

FAUNA BURUANA.

LEPIDOPTERA HETEROCERA, Fam. Zygaenidae, Syntomidae and Arctiidae.

By

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(with one coloured plate and four textfigures)

Fam. Zygaenidae.

1. *Gynautocera philomela buruensis* Rothsch. — 7 ♂♂ and 3 ♀♀, Station 9, 19/VI and 17/VII, 1921 [Flies in the morning fog. — L. T.]; Na'l'besi, 5/VII, 1921; Wa'temoen, 8, 10, 16/VII, 1922; En Biloro, 26/II, 1922.

2. *Eterusia picturata buruana* subsp. nov. — 1 ♂ and 1 ♀, Station 12, 5/II and 9/VII, 1921.

E. picturata J. & T. (Bull. Hill Mus. vol. I, p. 275; pl. 12, f. 13, 1924) has been captured by Messrs. C. F., and J. PRATT in Ceram and this form differs from that from Buru in the dark blueish green spots beyond the pale-yellow band, consisting of four small more oval spots in the male. These spots are larger in the female, especially that in the cell. The general colour of the fore wing seems to be not as dark as in the typical specimens from Ceram. The discal broad band of mustard-yellow on the hind wing is not deeply indented in cellule 5 and on veins 2 and 3 and the metallic caerulean-blue colour is more localised at the base of the wing. The yellow band much larger on the underside of the wings, bordered by metallic blue, which colour also decorates the margins.

3. *Artona celebensis* JORD. — 2 ♂♂ and 7 ♀♀, Station 9, 17, 19, 20/V; 5/VI, 1921. Only known from Celebes till now.

4. *Cleleg variata amboinensis* JORD. — 1 ♀, Mnges'wain, 30/I, 1922.

Fam. SYNTOMIDAE.

1. *Eressa furva buruana* subsp. nov. — 2 ♂♂, Station 9, 30/V, 1921; Tifoe, 17/XII, 1921.

The type from Damma-island, North of Australia, must be in the British Museum and might be an unicum till now. HAMPSON, the author, has written (Cat. Lep. Phal. I, p. 115) that there are brownish hyaline spots below middle of cell, in end and below end of cell; a postmedial spot above vein 6 and two spots between veins 3 and 5. In the figure of the type the spot below the middle of the cell is nearly invisible. The specimens from Buru want this spot absolutely. Also the spot below end of cell has disappeared. There are three circumcellular and one cellular spots. Characteristic is the hind wing of the male with the inner area lobed and folded over on upper surface of the wing.

2. *Euchromia caelipunctata* LATHY. — 12 ♂♂ and 10 ♀♀, Station 1, IV and VIII, 1921; Wai Gaté 3/I, 1922; Leksula, 20/VIII, 1921; Wa Ha, 12/XII, 1921; Tifu, 17/II, 1921; En Biloro, 26/II, 1922; Mnges'wain, 29/I, 1922; Known from Buru only.
3. *Euchromia dubia brilliantina* ROTHSCH. — 1 ♂, Station 1, Nal' Besi 400 M., 20/I, 1922.¹⁾
4. *Euchromia creusa buruana* subsp. nov. — 1 ♂, Station 21, 14/I, 1922. The first abdominal segment is not blue or black but yellowish white with some metallic blue dorsal scales.

Fam. ARCTIIDAE.

LITHOSIINAE.

1. *Philenora sordidior* ROTHSCH. — 3 ♂♂ and 5 ♀♀, Station 9, 14, 20, 21/V; 29/VI; 5/VII, 1921.



Fig. 1.

Known from N. Guinea. The variability of the pattern, especially the extensiveness of the brown colour beyond the postmedial brown line, is very great.

The cocoon is a very interesting one, boatshaped, formed of a loose network of hairs on a long stalk, which is fastened on a grain of a leaf (text-fig. 1).

2. *Schistophleps fulvia* HAMPS. — 1 ♀, Station 9, 5/VI, 1921.

3. *Miltochrista cuneonotata* WALK. — 2 ♂♂ and 2 ♀♀, Station 8, 9 and 13, 18/II, 1922; 4/VI, 24/X, 1921. The

¹⁾ HOLLAND (Nov. Zool. 1900) mentions *bourica* BOISD., which is a form of *dubia* RÖB. just as *brilliantina* ROTHSCH. Both should occur in Buru after Mr. VAN EECHE. L.T.

male from station 9 has been captured on Kaku Date, 1200 M.

4. *Miltochrista multidentata* HOLL. — 1 ♂, Station 9, 30/V, 1921. One of the few *Arctiidae* known from Buru only.

[*Miltochrista effasciata* FELD. — 1 ♀, Station A¹), 20/XI, 1921. Known from Amboina].

5. *Asura* (?) *octiger* nov. spec. Pl. VII, Fig. 1, text-fig. 2). — 6 ♂♂ and 4 ♀♀, Station 8 and 9, 8/II, 1922; 16, 23/V, 1921; 11, 17, 30/VI, 1921 and VII, 1921.

After preparation of the wings it struck me that the veins 10, 11 and 12 of the fore wings are anastomosing as figured in text-fig. 2. I have not found this characteristic in another species and perhaps it would be better to put this species in a new genus, but I am fearing to do that, because in future it will be necessary to revise both the genera *Miltochrista* HÜBN. and *Asura* WALK. and this new species has totally the habitus of an *Asura* like *A. exclusa* BUTL. Head, thorax and abdomen orange-red; the first abdominal segments dorsally more greyish yellow and further the abdomen ventrally darker fuscous brown in the ♀♀. Vertex of head, tegulae, patagia and thorax with fuscous spots. Fore wing orange-red with basal fuscous spots; the costa and outer margin black, except some orange above the middle of the cell; subbasal fuscous spot, bordered by a waved subbasal fuscous line, which is angled outwards in cell to join the bent antemedial line; the medial line strongly angled in cell to join the antemedial one; the postmedial line absent and the whole area to the outer margin reddish fuscous; a streak from the subbasal line along vein 2 to the medial line; forming two irregular eights. Hind wing yellowish. The fringe dark fuscous brown. On the underside the wings yellowish with fuscous brown apical areas. Legs orange spotted with fuscous brown. The females darker than the males, especially along the outer margins of the fore wings. Exp. alar.: 24—30 m.M.



Fig. 2.

6. *Asura reticulata* FELD. — 3 ♂♂ and 12 ♀♀, Station 1 and 9, Wa'Katin 20, 22, 28/V, 1921; 1, 8, 30/VI 1921; 17/VII and VIII, 1921.

7. *Asura flavagraphia* nov. spec. (Pl. VII, Fig. 2). — 6 ♀♀, Station 7, 20, 30/IX, 1921 (600—1100 M.).

Remembers of *A. agraphia* HAMPS. from Java but the general colour of the body and wings is yellow. The palpi at tips, a spot on vertex of head, the inner margin of tegulae, the outer margin of patagia and small

¹) Station A, written in red ink on labels, means: Amboyna. L. T.

spots on thorax brown. Antennae brown, yellow at base. Abdomen yellow. The fore wing fuscous brown with yellow round spot in base of the wing, another small yellow spot along the costa above the middle of cell, two yellow spots along the discocellularis, some orange apical and marginal spots and one very small one beneath the middle of cell. In one of the two specimens a postmedial series of dark orange points is visible and some orange along the inner margin. Hind wing yellow. Fringe of the fore wing brown and that of the hind wing yellow. Underside yellow with an irregular submarginal brown line, and two spots on costa. Legs yellow with some brown points, especially on the tibiae of the fore legs.

Exp. alar. : 32 m.M.

8. *Asura quadrilineata moluccensis* subsp. nov. — 1 ♀, Station 9, 11/VI, 1921.

In the collection of the Leyden Museum there are also two specimens from Amboina. Not orange as the typical specimens from Aru and Australia, but more yellow. The area between antemedial and medial fuscous lines nearly totally fuscous except a small spot on the costa and two smaller ones between vein 1 and 2 and on inner margin. The postmedial line more dentate than in the typical specimens. Those from Amboina with less fuscous.

9. *Asura pyraula* MEYR. — ♂ and ♀, Station 5 and 7, IV, IX, 1921. Known from Australia and N. Guinea.

10. *Asura nigriciliata* HAMPS. — 1 ♂, Station 21, 10/I, 1922. Known from Sangir and Celebes.

11. *Asura uniformeola* HAMPS. — 1 ♂, Station 9, 10/V, 1921. Known from Java, Borneo, Celebes, Talaut island, Sangir and Salomon islands.

12. *Neasura buruana* nov. spec. (Pl. VII, Fig. 3). — 4 ♂ ♂, Station 3/4 and 4, 4/IV, 2/VII, 1921; 28/II, 1922.

Head, antennae, thorax and abdomen, except the fuscous extremity, yellow. Fore wing fuscous with yellow base, costa black till the brown antemedial line, bent outwardly in cell, yellow along costa till apex and along outer margin, traces of a postmedial line and a streak between ante- and postmedial line in cell. The postmedial line excurved between vein 4 and 5, but the whole brown pattern very faint. Hind wing greyish fuscous with yellow fringe. Underside fuscous or more yellow with darker coloured legs.

Exp. alar.: 18—20 m.M.

13. *Chrysallactis niveiceps* ROTHSCH. — 3 ♂♂, Station 9, 14/V; 6, 29/VI, 1921.

Known from Br. N. Guinea.

14. *Eurosia accepta* BUTL. — 1 ♂ and 3 ♀♀, Station 9 and 1, II/V, 1/VII, 11/XII, 1921.

It is this the species without the tooth on the antennae; yellow with some fuscous on underside of fore wings. Perhaps a new species. *Accepta* is known from Borneo only.

15. *Chionaema pura* nov. spec. (Pl. VII, Fig. 4). — 9 ♂♂ and 5 ♀♀, Station 1, 5, 7, and 9/IV, 11, 19/V; 1, 17/VI; 5/VII; 14/X, 1921.

The lobe on underside of fore wing of the male bifid; the inner part of lobe not being larger than the outer one (text-fig. 3).

Head, tegulae, patagia, thorax, first segments of abdomen, the underside and the fore wings, white. Palpi, antennae, (except bases), a line on thorax and patagia, a small basal line, the antemedial and postmepial lines, and the outer margin scarlet. No spots in cell. The antemedial line curved inwards on vein 1, the postmedial one also, slightly bent outwardly. The base of costa, two spots on the lines and a subapical small streak scarlet. The hind wing crimson. The cilia of fore wing white, tinged with scarlet. Abdomen tinged with brown towards extremity. Underside of fore wings, especially the outer area, tinged with crimson, the two transversal lines also, the rest whitish. The hind wings tinged with crimson to the apex. Legs scarlet with white bands.

Exp. alar.: 25 m.M.

The females without subapical small scarlet streak and with the transversal lines more waved. The underside more tinged with crimson.

[*Chionaema fulvia* L. — 3 ♂♂ and 5 ♀♀, Station A, 14, 15, 18, 19, 29/XI, 1921. Known from Amboina, Ceram, Aru and N. Guinea].

16. *Caprimima biguttata buruana* subsp. nov. — 4 ♂♂, Station 8 and 9, 8/II, 1922; 23/V, 1/VI, 1921.

The outer margin of the bell-shaped white medial patch more regular; the white spot beyond upper angle of cell larger, bordered with a fine black line, which is connected with the black margin of the medial white patch. The geminate white subapical spot very distinct. The outer margin of the white medial area on the hind wing rounded. *Biguttata* is known from N. Guinea.



Fig. 3.

17. *Neoscaptia torquata* nov. spec. (Pl. VII, Fig. 5). — 1 ♂ and 2 ♀ ♀, Station 9, 13/V, 29/VI, 1921.

The male resembles very much *N. flavicaput* ROTHSCH. in pattern, because the medial patches are yellow, but the head is not yellow and *torquata* possesses an oval patch of androconia below the costa of the hind wing just like *N. androconiata* ROTHSCH.

Head, thorax and abdomen black-brown glossed with metallic blue; tarsi and the tufts of the genitalia yellowish white. Fore wing cupreous red; base, costa and termen black-brown; a yellow medial patch extending from below costa to inner margin, broader below costa than on inner margin and bent a little inwardly in the middle. On the outer side of the yellow patch an black-brown area with some blue suffusion (hardly visible in the damaged type). Hind wing dark red-brown with a triangular yellow medial area from costa of the submedian fold. Underside of fore wing red, that of hind wing reddish brown, except the yellow patches.

Female (probably!) much resembles *N. collateralis* HAMPS.; which may be the female of *N. flavicaput* ROTHSCH., only the colour of the hind wing is reddish brown and the yellow patch is only to be seen below the costa. Exp. alar.: 20 m.M.

18. *Byrsia dotata buruana* subspec. nov. — 2 ♂ ♂, Station 9, 4, 23/VII, 1921.

The orange patch on fore wing smaller and straight on the outer side; the black-brown band larger. *Dotata* is known from Celebes, Amboina, Batjan, Timor and N. Guinea.

19. *Darantasia triplagiata* HOLL. — 1 ♂, Station 9, 20/V, 1921. Already known from Buru.

20. *Teratopora pura* nov. spec. (Pl. VII, Fig. 6a, b) — 1 ♂ and 1 ♀, Station 1, VIII, 1921.

Straw-yellow without any pattern; the first segments of abdomen greyish.

Exp. alar.: 23 m.M.

21. *Padenia intermedia* nov. spec. (Pl. VII, Fig. 7) — 3 ♀ ♀, Station 9, 24/V, 5/VII, 15/VII, 1921.

Head and tegulae pure white, antennae brown; patagia, except the tips, and thorax cupreous brown; abdomen grayish brown with yellowish anal tuft; legs and palpi orange-yellow. Fore wing white with two transversal cupreous brown bands, one antemedial with the inner margin bent outwardly and the outer margin nearly straight and another from costa to just before tornus smaller than the antemedial one, nearly straight, slightly bent inwardly on vein 3. Hind wing semidiaphaneous fuscous white. Underside more tinged with fuscous and traces of the transversal lines on the fore wings.

Exp. alar.: 25 m.M.

22. *Ilema aurantiotestacea* ROTHSCH. — 6 ♂♂, Station 7, 9 and 17, IX, 1921; 21/V, 10/VI, 1921; 22/X, 1921.

Undoubtedly the species from Amboina, but the thorax of these specimens is not black but grayish fuscous.

23. *Ilema spec?* — 2 ♀♀, Station 9, 9/VI, 1921.

Resembling very much *I. dinawa* BETH. BAK. from N. Guinea (Nov. Zool. XI, p. 419; pl. V, f. 15, 1904), but it is also possible, that these specimens are the females of the preceding species or of one of the other species with a brown medial band on line from costa to the inner margin. There are traces of such a band on the inner margin and a black spot on the costa nearer to the base.

24. *Ilema ekeikei* BETH. BAK. — 1 ♀, Station 17, 22/X, 1921.

Certainly the species only known from N. Guinea, but the palpi are not black at tips. I have received a single female from Central Celebes also (Dr. KAUDERN leg.).

25. *Nishada impervia* WALK. — 2 ♂♂, Station 9, 19, 27/V, 1921. On Bamboo. Known from Ceram and N. Guinea.

26. *Lambula plicata* HAMPS. — 1 ♂, Station 7/IX, 1921.
Known from N. Guinea.

27. ***Lambula nigra*** nov. spec. (Pl. VII, Fig. 8). — 1 ♂, Station 9, IX, 1921.

Near to *L. phyllodes* MEYR. from N. S. Wales. With a costal fold of fore wing and a tuft of scales above end of cell of hind wing. Head, antennae, thorax and fore wings dark grayish brown; abdomen more gray with yellowish genital tufts. Hind wings semitransparent yellowish fuscous. Underside grayish brown but not as dark as the upperside, with the fold darker and a dark outer margin with cilia. Hind wings like the upperside with some dark suffusion along the costa and dark brown tuft of scales. Underside of the body and legs grayish brown.

Exp. alar. : 22 m.M.

HYP SINAE.

28. *Agape chloropyga* WALK. — 1 ♂ and 1 ♀, Station 1/VIII, 1921; Ajerberboenji, 6/III, 1922. From the Malayan Archipelago to Australia.

29. *Neochera dominia stibostethia* BUTL. — 16 ♂♂ and 10 ♀♀, Station 1, II, IV, VI, VII, VIII, X, 1921; Wai Eno, 22/IV, 1921; Wai Eken, 30/IX, 1921;

Described from Buru.

30. *Asota caricae* BSD. — 7 ♂♂ and 5 ♀♀, Station 1, VI, VII, VIII, 1921; Nal Besi, 18/V, 1921, [Amboina 19/XI, 1921].
Reared by Mr. Toxopeus ex pupa.
31. *Asota australis sinuosa* BSD. — 3 ♂♂, Station 22, 22/I, 1922; Ehu, 20/IX, 1921; Leksula, IX, 1921.
32. *Asota heliconia lanceolata* WALK. — 13 ♂♂ and 9 ♀♀, Station 1 and 4, VIII, X, 1921; 29/I, 1922; Rana, 4/V, 1921; Wa Katin, 18/IV, 1921; Tifu, 20/III, 1921.
Known from Buru.

ARCTIINAE.

33. *Maenas maculifascia* WALK. — 3 ♂♂; Leksula, 7/IX, 1921.
[Amboina 15, 24/XI, 1921].
34. *Diacrisia moorei* SNELL. — 3 ♂♂ and 1 ♀, Station 1 and 9, 26/X, 1921; 19/V, 2/VI, 1921 (e.l.).
Known from Celebes only.
35. *Diacrisia niceta* STOLL. — 11 ♀♀, Station 9; 12, 27/V, 16, 26/VI, 1921. Wa'Temun, 20/II, 1922; Wa'Tina, 22/IX, 1921. [Amboina 3/XII, 1921].
36. *Amsacta cardinalis* BUTL. — 2 ♀♀, Station 5, VI, 1921; Wai Eno, IV, 1921.
Known from Celebes, Philippines, Saleyer, Tukan-Besi Islands, Timor, Dammer, Letti, Moa and Tenimber Islands.
37. *Pericallia distinguenda burica* HOLL. — 1 ♂ and 1 ♀, Station 13, 23/X, 1921.
The female, much resembling *P. pasinuntia* STOLL (SEITZ, Grossschm. d. Erde X, pl. 24, 1) probably is not yet known.
38. *Utetheisa lothrix* CRAM. — 3 ♂♂, Station 1 and 9, VI, VII, 1921.
39. *Rhodogastria arthus-betrand communis* WALK. — 5 ♀♀, Station 1 and 19, VI, VIII, 1921; 3/I, 1922; Bah'lalé, 22/I, 1922.
40. *Argina cribraria* CL. — 6 ♂♂ and 9 ♀♀, Station 1, 3, 5, 6, 13, IV, VIII, IX, 1921.

NYCTEMERINAE.

41. *Nyctemera kala* SWINH. — 3 ♂♂, Station 6, 7, IX, 1921; Wai Eno, IV, 1921.
Known from the Key-islands only.
42. *Nyctemera luctuosa* v. VOLL. — 5 ♂♂ and 12 ♀♀, Station 1 and 8, 1921; Rana, 4/V, 1921; Bah'lale 22/I, 1922; Nal'besi 28/IV 1921; Wa'Katin 25/III, 1921; Leksula 10/IX, 1921; Wa'Temoen 9/II, 1922.
Common in the Moluccas and N. Guinea.
43. *Nyctemera coleta* CRAM. f. *subvitrea* SEITZ — 4 ♀♀, Mnges'wain, 14/V 1921; Rana, 5/V, 1921; Fakal, 23/X, 1921; Leksula, 17/I 1921.
Probably a new subspecies, the form resembles very much the ab.(?), described by Prof. SEITZ.
44. *Nyctemera guttulosa specularis* WALK. — 1 ♀, Tifu, 17/III, 1921.
Known from Celebes, Amboina and Ceram, but not yet from Buru.
45. *Nyctemera baulus buruana* subsp. nov. — 4 ♂♂ and 9 ♀♀, Leksula II, III, V, 1921; Wai Eno, 24/IV, 1921; Nal Besi, 21/V, 1921; Rana, IV, 1921.
Resembles *tertiana* MEYR., but without any trace of a white streak on submedian fold, darker and the white spots of the transversal band more distinguished.
46. *Nyctemera toxopei* nov. spec. — ♂ and ♀, Ehu, 600—1100 M., 25/IX, 1921; Fakal 17/IX, 1921 (Fig. 4).
Resembles *N. accepta* SWINH. from the Minahassa (Celebes), but with the transversal white band much larger; the hind wings narrowly bordered with brown and the pattern on thorax and abdomen not the same. Head and tegulae yellow; patagia and thorax yellowish white; there are black spots on frons, vertex, tegulae, patagia, thorax, and on abdomen, dorsally and laterally. The base of fore wing yellowish white with two black spots; the pattern figured in text figure 4, brownish and the band and submedian streak whitish. The ventral surface of thorax and abdomen orange yellow, spotted with black. Legs grayish brown and yellowish; black spots on coxae of the fore legs. Palpi brown.
Exp. alar.: 54 m.M. ¹⁾

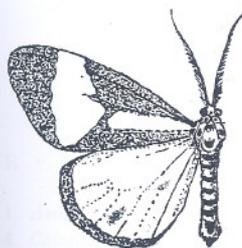


Fig. 4.

¹⁾ HOLLAND gives further *N. selecta burica* HOLL. which I have not caught after Mr. VAN EECKE. L. T.

47. *Deilemera evergista* CRAM. — 6 ♂♂ and 1 ♀, Leksula, 18/VII, VIII, XI, 1921; II, 1922.
48. *Deilemera aeres* BOISD. — 6 ♀♀, Wa'Katin, 11/IV, 1921; Leksula, VI, VII, 1921.
Already known from Buru.

48 Species is not very much and we may expect a lot more of these *Heterocera* from Buru.¹⁾ The fauna there seems to have for the majority an Australian character.

The greater part of this collection, including the types, remains in the Leyden Museum of Natural History.

Leiden, 15 Jan. 1926.

¹⁾ HOLLAND mentions many more species, but Mr. VAN EECKE tells me these are partly synonyms, partly based on wrong identifications. The following only stand including some not mentioned by HOLLAND: *Eucorma hamptoni* HOLL. (*Zygaenidae*), *Euchromia dubia bourica*, see p. 372, *Euchromia dohertyi* DRUCE (*Syntomidae*), *Miltochrista vepallida* HOLL., (*Lithosiinae*), *Pericallia pasinuntia* HOLL., see p. 378 (*Arctiidae*), *Nyctemera selecta burica* HOLL., see p. 379 (*Nyctemerinae*). So the number of species of the treated families amounts to ± fifty-four in all. L. T.



1.



2.



3.



4.



5.



6.^a



8.



7.



6.^b

R. v. E. ad nat. del.

1. *Asura octiger* m. ♀ — 2. *Asura flavagraphia* m. ♀ — 3. *Neasura buruana* m. ♂ —
4. *Chionaema pura* m. ♂ — 5. *Neoscaptia torquata* m. ♂ — 6a. *Teratopora pura* m. ♂,
6b. ♀ — 7. *Padenia intermedia* m. ♀ — 8. *Lambula nigra* m. ♂.