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A REVISION OF DIPLECTRIA (MELASTOMATACEAE)

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SUMMARY

Eleven species are recognized for the Southeast Asian, mainly Malesian genus *Diplectria* (Bl.) Reichenb., which includes *Anplectrum* A. Gray, or *Backeria* Bakh. *f.* Four new specific combinations are proposed, while one new species and a new subspecies are described.

INTRODUCTION

Diplectria (Bl.) Reichenb. belongs to a close-knit group of genera in the tribe *Dissochaeteae* of the *Melastomataceae*. The generic delimitations are often not easy and should be the subject of further study; even then subjective decisions are bound to be taken.

The first to distinguish *Diplectria* was Blume (1831), who regarded it as a small section in *Dissochaeta* Bl. Simultaneously he described the genus *Aplectrum* Bl. for three more species, which many later authors have considered to be congeneric. *Aplectrum* Bl., however, is a later homonym of *Aplectrum* Torr. (1826). The first legitimate generic name was provided by Reichenbach (1841), who elevated Blume's section.

Asa Gray recognized this homonymy and in 1854 proposed a new name: *Anplectrum*. Later authors added several species to it, and when Otto Kuntze (1891) discovered that *Diplectria* was the correct name there were about 20 species, for which he uncritically made the 'necessary' combinations. The confusion existing at that time regarding the generic delimitation is exemplified by the fact that several of these species are now placed in such genera as *Dalenia* Korth., *Dissochaeta* Bl. (incl. *Neodissochaeta* Bakh. *f.*), *Macrolenes* Naud., and *Pseudodissochaeta* Nayar. Bakhuizen *f.*, in his treatment of the family for the Dutch East Indies (1943), enumerated only four species for *Diplectria* and two for *Backeria* Bakh. *f.*, a new name for *Aplectrum* Bl. In the present revision the two genera are again united, and eleven species are recognized, as it appeared that outside the area treated by Bakhuizen *f.* some more taxa occur.

There is a nomenclatural problem concerning *Aplectrum* and *Backeria*, which is of little actual importance now that both names have been sunk into synonymy, but some remarks should be made. The case has already been mentioned by Merrill (1952), was extensively discussed by Airy-Shaw (1960), and is in short the following:

Aplectrum Bl. is a later homonym. Asa Gray changed it to *Anplectrum*, remarking, that 'a slight change in the privative may render Blume's name ... sufficiently different ...'. As he clearly intended to form a new name, it is homo-

typic with the one it replaced (ICBN Artt. 7, 72), so the new species doubtfully added to it (*A. ? ovalifolium*) cannot be its type, as supposed by Bakhuizen *f.* (1943: 24, 130). The new name proposed by the latter is therefore superfluous, unless it can be shown that *Anplectrum* must be rejected for one reason or the other. Bakhuizen *f.* (1964) tried to do so by arguing that *Aplectrum* and *Anplectrum* are mere orthographic variants, and that *Anplectrum* is bad Greek besides. He cited the Articles 73 and 75 of the ICBN (1961) to sustain his case.

The first one does not seem to apply, however. Rec. 73-G, where 'accordance with classical usage' is *advised*, and which refers to Art. 72, note 2, deals with vowels only, not with consonants, as is specifically stated. In the forthcoming ICBN (1978) the note has been restricted to apply to epithets only. More important is Art. 20, which states that a name may be composed in an absolutely arbitrary manner, which is exactly what Asa Gray did.

Art. 75 might be more to the point, but it seems very unlikely that the two similar, but not identical names will ever lead to confusion, as *Aplectrum* Torr. is a monotypic North American orchid, and *Anplectrum* A. Gray a genus of S. E. Asian melastomes. It can therefore be concluded that although the names may be orthographic variants in the classical sense, they are sufficiently different to be acceptable under the present Code. *Backeria* must therefore be regarded as superfluous. It is a pity that a name commemorating one of the most eminent botanists of Malesia created by another one must suffer such a fate.

MORPHOLOGY

The generic delimitation in the *Dissochaeteae* is probably best based on the characters offered by the stamens and their various appendages; *Diplectria* is nearly unique by the presence of epipetalous fertile stamens and alternipetalous ones of a remarkable shape. Of little use on the generic level, however, appeared to be the depth of the extra-ovarian chambers in which the anthers are inserted in bud; this is clearly correlated with the size of the anthers.

The melastomes are notoriously brittle when dried and especially the floral parts are easily lost; at the same time it is virtually impossible to identify specimens without stamens even to the genus in the *Dissochaeteae*. The best material is provided by a specimen with the flowers still in bud and about to open, for here all parts are sufficiently developed and still present. All descriptions and dimensions have therefore been taken from this stage. Moreover, in anthesis the filaments elongate considerably, pulling their anthers from the extra-ovarian chambers. The anthers then become erect and often curve, changing their shape and becoming difficult to measure. The deciduousness of the stamens has caused taxonomic difficulties, as is shown by the case of *Anplectrum glaucum* vs. *A. divaricatum*, both synonyms of *D. divaricata*, where the first has been said to have a variable number of staminodes (0 to 4), and the latter always four, but where the flower buds of the first invariably have all four staminodes present. Such a reduction has sofar never been observed in any specimen of *Diplectria*, and rarely in other genera.

As the appendages of the stamens are so important we here propose the following terminology, for no satisfactory one seems to exist. The stamens should again be observed in bud. (Fig. 1).

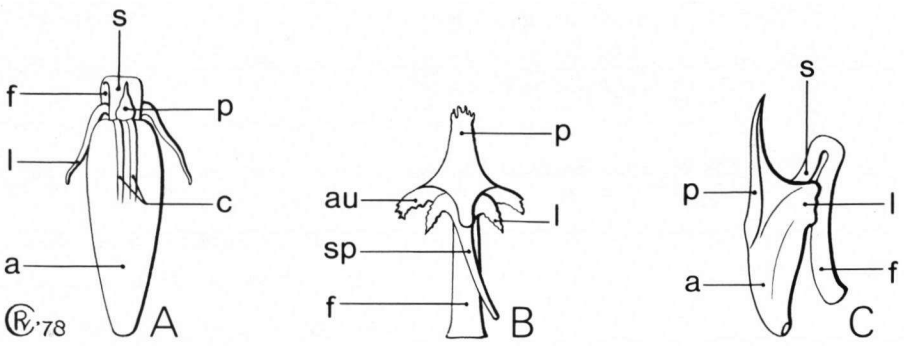

Fig. 1. Various stamens. — A. *Diplectria glabra* subsp. *kinabaluensis*, fertile stamen, adaxial, × 10 (*Clemens 40940*). — B. *Diplectria divaricata*, staminode, adaxial, × 10 (*Teysmann* Ao 1860). — C. *Dissochaeta inappendiculata*, staminode, lateral, × 20 (*Ouwehand s.n.*).

On the adaxial side, near the summit of the anther (or slightly below it in other genera) there is a usually somewhat triangular appendage, the *plectrum*. At its base very often a strip of tissue, considered to be connectival and at least in the herbarium generally of a darker colour, runs down the adaxial side of the anther; it is not rarely swollen and may form one or two elevated ridges, the *crest(s)*. The plectrum is variable in shape and may become deeply hastate with lobes which sometimes elongate considerably, the *auricles*. These should not be confused with the two (sub)apical, abaxial appendages, the *lateral appendages* (because they generally protrude to the sides). It is not always easy to recognize the distinction between the auricles and the lateral appendages, as the latter may fuse with the plectrum and then resemble the first, but generally their point of origin provides the distinction. Both kinds of appendages may occur on the same anther, but one should be aware that the lateral appendages are sometimes split up into several filiform parts (cf. *Macrolenes spp.*). Through reduction various parts may become absent, e.g. the lateral appendages in most of the staminodes of *D. divaricata*.

Between the area of the plectrum and the lateral appendages there may be constriction, the *stipe*, which gives the anther a more or less stalked appearance. The stipe is absent in *Diplectria*. The upper part of the epipetalous filaments is possibly also connectival. In *Diplectria* and many related genera there is a sharp bend shortly above the attachment tot the anther, the *stipopodium*. In dissecting the filament articulates and breaks here easily, although the 'natural' point of breakage is apparently between the stipopodium and the connectival area of plectrum and lateral appendages.

Contrary to a remark by Krasser (1893: 136) *Diplectria* is distinct from nearly all other *Dissochaeteae* by the presence of four epipetalous stamens (with a developed stipopodium) and four alternipetalous staminodes (with a straight filament in bud). Nearly all other genera have the alternipetalous stamens best developed, the epipetalous ones being at least somewhat smaller, or staminodial, or absent. When staminodes are present they have a shape strikingly different from those of *Diplectria*. In the latter genus they have a more or less flattened spreading plectrum, while the anther itself is reduced to a filiform or

short knobb-like structure, the *spur*. The other genera generally have a developed stipopodium, the plectrum is usually present as an obliquely erect thorn, and the anther is somewhat curved and angular, the whole sometimes having a fanciful resemblance to the head of a pteranodon (Fig. 1c). We have searched for examples where the alternipetalous stamens would be shorter than the epipetalous ones and still fertile, representing an initial stage of the reduction seen in *Diplectria*, and also for species with only the four epipetalous stamens left, the final stage, but failed to turn up any. This has convinced us of the importance of this structural feature as a delimitating factor on the generic level in this case.

A problem is posed by the genus *Dalenia*. This is distinct from all other *Dissochaeteae* by the calyx which in bud completely envelops the corolla until a transverse suture is developed; it then drops off as a calyptra. The species have a great overall resemblance and obviously form a natural unit. In fact they are among the few *Dissochaeteae* that can be recognized without flowers as a distinct group. For specific delimitation the flower has to be inspected and one then encounters, surprisingly enough, a dissochaetoid androecium in the type species, *D. pulchra*, and a diplectroid one in *D. beccariana*! This may be considered as an example of Vavilov's Law of homologous series in variation (1949—1950), which briefly states that in related taxa homologous instances of variation may be found. It is, however, false to give equal taxonomic status automatically to similar instances of variation; each case should be judged on its own merits. One can assume that structural characters are the expression of a genetical system that has been formed in the evolutionary history of a taxon. The cause of the change of a character 'a' to the derived one 'b' is of no interest here, the fact that it happened is. So we can assume that at one time 'b' has split-off from a population that retained 'a'. Further, for simplicity's sake we assume that the structural change is an irreversible one, as is probably the case when fertile stamens turn into staminodes, or are lost altogether. Now, when 'b' may be derived from 'a' there seems to be no logical reason why this may not happen again later in the taxon retaining 'a', but this may then cause different taxonomic evaluations. The earlier in history the change took place, the 'heavier' it would seem as a taxonomic character, but the later the 'lighter'. The mode of placentation is presently used for distinguishing subfamilies in the *Melastomataceae*, but also to distinguish between *Creochiton* and the rest of the *Dissochaeteae*. The place and type of staminodes may similarily be used to distinguish genera in the *Dissochaeteae* in one place and simultaneously for species in another, as is the case here.

The calyptra of *Dalenia* seems unique in the tribe, and the species are very similar in other respects. It would therefore seem most logical to assume that the origin of the calyptra took place before that of the two androecium types. The stock leading to *Diplectria* and *Dissochaeta* seems to have lost the calyx lobes nearly altogether (exception: *Dissochaeta schumannii*, incl. *Neodissochaeta lamiana*, with distinct segments, but only 4 stamens) before these two taxa diverged. So the same feature is used at different taxonomic levels.

In view of the above the possibility may not be ruled out that *Diplectria* has actually originated polyphyletically from *Dissochaeta* and is artificial, but this can not be demonstrated at present. Also, if only one species of *Diplectria* were known, the temptation would be great to include it in *Dissochaeta*. Our decision

for the retention of two distinct genera therefore seems subjective. On the other hand, if we would unite the two, and perhaps for good measure throw in *Dalenia*, too, the inclination would still remain to distinguish them infra-generically, using the same arguments. The problem would not have gone away and nothing would have been solved. Therefore, as we consider these structural difference important enough, *Dalenia*, *Diplectria*, and *Dissochaeta* are recognized as generically distinct. The interested reader may be referred to a similar discussion, but then on the infra-specific level, by Veldkamp (1973: 17—18).

Having thus more or less satisfactorily delimitated *Diplectria* we find that all species originally attributed to *Aplectrum* are present. These were distinguished most recently by Bakhuizen *f.* (as *Backeria*) on the assumption that the extra-ovarian chambers would not reach beyond the upper quarter of the ovary, while in *Diplectria* they would extend nearly to its base. Moreover, in *Backeria* the fertile anthers would be of a peculiar, thickish, ovoid shape, lacking both the plectrum and the abaxial appendages. Surveying the species it is observed that these characters represent the extremes of a range of variation. The depth of the chambers is of little variance within one species, but the species themselves range together to a complete scala. The same is true for the shape of the anthers and the two are obviously correlated. On one side we see *D. viminalis* (formerly in *Backeria*), on the other *D. divaricata* with its very deep chambers and linear-lanceolate, distinctly beaked anthers. In the middle, with the chambers reaching more or less halfway the ovary and with oblong, not beaked anthers to fit into them are *D. papuana*, *D. micrantha*, and *D. glabra*, and no sharp border can be drawn anymore.

Because of the existing confusion in the generic delimitation and the subsequent variable naming many species of *Dissochaeta* and *Neodissochaeta* had to be studied. These have been distinguished in the same way as *Diplectria* and *Backeria*. Here, too, a similar range has been found and no other features became apparent to distinguish these genera in the current sense. It will, however, be necessary to study them more thoroughly and a revision is certainly needed. We therefore refrain from proposing the new combinations apparently required when the two are united.

The same argument applies to *Creochiton* Bl. and *Eisocreochiton* Quisumbing & Merr., which will be dealt with elsewhere in this issue.

Similarly, in *Medinilla* Gaud. the depth of the chambers is more variable then generally mentioned; they may extend to the base of the ovary in some cases and may then have such thin septa that the ovary appears superior after careless dissection of the flower (e.g. the remarkable section *Heteroblemma* Bl. with *M. alternifolia*, *M. barbata*, *M. bisetosa*, *M. decurrens*, *M. flagellata*, *M. lorata*, *M. scandens*, *M. serpens*, and some more, apparently undescribed species; Mrs. J. Ridder, pers. comm. This section is characterized further by having alternate leaves, possibly anisophyllous when young, and wood that is lobed in transverse section; Drs. G. J. C. M. van Vliet, pers. comm.).

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LITERATURE

In the citation of literature under the taxa only those references will be given that are not present in Bakhuizen *f.*'s revision (1943).

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DIPLECTRIA

Diplectria Bl. *ex* Reichenbach, Nomencl. (1841) 174; Bakh. *f.*, Thesis (1943) 198 (*q.v.* for further synonymy); Bakh. *f.* in Back. & Bakh. *f.*, Fl. Java 1 (1964) 365. — *Dissochaeta* Bl. sect. *Diplectriae* Bl., Flora 14 (1831) 501; Bijdr. Nat. Wet. 6 (1831) 242. — *Anplectrum* A. Gray *Diplectriae* Triana, Trans. Linn. Soc., London 28 (1871) 84 (*sine statu*). — Lectotype: *Dissochaeta cyanocarpa* (Bl.) Bl. (= *Diplectria divaricata* O. Ktze).

Aplectrum Bl., Flora 14 (1831) 502; Bijdr. Nat. Wet. 6 (1831) 243, *nom. ill.*, *non* Torr. (1826). — *Anplectrum* A. Gray, U. S. Expl. Exped. 1, Bot., Phan. (1854) 597; C. B. Clarke in Hook. *f.*, Fl. Br. Ind. 2 (1879) 545; King, J. As. Soc. Beng. 69, 2 (1900) 57; Ridl., Fl. Mal. Pen. 1 (1922) 799; Airy-Shaw, Kew Bull. 14 (1960) 459. — *Backeria* Bakh. *f.*, Thesis (1943) 130, *nom. superfl.*; Bakh. *f.* in Back. & Bakh. *f.*, Fl. Java 1 (1964) 366; Raizada, Ind. For. 94 (1968) 435. — Lectotype: *A. viminale* (Jack) Bl. (= *Diplectria viminalis* O. Ktze).

Dissochaeta Bl. sect. *Disparistemones* Merr., J. Roy. As. Soc., Str. Br. 76 (1917) 101. — Type: *Dissochaeta glabra* Merr. (= *Diplectria glabra* Veldk.).

Straggling shrubs or root climbers, variously stellate-puberulous, indument often mixed with bristle- to hair-like enations. Nodes with interpetiolary ridges. Leaf blades 3- or 5-plinerved. *Thyrses* terminal or axillary. *Flowers* 4-merous. *Calyx* collar-shaped, truncate, or minutely 4-lobed, to irregularly undulate. Re-

ceptacle with 8 extraovarian chambers of variable depth, the epipetalous ones deepest; glabrous. *Petals* 4. *Stamens* heteromorphous; the 4 epipetalous ones fertile, filament (in bud) abruptly curved shortly above its attachment to the anther (the stipopodium); plectrum minute, rarely absent; lateral appendages minute, sometimes absent; anther dehiscing by a single, oblique, terminal and adaxial (in anthesis) pore. *Staminodes* 4, alternipetalous; filament straight; plectrum laterally expanded; lateral appendages of variable size and shape to absent; anther reduced to a spur. *Ovary* 4-locular; placentas axillary, attached in the middle. *Fruit* a rather dry pome. *Seeds* numerous, straight to slightly curved.

Distribution. 11 spp. from Birma to Indo-China, throughout Malesia, but rare in New Guinea, in the Philippines only in Mindanao and Jolo, absent in C.- and E. Java and the Lesser Sunda Isles.

Anatomy. G. J. C. M. van Vliet, Wood anatomy of Melastomataceae (Neotropics excluded); in prep.

KEY TO THE SPECIES

1a. Interpetiolary ridges pectinate by a row of erect, thick, velvety enations up to 15 by 1 mm . . . . . **1. D. latifolia**
b. Interpetiolary ridges not pectinate, enations when present bristle-like, up to 5.5 mm long. 2
2a. Interpetiolary ridges strongly pulvinate 3
b. Interpetiolary ridges inconspicuous to ± linear, not pulvinate 5
3a. Inflorescences more or less densely setose . . . . . **9. D. stipularis**
b. Inflorescences subglabrous to puberulous, at most with a few enations, but not densely setose 4
4a. Leaf blade underneath at the base of the midrib with glandular patches. Flower buds 7—9 mm long . . . . **6-b. D. glabra** subsp. **kinabaluensis**
b. Leaf blade not glandular. Flower buds up to 4.8 mm long **7. D. micrantha**
5a. Anthers broadly oblong, obovate, or panduriform to oblong, 2—4 mm long, apex rounded to apiculate 6
b. Anthers lanceolate to linear-lanceolate, 4—8 mm long, apex long-beaked 9
6a. Leaf blade underneath at the base of the midrib with glandular patches, Anthers oblong, apex rounded 7
b. Leaf blade not glandular. Anthers broadly oblong, obovate, or panduriform, apex rounded or apiculate 8
7a. Inflorescence axes densely puberulous, glabrescent. Staminodes with 1—2 mm long filaments, spur filiform 1.5—2 mm long; lateral appendages absent (plectrum sometimes long-auricular!). . . . . **8. D. papuana**
b. Inflorescence axes sparsely minutely puberulous to glabrous. Staminodes with 2.2—4 mm long filaments; spur 0.5—1.5 mm long; lateral appendages filiform, up to 6.5 mm long, the ends turned up in bud **6-a. D. glabra** subsp. **glabra**
8a. Petiole below the blade laterally usually with dense tufts of short puberulous enations, these rarely reduced to 1 or 2; blade 4.5—10.5 by 1.7—4.5 cm . . . . . **11. D. viminalis**

Petiole without such tufts, enations when present glabrous, bristle-like; blade 10—17 by 3—7 cm . . . . . **10. D. anomala**

9a. Spur of staminodes 0.5—1.75 mm long, shorter than the filament; lateral appendages only rarely present, then up to 0.5 mm long . **5. D. divaricata**

b. Spur of staminodes 3—5 mm long, ± as long as to longer than the filament; lateral appendages 0.5—2.25 mm long, free or fused with the plectrum, only rarely absent 10

10a. Petiole without enations; blade glabrous beneath. Staminodes with a 4.5—5 mm long spur . . . . . **3. D. conica**

b. Petiole with enations; blade puberulous beneath. Staminodes with a 3—4.5 mm long spur 11

11a. Petiole with puberulous enations. Anther 4—6 mm long; stipopodium 1.5—1.75 mm long . . . . . **2. D. furfurascens**

b. Petiole with glabrous enations. Anther 6.5—7 mm long; stipopodium *c.* 0.5 mm long . . . . . **4. D. barbata**

1. Diplectria latifolia (Triana) O. Ktze — **Fig. 2 B.**

D. latifolia (Triana) O. Ktze, Rev. Gen. Pl. 1 (1891) 246. — *Anplectrum latifolium* Triana, Trans. Linn. Soc., London 28 (1871) 84, t. 7: f 90-d; Cogn. in DC., Mon. Phan. 7 (1891) 568; Merr., Enum. Born. Pl. (1921) 443. — T y p e : *Lobb s.n.* (K), North Borneo.

Branches purplish velvety, enations absent. Nodes slightly swollen, interpetiolary ridges pectinate by a row of erect, thick, velvety enations, up to 15 by 1 mm. Petioles 15—30 mm long, velvety, without enations; blades ovate, 12.5—20 by 8.5—13 cm, base emarginate, apex abruptly acuminate, (3- or) 5-plinerved with distinct marginals and veins, upper surface glabrous but for the glabrescent nerves, lower surface puberulous, velvety on the major nerves; pergamentaceous. *Thyrses* terminal, up to 20 cm long, lax; axes as the branches; pedicels sometimes with glabrous enations (up to 1.3 mm long). *Flower* buds 9.5—10 mm long, hypanthium tubular, 6—7 by 2.75—3.5 mm, moderately puberulous, glabrescent; calyx truncate; corolla in bud acuminate-conical, *c.* 4 mm long. *Ovary c.* 0.7 times as long as the hypanthium; extra-ovarian chambers extending to base. *Fertile stamens* with 4—5 mm long filament; stipopodium *c.* 1.7 mm long; anther ovate-linear-lanceolate, 6—8.5 mm long, long-beaked; plectrum trapezoid, erose, *c.* 0.5 mm long; lateral appendages auricular, *c.* 0.5 mm long. *Staminodes* with 1.25—2.5 mm long filaments; spur 2—3 mm long; plectrum triangular, 1—2 mm long; lateral appendages ligular, 1—1.5 mm long. Styles 8—11 mm long. *Fruits* ellipsoid, 7—8 by *c.* 5 mm.

D i s t r i b u t i o n . Borneo (Sarawak, *Beccari 800*!, *1083*, *Dan 4367*!, *Lobb s.n.*!, *S 4367 Bakar*!; Brunei, *S 5922 Ashton*!).

E c o l o g y . Primary lowland Dipterocarp-forest; secondary heath forest; on clay; alt. *c.* 150 m.

C o l l e c t o r ' s n o t e s . Scandent shrub or climber, to 20 m; bole to 4 cm ∅. Flowers pink, deep pink, or mauve. Fruits purple.

N o t e . Contrary to the remarks by Triana and Cogniaux the flowers are not fascicled at the end of the floral axes, and the stamen has a small plectrum.

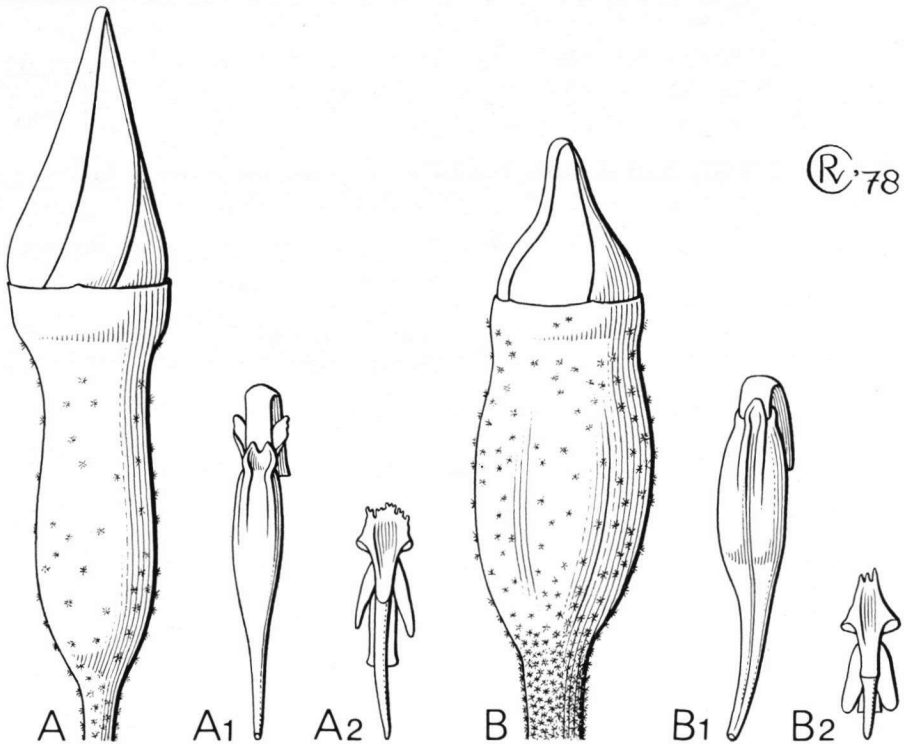

Fig. 2. *Diplectria*. — A. *D. furfurascens*, flower bud; A 1, id., fertile stamen, adaxial; A 2, id., staminode, adaxial (*Elmer 13352*, type). — B. *D. latifolia*, flower bud; B 1, id., fertile stamen, adaxial; B 2, id., staminode, adaxial (*Dan 4367*). All × 10.

2. **Diplectria furfurascens** (Elmer) Nayar, **comb. nov.** — **Fig. 2 A.**

Dissochaeta furfurascens Elmer, Leafl. Philip. Bot. 8 (1915) 2754; Merr., Enum. Philip. Fl. Pl. 3 (1923) 191. — T y p e : *Elmer 13352* (PNH†, iso in L, P, U), the Philippines (Mindanao, Agusan, Cabadaran, Mt. Urdaneta).

Branches puberulous, glabrescent, sometimes with a few glabrous bristle-like enations (to 1 mm long); nodes hardly thickened; interpetiolary ridges linear, glabrous. Petiole 6—7(—10) mm long, puberulous, with glabrous enations (to 1.5 mm long); blade ovate to ovate-oblong, 7—11.5 by 3—5.5 cm, base truncate to emarginate, apex acuminate, 3- (or 5-)plinerved with distinct marginals and veins, upper surface with puberulous to glabrous nerves, lower surface puberulous mainly on the major nerves; pergamentaceous. *Thyrses* terminal, *c.* 20 cm long; axes puberulous, glabrescent. *Flower* buds 9—14 mm long; hypanthium trumpet-shaped, 5—8(—10) by 3—3.5 mm, moderately puberulous; calyx truncate; corolla in bud acuminate-conical, 6.5—8 mm long. *Ovary c.* 0.6 times as long as the hypanthium; extra-ovarian chambers extending to base. *Fertile stamens* with 3.5—3.75 mm long filament; stipopodium 1.5—1.75 mm long; anther ovate-linear-lanceolate, 4—6 mm long, long-beaked; plectrum triangular,

bilobed, 0.3—0.5 mm long; lateral appendages ligular, 0.5—0.7 mm long. *Staminodes* with 2—3 mm long filament; spur 3.75—4.5 mm long; plectrum rhomboid, apex erose, 1.5—2 mm long; lateral appendages ligular to deeply and unequally bifid, 1—1.25 mm long. Styles 10—13 mm long. *Fruits* ellipsoid, 7—8 by 5—6.5 mm.

Distribution. The Philippines (Mindanao, Agusan, *Clemens s.n.*, *Elmer 13352!*, *PNH 41871 Mendoza!*)

Ecology. Old logged-over areas, remnants of Dipterocarpforest; alt. *c.* 250 m.

Collector's notes. Vine to 4 m high, bole to 2.5 cm ∅, profusely branched, branches pendulous, tips drooping. Bark yellowish brown, shredded, green and smooth on the branches. Wood green, soft, odour- and tasteless, with a large brown pith. Leaves subchartaceous, lucid and slightly darker green above, upper ones much reduced, lower surface isabellinous puberulous. Flowers pink. Fruits yellowish green and upon the exposed sides turning atro-violaceous with age, grey green (mainly after Elmer, l.c.).

Note. There are of course 8 stamens, not 7 as described by Elmer (see also Introduction); the length of the filament (8 mm) given by him is probably from an open flower, but even then it seems too long.

3. Diplectria conica Bakh. *f.* — Fig. 3 B.

D. conica Bakh. *f.*, Thesis (1943) 202. — Type: *Bünnemeyer 3094* (L; iso in BO, *n.v.*), Sumatra Agam, Brani.

Anplectrum crassinodum Merr., Papers Mich Ac. Sc. 24 (1939) 85, *nom. ill.*, *non* Merr. (1929). — Type: *Rahmat si Boeea* (MICH; iso in L), Sumatra, Asahan, Lumban Ria.

Branches minutely puberulous to glabrous, enations absent; nodes thickened; interpetiolary ridges linear, glabrous. Petiole 5—12 mm long, enations absent; blade ovate-oblong, 8—12 by 3—5 cm, base truncate, apex caudate, 3-plinerved with distinct marginals and veins, glabrous; pergamentaceous. *Thyrses* terminal and axillary, up to 40 cm long, lax; axes minutely puberulous, glabrescent, enations absent. *Flower* buds 9—11 mm long; hypanthium cup-shaped, 4—6.5 by 3—4 mm, minutely puberulous; calyx truncate to 4-lobed, lobes broadly truncate, *c.* 1 mm long; corolla in bud conical 6.5—7 mm long. *Ovary* 0.5—0.6 times as long as the hypanthium; extra-ovarian chambers reaching nearly to base. *Fertile stamens* with *c.* 4 mm long filament; stipopodium *c.* 1 mm long; anther ovate-lanceolate, 6.5—7.5 mm long (see note), gradually narrowed into a rounded beak; plectrum triangular, *c.* 0.75 mm long; lateral appendages ligular, *c.* 0.75 mm long. *Staminodes* with *c.* 4 mm long filament; spur filiform, curled at the apex, 4.5—5 mm long; plectrum trapezoid to hastate, *c.* 2 mm long; lateral appendages strap-shaped, 0.75—1.25 mm long, rarely absent. Style 11—13 mm long. *Fruits* unknown.

Distribution. Sumatra (W. Coast, *Bünnemeijer 3094!*; E. coast, *Rahmat si Boeea 7781!*).

Ecology. Not recorded; alt. *c.* 950 m.

Collector's notes. None.

Note. Bakhuizen *f.* erroneously recorded the anthers as 1.5—2 mm long.

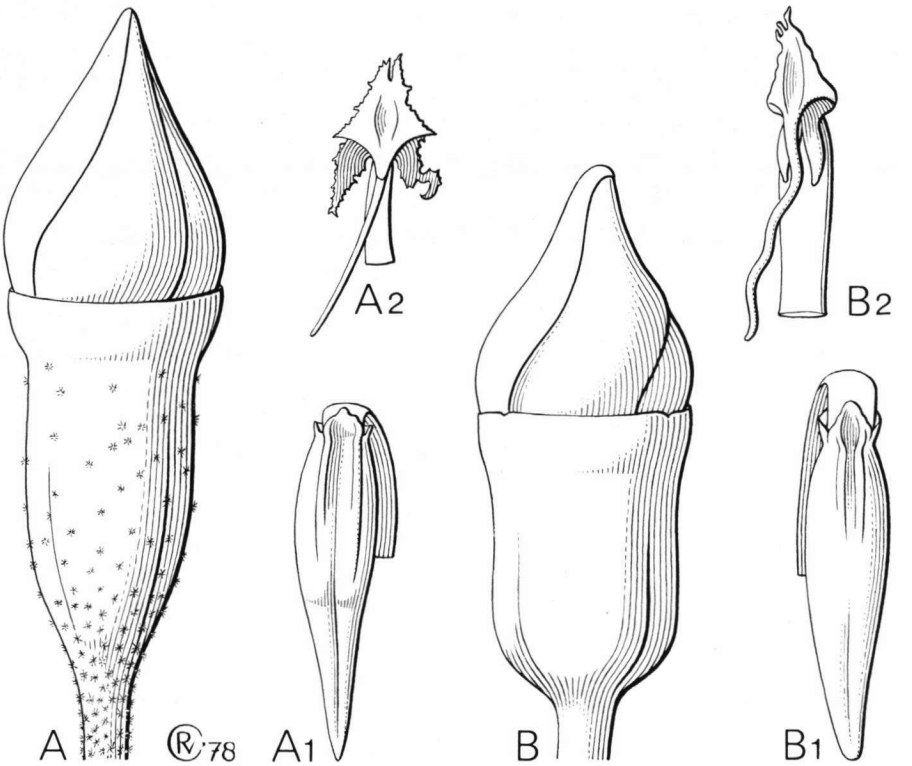

Fig. 3. *Diplectria.* — A. *D. barbata*, flower bud; A 1, id., fertile stamen, adaxial; A 2., id., staminode, adaxial (*Smitinand 10891*). — B. *D. conica*, flower bud; B 1, id., fertile stamen, adaxial; B 2, id., staminode, adaxial (*Bünnemijer 3094*, type). All × 10.

4. **Diplectria barbata** (C. B. Clarke) Franken & Roos, **comb. nov.** — **Fig. 3 A.**

[*Melastoma barbatum* Wall., Cat. (1831) 4082, *nomen.* —] *Anplectrum barbatum* Triana [Trans. Linn. Soc., London 28 (1871) 84, *nomen*] *ex* C. B. Clarke in Hook. *f.*, Fl. Br. Ind. 2 (1879) 456; Cogn. in DC., Mon. Phan. 7 (1891) 566; Fischer, Kew Bull. (1929) 312; Craib, Fl. Siam. Enum. 1 (1931) 697. — *Backeria barbata* Raizada, Ind. For. 94 (1968) 435. — T y p e: *Wallich 4082* (K, IDC-microfiche 7394), Birma, Martaban, Chappedong.

Anplectrum stellulatum Geddes, Kew Bull. (1928) 236; Craib, Fl. Siam Enum. 1 (1931) 699. — T y p e: *Kerr 5870* (K; iso in BM), Thailand, Pitsanulok, Nakawn Tai.

Anplectrum cyanocarpum auct., non Triana: Kurz, J. As. Soc. Beng. 46, 2 (1877) 78; For. Fl. Burma 1 (1877) 508.

Anplectrum glaucum auct., non Triana: C. B. Clarke in Hook. *f.*, Fl. Br. Ind. 2 (1879) 545, *p.p.*; Guill., Fl. Gén. I.-C. 2 (1921) 869, pro t. 96: f. 1, 2, p. 918, t. 100 pro text.; Merr. & Chun., Sunyatsenia 5 (1940) 144; Li, J. Arn. Arb. 25 (1944) 37.

Branches minutely puberulous to glabrous, rarely with bristle-like glabrous enations (to 1.5 mm long); nodes little swollen; interpetiolary ridge linear, sometimes with reflexed, puberulous, bristle-like enations (to 3.5 mm long). Petiole 5—10(—20) mm long, minutely puberulous, usually with puberulous ena-

tions (to 3 mm long); blade ovate to ovate-lanceolate, 7—15 by 2.5—5(—7.5) cm, base obtuse to emarginate, apex acuminate to caudate, 3-plinerved with distinct marginals and veins, upper surface glabrous, lower minutely puberulous, mainly on the major nerves, glabrescent; thin-pergamentaceous. *Thyrses* terminal, up to 25 cm long, lax; axes minutely puberulous, rarely with gland-tipped bristle-like enations (to 1.5 mm long). *Flower* buds 9—12 mm long; hypanthium urceolate to tubular, 5—7.5 by 2.5—3.5 mm, puberulous, without enations; calyx truncate, limb spreading in anthesis; corolla in bud acuminate-conical, 5—6.5 mm long. *Ovary* 0.5—0.6 times as long as the hypanthium; extra-ovarian chambers extending to base. *Fertile stamens* with *c.* 3.5 mm long filament; stipopodium *c.* 0.5 mm long; anther ovate-lanceolate, 6.5—7 mm long, long-beaked; plectrum triangular, up to 0.8 mm long; lateral appendages corniculate, *c.* 0.5 mm long. *Staminodes* with *c.* 2 mm long filament; spur 3—4.3 mm long; plectrum triangular to rhomboid, *c.* 1.5 mm long, often fused with the then auricle-like, ligular to filiform, 0.5—2.25 mm long lateral appendages. Style 12—15 mm long. *Fruits* subglobose-urceolate, 6—7 mm ∅.

Distribution. Birma (Martaban, *Wallich 4082*!; Mergui, *Hb. Hooker s.n.*!; Tenasserim, *Helfer KD 2290*), Thailand (Northern: Uttaradit, *Smitinand & Cheke 10839*!; Pitsanulok, *Kerr 5870*!; Southeastern: Khao Yai National Park, *Smitinand 10891*!; Trat, *Geesink & Phenkhlai 6262*!, *Sørensen et al. 7175*!; Southwestern: Kanchanaburi; Peninsular: Ranong, *Kerr 16573*!; Surat Thani, *Kerr 13232*; Phangga; Phuket, *Kerr 16529*, *17113*, *19087*; Satun; Province unknown: *Nimanong 89*!), Laos (Savannakhet, *Poilane 12234*!), Viet Nam (Tanh Hoa, *Bon 5411*!); Quang Tri, *Poilane 10854*!, *27539*!; Quang Nam, *Poilane 31700*!, *31855*!; Kontum, *Poilane 35651*!; Haut Donaï, *Poilane 22026*!, *22291*!, *Schmid s.n.*!; Bien Hoa, *Pierre s.n.*!; Province unknown, Bum M'o, *Hayata 337*!, Col. de Bananiers, *Pham Hoàng Hô 5003*!), Hainan (*Lau 27156*, *Wang 33290*, fide Merr. & Chun, 1940, and Li, 1944).

Ecology. Mixed deciduous or evergreen, primary or secondary forest; alt. up to 1200 m.

Collector's notes. Straggling shrub or climber with adventitious roots, to 25 m, bole to 30 cm ∅ at base. Flowers not fragrant; hypanthium bright yellow green. Petals white, pink, mauve, or purple. Anthers yellow; staminodes pink. Fruits greyish green.

Uses. The acidulous leaves are edible and agree very well with fish. Used against scabies: boil the leaves and wash (*Poilane 10854*).

Vernacular names. *krang-ton* (Surat, Thailand, fide Craib, 1931), *sirpa* (Moï-Djyrinh, Quang Nam, *Poilane 31700*).

Notes. Although the holotype consists of a twig and some exceptionally broad leaves, it is accepted as belonging to this taxon; it probably represents a sterile shoot. In the rare cases where these have been collected for other species, such leaves are considerably larger than those of the flowering shoots (see also the Collector's Notes sub *D. furfurascens*).

The type specimen of *A. stellulatum* is slightly aberrant by having glandular-tipped enations on the axes of the inflorescence; such enations are sometimes also present in *D. divaricata* and *D. stipularis*.

Hooker s.n. and *Kerr 16573* have glandular patches at the lower side of the leaf blade at the base of the midrib, similar to those found in *D. glabra*, *D. micrantha*, and *D. papuana*.

The Hainan collections have not been seen, but in view of the distribution of this taxon and the related *D. divaricata* they are most likely to belong here. An extensive discussion of the differences between these two species is given by Fischer (1929).

5. Diplectria divaricata (Willd.) O. Ktze — Fig. 1B; 4A.

D. divaricata (Willd.) O. Ktze, Rev. Gen. Pl. 1 (1891) 246; Bakh. *f.*, Thesis (1943) 200; Bakh. *f.* in Back. & Bakh. *f.*, Fl. Java 1 (1964) 365. — *Melastoma divaricatum* Willd., Sp. Pl., ed. 4, 2, 1 (1799) 596 ('*divaricata*'). — *Dissochaeta divaricata* G. Don, Syst. 2 (1832) 782; Naud., Ann. Sc. Nat. III, 15 (1851) 70. — *Anplectrum divaricatum* Triana, Trans. Linn. Soc., London 28 (1871) 84, t. 7: f. 90-b; C. B. Clarke in Hook. *f.*, Fl. Br. Ind. 2 (1879) 546; Palézieux, Bull. Hb. Boiss. 7 (1899) 66; King, J. As. Soc. Beng. 69, 2 (1900) 58; Merr., Enum. Born. Pl. (1921) 443; Ridl., Fl. Mal. Pen. 1 (1922) 800; Merr., Enum. Philip. Fl. Pl. 3 (1923) 218; Mansf., Bot. Jb. 60 (1925) 115; Merr., Univ. Calif. Publ. Bot. 25 (1929) 223; Henderson, Mal. Nat. J. 4 (1949) 131; Mal. Wild. Fl., Dicot. (1959) 131; Burk., Dict., ed. 2 (1966) 172. — *Backeria divaricata* Raizada, Ind. For. 94 (1968) 435. — Type: *Klein s.n. in Hb. Willd. 8218* (B, *n.v.*; fragmo in L, IDC-microfiche 7440) = *Rottler s.n. in Hb. Vahl & Liebmann* (C); *ex Hb. Willdenow in Hb. Royle* (LIV, K), 'India' (see note).

Osbeckia tetrandra Roxb. [Hort. Beng. (1814) 88, *nomen*] Fl. Ind. 2 (1832) 224. — *D. tetrandra* O. Ktze, Rev. Gen. Pl. 1 (1891) 246. — Type: *Roxburgh s.n.* (BM, *n.v.*; G) (*Wallich 4055-A* is possibly a duplicate; K, IDC-microfiche 7394), 'India Orientalis'.

Melastoma glaucum Jack, Trans. Linn. Soc., London 14 (1823) 15; Calc. J. Nat. Hist. 4 (1843) 325 ('*glauca*'); Gage & Burk., J. Str. Br. Roy. As. Soc. 73 (1916) 234, 253; Merr., J. Arn. Arb. 33 (1952) 233. — *Dissochaeta glauca* Bl., Flora 14 (1831) 501; Bijdr. Nat. Wet. 6 (1831) 242. — *Anplectrum glaucum* Triana, Trans. Linn. Soc., London 28 (1871) 84; C. B. Clarke in Hook. *f.*, Fl. Br. Ind. 2 (1879) 545, *p.p.*; Palézieux, Bull. Hb. Boiss. 7 (1899) 66; King, J. As. Soc. Beng. 69, 2 (1900) 58; Guill., Bull. Soc. Bot. France 60 (1913) 340; Merr., Enum. Born. Pl. (1921) 443; Ridl., Fl. Mal. Pen. 1 (1922) 799; Fischer, Kew Bull. (1929) 312; Craib, Fl. Siam Enum. 1 (1931) 697; Henderson, Mal. Nat. J. 4 (1949) 131, f. 126; Mal. Wild Fl., Dicot. (1959) 131, f. 126; Burk., Dict., ed. 2 (1966) 172. — *Backeria glauca* Raizada, Ind. For. 94 (1968) 435. — Type: *Jack 49* (E; iso in BM, G), Malaya, P. Penang.

Melastoma cyanocarpon Bl., Bijdr. 17 (1826) 1073. — *Dissochaeta cyanocarpa* Bl., Flora 14 (1831) 501; Bijdr. Nat. Wet. 6 (1831) 243. — *Anplectrum cyanocarpum* Triana, Trans. Linn. Soc., London 28 (1871) 84, t. 7: f. 90-c; Merr., Enum. Born. Pl. (1921) 443; Ridl., Kew Bull. 1 (1946) 31. — *D. cyanocarpa* O. Ktze, Rev. Gen. Pl. 1 (1891) 246; Bakh. *f.*, Thesis (1943) 199; Bakh. *f.* in Back. & Bakh. *f.*, Fl. Java 1 (1964) 365. — Type: *Hb. Blume s.n.* (L, sheet no 925.250–148; iso in P), Java.

[*Melastoma polyanthum* Benth. *ex* Wall., Cat. (1831) 4051, *nomen*, *non* Bl. (1831). — Type: *Wallich 4051* (K; iso in G; IDC-microfiche 7394)].

Dissochaeta anceps Naud., Ann. Sc. Nat. III, 15 (1851) 70. — *Anplectrum divaricatum* Triana *μ anceps* Cogn. in DC., Mon. Phan. 7 (1891) 567. — Type: *Zollinger 3044* (P; iso in G), Java.

Dissochaeta pepericarpa Naud., Ann. Sc. Nat. III, 15 (1851) 71. — Type: *Cuming 2259* (P; iso in G, K, L), Malacca, not Manila!

Dissochaeta spoliata Naud., Ann. Sc. Nat. III, 15 (1815) 69. — Type: *Gaudichaud 95* (P; iso in G), Malaya, P. Penang.

Dissochaeta palembanica Miq., Fl. Ind. Bat., Suppl. 1 (1860) 121, *nomen*, 317. — Lectotype: *Teysmann HB 3634* (U; Bakh. *f.*, 1943, lect.), Sumatra, Palembang, Pandan Dulu Enim.

Anplectrum suluense Merr., Philip. J. Sc. 30 (1926) 417. — Type: *BS 44461 Ramos & Edaño* (UC; iso in K, L, NY), The Philippines, Sulu Arch., Jolo.

Anplectrum patens Geddes, Kew Bull. (1928) 72. — Type: *Kerr 7215* (K), Thailand, Nakawn Sritamarat, Bachaw.

Branches floccose-puberulous to glabrous, with or without glabrous, bristle-like, sometimes glandular-tipped enations (to 3 mm long); nodes little swollen;

interpetiolary ridges inconspicuous to linear, variously puberulous to glabrous, with or without enations (to 4.5 mm long). Petiole 3—10 mm long, variously puberulous to glabrous, with or without enations (to 3.5 mm long); blade ovate-oblong to lanceolate, (3.5—)5—13(—17) by (1.5—)2.5—6.5(—8) cm, base rounded to emarginate, apex acute to acuminate, 3-(or 5-)plinerved with distinct marginals and veins, upper surface glabrous to sparsely puberulous, lower variously puberulous to glabrous; papyraceous to pergamentaceous. *Thyrses* terminal or axillary, up to 12(—23) cm long, lax; axes variously puberulous to glabrous, with or without enations (up to 3 mm long). *Flower* buds 6—12(—15) mm long; hypanthium urceolate to trumpet-shaped, 3.5—6(—7) by 2—3(—4) mm, variously puberulous to glabrous, with or without enations (to 3 mm long); calyx truncate, sometimes 4-lobed or -crenate; corolla in bud acuminate-conical 3—7(—9) mm long. *Ovary* 0.5—0.6 times as long as the hypanthium; extra-ovarian chambers extending more or less to base. *Fertile stamens* with 2—4 mm long filament; stipopodium 0.5—1 mm long; anther ovate-lanceolate, 5—8(—11) mm long, long-beaked; plectrum triangular to trapezoid, erose, often bilobed or bifid, inconspicuous or up to 0.75 mm long; lateral appendages auricular to oblong, to 0.75 mm long. *Staminodes* with 1.5—2.5(—4.5) mm long filament; spur (0.3—)0.5—1.75(—5) mm long; plectrum triangular to trapezoid, sometimes deeply hastate, erose to fimbriate, 1—2.5 mm long; lateral appendages usually absent, rarely strap-shaped, up to 0.5(—0.75) mm long. Styles 9—15 mm long. *Fruits* subglobose, 4—8 mm ∅.

Distribution. 'India orientalis' (*Rottler 9!, Roxburgh s.n.!, Wallich 4051-B!, 4054!, Klein 2!)*, Birma (Lamby Kyun, *d'Alleizette 2445!*), Thailand (Peninsular: Phangnga, *Geesink & Santisuk 5336!*; Phuket, *Rabil 268;* Nakhon Si Thammarat, *Kerr 7215!, 10075, 15580, Smith 461;* Narathiwat, *Sangkhachand 256!;* Pattani, fide Craib, 1931), Malaya (Wellesley Prov.: *Ridley s.n.* (Permatang Bertam); Perak: 9 coll., e.g. *King's Coll. 369!, Scortechini 28!;* Trengganu: *SF 30207 Corner!;* Pahang: *KEP FRI 13637!, Purseglove 4114!, SF 32600 Nur!;* Selangor: 8 coll., e.g. *Carrick 2358!, 2499!, KEP 99079 Ng!;* Negri Sembilan: 7 coll., e.g. *KEP FRI 1827 Ng!, Shah 133!;* Malacca: 11 coll., e.g. *Cuming 2259!, Griffith KD 2288/1!, Maingay KD 794=1219!;* Johore: *Noor & Samsui 66!, Ridley s.n.;* Penang: 10 coll., e.g. *Gaudichaud 95!, Jack 49!, Wallich 4051-A!, 4055-B!;* Singapore: *Jack s.n.!, Ridley s.n., Walker 37;* locality unknown: *Griffith KD 2289!, Maingay KD 793/2!, Wallich 4055-A!*), Sumatra (Atjeh: *v. Steenis 9411!, De Wilde & De Wilde-Duyfjes 12157!, 12568!, 12651!;* E. Coast: *Lörzing 5198!, 5724!, 12317!, 12318!, Rahmat si Boeea 7936!;* Djambi: *Posthumus 937!;* Palembang: *Teysmann HB 3634!;* Mentawei Isl.: *Iboet 423!;* locality unknown: *Korthals s.n.!, Jack 165!*), Java (West: 26 coll., e.g. *Blume s.n.!, Zollinger 3044!, 3661!*), Borneo (Sarawak, 14 coll., e.g. *Clemens 21568!, 21570!, Hose 181!, S. 23880 Kudi!;* East: *Endert 2270!, 3054!, Kostermans 4961!, 6965!, 21644!;* P. Laut: *v. Slooten 2282!;* Sabah: 16 coll., e.g. *Elmer 20333!, 21187!*), The Philippines (? Luzon: *Ramos in Hb. d'Alleizette s.n.!;* Mindanao: *PNH 964 Edaño!, 42216 Mendoza!, Santos 4267!;* Sulu Isl.: Jolo, *BS 44461 Ramos & Edaño!*), Celebes (Minehassa: *Kaudern 6!)*, Moluccas (Talaud Isl.: *Korthals s.n.!;* Sula Isl.: *Atjeh 318!;* Ceram: *Eyma 2788!, Rutten 1904!;* locality unknown: *De Vriese 92!*), New Guinea (Sepik: *Ledermann 6654!;* W. Distr.: *LAE 51727 Streimann!*); origin unknown: *De Vriese 93!*

E c o l o g y . Primary and secondary forests, along rivers, roads, on waste places; usually in the lowland, rarely up to 1460 m. A record of 3000 m from Java (Preanger: *Native collector s.n.*, 22–6–1917, L) seems very improbable.

C o l l e c t o r ' s n o t e s . Straggling, much branched shrub or vine, climbing with adventitious roots, to 15 m high, bole to 8 cm ∅, ultimate branches drooping. Innovations covered with a brown scurf. Stem gummy. Bark thick, brownish. Leaves brightly shiny above, white to brownish puberulous underneath, veins reddish. Hypanthium green, green with a purple calyx, dirty green-purple-blue, purple, ± black, rarely mentioned as pale cream, dirty white, white-green, pale yellow, or pink. Corolla curved backwards at anthesis, white-milky, pale pink, pale purple, pinkish purple, sky blue, lilac, bluish violet, or violet. The fertile stamens curved strongly out- and backwards; anthers yellow or pink. Style white or pale yellow; stigma pink. Fruits pale cream when young, white-green, pink, purplish grey, pale brownish grey, blue, purple, or deep purple.

U s e s . According to Burkill (1966) it is used in Pahang as a '*meroyan*', i.e. a decoction being drunk during the first three days after childbirth. Species of *Dissochaeta* are also used for this (cf p. 861). A hot decoction is also used for fomenting sprains. In Malacca Alvins found that a decoction of the roots was given for fevers, which also should help for ague. A poultice of the leaves is applied to the head for giddiness. In Upper Perak Burkill and Haniff noted it as a part of a decoction against malaria. The species is occasionally cultivated for its flowers.

L e a f a n a t o m y : See Palézieux (1899) sub *A. divaricatum* and *A. glaucum*.

V e r n a c u l a r n a m e s . *plawng* (Trang, Thailand, fide Craib, 1931), *tuniong utan* (Penang), *sesendok* (Perak), *sidodo akar* (Palembang), *ihadud* (Djambi), *luhu-luhu akar* (Sumatra), *uduk-uduk hutan* (Benuni, Brunei), *akar kemunting* (Iban, Sarawak, but possibly confused with *Rhodomyrtus*, cf. Corner, Wayside Trees 1, 1940: 446).

Ridley (1922) cites for Malaya: *akar chambai hutan, a. dumah bukit, a. sendudok rimbah* (*sendudok* also used for *Melastoma spp.*, fide Corner, l.c.). Burkill (1966) furthermore cites *sendudok-* or *kendudok halus, – akar, bunga tambang besi, a. jambu serai, lidah kuching, kopok, s. kaya, a. demah bukit, danai bukit, kayu merak*.

N o t e s . As can be observed from the Collector's Notes the colour of the flower is very variable. It was, however, not possible to find any correlating character which would warrant the distinction of subordinate taxa. The colour of the hypanthium was used by Backer and Bakhuizen *f.* for the distinction between *D. cyanocarpa* and *D. divaricata*. These two would differ also in the absence or presence of an indument on the summit of the ovary, but in bud we never. observed any hairs there; at anthesis loose hairs may presumable easily get into the flower, especially in the herbarium. Geddes mentioned a hairy ovary for his *Anplectrum patens*, but it is glabrous in the type specimen.

Various authors have tried to distinguish between *Anplectrum divaricatum* and *A. glaucum*, basing themselves on a presumed reduction of the number of staminodes in the latter. We have never seen any *Diplectria* that in bud lacked any staminode; at anthesis, however, they easily drop off, while a careless removal of the corolla in bud may cause the stamens and staminodes to stick to

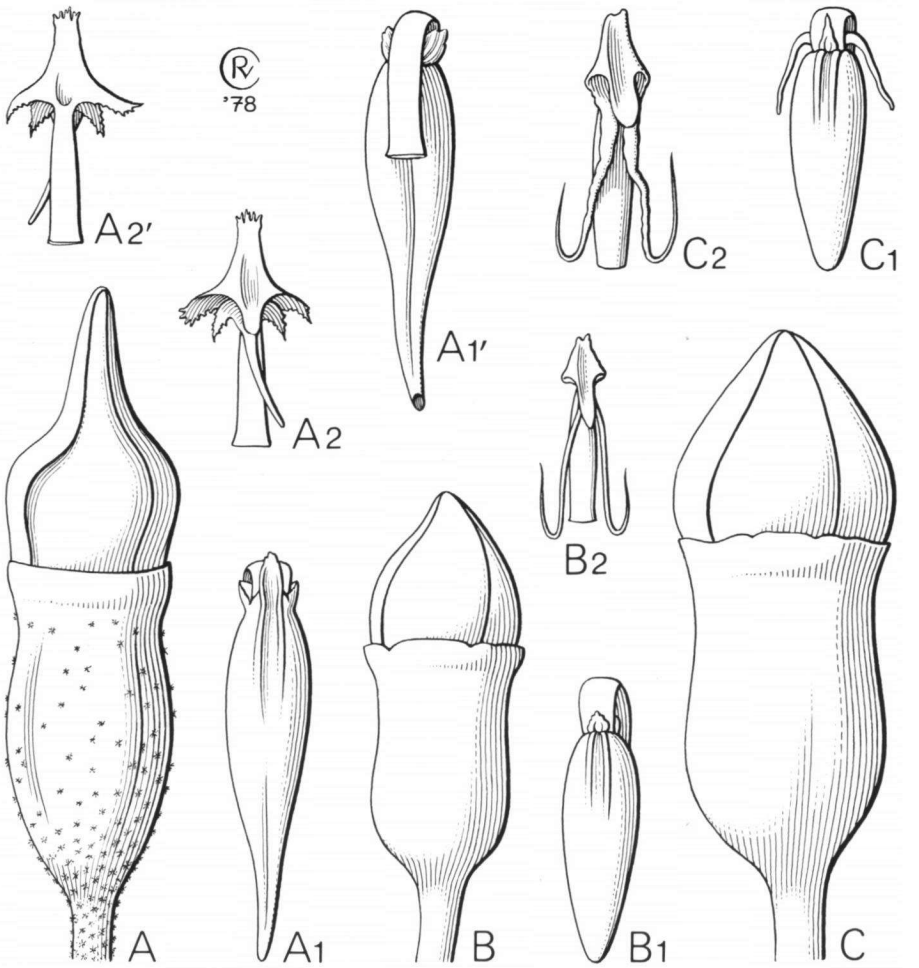

Fig. 4. *Diplectria.* — A. *D. divaricata*, flower bud; A 1, id., fertile stamen, adaxial; A 1', id., id., abaxial; A 2, id., staminode, adaxial; A 2', id., id., abaxial (*Teysmann* Ao 1860). — B. *D. glabra* subsp. *glabra*, flower bud; B 1, id., fertile stamen, adaxial; B 2., id., staminode, adaxial (*SAN 58046 Sin*). — C. *D. glabra* subsp. *kinabaluensis*, flower bud; C 1, id., fertile stamen, adaxial; C 2, id., staminode, adaxial (*Clemens 40940*). All x 10.

the inside of it, whereby they may easily be overlooked. The situation was further complicated by C. B. Clarke (1879), who recognized *A. glaucum*, but placed its basionym as a synonym under *A. divaricatum*.

The type specimen of *Melastoma divaricatum* in the Willdenow herbarium is annotated 'no 2 in herb. nostr.', 'Klein', 'Klein Ind. 1797', and 'Habitat in India'. The locality must obviously be regarded as India in the broad classical sense, for as can be seen from the distribution given above the occurrence of this species in Tranquebar, Tanjore Dist., Madras, where Klein seems to have collected exclusively, is very unlikely. Many of Klein's specimens, however,

were obtained from J. P. Rottler and in the herbaria of Vahl and Liebmann (C) there are indeed two sheets with identical specimens, the latter annotated simply with 'R', indicative of Rottler, the former labeled 'Rottler no 9. Herbar. Miss. no. 2' (note the reference to the Madras Mission Herbarium sub no. 2!). In Rottler's own herbarium (LIV) there is another matching specimen annotated by himself as '*Melastoma sp. n. divaricatum.* Cl. Willdenow *in litteris.* No. 2'; the Rottler specimen in K is annotated by him as '*Melastoma divaricata*'. The question remains where he obtained these specimens; it may be guessed that they were given to him by someone who had travelled to Southern Thailand or further.

The only record for Luzon is a D'Alleizette specimen. In regard of the many 'mistakes' on this collector's labels this locality seems incorrect, the more so since Merrill (1923) does not cite it and even reported that the species was absent in the Philippines (the type of *A. suluense* was collected in 1924).

There are three records for New Guinea, the two cited above, both fruiting, and *Ledermann 10457*, cited by Mansfeld (1925). In view of the external similarity between so many species of the *Dissochaeteae* fruiting specimens should be treated with caution, but as no other species resembling *D. divaricata* is known to us from the area, we presume that our identification is correct.

6. **Diplectria glabra** (Merr.) Nayar, **comb. nov.**

Dissochaeta glabra Merr., J. Roy. As. Soc., Str. Br. 76 (1917) 101; Enum. Born. Pl. (1921) 445; Univ. Calif. Publ. Bot. 15 (1929) 224. — T y p e : *Villamil 242* (PNH†, K), Br. N. Borneo.

subsp. **glabra** — **Fig. 4 B.**

Branches minutely puberulous, glabrescent to glabrous, enations rarely present. Nodes slightly thickened, interpetiolary ridges little developed to annular, enations absent. Petiole 5—20 mm long, puberulous, sometimes with puberulous enations (to 1.5 mm long); blade ± ovate, elliptic to oblong, (6.5—)8—18.5 by 4—8.5 cm, base truncate to subcordate, apex abruptly caudate, 3-plinerved with distinct marginals, veins distinct, upper surface nearly glabrous, lower mainly puberulous on the nerves, usually with glandular patches at the base of the midrib; pergamentaceous. *Thyrses* terminal and axillary, lax, up to 50 cm long; axes minutely puberulous, soon glabrescent. *Flower* buds 5—6.75 mm long; hypanthium urceolate-tubular, 3—4 by 2—3 mm, minutely puberulous, soon glabrous; calyx truncate, inconspicuously 4-dentate; corolla in bud shortly acuminate-conical, 2.75—3.5 mm long. *Ovary c.* 0.5 times as long as the hypanthium; extra-ovarian chambers reaching variously to upper and to lower half of the ovary. *Fertile stamens* with 2.75—3 mm long filament; stipopodium *c.* 0.6 mm long; anther oblong, 3.75—4 mm long, apex rounded, not beaked; plectrum triangular, *c.* 0.4 mm long; lateral appendages *c.* 0.45 mm long. *Staminodes* with 2.2—2.4 mm long filament; spur 0.5—0.6 mm long; plectrum triangular, up to 0.75 mm long; lateral appendages filiform, 3.5—4 mm long, the ends turned up in bud. Styles to 7 mm long. *Fruits* ellipsoid, *c.* 5 mm ∅.

D i s t r i b u t i o n . Borneo (East, *Endert 2275!;* South, *De Vogel 881!;* Sabah, 8 coll., e.g. *Elmer 20794!*, *Villamil 242!*).

Ecology. Primary and secondary forest, along streams; alt. to 185 m.

Collector's notes. Woody creeper, climber, or liana, up to 18 m. Bark green brown. Flowers white or white-green. Anthers pale yellow. Fruits at first white-green, then light blue, at last blackish.

subsp. **kinabaluensis** Veldk., **subsp. nov.** — **Fig. 1 A, 4 C.**

A subspecie typica distincta iugis interpetiolaribus pulvinatis, recurvis, dense puberulis setosis, floribus maioribus, atque etiam colore petalorum et distributione altitudinali ut videtur. — Typus: *SAN 46742 Mikil* (L; iso in SAN, *n.v.*), Borneo, Sabah, Ranau Dist., Sosopodon sub Mt. Kinabalu.

Interpetiolary ridges pulvinate, recurved, densely brown puberulous, glabrescent, often with puberulous enations (to 2.5 mm long). *Flower* buds 7—9 mm long; hypanthium 4.5—6 by 3.2—3.5 mm; corolla in bud 4—5 mm long. *Fertile stamens* with *c.* 4.5 mm long filament; stipopodium *c.* 1 mm long; anther *c.* 4 mm long; plectrum *c.* 0.7 mm long lateral appendages filiform, up to 1.5 mm long. *Staminodes* with 2.2—4 mm long filaments; spur 0.6—1.5 mm long; plectrum triangular to deeply hastate, 0.75—1.5 mm long, auricles, when present, ligular to fimbriate, up to 2 mm long; lateral appendages 3—6.5 mm long. Styles 9—11 mm long.

Distribution. Borneo (Sabah, Kinabalu, *Clemens 29442!, 30865!, 40940!, 50337!, 50476!, RSNB 2647 Chew et al.!, SAN 46742 Mikil!*).

Ecology. Secondary forest, near waterfalls: 1220—1980 m alt.

Collector's notes. Scandent, to 24 m. Inflorescences pendulous. Flower buds pink; flowers lavender or purple. Young stamens yellow, older cream-white; anthers brown. Fruits pink, pale-, green-, to lilac-purple.

7. Diplectria micrantha Veldk., **sp. nov.** — **Fig. 5 B.**

Iuga interpetiolaria valde pulvinata, longe setosa, non pectinata. Folia pagina inferiore basi eglandulosa. Inflorescentiae subglabrae. Alabastra ad 4,8 mm longa. Staminodiorum appendices laterales nullae. *Diplectria glabra* subsp. *kinabaluense* similissima. — Typus: *SAN 28959 Sario* (L; iso in SAN, *n.v.*), Borneo, Sabah, Ranau Dist., Sosopodon sub Mt. Kinabalu.

Branches minutely puberulous, enations few, glabrous (to 0.2 mm long); interpetiolary ridges strongly pulvinate, ? recurved, puberulous, glabrescent, long-setose by subglabrous enations (to 5.5 mm long). Petiole 5—11 mm long, puberulous, setose by subglabrous enations (to 1.5 mm long); blade (ovate-)elliptic, 7—11.5 by 3—6.7 cm, base emarginate, apex caudate, 3-plinerved with distinct marginals, intramarginals, and veins, upper surface glabrous, lower sparsely puberulous on the major nerves, not glandular at base; pergamentaceous. *Thyrses* terminal, lax, up to 20 cm long; axes subglabrous. *Flower* buds up to 4.8 mm long; hypanthium ovoid, 2.5—3 by *c.* 2 mm, glabrous; calyx truncate, minutely 4-denate; corolla in bud shortly conical, *c.* 2 mm long. *Ovary c.* 0.5 times as long as the hypanthium; extra-ovarian chambers reaching the upper half of the ovary. *Fertile stamens* with *c.* 1.2 mm long filament; stipopodium *c.* 0.4 mm long; anther oblong, *c.* 1.3 mm, apex rounded, not beaked; plectrum a *c.* 0.15 mm high rim; lateral appendages *c.* 0.15 mm long. *Staminodes* with *c.* 1 mm long filament; spur *c.* 0.35 mm long; plectrum deeply hastate, *c.* 0.35 mm long, auri-

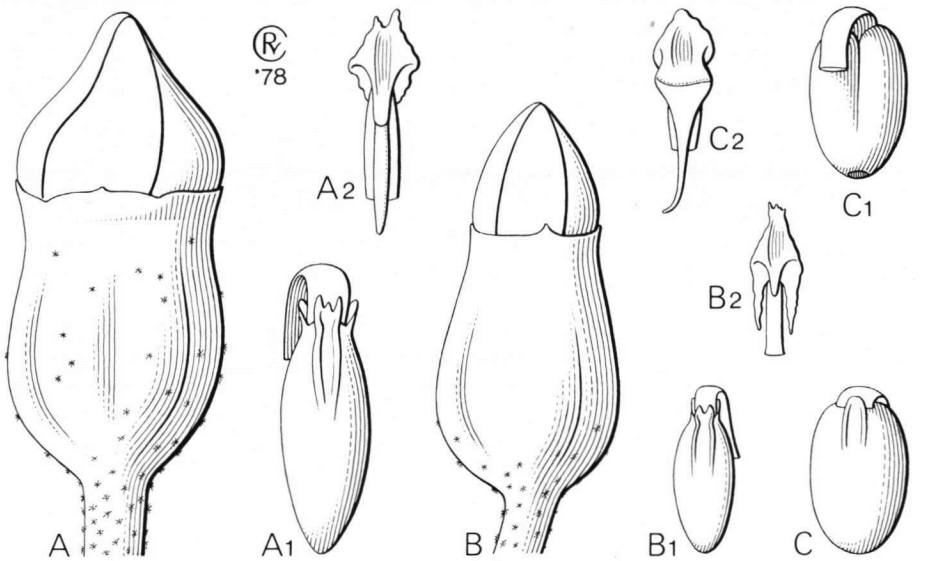

Fig. 5. *Diplectria*. — A. *D. papuana*, flower bud; A 1, id., fertile stamen, adaxial; A 2, id., staminode, adaxial (*Pleyte 705*). — B. *D. micrantha*, flower bud; B 1, id., fertile stamen, adaxial; B 2, id., staminode, adaxial (*SAN 28959 Sario*). — C. *D. anomala*, fertile stamen, adaxial; C 1, id., id., abaxial; C 2, id., staminode, adaxial (*King's Collector 10468*, type). All × 20.

cles ligular, *c.* 0.5 mm long; lateral appendages absent. Styles up to 4 mm long. *Fruits* subglobose, *c.* 4.5 mm ∅.

Distribution. Borneo (Sabah, Ranau Dist., *SAN 28959 Sario!*, *Sinclair et al. 9235!*).

Ecology. Primary mountain forest; 1400—1450 m alt.

Collector's notes. Climber. Leaves dark green and glossy above, beneath medium green and slightly glossy. Calyx reddish purple. Petals pink to dark red. Anthers white. Fruit violet.

8. Diplectria papuana (Mansf.) Bakh. *f.* — **Fig. 5 A.**

D. papuana (Mansf.) Bakh. *f.*, Thesis (1943) 202. — *Anplectrum papuanum* Mansf., Bot. Jb. 60 (1925) 115; Nova Guinea 14, 2 (1926) 202' — Type: *Janowsky 132* (L), New Guinea, Geelvink Bay, Siriwo River.

Branches minutely puberulous, soon glabrescent; nodes slightly thickened; interpetiolary ridges linear, enations absent (see note). Petiole 8—13 mm long, densely puberulus, enations few, small (to 1.5 mm long), glabrous; blade elliptic to oblong (8.2—)10—15.5 by (3.6—)7—9 cm, base truncate, slightly retuse, apex acuminate, 3-plinerved, marginals and veins distinct, above glabrous, beneath sparsely puberulous on the major veins to glabrous, base of the midrib laterally with 2 inconspicuous glandular patches; pergamentaceous. *Thyrses* terminal, lax, up to 40 cm long; axes densely puberulous, glabrescent, enations absent. *Flower* buds *c.* 6 mm long; hypanthium urceolate, *c.* 3.5 by 2.5 mm,

minutely puberulous; calyx truncate to shallowly broadly 4-dentate, ± patent; corolla in bud shortly conical, *c.* 3.5 mm long. *Ovary c.* 0.6 times as long as the hypanthium; extra-ovarian chambers extending to halfway. *Fertile stamens* with *c.* 3 mm long filament; stipopodium *c.* 0.7 mm long; anther oblong, 2.75—3 mm long, apex rounded, hardly beaked; plectrum triangular to trapezoid, up to 0.8 mm long; lateral appendages triangular, *c.* 0.6 mm long. *Staminodes* with 1—2 mm long filament; spur filiform, 1.5—2 mm long; plectrum triangular to trapezoid, short- to long-auricular, *c.* 0.8 mm long, auricles up to *c.* 0.75 mm long; lateral appendages absent. Styles *c.* 7 mm long. *Fruits* urceolate-globose, *c.* 4 mm ∅.

Distribution. New Guinea (Vogelkop, *Pleyte 705!;* N. West: *Janowski 132!*).

Ecology. Forest; 50 m alt.

Collector's notes. Liana, 15 m. Flowers purple. Fruits greyish green.

Note. Mansfeld's original diagnosis is very incomplete, but must be regarded as valid. In the subsequent more extensive description bristles are mentioned for the interpetiolary ridges. Bakhuizen *f.* recorded the spurs as 0.5—0.8 mm long only.

9. Diplectria stipularis (Bl.) O. Ktze — **Fig. 6 A.**

D. stipularis (Bl.) O. Ktze, Rev. Gen. Pl. 1 (1891) 246. — *Melastoma stipulare* Bl., Bijdr. 17 (1826) 1073. — *Aplectrum stipulare* Bl., Flora 14 (1831) 503; Bijdr. Nat. Wet. 6 (1831) 244. — *Anplectrum stipulare* Triana, Trans. Linn. Soc., London 28 (1871) 84; Airy-Shaw, Kew Bull. 14 (1960) 460. — *Backeria stipularis* Bakh. *f.*, Thesis (1943) 132; Bakh. *f.* in Back. & Bakh. *f.*, Fl. Java 1 (1964) 366. — Type: *Hb. Blume s.n.* (L, sheet no 908.129–14; iso in P), Java, West, Salak or Seribu.

[*Melastoma annulatum* Wall., Cat. (1831) 4056, *nomen.* —] *Anplectrum annulatum* Triana [Trans. Linn. Soc., London 28 (1871) 84, *nomen*] *ex* C. B. Clarke in Hook. *f.*, Fl. Br. Ind. 2 (1879) 546; Burk., Dict., ed. 2 (1966) 172. — *D. annulata* O. Ktze, Rev. Gen. Pl. 1 (1891) 246; Bakh. *f.*, Thesis (1943) 320, in synon. (see note); Furtado, Gard. Bull. Sing. 20 (1963) 106. — *Backeria annulata* Raizada, Ind. For. 94 (1968) 435. — Type: *G. Porter in Hb. Wallich 4056* (K, IDC-microfiche), Malaya, Penang.

Anplectrum lepido-setosum King, J. As. Soc. Beng. 69, 2 (1900) 56; Ridl., Fl. Mal. Pen. 1 (1922) 799; Kew Bull. 1 (1946) 32, *p.p.* — Type: *Scortechini s.n.* (CAL, *n.v.;* iso in K), Malaya, Perak.

Anplectrum crassinodum Merr., Univ. Calif. Publ. Bot. 15 (1929) 223. — Type: *Elmer 21291* (UC; iso in SING, *n.v.*; K, L), Borneo, Sabah, Tawao.

D. annulata O. Ktze var. *seticarpa* Furtado, Gard. Bull. Sing. 20 (1963) 107. — Type: *Shah 176* (SING, *n.v.*; iso in L), Malaya, Pahang, Bentong, Sabai Estate.

Branches glabrous to brown puberulous, enations bristle-like, sometimes gland-tipped (to 2.5 mm long); nodes thickened; interpetiolary ridge pulvinate, recurved, densely puberulous, margin with reflexed enations. Petiole 4—13 mm long, glabrescent; enations usually retrorse (to 3.5 mm long); blade oblong to lanceolate, 7.7—16.5(—18) by (3—)3.5—6 cm, base rounded to truncate, retuse, apex acuminate, 3-plinerved, marginals and veins distinct, upper surface glabrous, lower sparsely puberulous on the major nerves to glabrous; pergamentaceous. *Thyrses* terminal, lax, up to 17 cm long; axes velvety, enations patent, numerous, puberulous, sometimes gland-tipped (to 2.5 mm long). *Flower* buds to 7 mm long; hypanthium cup-shaped, up to 5.5 by 3.7 mm, puberulous, sometimes with enations; calyx truncate to faintly 4-lobed, margin usually with some

enations; corolla in bud broadly conical, up to 4 mm long. *Ovary c.* 0.5 times as long as the hypanthium; extra-ovarian chambers reaching to ± halfway the ovary. *Fertile stamens* with up to 2 mm long filament; stipopodium *c.* 0.5 mm long; anther obovate to slightly panduriform, up to 3 mm long, apex rounded, not beaked; plectrum shortly triangular, up to 0.5 mm long; lateral appendages absent. *Staminodes* with up to 1.75 mm long filament; spur filiform from a swollen base, up to 2.5 mm long; plectrum trapezoid to (rarely) triangular-hastate, up to 1 mm long; lateral appendages usually present, occasionally fused with the plectrum, ligular, up to 0.75 mm long. Style to 6 mm long. *Fruits* subglobose, up to 7 mm ∅.

Distribution. Malaya (Perak, *KEP 95044 Ismail!, KEP FRI 11163 Selveraj!, Scortechini 2106!;* Kelantan, *KEP FRI 5423 Ng!, 12509 Whitmore!, 17707!, SF 29646 Henderson!;* Trengganu, *SF 33853 Moysey & Kiah, 40491 Sinclair & Kiah!;* Pahang, *SF 16727 Burkill & Haniff, 22121 Henderson, Shah 176!;* Selangor, 5 coll., e.g. *SF 13618 Strugnell!, 13652 Pawanchee & Lela!;* Malacca, *Goodenough & Ridley 1574;* Johore, *Ridley s.n.;* Penang, *Curtis 1078, =1078, Ridley 9413, Ridley & Curtis 7949, Porter in Wallich 4056!;* Singapore, *Ridley s.n.*), Sumatra (E. Coast, *Lörzing 17296!, Rahmat si Boeea 7212*), Java (West, *Hb. Blume s.n.!*), Borneo (Sarawak, *Haviland c.o.c.h., c.o.c.k., Richards 1401!;* Northeast, *Aet 294!;* Sabah, 7 coll., e.g. *SAN 28134 Mikil!, 19243 Meijer!, RSNB 528 Chew et al.!, Elmer 21291!*).

Ecology. Damp primary or secondary forest; up to 760 m alt.

Collector's notes. Climber, up to 15 m, bole 7.5 cm ∅. Outer bark smooth, greyish, brownish, to dark red, middle yellow, inner pinkish or yellow. Leaves medium to dark glossy green above, medium green beneath. Hypanthium with reddish brown (glandular) hairs. Corolla white, translucent white, milky, tinged with red, pink, red, or mauve. Anthers yellow. Berries whitish, yellow, pink, brownish, brownish-green, -purple, purple, or blue.

Uses. According to Burkill (1966) a decoction is used as a '*meroyan*' (see sub *D. divaricata*).

Vernacular name. *kayu mata hari* (Penang).

Notes. The type specimen of *Melastoma stipulare*, formerly considered to represent an endemic taxon from W. Java, but not found there since Blume's time, unquestionably belongs to what generally has been called *D. annulata*. Blume recorded it for the G. Seribu ('Salak' on the label), but it may not be ruled out that it came from elsewhere.

The use of the same epithets in such closely related genera as *Diplectria* and *Dissochaeta* can lead to confusion, as is shown by the presence of specimens of this species under *Dissochaeta annulata* and the inclusion of the name *Diplectria annulata* in it by Bakhuizen *f.* As is clear from O. Kuntze's discussion (1891) he only transferred Triana's species of *Anplectrum* to *Diplectria*, so *Anplectrum annulatum* and not *Dissochaeta annulata* is the basionym of *Diplectria annulata*. The *Dissochaeta* has a persistently brown velvety and much larger hypanthium (8 mm or more long).

Furtado's variety is not recognized here, as the presence of enations on the hypanthium is very variable. Only rarely are they completely absent, but note that they may drop off during the maturing of the fruit. The nomenclatural

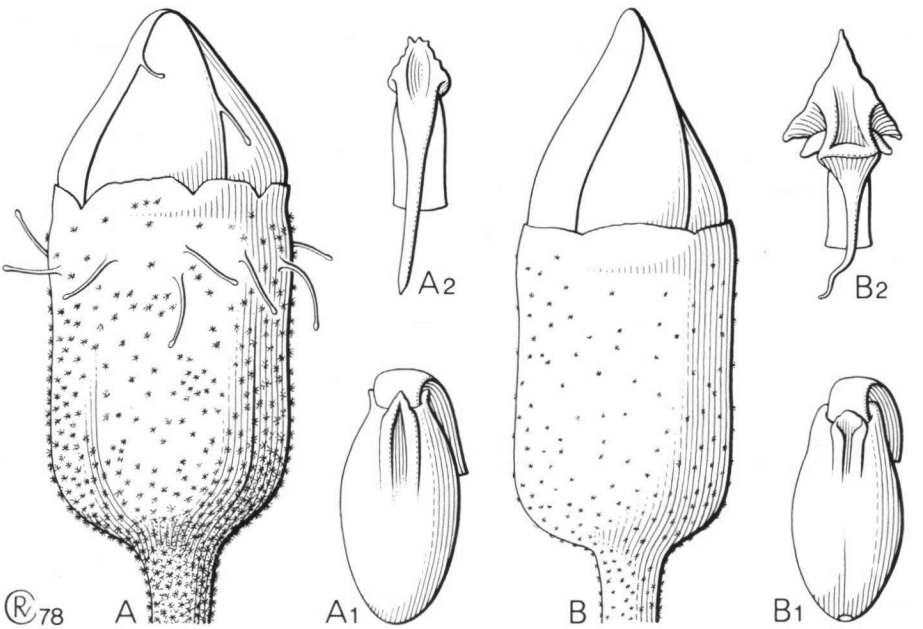

Fig. 6. *Diplectria*. — A. *D. stipularis*, flower bud; A 1, id., fertile stamen, adaxial; A 2, id., staminode, adaxial (*SAN 19243 Meijer*). — B. *D. viminalis*, flower bud; B 1, id., fertile stamen, adaxial; B 2, id., staminode, adaxial (*Meijer 7138*). All × 20.

confusion remarked above, is enhanced by the presence of a *Dissochaeta annulata* var. *setosa* which differs from the typical variety in the same way as Furtado's.

10. Diplectria anomala (King) Veldkamp, **comb. nov. — Fig. 5 C.**

Dissochaeta anomala King, J. As. Soc. Beng. 69, 2 (1900) 55; Ridl., Fl. Mal. Pen. 1 (1922) 798. — Lectotype: *King's Collector 10468* (CAL; iso in SING, *n.v.*; BM, K, L, P), Malaya, Selangor, Ulu Bubong.

Branches puberulous, glabrescent, enations sparse, glabrous (to 1 mm long); nodes little swollen; interpetiolary ridges linear, glabrous. Petiole 5—15 mm long, puberulous, with or without some glabrous enations; blade (ovate-)oblong 10—17 by 3—7 cm, base truncate to emarginate, apex rather abruptly acuminate, 3-plinerved, marginals and veins distinct, upper surface glabrous, lower minutely puberulous at base on the major nerves; thin pergamentaceous. *Thyrses* axillary and terminal, forming a leafy panicle, up to 30 cm long, lax, partial inflorescences to 13 cm long, axes as the branches. *Flower* buds *c.* 5 mm long; hypanthium subglobose, 2.5—3.5 mm, puberulous; calyx truncate, margin with a few deciduous enations; corolla in bud broadly conical, *c.* 2.5 mm long, less than half as long as the flower bud. *Ovary c.* 0.5 times as long as the hypanthium; extra-ovarian chambers reaching to upper third of the ovary. *Fertile stamens* with *c.* 2 mm long filament; stipopodium *c.* 0.3 mm long; anther elliptic,

2—2.5 mm long, apex not beaked, apiculate; plectrum and lateral appendages absent. *Staminodes* with *c.* 2 mm long filament; spur swollen at base, apiculate, *c.* 2 mm long; plectrum triangular, *c.* 0.5 mm long. Styles up to 6 mm long. *Fruits* subglobose, to 5 mm ∅, protruding from the hypanthium.

Distribution. Malaya (Perak, *King's Collector 2258!;* Kelantan, *Ridley s.n.!;* Selangor, *King's collector 10468!*).

Ecology. Dense jungle on hills; 150—250 m alt.

Collector's notes. Slender creeper, 5—7 m. Smaller leaves on the 'flower stem' pale green tinged, dark red. Flower white. Fruit deep blue.

Notes. King originally described the species as having four stamens with 'filamentous' appendages, 'so well developed in *Dissochaeta* and not at all represented in *Anplectrum*'. In fact the flower has four stamens and four staminodes, similar to those found in *D. stipularis*. King very likely studied a young flower, in which stamens and staminodes often are glued together, and he was thus more right than he knew when he said the stamens had filamentous appendages, for these were actually the filaments of the staminodes!

Most similar to *D. stipularis*, but immediately distinct by the absence of the conspicuous pulvinous nodes, the more extensive inflorescences, the few and inconspicuous enations, the subpersistent bracts (elliptic-oblong, 5—8 by 1.5—3.5 mm, base and apex rounded, margin with enations, puberulous; possibly the 'leaves of the flower stem' mentioned with *King's Collector 10468*), and the smaller fruits. Mr. J. F. Maxwell, Singapore, informed us (in litt.) that in his opinion *D. anomala* is merely a large form of *D. viminalis*, but in the absence of convincing intermediate material the species is here retained.

Not to be confused with *Anplectrum anomalum* King, which is a *Creochiton* and thus immediately distinct by the nervation of the leaves.

11. Diplectria viminalis (Jack) O. Ktze.

D. viminalis (Jack) O. Ktze, Rev. Gen. Pl. 1 (1891) 246. — *Melastoma viminale* Jack, Trans. Linn. Soc., London 14 (1823) 16 ('*viminalis*'); Bl., Bijdr. 17 (1826) 1073, *p.p.*; Merr., J. Arn. Arb. 33 (1952) 234. — *Aplectrum viminale* Bl., Flora 14 (1831) 502; Bijdr. Nat. Wet. 6 (1831) 244. — *Anplectrum viminale* Triana, Trans. Linn. Soc., London 28 (1871) 84; Airy-Shaw, Kew Bull. 14 (1960) 518. — *Backeria viminalis* Bakh. *f.*, Thesis (1943) 133; Bakh. *f.* in Back. & Bakh. *f.*, Fl. Java 1 (1964) 366. — Type: *Jack s.n.* (presumably lost), Sumatra. Neotype (here proposed): *Kuhl & v. Hasselt s.n.* (L, sheet no. 8912–7, also holotype of *Melastoma rostratum* Bl., *q.v.*).

Melastoma rostratum Bl., Bijdr. 17 (1826) 1074. — *Aplectrum rostratum* Bl., Flora 14 (1831) 502; Bijdr. Nat. Wet. 6 (1831) 244. — *Anplectrum rostratum* Triana, Trans. Linn. Soc., London 28 (1871) 84. — *D. rostrata* O. Ktze, Rev. Gen. Pl. 1 (1891) 246. — *Backeria viminalis* Bakh. *f.* var. *rostrata* Bakh. *f.*, Thesis (1943) 134, *nom. superfl.* — Type: *Kuhl & v. Hasselt s.n.* (L, sheet no 8912–7). Java, West, G. Seribu.

[*Melastoma petiolare* Wall., Cat. (1831) 4053, *nomen.* —] *Anplectrum pallens* Triana var. *petiolare* Ridl., Fl. Mal. Pen. 1 (1922) 800. — Type: *Wallich 4053* (K, IDC-microfiche 7394), Penang.

Aplectrum confine Bl., Mus. Bot. Lugd.-Bat. 1, 3 (1849) 38. — *Aplectrum pallens* Bl. var. *confine* Miq., Fl. Ind. Bat. 1 (1855) 554 ('*confinis*'). — *Anplectrum confine* Triana, Trans. Linn. Soc., London 28 (1871) 84. — *D. confinis* O. Ktze, Rev. Gen. Pl. 1 (1891) 246. — *Anplectrum viminale* Triana var. *confine* Airy-Shaw, Kew Bull. 14 (1960) 518. — *Backeria viminalis* Bakh. *f.* var. *confinis* Bakh. *f.*, Blumea 12 (1963) 61; Bakh. *f.* in Back. & Bakh. *f.*, Fl. Java 1 (1964) 367. — Type: *Korthals s.n.* (L, sheet no. 908.129–398; iso in K), Sumatra.

[*Aplectrum confine* var. β Bl., Mus. Bot. Lugd.-Bat. 1, 3 (1849) 39. —] *Aplectrum pallens* Bl. var. *latum* Miq., Fl. Ind. Bat. 1 (1855) 554. — Lectotype (here proposed): *Korthals s.n.* (L, sheet no 908.129–12; ? iso in K), Sumatra, West Coast, G. Malintang.

Aplectrum pallens Bl., Mus. Bot. Lugd.-Bat. 1, 3 (1849) 38. — *Anplectrum pallens* Triana, Trans. Linn. Soc., London 28 (1871) 84, t. 7: f. 90-a; C. B. Clarke in Hook. *f.*, Fl. Br. Ind. 2 (1879) 545; Palézieux, Bull. Hb. Boiss. 7 (1899) 66; King, J. As. Soc. Beng. 69, 2 (1900) 57; Merr., Enum. Born. Pl. (1921) 443; Ridl., Fl. Mal. Pen. 1 (1922) 800; Merr., Univ. Calif. Publ. Bot. 15 (1929) 223; Craib, Fl. Siam. Enum. 1 (1931) 698; Henderson, Mal. Nat. J. 4 (1949) 132, f. 127; Mal. Wild Fl., Dicot. (1959) 132, f. 127. — *D. pallens* O. Ktze, Rev. Gen. Pl. 1 (1891) 246. — *Backeria pallens* Raizada, Ind. For. 94 (1968) 435. — Type: *Korthals s.n.* (L, sheet no. 908. 129—1498; iso in K), Sumatra.
Creochiton ? pudibunda auct., non Bl.: Cogn. & Winkl. in Hub. Winkl., Bot. Jb. 48 (1912) 107.
Neodissochaeta sp.: Ridsdale, Trans. P. N. G. Sc. Soc. 9 (1968) 19, *pro NGF 31814, 31912.*

Branches finely puberulous to glabrous, rarely with a few short enations (to 1 mm long); nodes little swollen; interpetiolary ridges linear. Petiole 3—9 mm long, puberulous, below the blade laterally usually with dense tufts of small puberulous enations (to 1.75 mm long); blade ovatish oblong to -lanceolate, rarely elliptic, (3.5—)4.5—10.5 by (1.2—)1.7—4.5 cm, base rounded to emarginate, apex rather abruptly acuminate to ligulate, 3-plinerved, marginals and veins more or less faint, upper surface glabrous, lower puberulous mainly on the major nerves, in between minutely appressed puberulous ('glandular dotted'); pergamentaceous. *Thyrses* axillary, terminally grading into a leafy panicle, lax, few-flowered, partial inflorescences up to 7 cm long; axes puberulous, glabrescent. *Flower* buds up to 7 mm long; hypanthium cup-shaped, up to 5 by 3 mm, puberulous; calyx ± truncate to shallowly and distantly 4-lobed; corolla in bud acuminate-conical, up to 3.5 mm long, in bud apparently less than half as long as the bud and not continuous with the hypanthium. *Ovary* 0.5—0.7 times as long as the hypanthium; extra-ovarian chambers reaching to upper fourth of the ovary. *Fertile stamens* with an up to 2.5 mm long filament; stipopodium *c.* 0.5 mm long; anther obovate to slightly panduriform, to rather broadly oblong, 2—3 mm long, not beaked, apex rounded or apiculate; plectrum absent or a minute triangular scale, up to 0.25 mm long; lateral appendages absent. *Staminodes* with an up to 1.5 mm long filament; spur filiform from a thick fleshy base, up to 2.5 mm long; plectrum triangular to hastate, up to 0.8 mm long, auricles when present up to 1 mm long; lateral appendages usually absent, up to 0.5 mm long. Styles up to 4 mm long. *Fruits* urceolate, up to 6 mm ∅.

Distribution. Thailand (Peninsular: Phuket, *Kerr 14461!, 14587!*; Nakhon Si Thammarat, *E. Smith 413*), Malaya (Perak, 7 coll., e.g. *C. W. Lek 1230!, King's Collector 655!, Shah & Sidek 1163!;* Kelantan, *KEP FRI 7154 Cockburn!, 7247 id.!*; Selangor, *Ridley 8464!, Teo & P. 2623!*; Malacca, *Maingay 795!, 2492!, 2663!;* Johore, *Ridley 11105!*; Panang, *Curtis s.n., Porter s.n., Ridley s.n., Wallich 4053!;* Singapore, *SF 30666 Corner!*), Sumatra (W. Coast, 7 coll., e.g. *Beccari 913!, 934!, Korthals 283!;* E. Coast, *Rahmat si Boeea 9041!;* Indragiri, *Meijer 4329!;* Djambi, *Posthumus 987!;* Siberut Isl., *Iboet 276!, SF 14096 Boden Kloss!;* Biliton, *Teysmann s.n.!*), Java (West, *Bakhuizen v.d. Brink 5229!, 6401!, Bakhuizen v.d. Brink f. 853!*), Borneo (Sarawak, 7 coll., e.g. *Nooteboom & Chai 01164!, S 22896 Morshidi!, 24301 Sibat & Banyeng!;* Southeast, *Hub. Winkler 3272!;* East, *Endert 2559!, 3201!, 3351!;* Sabah, *Elmer 21305!, 21649!, SAN 24523 Brand!, 67969 Talip & Termiji!, 74345 Leopold & Dewol!;* province unknown: *Beccari 372, 834*) New Guinea (Southwest, *Soegeng 295*!; Western Distr., *NGF 31814 Henty et al.!, 31912 Ridsdale et al.!*).

Ecology. Primary and secondary forest, Dipterocarp-forest, Eucalyptop-

sis-forest in New Guinea, on dry podsol, tuff, or sandstone; 0—1000 m alt.

Collector's notes. Shrub, large climber, liana, vine, or epiphyte to 6 m. Bark brown or purplish. Branches drooping, terminally with a long, foliose panicle. Innovations purple, old leaves bright to dull dark green above, slightly paler beneath, sub-distichous. Flower buds pink; calyx pink or yellow-green; corolla white or white with pinkish hue. Anthers yellow. Berries white or pink when young, turning yellowish green, pale yellow, pink, violet, dark purple, dark blue, blue-black, to black and soft when ripe.

Uses. Probably used as a '*meroyan*' (see sub *D. divaricata*).

Leaf anatomy. See Palézieux (1899) sub *Anplectrum pallens.*

Vernacular names. *akar sindodo* (Kelantan), *sendudok akar* (Malaya), *kadudu besar* (Djambi), *karamunting akar* (Biliton), *harèndong* (Java).

Notes. The type of *Melastoma viminale* Jack was presumably lost in the fire of the 'Flame', the ship containing Jack's collections; at least no specimens were found in BM, E, K, or L.

Because of the absence of original material Blume (1826) tried to name his specimens from available literature. It now appears that his material is a mixture of a single *D. viminalis* (L sheet no. 908.129–60), and that one hardly fitting his own description, and sterile specimens of *Dissochaeta bracteata* (Jack) Bl. It is, therefore, no wonder that he simultaneously described *Melastoma rostratum*, the type of which matches Jack's description quite well; in order to simplify the nomenclature this specimen is appointed as a neotype here.

Aplectrum pallens, which was later described, is not much different, but *A. confine* is the form which later authors (Ridley, 1922; Bakh. *f.*, 1943) have tried to distinguish as a separate variety. The presumed differences, however, represent either merely stages in age or are so variable that they are of no value. The only ones remaining are that the leaves of '*confine*' are usually rather small, while the petiole has laterally below the blade distinct tufts of small brown-puberulous enations. These enations are rarely absent in '*viminalis*', usually there are only one or two on each side, as described by Jack, and also found in '*pallens*', '*pallens* var. *latum*', and '*rostratum*'. As there is no correlation with any floral feature it does not seem warranted to distinguish any infra-specific taxon, and certainly no different species on this.

The bracts are often long-persistant, as in *D. anomala*: elliptic to (linear-) lanceolate, 3—7.5 by 0.5—4 mm, base and apex rounded, margins sometimes with a few enations, puberulous.

The New Guinea collections are all from the border village between Southeast Irian Jaya and the Western District spelled variously as Inggebit, Ingembit, or Ingambit. It is curious that it has been found nowhere else in the island.

IDENTIFICATION LIST

The numbers refer to the species in the preceding enumeration. Those between brackets have not been seen, but were cited in literature and are therefore tentatively identified. Unnumbered collections have not been included.

A 418 (Rahim): 5; *2987* (Wood): 6a; Aet *294*: 9; d'Alleizette *2445*: 5; Alston *14816*: 5; Atjeh *318*: 5. Backer *6305*: 5; Bakhuizen v. d. Brink *5229*: 11; *5264*: 5; *6165*: 5; *6401*: 11; *6854*: 5; *7550*: 5; Bakhuizen v. d. Brink *f. 853*: 11; *2328*: 5; Beccari *351*: (5); *372*: (11); *800*: 1; *834*: 11; *913*: 11; *934*: 11;

1083: (1); *2186*: (5); Bogor *XII.B.217*: 5; Bon *5411*: 4; Brooke *8757*: 5; *9998*: 11; *10267*: 11; *10372*: 5; *10391*: 5; BS *44461* (Ramos & Edaño): 5; Bünnemeijer *304*: 3; Burkill & Shah *1063*: 5.

Carrick *2358*: 5; *2499*: 5; Clemens *21568*: 5; *21570*: 5; *29442*: 6b; *30865*: 6b; *40940*: 6b; *50337*: 6b; *50476*: 6b; Cuming 2259: 5; Curtis *1078*: 9; =*1078*: (9).

Dan *4367*: 1.

Elmer *13352*: 2; *20333*: 5; *20794*: 6a; *21187*: 5; *21291*: 9; *21305*: 11; *21649*: 11; Endert *2270*: 5; *2275*: 6a; *2559*: 11; *3054*: 5; *3201*: 11; *3351*: 11; Eyma *2788*: 5.

Gaudichaud *95*: 5; Geesink & Phenkhlai *6262*: 4; Geesink & Santisuk *5336*: 5; Goodenough & Ridley *1574*: (9); Griffith *2288/1*: 5; *2289*: (5).

Hardial & Sidek *396*: 5; Haviland *c.l.m.s.*: 11; *c.o.c.h.*: (9); *c.o.c.k.*: (9); *1*: 11; *550*: 11; Haviland & Hose *159*: 11; *971*: 11; Hayata *337*: 4; Hose *181*: 5; Hume *7938*: (9); *8305*: (9).

Iboet *276*: 11; *423*: 5; Ismael *83*: 11.

Jack *49*: 5; *165*: 5; Jacobs *4596*: 11; Janowski *132*: 8.

Kaudern *6*: 5; KEP *95044* (Ismail): 9; *98504* (id.): 5; *99079* (Ng): 5; KEP-FRI *1827* (Ng): 5; *5423* (id.): 9; *7154* (Cockburn): 11; *7247* (id.): 11; *11163* (Selvarai): 9; *12509* (Whitmore): 9; *13637* (Everett): 5; *17707*: 9; Kerr *5870*: 4; *7215*: 5; *10075*: (5); *13232*: (4); *14461*: 11; *14587*: 11; *15580*: (5): *16529*: (4); *16573*: 4; *17113*: (4); *19087*: (4); King's Collector *369*: 5; *655*: 11; *2258*: (10); *10468*: 10; Korthals *283*: 11; Kostermans *4961*: 5; *6965*: 5; *21644*: 5.

LAE *51727* (Streimann): 5; Lau *27156*: (4); Ledermann *6654*: 5; *10457*: (5); C. W. Lek *1230*: 11; Lörzing *5198*: 5; *5724*: 5; *12317*: 5; *12318*: 5; *17296*: 9.

Maingay KD *793/2*: 5; *794*: 5; *795*: 11; *1219*: (5); *2492*: 11; *2663*: 11; Meijer *4329*: 11; *7138*: 11; Moulton *6867*: 11.

Native collector *580*: 11; NBFD *8* (Orolfo): 6a; *1404* (Puasa): 5; NGF *31814* (Henty et al.): 11; *31912* (Ridsdale et al.): 11; Nimanong *89*: 4; Noor & Samsui *66*: 5; Nooteboom & Chai *1164*: 11.

Pham Hoàng Hô *5003*: 4; Pleyte *705*: 8; PNH *964* (Edaño): 5; *41871* (Mendoza): 2; *42216* (id.): 5; Poilane *10854*: 4; *12234*: 4; *22026*: 4; *22291*: 4; *27539*: 4; *31700*: 4; *31855*: 4; *35651*: 4; Posthumus *937*: 5; *987*: 11; Purseglove *4114*: 5; *5401*: 5.

Rabil *268*: (5); Rahmat si Boeea *7212*: (9); *7781*: 3; *7936*: 5; *9041*: 11; Richards *1401*: 9; Ridley *8464*: 11; *9413*: (9); *11105*: 11; Ridley & Curtis *7949*: (9); Rottler *9*: 5; RSNB *528* (Chew et al.): 9; *2647* (id.): 6b; Rutten *1904*: 5.

S *4367* (Bakar): 1; *5922* (Ashton): 1; *13984* (id.): 5; *17256* (Au): 5; *19751* (Chai): 5; *21304* (Haron): 5; *22896* (Morshidi): 11; *23880* (Kudi): 5; *24301* (Sibat & Banyeng): 11; SAN *19243* (Meijer): 9; *24523* (Brand): 11; *26097* (Chai): 5; *28134* (Mikil): 9; *28959* (Sario): 7; *35395* (Wing): 6a; *36928* (Banang): 6a; *38278* (Sinanggul): 5; *41260* (Ampuria): 5; *41606* (Agam & Aban): 5; *41905* (Mikil): 9; *46742* (id.): 6b; *50522* (Talip): 9; *54477* (Gansau): 9, *57228* (Sinanggul): 5; *58046* (Sin): 6a; *64762* (Seikeh): 5; *67969* (Talip & Termiji): 11; *71095* (Muroh): 5; *74345* (Leopold & Dewol): 11; *74415* (Leopold et al.): 5; *75319* (Muroh): 5; *75633* (Shea): 6a; Sangkhachand *256*: 5; Santos *4267*: 5; Scortechini *28*: 5; *2106*: 9; SF *13618* (Strugnell): 9; *13652* (Pawanchee & Lela): 9; *14096* (Boden-Kloss): 11; *16727* (Burkill & Haniff): (9); *22121* (Henderson): (9); *29646* (id.): 9; *30207* (Corner): 5; *30666* (id.): 11; *32600* (Nur): 5; *33853* (Moysey & Kiah): (9); *38817* (Sinclair & Kiah): 5; *38984* (Kiah): 5; *40491* (Sinclair & Kiah): 9; Shah *133*: 5; *176*: 9; Shah & Sidek *1163*: 11; Sidek *229*: 5; *288*: 5; Sinclair et al. *9235*: 7; v. Slooten *2282*: 5; Smitinand *10891*: 4; Smitinand & Cheke *10839*: 4; E. Smith *413*: (11); *461*: (5); Soegeng *295*: 11; Sørensen et al. *7175*: 4; v. Steenis *9411*: 5.

Teo & P. *2623*: 11; Teysmann HB *3634*: 5.

Villamil *242*: 6a; de Vogel *881*: 6a; de Vriese *66*: 5; *92*: 5; *93*: 5.

Walker *37*: (5); *39*: 5; Wallich *4051-A*: 5; *4051-B*: 5; *4053*: 11; *4054*: 5; *4055-A*: 5; *4055-B*: 5; *4056*: 9; Wang *33290*: (4); de Wilde & de Wilde-Duyfjes *12157*: 5; *12568*: 5; *12651*: 5; Hub. Winkler *1752*: 5; *3272*: 11; D. D. Wood *1904*: 5; *2389*: 5. Wray Jr. *641*: 11.

Zollinger *3044*: 5; *3661*: 5.