

A LIST OF THE GEOMETRIDAE COLLECTED BY DRS. A. MUTUURA, M. OGATA AND T. SHIRÔZU IN FORMOSA IN 1961

By HIROSHI INOUE

4157, Kugenuma, Fujisawa, Kanagawa Pref.

A small number of the Formosan Geometridae collected by Drs. A. MUTUURA, M. OGATA and T. SHIRÔZU during the summer of 1961 was submitted to me for identification and publication. Excepting a few of the specimens still unknown to me, they will be listed here with references of the original publications and those of the first records from Formosa. Those marked with asterisks are new records from the Island.

Subfamily Oenochrominae.

1. *Eumelea ludovicata ludovicata* GUENÉE

Eumelea ludovicata GUENÉE, 1857, Spec. Gén. Léop. 9: 393.

?*Eumelea ludovicata atomaria*, PROUT, 1910, Gen. Ins. 104: 62.

?*Eumelea aureliata*, BUTLER, 1880, Proc. zool. Soc. Lond. 1880 : 687.

Chiaochi, 5. vii. 1961, 1♂.

2. *Sarcinodes aequilinearia* (WALKER)

Mergana aequilinearia WALKER, 1860, List lep. Ins. Brit. Mus. 21 : 292.

Sarcinodes aequilinearia (!), MATSUMURA, 1931, 6000 Ill. Ins. Jap. : 926, no. 1439.

Wulai, 8. vii. 1961, 1♂.

Subfamily Geometrinae.

3. *Pingasa ruginaria pacifica* INOUE

Pingasa ruginaria pacifica INOUE, 1964, Kontyû, 32: 335.

Hypochroma ruginaria, BUTLER, 1880, Proc. zool. Soc. Lond. 1880: 686.

Wulai, 11. vii. 1961, 1♀.

4. *Terpna taiwana* (WILEMAN)

Pachyodes taiwana WILEMAN, 1912, Entom. 45: 259.

Wulai~Ayü, 8. vii. 1961, 1♂; Wulai, 8. vii. 1961, 2♂.

MATSUMURA's illustration of this species under *Terpna* (1931, 6000 Ill. Ins. Jap.: 932, no. 1464) is correct, but his "*Pachyodes taiwana* WILEMAN" (op. cit.: 919, no. 1403) is an error of *T. iterans* PROUT, subsp. to be described in my future paper.

5. *Dindica wilemani* PROUT

Dindica wilemani PROUT, 1937, in SEITZ, Macrolep. 12: 58.

Dindica polyphaenaria f. *taiwana*, MATSUMURA, 1931, op. cit.: 894, no. 1282 (nec WILEMAN).

Wulai, 8. vii. 1961, 1♂

Though recorded by BASTELBERGER (1909, Iris, 22: 173), the true *D. polyphaenaria* GUENÉE is not found in Formosa, being represented by the close relative, *D. wilemani*.

6. *Agathia laetata furcula* MATSUMURA, status nov.

Agathia furcula MATSUMURA, 1931, 6000 Ill. Ins. Jap.: 862, no. 1138.

Agathia laetata isogyna (partim) PROUT, 1932, in Seitz, *Macrolep.* 12: 69.

Chitou, 27. vi. 1961, 1♂; Wulai, 8. vii. 1961, 2♂, 1♀.

If *A. l. isogyna* from Khasis, Malaya, Java and Sumatra, is not distinguishable from the Formosan race, it will as a matter of course become a junior synonym of *l. furcula*, the publication of which was made a year before.

7. *Agathia hemithearia* GUENÉE

Agathia hemithearia GUENÉE, 1857, *Spec. Gén. Lép.* 9: 381; PROUT, 1930, *Bull. Hill Mus.* 4: 128.

Wulai, 8. & 9. vii. 1961, 1♂, 1♀.

8. *Comibaena procumbaria* (PRYER)

Euchloris procumbaria PRYER, 1877, *Cist. Ent.* 2: 232, pl. 4, f. 2.

Comibaena procumbaria, INOUE, 1956, *Check List Lep. Jap.*: 3: 231.

Wulai, 8. vii. 1961, 1♂

9. *Comibaena nigromacularia nigromacularia* LEECH

Euchloris nigromacularia LEECH, 1897, *Ann. Mag. nat. Hist.* (6) 20: 237.

Comibaena nigromacularia nigromacularia, INOUE, 1961, *Insecta Japonica*, (1) 4: 73, 99.

Chitou, 27. vi. 1961, 1♀.

10. *Hemithea marina* (BUTLER)

Thalassodes marina BUTLER, 1878, *Ann. Mag. nat. Hist.* (5) 1: 399.

Wushe, 23. vi. 1961, 1♂; Wulai, 7-8. vii. 1961, 1♂, 4♀.

11. *Chlorissa* (?) *chlorissodes* (PROUT)

Microloxia chlorissodes PROUT, 1912, *Gen. Ins.* 129: 201.

Chihpen, 30. vi. 1961, 1♂. Since this tiny species belongs to neither *Microloxia* nor *Chlorissa*, a new genus may be demanded for it.

12. *Diplodesma ussuriaria mundaria* (LEECH), **status nov.**

Hemithea mundaria LEECH, 1897, *Ann. Mag. nat. Hist.* (6) 20: 233.

Diplodesma mundaria, PROUT, 1934, in SEITZ, *Macrolep.* 12: 117.

Wushe, 23. vi. 1961, 1♂; Wulai, 8. vii. 1961, 1♂

As PROUT (loc. cit. & op. cit. *Suppl.* 4: 14, 1935) expresses his doubt, *D. mundaria* is apparently conspecific with *ussuriaria*, since it is quite identical with the latter in every point of structure including the genitalia, excepting that it has straighter postmedian lines, being placed more distad and its ground colour seems to be more vivid, should comparison be made in fresh conditions.

*13. *Comostola laesaria* (WALKER)

Iodis laesaria WALKER, 1861, *List lep. Ins. Brit. Mus.* 22: 544.

Wulai, 8. vii, 1961, 6♂, 1♀

Subfamily **Sterrhinae.**

14. *Calothyranis convectaria convectaria* (WALKER)

Timandra convectaria WALKER, 1861, *List lep. Ins. Brit. Mus.* 23: 800; PROUT, 1914, *Ent. Mitteil.* 3: 240.

Wulai, 7. & 11. vii. 1961, 1♂, 1♀

15. *Calothysanis extremaria* (WALKER)

Timandra extremaria WALKER, 1861, List lep. Ins. Brit. Mus. 23: 801; PROUT, 1913, in SEITZ, Macrolep. 4: 48.

Wushe, 23. vi. 1961, 1♀; Wulai, 8. vii. 1961, 1♂, 2♀.

16. *Problepsis albidior albidior* WARREN

Problepsis albidior WARREN, 1899, Nov. zool. 6: 33.

Problepsis deliaria, PROUT, 1914, Ent. Mitteil. 3: 240.

Wulai, 10. vii. 1961, 1♂.

I have a doubt if the Ryukyuan and south Japanese race *matsumurai* PROUT is constantly smaller and paler than the nominate race as described by PROUT, 1938, in SEITZ, Macrolep. 12: 188.

*17. *Problepsis conjunctiva subconjunctiva* PROUT

Problepsis conjunctiva subconjunctiva PROUT, 1917, Nov. zool. 24: 309.

Wulai, 8. vii. 1961, 2♀

18. *Scopula impersonata impersonata* (WALKER)

Acidalia impersonata WALKER, 1861, List lep. Ins. Brit. Mus. 23: 758; PROUT, 1913, in SEITZ, Macrolep. 4: 52.

Chihpen, 30. vi. 1961 & 1. vii. 1961, 1♂, 1♀.

19. *Scopula propinquaria* (LEECH)

Acidalia propinquaria LEECH, 1897, Ann. Mag. nat. Hist. (6)20: 91.

Scopula propinquaria, PROUT, 1934, Lep. Cat. 63: 220.

Wulai, 8. vii. 1961, 1♂.

20. *Scopula formosana* PROUT

Acidalia moorei orientalis PROUT, 1914, Ent. Mitteil. 3: 241 (nom. preocc., non ALPHÉRAKY).

Scopula moorei var. *formosana* PROUT, 1934, Lep. Cat. 63: 225.

Chitou, 27. vi. 1961, 1♂.

21. *Scopula anatreces* PROUT

Scopula anatreces PROUT, 1920, Nov. zool. 27: 287.

Wulai, 8. vii. 1961, 1♂

22. *Scopula kagiata* (BASTELBERGER)

Emiltis kagiata BASTELBERGER, 1909, Iris, 22: 172.

Chitou, 26-27. vi. 1961, 2♂, 2♀.

23. *Scopula defectiscripta* PROUT

Acidalia kagiata f. *defectiscripta* PROUT, 1914, Ent. Mitteil. 3: 241. [Unavailable name]

Scopula defectiscripta PROUT, 1922, Arch. Naturg. 82A (11): 288.

Wulai, 10. & 11. vii. 1961, 1♂, 1♀.

24. *Sterrha informis sinuata* (WILEMAN & SOUTH)

Ptychopoda sinuata WILEMAN & SOUTH, 1917, Entom. 50: 57.

Wushe, 23. vi. 1961, 1♂; Wulai, 7. vii. 1961, 1♀.

Subfamily Larentiinae

25. *Hastina subfalcaria caeluleolineata* MOORE

Hastina caeruleolineata MOORE, 1888, Lep. Coll. Atkinson, 3: 260; MATSUMURA, 1931, 6000 Ill. Ins. Jap.: 902, no. 1320.,

Chitou, 27. vi. 1961, 1♂.

26. *Heterophleps (Heterophleps) variegata* (WILEMAN)

Dysethia variegata WILEMAN, 1911, Entom. 44: 60.

Chitou, 26. vi. 1961, 1♂.

27. *Heterophleps (Heterophleps) taiwana* WILEMAN, **comb. nov.**

Dysethia taiwana WILEMAN, 1911, Entom. 44: 60.

Chitou, 26. & 27. vi. 1961, 1♂, 1♀.

28. *Microloba bella ogatai* subsp. **nov.**

Microloba bella (partim), PROUT, 1914, Ent. Mitteil. 3: 245.

Distinguished from the nominate subspecies as follows:

Forewing with marginal olive brown band narrower, white median area less olivaceous, with weak, slender median line, hindwing with postmedian line slender, without accompanying proximal band, which is nearly always developed in the nominate subspecies, both wings with under surface more weakly marked.

From *M. b. taracta* PROUT, 1958 (Bull. Brit. Mus. (N. H.), Entom. 6(12): 448), from Sikkim, it is separated in having well-developed cell spot.

Holotype (♂): Fenchihu (1660m), Chiayi, 12-13. vii. 1964 (H. INOUE). Paratypes: Taipingshan, Ilan, 23-24. vi. 1938, 1♂; data as holotype, 1♂ (H. INOUE); Wushe, 23. vi. 1961, 1♂ (M. OGATA;) ditto, 1963, 1♂ (Native collector). All the types in coll. H. INOUE.

29. *Naxidia punctata* (BUTLER)

Argidava punctata BUTLER, 1880, Ann. Mag. nat. Hist. (5) 6: 128.

Naxidia punctata, PROUT, 1914, Ent. Mitteil. 3: 245.

Chitou, 27. vi. 1961, 1♂

30. *Telenomeuta punctimarginaria inconspicua* (BASTELBERGER), **status nov.**

Triphosa inconspicua BASTELBERGER, 1909, Ent. Zeit. Stuttg. 23: 77.

Chitou, 27. vi. 1961, 1♂

Although *inconspicua* was sunk into *punctimarginaria* by PROUT (1941, in SEITZ, Macrolep. 12: 330), its resurrection for the Formosan population will be justified by the following characteristics:

Upper surface darker, with weaker brownish tinge, termen, especially that of hindwing, on an average more strongly crenulate, subterminal white dots more conspicuous, under surface more strongly marked, postmedian line of forewing more strongly curved costally.

Besides the above cited male, there are nine more specimens in my collection, collected at the central mountainous district.

31. *Chartographa convexa* (WILEMAN)

Lygris convexa WILEMAN, 1912, Entom. 25: 170.

Wushe, 23. vi. 1961, 1♂.

32. *Xanthorhoe cybele* PROUT

Xanthorhoe cybele PROUT, 1931, Nov. zool. 37: 22.

Chitou, 26. vi. 1961, 1♀.

33. *Gonanticlea aversa* SWINHAE

Gonanticlea aversa SWINHAE, 1892, Trans. ent. Soc. Lond. 1892: 4; PROUT, in SEITZ, Macrolep. 12: 271.

Chitou, 26. vi. 1961, 1♀

34. *Gymnoscelis ectochlora* (HAMPSON)

Eupithecia ectochlora HAMPSON, 1891, Ill. Het. Coll. Brit. Mus. 8: 118, pl. 152, f. 19.

Gymnoscelis ectochlora, HAMPSON, 1895, Fauna Brit. Ind. Moths, 3: 388.

Wushe, 23. vi. 1961, 1♂; Wulai, 8. vii. 1961, 2♀.

35. *Horisme hyperythra catalalia* PROUT

Horisme hyperythra catalalia PROUT, 1958, Bull. Brit. Mus. (N. H.), Entom. 6(12): 387.

Horisme hyperythra, PROUT, 1938, in SEITZ, Macrolep. Suppl. 4: 213.

Wulai, 8. vii. 1961, 1♀.

Subfamily **Ennominae**.

36. *Bapta mytylata* (GUENÉE)

Corycia mytylata GUENÉE, 1857, Spec. Gén. Lep. 9: 58.

Lomographa griseola BASTELBERGER, 1909, Iris, 22: 176.

Wulai, 10. vii. 1961, 1♂.

*37. *Lomographa marginata* (WARREN)

Zamarada (?) *marginata* WARREN, 1893, Proc. zool. Soc. Lond. 1893: 388, pl. 32, f. 22.

Wulai, 8. vii. 1961, 1♂.

38. *Parasynegia suffusa* WARREN

Parasynegia suffusa WARREN, 1893, Proc. zool. Soc. Lond. 1893: 414.

Wulai, 7. & 9. vii. 1961, 2♂.

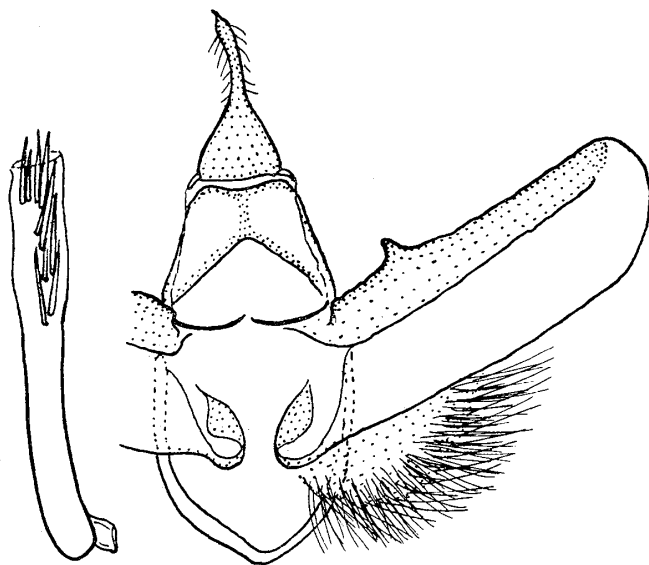


Fig. 1. *Parasynegia suffusa* WARREN.
Male genitalia.

PROUT (1914, Ent. Mitteil. 3: 260), who recorded *P. gopterana* (SWINHAE, 1894) from Formosa, removing it from synonymy of *P. erythra* HAMPSON, said that *gopterana* was probably not differentiable from *suffusa*.

39. *Zethenia contiguaria* LEECH

Zethenia contiguaria LEECH 1897, Ann. Mag. nat. Hist. (6) 19: 233.

Zethenia obscura WARREN, 1899, Nov. zool. 6: 66.

Wushe, 23. vi. 1961, 1♂; Chitou, 27. vi. 1961, 2♂; Wulai, 8. vii. 1961, 2♂.

40. *Ourapteryx formosana* MATSUMURA

Ourapteryx formosana MATSUMURA, 1910, Thous. Ins. Jap. Suppl. 2: 76, pl. 23, f. 13.

Urapteryx approximaria WILEMAN, 1912, Entom. 45: 168. **Syn. nov.**

Wulai, 7. vii. 1961, 1♂,

The Formosan species of this complicated genus is in great need of revision, since some species belonging to this and other allied genera were incidentally described by MATSUMURA, WILEMAN and BASTELBERGER in early 1910s; some of them must inevitably be rejected as junior synonyms in future.

*41. *Hypochrosis pyrrhophaeata* (WALKER)

Patruissa pyrrhophaeata WALKER, 1862, List lep. Ins. Brit. Mus. 26: 1961.

Wulai, 7. & 8. vii. 1961, 1♂, 1♀.

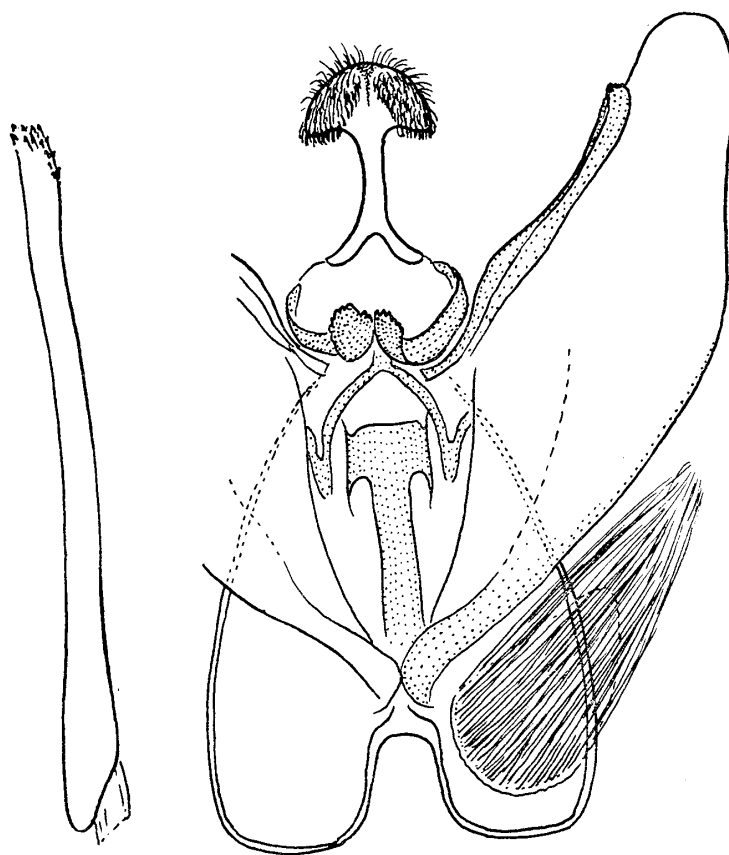


Fig. 2. *Hypochrosis pyrrhophaeata* (WALKER). Male genitalia.

PROUT (1932, Journ. F. M. S. Mus. 17: 86) removed this species from the synonymy of *H. stenaria* GUENÉE treated by HAMPSON (1895, Fauna Brit Ind. Moths, 3: 173).

42. *Corymica arnearia* WALKER

Corymica arnearia WALKER, 1860, List lep. Ins. Brit. Mus. 20: 230; PROUT, 1914, Ent. Mitteil. 3: 260.

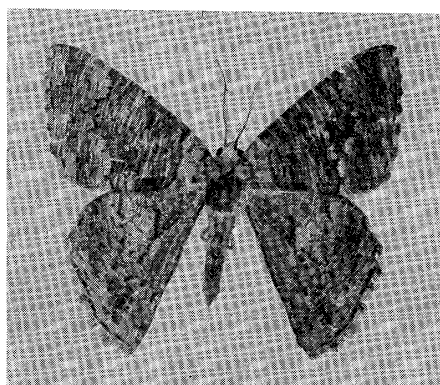
Wushe, 22. vi. 1961, 1♂; Wulai, 7. vii. 1961, 1♀.

43. *Pareclipsis gracilis* (BUTLER)

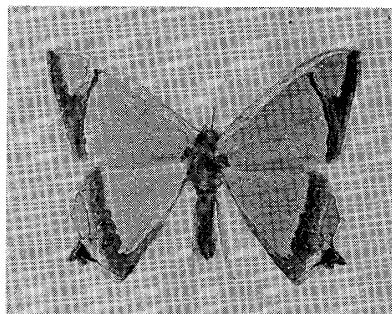
Endropia gracilis Butler, 1879, Ann. Mag. nat. Hist. (5) 4: 371.

- Spilopera gracilis*, PROUT, in SEITZ, Macrolep. 4: 345.
Wulai, 8. vii. 1961, 1♂.
44. *Calletaera basipuncta* WILEMAN
Calletaera basipuncta WILEMAN, 1916, Entom. 49: 36.
Wulai, 7. vii. 1961, 1♀.
45. *Trigonoptila latimarginaria* (LEECH)
Krananda latimarginaria LEECH, 1891, Entom. 24, Suppl.: 56.
Trigonoptila latimarginaria, PROUT, 1915, in SEITZ, Macrolep. 4: 349.
Wulai, 10. & 11. vii. 1961, 1♂, 1♀.
46. *Zanclopera calidata* WARREN
Zanclopera calidata WARREN, 1905, Nov. zool. 12: 438; PROUT, 1914, Ent. Mitteil. 3: 261.
Wulai, 9. & 10. vii. 1961, 2♂.
47. *Hyposidra talaca* (WALKER)
Chizala talaca WALKER, 1860, List lep. Ins. Brit. Mus. 20: 59.
Hyposidra talaca, SHIRAKI, 1913, Gov. Formosa, Agr. Exp. Stat. Spec. Rep. 8: 442, pl. 46, f. 1-4.
Wulai, 8. vii. 1961, 1♂.
- *48. *Hyposidra aquilaria* (WALKER)
Lagyra aquilaria WALKER, 1862, List lep. Ins. Brit. Mus. 26: 1485.
Penpuchi, 2 vi. 1961, 1♀.
49. *Hyposidra infixaria* (WALKER)
Lagyra infixaria WALKER, 1860, List lep. Ins. Brit. Mus. 20: 60.
Hyposidra variegata WILEMAN, 1910, Entom. 43: 347.
Hyposidra muscula BASTELBERGER, 1911, Intern. Ent. Zeit. Guben, 4: 249.
Wulai, 8. vii. 1961, 1♂.
50. *Amblychia angeronaria* GUENÉE
Amblychia angeronaria GUENÉE, 1857, Spec. Gén. Lép. 9: 215; BASTELBERGER, 1909, Iris, 22: 176.
Wulai, 8. & 10. vii. 1961, 3♂, 1♀.
51. *Erebomorpha fulguraria fulguraria* WALKER
Erebomorpha fulguraria WALKER, 1860, List lep. Ins. Brit. Mus. 21: 495; BASTELBERGER, 1909, Iris, 22: 180.
Wulai, 11. vii. 1961, 1♂.
The features of *E. consors* BUTLER from Japan, N. China, Korea and the Ussuri district that distinguish it from *E. fulguraria* are merely development of white bands and lines and some other minor coloration, and they are apparently geographic, not of species, though superficially rather remarkable. The structures including the genitalia are nearly perfectly identical between them; hence the following proposal:
Erebomorpha fulguraria consors BUTLER, 1878, **status nov.**
52. *Medasina parisnattei* (WALKER)
Elphos parisnattei WALKER, 1862, List lep. Ins. Brit. Mus. 26: 1545.
Medasina parisnattei, PROUT, 1914, Ent. Mitteil. 3: 270.

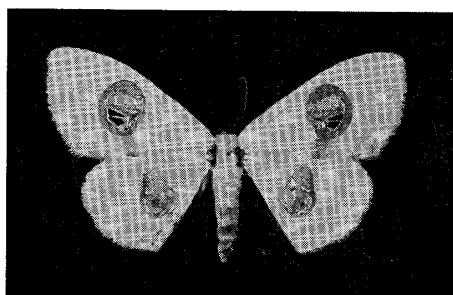
- Wulai, 11. vii. 1961, 1♂.
53. *Hemerophila (Phthonandria) cuneilinearis* WILEMAN
Hemerophila cuneilinearis WILEMAN, 1911, Entom. 44: 272.
 Wushe, 23. vi. 1961, 2♀; Nanshanchi, 24. vi. 1961, 1♂.
54. *Thinopteryx crocoptera assamensis* SWINHOE
Thinopteryx crocoptera assamensis SWINHOE, 1916, Ann. Mag. nat. Hist. (8) 18: 487.
Thinopteryx crocoptera, PROUT, 1914, Ent. Mitteil. 3: 249.
 Wulai, 8. vii. 1961, 1♀; Fushan-Magan, 10. vii. 1961, 1♀.
55. *Prochasma dentilinea* WARREN
Psilalcis dentilinea WARREN, 1893, Proc. zool. Soc. Lond. 1893: 431.
Boarmia dentilinea, PROUT, 1914, Ent. Mitteil. 3: 270.
Boarmia squalida WILEMAN, 1915, Entom. 48: 282.
 Chitou, 26-27. vi. 1961, 2♂.
56. *Serraca punctinalis glos* (PROUT), **status nov.**
Boarmia glos PROUT, 1914, Ent. Mitteil. 3: 269.
 Wulai, 8. vii. 1961, 1♂.
 As was doubted in the original description, the differences of *glos* Prout, *conferenda* BUTLER from *punctinalis* DENIS & SCHIFFERMÜLLER are geographic, not specific. The structure of the genitalia of the above cited taxa are identical.
57. *Ascotis selenaria dianaria* (HÜBNER)
Geometra dianaria HÜBNER, [1814-1817], Samml. eur. Schmett. Geom. t. 94, f. 483.
Ascotis selenaria, PROUT, 1914, Ent. Mitteil. 3: 268.
 Wulai, 10. vii. 1961, 1♂.
 It is disputable if the Formosan population belongs to the subspecies to which I have tentatively assigned.
58. *Ectropis nigriflex* PROUT
Ectropis nigriflex PROUT, 1914, Ent. Mitteil. 3: 267.
 Wulai, 8. & 10. vii. 1961, 1♂, 1♀.
59. *Gnophos caenosa* (BASTELBERGER)
Catascia caenosa BASTELBERGER, 1911, Intern. Ent. Zeit. Guben, 4: 249.
 Puli, 25. vi. 1961, 1♂.
60. *Gnophos delitescens* (BASTELBERGER)
Scotopteryx delitescens BASTELBERGER, 1909, Ent. Zeit. Stuttg. 23: 33.
Ectropis (?) *rusticaria* WILEMAN, 1911, Entom. 45: 91
 Wulai, 8. vii. 1961, 2♂.
61. *Cleora alienaria* (WALKER)
Boarmia alienaria WALKER, 1860, List lep. Ins. Brit. Mus. 21: 370.
 ?*Boarmia acaciaria* (partim), HAMPSON, 1895, Fauna Brit. Ind. Moths, 3: 264
 ?*Alcis acaciaria* (partim), PROUT, 1914, Ent. Mitteil. 3: 268.
 Wushe, 23. vi. 1961, 1♂; Chihpen, 1. vii. 1961, 1♀; Wulai, 8. & 10. vii. 1961, 2♂, 5♀.



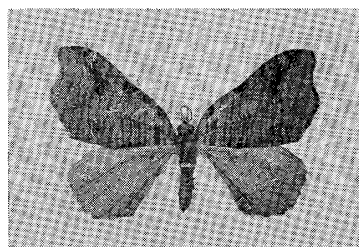
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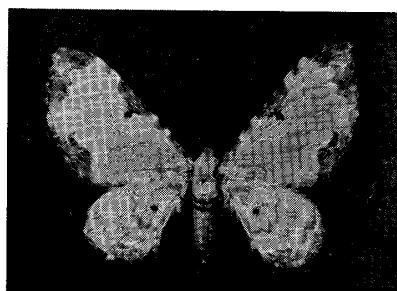
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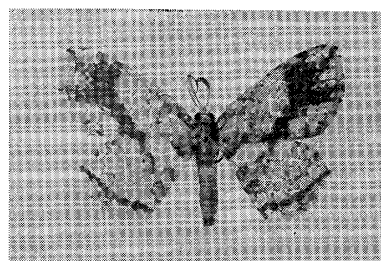
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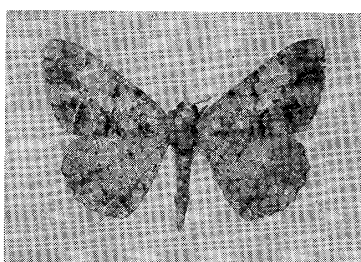
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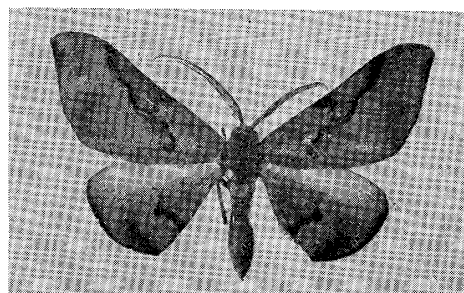
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EXPLANATION OF FIGURES

Fig. 1. *Terpna taiwana* (WILEMAN), ♂.

Fig. 3. *Problepsis conjunctiva subconjunctiva* PROUT, ♀.

Fig. 5. *Microloba bella ogatai* subsp. nov. Paratype, ♂.

Fig. 7. *Ectropis nigriflex* PROUT, ♂.

Fig. 2. *Agathia laetata furcula* MATSUMURA, ♂.

Fig. 4. *Gonanticlea aversa* SWINHOE, ♀.

Fig. 6. *Parasynechia suffusa* WARREN, ♂.

Fig. 8. *Hypochrosis pyrrhophaeata* WALKER, ♂.