



A REVISION OF THE AUSTRALIAN SPHINGIDÆ.

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No attempt has hitherto been made to present in one article the various Australian Species of this Family, and the material that has been published to date thereon. In the present paper it is proposed to supply this desiderata, and an experience of twenty years' study of the subject in Queensland, during which many of the species have been observed in their several stages, and most of them captured on the wing, the whole with five exceptions being contained in his collection, affords the writer exceptional facilities, and some authority for undertaking the subject. It is only of late that the numerous scientific works bearing on the matter have sufficiently accumulated in colonial libraries, however, to permit of the completion of the work.

My synonymic catalogue of the Australian Rhopalocera, bringing that division up to date, now in the press, and Mr. Meyrick's work on the Micro-Lepidoptera, and several groups of Bombycites and Geometrites will, with the present paper, constitute a considerable advance towards a complete publication of the known Australian Lepidopterous fauna to date.

SYNOPSIS OF THE SPECIES.

Order—LEPIDOPTERA.

Section—HETEROCERA.

Family—SPHINGIDÆ, *Horsf.*

SUB-FAMILY I.—MACROGLOSSINÆ, *Bois.*

Genus 1: *HEMARIS*, *Dalm.*

1. *H. Kingii*, *Macl.*
2. *H. Hylas*, *Lin.*
3. *H. Janus*, *Misk.*

Genus 2: *MACROGLOSSA*, *Ochs.*

4. *M. Errans*, *Walk.*
5. *M. Approximata*, *Walk.*
6. *M. Micacea*, *Walk.*
7. *M. Nox*, *Butl.*

SUB-FAMILY II.—CHÆROCAMPINÆ, *Butl.*

Genus 3: *ACOSMERYX*, *Bois.*

8. *A. Miskini*, *Murray.*
9. *A. Sericeus*, *Walk.*
- *10. *A. Cinnamomea*, *Herr. Schf.*

Genus 4: *PANACRA*, *Walk.*

11. *P. Lignaria*, *Walk.*
12. *P. Joanna*, *Kirb.*
13. *P. Testacea*, *Walk.*

Genus 5: *CIZARA*, *Walk.*

14. *C. Ardenia*, *Lewin.*

Genus 6: *CHÆROCAMPA*, *Dup.*

15. *C. Thyelia*, *Lin.*
16. *C. Pinastrina*, *Martyn.*
17. *C. Phœnix*, *Koch.*
18. *C. Oldenlandiæ*, *Fab.*
19. *C. Celerio*, *Lin.*
- *20. *C. Yorkii*, *Bois.*
21. *C. Scrofa*, *Bois.*
22. *C. Erotus*, *Cram.*
23. *C. Nessus*, *Dru.*
24. *C. Clotho*, *Dru.*
25. *C. Cleopatra*, *Misk.*
26. *C. Cloacina*, *Misk.*
27. *C. Latreillii*, *Macl.*
28. *C. Tryoni*, *Misk.*
29. *C. Pallida*, *Misk.*
- *30. *C. Walduckii*, *Butl.*
- *31. *C. Inornata*, *Walk.*

Genus 7: *DEILEPHILA*, Ochs.

32. *D. Livornica*, *Esp.*

Genus 8: *DAPHNIS*, Hub.

33. *D. Hypothous*, *Cram.*
34. *D. Protrudens*, *Feld.*

SUB-FAMILY III.—*AMBULICINÆ*, Butl.Genus 9: *AMBULYX*, Westw.

35. *A. Wildei*, *Misk.*

SUB-FAMILY IV.—*SMERINTHINÆ*, Bois.Genus 10: *CŒQUOSA*, Walk.

36. *C. Australasiæ*, *Don.*
37. *C. Triangularis*, *Don.*

SUB-FAMILY V.—*SPHINGINÆ*, Butl.Genus 11: *PROTOPARCE*, Burm.

38. *P. Convolvuli*, *Lin.*
39. *P. Abadonna*, *Fab.*
40. *P. Minimus*, *Misk.*

Genus 12: *MACROSILA*, Walk.

41. *M. Casuarinæ*, *Walk.*
42. *M. Severina*, *Misk.*
43. *M. Edwardsi*, *Olliff.*
44. *M. Bethia*, *Kirb.*

Genus 13: *NEPHELE*, Hub.

45. *N. Subvaria*, *Walk.*

Those species with which I am unacquainted, except by name and description, are indicated by an asterisk prefixed to the name.

Order—**LEPIDOPTERA**, *Lin.*Section—**HETEROCERA**, *Bois.*Family—**SPHINGIDÆ**, *Westw.*

Int. Mod. Class. Ins. II. p. 364 (1840); *Walk.* B. M. Cat. Lep. Het. VIII. p. 76 (1856); *Horsf.* Cat. Lep. E. I. C. I. p. 257 (1857).

Sphingides, *Bois.* Sp. Gen. Het. I. p. 2 (1874).

SUB-FAMILY I.—MACROGLOSSINÆ, *Butl.*

Trans. Z. Soc. IX. p. 516 (1875); *Moore* Lep. Cey. II. p. 26 (1882-3).

Macroglossides, *Bois.* Sp. Gen. Het. I. p. 289 (1874).

Genus 1 : *HEMARIS*, *Dalm.*

Vet. Akad. Handl. p. 207 (1816).

Sesia. part. Fab. Ent. Syst. III. 1. p. 379 (1793); *Walk.* B. M. Cat. Lep. Het. VIII. p. 84 (1856).

Cephonodes, part. Hub. Verz. bek. Schmett, p. 131 (1818-25); *Wallen*, Ofvers. Kongl. vet. Akad. Forh. p. 139 (1858); *Moore*, Lep. Cey. II. p. 31 (1882-3).

Potidæa, Wallen. Kong. Sven. Vet. Akad. Handl. (1865).

Macroglossa, part. Ochs. Schmett. Eur. IV. p. 41 (1816).

1. *H. KINGII*, *Macl.*

(*Macroglossum*, *K.*) Kings. Surv. Aust. II. p. 465, n. 167 (1827); *Kirb.* Trans. E. Soc. p. 233 (1877); *De Cerisy* M. S.

Sesia. Cunninghami, Walk. B. M. Cat. Lep. VIII. p. 85 (1856); *Schaufuss.* (*Mac. C.*) Nunquam Otiosus. I. p. 22 (1870); *Bois.* (*Mac. C.*) Sp. Gen. Het. I. p. 375, n. 69, t. 33, f. 5 (1874).

Hem. Hylas, Butl. Trans. Z. Soc. IX. p. 522, n. 24 (1875).

Hab. : Brisbane and Rockhampton.

This species is well distinguished from *Hylas*. by the wide apical brown band of primaries, and the yellowish-green basal areas of both wings, well delineated in Boisduval's figure, which

exactly represents our insect. I have bred it abundantly and found no variation. It feeds on Gardenia. Butler's figure (T. Z. Soc., 1875, t. 90, f. 6) of *Mac. Belis*. so precisely agrees with our larva that a description of it here is rendered unnecessary. Our pupa is rather darker in colour than in his figure.

2. H. HYLAS. *Lin.*

(*Sphinx* H.) Mant. I. p. 539 (1771); *Fab.* (*Sp. H.*) *Sp. Ins.* II. p. 154 (1781); Mant. *Ins.* II. p. 99, n. 4 (1787); *Ent. Syst.* III. 1, p. 379, n. 3 (1793); *Gmelin.* (*Sph. H.*); *Syst. Nat.* I. 5, n. 2387 (1795); *Turton.* (*Sp. H.*); *Syst. Nat. Lin.* III. p. 179 (1806); *Hub.* (*Ceph. H.*), *Verz. bek. Schmett.* p. 131 (1816); *Walk.* (*Ses. H.*) *B. M. Cat. Lep. Het.* VIII. p. 84 (1856); *Horsf. & Moore* (*Ses. H.*) *Cat. Lep. E. I. C. I.*, t. 8, f. 1, 1A larva (1857); *Bois.* (*Mac. H.*), *Sp. Gen. Het. I.* p. 376, n. 72 (1874); *Butl.* *Trans. Z. Soc.* IX. p. 522, n. 24, t. 90, f. 4, 5 (larva and pupa) (1875); *Moore* (*Ceph. H.*) *Lep. Cey.* II. p. 31, t. 93, f. 4, 4A, 4B (1882-3); *Swin.* (*Ceph. H.*) *Proc. Z. Soc.* p. 287 (1885); *Saalmuller.* *Lep. Madag.* I. p. 117, t. 3, f. 40 (—).

Sp. Picus. Cr. Pap. Ex. II. p. 83, t. 148, f. B. (1779); *Koll.* (*Mac. P.*) *Hug. Kasch.* IV. 11. p. 458 (1848).

Mac. Apus. Bois. *Faun. Madag.* p. 79, n. 2, t. 10, f. 4 (1833).

Hab.: Brisbane, Rockhampton, and Mackay; Japan, China, Philippines, Molucca, Penang, Nepal, India, Ceylon, S. and W. Africa.

Butler's figure of the larva of this species presents such an extraordinary diversity of appearance from that of the preceding species as to raise doubts in my mind of its correct application to Hylas, considering how nearly allied the two insects are. Horsfield and Moore's figure is not from life, which will account for its shortcomings. The copy of Moore's *Lep. of Ceylon* to which I have referred, is, unfortunately for me, deficient of the part containing this genus,

3. *H. JANUS. n. sp.*

Wings transparent, hyaline; veins black. *Primaries*: costal margin narrowly black; apex rather wider black; outer margin very narrowly black. *Secondaries*: costal margin, for about half way, narrowly yellowish-brown; abdominal margin wholly the same. Antennæ, black. Head and thorax, greenish-yellow. Abdomen, sordid ochreous-yellow. Anal brush, black; reddish-yellow at side extremities. **UNDERSIDE**: darker parts of both wings near base, ochreous-yellow. Head and body, light yellow.

Exp.: ♂ 56 mm.; ♀ 60 mm.

Hab.: Brisbane and Rockhampton. (Coll.: Miskin).

This species in marginal development of wings pretty closely resembles *Hylas*; it is well distinguished, however, by its smaller size, and difference in colour of body and brush, but most conclusively by the entire absence of dorso-abdominal band.

Genus 2: *MACROGLOSSA, Ochs.*

Schmett. Eur. IV. p. 41 (1816); *Walk.* B.M. Cat. Lep. Het. VIII. p. 85 (1856); *Horsf. & Moore* Cat. Lep. E.I.C. p. 261 (1857); *Bois.* Sp. Gen. Het. I. p. 332 (1874); *Moore*, Lep. Cey. II. p. 28 (1882-3).

Macroglossum, Scop. Ent. Carn. p. 414 (1763); *Swain*, Zool. Ill. Ser. I. t. 64 ()

Rhamphoschisma, Feld. Reise. Nov. Lep. IV. t. 75, f. 7 (1874); *Moore*, Lep. Cey. II. p. 26 (1882-3).

4. *M. ERRANS, Walk.*

B.M. Cat. Lep. Het. VIII. p. 96, n. 20 (1856); *Bois.* Sp. Gen. Het. I, p. 352, n. 32 (1874); *Butl.* Trans. Z. Soc. IX. p. 529, n. 38 (1875).

Rham. Scottiarum, Feld. Reise. Nov. Lep. II. t. 75, f. 8 (1868); *Bois.* Sp. Gen. Het. I. p. 354, n. 35 (1874); *Butl.* Trans. Z. Soc. IX. p. 529, n. 35 (1875).

Hab.: Brisbane, Rockhampton, and Bowen.

This species is variable in the development of the white transverse band of primaries; in some specimens it is barely discernible. Felder's insect is undoubtedly not distinct.

5. *M. APPROXIMATA*, *Walk.*

B. M. Cat. Lep. Het. Supp. XXXI. p. 27 (1864); *Butl.* Trans. Z. Soc. IX. p. 524, n. 6 (1875).

Hab.: Cardwell.

This species is very close to *Errans*, but from its restricted range may be safely considered distinct.

6. *M. MICACEA*, *Walk.*

B. M. Cat. Het. VIII. p. 96, n. 21 (1856); *Bois.* Sp. Gen. Her. I. p. 356 (1874); *Butl.* Trans. Z. Soc. IX. p. 529, n. 39 (1875).

M. Nox. Newm. (nec. Butl.) Trans. E. Soc., ser. 2, IV. p. 54 (1857).

M. Ethus, Bois. M. S.

Hab.: Brisbane and Rockhampton.

There can be no doubt from Newman's description that his insect is referable to this species.

7. *M. Nox. Butl.*

(*nec. Newm.*) Proc. Z. Soc. p. 5, t. 1, f. 6 (1875); Trans. Z. Soc. IX. p. 529, n. 40 (1875).

Hab.: Mackay and Cardwell.

This is a North Queensland form, never taken in Brisbane. Butler's figure does not do justice to the steely splendour of this insect.

SUB-FAMILY II.—CHÆROCAMPINÆ, *Butl.*

Trans. Z. Soc. IX. p. 516 (1875); *Moore* Lep. Cey. II. p. 13 (1882-3).

Deilephilæ. Bois. Sp. Gen. Het. I. p. 158 (1874).

Genus 3: *ACOSMERYX*, *Bois.*

Sp. Gen. Het. I. p. 214 (1874); *Butl.* Proc. Z. Soc. p. 245 (1875); *Moore*, Lep. Cey. II. p. 23 (1882-3).

Philampelus, part. Harr. Amer. Jour. Sc. XXXVI. p. 299 (1839); *Walk.* B. M. Cat. Het. VIII. p. 173 (1856).

Daphnusa, *Walk.* l. c. p. 237 (1856); *Bois.* Sp. Gen. Het. I. p. 51 (1874).

8. A. MISKINI, *Murray.*

(*Daph. M.*). Cist. Ent. I. p. 178 (1873); *Kirb.* (*Ac. M.*) Trans. E. Soc. p. 234 (1877); *Butl.* (*Ac. m.*) l. c. p. 396 (1877); Trans. Z. Soc. IX. p. 544, n. 4 (1875).

Ac. Daulis. *Bois.* Sp. Gen. Het. I. p. 218, n. 5 (1874).

Ac. Cinerea. *Butl.* P. Z. Soc. p. 245, n. 18 (1875); *Moore*, Lep. Cey. II. p. 24, t. 89, f. 2, 2A. (larva and pupa) (1882-3).

Hab.: Newcastle, Brisbane, Rockhampton; India and Ceylon.

This may be identical with *Anceus* (*Ancetus* in index) of Cramer (Pap. Ex. IV. t. 355, f. A.) but is not easily reconcilable.

9. A. SERICEUS, *Walk.*

(*Phil. S.*). B. M. Cat. Het. VIII. p. 181 (1856); *Horsf. and Moore* (*Phil. S.*). Cat. Lep. E.I.C.I. p. 271 (1857); *Butl.* (*Ac. S.*) Trans. Z. Soc. IX. p. 544, n. 2 (1875); Ill. Typ. Lep. Het. B.M. V. p. 1. t. 78, f. 2 (1881).

Ac. Anceoides, *Bois.* Sp. Gen. Het. I. p. 216, n. 2 (1874).

Hab.: Brisbane and Cardwell; India.

*10. A. CINNAMOMEA, *Herr. Schff.*

(*Enyo. C.*) Ex. Schmett. II. p. 3, f. 558 (1869); *Butl.* (E. ? C.) Trans. Z. Soc. IX. p. 542 (1875); *Kirb.* (*Ac. C.*) Trans. E. Soc. p. 234 (1877); *Butl.* (*Ac. C.*) l. c. 396 (1877).

Hab.: N. Australia.

It is difficult to say what Herrich Schff's figure is intended for. I have never seen anything like it. It is, doubtless, like many other of his figures, excessively over-coloured, and I should not be much surprised if Mr. Kirby's surmise was correct.

Genus 4: *PANACRA*, Walk.

B. M. Cat. Het. VIII. p. 154 (1856); *Bois.* Sp. Gen. Het. I. p. 285 (1874); *Moore* Lep. Cey. II. p. 24 (1882-3).

Perigonia, Walk., B. M. Cat. Het. VIII. p. 100 (1856); *Bois.* Sp. Gen. Het. I. p. 320 (1874).

Angonyx. *Bois.* l. c. 317 (1874).

11. *P. LIGNARIA*, Walk.

B. M. Cat. Het. VIII. p. 156 (1856); *Bois.* Sp. Gen. Het. I. p. 288, n. 6 (1874); *Butl.* Trans. Z. Soc. IX. p. 551, n. 16 (1875).

Hab.: Brisbane, Mackay, and Cape York.

Vigil of *Guer*, *Bois.*, and *Moore*, which is apparently synonymus with *Phœnix* of *Herr. Schff* and *Bois.*, is certainly very close to our species, but from *Herr. Schff* and *Moore*'s figures is altogether lighter coloured and a smaller insect.

Phœnix of *Koch* is quite another species—a *Chœrocampa*. There can be no doubt of this, as I had the name from that author to specimens sent him by me.

12. *P. JOANNA*, Kirb.

(*Chæ. J.*) Trans. E. Soc. p. 236, 241 (1877).

P. Maculiventris, Walk., M.S.

Hab.: Brisbane.

13. *P. TESTACEA*, Walk.

(*Peri. T.*) B. M. Cat. Lep. Het. VIII., p. 102, n. 3 ♂ (1856); l. c. XXXI. p. 29 (1864); *Bois.* (*Peri. ? T.*) Sp. Gen. Het. I. p. 329, n. 15 (1874); *Butl.* Trans. Z. Soc. IX. p. 550, n. 2 (1875); *Moore*, Lep. Cey. II. p. 26, t. 89, f. 1 (1882-3).

Angonyx. *Emilia*. *Bois.* Sp. Gen. Het. I., p. 318, t. 8, f. 1 ♂ (1874).

Pan. Ella. *Butl.* P. Z. Soc. p. 246 (1875); Trans. Z. Soc. p. 550, t. 92, f. 7 ♀ (1875).

Hab.: Cairns; Ceylon and India.

Butler's figure of *Ella* is doubtless from a faded specimen; the green is apt to turn yellowish.

Genus 5: *CIZARA*, Walk.

B. M. Cat. Lep. Het. VIII., p. 119 (1856).

14. C. *ARDENIA*, Lewin.

(*Sp. A.*) Lep. Ins. N.S.W., p. 3, t. 2, (larva) (1822); *Bois.* (*Dail. A.*) Voy. Astr. Lep. p. 183 (1832); *Walk.* B. M. Cat. Lep. Het. VIII., p. 120 (1856); *Bois.* (*Zon. A.*) Sp. Gen. Het. I., p. 148 (1874); *Butl.* Trans. Z. Soc. IX., p. 552 (1875).

Hab.: Sydney and Brisbane.

Genus 6: *CHÆROCAMPA*, Dup.

Hist. Nat. Lep. Fr. Supp. II. p. 159 (1835); *Walk.* B. M. Cat. Lep. Het. VIII. p. 125 (1856); *Bois.* Sp. Gen. Het. I. p. 223 (1874).

Deilephila, part. *Ochs.* Schmett. Eur. IV. p. 42 (1816).

Theretra, part. *Hub.* Verz. bek. Schmett. p. 135 (1818-25); *Moore* Lep. Cey. II. p. 21 (1882-3).

Hippotion, part. *Hub.* Verz. bek. Schmett. p. 135 (1812-25); *Moore* Lep. Cey. II. p. 16 (1882-3).

Xylophanes, part. *Hub.* Verz. bek. Schmett. p. 136 (1818-25); *Moore* Lep. Cey. II. p. 17 (1882-3).

Oreus, *Isoples*, *Amphion*, et *Thaumas*, part. *Hub.*

Metopsilus, part. *Duncan.* Nat. Lib. Brit. Moths. p. 154 (1836).

Hathia, part. *Moore.* Lep. Cey. II. p. 19 (1882-3).

15. C. *THYELIA*, Lin.

(*Sp. T.*) Mus. Ulr. p. 360 (1764); Syst. Nat. I. 2. p. 803 (1767)*; *Clerck* (*Sp. T.*), Icones, t. 46, f. 4, [? f. 7 8] (1759-64); *Fab.* (*Sp. T.*) Sp. Ins. II. p. 153 (1781); Mant. Ins. II. p. 98 (1787); Ent. Syst. III. 1. p. 378 (1793); *Turt.* (*Sp. T.*) Syst. Nat. III. p. 178 (1806); *Horsf. and Moore.* Cat. Lep. E.I.C. I. p. 276 (1857); *Bois.* Sp. Gen. Het. I. p. 231 (1874).

Sp. Theylia. Cram. Pap. Exot. III. p. 58, t. 226, f. E. F. (1782); *Hub. (Isop. T).* Verz. bek. Schmett. p. 135 (1816); *Butl. Trans. Z. Soc. IX.* p. 556, n. 13 (1875); *Moore (Isop. T.)* Lep. Cey. II. p. 19, t. 84, f. 5 (1882-3); *Forsayeth Trans. E. Soc.* p. 388, t. 15 (larva) (1884); *Swin. Proc. Z. Soc.* p. 288, n. 13 (1885).

Sp. Octopunctata. Gmelin. Syst. Nat. I. 5, p. 2386 (1790).

Sp. Boerhaviae, Fab. Syst. Ent. p. 542, n. 22 [1775]; *Sulz. [Sp. B.]* Gesch. Ins. p. 40, t. 20, f. 3 [1776]; *Fab. [Sp. B.]* Sp. Ins. II. p. 148 [1781]; *Mant. Ins. II.* p. 96 [1787]; *Ent. Syst. III. 1.* p. 371 [1793]; *Turton [Sp. B.]* Syst. Nat. Lin. III. p. 175 [1806].

Sp. Pluto. Fab. Sp. Ins. II. p. 148 [1781].

Sp. Eson. Cram. Pap. Ex. III. p. 57, t. 226, f. C [1782]; *Hub. [Isop. E].* Verz. bek. Schmett. p. 135 [1816]; *Walk. [Ch. E]. B. M. Cat. Lep. Het. VIII.* p. 137 [1856].

Deil. Rafflesii, Horsf. M. S. [1826].

C. Charis. Bois. Sp. Gen. I. p. 236, t. 30, f. 4 (1874).

Hab: Brisbane, Cardwell; China, India, Sarawak, Ceylon, and Canara

16. C. PINASTRINA, Martyn.

(*Sp. P.*) Psyche, t. 30, f. 85. (1797); *Moore (Xyloph. P.)* Lep. Cey. II. p. 18, t. 87, f. 2 (1882-3).

C. Silhetensis, Walk. B.M. Cat. Lep. Het. VIII. p. 143 (1856); *Schaufuss. Nunquam. Otiosus.* p. 17 (1870); *Butl. Trans. Z. Soc. IX.* 560, n. 32, t. 92, f. 8—larva—(1875), Ill. Typ. Lep. Het. B.M. V. p. 8, t. 79, f. 6 (1881); *Bois. (Deil. S.)* M.S.

C. Bisecta. Horsf. and Moore. Cat. Lep. E.I.C. I. p. 298, t. 11, f. 5A—larva—(1857); *Horsf. M.S.* (1826).

C. Intersecta., Butl. P. Z. Soc. p. 623 (1875); *Trans. Z. Soc. IX.* p. 638 (1875).

Hab.: Brisbane and Rockhampton; Java, India, and Ceylon.

17. *C. PHŒNIX*, Koch.

Ind. Aust. Lep. Faun. II. p. 53 (1873).

C. Margarita, Kirb. Trans. E. Soc. p. 240 (1877).

Hab. : Brisbane and Rockhampton.

The *Phœnix* of Herr. Schff is a *Panacra*. near to *P. Lignaria*, which see (No. 11.)

18. *C. OLDENLANDIÆ*. Fab.

(*Sp. O.*) *Sp. Ins.* II. p. 148, n. 37 (1781); *Mant. Ins.* II. p. 96, n. 41 (1787); *Ent. Syst.* III. 1, p. 370, n. 44, (1793); *Turton* (*Sp. O.*); *Syst. Nat. Lin.* III. p. 174 (1806); *Lewin.* (*Sp. O.*) *Lep. Ins. N.S.W.* p. 4, t. 3—larva—(1822); *Thon.* (*Sp. O.*) *Ent. Archiv.* Pt. I, t. 1, f. 3, p. 6 (1828); *Bois.* (*Deil. O.*) *Voy. Astr. Lep.* p. 184, n. 2 (1832); *Walk.* *B. M. Cat. Lep. Het.* VIII. p. 142 (1856); *Horsf. and Moore* *Cat. Lep. E.I.C. I.* p. 278, t. 11, f. 4, 4A,—larva—(1857); *Koch.* *Ind. Aust. Lep. Faun.* II. p. 53 (1873); *Bois.* *Sp. Gen. Het. I.* p. 242, n. 22 (1874); *Butl.* *Trans. Z. Soc.* IX. p. 559, n. 29, t. 91, f. 1,—larva—(1875); *Kirb.* *Trans. E. Soc.* p. 235 (1877); *Moore* (*Xyl. O.*) *Lep. Cey.* II. p. 17, t. 85, f. 1, 1A.—larva—(1882-3); *Forsay.* *Trans. E. Soc.* p. 390 (1884); *Swin.* *Proc. Z. Soc.* p. 514 (1884).

? *Sp. Lycetus.* *Cram.* *Pap. Ex. I.* p. 96, t. 61, f. D. (1779); *Fab.* (*Sp. L.*) *Mant. Ins.* II. p. 96, n. 42. (1787); *Ent. Syst.* III. 1. p. 371, n. 45 (1793); *Turton* (*Sp. L.*) *Syst. Nat. Lin.* III. p. 174 (1806); *Hub.* (*Xyl. L.*) *Verz. bek. Schmett.* p. 136, n. 1457 (1816); *Walk.* (*Ch. L.*) *B. M. Cat. Lep. Het.* VIII. p. 143, n. 126 (1856); *Herr. Schff* (*Ch. L.*) *Ex. Schmett.* II. p. 3, f. 557 (1869); *Butl.* (*Ch. L.*) *Trans. Z. Soc.* IX. p. 560 (1875).

Xyl. Gortys, *Hub.* *Samml. Ex. Schmett.* p. 58, f. 513-14 (1806).

Sp. Argentata, *Haw.* *Ent. Trans.* I. p. 334. (1812); *Steph.* (*Deil. A.*) *Ill. I.* p. 130 (1828); *Wood.* *Ind. Ent. Supp.* f. 28 (1839); *Butl.* (*Ch. A.*) *P. Z. Soc.* p. 8, t. 2, f. 3 (1875); *Trans. Z. Soc.* IX. p. 559, n. 30 (1875).

Ch. Firmata, *Walk.* *B. M. Cat. Lep. Het.* VIII. p. 148 (1856).

Hab. : Newcastle, Brisbane, Cardwell; Java, Sumatra, Celebes, Manilla, China, India.

Cramer's figure and description is, I think, intended for this species, but his figure leaves some room for doubt. I have not thought it advisable, therefore, to give his name the precedence, to which the priority of date would otherwise entitle it.

About *Argentata* and *Firmata* there is no doubt. Larva tolerably common on *Balsamia*.

19. C. CELERIO, *Lin.*

(*Sp. C.*) Syst. Nat, I. 2, p. 800, n. 12 (1767); *Cram.* (*Sp. C.*) Pap. Ex, II. p. 42, t. 125, f. E. (1779); *Fab.* (*Sp. C.*) Sp. Ins. II, p. 151 (1781); Mant. Ins. II. p. 97, n. 54 (1787); Ent. Syst. III. 1 p. 370, n. 43 (1793); *Turton.* Syst. Nat. Lin. III. p. 174 (1806); *Hub.* (*Hipp. C.*) Verz. bek. Schmett, p. 135, n. 1450 (1816); *Steph.* (*Deil. C.*) Ill. Brit. Ent. Haust. I. p. 128 (1828); *Dup.* Lep. France Supp. II. p. 159 (1835); *Bois.* (*Deil. C.*) Ind. Meth. Eur. Lep. p. 47 (—); *Steph.* Cat. Brit. Lep. p. 28 (1850); *Walk.* B. M. Cat. Lep. Het. VIII. p. 128. (1856); *Staint.* Brit. Butl. I. p. 96. (1857); *Horsf. and Moore* Cat. Lep. E.I.C. I. p. 274, t. 2, f. 1, 1A,—larva—(1857); *Chenu.* (*Deil. C.*) Enc. Hist. Nat. Pap. p. 264, f. 468 (1869); *Bois.* Sp. Gen. Het. I. p. 238, n. 18 (1874); *Butl.* Trans. Z. Soc. IX. p. 557, n. 23. (1875); *Kirb.* Ent. M. Mag. XIV. p. 185 (1877); *Green* Entom. XIV. p. 255 (1881); *Auriv.* Vet. Akad. Handl. XIX. p. 139, n. 5 (1882); *Moore* (*Hipp. C.*) Lep. Cey. II. p. 16, t. 84, f. 4 (1882-3); *Forsay.* Trans. E. Soc. p. 388 (1884); *Swin.* P. Z. Soc. p. 513 (1884); l. c. 288 [1885].

Sp. Tisiphone, *Lin.* Mus. Ulr. p. 359 [1704]; Syst. Nat. XII. Ed. p. 803 n. 23 [1767].

Phalena Inquilina, *Harris*, Ex. p. 93, t 28, f. 1. [1781].

Hipp. Ocys. *Hub.* Verz. bek. Schmett. p. 135 [1816].

Hab.: South Australia, Victoria, New South Wales, Brisbane, Rockhampton, Europe, E. W. and S. Africa, Madagascar, Mauritius, Ceylon, India, Java, Malay Archipelago.

I have had the larva feeding on grape vines.

* 20 C. YORKII, *Bois.*

Sp. Gen. Het. I. p. 248 [1874]; *Butl.* Trans. Z, Soc. IX. p. 631 [1875]; *Kirb.* Trans, E. Soc. p. 236. [1877].

Hab. : Cape York.

I cannot identify this description with anything with which I am acquainted.

21. *C. SCROFA*, *Bois*.

[*Deil. S*]. *Voy. Astr. Lep.* p. 185, n. 3 [1832]; *Walk. B. M. Cat. Lep. Het.* VIII. p. 147 [1856]; *Bois. Sp. Gen. Het.* I. p. 235 [1874]; *Butl. Trans. Z. Soc. IX.* p. 566, n. 72 [1875]; *Kirb. Trans. E. Soc.* p. 236 [1877].

Deil. Porcia, Wallen. *Wien. Ent. Mon.* IV. p. 42 [1860].

C. Ignea. Butl. P. Z. Soc. p. 10. t. 1, f. 4 (1875); *Trans. Z. Soc. IX.* p. 566, n. 73 (1875); *Kirb. Trans. E. Soc.* p. 236 (1877).

Hab. : Tasmania, South Australia, Victoria, Newcastle, Brisbane, Rockhampton.

Butler's figure represents the ordinary form of the ♀; Koch's name *Bernardus* (undescribed) was applied to a fresh example of the other sex, which presents a bluish-grey tinge on primaries.

22. *C. EROTUS*, *Cram.*

[*Sp. E*]. *Pap. Ex. III.* t. 104, f. B. [1779]; *Fab. [Sp. E]*. *Mant. Ins. II.* p. 95 [1787]; *Ent. Syst. III.* 1. p. 365, n. 28 [1793]; *Turton [Sp. E]*. *Syst. Nat. Lin. III.* p. 172. [1806]; *Hub. [Chromis. E]*. *Verz. bek. Schmett.* p. 138. n. 1479 [1816]; *Walk. B. M. Cat. Lep. Het.* VIII. p. 146 [1856]; *Koch. Stett. Ent. Zeit.* p. 239 [1871]—note; *Bois. Sp. Gen. Het.* I. p. 250, n. 31 [1874]; *Butl. Trans. Z. Soc. IX.* p. 566, n. 76 [1875].

Deil. Eras, Bois. *Voy. Astr. Lep.* p. 185, n. 4 [1832]; *Feisth. Voy. Fav.* t. 5, f. 2 [1829]; *Mag. Zool. Ins.* t. 21, f. 2. [1839]; *Walk. [Darap. Eras]*. *B. M. Cat. Lep. Het.* VIII. p. 186, n. 3. [1856]; *Butl. [Ch. Eras]*. *Trans. Z. Soc. IX.* p. 567, n. 78 [1875].

Gnathothlibus. Erotoides, Wallen. *Wien. Ent. Mon.* IV. p. 43, n. 44 [1860]; *Walk. [Ch. E]*. *B. M. Cat. Lep. Het.* VIII. p. 146, n. 34 [1856]; *Butl. [Ch. E]*. *Trans. Z. Soc. IX.* p. 566, n. 77 [1875].

Deil. Sapor, ♂ Bois. M. S.

Hab. : Newcastle, Brisbane to Cape York, Solomon Islands, New Caledonia, Tahiti, Navigator's Islands.

The larva is exceedingly common on grape vine. The reference by Mr. Tepper [Native Insects of South Australia II, p 15] to *C. Pallicosta*, Walk. is evidently applicable to *C. Scrofa*, Bois. *Pallicosta* is a near ally of *Erotus*, Cram. but is certainly a distinct species.

23. *C. NESSUS*, Drury.

[*Sp. N.*] Ill. Ex. Ins. II. p. 46, t. 27, f. 1. [1773]; *Cr.* [*Sp. N.*] Pap. Ex. III. t. 226, f. D. [1782]; Walk. B. M. Cat. Lep. Het. VIII. p. 140 [1856]; Horsf. and Moore, Cat. Lep. E.I.C. I. p. 276, t. 11, f. 2, 2A, larva [1857]; Butl, Trans. Z. Soc. IX. p. 565, n. 71 [1875]; Moore. (*Ther. N.*) Lep. Cey. II, p. 22, t. 86, f. 1 (1882-3); Swin. P. Z. Soc. p. 514 (1884): l. c, 288 (1885)

Sp. Equestris, Fab. Ent. Syst. III. p. 365, n. 29. (1793); *Hub.* (*Ther. E.*) Verz, bek. Schmett. p. 135, n. 1446 (1816).

Ch. rubicundus, Schaufuss. Nunquam. Otiosus. I. p. 18 (1870).

Hab.: Brisbane, Hongkong, Canara, Java, India, Ceylon.

24. *C. CLOTHO*, Drury.

(*Sp. C.*) Ill. Ex. Ins. II. p. 48, t. 28, f. 1. (1773); *Fab.* (*Sp. C.*) Syst. Ent. p. 540 (1775); Mant. Ins. II. p. 97 (1787); Ent. Syst. III. 1. p. 376 (1793); Walk, B. M. Cat. Lep. Het. VIII. p. 141 (1856); Horsf. and Moore, Cat. Lep. E.I.C. I. p. 277 (1857); Semp, Verh. Zool. Bot. Ges. Wien, t. 23, f. 3a, 3b, 3c (1867); Bois, Sp. Gen. Het I. p. 253, n. 135 (1874); Butl. Trans. Z. Soc. IX. p. 561, n. 43. (1875); Moore. (*Hathia. C.*) Lep. Cey. II. p. 20, t. 87, f. 1 (1882-3); Swin, P. Z. Soc. p. 289 (1885).

Sp. Batus, Fab. Ent. Syst. III. p. 377, n. 64. (1793).

Deil. Cyrene, Westw. Cab. Or. Ent. p. 13, t. 6, f. 1 (1847)

Cretica. ♂ Bois. Icones, t. 49, f. 2 (—).

25. *C. CLEOPATRA*, n. sp.

Primaries: Exceedingly angulated apically. Mouse-coloured, with greenish tinge; outer margin broadly suffused with rosy hue; broad clouding of darker greenish-brown transversely, from costa about midway, widely, to near hinder angle, which it does not quite reach; a very fine almost indistinct diagonal line from near, but not touching, costa near to apex, to hinder margin

at about two-thirds; a faint short curved streak from apex downwards, but not coalescing with diagonal line; faint indication of discoidal speck; light posterior basal spot; costa edged with red. *Secondaries*: Blackish-brown, anal area pale buff. Antennæ, rosy. Head and thorax, dark greenish mouse-colour; thoracic lateral band white. Abdomen, mouse-coloured, fainter at sides. *UNDERSIDE*: Light dirty buff, covered with fine black specks on almost invisible green grounds; a clouding of dark brown from base to middle, not touching costa. Body and legs, light greyish. Antennæ, red.

Ex.: ♂ 94 mm; ♀ 98 mm.

Hab.: Brisbane. (Coll.: Miskin).

This species is certainly very close to *Clotho*, but the indistinctness and different direction of the oblique band, and the discal dark cloud of primaries, and the entire light anal area in secondaries, as also the uniformity of tint of the thorax, sufficiently distinguish it.

26. *C. CLOACINA*, *n sp*

Primaries: Soft ochreous-yellow, faintly tinged with green; a discal shadow of darker hue; an oblique rather fine, but distinct line of brown from apex to about two-thirds of hinder margin; front of costa reddish; a round black spot at base posteriorly in ♀; pale buff in ♂. *Secondaries*: Soft ochreous-yellow; baso-costal area only, except a narrow streak along and to end of sub-median, blackish-brown. Antennæ, rosy; Head, thorax, and abdomen same colour as primaries, but abdomen paler at sides; thoracic lateral band, creamy, surmounted by greenish fringe. *UNDERSIDE*: Shining buff, with two or three imperfect oblique lines crossing the wings, consisting of pale greenish blue spots, most developed in secondaries; uniformly covered with specks of same colour; a brown clouding from base towards disc more or less pronounced in specimens. Body and legs, light fawn

Ex. ♂ 90 mm.; ♀ 100 mm. Hab.: Brisbane, Cardwell. Coll.: Miskin.

This species is nearest to *Clotho*, but is of an entirely different colour, showing but very faint indications of green, and an absence of discal speck, while in the secondaries the dark colour restricted to the base only, well distinguishes it,

27. *C. LATREILLII*, *Macl.*

(*Sp. L.*). King's Surv. Aust. II. p. 464, n. 165 (1827);
Butl. (Diludia ? L.). Trans. Z. Soc. IX. p. 614, n. 12 (1875);
De Cerisy (Deil. L.). MS.; *Kirb.* Trans. E. Soc. p. 235
 (1877).

C. Lucasii, *Walk.* B.M. Cat. Lep. Het. VIII. p. 141, n. 24
 (1856); *Horsf. & Moore.* Cat. Lep. E.I.C. I. p. 277, t. 11, f. 3,
 3A, larva (1857); *Bois.* Sp. Gen. Het. I. p. 254 (1874); *Butl.*
 Trans. Z. Soc. IX. p. 560, n. 36. (1875); *Ill. Typ. Lep. Het.*
 B.M. V. p. 8, t. 79, f. 5 (1881); *Moore (Hath. L.)*. Lep. Cey.
 II. p. 20, t. 86, f. 3 (1882-3); *Swin.* Proc. Z. Soc. p. 289
 (1885); *Bois. (Deil. L.)*. MS.

C. Comminutens, *Walk.* B.M. Cat. Lep. Het. XXXI. Supp.
 p. 31 (1864); *Butl.* Trans. Z. Soc. IX. p. 561, n. 37 (1875).

C. Deserta, *Butl.* Trans. Z. Soc. IX. p. 638 (1875).

C. Tenebrosa, *Moore.* P. Z. Soc. p. 595 (1877); (*Hath. T.*).
 Lep. Cey. II. p. 20, t. 86, f. 2. 2A (1882-3).

Deil. Spilota. *Horsf.* MS.

Hab.: Hunter River, Brisbane, Rockhampton, Mackay;
 Java, India, Ceylon.

I have bred this frequently; feeds on fuchsia and grape-
 vine.

28. *C TRYONI*, *n. sp.*

Primaries: mouse-coloured with decided green tinge, paler
 on outer margin; front edge of costa reddish; a diagonal
 brownish line from apex to hinder margin at about one-third
 from hinder angle, represented at the intersection of each of the
 nervules by a black speck; very faint indication of an inner
 parallel line; rather indistinct black discoidal speck. *Second-*
aries: black; a very slight appearance of lighter colour at anal
 angle and base of abdominal border; fringe white. Head and
 thorax and abdomen, dorsally, same colour as primaries; abdomen,
 laterally, paler, with patch of black at base. Antennæ white.
 UNDERSIDE: very light fawn with greenish hue faintly sprinkled
 with fine black specks. Primaries with a large black suffusion
 over basal and discal areas. Head and thorax buff; abdomen
 whitish; legs white. Antennæ brown.

Exp.: 80 mm. Hab.: Brisbane. Coll.: Queensland Museum.

Mr. Tryon, the Assistant Curator of the Queensland Museum, drew my attention to the absence of the usual thoracic lateral white band in some specimens associated in the collection with the series of *Latreillii*, and which had been looked upon simply as a varying form of that species; upon careful scrutiny I conclude that this must be treated as a distinct species; the difference in the general colour, the absolutely black secondaries, but, above all, the entire absence of even the faintest indication of the thoracic lateral band amply distinguishes it from its nearest ally.

29. *C. PALLIDA*, *n. sp.*

Primaries: uniform pale yellowish-fawn; simple fine brown oblique line from apex, where it is rather indistinct, to about two-thirds of hind margin; costal edge reddish. *Secondaries*: uniform dark brown with a scarcely perceptible light shade at anal angle. Antennæ white. Head, thorax, and abdomen, same colour as primaries, latter rather fainter at sides; thoracic lateral band dingy white. *UNDERSIDE*: wings uniform light fawn colour; discal area of primaries brown; body very pale buff; legs fawn, lighter above.

Ex.: 80 mm. Hab.: Brisbane. Coll.: Miskin.

This species is absolutely devoid of markings except the oblique line on upper side of primaries; it belongs to the group of which *Latreillii* is the type, but is well distinguished by the absence of discal spot and the single oblique line, and absence of spots on underside.

30. *C. WALDUCKII*, *Butl.*

Trans. E. Soc. p. 398, t. 9, f. 2 (1877).

Hab.: Western Australia (?).

This is near to *Latreillii*, but I cannot identify it with any species with which I am acquainted.

31. *C. INORNATA*, *Walk.*

B.M. Cat. Lep. Het. XXXI. Supp. p. 31 (1864; *Butl.*
Trans. Z. Soc. IX. p. 561, n. 38 (1875).

Hab.: North Australia.

I cannot identify this species; the description would almost do for my *Pallida* but for "secondaries wholly pale."

Genus 7: *DEILEPHILA*, *Ochs.*

Eur. Schmett. IV. p. 42 (1816); *Walk.* B.M. Cat. Lep. Het. VIII. p. 163 (1856); *Bois*, Sp. Gen. Het. I. p. 158 (1874)

32. *D. LIVORNICA*, *Esp.*

(*Sp.* *L.*). Aus. Schmett. II. pp. 87, 196, t. 8, f. 4. (1785); *Hub.* (*Phryxus* *L.*). Verz. bek. Schmett. p. 137, n. 1468 (1816); *Steph.* Cat. Brit. Lep. B.M. Pt. I. p. 28 (1850); *Walk.* B.M. Cat. Lep. Het. VIII. p. 164 (1856); *Bignell.* Ent. V. pp. 169, 180, 214 (1870), larva; *Hellins*, Ent. M. Mag. VII. p. 99. (1876), larva; *Butl.* Trans. Z. Soc. IX. p. 568 (1875); *Swin.* P. Z. Soc. p. 513 (1884); l. c. 287 (1885); Trans. E. Soc. p. 346 (1885)

Sp. Lineata, *Fab.* (part) Syst. Ent. p. 541 (1775); *Sp.* Ins. II. p. 147, n. 34 (1781); *Mant.* Ins. II. p. 96, n. 37 (1787); *Ent.* Syst. III. p. 368, n. 39 (1793); *Bois.* (*Deil.* *L.*). Sp. Gen. Het. I. p. 172, n. 15 (1874).

? *Sp. Koechlinii*, *Fues.* Arch. Insect. Sugesch. t. 33, f. 1. 6 (1781)

Hab.: Brisbane; South Europe and India.

I have in my collection an example of this species, which is said to have been taken in Brisbane. It came from the cabinet of a gentleman, now deceased, who had no foreign specimens.

Genus 8: *DAPHNIS*, *Hub.*

Verz. bek. Schmett. p. 134 (1816); *Walk.* B.M. Cat. Lep. Het. VIII. p. 182 (1856); *Moore*, Lep. Cey. II. p. 14. (1882-3).

Darapsa (part), *Walk.* B.M. Cat. Lep. Het. VIII. p. 182 (1856).

33. *D. HYPOTHOUS*, *Cram.*

(*Sp.* *H.*). Pap. Ex. III. p. 165, t. 285, f. D. (1782); *Hub.* Verz. bek. Schmett. p. 134, n. 1440 (1816); *Walk.*

(*Darap. II*). B.M. Cat. Lep. Het. VIII. p. 185 (1856); *Horsf. and Moore*, Cat. Lep. E.I.C. I. p. 271, t. 10, f. 2, 2a—larva—(1857); *Bois. (Ch. II)*. Sp. Gen. Het. I. p. 226 (1874); *Butl.* Trans. Z. Soc. IX. p. 572. n. 2 (1875); *Moore*, Lep. Cey. II. p. 15, t. 83, f. 1, 1A—larva—(1882-3).

D. Angustans, *Feld.* Reise. Nov. Lep. Het, t. 76, f. 6 (1868); *Butl.* Trans. Z. Soc. IX, p. 572, n. 5 (1875); *Kirb.* Trans. E. Soc. p. 236 (1877).

D. Pallescens, *Butl.* Proc. Z. Soc. p. 6. (1875); Trans. Z. Soc. IX. p. 572 (1875).

D. Horsfieldii, *Butl.* l. c. n. 6 (1875).

Hab.: Brisbane, Rockhampton, Cardwell; Molluccæ, Philippines, Amboina, Celebes, Java, India, and Ceylon.

34. *D. PROTRUDENS*, *Feld.*

Reise. Nov. Lep. II. t. 76, f. 7 (1868); *Bois. (Ch. P)*. Sp. Gen. Het. I, p. 226 (1874); *Butl.* Trans. Z. Soc. IX. p. 572, n. 4 (1875).

Ch. Neriastri, *Bois.* MS.

Hab.: Brisbane, Rockhampton, Cardwell; Halmeira and Cape Good Hope (?).

SUB-FAMILY III—AMBULICINÆ, *Butl.*

Trans. Z. Soc. IX. p. 516 (1875); *Moore*, Lep. Cey. II. p. 10 (1882-3).

Genus 9: *AMBULYX*, *Westw.*

Cab. Or. Ent. p. 61, t. 30, f. 2 (1847); *Walk.* B.M. Cat. Lep. Het. VIII. p. 120 (1856); *Bois.* Sp. Gen. Het. I. p. 181 (1874); *Moore*, Lep. Cey. II. p. 11 (1882-3).

35. *A. WILDEI*, *n. sp.*

♀ *Primaries*: Light reddish brown, with numerous transversed waved and bent, darker brown lines; the first of these is from the costa, bordering end of cell, thence sharply elbowed towards base, and continued to hinder margin; another beyond, nearly parallel about 8 mm. apart; beyond this last line (from

whence the wing is a much darker brown) a short distance from it, is another, faintly discernible except at costal and hinder margins, parallel line, and yet another from costa only reaching a short distance; a short dark band from costa near apex, curved and touching outer margin a little below apex; from the point where the last mentioned touches outer margin, commences a marginal band of very dark reddish-brown, which is continued along outer margin to hinder angle where it runs out to nothing, somewhat curved internally; towards base and near to hinder margin, is a large perfectly round very dark reddish-brown spot, with faint indication of ring of lighter colour around it. *Secondaries*: Yellowish-brown, lighter towards base of costa and pale brown along abdominal margin, the yellow part speckled with fine brown marks; a widish straight transverse black band about midway; a black crenated line midway between last and outer margin, with which latter it is nearly parallel, terminating just above anal angle; a round black spot near apical angle; a small round spot near anal angle. Head, thorax, and abdomen light reddish-brown; thorax with dark brown at sides. Antennæ exceedingly fine; light reddish-brown. **UNDERSIDE**: Golden yellowish-brown, clouded with brown specks, the basal area paler brown, the lines and bands of upper side faintly developed, the outer marginal band of primaries being here greyish white surmounted by dark brown line. Body yellowish-brown.

Exp.: 105 mm. Hab.: Cairns. Coll.: Queensland Museum.

This species approaches somewhat to *A. Lahora*, *Butl.*, and was captured by the Museum Collector, Mr. Wilde, recently at Cairns. It is noteworthy as representing an hitherto unrecorded Australian genus and family in this group, and is another instance of the wonderfully close similarity of the Heterocerous-Lepidopterous fauna of this particular locality (embracing Cardwell, Johnstone River, and Cairns) with the Indian fauna.

SUB-FAMILY IV.—SMERINTHINÆ, *Bois.*

Sp. Gen. Het. I. p. 8 (1874); *Butl.* Trans. Z. Soc. IX. p. 516 (1875); *Moore*, Lep. Cey. II. p. 7 (1882-3)

Genus 10.—*CŒQUOSA*, Walk.

B.M. Cat. Het. Lep. VIII. p. 256 (1856).

Acherontia (part), Ochs. Schmett. Eur. IV. p. 44 (1816).

Brachyglossa, Bois. Sp. Gen. Het. I. p. 9 (1874).

Metamimas, Butl. Trans. Z. Soc. IX. p. 582 (1875), uncharacterised.

36. C. AUSTRALASIÆ, Don.

(*Sp. A*). Ins. N. H. t. 33. f. 1 (1805); *Bois. (Ach. A)*. Voy. Astr. Lep. p. 181, n. 2 (1832); *Walk.* B.M. Cat. Lep. Het. VIII. p. 257, n. 2 (1856); *Bois. (Brach. A)*. Sp. Gen. Het. I. p. 10 (1874); *Butl. (Met. A)*. Trans. Z. Soc. IX. p. 582. n. 1 (1875).

B. Banksia, Bois. Sp. Gen. Het. I. p. 11, t. 27, f. 1 (1874); *Kirb. (Met. B)*. Trans. E. Soc. p. 237 (1877)

Hab.: Newcastle, Brisbane.

37. C. TRIANGULARIS, Don.

(*Sp. T*). Ins. N. H. t. 33, f. 2 (1805); *Bois. (Ach. T)*. Voy. Astr. Lep. p. 181, n. 1 (1832); *Walk.* B.M. Cat. Lep. Het. VIII. p. 257 (1856); *Chenu.* Enc. Hist. Nat. Pap. p. 275, f. 481 (1869); *Bois. (Brach. T)*. Sp. Gen. Het. I. p. 9, t. 16, f. 2 (1874); *Butl.* Trans. Z. Soc. IX, p. 597 (1875); *Oll. and Forde*, Scott's Aus. Lep. II. p. 5, t 10. larva—(1890).

Sp. Castaneus, Perry. Arcana or Mus. Nat. Hist. 1 (1811).

Hab.: Throughout East coast of Australia.

SUB-FAMILY V.—SPHINGINÆ, Butl.

Trans. Z. Soc. IX. p. 517 (1875); *Moore*, Lep; Cey. II. p. 1. (1882-3).

Genus 11: *PROTOPARCE*, Burm.

Abhandl. naturf. Gesellsch. Halle, p. 63 (1855); *Butl.* Trans. Z. Soc. IX. p. 606 (1875); *Moore*, Lep. Cey. II. p. 4. (1882-3).

Sphinx. (part), Walk.—B.M. Cat, Lep. Het. VIII. p. 211 (1856).

38. *P. CONVULVULI*, *Lin.*

(*Sp. C.*). Syst. Nat. I. 2. p. 798 (1767); *Roesel.* (*Sp. C.*). Ins. Belust. I. t. 7, f. 1, 5. (1746); *Dru.* (*Sp. C.*). Ill. Ex. Ins. I. t. 25, f. 1. (1770); *Fab.* (*Sp. C.*). Sp. Ins. II. p. 150 (1781); *Cram.* (*Sp. C.*). Pap. Ex. III. p. 55, t. 225, f. D. (1782); *Fab.* (*Sp. C.*). Mant. Ins. II. p. 97. (1787); Ent. Syst. III. 1. p. 374. (1793); *Hub.* (*Agrius. C.*). Verz. bek. Schmett, p. 140 (1816); *Steph.* (*Sp. C.*). Ill. B. Ent. Haust. I. p. 119 (1828); *Bois.* (*Sp. C.*). Voy. Astr. Lep. p. 187, n. 1 (1832); *Westw.* (*Sp. C.*). Brit. Moths I. p. 12, t. 3, f. 1—3 (1843); *Steph.* (*Sp. C.*). B.M. Cat. Lep. I. p. 27 (1850); *Walk.* (*Sp. C.*). B.M. Cat. Lep. Het. VIII. p. 212 (1856); *Staint.* (*Sp. C.*). Brit. Butt. and Moths, I. p. 89 (1857); *Horsf. & Moore.* (*Sp. C.*). Cat. Lep. E.I.C. I. p. 267, t. 9, f. 3, 3A,—larva—(1857); *Chenu.* (*Sp. C.*). Enc. Hist. Nat. Pap. p. 270, f. 477 (1869); *Bois.* (*Sp. C.*). Sp. Gen. Het. I. p. 94, (1874); *Butl.* Trans. Z. Soc. IX. p. 609, n. 19 (1875); *Snell.* (*Sp. C.*). Tijds. Ent. XX. p. 3 (1877); *Auriv.* (*Sp. C.*). Kongl. Sv. Akad. Handl. XIX. p. 129, n. 5 (1882); *Newm.* (*Sp. C.*). Ent. VIII. p. 72 (larva) (—).

Sp. Roseafasciata, *Koch*, Ind. Aust. Lep. Faun. p. 54 (1873); *Scott*, MS.

Sp. Distans, *Butl.* Cat. Lep. N. Z. p. 4, n. 10, t. 2, f. 11 (1874); (*Prot. D.*). Trans. Z. Soc. IX. p. 609, n. 20 (1875).

Hab.: Victoria, New South Wales, Brisbane to Cardwell; New Zealand; Europe, Asia, South Africa, Java.

Orientalis of *Butl.* (Trans. Z. Soc. IX. p. 609, t. 91, f. 16-17, 1875) is doubtless the same insect; Moore's figures (Lep. Cey. II. t. 75, f. 1A-E) exactly represent the various larval changes in our species, which feeds on *Ipomæa* and sweet potato.

39. *P. ABADONNA*, *Fab.*

(*Sp. A.*). Ent. Syst. Supp. p. 435, n. 56-7 (1798); *Kirb.* Trans. E. Soc. p. 238. (1877).

Sp. Godarti. (*MacI.*). King's Surv. Aust. II. p. 464, n. 166 (1827); *Butl.* (*Diludia. G.*). Trans. Z. Soc. IX. p. 615, n. 13 (1875); *de Cerisy*, MS.

Hab.: Brisbane, Rockhampton; India.

40. *P. MINIMUS*, *n. sp.*

Primaries: Light grey with markings of black, arranged principally in short longitudinal lines close together, forming irregular transverse bands; a small discoidal white spot surrounded with black; the principal transverse band is beyond but touching the discoidal spot, whereat it is widest, somewhat narrower at costa, and much narrower on reaching hinder margin, a branch less wide from just below and on basal side of discoidal spot to costa; some black lines in basal area; a few black marks towards apex, and some patches at hinder angle. *Secondaries*: light brown, with an oblique sub-basal dark line; outer margin irregularly bordered with blackish; fringe white, interrupted with dark spots, at termination of nervules. *Antennæ*: light grey. Head and thorax dark grey, latter with two dorsal black lines. Abdomen shining grey buff; dorsal very fine black line; lateral thicker black line; fringe of each segment and an irregular patch on apical edge of same towards the side, black. *UNDERSIDE*: dusky brown, lighter toward outer margins, with two indistinct transverse slightly waved fine lines; abdominal border of secondaries much lighter. Body and legs dark grey. *Antennæ*, reddish-brown.

Exp.: 63 mm. Hab.: Dawson River (Barnard). Coll.: Miskin.

Genus 12: *MACROSILA*, Walk.

B. M. Cat. Lep. Het. VIII. p. 198 (1856); *Bois. (part)*. Sp. Gen. Het. I. p. 60 (1874); *Butl. Trans. Z. Soc. IX. p. 605 (1875)*.

Diludia, Grote, and Robinson. Proc. Ent. Soc. Phil. V. p. 188 (1865); *Moore*, Lep. Cey. II. p. 3 (1882-3).

Meganoton, (part). *Bois.* Sp. Gen. Het. I. p. 58. (1874).

41. *M. CASUARINÆ*, Walk.

B. M. Cat. Lep. Het. VIII. p. 210 (1856); *Bois. (Sp. C)*. Sp. Gen. Het. I. p. 109 (1874); *Butl. (Dil. C)*. Trans. Z. Soc. IX. p. 615, n. 14 (1875).

Dil. Nebulosa, *Butl.* l. c. 15 (1875).

Hab.: Newcastle, Brisbane, Rockhampton, Cardwell, Cape York.

Larva feeds on *Tecoma Velutina* and *grandiflora*, and *Jasminum hirsuta*.

42. *M. SEVERINA*, *n. sp.*

Primaries: Yellowish-brown with greyish tinge, with numerous black or brown generally transverse crenelated bands or lines; a large discoidal white lunule surrounded with black; a waved black line from apex into the wing and returning to costa at about one-fourth from apex; a widish oblique band from costa to discoidal spot; a black streak from discoidal spot to middle of outer margin; another less distinct below and parallel with last; a short costal oblique somewhat obscure band, between base and discoidal band; another short costal double line or band, midway between discoidal band and inner face of apical streak; other less defined transverse waved lines across wings beyond discal spot. *Secondaries*: Dark brown, lighter in hue towards base, with an almost obsolete faint band from anal angle—where it presents a greyish lunular shaped mark—towards costal margin; fringe of both wings whitish. Antennæ, reddish-brown. Head, yellowish-brown; thorax dorsally the same, laterally with a cream coloured band surmounted by a wide intense black band nearly reaching to the head. Abdomen dorsally same as head and thorax with a dorsal black line interrupted at the joints by the fringe of the two first segments, black; laterally the first six segments black, with a square patch of dirty white occupying nearly the whole width of each; the remaining segments show a continuing black line to near the extremity. *UNDERSIDE*: Uniform shining purplish-brown, paler on hinder and abdominal margins; outer margins of both wings waved white and brown alternately. Body, shining grey; legs, grey; antennæ, brown.

Exp.: ♂ 133 mm.; ♀ 140 mm. Hab.: Cape York. Coll.: Miskin. Queensland Museum.

This fine species has probably escaped notice by reason of its extreme rarity. I know of only four specimens. It is pretty closely allied to *Casuarina*, to some examples of which excessively varying and common species, the arrangement of the markings of the wings bear some resemblance.

43. *M. EDWARDSI*, Olliff.

Proc. L. Soc. N.S.W. 2nd Ser. V. p. 515 (1890).

Hab.: Hunter River; Brisbane.

44. *M. BETHIA*, Kirb.

(*Dil. B.*) Trans. E. Soc. p. 238, 243 (1877).

Hab.: Rockhampton.

Genus 13: *NEPHELE*, Hub.

Verz. bek. Schmett. p. 133 (1816); Moore. Lep. Cey. II. p. 1 (1882-3).

Zonilia, Walk. B.M. Cat. Lep. Het. VIII. p. 192 (1856); Bois. Sp. Gen. Het. I. p. 139 (1874).

45. *N. SUBVARIA*, Walk.

(*Zon. S.*) B.M. Cat. Lep. Het. VIII. p. 196 (1856); Bois. (*Zon. S.*) Sp. Gen. Het. I. p. 143 (1874); Butl. Trans. Z. Soc. IX. p. 624, n. 15 (1875).

Zon. Metapyrrha, Walk. B.M. Cat. Lep. Het. VIII. p. 196 (1856); Bois. (*Z. M.*) Sp. Gen. Het. I. p. 143 (1874); Butl. (*Nep. M.*) Trans. Z. Soc. IX. p. 625, n. 16 (1875).

Deil. Dalii, Newm. Trans. E. Soc. Ser. 2, IV. p. 54 (1857).

Z. Antipoda, Walk. B.M. Cat. Lep. Het. XXXI, p. 34. (1864); Bois. MS.

Hab.: Swan River, Brisbane, Rockhampton.

Probably our species is the same as *Hespera* (Fab.)=*Morpheus* (Cram.) which latter species seems variable in one character in which ours is always constant, *i.e.*, the reddish or ferruginous colour of the secondaries; for, although in all the examples I have seen from India and Ceylon this character agrees with Moore's fig. in Lep. Cey., the secondaries being of the same brown hue as in the primaries, we find that Walker makes it "ferruginosæ" and Bois. "brun roussâtre," Fab. describing it as "fuscis." There appears to be no published description of *Antipoda*.

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<i>Amphion</i>	6	<i>Macrosila</i>	12
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