

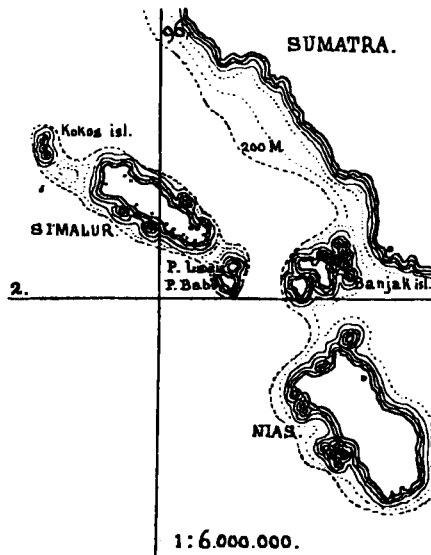
VII. — STUDIES ON INDO-AUSTRALIAN LEPIDOPTERA III. SOME RHOPALOCERA AND NETROCERA FROM SIMALUR, PULU LASIA, PULU BABI AND SUMATRA

BY R. VAN EECKE. (WITH 3 TEXTFIGURES AND PLATES VII AND VIII).

The first contribution to the knowledge of the Rhopalocera-fauna of Simalur and Pulu Babi has been published in volume XXXVI of „Notes from the Leyden Museum.” At that time (1914) it was not probable that more material, besides the 54 recorded species, would reach our country in a time that can be looked over. So, I was very pleased by receiving, a year ago, a few species from the islets named above through the intervention of Mr. Edw. Jacobson, who himself has brought together the above quoted first collection from Simalur and Pulu Babi and also that from Sumatra. The second collection, principally from Pulu Lasia (Lasiak), neighbouring Pulu Babi (N. L.  $2^{\circ} 7'$ , E. L.  $96^{\circ} 40'$ ), has been brought together by Mr. G. Harmsen, who will spare no trouble to capture more representatives of this remarkable fauna, very different from

that of Sumatra and of the islands Nias, Batu, Mentawai and Engano.

If we glance at the little map, it will be clear that the fauna of Simalur and its satellite-islets, which are isolated by the ocean from Sumatra, from the Banjak islets and from Nias, must form a faunistic unity. The chief character of this fauna is a high degree of melanismus, which is most developed on the islet Pulu Babi. Nearly all the collected species differ from the known ones, so that I have the task to describe several new subspecies. Doing this, my expectation, uttered in the first publication on the „Fauna Simalurensis”, becomes fulfilled.



Textfigure 1.

The material from Sumatra is also of great importance, because it contains several rare species, and some as yet unknown as belonging to the fauna of this island. Mr. Jacobson has captured the greater part of

them in the Highlands of Padang, the Ophir districts, Kurintji, Indrapura and Bengkulen (Dempu  $\pm$  1400 m.), for the greater part localities, which have been little explored as to Lepidoptera.

The Leyden Museum of Natural History is very much availed by this enrichment of its collection.

## RHOPALOCERA.

### Fam. Papilionidae.

#### Gen. PAPILIO L.

##### 1. *P. brookiana trogon* (v. Voll.).

2 ♂♂ — Cleft of Harau, Balun (Highl. of Pad., Sumatra) — 10/1913, 7/1914. This species is very common, but I have not received a single female among hundreds of males from Sumatra!

##### 2. *P. nox henricus* Fruhst.

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914. A very damaged specimen.

##### 3. *P. aristolochiae antiphus* (F.).

♂ and ♀ — Andalas (Highl. of Pad.) — 5/1914. See: „Notes from the Leyden Museum”, vol. XXXVI, p. 198—200.

##### 4. *P. demolion demolion* (Cram.).

♂ — Balun (Highl. of Pad.) — 6/1914.

##### 5. *P. nephelus albolineatus* Forbes.

6 ♂♂ and 1 ♀ — Balun, Aur, Andalas (Highl. of Pad.), Muara Sako (Kurintji) — 5 and 7/1914, 3 and 9/1915.

##### 6. *P. helenus enganicus* Doh.

2 ♂♂ — Air bangis, Balun (Highl. of Pad.) — 11/1913, 6/1914.

##### 7. *P. iswaroides iswaroides* Fruhst.

2 ♂♂ — Pike of Kurintji ( $\pm$  1700 M.) — 8/1915. This rare species, which resembles very much *helenus*, seems to live only in the mountains. The female is still unknown.

##### 8. *P. polytes theseus* (Cram.).

6 ♂♂ and 5 ♀♀ — Pulu Lasia — 5 and 9/1915, 2/1916. All the male specimens possess darkly coloured hindwings, with distinct submarginal red till white spots on the underside and with blue squamae to the margin. The ♀ f. f. *polytes* and *stichius* both are present. It is remarkable, that this common species does not vary worth mentioning on Simalur and its satellite-islets, as opposed to the other species.

##### 9. *P. forbesi forbesi* Gr. Sm.

13 ♂♂ — Balun (Highl. of Pad.), Suban Ajam (Bengkulen), Sungai Kumbang, Pike of Kurintji (Kurintji), Rimbo Pengadang (Bengkulen) —

6/1914, 7, 8 and 9/1915, 6/1916. Always the greater part of the captured specimens is of the male sex.

10. *P. memnon* L.

— *anceus* (Gram.) — ♀ — Baso (Highl. of Pad.) — 10/1913.

— *caeruleus* v. E. (Notes Leyd. Mus., vol. XXXVI, p. 202) — 2 ♀♀ — Pulu Lasia — 4 and 5/1916. One of the characters of the male sex, which has been figured on plate 4 of the cited „Notes”, is the narrowness of the hindwings, these being also longer than those of the known forms from the neighbouring localities. The two received female specimens show the same character. The hindwings are tailed like the female forms *butis* Fruhst and *hellopia* Fruhst. from Sumatra, Nias and Batu. However the margin of the hindwing is not largely black coloured, because the black colour is localised on the seven intranerval large spots and on the tail. The discal spots between the radial and submedian nervules are yellowish white. The anal part is orange-yellow. The discal spots between the costal and radial nervule are reddish brown. The remaining part of the hindwing is violet-black to the wingbase. Violet-blue scales round the cell along the nervules put us in mind of the discal colour of the male. Characteristic to the forewings is a yellowish white area on the disk. The cellspot is red. In distinction to Fruhstorfer's *hellopia* the abdomen of *caeruleus* is not yellow but totally violet-black with a black line on the dorsal and ventral part.

Below the disks of the forewings are largely grayish white; the cell, the apex and the basal part being brownish black. The base and the seven intranerval spots of the hindwing are pure black; the area's round the large spots are yellowish white and pure yellow at the anal angle. Between the median nervules 2 and 3 we observe a small black spot in the yellowish white area, a relic of the second series of black spots.

The figure on plate VII will give a good impression of the left upper-side of the female type.

11. *P. paris battacorum* Rothsch.

2 ♂♂ — Sungai Kumbang (Kurintji) — 8/1915.

12. *P. antiphates itamputi* (Butl.).

♂ — Cleft of Anci (Highl. of Pad.).

13. *P. sarpedon sarpedon* (L.).

9 ♂♂ and 1 ♀ — Andalus, Balun, Fort de Kock, Aur (Highl. of Pad.); Sungai Kumbang (Kurintji) — 11/1913, 3, 5, 6 and 7/1914, 8 and 9/1915.

14. *P. bathycles bathycloides* Honr.

3 ♂♂ — Balun (Highl. of Pad.), Cleft of Air Putih (Pajokumbuh) — 6/1914, 4/1915.

15. *P. agamemnon* L.

— *agamemnon* (L.), ♂ — Sungai Kumbang (Kurintji) — 8/1915.

— *lasius* subsp. nova, 7 ♂♂ and 5 ♀♀ — Pulu Lasia — 9/1915, When I received anno 1914 one female specimen from Sinabang (Simalur), I saw at a glance, that the specimen was much darker than those from Sumatra and Nias, but I feared to name a subspecies on a single type. As however a dozen specimens from Pulu Lasia seem to be constantly much darker like the subspecies *atropictus* Fruhst. from Engano, I dare to name a melanistic insular race. Except the brownish black colour and the little submarginal and discal spots of the upperside, the underside shows more distinguishing characters. All the spots, which are yellow in *agamemnon* from Sumatra and Nias, are white in *lasius*, except three basal spots in the cell of the forewing and partially the basal striga of the hindwing. The two white spots between the costal, subcostal and uperradial nervules are transparent; the transcellular black spot between the costal and subcostal nervule, which spot borders upon the transparent white one, is largely developed. The prime-colour is very dark redbrown like on the figure of plate VII.

16. *P. delesserti delesserti* (Guér.).

♂ — Cleft of Anci (Highl. of Pad.) — 3/1915.

Gen. LEPTOCIRCUS Swains.

17. *L. meges meges* (Zinck.).

4 ♂♂. — Balun (Highl. of Pad.) — 6/1914. An insular race from Pulu Babi, *squamosus* v. E., has been described in vol. XXXV of „Notes from the Leyden Museum” on page 193.

Fam. Pieridae.

Gen. LEPTOSIA Hübn.

18. *L. xiphia* F.

— *malayana* Fruhst. — ♂. — Muara Sako (Kurintji). — 10/1915.

— *micropunctata* v. E. — ♂. — Pulu Lasia — 4/1916. The typical specimens, a ♂ and ♀ from Pulu Babi, have been described in vol. XXXVI of the cited „Notes”.

Gen. DELIAS Hübn.

19. *D. baracasa danala* de Nicév.

♂. — Air Njuruk (Dempu, Palembang). — 8/1916. — The first specimen of this species received for our collection.

20. *D. hyparete despoliata* Fruhst.

♂. — Fort de Koek (Highl. of Pad.) — 10/1913.

21. *D. belisama glauce* (Butl.).

♂ and ♀ — Sungai Kumbang (Kurintji), Fort de Kock — 8/1915, 1/1913.

22. *D. crithoë tobahana* Rogenh.

♂. — Andalas (Highl. of Pad.) — 5/1914.

## Gen. HUPHINA Moore.

23. *H. judith* F.

— *amalia* (v. Voll.) — ♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

— *vaga* v. E. — 3 ♂♂ — Pulu Babi — 5/1915. The typical forms, a ♂ and two ♀♀ likewise from Pulu Babi, are figured on plate 4 of vol. XXXVI of the „Notes”. In my opinion *amalia* must be the Sumatran race of *judith*. An arrangement of all the forms, allied to *judith* is to find l. c.

## Gen. APPIAS Hübn.

24. *A. lyncida hippona* Fruhst.

5 ♂♂ — Andalas, Balun (Highl. of Pad.) — 5 and 6/1914.

25. *A. nero figulina* (Butl.).

2 ♂♂ — Balun, Aur (Highl. of Pad.) 6/1914.

26. *A. indra* Moore.

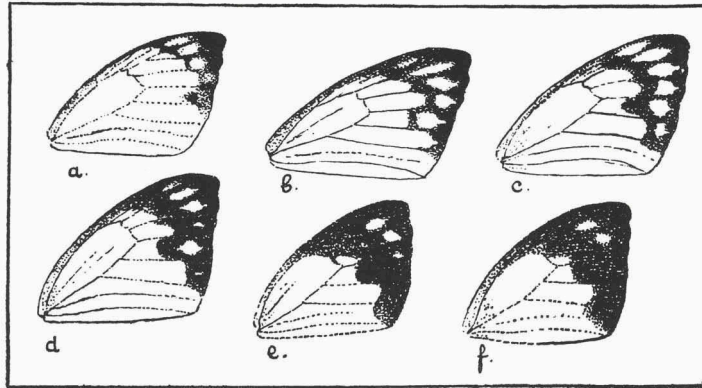
— *inanis* v. E. (*A. pandione inanis* v. E., Notes Leyd. Mus., vol. XXXV, p. 202; vol. XXXVI, p. 211) — 2 ♂♂ — Pulu Lasia — 5/1915, 3/1916.

— *plana* Butl. — 2 ♂♂ — Air Tarbit, Cleft of Air Putih (Pajokumbuh) — 12/1913, 4/1915. In my first studies on Indo-Australian Lepidoptera I have given my opinion about the synonymy of *indra*, *leptis*, *lucasi* and *nupta*. *Lalage* and *pandione* must not be joined with the forms named above. The described race, *inanis*, is very related to the form *nupta* Fruhst. from Nias(?). On this island lives also another common form, *festrada* Fruhst. which resembles very much the Sumatran form, *plana* Butl. *Inanis* is clearly an intermediate form between *nupta* and *festrada*, if we pay attention to the division of the black and the white colour on the forewings. The textfigures of *imbecilis* Moore (*a*) from Assam, *nupta* Fruhst. (*b*) from Nias, *inanis* v. E. (*c*) from Simalur, *lucasi* Wall. (*d*) from Mount Gedeh (Java), *festrada* Fruhst. (*e*) and *plana* Butl. (*f*) from Sumatra give a distinct impression of gradulation. The form from Formosa may be placed between *a* and *b*.

The latter gives us also a transition from *imbecilis* Moore to *lucasi* Wall. as to the colour and pattern on the underside of the hindwings,

which are nearly totally white in the forms from Sumatra, Borneo and Java.

Last not least the nervature of the wings and the male copulatory organs do not give us any constant character to separate the named forms



Textfigure 2.

specifically. Only the form *nupta* Fruhst. has not been examined by want of material. I am inclined to suppose, that *nupta* is inhabiting one of the satellite islets of Nias.

The following arrangement of the known local races or subspecies gives a good survey of the geographical distribution.

- A. indra* Moore (Cat. Lep. Ins. Mus. H. E.-I. C., vol. I, p. 74, 1857).
- *indra* (Moore) . . . . . Sikkim, Assam, Birma (wet-season).
- *imbecilis* (Moore). . . . . " " " (dry-season).
- *shiva* Swinh . . . . . Poona, N. Bombay.
- *statilia* Fruhst . . . . . Travancore, Nilghiris.
- *narendra* Moore . . . . . Ceylon.
- *thronion* Fruhst . . . . . Siam, Annam, Tonkin.
- *menandrus* Fruhst . . . . . Hainan.
- *aristoxenus* Fruhst. . . . . Formosa (mountains).
- *thrusea* Fruhst . . . . . " (lowlands).
- *plana* Butl . . . . . Malacca, Sumatra.
- *aemilia* Fruhst . . . . . Borneo.
- *festrada* Fruhst . . . . . Nias.
- *nupta* Fruhst. . . . . " ? Satellite-islet.
- *inanis* v. E. . . . . Simalur and satellite-islets,
- *massilia* Fruhst. . . . . Palawan.
- *leptis* Feld . . . . . Java.
- *lucasi* Wall. . . . . W. Java, Gedeh-mountains.
- *vadus* Fruhst. . . . . Lombok.

## Gen. SALETARA Dist.

27. *S. panda substriata* v. E.

2 ♂♂ — Pulu Lasia, Pulu Babi — 5 and 9/1915. These two ♂♂ belong to an insular race, which inhabits only the satellite islets of Simalur. On Simalur lives a race, which resembles very much those from Nias and from the Nicobars, *schönbergi* Semp. and *chrysea* Fruhst. *Substriata* may easily be recognized by the absence of the failing brownish black colour on the costal- and outermargin of the forewings. In one male and in the female specimen from Pulu Babi (Notes Leyd. Mus., vol. XXXVI, p. 217) we observe a grayish brown dust on the basal part and along the costa of the forewings (plate VII, fig. 4).

## Gen. IXIAS Hübn.

28. *I. flavipennis* Gr. Sm.

♂ Suban Ajam (Bengkulen) — 7/1916.

## Gen. CATOPSILIA Hübn.

29. *C. crocale* (Cram.).

♂ and ♀ — Aur (Kumanis), Padang (Highl. of Pad.) — 3/1914, 6/1915. Represented are the forms *alcmene* Cram. and *flava* Cram.

30. *C. scylla scylla* (L.).

♂ — Singkarah (Highl. of Pad.) — 6/1914.

## Gen. TERIAS Swains.

31. *T. hecabe latilimbata* (Butl.).

2 ♂♂ and 1 ♀ — Kalung, Lolo (Highl. of Pad.), Pasemah (Dempu, Palembang) — 12/1912, 6/1914, 8/1916. The ♂ specimen from Kalung (n<sup>o</sup>. 88) resembles very much *blanda* as to the pattern on the upperside. However the colour and the absence of the three strigulae in the cell of the underside of the forewings force me to arrange this specimen under *hecabe*.

32. *T. tecmessa* de Nicév.?

♂ — Suban Ajam (Bengkulen) — 7/1916. I communicate this determination under reservation, because only one specimen (n<sup>o</sup>. 580) has been captured, which might not be damaged by anatomical research. The descriptions by de Nicéville and Fruhstorfer (Journ. Asiatic. Soc. Beng. 1895, p. 498; Seitz. Grossschm. d. Erde II, p. 168, 1910) have not convinced me, that we have to do here with the named species.

The forewings are not elongated, and not as rounded as in *hecabe*. The demarcation between the black colour on the apex and outermargin, and the greenish yellow part of the forewing is irregular. On the outer-

margin of the hindwing we see a very narrow black line, dissolved into points between the nervules near the anal angle. The underside of the wings resembles that of *sari* Horsf. and *sodalis* Moore, only the apical grayish red-brown spot is separated from the margin by a yellow streak. The secondary sexual characters are present on each side of the median nervule of the forewing. Exp. alar.: 35 m.m. The specimen has been figured by me on plate VII.

33. *T. blanda snelleni* Moore.

♂ and ♀ — Andalas (Highl. of Pad.) — 5/1914.

34. *T. sari sodalis* Moore.

♂ — Air bangis (Highl. of Pad.) — 11/1913.

## Gen. HEBOMOIA Hübn.

35. *H. glaucippe sumatrana* Hag.

3 ♂♂ — Balun (Highl. of Pad.), Sinlak Deras (Kurintji) — 6/1914, 9/1915.

## Gen. PARERONIA Bingham.

36. *P. valeria lutescens* Butl.

3 ♂♂ — Muara Sako (Kurintji), Pulu Lasia, Pulu Babi — 5 and 9/1915. *Valeria* is one of the few species, which do not vary distinctly on Simalur. Fruhstorfer has described the insular race from Nias under the name *niasica*.

## Fam. Danaidae.

## Gen. DANAIS Godt.

37. *D. plexippus sumatrana* Moore.

♂ and ♀ — Andalas, Balun (Highl. of Pad.) — 5 and 6/1914.

38. *D. melanippus* (Cram.).

— *hegesippus* (Cram.), ♀ — Sibolga (Highl. of Pad.) — 1/1913.

— *edwardi* v. E., 2 ♀♀ — Pulu Lasia — 1/1916. On plate 4 (fig. 2) of the „Notes”, vol. XXXVI, I have figured a male specimen from Simalur (Sibigo). This remarkable form inhabits also the islet Pulu Lasia. The two female specimens are somewhat darker, especially as to the red colour on the forewings (plate VII).

39. *D. melissa septentrionis* Butl.

♂ — Gunung Dempu (Palembang) ± 900 M. — 9/1916.

40. *D. aspasia thargalia* Fruhst.

3 ♂♂ and 1 ♀ — Andalas, Cleft of Harau (Highl. of Pad.) — 5/1914, 10/1913.

41. *D. albata adustata* Fruhst.



2 ♂♂ and 2 ♀♀ — Pike of Kurintji ± 1700 M., Sungai Kumbang (Kurintji) — 8/1915.

42. *D. banksi banksi* (Moore).

2 ♂♂ and 1 ♀ — Fort de Kock, Suban Ajam (Bengkulen), Sungai Kumbang (Kurintji) — 11/1913, 7/1916, 9/1915.

43. *D. tytia tytioides* Hag.

— *macrina* Fruhst., 4 ♂♂ — Aur (Kumanis), Andalas (Highl. of Pad.) — 3 and 5/1914.

— *mecrimaga* v. E. (Notes Leyd. Mus., vol. XXXVI, p. 220) ♂ and ♀ — Pulu Lasia — 2 and 3/1916. This subspecies seems to be very constant on Simalur and on its satellite-islets.

44. *D. similis* (L.).

— ♂ and ♀ — Pantjuran Gading (Kurintji), Tanangtalu (Ophir distr.) — 5 and 9/1915. A not common species in Sumatra.

#### Gen. IDEOPSIS Horsf. a. Moore.

45. *I. gaura* Horsf.

— *eudora* Gray 3 ♂♂ and 7 ♀♀ — Aur, Puntian (Kumanis), Balun, Andalas (Highl. of Pad.), Muara Sako (Kurintji) — 3, 5 and 6/1914, 3 and 9/1915.

— *pseudocostalis* v. E. — 2 ♀♀ — Sinabang (Simalur), Pulu Babi — 3/1913, 5/1915. It is my positive opinion, proceeded from an anatomical research, that *gaura* and *daos* Boisd. belong to the same species (see p.p. 218 and 319, vol. XXXVI Notes Leyd. Mus.). *Pseudocostalis*, figured on plate VII, is clearly intermediate between *gaura* and *daos*. Mr. Piepers has written in his work on the *Erycinidae* and *Lycaenidae* of Java (p. XLV) that he does not believe, that *gaura* Horsf. and *daos* Bsd. belong to the same species, because „the systematic conception of species does not depend upon the absence or presence of a difference in a particular organ”. All right! But Mr. Piepers has not well read my publication on this subject. In his systematic work Mr. Piepers seems to set a high value on the pattern! I should like to show Mr. Piepers a series of *gaura*-, *pseudocostalis*- and *daos*-races and he will be the first to call them „evolutionforms” of one species. The biological, morphological and anatomical data indicate one species!

#### Gen. HESTIA Hübn.

46. *H. lynceus lynceus* (Drury).

♂ Balun (Highl. of Pad.) — 7/1914.

47. *H. hypermnestra hera* Fruhst.

♂ and ♀ — Aur (Kumanis, Highl. of Pad.) — 3/1915.

48. *H. leuconoë* (Erichs.).

— *chersonesia* Fruhst. — ♂ — Pasir Ganting (Indrapura) — 10/1915. Mr. Jacobson has had the good luck to discover this species on Sumatra. *Leuconoë* was known from Banka, Billiton, Batu and Engano. The specimen from Indrapura does not differ from the Malaccan specimens.

— *lasiaka* subspec. nova. — ♀ — Pulu Lasia — 12/1915. Very near to *vedana* Fruhst. from the Batu-islands. Yet *lasiaka* is not as black as *vedana* and the yellowish grayish brown colour on the base of the wings breaks the monotony on the upperside. The little differences of the pattern are to be seen on the textfigure.

Gen. EUPLOEA F.

49. *E. albomaculata* v. E.

(Notes Leyd. Mus. vol. XXXVI, p. 52).

♂ — Pulu Lasia — 5/1915.

Figured on plate VII.

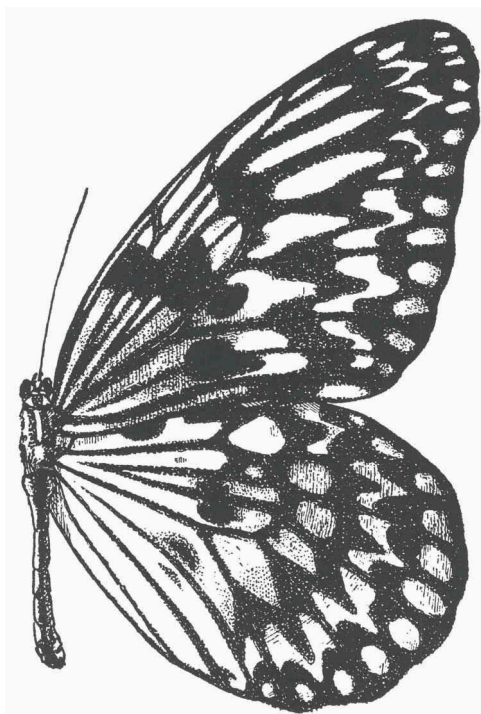
50. *E. malayica* Butl.

— *malayica* (Butl.) — 3 ♂♂ — Aur (Kumanis), Andalas, Balun (Highl. of Pad.) — 3, 5 and 6/1914.

— *harmseni* subspec. nova — 2 ♂♂ — Pulu Babi, Pulu Lasia — 5/1915, 3/1916. Once more an example of the great variability of a Malayan species. *Harmseni* is to recognise at a

glance by its shape, colour and pattern. Smaller than the typical *malayica* from Sumatra and *stolli* Weym. from Nias, the colour and pattern remember *claudina* Stdgr. from Palawan. The colour on the upperside is violet shining dark brown and the series of great spots are pure white. The white submarginal spots on the hindwing are elongated like in *claudina* Stdgr. On the underside of the hindwing we observe 6 circumcellular spots and one very small cellspot near the end of the cell. The right half of the upperside is figured on plate VII.

51. *E. lacordairei mithrenes* Fruhst.



Textfigure 3.

♂ — Andalas (Highl. of Pad.) — 5/1914.

52. *E. multiciber* (Cram.).

— *vandeventeri* Forbes. 3 ♂♂ and 2 ♀♀ — Andalas, Balun, Puntian (Kumanis), Cleft of Anci (Highl. of Pad.) — 5 and 7/1914, 3/1915.

— *babina* v. E. (Notes Leyd. Mus., vol. XXXVI, p. 53, 226) — ♂ — Pulu Lasia — 5/1915. The typical form has been captured on Pulu Babi; the form figured on plate VII is from Pulu Lasia. One specimen possesses a second series of elongated submarginal spots also on the upper-side of the hindwing.

53. *E. mazares mazarina* Fruhst.

7 ♂♂ and 1 ♀ — Aur, Puntian (Kumanis), Andalas (Highl. of Pad.) — 3 and 5/1914, 3/1915.

54. *E. aegyptus lippus* subsp. nova.

♂ — Pulu Lasia — 1/1916. A typical character of all the *Euploea* inae from Simalur and its satellite-islets is the great development of the series of white spots. Also *lippus* excels by its series of submarginal spots. On the upper-side of the hindwing two series are completely developed like in *iduna* Fruhst. from Kangean. A series of four circumcellular small, but distinct, spots, which are slightly violet coloured is characteristic on the upper-side of the forewing. Moreover traces of two spots are present between the radial and 2th median nervule. On the underside of the forewing seven circumcellular and one very small cellspot are visible, opposed to the hindwing, which shows only five circumcellular spots. All these mostly yellowish coloured spots enliven the dark brown *Euploea* to a high degree. The prime-colour is not as dark as in the neighbouring race from Nias, *staudingeri* Kheil. The figure on plate VII gives a good impression of this diverging form.

55. *E. diocletianus diocletianus* (F.).

5 ♂♂ — Balun, Cleft of Anci (Highl. of Pad.), Cleft of Air Putih (Pajokumbuh) — 6 and 7/1914, 3 and 4/1915.

Fam. Satyridae.

Gen. YPETHIMA Hübn.

56. *Y. philomela* (Joh.) = *Y. hübnerei* Snell.

2 ♂♂ — Fort de Kock, Aur (Kumanis, Highl. of Pad.) — 1 and 3/1914.

57. *Y. fasciata torone* Fruhst.

♂ — Andalas (Highl. of Pad.) — 5/1914. The first specimen from Sumatra received for our collection.

Gen. ERITES Westw.

58. *E. elegans distincta* Martin.

4 ♂♂ — Balun (Highl. of Pad.), Suban Ajam, Rimbo Pengadang (Bengkulen), Air Njuruk (Palembang) — 6/1914, 6, 7 and 8/1916.

Gen. LETHE Hübn.

59. *L. rohria enima* Fruhst.

3 ♂♂ and 1 ♀ — Fort de Kock, Boekit Marapalam, Andalas (Highl. of Pad.) — 10/1913, 5/1914.

60. *L. mekara debata* Fruhst.

2 ♂♂ and 2 ♀♀ — Suban Ajam (Bengkulen), Andalas (Highl. of Pad.) — 7/1916, 5/1914.

61. *L. darena sumatrensis* Stdgr.

3 ♂♂ — Sungai Kumbang (Kurintji), Tanangtalu (Ophir distr.) — 5, 8 and 9/1915.

Gen. NEORINA Westw.

62. *N. lowi latipicta* Fruhst.

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1915.

Gen. COELITES Bsd.

63. *C. euptychioides humilis* (Butl.).

♀ — Pasir Ganting (Indrapura) — 10/1915. The first female specimen received for our collection.

Gen. MYCALESIS Hübn.

64. *M. marginata marginata* Moore.

2 ♂♂ and 1 ♀ — Surian (Highl. of Pad.) — 6/1914.

65. *M. anapita anapita* Moore.

♂ Puntian (Kumanis, Highl. of Pad.) — 3/1915.

66. *M. mnasicles mnasicles* (Hew.).

2 ♂♂ and 1 ♀ — Aur Kumanis, Andalas (Highl. of Pad.) — 2 and 5/1914.

67. *M. janardana sagittifera* Fruhst.

♂ — Suban Ajam (Bengkulen) — 7/1916.

68. *M. fuscum fuscum* (Feld.).

♂ and ♀ — Padang — 1/1914.

69. *M. orseis orseis* (Hew.).

3 ♂♂ — Padang, Andalas (Highl. of Pad.) — 9/1913, 5/1914.

70. *M. maianae maia* de Nicév.

3 ♂♂ — Muara Sako (Kurintji) — 9/1915.

71. *M. oroatis ustulata* Dist.

3 ♂♂ and 1 ♀ — Suban Ajam (Bengkulen), Muara Sako (Kurintji), Air Njuruk (Dempu) — 7 and 8/1915, 10/1915.

## Gen. ORSOTRIAENA Wallengr.

72. *O. medus zipoetina* Fruhst.

♂ — Andalas (Highl. of Pad.) 5—1914.

## Gen. RAGADIA Wertw.

73. *R. crisia minoa* Fruhst.

♂ — Andalas (Highl. of Pad.) — 4/1914.

## Gen. MELANITIS F.

74. *M. leda leda* (L.).

6 ♂♂ and 4 ♀♀ — Fort de Kock, Aur (Kumanis), Andalas (Highl. of Pad.), Sungai Kumbang (Kurintji) — 3, 4 and 5/1914, 8/1915.

75. *M. phedima abdullae* Dist.

♂ — Puntian (Kumanis, Highl. of Pad.) — 4/1915.

76. *M. zitenius sumatranus* Fruhst.

♂ — Andalas (Highl. of Pad.) — 5/1914. A damaged specimen of this, in Sumatra not common, species.

## Gen. ELYMNIAS Hübn.

77. *E. panthera exsulata* subspec. nova.

2 ♂♂ and 3 ♀♀ — Pulu Lasia — 11/1915, 2 and 4/1916. *Exsulata* resembles *dolorosa* Butl. from Nias more than it does *enganica* Doh. from Engano. The upperside however is darker than that of *dolorosa* in both sexes; even the area round the three ocelli of the hindwing has disappeared. Only one female specimen is showing the, in the other races characteristic, marginal band, but not as distinct as in the neighbouring insular races. Also the underside of the wings is very dark coloured and strikes us by the enlarged ocelli and by a large white spot between the costal- and uperradial nervule. The white kernel of the radial ocellus is enlarged and stripe-shaped only in the females. The minute apical ocellus of the forewing is well developed in both sexes. See for the rest the figure on plate VIII.

78. *E. nigrescens beatrice* Fruhst.

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1915.

79. *E. nesaea laisides* de Nicév.

2 ♂♂ — Andalas, Balun (Highl. of Pad.) — 5 and 7/1914.

80. *E. ceryx ceryxoides* de Nicév.

4 ♂♂ — Sungai Kumbang, Pike of Kurintji (Kurintji) — 8/1915.

Fam. Amathusiidae.

Gen. FAUNIS Hübn.

81. *F. arcesilaus* F.

— *arcesilaus* (F.) — 2 ♂♂ and 1 ♀ — Andalas, Aur (Kumanis, Highl. of Pad.) — 3 and 5/1914.

• — *tenuitata* v. E. (Notes Leyd. Mus., vol. XXXVI, p. 228) — ♂ — Pulu Lasia — 4/1916.

82. *F. kirata* de Nicév.

1 ♂ and 2 ♀♀ — Aur, Puntian (Kumanis), Balun (Highl. of Pad.) — 5 and 6/1914, 3/1915.

Gen. XANTHOTAENIA Westw.

83. *X. busiris busiris* (Westw.).

9 ♂♂ — Air Tarbit, Air Njuruk (Dempu), Suban Ajam (Bengkulen), Andalas (Highl. of Pad.) — 12/1913, 5/1914, 7 and 8/1916.

Gen. AMATHUSIA F.

84. *A. phidippus* (L.).

— *eutropius* Fruhst. — ♂ and ♀ — Aur (Kumanis), Koto Alam (Pajokumbuh) — 3/1914, 4/1915.

— *melanops* subsp. nova. — 9 ♂♂ and 1 ♀ — Pulu Lasia — 5 and 9/1915, 4/1916. The name, *melanops*, indicates the characteristic darkness of the ocelli on the underside of the hindwing. Both the iris and the pupil are pure black, except a white spot in the centre and some yellow squamae near to the inner margin of the iris. The prime-colour on upper — and underside of the wings is very dark. Once more a melanistic insular race. The transversal bands on the underside and the lighter margins on the upperside are sharply limited. The silkish glance of the underside has totally disappeared. A figure of the underside, showing the dark ocelli, is given on plate VIII.

Gen. AMATHUXIDIA Stdgr.

85. *A. amythaon caerulilata* v. E.

(Notes Leyd. Mus., vol. XXXVI, p. 227).

♂ and ♀ — Pulu Lasia — 9/1915. The male type from Pulu Babi was very damaged. An accurate examination of the whole male from Pulu Lasia indicates on a resemblance to the insular form *insularis*

Doh. from the islet Engano. Remarkable is the shortness of the wing especially that of the hindwings. The shining blue band on the forewing however is very large,  $\pm 18$  m.m., and not narrowed to the anal angle like in *ottomana* Butl. from Borneo. The underside of the wings does not give characteristics, except that the submarginal transversal line does not cross the anal ocellus like in *ottomana*.

The female *caerulilata* resembles very much that of *ottomana*, it is much larger than the male and to recognise by its large yellow subapical band. The upperside of the male has been figured on plate VIII

Gen. ZEUXIDIA Hübn.

86. *Z. doubledaii sumatrana* Fruhst.

♂ — Sungai Kumbang (Kurintji) — 8/1915.

87. *Z. aurelius aurelius* (Cram.)

♂ — Muara Sako (Kurintji) — 9/1915. Kurintji seems to be a Dorado for lepidopterologists. *Aurelius* was represented in our collection by one damaged specimen and *doubledaii* by a few more from various localities.

Gen. THAUMANTIS Hübn.

88. *T. odana paramita* Fruhst.

2 ♂♂ and 3 ♀♀ — Balun (Highl. of Pad.), Simlak Deras (Kurintji) Rimbo Pengadang (Bengkulen) — 6 and 7/1914, 9/1915, 6/1916.

Fam. Nymphalidae.

Gen. ERGOLIS Boisd.

89. *E. ariadne ariadne* (L.)

2 ♂♂ and 1 ♀ — Sibolga, Aur (Kumanis, Highl. of Pad.) — 1/1913, 3/1914.

90. *E. merione ginosa* Fruhst.

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

Gen. LARINGA Moore.

91. *L. horsfieldi velitra* Fruhst.

3 ♂♂ and 1 ♀ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

92. *L. castelnaui castelnaui* (Feld.).

♂ — Andalas (Highl. of Pad.) — 5/1914.

Gen. CUPHA Bilb.

93. *C. erymanthis* (Drury).

— *nagara* Fruhst. — ♂ — Andalas (Highl. of Pad.) — 5/1914.

— *tripunctata* v. E. (Notes Leyd. Mus., vol. XXXVI, p. 233) — ♂ and ♀ — Pulu Lasia — 9/1915, 4/1916.

Gen. ISSORIA Hübn.

94. *I. sinha macromalayana* Fruhst.

6 ♂♂ — Balun, Andalas, Bukit Berampung (Highl. of Pad.) — 5 and 6/1914.

Gen. CYNTHIA F.

95. *C. arsinoë battaka* Martin.

5 ♂♂ — Balun, Aur (Highl. of Pad.), Rimbo Pengadang (Bengkulen) — Air Njuruk (Palembang) — 3 and 6/1914, 6 and 8/1916.

Gen. TERINOS Boisd.

96. *T. atlita atlita* (F.).

2 ♂♂ — Balun (Highl. of Pad.) — 6/1914.

Gen. CETHOSIA F.

97. *C. hypsea* Dbl.

— *aeole* (Moore) — 2 ♂♂ and 1 ♀ — Cleft of Harau, Aur (Highl. of Pad.) — 10/1913, 3/1914.

— *nigrescens* v. E. (Notes Leyd. Mus., vol. XXXVI, p. 232) — 5 ♂♂ — Pulu Babi, Pulu Lasia — 5/1915, 1 and 3/1916. This species appears to vary on the three islands. The form, figured in the cited „Notes” is an extreme one, being the darkest. On plate VIII I have figured now the form from Pulu Lasia, which shows a distinct marginal series of yellowish white lunules and some yellowish white circumcellular spots on the upperside of the forewing. The coarse pattern on the dark underside is striking by the black large lines and spots and by the narrowness of the white area's. The wing expansion of a specimen from Pulu Babi is 55 m.m.; that of a specimen from Pulu Lasia 67 m.m.

Gen. ARGYNNIS F.

98. *A. hyperbius sumatrensis* Fruhst.

7 ♂♂ and 2 ♀♀ — Matur, Fort de Kock, Andalas, Boekit Berampung (Highl. of Pad.) — 10 and 12/1913, 5 and 6/1914.

Gen. PRECIS Hübn.

99. *P. iphita tosca* Fruhst.

7 ♂♂ — Aur (Kumanis), Andalas (Highl. of Pad.), Tanangtalu (Ophir distr.), Suban Ajam (Bengkulen) — 3 and 5/1914, 5/1915, 7/1916.



100. *P. atlites atlites* (L.).

♂ — Fort de Kock — 10/1913.

101. *P. almana javana* (Feld.).

4 ♂♂ — Puntian (Kumanis), Balun (Highl. of Pad.) — 7/1914, 3 and 4/1915.

102. *P. orithyia sumatrana* Fruhst.

♂ — Matur (Highl. of Pad.) — 10/1913.

## Gen. PYRAMEIS Hübn.

103. *P. cardui* L.

♂ — Matur (Highl. of Pad.) — 10/1913.

104. *P. samani* Hag.

6 ♂♂ and 2 ♀♀ — Sungai Kumbang (Kurintji) — 9/1915. Only the two typical specimens, described and figured by Hagen in the „Deutsche entom. Zeitschr. Iris“, vol. IX, 1896, were known from the Karo-mountains.

## Gen. SYMBRENTHIA Hübn.

105. *S. hippoclus violetta* Hag.

9 ♂♂ — Puntian (Kumanis), Andalas, Balun (Highl. of Pad.), Suban Ajam (Bengkulen), Sungai Kumbang (Kurintji) — 5 and 6/1914, 3 and 9/1915, 7/1916.

106. *S. hypselis cirsesia* Fruhst.

4 ♂♂ — Puntian (Kumanis), Balun (Highl. of Pad.), Suban Ajam (Bengkulen) — 6/1914, 3/1915, 7/1916.

107. *S. hypatia chersonesia* Fruhst.

♂ — Sungai Kumbang (Kurintji) — 8/1915.

## Gen. RHINOPALPA Feld.

108. *R. polynice* (Cram.).— *polynice* (Cram.) — 2 ♂♂ and 1 ♀ — Koto Alam (Pajokumbuh), Rimbo Pengadang (Bengkulen) — 4/1915, 6/1916.— *epicallonice* v. E. (Notes Leyd. Mus., vol. XXXVI, p. 236) — ♂ — Pulu Lasia — 4/1916. The upperside of *epicallonice* has been figured now on plate VIII. Characteristic is the very large black marginal band and the dark colouring.

## Gen. HYPOLIMNAS Hübn.

109. *H. antilope* (Cram.).— *discandra* Weym. — 3 ♂♂ and 1 ♀ — Pulu Lasia — 5 and 9/1915, 2/1916. The form *discandra* Weym. inhabits the island Nias and

appears not to vary on the Simalur-group. Represented are the f. f. *nivas* Fruhst. and *violaria* Fruhst.

— *anomala* (Wall.) — ♀ — Balun (Highl. of Pad.) — 6/1914.

110. *H. misippus* (L.).

4 ♂♂ and 1 ♀ — Fort de Kock (Sum.), Pulu Lasia — 10, 11 and 12/1913, 2/1916. The female is the ♀ f. *diocippus* (Cram.).

111. *H. bolina incommoda* Butl. — ♀ — Pulu Lasia — 5/1915.

A very fine specimen of the form *jacintha* Don.

Gen. DOLESCHALLIA Feld.

112. *D. bisaltide* (Cram.).

— *mariae* Fruhst. — 5 ♂♂ and 1 ♀ — Fort de Kock, Balun, Puntian (Kumanis, Highl. of Pad.), Sungai Penuh (Kurintji) — 11 and 12/1913, 6/1914, 3 and 8/1915.

— *lasiakensis* subsp. nova — ♂ — Pulu Lasia — 12/1915. It is remarkable that the specimen from Pulu Lasia resembles very much those from Nias, while that from Simalur agrees with the Sumatran specimens. Yet the hindwings of both the specimens are narrower and the forewings more pointed. The white markings on the underside near to the bases of the wings are less developed than in the forms from Sumatra and Nias. The most differing form, that from Pulu Lasia, has been figured on plate VIII.

Gen. KALLIMA Dbl.

113. *K. limborgi tribonia* Fruhst.

3 ♂♂ — Balun (Highl. of Pad.), Rimbo Pengadang (Bengkulen) — 6/1914, 6/1916.

114. *K. spiridiva* Sm.

4 ♂♂ and 2 ♀♀ — Sungai Kumbang, Pike of Kurintji (Kurintji), Suban Ajam (Bengkulen) — 8 and 9/1915, 7/1916. A fine series, as yet a desideratum for our museum-collection. This species seems to be not very rare in the mountains and now has been captured near Padang Pandjang, in the Battak mountains, in Bengkulu, on the Karo-plateau and in Kurintji. It is now known, that this beautiful *Kallima* is flying during the months April till September.

Gen. AMNOSIA Westw.

115. *A. decora eudamia* Sm.

7 ♂♂ and 1 ♀ — Andalas (Highl. of Pad.), Suban Ajam (Bengkulen), Sungai Kumbang (Kurintji), Air Njuruk (Palembang) — 5/1914, 8/1915, 7 and 8/1916.

## Gen. STIBOCHIONA Butl.

116. *S. coresia kannegieteri* Fruhst.

3 ♂♂ — Aur (Kumanis), Andalas, Boekit Marapalam (Highl. of Pad.) — 12/1913, 5/1914.

## Gen. CYRESTIS Boisd.

117. *C. periander martinus* Fruhst.

4 ♂♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

118. *C. nivalis* Feld.

2 ♂♂ — Kalung, Aur (Highl. of Pad.) — 12/1913, 3/1914.

119. *C. maenalis irmae* Forbes.

6 ♂♂ — Suban Ajam (Bengkulen), Rimbo Pengadang (Bengkulen) — 6 and 7/1916.

## Gen. CHERSONESIA Dist.

120. *C. rahria* Moore.— *rahria* (Moore) — 3 ♂♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.— *ingens* subsp. nova — 2 ♂♂ — Pulu Lasia, Pulu Babi — 5/1915, 4/1916. The damaged female from Pulu Babi, mentioned in my first publication about the fauna Simalurensis, must be inserted also under *ingens*. These three specimens are the largest and darkest coloured ones of our whole series of 82 specimens from various localities. The figure on plate VIII will elucidate this short description.121. *C. peraka incerta* subsp. nova?♂ — Pulu Babi — 5/1915. Mr. Jacobson has captured on Simalur three male specimens, which resemble very much the specimens from Sumatra. Only they are smaller and much lighter coloured. The specimen, now received from Pulu Babi, is larger (wingexpansion 30 m.m.) with dark transversal strigae. Characteristic is the basal line of the submarginal band, this being straight and showing no subapical band like in *peraka*-specimens from other localities. The specimen, figured on plate VIII, must resemble also *C. nicevillei* Mart. from Sumatra.

## Gen. RAHINDA Moore.

121. *R. hordonia senthes* Fruhst.

♀ — Rimbo Pengadang (Bengkulen) — 6/1916.

## Gen. NEPTIS F.

122. *N. hylas papaja* Moore.

4 ♂♂ and 2 ♀♀ — Matur, Fort de Kock, Andalas, Puntian (Highl.

of Pad.) — 10/1913, 5/1914, 3/1915. Two specimens from Rimbo Pengadang (Bengkulen), captured 6/1916, differ distinctly from the other ones from Sumatra by their dark colours and by the narrowness of the transversal band on the hindwings. Yet all the characteristics indicate the species *hylas*.

123. *N. nata declinata* subspec. nova.

♂ and ♀ — Pulu Babi, Pulu Lasia — 5/1915, 4/1916. Both the typical specimens are larger than those from Nias (*natana* Fruhst.); the wingexpansion being 50 and 54 m.m. Striking is the dark colour on the upper- and underside of the wings. One of the supercellular spots of the forewing is largely developed; the four median discal spots are more reduced than in *natana*, while the submarginal series consists of larger white spots. The figure on plate VIII will show the differences more distinctly.

124. *N. nandina apharea* Fruhst.

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

125. *N. soma sumatrensis* subspec. nova.

♂ — Puntian (Kumanis, Highl. of Pad.) — 3/1915. I have found representatives of this species in the collections of the Leyden Museum from Formosa, Malacca and Sumatra. *Soma* has been captured in the Malayan region only on the islet Engano (*meridiei* Doh.). The genus *Neptis*, being a stumbling-block to many lepidopterologists, I have consulted Mr. H. Fruhstorfer, who has affirmed my determination.

The best characteristic to recognise *sumatrensis*, which also has been figured on plate VIII, is to find in the white striga and in the triangular white spot in the cell of the forewings. In *lutatia* Fruhst. from Formosa and *gononata* Butl. from Malacca the striga is distinctly separated from the triangular endspot, what does not happen in *sumatrensis*, which resembles more *acala* Fruhst. from Tonkin. The submarginal spots on both the wings, however, are more developed and whiter than in *acala*. The prime-colour remains as dark as in *acala*.

*Soma* now is known from the Highlands of Padang and from the Lampongs.

126. *N. vikasi* Horsf.

— *omeroda* Moore — ♂ — Tanangtalu (Ophir distr.) — 5/1915.

— *pallida* subspec. nova — ♂ — Pulu Lasia — 4/1916. An easily recognizable form by its white spots and strigae, which are shadowed in the form from Sumatra. The underside is not as dark as in the form *kheili* Moore from Nias; the prime-colour of the upperside of the wings is brown and not black, like in the forms from Nias. The figure on plate VIII is showing the characteristic white pattern of the wings.

127. *N. anjana hyria* Fruhst.

2 ♂♂ — Andalas (Highl. of Pad) — 5/1914.

Gen. PANTOPORIA Hübn.

128. *P. pravara helma* Fruhst.

2 ♂♂ and 1 ♀ — Suban Ajam (Bengkulen) — 7/1916.

129. *P. perius perius* (L.).

2 ♂♂ and 1 ♀ — Sibolga, Fort de Kock (Highl. of Pad.) — 1 and 10/1913, 2/1915.

130. *P. larymna selessana* Fruhst.

2 ♂♂ — Balun (Highl. of Pad.) — 6/1914.

131. *P. abiasa clerica* Butl.

2 ♂♂ — Sungai Kumbang (Kurintji), Suban Ajam (Bengkulen) — 9/1915, 7/1916.

132. *P. selenophora baris* Fruhst.

3 ♂♂ — Andalas (Highl. of Pad.), Sungai Kumbang (Kurintji) — 5/1914, 9/1915.

133. *P. ambra assa* de Nicév.

5 ♂♂ — Air Tarbit, Air Njuruk (Dempu), Sungai Kumbang (Kurintji), Suban Ajam (Bengkulen) — 12/1913, 8 and 9/1915, 7/1916.

134. *P. nefte subratina* Fruhst.

♂ — Andalas (Highl. of Pad.) — 5/1914.

Gen: LIMENITIS F.

135. *L. danava albomarginata* Weym.

5 ♂♂ — Pike of Kurintji, Sungai Kumbang (Kurintji), Rimbo Pengadang, Suban Ajam (Bengkulen) — 8 and 9/1915, 6 and 7/1916.

136. *L. procris minoë* Fruhst.

5 ♂♂ and 1 ♀ — Andalas, Balun (Highl. of Pad.), Rimbo Pengadang (Bengkulen), Koto Alam (Pajokumbuh) — 5 and 6/1914, 4/1915, 6/1916.

Gen. PARTHENOS Hübn.

137. *P. sylvia lilacinus* Butl.

11 ♂♂ and 8 ♀♀ — Pulu Lasia — 4/1916. *Sylvia* from Simalur and its satellite-islets does not vary from those from Malacca.

Gen. TANAËCIA Butl.

138. *T. pelea vikrama* Feld.

2 ♂♂ and 1 ♀ — Kalung, Andalas, Aur (Highl. of Pad.) — 12/1913, 5/1914, 3/1915. One of the males is a dwarf specimen with a wing-expansion of 45 m.m.

139. *T. heliophila picta* subspec. nova.

♂ — Pulu Babi — 5/1915. The typical form of *heliophila* Fruhst. is known from Nias, and has been figured on plate 132 (a, 1) in the „Grossschmetterlinge der Erde”, vol. II by Seitz. In comparison with this figure *picta* is much darker coloured and wants the white lunules on the upperside of the forewings. On the upperside of the hindwings, however, each intranerval black spot is basally limited by a white lunule and gives an impression of regularity. The type is figured on plate VIII (fig. 13).

Gen. EUTHALIA Hübn.

140. *E. cocytina cocytina* (Horsf.)

7 ♂♂ and 1 ♀ — Padang, Aur (Kumanis), Andalas (Highl. of Pad.), Rimbo Pengadang (Bengkulen — 9/1913, 1, 3 and 5/1914, 5/1916. The male forms *blumei* v. Voll. and *montivaga* Fruhst. both are represented.

141. *E. dirtea nephritica* Fruhst.

1 ♂ and 2 ♀♀ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

Gen. DICHORRAGIA Butl.

142. *D. nesimachus machates* Fruhst.

2 ♂♂ — Koto Alam (Pajokumbuh), Pantjuran Gading (Kurintji) — 4 and 9/1915.

Gen. APATURA F.

143. *A. parisatis sumatrensis* Stdgr.

5 ♂♂ — Kalung, Andalas, Aur (Kumanis, Highl. of Pad.) — 12/1913, 5/1914, 3/1915.

Gen. HESTINA Westw.

144. *H. mimetica carolinae* (Snell.)

♂ — Balun (Highl. of Pad.) — 7/1914.

Gen. EURIPUS Westw.

145. *E. halitherses sumatrensis* Fruhst.

2 ♂♂ — (Highl. of Pad.) — 6/1914.

Gen. ERIBOEA Hübn.

146. *E. athamas faliscus* Fruhst.

2 ♂♂ — Balun (Highl. of Pad.) — 6/1914. One of these males possesses a wingexpansion of 40 m.m.

147. *E. hebe* Butl.

— *hebe* (Butl.) — ♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

— *clavata* subsp. nova — 2 ♂♂ — Pulu Lasia — 1/1916. Probably the most melanistic form of the species. The pattern on the upperside resembles very much that of *plautus* Fruhst. from the islet Singapore, but the underside is much darker coloured, especially the margins. The red margin of the white area is also very dark.

It is remarkable that we find agreeing forms on two remote localities. I have tried to give a good figure on plate VIII.

148. *E. jalysus triphonius* Fruhst.

2 ♂♂ — Rimbo Pengadang (Bengkulen), Balun (Highl. of Pad.) — 6/1916, 6/1914.

Gen. CHARAXES O.

149. *C. polyxena ajax* Fawc.

♂ — Balun (Highl. of Pad.) — 6/1914.

Fam. Acraeidae.

Gen. PAREBA Doubl. d.

150. *P. vesta alticola* Fruhst.

4 ♂♂ and 1 ♀ — Andalas, Alahan Pandjang (Highl. of Pad.) — 5 and 6/1914.

Fam. Erycinidae.

Gen. LIBYTHEA F.

151. *L. myrrha myrrhina* Fruhst.

3 ♂♂ and 1 ♀ — Balun (Highl. of Pad.) — 6/1914.

Gen. ABISARA Feld.

152. *A. aita* de Nicév.

♂ — Pike of Kurintji — 8/1915. The first known specimen from W. Sumatra.

153. *A. savitri teutyra* Fruhst.

♀ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

Gen. LAXITA Butl.

154. *L. damajanti lasica* Butl.

2 ♂♂ — Balun, Puntian (Kumanis, Highl. of Pad.) — 6/1914, 3/1915.

155. *L. telesia lychnitis* Fruhst.

2 ♂♂ and 1 ♀ — Aur (Kumanis, Highl. of Pad.), Rimbo Pengadang (Bengkulen) — 3/1914, 3/1915, 5/1916. The two male specimens differ very much; the wingexpansion of the reddish black larger specimen

is 42 m.m., that of the reddish brown smaller specimen is 33 m.m. The discal spot on the upperside of the forewings is not white, but violet.

Gen. TAXILA Doubl.

156. *T. haquinus duca* Fruhst.

2 ♀♀ — Pasir Ganting (Sum.) — 10/1915.

Fam. Lycaenidae.

Gen. GERYDUS Boisd.

157. *G. biggsii* Dist.

♀ — Padang — 9/1913. I like to omit for the greater part the sub-specific names in this family, till Mr. Fruhstorfer has finished his revision, based upon a comparative anatomical study of the male genitalia.

Gen. PORITIA Moore.

158. *P. pleurata* Hew.

♀ — Suban Ajam (Bengkulen) — 7/1916. Hewitson's figure 13 on plate 88 of his „Diurnal Lepidoptera Brit. Mus.,” agrees better with the received female specimen from Sumatra than his other figures 3, 4 and 5 of *pleurata*. Only the mentioned specimen shows four ocelli near to the anal corner of the hindwings of the upperside. Yet Mr. Fruhstorfer has given the name *promula* to the Javanese race (Berl. Ent. Zeitschr., Bd. 56, p. 200).

Gen. DORAMAS Dist.

159. *D. livens* Dist. (Rhop. Malay Peninsula, plate XLII, fig. 15).

♀ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

Gen. CASTALIUS Hübn.

160. *C. roxus* (Godt.).

♂ — Rimbo Pengadang (Bengkulen) — 6/1916.

161. *C. elna* (Hew.).

♂ — Suban Ajam (Bengkulen) — 7/1916.

Gen. LAMPIDES Hübn.

162. *L. celeno juliana* v. E.

(Notes Leyd. Mus., vol. XXXVI, p. 250).

♂ — Pulu Babi — 5/1915.

Gen. Zizera Moore.

163. *Z. gaika* Trim. (= *Lycaena pygmaea* Sn.).

♂ — Fort de Kock — 10/1913.



164. *Z. usta* Dist.

♂ — Suban Ajam (Bengkulen) — 7/1916. In comparison with Distant's figure (Rhop. Mal. Pen., pl. 44, fig. 5) and Fruhstorfer's figure (Rhop. of Java by Piepers & Snellen, tome IV, Lycaenidae, pl. XXI, fig. 54) the specimen from Sumatra represents a local form. The submarginal series of little spots are distinctly visible, like in the specimens from Malacca and not vanished like in those from Java.

## Gen. LYCAENOPSIS Feld.

165. *L. akasa catullus* Fruhst.

2 ♂♂ — Pike of Kurintji, Suban Ajam (Bengkulen) — 6/1915, 7/1916.

166. *L. puspa mygdonia* Fruhst.

2 ♂♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

167. *L. cossaea cossaea* de Nicév.

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

168. *L. limbatus placidina* Fruhst.

♂ — Suban Ajam (Bengkulen) — 7/1916.

169. *L. camenae elothales* Fruhst.

2 ♂♂ — Sungai Kumbang (Kurintji) — 9/1915.

170. *L. musina candaules* de Nicév.

♂ — Rimbo Pengadang (Bengkulen) — 6/1916. Mr. Fruhstorfer, who has revised the genus (Archiv für Naturgesch., 82, p. 1, 1916), has placed this species in an „Artengruppe”, *Notarthrinus* Chapm.

171. *L. haraldus ananga* Feld.

♀ — Tanangtalu (Ophir distr.) — 5/1915. *Haraldus* has been placed in several genera. (*Lycaena*, *Lycaenopsis* and *Cyaniris*), but I have the impression that we have to do with a form, related to the *Thysonotes*. Mr. Fruhstorfer has not researched the male genitalia, which will give more certainty.

This species seems to be unknown from Sumatra. The female is very rare and has not yet been figured. I now have supplied this omission on plate VIII.

## Gen. LYCAENESTHES Moore.

172. *L. emolus* (Godt.).

— *goberus* Fruhst. (Zool. Med. Mus. Leyd., vol. II, p. 97). — ♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

— *minor* subsp. nova — ♂ — Pulu Babi — 5/1915. The colour of the upperside of the wings is like in *goberus* Fruhst., only the three black little spots in the anal angle of the hindwing are nearly invisible.

On the underside the prime-colour is more gray than in *goberus*. The pattern exists of more whitish rows and lunules. *Minor*, however, is more characterised by its pointed forewings and by its smallness (wing-expansion — 25 m.m.).

Gen. AMBLYPODIA Horsf.

173. *A. narada* Horsf.

2 ♂♂ — Fort de Kock, Balun (Highl. of Pad.) — 10/1913, 7/1914.

Gen. SURENDRA Moore.

174. *S. vivarna* Horsf.

3 ♂♂ — Andalas (Highl. of Pad.) — 5/1914.

Gen. ARHOPALA Boisd.

175. *A. fulgida tifata* Fruhst.

♂ — Pantjuran Gading (Kurintji) — 9/1915.

176. *A. avatha* de Nicév. (?)

♀ — Pantjuran Gading (Kurintji) — 9/1915. I hesitate to decide whether this specimen belongs to *avatha* or to *gunongensis* Beth. Baker. Bethune Baker has not described the female of *avatha* in his „Revision of the *Amblypodia*-group of the Lycaenidae” (Transact. Zool. Soc. London, vol. XVII) and has figured only the male of *gunongensis*. Firstly after comparison with some Sumatran specimens determined by Snellen, I reckoned the single female to *metamuta* Hew., but at last I have found more agreement to *avatha*.

The colour on the upperside is dark purplish blue; the borders are rather broadly black-brown coloured. On the underside the transverse band of the forewings is recurved and the submarginal row of the hindwings is not regular, but seems to be broken into three pieces. The specimen is rather small, the wingexpansion being only (—30 m.m.), like that of the female *gunongensis*, in which species the colour on the upperside is not as dark and in which the rows and bands on the underside are narrower and more contrasted with the prime-colour.

177. *A. agesias* (Hew.).

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914. Rather remarkable is the total absence of the transverse band on the underside of the forewings. Hewitson and de Nicéville have already mentioned such aberrations.

Gen. CURETIS Hübn.

178. *C. insularis* Horsf.

3 ♂♂ — Aur (Kumanis), Muara Kiawai (Ophir distr.) — 3/1914, 5/1915.

## Gen. ILERDA Doublé.

179. *I. epicles sumatrensis* Fruhst.

3 ♂♂ and 1 ♀ — Fort de Kock, Suban Ajam (Bengkulen) — 10/1913, 7/1916.

## Gen. RAPALA Moore.

180. *R. varuna orseis* (Hew.).

♂ — Koto Alam (Pajokumbuh) — 4/1915.

## Gen. DEUDORYX Hew.

181. *D. epijarbas cinnabarus* Fruhst.

♂ — Koto Alam (Pajokumbuh) — 4/1915.

## Gen. HYPOLYCAENA Feld.

182. *H. erylus splendidus* subspec. nova.

♂ — Pulu Babi — 5/1915. *Splendidus* is characterized by the splendid shining violet-blue of the upperside of the wings, which are more red to the bases. The black spot round the end of the cell is not very distinct though larger than in the typical form from Java. The ocellus in the anal angle of the hindwing is also very distinct on the upperside. On the underside we observe a more brownish gray colour near to the apices of the forewings, while the other parts are more bluish gray. The transverse lines are very narrow and not so striking as in the other forms from Sumatra and Java. The female specimens will, no doubt, be as dark as those of *erylus syphax* Fruhst. from Nias.

Mr. Edw. Jacobson has published some very interesting observations about a symbiosis between the larvae of *erylus* and the ant *Oecophylla smaragdina* F. in „Tijdschrift voor Entomologie, LV, p. 9, 1912. Mr. H. Viehmeyer has enumerated more *Lycaenidae*, living in symbiosis with the ants, in „The Philippine Journal of Science V, N<sup>o</sup>. 1, Sect. D. pp. 69—77.”

## Gen. SEMANGA Dist.

183. *S. superba* (subspec. sec. Fruhstorfer) Druce.

♂ — Pasir Ganting (Indrapura) — 10/1915.

## Gen. CHLIARIA Moore.

184. *C. tora pumilina* subspec. nova.

♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914. Kheil has given a photo of a very large form from Nias. The typical form measures 29 m.m., the received male from Sumatra however only 19 m.m.! Druce's name *minima* for the form from Borneo indicates also a small race.

The hindwings, except the costal and apical parts, and the bases of the forewings are silvery blue; the rest is dark grayish brown. The pattern of the underside of the hindwings is characterized by two distinct black subcostal spots and by the twice broken transverse striga, which is divided into three straight small lines in the anal angle. Of the marginal series of eight spots the third is very large and surrounded by orange. The pattern of the underside of the forewings is simple like in the form from Borneo.

Gen. MARMESSUS Hübn.

185. *M. lisias iskander* Fruhst.

♀ — Suban Ajam (Bengkulen) — 7/1916.

Gen. APHNAEUS Hübn.

186. *A. lohita senama* Fruhst.

3 ♂♂ and 1 ♀ — Cleft of Harau, Kalung (Highl. of Pad.) — 10 and 12/1913.

Gen. YASODA Doh.

187. *Y. pita* (subspec. sec. Fruhstorfer) (Horsf.).

♀ — Andalas (Highl. of Pad.) — 5/1914.

## NETROCERA.

Fam. Hesperidae.

Gen. SATARUPA Moore,

188. *S. affinis* Druce.

4 ♂♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914.

Gen. COLADENIA Moore.

189. *C. dan* (F.).

♂ and ♀ — Fort de Kock, Puntian (Kumanis, Highl. of Pad.) — 11/1913, 3/1915.

Gen. CELAENORHINUS Hübn.

190. *C. asmara* (Butl.).

♂ — Andalas (Highl. of Pad.) — 5/1914.

191. *C. dhanada* (Moore).

♂ — Suban Ajam (Bengkulen) — 7/1916.

192. *C. aurivittata* (Moore).

♂ — Puntian (Kumanis, Highl. of Pad.) — 3/1915. This specimen belongs to the var. *cameroni* Dist., figured in the „Rhopalocera Malayana”

(tab. XXXIV, fig. 19), only the two little white subapical spots are wanting.

3 ♂♂ — Sinabang (Simalur), Pulu Babi — 1/1913, 4/1913. I have figured one of these specimens on plate VIII, because the band on the forewings is irregular, probably like in the female specimen from Kina Balu (Borneo), mentioned by Elwes and Edwards, who received a female specimen from Staudinger. The band being constant in the three specimens, I have named this local race *simalurensis*.

Gen. TAGIADES Hübn.

198. *T. trichoneura* (Feld.).

♂ — Aur (Kumanis, Highl. of Pad.) — 4/1914.

194. *T. dealbata* (Dist.).

2 ♂♂ — Aur (Kumanis, Highl. of Pad.) — 3/1914. The pattern of one of these specimens is quite like in the figure, given by Distant in his „*Rhopalocera Malayana*” (tab. XXXV, fig. 21). The second specimen however differs by the submarginal series of larger black spots on the underside of the hindwings.

Generally I have observed that the Sumatran *Hesperidae* resemble more those from Malacca than those from Java, which latter belong very often to races or subspecies, which are not yet named.

Gen. ODONTOPTILUM de Nicév.

195. *O. pygela* (Hew.).

4 ♂♂ — Suban Ajam (Bengkulen), Aur, Puntian (Kumanis, Highl. of Pad.) — 7/1915, 3/1914.

Gen. HASORA Moore.

196. *H. lizetta* (Plötz.).

2 ♂♂ — Laut Tawar, Lasikin (Simalur) — 4 and 8/1913.

197. *H. chromus* (Cram.).

♂ — Air Njuruk (Palembang) — 8/1916. It struck me that Elwes and Edwards do not mention this and several other species from Sumatra in their revision of the oriental *Hesperidae* (Trans. Zool. Soc. London, vol. XIV, 1898). The *Hasora*-species seem to vary much in Sumatra. *Chromus* is characterised by its very narrow transverse band on the underside of the hindwings.

198. *H. alexis* (F.).

♂ — Suban Ajam (Bengkulen) — 7/1916. The *alexis* from Java, figured by Piepers and Snellen on plate VI of their „*Rhopalocera of Java*”, is once more different from the received specimen from Sumatra.

On the upperside of the forewings we observe a second yellowish little spot under the end of the cell. The transverse band on the underside of the hindwings is much paler violet-white.

199. *H. schoenherri* (Latr.).

♂ — Lasikin (Simalur) — 4/1913.

Gen. BIBASIS Moore.

200. *B. sena* (Moore).

♂ — Kalung (Highl. of Pad.) — 12/1913. This specimen differs from the Javanese specimens by the absence of the violet circumcellular spots below, like *palawana* Stgr.

Gen. RHOPALOCAMPTA Watson.

201. *R. crawfurdi* (Dist.).

3 ♂♂ — Puntian, Aur (Kumanis, Highl. of Pad.) — 3/1914, 3/1915.

Gen. ISMENE Swains.

202. *I. harisa* Moore.

2 ♂♂ — Aur (Kumanis, Highl. of Pad.) — 3/1915.

Gen. JAMBRIX Watson.

203. *J. stellifer* (L.).

3 ♂♂ and 1 ♀ — Cleft of Harau, Aur (Kumanis), Andalas (Highl. of Pad.) — 10/1913, 3/1914, 5/1914.

204. *J. latifascia* Elw. & Edw.

♂ — Air Tarbit (Palembang) — 12/1913.

Gen. SCOBURA Elw. & Edw.

205. *S. feralia* (Hew.).

♂ — Andalas (Highl. of Pad.) — 5/1914.

Gen. EETION de Nicév.

206. *E. elia* (Hew.).

♂ — Aur (Kumanis) — 3/1915.

Gen. HIDARI de Nicév.

207. *H. irava* (Moore).

2 ♂♂ and 1 ♀ — Fort de Kock, Padang — 6/1915, 9/1913.

208. *H. staudingeri* Dist.

♂ — Labuan Badjau (Simalur) — 6/1913. This specimen probably

represents a local race, the cell — and circumcellular spots being smaller and more separated than in the typical form from Perak, figured by Distant in his „Rhopalocera Malayana” (plate XXXV, fig. 25).

Gen. ERIONOTA Mab.

209. *E. thrax* (Cl., L.).

4 ♂♂ — Fort de Kock, Kalung (Highl. of Pad.), Puntian (Kumanis), Pulu Babi — 10/1912, 12/1913, 3 and 5/1915. The specimen from Pulu Babi is very small and lightly coloured. Wingexpansion: 48 m.m.

Gen. KORUTHAIOSLOS Watson.

210. *K. xanites* (Butl.).

♂ — Pasemah (Palembang) — 9/1916.

Gen. PARNARA Moore.

211. *P. philino* (Möschl.).

♂ — Sibigo (Simalur) — 8/1913.

212. *P. brunnea* (Snell.).

♂ — Fort de Kock — 11/1913.

213. *P. bevani* (Moore).

♂ — Fort de Kock — 11/1913.

214. *P. apostata* (Snell.).

♂ — Sibolga (Sum.) — 1/1913.

Gen. PADRAONA Moore.

215. *P. dara* (Koll.).

2 ♂♂ — Pulu Pandjang (Simalur), Sungai Tua (Kurintji) — 3/1913, 11/1913.

Gen. TELICOTA Moore.

216. *T. augias* (L.).

♂ and ♀ — Andalas (Highl. of Pad.), Air Njuruk (Palembang) — 5/1914, 8/1916.

217. *T. augiades* (Feld.).

♀ — Fort de Kock (Highl. of Pad.) — 10/1913.

Gen. AMPITTIA Moore.

218. *A. maro* (F.).

♀ — Cleft of Anci (Highl. of Pad.) — 3/1915.

Gen. OERANE Elw. & Edw.

219. *O. neaera* (de Nicév.).

♀ — Air Njuruk (Dempu, Palembang), ± 1400 m. — 8/1916. The

wingexpansion of this specimen is 44 mm. ! The Javanese female specimens are much smaller (35 m.m.).

Gen. KERANA Moore.

220. *K. armata* (Druce).

♀ — Suban Ajam (Bengkulen) — 7/1916.

---

This publication would have been considerably more extensive and nevertheless less intelligible, without the appreciated financial contribution by the Committee of the „Insulinde Fonds”, through which it has been able to illustrate these descriptions with coloured figures.

Leiden, 1 April 1918.

---



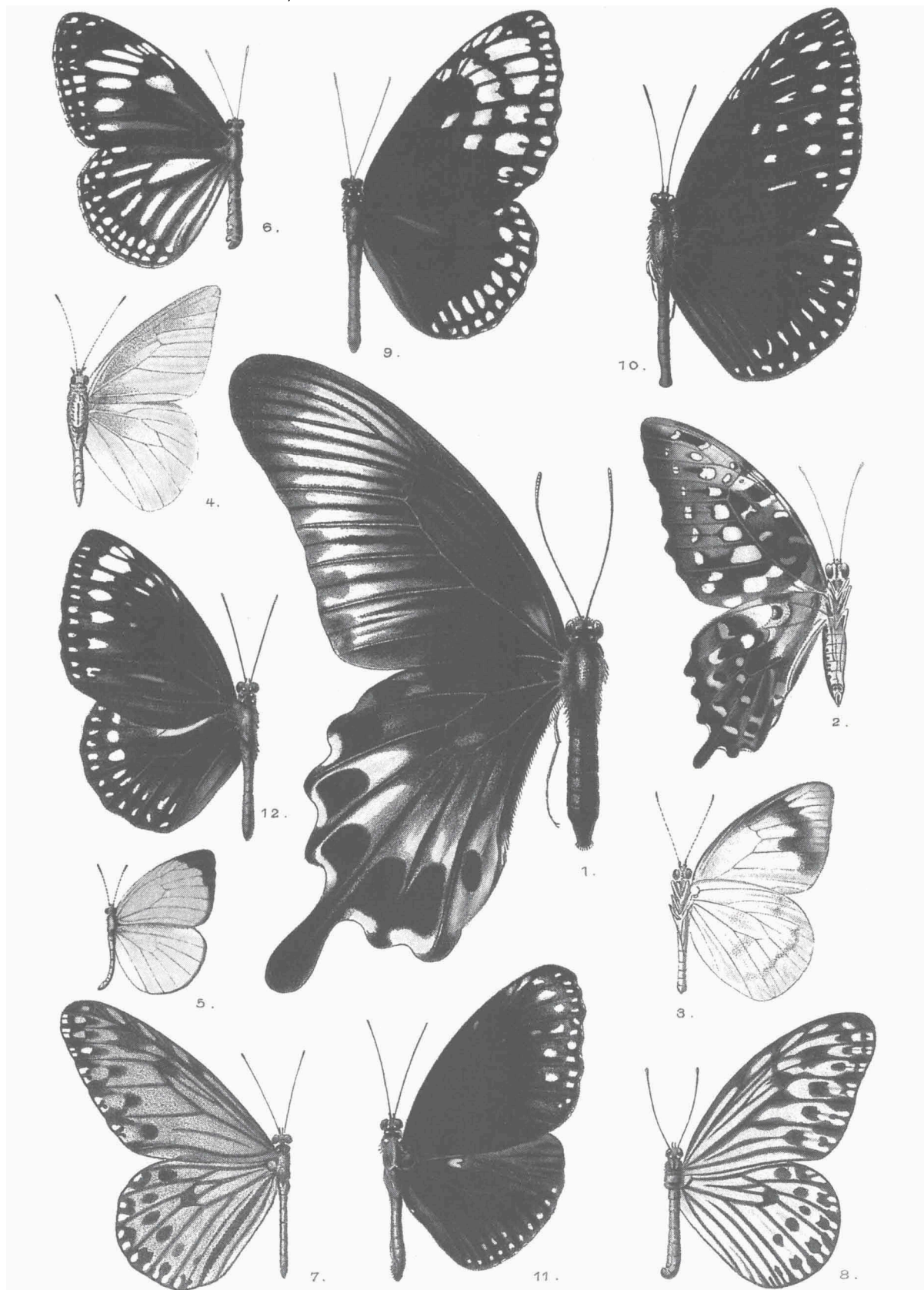
## EXPLANATION OF PLATES.

## PLATE VII.

- Fig. 1: Left upperhalf of ♀ *Papilio memnon caeruleus* m.  
 " 2: Right underhalf " " " *agamemnon lasius* m.  
 " 3: Left " " ♂ *Appias indra inanis* m.  
 " 4: Right upperhalf " ♂ *Saletara panda substriata* m.  
 " 5: " " " " *Terias tecmessa* de Nicév.  
 " 6: Left " " ♀ *Danais melanippus edwardi* m.  
 " 7: " " " ♂ *Ideopsis gaura pseudocostalis* m.  
 " 8: Right " " ♀ " " " "  
 " 9: " " " ♂ *Euploea albomaculata* m.  
 " 10: " " " " " *malayica harmseni* m.  
 " 11: " " " ♂ " *mulciber babina* m.  
 " 12: Left " " " " *aegyptus lippus* m.

## PLATE VIII.

- Fig. 1: Right underhalf of ♂ *Elymnias panthera exsulata* m.  
 " 2: Left " " " *Amathusia phidippus melanops* m.  
 " 3: " upperhalf " " *Amathuscidia amythaon caerulilata* m.  
 " 4: " " " " *Cethosia hypsea nigrescens* m.  
 " 5: Right " " " *Rhinopalpa polynice epicallone* m.  
 " 6: " " " " *Doleschallia bisaltide lasiakensis* m.  
 " 7: " " " " *Chersonesia rahria ingens* m.  
 " 8: " " " " " *peraka incerta* m.  
 " 9: " " " " " *simalurensis* m.  
 " 10: " " " " *Neptis nata declinata* m.  
 " 11: " " " " " *soma sumatrensis* m.  
 " 12: Left " " " " *vikasi pallida* m.  
 " 13: " " " " *Tanaëcia heliophila picta* m.  
 " 14: Right underhalf " " *Eriboea hebe clavata* m.  
 " 15: " upperhalf " ♀ *Lycaenopsis haraldus ananga* Feld.  
 " 16: Left underhalf " ♂ *Lycaenesthes emolus minor* m.  
 " 17: Right upperhalf and right underhalf of ♂ *Hypolycaena erylus splendidus* m.  
 " 18: Left upperhalf of ♂ *Celaenorhinus aurivittata simalurensis* m.



R. v. E. ad nat. del.

Firma P. W. M. Trap chromolith.



R. v. E. ad nat. del.

Firma P. W. M. Trap chromolith.