utrinque circa 25 a tuberculis orientibus; corpore subtus pedibusque nigris opacis.

Long. $2\frac{1}{4}$ lin.

ADORIUM CHRYSOMELOIDES.

Ovatum, flavum, antennis pedibusque piceis, capite maculisque quatuor thoracis transverse ordinatis nigris; elytris viridi-æneis nitidis, dense punctatis.

Long. 4 lin.

Ovate, yellowish shining; middle of breast and abdomen darker, reddish; the abdomen with a row of black spots down each side; femora and base of antennæ pitchy red; the rest of the antennæ, tibiæ, and tarsi darker and blackish. Head shining black, with a very few punctures in a depression between the eyes. Thorax glossy and very faintly punctured, with four large black spots arranged in a row across the middle, and having a smaller spot behind between the two middle ones. Scutellum glossy, dark red. Elytra ovate, not much wider than the thorax at the base; epipleuræ narrow and plane, thickly but not coarsely punctured, shining dark brassy green.

SEBÆTHE BALYI.

Breviter ovata vel suborbicularis, testacea, glabra; elytris macula supra callum humeralem, altera prope scutellum alteraque majore subapicali nigris (macula scutellari interdum majore et per suturam continuata, vel absente); antennis longitudine corporis, nigris, articulis duobus basalibus rufo-piceis; capite sulco transversali inter oculos; thorace impunctato, limbo laterali explanato; margine reflexo, ad angulos anticos incrassato; elytris subtilissime punctulatis.

Long. $2-2\frac{1}{2}$ lin.

The genus *Sebæthe* (subfam. *Halticinæ*) was described by Mr. Baly in the 'Annals and Magazine of Natural History' for December 1864.

6. List of Lepidopterous Insects collected at Takow, Formosa, by Mr. Robert Swinhoe. By ALFRED R. WALLACE, F.Z.S., and FREDERIC MOORE.

This small collection comprises forty-six species of diurnal, and ninety-three of nocturnal Lepidoptera, and bears internal evidence of having been chiefly formed in a cultivated district. It cannot, therefore, be taken as furnishing any adequate idea of the productions of the island of Formosa in this order of insects. The large majority of the species are those which are widely spread over the Eastern Tropics, and they generally present no striking differences from specimens collected in India or the Malay islands. There are not wanting indications, however, that a rich harvest of these beautiful insects could be obtained in the forests of the interior; for the only two

species which occur in the collection belonging to the forest-haunting genera *Euplœa* and *Pontia* appear to be quite distinct from any yet described. There is also a *Pieris* which exhibits sufficient departure from the allied Indian and Malayan forms to deserve a separate specific name, and a small *Lycæna* which seems quite new. It is probable that at least four times as many species as are here given exist in Formosa; and it is to be hoped that Mr. Swinhoe may yet have an opportunity of continuing his researches. Some notes on the habits of the various species sent by that gentleman have been incorporated in the accompanying list; and the five new species of Butterflies which the collection contains have been described as a first instalment towards the insect-fauna of a new and most promising region. The new species are *Pontia niobe, Pieris formosana, Terias vagans, Euplœa swinhoei,* and *Lycæna nisa.* Mr. Frederic Moore, who has paid much attention to the nocturnal Lepidoptera (*Heterocera*), has furnished the list of that part of the collection, in which, however, it has not yet been possible to determine all the obscurer species.

Section RHOPALOCERA.

1. Papilio diphilus, Esper (*polydorus,* Bd.).

A common Butterfly in India, the Philippines, and the Malay islands. The Formosan specimens most nearly resemble the Indian form.

Mr. Swinhoe says, "Found near villages; I have not observed this species in China."

2. Papilio androgeus, Cr.

The Formosan specimens of this very variable species are nearly the same as some from India and China.

"Very variable; two seldom seem alike. Some females have no tails."—*Swinhoe.*

3. Papilio pammon, L.

"Found in gardens; not common."—*Swinhoe.*

4. Papilio erithonius, Cr.

Agrees with Chinese specimens.

"Very common."—*Swinhoe.*

Mr. Swinhoe mentions seeing a tailed species like this, which he supposes to be *P. machaon.* It is more likely it would be *P. demolion,* Cr., or perhaps a new species altogether.

5. Pieris formosana, n. s.

Male. Above, exactly as in *P. hippo,* Cr. (*eleonora,* Bd.). Beneath, the apical spot on the upper wings is larger; the disk of the lower wings is white washed with yellow, which is deepest at the base and outer angle; and the marginal dusky band is narrower.

Female. Above, like *P. hippo,* Cr., but the hinder wings dusky,

with diffused whitish stripes, and powdery yellowish marks between the nervures along the hinder margin. Beneath, differs from *P. hippo* in the under wings being white, with dusky nervures and band on outer margin, and a yellow edging at the base and the outer angle.

This is a local modification of the Indian *P. hippo*.

Expanse $2\frac{1}{2}$–$2\frac{3}{4}$ inches.

Hab. Formosa.

"Frequents banyan trees."—*Swinhoe.*

6. PONTIA NIOBE, n. s.

Form and size of *P. nina*. Wings whiter; the apical patch entirely absent; the discoidal spot very small, as in some specimens of *P. nina*. Beneath paler and less irrorated, and the transverse posterior band interrupted and less distinct than in the allied species. Extreme tip of the antennæ orange.

Expanse $1\frac{5}{8}$ inch.

Hab. Formosa.

"Found in the dark shade of groves and lanes. Flies low, with a slow dodging flight."—*Swinhoe.*

7. CALLIDRYAS PYRANTHE, L.

"Abundant among rank overgrown herbage."—*Swinhoe.*

There is one specimen of a very small form of this species ($1\frac{3}{4}$ inch expanse), which Mr. Swinhoe seems to consider distinct. It is, however, identical in form and marking with the larger specimens.

8. CALLIDRYAS ALCMEONE, Cramer.

"Scarcer than the last, wilder flight."—*Swinhoe.*

9. TERIAS HECABE, L.

"Common among grass."—*Swinhoe.*

A variety occurs much smaller than usual, and in which the black margin of the upper wings is hardly sinuated, indicating a transition to *T. drona*, Horsf.

10. TERIAS VAGANS, n. s.

Wings with the anterior angle nearly square, but slightly rounded; hind wings subangular. *Male*: pure yellow, with a black border on the uppers, nearly as in *T. læta*, stopping abruptly before reaching the outer angle; hind wings with a very faint mark at the outer angle; beneath yellow, with an indistinct dusky transverse band across the middle of the hind wings. *Female*: pale yellow, faintly powdered with dusky scales; dark border as in the male; a very minute dark mark at the end of the discoidal cell of the uppers, a dusky patch at the outer angle of the lower wings, and the ends of the nervures between it and the anal angle each with a transverse black mark; beneath nearly as above in colour, but without markings, except the mark at the end of the cell of the uppers, a black

dot near the base between the costal and subcostal nervures of the hind wings, and a very minute black dot at the end of each nervure on the hind margin.

Expanse $1\frac{1}{2}$ inch.

Hab. Formosa; North India.

A single female specimen of this insect was sent from Formosa, and one male exists in the British Museum Collection from India, showing it to be a very distinct species, which is probably widely distributed, but rare and local. It comes very near *T. venata*, Moore, from Northern India.

11. Danais plexippus, Godart.

"Scarce in Formosa."—*Swinhoe.*

12. Danais chrysippus, Linnæus.

Mr. Swinhoe notices the resemblance of this species in appearance and habits to the female of *Diadema bolina*, L.

13. Euplœa swinhoei, n. s.

Above—brown black, velvety, with a dark purple gloss; hind wings near the anterior margin and anal angle browner; upper wings with a submarginal row of six white oval spots edged with blue, the second from the top largest and nearly touching the first; two dead-black stripes parallel to the lower margin. Hind wings with the anterior margin ashy white; a row of eight small round white spots close to the hinder margin, not reaching the anal or outer angles, and a submarginal row of four blue-edged spots, the largest near the outer angle. Beneath—deep brown; upper wings with three spots on the disk, the two upper ones blue (the smallest in the cell), the lowest larger and ashy white; a marginal row of eight small round white spots beginning at the outer angle, and within it a row of five spots, commencing opposite the space between the third and fourth of the marginal row; the four first very small; the last elongate, situated below the apex. Hind wings with the marginal row as above, but of nine or eleven spots; the submarginal row of three small white spots, and four small bluish spots arranged in a curve outside the extremity of the cell. Wings all finely white-edged between the nervures. The body beneath is white-spotted, and there are five white spots on the base of the wings, close to it, on each side. Abdomen blue black, with a group of bluish-white scales at the base of each segment.

Expanse $3\frac{1}{4}$ inches.

Hab. Formosa.

A single specimen was taken by Mr. Swinhoe at the foot of a hill a few miles inland. It most resembles a new species from Celebes, near *E. doleschalii*, Felder.

14. Messaris erymanthus, Drury.

"A solitary species: frequents flowers."—*Swinhoe.*

Wallace Online (http://wallace-online.org/)

15. JUNONIA LEMONIAS, Linnæus.

This agrees in markings with Indian specimens, but in form makes an approach to the Malayan species, *J. aonis*, L.

"Common in grassy places and hedgerows."—*Swinhoe.*

16. JUNONIA ORYTHIA, L.

This more resembles the Malayan than the Indian form of the species.

"Common where stones abound and the grass is short."—*Swinhoe.*

17. JUNONIA ASTERIA, Linnæus.

"Most abundant in rank and marshy places."—*Swinhoe.*

18. DIADEMA AUGE, Cramer.

"Suns itself about hedges, and has a stately sailing flight."—*Swinhoe.*

19. DIADEMA BOLINA, Linnæus.

"The male is a very lively creature, basking on plants and stones, flitting about and taking long excursions, and fighting with all Butterflies that come near its beat. The female appears to be much scarcer, or rather perhaps shows herself less. In habit she is quite distinct, lazying all day about bushes, and seldom flying far. When a female is observed, several males rush at her at once. Before I learnt the sexes I was sorely scandalized to see a blue-black and a red *in copulâ*. I thought I had discovered a libertine among Butterflies. But I have seen the thing so frequently now that I am convinced the two are merely sexes of the same species. I have never observed the males on flowers, though I have seen some hundreds."—*Swinhoe.*

20. HESTINA ASSIMILIS, Cramer.

"Not uncommon, but very local and difficult to capture."—*Swinhoe.*

A Chinese species.

21. NEPTIS ACERIS, Esper.

A widely distributed species.

"Common about tall grass and sides of grass-grown streams."—*Swinhoe.*

22. ATHYMA LEUCOTHOË, Linnæus.

"Common on bushes and grassy places, fluttering and sailing through the air. Suck the sap of wounded trees. Males fight for the females."—*Swinhoe.*

23. MELANITIS UNDULARIS, Fabricius.

"Loves shaded lanes, sluggish and never flies far."—*Swinhoe.*

24. Ergolis coryta, Cramer.

"Frequents hedgerows and places overgrown with rank herbage. Has a slow floating flight."—*Swinhoe*.

25. Cyllo leda, Linnæus.

"Common; frequents trunks of trees and the ground in dark shady places."—*Swinhoe*.

26. Debis europa, Fabricius.

"Loves to cluster on bamboo joints."—*Swinhoe*.

27. Mycalesis drusia, Cr. (? *mineus*, L.).

28. Mycalesis samba, Moore, Cat. Mus. E. I. C. p. 233 (*lalassis*, Hew.).

29. Mycalesis otrea, Cramer.

This differs from Cramer's figure in having a whitish band on the underside; but these insects vary so much that it would not be safe to describe it as distinct. Mr. Swinhoe says the species of *Mycalesis* are common about grassy places in Formosa.

30. Lycæna elpis, Godart.

One specimen only of this species was sent by Mr. Swinhoe.

31. Lycæna cnejus, Fabricius.

32. Lycæna kandarpa, Horsfield.

33. Lycæna pluto, Fabricius.

"Rather plentiful; very desultory and dodging in flight."—*Swinhoe*.

34. Lycæna plinius, Fabricius.

"About long grass."—*Swinhoe*.

35. Lycæna parrhasius, Fabricius.

36. Lycæna varunana, Moore, Proc. Zool. Soc. 1865, p. 772, pl. xli. f. ♂. 6

37. Lycæna sangra, Moore, Proc. Zool. Soc. 1865, p. 772, pl. xli. f. ♂. 8

38. Lycæna karsandra, Moore, Proc. Zool. Soc. 1865, p. 505, pl. xxxi. f. 7.

39. Lycæna nisa, n. s.

Small; wings rounded; in the male violet-blue, with broad dusky margins; in the female pale ash-colour, with faint golden and violet iridescence and a few traces of azure scales; the upper wings with dusky, the lower wings with white ciliated fringe. Beneath, in both

sexes, ashy white with a golden gloss; a fine dark line on the edge of the outer margin, and within it an obscure band of very faint brown lunules; on the lower wings a small round black spot on the lunulate band between the second and third median nervules. Antennæ black-and-white ringed.

Expanse 10 lines.

Hab. Formosa.

A pair only of this species was sent by Mr. Swinhoe.

40. PTERYGOSPIDEA FOLUS, Cramer (*cicero*, Fab.).

41. ISMENE LADON, Cramer.

42. HESPERIA DIVODASA, Moore, Proc. Zool. Soc. 1865, p. 791.

43. HESPERIA AGNA, Moore, Proc. Zool. Soc. 1865, p. 791.

44. HESPERIA CINNARA, Moore, MS.

This species will, I believe, shortly be described by Mr. Moore. It is closely allied to the last, but has larger and more numerous transparent spots, eight on the upper and three on the lower wing. Like all the other *Hesperidæ* in this list, it is a common Indian species.

45. PAMPHILA AUGIAS, Linnæus.

46. PAMPHILA MÆSA, Moore, Proc. Zool. Soc. 1865, p. 509.

Sect. HETEROCERA.

This section is represented in the collection by examples pertaining to 72 genera, all the species of which that have been determined being found also either in China, North-eastern India, or Ceylon. The total number of species is 93, these occurring in the several tribes as follows:—

Sphingites	3	genera	3	species.
Bombycites	9	,,	13	,,
Noctuites	23	,,	31	,,
Pyralites	15	,,	22	,,
Geometrites	9	,,	10	,,
Crambites	2	,,	3	,,
Tortricites	7	,,	7	,,
Tineites	4	,,	4	,,
	72		93	

Sect. HETEROCERA.

Tribe SPHINGITES.

1. LOPHURA HYAS, Walker, List Lep. B. M. Het. pt. viii. p. 107.

2. ACHERONTIA SATANAS, Boisd. Spéc. Gén. Lep. i. pl. 16. f. 1 (*Acherontia lethe*, West. Cab. Orient. pl. 42. f. 2).

3. CHÆROCAMPA SWINHOEI, Moore, n. sp.

Male. Ochreous brown: fore wing suffused with greenish ochreous, and slightly black-speckled, with a greyish-brown exterior band, which is minutely black-speckled and with an inner speckled border and a slight posterior black spot, an indistinct small black discal spot; cilia alternate ochreous and black. Hind wing dull cupreous black, slightly ochreous along the exterior border; cilia ochreous. Abdomen ochreous at the sides, and with a series of subdorsal paler short streaks. Underside of the wings reddish testaceous, minutely black-speckled; base and exterior band of fore wing dusky brown.

Exp. $2\frac{1}{4}$ inches.

Tribe BOMBYCITES.

Fam. LITHOSIIDÆ.

4. HYPSA ALCIPHON, Cram. t. 133. f. E.

5. HYPSA EGENS, Walk. Cat. Lep. Het. B. M. ii. p. 453.

6. HYPSA PLANA, Walk. ib. p. 450.

7. HYPSA INTACTA, Walk. ib. p. 451.

8. UTETHESIA PULCHELLA, Linn. (Cram. t. 109. f. E).

Fam. CHALCOSIIDÆ.

9. CLELEA SAPPHIRINA, Walk. Cat. Lep. Het. B. M. Suppl. p. 465.

10. PHALANNA POLYMENA, Linn. (Cram. t. 13. f. D).

11. SYNTOMIS ATEREUS, Cram. t. 400. f. A.

12. NYCTEMERA VARIANS, Walk. Cat. Lep. Het. B. M. ii. p. 400.

13. Gen. undetermined.

Fam. LIPARIDÆ.

14. LYMANTRIA, sp.

Fam. ARCTIIDÆ.

15. ALOA LACTINEA, Cram. t. 133. f. D.

16. ALOA BIFRONS, Walk. Cat. Lep. Het. B. M. iii. p. 705.

Tribe NOCTUITES.

Fam. GLOTTULIDÆ.

17. CHASMINA CYGNUS, Walk. Cat. Lep. Het. B. M. ix. p. 147.

Fam. XYLOPHASIDÆ.

18. PRODENIA RETINA, Guen. Noct. i. 163.

Fam. HELIOTHIDÆ.

19. HELIOTHIS ARMIGERA, Hübn. Noct. pl. 79. f. 370.

Fam. ACONTIDÆ.

20. XANTHODES TRANSVERSA, Guen. Noct. ii. p. 211.

21. XANTHODES INTERSEPTA, Guen. ib. p. 212.

22. ACONTIA MACULOSA, Walk. Cat. Lep. Het. B. M. xii. p. 795.

Fam. ANTHOPHILIDÆ.

23. ANTHOPHILA ROSEIFASCIA, Walk. Cat. Lep. B. M. Suppl. p. 803.

Fam. PLUSIDÆ.

24. PLUSIA VERTICILLATA, Guen. Noct. ii. 344.

25. PLUSIA FURCIFERA, Walk. Cat. Lep. B. M. xii p. 927.

Fam. CALPIDÆ.

26. ORESIA EMARGINATA, Fabr. (Guen. Noct. ii. 363).

27. ORESIA RECTISTRIA, Guen. Noct. ii. p. 363.

Fam. GONOPTERIDÆ.

28. ANOMIS FULVIDA, Guen. ii. p. 397.

Fam. TOXOCAMPIDÆ.

29. TOXOCAMPA METASPILA, Walk. Cat. Lep. B. M. xiii. p. 1032.

Fam. HOMOPTERIDÆ.

30. HOMOPTERA INFLIGENS, Walk. Cat. Lep. B. M. xiii. p. 1068.

Fam. CATEPHIDÆ.

31. ANOPHIA ACRONYCTOIDES, Guen. Noct. iii. 47.

Fam. OPHIDERIDÆ.

32. OPHIDERES FULLONICA, Linn. (Cram. t. 77. f. C).

33. OPHIDERES CAJETA, Cram. t. 30. f. A.

34. OPHIDERES SALAMINIA, Cram. t. 174. f. A.

Fam. OPHIUSIDÆ.

35. OPHIODES TRIPHÆNOIDES, Walk. Cat. Lep. B. M. xiv. 1358.

36. OPHIUSA ARCTOTÆNIA, Guen. Noct. iii. 272.

37. OPHIUSA STUPOSA, Fabr. (Cram. t. 273. f. E).

38. Achæa melicerta, Drury, Ins. i. pl. 23. f. 1.

39. Grammodes ammonia, Cram. t. 250. f. D.

40. Grammodes mygdon, Cram. t. 156. f. G.

41. Trigonodes hyppasia, Cram. t. 250. f. E.

Fam. Remigidæ.

42. Remigia archesia, Cram. t. 273. f. F, G.

43. Remigia gregalis, Guen. Noct. iii. p. 320.

44–47. Four species undetermined.

Tribe Pyralites.

Fam. Hypenidæ.

48. Hypena, sp.

Fam. Asopidæ.

49. Hymenia recurvalis, Fabr. (Guen. Delt. et Pyral. 225).

Fam. Hypocampidæ.

50. Oligostigma orbitalis, Walk. Cat. Lep. B. M. xvii. p. 432.

Fam. Spilomelidæ.

51. Lepyrodes geometralis, Guen. Delt. et Pyral. 278.

52. Zebronia perspicualis, Walk. Cat. Lep. B.M. Suppl. 1347.

53. Zebronia abdicalis, Walk. ib. xvii. p. 480.

Fam. Margarodidæ.

54. Glyphodes bivitralis, Guen. Delt. et Pyral. p. 293.

55. Glyphodes zelincalis, Walk. Cat. Lep. B. M. Suppl.

56. Margaronia psittacalis, Hübn. Samml. exot. Schmett. iii. f. 523.

Fam. Botydæ.

57. Botys sellalis, Guen. Delt. et Pyral. 330.

58. Botys thyasalis, Walk. Cat. Lep. B. M. xvii. p. 734.

59. Botys damasalis, Walk. ib. p. 668, ♂.
Botys adhæsalis, Walk. ib. p. 664, ♀.

60. Botys illisalis, Walk. ib. p. 653.

61. Botys admensalis, Walk. ib. p. 652.

62. Botys damoalis, Walk. ib. p. 656.

63–69. Seven species undetermined.

Tribe GEOMETRITES.

Fam. ENNOMIDÆ.

70. DREPANODES SCITARIA, Walk. Cat. Lep. B. M. xxv. p. 1488.
Syn. *Anisodes pyriniata*, Walk. ib. p. 1582.

Fam. PALYADÆ.

71. EUMELIA AURELIATA, Guen. Phal. i. p. 394, pl. 22. f. 6.

Fam. EPHYRIDÆ.

72. EPHYRA MONOCHROMATA, Walk. Catal. Lep. B. M. xxvi. p. 1754.

Fam. ACIDALIDÆ.

73. TIMANDRA AVENTIARIA, Guen. Phal. ii. p. 3.

74. ACIDALIA ATTENTATA, Walk. Catal. Lep. B. M. xxii. p. 754.

75. ACIDALIA LIGATARIA, Walk. ib. p. 748.

Fam. MICRONIDÆ.

76. MICRONIA ACULEATA, Guen. Phal. ii. p. 26, pl. 13. f. 8.

Fam. MACARIDÆ.

77. MACARIA DIVISARIA, Walk. Catal. Lep. B. M. xxiii. p. 927.

78. ORSONOBA RAJACA, Walk. ib. xx. p. 219.

Fam. LARENTIDÆ.

79. SAURIS REMODESARIA, Walk. Cat. Lep. B. M. xxii. p. 1253.

Tribe CRAMBITES.

80. CHILO, sp.

81, 82. CRAMBUS, two species.

Tribe TORTRICITES.

83–89. Seven species undetermined.

Tribe TINEITES.

90. ATTEVA NIVEIGUTTELLA.
Corinea niveiguttella, Walk. Catal. Lep. B. M. xxviii. p. 542.

91. AZINIS HILARELLA, Walk. ib.

92, 93. Two species undetermined.