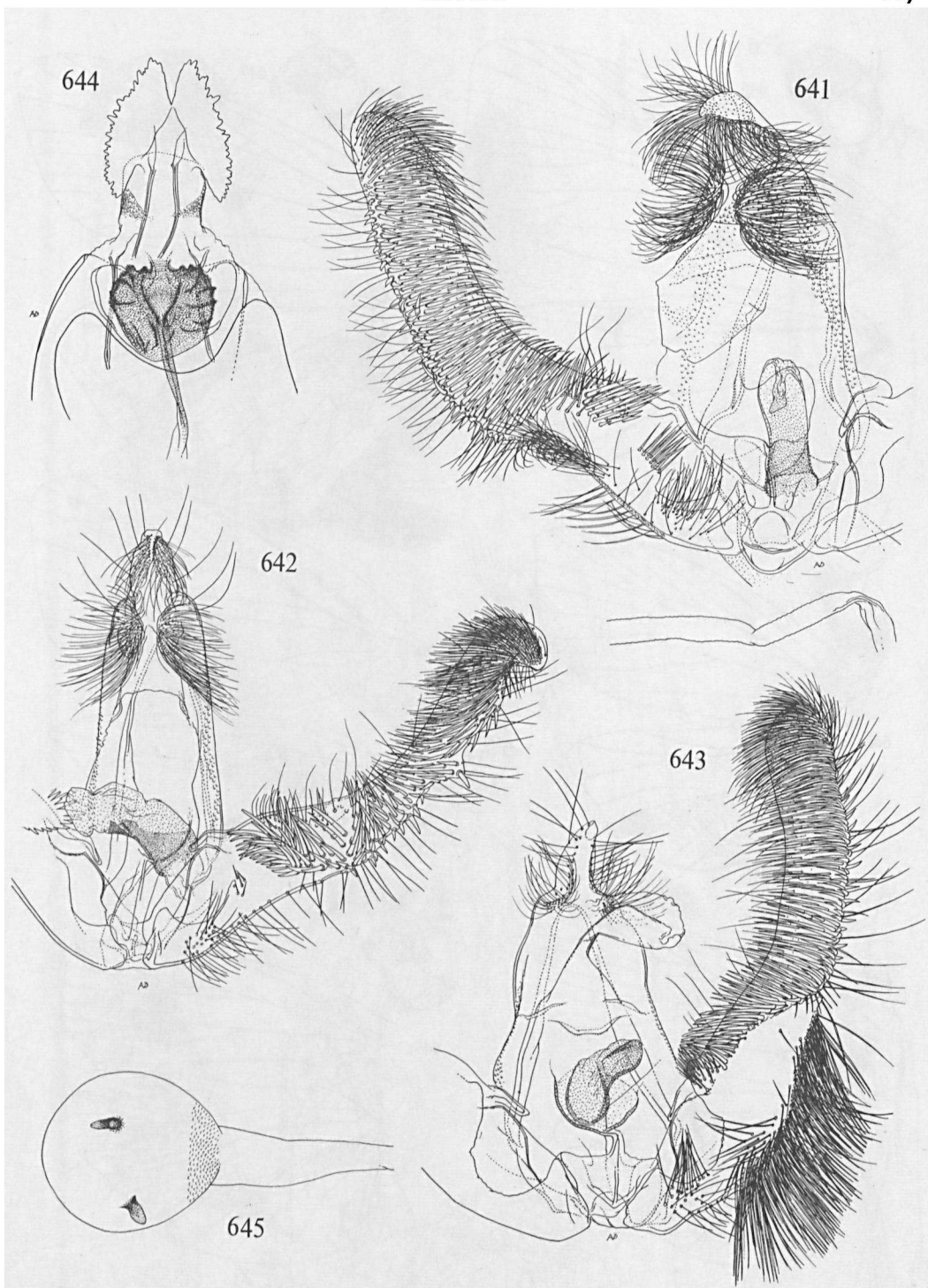
Figs. 626-632. Genitalia of *Lasiognatha* g. n. 626, *L. quartaria* sp. n., ♂, holotype; 627, do., ♀, allotype; 628, do., bursa; 629, *L. mormopa* (Meyr.), ♀, genit. 7631; 630, do., bursa; 631, *L. cellifera* (Meyr.), ♀; 632, do., bursa. (Figs. 631-632, after Diakonoff, 1968.)



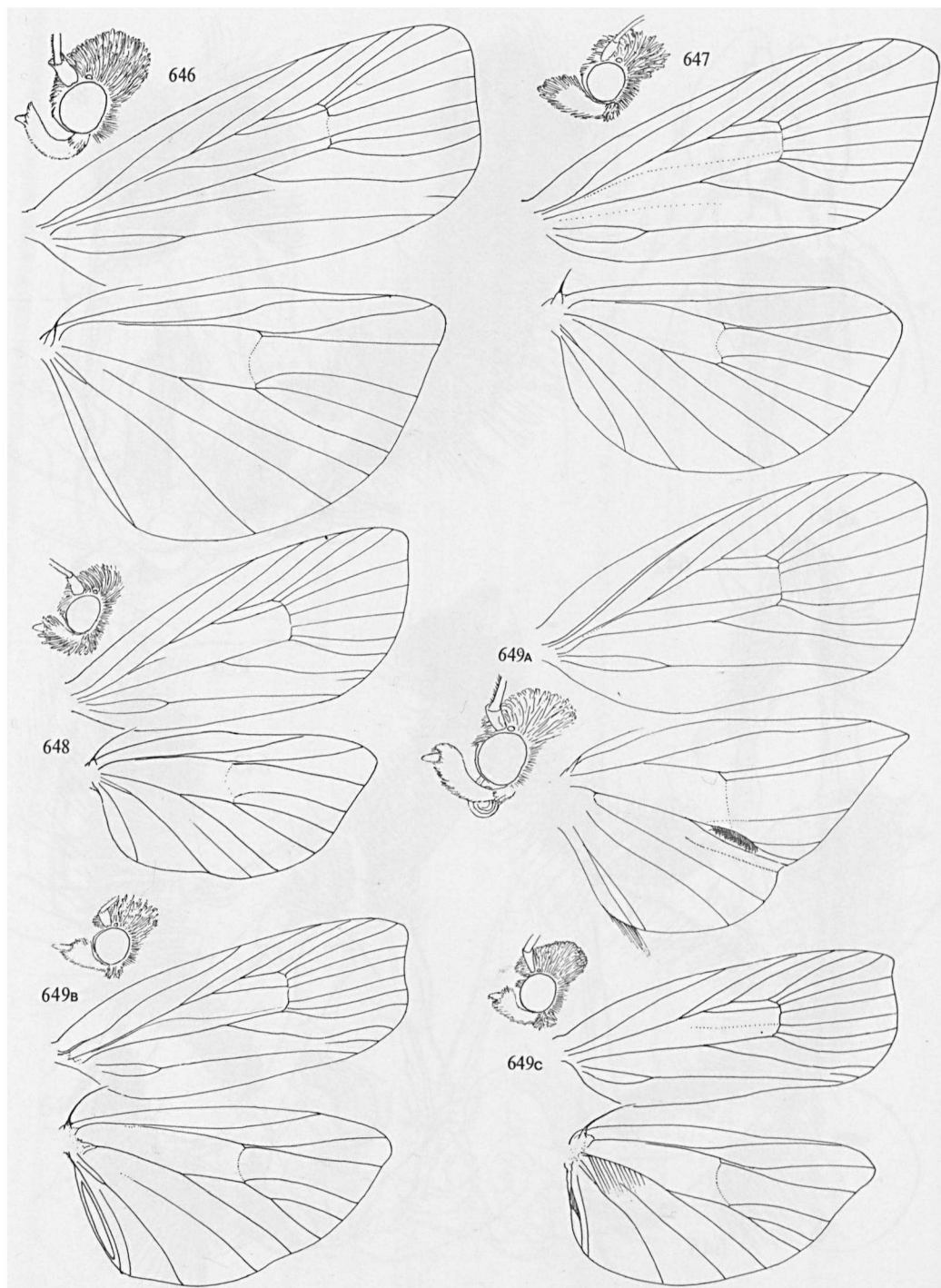
Figs. 633-637. Male genitalia of Olethreutae. 633, *Dudua charadraea* (Meyr.), genit. 7629; 634, *Lasiognatha mormopa* (Meyr.), genit. 7630; 635, *Olethreutes arcuella* (Cl.), genit. 6861; 636, *O. arbutella* (L.), genit. 7147; 637, *L. cellifera* (Meyr.) (Fig. 637, after Diakonoff, 1968.)



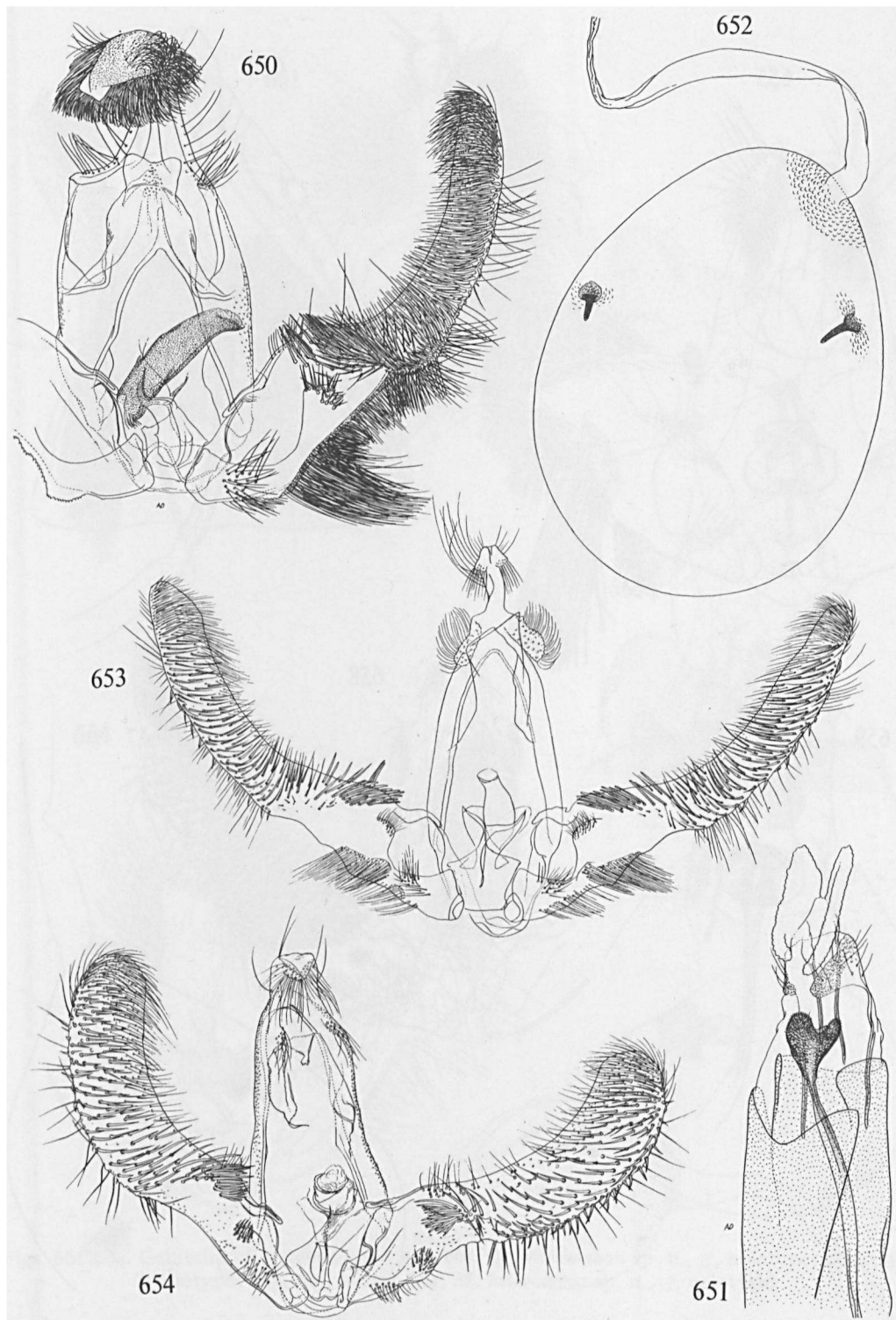
Figs. 638-640B. Benitalia of Olethreutae. 638, *Hedyia daeduchus* sp. n., ♂, holotype; 639, *Lasio-gnatha deceptor* (Diak.), ♂, holotype; 640, *H. iophaea* (Meyr.), ♂, genit. 7375; 640A, *Dudua aprobola* (Meyr.), ♀, slide 2572; 640B, do., bursa (Fig. 639, after Diakonoff, 1966.)



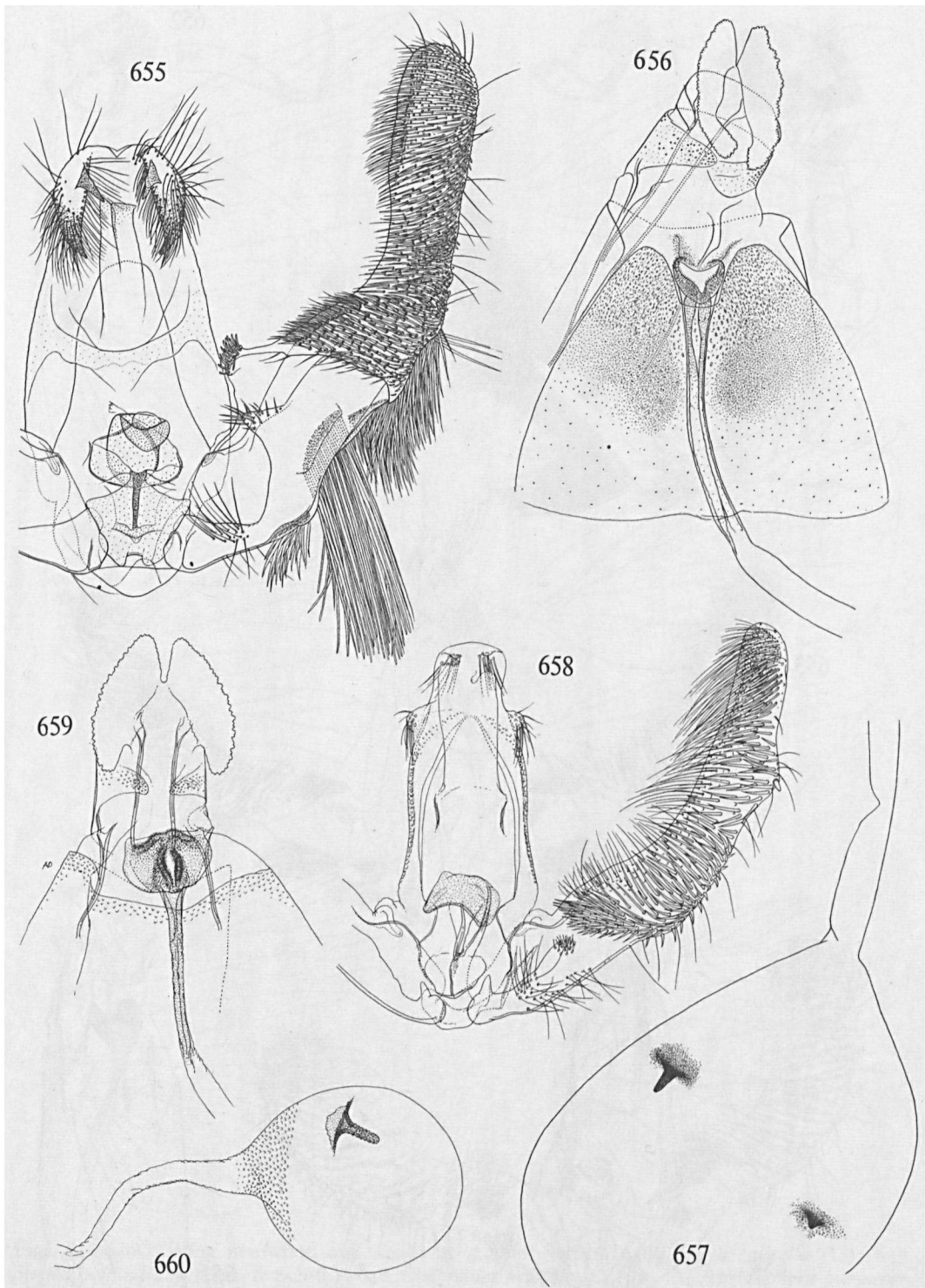
Figs. 641-645. Genitalia of *Hedya* Hb. and *Apsidophora* g. n. 641, *A. purpurorbis* sp. n., ♂, holotype; 642, *H. exsignata* (Meyr.), ♂, genit. 6514; 643, *H. leucalox* sp. n., ♂, holotype; 644, *H. ebenina* (Meyr.), ♀, genit. 6448; 645, do., bursa.



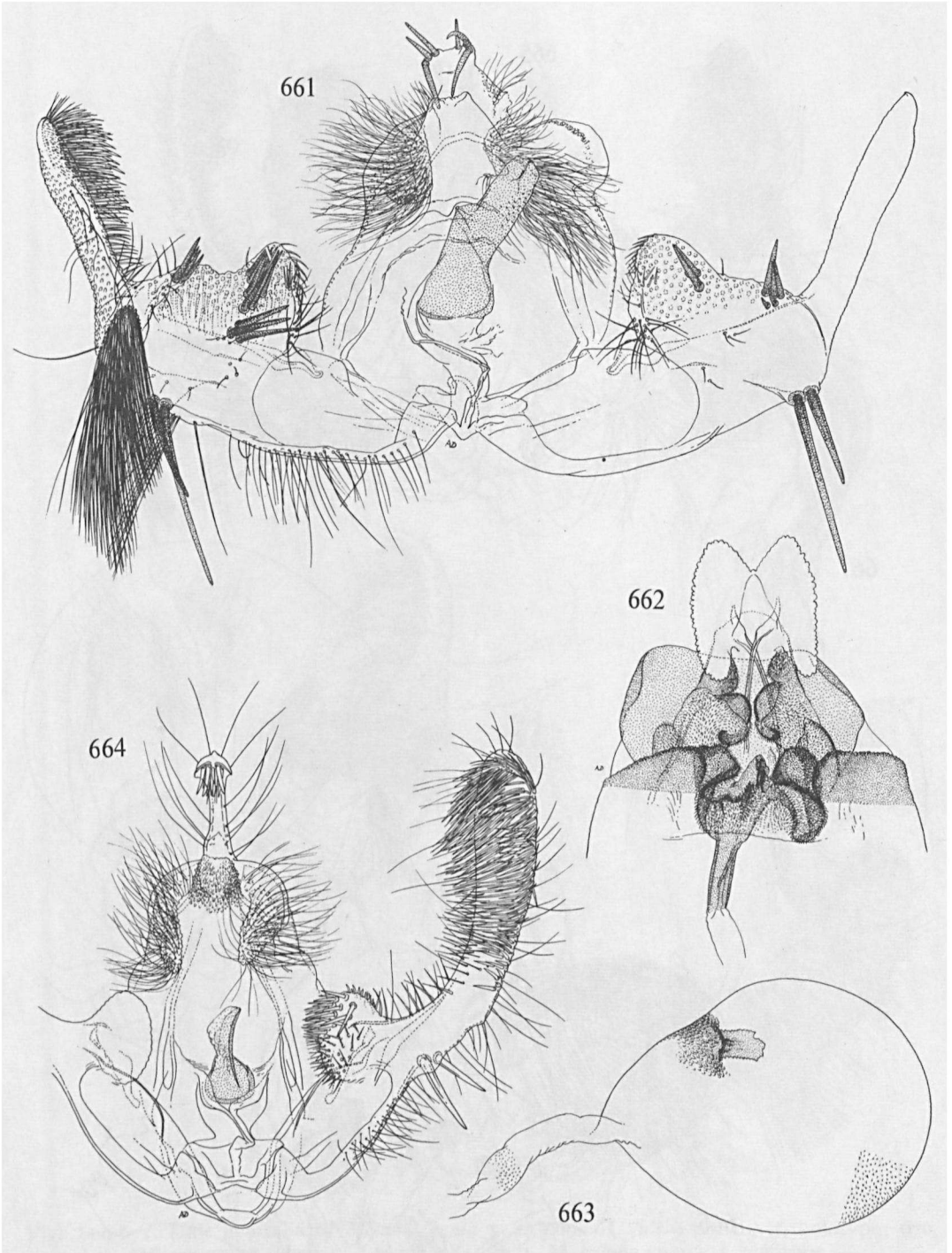
Figs. 646-649C. Wing neuration and heads of ♂ Olethreutini. 646, *Hedya salicella* (L.); 647, *Stictea mygindiana* (Den. & Schiff.); 648, *Olethreutes arcuella* (Cl.); 649A, *Apsidophora purpuror-bis* sp. n.; 649B, *Oestropha scorpiastis* (Meyr.); 649C, *Antaeola antaea* (Meyr.).



Figs. 650-654. Genitalia of Olethreutae. 650, *Antaeola antaea* (Meyr.), ♂, genit. 6458; 651, do., ♀, genit. 6459; 652, do., bursa; 653, *Cymolomia phaeopelta* (Meyr.), ♂, genit. 3415; 654, *Hedyia atrifraga* Diak., ♂, holotype. (Fig. 654, after Diakonoff, 1968.)

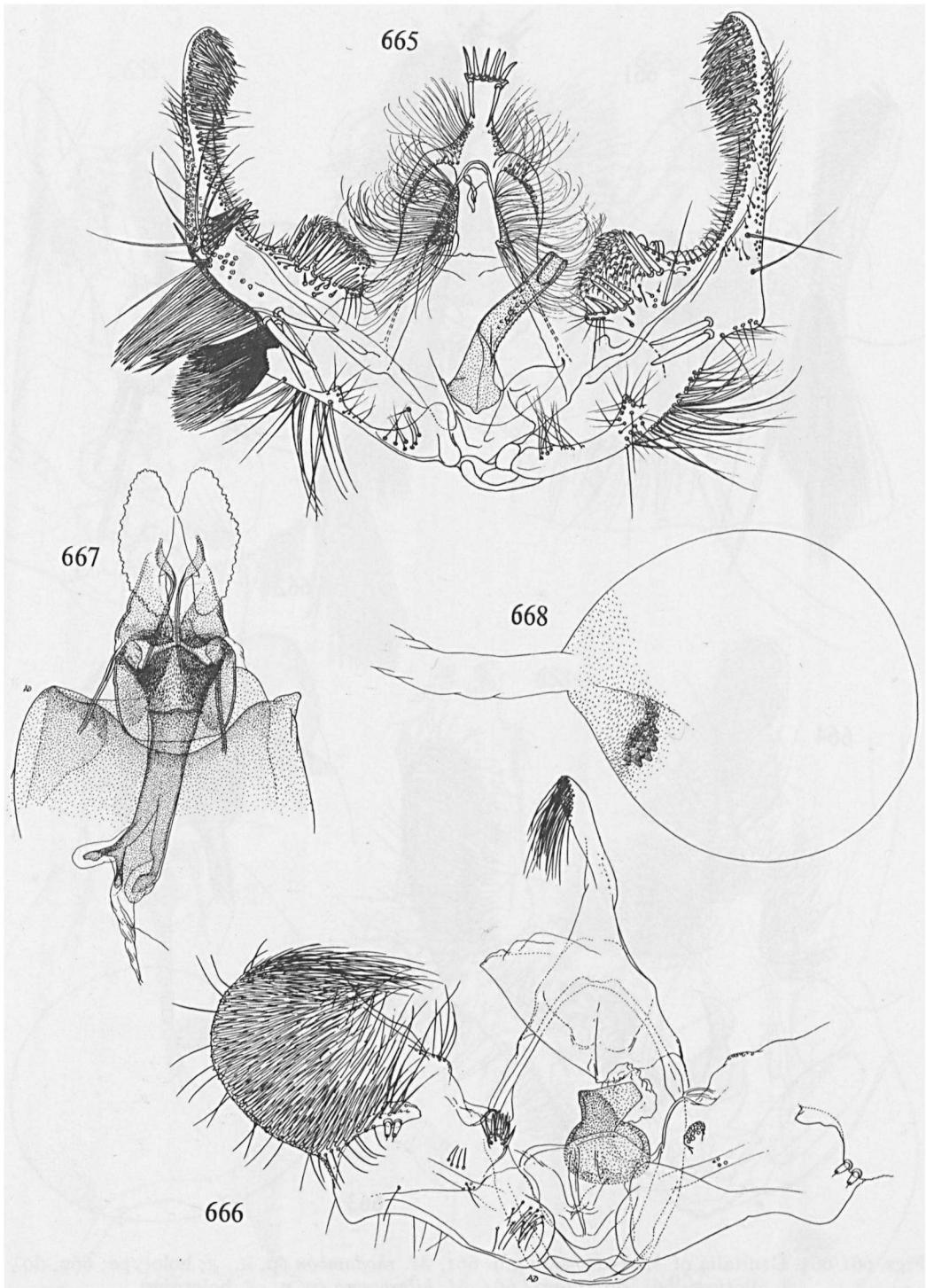


Figs. 655-660. Genitalia of Olethreutae. 655, *Oestrota scorpiastis* (Meyr.), ♂, genit. 6452; 656, do., ♀, genit. 6453; 657, do., bursa; 658, *Cymolomia vinolenta* sp. n., ♂, holotype; 659, *C. phaeopelta* (Meyr.), ♀, genit. 5861; 660, do., bursa.

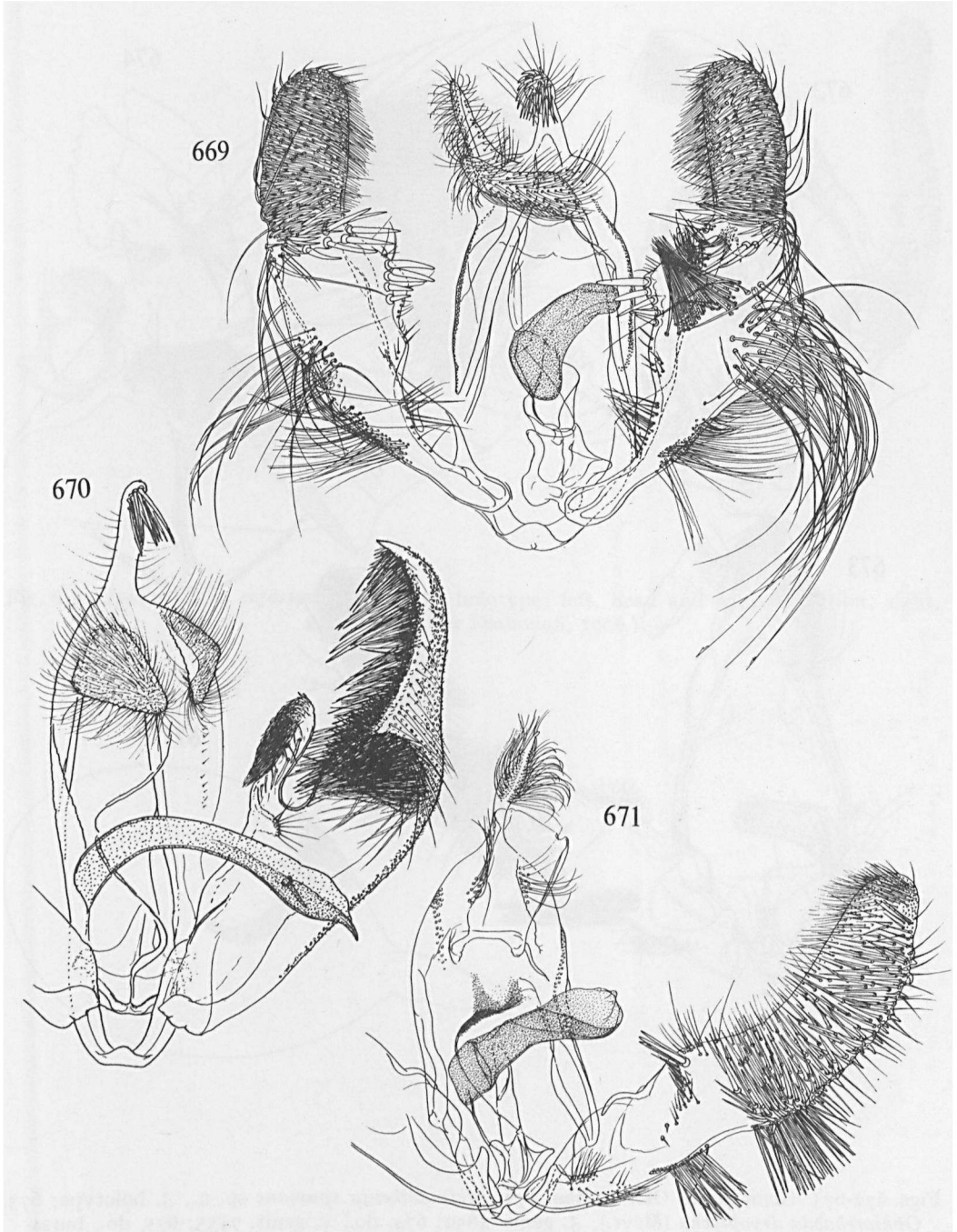


Figs. 661-664. Genitalia of *Metendothenia* g.n. 661, *M. rhodambon* sp. n., ♂, holotype; 662, do., ♀, allotype; 663, do., bursa; 664, *M. hilarocroca* sp. n., ♂, holotype.

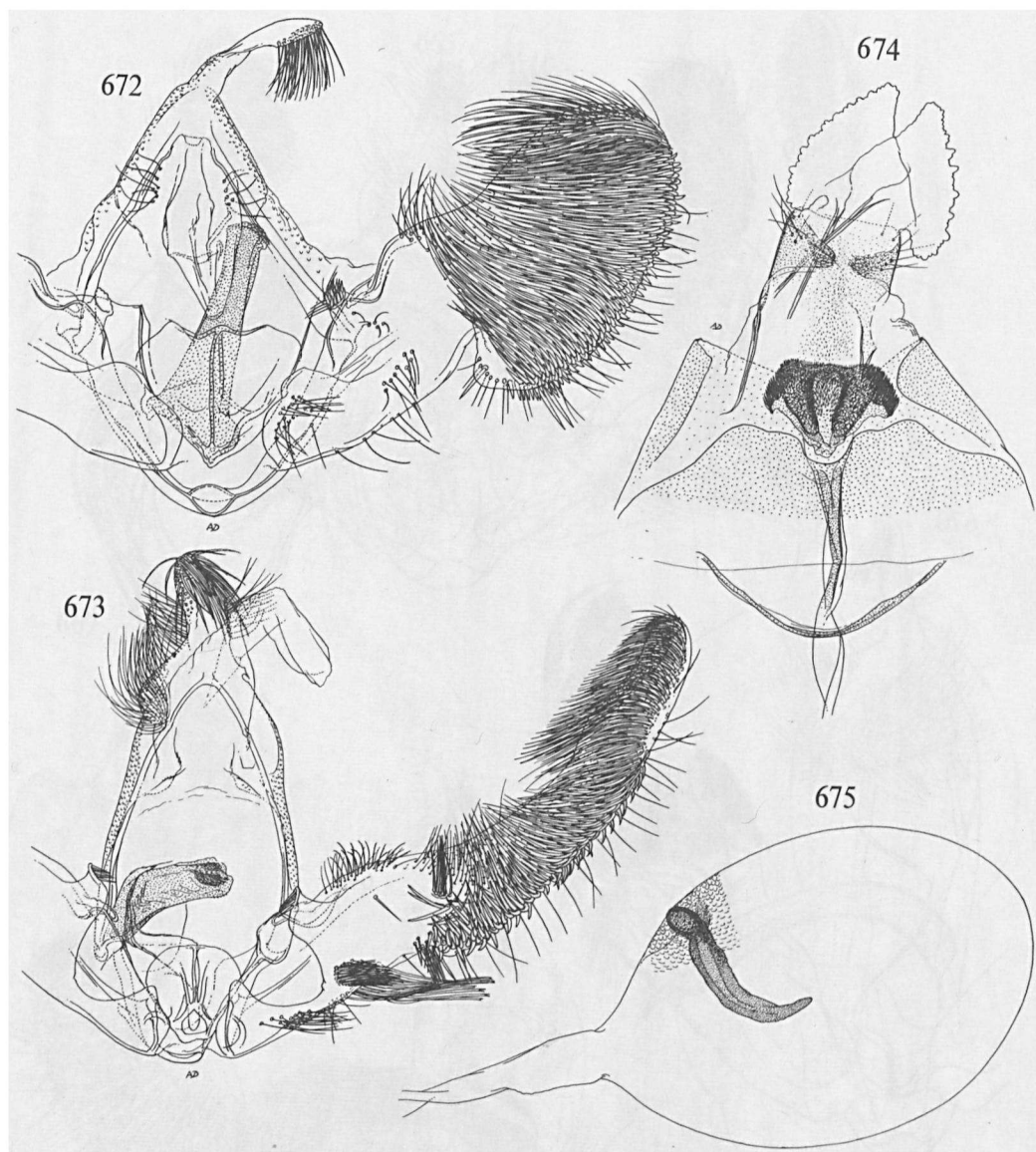




Figs. 665-668. Genitalia of *Metendothenia* g. n. 665, *M. emmita* sp. n., ♂, holotype; 666, *M. metacycla* sp. n., ♂, holotype; 667, *M. mesarotra* (Meyr.), ♀, lectotype; 668, do., bursa. (Figs. 667-668, after Diakonoff, 1966.)



Figs. 669-671. Male genitalia of *Metendothenia* g. n. 669, *M. fidelis* sp. n., ♂, holotype; 670, *M. mesarotra* (Meyr.), ♂, genit. 7841; 671, *M. calopa* sp. n., ♂, holotype.



Figs. 672-675. Genitalia of Olethreutae. 672, *Metendothenia spumans* sp. n., ♂, holotype; 673, *Ophiorrhada dryoptycha* (Meyr.), ♂, genit. 4859; 674, do., ♀, genit. 7455; 675, do., bursa.

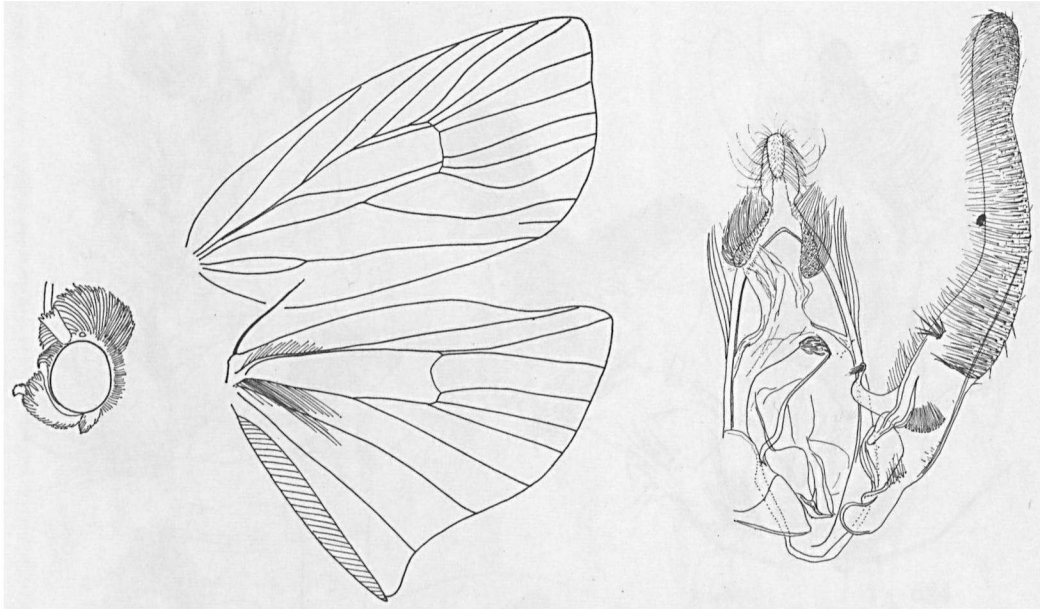
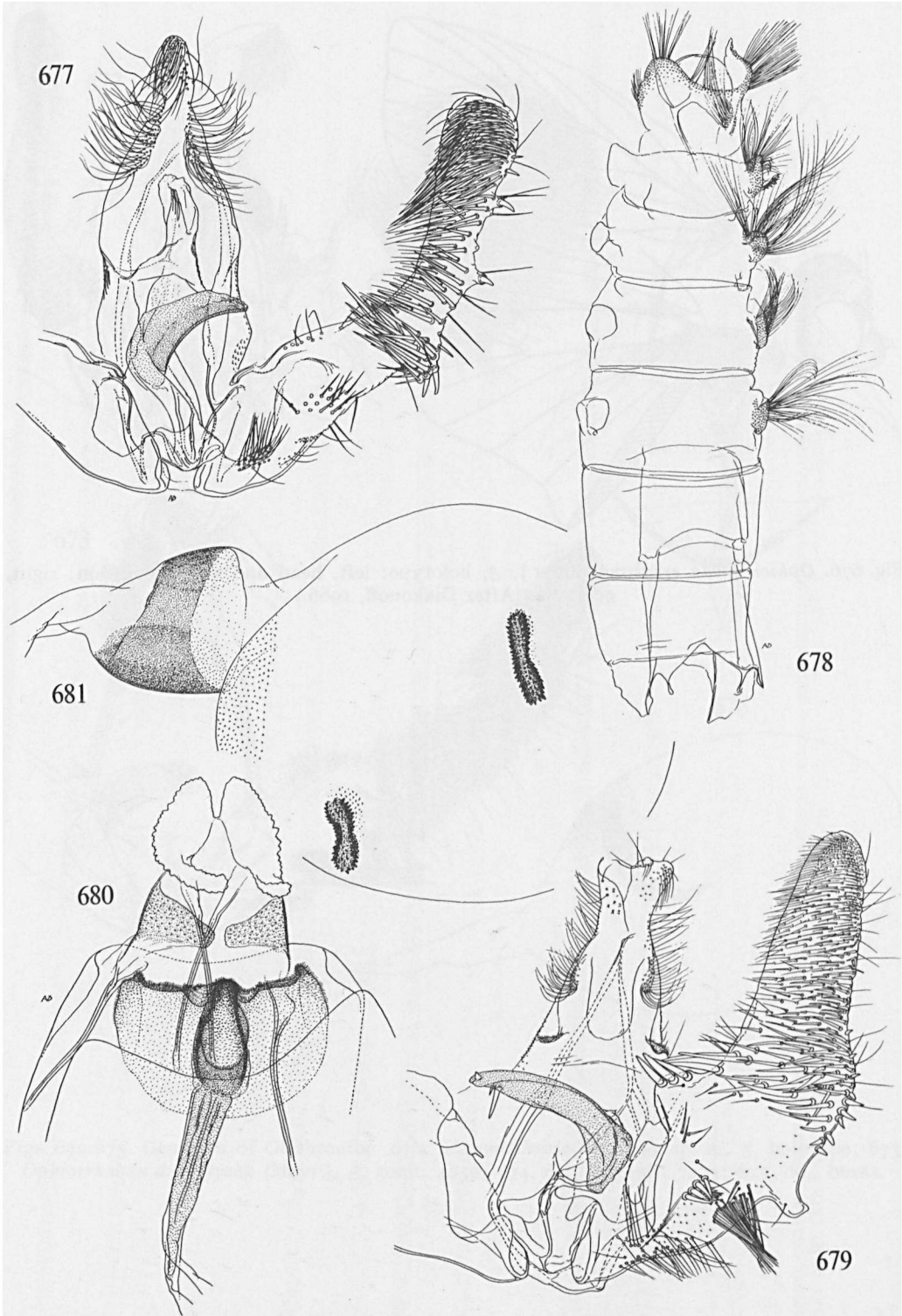
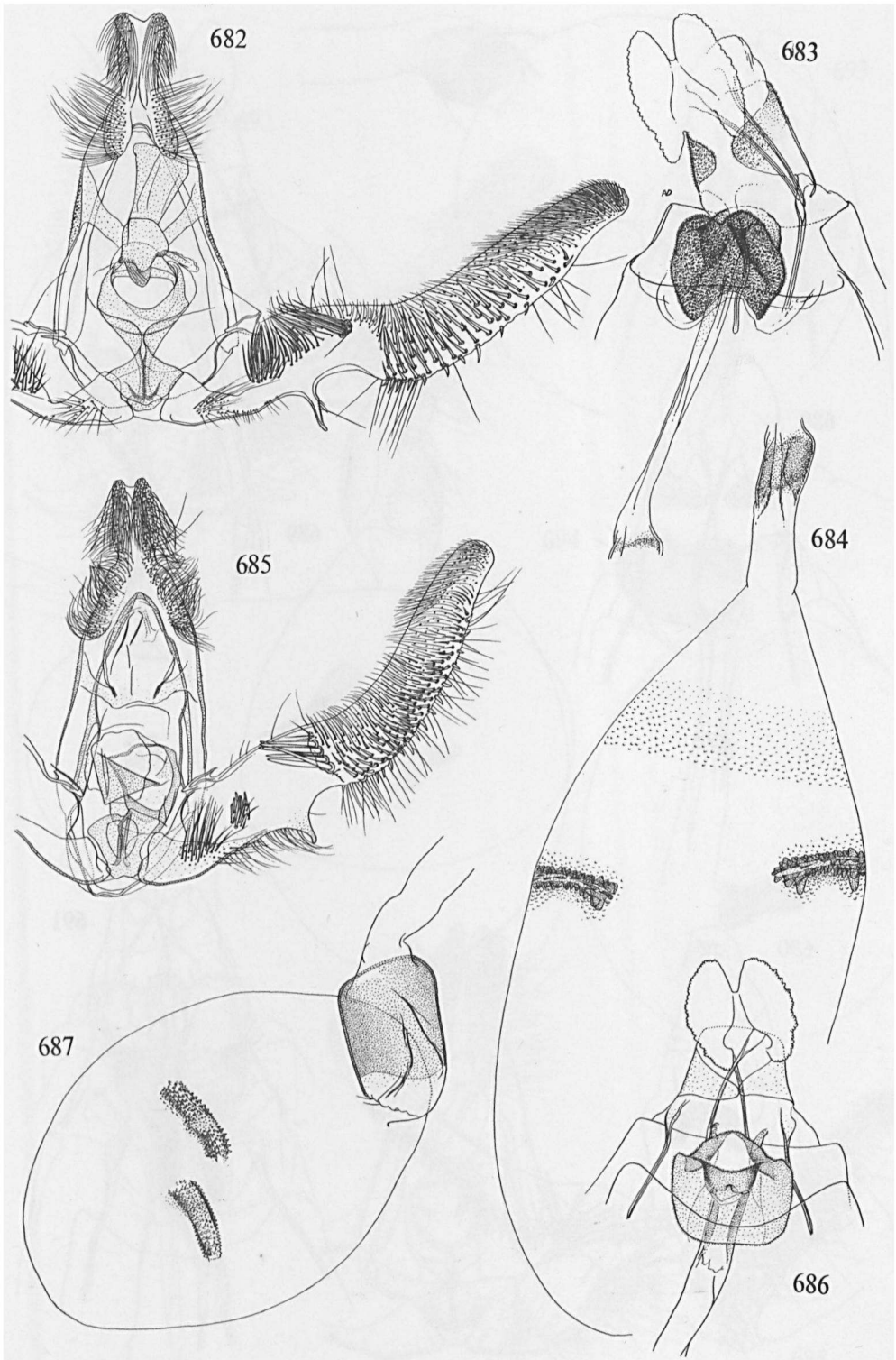


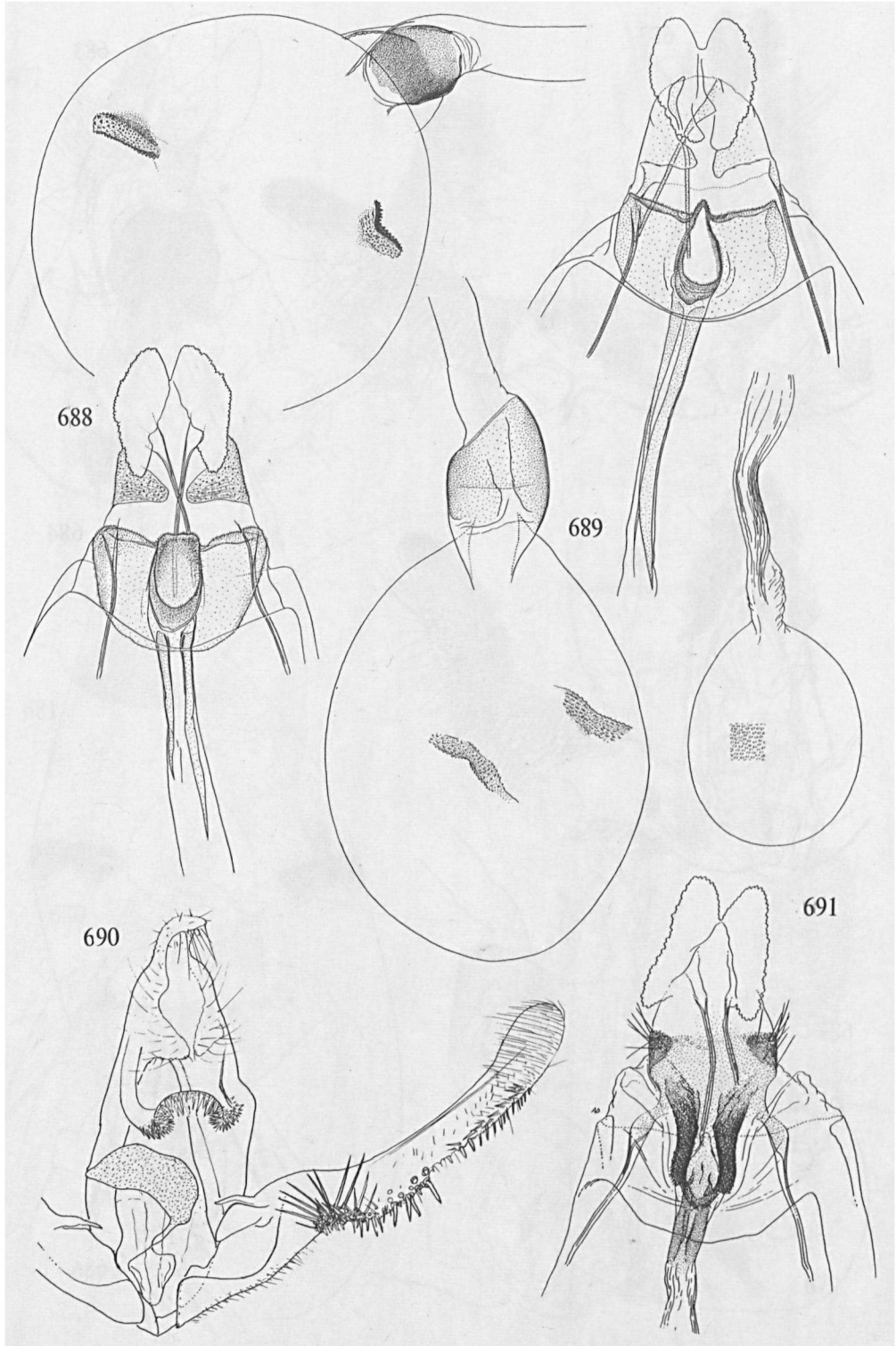
Fig. 676. *Ophiorrhabda ergasima* (Meyr.), ♂, holotype: left, head and wing neuration; right, genitalia. (After Diakonoff, 1966.)



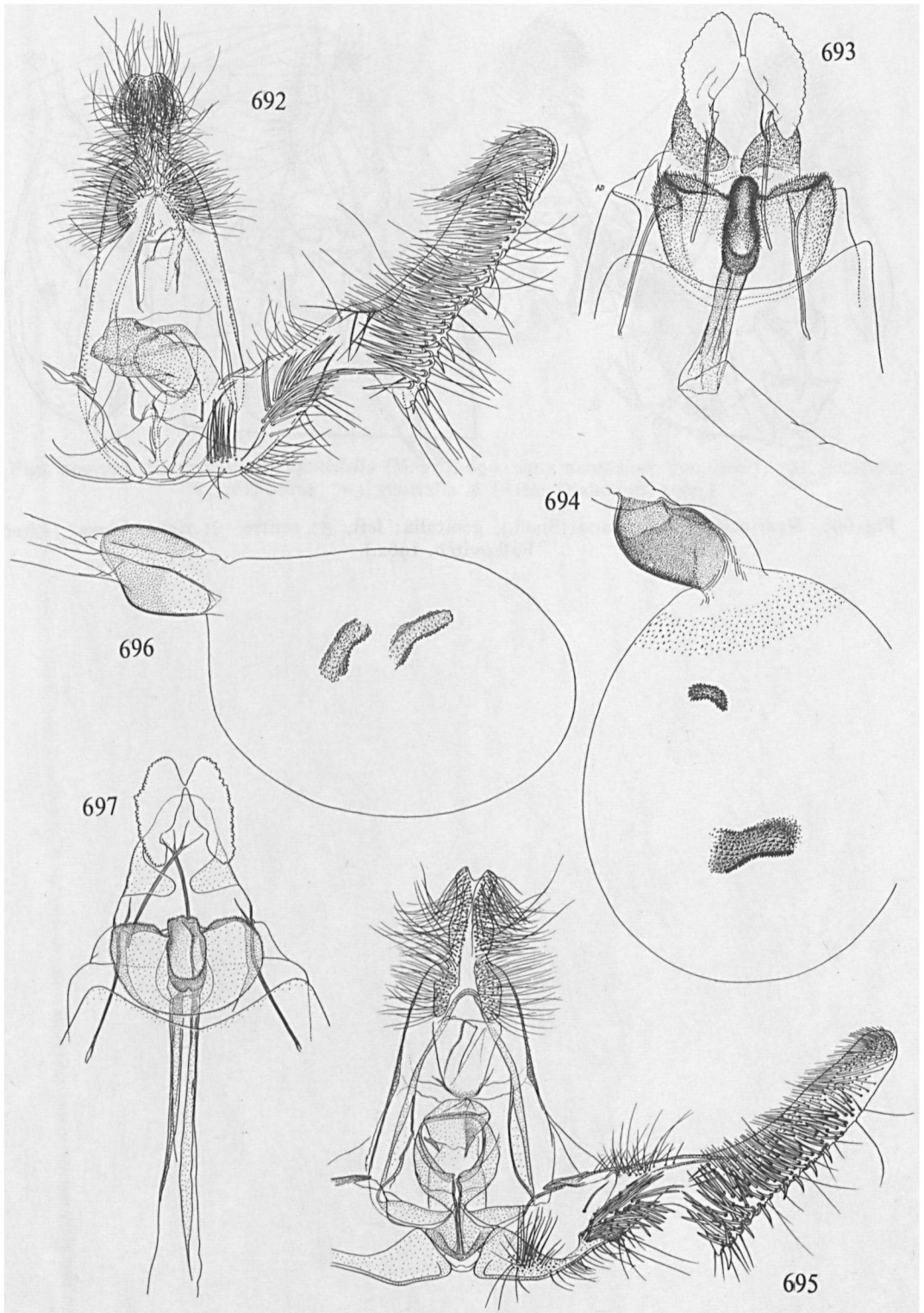
Figs. 677-681. Genitalia of Oletreutae. 677, *Ophiorrhabda favillosa* sp. n., ♂, holotype; 678, do. coremata; 679, *Celypha (Celyphoides) constructa* (Meyr.), ♂, genit. 7661; 680, *Lipsotelus anacanthus insulae* sbsp. n., ♀, holotype; 681, do., bursa.



Figs. 682-687. Genitalia of *Lipsotelus* Wals.. 682, *L. armiger* sp. n., ♂, holotype; 683, do., ♀, allotype; 684, do., bursa; 685, *L. xyloides* sp. n., ♂, holotype; 686, do., ♀, allotype; 687, do., bursa.



Figs. 688-691. Genitalia of Olethreutae. 688, *Lipsotelus lichenoides* Wals., lectotype, ♀, with above, bursa; 689, *L. anacanthus calens* sp. n., holotype, ♀ with, centre, bursa; 690, *Pristerognatha penthinana* (Gn.), ♂, genit. 8240; 691, do., ♀, genit. 8215, with above, bursa.



Figs. 692-697. Genitalia of *Lipsetelus* Wals. 692, *L. a. anacanthus* sbsp. n., ♂, holotype; 693, do., ♀, allotype; 694, do., bursa; 695, *L. a. amicus* sbsp. n., ♂, holotype; 696, do., ♀, allotype; 697, do., bursa.



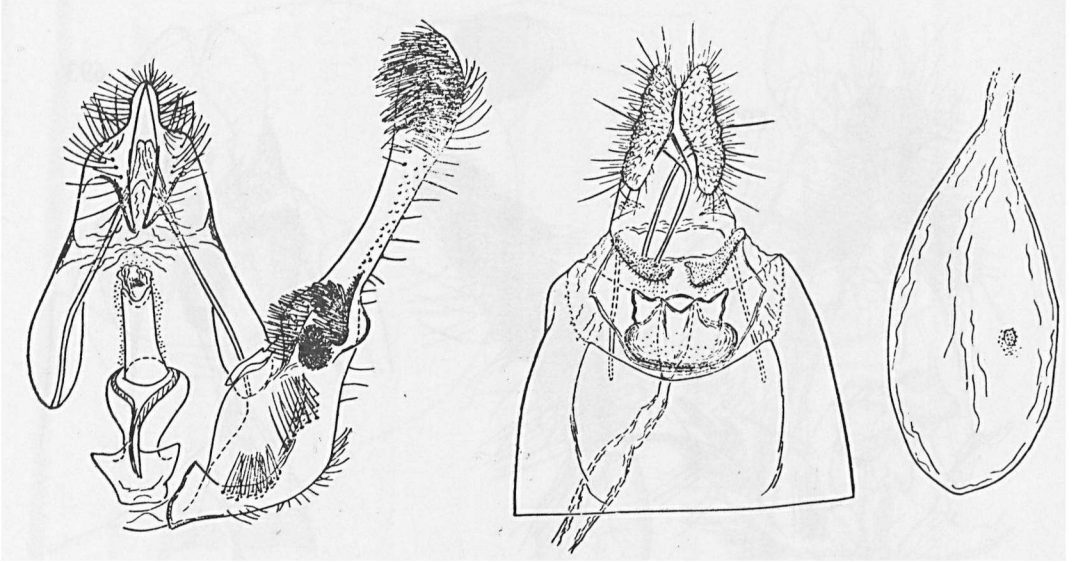
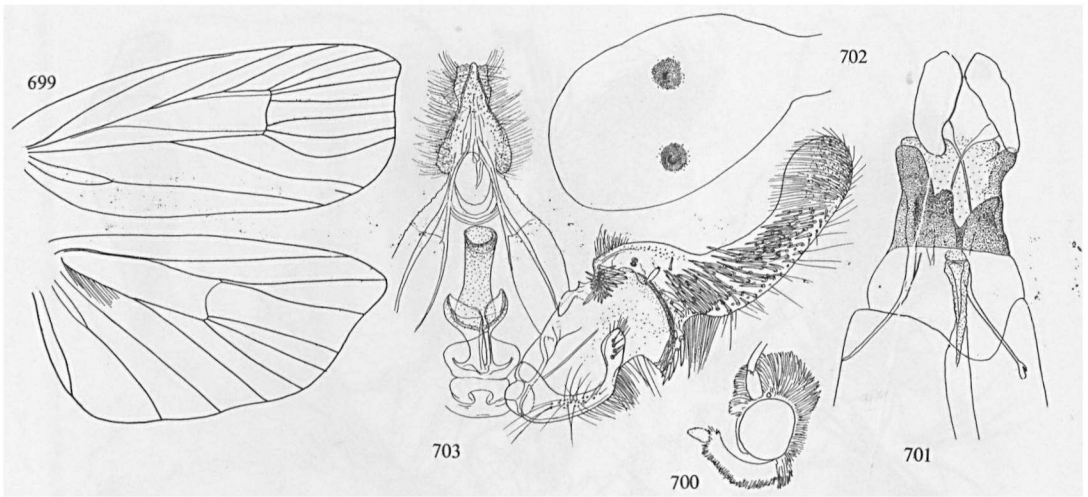
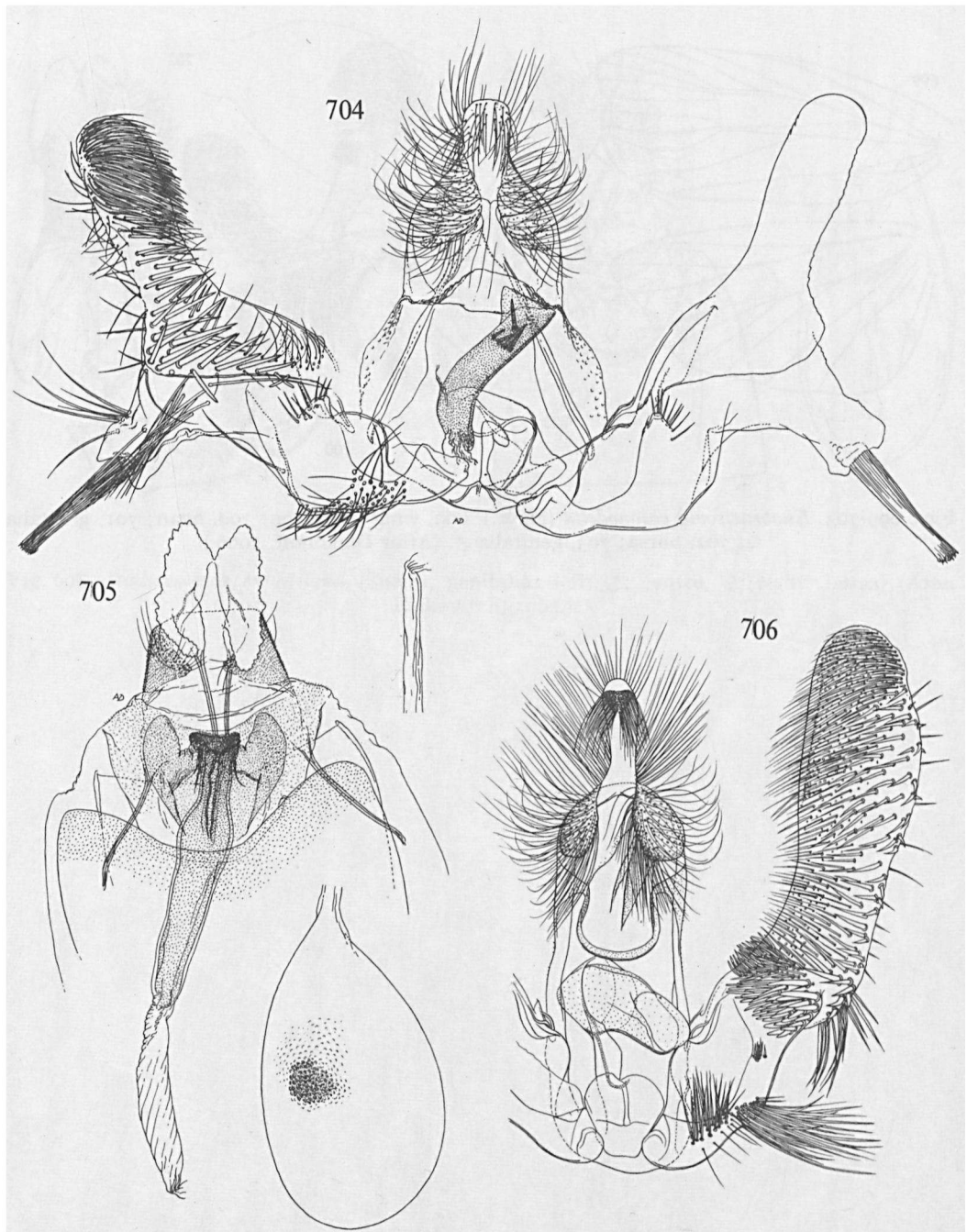


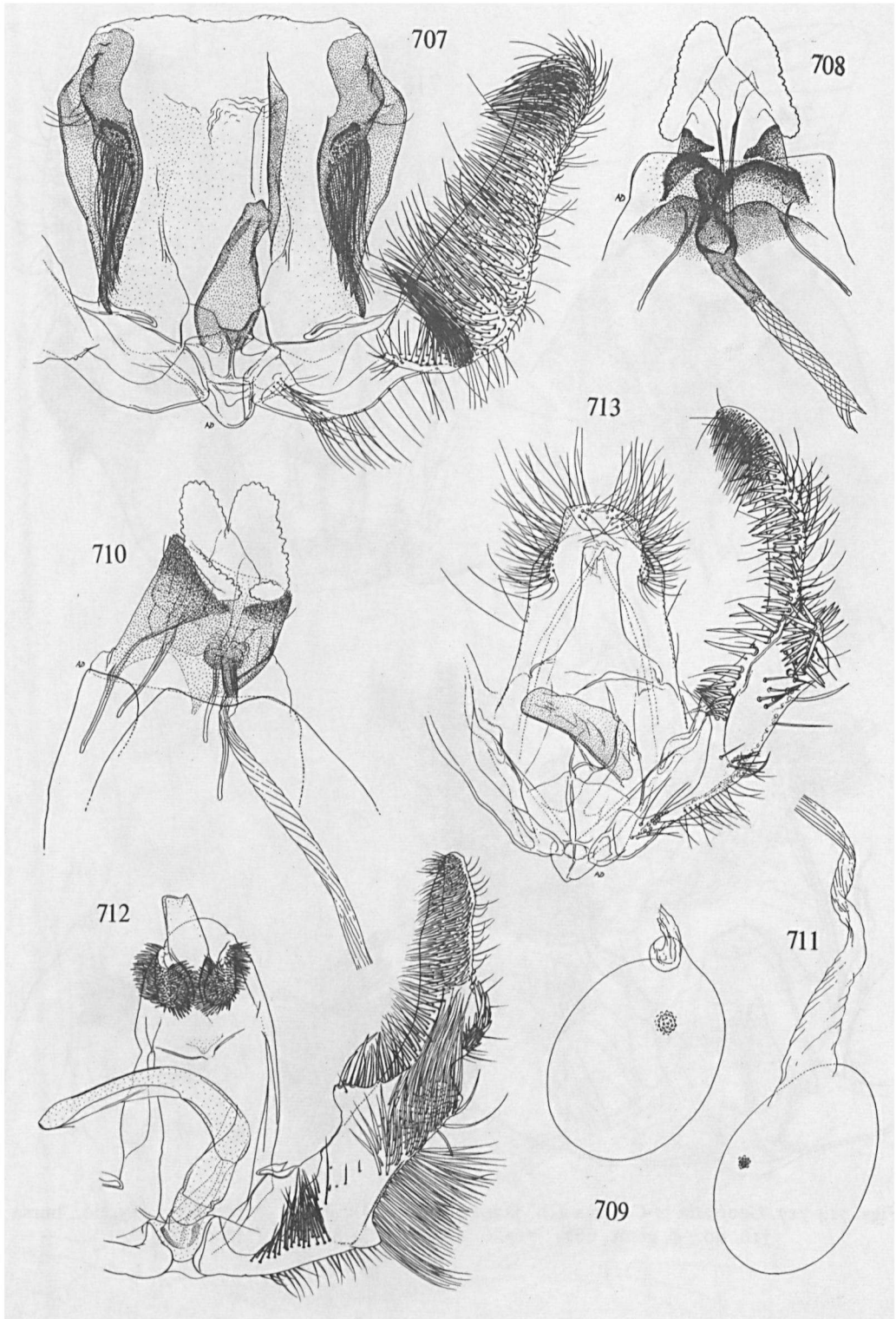
Fig. 698. *Rudisociaria expeditana* (Snell.), genitalia: left, ♂; centre, ♀; right, bursa. (After Falkovitch, 1962.)



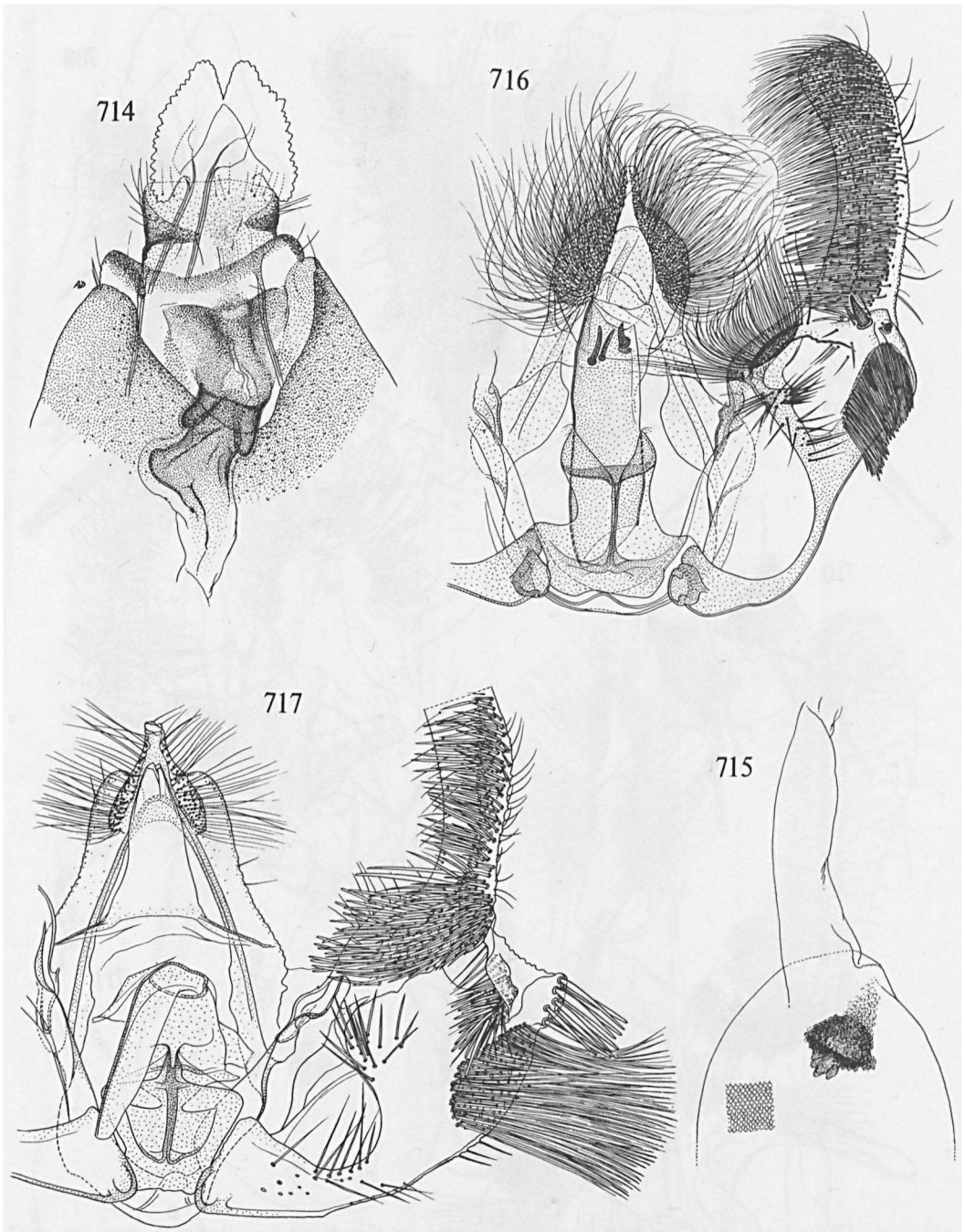
Figs. 699-703. *Euobraztsovia chionodelta* (Meyr.). 699, wing neuration; 700, head; 701, genitalia ♀; 702, bursa; 703, genitalia ♂. (After Diakonoff, 1966.)



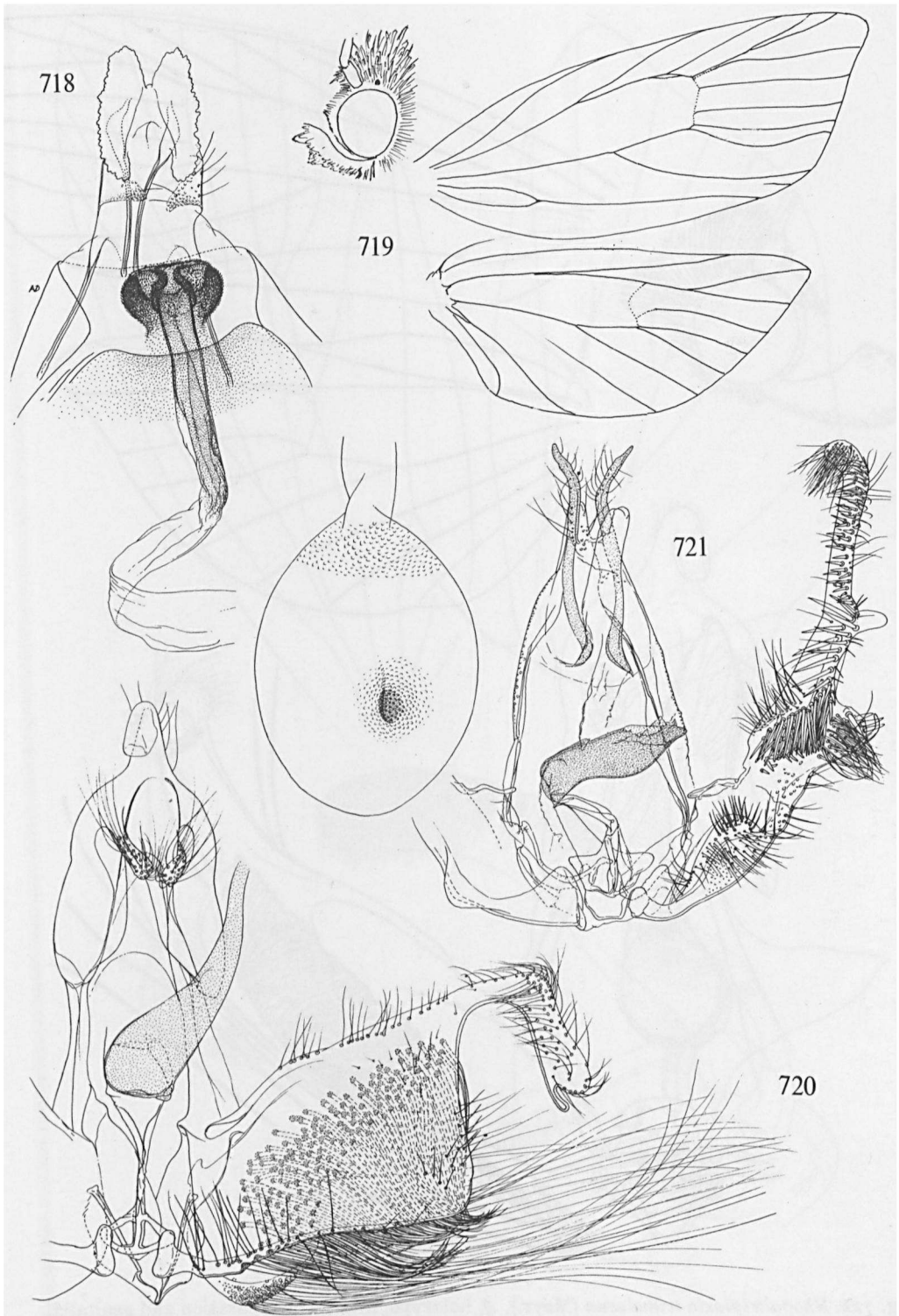
Figs. 704-706. Genitalia of Olethreutae. 704, *Olethreutes (Biscopa) bipunctana* (F.), ♂, slide 7235; 705, do., ♀, genit. 6872, with bursa; 706, *Temnolopha biguttata* sp. n., ♂, holotype.



Figs. 707-713. Genitalia of Olethreutae. 707, *Pelatea assidua* (Meyr.), ♂, genit. 6464; 708, *Olethreutes* (*O.*) *nubicincta* sp. n., ♀, allotype; 709, do., bursa; 710, *Olethreutes* sp., ♀, slide 6465; 711, do., bursa; 712, *Olethreutes* (*O.*) *nubicincta* sp. n., ♂, holotype; 713, *O.* (*Phiaris*) *agnota* sp. n., ♂, holotype.



Figs. 714-717. Genitalia of *Celypha* Hb. 714, *C. sistrata* (Meyr.), ♀, genit. 6625; 715, do., bursa; 716, do., ♂, genit. 6624; 717, *C. capnodesma* (Meyr.), ♂, genit. 3741.



Figs. 718-721. Genitalia, head and venation of Olethreutae. 718, *Celypha (Celyphoides) constructa* (Meyr.), ♀, genit. 6466, with below, bursa; 719, *Palaeomorpha jacobsoni* sp. n., ♂, holotype, head and wing venation; 720, *Rhopaltriplasia anamilleta* sp. n., ♂, genitalia, holotype; 721, *Capricornia boisduwaleana* (Dup.), ♂, genit. 8216.

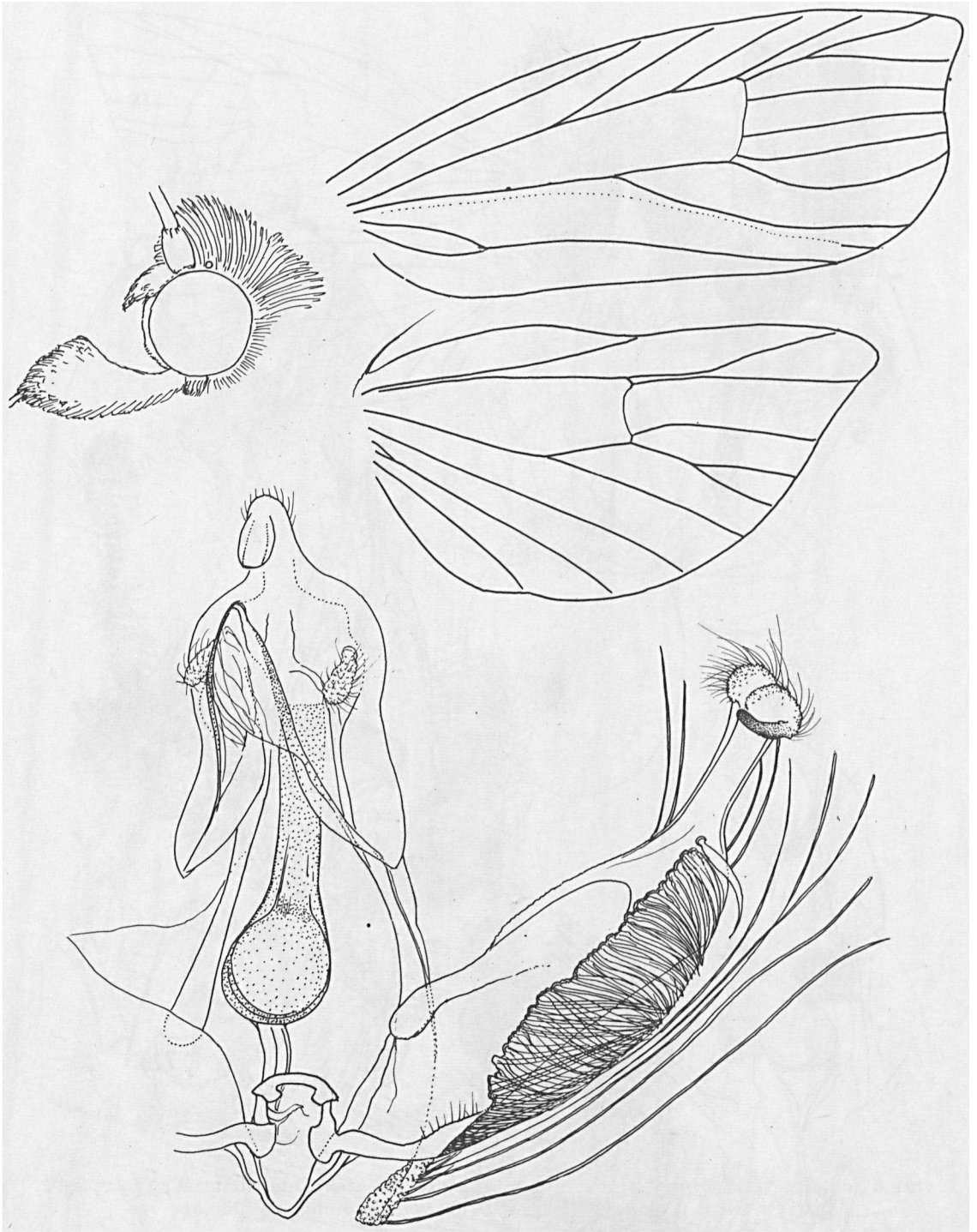


Fig. 722. *Rhopaltriplasia trimelaena* (Meyr.), ♂, holotype, head, wing neuration and genitalia.

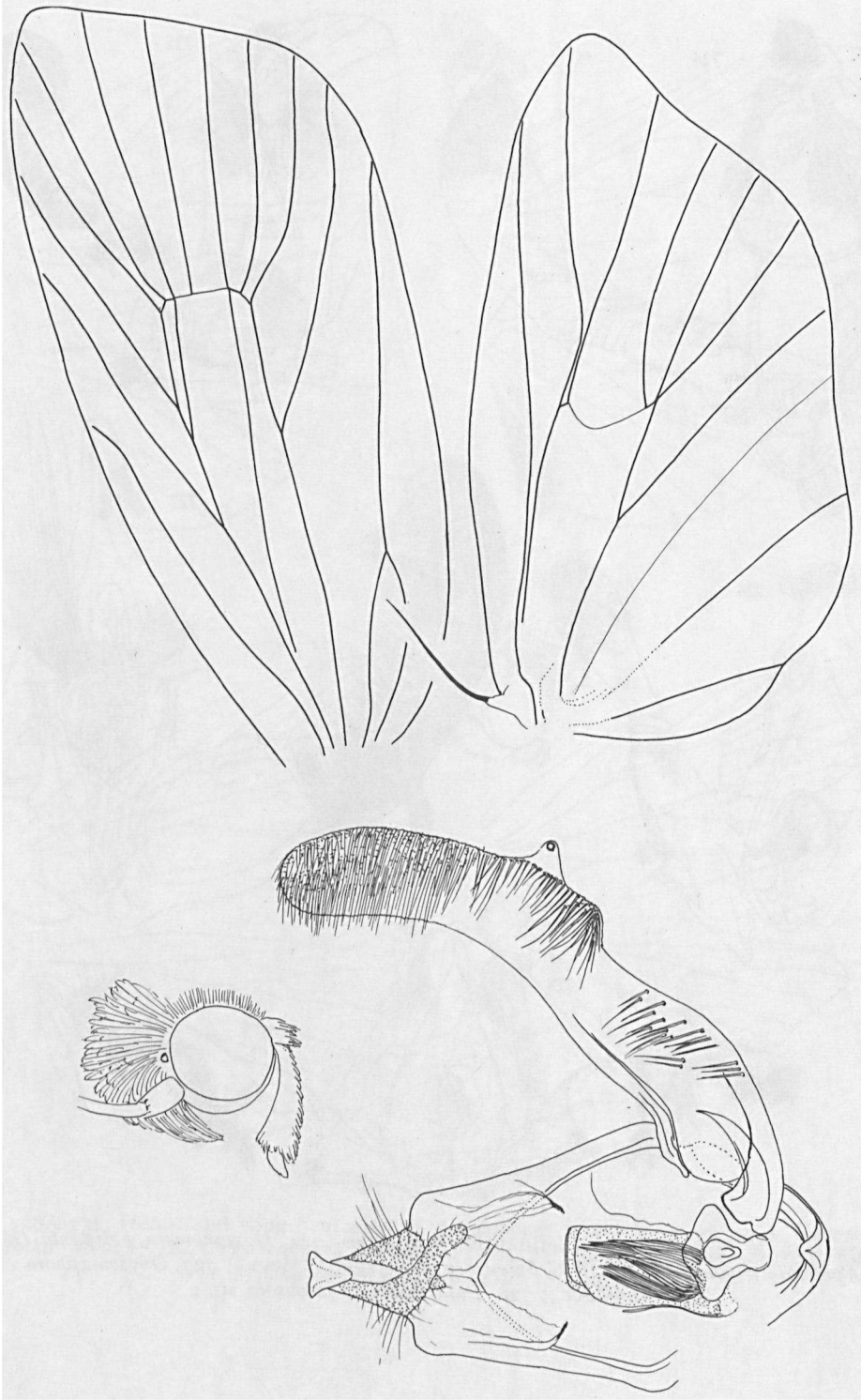
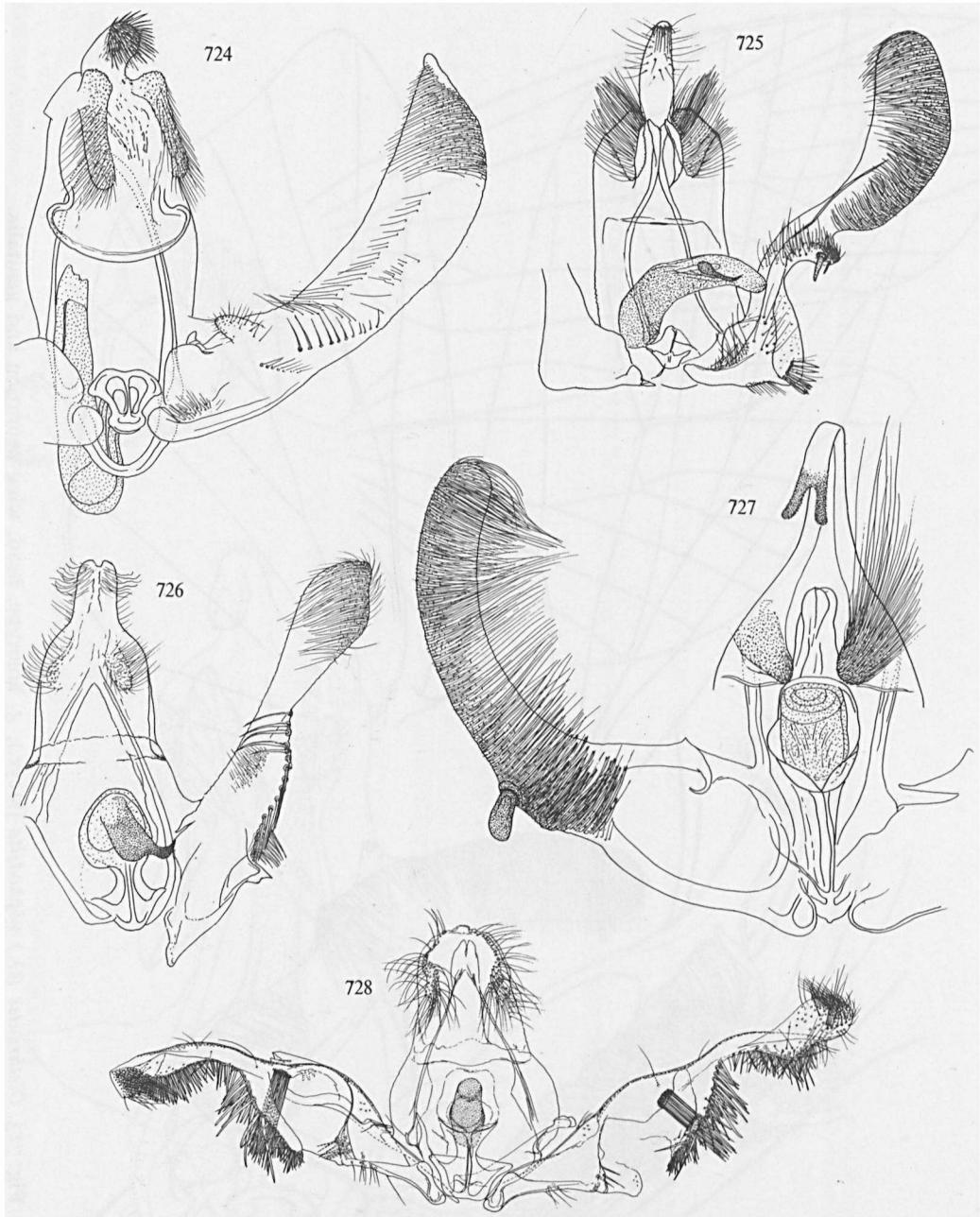
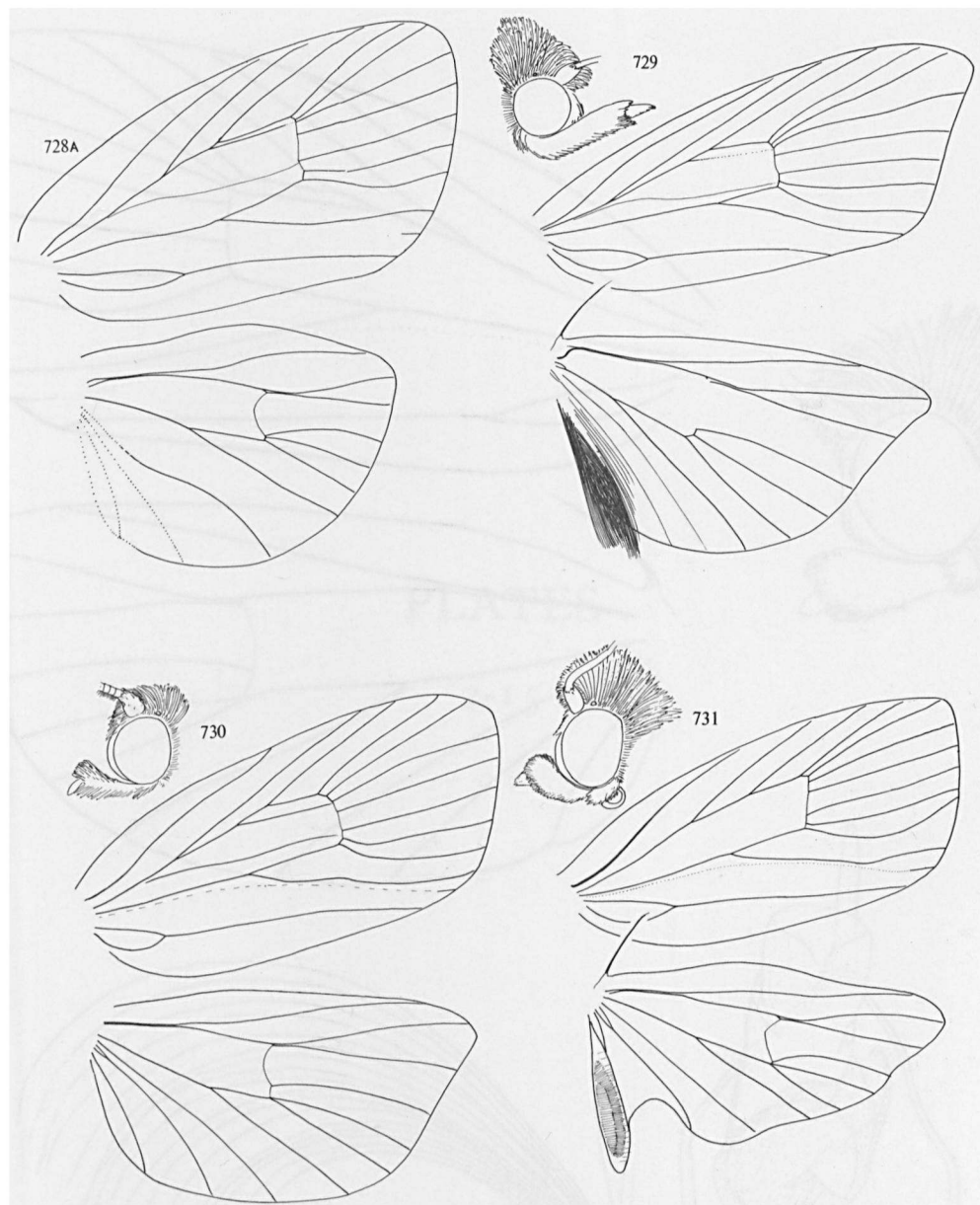


Fig. 723. *Oletihreutes (O.) niphodelta* (Meyr.), ♂, holotype, head, wing neuration and genitalia.





Figs. 724-728. Male genitalia of Olethreutini, holotypes. 724, *Gonomomera halixanta* (Meyr.); 725, *Apotomis trigonias* sp. n.; 726, *Selenodes caryocryptis* (Meyr.); 727, *Oxysemaphora chionolitha* (Meyr.); 728, *Palaeomorpha jacobsoni* sp. n.



Figs. 728A-731. Heads and wing neuration of ♂ holotypes of Olethreutae. 728A. *Gonomomera halixantha* (Meyr.); 729, *Oxysemaphora chionolitha* (Meyr.); 730, *Selenodes caryocryptis* (Meyr.); 731, *Melendothenia mesarotra* (Meyr.), genit. 7841.

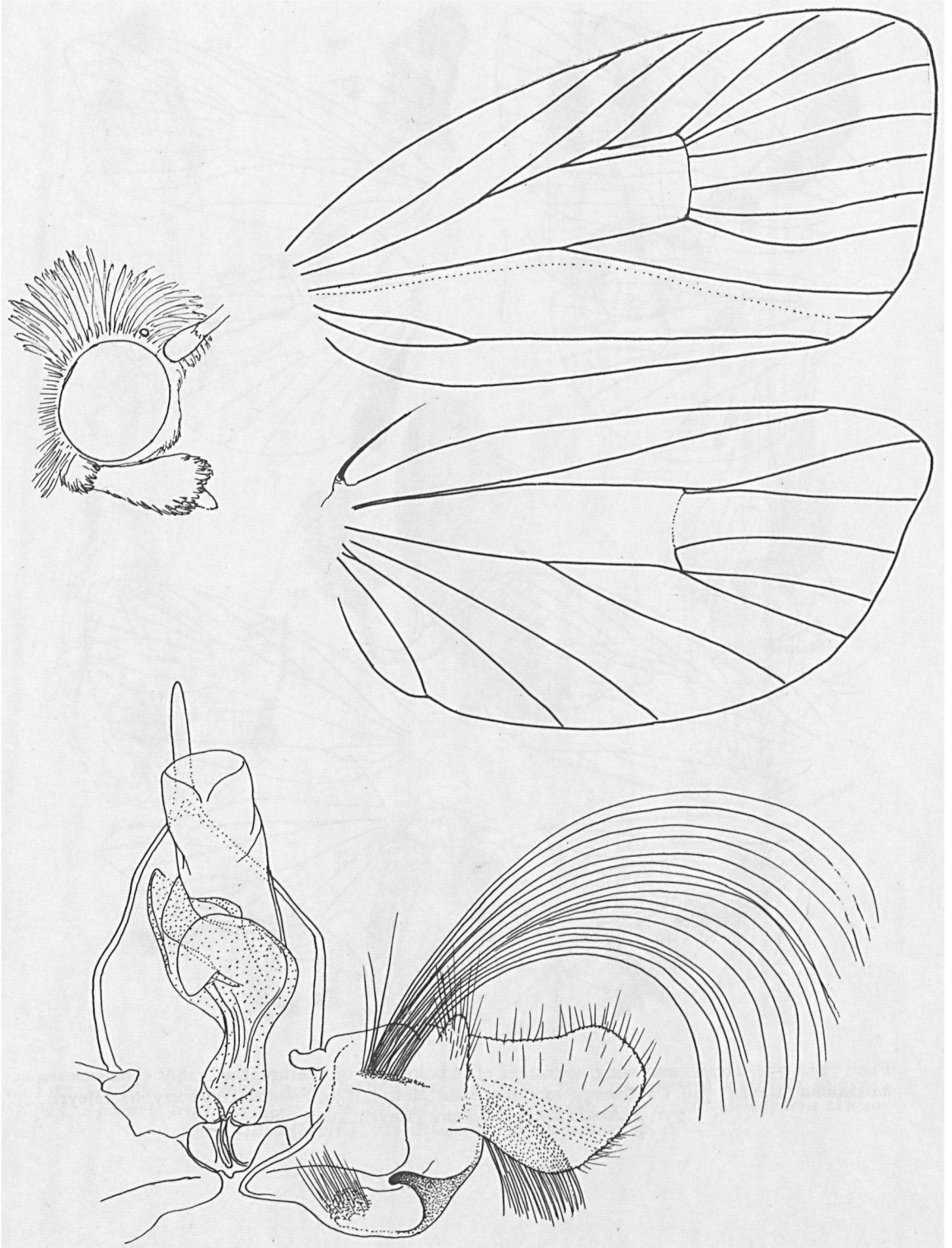


Fig. 732. *Stalagmocroca sandycota* (Meyr.), ♂: above, head and wing neuration; below, male genitalia, holotype.

# PLATES

2-15

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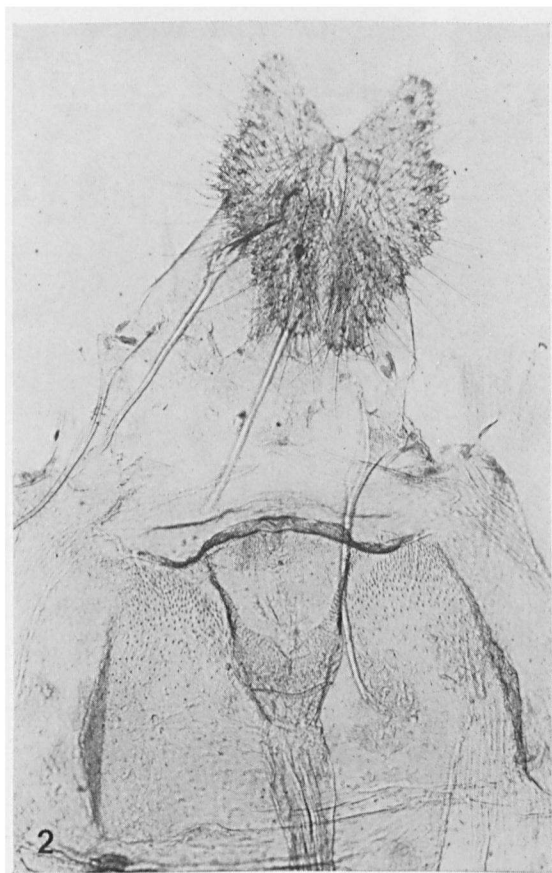
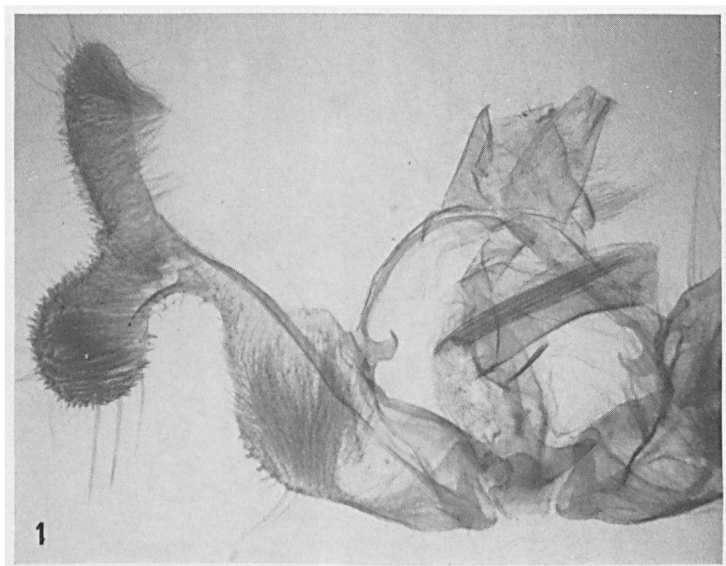


Plate 2. Genitalia of *Psilacantha pryeri* (Wals.) = "*Phaecasiophora*" *pryeri* Wals. Fig. 1, ♂, holotype, "Japan, Pryer, 1886", Wals. Coll. nr. 70270, genit. slide 11723 ♂ (BM). Fig. 2, ♀, allotype, do. labels, Wals. Coll. nr. 70269, genit. 11682 (BM). Fig. 3, do., ductus bursae. By the courtesy of the Trustees of the British Museum (Natural History).

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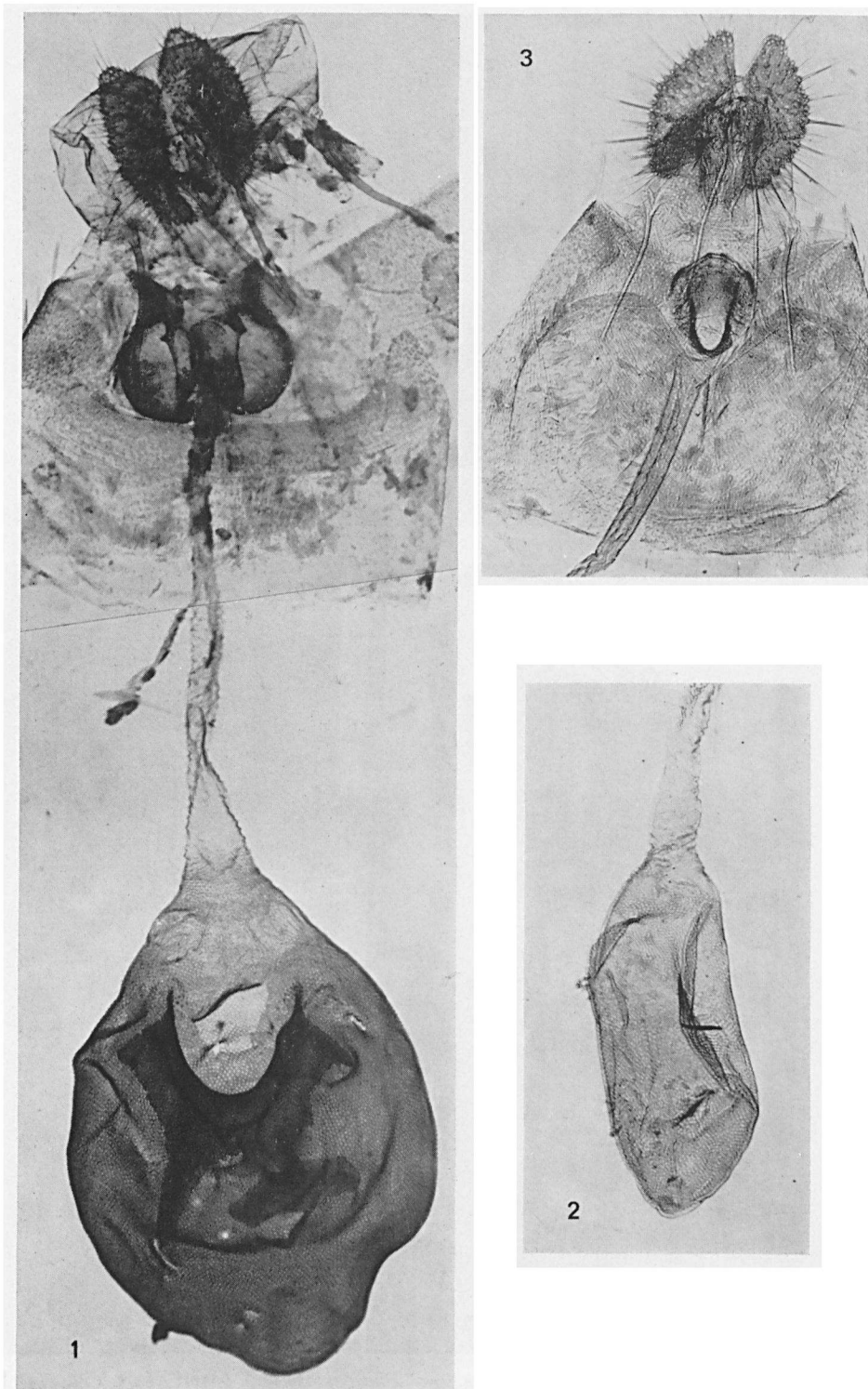


Plate 3. Female genitalia of Neopotamiae. Fig. 1. *Neopotamia divisa* (Wals.), holotype, "Golaghat, Naga Hills, Assam, Doherty, 1890", Wals. coll. nr. 40228, genit. 11681 ♀ (BM). Fig. 2. *Phaeacadophora acutana* Wals., holotype, "Satsuma, May 1886, Leech", Wals. Coll. nr. 60191, genit. 11680 ♀ (BM), bursa copulatrix. Fig. 3, do., sterigma. By the courtesy of the Trustees of the British Museum (Natural History).

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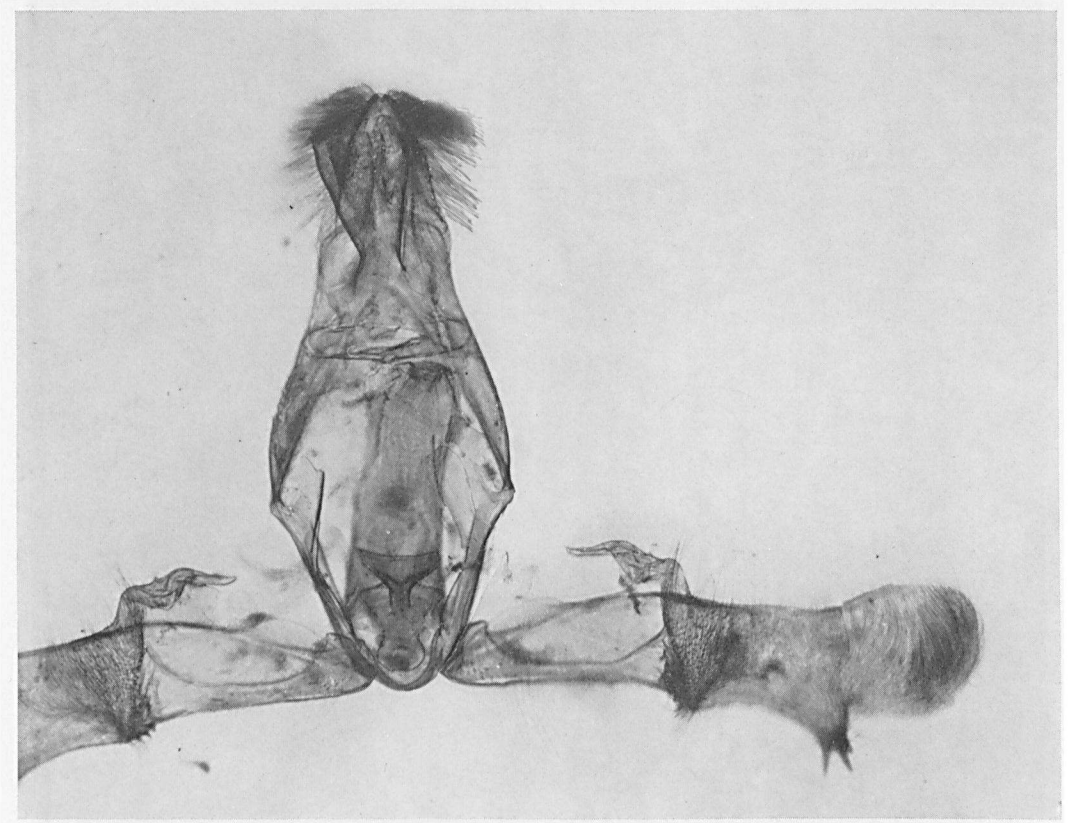


Plate 4. Male genitalia of *Hedya auricristana* (Wals.) comb. nov., holotype, "Japan, Pryer, 1886", Wals. Coll. nr. 70137, genit. 6327 (BM). By the courtesy of the Trustees of the British Museum (Natural History).

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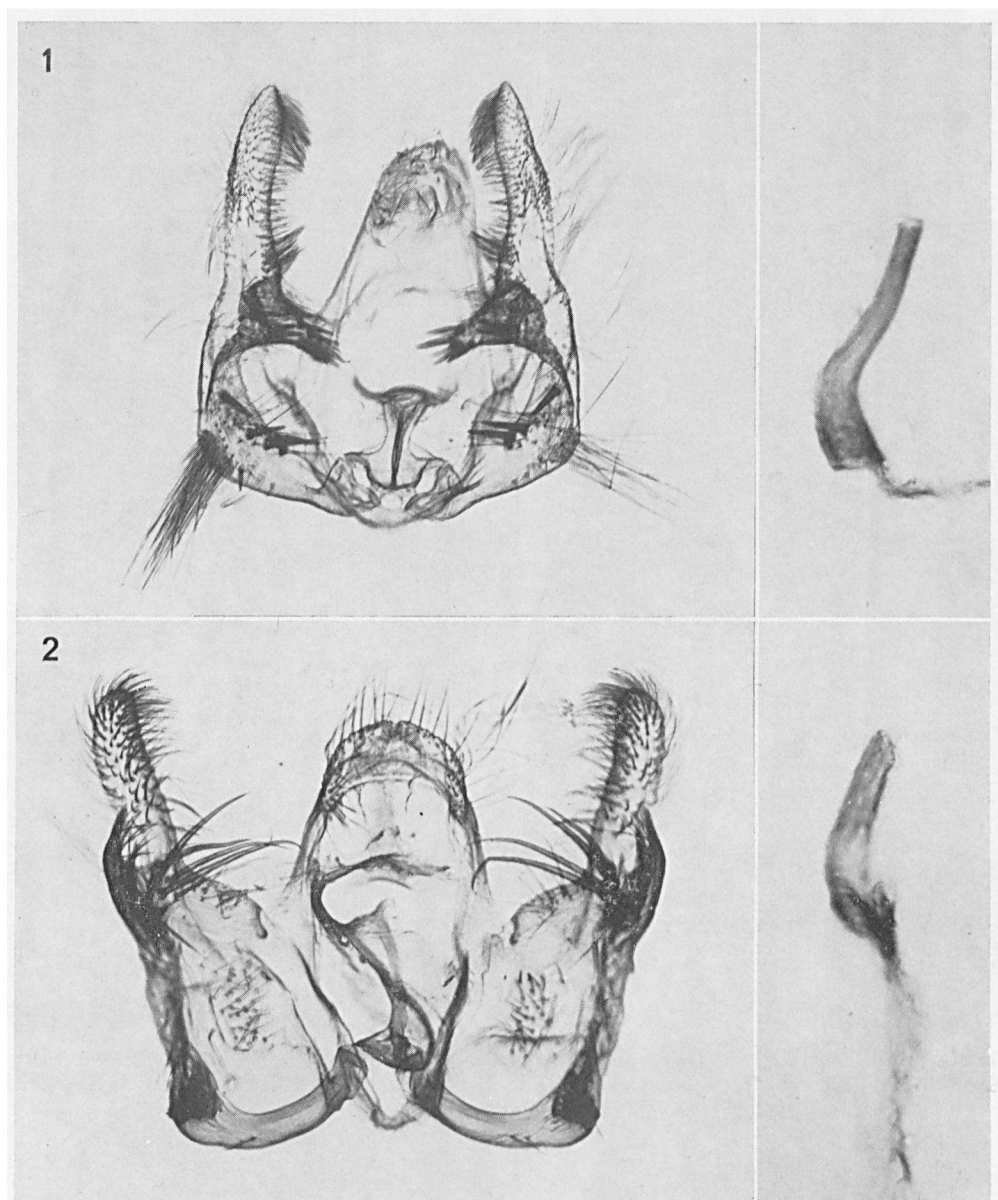


Plate 5. Fig. 1. Male genitalia with aedeagus (right) of "*Polychrosis*" *sedifera* Meyr., holotype, genit. 15770, "Queensland, Cairns, III. 1907, F.P.D." (Meyrick Coll., BM). Fig. 2. Male genitalia with aedeagus (right) of "*Polychrosis*" *anconia* Meyr., lectotype, genit. 15771, "Queensland, Brisbane, 3.III.1907, A.J.T." (Meyrick Coll., BM). Both in Meyrick Coll., BM. By the courtesy of the Trustees of the British Museum (Natural History).



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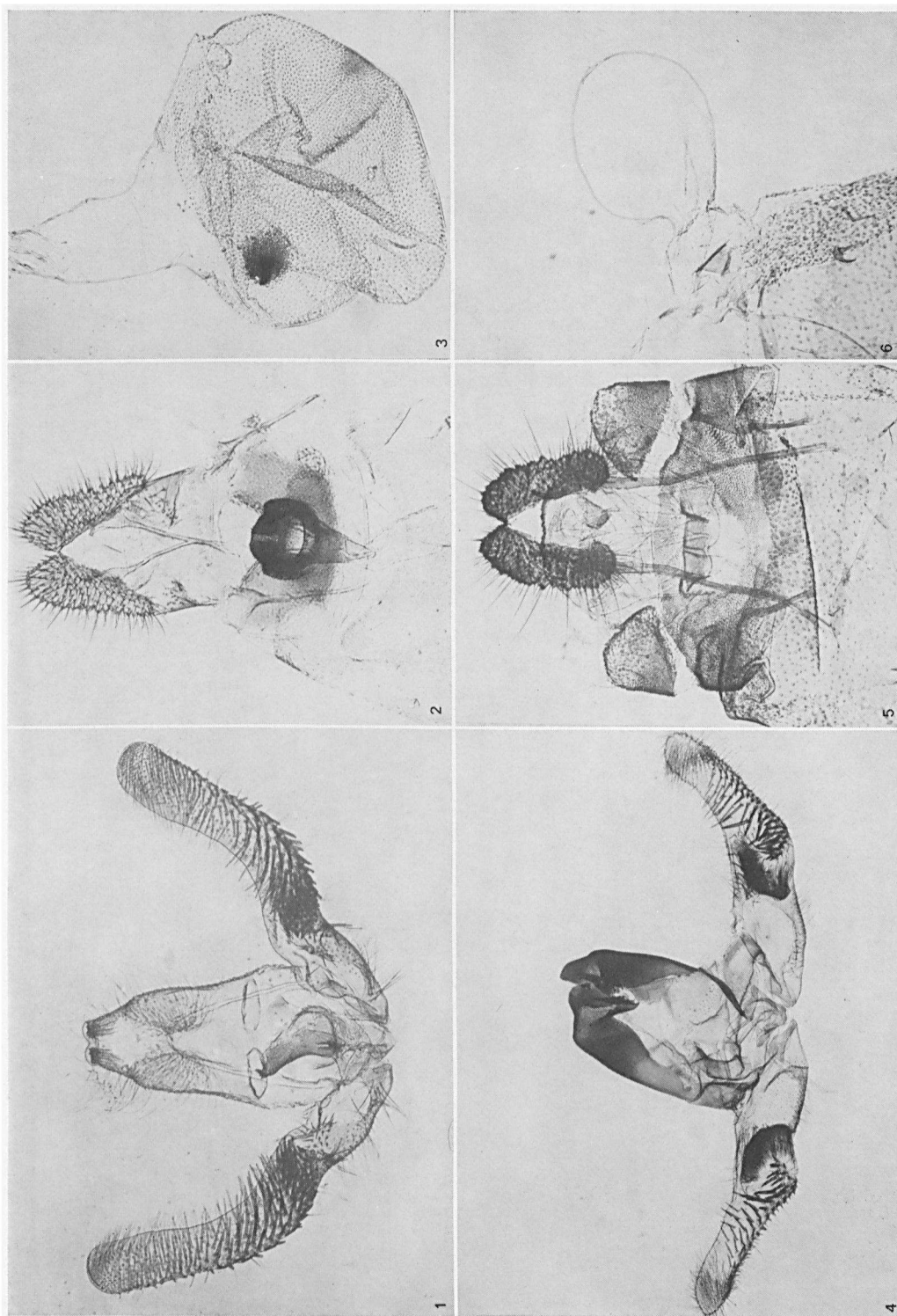


Plate 6. Genitalia of Olethreutae. Figs. 1-3. *Cymolomia herzigiana* (Sax.). Figs. 4-6. *Pelatea htugiana* (Frr.) ♂, ♀, and bursa, respectively. (After Bentinck & Diakonoff, 1968).

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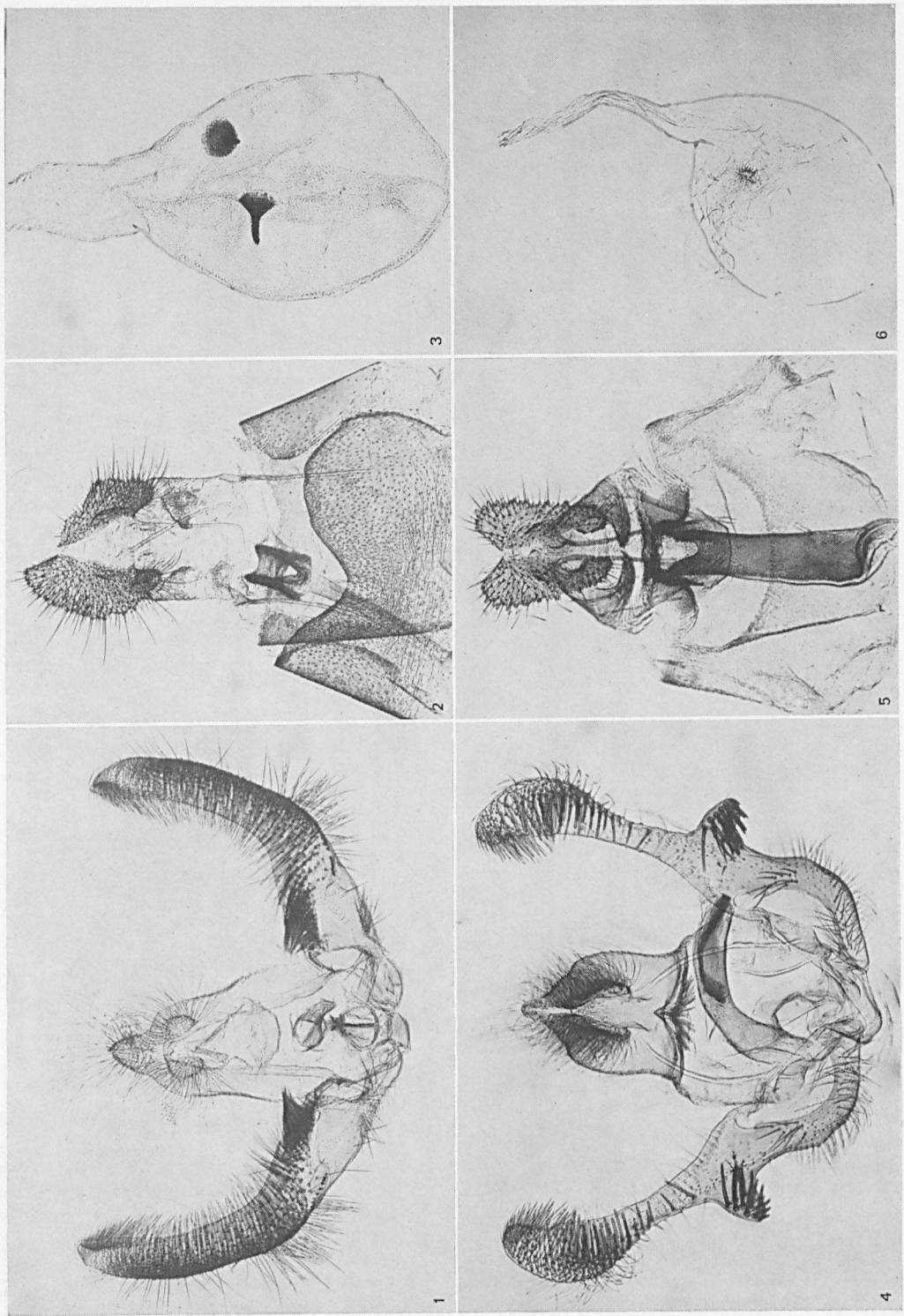


Plate 7. Genitalia of Olethreutae. Figs. 1-3. *Hedyia salicella* (L.). Figs. 4-6. *Orthotaenia undulana* (D. & Sch.) ♂, ♀, and bursa respectively. (After Bentinck & Diakonoff, 1969).

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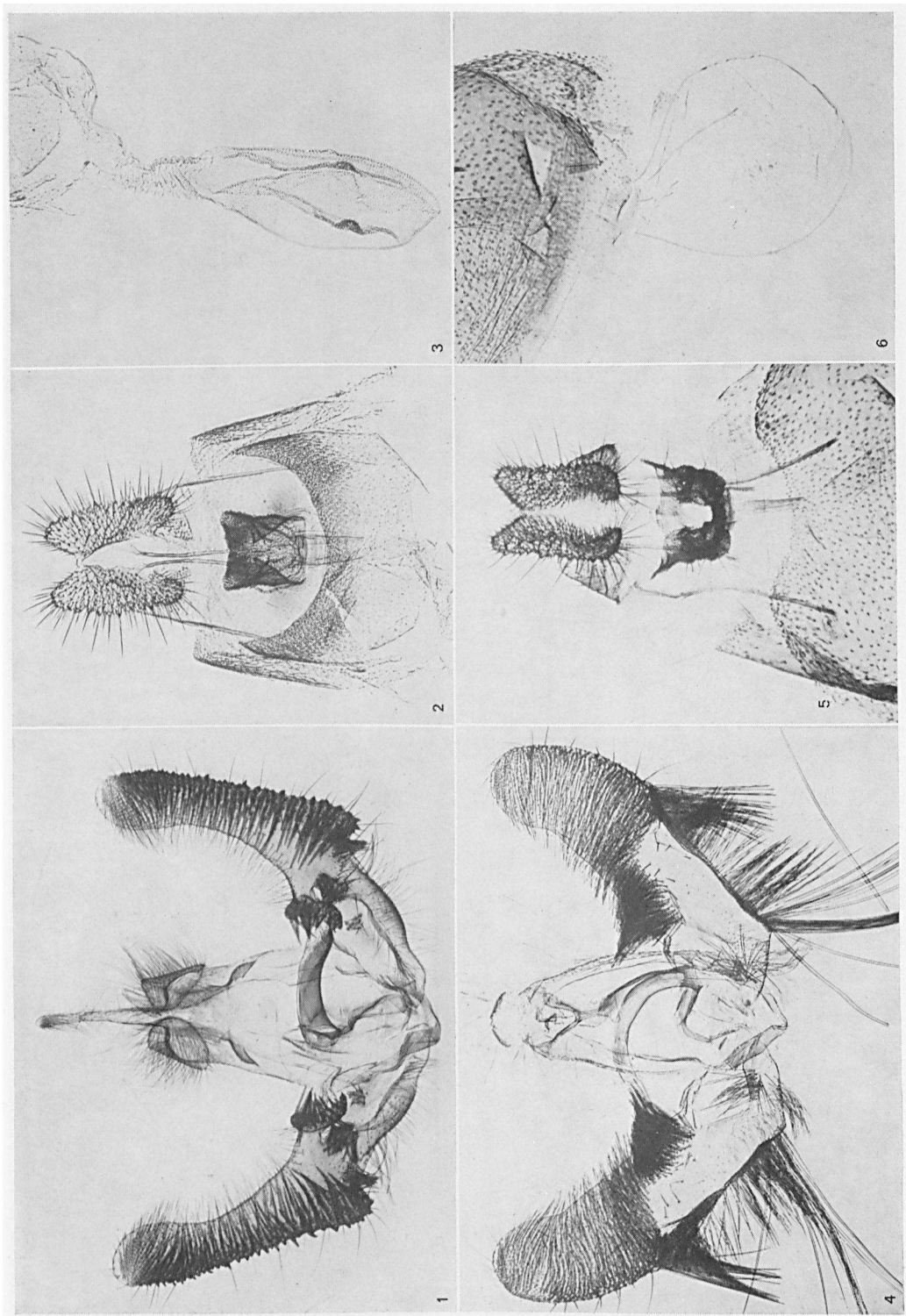


Plate 8. Genitalia of Olethreutae etc. Figs. 1-3. *Metendothenia atropunctana* (Zett.) comb. nov. Figs. 4-6. *Aterpia corticana* (D. & Sch.); ♂, ♀, and bursa, respectively. (After Bentinck & Dia-  
konoff, 1968).

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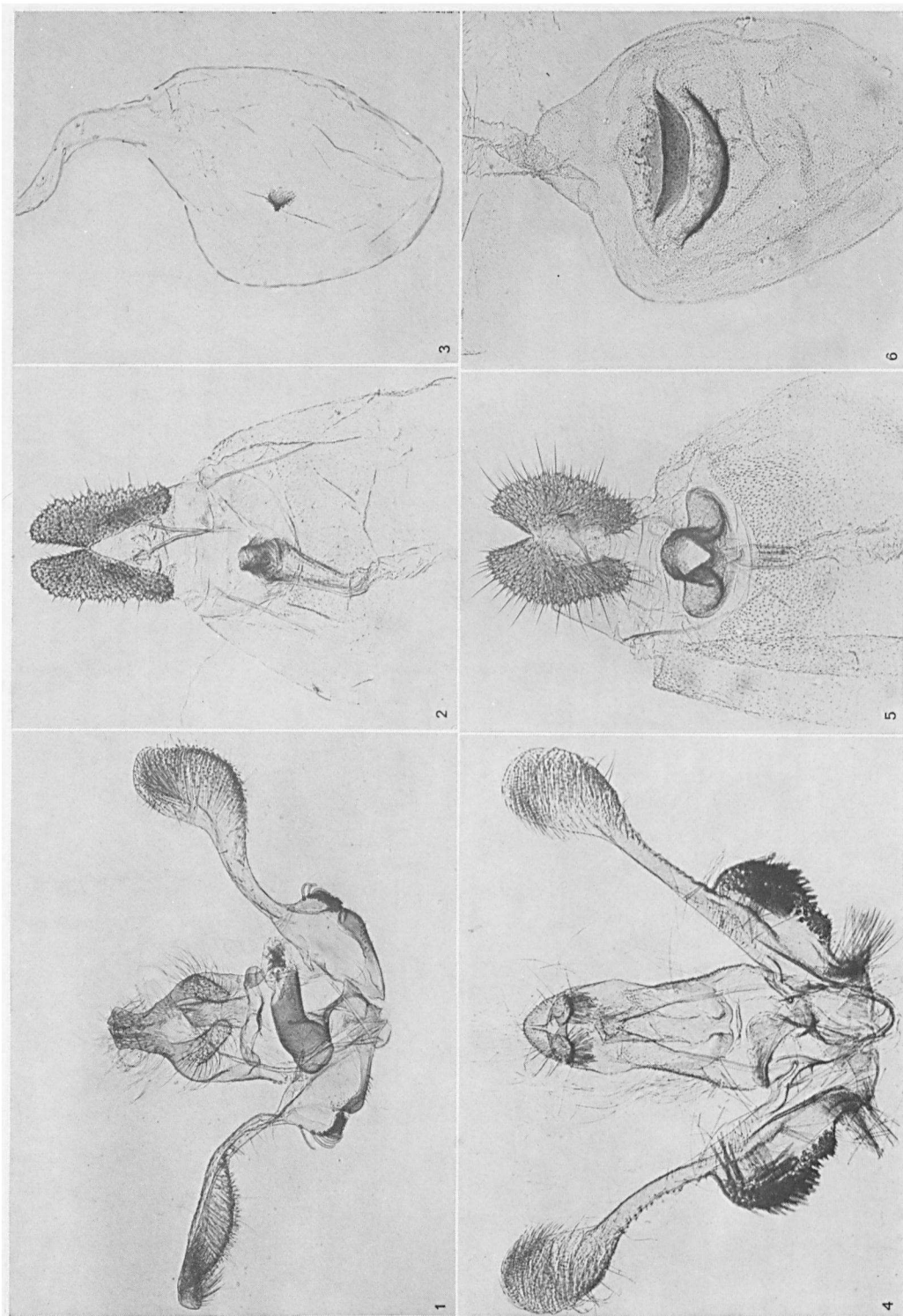


Plate 9. Genitalia of Olethreutae etc. Figs. 1-3. *Pseudohermias clausthaliana* (Sax.). Figs. 4-6. *Pseudosciaphila branderiana* (L.), ♂, ♀, and bursa, respectively. (After Bentinck & Diakonoff, 1968).

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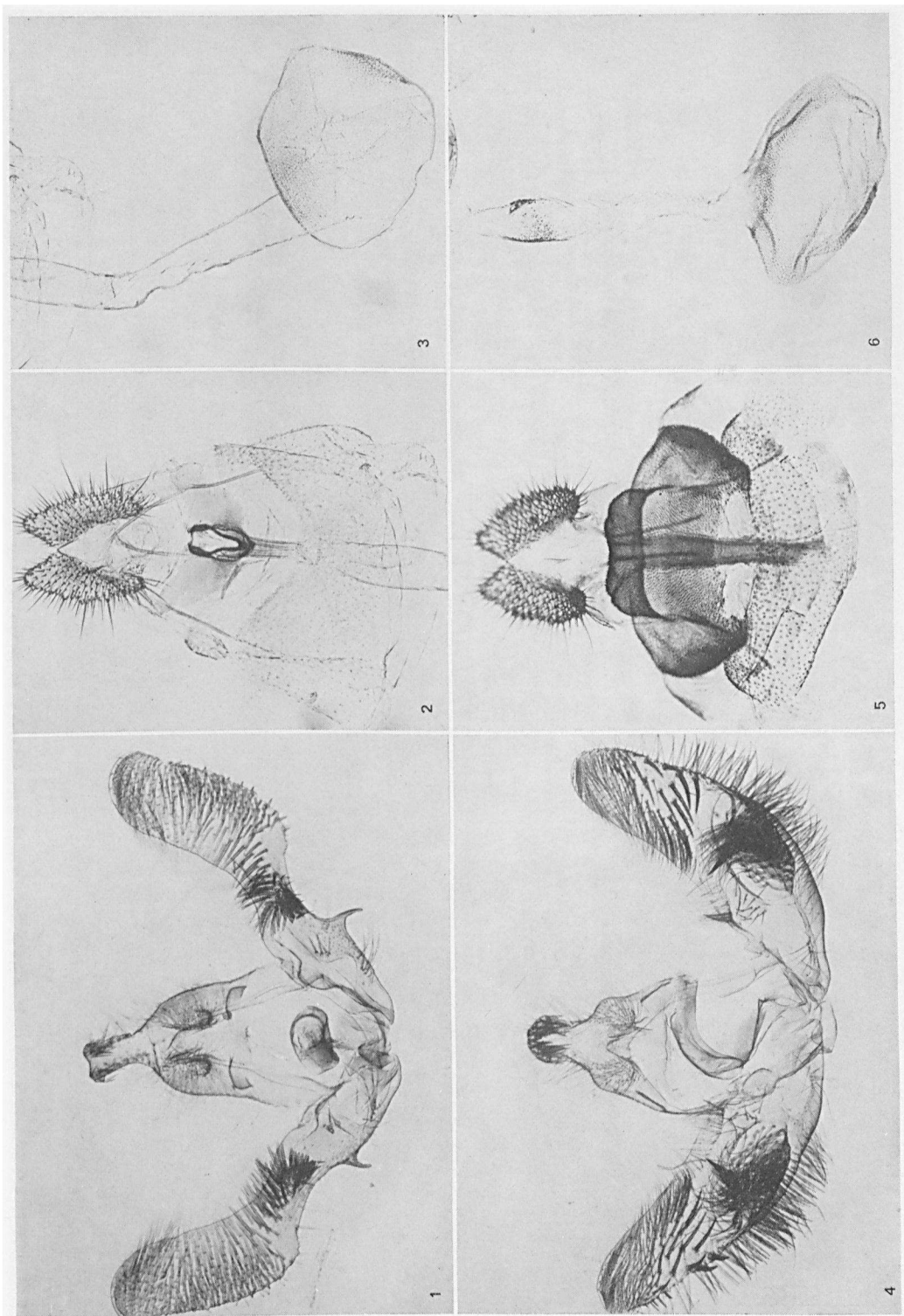


Plate 10. Genitalia of Olethreutae. Figs. 1-3. *Selenodes daleariana* Gn. Figs. 4-6. *Stactea mygindiana* (D. & Sch.); ♂, ♀, and bursa, respectively. (After Bentinck & Diakonoff, 1968).

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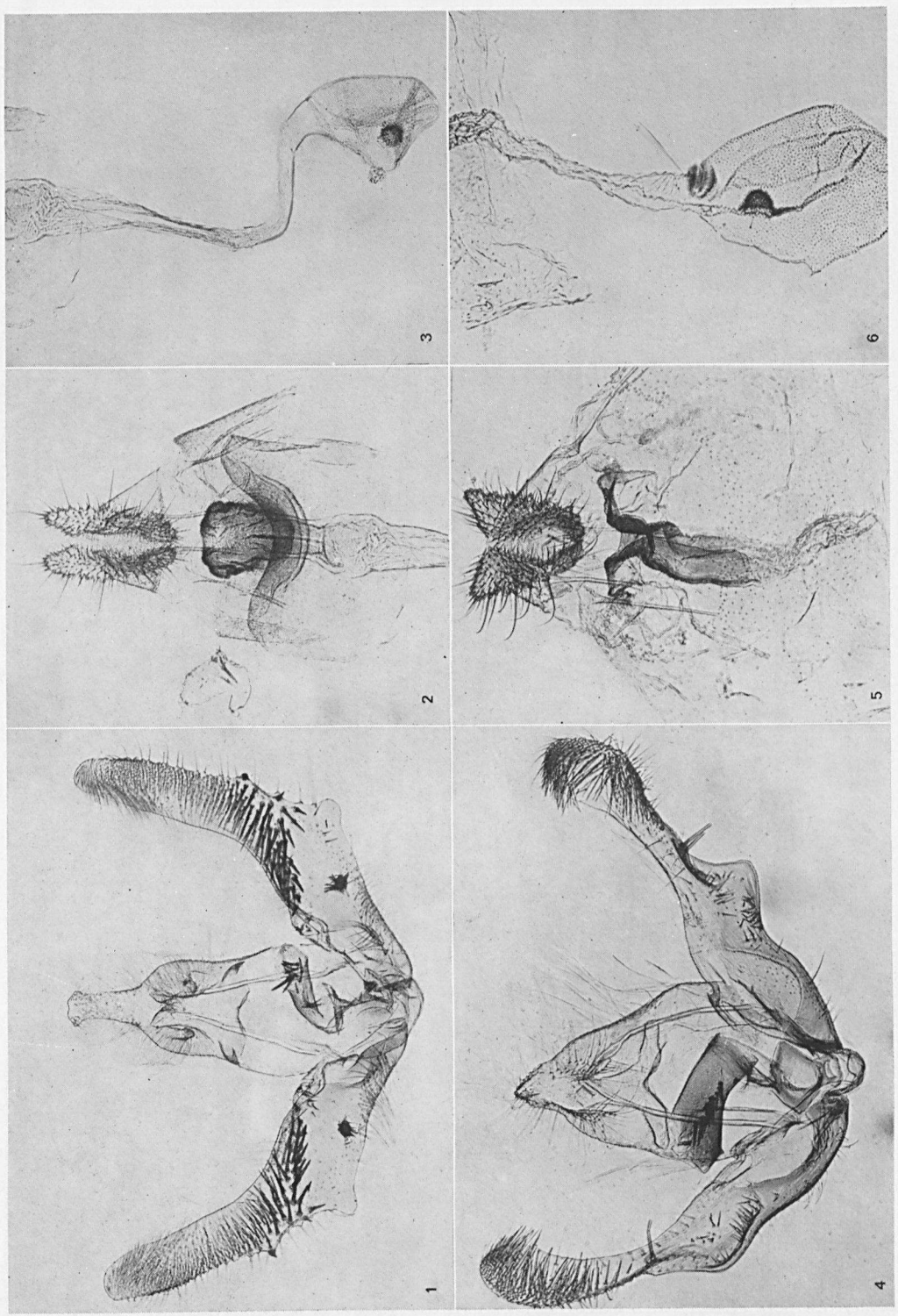


Plate 11. Genitalia of Olethreutae. Figs. 1-3. *Olethreutes arcuella* (Cl). Figs. 4-6. *Piniphila decrepitana* (H.-S.); ♂, ♀, and bursa, respectively. (After Bentinck & Diakonoff, 1968).

PLATES

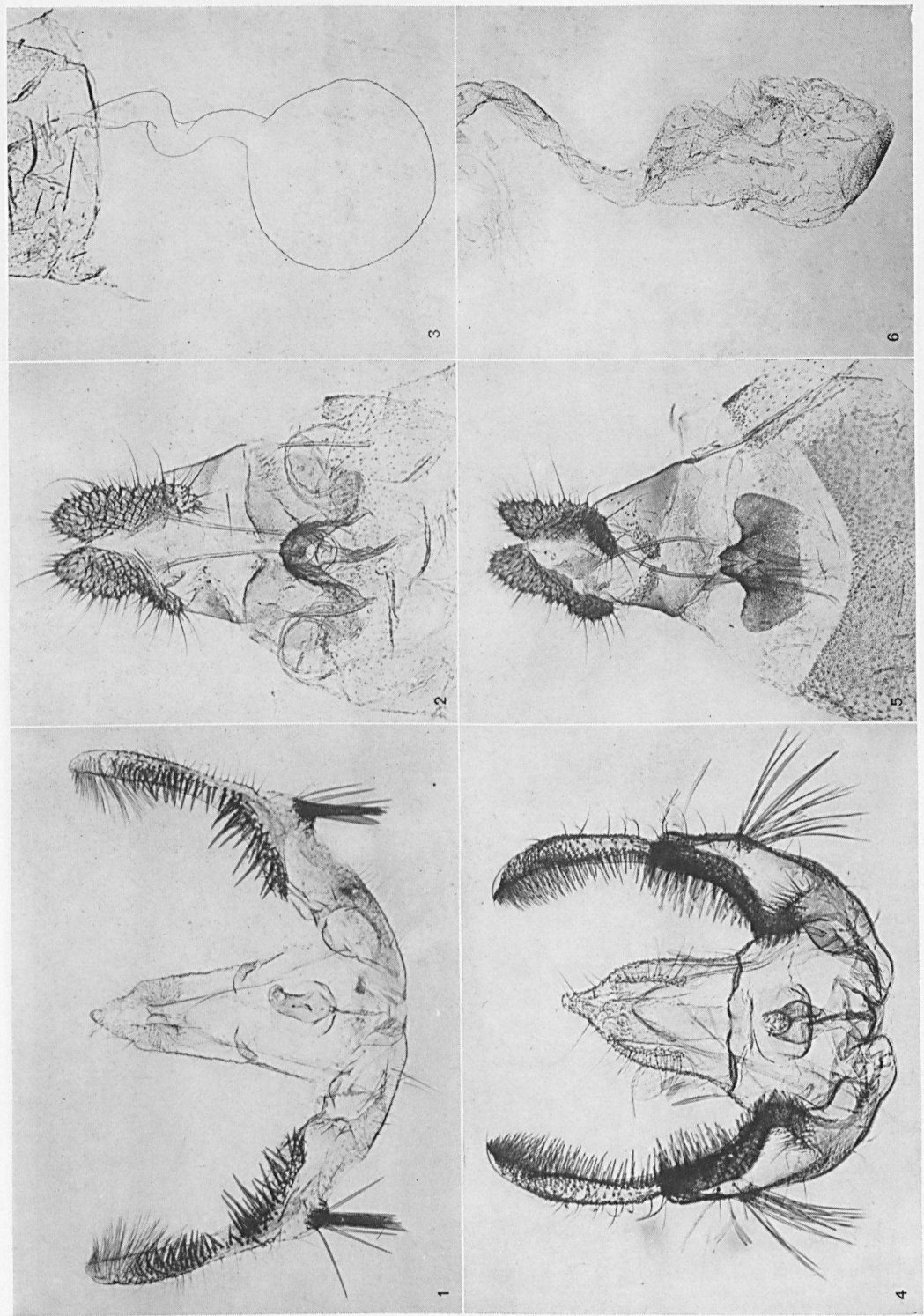


Plate 12. Genitalia of Olethreutae. Figs. 1-3. *Olethreutes (Loxoterma) aurofasciana* (Hw.). Figs. 4-6. *O. (Syrnicoris) rivulana* (Scop.); ♂, ♀, and bursa, respectively. (After Bentinck & Diakonoff, 1968).

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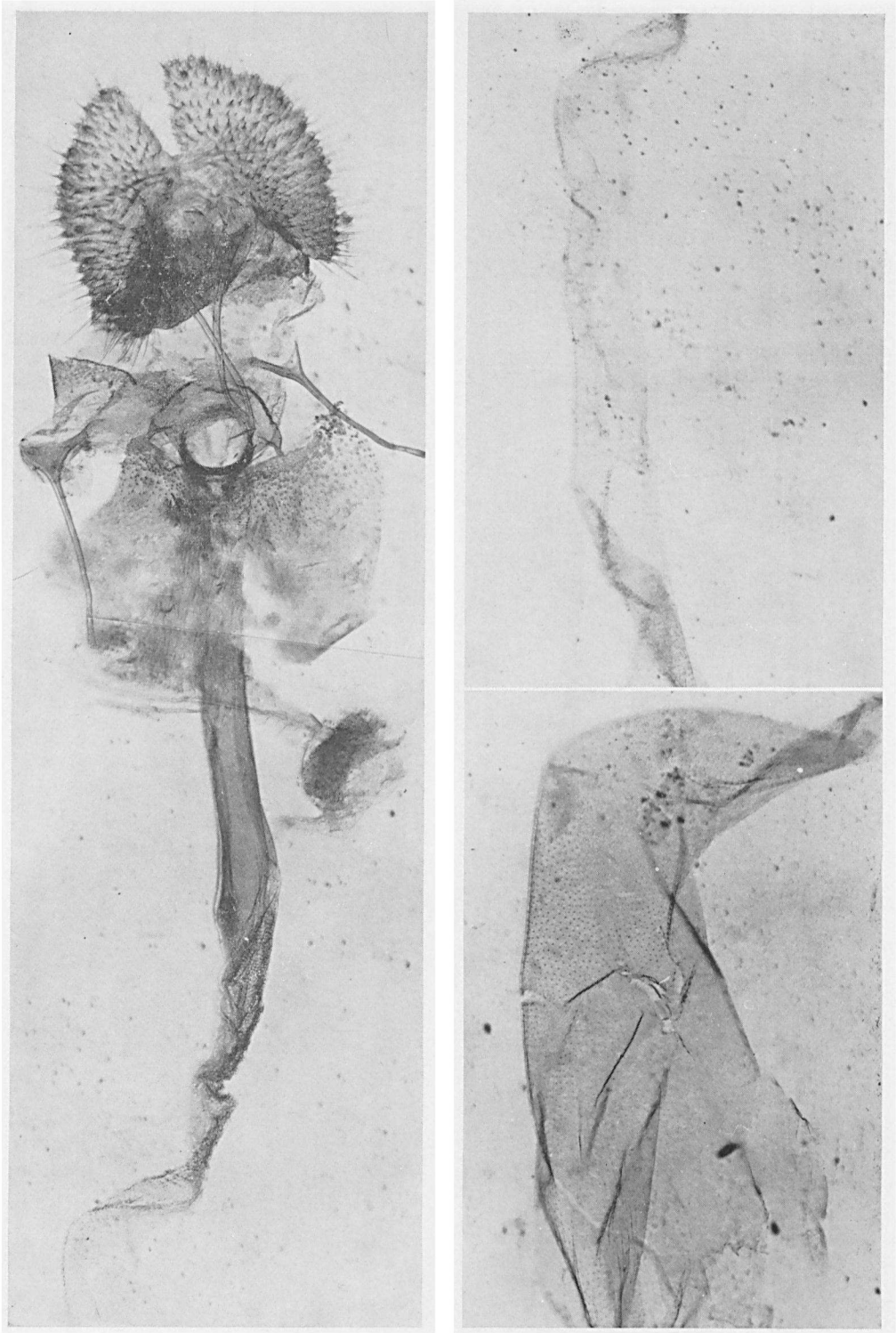


Plate 13. Genitalia of *Phaecasiophora (Megasyca) leechi* spec. nov., holotype, ♀, left, sterigma with colliculum, right, ductus bursae and corpus bursae. (By the courtesy of the Trustees of the British Museum, Natural History).



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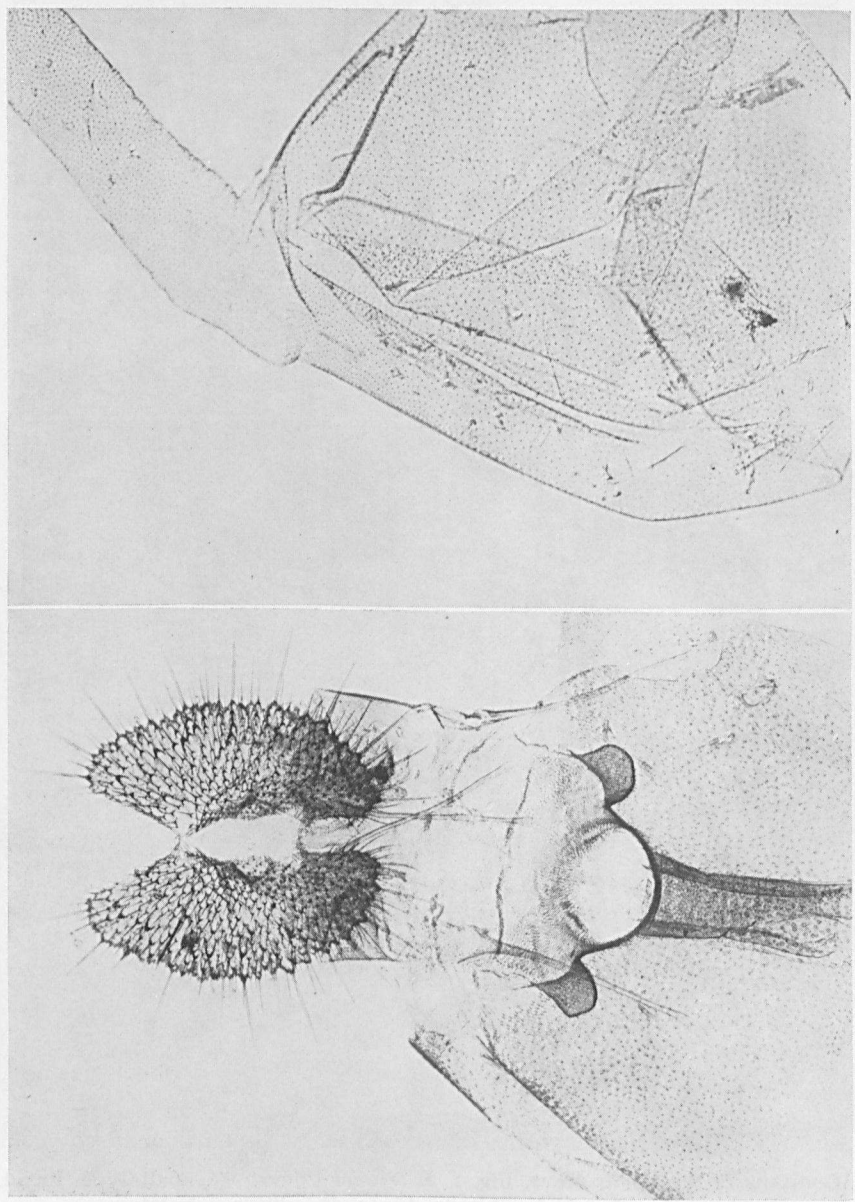


Plate 14. Female genitalia of *Psilacantha charidotis* (Drnt.), apallotype. Fig. 1. Ovipositor and sterigma. Fig. 2. Bursa copulatrix.

PLATES

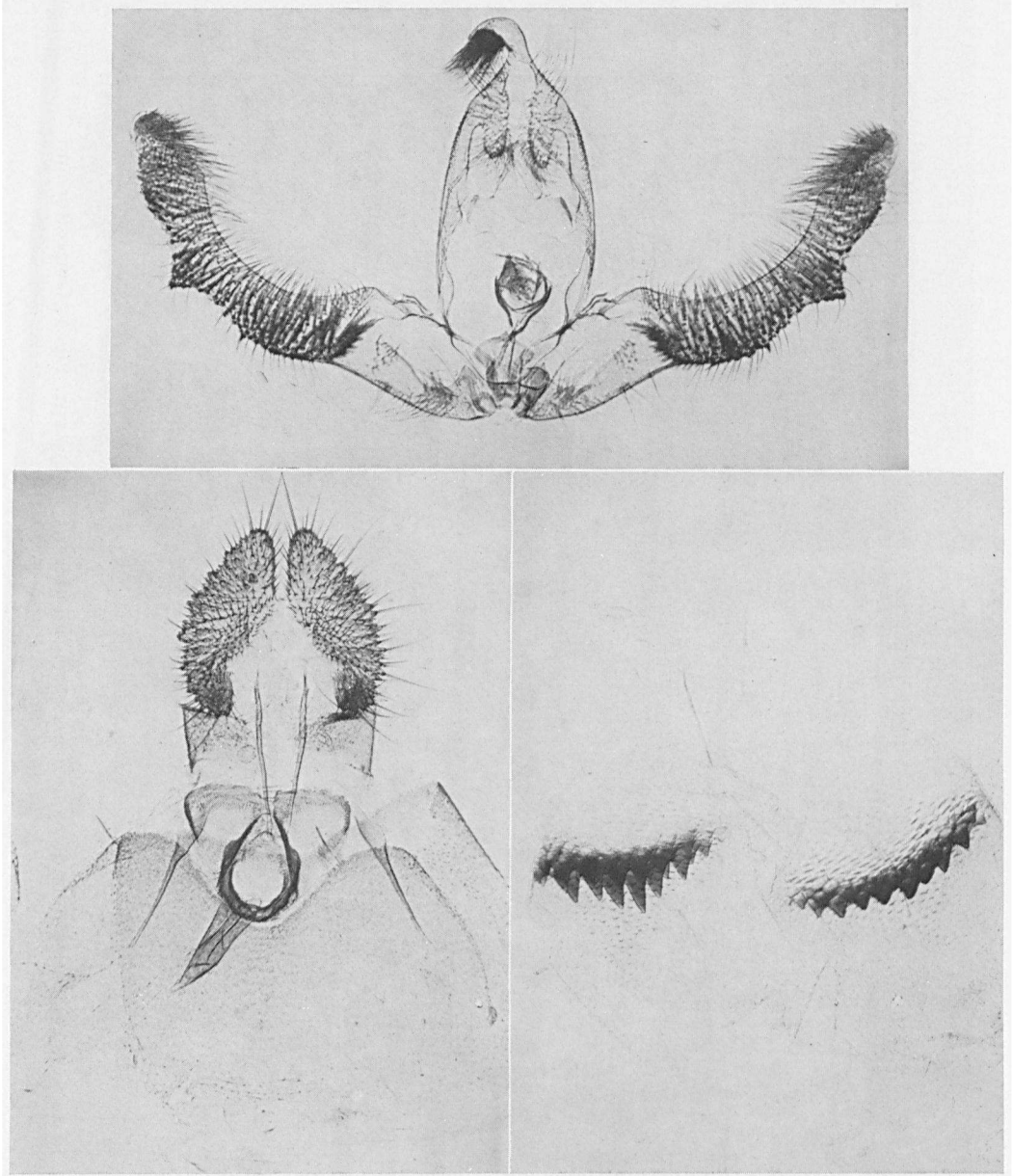


Plate 15. Genitalia of *Statherotis* Meyr. Fig. 1. *S. iricolor* (Meyr.), ♂, apallotype. Fig. 2. *S. porphyrochlora* sp. n., ♀, allotype. Fig. 3. Do., bursa copulatrix.