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MOTHS OF NEPAL
Part 6



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「ネパールの蛾 第6集」の刊行にあたって

本シリーズの第5集が出版されてから、早くも2年半が過ぎてしまった。その間、新たな採集品の追加などはあまり多くなかったが、執筆者たちの研究の進展によって新たな知見が蓄積され、また、海外の研究者からもネパールの蛾に関する研究報告が寄せられた。本書では、第1～5集——第1,2集(ゴダバリ地域)、第3集(東部ネパール)、第4集(高山帯)、第5集(中・西部ネパール)——の追加種の記録を扱うとともに、新たに7篇の研究報告を掲載した。

本書においては、本シリーズの既刊分と同様、学名、原記載の出典、採集データの記録を表示し、かつ1種類について少なくとも1個体をカラー写真で表示するのを原則とした。しかし既に既刊分において記録された種類については、原記載の出典とカラー写真を省略し、カラー写真については図版の頁及び番号でその所在を示した。

なお、本書において記載された新タクサのholotypeは(一部の明記してあるものを除いて)国立科学博物館に所蔵され、paratypeを含む残余の標本は各執筆者の手許に残される予定である。

カラー図版の撮影をお願いした山口 茂氏、採集品を提供していただいた鈴木亨治、白川邦臣、中島秀雄の諸氏に深謝する。

最後に、本書の出版にあたってさまざまなご援助をいただいた春田静子夫人に、著者を代表して厚くお礼申しあげる。

2000年12月5日

岸田泰則

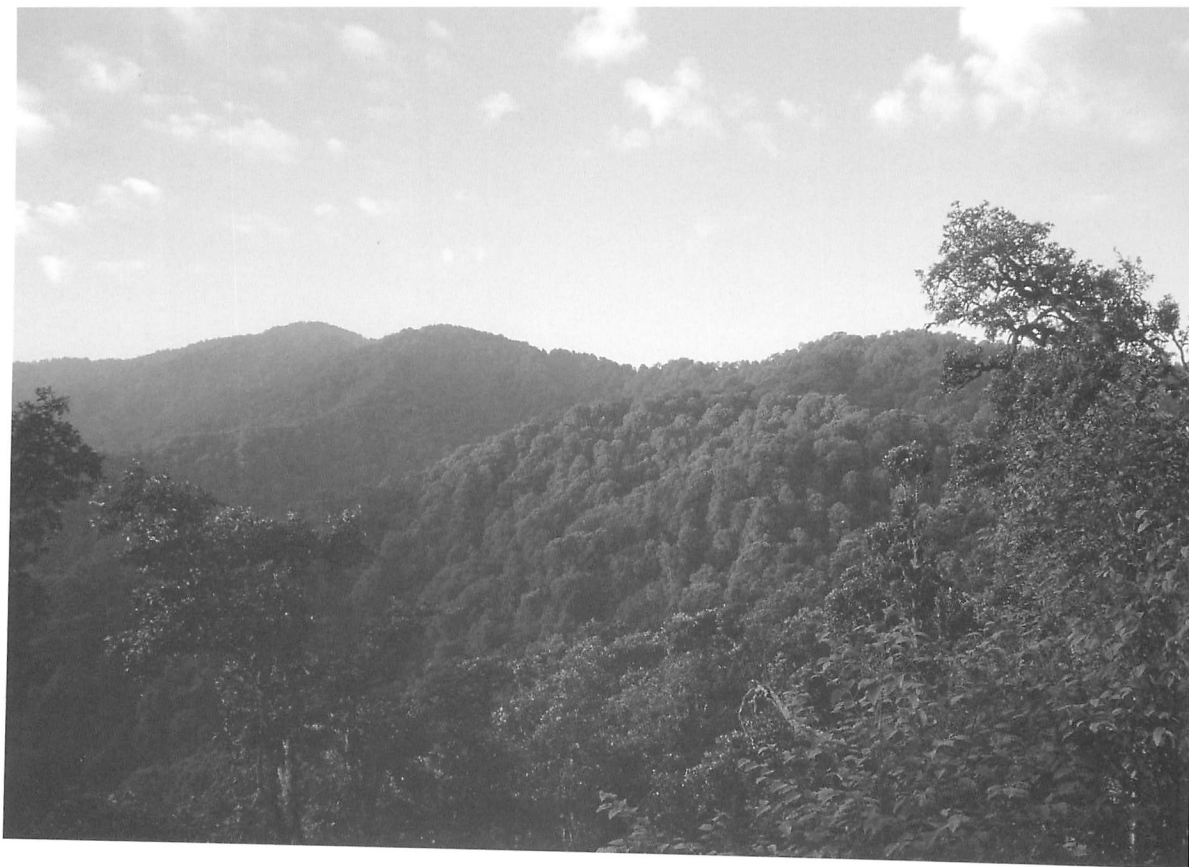
Introduction to “Moths of Nepal, Part 6”

Part 6 of “Moths of Nepal” contains additions and corrections to the records in the previous parts of this series, and seven papers dealing with Nepalese moths based on a material derived from some sources besides Haruta collection.

In the text, the scientific name, full reference to its original description and collecting data with at least one color picture are given for each species. But on the species already dealt in parts 1–5 of this series, the reference of the original description and color picture are omitted.

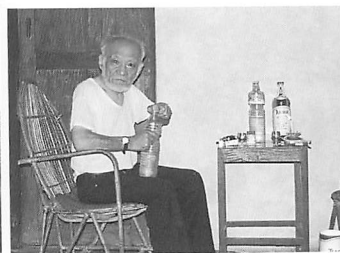
The holotypes of new taxa described here will be deposited in the National Science Museum, Tokyo, unless otherwise stated. Most of the material including paratypes of new taxa will be kept in each author’s collection.

5 December 2000
Yasunori Kishida



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The genus *Agalope* (s. str.) (Zygaenidae, Chalcosiinae) from the Himalayas and the Indo-Chinese Peninsula

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The genus *Agalope* in a strict sense (the *hyalina* group) will be revised in this paper. Mr Shen-Hon Yen is now analyzing the phylogenetic account of the subfamily Chalcosiinae, and a wide sense of *Agalope*, including *Achelura* and *Elcysma*, etc., will be revised by Owada and Yen in near future.

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Agalope hyalina (Kollar) (Plate 161: 1-7)

Chalcosia hyalina Kollar, [1844]: 462.

Agalope basalis Walker, 1854: 438.

Agalope hyalina: Jordan, [1907]: 13, part, pl. 3-b; Jordan, 1907: 26, part; Bryk, 1936: 182, part; Owada, 1992: 87, figs 6-7, 10, 17; Horie, 1993: 2, figs 110-111.

Distribution. Afghanistan, NW India (Kashmir), W & C Nepal (Karnali, Langtang, Kathmandu V.).

Material examined. Lectotype (Fig. 1245-A) of *Agalope basalis* Walker, 1854, ♂, designated herein, labeled "Blue round mark / N. India, 48-131 / *Agalope basalis*", in BMNH. NW India: Kashmir, Upper Sonamarg, Shogudari 3,200m, 1 ♂, 4. VIII. 1997, T. Katayama leg. Nepal: Karnali, Jumla, Ghughuti 2,660m, 21 ♂ 4 ♀, 21. IX. 1981, M. Owada & Y. Nishikawa leg.; Jumla, Jhari 2,550m, 1 ♀, 24. IX. 1981, M. Owada leg.; Kathmandu Valley, Mt Phulcoki 2,700m, 1 ♀, 19. V. 1984, A. Yokokura leg.; Sagarmatha, Solukhumbu, Paplu, 1 ♀, 19-20. V. 1985.

Notes. West Himalayan species. Of the males from the Karnali Zone of Nepal, ten specimens are melanic (Plate 161: 4, 5) and eleven are typical (Plate 161: 2, 3). Seven females are all typical (Plate 161: 6).

Agalope butleri Owada et Horie, **nom. nov.** (Plate 161: 8-11)

Agalope glacialis Butler, 1881: 26, pl. 84, fig. 6, *nec* Moore, 1872: 570; Horie, 1993: 2, fig. 112, pl. 33, fig. 15.

Agalope hyalina ab. *glacialis*: Jordan, 1907: 26.

Agalope hyalina f. *glacialis*: Bryk, 1936: 182.

Agalope hyalina: Endo & Kishida, 1999: 47, fig. 10, pp. 96 and 107, part.

Distribution. C & E Nepal, NE India (Darjeeling), Bhutan.

Material examined. Lectotype (or holotype) (Fig. 1245-B) of *Agalope glacialis* Butler, 1881, ♀, designated herein, labels as in Fig. 1245-C, in BMNH. Nepal: Annapurna Himal, Kali Gandaki, Karapani–Ghasa, 1 ♀, 2. VI. 1974, S. Yamaguchi & T. Aoki, Genit. Slide No. NSMT2245 ♀; Kathmandu V., Godavari 1,550m, 1 ♂, 19. V. 1984, A. Yokokura leg., Genit. Slide No. NSMT2171 ♂, 1 ♂, 11. VI. 1963, T. Haruta leg., Genit. Slide No. NSMT2244 ♂; Janakpur, Jiri 1,900m, 1 ♂ 1 ♀, 24. V. 1995, Jiri 2,340m, 1 ♀, 12–17. IV. 1996, T. Haruta leg.; Sagarmatha, Solukhumbu, Paplu, 6 ♂ 2 ♀, 19–20. V. 1985.

Notes. East Himalayan species, sympatric with *A. hyalina* in Central Nepal. This species is discriminated from the latter by the pure white hindwing instead of creamy white one.

In the original description, the number of the type specimens was not stated. There is only a female specimen in the collection of BMNH, with a hand-written label “*Agalope glacialis* Butler, Type”, without round type label (Fig. 1245-C). This specimen seems to accord with the illustration of the original description (Butler, 1881, pl. 84, fig. 6).

Chelura glacialis Moore, 1872, was traditionally placed under the genus *Chelura* Hope, 1840, nec Philippi, 1839, or *Achelura* Kirby, 1892, a replacement name for *Chelura* Hope. Jordan (1907) transferred *Achelura bifasciata* (Hope, 1940) and *A. glacialis* Moore to the genus *Agalope*, and the species-group names of *Agalope glacialis* Butler, 1881, and *Agalope glacialis* (Moore, 1872) became secondary homonyms. The replacement name for *Agalope glacialis* Butler was not proposed, since the nominal taxon was treated as an abberancy (Jordan, 1907) or a forma (Bryk, 1936) of *Agalope hyalina* (Kollar). In the course of studies on the Himalayan and Taiwanese *Agalope*, we became aware of the possibility that *Agalope glacialis* Butler is specifically different from *A. hyalina*, and intentionally used older combination for the senior one, *Achelura glacialis* (Moore) (Owada, 1992; Horie, 1993). By our recent examination of the male and female genitalia, however, *Chelura glacialis* Moore is considered to be related to the *Agalope pica* group, *sensu* Owada, 1992, rather than *Achelura*, and, as was already pointed by Owada (1992), this moth is somewhat intermediate between *Agalope* and *Elcysma* Butler, 1881. Therefore, we combined *Chelura glacialis* Moore, 1872, with the genus *Agalope* again in this paper. This arrangement is supported by phylogenetic studies on the subfamily Chalcosiinae by Shen-Hon Yen (personal communication).

***Agalope suzukikojii* Horie, sp. nov. (Plate 161: 12, 13)**

Distribution. Nepal (Langtang Himal).

Type series. Holotype (Plate 161: 12), ♂, C Nepal, Bagmati, Langtang Himal, Kyanjing 3,880m, 24. VII. 1992, K. Suzuki leg., Genit. Slide No. NSMT2474 ♂, in NSMT. Paratypes: 4 ♂ 1 ♀, same data as holotype, Genit. Slide No. NSMT2475 ♀; Bagmati, Langtang Himal, Kyanjin Gompa 3,800m, 5 ♂ 2 ♀, 12. VIII. 1993, K. Shirakawa, in NSMT and Horie collections.

Wing maculation similar to those of the preceding two species. Rather small, length of forewing 14–16 mm in male, 14–15 mm in female. Pectination of male antenna clearly longer in proportion. Ground colour of wings creamy white, dusted with greyish scales, veins dark grey, particularly in hindwing.

Male genitalia (Fig. 1246-A). Bifurcate projections of 8th abdominal tergite short and wide. Uncus rather narrow in basal portion. Gnathos short and thick in proportion. Distal part of valva short, smoothly narrowed. Aedeagus short, rather broad.

Notes. This moth is a high altitude flyer, and is clearly distinguished from the preceding two species by the long pectinate male antenna.

***Agalope harutai* Horie, sp. nov. (Plate 161: 14, 15)**

Distribution. W Nepal (Karnali).

Type series. Holotype (Plate 161: 14), ♂, W Nepal, Karnali, Jumla, Danpha Lekh 3,600m, 22.

IX. 1981, M. Owada leg., Genit. Slide No. NSMT2137 ♂; paratype, 1 ♂, same data as holotype, in NSMT.

Very similar to *A. suzukikojii*. Larger, length of forewing 18–19 mm in male.

Male genitalia (Fig. 1246-B). Larger than those of *A. suzukikojii*. Bifurcate projections of 8th abdominal tergite long and wide. Uncus rather broad in basal portion. Gnathos rather slender. Distal part of valva long, angulate before apex. Aedeagus long, slender.

Notes. In the Jumla District of the Karnali Zone, western Nepal, this species is allopatric with *A. hyalina* with altitude, that is, a high altitude (3,600m) flyer of *A. harutai* and a low altitude (2,550–2,660m) one of *A. hyalina*. Relationship of the two populations of the high altitude flyers, *A. suzukikojii* and *A. harutai*, is not clear. Their wing shape and maculation are very similar, but the size of their body and genitalia is rather different.

***Agalope mineti* Owada, sp. nov.** (Plate 161: 17)

Distribution. China (Sichuan).

Type series. Holotype (Plate 161: 17), ♂, labeled “Thibet, Chasseur de Ta-tsyen-lou, Ete 1892; Museum Paris, R. Oberthür”; paratype, 1 ♂, with a label “Museum Paris, R. Oberthür”, only, in MHNP.

The type specimens are rather worn. The wing maculation of this species is similar to that of the following species, *A. primularis*, though paler. The basal orange mark larger than that of *primularis*, and the outer margin obscure. Ground colour of the upperside of forewing much tinged with yellow than that of *A. hyalina* and *A. butleri*.

Male genitalia (Fig. 1246-C). Very similar to those of *A. hyalina*, *A. butleri*, *A. suzukikojii* and *A. harutai*. Uncus short, robust. Gnathos slender. Apex of valva with a small sclerotized plate, without stout spines, which are present in the latter four species; costa of valva angulate before apex. Aedeagus slender.

Notes. Though the coloration of this species is very similar to that of *A. primularis*, the male genitalia are similar to those of the four preceding species. The type locality, Ta-tsyen-lou, is now belonging to Sichuan, SW China.

***Agalope primularis* Butler, 1875** (Plate 161: 16)

Agalope primularis Butler, 1875: 392; Butler, 1881: 26, pl. 84, fig. 7; Horie, 1993: 3, fig. 113, pl. 33, fig. 16.

Agalope hyalina ab. *primularis*: Jordan, 1907: 26.

Agalope hyalina f. *primularis*: Bryk, 1936: 183; Endo & Kishida, 1999: 47, fig. 9.

Distribution. E Nepal, NE India (Darjeeling, Assam).

Material examined. Lectotype (Fig. 1245-D) of *Agalope primularis* Butler, 1875, ♂, designated herein, labels as in Fig. 1245-E, in BMNH. Nepal: Kathmandu V., Godavari 1,600m, 1 ♂, 12. IV. 1992, B. Krishna leg., Genit. Slide No. NSMT2264 ♂; Janakpur, Jiri 2,340m, 1 ♂, 12–17. IV. 1996, T. Haruta leg.

Notes. This species was described on the basis of a pair of specimens. Although the male specimen bears a hand-written label “*A. primularis* Butler, Type”, a red or blue round mark of the type specimen is not pinned on it. However, the collecting date on another label “May 74” accords with the original description. Therefore, we designate it as the lectotype.

Endo & Kishida (1999) still retained this taxon as a forma of *A. hyalina*, though Horie (1993, fig. 113) illustrated the male genitalia clearly different from those of *A. hyalina* (see Owada, 1992, fig. 10).

***Agalope grandis* Mell (Plate 161: 18–19)**

Agalope grandis Mell, 1922: 129; Bryk, 1936: 182.

Distribution. China (Guangdong).

Material examined. Lectotype (Plate 161: 18) of *Agalope grandis* Mell, 1922, ♂, labeled “Type [on red label] / Lp, 1 X 20 / *Agal. hyalina grandis* ♂ Mell, Type! Joohungisform (?)”, designated herein; paralectotype (Plate 161: 19), ♀, labeled “Type [on red label] / *Agalope hyalina grandis* ssp. n., Joohung (?), 20.6.1911”, in MNHB.

Male genitalia (Fig. 1247-A). Similar to those of *A. formosana* (see Owada, 1992, fig. 11) and *A. primularis* (see Horie, 1993, fig. 113), but much larger. Uncus long, broad. Gnathos stout, distal margin rectangular. Valva slender, ventral margin furrowed before apex, acute apical portion protruded, clothed with many minute projections. Distal margin of 8th tergite short wide bifurcate.

Notes. Large species, length of forewing 25 mm in male, 30 mm in female.

***Agalope kishidaograndis* Owada et Horie, sp. nov. (Pl. 161: 20, 21)**

Agalope sp.: Endo & Kishida, 1999: 47, fig. 11.

Distribution. N Vietnam, Laos.

Type series. Holotype (Plate 161: 20), ♂, N Vietnam, Lao Cai, Sa Pa 1,500–1,950m, 27–30. V. 1997, Y. Okushima leg., Genit. Slide No. NSMT2490 ♂, in NSMT. Paratypes: Same locality as holotype, Deo Tram Ton 1,900m, 1 ♀, 8, 9. X. 1997. M. Owada leg., Deo O Quy Ho 1,750m, 1 ♀, 14–16. VI. 2000, M. Owada leg., in NSMT; Laos, Xam Neua, 2 ♂ 8 ♀, II, IV, V. 2000, 2 ♀, 7, 14. IV. 1997, 39 ♂ 13 ♀, IX–XI. 2000, in NSMT and Horie collections.

Very similar to *A. grandis*, but smaller. Length of forewing, 21–22 mm in male, 21–22 mm in female.

Male genitalia (Fig. 1247-B). Similar to those of *A. grandis*, but smaller. Uncus rather slender. Gnathos slenderer, with round apex. Valva shorter, furrows on ventral margin weak, apex not so protruded, minute projections in apical portion fewer. Distal margin of 8th tergite deeply concave.

Notes. This taxon may possibly be a subspecies of *A. grandis*, but the male genitalia differ to some extent from those of the latter.

***Agalope formosana* Matsumura, 1927**

Agalope hyalina: Matsumura, 1911: 82, pl. 31, fig. 11; 1931: 983.

Agalope hyalina formosana Matsumura, 1927, 82, pl. 5, fig. 5;

Agalope formosana: Owada, 1992: 86, figs 1, 11; Wang, 1999: 18, fig.

Distribution. Taiwan.

Notes. Owada (1992) illustrated the male holotype and the genitalia, which are clearly different from those of *A. hyalina*. Wang (1999) illustrated a second specimen, a female collected at Tzuen, Hualien, on 12th September.

The moths of the *hyalina* group can be divided into two subgroups by the shape of valva of the male genitalia, that is, the apical portion of valva bluntly pointed and clothed densely with hair scales: *A. hyalina*, *A. butleri*, *A. suzukikojii*, *A. harutai* and *A. mineti*, and the apical portion of valva acutely pointed and not clothed with hair scales: *A. primularis*, *A. grandis*, *A. kishidaograndis* and *A. formosana*.

References

- Bryk, F., 1936. Zygaenidae II. In Strand, E. (ed.), *Lepid. Cat.* (71): 1–332.
- Butler, A. G., 1875. Descriptions of several new species of Indian heterocerous Lepidoptera. *Proc. zool. Soc. Lond.* **1875**: 391–393.
- Butler, A. G., 1881. *Illustrations of Typical Specimens of Lepidoptera Heterocera in the Collection of the British Museum*. Part V. xii + 74 pp, pls 78–100. London.
- Endo, T. & Y. Kishida, 1999. Day-flying Moths, Chalcosiinae and *Epicopeia*. In Endo, T. (ed.), *Endless Collection Series 8*. 119 pp. Endless Science Information, Tokyo.
- Horie, K., 1993. Zygaenidae. In Haruta, T. (ed.), *Moths of Nepal* (2). *Tinea* **13** (Suppl. 1): 1–4, pl. 33.
- Jordan, K., [1907], 1912. Zygaenidae. In Seitz, A. (ed.), *Gross-Schmett. Erde* **2**: 3–18 ([1907]), 441 (1912), pls. 1–3, 56.
- Jordan, K., 1907, 1911. Zygaenidae. In Seitz, A. (ed.), *Gross-Schmett. Erde* **10**: 5–52 (1907), 53–56 (1911), pls. 1–8.
- Matsumura, S., 1911. *Thousand Insects of Japan*. Supplement **3**. 147 pp., pls. 30–41. (In Japanese.)
- Matsumura, S., 1927. New species and subspecies of moths from the Japanese Empire. *J. College Agr. Hokkaido imp. Univ.* **19**: 1–91, pls. 1–5.
- Matsumura, S., 1931. *6000 Illustrated Insects of the Japan-Empire*. 2 + 2 + 3 + 23 + 1497 + 191 pp. Toko Shoin, Tokyo. (In Japanese.)
- Mell, R., 1922. Neue sudchinesische Lepidoptera. *Dt. ent. Z.* **1922**: 113–129.
- Moore, F., 1872. Descriptions of new Indian Lepidoptera. *Proc. zool. Soc. Lond.* **1872**: 555–583, pls 32–34.
- Owada, M., 1992. The chalcosiine moths of *Agalope* (Lepidoptera, Zygaenidae) from Taiwan, with notes on allied genera. *Jap. J. Ent.* **60**: 85–95.
- Walker, F., 1854. *List Specimens lepid. Insects Colln Br. Mus.* **2**: 279–581.
- Wang, Hsiau Yue, 1999. Dayflying moths, Uraniidae and Epiplemyidae. In Wang, H. Y. (ed.), *Guide Book to Insects in Taiwan* (2), rev. ed. 107 pp.



Fig. 1245. Type specimens and labels of *Agalope*. A. *A. basalis* Walker, lectotype ♂. B. *A. glacialis* Butler, lectotype ♀. C. *Ditto*, labels. D. *A. primularis* Butler, lectotype ♂. E. *Ditto*, labels. Pin scale: ca 1 cm.

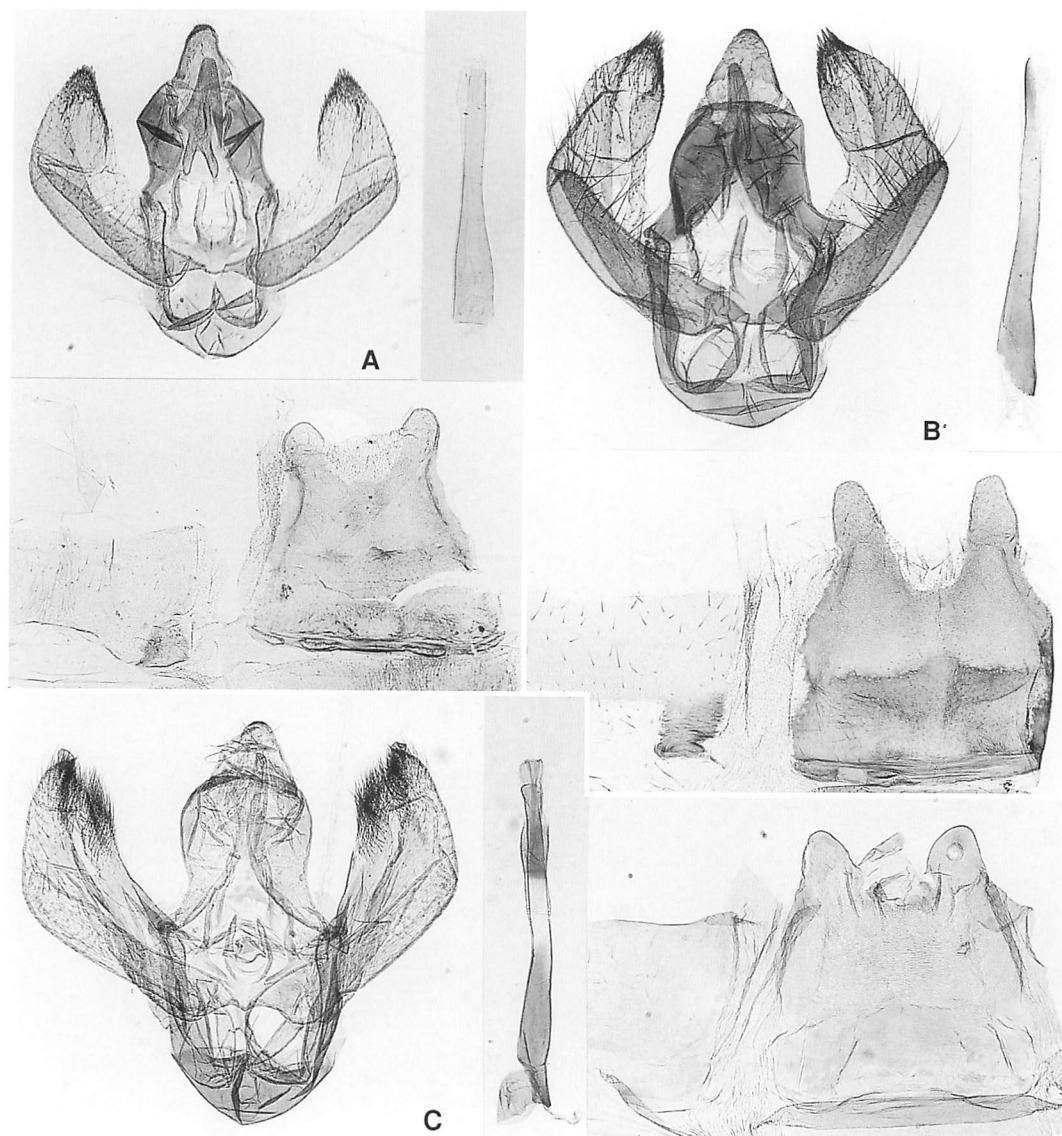


Fig. 1246. Male genitalia of *Agalope*. A. *A. suzukiojii* Horie, paratype. B. *A. harutai* Horie, holotype. C. *A. mineti* Owada, holotype.

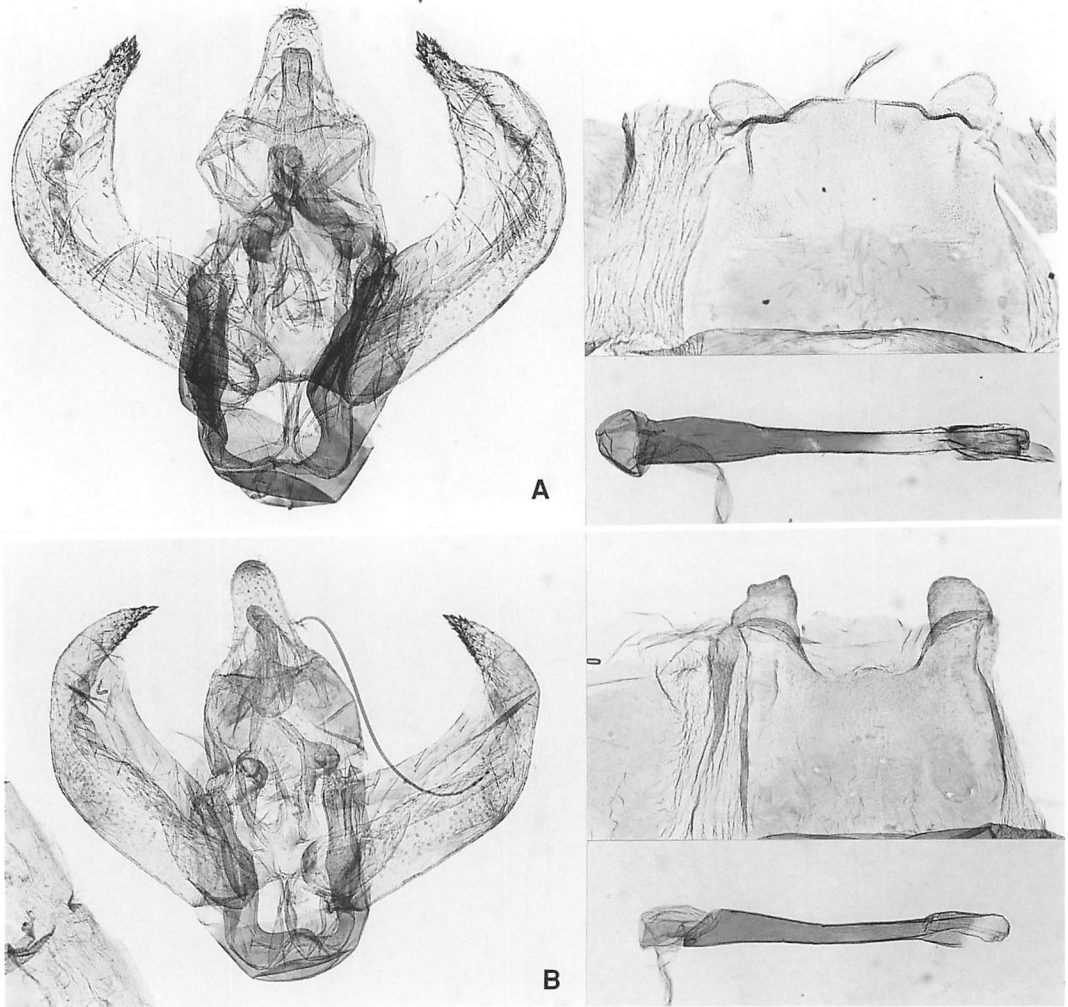


Fig. 1247. Male genitalia of *Agalope*. A. *A. grandis* Mell, lectotype. B. *A. kishidaograndis* Owada et Horie, holotype.

GEOMETRIDAE

Katsumi Yazaki

GEOMETRINAE

Comibaena nepalensis sp. n. (Pl. 162: 1)

♂. Expanse 24–27 mm. Very similar to *C. pictipennis* Butler, distinguished only by having tornal rufous blotch on forewing a little smaller, situated somewhat more distally, discal spot on both wings smaller and more clearly marked, distal rufous marking on hindwing much broader in cells between veins M_3 and CuA_2 . Female unknown.

Male genitalia (Fig. 1248). Socius rather small, not so strongly protruded before apex as in *pictipennis* (Fig. 1249). Valva with median process much broader. Saccus with bilateral processes much more slender with bluntny pointed apex than in *pictipennis*.

Holotype. ♂, Godavari, 16. iv. 1993 (M. S. Limbu). Paratypes. Godavari: 1 ♂, 23. iv. 1990; 1 ♂, 18. iv. 1991; 1 ♂, 11. x. 1991; 1 ♂, 23. iii. 1992. India, Dalapchand Aritaal: 1500 m, 1 ♂, 31. xii. 1991; 2 ♂, 21. iii. 1992; 1 ♂, 3. ix. 1992.

STERRHINAE

Antitrygodes vicina (Thierry-Mieg) (Pl. 162: 2)

Trygodes vicina Thierry-Mieg, 1907, *Naturaliste* 29: 271.

[Janakpur] Sindhulimadi 550 m, 1 ♀, 3. x. 1986.

LARENTIINAE

Isoloba bifasciata Warren (Pl. 162: 3)

Isoloba bifasciata Warren, 1893, *Proc. zool. Soc. Lond.* 1893: 345 pl. 32, fig. 18.

[Sagarmatha] Goyam 3120 m, 1 ♀, 13. viii. 1997 (K. Shirakawa).

Cryptoloba minor Warren (Pl. 162: 4)

Cryptoloba minor Warren, 1893, *Proc. zool. Soc. Lond.* 1893: 344.

[Sagarmatha] Surkhe 2340 m, 1 ♂, 5. viii. 1997 (K. Shirakawa).

Cryptoloba mesta Prout (Pl. 162: 5)

Cryptoloba mesta Prout, 1958, *Bull. Br. Mus. nat. Hist. (Ent.)* 6: 449, fig. 35.

[Bagmati] Langtang Himal, Syabru 2200 m, 1 ♂, 8. viii. 1993 (H. Nakajima).

Stamnodes elwesi Alphéraky (Pl. 162: 6)

Stamnodes elwesi Alphéraky, 1895, *Dt. ent. Z. Iris* 8: 202.

[Sagarmatha] Phulcyang 3000 m, 1 ♀, 9. viii. 1997 (K. Shirakawa); Goyam 3120 m, 1 ♀, 13. viii. 1997 (K. Shirakawa).

Nebula cupreata (Moore), **comb. n.** (Pl. 162: 7)

Melanippe cupreata Moore, 1868, *Proc. zool. Soc. Lond.* 1867: 655.

Nr Nilgiri, Karbani, 1 ♂, 8–11. vii. 1969 (T. Miyashita).

This species was transferred from “*Coenotephria*” to *Protonebula* by Inoue (1986). However the male genitalia (cf. Xue & Zhu, 1999, fig. 670) appear to be similar to those of *Nebula*, with which

Coenotephria was already synonymized, rather than to those of *Protonebula*, having simple valva without costal process, and labides not clinging to anellus. Therefore *cupreata* is here treated as a member of *Nebula*.

“*Nebura*” *brevifasciata* (Warren) (Pl. 162: 17)

Cidaria brevifasciata Warren, 1888, *Proc. zool. Soc. Lond.* **1888**: 330.

[Karnali] Mugu, Rara Lake 2990 m, 1 ♂, 25-26. ix. 1981 (M. Owada).

From the male genitalia this species is surely not a member of “*Nebura*”, but its exact systematic position is at present unclear.

***Dysstroma planifasciata* (Prout) (Pl. 162: 8)**

Cidaria planifasciata Prout, 1914, in Seitz, *Macrolepid. World* **4**: 220, pl. 13, row e.

[Bagmati] Langtang Himal, Kyanjing 3910 m, 4 ♂ 1 ♀, 11-12. viii. 1993 (H. Nakajima).

[Dhaulagiri] Arubali 3600 m, 1 ♂, 8-9. viii. 1998 (K. Shirakawa).

***Dysstroma dentifera* (Warren) (Pl. 162: 9)**

Polyfasia dentifera Warren, 1896, *Novit. zool.* **3**: 387.

[Sagarmatha] Solukhumbu, Everest View Hotel 3880 m, 1 ♂, 17-20. v. 1993. Nacheng, nr Nilgiri, 1 ♂, 12-14. vi. 1969.

***Dysstroma tenebricosa* (Heydemann) (Pl. 162: 10)**

Cidaria tenebricosa Heydemann, 1929, *Mitt. münch. ent. Ges.* **19**: 278, pl. 6, fig. 18.

[Sagarmatha] Pamge 3645 m, 2 ♂ 1 ♀, 14. viii. 1995, 1 ♀, 11. viii. 1997 (K. Shirakawa);

Phapkey 3495 m, 1 ♀, 16. viii. 1995 (K. Shirakawa); Goyam 3120 m, 1 ♂, 13. viii. 1997 (K. Shirakawa).

***Dysstroma aquilum* sp. n. (Pl. 162: 11)**

Somewhat similar to dark form of *D. tenebricosa*. Expanse 24–26 mm in male, 28 mm in female, smaller in size than *tenebricosa* (26–30 mm in male, 28–31 mm in female). Forewing bluish black without median pale area; subbasal and postmedian white lines lacking distal brown fascia seen in *tenebricosa*; postmedian line much more slender in posterior third than in *tenebricosa*; subterminal line whitish, more intensely sinuate and more distinct than in *tenebricosa*. Hindwing brownish fuscous nearly as in *tenebricosa*.

Male genitalia (Fig. 1250). Similar to those of *tenebricosa* (Fig. 1251). Valva a little shorter and less broad in distal half than in *tenebricosa*. Aedeagus vesica with cornuti consisting of longer and stouter spines.

Female genitalia (Fig. 1256). Ductus bursae somewhat shorter and broader than in *tenebricosa* (Fig. 1257). Corpus bursae smaller; signum relatively larger.

Holotype. ♀, Bagmati, Langtang Himal, Langtang 3500 m, 10. viii. 1993 (H. Nakajima).

Paratypes. Same data as holotype, 1 ♂. Sagarmatha, Pamge 3645 m, 1 ♂, 12. viii. 1997 (K. Shirakawa).

This new species is distinguished from most of congeners by forewing lacking median pale area and brownish fascia, and by brownish fuscous hindwing. The specimens recorded as *D. tenebricosa* from Nepal by Inoue (1987: 222) may belong to this new species.

***Dysstroma shirakawai* sp. n. (Pl. 162: 12)**

Expanse 27–29 mm in male, 29–31 mm in female. Coloration and maculation of forewing very similar to those of *D. subapicaria* (Moore). Forewing with ground color darker and less brownish; postmedian fascia situated a little more proximally, with costal white patch more

distinctly marked. Hindwing blackish brown instead of pale brownish gray in *subapicaria*.

Male genitalia (Fig. 1253). Valva slightly less broad in median area than in *subapicaria* (Fig. 1252). Aedeagus vesica with cornuti of a much longer and thicker bunch of spines.

Female genitalia (Fig. 1259). Ductus bursae as in *subapicaria* (Fig. 1258). Corpus bursae much larger; signum relatively long and slender, spindle-like instead of belt-like with roundly truncate cephalic end in *subapicaria*.

Holotype. ♂, Sagarmatha, Phapkey 3495 m, 16. viii. 1995 (K. Shirakawa). Paratypes. Same data as holotype, 1 ♂. Sagarmatha: Goyam 3120 m, 1 ♂ 1 ♀, 17. viii. 1995 (K. Shirakawa); Pamge 3645 m, 1 ♂ 1 ♀, 14. viii. 1995, 1 ♀, 11. viii. 1997 (K. Shirakawa). Bagmati, Langtang Himal, Kyanjing 3910 m, 2 ♂, 11-12. viii. 1993 (H. Nakajima).

The large costal white patch and the blackish brown hindwing immediately distinguish this new species from congeners.

“*Melanthia*” *exquisita* (Warren) (Pl. 162: 13)

Cidaria exquisita Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 375, pl. 30, fig. 2.

[Sagarmatha] Phulcyang 3000 m, 1 ♀, 9. viii. 1997 (K. Shirakawa); Goyam 3120 m, 1 ♂ 1 ♀, 13. viii. 1997 (K. Shirakawa).

This species has very characteristic male genitalia (Fig. 1255) showing *exquisita* not to belong to the genus *Melanthia*. Further study is required to make clear the systematic position of this species.

***Hydrelia elegans* (Inoue), comb. n. (Pl. 162: 14)**

Palpoctenidia elegans Inoue, 1982, *Bull. Fac. domest. Sci. Otsuma Wom. Univ.* **18**: 163, fig. 29F.

[Janakpur] Gate Khola 2540 m, 1 ♂, 15. viii. 1997 (K. Shirakawa).

This species was described on the basis of only a single female from Nepal. The male genitalia (Fig. 1254) show this species to be placed in the genus *Hydrelia*. A similar species distributed in China, *conspicuarica* (Leech), was recently transferred to *Hydrelia* by Xue & Zhu (1999).

***Acolutha pictaria* (Moore) (Pl. 162: 15)**

Emmelesia pictaria Moore, 1888, in Hewitson & Moore, *Descr. new Indian lepid. Insects Colln late Mr Atkinson*: 267.

Mt Phulchouki: 1 ♀, 30. iv-5. v. 1996.

***Cidaria basharica* Bang-Haas (Pl. 162: 16)**

Cidaria basharica Bang-Haas, 1927, *Horae macrolepidopt. Reg. palaearct.* **1**: 93, pl. 11, fig. 20.

[Mahakali] Darchula, Kuntisong 2900 m, 1 ♂, 9. vii. 1995.

ENNOMINAE

***Oxymacaria penumbrata* (Warren) (Pl. 162: 18)**

Semiothisa penumbrata Warren, 1896, *Novit. zool.* **3**: 141.

Godavari, 1 ♂, 25. v. 1991. Mt Phulchouki: 1 ♀, 31. v. 1990; 1 ♂ 1 ♀, 21. vii. 1990. [Mechi] Amjilasa 2350 m, 1 ♂, 8. vii. 1996. [Gandaki] Pokhara 850 m, 1 ♂, 3-6. viii. 1992.

***Oxymacaria nepalensis* (Inoue), stat. n. (Pl. 162: 19)**

Heterocallia penumbrata nepalensis Inoue, 1987, *Bull. Fac. domest. Sci. Otsuma Wom. Univ.* **23**: 255, fig. 73B.

[Bagmati] Langtang Himal: Syabru 2200 m, 1 ♂, 8. viii. 1993 (H. Nakajima); Langtang 3500 m, 1 ♂, 22. vii. 1992 (K. Suzuki); Lama Hotel 2390 m, 1 ♂ 1 ♀, 25. vii. 1992 (K. Suzuki).

This species was originally described as a subspecies of *O. penumbrata*. An examination of syntypes of *penumbrata* (Pl. 162: 22) reveals that *nepalensis* is an independent species. The genitalia of both sexes of the two species scarcely show specific distinction as in most species in this genus. The male genitalia of *nepalensis* (Fig. 1263) have valva with rather broad and round apical margin instead of bluntly pointed one in *penumbrata* (Fig. 1262). The female genitalia of *nepalensis* (Fig. 1261) have corpus bursae somewhat shorter than in *penumbrata* (Fig. 1260), and have a little differently shaped signum as shown in figures.

Oxymacaria brunneata (Warren) (Pl. 162: 20)

Semiothisa brunneata Warren, 1896, *Novit. zool.* 3: 140.

[Janakpur] Jiri, 1 ♂, 20-22. iii. 1993. 1 ♂ 2 ♀, 17-19. v. 1993. [Sagarmatha] Mahavir, 2 ♂, 26. v. 1993.

O. brunneata is treated as a subspecies of *O. maculosata* (Warren) (Pl. 162: 25, syntype ♂), described from India (Khasi Hills), in Persons *et al.* (1999). From an examination of syntypes of these two taxa (a male syntype of *brunneata* is figured in Pl. 162: 23) it should be better to retain *brunneata* as an independent species. This species is rather similar to *penumbrata* than to *maculosata*, and is distinguished from the former by forewing having a large blackish brown patch on postmedian line, and hindwing with less sinuous median line.

Oxymacaria intersectaria (Leech) (Pl. 162: 21)

Macaria intersectaria Leech, 1897, *Ann. Mag. nat. Hist.* (6) 19: 310.

[Mechi] Laam Pokhari 2850 m, 1 ♂, 30. vii. 1996.

This is the first record of this species from outside China. The identification was based on a comparison with holotype of *intersectaria* (Pl. 162: 24). *O. maculosata* appears to be somewhat similar to this species, but is separable in having forewing with postmedian line not so oblique, and blackish brown patch on postmedian line larger.

Odontopera rufitinctaria (Hampson), **comb. n.** (Pl. 11: 11)

Leptomiza rufitinctaria Hampson, 1902, *J. Bombay nat. Hist. Soc.* 14: 502.

Odontopera perplexa Yazaki, 1992, *Tinea* 13 (Suppl. 2): 36, pl. 11, fig. 11, **syn. n.**

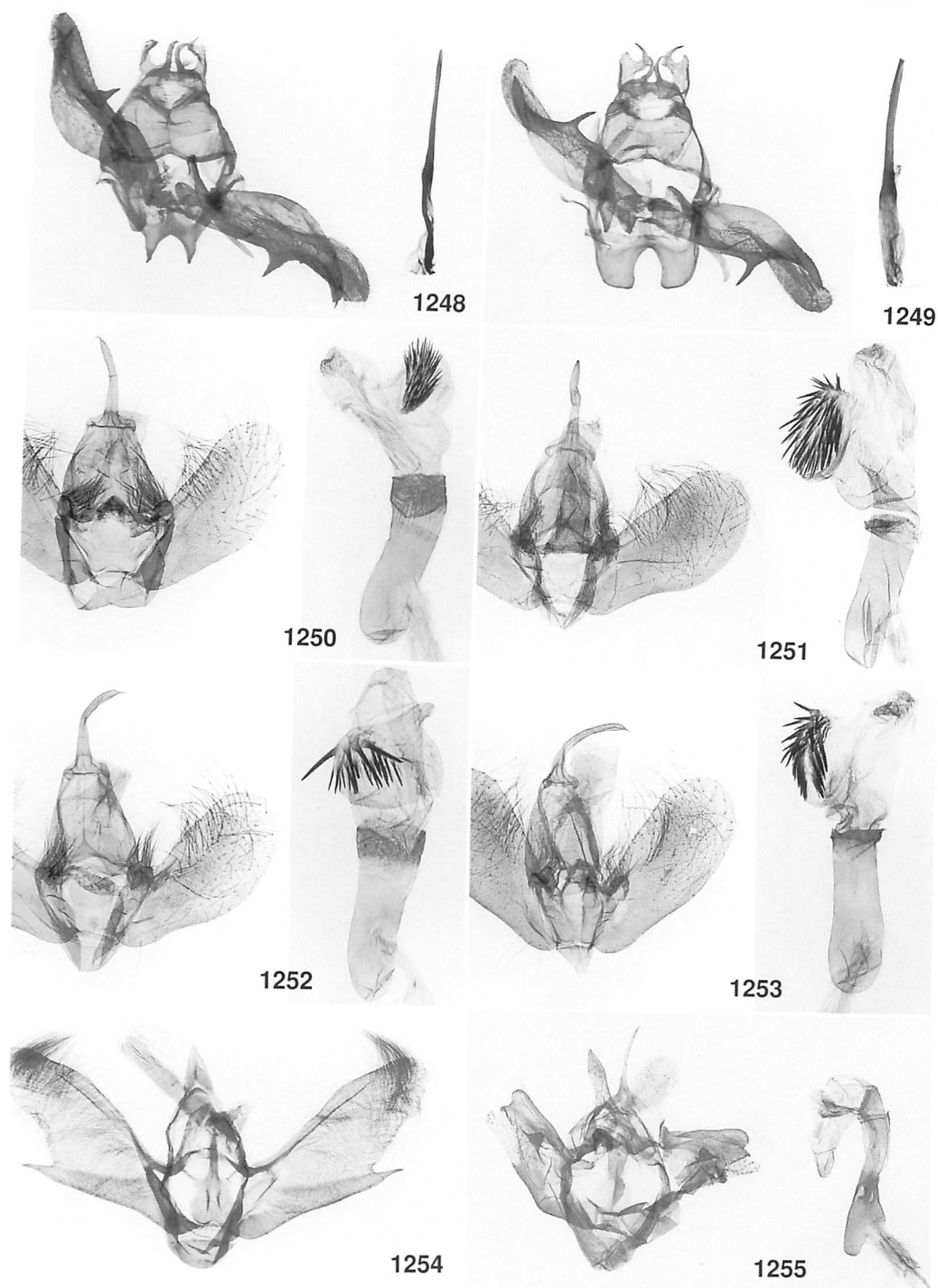
This species was described on female(s) from Simla, NW. India, and *O. perplexa* Yazaki was based on males from Nepal and Pakistan. According to the suggestion by Dr D. Stüning (*pers. comm.*), I have examined a syntype of *rufitinctaria* and female specimens of *perplexa* from Pakistan, and found that *perplexa* is conspecific with *rufitinctaria*.

Acknowledgements

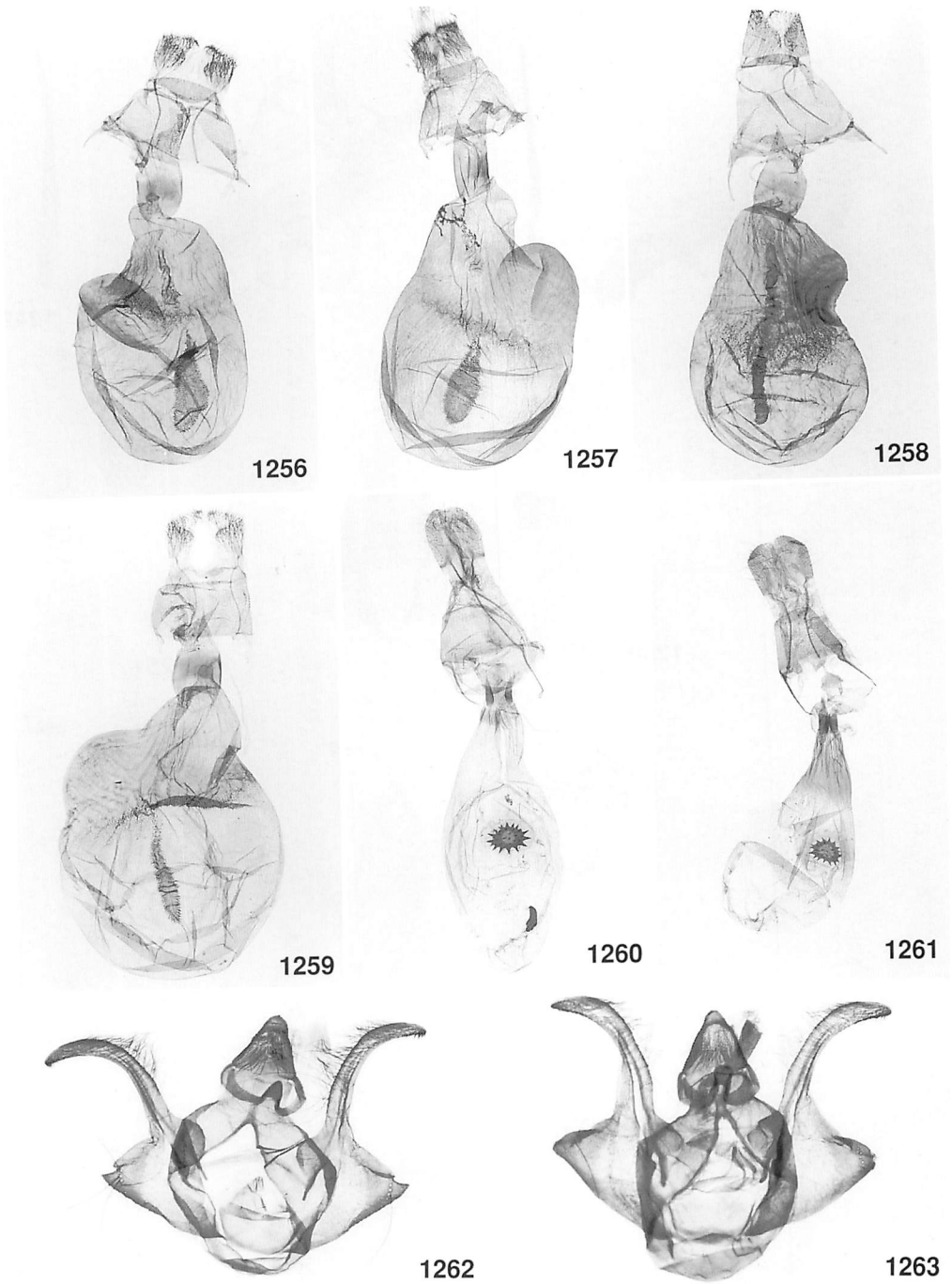
I wish to express my cordial thanks to Messrs K. Suzuki, Tokyo, K. Shirakawa, Kashiwa and H. Nakajima, Yokohama for their kindness in offering valuable material. I am also indebted to Dr D. Stüning, Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, for his useful advice.

References

- Inoue, H., 1986. Further new and unrecorded species of Geometridae from Taiwan. *Bull. Fac. domest. Sci., Otsuma Wom. Univ.* 22: 211-267.
- , 1987. Geometridae of eastern Nepal based on the collection of the Lepidopterological Research Expedition to Nepal Himalaya by the Lepidopterological Society of Japan in 1963. Part III. *Bull. Fac. domest. Sci., Otsuma Wom. Univ.* 23: 215-270.
- Parsons, M. S., M. J. Scoble, M. R. Honey, L. M. & B. R. Pitkin, 1999. In Scoble, M. J. (Ed.), *Geometrid moths of the world. A catalogue (Lepidoptera, Geometridae)*. CSIRO Publishing.
- Xue, D. and H. Zhu, 1999. *Fauna Sinica (Insecta)* 15. Science Press, Beijing.



Figs 1248–1255. Male genitalia. 1248. *Comibaena nepalensis* sp. n., paratype. 1249. *C. pictipennis* Butler. 1250. *Dysstroma aquilum* sp. n., paratype. 1251. *D. tenebricosa* (Heydemann). 1252. *D. subapicaria* (Moore). 1253. *D. shirakawai* sp. n., paratype. 1254. *Hydrelia elegans* (Inoue). 1255. “*Melanthia*” *exquisita* (Warren).



Figs 1256–1261. Female genitalia. 1256. *Dysstroma aquilum* sp. n., holotype. 1257. *D. tenebricosa* (Heydemann). 1258. *D. subapicaria* (Moore). 1259. *D. shirakawai* sp. n., paratype. 1260. *Oxymacaria penumbrata* (Warren). 1261. *O. nepalensis* (Inoue).
Figs 1262–1263. Male genitalia. 1262. *O. penumbrata* (Moore). 1263. *O. nepalensis* (Inoue).

GEOMETRIDAE: ENNOMINAE (part)

Rikio Sato

Arichanna subaenescens* Warren (Pl. 163: 1)Arichanna subaenescens* Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 426.

[Mechi] Kanchenjunga, Laam Pokhari 2,850m: 1 ♀, 30. vi. 1996. [Gandaki] Hinku-Chhumurun: 1 ♀, 15. vi. 1974 (S. Yamaguchi & T. Aoki).

Alcis leucophaea* Fletcher (Pl. 163: 2)Alcis leucophaea* Fletcher, 1961, *Veröff. zool. StSamml. Münch.* **6**: 175, pl. 17, figs 14, 16, 17, 19; pl. 23, figs 38-40.[Inner Himal] Dhung, 1 ♂, 24. vi. 1994 (T. Haruta). Muktinath, 3 ♀, 25-27. v. 1993 (T. Haruta), 1 ♂, 6-7. vii. 1994 (M.S.Limbu). [Gandaki] Kali-Gandaki-Tal, Cholopani nördl., Tukche 2,600m, 1 ♂, 23. vi. 1973; 1 ♀, *ditto*, 3,200m, 24. vi. 1973 (Diel & Lehmann), ZSM.

I recorded many specimens of *leucophaea* in my previous papers (Sato, 1994, 1995, 1998), but most of them should have been identified with *lobbichleri*, excluding the four specimens from Dhung and Muktinath taken by Mr Haruta (Sato, 1995:28). Herein I have recorded them again with some additional ones. I examined the holotypes of *leucophaea* and *lobbichleri* to confirm my identification.

Type material examined. Holotype ♂, "NEPAL, Mustangbhot, 29°11'n. Br. 83°58'ö. L, Kehami 3,700m, 20. VIII. 55, leg. F. Lobbichler / *Alcis leucophaea* Fletcher, Holotype, ♂ / ZSM Genitalprp. ♂ No. G 676", ZSM.

Alcis lobbichleri* Fletcher (Pl. 73: 10, 11 as *leucophaea*)Alcis lobbichleri* Fletcher, 1961, *Veröff. zool. StSamml. Münch.* **6**: 176, pl. 17, fig. 13; pl. 24, figs 44, 45.*Alcis leucophaea*: Sato, 1994:44, pl. 73, fig. 10,11; Sato, 1995: 28 (part); Sato, 1998: 20 (*nec* Fletcher, 1961).

As mentioned above, this and the previous species have been confused with each other by me, and a pair of specimens illustrated as *leucophaea* (Sato, 1994, pl.73, figs 10, 11) are misidentification of *lobbichleri*. Some specimens are added from Nepal as follows.

[Sagarmatha] Lukla 2,870m, 3 ♂, 19. v. 1995, 1 ♂, 21. v. 1995 (M. S. Limbu). Khumbu, Khumdzung 3,900m, 1 ♂, 25. vii. 1962 (G. Ebert & H. Falker); Prov. Nr. 3, East Khumjung 3,800m, 1 ♂, 14. vii. 1964, 1 ♀, 15. vii. 1964 (W. Diel), ZSM. [Mechi] Kanchenjunga, Khambachen 3,950m, 1 ♂ 1 ♀, 11-12. vii. 1996.

Type material examined. Holotype. ♂, "NEPAL, Manangbhot, 28°40'n.Br. 84°1'ö.L., Sabzi-chu 3,500m, 12.VI.55, leg. F.Lobbichler/ *Alcis lobberlichi* [*sic*] Fletcher, Holotype ♂ / Photographed B.M. negative No. 25664", ZSM.

Alcis miyashitai* Inoue (Pl. 163: 3)Alcis miyashitai* Inoue, 1982: 181, figs 44d, 45a, b.

[Mechi] Kanchenjung, Olaane 2,700m, 1 ♂, 30. vii. 1996.

Ruttellerona pseudocessaria* Holloway (Pl. 163: 4)Ruttellerona pseudocessaria* Holloway, [1994]: 224, pl. 13, figs 417, 486.

[Gandaki] Birethanti-Naudanda: 2 ♂, 22. vi. 1974 (S. Yamaguchi & T. Aoki).

Microcalicha melanosticta* (Hampson) (Pl. 163: 5)Boarmia melanosticta* Hampson, 1895: 266.

[Mechi] Kanchenjunga, Tawa River 1,000m, 1 ♂, 24-25. vii. 1996.

***Parapholodes* gen. nov.**

Type species: *Scotosia fuliginea* Hampson, 1891.

Male. Proboscis developed. Antenna bipectinate; each pecten arising from base of the segment, very long, the longest one 7–8 times as long as its basal segment, and densely ciliate ventrally, scaled dorsally, with a terminal bristle. Forewing with a fovea; veins R_1 and R_2 stalked, arising before upper angle of cell. Hind tibia without hair-pencil. Third abdominal sternite without cluster of spines.

Female. Antenna ciliate. Forewing without fovea; veins R_1 and R_2 entirely coincident, 11-veined, rarely long-stalked with R_2 .

Male genitalia (Fig. 1264). Uncus broad, bell-like, with a pointed apex. Gnathos with terminal portion bluntly rounded. Valva simple, dorsal and ventral margins parallel-sided, without any other ornamentation than a short groove near base. Juxta weakly sclerotized, broadly Y-shaped apically. Aedeagus with a single whip-like cornutus bearing minute spines at its base.

Female genitalia (Fig. 1266). Ovipositor very long. Sterigma very narrowly sclerotized. Bursa copulatrix slender with a single signum bearing a pair of sharp spines. Ductus seminalis arising from near posterior end of bursa copulatrix.

The type species, *fuliginea* Hampson, was placed in *Pholodes* Fletcher in “*Geometrid Moths of the World*” by Parsons *et al.* (1999). The genus *Pholodes* was established as a replacement name for *Lophodes* Guenée, [1858], which is a monobasic genus described for the unique Australian species *Lophodes sinistraia* Guenée, [1858], by Fletcher (1979: 163). *Pholodes* is distinguished from *Parapholodes* by the following characters. Forewing without fovea in male; veins R_1 and R_2 separate, 12-veined in male, but coincident, 11-veined in female. Male genitalia (Fig. 1265): uncus broad, swollen dorsally; medial plate of gnathos scobinate; valva with more sclerotized costa and a small projection from sacculus. Female genitalia (Fig. 1267): sterigma broadly sclerotized; no signum. The male and female moths of *Pholodes sinistraria* from Australia were illustrated by Common (1990: 105, fig. 36: 3–4).

Material of *P. sinistraria* examined. Australia, “Moe. Vict.”, 1 ♂, 3-1-1939, 1 ♂, 11-2-1941, 1 ♀, 3-2-1936, C. G. L. Gooding”; 1 ♀, “Brisbane, 7-2-38”, ANIC.

Two Indian species, *nigrescens* Warren and *squamosa* Warren, were included in *Pholodes* with *fuliginea* by Parsons *et al.* (1999). Both of them cannot be members of *Pholodes*, but the generic treatment will be confirmed by examining of the male and female genitalia in the near future.

Parapholodes is also similar to *Microcalicha* Sato, 1981, in superficial appearance, but there are many differences between them as follows. *Microcalicha*: male antennal pectinations unscaled dorsally, as in *Calicha* and *Paracalicha*; valva with a long projection; ovipositor relatively short. For further details, see my papers on *Calicha* and *Microcalicha* (Sato, 1981) and *Paracalicha* (Sato, 1992).

***Parapholodes fuliginea* (Hampson), comb. n. (Pl. 163: 6, 7)**

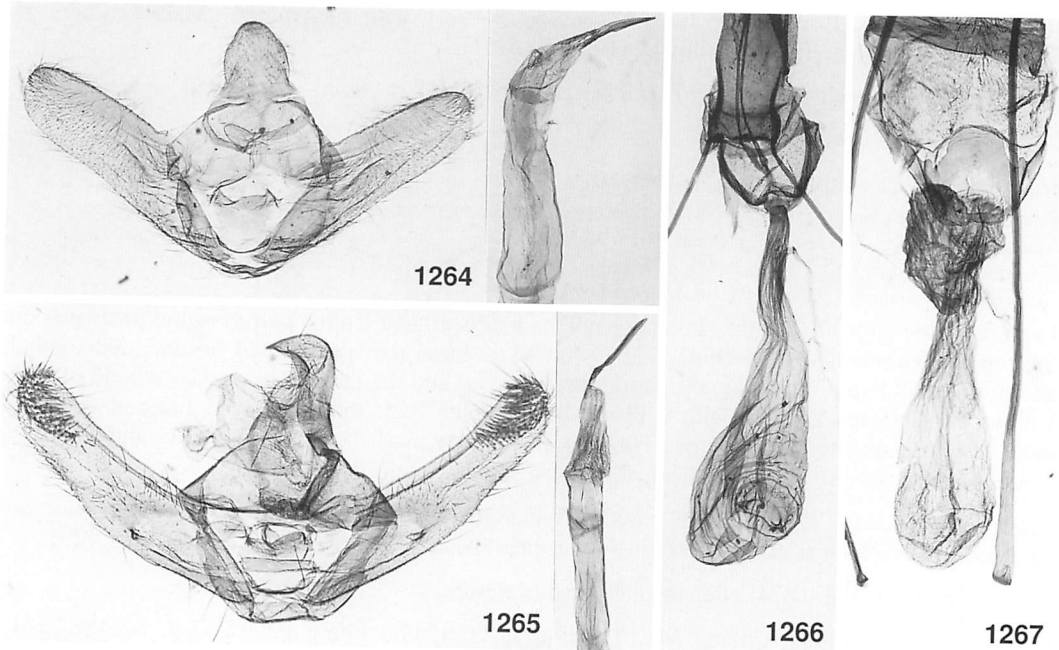
Scotosia fuliginea Hampson, 1891, *Illst. typical Specimens Lepid. Heterocera Colln Br. Mus.* 8: 31, 120, pl. 152, fig. 4.

Psilalcis atrifasciata Warren, 1893, *Proc. zool. Soc. Lond.* 1893: 431.

Poecialcis indigna Warren, 1899, *Novit. zool.* 6: 352.

Pholodes fuliginea: Parsons *et al.*, 1999: 745.

[Mechi] Godok 400m, 1 ♀, 11-18. vi. 1993, 1 ♀, 8-17. x. 1993 (M. S. Limbu). Taplejung 1,790m, 1 ♀, 25-26. x. 1979 (M. Owada). 1 ♀, “Rapti Tal 300m, ca 20 Meilen westl. Hitora, 23-27. s. 1962, leg. G.Ebert u. H. Falkner”, ZSM. Many specimens including males from Thailand, Vietnam and Sumatra were also examined. They will be recorded in my preparing papers dealing with the Boarmiini of each country.



Figs 1264–1265. Male genitalia. 1264. *Parapholodes fuliginea* (Hampson). RS-5540. 1265. *Pholodes sinistraria* (Guenée). ANIC.
 Figs 1266–1267. Female genitalia. 1266. *Parapholodes fuliginea* (Hampson). RS-5541. 1267. *Pholodes sinistraria* (Guenée). ANIC.

Harutaea gen. nov.

Type species: *Harutaea flavizona* sp. nov.

Proboscis developed. Palpus upturned, extending well beyond front. Male antenna fasciculate. Female ciliate. In male abdomen beneath covered with tufts of hairs, third abdominal sternite with a setal comb. Hind tibia of male with hair-pencil. Forewing without fovea in male, 11-veined, R_1 entirely coincident with R_2 , free from Sc in male and female.

Male genitalia. Uncus triangular, concave at apex. Median plate of gnathos well developed, with a rounded apex. Valva moderately narrowed apicad, with a large membranous process at costa and a slender, curved, digitate process from the sacculus.

Female genitalia. Sterigma strongly sclerotized with deeply concave caudal margin. Ductus bursae broad and short, bursa copulatrix small without signum (*flavizona* sp. nov.)

The type species has been treated as a member of *Gasterocome* Warren, 1894 (type-species: *Cleora pannosaria* Moore) since Prout (1915), under the name of *euryzona* (Hampson). There are many differences between *Gasterocome* and *Harutaea*. The characteristics of *Gasterocome* are summarized as follows. Venation: 12-veined, Sc, R_1 and R_2 separate. The scaling on both wings sparse, so that wings, especially towards the base, appearing translucent. Male genitalia (Fig. 1271): uncus abruptly narrowed apically; gnathos broadly triangular with "a central longitudinal row of oblong plates" (Holloway, 1993); valva expanded at apex, without any special processes other than a slender, curved, digitate one from the sacculus; aedeagus with a small, laterally directed spine at the apex. The digitate process on valva is the only characteristic sharing with *Harutaea*, though it is much shorter than in *Harutaea*. Female genitalia (Fig. 1273): sterigma very narrowly sclerotized; ductus bursae much slenderer; corpus bursae pyriform with the signum consisting of "two separate bosses adjacent to each other, each with a small spine"

(Holloway, 1993). Both genera have no obvious affinity with each other. Male genitalia of *pannosaria* was illustrated by Holloway (1993, fig. 481).

The following species belong to *Harutaea*: *flavizona* sp. nov., *sumatrana* sp. nov. and *conspicuaria* (Leech).

***Harutaea flavizona* sp. nov.** (Pl. 163: 8-10)

Boarmia euryzona Hampson, 1895: 281. [Unnecessary replacement name for *latifasciata* Warren]

Boarmia (Gasterocome) euryzona: Prout, 1915: 380.

Gasterocome latifasciata: Chang, 1990: 407; Inoue, 1992: 115; Wang, 1998: 204.

Gasterocome euryzona: Sato, 1994: 48, pl. 74:14, fig. 429.

Length of forewing 17–19 mm. In male black hair-tufts arising from a pair of round processes on the fourth abdominal sternite (Fig. 1272). Forewing: basal part yellow and fuscous; antemedial and postmedial bands ochreous, the former preceded by and the latter followed by a band of pale yellow; medial area fuscous with a black discocellular spot; the outer area fuscous, with an indistinct lunulate submarginal line. Hindwing: similarly marked, but antemedial band wanting. Underside: fuscous irroration reduced, allowing a shaper definition of pattern.

Male genitalia (Fig. 1269). Valva with a rectangular sclerotized process as ventral margin. Aedeagus with a long stick-like process on one side. Also shown by Sato (1994: 62, fig. 429).

Female genitalia (Fig. 1274). See the generic description.

Holotype. ♂, Thailand, Chiang Mai, Doi Pui 1,400m, Phu Phing Palace, 7-9. ix. 1987 (M. Owada), NSMT. Paratypes. E. Nepal. Kosi, Pheksinda 780m, 1 ♂, 17. vii. 1990 (T. Haruta), NSMT. N. E. India. Sikkim, Pemayangtse 2,000m, 1 ♀, 20-27. viii. 1988 (W. Thomas), ZFMK. E. India. Khasi Hills, 1 ♂, data unknown, ZFMK; Assam, Garampani 100m, 2 ♂, 21-29. xi. 1997, (Siniaev *et al.*), ZFMK. Thailand. Chang Mai, Doi Pui 1,300m, 1 ♂, 26-27. x. 1985 (S. Moriuti, T. Saito & Y. Arita), OPU; Doi Suthep 1,325m, 3 ♂, 22. xi-4. xii. 1989 (H. Schnitzler), ZFMK; Loei Province, Phu Luang Wildlife Sanctuary 700-900m, 1 ♂, 8-14. x. 1984 (Karsholt, Lomholdt & Nielsen), ZMUC. Peninsular Malaysia. Genting Highlands 1,700m, 2 ♀, 6-8. iv. 1986, RS; *ditto*, 1 ♀, 10-11. iv. 1986 (K. Yazaki), RS; Cameron Highlands, G. Berinchang, 1 ♂, 21. iv. 1990 (N. Bito), RS. Taiping, 1 ♂, data unknown, ZFMK. Vietnam. Lao Cai Prov., Sa Pa, Mt Fan-si-pan 1,500-1,800m, 2 ♂, 10. vi-6. vii. 1994 (Siniaev *et al.*), *ditto*, 2 ♂, 1-5. iii. 1995 (R. Brechlin), ZFMK; *ditto*, 1,500m, 1 ♀, 25-28. v. 1997 (B. Tanaka), RS; Vinh Phu Prov., Tam Dao 900m, 1 ♂, 23-24. ii. 1995 (R. Brechlin), ZFMK; *ditto*, 930m, 1 ♂, 12, 16-17. i. 1996 (M. Owada), NSMT; *ditto*, 900m, 29. v-2. vi. 1997 (B. Tanaka), RS. N. Sumatra. Holzweg II 1,050m, near Prapat, 1 ♀, 22-24. vii. 1985, 1 ♂, 29-30. vii. 1985 (R. Sato), 1 ♂, 4. vi. 1986, 1 ♂, 11. vi. 1986, 1 ♂, 24. xi. 1986, 1 ♂, 28. ix. 1989, 1 ♂, 29. ix. 1989, 1 ♂, 5. x. 1989, 1 ♂, 3. i. 1990, 1 ♂, 11. i. 1991 (E. W. Diehl), 1 ♂, 8. vi. 1994 (H. Inoue), RS; Air Sivah vic., Padang 1,200m, 1 ♂, 14. i. 1983 (Widago), MS; *ca* 30 km östl. Tapan 1,000m, 1 ♀, 24. ii. 1976 (M. Sommerer), MS; Holzweg III 1,150m, 14 km NE Prapat, 98°58 E/2°46 N, 1 ♂, 7. xii. 1982, 1 ♂, 28. viii-1. ix. 1983, 1 ♀, 10-25. vi. 1984 (E. W. Diehl), MS; Dairi Mts 850m, 15km W Sidikalang, 1 ♂, 3. v. 1981 (E. W. Diehl), MS; Deli, Dolok Merangir 150m, 1 ♂, 9. vi-1. ix. 1967, 1 ♀, 20. xii. 1968, 1 ♂, 9-11. vi. 1970 (E. W. Diehl), ZSM; Dolok Merangir, Dolok Ulu, 1 ♀, 13. iv. 1972, Holzweg II, Tiga-Dolock, 1 ♂, 18. v. 1972 (Roesler & Koppers), ZFMK. Taiwan. Nantou Hsien, Lushan Spa, 1 ♀, 21-23. vii. 1981, 2 ♂ 4 ♀, 26-29. vii. 1981, 2 ♂, 14-15. viii. 1983, 3 ♂ 1 ♀, 26-28. vii. 1984 (R. Sato), RS; Nantou Hsien, Hueisun Forest 570-800m, 1 ♂ 1 ♀, 28-29. ix. 1992 (F. Aulombard & J. Plante), ZFMK; Chiai Hsien, Alishan, 3 ♂, 11-12. viii. 1983 (R. Sato), RS; Taichung Hsien, Anmashan 2,200m, 2 ♂, 29. vii. 1997 (B. Tanaka), RS.

Only one male specimen designated as paratype has been recorded from Nepal (Sato, 1994: 48, pl. 74: 14).

Geographical range. N. India, Nepal, Thailand, Peninsular Malaysia, Vietnam, Sumatra, Taiwan.

Euryzona was proposed as a replacement name for *Poecilalcis latifasciata* Warren, 1893, *Proc.*

zool. Soc. Lond. **1893**: 427, by Hampson (1895). But *euryzona* was an unnecessary replacement name, and was sunk as a synonym of *latifasciata* (Parsons *et al.*, 1999: 30). On the other hand Hampson's "*euryzona*" is not conspecific to *latifasciata*, therefore it should be re-described under a new name. *Latifasciata* is a typical member of *Alcis* and was already recorded from Nepal with an illustration of female (Sato, 1994: 44, pl. 74: 2).

***Harutaeta sumatrana* sp. nov.** (Pl. 163: 11)

Male. Length of forewing 18–20 mm. Similar to *flavizona* in appearance. A little larger than *flavizona*. Antennal ciliation longer. Abdomen beneath covered with tufts of yellow hair instead of black hair-tufts from fourth abdominal sternite in *flavizona*. A pair of processes on the fourth abdominal sternite lacking. Wings paler, thickly hued with yellow. Hindwing without black marking on anterior distal half. Female unknown.

Male genitalia (Fig. 1268). Similar to those of *flavizona*. Apex of uncus more deeply concave. Valva broader; apical margin of membranous costal process smooth; sclerotized ventral process smaller; digitate process longer and stouter. A stick-like process of aedeagus longer, pointed at tip.

Holotype. ♂, "W. Sumatra, Mt Talamau, Westseite, 12km S Talu, 0°08' N/ 99°59' E, 11.9.1991, Rhododendronwald 2800m, leg. Graul & Schintlmeister", BMNH. Paratypes. 2 ♂, same data as holotype, RS; 5 ♂, "Sumatra sept. Aceh, Singha, Mata 1720m, 97°31'E/ 4°08' N, 25/26.i.1989, leg. Plössl & Tarmann"; 2 ♂, "Sumatra occ. Kerinci, Kayu Aro 1800m, nördl. Sungaipenuh, 20-23.2.1976, M. Sommerer leg.", MS.

Geographical range. Sumatra.

In my collection there is another unidentified species of this genus from Sumatra, represented only by one male, which may be new to science. It is very similar to *flavizona* in appearance, but can be distinguished from *flavizona* by lack of a pair of processes bearing black hair tufts on 4th abdominal sternite. Male genitalia show very slight differences from those of *sumatrana*. It will be undescribed until further material including females are discovered.

***Harutaeta conspicuaria* (Leech), comb. nov.**

Phyllabraxas conspicuaria Leech, 1897, *Ann. Mag. nat. Hist.* (6) **19**: 443.

Boarmia (Gasterocome) conspicuaria: Prout, 1915: 380, pl.22, row k.; Wehrli, 1943: 545.

Gasterocome conspicuaria: Holloway, 1993: 223.

This species was described from W. China based on three male specimens taken at Pu-tsu-fong. Male genitalia show this species to belong to *Harutaeta*.

Male genitalia (Fig. 1270). Uncus slender, almost smooth at apex. Valva almost parallel-sided apically; membranous costal process not rounded but truncated at apex; digitate process long and slender, not so curved as in the other species; ventral margin smooth without rectangular sclerotized process. Aedeagus covered with lots of minute spines apically; armed with about 10 short spines on vesica.

Material examined. W. China, Sichuan, Mt Omeishan, 1 ♂, 29. vii. 1980 (K. Ôhara, T. Gotô and N. Kôda).

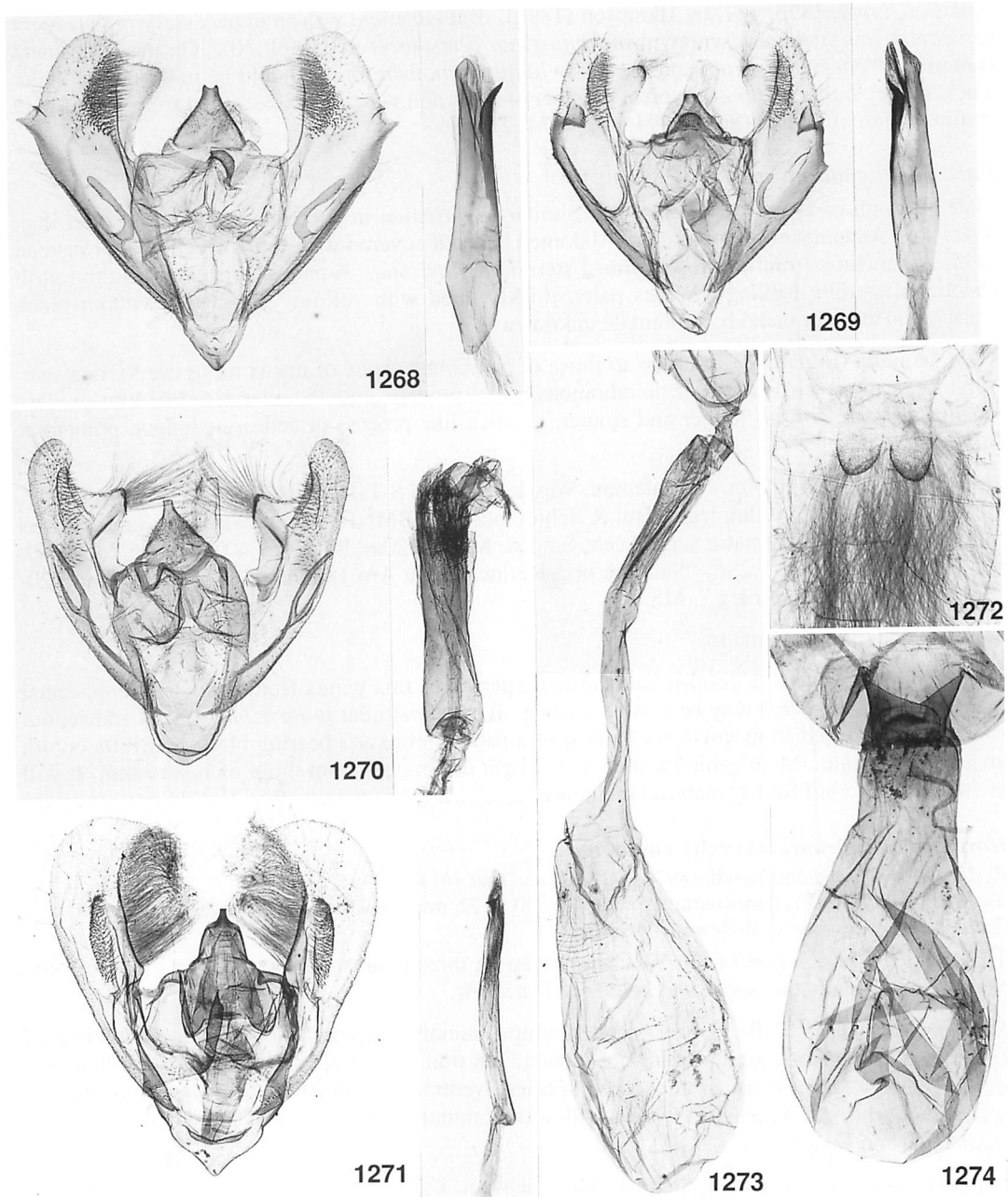
Geographical range. China.

***Ctenognophos obtectaria* (Walker) (Pl. 76: 11)**

Gnophos obtectaria Walker, 1866, *List Specimens lepid. Insects Colln Br. Mus.* **35**: 1597.

Ctenognophos methoria: Sato, 1994: 53 (*nec* Prout, 1926)

C. methoria was recorded from Nepal based on some specimens in my previous part (Sato, 1994), but the following ones should have been identified with *C. obtectaria*, and the others taken at Birtamond (1 ♂) and Okhaldhunga (1 ♂ 1 ♀) are another different species from *methoria*. In addition I have another species from W. Nepal in my collection. In order to identify those species



Figs 1268–1271. Male genitalia. 1268. *Harutaea sumatrana* sp. nov. RS-4119. 1269. *H. flavizona* sp. nov. RS-5562. ZSM. 1270. *H. conspicuaria* (Leech). RS-5561. 1271. *Gasterocome pannosaria* (Moore). RS-5580.
Fig. 1272. A pair of round processes on 4th abdominal sternite of *Harutaea flavizona* sp. nov. RS-5562. ZSM.
Figs 1273–1274. Female genitalia. 1273. *Gasterocome pannosaria* (Moore). RS-4126. 1274. *Harutaea flavizona* sp. nov. RS-4977.

I have to examine the type specimens of *Ctenognophos* spp. described from India, China and its adjacent areas. I have already examined them by the appearance, but they are very similar to each other. They can not be identified without examining their genitalia. I am going to record Nepalese specimens in my future paper on the revision of *Ctenognophos*.

[Janakpur] Jiri, 2 ♂, 20-22. x. 1992. Bonch, 7 ♂ 1 ♀, 29. x. 1986 (S. Sakurai) (Sato, 1994: 53, as *methoria*).

Type material examined. Lectotype of *Gnophos obtectaria*, here designated, ♂, "Type / Darjiling, W. S. Atkinson / *Gnophos obtectata* [sic], type / Probably Moore Coll. 94-106.", BMNH.

I have not found *methoria* from Nepal yet, but Inoue (1982: 186) recorded it from Nepal based on one male taken at Ulleri, 2,100m – Birethanti, 1,000m.

Abbreviations

The following abbreviations are used to indicate the location of specimens.

ANIC: Australian National Insect Collection, CSIRO Division of Entomology, Canberra, Australia. BMNH: The Natural History Museum, London, UK. MS: M.Sommerer collection, Munich, Germany. NSMT: National Science Museum, Tokyo, Japan. OPU: Entomological Laboratory, Osaka Prefecture University, Sakai, Japan. ZFMK: Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Germany. ZMUC: Zoological Museum, University of Copenhagen, Denmark. ZSM: Zoologische Staatssammlung, Munich, Germany. RS: R. Sato collection, Niigata, Japan.

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I wish to express my special thanks to the late Mr T. Haruta for his giving me a good opportunity to examine lots of Nepalese specimens of the Boarmiini. I am also indebted to Drs A. Hausmann, ZSM, D. Stüning, ZFMK, O. Karsholt, ZMUC and M. Owada, NSMT, for their permission to study specimens under their curation, and to Drs T. V. Rangsi and E. D. Edwards, ANIC, Dr P. McQuillan, University of Tasmania and Dr F. Komai, Osaka University of Arts, for the loan of *Pholodes sinistraria*. My sincere thanks are due to Dr H. Inoue, Iruma, for his critical reading of the manuscript, and Dr M. J. Scoble, BMNH, for his useful advice, and to Drs E. W. Diehl, N. Kôda, Messrs B. Tanaka, K. Yazaki, N. Bito and S. Sakurai, for the gift or loan of the specimens.

References

- Common, I. F. B., 1990. *Moths of Australia*. Melbourne University Press, Carlton.
- Chang, B. S., 1990. *Illustrations of Moths in Taiwan* (4). Taipei.
- Fletcher, D.S., 1979. Geometroidea. In Nye, I. W. B. (Ed.), *The generic Names of Moths of the World* 3. London.
- Hampson, G. F., 1895. *Fauna of British India including Ceylon and Burma (Moths)* 3. London.
- Holloway, J. D., 1993. The moths of Borneo: family Geometridae, subfamily Ennominae. *Malay. Nat. J.* 47: 1-309, pls 1-19, 593 figs.
- Inoue, H., 1982. Geometridae of Eastern Nepal based on the collection of the lepidopterological research expedition to Nepal Himalaya by the Lepidopterological Society of Japan in 1963. Part II. *Bull. Fac. domest. Sci., Otsuma Wom. Univ.* 18: 129-190.
- , 1992. Geometridae. Checklist. In Heppner, J. B. & H. Inoue (Eds), *Lepidoptera of Taiwan* 1: 111-129.
- Parsons, M. S., M. J. Scoble, M. R. Honey, L. M. Pitkin & B. R. Pitkin, 1999. In Scoble, M. J. (Ed.), *Geometrid Moths of the World. A Catalogue (Lepidoptera, Geometridae)*. CSIRO Publishing, Victoria.
- Prout, L. B., 1915. In Seitz, A. (Ed.), *Gross-Schmetterlinge der Erde* 4. Stuttgart.

- Sato, R., 1981. Taxonomic notes on the genus *Calicha* Moore and its allied new genus from Japan and adjacent countries (Lepidoptera: Geometridae). *Tyô Ga* **31**: 103–120.
- , 1992. *Paracalicha*, a new genus of the Geometridae (Lepidoptera), with descriptions of two new species from China and Thailand. *Jpn. J. Ent.* **60** (2): 369–375.
- , 1994. Geometridae: Ennominae (part). In Haruta, T. (Ed.), Moths of Nepal, part 3. *Tinea* **14** (Suppl. 1): 41–62, pls 73–76.
- , 1995. Geometridae: Ennominae (part). In Haruta, T. (Ed.), Moths of Nepal, part 4. *Tinea* **14** (Suppl. 2): 28–37, pls 102–103.
- , 1998. Geometridae: Ennominae (part). In Haruta, T. (Ed.), Moths of Nepal, part 5. *Tinea* **15** (Suppl. 1): 19–31, pls 130–131.
- Wang, H. Y., 1998. *Geometer Moths of Taiwan* **2**: 1–399. Taiwan Museum, Taipei.
- Wehrli, E., 1943. In Seitz, A. (Ed.), *Gross-Schmetterlinge der Erde* **4** (Suppl.). Stuttgart.

ARCTIIDAE

Yasunori Kishida

LITHOSIINAE***Cyana lobbichleri*** (Daniel), **comb. nov.** (Pl. 108: 1, 2, 3)*Chionaema lobbichleri* Daniel, 1961, *Veröff. zool. StSamml. Münch.* **6**: 153, pl. 15, figs 1-4.*Cyana nigrilinea* Kishida, 1995, *Tinea* **14** (Suppl. 2): 39, **syn. nov.**

In the course of a revisional work on the genus *Cyana*, this and the following two synonymies were confirmed.

Cyana arama (Moore) (Pl. 41: 4, 5)*Bizone arama* Moore, 1859, *Cat. Lep. east. Ind. Comp.*: 306, pl. 79, fig. 10.*Cyana distincta babui* Kishida, 1993, *Tinea* **13** (Suppl. 3): 38, **syn. nov.*****Cyana stresemanni*** (Rothschild) (Pl. 41: 3)*Chionaema stresemanni* Rothschild, 1936, *Ann. Mag. nat. Hist.* **10** (17): 488.*Cyana bellissima inouei* Kishida, 1993, *Tinea* **13** (Suppl. 3): 38, **syn. nov.*****Cyana puer*** (Elwes) (Pl. 41: 10, 11 as *dohertyi*)*Bizone puer* Elwes, 1890, *Proc. zool. Soc. Lond.* **1890**: 392, pl. 32, fig. 8.

This species was erroneously recorded as *C. dohertyi* Elwes in part 2 of this series.

Cyana dohertyi (Elwes) (Pl. 41: 12 as *sikkimensis*)*Bizone dohertyi* Elwes, 1890, *Proc. zool. Soc. Lond.* **1890**: 394, pl. 32, fig. 4.

This species was erroneously recorded as *C. sikkimensis* Elwes in part 2 of this series.

Ghoria nepalica (Daniel), **comb. nov.** (Pl. 132: 17)*Agylla nepalica* Daniel, 1961, *Veröff. zool. StSamml. Münch.* **6**: 154, pl. 15, figs 6, 7.

This species was recorded as *Ghoria* sp. in part 5 of this series.

Miltochrista flammealis (Moore) (Pl. 164: 13; Pl. 41: 16 as *orientaris*)*Barsinae flammealis* Moore, 1878, *Proc. Zool. Soc. Lond.* **1878**: 28, pl. 3, fig. 15.

Godavari: 2 ♀, 21-24. ix. 1989, 1 ♂, 3. x. 1989, 1 ♂, 5. vi. 1992.

This species was erroneously recorded as *M. orientaris* Daniel in part 2 of this series.

Miltochrista mactans (Butler) (Pl. 164: 17, 18)*Barsinae mactans* Butler, 1877, *Trans. ent. Soc. Lond.* **1877**: 340.

Godavari: 1 ♂, 23. v. 1991; 1 ♂, 11. v. 1990; 1 ♀, 22. v. 1991; 1 ♀, 3. x. 1991; 1 ♀, 6. x. 1992.
[Sagarmatha] Okhaldhunga: 1 ♀, 25. ix. 1990

Miltochrista defecta (Walker) (Pl. 164: 15, 16; Pl. 41: 17)*Barsinae defecta* Walker, 1854, *List Specimens lepid. Insects Colln Br. Mus* **2**: 540.

Godavari: 1 ♀, 20. vi. 1989; 6 ♂, 2-21. vi. 1992; 1 ♂, 23. ix. 1989; 1 ♀, 28. ix. 1990; 1 ♂, 21. ix. 1991; 1 ♂, 18. ix. 1992

Miltochrista sauteri Strand (Pl. 164: 14)

Miltochrista gratiosa var *sauteri* Strand, 1917, *Arch. Natg.* 81A (3): 125.

Miltochrista orientalis Daniel, 1951, *Bonn. zool. Beitr.* 2: 324, pl. 1: figs 27, 28, text-fig. 22.

[Sagarmatha] Okhaldhunga: 1 ♀, 18. vi. 1991; 1 ♀, 28. ix. 1991

SYNTOMINAE

Cueneressa diaphana (Kollar) (Pl. 164: 4)

Syntomis diaphana Kollar, 1848, in Hugel, *Kaschmir und das Reich Siek* 4: 460, pl. 19, fig. 7.

Godavari: 1 ♂, 16. v. 1991.

Amata multigutta (Walker) (Pl. 164: 3)

Syntomis multigutta Walker, 1854, *List Specimens lepid. Insects Colln Br. Mus* 1: 134.

Godavari: 3 ♂ 1 ♀, 25. v. 1995.

LYMANTRIIDAE

Yasunori Kishida

Olene tenebrosa (Walker), **comb. nov.** (Pl. 164: 5)

Mardara tenebrosa Walker, 1865, *List Specimens lepid. Insects Colln Br. Mus* 32: 361.

Dasychira tenebrosa: Swinhoe, 1903, *Trans. ent. Soc. Lond.* 3: 468.

Neocifuna tenebrosa: Kishida, 1988, *Japan Hetrocerists' J.* (145): 308.

Godavari: 1 ♂, 29. iii. 1990. Mt Phulchouki: 1 ♂, 20. vi. 1992; 1 ♂, 18. v. 1992. [Janakpur]

Jiri: 1 ♂, 17-19. vi. 1993. [Gandaki] Deolari: 3 ♂ 1 ♀, 25. v-7. vi. 1994.

The identification is based on an examination of the type specimen of *O. tenebrosa* in BMNH. The male genitalia (Fig. 1279) show this species should be placed in the genus *Olene* Hübner, 1823, which had been regarded as a junior synonym of *Dasychira* Hübner, 1806 until Holloway (1999).

Olene magnalia (Swinhoe), **comb. nov.** (Pl. 164: 6)

Dasychira magnalia Swinhoe, 1903, *Ann. Mag. nat. Hist.* (7) 12: 198.

Godavari: 1 ♂, 30. iii. 1990; 5 ♂ 2 ♀, 2-22. iii. 1992

Ilema bhana (Moore) (Pl. 164: 8)

Mardana bhana Moore, 1865, *Proc. zool. Soc. Lond.* 1865: 804.

Godavari: 1 ♂, 24. v. 1991; 1 ♂, 1. vii. 1990. Mt Phulchouki: 1 ♂, 12. v. 1991; 1 ♂, vii. 1991.

[Sagarmatha] Okhaldhunga: 1 ♂, 13. ix. 1990. [Janakpur] Jiri: 1 ♂, 22. iv. 1992.

Ilema kosemponica (Strand), **comb. nov.** (Pl. 164: 7; Pl. 54: 14 as *Neocifuna tenebrosa*)

Dasychira kosemponica Strand, 1914, *Ent. Mitt.* 3: 328.

Godavari: 1 ♂, 22. ix. 1989; 1 ♂, 27. vi. 1990; 1 ♂, 9. ix. 1991; 1 ♀, 20. vi. 1991; 1 ♂ 1 ♀, 1-15. vi. 1992. [Sagarmatha] Okhaldhunga: 1 ♂, 18. ix. 1971; 1 ♂, 11. v. 1990. [Mechi] Pheksinda: 5 ♂, 6-13. v. 1994.

This species was described from Taiwan, and newly recorded from Nepal. The male genitalia of Nepalese material (Fig. 1275) are identical with those of Taiwan material (Fig. 1277).

***Cifuna glaucozona* (Collenette), comb. nov. (Pl. 164: 9, 10)**

Dasychira glaucozona Collenette, 1934, *Novt. zool.* **39**: 145, pl. 10, fig. 15.

[Mechi] Pheksinda: 1 ♂ 1 ♀, 6-13. v. 1994.

This species is transferred from *Dasychira* to *Cifuna* Walker, 1855 based on the structure of male genitalia (Fig. 1280) being similar to that of *Cifuna locuples* Walker, 1855, the type species of the genus *Cifuna*.

***Euproctis antiphales* Hampson (Pl. 164: 11)**

Euproctis antiphales Hampson, 1892, *Fauna Br. Ind. (Moths)* **1**: 478.

Aroa nepalensis Daniel, 1961, *Veröff. zool. StSamml. Münch.* **6**: 157, pl. 15, fig. 9, **syn. nov.**

[Gandaki] Pokhara: 3 ♂, 17. vi. 1994.

***Euproctis stenosacca* Collenette (Pl. 164: 12)**

Euproctis stenosacca Collenette, 1951, *Ann. Mag. nat. Hist.* (4) **12**: 1031, pl. 19, fig. 1.

[Narayani] Baratopur: 2 ♂, 17. xi. 1992.

HYBLAEIDAE

Yasunori Kishida

***Hyblaea constellata* Guenée (Pl. 164: 1)**

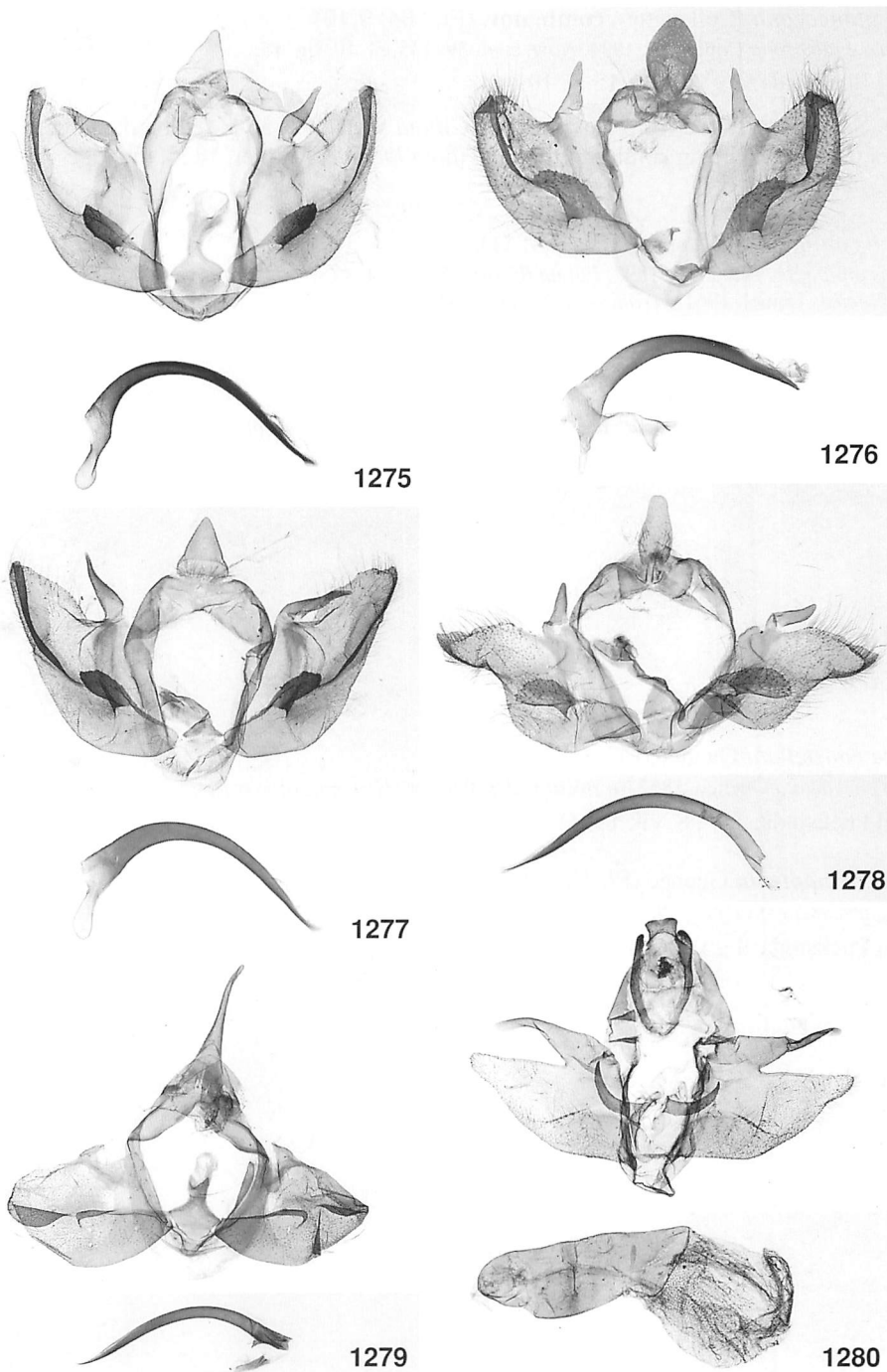
Hyblaea constellata Guenée, 1852, in Boisduval & Guenée, *Hist. nat. Insects (Lépid.)* **6**: 391.

[Mechi] Pheksinda: 1 ♂, 8. vii. 1991.

***Hyblaea firmamenta* Guenée (Pl. 164: 2)**

Hyblaea firmamenta Guenée, 1852, in Boisduval & Guenée, *Hist. nat. Insects (Lépid.)* **6**: 391.

[Mechi] Pheksinda: 1 ♂, 15. vi. 1990.



Figs 1275–1280. Male genitalia. 1275. *Ilema kosemponica* (Strand). 1276. *I. bhana* (Moore). 1277. *I. kosemponica* (Strand), Taiwan. 1278. *I. cyrteschata* (Collenette). 1279. *Olene tenebrosa* (Walker). 1280. *Cifuna glaucozona* (Collenette).

***Eupithecia* Curtis (Geometridae, Larentiinae) from Nepal**

Hiroshi Inoue

During the past forty years 52 species of *Eupithecia* were described as new from Nepal: Schütze, 1961 (5 species), Vojnits, 1981 (11 species), 1983 (17 species) & 1988 (11 species), Herbulot, 1984 (2 species) and Inoue, 1987 (6 species). The former two authors studied specimens of German expeditions (1955, 1962, 1964, 1967), but Vojnits' last paper was based on Dr M. Owada's collection in 1979. Herbulot's new species were from his own catches in 1983 and those of mine were based on Japanese expedition in 1963. All the species-group taxa of the world *Eupithecia* are listed by Parsons *et al.*, 1999, with citations of their original papers and the type localities.

In this paper will be recorded specimens secured in Nepal by the late T. Haruta, Tokyo, and his native collectors (1989-1995) (abbreviated as HT), H. Nakajima (1993), Yokohama (HN), T. Miyashita (1969, 1973), Tokyo (TM), M. Owada (1979, 1981), Tokyo (MO), and by S. Sakurai (1981), Niigata (SS), with a few exceptions.

Dr M. Owada, National Science Museum, Tokyo (NSMT), loaned and partly gifted me all the specimens collected by him, including those studied by Vojnits (1988) and he kindly took microphotographs of the genitalia illustrated here. Dr L. Ronkay, Hungarian National Museum, Budapest, and Mr M. D. Sommerer, Munich, sent me colour pictures of the type-series of new species by Vojnits, 1981 & 1983. Dr A. Hausmann, Zoologische Staatssammlung, Munich, sent me photographs of the holotypes of Schütze's new species, and Mr C. Herbulot kindly loaned me specimens of his new species. At the Natural History Museum, London, I could study the rich collection of the genus including many type specimens and took some photographs through kind offices of Mr D. Carter. I express my hearty thanks to all of them.

The species newly and previously described from Nepal will be alphabetically listed hereunder, (*-marked species are not in my cabinet). In addition some species from NE India (Darjeeling) and N Thailand (Doi Inthanon) will be included in the list from my collection. In the list valid taxa are indicated in bold type and invalid taxa (junior synonyms and homonyms) in roman type. Unless stated otherwise, all the type-series including the holotypes designated in this paper are preserved in The Natural History Museum, London.

Eupithecia acseszteri Vojnits *Cf. pengata* Schütze
Eupithecia acseszteri Vojnits, 1988: 50, figs 30-32; pl. 1: C.

Eupithecia acuta Vojnits (Pl. 165: 1 ♀)

Eupithecia acuta Vojnits, 1983: 276, fig.23.

[NE India] Darjeeling, 2,000-2,050 m, 23 & 25. iii. 1986, 1 ♂ 3 ♀ (W. Thomas); *ditto*, 2,573 m, 30. ix-5. x. 1986, 1 ♀ (F. Aulombard & J. Plante).

Based on two females this species was founded.

Male genitalia (Fig. 1281). Uncus long, nearly triangular, apex minutely bifurcate. Valva very long, costa almost straight, sacculus hardened from base to half way, then depressed and gently arched to apex. Aedeagus broad, two-third length of valva, cornuti a double stick-like processes of one-third length of aedeagus, one spine-like process and a curved imperfect long band. Abdominal plate basally expanded, apex bilobed, fissure shallow. Female genitalia (Fig. 1324). Papillae anales with rounded apices, apophyses very slender. Corpus bursae with a thick tube-like process, gradually changing from membrane to sclerite, cephalic part spherical, densely spined. Ductus bursae very broad, branching from caudal end of the tube, streaked and decorated

with spinules at basal area.

***Eupithecia albibaltea* Prout (Pl. 165: 2 ♀)**

Eupithecia albibaltea Prout, 1958: 391; [*id.*, 1941, pl. 38: h].

E. multa Vojnits is here treated as a junior synonym (**syn. nov.**).

[Bagmati] Syabru, 2,200 m, Langtang Himal, 8. viii. 1939, 10 ♂. [Kathmandu] Mt Phulchouki, 2,070 m, viii. 1993, 1 ♂ (HN). [NE India] Darjeeling, 2,000 m 11-20. viii. 1985, 3 ♂; *ditto*, 2,500 m, 11-16. viii. 1985, 1 ♂; *ditto*, 1,700 m, 18. viii. 1985, 1 ♂ (W. Thomas).

Male genitalia (Fig. 1282). Valva elongate, apex narrowly rounded. Aedeagus much shorter than valva, sclerotized cornutus not recognized. Abdominal plate very slender, long rods arising from narrow basal plate. Female genitalia are described and illustrated by Vojnits.

***Eupithecia albicans* Vojnits* *Cf. ruficarpus* (Warren)**

Eupithecia albicans Vojnits, 1981: 225, figs 10, 11.

***Eupithecia albicentralis* Inoue *Cf. concinna* Vojnits**

Eupithecia albicentralis Inoue, 1987: 237, figs 63: B; 64: A, B.

***Eupithecia albigutta* Prout (Pl. 165: 3 ♀)**

Eupithecia albigutta Prout, 1958: 393; [*id.*, 1941, pl. 38: k].

E. pulla Vojnits is here treated as a junior synonym (**syn. nov.**).

Besides the type-series of *pulla*: [Janakpur] Bonch, 2,000 m, 29. v. 1986, 1 ♀ (SS). [Koshi] Basantapur, 2,350 m, 15-16. iii. 1993, 1 ♀. [Kathmandu] Godavari, 1,600 m, 27. iii. 1992, 1 ♂; 2-31. iii. 1992, 2 ♂ 1 ♀ (TH).

Male genitalia (Fig. 1283). Uncus with a stick-like process degenerated, valva elongate, apex narrow. Aedeagus about two-third length of valva, well-defined cornutus not formed, excepting a small basal sclerotization. Abdominal plate with strongly sclerotized long rods, apices incurved, sharply pointed. Female genitalia (Fig. 1325). Apophysis anterioris and posterioris very long and stout, ductus bursae membranous, about twice length of ovate corpus bursae, which is densely spined.

***Eupithecia amplificata* sp. nov. (Pl. 165: 4 ♀, paratype)**

Wingspan, ♂ ♀ 21-22 mm. Antenna in male minutely ciliate, palpus correct, about twice in male and three times in female of diameter of eye. Wings ample, forewing with termen strongly gibbous, apex pointed, tornus rounded. Forewing dark red-brown, black ante- and postmedian lines angled anteriorly, then oblique to hindmargin, median line weaker, closer to antemedian, subterminal whitish line proximally margined with blackish clouds, discal black dot clear. Hindwing with anterior half white, unmarked, blackish brown ante- and postmedian fasciae distinct posteriorly, discal dot much smaller and obscurer than on forewing.

Male genitalia (Fig. 1284). Uncus with stick-like process rather short, apex pointed. Valva elongate, gradually tapering, ventral margin gently arched. Aedeagus about two-third length of valva, cornutus a strongly sclerotized band, about one-third length of aedeagus. Abdominal plate with wide-apart stout rods, fuscure very deep. Female genitalia (Fig. 1326). Papillae anales very short and broad, apices truncate, apophyses thick and short, a. anterioris about one-half length of a. posterioris. Ductus bursae short, corpus bursae ovate, densely spined.

Holotype. ♂, and paratypes, 1 ♂ 1 ♀: [Bagmati] Kyangjin, 3,900 & 3,910 m, Langtang Himal, 11 & 12. viii. 1993 (HN).

***Eupithecia apparatissima* Vojnits (Pl. 165: 5 ♂)**

Eupithecia apparatissima Vojnits, 1988: 43, figs 14-16; pl. 3: C.

[Sagarmatha] Nanghug, 2,550 m, 6. x. 1979, 1 ♂ (holotype) (MO). [Kathmandu] Mt Siwapuri, 2,650 m, 7. x. 1981, 1 ♂ (MO).

Male genitalia (Fig. 1285). Uncus short, trigonal. Valva with costal margin straight, ventral margin gently arched. Aedeagus thick, a little shorter than valva, two cornuti robust: one is beak-shaped, about one-third length of aedeagus, the other a longer stick, with rounded tip. Abdominal plate with wide-apart slender rods, basally connected by narrow a very narrow bar. Female unknown.

***Eupithecia particeps* sp. nov. (Pl. 165: 6 ♀, holotype)**

Eupithecia particeps (part.) Vojnits, 1988: 41, fig. 12.

E. particeps was founded on a pair of specimens, but the female paratype is a different species described here.

Female. Wingspan 20 mm. The shape of wings, colour and maculation of forewing nearly identical with strongly marked specimens of *lobbichlerata* Schütze (= *particeps* Vojnits).

Female genitalia (Fig. 1327). Papillae anales with apices flat, apophyses slender. Ductus bursae slender, at the junction with corpus bursae there is a large hump-like lobe at left side, corpus bursae spherical, densely spined, ductus seminalis branching from right caudal area of corpus bursae.

Holotype, ♀: [Kathmandu] Godavari, 1,600 m, 26. ii. 1992 (TH). Paratypes: type-locality, 10. iii. 1992, 1 ♀ (TH). [Sagarmatha] Junbesi, 2,670 m, 10-11. x. 1979, 1 ♀ (paratype of *particeps*) (MO).

***Eupithecia asempiterna* nom. nov. (Pl. 165: 7 ♂)**

The replacement name for *E. sempiterna* Vojnits, 1988, preocc., nec Vojnits, 1984

[Sagarmatha] Thame Og, 3,800 m, 1-2. x. 1979, 1 ♂ 3 ♀ (holotype ♂ and paratypes) (MO). [Janakpur] Thodang, 3,100 m, 14. x. 1979, 1 ♂ 1 ♀. [Gandaki] Deolari, 2,800 m, 15. x. 1981, 10 ♂ 2 ♀; Banthani, 2,620 m, 16. x. 1981, 1 ♂; Modi Khola, 2,570 m, Himaley Hotel, 19. x. 1981, 2 ♀; Modi Khola, 3,200 m, Deolari nr Kinku, 20. x. 1981, 1 ♂ 4 ♀ (MO).

Male genitalia (Fig. 1286). Uncus moderately long, apex bifurcate. Valva elongate, strongly tapering toward apex. Aedeagus about two-third length of valva, broad, containing a double serrated band-like cornuti. Abdominal plate with rods very slender, curved inward near apices, fissure very deep. Female genitalia (Fig. 1328). Papillae anales short, apices rounded, apophyses slender. Ostium cup-shaped, ductus bursae very short. Corpus bursae spherical at cephalic part, but caudal part slender, sclerotized at the border between densely spined and membranous area.

***Eupithecia atrisignis* Butler (Pl. 165: 8 ♀)**

Eupithecia atrisignis Butler, 1889: 114, pl. 137: 10; Hampson, 1895: 399.

[Karnali] Jumla, 2,440 m, 19-20. ix. 1981, 1 ♂ 4 ♀; *ditto*, 1. x. 1981, 1 ♀; Jhori, 2,550 m, 24. ix. 1981, 1 ♀; Jullya, 2,690 m, 29. ix. 1981, 1 ♂ 2 ♀. [Kathmandu] Kathmandu, 1,300 m, 21. x. 1986, 1 ♀ (SS); Godavari, 1,600 m, 26. iii. 1992, 1 ♀ (TH). [Bagmati] Dhunche, 1,960 m, Langtang Himal, 15. viii, 1993, 1 ♀ (HN). [NE India] Darjeeling, 8. ix. 1985, 1 ♂ (A. Yokokura); *ditto*, 2,050 m, 25. iii. 1986, 1 ♀ (W. Thomas); *ditto*, 2,573 m, 30. ix-5. x. 1986, 1 ♂ (F. Aulombard & J. Plante).

Male genitalia (Fig. 1287). Uncus trigonal, apex minutely bifurcate. Valva ample, costa almost straight, sacculus broadly sclerotized to the middle of ventral margin, strongly protuberant. Aedeagus broad, a little shorter than valva, three cornuti robust: one is beak-shaped, the next with a thorn-like tip, the 3rd an irregular band. Abdominal plate slender, gradually tapering, rods with

rounded tips. Female genitalia (Fig. 1329). Very similar to Eurasian *E. lariciata* (Freyer) (Inoue, 1980, fig. 46: C), but tube-like part of corpus bursae longer and more slender, spherical part densely spined.

Eupithecia balintzsolti Vojnits (Pl. 165: 9 ♀)

Eupithecia balintzsolti Vojnits, 1988: 49, figs 27–29; pl. 1: H.

[Kosi] Dhankuta, 1,100 m, 2. xi. 1979, 1 ♀; Palati, 1,200 m, 14. xi. 1979, 1 ♂ (holotype) (MO).

Male genitalia (prepared by Vojnits) (Fig. 1288). Very characteristic in the shape of strongly sclerotized large sacculus, resembling *atrignis*. Aedeagus broad, much shorter than valva, a short but stout spined cornutus, with a broad band-like basal part. Abdominal plate with long and slender rods (much narrower than the original figure). Female genitalia (Fig. 1330). Papillae anales elongate, apices rounded, apophyses very slender. Ductus bursae broad and short, corpus bursae with caudal half a broad tube, thick ductus seminalis branching from the caudal end, cephalic half of bursa spherical, densely spined.

The shape of the female genitalia is very similar to *E. ussuriensis* Dietze (Inoue, 1980, fig. 52: A) from Japan, Korea, Mongolia and SE Siberia and to *E. subfuscata* (Haworth) from Europe to Siberia.

Eupithecia beneficiaria Vojnits. *Cf. iracunda* Vojnits

Eupithecia beneficiaria Vojnits, 1988: 46, figs 17–19; pl. 3: E.

Eupithecia bini Vojnits, 1981* (Pl. 168: 1 ♀)

Eupithecia bini Vojnits, 1981: 231, figs 15,16.

Eupithecia circumacta Prout (Pl. 165: 10 ♀)

Eupithecia circumacta Prout, 1958: 391 [*id.*, 1941, pl. 38: h].

[Bagmati] Dhunche, 1,960 m, Langtang Himal, 15. viii. 1993, 1 ♀. [Kathmandu] Mt Phulchouki, 2,070 m, 17. viii. 1993, 1 ♀ (HN). [NE India] Darjeeling, 2,500 m, 13–16. viii. 1985, 1 ♀ (W. Thomas).

Males are not in my collection.

Female genitalia (Fig. 1331). Papillae anales truncate at apex, apophyses very slender. Ostium broad and long, corpus bursae ovate, densely spined.

Eupithecia circumscriptrix Vojnits *Cf. rubridorsata* Hampson

Eupithecia circumscriptrix Vojnits, 1983: 279, fig.22.

Eupithecia coccinea Vojnits* (Pl. 168: 2 ♂)

Eupithecia coccinea Vojnits, 1981: 224, figs 8, 9.

Eupithecia commiserenda Vojnits (Pl. 165: 11 ♂)

Eupithecia commiserenda Vojnits, 1983: 270, fig.13.

[Bagmati] Dhunche, 1,960 m, Langtang Himal, 7 & 15. viii. 1993, 2 ♂ (HN).

Male genitalia (Fig. 1289). Uncus moderately long, apex mintely bifurcate. Valva ample, ventral margin arched at two-thirds from base, apex rounded. Aedeagus broad, much shorter than valva, one cornutus is a very stout horn-like process, apical area serrate, the other a much shorter process, with round apex, in addition there are a sthick-like and a band-like sclerotizations. Abdominal plate with long rods, fissure very deep, central part of basal plate as wide as the width of the rods.

Eupithecia concinna Vojnits (Pl. 165: 12 ♂)*Eupithecia concinna* Vojnits, 1983: 211, figs 1, 3.*E. albicentralis* Inoue is here treated as a junior synonym (**syn. nov.**).

In addition to the type-specimens of *albicentralis*: [Bagmati] Kyangjin, 3,910 m, Langtang Himal, 11 & 12. viii 1993, 2 ♂ (HN). [NE India] Darjeeling, 3,000 m, 15. viii. 1985, 2 ♂ (W. Thomas).

Male genitalia (Fig. 1290). Uncus with stick-like process not long, apex shallowly bifurcate. Valva with broadly sclerotized sacculus, its margin roundedly produced near base. Aedeagus a little shorter than valva, a double horn-like cornuti shorter than aedeagus, one is nearly straight, the other shorter, curved. Abdominal plate broad at basal half, suddenly narrowed toward apex, rods sharply defined short thorns. 8th abdominal tergite terminating in a spine. Female genitalia are described and illustrated by Vojnits and me.

Eupithecia conjunctiva Hampson (Pl. 165: 13 ♂)*Eupithecia conjunctiva* Hampson, 1895: 400.

[Karnali] Rara Lake, 2,990 m, 25-26. ix. 1981, 2 ♂ (MO).

Male genitalia (Fig. 1291). Uncus short, apex bifurcate. Valva rather ample, sacculus emitting a spinule at one-third from base. Aedeagus a little shorter than valva, a mass of about 6 thorns from the tip of band-like cornutus, another cornutus is whip-like. Abdominal plate ample at basal part, rods strongly sclerotized at only apical portion, fissure very shallow.

Eupithecia contraria Vojnits (Pl. 165: 14 ♀)*Eupithecia contraria* Vojnits, 1983: 263, figs 2, 4, 5.*E. fuscoferruginea* Inoue is here treated as a junior synonym (**syn. nov.**).

In addition to the type-series of *fuscoferruginea*: [Bagmati] Mt Nilgiri, 4,200 m, 17-19. vii. 1969, 10 ♀ (TM). [Bagmati] Kyangjin, 3,900 & 3,910 m, Langtang Himal, 11 & 12 viii. 1993, 4 ♂ (HN).

Male genitalia (Fig. 1292). Valva slender, strongly narrowed toward apex. Aedeagus broad, a little shorter than valva, one cornutus is horn-like, about two-third length of aedeagus, strongly curved near apex, the other one a small thorn. Abdominal plate with rods broad and short, fissure very deep. Female genitalia (Fig. 1332) Ductus bursae striated and gradually expanded to irregularly ovate corpus bursae, which is a thick membrane and not transparent, densely striated at caudal half, cephalic half minutely spinulose.

***Eupithecia costinotata* sp. nov.** (Pl. 165: 15 ♀, holotype)

Female. Wingspan 19 mm. In colour and maculation of forewing somewhat similar to well-known European *E. insigniata* (Hübner), but basal patch dark brown, without same coloured antemedian fascia, an elongate dark brown costal mark beyond black discal spot, white subterminal line zigzag, proximally margined with dark grey marks at costa and central area, termen dark brown, fringe speckled with dark and light grey. Hindwing less brownish, more weakly marked than in *insigniata*.

Female genitalia (Fig. 1333). Papillae anales elongate, apex nearly pointed, apophysis very slender. Ductus bursae very short, corpus bursae large, ovate, densely spined, excepting narrow caudal area.

Holotype, ♀: [Kathmandu] Godavari, 1,600 m, 23. iii. 1992 (TH).

Eupithecia damnosa Vojnits* (Pl. 168: 3 ♂)*Eupithecia damnosa* Vojnits, 1983: 277, fig.20.

***Eupithecia darjeelica* sp. nov.** (Pl. 165: 16 ♂, holotype)

Male. Wingspan 15–16 mm. Antennal ciliae about as long as width of shaft, palpus one and half length of diameter of eye. Wings fuscous brown, transverse lines indistinct, but black discal dot very distinct, subterminal row of white dots scarcely traceable at anterior half. Hindwing nearly concolorous with forewing, but paler anteriorly, discal dot very weak.

Male genitalia (Fig. 1293). Uncus moderately long, apex bifurcate. Valva ample, costa straight, ventral margin gently arched. Aedeagus very broad, about two-third length of valva. Sclerotized cornutus indistinct, but a small basal sclerite visible. Abdominal plate with slender rods, apices rounded, fessure about twice deeper than the basal plate,

Holotype, ♂, and paratype, 1 ♀: {NE India} Darjeeling, 2,000 m, 11-20. iii. 1985 (W. Thomas). Omitted from the type-series: {N Thailand} Doi Inthanon, 25. x. 1990, 1 ♂, (J. D. Braddley, A. Lewvenich & H. Kuroko).

The above recorded male from N Thailand is perfectly identical with the Indian specimen in the genitalia, but wings paler, forewing with ante- and postmedian fascia clear, both parallel with termen after angled anteriorly.

***Eupithecia delaeveri* Vojnits** (Pl. 165: 17 ♀)

Eupithecia delaeveri Vojnits, 1976: 204, figs 1: A; 2: C; 3: C.

E. supersophia Inoue is here treated as a junior synonym (**syn. nov.**).

Besides the type-series, 1 ♂ 2 ♀, of *supersophia* from NE India and E Nepal: [Kathmandu] Mt Siwapuri, 2,650 m, 7. x. 19181, 1 ♀ (MO). [Bagmati] Kyangjin, 3,910 m, Langtang Himal, 12. viii. 1993, 1 ♀ (HN).

E. delaeveri was described from SW China.

Male genitalia (Fig. 1294). Uncus with stick-like process absent. Valva with costal margin weakly curved upward near apex, ventral margin gently arched, apical area nearly truncate. Aedeagus a little shorter than valva, cornuti several band-like sclerotizations, one is terminating in a spine, another with serrated tip. Abdominal plate with wide-apart slender rods, curved inward near tips, depth of fissure about three times width of basal plate. Female genitalia (Fig. 1334). Papillae anales narrow, apices rounded, apophyses stout and long. Ostium funnel-shaped, ductus bursae about as long as length of corpus bursae. Corpus bursae ovate, densely spinulose, but caudal part spineless, ductus seminalis branching from caudal end of right side.

In addition to Vojnits' "*bohatschi* group" (1976) from SE Siberia (*bohatschi* Staudinger) and China (7 new species), *E. ustata* Moore from NE India, *E. sinicaria* Leech from China, *E. sophia* Butler and *jezoensis* Matsumura from Japan belong to the same group from the pattern of forewing and structure of genitalia of both sexes.

Eupithecia deprima Vojnits *Cf. leucostaxis* Prout

Eupithecia deprima Vojnits, 1974: 223, figs 3: A-E.

Eupithecia dierli Vojnits *Cf. pyricoetes* Prout

Eupithecia dierli Vojnits, 1983: 264, figs 6, 8.

Eupithecia discolor Vojnits *Cf. rubridorsata* Hampson

Eupithecia discolor Vojnits, 1983: 277, figs 21, 24.

***Eupithecia emendata* Vojnits** (Pl. 168: 4 ♂)

Eupithecia emendata Vojnits, 1983: 268, figs 11, 16.

E. mediargentata Inoue is here treated as a junior synonym (**syn. nov.**).

Besides the type-series, 3 ♀, of *mediargentata* from E Nepal and NE India, no additional specimens were examined.

Male genitalia are described and illustrated by Vojnits for *emendata*. Female genitalia (Fig. 1335). Papillae anales slender, apices sharply defined, apophyses rather thick, moderately long. Corpus bursae an elongate tube, minutely spined in the membranous area, cephalic part a sclerotized stick-like process, ending in a small spherical pouch. Ductus seminalis branching from the membranous tube at right side.

Eupithecia flavitornata Herbulot *Cf. maculosa* Vojnits
Eupithecia flavitornata Herbulot, 1984: 43, figs 7, 11.

Eupithecia fletcheri Prout (Pl. 165: 18 ♀)
Eupithecia fletcheri Prout, 1926: 252.

[Karnali] Rara Lake, 2,990 m, 25-26. ix. 1981, 1 ♂ 1 ♀; Jumla, 2,440 m, 1. x. 1981, 1 ♀ (MO).

Male genitalia (Fig. 1295). Uncus without stick-like process. Valva elongate, apex rounded, costa and sacculus well-marked, the latter gently arched. Aedeagus slender, two-third length of valva, sclerotized cornuti not recognized. Abdominal plate with wide-apart long rods, connected with string-like base, apices incurved, rounded. Female genitalia (Fig. 1336). Papillae anales narrow, apophyses slender, membranous ductus bursae about twice length of corpus bursae, which is spherical, densely spined.

Eupithecia forsteri Vojnits* (Pl. 168: 5 ♂)
Eupithecia forsteri Vojnits, 1983: 266, figs 7, 9.

Eupithecia fusca Vojnits (Pl. 165: 19 ♂)
Eupithecia fusca Vojnits, 1891: 222, figs 6, 7.

[NE India] Darjeeling, 2,500 m, 13-16. vii. 1985, 1 ♀; *ditto*, 3,000 m, 15. viii. 1985, 1 ♂ (W. Thomas).

Male genitalia (Fig. 1296). Uncus trigonal, minutely bifurcate. Valva ample, apex gently rounded. Aedeagus about as long as valva. The cornuti illustrated in the original paper are three robust spines, while in the above recorded male they are two stick-like processes and one much smaller spine connected with basal sclerite by membrane. Abdominal plate with slender rods, fissure very deep. Female genitalia (Fig. 1337). Shape of corpus bursae is peculiar, somewhat similar to *E. pacifica* Inoue (1980: 163, figs 41: B; 58: A) from Japan and *E. alishana* Inoue (1988: 351, fig. 18: E) from Taiwan.

Eupithecia fuscoferruginea Inoue *Cf. contraria* Vojnits
Eupithecia fuscoferruginea Inoue, 1987: 239, figs 63: F; 65: A, B.

Eupithecia improva Vojnits (Pl. 168: 6 ♂)
Eupithecia improva Vojnits, 1983: 269, fig. 12.

E. proinsigniata Inoue is here treated as a junior synonym (**syn. nov.**).

There are no additional specimens in my cabinet.

Male genitalia (Fig. 1297). Uncus short, apex triangular. Valva with costal and ventral margin straight, sacculus strongly sclerotized, terminating in a triangle. Aedeagus a little shorter than valva, two thorn-like cornuti, one is almost straight, about two-third length of aedeagus, the other is much shorter and a little curved. Abdominal plate a weakly sclerotized tapering plate, apex indent. Female genitalia are described and illustrated by me for *proinsigniata*.

Eupithecia iracunda Vojnits (Pl. 165: 20 ♀, holotype)

Eupithecia iracunda Vojnits, 1988: 44, fig.13; pl. 2: B.

E. beneficiaria Vojnits is here treated as a junior synonym (**syn. nov.**).

[Sagarmatha] Junbesi, 2,670 m, 10-11. x. 1979, 1 ♀ (holotype of *iracunda*); Kharikhola, 1,980 m, 7. x. 1979, 1 ♂ (holotype of *beneficiaria*). [Bagmati] Palati, 1, 200 m, 9. xi. 1979, 1 ♂ (MO).

Male genitalia (Fig. 1298). Sacculus strongly protuberant, with a half-moon plate. Aedeagus broad, shorter than valva, cornuti are complicated: a small hooked or wedge-shaped process, a broad plate with rounded tip and a narrower band-like sclerotization. Abdominal plate with very long rods, a little expanded apically. Female genitalia (holotype of *iracunda* prepared by Vojnits) (Fig. 1338). Corpus bursae contains a wedge-shaped sclerite at left side and a plate-like one at the right side, but these sclerites are cornuti of the male left after copulation.

***Eupithecia karnaliensis* sp. nov.** (Pl. 165: 21 ♀, paratype)

Wingspan 17–20 mm. Shape of wings, colour and pattern similar to *E. mustangata* Schütze. Forewing dark grey, black discal dot clear, white median fascia angled at discocellulars, but sometimes median area broadly whitish.

Male genitalia (Fig. 1299). Uncus moderately long, triangular, apex minutely bifurcate. Valva ample, costa weakly swollen at basal area, sacculus narrow, weakly indent at the end. Aedeagus broad, about two-third length of valva, cornuti complicated: one is an incomplete long band, about two-third length of aedeagus, next is a beak-shaped shorter sclerite, the last one is a slender spine, about one-fourth length of aedeagus. Abdominal plate with very slender rods, approximated each other, apices more or less lobed, fissure very deep. Female genitalia (Fig. 1339). Papillae anales short, apices rounded, apophyses very slender. Ductus bursae very short, corpus bursae ovate, densely spined at cephalic half, a row of stout spines at left side, spinulous at caudal area.

Holotype, ♂: [Karnali] Jullya, 2,690 m, 29. ix. 1981 (MO). Paratypes: [Karnali] Jhari, 2550 m, 24. ix. 1981, 1 ♀. [Gandaki] Phedi, 2,350 m, 18. x. 1981, 1 ♀ (MO). Omitted from the type-series: [NE India] Darjeeling, 9. ix. 1985, 1 ♀ (A. Yokokura).

***Eupithecia lactibasis* sp. nov.** (Pl. 165: 22 ♀, holotype)

Female. Wingspan 24 mm. The largest species among all the known *ustata*-group. Forewing with costa almost straight to near apex, termen weakly gibbous, tornus pronounced. Forewing white from base to postmedian dark grey fascia, its distal side margined with a double white lines, costa with blackish brown flat marks at basal, median and postmedian areas, discal blackish bar very slender, subterminal area outside postmedian fascia yellowish brown, white subterminal line interrupted on veins, terminal area dark grey, fringe grey, spotted with white. Hindwing white, transverse lines faintly indicated, discal dot minute, termen blackish grey, basal half of fringe white, outer half greyish.

Female genitalia (Fig. 1340). Papillae anales slender, tapering to narrow apex, apophyses long and slender. Ductus bursae nearly as long as diameter of corpus bursae. Corpus bursae spherical, densely spined, excepting narrow spinelss caudal area.

Holotype, ♀: [NE India] Darjeeling, 2,050 m, 25. iii. 1986 (W. Thomas).

Eupithecia lata Vojnits* (Pl. 168: 7 ♂)

Eupithecia lata Vojnits, 1981: 326, figs 12, 13.

Eupithecia leucostaxis Prout (Pl. 165: 23 ♀)

Eupithecia leucostaxis Prout, 1926b: 318; [*id.*, 1941, pl. 38: 1].

E. deprima Vojnits is here treated as a junior synonym (**syn. nov.**).

[Bagmati] Kyangjin, 3,910 m, Langtang Himal, 12. viii. 1993, 3 ♂ 4 ♀ (HN).

Male genitalia (Fig. 1300). Uncus moderately long, apex minutely bifurcate. Valva ample, ventral margin gently arched. Aedeagus broad, a little shorter than valva, cornuti robust: one is a horn-like process, about half length of aedeagus, next two are wedge-shaped, the last one is a short band. Abdominal plate with very slender rods, closely approximated together, apices not well-defined, fissure very deep. Female genitalia (Fig. 1341). Papillae anales with rounded apices, apophyses slender. Ductus bursae very short, caudal half of corpus bursae gradually expanded, streaked, spinulose at middle, cephalic half globular, densely spined, but stoutly spined at central area caudal to densely spined area, ductus seminalis arising from mid-right side.

***Eupithecia liberata* sp. nov.** (Pl. 165: 24 ♂, paratype)

Wingspan 16–19 mm. Very similar to *E. yoshimotoi* Inoue (1988: 340, figs 12: A, B) from Taiwan, but smaller, forewing a little more slender.

Male genitalia (Fig. 1301). Uncus thick and long, apex expanded, cup-shaped, dorsally bilobed. Valva elongate, costal and ventral margins smooth, gradually tapering. Aedeagus much shorter than valva, a long stick-like cornutus about four-fifth length of aedeagus, tip pointed, the other cornutus much shorter and weakly sclerotized, tip rounded. Abdominal plate very slender, gradually tapering toward apex, apex bilobed. Female genitalia (Fig. 1342). Papillae anales with apices narrowly rounded, apophyses long and slender. Ostium funnel-shaped, ductus bursae very short. Corpus bursae ovate, densely covered with spinules at cephalic two-thirds, caudal one-third narrower, spinules at left half. Distinguished from *yoshimotoi* by much more slender apophyses anteriores and posteriores and larger and smooth margined ovate part of corpus bursae.

Holotype, ♀: [Kathmandu] Godavari, 1,600 m, 29. iii. 1992 (TH). Paratypes: type-locality, 9. iv. 1992, 1 ♂ 1 ♀; 25. iv. 1992, 1 ♀ (TH); Mt Phulchouki, 2,070 m, 17. viii. 1993, 2 ♂. [Bagmati] Lama Hotel, 2,390 m, Langtang Himal, 11. viii. 1993, 2 ♀ (HN).

***Eupithecia likiangi* Vojnits** (Pl. 165: 25 ♂)

Eupithecia likiangi Vojnits, 1976: 203, figs 1: E; 2: D; 3: B; *id.*, 1988: 37, pl. 1: I.

[Sagarmatha] Manidingma, 2,240 m, 8. x. 1979, 1 ♂ (MO), recorded by Vojnits, 1988.

Much smaller than the close relative *E. delaeveri* Vojnits.

Male genitalia (Fig. 1302). Distinguished from *delaeveri* by more elongate valva, abdominal plate with central fissure deeper. Female genitalia are described and illustrated by Vojnits, 1976.

***Eupithecia lilliptana* sp. nov.** (Pl. 165: 26 ♂, paratype)

Wingspan 14–15 mm. Tiny species. Palpus about one-half length of diameter of eye, antennal ciliae in male about as long as width of shaft. Frons and palpus blackish, but 3rd joint of palpus much paler. Wings elongate, forewing with termen gently gibbous, apex pointed. Forewing pale reddish brown, transverse lines are inconspicuous, but only pale postmedian fascia and blackish marks at costa as the commencement of the fascia visible, discal black dot conspicuous. Hindwing paler, transverse lines and discal dot faintly indicated.

Male genitalia (Fig. 1303). Uncus moderately long, apex bifurcate. Valva ample, ventral margin arched at two-thirds from base, apex rounded. Aedeagus broad, nearly as long as valva, one cornutus is a stout horn-like process, about four-fifth length of aedeagus, the other a very small spine. Abdominal plate with stout rods, widely separated, basal plate very narrow, lobed at both sides. Female genitalia (Fig. 1343). Papillae anales with apices rounded, apophyses very slender. Ductus bursae very short, corpus bursae irregular in shape, densely spined at cephalic half and spinulose at caudal half.

Holotype, ♂, and paratypes, 1 ♂ 1 ♀: [Kosi] Dhankuta, 1,100 m, 1 & 2. xi. 1979 (MO). Paratypes in coll. NSMT.

In the male genitalia, especially the feature of the horn-like cornutus this species is similar to *E. inexhausta* Vojnits, 1984: 218, figs 6, 9, from W China, but much smaller and there is an additional small cornutus. Also very similar to *E. commiserenda* Vojnits from Nepal, but much smaller, wings much paler.

***Eupithecia lineidistincta* Vojnits* (Pl. 168: 8 ♂)**

Eupithecia lineidistincta Vojnits, 1981: 217, figs 1, 2.

***Eupithecia lobbichlerata* Schütze (Pl. 165: 27 ♀)**

Eupithecia lobbichlerata Schütze, 1961: 181, pl. 29: 3, 8; pl. 31: 2, 2a, 3.

E. particeps Vojnits is here treated as a junior synonym (**syn. nov.**).

In addition to the type-series of *particeps*: [Janakpur] Changma, 2,200 m, 13. x. 1979, 2 ♂ 9 ♀; Jiri, 1,860 m, 15-16. x. 1979, 5 ♀. [Kathmandu] Mt Siwapuri, 2,550 m, 7. x. 1981, 1 ♂. [Mechi] Taplejung, 1,790 m, 25-26. x. 1979, 1 ♀. [Gandaki] Ulleri, 2,070 m, 14. x. 1981, 1 ♂; Dhampus Danda, 2,100 m, 25. x. 1981, 1 ♂. [Karnali] Rara Lake, 2,990 m, 25-26. x. 1981, 1 ♀ (MO). [Bagmati] Kyangjin, 3,910 m, Langtang Himal, 12. viii. 1993, 1 ♀ (HN). [NE India] Darjeeling, 2,100 m, 9. xi. 1981, 1 ♂ (MO).

Male genitalia (Fig. 1304). Uncus rather short, apex bifurcate. Valva elongate, apical area trigonal. Aedeagus shorter than valva, a double horn-like cornuti about half length of aedeagus. Abdominal plate with long slender rods, almost parallel, fissure very deep. Female genitalia (Fig. 1344). Papillae anales with nearly pointed apices, apophyses thick. Ductus bursae very short, corpus bursae with caudal half cylindrical, cephalic half ovate, densely spined at left side, right side narrowly spineless. Broad ductus seminalis branching from the cylindrical part.

***Eupithecia lucigera* Butler (Pl. 165: 28 ♂)**

Eupithecia lucigera Butler, 1889: 115, pl. 137: 11; Hampson, 1895: 398; Inoue, 1987: 241, fig.63: D.

[Bagmati] Naching, near Nilgiri, 12-14. vi, 1969, 1 ♂ (TM). [Kathmandu] Godavari, v-vii. 1973, 1 ♂ (TM); Mt Phulchouki, 2,070 m, 17. viii. 1993, 2 ♀ (HN).

Male genitalia (Fig. 1305). Uncus with a stick-like process. Valva elongate, costal and ventral margins nearly parallel, apex gently rounded. Aedeagus very broad, about two-third length of valva, there is a long stick-like cornutus and some other sclerites. Abdominal plate slender, tapering toward apex, apex minutely double lobed. Female genitalia (Fig. 1345). Papillae anales truncate, apophyses slender. Ductus bursae very short, corpus bursae pouch-like, partly spined, ductus seminalis arising from right middle of the pouch.

***Eupithecia maculosa* Vojnits (Pl. 165: 29 ♂)**

Eupithecia maculosa Vojnits, 1981: 230, fig.14.

E. flavitornata Herbulot is here treated as a junior synonym (**syn. nov.**).

[Sagarmatha] Manidingma, 2,240 m, 8. x. 1979, 2 ♂. [Kathmandu] Mt Siwapuri, 2,650 m, 7. x. 1981, 1 ♂ (MO). [NE India] Darjeeling, 2,573 m, 30. ix-9. x. 1986, 1 ♂ (F. Aulombard & J. Plante).

Male genitalia (Fig. 1306). Uncus moderately long, apex minutely bifurcate. Valva ample, but apical area strongly tapering. Aedeagus thick, a little shorter than valva, a band-like cornutus incomplete, the other serrated cornutus much shorter. Abdominal plate with widely apart rods, apices lobed, curved inward basal plate expanded, fissure very deep. Female genitalia unknown.

***Eupithecia marmorea* Vojnits* (Pl. 168: 9 ♀)**

Eupithecia marmorea Vojnits, 1983: 274, fig.18.

Eupithecia matura* Vojnits* (Pl. 168: 10 ♂)Eupithecia matura* Vojnits, 1981: 221, fig.5.***Eupithecia mediargentata* Inoue Cf. *emendata* Vojnits***Eupithecia mediargentata* Inoue, 1987: 243, figs 63: I; 67: A.***Eupithecia melanolopha* Swinhoe (Pl. 165: 30 ♂)***Eupithecia melanolopha* Swinhoe, 1895: 296; Hampson, 1896: 559; [Prout, 1941, pl. 38: I]; Inoue, 1979: 190, figs 4: Q; 15: D; 16: C; 17: C; *id.*, 1988: 336, figs 8: A-F.*E. owadai* Vojnits is here treated as a junior synonym (**syn. nov.**).In addition to the holotype, ♀, of *owadai*: [Sagarmatha] Manidingma, 2,240 m, 8. x. 1979, 1 ♂ (MO). [Kathmandu] Kathmandu, 1,300 m, 24. x. 1986, 1 ♂ (SS).

For the genitalia of the both sexes, see Inoue, 1979 & 1988.

Eupithecia mira* Vojnits (Pl. 165: 31 ♂)Eupithecia mira* Vojnits, 1988: 45, fig.23; pl. 3: D.

[Sagarmatha] Manidingma, 8, x. 1979, 1 ♂ 1 ♀ (MO). [N Thailand] Doi Inthanon, 2,560 m, 25. x. 1990, 1 ♂ (J. D. Bradley, A. Lewvenich & H. Kuroko).

Based on a very worn female from E Nepal this small species was described. Here one male with the same data with the holotype and another male from N Thailand recorded above are associated with the female.

Forewing dark grey, discal minute dot clear, whitish subterminal band, a narrow grey line running inside of the band. Hindwing with fine three lines parallel with termen, discal dot vestigial.

Male genitalia (Fig. 1307). Uncus moderately long, triangular, apex minutely bifurcate. Valva with costa straight, sacculus broadly and strongly sclerotized, hollowed near apex, apex truncate. Aedeagus broad, much shorter than valva, cornuti complicated: one incomplete band, terminating in a short spine, one horn-like process, about half length of aedeagus, a short stout thorn and smaller sclerites. Abdominal plate ample, tapering toward apex, rods shortly protruded, fissure very shallow. Female genitalia are described and illustrated in the original paper. The sclerotization in the globular corpus bursae is characteristic: a serrated band at caudal area, connected with double transverse bands, the right side of the bands stoutly spined.

Eupithecia multa* Vojnits Cf. *albibaltea* ProutEupithecia multa* Vojnits, 1981: 234, figs 19, 20.***Eupithecia mustangata* Schütze, 1961 (Pl. 165: 32 ♀)***Eupithecia mustangata* Schütze, 1961: 181, pl. 29: 4, 9; pl. 31: 4; pl. 32: 1; Vojnits, 1981: 236, figs 21, 22; *id.*, 1988: 38, pl. 1: A, B, D, E, F, G; pl. 3: I; Inoue, 1982: 167.

Besides the type-series many specimens were recorded by Vojnits and by me. [Sagarmatha] Monji, 2,800 m, 4. x. 1979, 1 ♀. [Janakpur] Changma, 2,200 m, 13. x. 1979, 1 ♂ 1 ♀; Jiri, 1,860 m, 15-16. x. 1979, 1 ♀ (MO).

Male genitalia (Fig. 1308). Aedeagus broad, a little shorter than valva, one of the two cornuti is a triangular plate, the other a short stick, with rounded tip. Abdominal plate with slender rods, fissure as deep as the length of expanded basal plate. Female genitalia (Fig. 1346). Apophyses posteriores longer than ovate corpus bursae, the caudal half of which is striated, cephalic half densely spined. A stick-like sclerotization at middle of corpus bursae, its right side strongly dentate.

***Eupithecia nepalata* Schütze* (Pl. 168: 11 ♀)**

Eupithecia nepalata Schütze, 1961: 179, pl. 29: 1, 6; pl. 30: 1, 1a, 1b, 2.

***Eupithecia nigrilinea* (Warren) (Pl. 166: 1 ♂)**

Tephroclystia nigrilinea Warren, 1896: 317.

[Karnali] Jillaya, 2,690, 29. ix. 1981, 1 ♂ (MO).

Male genitalia (Fig. 1309). Uncus moderately long, apex minutely bifurcate. Valva slender, costa nearly straight, ventral margin gently arched. Aedeagus broad, a little shorter than valva, cornuti two serrated sticks, one is about half length of aedeagus, the other much shorter, tips rounded. Abdominal plate with slender rods, apices rounded, fissure deep, about five times of the width of basal plate.

***Eupithecia nigrinotata* Swinhoe (Pl. 166: 2 ♂)**

Eupithecia nigrinotata Swinhoe, 1895: 296; Hampson, 1896: 560; [Prout, 1941, pl. 38: k].

[Kosi] Dhankuta, 1,100 m, 2. ix. 1979, 1 ♂ (MO).

Male genitalia (Fig. 1310). Uncus a long rod, apex shallowly bifurcate. Valva with dorsal and ventral margins parallel to near broad apex. Aedeagus about two-third length of valva, a spine-like cornutus about one-third length of aedeagus. Abdominal plate very narrow, with long slender rods, base expanded.

***Eupithecia noncoacta* Vojnits (Pl. 166: 3 ♀, paratype)**

Eupithecia noncoacta Vojnits, 1988: 40, figs 4-6; pl. 2: D, E, F.

[Bagmati] Drumthall, 2,420 m, 13. xi. 1979, 1 ♂ 1 ♀ (MO) (holo- and paratype).

Male genitalia (prepared by Vojnits) (Fig. 1311). Uncus short, triangular. Valva with ventral margin angled at two-thirds from base. One cornutus is a long spine, about one-half length of aedeagus, the other much more slender. Abdominal plate: the line drawing in the original paper is copied, because it cannot be traced from the slide of the holotype. Female genitalia (prepared by Vojnits) (Fig. 1350). Papillae anales and apophyses very slender. Ductus bursae about one-third length of large ovate corpus bursae.

***Eupithecia owadai* Vojnits Cf. *melanolopha* Swinhoe**

Eupithecia owadai Vojnits, 1988: 47, fig.24; pl. 3: F.

***Eupithecia pallescens* sp. nov. (Pl. 166: 4 ♂, holotype)**

Male. Wingspan 19-20 mm. Wings very narrow, forewing with apex pointed, termen weakly gibbous. Forewing with costal area broadly suffused with brownish grey from base to two-thirds, discal black spot clear, costal-apical area marked with brownish grey, terminal area tinged with the same colour, the remaining wide area pale yellowish brown, subterminal white line inconspicuous, termen dark brown, fringe dark grey. Hindwing pale yellow, terminal-tornal area light brownish, discal minute dot clear.

Male genitalia (Fig. 1312). Uncus moderately long, triangular, apex sharply defined. Valva ample, costa almost straight, sacculus well-marked, broad, weakly lobed at its tip two-thirds from base. Aedeagus much shorter than valva, cornuti complicated: two stout spines, one of them is about one-third length of aedeagus, the other much shorter, an incomplete band-like sclerotization two-third length of aedeagus. Abdominal plate with slender rods, fissure one-third length of width of basal plate.

Holotype, ♂: [NE India] Darjeeling, 2,100 m, 9. xi. 1981 (MO). Paratype: [Bagmati] Drumthali, 2,420 m, 13. xi. 1979, 1 ♂ (MO), in coll. NSMT.

Eupithecia particeps Vojnits *Cf. loblichlerata* Schütze
Eupithecia particeps Vojnits, 1988: 41, figs 7-9; pl. 3: G, H.

***Eupithecia peguensis* Prout (Pl. 166: 5 ♀)**

Eupithecia peguensis Prout, 1958: 392, [*id.*, 1941, pl. 38: i].

E. torva Vojnits is here treated as a junior synonym (**syn. nov.**).

[Bagmati] Mt Nilgiri, 4,200 m, 17-19. vii. 1969, 1 ♀ (TM). [Kathmandu] Kirtipur, 1,300 m, 6. xi. 1986, 1 ♀ (SS). [Kathmandu] Godavari, 1,600 m, 17 & 20. iv. 1990, 1 ♂ 1 ♀; *ditto*, 20. iii. 1992, 1 ♀ (TH).

Male genitalia (Fig. 1313). Uncus short, triangular. Valva ample, costa gibbous, ventral margin gently arched, apex narrowly rounded. Aedeagus about as long as valva, cornuti complicated: a band-like sclerotization, about 6 thorn-like ones. Abdominal plate with widely apart rods, not strongly sclerotized. Female genitalia (Fig. 1351). Papillae anales flat at apex, apophyses rather short, stout. Ductus bursae and corpus bursae continuous, a long tube, wrinkled and spinulose, terminating in a spined pouch, ductus seminalis arising from caudal part of the pouch.

***Eupithecia pengata* Schütze (Pl. 166: 6 ♂)**

Eupithecia pengata Schütze, 1961: 180, pl. 29: 2, 7; pl. 30: 3, 3a, 3b; pl. 31: 1.

E. acseszteri Vojnits is here treated as a junior synonym (**syn. nov.**).

Holotype, ♂, of *acseszteri*: [Sagarmatha] Kharikhola, 1,980 m, 7. x. 1979 (MO). [Sagarmatha] Manidingma, 2,240 m, 8. x. 1979, 2 ♂ 1 ♀. [Janakpur] Changma, 2,200 m, 13. x. 1979, 2 ♂; Jiri, 1,860 m, 15-16. x. 1979, 1 ♀. [Kosi] Dhankuta, 1,100 m, 8. xi. 1979. [Karnali] Jimla, 2,440 m, 19-20. ix. 1981, 1 ♂; Jhari, 2,550 m, 24. ix. 1981, 1 ♂. [Kathmandu] Mt. Siwapuri, 2,650 m, 7. x. 1981, 4 ♀. [Gandaki] Dhampus Danda, 2,100 m, 23. x. 1981, 1 ♂ (MO). [Bagmati] Kyangjin, 3,910 m, 12. viii. 1993, 1 ♂ (HN). [NE India] Darjeeling, 2,100 m, 9. xi. 1981, 1 ♀ (MO).

Male genitalia (Fig. 1314). Uncus rather stout, valva strongly tapering, apex narrow. Aedeagus slender, a little shorter than valva. A single cornutus is nearly as long as aedeagus. Abdominal plate robust, rods as long as basal plate, tips more or less lobed, incurved. Female genitalia (Fig. 1347). Basal part of ductus seminalis very broad and sclerotized. Spherical corpus bursae densely spined, caudal half narrower.

***Eupithecia phulchokiana* Herbulot* (Pl. 168: 12 ♂)**

Eupithecia phulchokiana Herbulot, 1984: 45, figs 6, 13.

Eupithecia proinsigniata Inoue *Cf. improva* Vojnits

Eupithecia proinsigniata Inoue, 1987: 239, figs 63: e, 64: C, D.

Eupithecia propoxydata* Schütze

Eupithecia propoxydata Schütze, 1961: 182, pl. 29: 5; pl. 32: 2, 2a, 2b.

This species was described on a single male from Managbhot, 3,500 m, Gandaki dstr. From the structure of the male genitalia and very characteristic 8th abdominal sternite it is a close relative of *E. suboxydata* Staudinger as was pointed out by the author.

Vojnits & Laever, 1973, created a new genus *Catarina* for *suboxydata* and its close relatives, but now this genus is considered to be a synonym of *Eupithecia* (cf. Inoue, 1979: 159; Parsons et al., 1999: 326). *Catarina formosa* Vojnits & Laever, 1973: 430, figs 1: b; 5: b, from Yunnan, W China, is possibly a synonym of *propoxydata*.

Eupithecia pulla Vojnits *Cf. albigutta* Prout

Eupithecia pulla Vojnits, 1988: 38, figs 1-3, 10; pl. 2: G. H.

Eupithecia pyrigoetes Prout (Pl. 166: 7 ♀)

Eupithecia pyrigoetes Prout, 1958: 392, [*id.*, 1941, pl. 38: h]

E. dierli Vojnits is here treated as a junior synonym (**syn. nov.**).

[NE India] Darjeeling, 2,500 m, 13-16. viii. 1985, 1 ♀ (W. Thomas).

Male genitalia are described and illustrated by Vojnits for *dierli*. Female genitalia (Fig. 1348). Papillae anales with apices more or less truncate, apophyses very slender. Ostium funnel-shaped, corpus bursae ovate, central area densely spined, a row of spinules at caudal area.

Eupithecia quadripunctata Warren (Pl. 166: 8 ♀)

Eupithecia quadripunctata Warren, 1888: 331.

Eupithecia rajata (part.): Hampson, 1895: 399, nec Guenée.

E. vivida Vojnits is here treated as a junior synonym (**syn. nov.**).

[Janakpur] Changma, 2,200 m, 18. x. 1979, 1 ♂ 1 ♀. [Karnali] Rara lake, 2,990 m, 25-26. ix. 1981, 1 ♂ 1 ♀ (MO). [Kathmandu] Kathmandu, 1,300 m, 1. x. 1986, 1 ♂ 1 ♀ (SS). [Kathmandu] Mt Phulchouki, 2,075 m, x. 1991, 1 ♀; Godavari, 1,000 m, 23. ii-20. iii. 1992, 15 ♂ ♀. [Kosi] Basantapur, 2,350 m, 15-16. iii. 1993, 33 ♂ ♀. [Janakpur] Jiri, 2,350 m, 20-22. iii. 1993, 1 ♂ (TH). [NE India] Darjeeling, 2,050 m & 2,200 m, 25 & 27. iii. 1986, 2 ♂ 1 ♀ (W. Thomas).

Male genitalia (Fig. 1315). Uncus triangular, apex bifurcate. Valva ample, costa almost straight, apex lobed, sacculus with ventral margin straight, apex spatulate. Aedeagus thick, a little longer than valva, cornuti complicated: ten or more thorn-like sclerites, a spine-like long process and several other small sclerites. Abdominal plate trigonal, apex narrowly produced. Female genitalia (Fig. 1349). Papillae anales and apophyses rather short, colliculum a strongly sclerotized plate. Ductus bursae extremely short, continuing to strongly sclerotized corpus bursae. Corpus bursae ovate, densely spined, but cephalic part minutely so, ductus seminalis arising from right shoulder, its basal part strongly sclerotized, curved to left.

Bivoltine, appearing in spring and autumn. The autumn specimens are much smaller than the spring ones.

Related to *E. recens* Dietze from C Asia to China (Vojnits & Laever, 1978: 235, figs 14, 16), *repentina* Vojnits & Laever from China and Japan (Inoue, 1980: 171, figs 44:A; 47: H-J; 49: C; 58: C, as *recens*) and *taiwana* Wileman & South from Taiwan (Inoue, 1988: 347, figs 15: A-F).

Eupithecia raniata Prout (Pl. 166: 9 ♂)

Eupithecia raniata Prout, 1958: 391, [*id.*, 1941, pl. 38: f].

[NE India] Darjeeling, 2,000 m & 2,500 m, 11-20. viii. 1985, 1 ♂ 1 ♀ (W. Thomas).

Male genitalia (Fig. 1316). Uncus with stick-like process moderately long, apex shallowly bifurcate. Valva elongate, gently tapering, apex rather wide. Aedeagus about two-third length of valva, sclerotized cornutus not recognized. Abdominal plate with slender rods, fissure about three times longer than width of basal plate. Female genitalia (Fig. 1352). Papillae anales with acute apices, apophyses anteriores and posteriores very long. Ductus bursae narrow, corpus bursae largely pouched leftward, then spherical, densely spined.

Eupithecia robiginascens Prout (Pl. 166: 10 ♀)

Eupithecia robiginascens Prout, 1926a: 9; *id.*, 1926b: 316; [*id.*, 1941, pl. 38: h]; Inoue, 1987: 237.

Already recorded from Nepal by me. [Sagarmatha] Manidingma, 2,240 m, 8. x. 1979, 2 ♂. [Kosi] Basanpur, 2,380 m, 21. x. 1979, 1 ♀. [Karnali] Chuchumara Dara, 3,600 m, 27. ix. 1981,

1 ♂ (MO). [Bagmati] Langtang, 3, 880 m, 20-22 vii. 1979, 1 ♀ (TH); Lama Hotel, Langtang Himal, 11-13. viii. 1993, 26 ♂ ♀ (HN). [NE India] Darjeeling, 1,700 to 3,600 m, 14 & 18. viii. 1985, 2 ♂ 2 ♀ (W. Thomas); *ditto*, 2,573 m, 30. ix-5. x. 1986, 1 ♀ (F. Aulombard & J. Plante).,

Male genitalia (Fig. 1317). Uncus moderately long, apex minutely bifurcate. Valva with ventral margin weakly lobed at one-third from base. Aedeagus very broad, about two-third length of valva, two horn-like cornuti, one is as long as aedeagus, the other shorter. Abdominal plate slender, rods straightish, fissure deep. Female genitalia (Fig. 1353). An elongate pouch-like process branching from left base of ductus bursae, corpus bursae ovate, spineless at caudal part, from right side of which arising ductus bursae.

Eupithecia rubridorsata Hampson (Pl. 166: 11 ♀)

Eupithecia rubridorsata Hampson, 1895: 403; [Prout, 1941, pl. 38: k].

E. discolor Vojnits and *circumscriptrix* Vojnits are here treated as junior synonyms (**syn. nov.**).

[Kathmandu] Mt Siwapuri, 2,650 m, 7. x. 1981, 1 ♂ (MO); Godavari, 1,600 m, 14. iv. 1990, 1 ♀ (TH). [Bagmati] Lama Hotel, 2,390 m, Langtang Himal, 13. viii. 1993, 1 ♀ (HN).

Male genitalia (Fig. 1318). Uncus without stick-like process. Valva elongate, apical area narrow. Aedeagus slender, about two-third length of valva, a band-like cornutus incomplete, only basal sclerotization is visible. Abdominal plate with wide-apart rods, apically curved inward, apices lobed, fissure very deep. Female genitalia (Fig. 1354). Papillae anales with apices acute, apophyses long and stout. Ostium funnel-shaped, ductus bursae very narrow, about as long as diameter of corpus bursae. Corpus bursae spherical, densely spined.

Eupithecia ruficorporis (Warren)* (Pl. 168: 13 ♂)

Tephroclystia ruficorporis Warren, 1897: 230; [Prout, 1941, pl. 38: f].

E. albicans Vojnits is here treated as a junior synonym (**syn. nov.**).

Eupithecia seditiosa Vojnits* (Pl. 168: 14 ♂)

Eupithecia seditiosa Vojnits, 1981: 232, figs 17, 18.

Eupithecia sempiterna Vojnits *Cf. asempiterna* Inoue

Eupithecia sempiterna Vojnits, 1988: 48, figs 20-22, 25; pl. 2: A, B, C.

Eupithecia sola Vojnits* (Pl. 168: 15 ♂)

Eupithecia sola Vojnits, 1983: 275, fig. 19.

***Eupithecia stramineata* sp. nov.** (Pl. 166: 12 ♀, holotype)

Female. Wingspan 23 mm. Palpus porrect, a little over three times length of diameter of eye. Wings ample, forewing with costa gently arched toward apex, termen weakly gibbous, apex bluntly pointed. Forewing pale reddish brown, transverse lines faint, discal black dot minute but clear, fringe greyish. Hindwing paler than forewing, narrow costal area whitish. Under surface much paler, both wings with minute discal dots.

Female genitalia (Fig. 1355). Papillae anales very large, apices nearly pointed, apophyses stout, short. Ductus bursae about half length of diameter of corpus bursae. Ovate corpus bursae densely spined, excepting spinelss right side.

Holotype, ♀: [Janakpur] Thodung, 3,100 m, 14. x. 1979 (MO).

Eupithecia subrubescens (Warren) (Pl. 166: 13 ♂)

Cidaria subrubescens Warren, 1888: 329; Hampson, 1895: 356.

Melanippe despicienda Butler, 1889: 117, pl. 137: 17.

Horisme subrubescens: Prout, 1938: 212, pl. 17: e; *id.*, 1941: 353.

Eupithecia subrubescens: Inoue, 1987: 241, figs 63: C. 65: C.

Already recorded by me from E Nepal and there are no additional specimens.

Male genitalia (Fig. 1319). Uncus with a spine-like process. Valva elongate, apex narrowly rounded, a long spine arising from the apex of sacculus. Aedeagus about as long as valva, cornuti stick-like, not strongly sclerotized. Abdominal plate with widely apart broad rods.

Eupithecia subviridis Vojnits* (Pl. 168: 16 ♀)

Eupithecia subviridis Vojnits, 1983: 279, fig.25.

Eupithecia supersophia Inoue *Cf. delaeveri* Vojnits

Eupithecia supersophia Inoue, 1987: 243, figs 63: H, 66: C, D.

Eupithecia suspiciosa Vojnits *Cf. tricrossa* Prout

Eupithecia suspiciosa Vojnits, 1983: 267, fig. 10.

Eupithecia tenebricosa Vojnits* *Cf. vojnitsi* Inoue

Eupithecia tenebricosa Vojnits, 1983: 274, fig.15.

Eupithecia tenuisquama (Warren) (Pl. 166: 14 ♀)

Tephroclystis tenuisquama Warren, 1896: 317; [Prout, 1941, pl. 38: i].

Eupithecia toshimai Inoue (1980: 177, figs 44: C; 46: B; 47: O-Q; 49: F; 53: D; id, 1988: 354) from Japan and Taiwan is here treated as a junior synonym (**syn. nov.**).

[Sagarmatha] Manidingma, 2,240 m, 8. x. 1979, 1 ♂; Sete, 2,600 m, 12, x, 1979, 1 ♂ (MO). [Kathmandu] Kathmandu, 1,300 m, 7. ix. 1986, 1 ♀ (SS); Godavari, 1,600 m, 24. ii. 1992, 1 ♀; 27. iii. 1993, 1 ♂ 1 ♀; Mt Phulchouki, 2,075 m, 29. ii. 1992, 1 ♀. [Kosi] Rasantapur, 2,350 m, 15-16. iii. 1993, 1 ♂ 4 ♀. [Janakpur] Jiri, 2,350 m, 20-22. iii. 1993, 3 ♂ (TH). [NE India] Darjeeling, 2,050 m, 25. iii. 1986, 1 ♂ 1 ♀ (W. Thomas). [N Thailand] Doi Inthanon, 2,560 m, 25. x. 1990, 1 ♀ (D. J. Bradley, A. Lewvenich & H. Kuroko).

Male genitalia (Fig. 1320). Uncus not long, apex minutely bifurcate. Valva with sacculus weakly sclerotized, terminating in a small lobe. Aedeagus broad, a little shorter than valva, a spined cornutus about one-third length of aedeagus, an imperfect band-like sclerite. Abdominal plate with two small lobes at apex, basally expanded. Female genitalia (Fig. 1356). Corpus bursae with sclerotized and streaked cylindrical caudal part, ductus seminalis branching from right side. Cephalic part of corpus bursae spherical, densely spined.

Bivoltine, appearing in spring and autumn, 2nd brood being smaller than 1st one. Widely distributed in NE India, Nepal, N Thailand, Taiwan and S Japan.

Eupithecia torva Vojnits *Cf. peguensis* Prout

Eupithecia torva Vojnits, 1983: 271, figs 14, 17.

Eupithecia tricrossa Prout (Pl. 166: 15 ♀)

Eupithecia tricrossa Prout, 1926: 316; [*id.*, 1941, pl. 38: h].

E. suspiciosa Vojnits is here treated as a junior synonym (**syn. nov.**).

[NE India] Darjeeling, 2,573 m, 30. ix-5. x. 1986, 1 ♀ (F. Aulombard & J. Plante). [N Thailand] Doi Inthanon, ca 2,571 m, 9. ix. 1987, 1 ♀ (Arita & Yoshiyasu); *ditto*, 2,560 m, 25. x. 1990, 2 ♂ 7 ♀ (J. D. Bradley, A. Lewvenich & H. Kuroko).

Male genitalia (Fig. 1321). Uncus moderately long, apex bifurcate. Valva elongate, strongly tapering, apex nearly pointed. Aedeagus broad, much shorter than valva, a spined cornutus and a

narrow band-like sclerotization. Abdominal plate with broad, closely approximated rods, fissure about four-fifth length of width of basal plate. Female genitalia (Fig. 1360). Papillae anales with rounded apices, apophyses slender. From funnel-shaped otium to the end of ductus bursae about one-third length of corpus bursae. Corpus bursae ovate, large, spines are arranged in a transverse band at middle, the remaining area spinelss.

In the original description of *tricrossa* this species was recorded from Myanmar (type-locality), Sikkim (Darjeeling, Nagrispur and Kurseong) and Bhutan.

A close relative of *E. nuceistrigata* Bastelberger (Inoue, 1988: 343, figs 14: A-F) from Taiwan, but the genitalia of the both sexes are quite distinct.

***Eupithecia uniformis* sp. nov.** (Pl. 166: 16 ♀, holotype)

Female. Wingspan 19-20 mm. Palpus about as long as diameter of eye. Frons dark brownish grey. Forewing elongate, termen oblique, weakly gibbous, apex pointed. Forewing light reddish brown, with blackish suffusion. Transverse lines scarcely traceable, postmedian dark grey fascia angled near discocellulars, subterminal whitish line extended distad as ill-defined row of spots, discal black dash clear. Hindwing pale yellowish brown, hindmarginal area blackish grey, discal dot faint.

Female genitalia (Fig. 1357). Papillae anales small, apices nearly pointed, apophyses very slender. Ductus bursae very short, corpus bursae elliptical, densely spined, a band of stout spines at left caudal area, bursa encircled both sides with thick membrane of irregular shape.

Holotype, ♀ : [Jamakpur] Jiri, 1,860 m, 15-16. x. 1979 (MO). Paratype: [Sagarmatha] Manidingma, 2,240 m, 8. x. 1979, 1 ♀ (MO), in coll. NSMT.

***Eupithecia violacea* Vojnits** (Pl. 166: 17 ♀)

Eupithecia violacea Vojnits, 1981: 220, fig.4.

[Bagmati] Karbani, near Nilgiri, 8-11. vii. 1969, 1 ♂ (TM).

Male genitalia (Fig. 1322). Uncus moderately long, apex minutely bifurcate. Valva elongate, strongly tapering toward apex. Aedeagus two-third length of valva, two band-like cornuti not well-defined. Abdominal plate with slender rods, nearly parallel sided, apices more or less lobed. Female genitalia are described and illustrated in the original paper.

Eupithecia vivida Vojnits *Cf. quadripunctata* Warren

Eupithecia vivida Vojnits, 1978: 238, figs 18, 20.

Eupithecia vojnitzi* Inoue, nom. nov. (Pl. 168: 17 ♂)

The replacement name for *E. tenebricosa* Vojnits, 1983, preocc., *nec* Schaus, 1913.

***Eupithecia xerophila* sp. nov.** (Pl. 166: 18 ♀, holotype)

Female. Wingspan 21 mm. Palpus about twice length of diameter of eye, blackish. Frons mixed with blackish and greyish scales. Forewing elongate, termen oblique, weakly gibbous. Ground colour reddish brown, transverse lines and fasciae dark grey, ante- and postmedian fasciae acute-angled anteriorly, subterminal white line very narrow, discal black spot heavy. Hindwing with anterior area much paler, hindmargin blackish, discal dot minute but conspicuous.

Female genitalia (Fig. 1358). Similar to those of *E. apparticeps*, but the ovate corpus bursae much larger, hump-like process at membranous tube smaller, right part of bursa widely membranous, extending broad ductus bursae.

Holotype, ♀ : [Gandaki] Chimrong, 2,000 m, 21. x. 1981 (MO). Paratype: [NE India] Darjeeling, 2,100 m, 9. xi. 1981 (MO).

Eupithecia yasudai Inoue (Pl. 166: 19 ♀, paratype)

Eupithecia yasudai Inoue, 1987: 241, figs 63: G, 66: A, B.

There are no additional specimens in my cabinet.

Male genitalia (Fig. 1323). Uncus without stick-like process. Valva rather ample, costa a little gibbous at basal half, ventral margin gently arched. Aedeagus a little shorter than valva, no stick-like cornuti are constructed by two basal sclerotizations. Abdominal plate with slender rods, wide-apart each other, apices pointed, curved inward, basal plate very narrow. Female genitalia (Fig. 1359). Papillae anales and apophyses very slender, rather stout. Ductus bursae very short, spherical corpus bursae densely spined, but caudal part spineless.

References

- Butler, A. G., 1889. *Illustrations of typical Specimens of Lepidoptera Heterocera in the Collection of the British Museum* 7. 124 pp., 16 pls. London.
- Hampson, G. F., 1895. *The Fauna of British India, including Ceylon and Burma (Moths)* 3. xxviii+546 pp. London.
- , 1896. *Ditto* 4. xxiv+594 pp.
- Herbulot, C., 1984. Nouveaux Larentiinae du Nepal (Lep. Geometridae). *Miscnea ent.* 50: 41–45.
- Inoue, H., 1979. Revision of the genus *Eupithecia* of Japan, Part 1. *Bull. Fac. domest. Sci., Otsuma Wom. Univ.* 15: 157–224.
- , 1980. *Ditto*, Part 2. *Op. cit.* 16: 153–213.
- , 1982. Geometridae of eastern Nepal based on the collection of the lepidopterological research expedition to Nepal Himalaya by the Lepidopterological Society of Japan in 1963. Part II. *Op. cit.* 18: 129–190.
- , 1987. *Ditto*. Part III. *Op. cit.* 23: 215–270.
- , 1988. The genus *Eupithecia* Curtis from Taiwan (Lepidoptera: Geometridae). *Op. cit.* 24: 323–375.
- Parsons, M. S., M. J. Scoble, M. R. Honey, L. M. & B. R. Pitkin, 1999. Genus *Eupithecia*. In Scoble, M. J. (Ed.), *Geometrid moths of the World. A catalogue (Lepidoptera, Geometridae)* 1: 326–378. CSIRO Publishing.
- Prout, L. B., 1914–15. Larentiinae (part.). In Seitz, A. (Ed.), *The Macro-lepidoptera of the World* 4: 274–297, pls 12, 13, 35. Stuttgart.
- , 1938. *Ditto*. *Op. cit.* 4 (Suppl.): 163–168, pls 14, 16, 18.
- , 1941. *Ditto*. . *Op. cit.* 12: pls 38–39.
- , 1926a. New Geometridae. *Novit. zool.* 33: 1–32.
- , 1926b. On a collection of moths of the family Geometridae from Upper Burma made by Captain A. E. Swann. *J. Bombay nat. Hist. Soc.* 31: 308–322.
- Schülze, E., 1961. Lepidoptera der Deutschen Nepal-Expedition 1955. Gattung *Eupithecia* Curtis. *Veröff. zool. StSamml. Münch.* 6: 179–183.
- Swinhoe, C., 1895. New species of Indian Epiplemidae, Geometridae, Thyrididae, and Pyralidae. *Ann. Mag. nat. Hist.* (6) 16: 293–304.
- Vojnits, A. & E. De Laever, 1973. Revision of the “*Eupithecia suboxydata-subbruneata*” group (Lepidoptera: Geometridae). *Acta zool. Hung.* 19: 427–444.
- , 1978. Eupithecini from Korea and China (Lepidoptera). *Op. cit.* 24: 228–252.
- Vojnits, A. M., 1974. New *Eupithecia* species (Lepidoptera: Geometridae) from China. Studies on Palaearctic *Eupithecia* species. III. *Acta zool. hung.* 20: 219–226.
- , 1976. New species of the *Eupithecia bohatschi* Group from China (Lepidoptera: Geometridae). *Op. cit.* 22: 197–211.
- , 1981. Data to the *Eupithecia* fauna of Nepal. I (Lepidoptera: Geometridae). *Op. cit.* 27: 217–238.
- , 1983. *Ditto*. II. *Op. cit.* 29: 261–282.
- , 1984. New data to the Eupithecini fauna of China based on Höne’s collections. *Op. cit.* 30: 213–240.
- , 1988. Data of the *Eupithecia* fauna of Nepal. III. (Lepidoptera: Geometridae). *Op. cit.* 34: 37–53.
- Warren, W., 1888. On Lepidoptera collected by Major Yerbury in western India in 1886 and 1887. *Proc. zool. Soc. Lond.* 1888: 292–339.
- , 1896. New Indian Epiplemidae and Geometridae. *Novit. zool.* 3: 307–321.
- , 1897. New genera and species of Drepanulidae, Thyrididae, Epiplemidae, Uraniidae, and Geometridae in the Tring Museum. *Op. cit.* 4: 195–262.

***Perizoma* Hübner (Larentiinae, Geometridae) from Nepal**

Hiroshi Inoue

As was repeatedly stated in my papers published in this series of books the specimens of *Perizoma* hereunder recorded are based on the collections of the late T. Haruta, Tokyo, and his native collectors (abbreviated as TH), H. Nakajima (HN), Yokohama, T. Miyashita, Tokyo (TM), S. Sakurai (SS), Niigata, and some other people. In Addition Dr M. Owada (MO), National Science Museum, Tokyo (NSMT), kindly gave me a chance to examine his rich collection in 1979 and 1981 as a loan and partly as a gift. Mr K. Yazaki (KY), Tokyo, also permitted me a free access to his private collection. In the list will be added some specimens from NE India (Darjeeling, Sikkim) and N Thailand (Doi Inthanon) in my collection.

From Nepal Fletcher (1961) described two new species and one new subspecies and Inoue (1982) three new species of *Perizoma*. Yazaki (1993 & 1994) recorded and illustrated six species, including one in the genus *Gagitodes*.

All the nominal species and subspecies of *Perizoma* from the Indian subcontinent are included by Prout (1939) in his monumental "Seitz work", and the sequence of the species in this paper will follow him, with some exceptions.

Unless stated otherwise all the type-series of new species, including holotypes, described in this paper are preserved in The Natural History Museum, London (BMNH).

Group A: In male genitalia uncus with a long stick-like or spine-like process (*Perizoma*).***Perizoma conjuncta* Warren (Pl. 166: 20 ♀)**

Perizoma conjuncta Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 381.

[Kathmandu] Godavari, v-vii. 1973, 1 ♂ (TM). [Janakpur] Bihayachhap, 1,100 m, 4-5. x. 1986, 1 ♀ (SS). [Sagarmatha] Okhaldhunga, 1,800 m, 5. v. 1990, 1 ♂; 21. x. 1990, 1 ♀ (K. Ito). [Kathmandu] Mt Phulchouki, 2,070 m, 17. viii. 1993, 4 ♀ (HN).

***Perizoma maculata* (Moore) (Pl. 166: 21 ♂)**

Citaria maculata Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 277.

[Gandaki] Phedi, 2,350 m, 18. x. 1981, 1 ♂ (MO). [NE India] Darjeeling, 27-29. ix. 1986, 2 ♂; ditto, 2,573 m, 30. ix-5. x. 1986, 3 ♀; ditto, 1,475 m, 7-22. iv. 1988, 1 ♂ (F. Aulombard & J. Plante).

***Perizoma lacteiguttata* Warren (Pl. 166: 22 ♂)**

Perizoma lacteiguttata Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 378, pl. 30: 16.

[Mechi] Walungchung Gola, 3,310 m, 11. v. 1982, 1 ♂ (T. Yasuda) (recorded in 1987 by me). [NE India] Darjeeling, 2,500 m, 13-16. viii. 1985, 1 ♂ (W. Thomas).

Group B: In male genitalia uncus without a long process. If a process is present, it is much shorter than in the Group A (*Gagitodes*).***Perizoma plumbeata* (Moore) (Pl. 166: 23 ♂)**

Anticlea plumbeata Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 273; Yazaki, 1994: pl. 69: 9.

[Sagarmatha] Ringmo, 2,780 m, 9. x. 1979, 1 ♀. [Gandaki] Ulleri, 2,070 m, 14. x. 1981, 1 ♀;

Deolari, 2,800 m, 15. x. 1981, 3 ♂; Banthanti, 2,620 m, 16. x. 1981, 1 ♂; Modi Khola, 2,670 m, Himaley Hotel, 19. x. 1981, 3 ♂ 3 ♀; Chomrong, 2,000 m, 21. x. 1981, 1 ♀ (MO).

***Perizoma schistacea* (Moore) (Pl. 166: 24 ♀)**

Anticlea schistacea Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 273.

Perizoma plumbeata: Yazaki, 1993: 111, pl. 60: 7, *nec* Moore.

Perizoama schistacea: Yazaki, 1994: 17, pl. 69: 8.

[Gandaki] Banthani, 2,620 m, 16. x. 1981, 2 ♂; Phedi, 2,350 m, 18. x. 1981, 2 ♂; Modi Khola, 2,670 m, Himaley Hotel, 19. x. 1981, 3 ♂ 1 ♀ (MO). [Janakpur] Bonch, 2,000 m, 29. x. 1986, 2 ♀ (SS); Jiri, 2,350 m, 31. v-2. vi. 1993, 2 ♂ (TH). [NE India] Darjeeling, 2,100 m, 9. xi. 1981, 1 ♂ 2 ♀ (MO); 14. vi. 1987, 1 ♀ (TM).

***Perizoma antisticta dentivalva* subsp. nov. (Pl. 166: 25 ♀, paratype)**

Wingspan, ♂ 19 mm, ♀ 22 mm. Separated from *P. a. antisticta* (Prout, 1938: 164, pl. 16: a) from NW India by much darker ground color of forewing, oblique subbasal black band and much smaller mid-terminal whitish spot, which is often vestigial. Similar to *P. schistacea*, but forewing with ground color red-brown.

Malge genitalia (Fig. 1361). Valva with ventral margin strongly dentate, while in *P. schistacea* it is smooth as in most other congeners. Aedeagus very weakly curved at middle, cornuti consisting of a thorn-like and a spine-like processes. Female genitalia (Fig. 1373). Colliculum large, strongly sclerotized, a little longer than wide, caudal end more or less lobed at sides, caudal part of corpus bursae long, sclerotized.

Holotype, ♂: [Sagarmatha] Ringmo, 2,760 m, 9. x. 1979 (MO). Paratypes: [Gandaki] Modi Khola, 2,670 m, Himaley Hotel, 19. x. 1981, 1 ♂ 1 ♀; *ditto*, 3,200 m, Deolari, Nr Hinku, 20. x. 1981, 2 ♀ (MO). One female paratype each in coll. NSMT and KY.

***Perizoma leucatma* Fletcher, stat. nov.**

Perizoma antisticta leucatma Fletcher, 1961: 168, pl. 16: 7.

The maculation of forewing is unstable and quite distinct from *P. antisticta*, though the characteristic male genitalia are indistinguishable from it.

This species was found on fourteen males from Manangbkot, near Pokhara, Gandaki. I examined all the type-series, but there are no specimens in my cabinet. Mr G. Martin, BMNH, kindly sent me microphotographs of the male genitalia of *P. antisticta* (holotype) and *P. leucatma* (paratype).

***Perizoma subbicolor* sp. nov. (Pl. 166: 26 ♂, holotype)**

Wingspan, ♂ 21 mm, ♀ 22 mm. Very similar to the preceding new species, but forewing with ground colour ochreous brown, oblique antemedian fascia much narrower, fuscous band between ante- and postmedian lines, its inner margin vertical to costa and then angled in cell, running straight to hindmargin, the outer margin strongly angled anteriorly, then almost parallel with the inner margin, subterminal white line only visible at costal area. The white patch at mid-terminal area of *antisticta* absent. Under surface, forewing with fuscous central band of upper faintly reproduced.

Male genitalia (Fig. 1362). Valva with ventral margin smooth. Aedeagus extremely slender, weakly sinuous, cornutus a small spine. Female genitalia (Fig. 1374). Ductus bursae membranous, slender, corpus bursae ovate, caudal one-third sclerotized, signum a large half-moon.

Holotype, ♂: [Gandaki] Khola, 3,200 m, Deolari, Nr Hinka, 20. x. 1981 (MO). Paratypes: [Karnali] Rara Lake, 2,990 m, 25-26. ix. 1981, 1 ♀ (MO). [Mechi] Gokok, 400 m, 21-22. iv. 1993, 1 ♀ (TH).

***Perizoma lacernigera* (Butler) (Pl. 166: 27 ♀)**

Idaea lacernigera Butler, 1889, *Illust. typical lepid. Heterocera Colln Br. Mus.* 7: 109, pl. 136: 15.

[Bagmati] Nacheng, near Nilgiri, 12-14. vi. 1969, 1 ♀ (TM). [Gandaki] Phedi, 2,350 m, 18. x. 1981, 2 ♂ 3 ♀ (MO). [Janakpur] Jiri, 2,350 m, 31. v-1. vi. 1993, 1 ♀ (TH). [N Thailand] Doi Inthanon, 2,560 m, 25. x. 1990, 2 ♀ (J. D. Bradley & A. Lewvenich).

***Perizoma hockingii* (Butler) (Pl. 166: 28 ♂)**

Eupithecia hockingii Butler, 1889, *Illust. typical lepid. Heterocera Colln Br. Mus.* 7: 115, pl. 137: 12.

[Sagarmatha] Ringma, 2,760 m, 9. x. 1979, 1 ♀. [Gandaki] Deolari, 2,800 m, 15. x. 1981, 1 ♂; Banthanti, 2,620 m, 16. x. 1981, 5 ♂ 1 ♀ (MO). [Janakpur] Bonch, 2,000 m, 29. x. 1996, 1 ♂ 2 ♀ (SS); Jiri, 31. v-2. vi. 1996, 1 ♂ (TH).

***Perizoma decorata* (Moore) (Pl. 166: 29 ♀)**

Eupithecia decorata Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 268.

[Gandaki] Banthanti, 2,620 m, 16. x. 1981, 3 ♂ 4 ♀; Modi Khola, 2,670 m, 19. x. 1981, 1 ♀ (MO). [NE India] Choka, 3,030 m, Sikkim, 23-24. ix. 1983, 1 ♀ (MO).

***Perizoma quadrinotata* Warren, sp. rev. (Pl. 166: 30 ♀)**

Perizoma quadrinotata Warren, 1896, *Novit. zool.* 3: 123.

[NE India] Darjeeling, 27-29. ix. 1986, 1 ♀ (F. Aulombard & J. Plante). [N Thailand] Doi Inthanon, 2,560 m, 25. x. 1990, 9 ♀ (J. D. Bradley, A. Lewvenich & H. Kuroko).

Prout (1939: 276) considered this species as a subspecies from Assam and Upper Burma of *decorata* from Sikkim and Parsons et al. (1999: 721) treated it as a junior synonym of *decorata*, but my comparison of the female genitalia revealed that ductus bursae of *quadrinotata* is much longer and more slender than in *decorata*. This species will eventually be discovered from Nepal.

***Perizoma parvaria* (Leech) (Pl. 166: 31 ♀)**

Cidaria parvaria Leech, 1891, *Entomologist* 24 (Suppl.): 52.

Perizoma albidivisa Warren, 1893, *Proc. zool. Soc. Lond.* 1893: 380; Yazaki, 1994: 17, pl. 69: 11; Parsons et al., 1999: 719. **Syn. nov.**

Perizoma parvaria albidivisa: Prout, 1939: 276, pl. 27: g.

No additional specimens from Nepal since one female was recorded by Yazaki,

As suggested by Prout the Indian representative *albidivisa* is indistinguishable from *parvaria* from Japan, Korea, SE Siberia and China.

***Perizoma minuta* (Butler) (Pl. 166: 32 ♂)**

Melanippe minuta Butler, 1887, *Illust. typical lepid. Heterocera Colln Br. Mus.* 7: 117, pl. 137: 15, 16.

[Kosi] Walunchong Gola, 3,310 m, 12. vi. 1962, 1 ♀ (T. Yasuda). [Kathmandu] Mt Phulchowki, 2,275 m, 22. iv. 1992, 1 ♂ (TH).

P. latifasciata (Warren, 1893) from Sikkim is probably untenable as a subspecies if we examine many more specimens to see individual variation. Yazaki, 1994, pl. 69: 12 illustrated a male from Nepal as *P. m. latifasciata*, but he did not record it in the text.

***Perizoma albifrons* sp. nov. (Pl. 166: 33 ♀, holotype)**

Female. Wingspan 19–20 mm. Very similar to *P. minuta*, dorsal surface of palpus and head white as in that species. Forewing a little more elongate, apex falcate, termen more oblique, gibbous at middle. Postmedian white line bordering central fuscous band smooth, not dentate as in *minuta*, terminal blackish brown marks below apex and near tornus much narrower. Hindwing with the shape of wing and maculation as in *minuta*.

Female genitalia (Fig. 1376). Colliculum cup-shaped, much broader at the genital opening than in *minuta*.

Holotype, ♀: [NE India] Darjeeling, 2,050 m, 25. iii. 1986 (W. Thomas). Paratype: [Kathmandu] Godavari, 1,600 m, 9. iv. 1992, 1 ♀ (TH).

***Perizoma albofasciata* (Moore) (Pl. 167: 1 ♀)**

Cidaria albofasciata Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 277.

Perizoma albofasciata: Prout, 1938: 277; Inoue, 1987: 235 (as *albofasciatum*); Yazaki, 1994: 17, pl. 69: 10.

Perizoma rantaizanensis Wileman, 1915, *Entomologist* 48: 59. **Syn. nov.**

Perizoma albofasciata f. *mixtifascia* Prout, 1938: 277. **Syn. nov.**

Perizoma albofasciata mixtifascia: Parsons *et al.*, 1999: 719.

[Kosi] Basantpur, 2,380 m, 31. x. 1979, 1 ♀. [Gandaki] Deolari, 2,800 m, 15. x. 1981, 2 ♂ 1 ♀ (MO). [Janakpur] Bonch, 2,000 m, 29. x. 1986, 1 ♀ (SS).

In addition to the type-series of the above cited three taxa I examined many specimens from Nepal and Taiwan and concluded that *rantaizanensis* from Taiwan and *mixtifascia* from Myanmar are unnecessary names.

***Perizoma variabilis* Warren (Pl. 167: 2 ♂)**

Perizoma variabilis Warren, 1893, *Proc. zool. Soc. Lond.* 1893: 377.

Perizoma argentipuncta (part.) Inoue, 1982: 164.

[Bagmati] Mt Nilgiri, 4,000 -4,200 m, 17-19. vii. 1969, 2 ♂ 2 ♀ [including one female paratype of *argentipuncta*] (TM). [Sagarmatha] Thame Og, 3,800 m, 1-2. x. 1979, 1 ♀ (MO). [Bagmati] Kyangjin, 3,900 m & 3,910 m, 11 & 12. viii. 1993, 5 ♂ (HN). [NE India] Darjeeling, 2,573 m, 30. ix-5. x. 1986, 1 ♀ (F. Aulombard & J. Plante).

***Perizoma lucifrons* Prout (Pl. 167: 3 ♀)**

Perizoma lucifrons Prout, 1926, *J. Bombay nat. Hist. Soc.* 31: 309.

[Kathmandu] Godavari, 21. viii. 1979, 1 ♀ (TH). [Gandaki] Deolari, 2,800 m, 15. x. 1981, 1 ♀ (MO). [NE India] Darjeeling, 3,000 m, 15. viii. 1985, 1 ♂ (W. Thomas).

***Perizoma acutipennis* sp. nov. (Pl. 167: 4 ♂, holotype)**

Male. Wingspan 20 mm. Very similar to *P. lucifrons*, but forewing still narrower, apex falcate, termen oblique, gently gibbous. Transverse lines and central fuscous band not clear, but subbasal oblique band conspicuous, basal and distal areas dark brown, distal pale fascia outside postmedian double lines faintly indicated, discal black bar clearer than in *lucifrons*. Hindwing white as in *lucifrons*.

Male genitalia (Fig. 1363). Costa rather broad, a little projected at apex, sacculus broadly sclerotized, its dorsal margin indent at middle. Aedeagus nearly as long as valva. Cornuti: one spine with expanded shaft, the other two are stout sticks with strongly serrated apical areas, while in *lucifrons* cornuti are a long double spines, apical area branched into several spinules.

Holotype, ♂: [NE India] Tongla, 3,040 m, Darjeeling, 6. x. 1983 (MO). Paratype: Darjeeling, 2,500 m, 13-16. viii. 1985, 1 ♂ (W. Thomas).

***Perizoma bicolor* Warren (Pl. 167: 5 ♂, 6 ♀)**

Perizoma bicolor Warren, 1893, *Proc. zool. Soc. Lond.* 1893: 379.

Perizoma argentipuncta Inoue, 1989: 164, figs 31: B; 32: A, B. **Syn. nov.**

In addition to the type-series of *argentipuncta*: [Bagmati] Nirasang, 4,200-4,500 m, near Nilgiri, 8-9. vii. 1969, 2 ♂ 1 ♀ (TM). [Sagarmatha] Thame Og, 3,800 m, 1-2. x. 1979, 1 ♂ (MO). [Bagmati] Kyangjin, 3,900 m, Langtang Himal, 11. viii. 1993, 1 ♂ (HN).

This species, founded on a single male from Sikkim, seems to be variable in size and maculation of forewing. Often forewing with clear median band as in the holotype, but sometimes ochreous

brown ground colour becomes darker and the band more or less merging into the ground colour. Fuscous basal patch clear, proximal border of the band arched or angled below cell, distal border crenulated anteriorly, subterminal white line or row of dots incomplete.

Male genitalia (Fig. 1364). Costa straight, apex nearly pointed and protruded from valvula, ventral margin indent after basal expansion, then gently tapering. A single spined cornutus about one-fourth or -fifth length of aedeagus. Female genitalia (Fig. 1377). Colliculum nearly cup-shaped. Ovate corpus bursae with a small signum at middle, emitting a mass of spinules and another signum placed near cephalic end serrated.

I am not confident if *P. mediangularis* (Prout, 1914) from Omei-Shan (=Emei Shan, Sichuan) is identical with this species or not. *P. mediangularis* of Xue & Zhu, 1999: 890, fig.1123 (♀ genitalia); pl. 23: 35, from W China is very probably identical with this species.

Perizoma fumosum Inoue (Pl. 167: 7 ♀)

Perizoma fumosum Inoue, 1982: 165, fig.31: C; 32: C, D.

In addition to the type-series: [Bagmati] Nirasang, 4,200-4,500 m, near Nilgiri, 8-9. vii. 1969, 1 ♀ (TM).

***Perizoma obligatum* sp. nov.** (Pl. 167: 8 ♂, paratype)

Perizoma variabile (part.): Inoue, 1987: 235, *nec* Warren.

Wingspan, ♂ 19-20 mm, ♀ 21-22 mm. Shape of wings and maculation of forewing somewhat similar to *P. apicistrigata* Warren (1893) from Sikkim, but the trasverse lines much darker and indistinct. Postmedian double lines in *apicistrigata* strongly angled at middle, but in this species it is weakly angled anteriorly, antemedian double lines weakly excurved in *apicistrigata*, but in this species it is angled at posterior margin of cell. Subterminal white line incomplete, represented by a row of minute dots or dashes. Hindwing with a minute discal dot and faint subterminal line.

Male genitalia (Fig. 1365). Valva nearly as in *bicolor*. Aedeagus very slender, a spined cornutus very small, a pair of stick-like process surrounding aedeagus (part of manica) very slender, apices divided into some hooked bristles. Female genitalia (Fig. 1378). Ostium cup-shaped, ductus bursae continuing from it sclerotized as long as the membranous part. Cornuti as in *bicolor* and other close relatives.

Holotype, ♂: [Mechi] Between Yangma & Nup, 3,310 m, 25. vii. 1963 (TH et al.). Paratypes: data as holotype, 1 ♂. [NE India] Darjeeling, 3,600 m, 14. viii. 1985, 2 ♂ 3 ♀ (W. Thomas).

Perizoma molybda Fletcher (Pl. 167: 9 ♂, 10, 11 ♀)

Perizoma molybda Fletcher, 1961: 167, pl. 16: 5; pl. 20: 28; pl. 27: 54, 55; Inoue, 1982: 163, figs 31: A; 32: F, G.

Addition to record in 1982: [Mechi] Nango-la, 4,020 m, 22. viii. 1963, 1 ♂ (TH et al.). [Janakpur] Na-Gaon, 4,050 m, 19-19. vii. 1993, 1 ♂; Daldung, 3,750 m, 16. viii. 1993, 1 ♀. [Dhauragiri] Sangda, 4,460 m, Inner Himal, 25. vi-3. vii. 1994, 1 ♂ (TH). [Bagmati] Kyangjin, 3,900 & 3,910 m, 11 & 12. viii. 1993, 4 ♂ 2 ♀ (HN).

Perizoma fulvimacula (Hampson) (Pl. 167: 12 ♀)

Larentia fulvimacula Hampson, 1896, *Fauna Br. India* (Moths) 4: 557.

[Sagarmatha] Thame Og, 3,800 m, 1-2. x. 1979, 1 ♂. [Karnali] Rara lake, 2,990 m, 25-26. ix. 1981, 2 ♀; Jaljale, 3,420 m, 30. ix. 1981, 3 ♂ 1 ♀ (MO). [Mochi] Godak, 400 m, 21-22. iv. 1993, 4 ♀ (TH). [NE India] Darjeeling, 3,040 m, 6. x. 1983, 2 ♀ (MO).

Male genitalia (Fig. 1366). Sacculus broadly sclerotized, its dorsal margin produced at middle. Aedeagus rather robust, weakly curved, one cornutus is a spine, about one-fourth length of aedeagus, one or two other small cornuti present. Female genitalia (Fig. 1379). Colliculum

strongly sclerotized, spatulate, nearly as long as corpus bursae. Corpus bursae spherical, membranous, left side decorated with a band-like sclerite.

P. obscurata Bastelberger, 1909 (= *P. lineola* Bastelberger, 1911, **syn. nov.**) from Taiwan is the closest relative of this continental species, but in the male genitalia the dorsal process of sacculus much longer and aedeagus strongly curved at one-third from base.

***Perizoma affinis* (Moore) (Pl. 167: 13 ♂, 14 ♀)**

Cidaria affinis Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 277.

[Sagarmatha] Poyan, 2,780 m, 6. x. 1979, 1 ♀. [Karnali] Rara Lake, 2,990 m, 25-26. ix. 1981, 2 ♂ 1 ♀. [Gandaki] Ulleri, 2,070 m, 14. x. 1981, 1 ♀ (MO). [Janakpur] Bonch, 2,000 m, 29. x. 1986, 1 ♀ (SS). [NE India] Darjeeling, 2w,573 m, 30. ix-5. x. 1986, 1 ♀ (F. Aulombard & J. Plante).

Sometimes in female forewing with interspace between basal patch and proximal border of median dark band much paler and mid-terminal whitish spot much larger and clearer than normal specimens.

Male genitalia (Fig. 1367). Very similar to the preceding species, but the spined cornutus much thicker. Female genitalia (Fig. 1380). The spatulate colliculum much longer, corpus bursae with sclerotized left margin much vaguer than in *fulvamacula*.

P. fulvamacula of Xue & Zhu, 1999: 885, figs 1116, 1117; pl. 23: 29, from Tibet is very probably a misidentification of this species.

***Perizoma constricta* Warren (Pl. 167: 15 ♂, 16 ♀)**

Perizoma constricta Warren, 1901, *Novit. zool.* 8: 28.

[Karnali] Chuchumara Dara, 3,600 m, 27. ix. 1981, 1 ♂; Jaljale, 3,420 m, 30. ix. 1981, 2 ♂ (MO). [Kathmandu] Godavari, 1,600 m, 26. iv. 1992, 1 ♀; 2. v. 1992, 1 ♀; 23. v. 1992, 1 ♀ (TH). [Janakpur] Jiri, 2,350 m, 20-22. iii. 1993, 2 ♂ (TH).

***Perizoma restrictum* sp. nov. (Pl. 167: 17 ♀, holotype)**

Male. Wingspan 21 mm. Similar to *P. affinis* and *constricta*; forewing with termen weakly gibbous as in the former, less straightish than in the latter. Forewing with the transverse lines vaguer than in the two species, central band also faint, but discal black spot heavy. Hindwing darker than in the two species.

Male genitalia (Fig. 1368). Valva nearly as in *constricta*. Aedeagus shorter than valva, broad, straight, cornuti well-developed: one is a beak-shaped process with a long shaft, more than half length of aedeagus, the other a serrated stick, much narrower and shorter than the former.

Holotype, ♂: [Kosi] Walungchung Gola, 3,350 m, 18. vi. 1962 (T. Yasuda).

***Perizoma paramordax* Xue (Pl. 167: 18 ♀)**

Perizoma paramordax Xue, 1999: 889, fig. 1120; pl. 23: 34.

[Kosi] Walungchung Gola, 3,350 m, 2. vii. 1962, 1 ♀ (T. Yasuda).

Founded on a single male from Tibet this species was described. Unfortunately the female from Nepal in my collection does not have the abdomen, but the characteristic maculation of forewing almost matches the picture of the holotype.

***Perizoma seriata* (Moore) (Pl. 167: 19 ♂, 20, 21 ♀)**

Cidaria seriata Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 273; Yazaki, 1993: 111, pl. 60: 6.

[Sagarmatha] Namche Bazar, 3,440 m, 20. ix. 1979, 1 ♀; Ringmo, 2,780 m, 9. x. 1979, 1 ♀. [Gandaki] Doalari, 2,800 m, 15. x. 1981, 1 ♀; Modi Khola, 2,670 m, Himaley Hotel, 18. x. 1981,

1 ♂; *ditto*, 3,200 m, 20. x. 1981, 2 ♂ 3 ♀; Jaljale, 3,420 m, 30. ix. 1981, 1 ♂. [Karnali] Chugnuti, 2,660 m, 21. x. 1981, 1 ♀; Rara Lake, 2990 m, 25-26. ix. 1981, 1 ♂ 1 ♀ (MO). [Janakpur] Bonch, 2,000 m, 29. x. 1986, 1 ♂ 2 ♀ (SS). [Kathmandu] Godavari, 1,600 m, ix. 11991, 1 ♀; 30. v. 1992, 1 ♀. [Janakpur] Jiri, 1,300 m, 4. vi. 1992, 1 ♂; *ditto*, 2,350 m, 15-22. 999. 1993, 2 ♂ 2 ♀ (TH). [NE India] Darjeeling, 2,000- 2,200 m, 23-27. iii. 1981, 3 ♂ 3 ♀ (W. Thomas). [Pakistan] Kaniskar, 2,260 m, Baltistan, 17. x. 1989, 1 ♀ (F. Aulombard & J. Plante).

Larentia niveiplaga Bastelberger, 1909, from Taiwan was considered to be a subspecies of *seriata* by Prout, 1939: 279, but it was treated as a junior synonym by Parsons *et al.*, 1999: 725. I suspect the latter treatment.

***Perizoma owadai* sp. nov.** (Pl. 167: 22 ♂, 23, 24 ♀)

Closely related to *P. seriata*, but on an average larger (wingspan of the largest female 27 mm). Forewing with the ground colour much paler, therefore the basal patch, central band and black discal bar much clearer. Often the pale areas inside and outside of the band whitish with faint brownish hue, but sometimes these areas are light ochreous brown. Mid-terminal white spot well-developed as in *seriata*.

Male and female genitalia (Figs 1369, 1381) not distinguishable from those of *seriata*. The two species have a short triangular process of uncus.

Holotype, ♂: [NE India] Thangahing, 3,950 m, Sikkim, 19-20. ix. 1083 (MO). Paratypes: [NE India] data as holotype, 2 ♂ 3 ♀. [Sagarmatha] Thame Og, 3,600 m, 1-2. x. 1979, 1 ♂ 2 ♀. [Karnali] Jumla, 2,440 m, 19-20. ix. 1981, 1 ♀; 1. x. 1981, 1 ♂; Chughuhi, 2,660 m, 21. ix. 1981, 1 ♂ 3 ♀; Rara Lake, 2,990 m, 25-26. ix. 1981, 3 ♂ 1 ♀; Chuchumara Dare, 3,600 m, 27. ix. 1981, 1 ♀; Jumla, 1. x. 1981, 1 ♂ (MO). In BMNH there is 1 ♀, labeled: Assam, Mishmi Hills, 1928, Percy Slader Expn. BM.1929-531. Part of paratypes in coll. NSMT and KY.

***Perizoma peculiare* sp. nov.** (Pl. 167: 25, 26 ♂, 27 ♀, all paratypes)

Wingspan, ♂ 19-20 mm, ♀ 22 mm. Very similar to *P. seriata*, but forewing with proximal and distal areas bordered by the central blackish band ochreous brown, mid-terminal white spot of *seriata* is replaced by pale brownish spot.

Male genitalia (Fig. 1370). Shape of valva almost identical with *seriata*, but aedeagus surrounded by a pair of large spatulae (part of manica), those margins strongly serrated, with rounded apices. Female genitalia (Fig. 1382). Colliculum strongly sclerotized, spatulate, about as long as membranous ductus bursae. Corpus bursae ovate, signum very large, consisting of several laminae.

Holotype, ♂: [Kathmandu] Mt Siwapuri, 2,650 m, 7. x. 1981 (MO). Paratypes: Data as holotype, 3 ♂. [Karnali] Rara Lake, 25-26. ix. 1981, 1 ♂ 1 ♀. [Gandaki] Ulleri, 2,070 m, 14. x. 1981, 1 ♂; Deolari, 2,600 m, 15. x. 1981, 3 ♂; Banthanti, 2,630 m, 16. x. 1981, 3 ♂ (MO). [Kathmandu] Mt Phulchouki, 2,075 m, ix. 1991, 1 ♂ (TH). [NE India] Darjeeling, 2,573 m, 30. ix-5. x. 1986, 1 ♂ 9F. Aulombard & J. Plante). [N Thailand] Doi Inthanon, 2,560 m, 15. x. 1990, 1 ♂; *ditto*, 1,300 m, 23-27. x. 1990, 1 ♀ (J. D. Bradley, A. Lewvenich & H. Kuroko). Part of paratypes in coll. NSMT and KY.

***Perizoma lilliptanum* sp. nov.** (Pl. 167: 28 ♂, holotype)

Male. Wingspan 16 mm. A close relative of *P. seriata*, but much smaller. Forewing with termen less oblique, much darker, blackish brown. The maculation almost identical with *seriata*, subterminal white line and mid-terminal white spot very clear. Hindwing white, discal blackish dot and subterminal line faintly indicated.

Male genitalia (Fig. 1371). A stout spined cornutus about half length of aedeagus, while in *seriata* the spined cornutus much more delicate and shorter.

Holotype, ♂: [Kathmandu] Mt Phulchouki, 2,700 m, 2-3. vii. 1987 (TM).

***Perizoma micropunctum* sp. nov.** (Pl. 167: 29 ♂, 30 ♀ paratype)

Wingspan, ♂ 16–19 mm, ♀ 20–21 mm. Tiny species, shape of wings as in the preceding new species. Face and dorsal margin of palpus dark grey. Forewing purplish black, transverse lines indistinct, discal black spot heavy. Subterminal white line indistinct, only visible at anterior half, mid-terminal white spot very small, often an additional smaller white dot anterior to it. Hindwing as in the preceding species, but often terminal area infuscated, discal black mark absent.

Male genitalia (Fig. 1372). Valva as in many congeners, sacculus not specialized, but narrowly sclerotized at margin. Aedeagus nearly as long as valva, broad, cornutus a stout short spine, with broader stalk. Female genitalia (Fig. 1383). Sclerotized from genital opening to ovate corpus bursae, its length about as long as diameter of corpus bursae.

Holotype, ♂: [NE India] Darjeeling, 3,000 m, 15. viii. 1985 (W. Thomas). Paratypes: Data as holotype, 4 ♂ 1 ♀; *ditto*, 2,573 m, 30. ix–5. x. 1986, 1 ♂ (F. Aulombard & J. Plante); Bakkhim, 2,670 m, Sikkim, 12. ix. 1983, 1 ♀ (MO). [Kathmandu] Godavari, 20. v. 1979, 1 ♀ (TH). [Gandaki] Banthanti, 2,620 m, 16. x. 1981, 1 ♂; Madi Khola, 2,670 m, 19. x. 1981, 1 ♂ 3 ♀. [Karnali] Rara Lake, 2,990 m, 25–26. ix. 1981, 1 ♂ 2 ♀ (MO). Part of paratypes in coll. NSMT and KY.

***Perizoma amblyodes* Fletcher** (Pl. 167: 31 ♀)

Perizoma amblyodes Fletcher, 1961: 167, pl. 16: 3; pl. 20: 29, 30; pl. 27: 52; Inoue, 1982: 165.

Additional specimen: [Kosi] Taplejung, 3,200 m, 8. vii. 1962, 1 ♀ (T. Yasuda).

***Perizoma fasciata* Warren** (Pl. 168: 18 ♀, holotype of *caeruleofascia*)

Perizoma fasciata Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 379.

Perizoma caeruleofascia Inoue, 1982: 165, figs 31: D; 32: E. **Syn. nov.**

Besides the holotype, ♀, of *caeruleofascia* there are no additional specimens. At BMNH I compared the type specimens of *fasciata* and *caeruleofascia* and concluded that the two taxa are the same.

***Perizoma olivacea* (Warren)** (Pl. 167: 32 ♂)

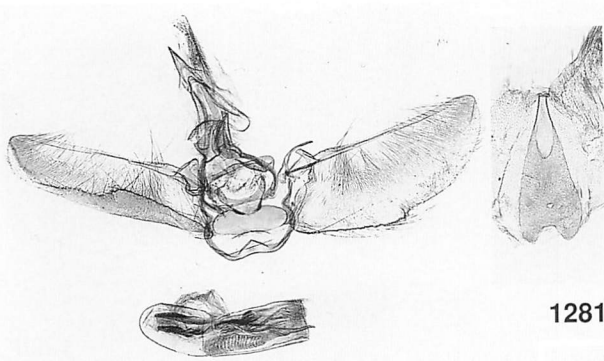
Gagitodes olivacea Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 362, pl. 30: 6; Inoue, 1982: 165, fig. 31: E;

Yazaki, 1993: 111, pl. 60: 8.

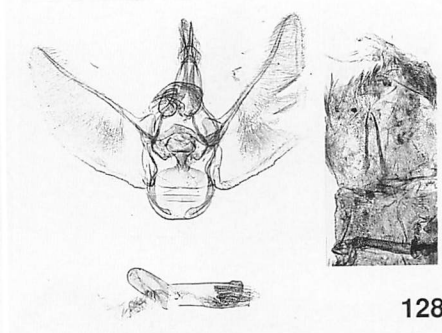
Additional specimen: [Bagmati] Lantang Natn Park, 3,500 m, 22. vii. 1992, 1 ♂ (K.. Suzuki).

Selected literature

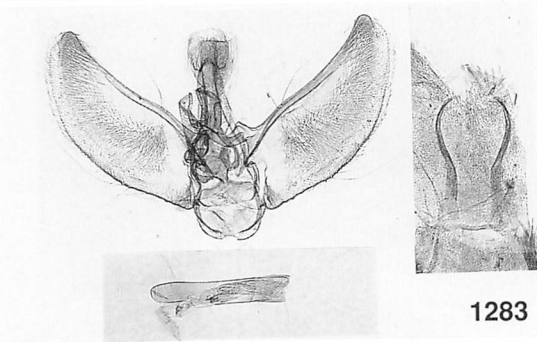
- Fletcher, D. S., 1961. Geometridae in Lepidoptera der Deutschen Nepal-Expedition 1955. *Veröff. zool. StSamml. Münch.* **6**: 163–176.
- Inoue, H., 1981. Geometridae of eastern Nepal based on the collection of the lepidopterological research expedition to Nepal Himalaya by the Lepidopterological Society of Japan in 1963. Part II. *Bull. Fac. domest. Sci., Otsuma Wom. Univ.* **18**: 129–190.
- , 1987. *Ditto*. Part III. *Op. cit.* **23**: 215–270.
- Parsons, M. S., M. J. Scoble, M. R. Honey, L. M. & B. R. Pitkin, 1999. Genus *Perizoma*. In Scoble, M. J. (Ed.), *Geometrid moths of the world. A catalogue (Lepidoptera, Geometridae)*: 718–726. CSIRO Publishing.
- Prout, L. B., 1913 [German edn]. Genus *Perizoma*. In Seitz, A. (Ed.), *The Macrolepidoptera of the World* **4**: 258–262, pls 7, 8, 10, 13. Stuttgart.
- , 1938. *Ditto*. *Op. cit.* **4** (Suppl.): 163–168, pls 14, 16, 18.
- , 1939. *Ditto*. *Op. cit.* **12**: 275–280, pl. 27.
- Yazaki, K., 1993. Geometridae. In Haruta, T. (Ed.), *Moths of Nepal, Part 2. Tinea* **13** (Suppl. 3): 103–115.
- , 1994. *Ditto*, Part 3. *Op. cit.* **14** (Suppl. 1): 5–33.



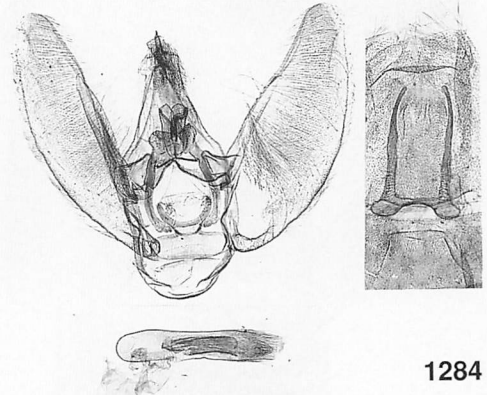
1281



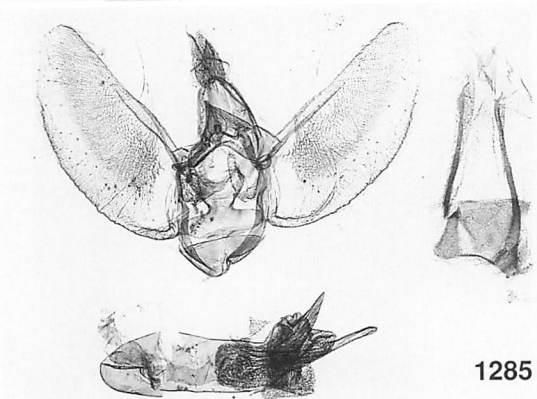
1282



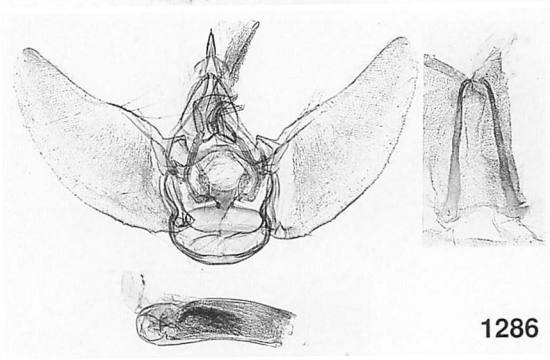
1283



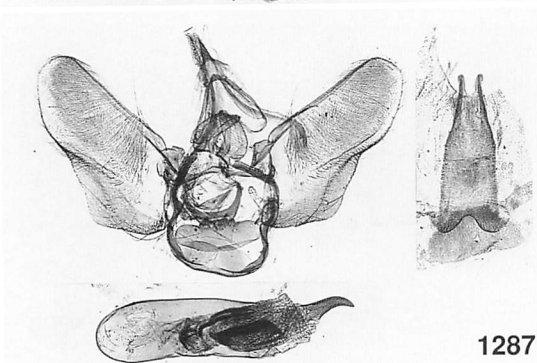
1284



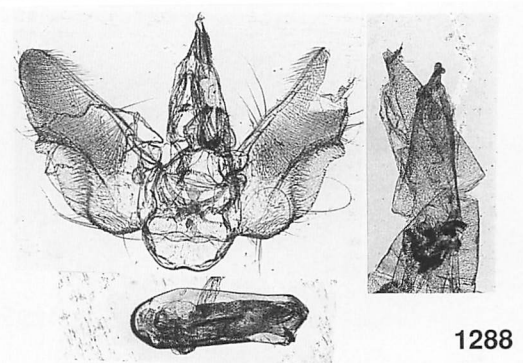
1285



1286

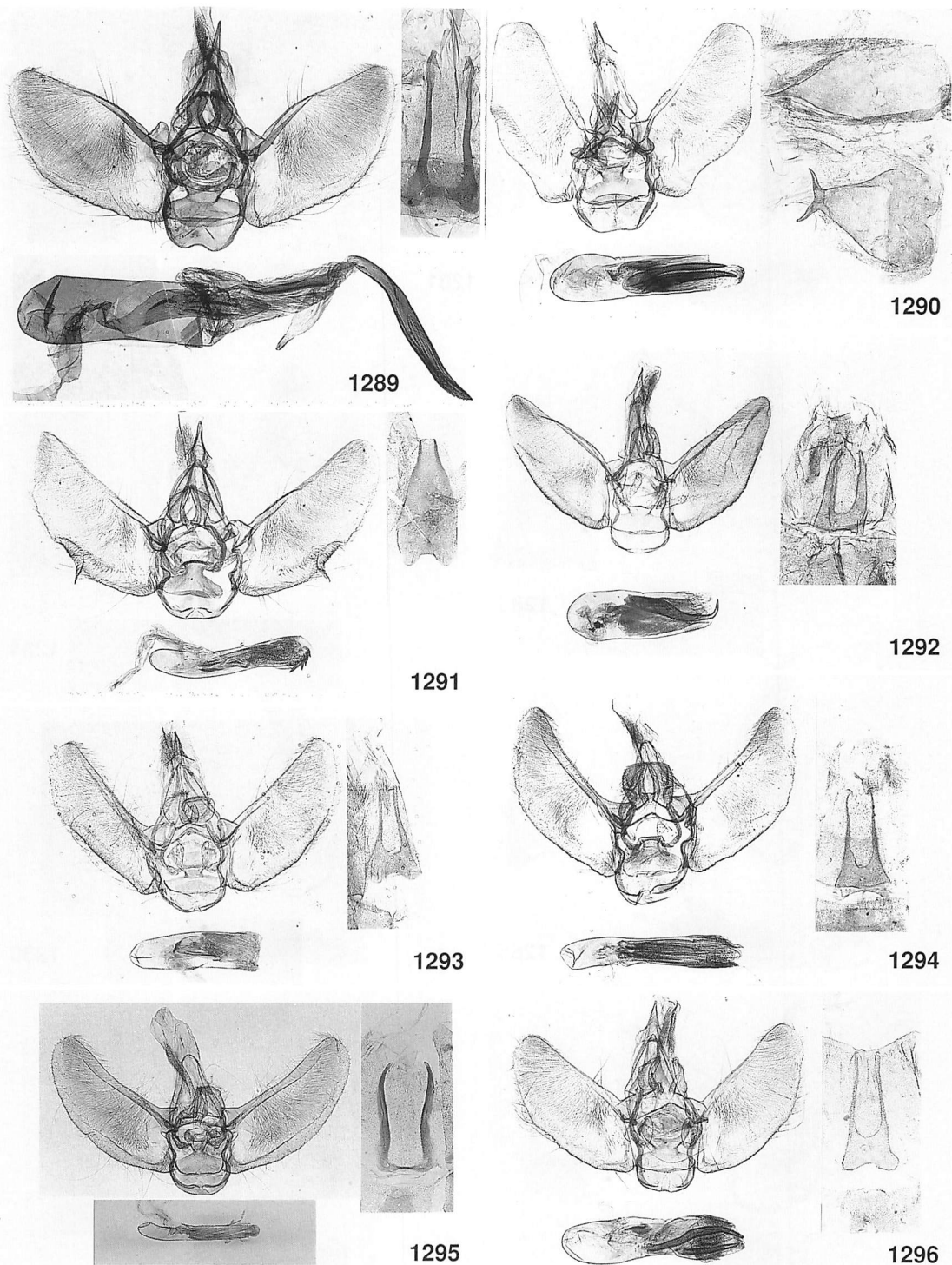


1287

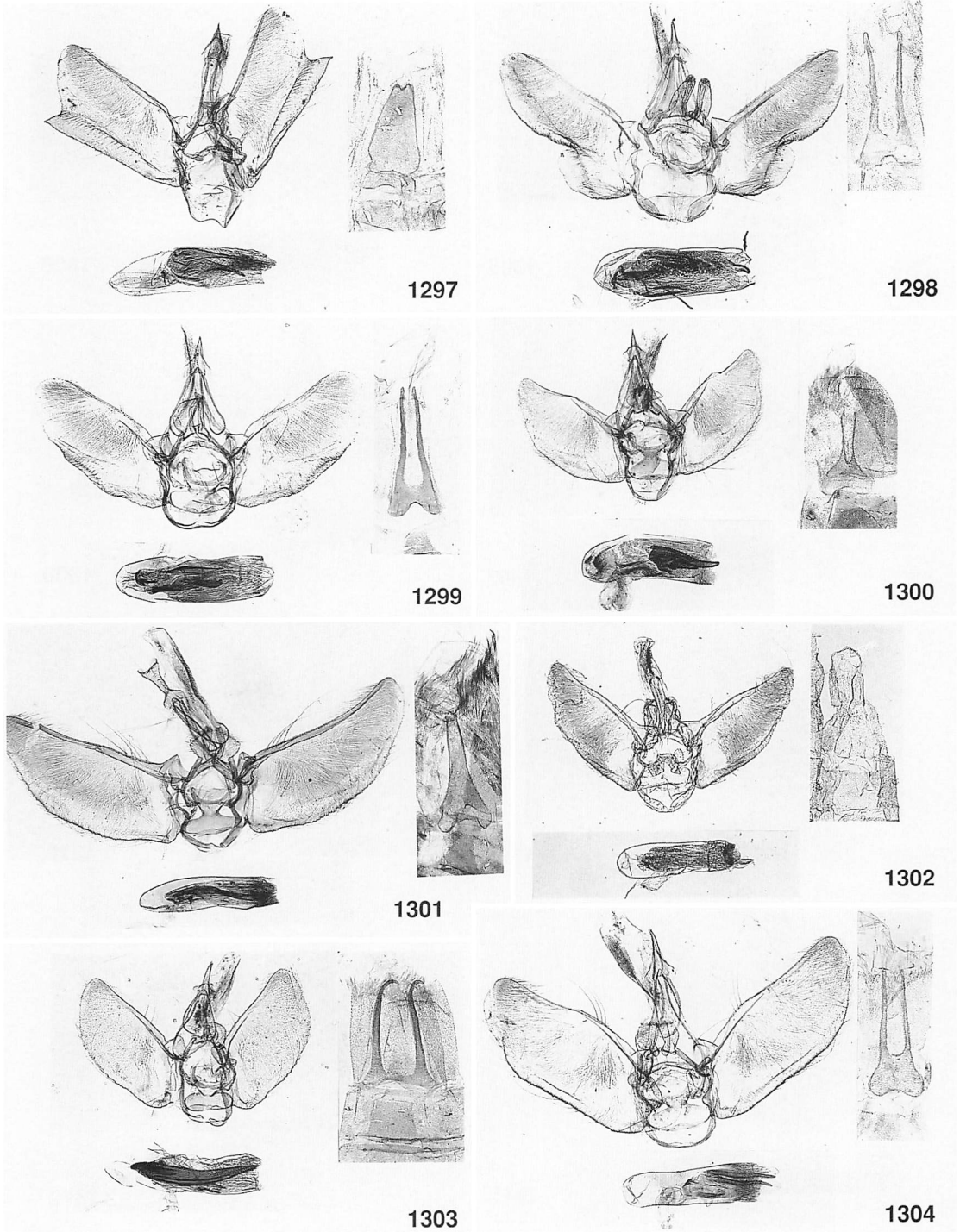


1288

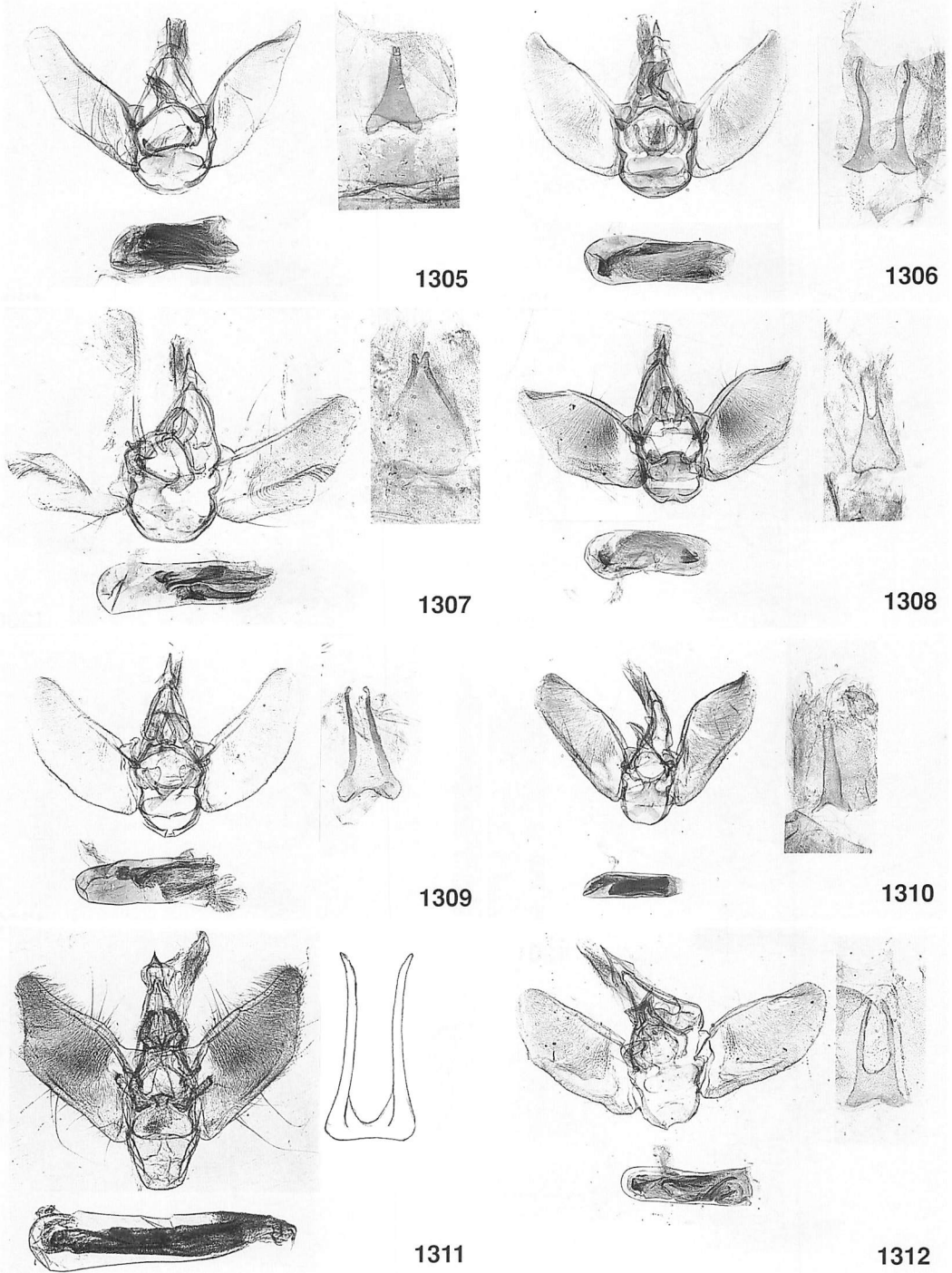
Figs 1281–1288. Male genitalia and 8th abdominal sternite (abdominal plate) of *Eupithecia*. 1281. *acuta*. 1282. *albibaltea*. 1283. *albigutta*. 1284. *amplificata*. 1285. *appartissima*. 1286. *asempiterna*. 1287. *atrisignis*. 1288. *balintzsolti*.



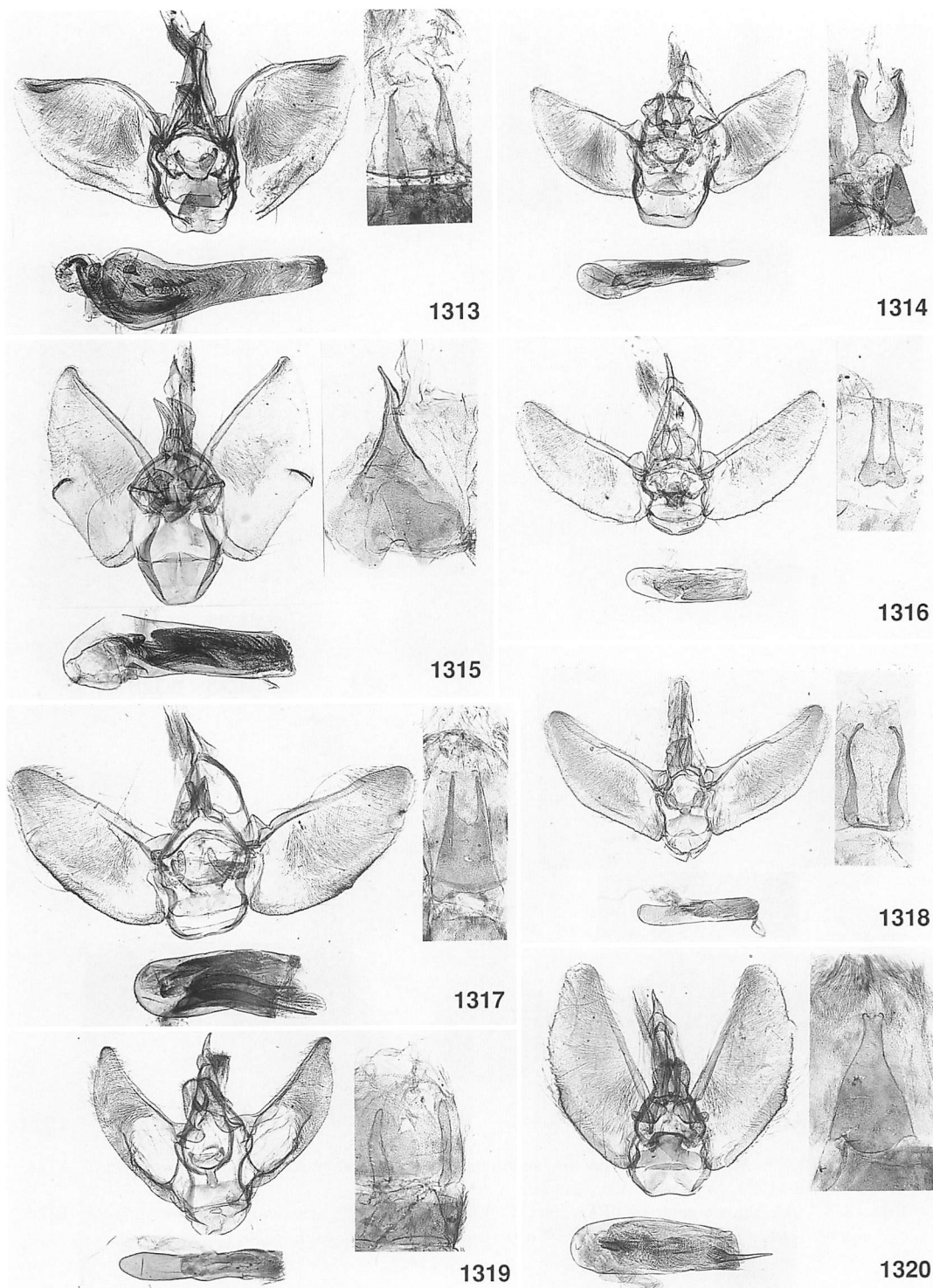
Figs 1289-1296. Male genitalia and 8th abdominal sternite (abdominal plate) of *Eupithecia*. 1289. *commiserenda*. 1290. *concinna* (upper: 8th abdominal tergite). 1291. *conjunctiva*. 1292. *contraria*. 1293. *darjeelica*. 1294. *delaeveri*. 1295. *fletcheri*. 1296. *fusca*.



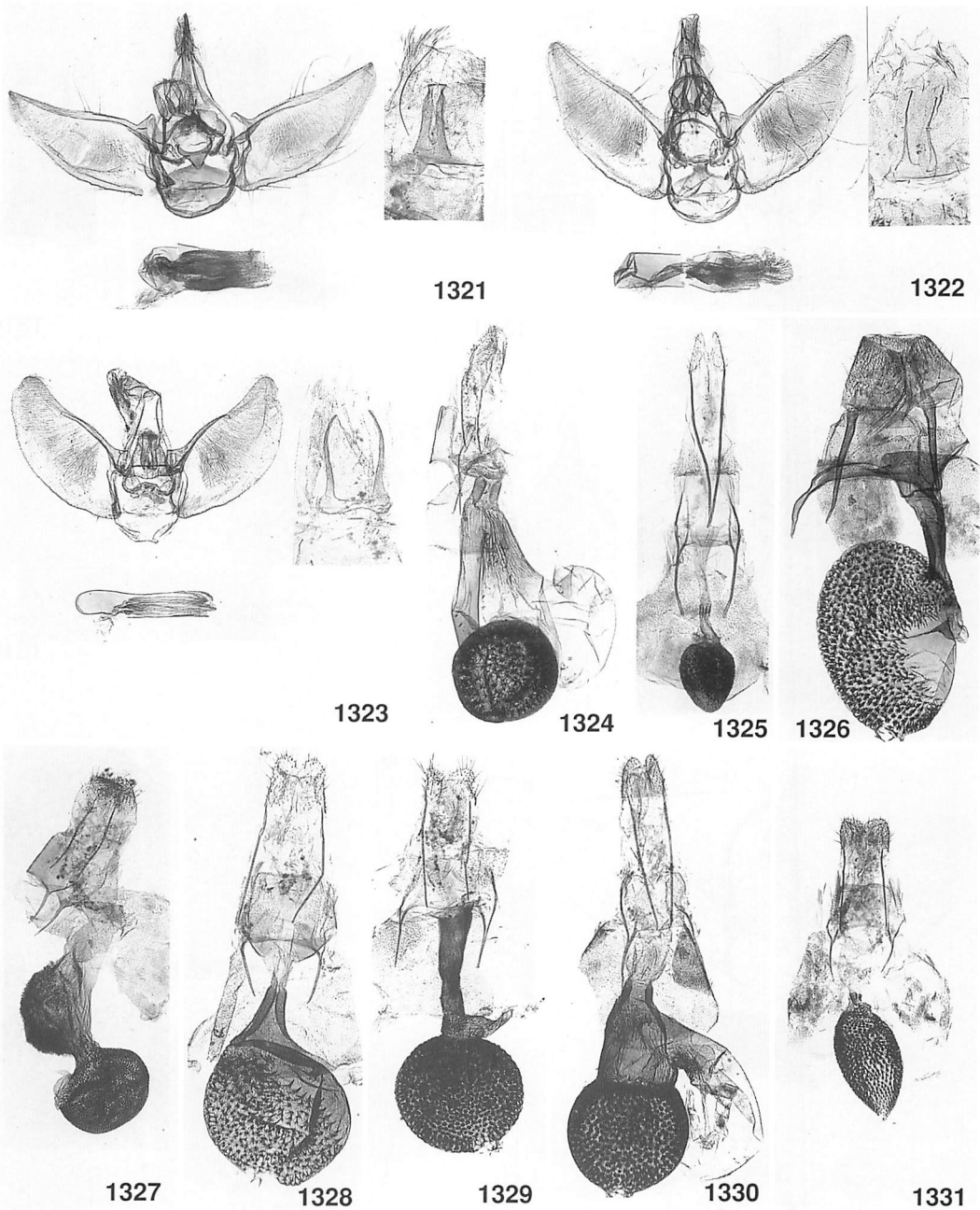
Figs 1297-1304. Male genitalia and 8th abdominal sternite (abdominal plate) of *Eupithecia*. 1297. *improva*. 1298. *iracunda*. 1299. *karnaliensis*. 1300. *leucostixis*. 1301. *liberata*. 1302. *likiangi*. 1303. *lilliptana*. 1304. *lobbichlerata*.



Figs 1305–1312. Male genitalia and 8th abdominal sternite (abdominal plate) of *Eupithecia*. 1305. *lucigera*. 1306. *maculosa*. 1307. *mira*. 1308. *mustangata*. 1309. *nigrilinea*. 1310. *nigrinotata*. 1311. *noncoacta*. 1312. *pallescens*.

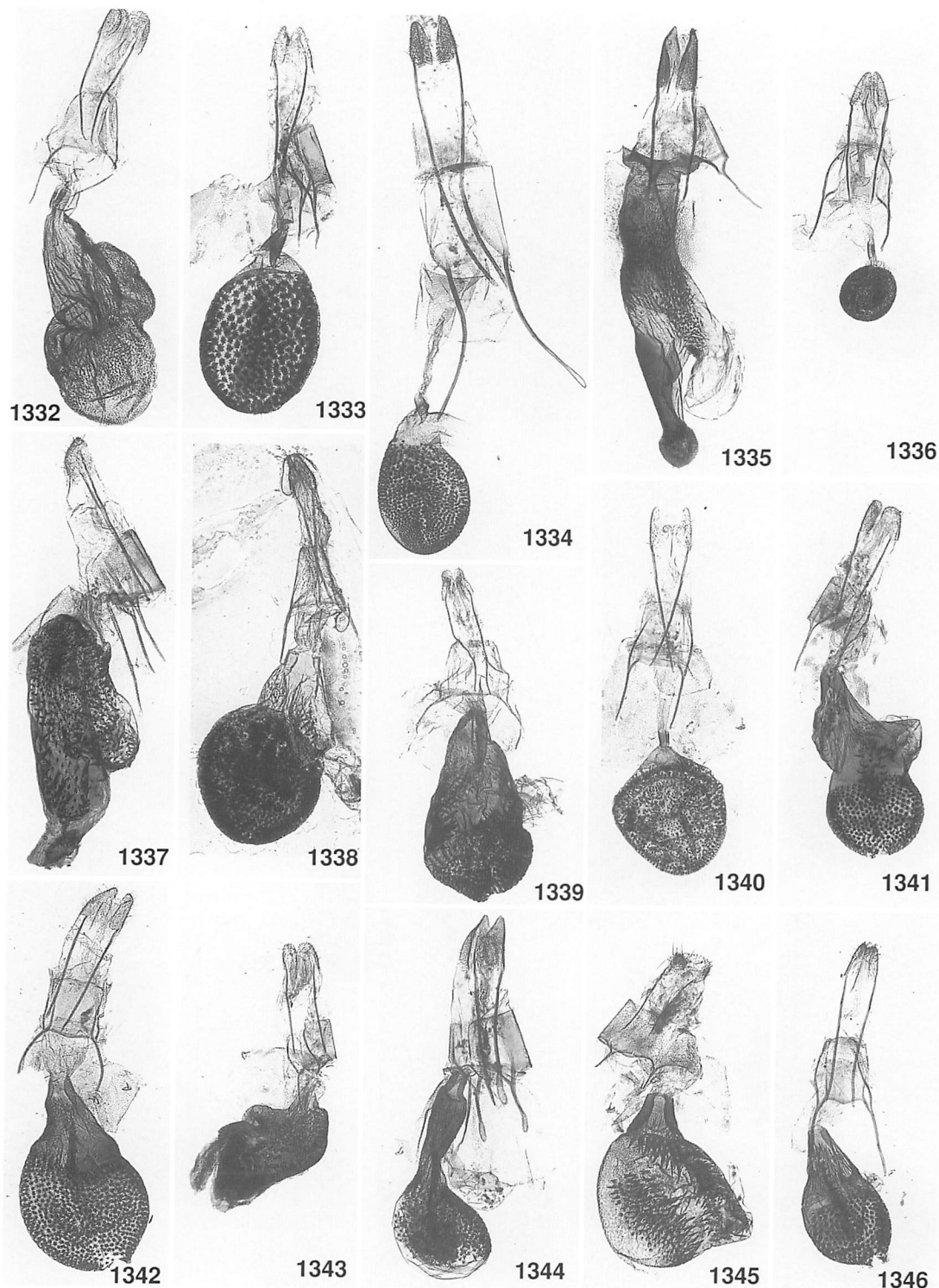


Figs 1313–1320. Male genitalia and 8th abdominal sternite (abdominal plate) of *Eupithecia*. 1313. *peguensis*. 1314. *pengata*. 1315. *quadripunctata*. 1316. *raniata*. 1317. *robiginascens*. 1318. *rubridorsata*. 1319. *subrubescens*. 1320. *tenuisquama*.

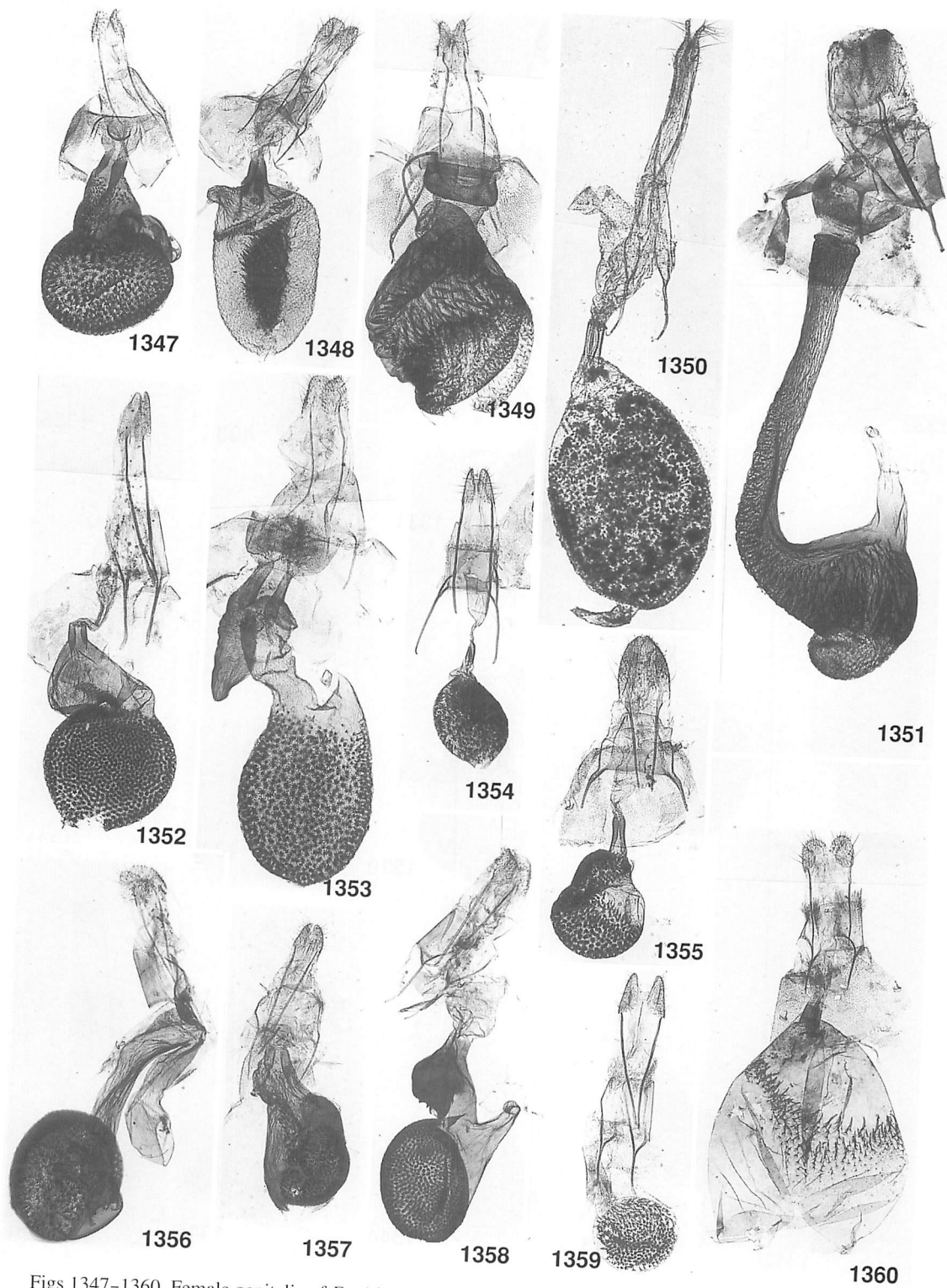


Figs 1321-1323. Male genitalia and 8th abdominal sternite (abdominal plate) of *Eupithecia*. 1321. *tricrossa*. 1322. *violacea*. 1323. *yasudai*.

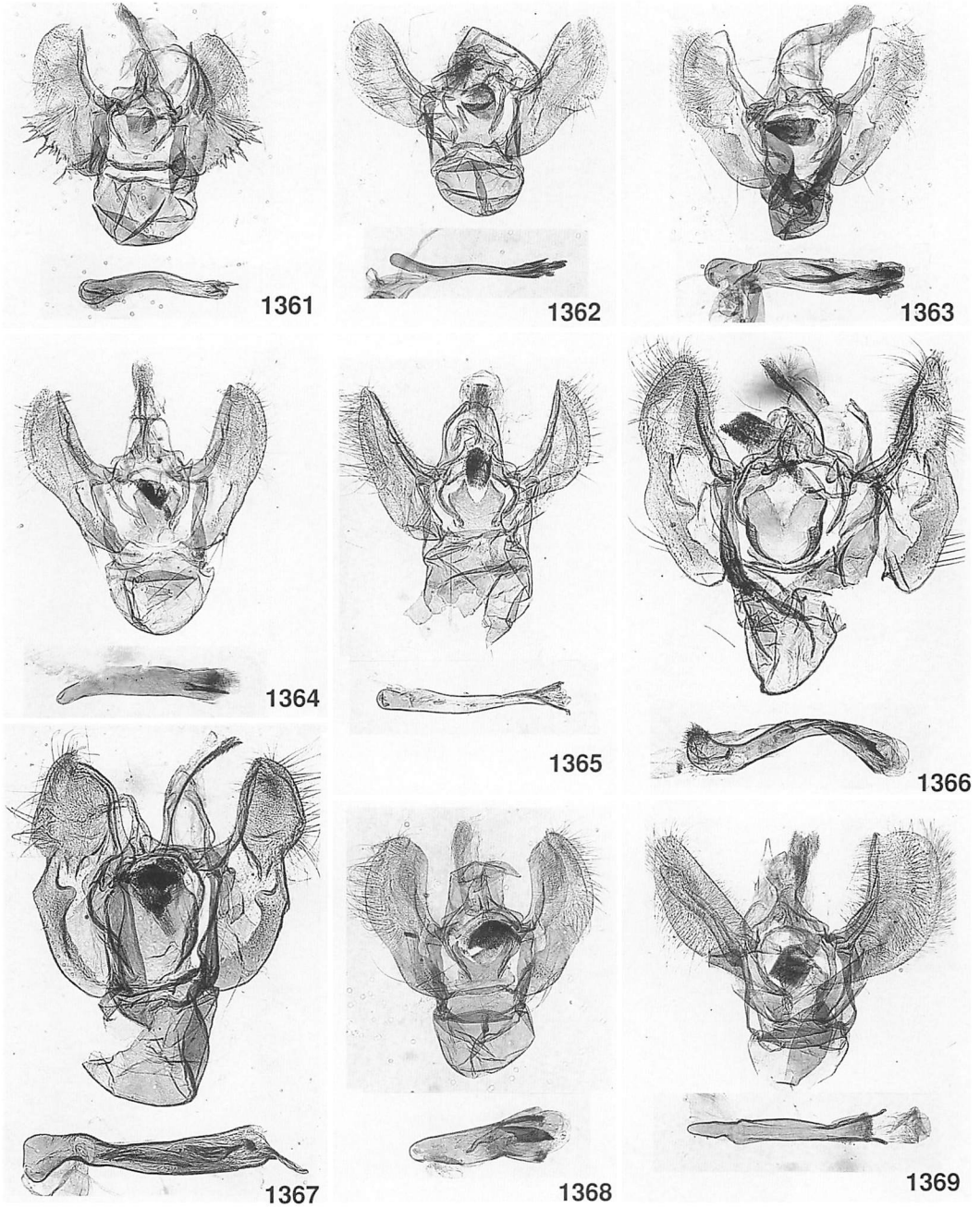
Figs 1324-1331. Female genitalia of *Eupithecia*. 1324. *acuta*. 1325. *albigutta*. 1326. *amplificata*. 1327. *apparticeps*. 1328. *asempiterna*. 1329. *atrisignis*. 1330. *balintzsolti*. 1331. *circumacta*.



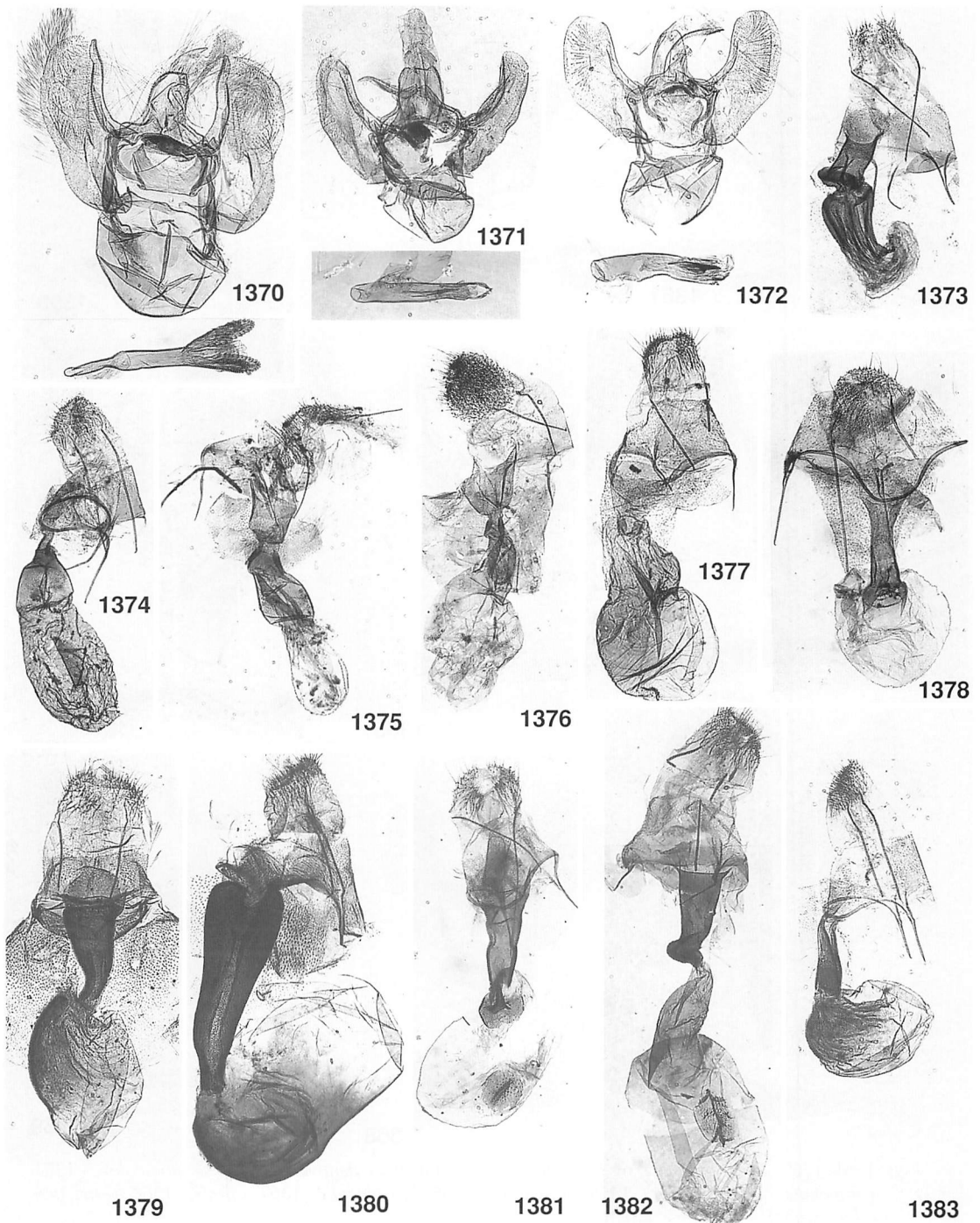
Figs 1332-1346. Female genitalia of *Eupithecia*. 1332. *contraria*. 1333. *costinotata*. 1334. *delaeveri*. 1335. *emendata*. 1336. *fletcheri*. 1337. *fusca*. 1338. *iracunda*. 1339. *karnaliensis*. 1340. *lactibasis*. 1341. *leucostaxis*. 1342. *liberata*. 1343. *lilliptana*. 1344. *lobbichlerata*. 1345. *lucigera*. 1346. *mustangata*.



Figs 1347-1360. Female genitalia of *Eupithecia*. 1347. *pengata*. 1348. *pyricoetes*. 1349. *quadripunctata*. 1350. *noncoacta*. 1351. *peguensus*. 1352. *raniata*. 1353. *robiginascens*. 1354. *rubridorsata*. 1355. *stramineata*. 1356. *tenuisquama*. 1357. *uniformis*. 1358. *xerophila*. 1359. *yasudai*. 1360. *tricrossa*.



Figs 1361–1369. Male genitalia of *Perizoma*. 1361. *antisticta dentivalva*. 1362. *subbicolor*. 1363. *acutipennis*. 1364. *bicolor*. 1365. *obligatum*. 1366. *fulvimacula*. 1367. *affinis*. 1368. *restrictum*. 1369. *owadai*.



Figs 1370-1372. Male genitalia of *Perizoma*. 1370. *peculiare*. 1371. *lilliptanum*. 1372. *micropunctum*.
 Figs 1373-1383. Female genitalia of *Perizoma*. 1373. *antisticta dentivalva*. 1374. *subbicolor*. 1375.
minuta. 1376. *albifrons*. 1377. *bicolor*. 1378. *obligatum*. 1379. *fulvimacula*. 1380. *affinis*. 1381.
owadai. 1382. *peculiare*. 1383. *micropunctum*.

Pyralidae of Nepal (III)

Hiroshi Yamanaka

In the present paper I will record 58 species of Nepalese Pyralidae based on the specimens of the late Mr T. Haruta and his collectors mostly collected in 1994 and 1995 and of Mr S. Sakurai. Among them seven species are newly added (asterisk-marked) to the list of Pyralidae of Nepal previously treated in the parts 4 and 5 of this series and furthermore three new species, *Anania fuscofulvalis*, *Cotachena nepalensis*, *Lista monticola*, belonging to subfamilies Pyraustinae and Epipaschiinae are described.

ACENTROPINAE

Parapoynx fluctuosalis (Zeller) (Pl. 141: 18)

[Bagmati] Nagarkot: 1 ♀, 27. vi. 1994.

Parapoynx stagnalis (Zeller) (Pl. 141: 19)

[Bagmati] Nagarkot: 1 ♀, 27. vi. 1994.

PYRAUSTINAE

Callibotys hyalodiscalis (Warren) (Pl. 163: 12)

Rhectothyris hyalodiscalis Warren, 1895, *Ann. Mag. nat. Hist.* (6) 16: 471.

[Bagmati] Mt Phulchouki: 1 ♂, 13. vi. 1994.

Anania fuscofulvalis sp. n. (Pl. 163: 13, ♀ paratype)

Similar to *A. albeoverbascalis* Yamanaka, 1966 described from Japan in general appearance, but larger in size (length of forewing 13–14 mm in *fuscofulvalis*, 9–12 mm in *albeoverbascalis*); ground colour of upperside of both wings much more strongly tinged with tawny, in forewing a quadrate yellowish mark between orbicular and discocellular spot larger and more conspicuous.

Male and female genitalia (Figs 1386, 1394). Very similar to *albeoverbascalis*, but in male uncus longer, a little slenderer; valva a little longer; an indented projection of clasper a little slenderer and weakly curved (Fig. 1387), while in *albeoverbascalis* it is more or less strongly curved (Fig. 1388), in female ductus bursae longer.

Holotype. ♂, Bagmati, Godavari, 4. v. 1990 (*ex* T. Haruta). Paratypes. 2 ♀, same data as holotype; 2 ♂ 2 ♀, Bagmati, Mt Phulchouki, 16. vi. 1992 (*ex* T. Haruta).

Crocidophora flavofasciata (Moore) (Pl. 124: 2)

[Bagmati] Nagarkot: 1 ♂ 3 ♀, 26–27. vi. 1994.

Epiparbattia gloriosalis whalleyi Munroe & Mutuura (Pl. 124: 8)

[Kosi] Pheksinda: 1 ♂, 2–7. v. 1994. [Bagmati] Godavari: 1 ♀, 9. vi. 1994.

Udea ferrugalis (Hübner) (Pl. 124: 30)

[Mahakali] Dandeldhura: 1 ♂, 3. vi. 1995.

**Udea stigmatalis* (Wileman) (Pl. 163: 14)

Pionea stigmatalis Wileman, 1911, *Trans. ent. Soc. Lond.* 1911: 387.

[Gandaki] Pokhara: 1 ♀, 9. xi. 1986 (S. Sakurai).

***Cotachena nepalensis* sp. n.** (Pl. 163: 15, holotype)

Male. Similar to *C. alysoni* Whalley, 1961 described from China, Thailand, Indo China, Malay Peninsula, India and Japan in maculation, but larger in size (length of forewing 11–12 mm in *nepalensis*, 9–10 mm in *alysoni*); forewing more elongate, apex acuter, termen more or less strongly oblique; upperside of forewing more or less strongly suffused with brownish fuscous, the roundish semihyaline spot below vein CuA₂ smaller. Female unknown.

Male genitalia (Fig. 1389). Very similar to those of *C. alysoni*, but can be separable by the following characters: uncus longer, and apical margin smoothly rounded (Fig. 1390), while in *alysoni* the apical margin of uncus is rather evenly rounded (Fig. 1391); valva longer.

Holotype. ♂, Bagmati, Godavari, 15. v. 1990 (*ex* T. Haruta). Paratypes. Same locality as holotype, 1 ♂, 3. vi. 1990, 1 ♂, 23. v. 1991 (*ex* T. Haruta). Bagmati, Mt Phulchouki, 2 ♂, 13. vi. 1994 (*ex* T. Haruta).

***Pycnarmon virgatalis* Moore** (Pl. 163: 17)

Pycnarmon virgatalis Moore, 1867, *Proc. zool. Soc. Lond.* **1867**: 92, pl. 7, fig. 9.

[Janakpur] Sindhulimadi: 1 ♀, 3. x. 1986 (S. Sakurai). [Mechi] Godok: 1 ♂, 12. vi. 1993; 1 ♀, 13. vi. 1993.

***Spoladea recurvalis* (Fabricius)** (Pl. 125: 2)

[Bagmati] Nagarkot: 1 ♀, 26. vi. 1994. [Mahakali] Dandeldhura: 2 ♂ 1 ♀, 27. ix. 1994. [Kosi] Chichile: 1 ♀, 13. v. 1994.

***Charitoprepes lubricosa* Warren** (Pl. 124: 11)

[Janakpur] Jiri: 1 ♂, 3. vi. 1994.

***Syngamia falsidicalis* (Walker)** (Pl. 125: 5)

[Kosi] Chichile: 1 ♂, 13. v. 1994.

***Aethaloessa calidalis calidalis* (Guenée)** (Pl. 125: 6)

[Mahakali] Dandeldhura: 1 ♂, 27. ix. 1994.

***Filodes sexpunctalis* Snellen** (Pl. 125: 14)

[Kosi] Pheksinda: 1 ♀, 7–12. v. 1994.

***Tyspanodes cardinalis* Hampson** (Pl. 124: 16)

[Bagmati] Godavari: 1 ♂, 2. v. 1994.

****Tyspanodes hypsalis* Warren** (Pl. 163: 18)

Tyspanodes hypsalis Warren, 1891, *Ann. Mag. nat. Hist.* (6) **7**: 426.

[Kosi] Pheksinda: 1 ♂, 8. v. 1994; 1 ♂, 11. v. 1994.

***Nevrina procopia* (Stoll)** (Pl. 124: 18)

[Kosi] Chichile: 1 ♀, 9. v. 1994.

***Omiodes noctescens* (Moore)** (Pl. 125: 12)

[Kosi] Pheksinda: 2 ♂, 7–12. v. 1994.

Omiodes barcalis (Walker), **comb. n.** (Pl. 142: 29)

Botys bracalis Walker, 1859, *List Specimens lepid. Insects Colln Br. Mus.* **19**: 1001.
Pilocrocis barcalis: Yamanaka, 1998, *Tinea* **15** (Suppl. 1): 102.

This species was recorded as a member of *Pilocrocis* Lederer, 1863 by me in the previous part of this series (Yamanaka, 1998). According to my investigation, the structures of male genitalia of this species are quite similar to those of the members of the genus *Omiodes* Guenée, 1854. Therefore I placed it in *Omiodes*.

****Notarcha quaternalis*** (Zeller) (Pl. 163: 16)

Botys quaternalis Zeller, 1852, *Lepid. Microptera Caffrorum*: 44.
 [Janakpur] Bijayacchap: 1 ♂ 1 ♀, 5. x. 1986 (S. Sakurai).

Dichocrocis definita (Butler) (Pl. 124: 27)

[Kosi] Pheksinda: 4 ♀, 7-12. v. 1994.

****Dichocrocis zebralis*** (Moore) (Pl. 163: 21)

Pycnarmon zebralis Moore, 1867, *Proc. zool. Soc. Lond.* **1867**: 91: pl. 7, fig. 12.
 [Kosi] Pheksinda: 1 ♂, 8. v. 1994. Chichile: 1 ♀, 13. v. 1994.

Botyodes asialis Guenée (Pl. 124: 20)

[Mahakali] Dandeldhura: 1 ♂, 26. ix. 1994.

Botyodes crocopteralis Hampson (Pl. 124: 22 ♂, 23 ♀)

[Bagmati] Mt Phulchouki: 1 ♂ 1 ♀, 13. vi. 1994.

Pleuroptya balteata (Fabricius) (Pl. 125: 16)

[Mahakali] Dandeldhura: 1 ♀, 28. ix. 1994.

Pleuroptya ruralis (Scopoli) (Pl. 125: 18)

[Mahakali] Dandeldhura: 1 ♀, 4. iv. 1994; 2 ♂ 2 ♀, 24-28. ix. 1994.

Pleuroptya obfuscalis Yamanaka (Pl. 142: 30)

[Bagmati] Mt Phulchouki: 1 ♂ 1 ♀, 12-13. vi. 1994.

Pleuroptya characteristica (Warren) (Pl. 125: 20)

[Bagmati] Mt Phulchouki: 1 ♀, 13. vi. 1994.

Coptobasis lunalis (Guenée) (Pl. 125: 23)

[Mahakali] Dandeldhura: 1 ♂ 3 ♀, 27-28. ix. 1994.

Hemopsis dissipatalis (Lederer) (Pl. 142: 31)

[Kosi] Pheksinda: 2 ♂ 1 ♀, 7-12. v. 1994.

Syllepte tibialis (Moore) (Pl. 142: 7)

[Bagmati] Nagarkot: 1 ♂, 27. vi. 1994.

Syllepte gastralis (Walker) (Pl. 125: 26)

[Kosi] Pheksinda: 2 ♂, 7-12. v. 1994.

****Haritalodes basipunctalis*** (Bremer) (Pl. 163: 19)

Botys basipunctalis Bremer, 1864, *Mém. Acad. Imp. Sci. St.Pétersb.* (7) **8**, 1: 68, pl. 6, fig. 8.
 [Kosi] Pheksinda: 1 ♂, 7-12. v. 1994.

Agathodes ostentalis (Geyer) (Pl. 125: 27)

[Bagmati] Nagarkot: 5 ♀, 27. vi. 1994.

Palpita perunionalis Inoue (Pl. 125: 31)

[Mahakali] Dandeldhura: 1 ♂ 3 ♀, 27. ix. 1994; 1 ♀, 2. vi. 1995.

**Cydalima conchylalis* (Guenée) (Pl. 163: 20)

Margarodes conchylalis Guenée, 1854, in Boisduval & Guenée, *Hist. nat. Insectes (Lépid.)* 8: 303, pl. 8, fig. 9.

[Janakpur] Bijayaccap: 1 ♂ 1 ♀, 4. x. 1986; 1 ♂ 1 ♀, 6. x. 1986 (S. Sakurai).

Glyphodes lacustralis Moore (Pl. 126: 6)

[Bagmati] Mt Phulchouki: 4 ♂, 12-13. vi. 1994.

Dysallacta negatalis (Walker) (Pl. 126: 8)

[Mahakali] Dandeldhura: 1 ♂, 28. ix. 1994.

Hyaloplaga pulchralis (Moore) (Pl. 126: 10)

[Kosi] Pheksinda: 1 ♀, 7-12. v. 1994.

Rhagoba octomaculalis (Moore) (Pl. 142: 20, 21)

[Kosi] Pheksinda: 1 ♀, 7-12. v. 1994.

Terastia egialealis (Walker) (Pl. 126: 16)

[Kosi] Chichile: 1 ♂, 9. v. 1994; 2 ♂, 13. v. 1994.

Maruca vitrata (Fabricius) (Pl. 126: 22)

[Bagmati] Mt Phulchouki: 1 ♀, 13. vi. 1994. [Mahakali] Dandeldhura: 1 ♀, 27. ix. 1994.

Pachynoa sabelialis (Guenée) (Pl. 126: 23)

[Bagmati] Nagarkot: 1 ♀, 27. vi. 1994.

Herpetogramma phaeoptera (Guenée) (Pl. 142: 26)

[Mahakali] Dandeldhura: 1 ♂ 3 ♀, 27-28. ix. 1994.

Herpetogramma luctuosale luctuosale (Guenée) (Pl. 127: 2)

[Kosi] Pheksinda: 2 ♀, 7-12. v. 1994. [Bagmati] Nagarkot: 2 ♀, 27. v. 1994.

PYRALINAE

Tamraca torridalis (Lederer) (Pl. 127: 18)

[Kosi] Pheksinda: 1 ♂, 7-12. v. 1994.

Orybina flaviplaga flaviplaga (Walker) (Pl. 127: 10)

[Kosi] Chichile: 1 ♀, 13. v. 1994.

Orybina kobesi Roesler (Pl. 127: 11)

[Bagmati] Nagarkot: 1 ♂, 27. vi. 1994.

Sacada discinota (Moore) (Pl. 127: 13 ♂, 14 ♀)

[Mahakali] Dandeldhura: 2 ♂, 24. ix. 1994; 1 ♀, 25. ix. 1994; 1 ♀, 28. ix. 1994. [Kosi] Chichile: 1 ♂, 9. v. 1994; 1 ♂, 13. v. 1994.

Tocolosida rubriceps Walker (Pl. 127: 12)
[Kosi] Pheksinda: 1 ♂ 1 ♀, 7-12. v. 1994.

EIPASCHIINAE

Stericta asopialis (Snellen) (Pl. 143: 11)
[Bagmati] Nagarkot: 1 ♂, 26. vi. 1994.

Lista variegata (Moore) (Pl. 163: 22)

Scopocera variegata Moore, 1888, in Hewiston & Moore, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson* (3): 203, pl. 7, fig. 4.

[Bagmati] Mt Phulchouki: 1 ♀, 4. viii. 1991; 1 ♂, 6. ii. 1992; 1 ♀, 12. vi. 1994. [Janakpur] Jiri: 1 ♂, 25. v. 1995.

Lista monticola sp. n. (Pl. 163: 23, holotype)

Male. Length of forewing 10 mm. Very similar to *L. ficki* (Christoph, 1881) described from Amur, Russia in colour and maculation, but distinguished from it by the following characters. Upperside of basal area of both wings not so densely suffused with fuscous scales. Underside of both wings pale fuscous, with distinct markings (Fig. 1384), while in *ficki* it is sericeous, markings being weaker (Fig. 1385). Female unknown.

Male genitalia (Fig. 1392). Similar to *L. ficki* (Fig. 1393), but smaller in size; uncus narrower, apical margin truncate, lateral process absent; apical process of gnathos smaller; sacculus a little narrower, and bifurcate dorsal process slender, sharply pointed.

Holotype. ♂, Bagmati, Godavari, 18. vi. 1991 (ex T. Haruta).

Lamida obscura (Moore) (Pl. 143: 12)

[Bagmati] Nagarkot: 1 ♀, 26. vi. 1994.

Locastra muscosalis (Walker) (Pl. 143: 15)

[Bagmati] Nagarkot: 3 ♂, 26-27. vi. 1994.

PHYCITINAE

Faveria leucophaeella (Zeller) (Pl. 163: 24)

Pempelia (Salebria) leucophaeella Zeller, 1867, *Stettin. ent. Ztg* 28: 390.

[Bagmati] Kirtipur: 1 ♂, 10. xi. 1986 (S. Sakurai).

**Ceroprepes naga* Roesler & Küppers (Pl. 163: 25)

Ceroprepes naga Roesler & Küppers, 1979, *Beitr. naturk. Forsch. SudwDtl. Beih.* 3: 177-178, pl. 15, fig. 38.80, pl. 36, fig. 38.80.



1384



1385

Figs 1384-1385. Underside of *Lista* spp. 1384. *L. monticola* sp. n., ♂, holotype. 1385. *L. ficki* (Christoph), ♂ (Primorsky kray).

[Janakpur] Bijayacchap: 1 ♂, 5. x. 1986 (S. Sakurai). Bonch: 1 ♀, 20. x. 1986 (S. Sakurai).

Acknowledgements

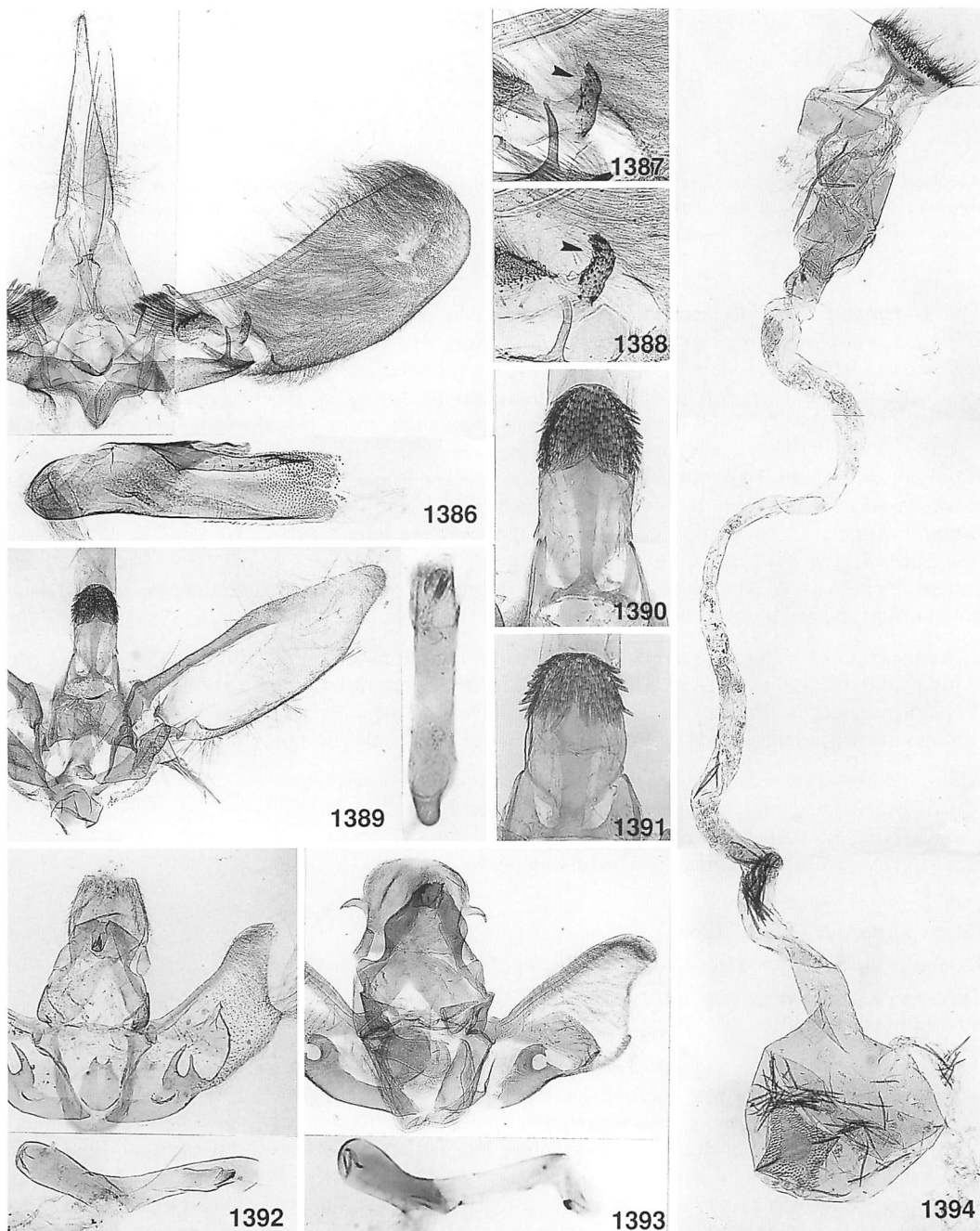
I wish to express my hearty thanks to Mr M. Shaffer, Department of Entomology, the Natural History Museum, London, for his kind help in various ways. I also wish to thanks to Drs H. Inoue, Iruma, Saitama and W. Speidel, Müseum fur Naturkunde der Humboldt-Universität, Berlin, for their valuable advice. My hearty thanks also due to the late Mr T. Haruta and Mr S. Sakurai for their kindness in offering valuable specimens.

Postscript

My treatment in the previous part of this series, p. 112, line 2 from bottom, as “*Microthrix* Ragonot, 1888 was synonymized with *Elegia* Ragonot, 1887 by Speidel (1996)” was a mistake, because these two genera were already synonymized by Roesler (1988, *Beitr. Ent.* **38**: 68).

Additional references

- Gentili, P. & M. A. Solis, 1997. Checklist and key of New World species of *Omiodes* Guenée with descriptions of four new Costa Rican species (Lepidoptera: Crambidae). In Solis, M. A. & M. Horak [Eds], *Pyraloidea Studies Festschrift for Michael Shaffer. Ent. scand.* **28**: 471–492, figs 1–63.
- Munroe, E. & A. Mutuura, 1969. Contributions to a study of the Pyraustinae (Lepidoptera: Pyralidae) of temperate East Asia. V. *Can. Ent.* **101**: 299–305, figs 1–9.
- Roesler, R. U., 1988. Untersuchungen zur Taxonomie palaearktischen Phycitinae (Lepidoptera, Pyraloidea). *Beitr. Ent.* **38**: 65–73.
- Shibuya, J., 1928. The systematic study of the Formosan Pyralidae. *J. Fac. Agric. Hokkaido Imp. Univ.* **22**: 1–300, pls 1–9.
- Yamanaka, H., 1966. A revisional study of the Japanese *Anania*, with description of a new species (Lep. Pyralidae). *New Entomologist* **15**: 31–40, pls 1–2.



Figs 1386-1393. Male genitalia. 1386. *Anania fuscofulvalis* sp. n., paratype. 1387-1388. Projection of clasper (marked with arrow). 1387. *A. fuscofulvalis* sp. n. 1388. *A. alboverbascalis* Yamanaka. 1389. *Cotachena nepalensis* sp. n., paratype. 1390-1391. Uncus. 1390. *C. nepalensis* sp. n. 1391. *C. alysoni* Whalley. 1392. *Lista monticola* sp. n., holotype. 1393. *L. ficki* (Christoph, 1881) (Primorsky kray).

Fig. 1394. Female genitalia of *Anania fuscofulvalis* sp. n., paratype.

HEPIALIDAE

Kyoichiro Ueda

Abstract Eleven species of Hepialidae collected from Nepal and adjacent areas are recorded and figured. Five species of the genus *Thitarodes* are described as new: *Thitarodes maculatum*, *T. kishidai*, *T. kingdonwardi*, *T. harutai* and *T. limbui*.

The systematic study of Hepialidae from Nepal was begun by Walker (1856) who described *Hepialus nepalensis* based on Hardwicke's collection. Hampson (1892) established a new genus *Hepialiscus* to accommodate it. Pfitzner (1912) mentioned and figured *H. nepalensis*. Tindale, in a series of monographs on the hepialid species of Australia, the Oriental and Palaearctic regions (1941, 1942), only listed *Hepialiscus nepalensis* from Nepal with redescription and figures. Viette (1968) established a new genus *Thitarodes* to accommodate four species, *i. e.*, *Hepialus armoricanus* Oberthür and three new species from Nepal: *T. danieli*, *T. eberti* and *T. dierli* based on collections by a German expedition. Viette (*l.c.*) also described a new species *Palpifer falkneri*. Nielsen (1988) revised the peculiar genus *Bipectilus* Chu & Wang and described *B. latirami* and *B. gracilirami* from Nepal. Robinson *et al.* (1995) provided an extensive checklist of Microlepidoptera and Pyraloidea of Nepal, and listed nine species and four unidentified species of the genus *Thitarodes*.

Eleven species of Hepialidae are dealt in this paper mainly based on the collection by the late Mr Haruta, and the collections in The Natural History Museum, London and Muséum national d'Histoire naturelle, Paris. All figures were drawn before slide mounting to avoid distortion through the procedure using a Wild M10 microscope. All scales on the figures represent 1 mm.

Abbreviations of museums where the material examined is deposited:

BMNH – The Natural History Museum, London

KMNH – Kitakyushu Museum & Institute of Natural History

MNHN – Muséum national d' Histoire naturelle, Paris

Genus *Thitarodes* Viette, 1968

Thitarodes Viette, 1968, *Ergebn. ForschUnternehmens Nepal Himalaya* 3: 128.

Type-species: *Hepialus armoricanus* Oberthür, 1909, *Etud. Lépid. comp.* 3: 411, pl. 25 fig. 135, by original designation.

Antenna simple, filiform and apical segment acute; frons more or less swollen; clypeus unscaled, with two pairs of sensory pits; labrum slender and tuberculate; mandible rudimentary but present; maxillary palpus short, one- or two-segmented; labium with one- or two-segmented labial palpus. All legs without spurs; arolium developed; fore leg with epiphysis on the tibia; male hind tibia broadened with or without dense or moderate scent-brushes dorsally. Fore wing 13–24 mm long; costa straight; termen evenly curved; posterior margin slightly concave between CuA and A1; Sc unbranched, R straight; Rs_1 and Rs_2 stalked; cross-vein $Rs-M_1$ variably reaching Rs_{3+4} , *i. e.*, between furcation Rs_{1+2}/Rs_{3+4} and Rs_3/Rs_4 , just reaching the Rs_3/Rs_4 furcation or beyond the Rs_3/Rs_4 furcation; stalk Rs_{1+2} long, 4–6 times length of stalk Rs_{3+4} ; the first principal M branch weak; CuP weak, curved to posterior margin and reaching A in the middle or beyond the middle; A_1 weak basally; A_2 very weak. Hind wing with stalk of R/Rs short; R separating from Rs at basal 1/3 of cell; stalk of M+CuA short.

Abdomen; male 2nd abdominal segment with deep groove on the lateral membranous area, if scent-brushes of hind tibia developed; female 7–8th abdominal sterna fused each other and in some species weakly sclerotized.

Male genitalia. Eighth abdominal sternum present. A pair of dorsal projections (twin process) only moderately developed; subanal sclerite absent; a pair of acute processes on dorso-posterior region present or absent; processus momenti large and separated from tegumen by membrane; valvella developed or not produced. Vinculum as deep as tegumen, without processes. Valva simple but variable in shape with an acute process at the base. Ventral wall of mesosome (trulleum) well sclerotized. Juxta oblong. Aedeagus not sclerotized.

Female genitalia. Ninth abdominal tergum roof-like, as deep as ninth abdominal sternum. Subanal plates narrow. Ninth abdominal sternum longer than ninth abdominal tergum in lateral view; medial portion well sclerotized and produced anteriorly; antero-lateral region broadly concave in dorsal view. Signum absent on bursa copulatrix.

Remarks. The genus *Thitarodes* was established by Viette (1968) to accommodate four dark, small to medium-sized species, *i.e.*, *T. armoricanus* (Oberthür), *T. danieli* Viette, *T. eberti* Viette and *T. dierli* Viette. He defined it mainly by the acute process from the base of the valva. The first species, *armoricanus*, was designated as the type-species of this genus. Viette (*l.c.*) also suggested that *Hepialus variabilis* Bremer, 1861 should be assigned to *Thitarodes* although it has long and acute processes on the interior margin of the tegumen (Viette, 1949).

The type-species of the genus *Thitarodes*, *Hepialus armoricanus* Oberthür, 1909 has some taxonomic problems. Oberthür (1909a) figured this species as male (pl. 25, fig. 135) and added the locality as Rennes (France). Later he gave full an account of this locality, *i.e.*, he collected this fresh (!) specimen in his garden in the spring of 1895 (Oberthür, 1909b). However, he compared it with rather old hepialid specimens from Ta-Tsien-Lu and Tay-tou-ho and concluded that “qu’*H. armoricanus* est une espèce originaire de la Chine occidentale, plutôt que de la péninsule armoricaine” (*l.c.*: 251). He also inferred that the pupa might have been imported with dry herbs. Pfitzner (1912) summarized that this was “a case of a pupa being introduced accidentally from Tibet” (p. 434). Around the end of the 19th century, “Tibet” was used rather broader sense than today. For example, Pratt (1892) made a collecting trip to “Tibet” through China and met French missionaries Bishop Biet and Fathers Soulié, Mossot and Dejean at Ta-Tsien-Lu (now Kangding, Sichuan, China). These missionaries lived there and collected natural history materials. They exported them to Oberthür and other European naturalists to earn funds for their missionary work. So, it is most probable that *armoricanus* came from this region as Oberthür indicated.

I examined the holotype-specimen in Paris (Pl. 2, fig. 1) and found that it is female ! I have not examined the male specimen Viette (1949) studied, and the correct male and female association of this species is still uncertain. Chu and Wang (1985) figured the venation, leg structures and male genitalia of “*H. armoricanus*” from Kangding, Sichuan without illustrating the wing patterns. The shape of the saccus is different from that in Viette’s figure (Viette, 1949: pl. 1, fig. 4).

Since Chu and Wang’s (*l.c.*) publication, Chinese workers have rapidly described many new species in the genus *Hepialus* from this region and these species are tentatively assigned to the genus *Thitarodes* by Nielsen *et al.* (2000). They summed up the number of species in *Thitarodes* as more than fifty. These species show considerable differences from each other in many characters, as the authors recognized. For example, the acute process from the base of the valva is absent in many species. It is apparent that this genus needs taxonomic revision in future.

***Thitarodes danieli* Viette, 1968 (Pl. 169: 1–2; Figs 1395–1398)**

Male. Length of fore wing: 19 mm. Antenna with 29 flagellar segments; reddish brown. Frons dark brown; vertex dark brown mixed with golden brown. Thorax dark brown mixed with golden brown dorso-anteriorly, ochreous posteriorly and laterally. Legs buff-brown; hind tibia slightly broadened distally; scent-brushes sparse. Fore wing fuscous mixed with ochreous; cross vein $Rs-M_1$ reaching Rs_3/Rs_4 beyond the furcation. Dark brown markings edged with ochreous. Costa with minute white spots. Large dark brown markings below CuA stem and A_1 respectively.

Subterminal and terminal series of dark brown markings confluent with each other below M_2 . Cilia ochreous chequered with dark brown at veins. Hind wing pale brown; costa darkened; cilia same as fore wing. Lateral membranous region of 2nd abdominal segment without distinct groove.

Male genitalia. Dorso-posterior process broadened and very long, with minute dentations marginally. Saccus evenly curved in caudal view. Valva not so narrowed basally; basal acute process long, well developed.

Female. Length of fore wing: 24 mm. Antenna with 26 flagellar segments. Fore and hind wing more whitish than male. Fore wing with distinct brown markings on median region, which is edged with ochreous.

Female genitalia. Ninth abdominal tergum with incision broad and rounded, from about midlength; sternum swollen near median sclerotized portion; concave antero-lateral region elliptical.

Material examined. 1 ♂, prov. Nr. 3, East Khumjung, 3800 m, 29. vi. 1964., W. Dierl leg. Staatsslg. München. With the identification label written "*Thitarodes danieli* Viette male P. E. L. Viette det. 1965" (MNHN) (gen. no. 740). 1 ♀, Khumbu, Khumdzung 3900 m, 21. vi. 1962, G. Ebert & H. Falkner leg. Staatsslg. München. With the identification label written "*Thitarodes danieli* Viette male P. E. L. Viette det. 1965" (MNHN) (gen. no. 741).

***Thitarodes maculatum* sp. nov.** (Pl. 169: 3; Figs 1399–1400)

Male. Length of fore wing: 19 mm. Antenna filiform with 23 flagellar segments; apical segment

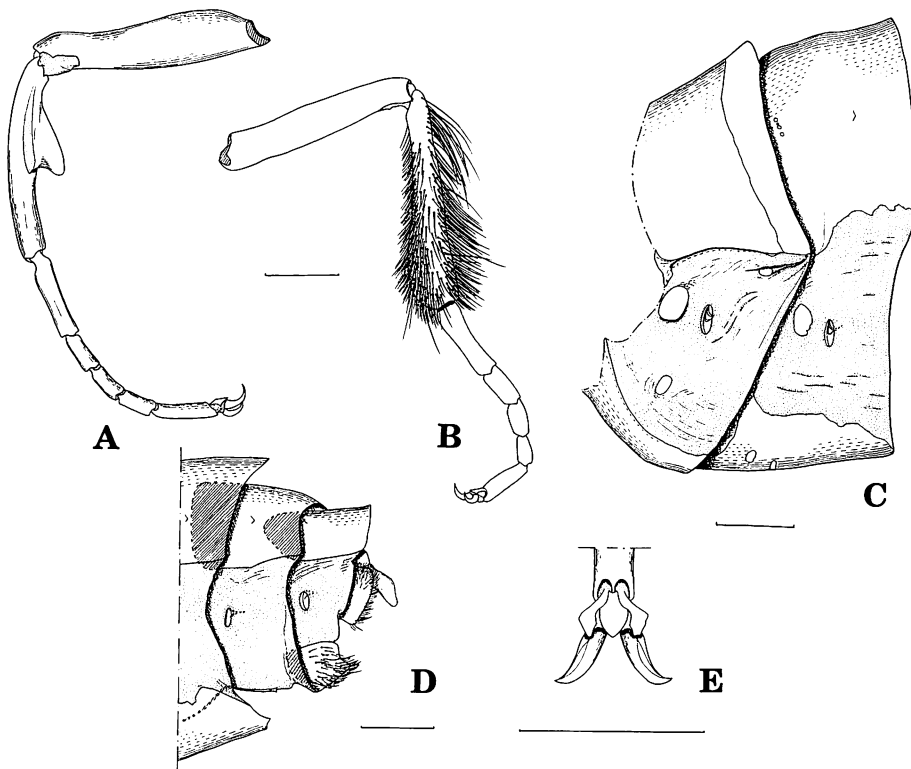


Fig. 1395. Male legs and abdominal segments of *Thitarodes danieli*. A: Fore leg. B: Hind leg. C: Second and third abdominal segments. D: Terminalia. E: Pretarsus.

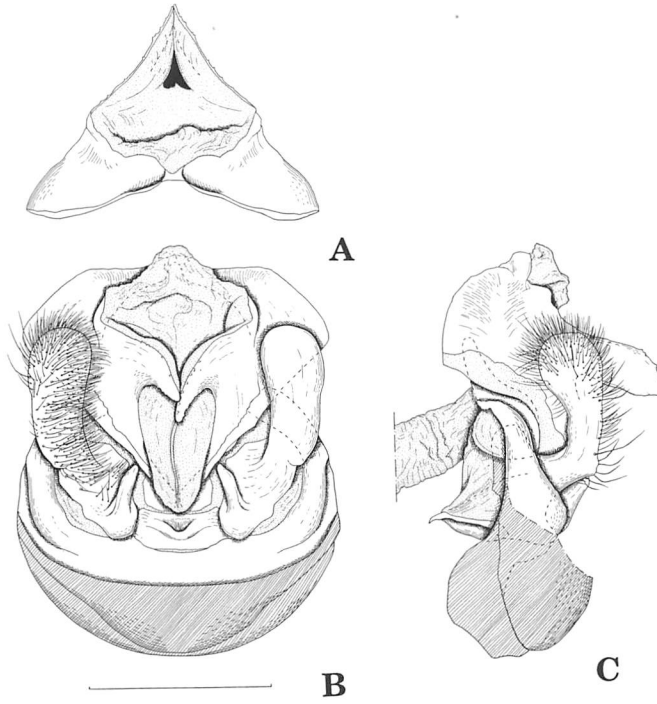


Fig. 1396. Male genitalia of *Thitarodes danieli*. A: Dorsum, dorsal view. B: Whole genitalia, caudal view. C: Whole genitalia, lateral view.

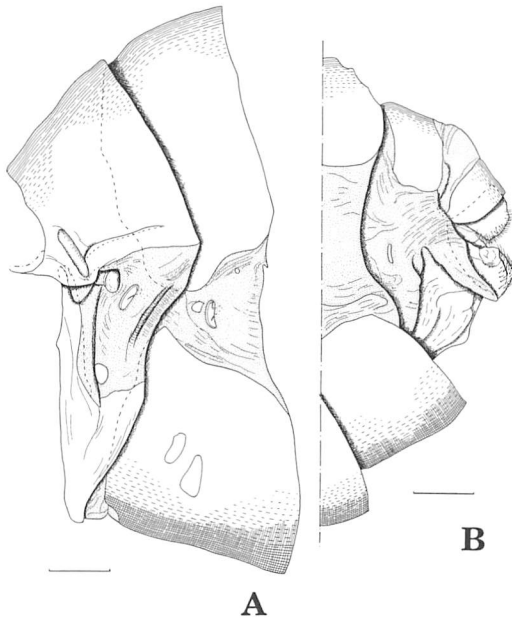


Fig. 1397. Female abdominal segments of *Thitarodes danieli*. A: Second and third abdominal segments. B: Terminalia.

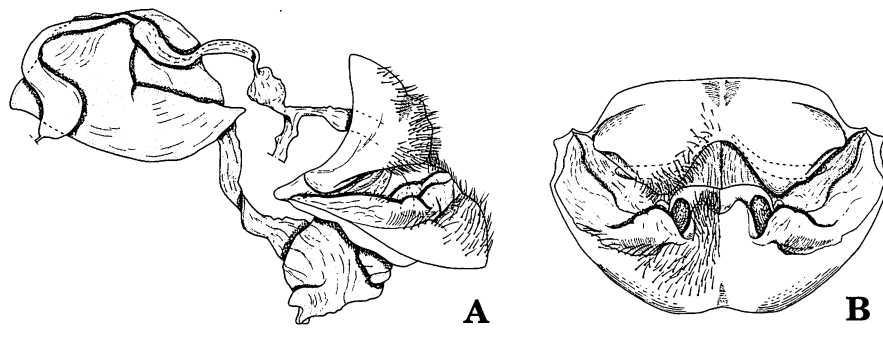


Fig. 1398. Female genitalia of *Thitarodes danieli*. A: Whole genitalia, lateral view. B: Ninth abdominal segment, caudal view.

conical; light reddish brown. Frons dark brown. Thorax dark brown dorsally, ochreous laterally; posterior portion of thorax ochreous. Legs buff-brown; hind tibia moderate; scent-brushes sparse. Fore wing fuscous with bold dark brown markings, most of which are edged with ochreous; subterminal series of dark brown markings from apex to dorsum, each of which gradually broadened; terminal series of dark brown markings; cilia ochreous chequered with dark brown at veins. Hind wing pale grey with golden hairs on veins; basal portion ochreous; costa brownish; cilia same as fore wing. Abdomen fuscous dorsally and mixed with ochreous laterally and ventrally; lateral membranous region of 2nd abdominal segment without distinct groove.

Male genitalia. Dorso-posterior process short but broadened apically and ending in two distal acute processes. Saccus concave ventromedially in caudal view. Valva strongly narrowed basally in lateral view; basal acute process moderate.

Female. Unknown.

Holotype. ♂, Nepal, Chungbu Khola (14,500 feet); 1949. B. M. Nepal Exp. 1949., B. M. 1949-637., B. M. Genitalia slide no. 29367 [BMNH].

Remarks. This new species has fore wing pattern that is basically similar to *T. danieli*. However, the large marking below CuA_2 is concave in the middle and almost divided into two; the subterminal series of markings runs straight from the apex. The dorso-posterior process of the male genitalia is short and almost divided into two apically; the valva is narrowed basally with a shorter basal acute process. This is species "D" in the checklist of Robinson *et al.* (1995).

***Thitarodes eberti* Viette, 1968 (Pl. 169: 4-5; Figs 1401-1406)**

Male. Length of fore wing: 14-16 mm. Antenna with 24-25 flagellar segments. Frons dark brown; vertex dark brown mixed with ochreous. Thorax dark brown mixed with ochreous dorso-anteriorly, ochreous dorso-posteriorly and laterally. Legs ochreous mixed with brown; hind tibia slender; dense scent-brushes minute. Fore wing ochreous mixed with golden brown; dark brown markings edged with ochreous and golden brown; costa with five white spots; cross vein $Rs-M_1$ reaching Rs_3/Rs_4 at the furcation; postmedial white line from apex to M_3 ; dark brown subterminal line from Rs_2 to M_3 ; terminal series of white spots from Rs_2 to dorsum; cilia ochreous chequered with dark brown at veins. Hind wing fuscous; costa tinged with ochreous; cilia same as fore wing. Lateral membranous region of 2nd abdominal segment with groove posteriorly.

Male genitalia. Tegumen narrow in lateral view; dorso-posterior process absent. Valva moderate and gradually broadened apically in lateral view; basal acute process produced horizontally, then upturned.

Female. Length of fore wing: 17.5 mm. Antenna with 28 flagellar segments. Fore and hind

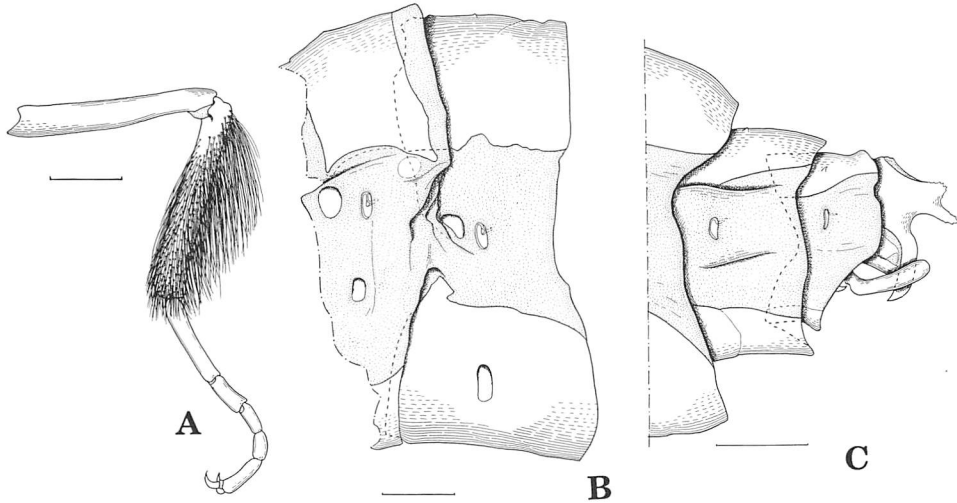


Fig. 1399. Male legs and abdominal segments of *Thitarodes maculatum* sp. nov. A: Hind leg. B: Second and third abdominal segments. C: Terminalia.

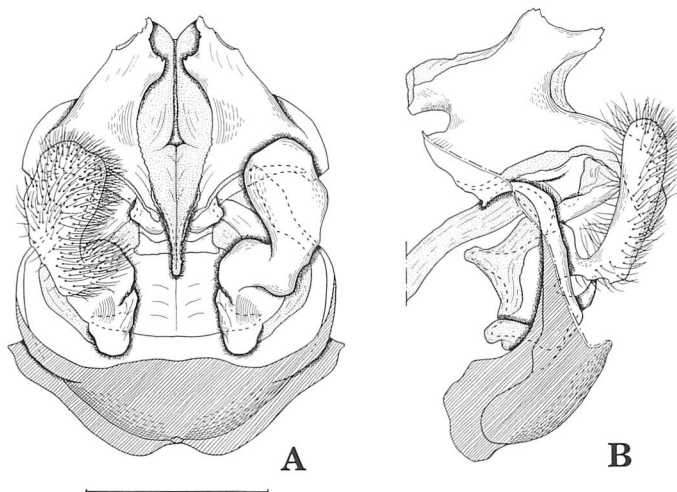


Fig. 1400. Male genitalia of *Thitarodes maculatum* sp. nov. A: Whole genitalia, caudal view. B: Whole genitalia, lateral view.

wing paler than male; postmedial white line indistinct and postmedial area pale grey; subterminal series of dark brown markings distinct.

Female genitalia. Ninth abdominal tergum with incision broadly U-shaped, from beyond midlength; sternum slightly swollen near median sclerotized portion; concave antero-lateral region semi-circular.

Material examined. 5 ♂, Chautara Dist., Nauling Lekh, 9500' (mixed primary forest), 11-20. vi. 1983, M. G. Allen, M. J. D. Brendell, G. S. Robinson, K. R. Tuck leg., Brit. Mus. 1983-222 [BMNH]. 11 ♂, Chantara Dist., Choche Ridge, 10500' (Rhodo/conifer forest), 12-17. vi. 1983, M. G. Allen, M. J. D. Brendell, G. S. Robinson, K. R. Tuck leg., Brit. Mus. 1983-222 [BMNH].

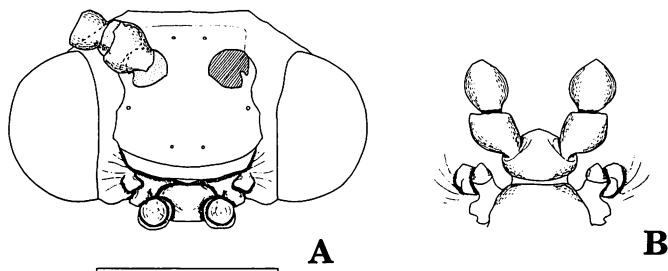


Fig. 1401. Head of male *Thitarodes eberti*. A: Frontal view. B: Labial palpus.

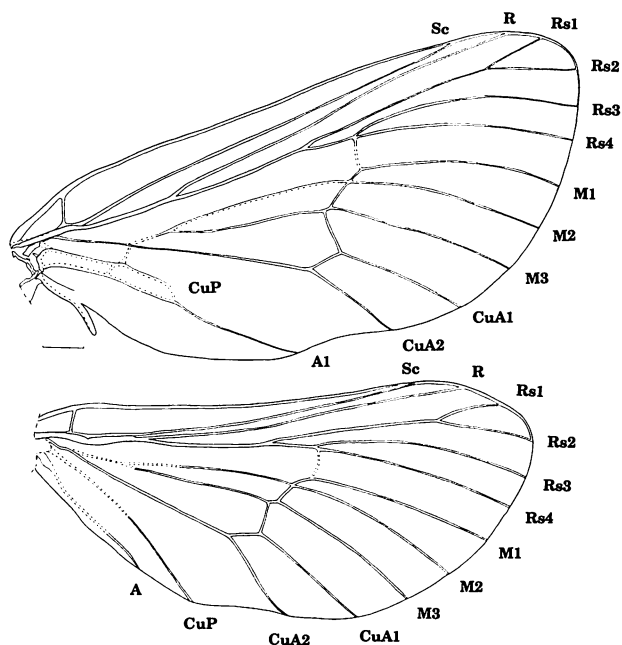


Fig. 1402. Venation of male *Thitarodes eberti*.

12 ♂ 3 ♀, Kathmandu Dist., Phulchoki, 8800' (primary montane oak forest), 27-31. v. 1983, M. G. Allen, M. J. D. Brendell, G. S. Robinson, K. R. Tuck leg., Brit. Mus. 1983-222 [BMNH]. 1 ♀, Phulchoki, 2000-2500 m (oak-laurel forest), 25. vi. 1984., M. G. Allen, Brit. Mus. 1985-122 [BMNH]. 1 ♂, Sagarmatha, Solukhumbu, Dagchu 2,800 m, 23-24. v. 1993, M. S. Limbu leg. (gen. no. 734). 3 ♂ 1 ♀, Janakpur Dolakha, Deolari, 2,800 m, 25. v.-7. vi. 1994., M. S. Limbu leg. (gen. no. 752).

Remarks. Species "A" and "B" in the checklist of Robinson, G. S. *et al.* (1995) are *T. eberti*.

Thitarodes dierli Viette, 1968 (Pl. 169: 6-7; Figs 1407-1410)

Male. Length of fore wing: 13 mm. Antenna with 23 flagellar segments. Frons dark brown; vertex ochreous with dark brown. Thorax dark brown mixed with ochreous dorso-anteriorly, ochreous dorso-posteriorly and laterally. Legs buff-brown; hind tibia broadened with long scent-brushes dorsally. Fore wing fuscous ochreous and white; cross vein Rs-M₁ reaching Rs₃/Rs₄ beyond the furcation; dark brown marking below CuA stem fused with medial markings and

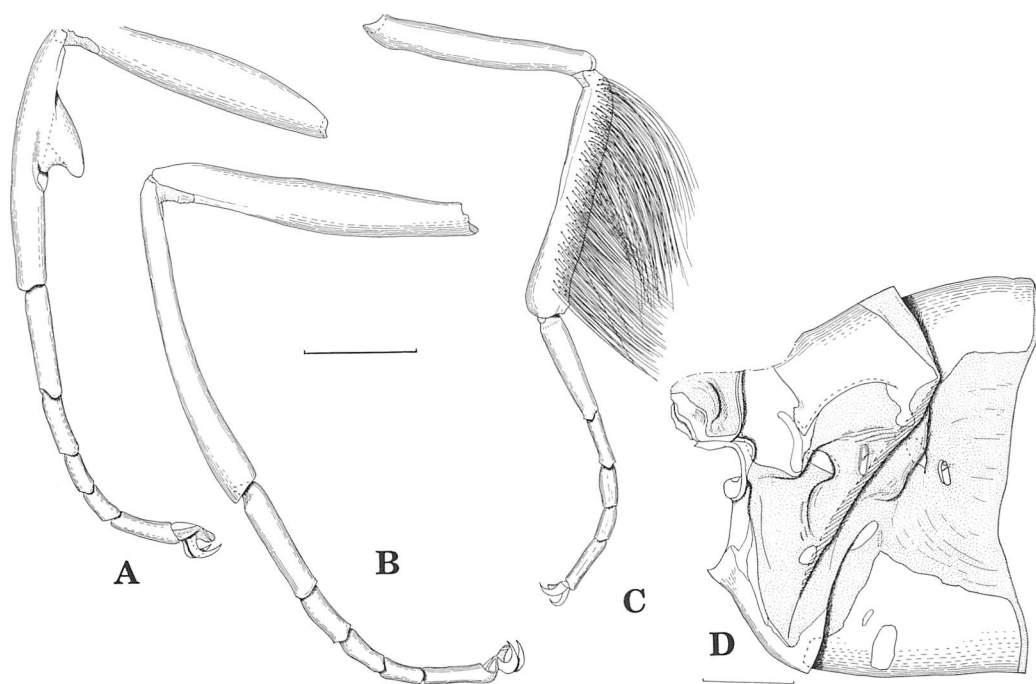


Fig. 1403. Male legs and abdominal segments of *Thitarodes eberti*. A: Fore leg. B: Mid leg. C: Hind leg. D: Second and third abdominal segments.

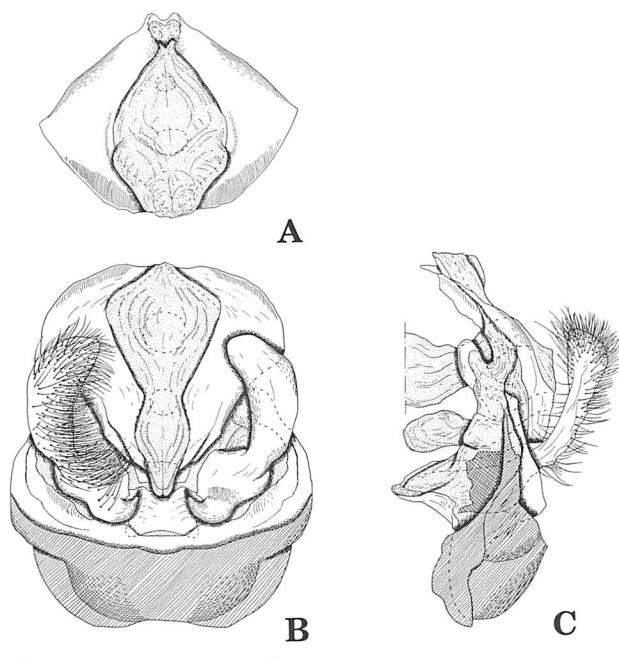


Fig. 1404. Male genitalia of *Thitarodes eberti*. A: Dorsum, dorsal view. B: Whole genitalia, caudal view. C: Whole genitalia, lateral view.

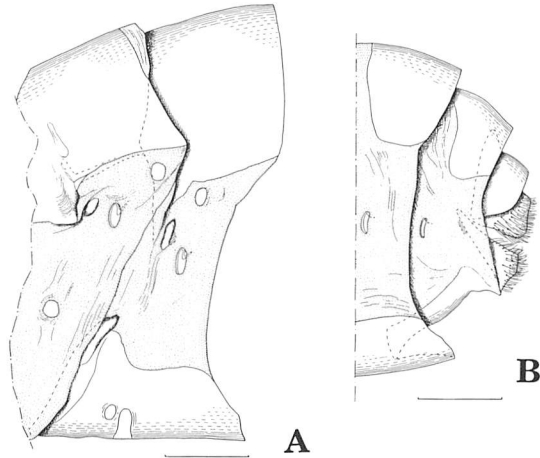


Fig. 1405. Female abdominal segments of *Thitarodes eberti*. A: Second and third abdominal segments. B: Terminalia.

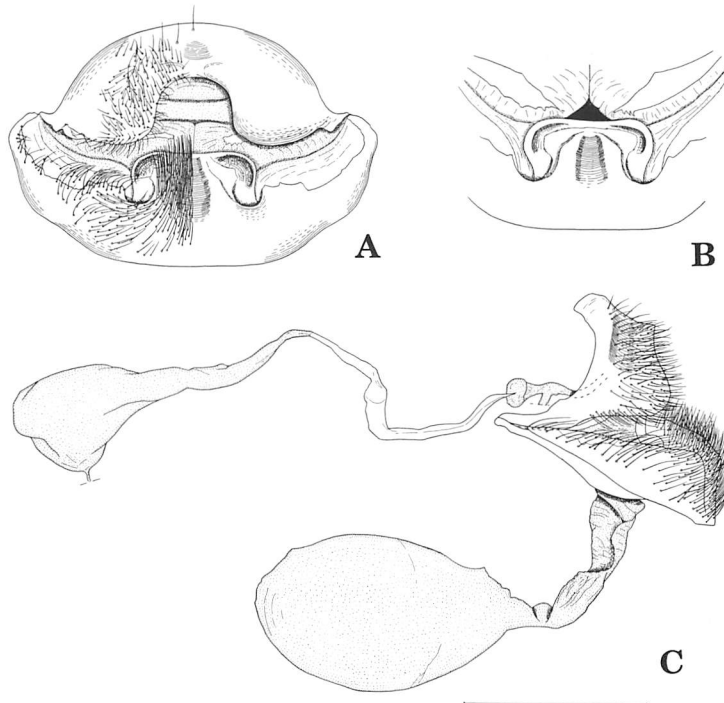


Fig. 1406. Female genitalia of *Thitarodes eberti*. A: Ninth abdominal segment, caudal view. B: Central portion of ninth abdominal sternum, dorsal view. C: Whole genitalia, lateral view.

dorsum element of terminal series, and forming coarse pattern; dark brown marking below A_1 present independently; subterminal and terminal series confluent with each other from apex to CuA_1 ; cilia dark brown; apical half of cilia ochreous between veins. Hind wing fuscous; costa darkened; cilia ochreous, chequered with dark brown at veins. Lateral membranous region of second abdominal segment with oblique deep groove.

Male genitalia. Dorso-posterior process not developed. Valva almost equal in width throughout

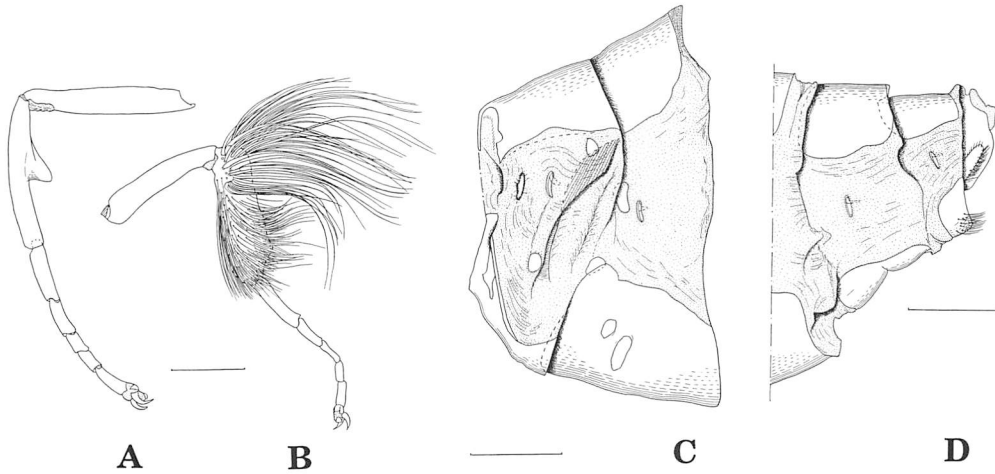


Fig. 1407. Male legs and abdominal segments of *Thitarodes dierli*. A: Fore leg. B: Hind leg. C: Second and third abdominal segments. D: Terminalia.

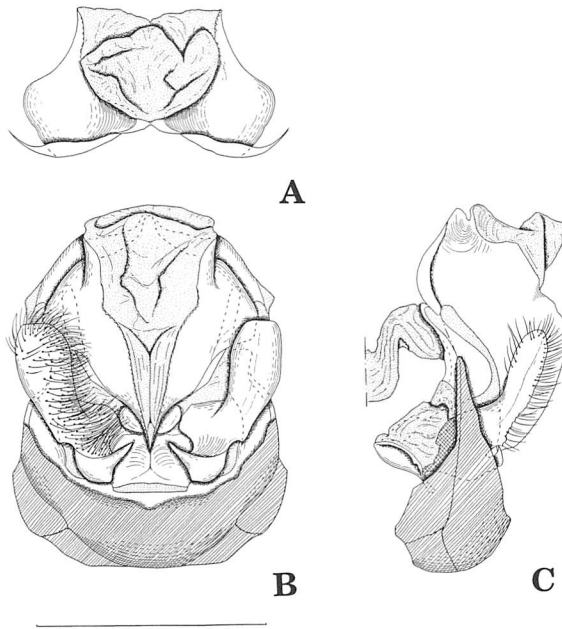


Fig. 1408. Male genitalia of *Thitarodes dierli*. A: Dorsum, dorsal view. B: Whole genitalia, caudal view. C: Whole genitalia, lateral view.

its length in lateral view; basal acute process produced obliquely.

Female. Length of fore wing: 17.5 mm. Antenna with 23 flagellar segments. Fore wing more whitish than male; cross vein $Rs-M_1$ reaching Rs_3/Rs_4 slightly beyond the furcation; in hind wing the cross vein reaching it at the furcation; terminal white line distinct from apex to CuA_2 .

Female genitalia. Ninth abdominal tergum with incision acute, from beyond midlength; sternum not swollen near median sclerotized portion; concave antero-lateral region rounded.

Material examined. 1 ♂, prov. Nr. 3, East Khumjing 3800 m, 17. vi. 1964., W. Dierl leg.

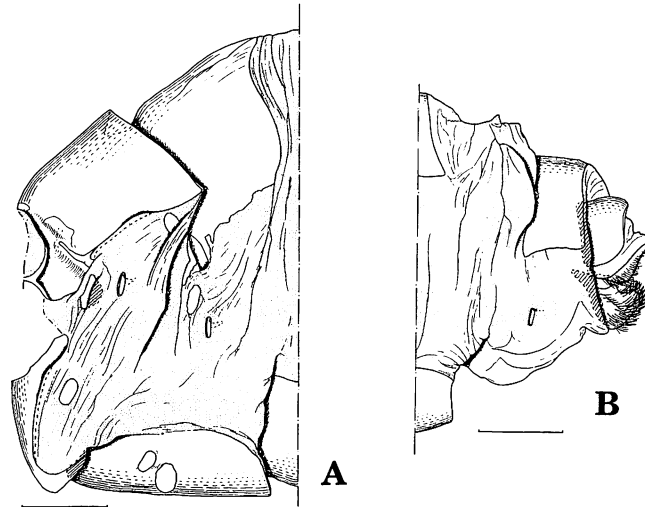


Fig. 1409. Female abdominal segments of *Thitarodes dierli*. A: Second and third abdominal segments. B: Terminalia.

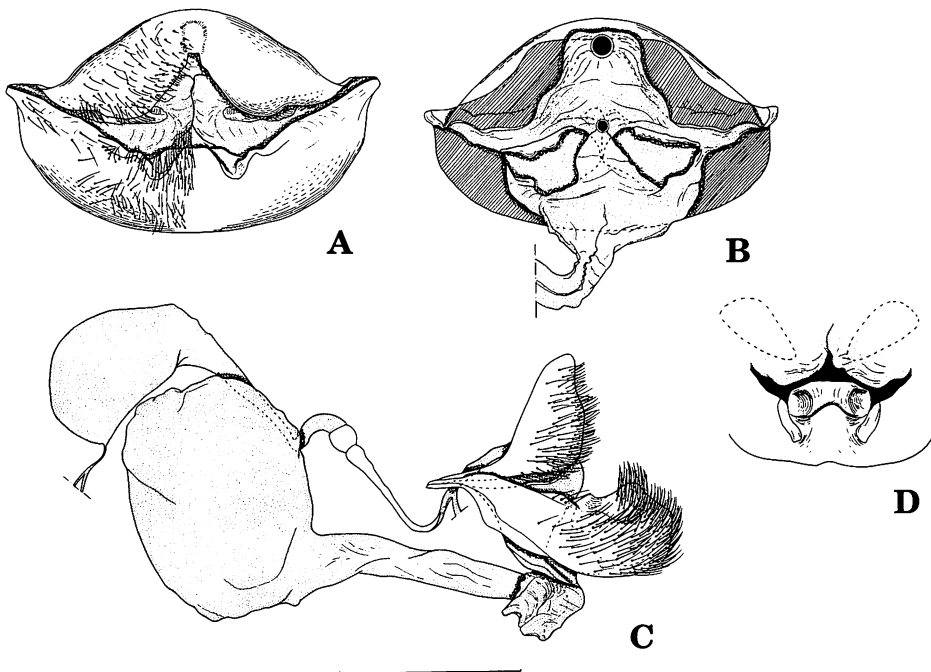


Fig. 1410. Female genitalia of *Thitarodes dierli*. A: Ninth abdominal segment, caudal view. B: Ninth abdominal segment, frontal view. C: Whole genitalia, lateral view. D: Central portion of ninth abdominal sternum, dorsal view.

Staatsslg. München [MNHN] (gen. no. 742). 1 ♀, same data as ♂, with the identification label "*Thitarodes dierli* Viette female" [MNHN] (gen. no. 743). 5 ♂ 1 ♀, Chautara Dist., Nauling Lekh, 9500' (Mixed primary forest), 11-20. vi. 1983, M. G. Allen, M. J. D. Brendell, G. S. Robinson, K. R. Tuck leg., Brit. Mus. 1983-222 [BMNH]. 1 ♂, Chautara Dist., Nauling Lekh, 9500' (Rhodo. conifer moss forest), 11-20. vi. 1983., M. G. Allen, M. J. D. Brendell, G. S.

Robinson, K. R. Tuck leg., Brit. Mus. 1983-222 [BMNH].

Remarks. Species "C" in the checklist of Robinson *et al.* (1995) is *T. dierli*.

***Thitarodes kishidai* sp. nov.** (Pl. 169: 8; Figs 1411–1414)

Male. Length of fore wing: 13 mm. Antenna with 25 flagellar segments; reddish brown. Vertex ochreous; frons dark brown. Maxillary palpus short but distinctly two-segmented; labium in ventral view quadrate and tapered anteriorly; labial palpus two-segmented; distal segment slightly shorter than the proximal one. Thorax ochreous mixed with dark brown dorsally. Fore leg with broad epiphysis; tibia of hind leg swollen and bearing long scent-brushes posteriorly. Fore wing dark brown mixed with golden brown and white; indistinct dark brown maculae edged with golden brown on costal area; costal white spots untraceable; distinct white bar present along cross-vein $Rs-M_1$; cross-vein $Rs-M_1$ reaching Rs_{3+4} beyond the Rs_3/Rs_4 furcation; a medial large dark brown macula running from end of cell, along cross-veins downwards, then extending inwardly along CuA ; subterminal series of dark brown maculae; terminal line ochreous slightly defined with white on inner side; cilia ochreous chequered with dark brown. Hind wing fuscous; costa slightly ochreous beyond the middle; cilia ochreous chequered with dark brown. Abdomen fuscous dorsally and ochreous ventrally; a deep pocket present on lateral membranous region of 2nd abdominal segment.

Male genitalia. Tegumen with very short twin processes; a pair of large processes present dorso-posteriorly, these processes tapering posteriorly and ending in acute tips, dorso-apical region of which are serrated, the serration extending ventrally to the valvella. Subanal sclerite absent. Valva moderate and almost same length of tegumen; a very acute vertical process present basally.

Female. Unknown.

Holotype. ♂, C. NEPAL, Lete near Nilgiri (2,400 m), 23. vi. 1969, T. Miyashita leg. (KMNHIR000, 237) [KMNH]. Paratype. 1 ♂, same data as holotype (KMNHIR000,238) (gen. no. 737) [KMNH].

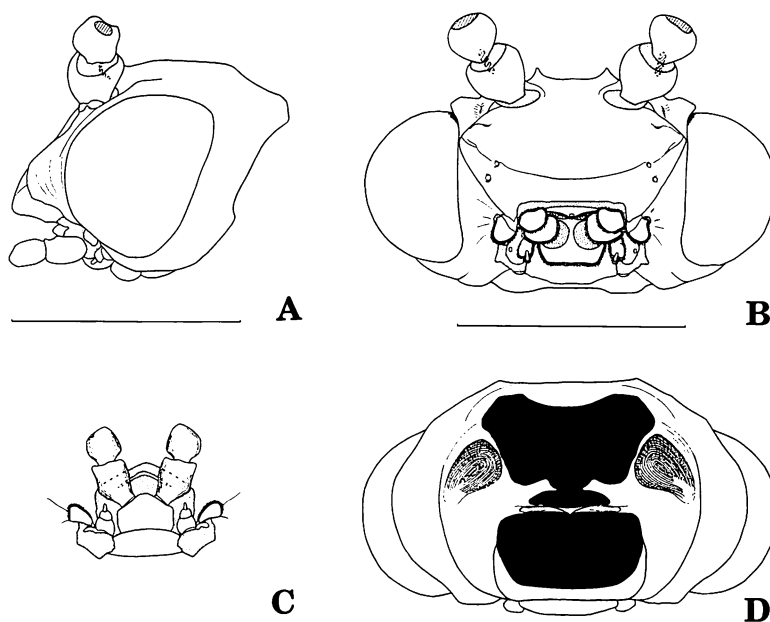


Fig. 1411. Head of male *Thitarodes kishidai* sp. nov. A: Lateral view. B: Frontal view. C: Labial palpus, ventral view. D: Caudal view.

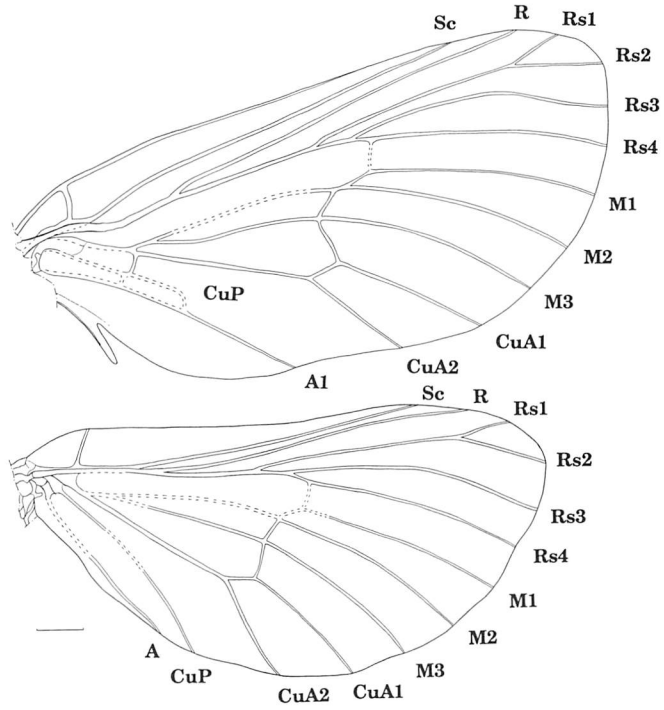


Fig. 1412. Venation of male *Thitarodes kishidai* sp. nov.

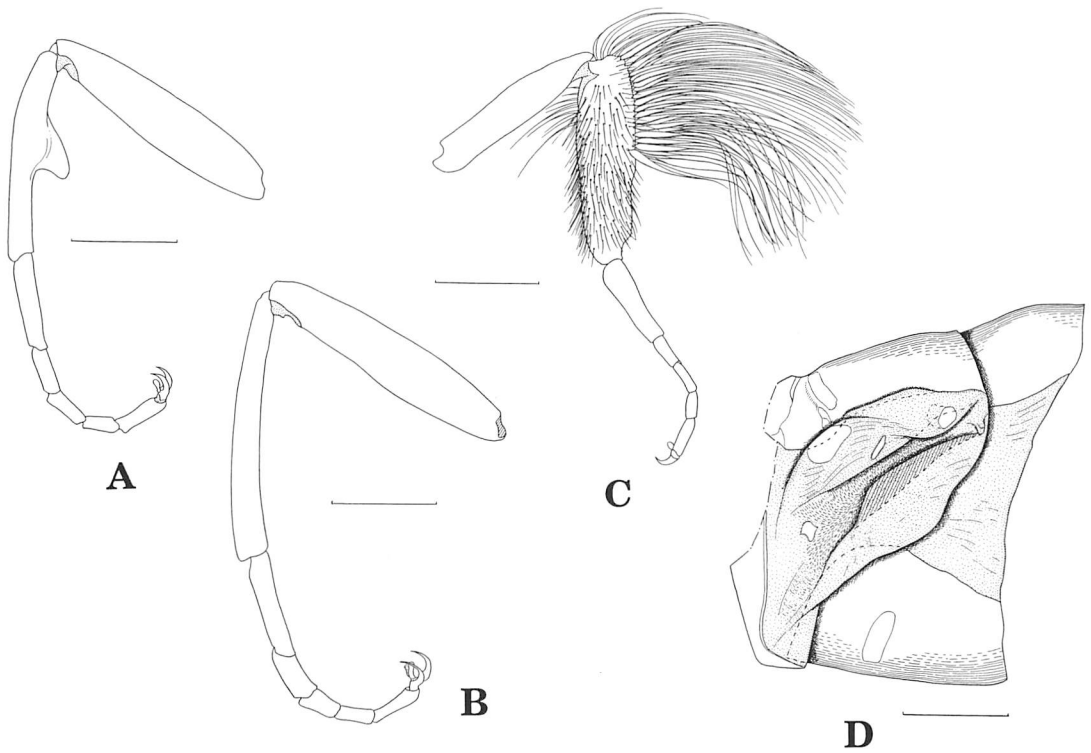


Fig. 1413. Male legs and abdominal segments of *Thitarodes kishidai* sp. nov. A: Fore leg. B: Mid leg. C: Hind leg. D: Second and third abdominal segments.

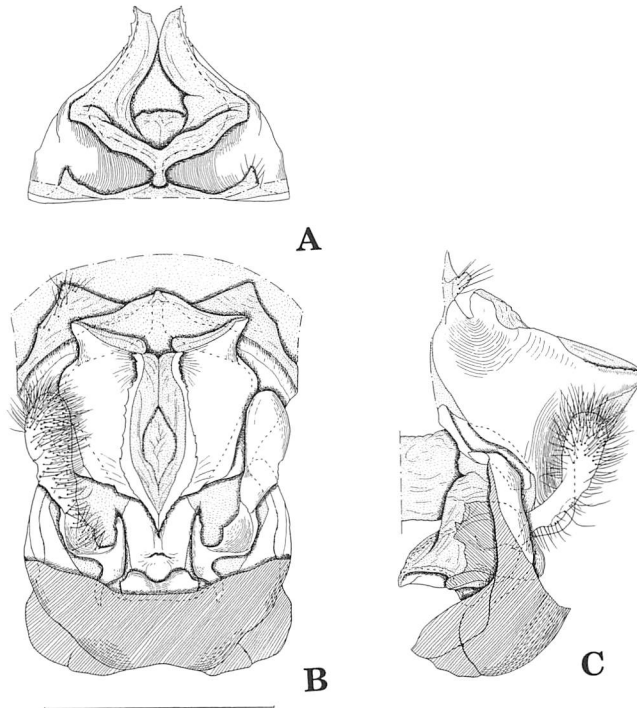


Fig. 1414. Male genitalia of *Thitarodes kishidai* sp. nov. A: Dorsum, dorsal view. B: Whole genitalia, caudal view. C: Whole genitalia, lateral view.

Remarks. This new species is distinguished from other species of the genus *Thitarodes* by 1) the vertically produced basal process of the valva, and 2) the tapering dorso-posterior acute process of the tegumen. A two-segmented maxillary palpus may be added to these diagnostic characters. This species is named after Mr Yasunori Kishida, Tokyo, who kindly donated this interesting species to KMNH.

***Thitarodes kingdonwardi* sp. nov.** (Pl. 169: 9; Figs 1415–1416)

Male. Length of fore wing: 17–18 mm. Antenna with 26 flagellar segments. Frons fuscous; vertex fuscous mixed with brown. Thorax brown mixed with dark brown and ochreous; legs buff-brown; hind tibia slender with minute scent-brushes. Fore wing fuscous mixed with dark brown, white and ochreous; costa with 4 or 5 indistinct white spots; cross vein $Rs-M_1$ reaching Rs_3/Rs_4 between furcation Rs_{1+2}/Rs_{3+4} and Rs_3/Rs_4 ; dark brown band running along the cross-veins below the furcation to CuA_1 ; in another specimen a narrow white band edged with dark brown is substituted for it; dark brown marking below CuA stem large or almost divided into two; subterminal series of dark brown markings from apex to dorsum, edged with ochreous and shifted basally; terminal series of white spots from Rs_3 to CuA_1 ; cilia ochreous tipped with white and chequered with dark brown at veins. Hind wing fuscous slightly mixed with white marginally; costa tinged with dark brown; cilia same as fore wing. Lateral membranous region of 2nd abdominal segment without distinct groove; tuberculate plates large.

Male genitalia. Tegumen simple; dorso-posterior process absent; ventral margin with serration in lateral view. Valva rather broad; basal acute process short and produced horizontally and medially.

Holotype. ♂, China, S. E. Tibet, Tsangpo Valley, Nyima La (14,000 feet), 17. vii. 1924, F.

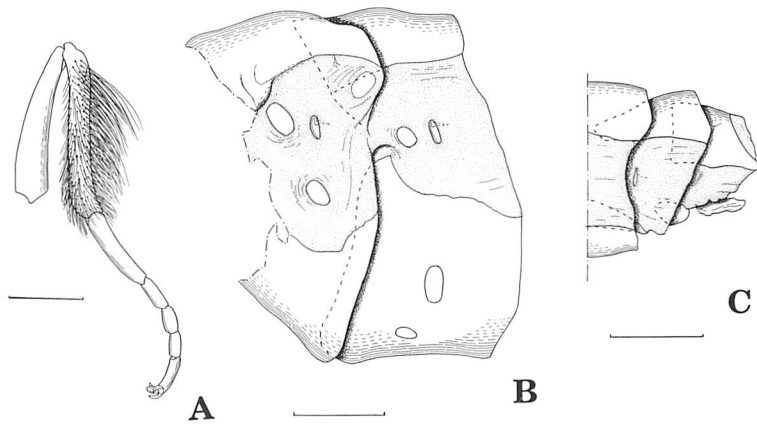


Fig. 1415. Male leg and abdominal segments of *Thitarodes kingdonwardi* sp. nov. A: Hind leg. B: Second and third abdominal segments. C: Terminalia.

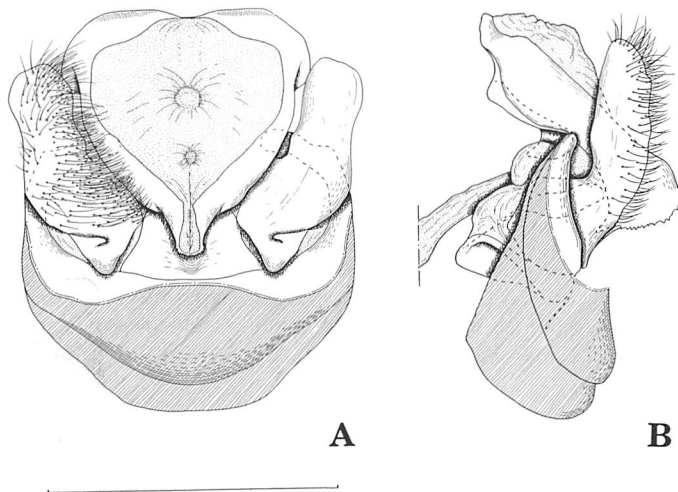


Fig. 1416. Male genitalia of *Thitarodes kingdonwardi* sp. nov. A: Whole genitalia, caudal view. B: Whole genitalia, lateral view.

Kingdon Ward leg., Brit. Mus. 1925-314, B. M. Genitalia slide No. 29368 [BMNH]. Paratype. 1 ♂, same locality as holotype, 21. vi. 1924, F. Kingdon Ward leg., Brit. Mus. 1925-314 [BMNH].

Remarks. Resembling *Thitarodes armoricanus* (Oberthür) (Fig. 1425) in wing pattern, but white band below cell not wide and inconspicuous, and subterminal series of dark brown markings evenly curved. Male genitalia with broad diaphragma when viewed from behind, with a short acute basal process of valva produced horizontally.

This species is named after the collector, the late Mr F. Kingdon Ward who was a famous plant hunter and author of "The Land of the Blue Poppy". The photographs of the habitat near the locality are provided through the courtesy of Mr Yasuyuki Watanabe, Amagasaki (Figs a, b).

***Thitarodes harutai* sp. nov.** (Pl. 169: 10; Figs 1417–1418)

Male. Unknown.

Female. Length of fore wing: 16 mm. Antenna with 24 flagellar segments. Frons dark brown; vertex dark brown mixed with buff-brown. Thorax fuscous; brown laterally. Legs brown. Fore wing fuscous mixed with ochreous and white; medial dark brown band below cell along the cross-veins; cross-vein $Rs-M_1$ reaching Rs_{3+4} beyond Rs_3/Rs_4 furcation; postmedial dark brown marking, edged with ochreous, present on M_1 ; a large dark brown marking below CuA stem; subterminal ochreous streak mixed with dark brown; terminal line white; cilia dark brown tipped with ochreous between veins. Hind wing fuscous; costa tinged with dark brown; cilia ochreous chequered with dark brown at veins.

Female genitalia. Ninth abdominal tergum with incision trapezoidal, from about midlength; sternum not swollen near median sclerotized portion; concave antero-lateral region round in caudal view and invaginated antero-distally in dorsal view.

Holotype. ♀, Nepal, Mechi [Kanchenjunga], Laam Pokhari, 2,850 m, 30. vi. 1996., M. S. Limbu leg. (KMNHIR000, 239) (gen. no. 745) [KMNH].

Remarks. This species is known from only one female specimen, but differs from other species by the postmedial dark brown marking on M_1 and especially, by the medial sclerotized portion with invaginated hollow cavities (Fig. 1418-B, hatched area) at both sides. It is named after, and dedicated to the late Mr Toshiro Haruta.

***Thitarodes limbui* sp. nov.** (Pl. 169: 11; Fig. 1419)

Male. Unknown.

Female. Length of fore wing: 18 mm. Both antennae incomplete. Frons and vertex dark brown. Thorax fuscous mixed with golden brown dorso-anteriorly and ochreous dorso-posteriorly and laterally. Legs ochreous mixed with dark brown. Fore wing ochreous mixed with dark brown and white; cross-vein $Rs-M_1$ reaching Rs_3/Rs_4 beyond the furcation; dark brown markings indistinct except ones below CuA stem and A_1 ; narrow white marking along cross-vein CuA_1-M_3 ; subterminal series of dark brown markings edged with ochreous, but indistinct; cilia ochreous chequered with dark brown at veins. Hind wing pale brown; cilia same as fore wing. Abdomen with 7th and 8th sterna weakly sclerotized.

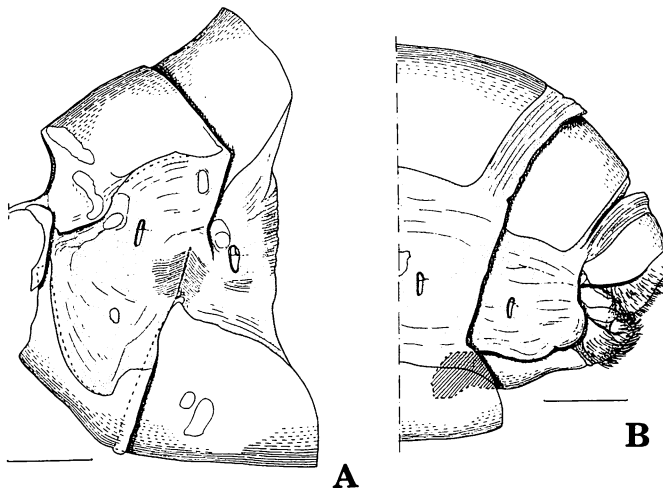


Fig. 1417. Female abdominal segments of *Thitarodes harutai* sp. nov. A: Second and third abdominal segments. B: Terminalia.

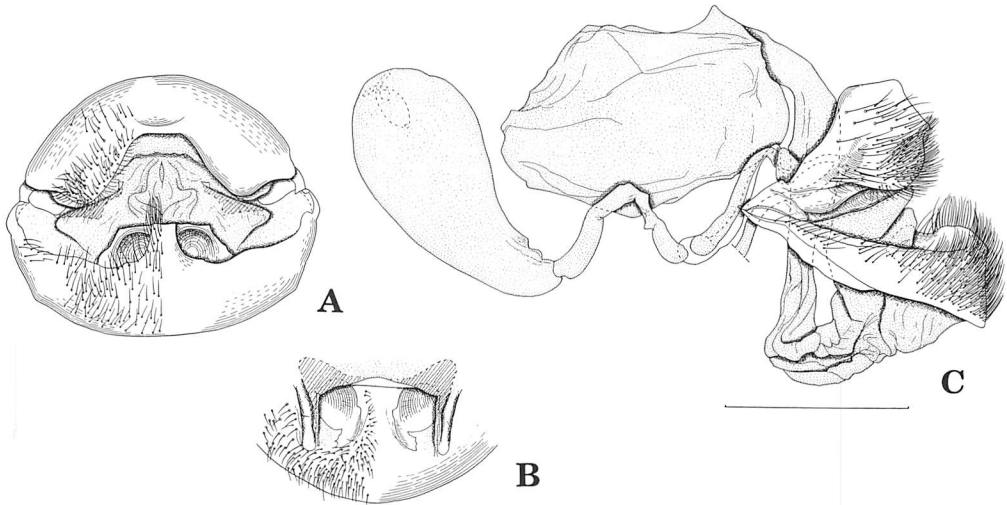


Fig. 1418. Female genitalia of *Thitarodes harutai* sp. nov. A: Ninth abdominal segment, caudal view. B: Central portion of ninth abdominal sternum, dorsal view. C: Whole genitalia, lateral view.

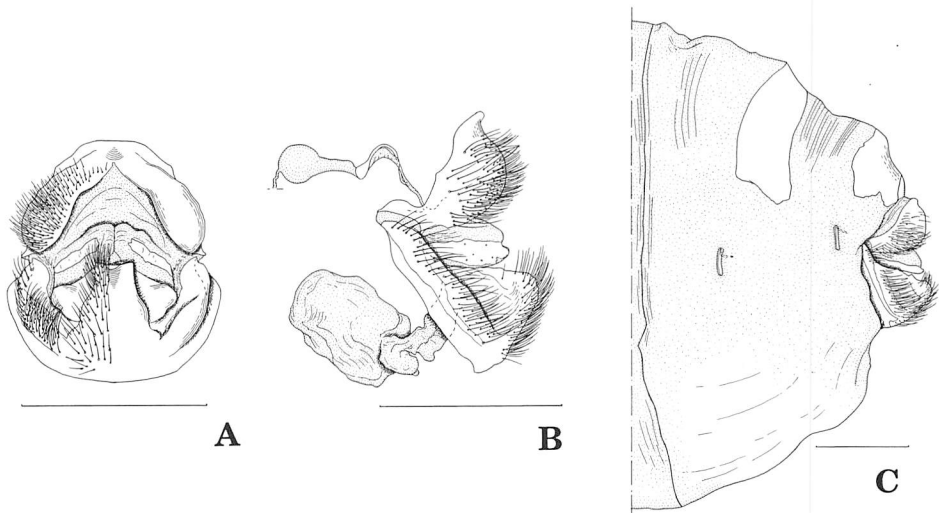


Fig. 1419. Female abdominal segments and genitalia of *Thitarodes limbui* sp. nov. A: Ninth abdominal segment, caudal view. B: Whole genitalia, lateral view. C: Terminalia.

Female genitalia. Ninth abdominal tergum with incision broad and triangular, from far beyond midlength, apex acute; ninth abdominal sternum narrow; central sclerotized portion as deep as the sternum and without concave region antero-laterally; ductus bursae and corpus bursae very short, as long as ninth sternum.

Holotype. ♀, Nepal, Mechi [Kanchenjunga], Khambachen (3,950 m), 11-12. vii. 1996., M. S. Limbu leg. (KMNHIR000,240) (gen. no. 746) [KMNH].

Remarks. This species is also known only from one female specimen, but differs from other species by the 7-8th abdominal sterna being weakly sclerotized, the deep incision of 9th tergum and the central sclerotized portion without a concave region. The very short ductus and corpus

bursae are also diagnostic. This species is named after, and dedicated to Mr Mahendra S. Limbu, one of the Nepalese collaborators of the late Mr Toshiro Haruta.

Endoclita aboe (Moore, 1859) (Pl. 169: 13; Figs 1420-1421, 1431-1432)

Female. Length of fore wing: 40 mm. Antenna simple, filiform with 20 flagellar segments; ochreous. Vertex and frons fuscous. Thorax fuscous slightly mixed with golden brown dorsally; legs fuscous mixed with dark brown. Fore wing dark brown mixed with pale white; costa with 5 or 6 indistinct dark brown markings defined on inner side by pale white; dark brown lines below Sc to CuA, irregularly interrupted at veins; basal pale white markings defined on each side by dark brown below CuA; postmedial line narrow, defined on inner side by pale white, continuously running below Sc to A₁ but slightly shifted basally at CuA₁; four series of irregular dark brown markings across subterminal area; cilia dark brown. Hind wing dark brown. Abdomen fuscous; 2nd abdominal sternum as deep as the tergum; 7th and 8th abdominal sterna separated, well sclerotized and broad.

Female genitalia. Ninth abdominal tergum inverted-V shaped in caudal view, well sclerotized, produced posteriorly and terminating in acute tip in lateral view; subanal plate large and well sclerotized, with truncated posterior margin in lateral view. Ninth abdominal sternite separated into broad central process and lateral processes; posterior margin of central process curved dorsally and almost straight; dorsal region of central process well sclerotized; lateral process large and triangular in lateral view. Ductus bursae as long as bursa copulatrix; serrated signum present on bursa copulatrix.

Remarks. Although only a female specimen was dissected, *Endoclita aboe* is inferred to be closely related to *E. inouei* (Ueda, 1987) from Taiwan by the following character-states: ninth abdominal tergum with pointed lateral margin, large and broad subanal plate, broad central process with the posterior margin curved dorsally, triangular lateral process and signum with serration.

Material examined. 1 ♀, Godavari, 1600 m, Kathmandu, 12. vi. 1990. (gen. no. 786) [KMNH].

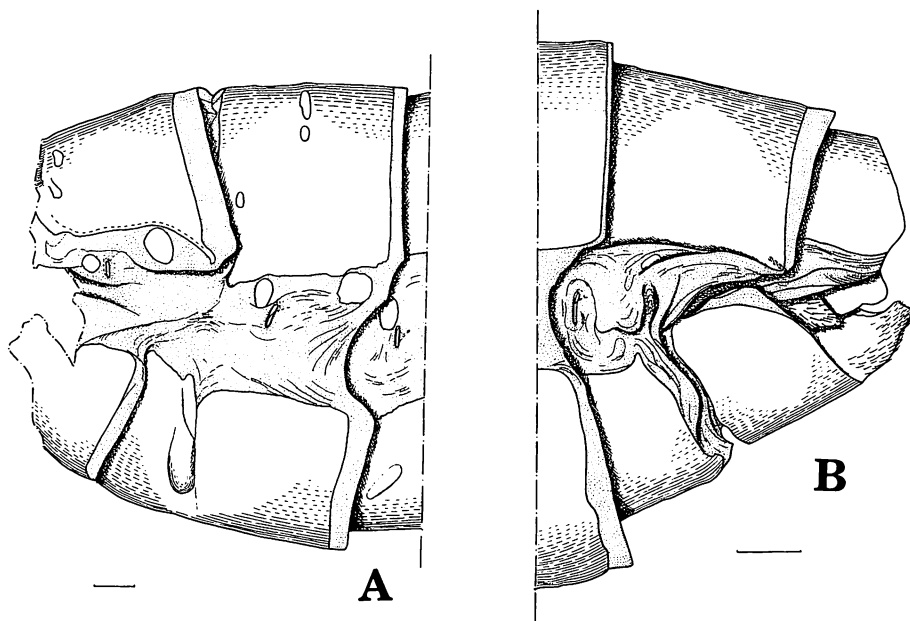


Fig. 1420. Female abdominal segments of *Endoclita aboe*. A: Second and third abdominal segments. B: Terminalia.

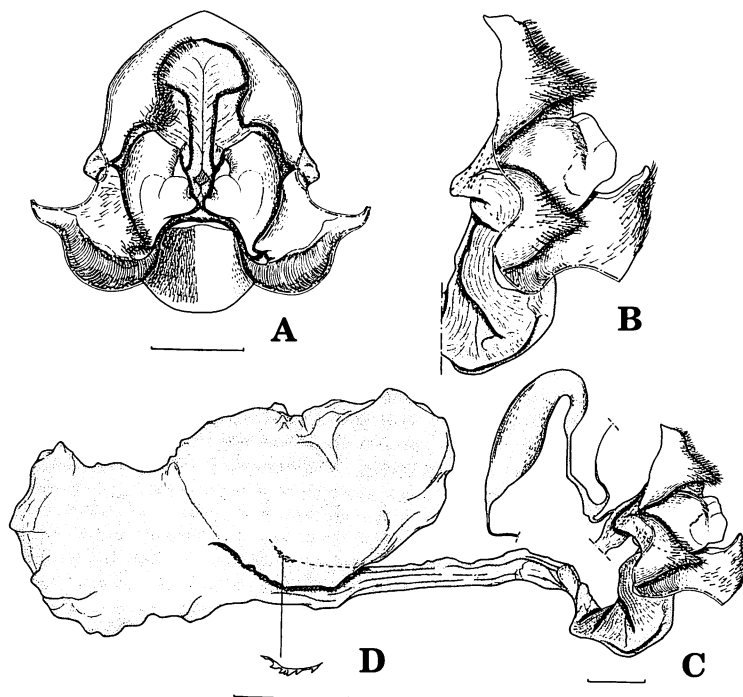


Fig. 1421. Female genitalia of *Endoclita aboe*. A: Ninth abdominal segment, caudal view. B: Ninth abdominal segment, lateral view. C: Whole genitalia, lateral view. D: Signum-like structure.

1 ♂ 1 ♀, Khatmandu, 1910, More.; F.T. 685, *Phassus signifer* Wlk., Named by T.B.F. [BMNH]. 1 ♀, Kathmandu, 1400 m, British Embassy, 12. vi. 1983, Brit. Mus. 1984-397 [BMNH]. A further 8 ♂ 2 ♀ are preserved in BMNH including the holotype ♂ (Pl. 2, fig. 7) from Darjeeling, India.

Endoclita damor (Moore, 1859) (Pl. 169: 12; Figs 1422–1424, 1427–1428)

Female. Length of fore wing: 24–38 mm. Antenna filiform with 18 flagellar segments; basal 1/3 covered with fuscous scales. Frons and vertex fuscous; labial palpus short, as long as labium, of two segments but almost fused and its separation indistinct. Thorax fuscous mixed with dark brown dorso-anteriorly, dark brown antero-laterally, fuscous dorso-posteriorly and laterally; legs fuscous. Fore wing fuscous mixed with dark brown and white; costa with 5 or 6 markings which are white mixed with fuscous; dark brown marking at the basal portion of cell; broad dark brown streak from near the end of cell running inwards to A_1 obliquely; white medial line from the furcation of Rs_3/Rs_4 oblique to M_1 , then confluent with white postmedial line; broad dark brown line from end of cell to middle of M_1 cell; postmedial line white from costa, interrupted by this M_1 dark brown line, and running to dorsum; subterminal line white from costa to dorsum; terminal series of light-grey markings encircled by white from below Rs_2 to dorsum; cilia lightgrey mixed with brown. Hind wing fuscous mixed with lightgrey; white marking near apex; apex tinged with dark brown; cilia grey. Abdomen fuscous dorsally, ochreous ventrally; 2nd abdominal segment with ventral margin of the tergum irregularly sclerotized anteriorly; the sternum narrow, 1/2 as deep as tergum; 7th abdominal sternum well sclerotized; 8th abdominal sternum small and tapering posteriorly.

Female genitalia. Ninth abdominal tergum inverted-U shaped in caudal view, well sclerotized and articulated with subanal plate ventrally; subanal plate large and well sclerotized with rounded

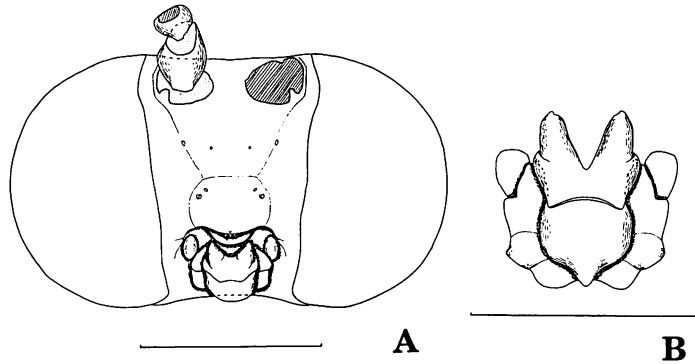


Fig. 1422. Head of female *Endoclita damor*. A: Frontal view. B: Labial palpus, ventral view.

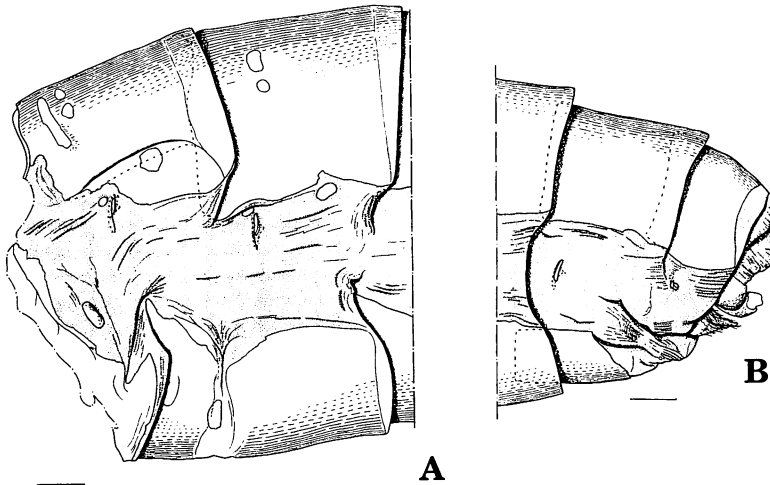


Fig. 1423. Female abdominal segments of *Endoclita damor*. A: Second and third abdominal segments. B: Terminalia.

posterior margin in lateral view. Ninth abdominal sternite consisting of central process and lateral processes, and strongly connected with 8th abdominal sternum; posterior margin of central process deeply concave medially, its distal portion produced latero-posteriorly; dorsal region of central process broadly membranous; lateral process flat with rounded distal margin. Ductus bursae almost as long as bursa copulatrix; no signum present on bursa copulatrix. Short but distinct membranous duct extending interiorly from the dorsal region of diaphragma; this duct terminates in two membranous lobes and it is inferred to be a gland-like structure.

Material examined. 1 ♀, Godavari, 1,600 m, Kathmandu, 14. vi. 1990. 1 ♀, Jiri, 2,350 m, Dolakha, Janakpur, 19. v. 1993. 1 ♀, Godavari, 23. v. 1990, T. Haruta *et al.* leg. (gen. no. 707). 3 ♂ 1 ♀, Khatmandu, 1910. More.; F. I. 683, *Phassus damor*, Moore, Named by T. B. F., Presented by R. L. E. Ford, B. M. 1949-487 [BMNH].

Hepialiscus nepalensis (Walker, 1856) (Pl. 169: 14-17)

The adult morphology of this species was illustrated by Tindale (1942) and Ueda (1988) in detail. The wing pattern shows considerable variation as is often found in other Hepialidae such as *Dalaca* etc.

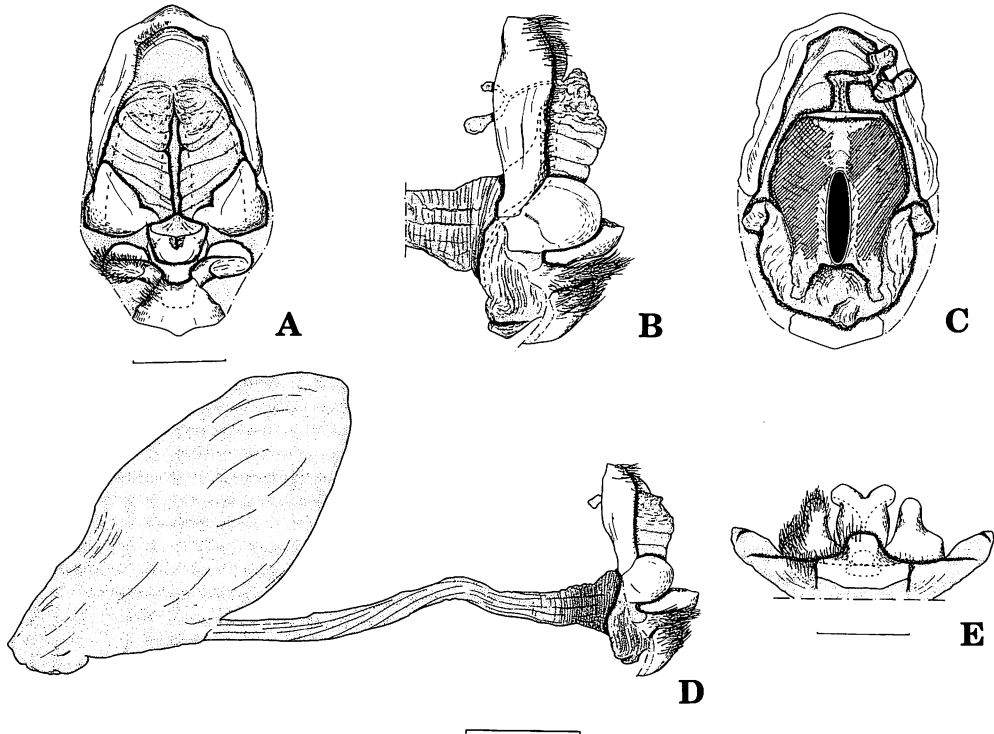


Fig. 1424. Female genitalia of *Endoclita damor*. A: Ninth abdominal segment, caudal view. B: Ninth abdominal segment, lateral view. C: Ninth abdominal segment, frontal view. D: Whole genitalia, lateral view. E: Eighth abdominal sternum, central and lateral processes, ventral view.

1 ♂, Godavari, 1600 m, Kathmandu, 8. v. 1991. 1 ♂, Jiri, 2300 m, Dolakha, Janakpur, 15. iv. 1994. 1 ♂, Deorali, 2800 m, Dolakha, Janakpur, 29. v. 1994. 1 ♂, same locality, 25. v.-7. vi. 1994., M. S. Limbu leg. 1 ♀, same locality, 28. v. 1994. 1 ♀, same locality, 31. v. 1994. 1 ♀ (holotype), with the label: Hardwicke Bequest, *Hepialus nepalensis* Walk., Cat. Lep. BM 7 p1557 (1856), TYPE, [BMNH]. 5 ♂, Godavari (=Godavari), 1550-1700 m, mixed forest, 6. v. 1984., M. G. Allen leg., BM 1984-136 [BMNH]. 1 ♀, same locality, 11. v. 1984., M. G. Allen leg., BM 1984-136 [BMNH]. 1 ♂, same locality, 25. v. 1984., M. G. Allen leg., BM 1984-136 [BMNH]. 2 ♂ 2 ♀, Rani Ban, 1600 m, mixed forest, 22. v. 1984., M. G. Allen leg., BM 1984-136 [BMNH]. 5 ♂, Kathmandu, 1600 m, 22. v. 1984., M. G. Allen leg., BM 1984-136 [BMNH].

Acknowledgements

Dr Gaden S. Robinson allowed me to study the specimens preserved in The Natural History Museum, London, read an earlier draft of this paper and gave useful comments. Mr Kevin R. Tuck, The Natural History Museum arranged the loan of specimens and helped me in many ways during my stay in the museum. Dr Joel Minet, Muséum national d'Histoire naturelle, Paris arranged the loan of hepialid specimens under his care and allowed me to study their collection. Dr Hiroshi Inoue, Iruma, sent me interesting Indian material for comparison. Mr Yasunori Kishida, Tokyo, donated an interesting species to KMNH. Mr Satoshi Koiwaya, Miyazaki, provided me with colour copies of Oberthür's "Études". Dr Mamoru Owada, National Science Museum, Tokyo, helped me to check some papers on Chinese Hepialidae. The staff of the library in The Natural History Museum, London, sent me copies of a number of important items of literature. Mr Yasuyuki Watanabe, Amagasaki, gave me the permission to use his fine

photographs from around Nyimala, S. E. Tibet, and informed me of the detailed route that F. Kingdon Ward explored. Finally, but not least, the late Mr Toshiro Haruta gave me the opportunities to study his interesting hepialid collections from Nepal. I would like to express my sincere thanks to them all.

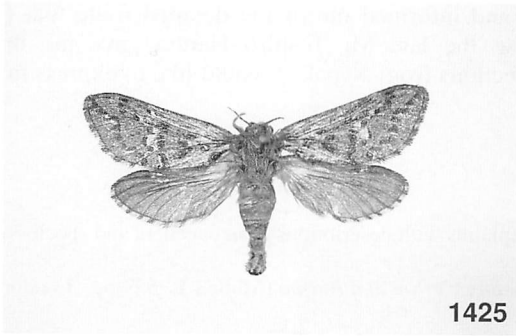
References

- Chu, H. F., & L. Y. Wang, 1985. "Insect-herb" versus hepialids with descriptions of new genera and species of Chinese Hepialidae. *Sinozoologia* 3: 121–134.
- Hampson, G. F., 1892. *The Fauna of British India, including Ceylon and Burma* (Moths) 1. 527 pp. London, Taylor and Francis.
- Nielsen, E. S., 1988. The peculiar Asian ghost moth genus *Bipectilus* Chu & Wang: taxonomy and systematic position (Lepidoptera: Hepialidae s.str.). *Syst. Ent.* 13: 171–195.
- Nielsen, E. S., Robinson, G. S. and D. L. Wagner (2000). Ghost-moths of the world: a global inventory and bibliography of the Exoporia (Mnesarchaeoidea and Hepialoidea) (Lepidoptera). *J. nat. Hist.* 34: 823–878.
- Oberthür, C., 1909a. *Étud. Lépid. comp.* 3: 411. pl. 25.
- , 1909b. Observations sur l'*Hepialus armoricanus*. *Bull. Soc. ent. Fr.* 1909: 250–252.
- Pfützner, R., 1912. Hepialidae. In Seitz, *Die Gross-Schmetterlinge der Erde* 2: 433–439, pls. 53–54.
- Pratt, A. E., 1892. To the Snows of Tibet through China. 268 pp. Longmans, Green, and Co. London.
- Robinson, G. S., Sattler, K., Shaffer, M., Tuck, K. R. and M. G. Allen, 1995. Microlepidoptera and Pyraloidea of Nepal – a checklist and bibliography. In Haruta, T. (Ed.), *Moths of Nepal*, part 4. *Tinea* 14 (Suppl. 2): 150–181.
- Tindale, N. B., 1941. Revision of the Australian ghost moths (Lepidoptera Homoneura, Family Hepialidae). Part 4. *Rec. S. Aust. Mus., Adelaide* 7: 15–46, 3 pls., 51 figs.
- , 1942. Revision of the Australian ghost moths (Lepidoptera Homoneura, Family Hepialidae). Part 5. *Rec. S. Aust. Mus., Adelaide* 7: 151–168, 3 pls., 30 figs.
- Ueda, K., 1987. A new species of the genus *Endoclita* Felder & Rogenhofer (Lepidoptera: Hepialidae) from Taiwan. *Tinea* 12 (Suppl.): 103–108.
- , 1988. New species of the genus *Hepialiscus* Hampson (Lepidoptera, Hepialidae) from Taiwan. *Bull. Kitakyushu Mus. Nat. Hist.* 8: 39–54.
- Viette, P., 1949. Contribution à l'étude des Hepialidae (6e note). Description des genitalia de quelques espèces paléarctiques. *Rev. fr. Lépid.* 12: 83–86. pl. 1.
- , 1968. Lepidoptera Hépiidae du Népal. *Ergebn. Forsch. Unternehmens Nepal Himalaya* 3: 128–133.
- Walker, F., 1856. Lepidoptera Heterocera. *List of the Specimens of lepidopterous Insects in the Collection of the British Museum* 7: 1509–1808.

A note on adult flight times of *Thitarodes*

(Gaden S. Robinson)

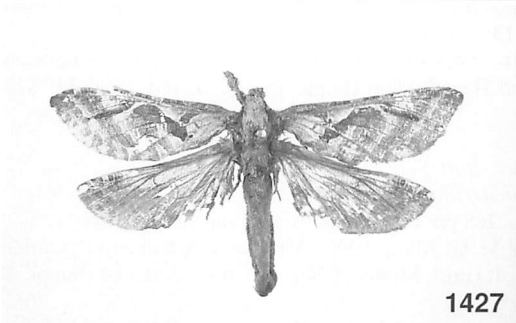
The 1983 BMNH Expedition to Nepal (Martin Brendell, Gaden Robinson, Kevin Tuck and Col. Mike Allen) discovered the unusual flight behaviour of *Thitarodes* quite by accident. Very early on in the expedition, we tested portable generators and mercury-vapour lights at the Phulchoki site (8800 ft, 2680 m) in early dusk, some 30 minutes before we would normally start up a lamp in any part of the world. To our surprise, specimens of *Thitarodes* arrived at the illuminated sheet after the lamps had been running for 8–10 minutes. Thereafter we made a point running lights far earlier than is usual and, as a result, obtained good series of several *Thitarodes* species. The adult flight time appeared to be extremely short, no more than 10–15 minutes, and a hiatus would then ensue for some 15–30 minutes before any other Lepidoptera arrived. The *Thitarodes* species that we collected were all early crepuscular fliers, and light conditions were such that adults could be netted when visible against the darkening sky at the same time as others were being collected at light. At no time during the expedition did we ever encounter *Thitarodes* adults flying at any other time of day.



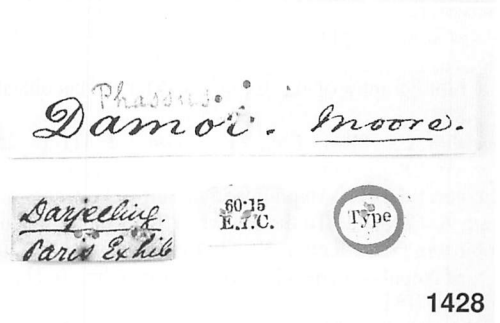
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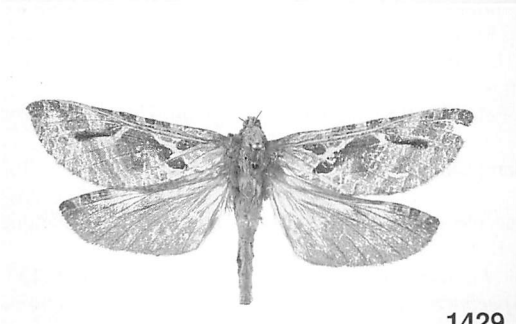
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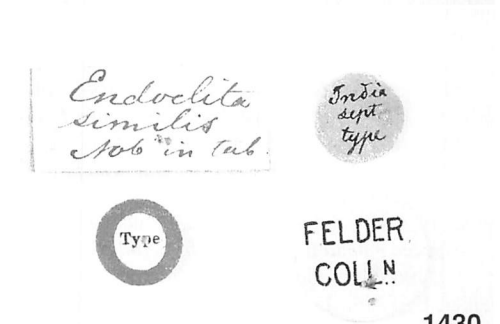
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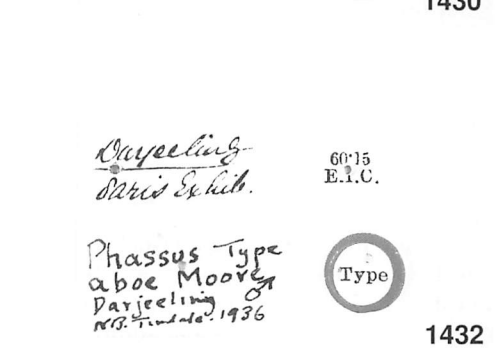
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Figs 1425-1432. Type specimens. 1425. *Thitarodes armoricanus* (Oberthür, 1909), holotype ♀. 1426. *Ditto*, labels. 1427. *Endoclyta damor* (Moore, 1859), holotype ♀. 1428. *Ditto*, labels. 1429. *E. similis* Felder, 1874, holotype ♀. 1430. *Ditto*, labels. 1431. *E. aboe* (Moore, 1859), holotype ♂. 1432. *Ditto*, labels.



Fig. a. Habitat of *Thitarodes kingdonwardi* sp. nov., Kyikar near Nyima La, Tibet, 3500 m, 9. vii. 1994. (Photo by Mr Y. Watanabe).

Fig. b. *Ditto*, 10. vii. 1994.

Additional notes on the Ennominae of Nepal, with descriptions of eight new species (Geometridae)

Dieter Stüning

Synopsis. One hundred thirty species of Geometridae-Ennominae are recorded from Nepal, including 25 species recorded for the first time and 8 species (*Heterolocha mariailgeae*, *Ourapteryx chrisbahri*, *O. inouei*, *Dalima warreni*, *Uliura dierli*, *Arichanna (A.) peniculifera*, *A. (Paricterodes) schnitzleri*, *Calcyopa prasina*) described as new. Collectional data of all specimens involved are presented. Lectotypes of 8 species (*Selenia dentilineata* Moore, 1888; *Endropia basipuncta* Moore, 1868; *Medasina persimilis* Moore, 1888; *Deinotrichia scotosiaria* Warren, 1893; *Arichanna ditetragona* Wehrli, 1938; *Arichanna furcifera* Moore, 1888; *Paricterodes albivertex* Wehrli, 1933; *Calichodes difoveata* Wehrli, 1943) are designated. Nomenclatural changes proposed in this article include 5 generic synonyms, 1 generic replacement name, 15 specific or subspecific synonyms, 24 new or revived combinations. A list of species new to the Nepalese fauna and those which have to be omitted is given.

Introduction

In the following paper, 130 species of Geometridae-Ennominae are recorded from Nepal, 28 of them for the first time. This is only a part of the total number of about 485 species of Ennominae recorded already in the previous parts of “Moths of Nepal” and also only a part of the total amount of species available in the collections studied for preparation of this paper. Further efforts will be necessary to cover them completely. Eight species are described as new to science. This shows that – despite extensive collecting over years mainly by the late Mr T. Haruta and his local collectors – even the Nepalese macro-moth fauna is by far not yet known completely. The present study was based mainly on the collections of the Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn (ZFMK), the Zoologische Sammlung des Bayerischen Staates, Munich (ZSM), and the private collection of Manfred D. Sommerer, Munich. Besides, additional selected records have come from the collections of Claude Herbulot, Paris and Georges E. R. J. Orhant, Wailly-Beaucamp (France). Nepalese Geometridae now in the collection of the ZFMK have been partly presented by Mr Hermann Schnitzler, Frechen, who carried out several collection trips to East Nepal (1989, 1992, 1994). In addition, ample material collected by Hungarian collectors came to my hands. Noctuidae collected during these expeditions have already been published in the last volume of MoN (Hreblay & Ronkay, 1998). In this paper extensive information is given concerning collectors and collecting sites which appear again in the following pages. Important information concerning the history of collecting Lepidoptera in Nepal, mentioning the German expeditions (1955, 1962, 1964, 1967) as well, are given by Robinson *et al.*, 1995. Ample material has also been gathered during a subsequent long-term expedition to Central Nepal in 1973 (Dierl-Lehmann). Gyula M. László, one of the Hungarian collectors and Geometridae specialist himself, provided a number of selected data out of his private collection which also could not yet be studied as a whole. K. Yazaki generously donated to the ZFMK collection a valuable sample of material collected by Mr T. Haruta *et al.*, data of which are reported here if not published previously. Besides presenting faunistic data a number of taxonomic changes have been found necessary. In particular, the study of a part of the W. S. Atkinson collection turned out to be most important for this revisional work. It is now kept in the MNHU collection, Berlin, as part of the famous Staudinger collection. Dr O. Staudinger, Dresden, had purchased a major part of this important collection, well known through the publication of W. C. Hewitson and F. Moore (1879–1888). As mentioned in the introduction of that work, F. Moore had made arrangements with the purchaser to examine the Heterocera of the collection, and he also was able to keep duplicate specimens for his own collection (which is now part of the BMNH collection). Nevertheless, singletons of several species are only present in the

MNHU collection, and this fact gave rise to a number of misidentifications in the past. Also of particular importance was the study of the Wehrli collection which is part of the ZFMK Lepidoptera collection since 1955. It contains almost 150,000 Geometridae, including types of all taxa ever described by Eugen Wehrli. A special effort has also been made to arrange the species according to tribal characters, basing on the work of J. D. Holloway [1994], but expanding his definitions also to those species not occurring on Borneo.

Abbreviations and conventions

The following abbreviations are used to indicate the type depositories: BMNH – The Natural History Museum, London, UK; MNHU – Museum für Naturkunde der Humboldt-Universität zu Berlin, Germany; SMNS – Staatliches Museum für Naturkunde, Stuttgart, Germany; SNG – Senckenberg-Museum, Frankfurt am Main, Germany; ZFMK – Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Germany; ZSM – Zoologische Staatssammlungen, Munich, Germany; OPU – Entomological Laboratory, Osaka Prefecture University, Sakai, Japan. Further abbreviations: MoN (1-5) – Moths of Nepal, volume (1-5). Such abbreviations refer to previous citations of a given species in the “Moths of Nepal”- volumes. Page, plate and figure numbers are added. References of first description are only provided if a species is mentioned for the first time or in case of taxonomic changes. Newly recorded species are marked with an asterisk. All lectotypes have been designated for reasons of nomenclatural stability, not in the course of curatorial activities. Specimens have been supplied with an additional red printed label quoting the original name, date and author, author and year of designation, and depository. A number of new synonyms recorded hereunder have already been mentioned by Scoble *et al.*, 1999. However, these entries often reflect the situation found in the BMNH card index, as a result of many years of curatorial work, but “the cards do not indicate whether taxonomic changes, such as synonymy or in generic combination, were made in the index or whether they were published somewhere in the scattered literature to the Geometridae.” (Scoble *et al.*, 1999: xviii; and *in litt.*).

Systematic account

Hypochrosini

Hypochrosis (Marcala) abstractaria (Walker, [1863]) (MoN 4: 19; Pl. 12: 12, as *hyadaria*, Pl. 101: 2, 3)

Godavari, 1539 m: many specimens, 9-24. v. 1989; Godavari, 1500 m: 1 ♂, 25. v. 1992 (H. Schnitzler); Godavari, 1600 m: 1 ♀, 13. iv. 1992, 1 ♂, 23. ix. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2000 m: 1 ♂, 4 ♀, iii-iv. 1991 (*ex coll.* A. Schintlmeister); *ditto*, 2200 m: 2 ♀, 27. v. 1992; *ditto*, 2075 m: 1 ♀, 16. vi. 1992 (T. Haruta *et al.*); E. Nepal, Jiri, 2 ♀, 30. v., 4. vi. 1992 (H. Schnitzler); Ganesh Himal, vic. Nesim, 2600 m: 10 ♂ 7 ♀, 11. iii. 1996; Dhaulagiri Himal, vic. Lebang, 2400 m: 1 ♂, 23. iii. 1996; Mahabharat range, nr. Gorahi, 1700 m: 1 ♀, 22. iii. 1996; Dhumre, Bimal Nager, 500 m: 29-30. iii. 1995 (L. Bódi & G. Macrancy); Annapurna region, Sudame, 1250 m: 1 ♀, 24-25. iii. 1995 (M. Hreblay & L. Nemeth). Coll. ZFMK. Numerous specimens from E. & C. Nepal in coll. ZSM, including this and the next species (not yet separated).

The genus-name *Marcala* Walker, [1863] 1862, type-species: *ignivorata* Walker [1863] 1862 = *hyadaria* Guenée [1858], is revived here on subgeneric level for species of the *hyadaria*-group (*sensu* Holloway [1994]: 22). They are smaller and less robust-bodied than typical *Hypochrosis* species and have rather straightish diverging transverse lines instead of irregular banding through the forewings. There is a circular discal spot which is also lacking in typical *Hypochrosis*. *Marcala* is not upgraded to genus rank as the male genitalia generally agree with those of *Hypochrosis*, though valves are considerably shorter, there is a single furca and the vinculum is

less longate, too. Species to be included in the subgenus are: *hyadaria* Guenée, [1858] (for synonyms and subspecies see Holloway [1994]: 21, 22), *abstractaria* Walker, 1862, *chlorozonaria* Walker, 1861, *amaurospila* Yazaki, 1995, and *cadmica* Herbulot, 1995. *H. cryptopyrrhata* Walker, [1863], is also better placed here than in typical *Hypochrosis*.

Hypochrosis (Marcala) amaurospila Yazaki, 1995 (MoN 4: 19, Pl. 101: 4, holotype)

Hypochrosis amaurospila Yazaki, 1995, *Tinea* 14 (Suppl. 2): 19.

Godavari, 1539 m: 2 ♂, 9-24. v. 1989 (H. Schnitzler); Godavari, 1600 m: 1 ♂, 18. ix. 1992 (T. Haruta *et al.*).

Differentiating this species and dark forms of *abstractaria* by external characters sometimes can be difficult or even impossible. Male genitalia differences, however (shape of uncus and costal processes) are distinctive, clearly visible often even without dissection. Bänziger (1972: 1403, fig. 18) already figured male genitalia of this and some related species from N. Thailand, treating it as “sp. n.,” but he never described it. It has not yet been checked, if one of the synonyms associated with *abstractaria* (*irrorata* Moore, 1888; *tinctaria* Walker [1863]) (types of both are females), may be conspecific with *amaurospila*. Female genitalia characters have not yet been published nor studied by the author.

Hypochrosis (Marcala) flavifusata (Moore, 1888) (MoN 1: 39, Pl. 12: 13)

Godavari, 1600 m: 1 ♀, 20. iii. 1992 (T. Haruta *et al.*). Coll. ZFMK. Godavari, 1600-1800 m: 5 ♂, 31. v-2. vi. 1967, including ZSM Genitalprp. No. G 605; Rapti valley, Monahari Khola, Belwa 350 m: 1 ♀, 12. v. 1967 (Dierl-Forster-Schacht); Prov. Chisapani Garhi, Bhainse Dobhan 730 m: 2 ♂, 16-20. vii. 1967 (Dierl-Schacht). Coll. ZSM.

Further material examined. Holotype, ♂, “Darjeeling, Coll. Atkinson” (printed label)-“*Marcala flavifusata* Type Moore” (handwritten label)-“Origin.” (pink, printed label)-“Typus” (red, printed label), in coll. MNHU.

Clearly distinguishable by the yellowish ground colour and the reduced postmedian line of forewing. Seasonal differences are obvious in this species: The wet-season form has the forewings coloured more clearly yellowish (greyish-yellow in the dry-season form), the hindwings are darker reddish-brown. The male genitalia generally agree with those of the other species included in the subgenus (see Bänziger, 1972, fig. 16).

Phoenix iris Butler, 1880 (MoN 4: 19; Pl. 100: 24)

Dhumre, Bimal Nager, 500 m: 2 ♂, 29-30. iii. 1995 (L. Bódi & G. Macrancy) Coll. ZFMK.

Differs from *Marcala* in the male genitalia: uncus not hammer-headed, only slightly expanded apically, costal process absent, gnathus apically trispined (but left furca-arm developed as in *Marcala*).

Celenna festiviaria (Fabricius, 1794) (MoN 3: 29; Pl. 72: 16)

Royal Chitwan Nat. Park, 240 m: 25 ♂, 14 ♀, 21-23. vi. 1993 (M. Hreblay & C. Csorba). Coll. ZFMK.

For male genitalia see Holloway [1994]: fig. 11, but the central process of the ventral margin of the valves is much shorter, tapering, not spatulate in Nepalese specimens.

Omiza pachiaris Walker, 1860 (MoN 1: 39; 3: 29; Pl. 12: 11)

Godavari, 1600 m: 1 ♂, 2. x. 1991; 1 ♂, 8. vi. 1992 (T. Haruta *et al.*); E. Nepal, Jiri, 2200 m: 1 ♀, 6. vi-14. vi. 1994 (H. Schnitzler). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 1 ♂ 1 ♀, 31. vii-1. viii. 1967; Prov. Chisapani Garhi, Chisapani Garhi 1600 m: 1 ♂ 1 ♀, 11-15. vii. 1967 (Dierl-Schacht). Coll. ZSM.

Achrosis incitata (Walker, 1862) (MoN 1: 39; 3: 29; Pl. 12: 15)

Godavari, 1600 m: 1 ♂, 23. iii. 1992; 1 ♂, 26. iii. 1992; 1 ♂, 22. vii. 1992 (T. Haruta *et al.*); Ganesh Himal, vic. Sunpati, 2330 m, 13. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Prov. Chisapani Garhi, Chisapani Garhi 1600 m: 1 ♂, 11-15. vii. 1967 (Dierl-Schacht). Coll. ZSM.

Achrosis rufescens (Butler, 1880), **comb. n.** (MoN 1: 39; 3: 29; Pl. 12: 14)

Godavari, 1539 m: 7 ♂ 4 ♀, 9-24. v. 1989; Mt Phulchouki, 2150 m: 1 ♂, 10. v. 1989; Jiri, 2200 m: 3 ♀, 3-4. vi. 1992 (H. Schnitzler); Godavari, 1600 m: 1 ♂, 5. iv. 1992 (T. Haruta *et al.*). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 11 ♂ 6 ♀, 1. vi-4. vi., 31. vii-3. viii. 1967 (Dierl-Forster-Schacht); Helmu area, GusumBanjyang 2600 m: 4 ♂, 1-4. ix. 1967; Bhandar, beneath Thodung, 2200 m: 15 ♂ 6 ♀, 3-5. viii. 1964; Jubing, 1600 m: 1 ♂, 8. v. 1964; Jiri, 2000 m: 1 ♂, 9. viii. 1964 (W. Dierl); Jiri, 1900 m: 1 ♂, 18. v. 1962; Sun-Khosi-valley, 2150 m: 1 ♂, 1. v. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

This species is transferred to *Achrosis* Guenée, [1858] on grounds of diagnostic characters given by Holloway ([1994]: 27).

Achrosis costimaculata (Moore, 1868), **comb. n.** (MoN 1: 39; 3: 30; Pl. 12: 17, as *lithosiaria*)

Osicerda costimaculata Moore, 1868, *Proc. zool. Soc. Lond.* **1867**: 650.

Kathmandu valley, Godavari 1600-1800 m: 1 ♀, 2. vi. 1967; Rapti valley, Monahari Khola, Belwa 350 m: 1 ♀, 8. v. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

A. costimaculata (Moore) is here formally transferred to *Achrosis* (not mentioned by Holloway [1994]). *Achrosis lithosiaria* (Walker) is an exclusively Sundanean element found in Peninsular Malaysia, Sumatra and Borneo (Holloway, [1994]: 32, pl. 2: 9, 10) and Palawan (new record).

*** *Achrosis rondelaria*** (Fabricius, 1775) (Pl. 170: 22, 23)

Phalaena rondelaria Fabricius, 1775, *Syst. Ent.*: 623

Trisuli valley, vic. Betravati, 820 m: 1 ♂, 25. ix. 1995 (Herczig & László); Dhumre, Bimal Nager, 500 m: 1 ♂, 29-30. iii. 1995 (L. Bódi & G. Makranczy); Ganesh Himal, Syabrubesi, 1520 m: 1 ♀, 12. vi. 1993. Coll. ZFMK. Prov. Chisapani Garhi, Bhainse Dobhan 730 m: 3 ♀, 15-20. vii. 1967 (Dierl-Schacht); Bhandar, beneath Thodung, 2200 m: 1 ♂, 4. viii. 1964 (W. Dierl); Bhimpedi, 400 m: 1 ♂, 4-7. iv. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

A number of synonyms have been associated with this taxon (Scoble *et al.*, 1999: 14). Holloway ([1994]: 27) treats it as a senior synonym of both the type-species of the genera *Sabaria* Walker and *Isnisca* Walker. However, external differences even in the Nepalese material are considerable and may indicate that there are more than one distinct species summarized under *rondelaria* presently. The male genitalia of the two forms figured have not yet been compared.

Garaeus specularis Moore, 1868 (MoN 1: 37; 3: 28; 5: 15; Pl. 11: 19)

Pericallia olivescens Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr. W. S. Atkinson* (3): 228, **syn. n.**

Godavari, 1600 m: 1 ♂, 5. iii. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2150 m: 2 ♀, 10. v. 1989; *ditto*, 2075 m: 1 ♀, 3. iv. 1992; Jiri, 2200 m: 3 ♂, 6-14. vi. 1994 (H. Schnitzler); Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993 (M. Hreblay & G. Csorba); Dhaulagiri Himal, vic. Lebang, 2450 m: 1 ♂, 24. iii. 1996; Arun valley, vic. Hille, 2. 620 m: 1 ♂, 15. iii. 1996 (L. Body & G. Makranczy); Dhaulagiri Himal, vic. Marpha, 3000 m: 1 ♂, 5. vii. 1996 (Chenga Sherpa). Coll. ZFMK. C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 5 ♂ 1 ♀, 22-25. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Further material examined. Holotype, ♀ (without abdomen), "Darjeeling, Coll. Atkinson" (printed label)-"*Pericallia olivescens* (♂?) type Moore" (handwritten label)-"Origin." (pink, printed label)-"Typus" (red, printed label)-"3312" (handwritten collection number). Coll. MNHU.

Scoble *et al.* (1999: 394) already mention the synonymy cited above, based on entries found in

the BMNH card index, but obviously not published before.

Garaeus apicata (Moore, 1868) (MoN 1: 37; 3: 28; 5: 15; Pl. 11: 18)

Godavari, 1539 m: 3 ♂, 9-24. v. 1989 (H. Schnitzler); Godavari, 1600 m: 1 ♀, 22. iii. 1992; Mt Phulchouki, 2075 m: 3 ♂, 30. v., 20. vi., 24. vi. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2200 m: 2 ♂, 27. v. 1992; Jiri, 2200 m: 3 ♂ 1 ♀, 30. v-4. vi. 1992; Jiri, 2200 m: 4 ♂ 1 ♀, 6-14. vi. 1994 (H. Schnitzler); GaneshHimal, Syabrubesi, 1520 m: 3 ♂, 12. vi. 1993; Ganesh Himal, vic. Somathang, 3270 m: 1 ♀, 15. vi. 1993; Solu Khumbu Himal, Lukla, 2800 m: 1 ♀, 26. vi. 1993; *ditto*, vic. Lukla, 2300 m: 2 ♂, 3. vii. 1993 (M. Hreblay & G. Csorba); Dhaulagiri Himal, vic. Lebang, 2400 m: 1 ♂, 23. iii. 1996; *ditto*, 2450 m: 2 ♂, 24. iii. 1996; *ditto*, 2200 m: 1 ♂ 1 ♀, 26. iii. 1996; Ganesh Himal, vic. Nesim, 2600 m: 1 ♀, 11. iii. 1996; Dhumre, Bimal Nager, 500 m: 1 ♂, 29-30. iii. 1995 (L. Bódi & G. Macranczy); vic. Muldi (Murre), 2835 m: 1 ♀, 3. v. 1996 (Chenga Sherpa). Coll. ZFMK. Numerous specimens from various localities in E. Nepal, elevation of collecting sites 1600-3100 m. C. Nepal: Kyumnu-Khola-valley vic. Gandrung, 2360 m: 3 ♂ 3 ♀, 12. v-22. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Garaeus cruentatus Butler, 1880 (MoN 1: 37; Pl. 11: 20)

Pericallia sikkima Moore, 1888, *Descr. new Indian Lepid. Insects Colln late Mr. W. S. Atkinson* (3): 228, **syn. n.** Mt Phulchouki, 2150 m: 1 ♂, 10. v. 1989; Ganesh Himal, Somathang, 3270 m: 1 ♂, 15. vi. 1993; Solu Khumbu Himal, vic. Jiri, Bhandar, 2125 m: 1 ♂, 6. vii. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Kathmandu Valley, Godavari 1600-1800 m: 1 ♂, 2. vi. 1967 (Dierl-Forster-Schacht); Kyumnu-Khola-valley vic. Gandrung, 2360 m: 1 ♂, 19. v., 1 ♂, 24. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Further material examined. Syntype, ♂, "Darjeeling, Coll. Atkinson"-*"Pericallia sikkima* ♂ type Moore" (handwritten label)-"Origin."-"Typus"-*"3320"*. Coll. MNHU.

Scoble *et al.* (1999: 393) already mention the synonymy cited above, based on entries found in the BMNH card index, but obviously not published before.

Garaeus argillacea (Butler, 1889) (MoN 5: 15; Pl. 130: 4)

Godavari, 1600 m: 1 ♂, 21. iii. 1992 (T. Haruta *et al.*); Ganesh Himal, Syabrubesi, 1520 m: 1 ♀, 12. vi. 1993 (M. Hreblay & G. Csorba); Dhaulagiri Himal, vic. Lebang, 2450 m: 1 ♀, 24. iii. 1996 (L. Bódi & G. Macranczy). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 3 ♂ 1 ♀, 2/7. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Garaeus absona (Swinhoe, 1890) (Pl. 170: 2)

Epifidonia absona Swinhoe, 1890, *Proc. zool. Soc. Lond.* **1889** (4): 427.

5 km S. Kathmandu, Dhankinkali: 1 ♂, 21. xi. 1995 (Chenga Sherpa). Coll. ZFMK. Kathmandu Valley, Godavari 1600-1800 m: 1 ♂, 19. vi. 1967 (Dierl-Schacht); Helmu area, Gusum Banjyang 2600 m: 3 ♂, 1/5. ix. 1967 (W. Dierl); Pultschuk, 2300-2500 m: 2 ♂, 16. vi. 1967 (Dierl-Forster-Schacht); Thodung 3100 m: 1 ♂, 27. v. 1962 (G. Ebert & H. Falkner), ZSM Genitalprp. No. G 304; Dudh-Kosi-valley, beneath Thangpoche, 2 ♂, 3400 m: 29/30. v. 1964 (W. Dierl). Coll. ZSM.

Mentioned and figured by Inoue (1982: 169), but not later in MoN 1-5. Obviously rare. Three male specimens collected in May are referable to f. *pyrsa* Prout, 1925.

* ***Garaeus fulvata*** (Warren, 1898) (Pl. 170: 1)

Pseudomiza fulvata Warren, 1898, *Novit. zool.* **5**: 40

Taplejung area, Lal Kharka, 2. 250 m: 1 ♂, 10. x. 1994 (M. Hreblay & T. Csövari). Coll. ZFMK. Kyumnu-Khola-valley, vic. Gandrung, 2360 m: 1 ♂, 17. v. 1973 (Dierl-Lehmann). Coll. ZSM.

“*Garaeus albipuncta* (Warren, 1896), **stat. rev.** (MoN 2: 114; 3: 28, as *albifrons* Moore; Pl. 60: 24) Godavari, 1600 m: 1 ♂, 24. iii. 1992, 1 ♀, 2. xi. 1991, 1 ♀, 7. xi. 1991 (T. Haruta *et al.*); Mt Phulchouki, 2000 m, 1 ♂, iii-iv 1991 (*ex coll.* A. Schintlmeister); Dhaulagiri Himal, vic. Lebang, 2200 m: 1 ♀, 26. iii. 1996; *ditto*, 2450 m: 1 ♂, 24. iii. 1996 (L. Bódi & G. Macranczy). Coll. ZFMK. C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 2 ♂ 1 ♀, 24-25. v. 1973 (Dierl-Lehmann). Coll. ZSM.

The present placement of this and the related, distinct species *colorata* Warren, 1893 and *altericeps* Wehrli, 1938, **stat. n.**, in *Garaeus* (Scoble *et al.*, 1999) is certainly wrong, as typical characters of the latter genus (*e.g.* hairy eyes, claw-like unilateral furca in the male genitalia) are absent. A closer relationship to *Agaraeus* Kuznetsov & Stekolnikov, 1982, *Apeira* Gistel, 1848 or *Selenia* Hübner, [1823] 1816 seems more likely at present, but more probably a new genus must be described for the reception of the above-mentioned species. A revision of this group is under preparation.

Agaraeus discolor (Warren) (MoN 1: 37; 5: 15; Pl. 11: 21)

Godavari, 1600 m: 1 ♀, 2. xi. 1991 (T. Haruta *et al.*). Coll. ZFMK. Godavari, 1600-1800 m: 1 ♂, 10. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Mimochroa hypoxantha (Kollar, [1844])-group (MoN 3: 28; Pl. 72: 15, *lugens*, Pl. 72: 14, *viridescens*)

Ennomos hypoxantha Kollar, [1844], in Hügel, *Kaschmir und das Reich der Siek* 4 (2): 484.

Mimochroa lugens (Butler), 1880, *Ann. Mag. nat. Hist.* (5) 6: 123, syn. n. (?)

Mt Kalinchok, vic. Muldi, 2835 m: 1 ♂ 1 ♀, 17-18. xi. 1996; W. Nepal, vic. Jumla, 2500 m: 1 ♂, 1. xi. 1996 (M. Hreblay); Ganesh Himal, vic. Thangjet, 2165 m: 1 ♂, 16. x. 1995 (M. Hreblay & L. Bódi); Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993; Solu Khumbu Himal, vic. Lukla, Bupsa, 2300 m: 2 ♂, 3. vii. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 4 ♂, 31. v-7. vi. 1967 (Dierl-Forster-Schacht); Bhandar beneath Thodung, 2200 m: 5 ♂, 3-5. viii. 1964; Junbesi 2750 m: 5 ♂, 25-31. vii. 1964; Sete, 2700 m: 3 ♂, 1. viii. 1964 (W. Dierl); Seta, above Likhu-Khola-valley, 2500 m: 4 ♂, 24. ix. 1962 (Diesselhorst). Coll. ZSM. Bhandar beneath Thodung, 2200 m: 1 ♂, 4. viii. 1964; Junbesi 2750 m: 1 ♂, 25-31. vii. 1964 (W. Dierl); Tampa Khosi valley, 2600 m: 1 ♂, 10. v. 1962 (G. Ebert & H. Falkner); Sun-Kosi-valley, Kodari 2000 m: 1 ♂, 18/19. viii. 1971 (de Freina); Solu Khumbu Himal, Lukla 2800 m: 1 ♂, 2. vii. 1993 (M. Hreblay & G. Csorba); Annapurna Himal, Kali-Gandaki-valley, nr. Ghasa 2. 080 m: 1 ♂, 4. vi. 1996 (Gy. M. László & G. Ronkay); E. Nepal, Surke Danda, NE Suketar 2. 560 m: 2 ♂, 10. xi. 1998; Deorali Danda, Helok 2000 m: 1 ♂, 1. xii. 1997 (Karma Sherpa); Taplejung area, nr. Patibhara Peak, 3155 m: 2 ♂, 13/14. x. 1994 (M. Hreblay & G. Csorba); *id.*, Mechi, Tamur valley N Sinwa, 1100 m: 23. x. 1996 (Gy. M. László & G. Ronkay). Coll. Sommerer.

The material mentioned above was first considered to belong to one species *M. hypoxantha*, treated as senior synonym of *M. lugens* by Scoble *et al.*, 1999: 610. Differences in the ground colour had been considered as seasonal (greenish (= dry season) specimens collected in x-xii (ZFMK, Sommerer, Yazaki), Yazaki (1994: 28) also mentions one specimen (as *viridescens*) in v; brownish (= wet season) specimens collected in vi-viii). Ongoing studies (including further informations about Yazaki's material) revealed that two or more quite similar taxa are represented in Nepal, and all may occur in differently coloured seasonal forms. Genitalia differences have been found as well as differences in the length of male and female antennal branches. A possible explanation may be that the (western Himalayan) *hypoxantha* and the (eastern Himalayan) *lugens* in fact are separate species, both occurring sympatrically in Nepal. *Mimochroa viridescens* Warren, 1894, **comb. rev.** (mentioned as a member of *Apeira* Gistel, 1848, by Scoble *et al.*, 1999: 50) has been described from E. India (Assam, Khasi Hills). Topotypical specimens differ in pattern characters (especially in the almost rectangularly angled hindwing postmedian) and also in the male genitalia from the specimen figured as *viridescens* by Yazaki. True *viridescens* seems to be more closely related to *M. gynopteridia* Butler, 1880 (see next species), described from the

N. E. Himalayas as well and probably its Himalayan sister-species, also occurring in Nepal. At present, without having studied the types of the species involved, it is impossible to determine the species of the *hypoxantha*-group with certainty.

* *Mimochroa gynopteridia* (Butler, 1880) (Pl. 170: 7)

Epione gynopteridia Butler, 1880, *Ann. Mag. nat. Hist.* (5) 6: 123.

Dhumre, Bimal Nager, 500 m: 1 ♂, 29-30. iii. 1995 (L. Bódi & G. Macrancy) (green form, similar to *viridescens*). Coll. ZFMK. Bhimpedi, 400 m: 1 ♂, 4-7. iv. 1962 (G. Ebert & H. Falkner); Prov. Chisapani Garhi, Bhainse Dobhan 730 m: 1 ♂, 16-20. vii. 1967 (Dierl-Schacht). Coll. ZSM.

According to Warren (1894: 443) “of the same size and markings” [as *viridescens*], distinguished “at once by the colour of the upper and under sides”. In fact, typical *gynopteridia* are yellowish brown, but they also may occur in a green form, very similar to typical *viridescens* (1 ♂, collected in March, in coll. ZFMK). However, the postmedian lines of the hindwings are less strongly angled in *gynopteridia*. Male genitalia of the latter have been compared with those of toptotypical *viridescens* and found to be slightly different, so both are treated as closely related species at present. Further investigations including types and females may solve this question.

Of *Mimochroa angulifascia* (Moore, 1879) (MoN 3: 28; Pl. 72: 13) and *Mimochroa albifrons* (Moore, 1888) (MoN 2: 113; 3: 28; Pl. 60: 22) no Nepalese material could be traced in coll. ZFMK, ZSM and coll. Sommerer. Holotype, ♂, of *albifrons*, labelled “Darjeeling, Coll. Atkinson”, “*Endropia albifrons* ♂ type Moore” (handwritten label), “Origin.” (pink printed label), “Typus” (red printed label), “3295” (handwritten); in coll. MNHU [checked].

Mimomiza “cruentaria” (Moore, 1868) (MoN 1: 38; Pl. 12: 2)

Godavari, 1539 m: 1 ♂, 9-24. v. 1989 (H. Schnitzler); Godavari, 1600 m: 1 ♀, 10. iii. 1992; *id.*, 1 ♂, 26. iv. 1992; *id.*, 1 ♂, 3. vi. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2150 m: 1 ♀, 10. v. 1989 (H. Schnitzler); Mt Phulchouki, 2000 m: 6 ♂ 1 ♀, iii-iv 1991 (*ex coll.* A. Schintlmeister); W. Nepal, vic. Dailekh, 2600 m: 1 ♀, 4. viii. 1996 (M. Hreblay & B. Szin). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 6 ♂, 31. v-5. vi., 7. viii. 1967 (Dierl-Forster-Schacht); Jiri, 2000 m: 2 ♂, 1 ♀, 5. iv., 10. iv. 1964; Chialsa, Solu-Khola-valley, 2700 m: 1 ♂, 24. iv-1. v. 1964; Bhandar, beneath Thodung, 2, 200 m: 2 ♀, 2-5. viii. 1964 (W. Dierl); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 1 ♂, 16. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Conspicuous differences in male genitalia are found in the ZFMK-material mentioned above, showing that two externally similar, but clearly distinct species occur. In one of them the symmetric furca ends with a long curved spine, as described for *cruentaria* by Holloway ([1994]: 38). The second, somewhat smaller species has the apical parts of the furca spiral, without a long spine, but with a row of small spines, similar to *Mimomiza flavescens* (Swinhoe, 1906), *stat. rev.*, but not conspecific. Both Nepalese taxa may also occur in a purely yellow, probably seasonal variant. *M. flavescens* (♂ syntype, coll. BMNH, checked) was described from the Khasi Hills and has been treated as a subspecies of *cruentaria* by Scoble *et al.*, 1999: 611. The female holotype of *cruentaria* could not be traced in the BMNH collection (G. Martin, *pers. comm.*). As a number of other types originating from the A. E. Russel collection it is probably lost. The genus needs revision.

Mimomiza leucogonia (Hampson, 1895) (MoN 1: 38; Pl. 12: 3)

Godavari, 1539 m: 1 ♂, 19. v. 1989 (H. Schnitzler); Godavari, 1600 m: 1 ♂, 18. vi. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2150 m: 1 ♂, 10. v. 1989 (H. Schnitzler); *id.*, 2075 m: 1 ♂, 23. vi. 1992 (T. Haruta *et al.*); Jiri, 2200 m: 1 ♂, 5. vi. 1992; *id.*, 1 ♀, 30. v. 1992; *id.*, 3 ♂, 6-14. vi. 1994 (H. Schnitzler). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 2. vi. 1967; Pultschuk, 2300-2500 m: 2 ♂, 12/16. vi. 1967 (Dierl-Forster-Schacht); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 5 ♂, 22-25. v. 1973; Kali-Gandaki-valley, Kalopani-Dhumpu, 2500 m: 1 ♀, 3. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

M. leucogonia has very shortly pectinate male antennae, but agrees with *cruentaria* and related species in wing shape, general coloration and in the peculiar pattern of the forewing apex. Male genitalia are of the *flavescens* type, the symmetrical furca-arms having spiral, densely spined apices. *M. leucogonia* therefore clearly belongs to this genus.

Anthyperythra hermearia Swinhoe, 1891 (MoN 1: 28; Pl. 8: 10)

Godavari, 1039 m: 1 ♀, 15. v. 1989 (H. Schnitzler); Godavari, 1600 m: 1 ♂, 24. iii. 1992; Mt Phulchouki, 2075 m: 1 ♀, 23. iii. 1992 (T. Haruta *et al.*). Coll. ZFMK. Kathmandu valley, SW Kathmandu, Dhankinkali, 1 ♂, 2. iii. 1996 (ChengasSherpa). Coll. Sommerer.

This genus is frequently placed together with *Hyperythra* Guenée, [1858] and *Hypephyra* Butler, 1889, but is not related to them as they belong to different tribes, Caberini and Macariini (Holloway [1994]: 99, 158). *Anthyperythra* Swinhoe, 1891 is a true member of the Hypochrosini, as indicated by the genitalia structures. This was already mentioned by Wehrli (1939: 316) who proposed to change its systematic position and place it close to *Epione* Duponchel, 1829, and *Heterolocha* Lederer, 1853, both also belonging to the Hypochrosini as defined nowadays.

Artemidora epicyrta (Fletcher, 1961), **comb. n.** (MoN 4: 12; Pl. 101: 7)

Holotype, ♂, Manangbhot, Sabzi-chu, 3500 m, 13. vii. 1955, leg. F. Lobbichler, in coll. ZSM. Paratypes. 68 ♂, Annapurna Himal, Tukucha (2556 m), Manangbhot (3500 m), Jargeng-Khola (4000 m), Naurgaon (4100 m), in coll. ZSM, BMNH, coll. Sommerer and ZFMK.

Yazaki (1995: 12) recorded two additional males (Churi Lattar, 4080 m). Females are still unknown. *A. epicyrta* has been described in the genus *Heterolocha* Lederer, but it does not fit to the characters of the latter genus. It agrees, however, quite well with *Artemidora* Meyrick, 1892, especially the male genitalia show a number of common features. A reliable synapomorphy is a modification of the caudal portion of the vinculum which is broadened lobe-like before curving ventrally. For further characters see next species.

* ***Artemidora disistaria*** (Walker, 1862) **comb. n.** (Pl. 170: 11, 12, 15, 16)

Aspilates ? *disistaria* Walker, 1862, *List Specimens lepid. Insects Colln Br. Mus.* 24: 1075

C. Nepal, Kali-Gandaki-valley, Kalopani-Dhumpu, 2500 m: 3 ♂, 3. vi., 7. vi., 8. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

A. disistaria also has been treated as a member of the genus *Heterolocha* Lederer (see Scoble *et al.*, 1999), but it is closely related to *A. epicyrta*. Differences towards the latter are mainly found in the antemedial line which is smooth in *disistaria*, outwardly dentate in *epicyrta*. *A. disistaria* is slightly smaller, with dark brown coloration, though grey specimens also occur (Pl. 170: 11). Females of *disistaria* (W. Himalaya, Punjab region, coll. ZFMK; see Pl. 170: 15, 16) exhibit a further character common to all species of *Artemidora*: a strong sexual dimorphism. They are smaller than the males and have the shape of the wings more strongly modified. Male genitalia (Fig. 1442) are also similar to those of *epicyrta* (see Yazaki, 1995, fig. 584), but the juxta is more narrowly invaginated and apically bifurcate.

Apheterolocha patalata (Felder & Rogenhofer, 1875) **comb. n.** (Pl. 170: 13, 14, 17) (MoN 1: 40; Pl. 12: 19)

A: Specimens larger, more distinctly greenish, basal costal spot of forewings strong, black, postmedian line of hindwings more strongly curved, closer to the margin. Without black spots at the tornal regions (this form agrees with the type of *patalata*). Rarely, also brownish specimens occur (Pl. 170: 14): Mt Phulchouki, 2075 m: 2 ♂, 10. iii., 28. iii. 1992 (brown form); C. Nepal, Dhaulagiri Himal, 2450 m: 4 ♂, 23-26. iii. 1996 (both, brown and green forms) (L. Bódi & G. Macranczy). Coll. ZFMK. Dudh Kosi valley, beneath Thangpoche, 3400 m: 14 ♂ 1 ♀, 29-31. v. 1964 (W. Dierl). Coll. ZSM; *id.*, 1 ♂, 31. v. 1964. Coll. Sommerer.

B: Specimens smaller, on an average lighter greenish, basal costal spot of forewings more or less reduced, postmedian line of hindwings more straightish, at a greater distance to the margin. Often with black spots near tornal region of forewing, hindwing or both (see MoN 1, Pl. 12: 19).

Godavari, 1539 m: 1 ♂ 1 ♀, 9-24. v. 1989; Mt Phulchouki, 2150 m: 1 ♂, 10. v. 1989 (H. Schnitzler); *id.*, 28. vi. 1992 (greenform) (T. Haruta *et al.*); Mahabharat range, 1700 m: 1 ♂, 22. iii. 1996 (L. Bódi & G. Macrancy). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 31. v. 1967 (Dierl-Forster-Schacht). ZSM Genitalprp. No. G 312; *id.*, 33 ♂ 3 ♀, 31. v-10. vi.; 4. viii., 7. viii. 1967; Rapti valley, MonahariKhola, Belwa, 350 m: 1 ♂, 10. v. 1967 (Dierl-Forster-Schacht). Coll. ZSM. Godavari, 1600-1800 m: 1 ♂, 3. vi. 1967 (Dierl-Schacht); Ganesh Himal, W Thangjet, 2300 m: 1 ♂, 18. ix. 1994 (M. Hreblay & T. Csövari). Coll. Sommerer.

Differences in male genitalia characters (Fig. 1443, form B; form A without spines on vesica, furca reduced) indicate that both forms may also be distinct species. In this case, form B must be described as new. Further comparative studies based on more material and female genitalia are necessary.

Further material examined: holotype, ♂, of *Heterolocha patalata* Felder & Rogenhofer, 1875: "Type"- "Rampoor, 23/8"- "Novara CXXXII f. 9, *Heterolocha patalata* m., Himalaja. ♂" (both handwritten labels) [abdomen lost]. Coll. BMNH. There are several locations named Rampur in N. India, but the type-locality of *patalata* is most probably situated NE of Simla, Punjab, at 3300 ft. (M. Honey, *in litt.*).

Apheterolocha Wehrli, 1937, type-species *Heterolocha quadraria* Leech, 1897, clearly differs from *Heterolocha* Lederer, 1853, in a number of characters, external as well as of the genitalia. Externally the broader wings and the transverse lines terminating in distinctive costal spots are typical for *Apheterolocha*, in the forewing venation, *Apheterolocha* has R₁ separate, in *Heterolocha* it is fused with and arising from Sc; in the male genitalia, *Apheterolocha* has the uncus elongate triangular, the gnathus with its terminal fusion unsclerotized and bent ventrad, valves broad at base only, tapering towards apex, furca arms small and symmetrical, unspined, coremata weak, *Heterolocha* with uncus broad at base, a narrow medial part and a broader distal portion. Gnathus with terminal part well sclerotized, pointed and bent dorsad. Valves very broad at base, not much tapering towards apex, furca arms well developed, symmetrical or asymmetrical, spined, coremata strongly developed, with narrow basal part and broad, rounded and flattened distal part. The female genitalia of *Heterolocha* have the signum characteristically modified, very large, with three curved spines arising from a common plate. *Apheterolocha* females have a smooth plate with two short tooth-like spines instead.

Heterolocha falconaria (Walker, 1866) (MoN 1: 39; Pl. 12: 18, as *phaenicotaeniata* [*sic*])

Aspilates falconaria Walker, 1866, *List Specimens lepid. Insects Colln Br. Mus.* 35: 1665

Godavari, 1539 m: 1 ♂, 9-24. v. 1989; Mt Phulchouki, 2700 m: 1 ♂, 25-26. v. 1989 (H. Schnitzler); *id.*, 2000 m: 1 ♂, iii-iv. 1991 (*ex coll.* A. Schintlmeister); Solu Khumbu Himal, Lukla 2800 m: 3 ♂, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Ganesh Himal, E Thangjet, 2165 m: 1 ♀, 17. ix. 1994 (M. Hreblay & T. Csövari); Ganesh Himal, vic. Sunpati, 2330 m: 1 ♂, 13. vi. 1993; *id.*, Somathang, 3270 m: 1 ♂, 16. vi. 1993; Solu Khumbu Himal, vic. Lukla, 2800 m: 2 ♂, 2. vii. 1993; *id.*, Tragsindha Pass, 3000 m: 1 ♂, 4. viii. 1993 (M. Hreblay & G. Csorba); Taplejung area, Tambowa, 2. 115 m: 1 ♂, 12. x. 1994 (M. Hreblay & T. Csövari); Modi Khola, Chomro, 2000 m: 1 ♂, 11. x. 1980 (Stangelmaier); C. Nepal, Annapurna Himal EGorepani, 2900 m: 1 ♂, 7. x. 1994 (Csorba & Ronkay); Kyumnu-Khola-valley vic. Gandrung, 2360 m: 1 ♂, 20. v. 1973 (Dierl-Lehmann). Coll. Sommerer. Many specimens in coll. ZSM, but not yet separated from the undescribed species mentioned beneath.

Typical *falconaria*, as treated in coll. BMNH and ZFMK, has deep orange yellow ground colour and was figured by Yazaki (1992, Pl. 12: 8). However, also lighter yellowish specimens of *falconaria* currently occur. These specimens are easily confused with a second, externally similar, undescribed species, separated by distinct differences in genitalia characters. In all

collections studied this undescribed species was found mixed with specimens of *falconaria*. Its description is in preparation by the author, as part of a revision of the genus *Heterolocha*. Male genitalia of *falconaria* (Fig. 1439) have the furca arms asymmetrical, the left one much longer, slender and slightly curved, terminating in some long, weak bristles. The right arm short, stout, more strongly curved, terminating in a strong spine with some smaller ones subapically. The aedeagus has a strong, lateral, spine-like arm close to the apex, the vesica is unsclerotized, without cornuti, but with an acutely pointed retroflexed diverticulum. *Heterolocha phoenicotaeniata* Kollar is a western Himalayan species (Pl. 170: 21, ♂, Kashmir) which has not yet been discovered in Nepal. However, there is a similar species from C. Nepal in coll. ZSM which also will be described in the revision mentioned above. *H. obliquaria* Hampson, 1902 and *H. incolorata* Warren, 1894, are also related to this species-group.

* ***Heterolocha rubrifusa*** Hampson, 1902 (Pl. 170: 18, 19)

Heterolocha rubrifusa Hampson, 1902, *J. Bombay nat. Hist. Soc.* **14** (3): 498

Solu Khumbu Himal, vic. Lukla, 3200 m: 1 ♂, 27. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Dudh-Kosi-valley, 3500 m: 4 ♂ (dark form), 22-23. vii. 1962, ZSM Genitalprp. No. G. 313; Khumbu, Khumdzung 3900 m: 1 ♂, 19. vii. 1962 (G. Ebert & H. Falkner); E. Nepal, Beding, Rolwaling valley, 3940 m: 1 ♂, 17. viii. 1964 (Löffler). ZSM Genitalprp. No. G 314; *id.*, 4000 m: 1 ♂. Coll. ZSM. Dudh-Kosi-valley, 3500 m: 1 ♂ (darkform), 22-23. vii. 1962 (G. Ebert & H. Falkner); Beding, Rolwaling valley, 4000 m: 1 ♂, 17. viii. 1964 (Löffler); SoluKhumbu Himal, Lukla, 2800 m: 5 ♂, 26. vi., 2. vii. 1993, genit. praep. Nr. MS 1999-71; *id.*, vic. Lukla, 3200 m: 1 ♂, 27. vi. 1993; *id.*, 3450 m: 2 ♂, 1. vii. 1993; *id.*, Tragsindha Pass, 3000 m: 1 ♂, 4. viii. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

Further material examined. Holotype, ♂, "Yatung, Tibet, A. E. Hobson. 98-201" (printed label)-"Type" (round label, rimmed red)-"*Heterolocha rubrifusa* type ♂ Hmpsn." (handwritten label). Gen. prep. 2071-DS. (Fig. 1438). Coll. BMNH.

H. rubrifusa occurs in a yellow form (Pl. 170: 18) with slightly reddish transverse band and a dark form (Pl. 170: 19), amply suffused with olive green, with transverse lines and discal spot of forewings, outer margins of both wings and distal area of hindwings pinkish. In the male genitalia (Fig. 1441) the furca arms are long, but not reaching the base of the uncus, symmetrical, terminating with some long, weak bristles, but spined also subapically, for about one third of their length. The aedeagus vesica has an acute, retroflexed, sclerotized, dentate diverticulum and a field of small cornuti opposite to it. *H. rubrifusa* is related to the Taiwanese *H. sabulosa* Bastelberger.

* ***Heterolocha mariaigeae*** sp. n. (Pl. 170: 20, ♂ holotype)

Forewing length 14–17 mm. Basal and postmedial area of forewings pinkish-purple, a large, oval, pale-centred discal spot of the same colour. Antemedial line curved, dark grey, indented on cubital vein, outcurved again inside the cell. Postmedian line slightly dentate on the veins, reaching the costa a little distance before the apex. Medial area of forewings greenish-yellow. Hindwings with the same ground colour, crossed by a broad pinkish-purple postmedian line which is sharply defined with dark grey inside. Basal area of the same colour, but not bordered by a distinct line. Discal spot much smaller than in forewing. Underside brightly yellow, postmedian line more strongly dentate than on upperside, postmedian area of a more reddish purple colour, base of forewings yellow, bordered by a broad antemedial line of the same colour. Underside of hindwings quite similar to upperside.

Male genitalia (Fig. 1440). Furca arms long and slender, slightly asymmetrical, the left one longer, reaching well beyond the base of uncus, the right one just reaching it. Both arms terminating with a few long, weak bristles and a few small spines close to the apex. Uncus rather broad apically, dorso-ventrally flattened. Valves broad, only slightly tapering distally. Coremata with a wide, round proximal portion. Aedeagus with a very long, stick-like cornutus, broader at base, narrowing distally and slightly club-like at apex, the latter densely spined.

Holotype, ♂, Nepal, Godavari, Mt Phulchouki, ca 30 km S Kathmandu, 2000 m, March-April 1991, ex coll. A. Schintlmeister (local collector). Coll. ZFMK. Paratypes. Helmu area, Gusum Banjyang 2600 m, 2 ♂, 3. ix. 1967 (W. Dierl); Pultschuk 2300-2500 m: 1 ♂, 16. vi. 1967; *id.*, 2 ♀, 14-15. vi. 1967 (Dierl-Forster-Schacht); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 2 ♂, 20. v. 1973, ZSM Genitalprp. No. G. 315, gen. prep. No. 2078-DS (Dierl-Lehmann). Coll. ZSM. N. E. India, Sikkim, Mt Kanchenjunga SE, 2600 m, 2 ♂ 1 ♀, 9-10. viii. 1995 (E. Afonin & V. Siniaev); *id.*, Darjeeling, 2100 m: 1 ♂, 17-20. vi. 1987 (W. Thomas). Coll. ZFMK.

Geographical range. C. & E. Nepal, N. E. India (Sikkim).

Derivatio nominis. This species is dedicated to Mrs Maria Ilge, Bonn, Germany, for her generous support of the taxonomic work of the author and future nature conservation projects in Nepal.

Fascellina plagiata (Walker, 1866) (MoN 1: 37; 3: 28; Pl. 11: 17)

Godavari, 1539 m: 1 ♂, 13. v. 1989; *id.*, 1 ♂, 9-24. v. 1989; *id.*, 1500 m: 1 ♂, 22. iv. 1992; *id.*, 1 ♂, 9. v. 1992 (H. Schnitzler); Godavari, 1600 m: 1 ♂, 22. 3. 1992; *id.*, 1 ♂, 15. v. 1992 (T. Haruta *et al.*); Solu Khumbu Himal, vic. Jiri, Bhandar, 2125 m: 1 ♂, 6. vii. 1993 (M. Hreblay & G. Csorba); Ganesh Himal, vic. Thangjet, 2300 m: 1 ♂, 21. vii. 1995 (M. Hreblay & G. Csorvari); Dhumre, Bimal Nager, 500 m: 3 ♂, 29-30. iii. 1995 (L. Bódi & G. Makranczy); W. Nepal; vic. Dailekh, 2600 m: 1 ♂, 4. viii. 1996 (M. Hreblay & B. Szin). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 12 ♂, 31. v-10. vi., 31. vii-7. viii., 30. viii. 1967 (Dierl-Schacht); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 4 ♂, 24-25. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Fascellina porphyreofusa Hampson, 1895 (Pl. 170: 3, 4) (MoN 1: 37; Pl. 11: 16)

Godavari, 1500 m: 1 ♂, 28. v. 1992 (H. Schnitzler); *id.*, 1600 m: 1 ♂, 19. iii. 1992 (T. Haruta *et al.*); Muldi (Murre), 85°54'E27°20'N, 2200 m: 1 ♀, 9. viii. 1995 (M. Hreblay & T. Csorvari). Coll. ZFMK. Kathmandu Valley, Godavari 1600-1800 m: 2 ♂, 7/12. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

As many other species in the genus *Fascellina*, *F. porphyreofusa* also shows strong seasonal variation. The female figured belongs to the wet-season form (as the type in coll. BMNH does), without pale grey marginal area of forewings, apex and costal patch, but with silvery postmedial lines and suffusion of silvery scales distally to them (for dry-season form see MoN, Pl. 11: 16).

Fascellina chromataria Walker, 1860 (MoN 3: 28; Pl. 72: 20)

Royal Chitwan Nat. Park, 240 m: 10 ♂, 21-23. vi. 1993 (M. Hreblay & G. Csorba); Dhumre, Bimal Nager, 500 m: 1 ♀, 29-30. iii. 1995 (L. Bódi & G. Macranczy). Coll. ZFMK.

****Fascellina inornata*** Warren, 1893 (Pl. 170: 5, 6)

Fascellina inornata Warren, 1893, *Proc. zool. Soc. Lond.* **1893** (2): 399

Fascellina fuscoviridis Warren, 1896, *Novit. zool.* **3**: 320, **syn. n.**

Fascellina pinratanae Inoue, 1992, *Bull. Fac. domest. Sci. Otsu Univ.* **28**: 181, figs 78, 79, **syn. n.**

Godavari, 1500 m: 1 ♀, 3. v. 1992 (H. Schnitzler). Coll. ZFMK.

Synonymy of *fuscoviridis* and *inornata* already stated by Scoble *et al.*, 1999: 389, based on unpublished data of the BMNH card index. Another striking example of seasonal variation in this genus, both forms having been described as distinct species before. *F. fuscoviridis* with predominantly green hindwings and lacking the silvery scaling of typical *inornata* is the dry-season form. The species also occurs in N. Thailand and N. Vietnam and has been described as *F. pinratanae* Inoue, 1992, again. Males from the latter region have a complete, green, postmedial band crossing the forewings (instead of a large, oval, green patch close to the apex in typical *inornata*), so *pinratanae* may be retained as subspecific name.

Plagodis reticulata Warren, 1893 (MoN 1: 38; 3: 29; Pl. 12: 7)

E. Nepal, Thodung 3100 m: 3 ♂, 24-25. v. 1962 (G. Ebert & H. Falkner); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 2 ♂ 1 ♀, 22-25. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Plagodis inustaria (Moore, 1868) (MoN 1: 38; 3: 29; Pl. 12: 8)

Godavari, 1600 m: 1 ♂, 24. iii. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2000 m: 1 ♂, iii-iv 1991 (*ex coll.* A. Schintlmeister); Mt Phulchouki, 2070 m: 1 ♂, 2. iv. 1992 (T. Haruta *et al.*); Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993; Ganesh Himal, vic. Sunpati, 2330 m: 1 ♂, 13. vi. 1993; Solu Khumbu Himal, vic. Jiri, Bhandar, 2125 m: 1 ♂, 6. vii. 1993 (M. Hreblay & G. Csorba); Dhaulagiri Himal, vic. Lebang, 2400 m: 1 ♂, 23. iii. 1996 (L. Bódi & G. Macranczy); Annapurna Himal, vic. Pisang, 3150 m: 2 ♂, 11. vi. 1996 (M. Hreblay & C. Szabóky). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 5 ♂, 3, 7. vi., 1, (2), 5. viii. 1967 (Dierl-Schacht); Bhandar, beneath Thodung 2200 m: 3 ♀, 3-4. viii. 1964 (W. Dierl). Coll. ZSM.

Pseudopanthera himalayica (Kollar, [1844]) (MoN 1: 27; Pl. 8: 2)

Solu Khumbu Himal, vic. Lukla, Bupsa, 2300 m: 2 ♂, 3. vii. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Kathmandu Valley, Godavari, 1600-1800 m: 13 ♂ 1 ♀, 30. v-10. vi. 1967 (Dierl-Schacht); Jiri, 2000 m: 3 ♂, 10-13. viii. 1964 (W. Dierl); Pultschuk 2300-2500 m: 1 ♂, 15. vi. 1967 (Dierl-Forster-Schacht); Bhandar, beneath Thodung 2200 m: 5 ♂, 4-5. viii. 1964 (W. Dierl); Likhu-Khola-valley, 1700 m: 1 ♂, 4. vi. 1962 (G. Ebert & H. Falkner); C. Nepal, Kali-Gandaki-valley, Kalopani Dhumpu 2500 m: 1 ♂ 2 ♀, 5-7. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

P. himalayica has male genitalia typical for Hypochrosini.

Leptomiza calcearia (Walker, 1860) (MoN 1: 38; Pl. 12: 5)

Godavari, 1600 m: 1 ♀, 14. iii. 1992 (T. Haruta *et al.*); Jiri, 2200 m: 1 ♀, 3. vi. 1992 (H. Schnitzler); Taplejung Area, Tambowa 2115 m: 1 ♂, 12. x. 1994 (M. Hreblay & T. Csovari). Coll. ZFMK. Jiri, 1900 m: 1 ♂, 18. v. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

Diagnosis see next species.

****Leptomiza dentilineata*** (Moore, 1888), **sp. rev.** (Pl. 170: 9, 10)

Selenia dentilineata Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr. W. S. Atkinson* (3): 228

E. Nepal, Solu Khola valley, Chialsa, 2700 m: 1 ♂ 1 ♀, 24. iv-1. v. 1964 (W. Dierl). Coll. ZSM.

Further material examined. Lectotype, here designated for reason of nomenclatural stability: ♂, "Darjeeling, Coll. Atkinson" (printed label)–"*Selenia dentilineata* type Moore" (handwritten label)–"Typus" (red, printed label)–"Origin." (pink, printed label). Coll. MNHU. (Fig. 1437). Paralectotypes: 1 ♂, Darjeeling, 7000ft., Coll. Atkinson; 2 ♂, Darjeeling, Coll. Atkinson. Gen. prep. No. 2072-DS. Coll. MNHU; 1 ♂, Darjeeling, 7000ft., Moore Coll., 94-106. Coll. BMNH. N. E. India, Darjeeling, 2100 m: 1 ♀, 17-20. vi. 1987; *id.*, Tigerhill, 2400 m: 1 ♂, 3. vii. 1986; 1 ♀, 19-28. vi. 1987; 1 ♀, 29-31. viii. 1988 (W. Thomas). Coll. ZFMK.

Distinguished from *L. calcearia* by smaller size, the termen of forewing being only very shallowly incurved beneath apex (deeply incurved two times and dentate on M_1 and M_3 in *calcearia*), termen of hindwing rounded rather than tailed on M_3 . Large, round, yellowish discoidal spot of *calcearia* not present in *dentilineata*. Silvery white dentate postmedial and waved antemedial lines of the same colour present in both species, sometimes obscured and inconspicuous as in the two Nepalese specimens. These differences are probably seasonal variations. Male genitalia (Figs 1434, 1436) of the same type, but different as follows: valves in *calcearia* longer and narrower, with a pair of small globular structures at base. These are lacking in *dentilineata*. Aedeagus vesica strongly bulbous basally in both species, scobinate and partly very shortly dentate in *dentilineata*, covered with longer spines basally in *calcearia*. The latter, in addition, has two diverticula, arising more distally, each covered with a row of even stronger spines laterally.

Polyscia argenteilinea (Moore, 1868), **comb. n.** (MoN 5: 15; Pl. 130: 1)

Taplejung Area, Lal Kharka, 2. 250 m: 2 ♂, 10. x. 1994 (M. Hreblay & T. Csovári). Coll. ZFMK. Jiri, 2000 m: 1 ♂, 10. viii. 1964 (W. Dierl), Khola valley, Sete, 2500 m: 1 ♂, 24. ix. 1962; Helmuarea, Gusum Banyang 2600 m: 5 ♀, 1-5. ix. 1967; Bhandar, beneath Thodung, 2200 m: 1 ♀, 2. vii. 1964 (W. Dierl); Seta, above Likhu-Khola-valley, 24. ix. 1962 (Diesselhorst); Pultschuk, 2300-2500 m: 1 ♀, 16. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Previously treated as a member of the genus *Pseudomiza* Butler, which, however, belongs to the Lithinini (see p. 110). *P. argenteilinea* doubtlessly belongs to the Hypochrosini and is being transferred to *Polyscia* Warren, 1896 (type-species: *P. ochrilinea* Warren, 1896) with which it agrees in facies and genitalia structures (Fig. 1433) (see Holloway [1994]: 38, for generic definition, fig. 70 for male genitalia of *P. viridispurca* Prout, 1927). Especially the shape of the furca-arms is distinctive.

****Dissoplaga flava*** (Moore, 1888) (Pl. 170: 8)

Cimicodes flava Moore, 1888, *Desr. new Indian lepid. Insects Colln late Mr. W. S. Atkinson* (3): 233, pl. 8, fig. 4 (= *sanguiflua*).

Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 1. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Corymica specularia Moore, 1868 (MoN 1: 40; 3: 30; Pl. 12: 21)

Godavari, Mt Phulchouki, 2700 m: 1 ♂, 25-26. v. 1989; Jiri, 2200 m: 1 ♂ 1 ♀, 2. vi. 1992 (H. Schnitzler); Ganesh Himal, vic. Sunpati, 2330 m: 4 ♂, 13. vi. 1993; Solu Khumbu Himal, Lukla, 2800 m: 1 ♂, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Pultschuk, 2300-2500 m: 7 ♂ 7 ♀, 12-15. vi. 1967 (Dierl-Forster-Schacht); Helmu area, Gusum Banjang 2600 m: 6 ♂, 8 ♀, 1-4. ix. 1967 (W. Dierl); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 7 ♂ 3 ♀, 12. v., 20-23. v., 7. vi. 1973; Kali-Gandaki-valley, Kalopani-Dhumpu 2500 m: 1 ♂ 4 ♀, 30. v-8. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

****Corymica vesicularia*** (Walker, 1866) (Pl. 170: 24, 25)

Caprilia vesicularia Walker, 1866, *List Specimens lepid. Insects Colln Br. Mus.* 35: 1569

Royal Chitwan Nat. Park, 240 m: 1 ♂ 1 ♀, 21-23. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK.

Very similar to *C. specularia*, but wings shorter and broader, outer margin of forewing more distinctly dentate on vein M_1 , hindmargin on outer half more strongly incurved, costal streak lacking.

Corymica spatiosa Prout, 1925 (MoN 1: 40; Pl. 12: 16)

Godavari, 1500 m: 1 ♀, 25. v. 1992 (H. Schnitzler); Godavari, 1600 m: 1 ♀, 13. iii. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2000 m: 1 ♀, iii-iv 1991 (*ex coll.* A. Schintlmeister); Mt Phulchouki, 2150 m: 1 ♀, 10. v. 1989; Jiri, 2200 m: 1 ♀, 3. vi. 1992 (H. Schnitzler); Mahabharat range, vic. Ghorahi, 1700 m: 1 ♂, 22. iii. 1996 (L. Bódi & G. Macrancy). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 1 ♂ 4 ♀, 2. vi., 5. vi., 1. viii., 6. viii., 3. ix. 1967; Kathmandu Chauni, 1400 m: 1 ♀, 31. viii. 1967; Prov. Chisapani Garhi, Chisapani Garhi 1600 m: 1 ♂ 1 ♀, 11-15. vii. 1967 (Dierl-Schacht); Bhandar, beneath Thodung, 2200 m: 1 ♀, 2-5. viii. 1964 (W. Dierl). Coll. ZSM.

Of *Corymica immaculata* Warren, 1897 (MoN 1: 40; Pl. 12: 22) and *Corymica deducta* (Walker, 1866) (MoN 2: 114; 3: 30; Pl. 60: 26) no Nepalese specimens could be traced in the collections studied.

Ourapterygini***Ourapteryx dierli*** Inoue, 1994 (MoN 4: 130; Pl. 123: 9)

W. Nepal, Surkhet, 1000 m: 2 ♂, 25. vii. 1996 (M. Hreblay & B. Szin). Coll. ZFMK.

Since its description in 1994, this conspicuous species has only been known from the type-locality in C. Nepal, Kali-Gandaki-valley. The above-mentioned two specimens extend its range of distribution to W. Nepal. Also the rather low elevation of the collecting site is remarkable.

* *Ourapteryx excellens* Butler, 1889 (Pl. 171: 16)

Urapteryx [sic] *excellens* Butler, 1889, *Illust. typical Specimens Lepid. Heterocera Colln Br. Mus.* 7: 20, 99, pl. 135, fig. 13.

Annapurna Himal, 2 km NW Kaisang, 3900 m: 1 ♂, 21. vi. 1996 (M. Hreblay & C. Szabóky); W. Nepal, Surkhet, 1000 m: 1 ♀, 25. vii. 1996 (M. Hreblay & B. Szin). Coll. ZFMK. C. Nepal, Kali-Gandaki-valley, Kalopani Dhumpu 2500 m: 1 ♂, 3. vi., 1 ♂, 5. vi., 1 ♀, 6. vi. 1973; *id.*, Choklopani N Tukche, 2600 m: 1 ♀, 24. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

Nepalese specimens of *O. excellens* are much darker than topotypical specimens from Kashmir: the ground colour is rather greyish-white than pure white, the transverse lines and the discoidal streaks are wider, the postmedian area of the forewings more heavily striated. In the hindwings a conspicuous postmedian line is present (more or less reduced in topotypical specimens), there is also ample striation on anterior and postmedian areas and the cubital veins are more strongly lined with dark brown. This Western Himalayan species obviously reaches its eastern border of distribution in C. Nepal. It occurs together with *O. dierli* Inoue in Kali-Gandaki.

* *Ourapteryx chrisbahri* sp. n. (Pl. 171: 13, ♂ holotype)

Forewing length 22–25 mm (♂). Very similar to *O. contronivea* Inoue, 1993. Ground colour a little paler yellowish white, the wings somewhat less striated, the transverse lines narrower. Tail of hindwings slightly shorter and narrower, but two red spots at base of the tails present as in *contronivea*. The grey band connecting both spots a little weaker. Frons of the same colour, setal comb on third sternite lacking as in *contronivea*. The only reliable character to separate both species with certainty is found in the male genitalia.

Male genitalia (Fig. 1448). Uncus shorter, gnathus with medial dentate plate much wider, valves broader than in *contronivea*. Furca of “normal” shape, gently curved, moderately thickened apically, terminating with a dense row of spines. In *contronivea* the furca is strongly modified, very narrow, strap-like, strongly sclerotized, apically pointed (beak-shaped) with a few small spines subapically (see Inoue, 1995: 128, fig. 809). Aedeagus with a cluster of very small spines and a dense mass of much longer ones (as in *contronivea*).

Female unknown.

Holotype, ♂, “Indien, WB [West Bengal], Darjeeling, 6. vii. 1988, Nat. Coll., via W. Thomas”. Gen. prep. No. 2079-DS. Coll. ZFMK. Paratypes. Indien, WB, Darjeeling, Tiger hill 2400 m: 1 ♂, 19-20. vi. 1987 (W. Thomas), gen. prep. Bonn-L (H. Inoue fec.). Coll. ZFMK. Nepal, Kathmandu, Mt Phulchouki 2075 m: 1 ♂, 4. viii. 1991 (T. Haruta *et al.*), genitalia slide HI-15032. Coll. H. Inoue (this specimen will be transferred to coll. BMNH).

Derivatio nominis. This new species is dedicated to Mr Chris Bahr, Wentorf, Germany, who generously supported the taxonomic work of the author and forthcoming nature conservation projects in Nepal.

* *Ourapteryx inouei* sp. n. (Pl. 171: 14, ♂ holotype; 15, ♀ paratype)

Length of forewing 22–25 mm (♂ ♀). Similar to *O. caecata* Bastelberger from Taiwan in appearance. Ground colour dusted white, transverse lines, discoidal streak and striation grey, suffused with yellow scales. Fringe of forewings yellow, with a very thin black basal line, of hindwings orange-red. Striation densest at submarginal area of hindwings. Hindwing-tails very short, but rather broad at base. Two spots close to the base of the tails, the anterior rather large, red, surrounded with black scales, the posterior small, black, streak-like, rarely with a few red scales. The spots are connected by a grey band. Antennae brownish, scaled white dorsally, frons

white with an orange-brown to light brown transverse band towards vertex, the latter pure white. Thorax white above and beneath, legs with a few black scales. Hindtibiae dilated, with a hair-pencil. Abdomen white, with setal comb on third sternite and a strong sterno-tympanal process on sternite 1+2.

Male genitalia (Fig. 1449). Uncus short and stout, gnathus with lateral arms weak, central plate small. Socii large. Valves rather short, evenly rounded and tapering towards apex. Furca developed on right side, short, extremely stout, spined interiorly over all its length. Aedeagus vesica very bulbous at base, with an elongate group of about 20 strong and not deciduous spines of differing length, situated more terminally.

Female genitalia (Fig. 1450). Lamella antevaginalis symmetrical, irregularly kinkled, with ostium situated centrally. There is a small, roundish postvaginal plate. Colliculum small, short, cylindrical, ductus bursae membranous, very short, bursa with its posterior part densely fluted and sclerotized, reaching back to the colliculum, anterior half membranous, signum of usual shape, slightly asymmetrical.

Holotype, ♂, Nepal, Ganesh Himal, Somathang, 3270 m, 15. vi. 1993, leg. M. Hreblay & G. Csorba. Coll. ZFMK. Paratypes. Solu Khumbu Himal, Lukla 2800 m: 1 ♂, 2. vii. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer; Dolakha Prov., Jiri, 2200 m: 1 ♀, 6-14. vi. 1994 (H. Schnitzler), gen. prep. No. 2080-DS. Coll. ZFMK; N. E. Nepal, Tamur valley, between Walunchung & Chowki, 2450 m: 1 ♂, 28. vii. 1963 (T. Haruta *et al.*). Coll. H. Inoue (the specimen will be transferred to coll. BMNH); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 1 ♂, 25. v. 1973 (Dierl-Lehmann), gen. prep. no. 2074-DS. Coll. ZSM; India, Uttar Pradesh, 15 km N Joshimath. Ghangaria, 3050 m: 1 ♂, 27-31. vii. 1993 (Kautt & Weisz), *ex coll.* Schäfer, coll. SMNS.

Geographical range. N. W. India (Uttar Pradesh), C. & E. Nepal.

Derivatio nominis. This species is dedicated to Prof. H. Inoue, Iruma City, Japan, who described the majority of new species in this genus, not to mention his uncountable contributions to the taxonomy of other genera and families in the field of heterocerous Lepidoptera.

Baptini

For tribal definition see Holloway [1994]: 58. Belyaev (1998: 440) describes a new tribe Deveniliini for reception of the genera *Devenilia* Wehrli, 1937, *Crypsicometa* Warren, 1894, *Synegia* Guenée, [1858] and *Platycerota* Hampson, 1893. All except *Devenilia* are included in the concept given by Holloway [1994] for the tribe Baptini, and the latter also fits well into it. Belyaev does not make an attempt to separate his new tribe from the Baptini *sensu* Holloway [1994] the definition of which obviously was unknown to him. Therefore the tribe Deveniliini Belyaev, 1998, is subordinated here to the Baptini *sensu* Holloway [1994].

Prometopidia conisaria Hampson, 1902 (MoN 4: 18; Pl. 100: 11)

Jiri, 2000 m: 1 ♂ 1 ♀, 5. iv. 1964 (W. Dierl). ZSM Genitalprp. No. G 424 (♂). Coll. ZSM.

The Jiri specimens mentioned above agree well with the lectotype designated and figured by Yazaki (1995, Pl. 128: 5), in having the transverse lines rather punctulate, not continuous as in the Godavari specimen figured on Pl. 100: 11. It has not become clear yet, if the striking differences are seasonal or if two closely related species may be involved.

Nothomiza costinotata (Warren, 1893) (MoN 5: 15; Pl. 129: 24)

Annapurna Himal, Bagartchhap, 2200 m: 1 ♀, 9. vi. 1996 (Hreblay & Szaboky). Coll. ZFMK. Kyumnu-Khola-valley, vic. Gandrung, 2360 m: 1 ♂, 20. v. 1973 (Dierl & Lehmann); Kali-Gandaki-valley, Kalopani-Dhumpu, 2500 m: 1 ♂, 1. vi., 1 ♀, 4. vi. 1973 (Dierl & Lehmann); Helmu area, Gusum Banjyang 2600 m: 1 ♂ 1 ♀, 5. ix. 1967 (W. Dierl). ZSM Genitalprp. No. G 413 (♂); Pultschuk 2300-2500 m: 1 ♀, 16. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Nothomiza cinerascens (Moore, 1888) (MoN 3: 29; Pl. 72: 18)

Mt Phulchouki, 2700 m: 1 ♂ 2 ♀, 25-26. v. 1989 (H. Schnitzler); Solu Khumbu Himal, Lukla, 2800 m: 1 ♂ 2 ♀, 26. vi. 1993; Ganesh Himal, Somathang, 3270 m: 2 ♀, 15. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Helmu area, Gusum Banjyang 2600 m: 4 ♂, 1 ♀, 1-5. ix. 1967, including ZSM Genitalprp. No. G 411 (♂); Pultschuk, 2300-2500 m: 1 ♀, 15. vi. 1967 (Dierl-Forster-Schacht); Thodung, 3100 m: 3 ♂, including ZSM Genitprp. No. G. 290, 4 ♀, 22. v-3. vi. 1962; Ting-Sang-La, 3800 m: 2 ♂ 2 ♀, 3. v/6. v. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

Syntypes in MNHU and BMNH, lectotype not yet designated. *Nothomiza* Warren, 1894, (type-species: *Cimicodes costalis* Moore, 1868) as it is defined now, is a very diverse genus containing several distinct species-groups. It needs revision.

****Heterostegania lunulosa*** (Moore, 1888) (Pl. 171: 1)

Anisodes lunulosa Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr. W. S. Atkinson*: 250, pl. 8, fig. 8.

C. Nepal, Kyumnu-Khola-valley, vic. Gandrung, 2360 m: 1 ♂, 13. v. 1973; *id.*, 1 ♂, 21. v. 1973 (Dierl-Lehmann); Nepal, without locality, 1 ♂. Coll. ZSM. Ganesh Himal, Nesukharka S Somdang, 2700 m: 1 ♀, 20-21. v. 1995 (Fábián & L. Ronkay). Coll. Sommerer.

Collected sympatrically with the following species. Inoue (1982: 168) recorded *lunulosa* from Nepal, but he figured (*l. c.*, fig. 35A) the following species, *H. nigrofusa* Warren. For diagnosis see next species.

Heterostegania nigrofusa Warren, 1893 (Pl. 171: 2, ♀) (MoN 3: 20; Pl. 69: 23)

Thodung, 3100 m: 1 ♂, 29. v. 1962 (ZSM Genitalprp. No. G 474); *ditto*, 1 ♀, 23. v. 1962 (G. Ebert & H. Falkner); Kyumnu-Khola-valley, vic. Gandrung, 2360 m: 1 ♂, 22. v. 1973; *ditto*, 2 ♂, 25. v. 1993 (Dierl-Lehmann). Coll. ZSM.

H. nigrofusa is slightly smaller and much paler than *H. lunulosa*, at least the basal and marginal areas of the wings. The postmedian line is more strongly excurved on the cubital veins, the medial area is broader in *lunulosa*. Males of *nigrofusa* (always?) have a large, black patch in the forewing postmedial, also on the cubital veins. This patch is (always?) lacking in the female (see Pl. 171: 2) which also has the medial area of the wings rather more brownish than the males. The male genitalia of both species are also clearly different (Figs 1446, 1447): uncus laterally flattened, dorso-ventrally expanded in *nigrofusa*, in *lunulosa* rather stick-like, strongly bent ventrad and dorso-ventrally flattened in the apical part. Broad basal portion of uncus much larger in *lunulosa*. Costa of valve broadly expanded and bent outwardly in *nigrofusa*, narrower and rather straight in *lunulosa*. Aedeagus hooked apico-ventrally in *nigrofusa*, only slightly produced in *lunulosa*, number and arrangement of cornuti also clearly different.

Platycerota homoema (Prout, 1926), **comb. n.** (MoN 1: 26; 5: 11; Pl. 7: 22)

E. Nepal, Jiri, 2200 m: 1 ♂, 3. vi. 1992 (H. Schnitzler). Coll. ZFMK. Solu Khumbu Himal, Lukla 2800 m: 1 ♂, 2. vii. 1993 (M. Hreblay & G. Csorba); E. Nepal, Surke Danda, NE Suketar, LaliKharka, 2600 m: 1 ♀, 18. v. 1997 (Hreblay & Szabóky). Coll. Sommerer. Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 8. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

The genera *Platycerota* Hampson, 1893 and *Crypsicometa* Warren, 1894, **syn. n.** are synonymized following the proposal of Holloway ([1994]: 81) who compared the genitalia characters of the type species of both genera. Further comparative studies by the author confirmed this treatment. In addition to the type-species of *Crypsicometa*, *incertaria* Leech, 1891, **comb. n.**, the following species are also transferred to *Platycerota*: *particolor* Warren, 1896, **comb. n.** (*Orthobrachia*) (= *Crypsicometa ochracea* Inoue, 1971, **syn. n.**), *armeniaca* Inoue, 1992, **comb. n.** The probable synonymy of *particolor* and *ochracea* had already been suggested by Yazaki, 1991, and now could be confirmed by the author who checked the type-material of *particolor* (two female syntypes, Khasi Hills, Assam, coll. BMNH; for genitalia see

Fig. 1445) and an additional male (Fig. 1444) from the same locality. The genus *Heterostegania* Warren, 1893, is also closely related and may be synonymous, but is treated here as distinct until more thorough studies may help to decide this question.

Platycerota vitticostata (Walker, [1863]) (MoN 3: 21; Pl. 70: 3)

Prov. Chisapani Garhi, Chisapani Garhi 1600 m: 1 ♂, 11-15. vii. 1967 (Dierl-Schacht). Coll. ZSM.

Eurytaphria undilineata Warren, 1893 (MoN 4: 18; Pl. 100: 14)

Prov. Chisapani Garhi, Bhainse Dobhan 730 m: 1 ♀, 16-20. vii. 1967 (Dierl-Schacht). Coll. ZSM.

Rhynchobapta cervinaria (Moore, 1888) (MoN 5: 11; Pl. 129: 22, as *Rhynchobapta*)

Solu Khumbu Himal, Lukla, 2800 m: 2 ♀, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Jiri, 2000 m: 1 ♂, 8. iv. 1964; Helmuarea, Gusum Banjyang 2600 m: 1 ♀, 5. ix. 1967 (W. Dierl); Pultschuk 2300-2500 m: 1 ♀, 15. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Strongly bipectinate antennae as in this genus are quite rare in the Baptini, but genitalia characters clearly indicate *Rhynchobapta* to be a true member of this tribe.

* ***Eurybeidia languidata*** (Walker, 1862) (Pl. 171: 4)

Abraxas languidata Walker, 1862, *List Specimens lepid. Insects Colln Br. Mus.* 24: 1122

Kathmandu Valley, Godavari 1600-1800 m: 1 ♀, 5. vi. 1967 (Dierl-Schacht). Coll. ZSM.

As already pointed out by Wehrli (1939: 269) in his (invalid) description of *Eurybeidia*, the two species included by him differ largely from the rest of the *Obeidia* species: the wings are broader, R_2 is stalked with R_{3-5} (a character of the tribe Baptini). He also found the genitalia being strongly different compared with those of other *Obeidia*. Indeed, the male genitalia of *languidata* and the related *E. largeteaui* Oberthür agree reliably with the definition of the tribe Baptini given by Holloway [1994]: 58, though showing some derived features. *Eurybeidia* should be placed within the Baptini in future.

Lithinini

* ***Pseudomiza cervina*** (Warren, 1893), **sp. rev.** (Pl. 171: 5, 6)

Heteromiza cervina Warren, 1893, *Proc. zool. Soc. Lond.* 1893: 405

C. Nepal, Kyumnu-Khola-valley, vic. Gandrung, 2360 m: 1 ♂, 16. v. 1973 (Dierl-Lehmann). Coll. ZSM.

The statement made by Holloway [1994]: 38, that *Pseudomiza* Butler, 1889 (type-species: *castanearia* Moore, 1868; junior objective synonym: *Heteromiza* Warren, 1893) should rather be considered as member of the tribe Lithinini could be confirmed by my own studies. *P. castanearia* and also the closely related *P. cervina* (Warren, 1893) have "facies, build, male antennae and genitalia more typical of the Lithinini". Scoble *et al.* (1999: 797) list *P. cervina* as a synonym of *P. castanearia* which is not correct: both species are not only clearly differing in size and ground colour, but also the male genitalia exhibit specific differences (see Figs 1453, 1454): those of *cervina* are distinctly smaller, the saccus less extended, the aedeagus vesica bears a long distal cornutus and a more proximal group of three smaller cornuti, whereas in *castanearia* the distal cornutus is even longer, but there is only a single proximal one. Otherwise, genitalia structure is rather similar in both species. Presently, the genus *Pseudomiza* should be restricted to the two taxa mentioned above.

"***Pseudomiza***" ***obliquaria*** (Leech, 1897) (MoN 1: 38; Pl. 12: 4)

Godavari, 1600 m: 1 ♀, 2. iv. 1992 (T. Haruta *et al.*); Annapurna Himal, vic. Tal, 1700 m: 1 ♀, 8. vi. 1996 (Hreblay & Szaboky). Coll. ZFMK. Godavari, 1600-1800 m: 1 ♂, 1. vi. 1967 (Dierl-

Forster-Schacht); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 4 ♂ 1 ♀, 19-25. v. 1973; Kali-Gandaki valley; Choklopani-Dhumpu 2500 m: 2 ♀, 15. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

This widespread species is treated as a member of the genus *Pseudomiza* at present. It belongs, however, in fact to the tribe Hypochrosini, as is clearly demonstrated by the male genitalia (Fig. 1435). It may be next to *Dissoplaga* Warren, 1894 (type-species *sanguiflua* Moore = *flava* Moore) which is most similar in wing-shape, pattern and antennae, but the rather strong differences of the genitalia characters negate transferring *obliquaria* to that genus. The description of a new genus for *obliquaria* and the closely related "*Pseudomiza*" *punctinalis* Beyer, 1958, is in preparation by the author.

Scionomia solitaria Yazaki, 1992 (MoN 1: 32; Pl. 11: 4)

Helmu area, Gusumbanjyang, 2600 m: 1 ♂ 1 ♀, 1/2. ix. 1967 (W. Dierl). ZSM Genitalprp. No. G 422 (♂); Jubing, 1600 m: 1 ♀, 2. v. 1964 (W. Dierl). Coll. ZSM.

The description was based on one male from Godavari. There are two additional specimens from Darjeeling in coll. MNHU. A female has recently been collected in N. Vietnam (coll. ZFMK).

Anonychia grisea (Butler, 1883) (MoN 3: 22; Pl. 70: 6, as *exilis*)

Anonychia exilis Yazaki, 1994, *Tinea* 14 (Suppl. 1): 22, pl. 70, fig. 6, **syn. n.**

Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993; Solu Khumbu Himal, Lukla, 2800 m: 1 ♂, 26. vi. 1993; Solu Khumbu Himal, vic. Jiri, Bhandar, 2125 m: 1 ♀, 6. vii. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. The ZSM collection contains a large number of *Anonychia* "*grisea*", in fact a mixture of true *grisea* and *pallida* Warren, **sp. rev.**, which have not yet been separated.

Reasons for synonymizing *exilis* with *grisea* are given with the next species. For differences between *grisea* and *pallida*, including those of the male genitalia, see Yazaki, 1994: 22; figs 369, 367.

Anonychia pallida Warren, 1897, **sp. rev.** (MoN 1: 27; 3: 22; Pl. 8: 3, as *grisea*)

Anonychia pallida Warren, 1897, *Novit. zool.* 4: 102

Dhaulagiri Himal, vic. Lebang, 2450 m: 1 ♂ 1 ♀, 24. iii. 1996 (L. Bódi & G. Macrancy); W. Nepal, Dhimi, 1500 m: 1 ♀, 5. xi. 1996 (M. Hreblay). Coll. ZFMK. Pultschuk, 2300-2500 m: 1 ♀, 17. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Though Warren described *pallida* comparing it with *grisea*, the name has not been used subsequently; neither Prout (1915: 338) nor Wehrli (1940: 361) even mention it. They probably considered *pallida* to be an mere variation of *grisea*. Scoble *et al.* (1999: 45) treat *pallida* as a synonym of *grisea*. Yazaki (1992: 27; 1994: 22, figs 367, 369) figured the male genitalia of both taxa and described specific differences, but he misidentified *pallida* as *grisea* and described *grisea* again (as *exilis*). Both taxa are closely related, but obviously distinct, as they occur sympatrically and synchronously, *e.g.* at Simla (Punjab region), the type locality of *pallida* (coll. ZFMK).

Anonychia diversilinea Warren, 1897 (MoN 2: 112; 3: 21; Pl. 60: 15)

Mahabharat range, vic. Ghorahi, 1700 m: 1 ♂, 22. iii. 1996 (L. Bódi & G. Macrancy). Coll. ZFMK. E. Nepal, Pultschuk, 2300-2500 m: 1 ♀, 15. vi. 1967 (Dierl-Forster-Schacht); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 2 ♂ 1 ♀, 22/24. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Anonychia lativitta (Moore, 1888) (MoN 3: 22; Pl. 70: 5)

Ganesh Himal, Somathang, 3270 m: 2 ♂ 1 ♀, 15. vi. 1993; GaneshHimal, Yure Karka, 3370 m: 1 ♀, 14. vi. 1993; Solu Khumbu Himal, vic. Lukla, 3200 m: 2 ♀, 27. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Khumjung, 3800 m: 15 ♂, 16 ♀, 17. vi-15. vii. 1964 (W. Dierl);

Khumbu, Khumdzung 3900 m: 34 ♂, 24 ♀, 21. vi-19. vii. 1962; Thodung, 3900 m: 1 ♂ 1 ♀, 28. v/30. v. 1962 (G. Ebert & H. Falkner); C. Nepal, Dhaulagiri SE, 3700 m: 3 ♂ 2 ♀, 10-13. vi. 1973; Kali-Gandaki-valley, Choklopani N Tukche, 2600 m: 1 ♂, 20. vi. 1973; Syang-Khola-valley, W Jomosom, 3950 m: 2 ♂, 3-4. vii. 1973 (Dierl-Lehmann). Coll. ZSM.

There are further two species of *Anonychia* in Nepal which could not yet be identified with certainty. One of them is similar to *A. violacea* Moore, 1888, described from Darjeeling, but the type in coll. MNHU still has to be compared.

“Entomopteryx” obliquilinea (Moore, 1888) (MoN 1: 37; 3: 28; Pl. 12: 1)

Godavari, 1600 m: 1 ♂, 29. viii. 1992 (T. Haruta *et al.*); Dhumre, Bimal Nager, 500 m: 1 ♂, 29-30. iii. 1995 (L. Bódi & G. Makranczy). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 1 ♂ 1 ♀, 7/9. vi.; 3 ♂ 3 ♀, 31. vii-7. viii. 1967 (Dierl-Forster-Schacht); Sun-Khosi-valley, 2150 m: 1 ♂ 1 ♀, 1-2. v. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

As Holloway [1994]: 96 pointed out, the genus *Callerynnis* Warren, 1894 (type-species: *Erinnys combusta* Warren, 1893), must be treated as junior subjective synonym of *Entomopteryx* Guenée, [1858] (type-species: *E. amputata* Guenée, [1858]). *“E.” obliquilinea*, however, does not share the very typical genitalic features which unites the two species mentioned above and a third one, *E. statheuta* Prout, 1932. The question, if a new genus has to be described for reception of *obliquilinea* or if such a genus already exists has not yet been solved.

* ***Ocoelophora basipuncta*** (Moore, 1868) (Pl. 171: 7)

Endropia basipuncta Moore, 1868, *Proc. zool. Soc. Lond.* **1867** (3): 621

Taplejung area, Tambowa 2. 115 m: 1 ♂, 12. x. 1994 (M. Hrebly & T. Csövari). Coll. Sommerer.

Further material examined. Lectotype, here designated for reason of nomenclatural stability: ♂, “Bengal”-“*Endropia basipuncta* Moore, Type” (both handwritten labels)-“Moore Coll., 94-106.” (printed label)-gen. prep. No. 2077-DS (BMNH Geometridae genitalia slide no. 20290). Coll. BMNH. (Fig. 1455).

The description was based at least on one male and one female. There is a female, labelled as “Moore Type”, in the BMNH collection (G. Martin, *in litt.*) which is considered being one of the syntypes, though collected in Darjeeling (type-locality given is “Bengal”). As in many other cases there is no type material formerly belonging to the A. E. Russel collection – as mentioned in the description. According to genitalia structures, *Ocoelophora* clearly belongs to the Lithinini. Male genitalia of *basipuncta* (Fig. 1452) are very conspicuous in having the valve costa apically extended and obliquely flattened, the latter character not visible in the figure. The uncus is slightly broadening distally, the central part of the gnathus broad and strongly dentate. There are no furcal arms; the saccus is incurved medially. Aedeagus stout, dorso-ventrally flattened, vesica with a field of scobination and a semi-circle of spines, gradually increasing in size and directed proximad.

***Ocoelophora* sp.** (MoN 3: 28; Pl. 72: 3, as *lentiginosaria*)

Nepal, Thodung 3100 m: 1 ♂, 24. v., 1 ♂, 29. v., 1 ♂ 1 ♀, 30. v. 1962, G. Ebert & H. Falkner. Coll. ZSM; *id.*, 1 ♂, 27. v. 1962. Coll. Sommerer.

O. lentiginosaria (Leech, 1891) has been described from Japan, it occurs in Taiwan (ssp. *festae* Bastelberger, 1911) and has also been recorded from Korea (ssp. *coreata* Wehrli, 1940) and continental China (Sichuan). It has not been checked, however, if all these taxa are really conspecific. Nepalese specimens, as figured by Yazaki, 1993, Pl. 72: 3, are externally and also in the male genitalia clearly different (compared to a Chinese specimen of “*lentiginosaria*”). They may belong to *O. ochreifusca* (Hampson, 1895), described from Bhutan – externally very similar, but known only by a colour slide of the type to the author – or may be undescribed.

Boarmiini

The tribe Boarmiini is treated here in the broad sense proposed by Holloway ([1994]: 167), but only a few genera of particular interest have been studied thus far. These are *Dalima* Moore, 1868, *Mesastrape* Warren, 1894, gen. rev., *Arichanna* Moore, 1868, the former *Medasina*-group of genera and *Calcypa* nom. n. Notes on the rather large number of the remaining ones are under preparation and will be published separately.

Dalima apicata Moore, 1868 (MoN 1: 31; Pl. 9: 6)

Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993; *id.*, NE Sumpati, 2330 m: 2 ♂, 13. vi. 1993 (M. Hreblay & G. Csorba) Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 4 ♂, 1-2. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM, coll. Sommerer. Ganesh Himal, NE Sunpati, 2330 m: 1 ♂ 1 ♀, 13. vi. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

This conspicuous species has been described from "Bengal". Further material examined comes from Sikkim, N. Vietnam and China (coll. ZFMK).

Dalima truncataria (Moore, 1868) (MoN 1: 31; 3: 24; 5: 13; Pl. 9: 8)

Godavari, 1600 m: 1 ♂, 28. iii. 1992; 1 ♀, 2. iv. 1992; 1 ♂, 23. vii. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2700 m: 1 ♂, 25-26. v. 1989 (H. Schnitzler); *id.*, 2000 m: 1 ♀, 10. x. 1991 (excoll. A. Schintlmeister); Jiri, 2200 m: 1 ♀, 31. v. 1992; 1 ♀, 6. vi-14. vi. 1994 (H. Schnitzler). Coll. ZFMK. Bhandar, beneath Thodung, 2200 m: 1 ♂, 5. viii. 1964; Helmu area, Gusum Banjyang 2600 m: 1 ♀, 4. ix. 1967 (W. Dierl). Coll. ZSM. Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 1. vi. 1967 (Dierl-Forster-Schacht); Ganesh Himal, W Thangjet 2300 m: 2 ♂ 1 ♀, 18. ix/23. ix. 1994 (M. Hreblay & T. Csövari). Coll. Sommerer.

Further material examined comes from N. E. India (Sikkim), E. India (Assam, Meghalaya), China (Sichuan) and N. Vietnam (coll. ZFMK), material from Thailand is represented in coll. Sommerer.

Dalima lucens (Warren, 1893) (Pl. 171: 17)

Hololoma lucens Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 396

Solu Khumbu Himal, vic. Lukla, 2800 m: 2 ♂, 26. vi. 1993 (M. Hreblay & G. Csorba); Jiri, 2200 m: 1 ♂, 6. vi-14. vi. 1994 (H. Schnitzler). Coll. ZFMK. Solu Khumbu Himal, Lukla 2800 m: 2 ♂, 26. vi/2. vii. 1993; *id.*, E Lukla, 3200 m: 1 ♂, 27. vi. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

Not recorded or figured in MoN, but Inoue (1982: 171) mentioned one male with unknown data (collected 1963) from Nepal. This species has been described from Sikkim.

Dalima patularia (Walker, 1860) (MoN 1: 31; 3: 24; Pl. 9: 5)

Godavari, 1600 m: 1 ♂, 25. vi. 1992 (T. Haruta *et al.*) Coll. ZFMK. Godavari, 1600-1800 m: 2 ♂ 1 ♀, 2-6. vi. 1967 (Dierl-Forster-Schacht); Sun-Kosi-valley, Todara 2000 m: 1 ♀, 19. viii. 1971 (de Freina). Coll. ZSM.

Dalima schistacearia Moore, 1868 (MoN 1: 31; Pl. 9: 4)

Godavari, 1539 m: 1 ♀, 9-24. v. 1989; *ditto*, 1500 m: 1 ♂, 4. v. 1992 (H. Schnitzler); *ditto*, 1600 m: 1 ♀, 31. iii. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2000 m: 1 ♀, iii-iv. 1991 (*ex coll.* A. Schintlmeister); Ganesh Himal, above Nesim, 2. 720 m: 1 ♂, 21. ix. 1995 (B. Herczig & G. M. László); Ganesh Himal, vic. Thangjet, 2165 m: 1 ♀, 16. x. 1995 (M. Hreblay & L. Bódi). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 4 ♂, 31. v-10. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM. Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 6. vi. 1967 (Dierl-Forster-Schacht); Ganesh Himal, W Thangjet 2300 m: 2 ♂, 23. ix. 1994 (M. Hreblay & T. Csövari). Coll. Sommerer.

The ZFMK material mentioned above (collected in iii–iv and ix) predominantly belongs to the typical light brownish form of *schistacearia*, whereas the dark brown f. *patnaria* Felder & Rogenhofer, 1875, is figured by Yazaki (1992; Pl. 9: 4); this figure probably shows one of the specimens collected in vii. This dark form is also predominant in material from Sikkim in the ZFMK collection, also collected in vii. It seems obvious that *schistacearia* and *patnaria* are seasonal rather than geographical forms or mere variations. More dated material will be necessary to decide this question.

***Dalima warreni* sp. n.** (Pl. 171: 18–20, paratypes; MoN 3: 24; Pl. 70: 12, as *vulpinaria*)

Diagnosis. Length of forewings 23–25 mm (♂ ♀), expanse 40–45 mm. Ground colour lighter or darker brown, often suffused with grey or violet-grey. Both wings more or less irrorated with dark grey scales which also may accumulate into indistinct submarginal bands. In few specimens there is also suffusion with silvery-grey scales, often concentrating near the hindmargin of the forewing and accompanying the transverse bands. The latter are reddish brown, often with a yellowish to olive tinge, the forewing antemedial rather weak, visible only – if present – by the silvery-grey accompanying scales and the costal streak. The medial line obsolete, marked by its costal end only. Postmedial line running from the middle of the forewing hindmargin towards the falcate apex, but acutely angled before reaching it and terminating at three quarters of the costa in a brownish streak like the other lines (in *vulpinaria* the angle of the forewing postmedian is much weaker). Hindwings with a strong medial line, colinear with the forewing postmedial, running through the discal spot or slightly distally of it. Discal spot of forewing black, small, but always visible, that of the hindwings very faint and often obsolete. Margin of hindwings slightly incurved below apex, produced to a small “tail” on Rs (in *vulpinaria* this “tail” is largely reduced, almost invisible). Females differ in having the forewing apex more strongly falcate and the hindwing “tail” a little larger. Underside of both wings much lighter than above, orange yellow, heavily suffused with black atoms, the lines as above, but also blackish, submarginal bands rather distinct. Discal spots of forewings as on upperside, those of the hindwings obsolete. Frons smoothly scaled, dark brown, vertex covered with light grey, larger scales, as the whole thorax dorsally is. Palps short, orange-red except the very small terminal joint which is suffused with black. Thorax beneath covered with long orange-red hair-scales. Male antennae ciliate, each segment ventrally with two groups of ciliae arising from well separated thickenings (Fig. 1461), not arising commonly from short pectinations as in *vulpinaria* (Fig. 1462). Female antennae rather simple, ciliate, but more weakly so as in male. Legs with hindtibia slightly dilated, containing a weak hair-pencil, but no setal comb on third sternite of abdomen traceable, sternotympanal process also not developed (in *vulpinaria* both structures are present). Tympanal openings with moderate laciniae.

Male genitalia (Fig. 1458). Uncus triangular, apically shortly bifurcate. Gnathos strong, lateral arms and triangular terminal plate well developed. Tegumen broad. Valvae tapering towards apex, costa well sclerotized, terminally with an elongated cucullus. There is a sclerotized band connecting the proximal end of the latter with the distal end of the sacculus. Interior margin of sacculus with a few strong spines, otherwise unadorned. Juxta with a heavily sclerotized, apically pointed, medial process. Aedeagus stout, vesica basally with two patches of minute spines. *D. vulpinaria* has the male genitalia generally similar (Fig. 1457) but they are considerably larger and differ mainly in the shape of the sacculus which is elongated and has a strongly dentate interior ridge, and a longer medial process of the juxta, broadening distally.

Female genitalia (Fig. 1460). Bursa copulatrix bean-shaped, proximal part slightly sclerotized with some weak ribbing, probably representing the dilated ductus bursae being as wide as the corpus. Signum modified: small, narrow, rounded on proximal side, bidentate at the opposite side. A typical colliculum present, surrounding of antrum without conspicuous sclerotization, only a small rounded band posterior to the colliculum visible. Ovipositor slightly elongated, cylindrical. Female genitalia of *vulpinaria* (Fig. 1459, holotype) much larger, bursa elongate, becoming narrower towards the ductus bursae which is also largely dilated, but more strongly sclerotized and with more extensive ribbing. Signum truncate on one side, slightly concave, but

not bidentate. Colliculum larger, elongate. There is a weak antevaginal sclerotized band with centrifugal ridges, but no postvaginal sclerotization visible.

Holotype. ♂, “Nepal, Solu Khumbu Himal, Lukla, 2800 m, 26. vi. 1993, M. Hreblay & G. Csorba”. Coll. ZFMK. Paratypes. 15 ♂, same data as holotype, including gen. prep. No. 2082-DS; same region and collectors, 1 ♂, 10 km S of Lukla, 2300 m, 3. vii. 1993; 1 ♂, 5 km E of Lukla, 3200 m, 27. vi. 1993; 3 ♂ 1 ♀, Nepal, Jiri, 2200 m, 31. v-2. vi. 1992 (gen. prep. No. 2081-DS); *id.*, 1 ♂, 6. vi-14. vi. 1994 (H. Schnitzler). Coll. ZFMK. Solu Khumbu Himal, Lukla 2800 m: 2 ♂ 2 ♀, 2. vii. 1993; *id.*, 1 ♂, 26. vi. 1993; *id.*, 7 km E of Lukla, 3450 m: 1 ♂, 1. vii. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer. [Janakpur] Jiri: 1 ♂, 17-19. v. 1993 (T. Haruta *et al.*, already mentioned in MoN 3: 24). Coll. Yazaki. India: West Bengal, Darjeeling, Tigerhill, 2400 m: 2 ♂, 10-12. vii. 1986, W. Thomas; same region, locality & collector: 6 ♂, 1 ♀, 19-28. vi. 1987; same region & collector, Mangpu-road, 1800 m: 1 ♂, 1. vii. 1997, Coll. ZFMK. India, Bengale Occ., Tiger Hill, 2573 m: 2 ♂ 4 ♀, 19. viii. 1993, leg. & coll. G. Orhant, 1 ♀ coll. Herbulot; 1 ♂, Sikkim, Möller, 1888; 1 ♂, Sikkim, Knyvett; 1 ♀, Sikkim, O. Möller; 1 ♀, Sikkim, 8. ix. 1888, O. Möller; 1 ♂, Bhutan, Dudgeon, vii. 91; 1 ♂, Bhutan, Bumthang, 9500 ft., 15. vii. 1933, F. Ludlow & G. Sheriff. Coll. BMNH.

The study of the female holotype of *Oxydia vulpinaria* Moore, 1888: 232 (Fig. 1465), labelled: “Darjeeling, Coll. Atkinson” (printed label)–“*Oxydia vulpinaria* type ♀ Moore” (handwritten label)–“Origin.” (pink, printed label)–“Typus” (red, printed label)–“3342” (handwritten number)-gen. prep. No. 2083-DS, in the Staudinger collection (MNHU) revealed that it is not conspecific to what hitherto has been treated as *vulpinaria* in the collections known to the author (including BMNH which obviously was the source for Yazaki’s (1994: 24) determination). Comparison with the ♂ holotype of *Dalima latitans* Warren, 1893, **syn. n.**, and the associated female (coll. BMNH) revealed the conspecificity of both taxa. A further new synonym of *vulpinaria* Moore is *Dalima herbuloti* Orhant, 1995, **syn. n.** (Orhant, *in litt.*). Therefore the species hitherto treated as *vulpinaria* had to be described as new.

Dalima metachromata (Walker, 1862), **comb. n.** (MoN 2: 113; Pl. 60: 19)

E. Nepal, Jiri, 2200 m: 2 ♂, 6. vi-14. vi. 1994 (H. Schnitzler); Ganesh Himal, Syabrubesi, 1520 m: 2 ♂, 12. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 4. vi. 1967 (Dierl-Forster-Schacht); Ganesh Himal, vic. Sunpati, 2330 m: 2 ♂, 13. vi. 1993 (M. Hreblay & G. Csorba); Ganesh Himal, W Thangjet, 2300 m: 2 ♂, 18. ix. 1994 (M. Hreblay & T. Csövari); Ganesh Himal, W Gholjong 2420 m: 1 ♂ 1 ♀, 12. ix. 1995 (B. Herczig & Gy. M. László). Coll. Sommerer.

Originally described as a member of *Abraxas* Leach, Thierry-Mieg later described the genus *Erebabraxas* for reception of the single species *metachromata* Walker. Studies of genitalia characters (Fig. 1464) and other morphological structures now brought to light that *metachromata* is in fact a member of the genus *Dalima* Moore. As a consequence, the genus *Erebabraxas* Thierry-Mieg, 1907, **syn. n.**, is synonymized with *Dalima* Moore, 1868.

Dalima spontaneata (Walker, 1862), **comb. n.** (MoN 1: 31; Pl. 8: 23)

Yazaki (1992: 31) recorded one male from Godavari. There is no Nepalese material in the collections studied.

Like the previous species originally described as a member of *Abraxas* Leach. Later Warren described the genus *Heterabraxas* for its reception. Inoue (1970: 208) described this species again as *Abraxas* (?) *shigeruabei*, but synonymized it himself (Inoue, 1982: 168). It also proved to be a typical member of the genus *Dalima* and it is closely related to *metachromata* in the male genitalia structures (Fig. 1463); therefore the genus *Heterabraxas* Warren, 1894, **syn. n.**, is also synonymized with *Dalima* Moore, 1868. For other synonyms and generic definition see Holloway ([1994]: 176).

Mesastrape fulguraria (Walker, 1860), **comb. rev.** (MoN 1: 32; Pl. 10: 5, as *Erebomorpha*)
 Godavari, 1600 m: 1 ♀, 26. iii. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2000 m: 1 ♂, iii-iv 1991
 (*ex coll.* A. Schintlmeister); *id.*, 2700 m: 7 ♂, 25-26. v. 1989; Jiri, 2200 m: 1 ♂, 4. vi. 1992; *id.*, 4
 ♂ 1 ♀, 6-14. vi. 1994 (H. Schnitzler); Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993;
 GaneshHimal, vic. Sunpati, 2330 m: 3 ♂, 13. vi. 1993; Solu Khumbu Himal, vic. Lukla, Bupsa,
 2300 m: 2 ♂, 3. vii. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. This abundant species is also
 represented in coll. ZSM and coll. Sommerer.

M. fulguraria is different from *Chorodna fulgurita* (Walker), **comb. n.**, in a number of characters,
 as already pointed out by Warren (1894: 432) when he described the genus *Mesastrape*, **gen. rev.**
 (type-species: *Erebomorpha consors* Butler, 1878, now treated as a subspecies of *fulguraria*) and
 by Thierry-Mieg (1899: 21) describing the genus *Stygomorpha* for reception of the same species.
 This was not followed by subsequent authors who again placed *fulguraria* into *Erebomorpha*,
 misled by superficial similarities. Warren based his description of *Mesastrape* mainly and
 Thierry-Mieg exclusively on differences of the female antennae, those of *fulguraria* being
 bipectinate, while those of *fulgurita* are simple. My own studies brought a number of additional
 differences to light: antennal pectinations unscaled dorsally in *fulguraria*, scaled in *fulgurita* (as
 in all species of *Chorodna* and the former *Medasina*-group of genera); abdomen below – except
 sternite 1+2 – smoothly scaled in *fulguraria*, covered with long hair-scales and a distinct pair of
 scale-brushes laterally on sternite 3 in *fulgurita* (as at least in all *Chorodna* species); genital
 membrane unscaled in *fulguraria* (as in the majority of ennomine genera), covered with
 elongated hair-scales in *fulgurita* (as in all species of *Chorodna* and the former *Medasina*-group
 of genera); male genitalia (see Fig. 1487) not of the *Chorodna*-type, as well as a number of minor
 differences. *Mesastrape* should be placed close to *Xandrames* Moore, 1868, with which it shares
 a number of characters (*e.g.* the antennae of female *Xandrames* are also pectinated).

Chorodna erebusaria Walker, 1860 (MoN 1: 32; Pl. 10: 7)

Godavari, 1600-1800 m: 1 ♂, 4. vi. 1967 (Dierl-Forster-Schacht); Godavari, 1539 m: 1 ♂, 20. v.
 1989 (H. Schnitzler); Godavari, 1600 m: 1 ♂, 26. ix. 1991; 1 ♂, 22. vi. 1992; 1 ♂, 28. ix. 1992
 (T. Haruta *et al.*) Coll. ZFMK. Godavari, 1600-1800 m: 13 ♂, 31. v-5. vi. 1967 (Dierl-Forster-
 Schacht). Coll. ZSM.

Chorodna vulpinaria Moore, 1868 (MoN 1: 32, Pl. 10: 3)

Solu Khumbu Himal, vic. Lukla, 2300 m: 2 ♂, 3. vii. 1993 (M. Hreblay & G. Csorba). Coll.
 ZFMK. E. Nepal, Junbesi 2750 m: 4 ♂, 25-31. vii. 1964; Helmu area, Gusum Banjyang 2600 m:
 1 ♂, 5. ix. 1967; Bhandar, beneath Thodung, 2200 m: 1 ♂, 5. viii. 1964 (W. Dierl). Coll. ZSM.

Chorodna fulgurita (Walker, 1860), **comb. n.** (MoN 1: 32; Pl. 10: 1)

Godavari, 1539 m: 2 ♂, 16. v. 1989; *id.*, 1500 m: 1 ♂, 27. 5. 1992 (H. Schnitzler); *id.*, 1600 m: 1
 ♂ 1 ♀, 15-16. x. 1992 (T. Haruta *et al.*); Mt Phulchouki, 2000 m: 1 ♂, iii-iv 1991 (*ex coll.* A.
 Schintlmeister); Jiri, 2200 m: 1 ♀, 30. v. 1992; 1 ♂, 3. vi. 1992 (H. Schnitzler). Coll. ZFMK.
 Thodung, 3100 m: 1 ♀, 29. v. 1962 (G. Ebert & H. Falkner); C. Nepal, Kyumnu-Khola-valley
 vic. Gandrung, 2360 m: 2 ♀, 23/25. v. 1973 (Dierl-Lehmann). Coll. ZSM.

As already partly mentioned under *M. fulguraria*, *Erebomorpha fulgurita* fits to the relevant
 characters of the genus *Chorodna* (for male genitalia see Fig. 1478) and is therefore being
 transferred to that genus. *Fulgurita* being the type-species of *Erebomorpha* Walker, 1860, the
 latter genus must be treated as a synonym (**syn. n.**) of *Chorodna* Walker, 1860. Both genera have
 been published in the same year and the same volume of Walker's "List of the Specimens of
 Lepidopterous Insects in the collection of the British Museum", but according to Art. 24. 2.
 (principle of first reviser) of the Code (Fourth Edition), precedence is given to *Chorodna* and
 thereby fixed as senior synonym.

Chorodna moorei (Thierry-Mieg, 1899), **comb. n.** (MoN 1: 33; 3: 53; Pl. 10: 6)

Annapura Himal, Ulleri, 1900 m: 1 ♂, 3. x. 1994 (Csorba & Ronkay). Coll. Sommerer.

Moore (1868: 653) described the genus *Vindusara* and included two species, *Abraxas compositata* Guenée and *Abraxas metachromata* Walker. The first-mentioned species, however, figured by Moore on plate 32, fig. 6, was a misidentification. Thierry-Mieg (1899: 20) corrected this error and redescribed the figured species as *moorei*, transferring it at the same time to the genus *Erebomorpha* Walker. *E. moorei* Thierry-Mieg, 1899 much later was designated type-species of the genus *Vindusara* Moore by Fletcher (1979: 212) who also pointed out that “Under article 70 (a) of the Code, the case of a misidentified type-species should be referred to the Commission”. This has not been done. Under the rules of the New Code (4th Edition, 1999, Art. 70. 3), an author “may select, and thereby fix as type species, the species that will, in his or her judgement, best serve stability and universality”. According to this article, *Erebomorpha moorei* Thierry-Mieg, 1899 (previously misidentified as *Abraxas compositata* Guenée, [1858]) is here formally fixed as type-species of *Vindusara* Moore, 1868. For the second, originally included species, *Abraxas metachromata* Walker, Thierry-Mieg (1907: 212) described the new genus *Erebraxas*, which has been synonymized with *Dalima* Moore in the present paper (see p. 115).

Not regarding the very conspicuous, *Abraxas*-like coloration, there is no morphological reason to keep *moorei* in a separate genus. As mentioned above, Thierry-Mieg treated it as a member of *Erebomorpha* Walker, but this genus has been synonymized with *Chorodna* Walker (see previous species). In fact, male genitalia (Fig. 1479) and other characters of *moorei* also agree with the generic concept given by Holloway ([1994]: 200), excepting the broad pale costal zone of the forewings which, however, is also lacking in some other species of *Chorodna* (e.g. *C. creataria* Guenée). Therefore, *Vindusara* Moore, 1868, **syn. n.** is here synonymized with *Chorodna* Walker, 1860.

Chorodna creataria (Guenée, [1858]) (MoN 2: 23; 3: 53; Pl. 38: 10)

Jiri, 2200 m: 1 ♂, 3. vi. 1992; *id.*, 1 ♂, 6-14. vi. 1994 (H. Schnitzler). Coll. ZFMK. Modi Khola, Birethanti 1100 m: 3 ♂, 17. x. 1980 (Stangelmaier). Coll. Sommerer. Kathmandu valley, Godavari 1600-1800 m: 11 ♂ 2 ♀, 31. v-10. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Chorodna mauraria (Guenée, [1858]) (MoN 2: 23; 3: 53; Pl. 38: 8)

Godavari, 1539 m: 1 ♂, 23. v. 1989; Jiri, 2200 m: 1 ♀, 25. v. 1992 (H. Schnitzler). Coll. ZFMK. Kathmandu valley, Godavari, 1600-1800 m: 1 ♂ 1 ♀, 5-6. vi. 1967; Kathmandu-Chauni, 1400 m: 1 ♂, 2. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Chorodna similis (Moore, 1888), **comb. n.** (MoN 2: 23; 4: 33; 5: 27; Pl. 38: 7, as *quadrinotata*)

Medasina quadrinotata Warren, 1893, **syn. n.**

Godavari, 1539 m: 1 ♂, 22. v. 1989 (H. Schnitzler); *id.*, 1 ♂, 25. iv. 1992 (local collector, *ex coll.* H. Schnitzler). Coll. ZFMK. E. Nepal, Jubing 1600 m: 2 ♂, 8. v/11. v. 1964 (W. Dierl). Coll. ZSM.

Further material examined. Moore based the description of *similis* on a single male specimen (Fig. 1467), holotype, ♂, “Darjeeling, 7000”, Coll. Atkinson” (printed label)-“*Medasina similis* ♂ type Moore” (handwritten label)-“Typus” (red, printed label)-“Origin.” (pink, printed label)-kept in the MNHU collection since Staudinger purchased the Atkinson collection.

Warren (1893: 417) obviously did not know this specimen when he described his *quadrinotata*, he only mentioned *C. strixaria* as similar species. Typical *quadrinotata* [holotype ♂, Sikkim, in BMNH, checked] are of a much lighter ground colour, the internal border of the costal streak being less straightish and less defined, also the underside much lighter. Dated specimens indicate that both are seasonal forms, *quadrinotata* being the dry-season form. Male genitalia (Fig. 1481) of both are almost identical. Further confusion was caused by the fact that *similis* and *persimilis* have been synonymized erroneously.

Chorodna metaphaearia (Walker, [1863]) (MoN 3: 55; Pl. 71: 1), *Chorodna strixaria* (Guenée, [1858]) (MoN 3: 53; Pl. 76: 4): no Nepalese material could be traced in the collections studied.

Callocasta persimilis (Moore, 1888), **sp. rev.** (MoN 2: 23; Pl. 38: 6, as *Medasina similis*; 3: 53, as *Chorodna similis*; 4: 34; 5: 27, as *Callocasta similis*)

Medasina persimilis Moore, 1888, in Hewitson & Moore, *Descr. new Indian lepid. Insects Colln late Mr. W. S. Atkinson*: 235.

Mt Phulchouki, 1750 m: 1 ♂, 26. ix. 1983; *id.*, 2400 m: 1 ♀, 4. x. 1983 (leg. & coll. Herbulot). E. Nepal, Deorali Danda, Anpan 1900 m: 1 ♂, 16. v. 1997 (Hreblay & Szabóky). Coll. Sommerer. C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 1 ♂, 25. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Further material examined. Lectotype, here designated for reason of nomenclatural stability: ♂, "Darjeeling, 7000', Coll. Atkinson" (printed label)–"*Medasina persimilis* type Moore" (handwritten label)–"Typus" (red, printed label)–"Origin." (pink, printed label), gen. prep. No. 2076-DS. Coll. MNHU. (Fig. 1468). Paralectotypes, 2 ♂, Darjeeling, coll. Atkinson (MNHU); 1 ♂, Darjeeling, coll. Atkinson. Coll. BMNH. Swinhoe (1894: 218) mentions specimen(s) from Shillong, Assam (as *similis*); a pair from N. Vietnam in coll. ZFMK.

The rather short descriptions of Moore (1888: 235, 236) and the fact that the holotype of *Medasina similis* Moore was not in the BMNH collection since Staudinger bought part of the Atkinson collection (around 1876; Horn *et al.*, 1990: 22) or at least since Moore finished his studies and published the results in 1888, probably led curators of the BMNH collection to consider *similis* and *persimilis* as synonyms. In fact, both species are rather unrelated. In addition, Swinhoe (1894: 218) described a new genus *Callocasta* including two species, *similis* and *basistrigaria* Moore, 1868 (see also Sato, 1995: 34). Fletcher (1979: 33) designated *Medasina similis* Moore, 1888, as type-species of that genus. It is sure that this designation again based on the previous misidentification of *persimilis* Moore. Sato also relied on this treatment when he figured a specimen of *persimilis* as *similis* (1993: 23, Pl. 38: 6) and later revived the genus *Callocasta* (1995: 34), having found that "*similis*" has genitalia untypical for *Chorodna*. This in fact is true for *persimilis*, whereas *similis* (= *quadrinotata*) has genitalia typical for *Chorodna*. Both species can be separated easily by the hindwing being "bidentate below the apical angle" in *similis* (Moore, 1888: 235), which is not the case in *persimilis*, the latter has the pale costal band much broader and darker brownish, "marked by a few slender dark brown strigae, disposed only along the edge" (Moore, 1888: 236). Male genitalia of *persimilis* (Fig. 1482) are distinctly different from those of *similis* and also do not agree with the genitalia characters of *Lassaba*, *Deinotrichia*, *Coremecis*, *Sinamedia* or *Uliura*. *Callocasta* Swinhoe, 1894 therefore is retained as distinct genus at present. Type-species: *Medasina persimilis* Moore, 1888, here designated under Article 70. 3. of the Code, Fourth Edition, misidentified as *Medasina similis* Moore, 1888, in the subsequent designation by Fletcher, 1979: 33.

Lassaba contaminata Moore, 1888 (MoN 3: 52; 5: 26; Pl. 76: 1, 2, as *Deinotrichia cervina* Warren)

Lassaba contaminata Moore, 1888, in Hewitson & Moore, *Descr. new Indian lepid. Insects Colln late Mr W. S. Atkinson*: 246.

Ganesh Himal, Somathang, 3270 m: 7 ♂ 8 ♀, 15. vi. 1993; Ganesh Himal, vic. Sunpati, 2330 m: 1 ♂, 13. vi. 1993; Solu Khumbu Himal, Lukla, 2800 m: 6 ♂, 26. vi. 1993; Solu Khumbu Himal, vic. Lukla, 3200 m: 2 ♂, 27. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Thodung, 3100 m: 7 ♂ 4 ♀, 20. v-3. vi. 1962; Khumbu, Khumdzung 3900 m: 1 ♂ 6 ♀, 18. vi-25. vii. 1962; Dudh-Kosi-valley, 3500 m: 2 ♂ 4 ♀, 22-23. vii. 1962; *id.*, 3000 m: 1 ♀, 27. vii. 1962; Bhimpedi, 400 m: 1 ♂, 4-7. iv. 1962 (G. Ebert & H. Falkner); E. Nepal, Khumjung, 3800 m: 1 ♂, 13. vii., 1 ♀, 27. vi. 1964; Junbesi, 2750 m: 1 ♂ 2 ♀, 25-31. vii. 1964; Sete, 2700 m: 1 ♀, 1. viii. 1964 (W. Dierl); C. Nepal, Kali-Gandaki-valley, Kalopani-Dhump, 2500 m: 2 ♂ 2 ♀, 31. v-5. vi. 1973; *id.*, Choklopani N Tukche, 3200 m: 1 ♂, 24. vi. 1973; Dhaulagiri SE, 3700 m: 3 ♀, 10-13. vi. 1973 (Dierl-Lehmann). Coll. ZSM. Solu Khumbu Himal, Lamjura Pass, 3500 m: 3 ♂, 5. vii. 1973 (Dierl-Lehmann). Coll. ZSM.

1993; *id.*, E Lukla, 3200 m: 1 ♂, 27. vi. 1993; *id.*, 3450 m: 1 ♀, 1. vii. 1993; *id.*, Tragsindha Pass, 3000 m: 2 ♂, 4. vii. 1993; Ganesh Himal, W Somathang, 3. 850 m: 1 ♀, 18. vi. 1993 (M. Hreblay & G. Csorba); Ganesh Himal, S Somdang, 3. 180 m: 1 ♂, 21. ix. 1994; China, Tibet, 8km S Nyalam, 3. 220 m: 1 ♂, 4. x. 1994 (M. Hreblay & T. Csövari). Coll. Sommerer. Nepal, Langtang valley, Kyanjin Gompa, 3. 850 m: 1 ♂, 6-9. x. 1983 (C. Herbulot); *id.*, 3000 m: 1 ♂ 2 ♀, 3-5. vi. 1976 (J. Plante). Coll. Herbulot.

Further material examined. Moore based the description of *contaminata*, type-species of the genus *Lassaba* Moore, 1888, on a pair of specimens, a male syntype (Fig. 1470), now in coll. BMNH, "Chumbi valley, Sikkim (Elwes)"-"Moore Coll. 94-106"-gen. prep. No. 1421-DS (BMNH Geometridae genitalia slide no. 12477) and a female syntype (Figs 1472, 1477) now in coll. MNHU ("Darjeeling, Coll. Atkinson."-"*Lassaba contaminata* ♀ type. Moore." (handwritten label)-"3484"- "Origin." (pink label)-"Typus" (red label), gen. prep. no. 2075-DS.

The male is a comparatively small, heavily rubbed and almost unrecognizable specimen, the female is of rather good quality. They agree, the female perfectly, the male sufficiently, with the two specimens which Sato (*l. c.*) figured as "*Deinotrichia cervina*". *Lassaba cervina* (Warren, 1893), **comb. n.** (Figs 1471, 1476, ♂ holotype, coll. BMNH) is a closely related species which has not been recorded from Nepal with certainty. It differs from *contaminata* in the more or less uniform greyish-brown colour, the hindwings being similarly coloured as the forewings, not whitish as in *contaminata*. The female of true *cervina* is unknown, as well as the type-locality, but "*Medasina*" *pallidimargo* Swinhoe, 1905, described from Kashmir and based on females only, is treated – probably correctly – as junior synonym (Scoble *et al.*, 1999: 221). Females of *pallidimargo* are even darker greyish brown than the males, not white as females of *contaminata*. Males from Kashmir, discovered subsequently, are rather close to the type of *cervina*, though not perfectly identical, so it seems likely, that *pallidimargo* is a western Himalayan race (**stat. n.**) of *cervina*. The type-locality of the latter still remains unknown, though Elwes (1893: 419) suspects it to be Sikkim or West Bhutan. More material of this group is needed to clarify the distribution and subspecific separation. True *L. contaminata*, however, is quite abundant. Male genitalia of *L. contaminata* (Fig. 1480), typifying the generic characters of *Lassaba*, have valves rather narrow and elongate, gradually tapering towards apex, the latter being membranous, densely covered with very delicate hair-like setae. Ventral margin of valve costa lined with spine-like setae in the middle. Saccular process broad at basal half, with a blade-like ridge along inner surface and covered with small spines towards the valve lamina, abruptly tapering distally into a narrow, stick-like, free arm which only slightly curves ventrad. Basal lamina of valve sclerotized, with a very characteristic, rounded triangular, upright process centrally. Uncus broad at base, stout, triangular or elongate triangular, with apex bifid. Gnathus strong, with moderate, rounded central portion. Juxta broad at base, becoming extremely narrow in the central part, abruptly broadening distally. Aedeagus stout, apically truncate, vesica simple, with a group of cornuti – fused like a segment of a circular saw – at base. The redescription of *Lassaba* by Holloway ([1994]: 202) has to be revised in parts, as he laid too much emphasis on the two Bornean species *acribomena* Prout and *vinacea* Prout which do not belong to the core-group of the genus. The Nepalese species *albidaria* Walker and *parvalbidaria* Inoue belong to the same species-group. This natural group of taxa is kept as a part of the genus *Lassaba* at present, but its status has to be reconsidered.

Lassaba dissimilis (Moore, 1888), **comb. n.** (MoN 5: 26; Pl. 131: 10, as *Deinotrichia*)

Solu Khumbu Himal, Lukla, 2800 m: 1 ♂, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Dudh-Kosi-valley, Bujan 2900 m: 1 ♂, 18-19. vii. 1964 (W. Dierl). Coll. ZSM.

Further material examined. Holotype, ♂ (Figs 1469, 1475), "Darjeeling, Coll. Atkinson" (printed label)-"*Medasina dissimilis*. ♂, type. Moore." (handwritten label)-"Typus" (red, printed label)-"Origin." (pink, printed label). Coll. MNHU. ♂, "Darjeel., Col. Atk." Coll. MNHU; 6 ♂ 2 ♀, Sikkim. Coll. BMNH. Sikkim, Mt Kanchenjunga, 3000 m: 3 ♂, 7-8. viii. 1995 (V. Sinaev & E. Afonin). Coll. ZFMK.

The description of *dissimilis* obviously was based on one male only ("Male., in coll. Dr. Staudinger"; Moore, 1888: 235) which is mentioned above as holotype. There is a second male specimen in coll. MNHU, also out of the Atkinson collection, but it is not considered as syntype, as it was probably a later acquisition (or, at least, has not been in Moore's hands). *L. dissimilis* has male genitalia characters (Sato, 1998, fig. 855) agreeing in all details with those of *L. contaminata*, the type-species of *Lassaba*, and therefore is transferred to that genus. It disagrees externally in having the hindwing margin produced at M_3 , a character which it has in common with the next species.

***Lassaba interruptaria* (Moore, 1868), comb. n.** (MoN 3: 53, as *Chorodna*; 4: 33, as *Deinotrichia*; Pl. 76: 3)

Helmu area, Gusum Banjyang 2600 m: 22 ♂ 7 ♀, 1-5. ix. 1967; Junbesi, 2750 m: 14 ♂, 25-31. vii. 1964; Bhandar, beneath Thodung, 2200 m: 1 ♀, 3. viii. 1964 (W. Dierl). Coll. ZSM. Junbesi, 2750 m: 1 ♂, 25-31. vii. 1964 (W. Dierl); W. Nepal, 21 km N Dailekh, 3400 m: 1 ♂, 1-2. viii. 1996 (M. Hreblay & B. Szin). Coll. ZFMK.

Further material examined. Syntype, ♂, "Bengal", in coll. BMNH; 6 ♂ 3 ♀, Sikkim, Darjeeling, Yatung/ Tibet, in coll. BMNH. Sikkim, Lachen-Lachung, viii. 1933, 1 ♂ 1 ♀ (ex coll. Oberthür, ex coll. Wehrli); Sikkim, Mt Kanchenjunga SE, 2600 m: 12 ♂ 2 ♀, 9-10. viii. 1995 (E. Afonin & V. Sinjaev). Coll. ZFMK.

Similar to *L. dissimilis*, having the hindwing margin produced on vein M_3 , too, but slightly smaller and having a broad pale band parallel to forewing costa which is lacking in *dissimilis*. The male genitalia agree with the generic characters though the free apical part of the saccular processis rather short.

***Lassaba anepsia* (Wehrli, 1941), comb. n.** (MoN 2: 23, as *Medasina stolidaria*; 3: 52; 5: 26, as *Deinotrichia stolidaria*)

Medasina anepsia Wehrli, 1941, in Seitz, *Gross-Schmett. Erde* 4 (Suppl.): 445, pl. 38: h

Jiri, 2200 m: 1 ♂, 4. vi. 1992; *id.*, 1 ♂, 6-14. vi. 1994 (H. Schnitzler); Ganesh Himal, Somathang, 3270 m: 5 ♂ 11 ♀, 15. vi. 1993; Ganesh Himal, NE Sunpati, 2330 m: 4 ♂, 13. vi. 1993; Ganesh Himal, Syabrubesi, 1520 m: 2 ♂, 12. vi. 1993; Solu Khumbu Himal, Lukla, 2800 m: 10 ♂ 2 ♀, 26. vi. 1993; *id.*, E Lukla, 3200 m: 3 ♂ 1 ♀, 27. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. E. Nepal: Dudh-Kosi-valley, 3500 m: 5 ♂ 2 ♀, 22-23. vii. 1962; Thodung 3100 m: 3 ♀, 23. v., 29. v., 3. vi. 1962 (G. Ebert & H. Falkner); Dudh-Kosi-valley, Bujan 2900 m: 1 ♀, 18-19. vii. 1964; Junbesi 2750 m: 3 ♂, 18 ♀, 25-31. vii. 1964; Helmuarea, Gusum Banjyang 2600 m: 4 ♀, 1-3. ix. 1967; Sete 2700 m: 1. viii. 1964 (W. Dierl); C. Nepal: Kali-Gandaki-valley, Kalopani Dhumpu 2500 m: 1 ♂ 1 ♀, 15. vi. 1973; Kyumnu-Khola-valley vic. Gandrung, 2360 m: 1 ♂, 23. v. 1973; Dhaulagiri SE, 3700 m: 1 ♀, 10-13. vi. 1973 (Dierl-Lehmann). Coll. ZSM. Solu Khumbu Himal, Lukla 2800 m: 4 ♂, 2. vii. 1993; *id.*, E Lukla, 3450 m: 3 ♂ 2 ♀, 1. vii. 1993; *id.*, Tragsindha Pass, 3000 m: 1 ♂, 4. vii. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

Further material examined. Holotype ♀ (Fig. 1474), "Chine, Yunnan, Reçu de Lou-Nan, 1931"-*"Medasina anepsia* Wehrli, ♀ Type, Dr. Wehrli" (red label, partly handwritten)-*"Medasina anepsia* Wehrli, Type ♀, abgebildet Seitz IV, Suppl. fig., Dr. Wehrli" (yellow label, partly handwritten)-"phot. 22. X. 39" (handwritten label). Coll. ZFMK. Prov. N. Yuennan, Li-kiang, 4000 m: 1 ♀, 6. vii. 1935, H. Höne. India, Darjeeling, Tiger Hill, 2400 m: 2 ♂, 10-12. vii. 1986; *id.*, 1 ♂ 1 ♀, 19-28. vi. 1987 (W. Thomas); Sikkim, Mt Kanchenjunga 2600 m: 7 ♀, 9-10. viii. 1995 (E. Afonin & V. Sinjaev); Simla, Punjab, 2500 m: 1 ♂, vii. Coll. ZFMK. 1 ♂ 1 ♀, Tonglo, Sikkim, 10,000 feet, July 1886, H. J. Elwes (paralectotypes of *Deinotrichia scotosiaria* Warren). Coll. BMNH.

The large syntype-series of *Deinotrichia scotosiaria* Warren, 1893, partly consists of this species which Wehrli much later described as *anepsia*. Inoue (1982: 178, fig. 42: D) first recorded and figured this rather abundant species from Nepal, but erroneously as *stolidaria* Leech. Sato (1993: 23, 1994: 52, 1998: 26) also used this name. However, *Lassaba stolidaria* (Leech), **comb. n.**

(Fig. 1473, ♂ syntype of ssp. *heliomena* Wehrli, **syn. n.**) is a Chinese species which has not been found in the Indian or Nepalese Himalaya so far. It differs from *anepsia* in the ground colour being light brownish to brownish-grey in the nominate subspecies, in the ssp. *nigrofusca* Wehrli, which is darker, but not as dark as *anepsia*, it differs also in the absence of the typical white, waved submarginal line of *anepsia* which the latter has in common with *Deinotrichia scotosiaria* Warren. Male genitalia (Fig. 1483) exhibit typical *Lassaba* features, though they are smaller, the valves are shorter, the uncus is more triangular with lateral projections, apically not distinctly bilobed, the saccular process is shorter and less spined, etc. There are also differences in the arrangement of cornuti which are not so tightly fused on a common plate as they are in *contaminata*. Male genitalia of *stolidaria* are very similar to those of *anepsia*. The description of *Lassaba stolidaria heliomena* (Wehrli, 1941), was based on comparison with the (miscoloured) figure of the nominate subspecies in Seitz 4, plate 23: a. Type-material of both have been compared now directly and it became obvious that they do not belong to different subspecies.

Lassaba albidaria (Walker, 1866) (MoN 2: 22; 3: 52; 5: 26; Pl. 37: 18, 19)

Lassaba parvalbidaria nepalensis (Sato, 1993) (MoN 2: 22; 3: 52, as *paralbidaria*; 5: 26, ditto; Pl. 37: 20, 21)

Numerous specimens of both species from E. & C. Nepal in coll. ZFMK, ZSM and coll. Sommerer.

As already mentioned under *contaminata*, they do not belong to the core-group of *Lassaba*. They differ in the wing-shape and in a number of characters in the male genitalia (Sato, 1993, figs 169-171) (females not yet compared).

“*Lassaba*” *obliterata* (Moore, 1868) (MoN 2: 23; Pl. 38: 5)

Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 9. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

This exceptional species with whitish upperside and black-and-white underside externally fits to the diagnosis given by Holloway (*l.c.*) for *Lassaba*, but considering the genitalia characters it neither belongs to the *albidaria*-group of that genus nor to the core-group of *Lassaba*. Bifurcate, asymmetrical saccular processes as well as a large, flap-like process arising from the basal sclerotized part of the valve lamina render its systematic position dubious.

* *Deinotrichia scotosiaria* Warren, 1893 (Pl. 171: 21, 22)

Deinotrichia scotosiaria Warren, 1893, *Proc. zool. Soc. Lond.* **1893** (2): 420, pl. 30, fig. 9.

Form A. Fitting to the lectotype from Sikkim. Forewings striated, transverse lines inconspicuous (= *D. scotosiaria* Warren) (Pl. 171: 21): E. Nepal, Helmu area, Gusum Banjang 2600 m: 13 ♂ 3 ♀, 1. ix-5. ix. 1967 (W. Dierl); Gosainkund Lekh, TarkeBanjang 3600 m: 1 ♂, 27-30. viii. 1967 (Dierl-Schacht).

Form B. Forewings darker, smoothly scaled, not striated, transverse lines distinct, hindwings of a lighter grey (= *Deinotrichia* sp.) (Pl. 171: 22): Dudh Kosi valley, 3500 m: 16 ♂, 22-23. vii. 1962 (G. Ebert & H. Falkner), including ZSM Genitalprp. No. G 467; GosainkundLekh, Tarke Banjang 3600 m: 2 ♂, 27-30. viii. 1967 (Dierl-Schacht); Khumbu, Khumdzung 3900 m: 1 ♂, 21. vii. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

Inoue (1982: 177, fig. 42: F) already figured a male specimen of *scotosiaria*, but he did not mention it in the text. Also not mentioned in MoN 1-5. Further material examined. Lectotype ♂, here designated for reason of nomenclatural stability: “Sikkim. O. Möller. 10000 [feet] [18]89”-“Type” (round label, rimmed red)-“*Deinotrichia scotosiaria* Warr.” (handwritten label)-“Collectio H. J. Elwes”-“type, L. B. P. sel.” (in Prout’s handwriting), gen. prep. No. 2070-DS (BMNH Geometridae genitalia slide no. 20269). Coll. BMNH. (Fig. 1489). Paralectotypes. 1 ♂, “Sikkim, O. Möller. 1900-64”; 2 ♂ 2 ♀, “Tonglo, Sikkim, 10, 000 feet, July 1886, H. J. Elwes”, gen. prep. Nos. 2093-2097-DS, BMNH Geometridae genitalia slide nos. 20264-20268. Coll. BMNH. The specimen here designated as lectotype had already been selected as “type” by L. B.

Prout (but obviously not published). It also fits to the figure in the original description. The latter was based on a rather large number of syntypes, consisting of three distinct species. One species is much larger (forewing length 27–30 mm) and has later been described as *Medasina anepsia* Wehrli, 1941. The other two – including the true *scotosiaria* as designated above – are considerably smaller (forewing length 20–23 mm). They differ like the two Nepalese forms described above. Male and female genitalia differences are rather small but constant, so both taxa are presently considered to be sister-species. Further studies based on exactly dated specimens of a wider range of distribution are necessary to prove the correctness of this assumption. *D. scotosiaria* Warren is also distributed in China (Sichuan, Yunnan), according to material in coll. ZFMK, the new species apparently not.

Darisa firnilinea (Prout, 1926) (MoN 2: 23; Pl. 38: 1)

Kathmandu valley, Godavari 1600-1800 m: 1 ♂ 4 ♀, 31. v-9. vi. 1967 (Dierl-Forster-Lehmann). Coll. ZSM.

Darisa mucidaria (Walker, 1866) (MoN 2: 23; 5: 26; Pl. 38: 2)

Godavari, 1539 m: 2 ♂, 9-24. v. 1989; Mt Phulchouki, 2600 m: 2 ♂, 7-10. vi. 1988; *id.*, 2200 m: 2 ♂, 27. v. 1992 (H. Schnitzler); *id.*, 2500 m: 1 ♂, 29. vi. 1990 (*ex coll.* A. Schintlmeister); Jiri, 2200 m: 3 ♂ 8 ♀, 30. v-4. vi. 1992; *id.*, 4 ♂ 2 ♀, 6-14. vi. 1994 (H. Schnitzler); Ganesh Himal, Syabrubesi 1520 m: 2 ♂, 12. vi. 1993; Solu Khumbu Himal, vic. Lukla, Bupsa, 2300 m: 1 ♀, 3. vii. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. E. Nepal, Jubing, 1600 m: 7 ♂, 4. v-9. v. 1964 (W. Dierl); Bhimpedi, 400 m: 1 ♂, 5-7. iv. 1963; Tampa-Khosi-valley, 2600 m: 1 ♂, 10. v. 1962 (G. Ebert & H. Falkner); Seta, above Likhu-Khola-valley, 2500 m: 2 ♂, 24. ix. 1962 (Diesselhorst); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 2 ♂ 2 ♀, 13-25. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Darisa peracuta Sato, 1995 (MoN 5: 28; Pl. 131: 9)

Kathmandu valley, Godavari 1600-1800 m: 1 ♂ 1 ♀, 3. vi., 1 ♂, 7. vi. 1967 (Dierl-Forster-Schacht); Jubing, 1600 m: 1 ♂, 11. v. 1964 (W. Dierl). Coll. ZSM.

Sinameda basistrigaria (Moore, 1868) (MoN 2: 23; 3: 52; Pl. 38: 3)

Pultschuk, 2300-2500 m: 1 ♂, 16. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

* ***Uliura albidentata*** (Moore, 1868) (Pl. 171: 23)

Cleora albidentata Moore, 1868, *Proc. zool. Soc. Lond.* **1867**: 629

Godavari, Mt Phulchouki, 2200 m: 1 ♂, 27. v. 1992 (H. Schnitzler). Coll. ZFMK.

Not recorded previously from Nepal, but rather abundant in N. E. India (Sikkim, Darjeeling region). Female holotype (Fig. 1490), “Bengal”-“*Cleora albidentata* Type Moore” [abdomen lacking] in coll. BMNH [checked].

Uliura combustaria (Walker, 1866) (MoN 2: 22; 5: 26; Pl. 37: 22)

Godavari, Mt Phulchouki, 2600 m: 1 ♂ 1 ♀ 7. vi-10. vi. 1988 (H. Schnitzler); *ditto*, 2200 m: 2 ♂ 1 ♀ 27. v. 1992; Jiri, 2200 m: 1 ♀, 2. vi. 1992; Ganesh Himal, Syabrubesi, 1520 m: 4 ♂, 12. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. E. Nepal, Pultschuk, 2300-2500 m: 6 ♂, 12. vi-15. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

This species occurs also in N. E. India, N. Thailand (Sato, 1995) and N. Vietnam (material in ZFMK, unrecorded).

***Uliura dierli* sp. n.** (Pl. 171: 24, 25) (MoN 2: 22; Pl. 37: 23)

Medasina sp., Sato, 1993, MoN 2: 22, fig. 163 (♂-genitalia), pl. 37, fig. 23 (♂).

Uliura sp., Sato, 1995, *Trans. lepid. Soc. Japan* **46**: 213

Holotype, ♂ “Nepal, Kathmandu Valley, Godavari 1600-1800 m, 1. vi. 1967, (Diehl-Forster-

Schacht)", Staatsslg. München". Coll. ZSM. Paratypes. 12 ♂ 1 ♀, type-locality, 31. v., 4-9. vi., 2. viii. 1967, including ZSM Genitalprp. No. G 368, 379, 386; gen. prep. No. 2084-DS (♂), 2085-DS (♀), same collectors. Coll. ZSM, ZFMK, Sommerer. 3 ♂, 15 km SSE Katmandou, Godavari, 1530 m, 27. ix. 1983; 6 ♂, 17 km SSE Katmandou, route du Phulchoki, 1750 m, 28-30. ix. 1983 (C. Herbulot). Coll. Herbulot. Nepal, 20 km SE Kathmandu, Godavari 1600 m, 1 ♂, 23. ix. 1989; 1 ♂, 26. vi. 1990; 4 ♂, v-vii. 1973; 4 ♂, 2-6. vi. 1987 (T. Miyashita). N. Thailand, Chiang Mai, Doi Inthanon 1300 m, 1 ♂, 1/3. xi. 1985 (S. Moriuti, T. Saito & Y. Arita). Coll. Sato, OPU, NSMT.

Length of forewing (♂ ♀) 17–19 mm. Ground colour a warm, bright brown (dark greyish-brown in the second generation). Hindwings coloured like the forewings, with similar pattern. Most similar to *U. infausta* Prout, 1914 from Taiwan which is a little larger and has the ground colour more greyish-brown and the area between base and postmedials lighter than the rest of both wings. Postmedial line in *dierli* fine, very slightly dentate on the veins, with a moderate subcostal angle. *Infausta* has the lines stronger and more conspicuously dentate. Submarginal line dentate in both species, white, with a very small, round, white spot in the middle in *dierli*, that of *infausta* larger, more longitudinal, cream-coloured, also in the hindwing. Underside of both species with a broad, dark brown band, covering the area outside the postmedial line, in *dierli* with a small, inconspicuous, light spot in the center, in *infausta* with a larger, cream-coloured patch.

Male genitalia (Fig. 1484) with a long process to the sacculus, similar to that of *combustaria*. In *dierli* the process is bulbous distally and only spined there, in *combustaria* it is spined all over and not bulbous. Juxta of *dierli* bifurcate which is exceptional for the genus. Aedeagus in *dierli* rather simple, with the apico-ventral part gradually tapering and moderately pointed, the vesica without ornamentation. In *infausta* the first-mentioned structure has a conspicuous, darkly sclerotized and pointed lateral arm, the vesica bears a small group of cornuti. The female genitalia of *dierli* (Fig. 1486) are exceptional in having an enlarged, prolonged and darkly sclerotized antrum which is somewhat roundly extended to the postvaginal area. The ductus bursae is sclerotized and strongly fluted, the membranous bursa small and almost spherical. Signum a small, slightly curved fold with triangular sclerotization.

Derivatio nominis. Dedicated to the late Dr Wolfgang Dierl, former senior curator of the Lepidoptera collection of the Zoologische Staatssammlung, Munich (ZSM). Dr Dierl was the organizer and leader of three long-term expeditions to Nepal (1964, 1967, 1973) and collected a huge amount of highly interesting material (see also G. S. Robinson *et al.*, 1995: 150). Dierl himself was a specialist of the Psychidae and he published about Nepal material of that family (Dierl, 1966).

Geographical range. E. Nepal, N. Thailand.

Notes. In the collections studied there are no specimens of *Uliura dierli* from N. E. India (Sikkim/ Darjeeling-region), though the species is obviously not rare in E. Nepal. The find of a single specimen in N. Thailand (Doi Inthanon) leaves a large gap of distribution which may be closed by further collecting. The new species obviously appears in a second generation in October or later, as indicated by the material collected by C. Herbulot and the specimen from Thailand. The second generation is a little smaller and darker, greyish-brown. *U. dierli* has been secured at medium altitudes, 1600–1800 m (Thailand: 1300 m).

Uliura gratiosa Sato, 1995 (MoN 4: 33; Pl. 103: 3, 4, 5)

No Nepalese material in the collections studied.

Further material examined. 1 ♂ 2 ♀, NE India, Darjeeling. Ex coll. Ch. Oberthür. Coll. ZFMK.

Sato (1995: 33) described this species referring to specimens from Nepal and Thailand. *U. gratiosa* is very similar to *U. azyx* (Prout, 1926), **comb. n.**, described in the genus *Paradarisa* Warren and based on one ♀ only (Htawgaw, N. E. Burma, 6000 ft., A. E. Swann, vi. 23; type in

coll. BMNH; checked). However, Prout already admitted in the description, that “in the absence of the ♂ it is not quite certain that this will not prove a true *Medasina*, i.e. with the ♂ antenna pectinate”. Female genitalia of the holotype (genit. prep. 1927-DS; BMNH Geometridae genitalia slide no. 16730) have proved to be similar to those of *gratiosa*, though not identical. Differences may be specific or subspecific, but as males from Upper Burma are still not at hand, the taxonomic treatment of both taxa cannot be decided finally.

Arichanna (Arichanna) plagifera (Walker, 1866) (MoN 3: 41; Pl. 73: 1)

E. Nepal, Jiri, 2200 m: 3 ♂, 30. v-3. vi. 1992 (H. Schnitzler); Ganesh Himal, Syabrubesi, 1520 m: 4 ♂ 1 ♀, 12. vi. 1993; Ganesh Himal, vic. Sunpati, 2330 m: 1 ♂, 13. vi. 1993; Solu Khumbu Himal, Lukla, 2800 m: 8 ♂, 26. vi. 1993; Solu Khumbu Himal, vic. Lukla, 2300 m: 1 ♂, 3. vii. 1993 (M. Hreblay & G. Csorba); Junbesi, 2750 m: 1 ♀, 25-31. vii. 1964; Helmu area, Gusum Banjyang, 2600 m: 1 ♂, 4. ix. 1967 (W. Dierl); C. Nepal, Kyumnu-Khola-valley, vic. Gandrung, 2360 m: 1 ♂, 20. v. 1973 (Dierl-Lehmann). Coll. ZFMK. Thodung, 3100 m: 10 ♂ 11 ♀, 19. v-3. vi. 1962; Khumbu, Khumdzung 3900 m: 2 ♀, 26. vi., 20. vii. 1962; Khumbu, Lobuche 4900 m: 1 ♂, 1. vii. 1962; Dudh-Kosi-valley, 3000 m: 1 ♂, 27. vii. 1962 (G. Ebert & H. Falkner); Helmu area, Gusum Banjyang 2600 m: 4 ♂ 1 ♀, 1-4. ix. 1967; Junbesi, 2750 m: 4 ♀, 25-31. vii. 1964; Dudh-Kosi-valley, Bujan 2900 m: 3 ♂ 2 ♀, 18-19. vii. 1964 (W. Dierl); Pultschuk 2300-2500 m: 1 ♂, 1 ♀, 12. vi. 1967 (Dierl-Forster-Schacht); C. Nepal, Kyumnu-Khola-valley vic. Gandrung: 8 ♂, 12. v. (2), 19-24. v. (6), 15. vi. 1973 (1) (Dierl-Lehmann). Coll. ZSM.

Arichanna (Arichanna) marginata Warren, 1893 (MoN 2: 5; 3: 41; Pl. 34: 8)

Kathmandu Valley, Godavari 1600 m: 1 ♂, 30. viii. 1964 (W. Dierl); *id.*, 1600-1800 m: 1 ♂, 9. vi. 1967; Pultschuk 2300-2500 m: 1 ♂, 15. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

Arichanna (Arichanna) tramesata Moore, 1868 (MoN 2: 6; 3: 43; Pl. 34: 11)

Mt Phulchouki, 2150 m: 1 ♂, 10. v. 1989 (H. Schnitzler); Mt Phulchouki, 2000 m: 17 ♂ 1 ♀, iii-iv 1991 (*ex coll.* A. Schintlmeister); Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993; Ganesh Himal, vic. Sunpati, 2330 m: 1 ♂, 13. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Jiri, 1900 m: 1 ♂, 18. v. 1962 (G. Ebert & H. Falkner); Junbesi, 2750 m: 8 ♂, 25-31. vii. 1964; Thodung, 3200 m: 1 ♂, 19. iv. 1964; Bhandarbeneath Thodung, 2200 m: 1 ♂, 4. vii. 1964, ZSM Genitalprp. No. G 497; Helmu area, Gusum Banjyang 2600 m: 8 ♂, 1-4. ix. 1967, including ZSM Genitalprp. No. G 498 (W. Dierl); Pultschuk, 2300-2500 m: 1 ♀, 14. vi. 1967 (Dierl-Forster-Schacht); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 7 ♂ 1 ♀, 12-23. v. 1973 (Dierl-Lehmann). Coll. ZSM.

Arichanna (Arichanna) albolineata Inoue, 1988 (Pl. 172: 1, 2) (MoN 2: 6; 3: 43; Pl. 34: 10)

Thodung, 3100 m: 2 ♂ 1 ♀, 20-29. v. 1962 (G. Ebert & H. Falkner); Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993; Ganesh Himal, Jaisuli Kunda, 4150 m: 1 ♂, 16-17. vi. 1993; Ganesh Himal, Somathang, 3270 m: 1 ♀ (dark form), 15. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Thodung, 3100 m: 108 ♂, 19-30. v., 1 ♀, 3. vi. 1962 (nominal form), 142 ♂, 19-30. v., 5 ♀, 22. v., 23. v., 2. vi. 1962 (darkform); Khumbu, Khumdzung 3900 m: 1 ♂, 21. vii. 1962 (nominalform), 1 ♂, 26. vi. 1962 (dark form); Khumbu, Periche 4350 m: 1 ♂, 29. vi. 1962 (nominal form); Tampa-Khosi-valley, 2600 m: 1 ♂, 9. v. 1962 (dark form) (G. Ebert & H. Falkner); Thodung, 3200 m: 4 ♂, 14. iv-18. iv. 1964 (dark form); Dudh-Kosi-valley beneath Thangpoche, 3400 m: 1 ♂ 1 ♀, 29/31. v. 1964 (dark form) (W. Dierl). Coll. ZSM.

There is a dark form having the namegiving white lines and streaks suffused with grey and olive scales. This variant occurs sympatrically and synchronously with and is even more abundant as the nominotypical form. Male genitalia are identical.

Arichanna (Arichanna) transfasciata Warren, 1893 (MoN 2: 6; 3: 43; Pl. 34: 9)

Godavari, 1539 m: 1 ♂, 16. v. 1989 (H. Schnitzler). Coll. ZFMK. Likhu-Khola-valley, 1700 m: 2 ♂, 4. vi/9. vi. 1962 (G. Ebert & H. Falkner); Kathmandu Valley, Godavari 1600-1800 m: 20 ♂,

31. v-8. vi. 1967 (Dierl-Forster-Schacht). Coll. ZSM.

The last mentioned three species *tramesata*, *albolineata* and *transfasciata*, together with the closely related *A. (A.) eucosme* Wehrli, 1939 (Sato, 1989: 174) represent one of several monophyletic species-groups presently united in the nominotypical subgenus *Arichanna*.

Arichanna (Arichanna) interplagata Guenée, [1858] (Pl. 172: 3, 4) (MoN 2: 5; 3: 43, as *ramosa* Walker; Pl. 34: 7)

Godavari, Mt Phulchouki, 1539 m: 1 ♀, 10. v. 1989 (H. Schnitzler); *ditto*, 2000 m: 1 ♂, iii-iv 1991 (ex coll. A. Schintlmeister); Ganesh Himal, Syabrubesi, 1520 m: 6 ♂, 12. vi. 1993; Ganesh Himal, vic. Sunpati, 2330 m: 3 ♂, 13. vi. 1993; Ganesh Himal, Yure Karka, 3370 m: 1 ♂, 14. vi. 1993; Ganesh Himal, Somathang, 3270 m: 5 ♂, 15. vi. 1993; Solu Khumbu Himal, vic. Lukla, 3200 m: 1 ♂ 3 ♀, 27. vi. 1993; Solu Khumbu Himal, vic. Jiri, Bhandar, 2125 m: 4 ♂ 1 ♀, 6. vii. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Numerous specimens from various localities in E. & C. Nepal, including Genitalprp. No. 254 G, 257 G, in coll. ZSM. Altitudes of collecting sites 2000-3900 m.

Further material examined. Holotype, ♂, of *Scotosia ramosa* Walker, 1866 (see Fig. 1496) "N. India"- "Type"- "Geometridae genitalia slide No. 7011"; -Holotype, ♀, of *Cidaria interplagata* Guenée, [1858] (see Fig. 1495) "Interplagata Gn., Ind. centr."- "Typicum Specimen"- "Ex Musaeo Ach. Guenée"- "Ex Oberthür Coll., Brit. Mus. 1927-3"- "Geometridae genitalia slide No. 7013". Coll. BMNH.

Inoue (1987: 257) synonymized *ramosa* Walker with *interplagata* Guenée, after having studied the holotypes of both species in the collection of the BMNH. I also came to the same conclusion after checking both types again and after comparing a number of male and female genitalia preparations, which do not exhibit clear differences between the both forms. However, both are rather different externally: *ramosa* is larger, with pure white lines and streaks on forewing, the hindwings white, with larger submarginal dots (Pl. 172: 3), *interplagata* having the forewing lines obscured with yellow and olive, the hindwings are yellowish-white, with smaller submarginal dots (Pl. 172: 4). Moreover, both forms have been collected together in Helmu area, Gusum Banjyang 2600 m, and there are obviously no transitional forms. So it cannot be excluded at present that both will turn out to be closely related (sister-)species. The Chinese subspecies *aphanes* Wehrli, 1933, **syn. n.**, which Wehrli described in comparison to typical *ramosa*, agrees perfectly with typical *interplagata* from Nepal. I have not seen typical *ramosa* from China so far. *A. (A.) interplagata* has been recombined here with the nominal subgenus (see Inoue, 1987). It does not exhibit the typical characters of the subgenus *Icterodes* in which it has been placed by Sato (1993: 5). Together with a number of very similar, undescribed species from China, *interplagata* represents a further natural species-group presently summarized in the nominal subgenus *Arichanna*.

Arichanna (Arichanna) furcifera Moore, 1888 (Pl. 172: 5, 6) (MoN 2: 5; 3: 43)

Godavari, Mt Phulchoki, 2200 m: 2 ♂, iii-iv. 1991 (ex coll. A. Schintlmeister); *ditto*, 2700 m: 1 ♀, 25-26. 5. 1989, (H. Schnitzler); Ganesh Himal, vic. Sunpati, 2330 m: 1 ♂, 13. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. E. Nepal, Helmu area, Gusum Banjyang 2600 m: 1 ♂, 3. ix. 1967 (W. Dierl); Pultschuk 2300-2500 m: 3 ♂, 12/14. vi. 1967, including gen. prep. No. 1917-DS (Dierl-Forster-Schacht); C. Nepal, Kyumnu-Khola-valley, 2360 m: 5 ♂, 16-20. v. 1973, including gen. prep. No. 1915-DS (Dierl-Lehmann). Coll. ZSM.

Further material examined. Lectotype, here designated for reason of nomenclatural stability: ♂, "Darjeeling, uP 66"- "*Arichanna furcifera* ♂ type Moore" [both handwritten labels]- "Moore Coll. 94-106"- "Type" [round label, rimmed red]- "Lectotype" [round label, rimmed blue]-gen. prep. No. 1422-DS a, b (= BMNH Geometridae genitalia slide Nos 12478, 12479 (antenna & legs)). Coll. BMNH. (Fig. 1491). Paralectotypes: 1 ♂, "Darjeeling"- "Coll. Atkinson"-gen. prep. No. 1423-DS; 1 ♀, "Darjeeling, 7000"- "Coll. Atkinson"-gen. prep. No. 1424-DS. Coll. MNHU. Numerous specimens from Sikkim, Bhutan, Khasi Hills, Naga Hills, Burma, with gen. prep. Nos

1485-1491-DS (BMNH Geometridae genitalia slide nos 15050-15056). Coll. BMNH. Holotype, ♂, of ssp. *epiphanes* Wehrli (Fig. 1493): “Tséku, 1900, R. P. J. Dubernard”-“*epiphanes* Wehrli, Typ”-“*Icterodes furcifera epiphanes* Wehrli, Type”-Genitalpräp. ZFMK Nr. 798 (R. Sato fec.). Coll. ZFMK. Specimens from N. Vietnam (Fan-si-pan, iii-vii) and China, Prov. Fujian (Kuatun, iii-vi. 1938, J. Klapperich). Coll. ZFMK.

Geographical range. C. & E. Nepal, N. E. India, Bhutan, E. India (Meghalaya, Assam), Myanmar, N. Vietnam, S. China (Yuennan, Fujian).

Moore based his description of *A. furcifera* on two males and a female, without designating a holotype. The syntypes have been kept in the Moore collection (now in BMNH) (1 ♂) and in the Staudinger collection (the latter in MNHU now). Staudinger bought the Atkinson collection, but Moore kept examples of species described by him, if there were more than one. Singletons are always in the Staudinger collection. So the lectotype should preferably be selected out of the Staudinger collection, but in the case of *furcifera*, the MNHU male showed considerable anomaly of the genitalia and therefore the BMNH male was selected. Wehrli's subspecies *epiphanes* (Yuennan, S. W. China) is being synonymized (**syn. n.**) as it became clear from other dated material, that the differing colour and pattern features of this taxon are seasonal rather than geographical. In all areas studied moths looking more or less like *epiphanes* currently appear in early spring (*i.e.* end of dry season). Moreover, recent collecting in N. Vietnam revealed *furcifera* specimens very similar to “normal” (*i.e.* wet season) specimens from Darjeeling or Nepal.

***Arichanna (Arichanna) peniculifera* sp. n.** (Pl. 172: 7, paratype) (MoN 2: 5; 3: 43; 5: 19; Pl. 34: 4, 5, as *Arichanna* sp.)

Diagnosis. Length of forewing 20–23 mm (♂♀), on an average slightly larger than *furcifera* Moore. Both species very similar, not separable with certainty by coloration and pattern features. Specimens of *peniculifera* mostly have the large, blackish spot at the end of the forewing-cell smaller, roundish and separated from costa, but there are current exceptions. In addition, both species exhibit considerable seasonal variation. The male antennae may serve to separate the species: in *peniculifera* the flagellum-segments are short, the unpectinated apical part longer than in *furcifera* where the flagellum-segments are longer.

Male genitalia (Fig. 1498). Uncus apically truncate, trifid as in *furcifera* (Fig. 1497), but broader. Central part of gnathus scobinate in both species, but also broader in *peniculifera*. Valve costa more strongly reduced, spined costal “harpe” situated almost distally (basally in *furcifera*). Central group of spines situated closer to costa, composed of larger, longer but fewer spines. End of sacculus covered with a conspicuous brush of dark-brown, coarse hair-scales, covering a very small terminal saccular process (which is large in *furcifera* and *flavimedia* (Fig. 1499), but both lack the brush). Aedeagus similar to *furcifera*, but vesica broader at base, partly scobinate, without cornuti (*furcifera* has the vesica decorated with two rows of cornuti which sometimes are connected by a row of smaller spines).

Female genitalia (Fig. 1501). Basal half of ductus bursae broad, moderately sclerotized, scobinate, slightly fluted, not laterally flattened as in *furcifera* where this part of the ductus is also more massively sclerotized. Distal part of ductus short, hyalinous, gradually widening to the bursa which is not sclerotized, either. In *furcifera* (Fig. 1500) the membranous part of the ductus is much longer. Signum in *peniculifera* more or less a rectangular plate, toothed at the corners. *Furcifera* has the signum smaller, composed of two fused triangles, with two teeth at the ends of the common angle. Sterigma in both species consisting of a narrow antevaginal ledge (which is broader in *peniculifera*) and an ovate, posteriorly tapering plate, which is weakly sclerotized in *furcifera*, strongly so in the new species.

Holotype, ♂, (Fig. 1492) “Indien Wb [W. Bengal], Darjeeling, Himafalls 2000 m, 8. vii. 1986, leg. W. Thomas”. “Museum A. Koenig Eing. Nr. 88/217”. Coll. ZFMK. Paratypes. 6 ♂ 1 ♀, same region and collector: 4 ♂, Mangpu-road, 1800-1900 m, 11. vii. 1986, 18/29. vi. 1987; 2 ♂, Kalimpong Algarah, 1700 m, 5/6. vii. 1986; 1 ♀, 3 miles village, 1900 m, 29. vi. 1986; 1 ♂, Inde

Anglaise, Pedong, Région de Darjeeling. Chasseurs indigènes, 1935, Genitalpräp. ZFMK Nr. 847 (Sato fec.) [ex coll. Oberthür]; 1 ♂, Nord-Indien, Sikkim Darjeeling, Coll. Dr. E. Wehrli, gen. prep. no. 5445 (Wehrli fec.) (ZFMK). 5 ♂, Bengal Occ., Mangpu, 1800 m, 18. viii. 1993 (G. Orhant); 1 ♂, *id.*, Darjeeling, 21. vii. 1991; 1 ♂ 1 ♀, Sikkim, Phodong, 22-23. viii. 1993 (leg. & coll. G. Orhant); 1 ♂, “Darjiling” (MNHN). 2 ♂ “Sikkim” [ex coll. Bastelberger], 1 ♀, *id.*, gen. prep. no. 1983-DS [coll. A. Seitz] (SNG). 1 ♂, Sikkim, 31. vi. [18]89, J. G. Pilcher; 1 ♀, Sikkim, O. Moller; 1 ♂, Darjeeling (Pilcher), 1 ♀, *id.*, gen. prep. No. 1492-DS (BMNH). E. Sikkim, Dalapchand Aritaal, 150 m: 1 ♀, 6. iii. 1992, 1 ♂, 17. iii. 1992 (Nat. coll.) [coll. NSMT, Sato]. 1 ♂, E. Nepal, Godavari, 1600 m, 21. ii. 1992, RS-3590 (T. Haruta *et al.*); Mt Phulchouki, 2275 m: 1 ♂, 5. iii. 1993 (M. S. Limbu); *id.*, 1 ♂, 12. vi. 1994; *id.*, 1 ♂, 21. vii. 1990, RS-5554; *id.*, 1 ♂, 2. x. 1994 (T. Haruta *et al.*); W. Nepal, Makahali, Dandeldhura, 1900 m: 1 ♂, 25. ix. 1994; *id.*, 3 ♂ 1 ♀, 28. ix. 1994, RS-5556 (female); C. Nepal, Gandaki, Gorepani 2500 m: 1 ♂, 19. vi. 1994; Pokhara, 850 m: 1 ♂, 26. iii. 1993; *id.*, 1 ♂, 16. iv. 1993 (M. S. Limbu) [coll. NSMT, Sato]-1 ♂, 17km SSE Kathmandu, Route du Phulchoki, 1750 m, 29. ix. 1983, C. Herbulot, gen. prep. No. 1984-DS; 1 ♂, same locality and collector, 2400 m, 4. x. 1983. Coll. Herbulot. Taplejung area, Tambowa, 2115 m: 1 ♂, 12. x. 1994; *id.*, nr. Patibhara peak, 3155 m: 1 ♀, 13-14. x. 1994 (M. Hreblay & T. Csövari); E. Nepal, Surke Danda, NE Suketar, 2560 m: 1 ♀, 10. xi. 1998 (Karma Sherpa). Coll. Sommerer. Mechi, Taplejung area, Kare Banjang, 2250 m: 1 ♂, 2. xi. 1996, Gy. M. László & G. Ronkay. Coll. Gy. M. László. 2 ♂, “Khasis, Feb. 1894, Nat. Coll.” gen. prep. no. 1493-DS (=BMNH Geometridae genitalia slide no. 15058); 1 ♂, *id.* March; 1 ♂, *id.*, May 1894; 4 ♂, “Khasia Hills”; 3 ♂, Khasia Hills, Assam. Nissary. Coll. BMNH-1 ♂, Indien-Ost, Meghalaya/Assam, Khasi-Jaintia Hills, 1500 m, Shillong 1979 (G. Behounek). Coll. ZSM-1 ♂ 1 ♀, Meghalaya, Garo Hills, Nokrek, 1. 150 m, 2. 13. vii. 1993 (Afonin & Siniaev). Coll. G. Orhant. Burma, Mt Victoria, Pakokku Chin Hills, 2600 m: 1 ♂, 2-31. V. 1938 (G. Heinrich), gen. prep. no. 1495-DS (=BMNH Geometridae genitalia slide no. 15060). Coll. BMNH. N. Thailand, Nan Prov., Pua, Doi Phu Kha 1680 m: 1 ♂, 5. 1. 1992, (H. Schnitzler); *id.*, 1 ♀, 26. ii. 1993 (D. Stüning). Coll. ZFMK. N. Thailand, Changwat Chiang Mai, Doi Phahompok, 2000 m: 3 ♂, 15. ii. (2), 24. ii. 1998 (M. Hreblay & C. Szabóky). Coll. Sommerer. N. Vietnam, Cha-pa, Mt Fan-si-pan 1500-1800 m: 11 ♂, 10. vi-6. vii. 1994 (V. Siniaev & nat. coll., ex coll. A. Schintlmeister); *id.*, 2400 m: 1 ♂, 28. iii. 1995; 1 ♀, 1600 m, 25-30. iii. 1995. Coll. ZFMK-*id.*, 1600 m: 1 ♂ 1 ♀, 28. x-3. xi. 1994 (V. Siniaev); *id.*, 4 ♂, 3. xii. 1994. Coll. G. Orhant.

Geographical Range. Nepal, N. E. & E. India, Myanmar, N. Thailand, N. Vietnam.

Derivatio nominis. Referring to the brush of stiff scales on the ventral side of the valve in the male genitalia (peniculus (lat.) = brush).

The new species occurs sympatrically and synchronously with *A. furcifera*. From few localities (*i.e.* Bhutan, N. Thailand) only one species has been collected so far, but it is very likely, that the second will be found occasionally. *A. peniculifera*, as well as the other two species of the *furcifera*-group, exhibits a conspicuous seasonal variation. The dry-season form always has the otherwise blackish areas of the wings much lighter greenish, providing those specimens with a strongly different appearance. The hindwings are also much lighter (compare MoN 2, Pl. 34, fig. 4 & 5 which do not show the differences between *furcifera* and *peniculifera*, but seasonal forms of the latter, as Sato (*in litt.*) confirmed).

Arichanna (Arichanna) flavimedia (Hampson, 1895) (MoN 2: 5; Pl. 34: 6)

Kathmandu Valley, Godavari 1600-1800 m: 2 ♂, May 1967; 1 ♂, *id.*, 31. v. 1967, gen. prep. No. 2073-DS (Dierl-Forster-Schacht); 1 ♂, 4. vi. 1967; 1 ♂, 6. viii. 1967, ZSM Genitalprp. No. G 332 (Dierl-Schacht). Coll. ZSM; Annapurna Himal, 1700 m, between Landrung and Bichowk, 1 ♂, 9. iv. 1995, Gy. M. László & G. Ronkay. Coll. Gy. M. László.

Further material examined. Holotype, ♂ (Fig. 1494) “Darjiling, 79. 57”-“*Boarmia flavomedia* [sic] Hmpsn. type ♂”-“Type” (round label rimmed red), gen. prep. No. 1925-DS (BMNH

Geometridae genitalia slide no. 16728). Coll. BMNH. 1 ♂, Sikkim, 20. v. 1888, (O. Möller); 1 ♂, Darjeeling (Pilcher); 1 ♂, Gopaldhara, Darjeeling, 4720' (H. Stevens); 1 ♂, Sikkim, 1887 (Möller); 1 ♀, Sikkim, ix. 1909 (F. Moller), gen. prep. No. 2033-DS (BMNH Geometridae genitalia slide no. 19111). Coll. BMNH; 1 ♂, N. W. Indien, Uttar Pradesh, Kumaon Himalaya, Kilbury 2400 m, May 1990. Coll. ZFMK. 1 ♂, Kumaon-Himalaya, Distr. Nainital, Bhim Tal 1500 m, 16. v. 1971; *id.*, 1 ♀, 5. vi. 1971 (de Freina). Coll. Sommerer. (first record for Uttar Pradesh); 1 ♂, N. Thailand, Doi Phu Kha 1. 680 m, 1. iii. 1993 (D. Stüning). Coll. ZFMK (first record for Thailand); Taiwan, Prov. Taoyuan, Ming Chyr Forest Recreation Area, 1. 160 m: 1 ♀, 8. v. 1997 (Gy. M. László & G. László). Coll. Gy. M. László (first record for Taiwan).

Geographical range. N. W. India (Uttar Pradesh), Nepal, N. E. India (Sikkim), N. Thailand, Taiwan.

Notes. *Flavimedia* Hampson seems to be a rather rare species. Besides those few specimens mentioned above, Sato (1993: 5) recorded four additional specimens from E. Nepal, Godavari, collected in ii, iv and v. Only three females are known to exist in collections (♀-genitalia: Fig. 1502). Also in this species seasonal variation is obvious: the specimens from Thailand and Annapurna Himal, collected in March and April (= dry season) have the otherwise yellowish distal and almost black basal parts of the forewings suffused with lighter green, the submarginal band of the hindwings is much narrower.

Arichanna (Icterodes) sparsa (Butler, 1890) (MoN 2: 5; 3: 42; Pl. 34: 2)

E. Nepal, Jiri, 2200 m: 8 ♂ 1 ♀, 30. v-4. vi. 1992; *ditto*, 6 ♂, 1 ♀, 6-14. vi. 1994 (H. Schnitzler); Ganesh Himal, Syabrubesi, 1520 m: 2 ♂ 1 ♀, 12. vi. 1993; Ganesh Himal, vic. Sunpati, 2330 m: 1 ♂, 13. vi. 1993; Solu Khumbu Himal, Lukla, 2800 m: 2 ♀, 26. vi. 1993; solu Khumbu Himal, vic. Lukla, 3200 m: 1 ♀, 27. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Thodung, 3100 m: 3 ♂ 20 ♀, 25. v-3. vi. 1962; Khumbu, Khumdzung 3900 m: 1 ♂, 21. vi. 1962; Likhu-Khola-valley, 1700 m: 1 ♂, 6. vi. 1962 (G. Ebert & H. Falkner); Seta, above Likhu-Khola-valley, 2500 m: 1 ♂ 1 ♀, 24. ix. 1962 (Diesselhorst); Seta, 2700 m: 1 ♀, 1. viii. 1964; Junbesi, 2750 m: 1 ♂ 6 ♀, 25-31. vii. 1964; Dudh-Kosi-valley, Bujan, 2900 m: 1 ♀, 18-19. vii. 1964; Helmu area, Gusum Banjyang 2600 m: 1 ♂ 6 ♀, 1. ix-4. ix. 1967 (W. Dierl); C. Nepal, Kali-Gandaki-valley, Choklopani N Tukche 2600 m: 3 ♂, 9 ♀, 19. vi-25. vi. 1973; *id.*, 3200 m: 1 ♀, 24. vi. 1973; *id.*, Kalopani-Dhumpu, 2500 m: 1 ♂, 18. vi. 1973; *id.*, Syang-Khola-valley, W Jomosom, 3950 m: 2 ♀, 7. vii. 1973; Dhaulagiri SE, 3700 m: 1 ♀, 10-13. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

The subgenera *Icterodes* Butler, 1878, and *Epicterodes* Wehrli, 1933, share the bipectinate antennae in male and the yellow hindwings spotted black (not present in all *Icterodes*). They also share the elongate valves with long cucullus in the male genitalia. The spined process at the proximal end of the cucullus ("harpe" of authors) is always present and strong in *Icterodes*, reduced or absent in *Epicterodes*. The latter has a dentate ridge extending from the proximal end of the cucullus to the valve base; it is reduced and not dentate in *Icterodes*. Both have a long, stick-like, apically curved and sharply pointed "ectocornutus" (part of the aedeagus-shaft which is spread during copulation). It is considerably shorter than the rounded apex of the aedeagus in *Epicterodes*, almost as long as the latter in *Icterodes*. The vesica lacks cornuti in *Epicterodes* but has a single, multidentate ("radula"-shaped) one in *Icterodes*.

Arichanna (Icterodes) transectata (Walker, 1862) (Pl. 172: 15, 16)

Rhyparia ? transectata Walker, 1862, *List Specimens lepid. Insects Colln Br. Mus.* 24: 1112

Arichanna (Epicterodes) flavosparsa Inoue, 1970, *Spec. Bull. lepid. Soc. Japan* 4: 211, pl. 2, figs 31, 32, pl. 9, fig. 73 (♂-genitalia), pl. 11, fig. 82 (♀-genitalia).

E. Nepal, Junbesi, 2750 m: 1 ♀, 25-31. vii. 1964 (W. Dierl). Coll. ZSM.

Transectata and *flavosparsa* have been correctly synonymized by Inoue, 1987: 258. This species is also a member of the subgenus *Icterodes* – though mentioned as *Epicterodes* by Inoue –, sharing the structural features mentioned for *A. (Icterodes) sparsa*. The female antennae are bipectinate which is rarely found in the whole genus *Arichanna*. Only two other species are

known with this character: *Arichanna satoi* Sommerer & Stüning, 1997 from Sumatra and a recently discovered, still undescribed species from N. Vietnam. *Transectata* is smaller than the similar *sinica* and *flavinigra* and is best distinguished by the rather clear yellowish postmedial line of the forewings.

***Arichanna (Epicterodes) flavinigra* Hampson, 1907 (MoN 2: 5; 3: 41; Pl. 34: 1)**

E. Nepal, Jiri, 2200 m: 1 ♂, 3. vi. 1992; *ditto*, 17 ♂, 6-14. vi. 1994 (H. Schnitzler); Ganesh Himal, vic. Sunpati, 2330 m: numerous ♂ & ♀, 13. vi. 1993; Ganesh Himal, Syabrubesi, 1520 m: 6 ♂ 1 ♀ 12. vi. 1993; Ganesh Himal, Somathang, 3270 m: 1 ♂, 15. vi. 1993; Solu Khumbu Himal, vic. Lukla, 3200 m: 1 ♀, 27. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Numerous specimens from E. & C. Nepal in coll. ZSM

The most abundant species of this group. Differences to the related *A. (E.) sinica* are the much darker forewings on upperside, the postmedian line of spots in the hindwing, at least the central one being sickle-shaped (rounded in *sinica*) and the forewing underside which is yellow with extensive black markings (in *sinica* grey with blackish markings).

***Arichanna (Epicterodes) sinica* (Wehrli, 1933) (MoN 3: 41; Pl. 73: 3)**

E. Nepal, Junbesi, 2750 m: 9 ♂ 3 ♀, 25-31. vii. 1964; Jiri, 2000 m: 1 ♂, 13. viii. 1964; Bhandar, beneath Thodung, 2200 m: 1 ♂, 2-5. viii. 1964; Helmu area, Gusum Banjyang 2600 m: 2 ♀, 1-2. ix. 1967 (W. Dierl); Dudh-Kosi-valley, 3500 m: 8 ♀, 22-23. vii. 1962; *id.*, 3000 m: 1 ♀, 27. vii. 1962; Khumbu, Khumdzung 3900 m: 1 ♀, 24. vii. 1962 (G. Ebert & H. Falkner); C. Nepal, Kali-Gandaki-valley, Kalopani-Dhumpu 2500 m: 3 ♂ 1 ♀, 15. vi. 1973; *id.*, Choklopani N Tukche, 2600 m: 1 ♂, 22. vi. 1973; *id.*, 3200 m: 1 ♀, 24. vi. 1973 (Dierl-Lehmann). Coll. ZSM.

Sato (1994: 41) published already the synonymy of *A. (Epicterodes) sinica* Wehrli, 1933 and *A. (Epicterodes) himalayensis* Inoue, 1970. *Himalayensis* can be kept in use to name the Himalayan race (**stat. n.**), though differences between Yunnan and Himalayan populations are not very conspicuous. Wehrli (1933: 41), however, stated such subspecific differences. He described *sinica* as a subspecies of "*flavinigra*", but he misidentified Himalayan *sinica* as *flavinigra*. This becomes obvious by the specimen he figured as *flavinigra* in the above-mentioned paper (fig. 13) and can also be concluded by his handwritten determination label attached to this specimen which is still in the ZFMK collection. The genitalia differences mentioned by him can be explained by the fact that he compared those of *sinica* with the genitalia of the Chinese *flavomaculata* Leech which is also stated in the original description of *sinica*, but not in Seitz IV, Suppl., 1939: 258). Wehrli based the description of *sinica* on three males, without designation of the holotype, but he (1939: 258) called the specimen figured on plate 19 (c) "the type", so this act can be considered as a valid lectotype designation (Art. 74. 4. of the New Code). The same specimen has been figured again (as "holotype") by Sato (1994: fig. 390). Labels and male genitalia are shown on figs 396, 397. Genitalpräg. ZFMK Nr. 816. Inoue (1970: 210) described Himalayan *sinica* as new species *A. (Epicterodes) himalayensis*, as already published by Sato (1994: 41), comparing his Nepalese material to specimens out of the ZFMK collection that had been erroneously identified as *sinica*. However, they represent another, still undescribed species which is rather more abundant in the Yunnan area than true *sinica* are. The description of the latter is underpreparation by the author.

***Arichanna (Paricterodes) tenebraria* (Moore, 1868) (MoN 3: 42; Pl. 73: 5)**

Ganesh Himal, Somathang, 3270 m: 12 ♀, 15. vi. 1993; Solu Khumbu Himal, vic. Lukla, 2800 m: 2 ♀, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Solu Khumbu Himal, Tragsindha Pass, 3000 m: 1 ♂ ♂, 4. vii. 1993; *id.*, Lamjura Pass, 3500 m: 1 ♀, 5. vii. 1993; Ganesh Himal, Yure Karka, 3370 m: 1 ♀, 14. vi. 1993; *id.*, W Somathang, 3. 850 m: 1 ♀, 18. vi. 1993 (M. Hreblay & G. Csorba); Annapurna Himal, Thadung, SE Jomsom; 3450 m: 3 ♀, 14. vi. 1996 (Gy. M. László & G. Ronkay). Coll. Sommerer. Numerous specimens from E. & C. Nepal in coll. ZSM. Altitudes of collecting sites predominantly above 3500 m.

Type-species of *Paricterodes* Warren, 1893, mentioned also by Inoue (1970: 211) from E. Nepal. Collected in high altitudes only.

**Arichanna (Paricterodes) luciguttata* (Warren, 1893) (Pl. 172: 8)

Paricterodes luciguttata Warren, 1893, *Proc. zool. Soc. Lond.* **1893** (2): 390.

Solu Khumbu Himal, Lukla 2800 m: 1 ♂, 2. vii. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

Very similar, if not conspecific, to *Arichanna similaria* Leech, 1897, described from W. China.

Arichanna (Paricterodes) commixta (Warren, 1893) (MoN 3: 42: Pl. 73: 6)

Khumbu, Khumdzung 3900 m: 3 ♂ 1 ♀, 18-25. vii. 1962; Dudh-Kosi-valley, 3500 m: 2 ♂, 22-23. vii. 1962; Tanga, 3800 m: 3 ♂ 3 ♀, 29. vii. 1962 (G. Ebert & H. Falkner); Khumjung, 3800 m: 1 ♂ 2 ♀, 12/14. vii. 1964 (W. Dierl); Thangpoche, 3900 m: 1 ♂, 9. viii. 1964 (Löffler); Gosainkund Lekh, Tarke Banjyang 3600 m: 15 ♂, 22 ♀, 26-30. viii. 1967 (Dierl-Schacht). Coll. ZSM.

Recorded also by Inoue (1970: 212) from E. Nepal, collected at high altitudes.

Arichanna (Paricterodes) consocia (Butler, 1880) (MoN 2: 5; 3: 41; Pl. 34: 3)

Helmu area, Gusum Banjyang 2600 m: 3 ♂ 9 ♀, 1-5. ix. 1967 (W. Dierl). ZSM Genitalprp. No. G 630, ♂; E. Nepal, Junbesi 2750 m: 5 ♂ 2 ♀, 25-31. vii. 1964 (W. Dierl); E. Nepal, Sete 2700 m: 1 ♂, 1. viii. 1964 (W. Dierl); *id.*, 2500 m: 3 ♂, 24. ix. 1962 (G. Diesselhorst). Coll. ZSM. Ganesh Himal, W Thangjet, 2300 m: 1 ♂, 18. ix. 1994; *id.*, E Thangjet, 2165 m: 1 ♂, 17. ix. 1994 (M. Hreblay & T. Csövari). Coll. Sommerer.

This and the next species have been correctly upgraded to species-rank by Sato (1994: 41). Inoue (1970: 212) also mentioned *consocia*, but he obviously misidentified it, figuring on Pl. 2, fig. 36 a male of *A. (P.) albivertex* Wehrli as *consocia*.

Arichanna (Paricterodes) conspersa (Butler, 1880) (MoN 3: 42; Pl. 73: 4)

Jiri, 2200 m: 10 ♂ 1 ♀, 30-31. v. 1992; *ibid.*, 3 ♂ 4 ♀, 6-14. vi. 1994 (H. Schnitzler); Ganesh Himal, Syabrubesi, 1520 m: 4 ♂, 12. vi. 1993; Ganesh Himal, vic. Sunpati, 2330 m: 6 ♂ 2 ♀, 13. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Kathmandu valley, 1600 m: 1 ♀, 31. v. 1964; E. Nepal: Jiri, 2000 m: 5 ♂, 2. iv-10. iv. 1964; Jubing, 1600 m: 2 ♂, 4/8. v. 1964 (W. Dierl); Pultschuk, 2300-2500 m: 1 ♀, 13. vi. 1967 (Dierl-Forster-Schacht); Thodung, 3100 m: 1 ♀, 3. vi. 1962 (G. Ebert & H. Falkner); C. Nepal, Kyumnu-Khola-valley vic. Gandrung, 2360 m: 8 ♂ 3 ♀, 19-22. v. 1973 (Dierl-Lehmann). Coll. ZSM. Ganesh Himal, nr. Haku, 2200 m: 1 ♂ 1 ♀, 23. iii. 1995 (Gyu. M. László & G. Ronkay). Coll. Gyu. M. László. Ganesh Himal, NE Sunpati, 2330 m: 4 ♂ 1 ♀, 13. vi. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

Well recognizable by its smaller size and narrow wings, as already pointed out by Sato (1994: 42).

Arichanna (Paricterodes) albivertex (Wehrli, 1933) (Pl. 172: 9-11) (MoN 3: 42, pro parte)

Jiri, 2200 m: 1 ♂, 3. vi. 1992 (H. Schnitzler); Ganesh Himal, Syabrubesi, 1520 m: 1 ♂, 12. vi. 1993, gen. prep. No. 2086-DS; Ganesh Himal, Somathang, 3270 m: 1 ♀, 15. vi. 1993; Solu KhumbuHimal, Lukla, 2800 m: 2 ♂, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. E. Nepal, Junbesi, 2750 m: 4 ♂ 10 ♀, 25-31. vii. 1964; Khumjung 3800 m: 1 ♂, 1. vii. 1964, ZSM Genitalprp. No. G 259; *id.*, 2 ♀, 27. vi., 1 ♀, 29. vi., 1 ♀, 12. vii., 1 ♀, 14. vii. 1964 (W. Dierl); Khumbu, Khumdzung 3900 m: 10 ♀, 20. vi-28. vii. 1962; Dudh-Kosi-valley, 3500 m: 3 ♂ 1 ♀, 22-23. vi. 1962 (G. Ebert & H. Falkner); Syang-Khola-valley, W Jomosom, 3950 m: 1 ♀, 4. vii. 1973 (Dierl-Lehmann). Coll. ZSM. Solu Khumbu Himal, Lukla, 2800 m: 3 ♂, 26. vi. 1993; *id.*, E Lukla, Yak Karka, 4000 m: 1 ♀, 28. vi. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

This species has previously been mixed with the new species described beneath. The following

specimens, recorded already by Sato in MoN 3: 42, and 4: 28, have been re-examined by Sato and found to be true *albivertex*: Janakpur, Goyang, 2 ♀, 11. vii. 1993; Inner Himal, Gandaki, Manang, Churi Latter, 4080 m, 1 ♀, 11-13. vii. 1994 (M. S. Limbu). Two additional specimens (coll. Sato) have not been recorded previously: Janakpur, Dolakha, Na-Gaon 4050 m: 1 ♀, 18-19. vii. 1993; W. Nepal, Darchula Dist., Chya Lekh 3740 m: 1 ♀, 1/8. vii. 1995 (M. S. Limbu).

Further material examined. *A. (P.) albivertex* has been described from S. W. China; Wehrli based his description on 1 ♂ and 1 ♀ from Sichuan (Tatsienlu) and 1 ♀ from Yunnan (Tseku) – the latter in fact is a ♂, without designation of a holotype. All three specimens are from the Charles Oberthür collection. Lectotype, here designated for reason of nomenclatural stability: ♂, “Chasseurs Indigènes des Missionnaires de Ta-tsien-Lou 1908” (white, printed label)–“*albivertex* Wrlri Typ” (red label, partly handwritten)–“*Paricterodes albivertex* Wehrli ♂ Holo Type” (red label, partly handwritten)-Genitalpräp. ZFMK Nr. 800 (R. Sato fec.). Coll. ZFMK. This is the specimen figured in the original description (fig. 5), on plate 19g of Seitz IV, Suppl. and by Sato, 1994, figs 388, 395 (labels) and 402 (genitalia) (as holotype). Paralectotypes: 1 ♀, same locality as lectotype, 1910, Genitalpräp. ZFMK Nr. 811 (R. Sato fec.); 1 ♂, “Tsékou, 1900, R. P. J. Dubernard”, Genitalpräp. Wehrli Nr. 5462. Coll. ZFMK.

For diagnosis see next species.

***Arichanna (Paricterodes) schnitzleri* sp. n.** (Pl. 172: 12–14) (MoN 3: 42, pro parte; Pl. 73: 7, 12, as *albivertex*)

Diagnosis. Length of forewing 32–35 mm in male, 34–35 mm in female. Very similar in size and wing-shape to *albivertex*. Ground-colour of wings creamy white (pure white in *albivertex*), forewings strongly suffused with dark brown pattern elements, except basal area (in *albivertex* pattern rather blackish, with additional greenish suffusion which is lacking in *schnitzleri*, basal area not lighter than the rest). Hindwings not so strongly spotted, without a continuous postmedial band (*albivertex* heavily spotted with a continuous postmedial band which is outwardly dentate on the veins). Abdominal margin of the hindwings lined with creamy white hair-scales (in *albivertex* yellow). Pectination of male antenna a little longer in *schnitzleri*, female antennal segments of different shape: in *schnitzleri* short, broad, deeply incurved apically (heart-shaped), in *albivertex* narrow, elongate, very slightly incurved apically. Vertex in *schnitzleri* dark brown and yellow (in *albivertex* white and dark grey).

Male genitalia (Fig. 1503). Similar to *albivertex* (Fig. 1504) and the other related species (*lapsariata*, *consocia*, *conspersa*), most similar to *lapsariata*. The latter is, however, externally clearly different (see Sato, 1994, figs 385–389, 398–404). Genital capsule rather elongate, valves apically rounded, saccus elongate, juxta narrow in distal half, cornuti on vesica more numerous, with an apical “crown” of much longer spines than in *albivertex* (compare also Sato, *l.c.*, fig. 403 = *schnitzleri*, figs 402, 404 = *albivertex*).

Female genitalia (Fig. 1505). Very similar to *lapsariata* (see Sato, *l.c.*, fig. 405). Both species have the corpus bursae broad and angulated proximally, in *lapsariata* only on right side, the signum situated on the ventral surface of the bursa, in *schnitzleri* both sides angulated, the signum situated in the left corner. The other related species have the bursa more or less ovate to elongate ovate. The ductus bursae is curved, heavily sclerotized and fluted ventrally in *lapsariata* and *schnitzleri*, colliculum and togue-shaped lamella postvaginalis also similar.

Holotype. ♂, E. Nepal, Jiri, 2200 m, 2. vi. 1992 (H. Schnitzler). Coll. ZFMK. Paratypes. 7 ♂ 1 ♀, same locality and collector, 30. 5-1. vi. 1992, including gen. prep. No. 2087-DS (♂); 3 ♂ 1 ♀, samelocality and collector, 6-14. vi. 1994; Ganesh Himal, Syabrubesi, 1620 m: 8 ♂, 12. vi. 1993; Ganesh Himal, 3 km NE Sunpati, 2330 m: 12 ♂ 4 ♀, 13. vi. 1993, including gen. prep. Nos 2088, 2089-DS (♀) (M. Hreblay & G. Csorba). Coll. ZFMK; -E. Nepal, Thodung 3100 m: 38 ♂ 37 ♀, 20. v-3. vi. 1962 (G. Ebert & H. Falkner), including ZSM Genitalprp. No. G 260 (♂, 27. v. 1962); *id.*, 3200 m: 2 ♂ 1 ♀, 10-18. iv. 1964 (W. Dierl); Kali-Gandaki-valley, Kalopani-Dhumpu 2500 m: 1 ♂ 4 ♀, 30. v-3. vi. 1973 (Dierl-Lehmann); C. Nepal, Kyumnu-Khola-valley

vic. Gandrung, 2360 m: 1 ♂, 23. v. 1973 (Dierl-Lehmann); Dudh-Kosi-valley, Carikhola, 2700 m: 1 ♂ 1 ♀, 14. v. 1964; *id.*, beneath Thangpoche, 3400 m: 3 ♂, 29. v. 1964 (W. Dierl); Dudh-Kosi-valley, 3500 m: 1 ♂, 22-23. vii. 1962 (G. Ebert & H. Falkner); Jiri, 2000 m: 1 ♂, 2. iv. 1964 (W. Dierl); Solu-Khola-valley, Chialsa 2700 m: 1 ♂, 24. iv-1. v. 1964 (W. Dierl); Tampa-Khosi-valley, 2400 m: 1 ♂, 12. v. 1962; *id.*, 2600 m: 1 ♀, 10. v. 1962; Sun-Khosi-valley, 2150 m: 3 ♀, 1. v. 1962; Ting-Sang-La, 3800 m: 5 ♂, 17 ♀, 3. v/6. v. 1962; Khumbu, Khumdzung 3900 m: 2 ♀, 29. vi/13. vii. 1962 (G. Ebert & H. Falkner). Coll. ZSM. GaneshHimal, 3 km NE Sunpati, 2330 m: 13 ♂ 5 ♀, 13. vi. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer. E. Nepal, Janakpur, Dolakha, Jiri 2350 m: 9 ♂ 2 ♀, 21-23. iii. 1993 (M. S. Limbu); *id.*, 3 ♂ 1 ♀, 13-15. iv. 1994 (T. Haruta); *id.*, 1 ♂, 1. vi. 1992 (M. S. Limbu); *id.*, 1 ♂, 26. iv. 1992 (M. S. Limbu); Kathmandu, Bagmati, Naubise, Daman Pass 2400 m: 1 ♂ 7 ♀, 28. vi. 1992 (T. Haruta & M. S. Limbu); Sagarmatha, Solukhumbu, Thaktok 3100 m: 1 ♀, 22. v. 1993 (M. S. Limbu); Sagarmatha, Solukhumbu, Everest View Hotel 3880 m: 1 ♂, 17-20. v. 1993 (T. Haruta); Mechi, Taplejung, Phokte 2550 m: 1 ♂, 11. iv. 1993; Kosi, Terhthum, Dundh 2660 m: 1 ♀, 7. iv. 1993; Kosi, Terhthum, Gupha 2850 m: 1 ♀, 10. iv. 1993; Kosi, Terhthum, Chauki 2550 m: 1 ♂, 8. iv. 1993 (M. S. Limbu); C. Nepal, Kaligandaki, Kalbani 2400 m: 1 ♀, 12. vii. 1969 (T. Miyashita). Coll. NSMT, Sato. Ganesh Himal, near Haku, 2200 m: 31 ♂, 23. iii. 1995; *id.*, 2 km SW Haku, 2200 m: 51 ♂, 23. iii. 1995; *id.*, nr. Nesim 2000 m: 7 ♂, 22. iii. 1995; *id.*, near Godlang, 2520 m: 5 ♂, 19. iii. 1995; *id.*, 7 km W Godlang, 2950 m: 3 ♂, 18. iii. 1995; *id.*, 2 km W Gholjong, 2420 m: 5 ♂, 17-20. iii. 1995 (Gy. M. László & G. Ronkay); *id.*, 7 km W Godlang, 2950 m: 1 ♀, 8. v. 1995 (Gy. Fábíán & L. Ronkay); Annapurna Himal, between Landrung and Bichowk, 1700 m: 1 ♂, 9. iv. 1995; *id.*, 4 km E Tadapani, 1920 m: 1 ♂, 6. iv. 1995 (Gy. M. László & G. Ronkay); Koshi, Terhathum area, Sirumani 2950 m: 2 ♂ 7 ♀, 25. iii. 1996 (Csorba & Ronkay). Coll. Gy. M. László.

Geographical range. C. & E. Nepal, N. E. India, S. W. China.

Derivatio nominis. Dedicated to Hermann Schnitzler, Frechen, who collected valuable Geometridae on three expeditions to Nepal for the ZFMK collections. We also owe him highly interesting material from other parts of the world.

There is only one male known so far from Darjeeling (Pedong, *ex coll.* René Oberthür). The specimen is heavily rubbed and may be mislabelled; therefore it is not included in the type-series. A series of 8 ♂ 1 ♀ from Sichuan (Nanchuan area) is almost identical to specimens from Nepal, but also not in good condition and therefore not included in the type-series. 9 ♂ 1 ♀ from Yunnan, Lijiang area (*coll.* H. Höne), are smaller and darker than Nepalese specimens and may represent a different subspecies.

* *Arichanna (Phyllabraxas) albovittata* Moore, 1888 (Pl. 172: 19, 20)

Arichanna albovittata Moore, 1888, *Descr. new Indian lepid. Insects Colln late Mr. W. S. Atkinson* (3): 274.

Solu Khumbu Himal, Lukla, 2800 m: 1 ♀, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Dudh-Kosi-valley, 2800 m: 1 ♂, 9. vi. 1962 (G. Ebert & H. Falkner); Junbesi, 2750 m: 1 ♂ 1 ♀, 25-31. vii. 1964 (W. Dierl). Coll. ZSM. Solu Khumbu Himal, Tragsindha Pass, 3000 m: 1 ♀, 4. vii. 1993 (M. Hreblay & G. Csorba). Coll. Sommerer.

Facies, ciliate antenna and male genitalia characters (valvae short, stout, strongly tapering towards apex, cucullus short, without spined process ("harpe" of authors) proximally, aedeagus with short, curved ectocornutus (*i. e.* arising from aedeagus shaft), vesica with a hump of numerous small spines on a globular diverticulum) clearly indicate that *albovittata* is a member of the subgenus *Phyllabraxas* Leech.

Arichanna (Phyllabraxas) violacea (Warren, 1893) (MoN 4: 145; Pl. 103: 14)

Dudh-Kosi-valley, 3500 m: 15 ♂, 22-23. vii. 1962; Khumbu, Khumdzung, 3900 m: 16 ♂ 1 ♀, 12-25. vii. 1962; Tanga, 3800 m: 19 ♂ 2 ♀, 29. vii. 1962 (G. Ebert & H. Falkner); E. Nepal, Khumjung 3800 m: 13 ♂ 8 ♀, 25. vi-15. vii. 1964; Pangpoche, 4000 m: 1 ♀, 10. vii. 1964 (W. Dierl); Gosainkund Lekh, Tarke Banjyang 3600 m: 1 ♂, 27. viii. 1967 (Dierl-Schacht); C. Nepal,

Syang-Khola-valley, W Jomosom, 3950 m: 2 ♀, 3-4. vii. 1973 (Dierl-Lehmann). Coll. ZSM.

The genitalia characters clearly indicate that *violacea* belongs to the subgenus *Phyllabraxas*. Inoue (1979: 209, 210) already records this species from Nepal (elevation of collecting sites: 3310–3950 m) and figures the male and female genitalia. Nakajima (1995: 145) recorded this species again from Langtang valley (elevations given: 3500 m and 3900 m).

***Arichanna (Phyllabraxas) rubrivena* Warren, 1893 (Pl. 172: 17)**

Arichanna rubrivena Warren, 1893, *Proc. zool Soc. Lond.* **1893** (2): 424

Khumbu, Khumdzung 3900 m: 1 ♂, 24. vii. 1962; Dudh-Kosi-valley, 3500 m: 3 ♂, 22-23. vii. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

Also this species is a member of *Phyllabraxas*. Recorded by Inoue (1970: 209) from Nepal by 1 ♂ only (Gunsa, 3400 m). Not recorded again in MoN.

***Arichanna (Phyllabraxas) biquadrata* Warren, 1893 (MoN 3: 41; 4: 145; Pl. 73: 2; Pl. 103: 13)**

Arichanna ditetragona Wehrli, 1938, *Mitt. münch. ent. Ges.* 28: 81, **syn. n.**

Dudh Kosi valley, 3500 m: 1 ♂, 22-23. vii. 1962; Khumbu, Khumdzung, 3900 m: 1 ♀, 20. vii. 1962 (G. Ebert & H. Falkner); Solu Khumbu Himal, Lukla, 2800 m: 1 ♀, 26. vi. 1993 (M. Hreblay & G. Csorba). Coll. ZFMK. Dudh-Kosi-valley, 3500 m: 12 ♂ 2 ♀; Khumbu, Khumdzung, 3900 m: 1 ♂ 1 ♀, 16/19. vii. 1962; Tanga, 3800 m: 1 ♂ 2 ♀, 29. vii. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

Further material examined. Lectotype, of *Arichanna ditetragona* Wehrli, here designated for reason of nomenclatural stability: ♂, “Li-kiang. (China). 0, Provinz Nord-Yuennan., 24. 7. 1935. H. Höne.”-“*Arichanna ditetragona* Wrli, Cotype, abgebildet Seitz IV., Suppl. fig.” (handwritten, yellow label). Dr. Wehrli, Basel (blue, printed label). Coll. ZFMK. Paralectotypes: 2 ♂, same locality & collector, 14. 7. 1935; 1 ♂, *ditto*, 23. 7. 1935, Genitalpräp. ZFMK Nr. 799 (R. Sato fec.). Coll. ZFMK.

This species also clearly belongs to *Phyllabraxas*. In his description of *ditetragona* Wehrli compared it with “*biquadrata*”, but – as became evident by his original labelling in his collection – he misidentified two males of *A. plagifera* Walker from Sikkim as *biquadrata*. Two differently coloured specimens of *plagifera* from China, with yellowish hindwings, he considered to be true *plagifera*. Thus it becomes understandable that he 1) treats *plagifera* and *biquadrata* as closely related species and 2) describes his *ditetragona* as “easily distinguishable” from *biquadrata*.

Already Inoue (1970: 209) recorded that he received information about the synonymy of *ditetragona* with *biquadrata* (by D. S. Fletcher, *in litt.*). Comparison by the author of *biquadrata* specimens with the type material of *ditetragona* has now confirmed that there are in fact no structural differences. Therefore, *Arichanna ditetragona* Wehrli, 1938 is here synonymized with *Arichanna biquadrata* Warren, 1893. The name *ditetragona*, however, should be used furtheron as subspecific name (**stat. n.**) for the Yunnan population which has slightly more yellowish ground colour and the black patches close to the forewing apex are reduced between the medial veins.

***Arichanna (Phyllabraxas) subtilis* Inoue, 1987 (Pl. 172: 18)**

Arichanna (Phyllabraxas) subtilis Inoue, 1987, *Bull. Fac. domest. Sci. Otsuma Wom. Univ.* **23**: 257

Annapurna Himal, 2 km NW of Kaisang, 3900 m: 1 ♂, 21. vi. 1996 (M. Hreblay & C Szabóky). Coll. ZFMK. Annapurna Himal, Mesokantu Pass, 4500 m: 1 ♀, 16. vii. 1995 (Gy. M. László & G. Ronkay). Coll. Sommerer.

The male specimen mentioned and figured here with transverse lines very faint. Inoue based his description on one male only. Not recorded in MoN. Type-locality: Nepal, Nilgiri, 4200 m. The species seems to be restricted to very high altitude.

“*Arichanna*” *subaenescens* Warren, 1893 (Pl. 171: 8)

Arichanna (?) *subaenescens* Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 426.

Ganesh Himal, Somathang, 3270 m: 3 ♀, 15. vi. 1993 (M. Hrebly & G. Csorba). Coll. ZFMK. E. Nepal, Khumjung 3800 m: 1 ♀, 25. vi. 1964; Helmu area, Gusum Banjyang 2600 m: 1 ♀, 4. ix. 1967 (W. Dierl); C. Nepal, Dhaulagiri SE, 3700 m: 1 ♀, 10-13. vi. 1973 (Dierl-Lehmann). Coll. ZSM. [Mechi] Kanchenjunga, Laam Pokhari, 2850 m, 1 ♀, 30. vi. 1996. [Gamdaki] Hinku-Chhumurum, 1 ♀, 15. vi. 1974 (S. Yamagichi & T. Aoki).

Further material examined. 1 ♂, Sikkim, Yatong, 1894 (Dudgeon), gen. prep. no. 2068-DS (BMNH Geometridae genitalia slide no. 20196). Coll. BMNH.

The species was described from Sikkim, and Warren placed it – with doubt – into the genus *Arichanna* Moore. Inoue (1982: 179) recorded already a number of specimens of this species from Nepal and discussed its systematic position in a subsequent paper (1987: 259). There he came to the conclusion that it does not belong to *Arichanna* and that it may require a new genus, probably related to *Scionomia*. My examination of all relevant morphological structures (for male genitalia see Fig. 1451) has shown that this species is typical lithinine – as *Scionomia* is, too – agreeing to the definition that Holloway ([1994]: 92, 93) gave. However, a proper genus for its reception obviously does not exist and will be described after further studies. Males of this species are extremely rare in collections.

***Calcyopa* nom. n.**

Type-species: *Calichodes difoveata* Wehrli, 1943.

Calcyopa nom. n. is proposed as replacement name for *Calichodes* Wehrli, 1943, in Seitz, *Gross-Schmett. Erde* **4** (Suppl.): 544, junior homonym of *Calichodes* Warren, 1897, *Novit. zool.* **4**: 246.

As Holloway ([1994]: 251) pointed out, the genus-group name *Calichodes* was first published by Warren, but not stated as new genus in the description, so Wehrli considered it to be a manuscript name. “However, the earlier usage is valid under the International Code of Zoological Nomenclature and therefore has priority.” (Article 12, b (5) of the 3rd Edition, 1985, Article 12. 2. 5 of the 4th Edition, 1999). *Calichodes* Warren is a monotypic genus, type-species *C. foveata* Warren, 1897, a junior synonym of *C. subrugata* (Walker, 1862). The species is distributed over Peninsular Malaysia, Sumatra, Borneo and, with a distinct subspecies, in New Guinea (see Holloway, *l.c.*, pl. 15: 15, figs 520, 524).

In addition to the characters mentioned by Wehrli for “*Calichodes*”, the generic description of *Calcyopa* can be completed as follows: Male antennae with two pairs of short, strongly ciliate projections ventrally on each segment. Abdomen: third sternite without setal comb, seventh and eighth sternite covered with long hair scales, seventh sternite strongly modified, small, membranous, with a pair of coremata anteriorly and a pair of more or less triangular corematous lobes posteriorly, the latter with long hair scales and a dense layer of short, metallic scales covering its surface. The anterior coremata may be weak, scarcely invaginated (type-species), invaginated with moderate length (*rosearia*) or deeply invaginated (*prasina*, see Fig. 1509). In addition, there are (narrowly tube-like, if everted) coremata laterally on third segment (type-species), on third to fifth segment (*prasina*), or absent (*rosearia*). Last intersegmental membrane (= genital membrane) covered with hair-scales. Male genitalia with acutely triangular valves, with a free costa, apically dilated and with long bristles, standing at right angles towards the upper valve margin. Sacculus process stick-like, spined over the whole length or at apex only. Uncus with triangular base, apical narrow part deeply divided. Gnathus with weak lateral arms, central part strong, elongate, slightly upcurved, pointed. Aedeagus stout, with or without apical sclerotization (a long, narrow process dorsally, a group of spines ventrally in the type-species, a tooth-like, short process in *rosearia*), vesica unadorned, bulbus ejaculatorius long. Female genitalia with bursa rather short, triangular to squarish, without distinct ductus bursae. Signum modified to elongate grooves, lined with a chain of numerous sclerotized teeth. Introitus deeply set into a membranous pouch which is rather small in the type-species but large in the congeners.

The duplicate fovea in the male forewing, considered unique by Wehrli, is also found in related genera as *Myrioblephara* or *Necyopa*. The latter genus is closely related to *Calcyopa*, agreeing in the special composition of coremata which are even more derived in *Necyopa*, in the deeply divided uncus, shape of gnathus and valva including free costa, but differing in the antennae being bipectinate in *Necyopa*, the sacculus being unspined and the vesica lined with numerous cornuti.

The type-species *C. difoveata* (Wehrli) occurs from East to South China and is also represented in Taiwan (= *Aethalura lushanalis* Sato, 1987, **syn. n.**). Sato provides illustrations of a male and a female as well as their genitalia.

Lectotype, of *Calichodes difoveata* Wehrli, here designated for reason of nomenclatural stability: ♂, "West-Tien-Mu-Shan, (1600 m) Pz. Chekiang, 26. 4. 1932, H. Höne" (printed label)-"25070" (Höne's diary no., stamped on backside of first label)-"*Boarmia Myrioblephara difoveata* Whli, ♂ Type Dr. Wehrli" (red label, partly handwritten by Wehrli) Coll. ZFMK. (Fig. 1507). Paralectotypes. 3 ♀, same locality and collector, 30. 4. 1932; 1 ♀, Lienping, S. China, v. Coll. ZFMK. Further two paralectotypes in coll. BMNH.

In addition to the new species described beneath, two other species presently are included in this genus: *Calcyopa rosearia* (Joannis, 1929), **comb. n.** (*Ectropis*), described from "Tonkin" (N. Vietnam) and also known from Yunnan, Thailand and Sumatra, and an undescribed species also from Vietnam.

***Calcyopa prasina* sp. n.** (Pl. 172: 21, 22, paratype)

Length of forewing 11–13 mm in male, 12–14 mm in female. Very similar to *Necyopa flatipennata* Walker and *N. relictomata* (Swinhoe), **sp. rev.**, but easily distinguished by the bipectinate antennae of the latter two species. Ground colour green in fresh specimens, but often faded to yellowish or brownish green. Antennal projections longer than in the congeners. Antemedian line of forewing double, postmedian outcurved between M_1 and M_3 , with an elongate oval blackish spot near the posterior bend which is always present in males, but sometimes inconspicuous or lacking in females. Hindwing with a rather straightish black antemedian line, basal area inside this line densely covered with blackish scales. Postmedial evenly curved, black. A black tornal spot present. Discal spots on all wings, but small. Underside pale grey, a broad marginal band on forewing darker grey, with a pale central spot. Postmedian line not outcurved as on upperside. Hindwing with dark grey basal area and tornal spot, sometimes also with dark grey marginal band. Abdomen with three pairs of lateral scale brushes, arising from evertible coremata structures laterally on segments 3, 4 and 5. Large, deeply invaginated coremata (Fig. 1509) also on sternite 7.

Male genitalia (Fig. 1506). Uncus with apical, deeply divided portion longer than in *difoveata*, distal one third abruptly bent ventrad. Sacculus longer, loosely spined all over its length. Aedeagus without ornamentation apically.

Female genitalia. Introitus set into a very large pouch, achieving almost the size of the rather small and squarish bursa. Distinctly sclerotized colliculum (as in *difoveata*) absent. Signum consisting of two oblique grooves, a dorsal and a ventral one, lined with teeth interiorly.

Holotype, ♂ (Fig. 1508), Thailand, Chiangmai, Doi Suthep, 1325 m, Meo Village View Point, 22. xi-4. xii. 1989 (H. Schnitzler). Coll. ZFMK. Paratypes. 1 ♂ 1 ♀, same data as holotype; 1 ♂ 1 ♀, *id.*, 15-25. xi. 1990; 1 ♂, N. Thailand, Nan Prov., Pua, Doi Phu Kha, 1680 m, 16. ii. 1993, leg. D. Stüning; 2 ♂, *id.*, 23. ii. 1993; 1 ♂, *id.*, 1. iii. 1993. Coll. ZFMK; -1 ♂, Thailand, Chiangmai, Doi Pui, 1300 m, 1-4. ix. 1987, leg. Moriuti, Saito, Arita & Yoshiyasu. Slide no. RS-3161. Coll. Ent. Lab., Univ. Osaka Pref-1 ♂, Thailand, Loei Prov., Phu Luang Wildlife Sanctuary, 8-14. x. 1984, 700-900 m, Karsholt, Lomholdt & Nielsen leg., slide no. 58 (RS), coll. ZMC-1 ♂ 2 ♀, N. Vietnam, Tam Dao, 60 km NW Hanoi, 1200 m, secondary forest, 1-5. v. 1993, leg. Siniaev & Simonov, *ex coll.* A. Schintlmeister; 1 ♀, *id.*, 1-15. xi. 1992; 1 ♂, N. Vietnam, Cuc Phuong, 60 km SW Hanoi, 400 m, secondary forest, 18. xi-3. xii. 1992, same collectors; 1

♀, N. Vietnam, Mt Fan-si-pan, Sa-pa, 1600-1800 m, 8-29. v. 1993, same collectors. Coll. ZFMK-1 ♂, Malaysia, Cameron Highlands, Brinchang 1500 m, 8-16. iii. 1983, leg. E. Bauer. Coll. M. Sommerer; 1 ♂, *id.*, 10-11. iv. 1986, leg. K. Yazaki, slide no. RS-3277. Coll. R. Sato; 1 ♂, *id.*, Strawberry Park, 21. vi. 1988, leg. & coll. Cl. Herbulot; -1 ♀, SE Burma, Dawna Hills, 13. vi. 1991, leg. S. Steinke. Coll. ZFMK-1 ♀, India, Darjeeling, Mangpu-road 1800 m, 16. vi. 1987, leg. W. Thomas; 1 ♂, *id.*, 29. vi. 1987, 1900 m. Coll. ZFMK. 1 ♂, Sikkim, 29. v. [18]89, G. Pilcher leg. Coll. BMNH-1 ♂, Nepal, Bhimpedi, 400 m, 4-7. iv. 1962, G. Ebert & H. Falkner leg.; 1 ♂, Nepal, Kathmandu Valley, Godavari 1600-1800 m, 31. v. 1967, leg. Dierl, Forster, Schacht. Coll. ZSM. 1 ♂, Nepal, 18 km SSE Katmandu, route du Phulchoki, 2100 m, 1. x. 1983, leg. & coll. Cl. Herbulot. 1 ♂, India, Uttar Pradesh, Kumaon, Distr. Nainital, Bhimtal, 1500 m, 15-30. v. 1990, (H. Speidel); *id.*, 1 ♂, 20. ix. 1992 (Smetacek). Coll. ZFMK.

Geographical range. Thailand, Vietnam, Peninsular Malaysia, Myanmar, N. India, Nepal.

The new species is widely distributed, but always rare, more abundant only in N. Thailand and N. Vietnam.

“*Calichodes*” *ochrifasciata* (Moore, 1888) and “*Calichodes*” *defervescens* (Prout, 1927), as treated by Sato, 1993: 18, 1994: 50 and 1998: 24, are neither belonging to *Calichodes* Warren nor to *Calcypa* nom. n. Male genitalia with the uncus totally divided into two claw-like parts indicate a relationship with *Chrysoblephara* Holloway [1994], but the ornamentation of the valves is very different. Probably, a new genus ought to be described for the two species mentioned, after further studies including the female genitalia (Sato, *pers. comm.*). *Necyopa recticomata* (Swinhoe, 1903) (holotype, ♂, “Bulsit Besar, Siam, Malay States”, BMNH Geometridae genitalia slide No. 13194, in coll. BMNH, checked) has been treated as a junior synonym of *N. flatipennata* Walker, 1862 (Holloway [1994: 256], Scoble *et al.*, 1999: 626). It is restored here as distinct species as it differs from *flatipennata* in the following characters: large patch of strongly modified (androconical?) scales on hindwing underside near tornus present in *flatipennata*, absent in *recticomata*. Wingshape: both wings rounded, rather broad in *recticomata*, in *flatipennata* apex of forewing more acute, termen of both wings rather straight, especially in the hindwing. Arrangement of abdominal coremata and male genitalia similar in both species, but in the latter there are differences in the shape of the free costa and the size of the uncus. Aedeagus with long row of strong cornuti almost identical in both species.

C. flatipennata occurs also in Sumatra (1 ♂, coll. Sommerer), *C. recticomata* has recently been collected at Peninsular Malaysia (Fraser’s Hill, 1 ♂, coll. Herbulot) and C. Thailand (Khao Yai Nat. Park, 4 ♂ 1 ♀, coll. OPU, ZFMK).

Miscellaneous genera and species

* *Xenographia lignataria* Warren, 1893 (Pl. 171: 9, 10)

Xenographia lignataria Warren, 1893, *Proc. zool. Soc. Lond.* **1893**: 404

E. Nepal, Junbesi, 2750 m: 1 ♀, 25-31. vii. 1964 (W. Dierl). Coll. ZSM. Taplejung area, nr. Patibhara peak, 3155 m: 1 ♂, 13-14. x. 1994 (M. Hreblay & T. Csövari); SW Mt Kalinchok, 3000 m: 1 ♀, 29. vi. 1997 (Hreblay & Csak). Coll. Sommerer.

Further material examined. Two male syntypes (but labelled as “paratypes”), Sikkim, O. Möller, [18]89; *id.*, 4. x. 1888, *ex coll.* BMNH, coll. ZFMK.

Male genitalia (Fig. 1456), especially the free costal arms angled in the middle, in combination with a triangular valve, indicate a possible relationship to the tribe Cassymini, as defined by Holloway ([1994]: 117) and Fletcher (1974).

* “*Xenographia*” *semifusca* Hampson, 1895 (Pl. 171: 3)

Xenographia semifusca Hampson, 1895, *Fauna Br. India* (Moths) **3**: 189.

Heterostegania denticulosa Warren, 1896, *Novit. zool.* **3**: 128

Kathmandu valley, Godavari 1600-1800 m: 1 ♂, 6. vi. 1967, ZSM Genitalprp. No. G 291; *id.*, 1 ♂, 10. vi. 1967 (Dierl-Forster-Schacht); Jiri, 1900 m: 1 ♀, 18. v. 1962 (G. Ebert & H. Falkner). Coll. ZSM.

Not a member of the very peculiar genus *Xenographia* Warren, but, – according to the male genitalia – without doubt a member of the Baptini, close to *Heterostegania* Warren, but probably not congeneric. The generic treatment will be solved after further studies. The synonymy with *Heterostegania denticulosa* Warren seems justified, but could not yet be checked.

**Seleniopsis* sp. (Pl. 171: 11, 12)

E. Nepal, Jiri, 2200 m: 1 ♀, 1. vi. 1992 (H. Schnitzler). Coll. ZFMK. Jiri, 2000 m: 1 ♂, 2. iv. 1964; *id.*, 1 ♀, 12. iv. 1964 (W. Dierl). ZSM Genitalprp. No. G 307 (♂); Kali-Gandaki-valley, Kalopani-Dhumpu 2500 m: 1 ♂, 6. vi. 1973 (Dierl-Lehmann). Coll. ZSM. Modi Khola, Gandrung, 1950 m: 1 ♂, 10. x. 1980 (Stanglmaier); NNE of Muldi (Murre), 2835 m: 1 ♂, 5. viii. 1995 (M. Hreblay & T. Csövari). Coll. Sommerer.

First record for *Seleniopsis* Warren, 1894 from the Himalaya region. Species of this genus have so far only been recorded from continental China, Taiwan and Japan. The Nepalese taxon is very similar to *grisearia* Leech, 1897 and *evanescens* (Butler, 1881) externally (both of which may be conspecific), but male genitalia are clearly different (male from Sichuan compared). The Japanese *S. evanescens* could not be studied so far, so it was not yet possible to decide whether the Nepalese taxon may be new to science. *Seleniopsis* has traditionally been treated as related to *Plagodis* Hübner [1823] or *Selenia* Hübner [1823], two genera belonging to the Hypochrosini, but male genitalia are not hypochrosine. Some characters (shape of the valves, uncus and gnathus, single furca with spined apex) indicate a possible relationship to the Ourapterygini, albeit being externally very different to the genera presently included in that tribe.

New records for the fauna of Nepal (Geometridae-Ennominae)

<i>Achrosis rondelaria</i> (Fabricius)	+ <i>Heterostegania lunulosa</i> (Moore)
<i>Garaeus fulvata</i> (Warren)	<i>Pseudomiza cervina</i> (Warren)
<i>Mimochroa gynopteridia</i> (Butler)	<i>Ocoelophora basipuncta</i> (Moore)
<i>Artemidora disistaria</i> (Walker)	+ <i>Dalima warreni</i> sp. n.
+ <i>Heterolocha falconaria</i> (Walker)	+ <i>Lassaba contaminata</i> Moore
<i>Heterolocha rubrifusa</i> Hampson	+ <i>Lassaba anepsia</i> (Wehrli)
<i>Heterolocha mariailgeae</i> sp. n.	+ <i>Deinotrichia scotosiaria</i> Warren
<i>Fascellina inornata</i> Warren	<i>Uliura albidentata</i> (Moore)
<i>Leptomiza dentilineata</i> (Moore)	<i>Arichanna (Paricterodes) luciguttata</i> (Warren)
<i>Dissoplaga flava</i> (Moore)	+ <i>Arichanna (Paricterodes) schnitzleri</i> sp. n.
<i>Corymica vesicularia</i> Walker	<i>Arichanna (Phyllabraxas) albovittata</i> Moore
<i>Ourapteryx excellens</i> Butler	<i>Calcyopa prasina</i> sp. n.
<i>Ourapteryx chrisbahri</i> sp. n.	<i>Xenographia lignataria</i> Warren
<i>Ourapteryx inouei</i> sp. n.	“ <i>Xenographia</i> ” <i>semifusca</i> Hampson
<i>Euryobeidia languidata</i> (Walker)	<i>Seleniopsis</i> sp.

(Species marked with a “+” have been mentioned and/or figured but have been misidentified in previous papers on the Nepalese moth fauna).

Species to be omitted from the Nepal fauna

<i>Mimochroa viridescens</i> Warren	<i>Lassaba cervina</i> (Warren)
<i>Heterolocha phoenicotaeniata</i> (Kollar)	<i>Lassaba stolidaria</i> (Leech)
<i>Dalima vulpinaria</i> (Moore)	

Acknowledgments

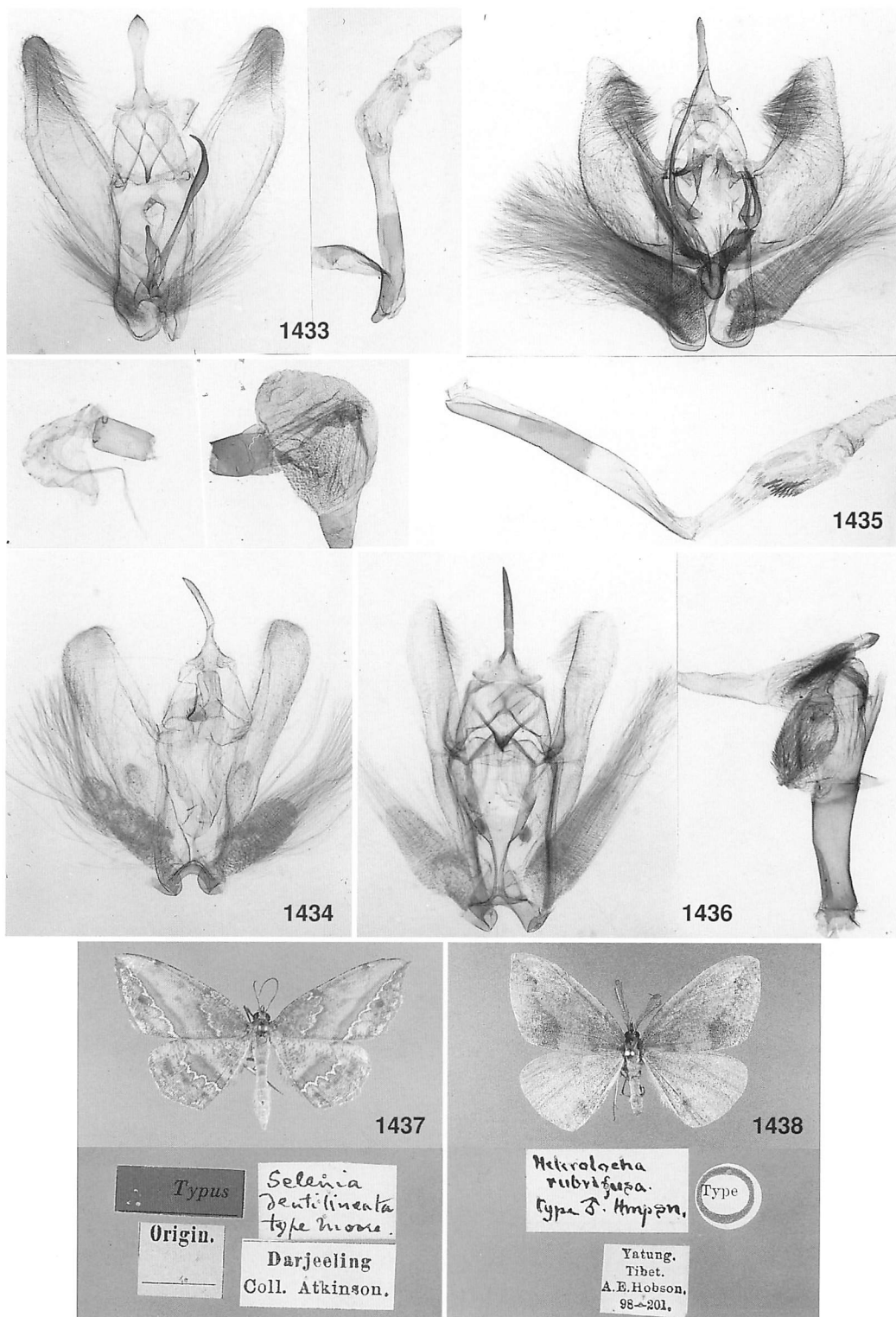
I am very grateful to Dr M. J. Scoble, Mr M. R. Honey and Mr G. Martin for organizing the loan of type-material from BMNH, the latter two also for help in locating a type-locality and for providing numerous data out of the collection under their care. I am equally thankful to Dr W. Mey, Dr W. Speidel (MNHU) and Dr A. Hausmann (ZSM) for loan of type-material and for their support and hospitality during several visits. Special thanks are due to Dr Speidel for fruitful discussions on taxonomical problems and for frequent services as a courier between Bonn and Berlin. Mr M. D. Sommerer, Munich, generously supplied me with numerous data from his private collection. I also thank him (and Mrs Sommerer) for their warm hospitality during several visits at their home. Dr Xue Dayong, Zoological Museum of the Chinese Academy of Sciences, Beijing, provided me with a large number of digitalized photographs of type specimens. I am also indebted to the following colleagues and friends who contributed substantially to my work: Mr K. Yazaki for providing a sample of Nepalese Geometridae collected by the late T. Haruta; Prof H. Inoue, Iruma, for sending selected Ennominae-material and Dr R. Sato, Niigata, for discussions about taxonomical problems; Mr Claude Herbulot, Paris, and Mr G. Orhant, Wailly-Beaucamp, France, for loan of specimens and for providing additional data from their collections; Dr J. Minet (MNHN) for loan of specimens. Special thanks are due to the Hungarian collector and Noctuidae specialist, Dr M. Hreblyay, Erd, whom I owe a major part of our Nepal Geometridae. Mr G. Ronkay and Mr Gy. M. László, Budapest, provided numerous data and offered duplicate specimens. I thank Mr C. G. Treadaway, Limbach, for linguistic improvement of the manuscript and Mrs U. Kleikamp, ZFMK, for thoroughly preparing all black-and-white prints.

References

- Bänziger, H., 1972. Biologie der lacriphagen Lepidopteren in Thailand und Malaya. *Rev. suisse Zool.* **79** (4): 1381-1469.
- Belyaev, E. A., 1998. Morphology of copulative apparatus in *Devenilia corearia* and description of a new *Deveniliini* (Lepidoptera, Geometridae, Ennominae) tribe. *Zool. J., Moscow* **77** (4): 438-443 (in Russian).
- Beyer, E. 1958. Über sechs neue Geometrinae aus China (Lepid. Geom.). *Brotéria* **27** (54): 109-115.
- Butler, A. G., 1880a. New species of Asiatic Lepidoptera Heterocera. *Ann. Mag. nat. Hist.* (5) **6**: 119-129.
- , 1880b. Descriptions of new species of Asiatic Lepidoptera Heterocera. *Ann. Mag. nat. Hist.* (5) **6**: 214-230.
- , 1889. *Illustrations of typical specimens of Lepidoptera Heterocera in the collection of the British Museum* **7**. 124 pp. London.
- Dierl, W., 1966a. Zur Kenntnis der Hauptbiotope des Expeditions gebietes Khumbu Himal vom Gesichtspunkt des Entomologen (Nepal Expedition 1964). *Khumbu Himal* **1**: 142-171, figs 1-22.
- , 1966b. Psychidae (Lep.) aus Nepal. *Khumbu Himal* **1**: 322-342, figs 1-59.
- Ebert, G., 1966. Beiträge zur Kenntnis der entomologischen Sammelgebiete der Nepal-Expedition 1962. *Khumbu Himal* **1**: 121-141, figs 1-2.
- Fabricius, J.-C., 1775. *Systema Entomologiae. Sistens Insectorum Classes etc* **1**. Flensburgi et Lipsiae.
- Felder, C., Felder, R. & A. F. Rogenhofer, 1868-1875. *Reise der österreichischen Fregatte Novara um die Erde* **2**. Wien.
- Fletcher, D. S., 1961. Lepidoptera der Deutschen Nepal-Expedition 1955: Geometridae. *Veröff. zool. StSamml. Münch.* **6**: 163-178, pls 16-28.
- , 1974. A revision of the Old World genus *Zamarada* (Lepidoptera: Geometridae). *Bull. Br. Mus. nat. Hist.* (Ent.) Suppl. **22**.
- , 1979. In Nye, I. W. B. (Ed.), *The generic Names of Moths of the World* **3**. Trustees of the British Museum (Natural History), xx, 243 pp. London.
- Guenée, A., [1858] 1857. Uranides et Phalénites 2. In Boisduval, M. & A. Guenée, *Hist. nat. Insectes (Spec. gén. Lépid.)* **10**: 1-584. Paris.
- Hampson, G. F., 1895. *Fauna of British India, including Ceylon and Burma* (Moths) **3**. xxviii, 546 pp. London.
- , 1902. The moths of India. Supplementary paper to the volumes in "The Fauna of British India". Series ii, part 7. *J. Bombay nat. Hist. Soc.* **14**: 494-519.
- Herbulot, C., 1995. Dix nouveaux Ennominae d'Afrique et D'Indonésie (Lepidoptera Geometridae). *Bull.*

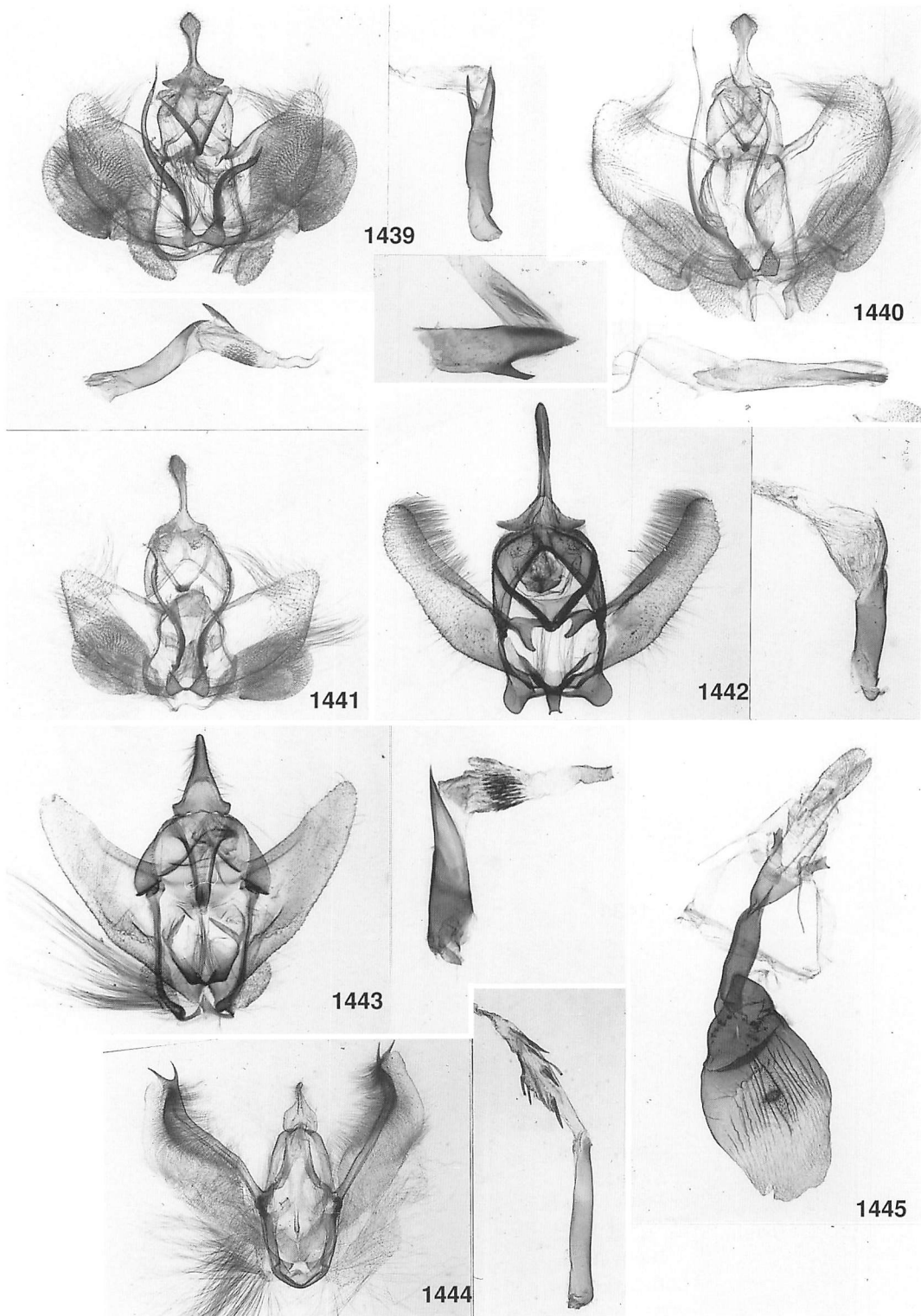
- Soc. ent. Mulhouse* **1995**: 55-58.
- Holloway, J. D., 1993 [1994]. The Moths of Borneo, part 11: Geometridae, Ennominae. *Malay. Nat. J.* **47**: 1-309, 19 pls.
- Horn, W., Kahle, I., Friese, G. & R. Gaedike, 1990. Collectiones entomologicae. Ein Kompendium über den Verbleib entomologischer Sammlungen der Welt bis 1960, Teil 1. Akademie der Landwirtschaftswissenschaften der DDR, 1-220, Berlin.
- Hreblay, M. & L. Ronkay, 1998. Noctuidae from Nepal. In Haruta, T. (Ed.), Moths of Nepal, part 5. *Tinea* **15** (Suppl. 1): 117-310, pls 144-157.
- Inoue, H., 1970. Geometridae of Eastern Nepal based on the collection of the Lepidopterological Research Expedition to Nepal Himalaya by the Lepidopterological Society of Japan in 1963, part 1. *Spec. Bull. lepid. Soc. Japan* **4**: 202-239.
- , 1971. The Geometridae of the Ryukyu Islands (Lepidoptera). *Bull. Fac. domest. Sci. Otsuma Wom. Univ.* **7**: 141-179, 6 pls.
- , 1982. *Ibid.*, part 2. *Bull. Fac. domest. Sci. Otsuma Wom. Univ.* **18**: 129-190.
- , 1987. *Ibid.*, part 3. *Bull. Fac. domest. Sci. Otsuma Wom. Univ.* **23**: 215-270.
- , 1988. Five new species of Geometridae from southeast Asia (Lepidoptera). *Tinea* **12** (11): 97-104.
- , 1992. Twenty-four new species, one new subspecies and two new genera of the Geometridae (Lepidoptera) from East Asia. *Bull. Fac. domest. Sci. Otsuma Wom. Univ.* **28**: 149-188.
- , 1994. Description of a new species of *Ourapteryx* Leach (Geometridae, Ennominae) from Central Nepal. *Tinea* **14** (1): 10-12.
- , 1995. The genera *Abraxas* and *Ourapteryx* from Nepal (Geometridae, Ennominae). In Haruta, T. (Ed.), Moths of Nepal, part 4. *Tinea* **14** (Suppl. 2): 119-139.
- INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, 1985: International Code of Zoological Nomenclature, Third Edition. London. The International Trust for Zoological Nomenclature. 338 pp.
- INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, 1999: International Code of Zoological Nomenclature, Fourth Edition. London. The International Trust for Zoological Nomenclature. 306 pp.
- Joannis, J. de, 1929. Lépidoptères Hétérocères du Tonkin. *Annls Soc. ent. Fr.* **98**: 361-552.
- Kishida, Y. & K. Yazaki, 1991. Notes on some moths from Taiwan X. *Japan Heterocerists' J.* (165): 263-266.
- Kollar, V., [1844]. Aufzählung und Beschreibung der von Freiherrn Carl v. Hügel auf seiner Reise durch Kaschmir und das Himaleyagebirge gesammelten Insecten: Lepidoptera. In Hügel, *Kaschmir und das Reich der Siek* **4** (2): 395-496. Stuttgart.
- Leech, J. H., 1897. On the Lepidoptera Heterocera from China, Japan, and Corea. *Ann. Mag. nat. Hist.* (6) **19**: 414-463, pls 6-7.
- Moore, F., [1868]. On the lepidopterous Insects of Bengal. *Proc. zool. Soc. Lond.* **1867**: 612-686, pls 32-33.
- , 1888. *Descriptions of new Indian lepidopterous Insects from the collection of the late Mr. W. S. Atkinson. Heterocera* (continued): 199-299, pls vii, viii. Calcutta.
- Nakajima, H., 1995. A list of geometrid moths collected in Langtang Valley in 1992. In Haruta, T. (Ed.), Moths of Nepal, part 4. *Tinea* **14** (Suppl. 2): 140-147.
- Prout, L. B., 1914. H. Sauter's Formosa-Ausbeute: Geometridae (Lep.). *Ent. Mitt.* **3**: 236-249, 259-273.
- , 1912-1916. Spannerartige Nachtfalter. In Seitz, A. (Ed.), *Gross-Schmett. Erde* **4**. Stuttgart.
- , 1927. On a collection of moths of the family Geometridae from Upper Burma made by Captain A. E. Swann. Part IV. *J. Bombay nat. Hist. Soc.* **31** (4): 932-950, pl. II.
- Robinson, G. S., Sattler, K., Shaffer, M., Tuck, K. R. & M. G. Allen, 1995. Microlepidoptera and Pyraloidea of Nepal—a checklist and bibliography. In Haruta, T. (Ed.), Moths of Nepal, part 4. *Tinea* **14** (Suppl. 2): 150-181.
- Sato, R., 1989. Two Wehrli's taxa of *Arichanna* (Lepidoptera: Geometridae) raised to the species status. *Tinea* **12**: 171-176.
- , 1993. Geometridae: Ennominae (part). In Haruta, T. (Ed.), Moths of Nepal, part 2. *Tinea* **13** (Suppl. 3): 5-30, pls 34-38.
- , 1994. Geometridae: Ennominae (part). In Haruta, T. (Ed.), Moths of Nepal, part 3. *Tinea* **14** (Suppl. 1): 41-62, pls 73-76.
- , 1995a. Geometridae: Ennominae (part). In Haruta, T. (Ed.), Moths of Nepal, part 4. *Tinea* **14** (Suppl. 2): 28-37, pls 102-103.
- , 1995b. Records of the Boarmiini (Geometridae; Ennominae) from Thailand II. *Trans. lepid. Soc. Japan* **46**: 209-227.
- , 1998. Geometridae: Ennominae (part). In Haruta, T. (Ed.), Moths of Nepal, part 5. *Tinea* **15** (Suppl. 1): 19-31, pls 130-131.

- Swinhoe, C., 1890. On new Indian Lepidoptera, chiefly Heterocera. *Proc. zool. Soc. Lond.* **1889**: 396-432.
- , 1894. A list of the Lepidoptera of the Khasia Hills. Part II. *Trans. ent. Soc. Lond.* **1894**: 145-223.
- Thierry-Mieg, P., 1899. Descriptions de Lépidoptères Nocturnes. *Annl. Soc. ent. Belg.* **43**: 20-21.
- , 1907. Description de Lépidoptères Nouveaux. *Naturaliste* **29**: 150-151, 174-175, 187-188, 200, 212, 224-225, 238, 247, 259-260, 271.
- Walker, F., 1860. *List of the Specimens of lepidopterous Insects in the Collection of the British Museum* **20**: 1-26. London.
- , 1861. *Ibid.* **22**: 499-755. London.
- , 1862. *Ibid.* **24**: 1020-1280. London.
- , [1863] 1862. *Ibid.* **26**: 1479-1796. London.
- Warren, W., 1893. On new genera and species of moths of the family Geometridae from India, in the Collection of H. J. Elwes. With notes by H. J. Elwes. *Proc. zool. Soc. Lond.* **1893**: 341-434, pls 30-32.
- , 1897. New genera and species of moths from the Old World Regions in the Tring Museum. *Novit. zool.* **4**: 12-130, 378-402.
- Wehrli, E., 1933. Neue Arten und Rassen der Gattung *Arichanna* Moore (*Arichanna* S. str., *Icterodes* Btl., *Epicterodes* sg. n., *Paricterodes* Warr. und *Phyllabraxas* Leech) aus meiner Sammlung. (Geometr. Lepid.) *Ent. Z., Frankf. a. M.* **47** (4): 29-31; 47 (5): 40-42; 47 (6): 47-51, 2 pls.
- , 1938. Neue Untergattungen, Arten und Unterarten von ostasiatischen Geometriden (Lepid.) aus den Sammlungen Oberthür und Dr. Höne und eine *Boarmia* der Ausbeute H. u. E. Kotzsch. *Mitt. münch. ent. Ges.* **28**: 81-89.
- , 1939-1954. Geometrinae. In Seitz, A. (Ed.), *Gross-Schmett. Erde* **4** (Suppl.): 254-722. Stuttgart.
- Yazaki, K., 1992. Geometridae. In Haruta, T. (Ed.), *Moths of Nepal*, part 1. *Tinea* **13** (Suppl. 2): 5-46, pls 2-12.
- , 1993. Geometridae. In Haruta, T. (Ed.), *Moths of Nepal*, part 2. *Tinea* **13** (Suppl. 3): 103-121, pls 59-60.
- , 1994. Geometridae. In Haruta, T. (Ed.), *Moths of Nepal*, part 3. *Tinea* **14** (Suppl. 1): 5-40, pls 66-72.
- , 1995. Geometridae. In Haruta, T. (Ed.), *Moths of Nepal*, part 4. *Tinea* **14** (Suppl. 2): 2-27, pls 97-101.
- , 1998. Geometridae. In Haruta, T. (Ed.), *Moths of Nepal*, part 5. *Tinea* **15** (Suppl. 1): 3-18, pls 129-130.

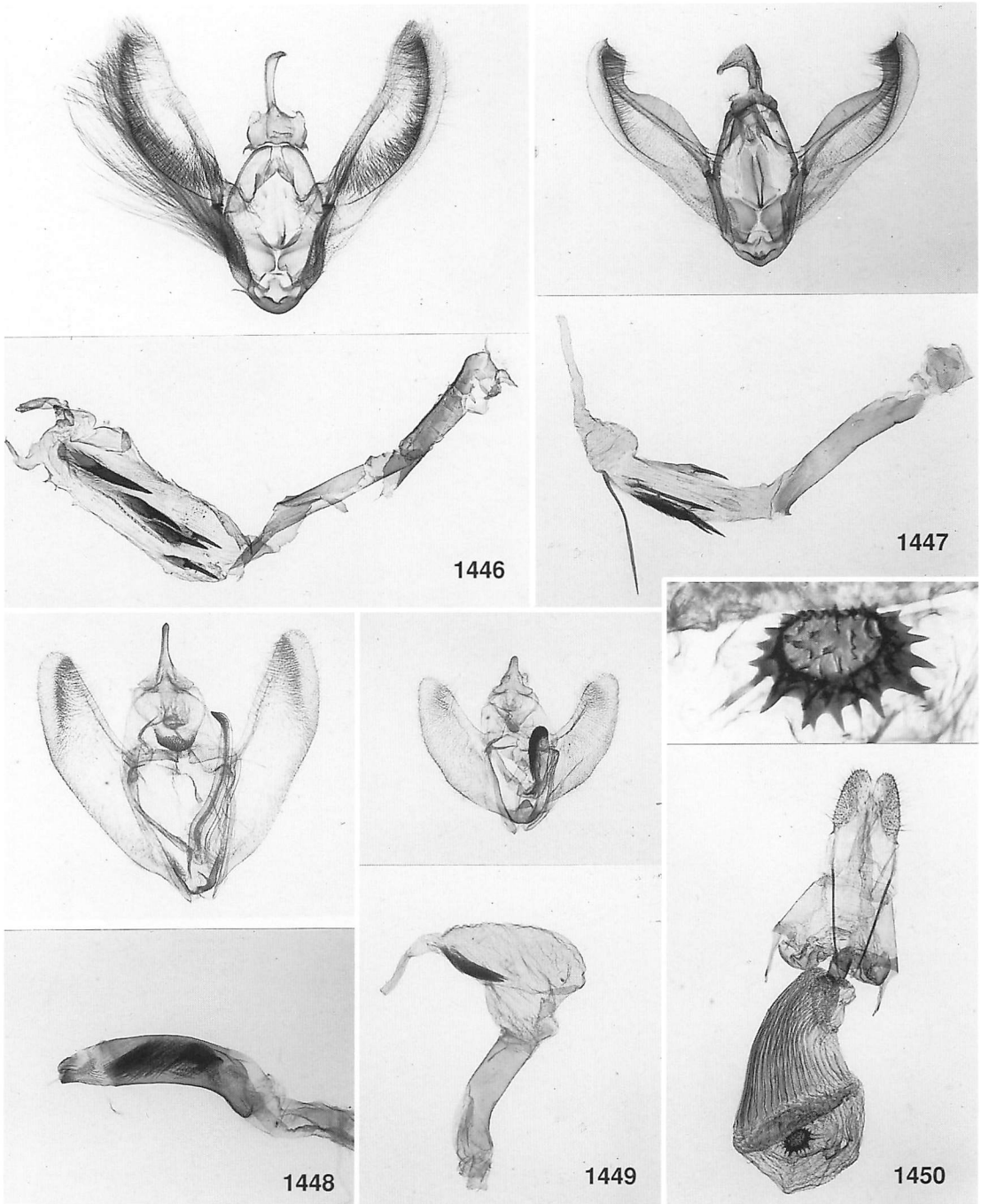


Figs 1433-1436. Male genitalia. 1433. *Polyscia argentilinea* (Moore). 1434. *Leptomiza dentilineata* (Moore), paralectotype, Darjeeling. 1435. "*Pseudomiza*" *obliquaria* (Leech). 1436. *Leptomiza calcearia* (Walker).

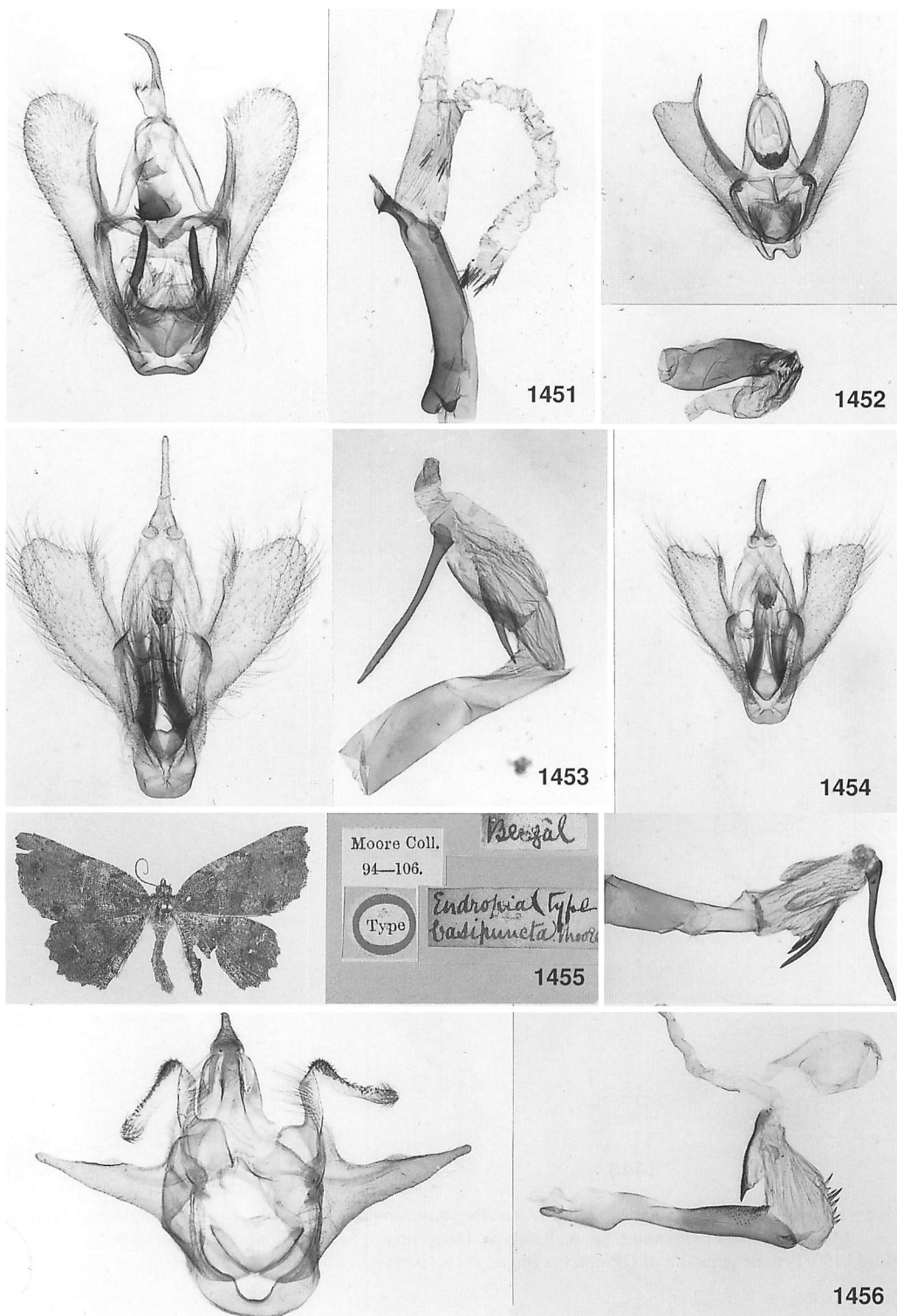
Figs 1437-1438. Type specimens & labels. 1437. *Selenia dentilineata* Moore, lectotype ♂, MNHU. 1438. *Heterolocha rubrifusa* Hampson, holotype ♂, BMNH.



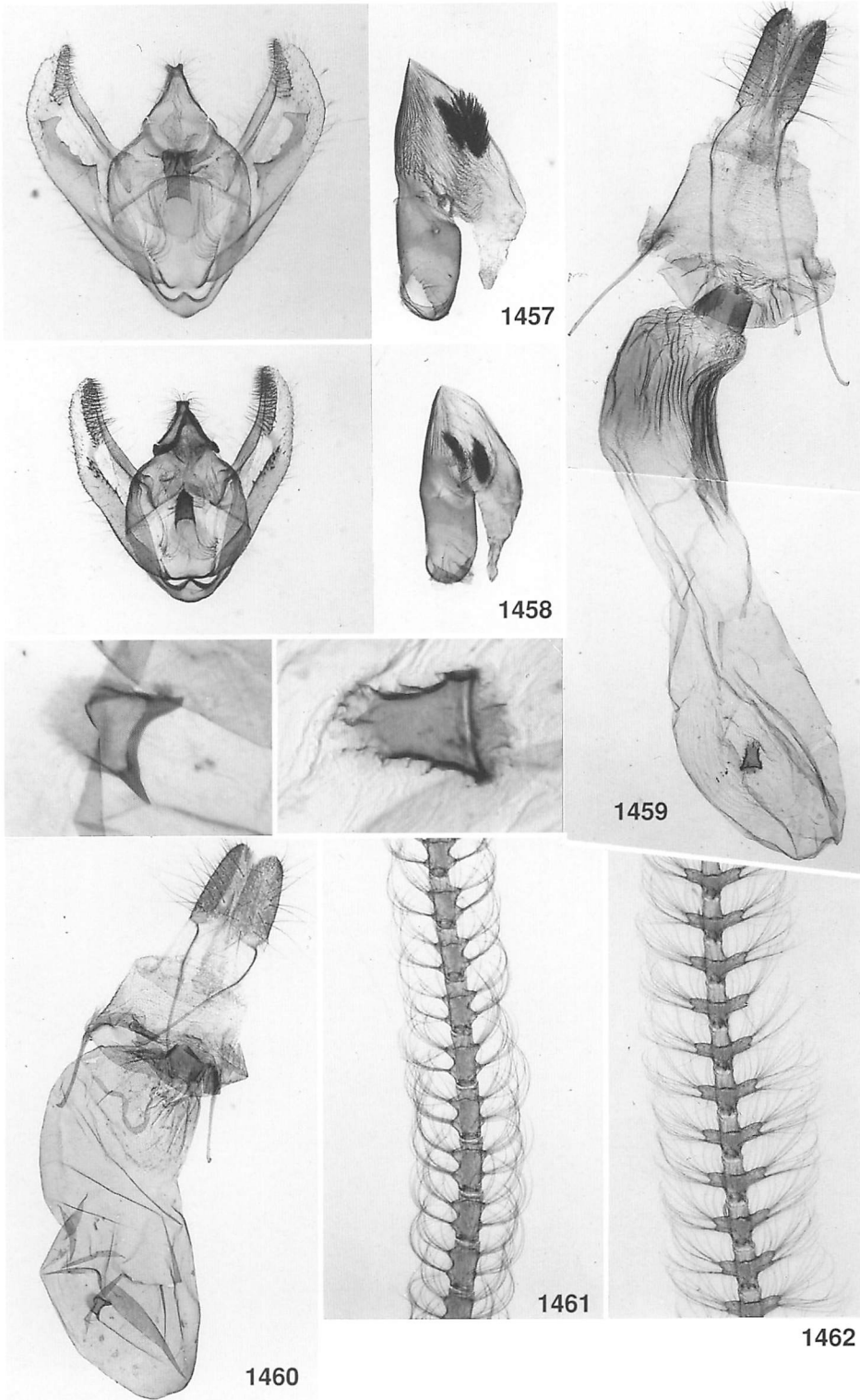
Figs 1439–1444. Male genitalia. 1439. *Heterolocha falconaria* (Walker). 1440. *H. mariailgeae* sp. n., paratype. 1441. *H. rubrifusa* Hampson. 1442. *Artemidora disistaria* (Walker). 1443. *Apheterolocha patalata* (Felder & Rogenhofer). 1444. *Platycerota particolor* (Warren), Khasi Hills. Fig. 1445. Female genitalia of *Platycerota particolor* (Warren), syntype ♀, Khasi Hills, BMNH.



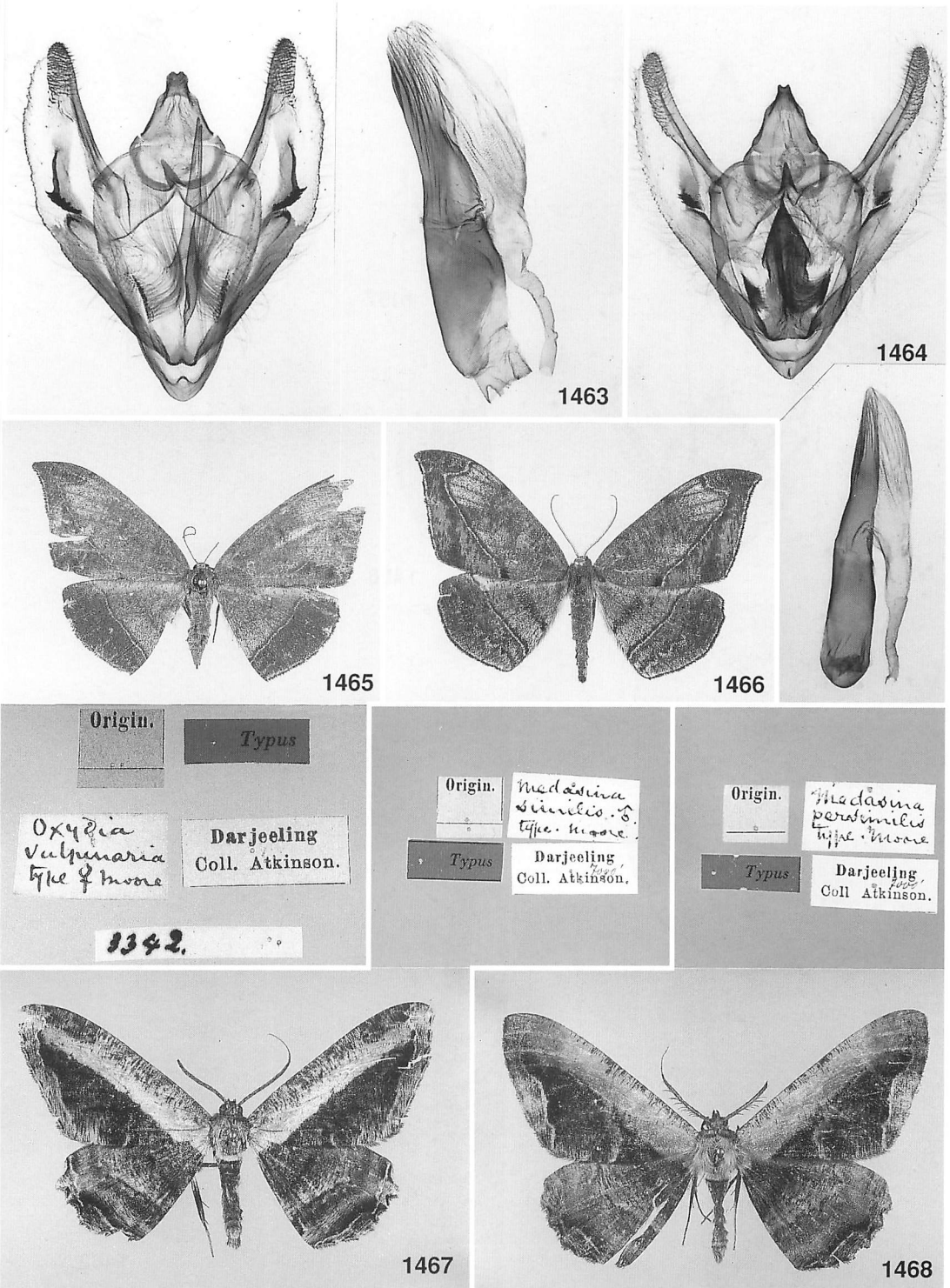
Figs 1446-1449. Male genitalia. 1446. *Heterostegania lunulosa* (Moore). 1447. *H. nigrofusa* Warren.
1448. *Ouraapteryx chrisbahri* sp. n., holotype, Darjeeling. 1449. *O. inouei* sp. n., paratype.
Fig. 1450. Female genitalia of *Ouraapteryx inouei* sp. n., paratype. Enlarged signum above.



Figs 1451–1454. Male genitalia. 1451. “*Arichanna*” *subaenescens* Warren, Sikkim. 1452. *Ocoelophora basipuncta* (Moore). 1453. *Pseudomiza castanearia* (Moore), Darjeeling. 1454. *P. cervina* (Warren). Fig. 1455. *Endropia basipuncta* Moore, lectotype ♂, Bengal, BMNH. Fig. 1456. Male genitalia of *Xenographia lignataria* Warren, paratype, Sikkim.



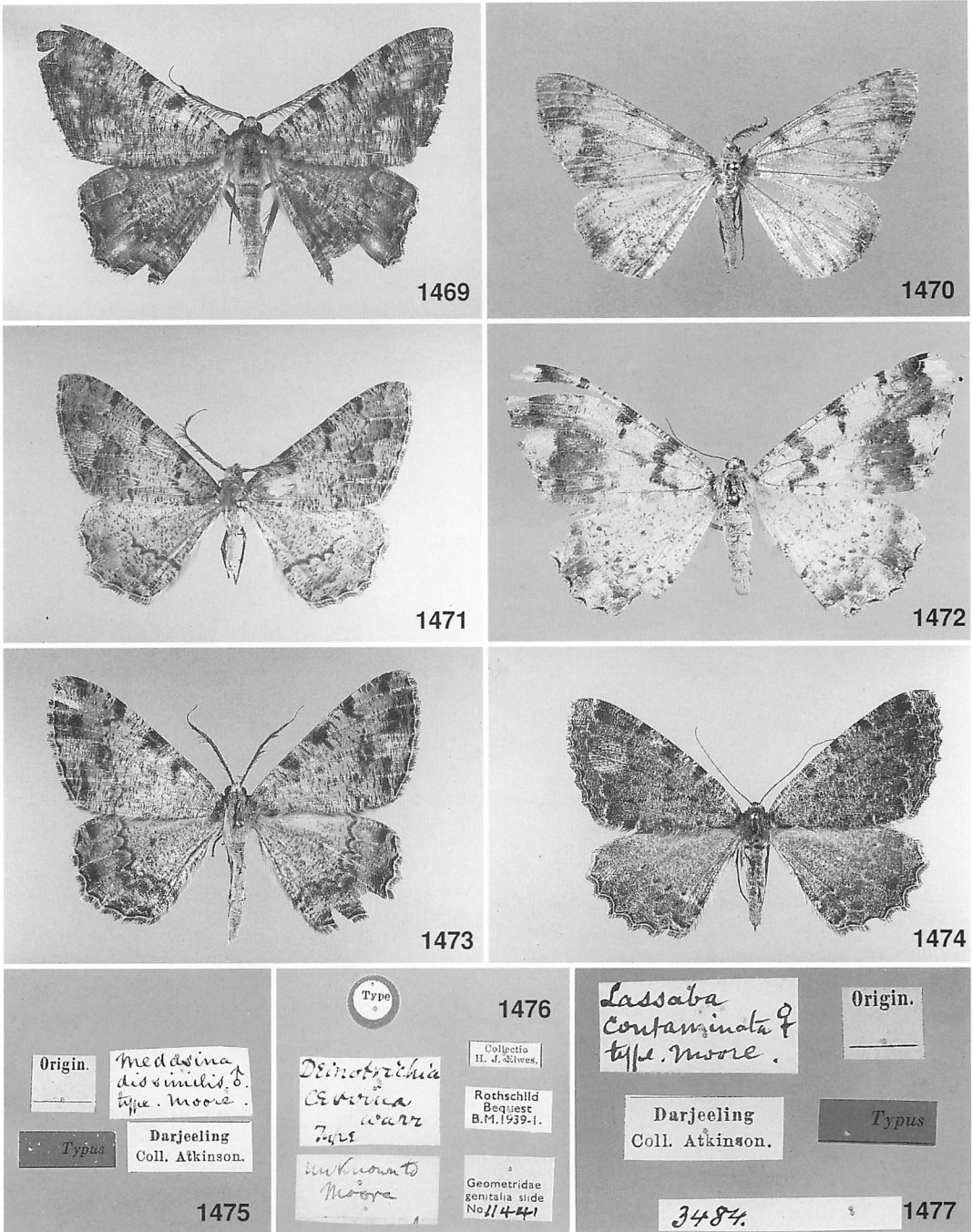
Figs 1457–1458. Male genitalia. 1457. *Dalima vulpinaria* (Moore), Darjeeling. 1458. *D. warreni* sp. n., paratype.
 Figs 1459–1460. Female genitalia. 1459. *Dalima vulpinaria* (Moore), holotype. 1460. *D. warreni* sp. n., paratype.
 Figs 1461–1462. Male antennae. 1461. *Dalima warreni* sp. n., paratype. 1462. *D. vulpinaria* (Moore), Darjeeling.



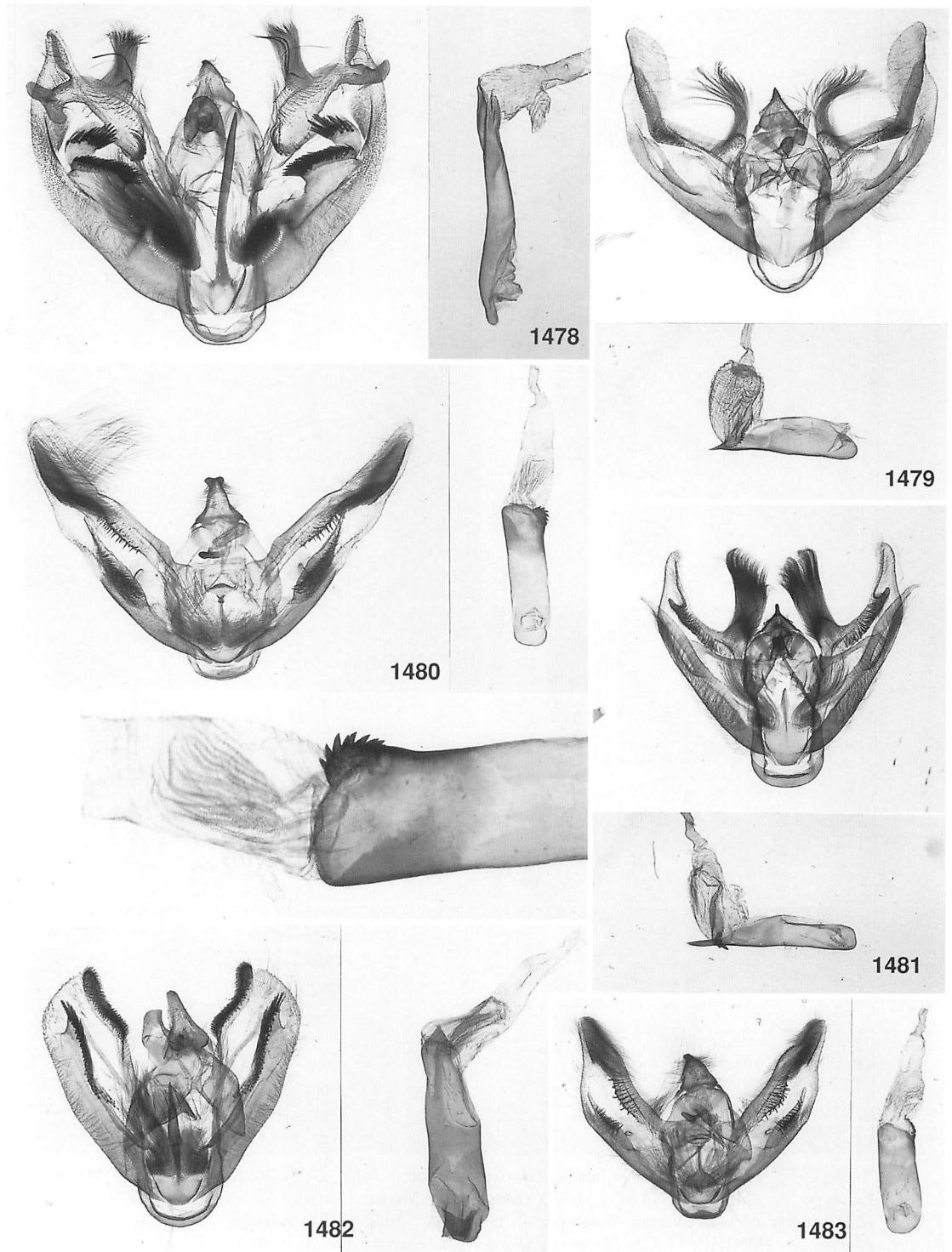
Figs 1463–1464. Male genitalia. 1463. *Dalima spontaneata* (Walker), Burma. 1464. *D. metachromata* (Walker).

Figs 1465–1466. *Dalima vulpinaria* (Moore). 1465. ♀, holotype, Darjeeling, MNHU. 1466. ♂, Darjeeling.

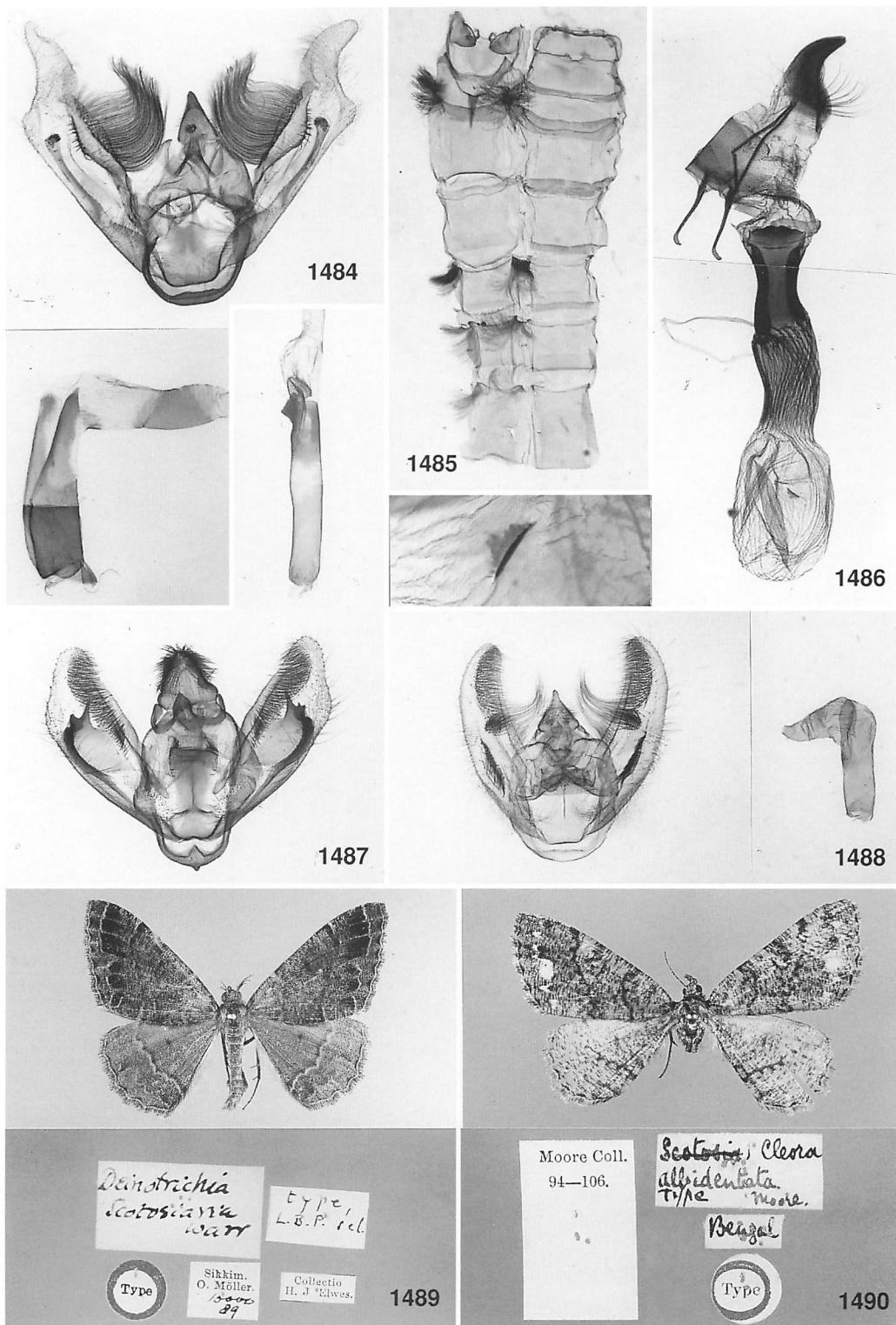
Figs 1467–1468. Type specimens & labels, coll. MNHU. 1467. *Medasina similis* Moore, holotype ♂. 1468. *M. persimilis* Moore, lectotype ♂.



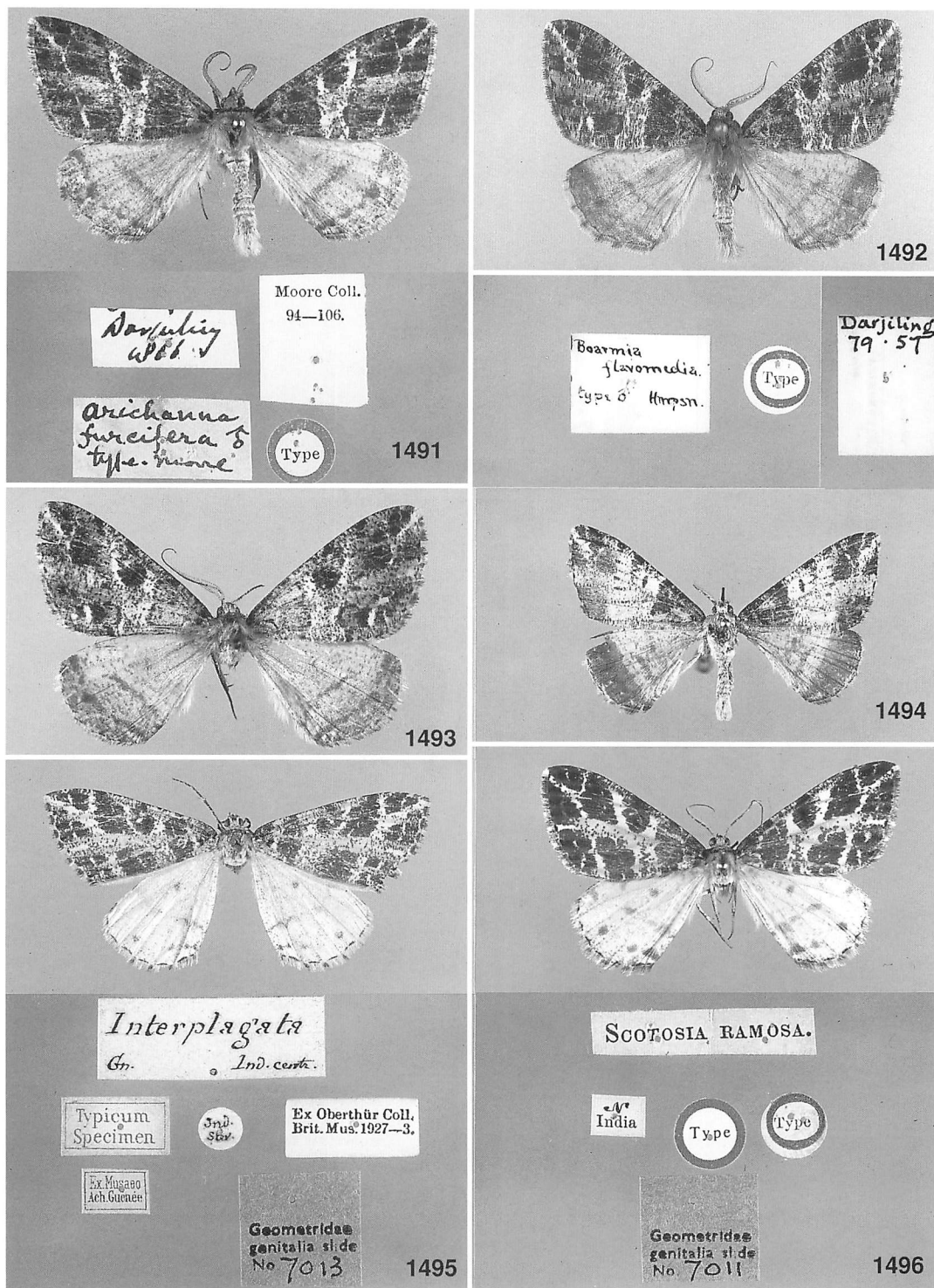
Figs 1469-1477. Type specimens & labels of *Lassaba* Moore. 1469, 1475. *Medasina dissimilis* Moore, holotype ♂ (MNHU). 1470. *Lassaba contaminata* Moore, syntype ♂ (BMNH). 1471, 1476. *Deinotrichia cervina* Warren, holotype ♂ (BMNH). 1472, 1477. *Lassaba contaminata* Moore, syntype ♀ (MNHU). 1473. *Medasina stolidaria heliomena* Wehrli, syntype ♂ (ZFMK). 1474. *Medasina anepsia* Wehrli, holotype ♀ (ZFMK).



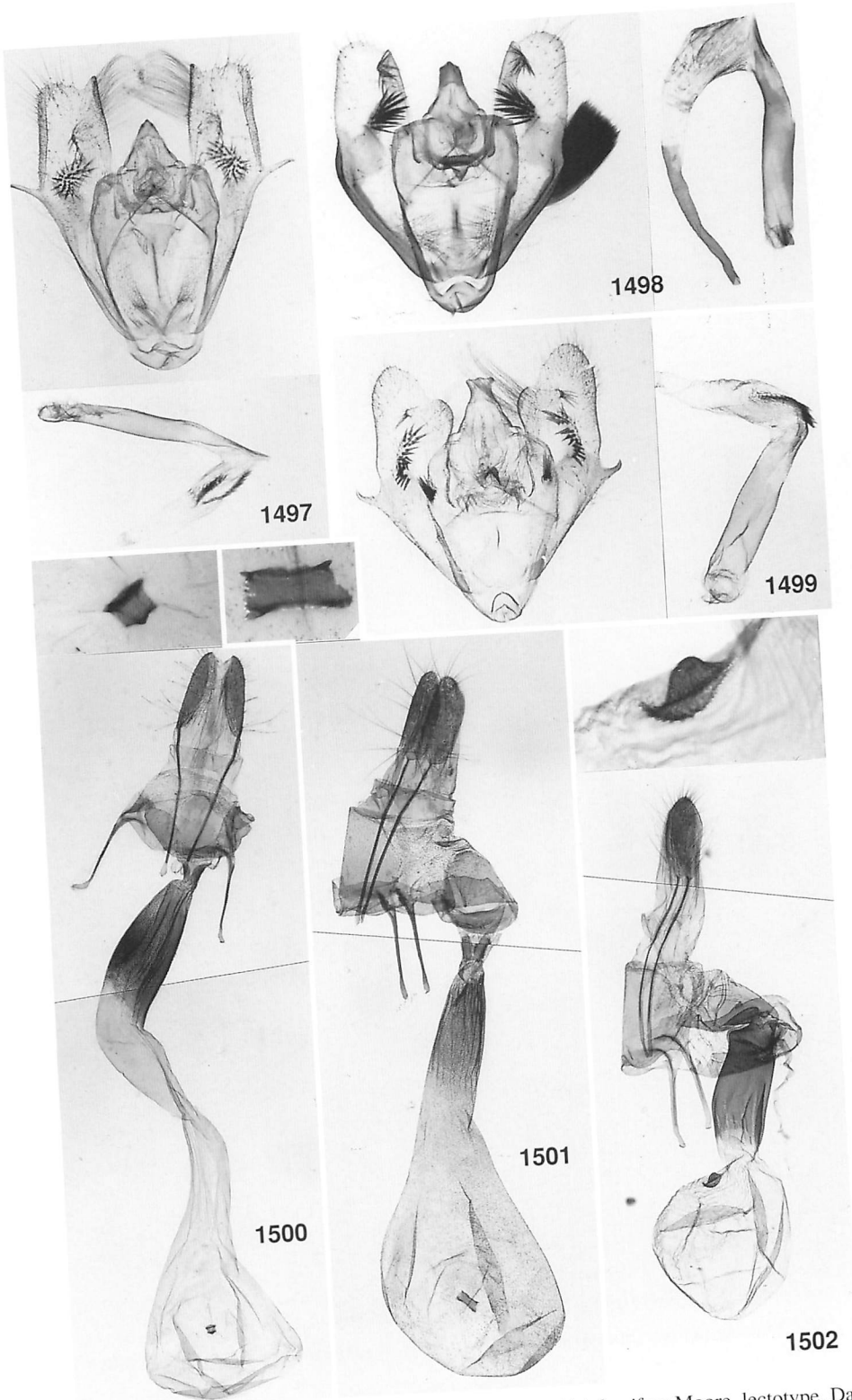
Figs 1478–1483. Male genitalia. 1478. *Chorodna fulgurita* (Walker). 1479. *C. moorei* (Thierry-Mieg), N. Vietnam. 1480. *Lassaba contaminata* Moore. 1481. *Chorodna similis* (Moore), Darjeeling. 1482. *Callocausta persimilis* (Moore), lectotype. 1483. *Lassaba anepsia* Wehrli.



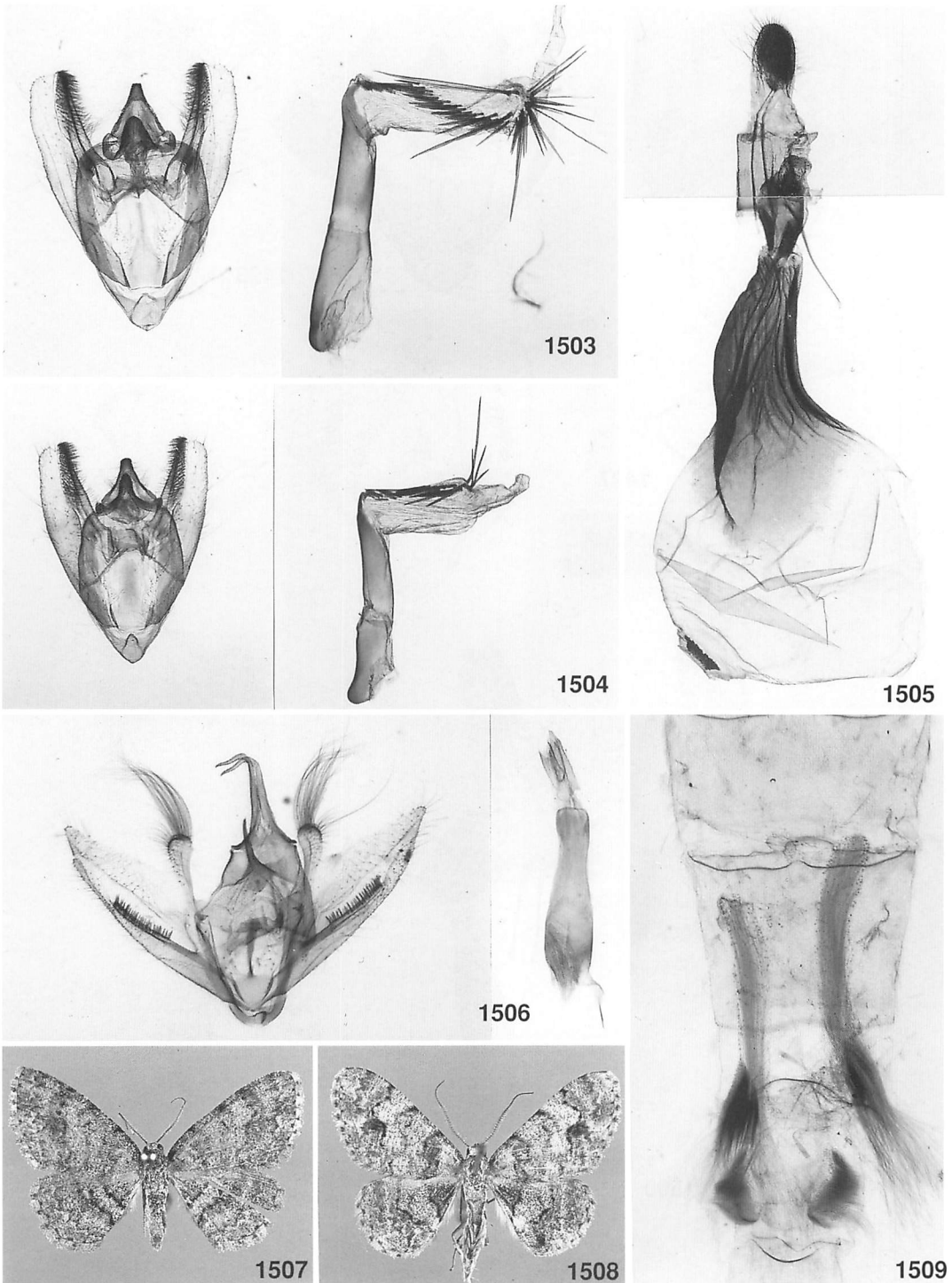
Figs 1484–1486. *Uliura dierli* sp. n. 1484. Male genitalia, paratype. 1485. Male abdominal integument. 1486. Female genitalia, paratype.
 Figs 1487–1488. Male genitalia. 1487. *Mesastrape fulguraria* (Walker). 1488. *Deinotrichia scotosiaria* Warren, lectotype.
 Figs 1489–1490. Type specimens & labels. 1489. *Deinotrichia scotosiaria* Warren, lectotype ♂ (BMNH). 1490. *Cleora albidentata* Moore, holotype ♀ (BMNH).



Figs 1491-1496. Type specimens of *Arichanna* Moore. 1491. *Arichanna furcifera* Moore, lectotype ♂, Darjeeling (BMNH). 1492. *A. (A.) peniculifera* sp. n., holotype ♂, Darjeeling (ZFMK). 1493. *Icterodes furcifera epiphanes* Wehrli, holotype ♂, Yunnan (ZFMK). 1494. *Boarmia flavimedia* Hampson, holotype ♂, Darjeeling (BMNH). 1495. *Citaria interplagata* Guenée, holotype ♀ (BMNH). 1496. *Scotosia ramosa* Walker, holotype ♂, N. India (BMNH).



Figs 1497-1499. Male genitalia of *Arichanna* Moore. 1497. A. (*A.*) *furcifera* Moore, lectotype, Darjeeling. 1498. A. (*A.*) *peniculifera* sp. n., paratype, Darjeeling. 1499. A. (*A.*) *flavimedia* (Hampson), holotype. Figs 1500-1502. Female genitalia of *Arichanna* Moore. 1500. A. (*A.*) *furcifera* Moore. 1501. A. (*A.*) *peniculifera* sp. n., paratype. 1502. A. (*A.*) *flavimedia* Hampson, Sikkim.



Figs 1503–1504. Male genitalia. 1503. *Arichanna (Paricterodes) schnitzleri* sp. n., paratype. 1504. *A. (P.) albivertex* Wehrli.

Fig. 1505. Female genitalia of *A. (P.) schnitzleri* sp. n., paratype.

Fig. 1506. Male genitalia of *Calcyopa prasina* sp. n., paratype, Thailand.

Figs 1507–1508. Type specimens of *Calcyopa* nom. n. 1507. *Calichodes difoveata* Wehrli, lectotype ♂ (ZFMK). 1508. *Calcyopa prasina* sp. n., holotype ♂, Thailand (ZFMK).

Fig. 1509. *Calcyopa prasina* sp. n., paratype ♂, abdominal integument with coremata.

Lasiocampidae of Nepal

Additions and Corrigenda to 'Moths of Nepal', Parts 1–5

Vadim V. Zolotuhin and Thomas J. Witt

Abstract Nepalese Lasiocampidae are treated with descriptions of new species and subspecies, additional data on the distribution and taxonomic notes. New taxa described here are: *Dendrolimus phantom* sp. n., *Pyrosis hreblayi* sp. n., *P. undulosa gadrangana* ssp. n. and *Syrastrena lajonquierei fortelineata* ssp. n.. Neotype for *Poecilocampa undulosa* Walker, 1855 and lectotype for *Lenodora semihyalina* Swinhoe, 1890 are designated.

This paper deals with Nepalese Lasiocampidae including descriptions of new species and subspecies, additional data on the distribution and taxonomic notes. Most material is deposited in the collection of Thomas Witt, München (MWM) – later to be deposited in the Zoologische Staatssammlung, München; other institutions are stipulated.

Malacosoma indica (Walker) (Pl. 173: 1, 2)

Clisiocampa indica Walker, 1855, *List Specimens lepid. Insects Colln Br. Mus.* 6: 1489. Type locality: Northern India. Holotype: ♀ (Zoological Museum of Oxford University).

Malacosoma tibetana Hou, 1982, in Chen *et al.*, *Insects of Xizang* 2: 112, pl. 1, fig. 9.

Material. 77 ♂ 5 ♀, Annapurna Himal, Thini, 1 km S Jomsom, 3000 m, 83°44'E, 28°46'N, 8. VII. 1995, leg. G. Csorba, Gy. M. László, G. Ronkay.

This species was recorded as *Malacosoma tibetana* Hou, 1982 by Kishida 1995: 38, pl. 105, fig. 1 from Nepal.

Baodera khasiana (Moore, 1879) (Pl. 174: 1, 2)

Trichiura khasiana Moore, 1879, in Hewitson & Moore, *Descr. new Indian lepid. Insects Colln late Mr. Atkinson* 1: 82. Type locality: Khasia Hills. Holotype: ♂ (Zoologisches Museum der Humboldt Universität, Berlin).

Baodera kashiana: Kishida, 1995, *Tinea* 14 (Suppl. 2): 58, pl. 108, fig. 2.

Material. 2 ♂, Solu Khumbu Himal, Lukia, 2800 m, 2. VII. 1993, leg. M. Hreblay & G. Csorba. 4 ♂, Annapurna Himal, between Nangethanti and Ghorepani, 2600 m, 83°42.5'E, 28°23.5'N, 24. VII. 1995, leg. Gy. M. László & G. Ronkay. 1 ♀, Annapurna Himal, Bhantanti village, 2500 m, 83°43'E, 28°22.5'N, 25. VII. 1995, leg. Gy. M. László & G. Ronkay. 2 ♀, Annapurna Himal, Bhantanti village, 2420 m, 83°43'E, 28°22.5'N, 23–24. VI. 1996, leg. Gy. M. László & G. Ronkay.

Listed as *Baodera kashiana* [sic] by Kishida (1995: 58) from Janakpur and Bagmati.

Lenodora castanea (Hampson, 1892) (Pl. 173: 4, 7)

Odonestis castanea Hampson, 1892, *Fauna Br. India* (Moths) 1: 426. Type locality: Sikkim.

Euthrix fossa: Kishida, 1995: 38, pl. 105, figs 5, 6; Kishida, 1998: 38, *nec* Swinhoe, 1924.

Material. 12 ♂ 6 ♀, Annapurna Himal, Nangethanti, 2500 m, 83°43'E, 28°23'N, 4. X. 1994, leg. G. Csorba & G. Ronkay. 2 ♂, Langtang, 2860 m, near Chandrabari, 85°21'E, 28°05'N, 25. IX. 1994, leg. G. Csorba & G. Ronkay. 2 ♂, Ganesh Himal, 3 km NE of Sungati, 2330 m, 13. VI. 1993, leg. M. Hreblay & G. Csorba. 14 ♂, Godavari, Mt Phulchouki, ca 30 km S Kathmandu, V–VI. 1991, 1850 m, *ex coll.* A. Schintlmeister. 1 ♂, Solu Khumbu Himal, Lukia, 2800 m, 26. VI. 1993, leg. M. Hreblay & G. Csorba.

Noted from Nepal for the first time.

***Lenodora semihyalina* Swinhoe, 1890 (Pl. 173: 3)**

Lenodora semihyalina Swinhoe, 1890, *Trans. ent. Soc. Lond.* **1890**: 196, pl. 6, fig. 10 (♂), 16 (♀). Type locality: Burma (Rangoon).

Material. 1 ♂ (here designated as lectotype, BMNH), Rng [Rangoon], Burma. 1 ♀, (here designated as paralectotype, BMNH) Bassein 9. [18]88. 1 ♀, East Pegu, 4-5000 ft, III-IV. 1890, W. Doherty (BMNH). 2 ♀, Naga Hills, 3000 ft., Sept.-Oct. 1889, W. Doherty (BMNH). 1 ♂ 1 ♀, Bangladesh, Keraniganj, on rice, 1. XI. 1977 *ex* H. D. Catling (BMNH). 2 ♂, Royal Chitwan, National Park, Inland Jungle Resort, 240 m, 21-23. VI. 1993, leg. M. Hreblay & G. Csorba (MWM).

Comments. This little known species, poorly spread in museum collections, is noted here from Nepal and Bangladesh for the first time. As in other *Lenodora*, the larva of this species feeds on grasses: both specimens from Bangladesh were reared from rice (*Oryza sativa*).

***Euthrix laeta* Walker, [1855] (Pl. 173: 5)**

Amydona laeta Walker, [1855], *List Specimens lepid. Insects Colln Br. Mus.* **6**: 1416. Type locality: India, Assam, Sylhet. Lectotype: ♂ (BMNH).

Material. 2 ♂, Ganesh Himal, Syabrubesi, 1520 m, 12. VI. 1993, leg. M. Hreblay & G. Csorba. 1 ♂, Tamahoun distr., Bimalnager village, 530 m, 12. X. 1994, leg. G. Csorba & G. Ronkay. 2 ♂, Royal Chitwan National Park, Bandarjohala Island, Jango Island Resort, 84°28'E, 27°40'N, 28-30. X. 1995, leg. L. Lokos & L. Peregovits. 2 ♂, Dhumre, Bimai Nager, 500 m, 84°26'E, 27°55'N, 29-30. III. 1995, leg. L. Bodi & G. Makranczy. 1 ♂, Annapurna Himal, 850 m, 1 km N of Besisahar, 84°23'E, 28°14'N, 5. VI. 1996, leg. M. Hreblay & Szaboky. 1 ♂, Taplejung Area, Shimbu (Pakora), 1615 m, 11. XI. 1994, leg. M. Hreblay & Csovári. 4 ♂, C. Nepal, Pokhara, 1. VII. 1995, 83°59'E, 28°14'N, 1600 m, leg. Afonin & Siniaev. 1 ♂, C. Nepal, Mts Dholagid Region, 3000 m, 3. VII. 1995, leg. Afonin & Siniaev. 1 ♀, Annapurna Himal, valley of Kall Gandaki, 1300 m, near Tatopani, 83°39'E, 28°29'N, 3. VI. 1996, leg. László & G. Ronkay.

Recently recorded from Nepal by Kishida (1998: 38, pl. 134, fig. 3).

***Gastropacha pardale* (Walker, 1855) (Pl. 173: 6)**

Megasoma pardale Walker, 1855, *List Specimens lepid. Insects Colln Br. Mus.* **6**: 1453. Type locality: Java.

Material. 1 ♂, Dhumre, Bimal Nager, 500 m, 26-28. III. 1995, leg. M. Hreblay & L. Nemeth. 2 ♂, Koshi, Taplejung area above Dhoban, 1600 m, 87°39'E, 27°29'N, 10. IV. 1996, leg. G. Csorba & G. Ronkay. 1 ♂, Annapurana Himal, 1 km N of Syange, 1200 m, 84°25'E, 28°24'N, 7. VI. 1996, leg. M. Hreblay & Szaboky. 1 ♂, Annapurna Region, Sudame, 83°45'E, 28°20'N, 24-25. III. 1995, leg. M.M. Hreblay & L. Nemeth.

First record from Nepal. Represented as subspecies *nandiana* Moore, 1859.

***Gastropacha encausta* (Hampson, 1900) (Pl. 173: 8, 9)**

Stenophylloides encausta Hampson, 1900, *J. Bombay nat. Hist. Soc.* **13**: 233. Type locality: Simla.

Material. 4 ♂, Annapurna Himal, Thini, 1 km S Jomsom, 3000 m, 83°44'E, 28°46'N, 8. VII. 1995, leg. G. Csorba, Gy. M. Laszlo & G. Ronkay. 1 ♀, Annapurna Himal, Thodung, 5 km SE Jomsom, 3450 m, 83°46'E, 28°46'N, 9. VII. 1995, leg. G. Csorba, Gy. M. Laszlo & G. Ronkay. 1 ♂, Annapurna Himal, Thodung, 3 km SE Jomsom, 83°45'E, 28°45'N. 4 ♂, Annapurna Himal, 4 km NE of Tukuche, 2600 m, 83°40'E, 28°43'N, 3. IX. 1996, leg. Chenga Sherpa. 1 ♂, Annapurna Himal, valley of Kali Gandaki, 2080 m, near Ghasa, 83°40'E, 28°43'N, 18-19. VI. 1996, leg. Gy. M. László & G. Ronkay.

First record from Nepal.

***Gastropacha eberti* Lajonquière, 1967 (Pl. 173: 11)**

Gastropacha eberti Lajonquière, 1967, *Entomops* **11**: 74, figs 1-4. Type locality: SO-Afghanistan, Safed-Koh. Holotype: ♂ (Landessammlung Naturkunde Karlsruhe).

Material. 1 ♂, W. Nepal, 18 km N of Surkhet, 1600 m, 12. XI. 1996, leg. M. Hreblay. 1 ♂,

Langtang, 1950 m, 1.5 km NE Dhunche, 85°18'E, 28°06'N, 24. IX. 1994, leg. G. Csorba & G. Ronkay. 1 ♂, Ganesh Himal, 2165 m, 2 km E of Thangjet, 85°10'E, 20°10'N, 17. IX. 1994, leg. M. Hreblay & T. Csovári. 1 ♂ 2 ♀, Valley of Tamea, Kosi River, 5 km S of Piguti, 950 m, 8-9. X. 1995, leg. Nemeth. 2 ♂, Annapurna Himal, Geirigan village, 26. VII. 1995, leg. Gy. M. László & G. Ronkay. 1 ♂, Syangja dist., 2 km E Syangja, 1200 m, 22. VII. 1995, leg. G. Csorba.

Firstly noted from Nepal.

Paradoxopla undulifera (Walker, 1855) (Pl. 174: 3, 4)

Gastropacha undulifera Walker, 1855, *List Specimens lepid. Insects Colln Br. Mus.* 6: 1395. Type locality: "Inde du Nord".

Material. 1 ♂, Dhaulagiri Himal, 2.5 km SE of Lebang, 2450 m, 24. III. 1996, leg. L. Bodi & G. Makranczy. 1 ♂, W. Nepal, 11 km N of Dailekh, 2350 m, 27. IV. 1997, leg. M. Hreblay & L. Szecsényi. 1 ♀, W. Nepal, 11 km N of Dailekh, 2350 m, 29. VII. 1996, leg. M. Hreblay & B. Szin. 2 ♂, W. Nepal, 13 km N of Dailekh, 2645 m, 30. VII. 1996, leg. M. Hreblay & B. Szin. 1 ♂, W. Nepal, 14 km N of Dailekh, 2600 m, 4. VIII. 1996, leg. M. Hreblay & B. Szin.

Firstly noted from Nepal.

***Dendrolimus phantom* sp. n.** (Pl. 174: 5)

Holotype. ♂, Annapurna Himal, valley of Kali Gandaki, 3 km NE Tukuiche, 2750 m, 16. VI. 1996, leg. Gy. M. László & G. Ronkay (MWM). Paratypes. 4 ♂, same data as holotype (1 ♂ Gen. Práp. 4240). 1 ♂, Annapurna Himal, 4 km NE of Tukuiche, 2600 m, 83°40'E, 28°43'N, 3. IX. 1996, leg. Chenga Sherpa (all MWM).

Male. Expanse 50–54 mm, forewing length 24–26 mm. Body grey, hairy; abdomen brownish grey. Wings slightly elongated with wavy outer edge. Forewing mouse grey, basal and medial zones with distinct brownish tint. Medial fasciae smooth, brownish, slightly curved; external fascia distinct, dentated, blackish with the teeth approximately of the same size and shape. External zone with light yellowish tint. Discal spot small, like a point, without dark bordering. Hindwing mouse grey, with smooth, broad, dark grey, straight transverse fascia.

Male genitalia (Fig. 1510). Tegumen narrow; socii obvious; vinculum broad, cup-shaped with strong distal processes which have caudally a tubular projection covered on inner margin with small hooks. Valvae membranous basally, with a conical upper lobe and short, triangular, toothed projection at base. Aedeagus tubular, with elongated top, covered caudally with flattened hooks. Vesica with a large zone of obvious sclerotization, without cornuti.

Distribution. Only known from the type locality.

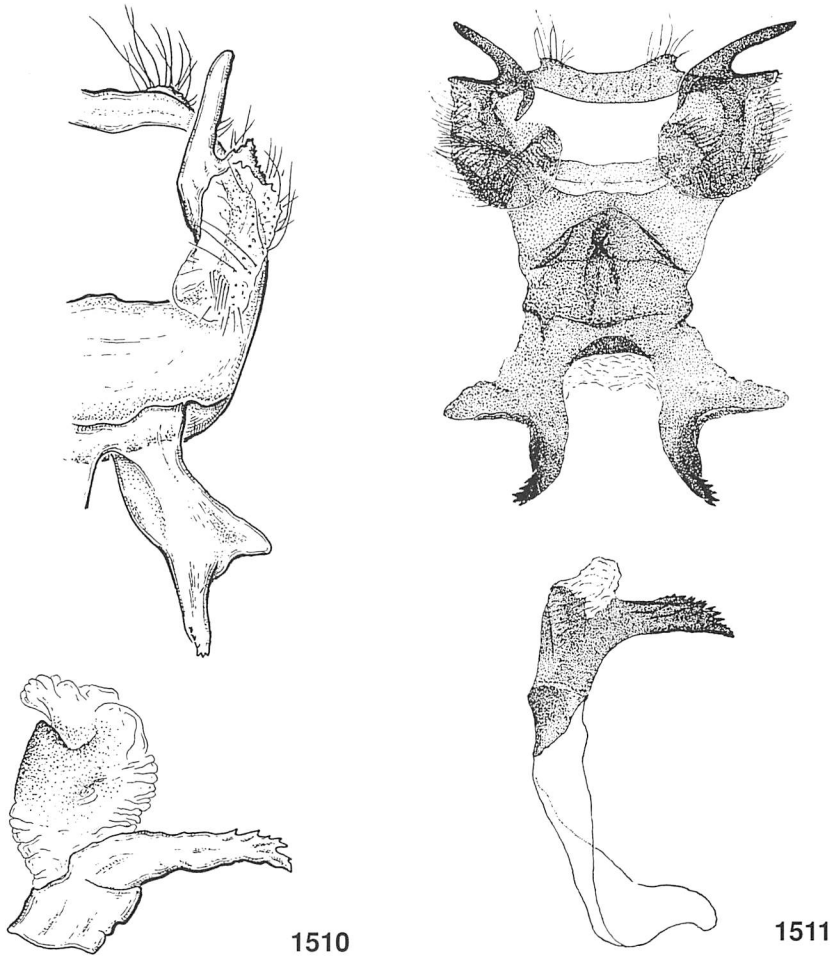
Comments. The position of this species as well as *D. cheela* (Moore, 1879) in the genus *Dendrolimus* is uncertain because of their strongly modified genitalia. Probably they have to be considered as members of a separate (new) genus within Pinarini.

Nothing is known about the female, praeimaginal instars and biology of the new species. Perhaps, this species has two generations a year with flight period in June and in September, but more probably only one generation with very elongated emarging period of moths from pupae.

This new species is similar in appearance to *D. cheela* (Moore, 1879) (= *D. benderi* Lajonquière, 1975) (174: 6) from Pakistan and northern India, but smaller, with more monotonous wing coloration, without contrast yellow and reddish brown bands. *D. cheela* also has external fasciae with teeth, but in different size and shape, especially in M-Cu zone. The discal spot in the new species is 2 times larger than in *D. cheela*, in spite of the larger size of the latter. The male genitalia are also different as illustrated (Fig. 1511).

Kunugia latipennis (Walker, 1855)

Lebeda latipennis Walker, 1855, *List Specimens lepid. Insects Colln Br. Mus.* 6: 1457. Type locality: Northern India.



Figs 1510–1511. Male genitalia of *Dendrolimus*. 1510. *D. phantom* sp. nov., paratype. 1511. *D. cheela* (Moore) (after Lajonquière (1975) as for *D. benderi* Lajonquière).

Material. 1 ♂, W. Nepal, 8 km N of Surkhet, 1800 m, Tal Pokari, leg. M. Hreblay & L. Szécsényi, 25. IV. 1997. 1 ♂, Mechi, Taplejung area, Tamur valley, 4 km N of Dobhan, 800 m, 87°40'E, 27°22'N, 22. X. 1996, leg. M. László & G. Ronkay.

First observation from Nepal.

Lebeda trifascia (Walker, 1855) (Pl. 173: 10)

Lasiocampa trifascia Walker, 1855, *List Specimens lepid. Insects Colln Br. Mus.* 6: 1439. Type locality: North Bengal. Holotype: ♂ (BMNH).

Material. 1 ♂, Annapurna Himal, Nayapool, 1090 m, 83°47'E, 28°18'N, 2. X. 1994, leg. G. Csorba & G. Ronkay. 1 ♂, Tanahoun distr., Bimalnager village, 530 m, 12. X. 1994, leg. G. Csorba & G. Ronkay. 1 ♀, Valley of Tamea, Kosi River, 5 km S of Piguti, 950 m, 8-9. X. 1995, leg. L. Nemeth.

Noted from Nepal for the first time.

Suana concolor (Walker, 1855) (Pl. 173: 12)

Lebeda concolor Walker, 1855, *List Specimens lepid. Insects Colln Br. Mus.* 6: 1453. Type locality: India, Sylhet. Lectotype: ♂ (BMNH).

Material. 1 ♂, Royal Chitwan, National Park, Island Jungle, Resort, 240 m, 21-23. VI. 1993, leg. M. Hreblay & G. Csorba.

Recently cited from Nepal by Kishida (1998: 38, pl. 134, fig. 1).

Streblote siva (Lefebvre, 1827) (Pl. 174: 7)

Bombyx siva Lefebvre, 1827, *Zool. J.* 3: 210. Type locality: India.

Material. 1 ♀, Kathmandu Valley, 1400 m, 26. VIII. 1973, leg. W. Dierl (ZSSM).

Recorded from Nepal for the first time.

Streblote igniflua (Moore, 1883) (Pl. 173: 13)

Taragama igniflua Moore, 1883, *Lep. Ceylon* 2: 147. Type locality: Ceylon.

Material. 1 ♂, Kathmandu, 1235 m, 14-15. IX. 1994, leg. M. Hreblay & T. Csóvari (coll. V. Zolotuhin).

Recorded from Nepal for the first time.

Pyrosis Oberthür, 1880 (= *Bhima* Moore, 1888)

The first attempt to revise this genus (de Lajonquière, 1975) appears to be considered as unsuccessful. After that work till now there are many difficulties in determination of the members of this small genus because of uncorrect definition of many taxa by Lajonquière. Only one species of the genus was cited from Nepal as *Bhima undulosa* (Walker, 1855) (Kishida, 1992, 1994) based on one male and one female. Our investigation has shown that four different species, of which one species and one subspecies are described as new, are native in Nepal.

Pyrosis fulviplaga (de Joannis, 1929), **stat. rev.** (Pl. 174: 8)

Bhima fulviplaga Joannis, 1929, *Ann. Soc. ent. Fr.* 48: 563. Type locality: [Vietnam] Hoang su phi; Lajonquière 1975: 146.

Bhima undulosa: Kishida, 1992: 76, pl. 19, fig. 5 (♂).

Distribution. Hitherto known only from northern India, Nepal and northern Vietnam.

Material. 1 ♂, Ganesh Himal, valley of Trisuli River, 2 km S of Betrawati, 930 m, 25. IX 1995, leg. L. Németh (MWM). 1 ♂, Annapurna Himal, 1 km N of Dana, 1600 m, 83°38'E, 28°33'N, 1. IX. 1996, leg. Chenga Sherpa (MWM). 1 ♂, Ganesh Himal, Mailungkhala, 1100 m, 25-26. IX 1995, leg. P. Gyulai-A. Garai (MWM). 1 ♂, Godavari, 21. IX. 1991 (see Kishida, 1992: 76, pl. 19, fig. 5).

Comments. The status of this taxon, described by Joannis as a good species, was downgraded by Lajonquière (1975) into a subspecies of *undulosa* Wlker. They occur sympatric in Nepal and it proves they are separate species. Moreover, *fulviplaga* differs well from *undulosa* as well as from all other known species of the genus by smallest size, very long and narrow forewing and very small, semitransparent, practically triangular, concave hindwing. The flight period of *fulviplaga* is autumn (September-October). Nothing is known about its females so far. The male specimen illustrated as *P. undulosa* in this series (Kishida, 1992: 76, pl. 19, fig. 5) is this species.

Pyrosis undulosa (Walker, 1855)

Poecilocampa undulosa Walker, 1855, *List Specimens lepid. Insects Colln Br. Mus.* 6: 1477. Type locality: Nepal.

Pyrosis undulosa: Lajonquière, 1975: 145 (the typical male specimen pointed as to be lost); Kishida, 1994: 63, pl. 77, fig. 5 (♀).

Distribution. So far known only from northern India and Nepal.

Comments. The male type specimen of *Pyrosis undulosa* (Walker, 1855) from Nepal, with which *fulviplaga* has been permanently confused, is probably lost. At least, it was not found in BMNH, there it must be deposited, by the first author in spite of special search. Lajonquière (1975: 142)

also wrote: “Le Père J. de Joannis s’était heurté, des l’abord, à une première difficulté, non des moindres, en ce que le Type de *Bh. undulosa* Walker avait disparu du British Museum (N.H.). Or ce mâle, remis par le Major-Général Hardwicke, venait du Népal; aucun autre exemplaire en provenance de ce pays n’était venu alors, et d’ailleurs jusqu’à maintant, prende sa place. Par contre, une femelle, ... aucune mention de femelle n’est faite par Walker dans sa description”. Hence, *undulosa* sensu Lajonquière (1975) seems to be both *rotundipennis* and *fulviplaga* (see Lajonquière, 1975: pl. 1, figs A–C), *undulosa* sensu Kishida (1992) is *fulviplaga* (see Kishida, 1992: pl. 19, fig. 5) and *undulosa* sensu Hampson (1892: 404 – Fig. 1512) seems to be *P. hreblayi* Zolotuhin et Witt, sp. nov. The male and female genitalia characters of *Pyrosis* have a limited significance in specific diagnostics because of their extreme similarity. Thus, we considered *undulosa* as an *idiota* Graeser-like species that is on the wing in October to November and has citrone-yellow hindwing with smooth blackish pattern (Pl. 174: 9; also a conspecific specimen was illustrated by Grünberg (1934: pl. 34, row a)).

In order to avoid taxonomic confusion and following the rules of stability of zoological nomenclature, we designate here the neotype male of *Poecilocampa undulosa* Walker deposited in MWM. It corresponds to the original description of *Poecilocampa undulosa* Walker (Fig. 1513) and has the following label data, printed with a computer on a white label: “West-Nepal, 11 km N of Dailekh, 2350 m, 11. XI. 1996, leg. M. Hreblay., Museum Witt” and on a red label: “Neotype, *Poecilocampa undulosa* Walker, 1855, ♂, design. Zolotuhin et Witt, 1998, Museum Witt”. A third label reads: “*Pyrosis undulosa* Walker, 1855, det. Zolotuhin & Witt, 1998”.

Two different subspecies of the species were found in Nepal.

***Pyrosis undulosa undulosa* (Walker, 1855) (Pl. 174: 9)**

Material. ♂, neotype, W. Nepal, 11 km N of Dailekh, 2350 m, 11. XI. 1996, leg. M. Hreblay (MWM). 22 ♂, the same data. 1 ♂, India sept., Kumaon-Himalaya, Distr. Naini Tal, Bhim Tal, 1500 m, 8. XI. 1971, leg. F. Smetacek. 1 ♂, the same data, 9. XI. 1979. 5 ♂, Pakistan, Kashmir, Himalaya Mts, 30 km N Murree, near Nathia Ghali, Ayubia village, 2600 m, 8-9. X. 1998, leg. Gy. M. Lázsló & G. Ronkay.

Expanse 43–47 mm, forewing length 23–26 mm. Forewing slightly semitransparent, blackish, with distinct citrone-yellow wavy basal and antemedial fasciae; postmedial fascia distinct only in Sc and Cu-A zones. External band represented as a row of vague, triangular, black spots between veins, slightly pointed outside by whitish scales. Discal spot obvious, white. Hindwing blackish with citrone-yellow pattern, which is more or less developed but normally consists of two transversal bands, sometimes confluent into a large basal-medial spot and a broad field between black external fascia and outer margin of the wing. Anal zone of hindwing covered with brown hairs. Body dark reddish brown, frons with yellow hairs.

Male genitalia. As in *P. undulosa gadrangana* ssp. nov.

Distribution. From Pakistan and northern India to central Nepal.

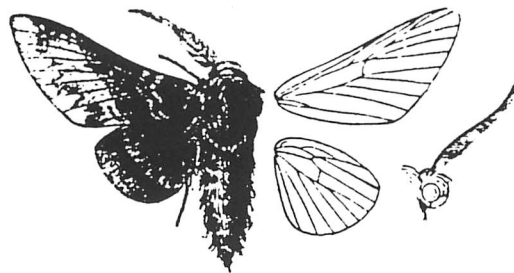


Fig. 279.—*Bhima undulosa*, ♂. †.

Fig. 1512. *Pyrosis undulosa* sensu Hampson, 1892 (after Hampson (1892: 404)).

4. *PÆCILOCAMPA UNDULOSA*.

Mas. *Obscure fusca; verticis discus et abdomen ferrugineo-fusca; alæ anticæ macula discali testacea fasciisque tribus duplicatis undulosis obliquis testaceis, posticæ fascia una duplicata margineque testaceis.*

Male. Dark brown. Disk of the vertex and abdomen ferruginous-brown. Fore wings with a testaceous discal spot, and with three double undulating oblique testaceous bands; the first near the base, the second beyond the middle, the third submarginal. Hind wings with one discal oblique undulating double testaceous band and a broad testaceous border. Length of the body 10 lines; of the wings 34 lines.

a. Nepal. Presented by Major-Gen. Hardwicke.

Fig. 1513. Copy of the original description of *Poecilocampa undulosa* Walker (after Walker (1855: 1477)).

***Pyrosis undulosa gadrangana* ssp. nov.** (Pl. 174: 10)

Holotype. ♂, Ganesh Himal, near Godlang, 2520 m, 85°17'E, 28°10'N, 13. X. 1995, leg. L. Peregovits & L. G. Ronkay (MWM). Paratypes. 8 ♂, same data as holotype (MWM). 8 ♂, Ganesh Himal, 2 km W of Thangjet, 2300 m, 85°17'E, 28°10'N, 17. X. 1995, leg. M. Hreblay & L. Bodi (MWM). 8 ♂, Ganesh Himal, between Godavari and Nesim, 2720 m, 85°16'E, 28°08'N, 22. X. 1995, leg. S. Kovács (MWM). 3 ♂, Ganesh Himal, near Godlang, 2520 m, 85°17'E, 28°10'N, 13. X. 1995, leg. L. Peregovits & L. G. Ronkay (MWM). 1 ♂, same data, 21. X. 1995 (MWM). 6 ♂, Ganesh Himal, above Nesim, 2300 m, 85°15.5'E, 28°6.5'N, 23. X. 1995, leg. L. Peregovits & L. G. Ronkay (MWM). 1 ♂, Ganesh Himal, 12 km S of Somdang, 2500 m, 85°12'E, 28°08'N, 26. X. 1995, leg. M. Hreblay & L. Bodi (MWM). 17 ♀, Indien sept. or., Meghalaya Umran, 33 km N Shillong, 800 m, 25°45'N, 91°43'E, Sek. Wald, 8-11. XII. 1997, leg. Sinjaev *et al.* (MWM).

Smaller, expanse 42–44 mm, forewing length 22–25 mm. Forewing distinctly semitransparent, blackish, with distinct citrone-yellow wavy basal and antemedial fasciae; postmedial fascia double, the proximal one more or less distinct but the distal one obvious only in Cu-A zone. External band represented by a row of vague triangular brown-black spots between veins, not pointed outside by whitish scales. Discal spot obvious but small, white. Hindwing blackish with significant reduction of citrone-yellow pattern, which consists of two transversal bands, normally appearing in Cu-A zone with weak shadow, sometimes completely absent, between black external fascia and outer margin of the wing. A citrone-yellow basal-medial zone, seen in nominotypical subspecies, completely absent, and only singular scales found there. Anal zone of hindwing covered with red brown hairs. Body dark red brown, frons with yellow hairs.

Male genitalia (Fig. 1514). Typical for the genus structure. Distal processes of vinculum slightly toothed on distal edge; aedeagus strong but short, its apical hooks long, irregular.

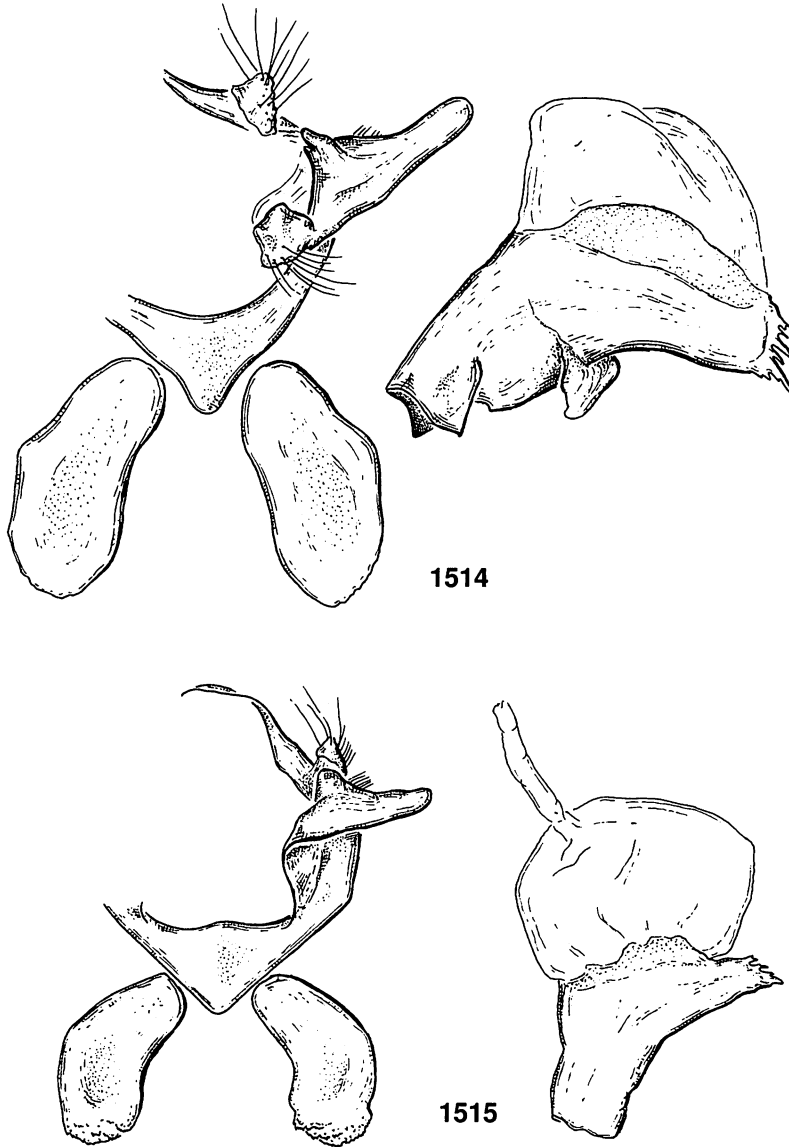
Female. Female of this subspecies, taken on 17. IX. 1990 at Okhaldhunga, Sagarmatha, was illustrated by Kishida, 1994: 63, pl. 77, fig. 5 as "*Bhima undulosa*". Expanse 76–82 mm, forewing length 40–43 mm.

Distribution. Eastern Nepal and north-eastern India.

Biology is unknown. Autumnal mountain species with flight period from October to December. The females from north-eastern India were collected in secondary forest.

***Pyrosis hreblayi* sp. nov.** (Pl. 174: 11, 12)

Holotype. ♂, Koshi, Terhathum area above Gorja, Tshisopami 2600 m, 87°37'E, 27°21'N, 5. XI. 1996, leg. Gy. László & G. Ronkay (MWM). Paratypes. 97 ♂ 1 ♀, same locality as holotype, 25. X-7. XI. 1996, leg. Gy. László & G. Ronkay (MWM). 18 ♂ 1 ♀, E. Nepal, Deorali Danda, 6 km NW of Vamphudin, 2900 m, 27. XI. 1997, leg. Karma Sherpa (MWM). 9 ♂ 1 ♀, Arun valley, 12 km N of Chitre, 2600 m, 87°27'E, 27°09'N, 31. X. 1995, leg. M. Hreblay



Figs 1514–1515. Male genitalia of *Pyrosis*. 1514. *P. undulosa gadrangana* ssp. nov., paratype. 1515. *P. hreblayi* sp. nov., paratype.

& L. Bodi (MWM). 17 ♂, E. Nepal, Surke Danda, 2 km NE of Suketar, 2560 m, 10. XI. 1998, leg. Karma Sherpa (MWM). 8 ♂ 1 ♀ E. Nepal, Deorali Danda, Anpan, 1900 m, 13. XI. 1998, leg. Karma Sherpa (MWM). 5 ♂, E. Nepal, Surke Danda, 1 km W of Kesawa, 2000 m, 12. XI. 1998, leg. Karma Sherpa (MWM). 2 ♂, E. Nepal, Torontan, 3200 m, 16. XI. 1998, leg. Karma Sherpa (MWM). 2 ♂, E. Nepal, Surke Danda, 1 km W of Kesawa, 2000 m, 24. XI. 1997, leg. Karma Sherpa (MWM).

Male. Large and robust species with expanse 44–47 mm, forewing length 24–25 mm. Head and thorax red-brown without any light hairs; abdomen darker. Wings short and broad. Forewing blackish brown, semitransparent; basal and antemedial fasciae distinct, yellowish white, wavy; postmedial fasciae double, proximal one distinct but distal one obvious only in Cu-A zone.

External band represented by a row of vague, triangular, dark brown spots between veins, slightly pointed outside by yellowish white scales. Discal spot obvious, white. Hindwing dark red brown with two vague, transversal, dark yellow or reddish yellow bands, normally appearing in one in Cu-A zone. A very vague, transversal blackish shadow present in external area but sometimes completely absent. Basal part of hindwing covered densely with red-brown hairs. In some specimens small yellowish spots found in Cu zone of hindwing.

Female. Considerably larger than male with expanse 67–76 mm, forewing length 37–40 mm. Wings elongated; ground colour dark cream with lighter lunulated transversal fasciae and darker medial zone and external fascia. In the external fascia, teeth between R_4-R_5 and R_5-M_1 considerably larger than the tooth between R_3-R_4 .

Male genitalia (Fig. 1515). Typical for the genus structure. Distal processes of vinculum covered distally with numerous small teeth; aedeagus short, tubular, narrowed towards top, with short apical hooks.

Female genitalia were not studied.

Biology is unknown. High mountain species. All specimens were collected with light-trap in the first half of the night. Flight period is from the end of October to November.

***Pyrosis* sp. (Pl. 174: 13)**

Material. 2 ♀, Koshi, Taplejung area SW of Mamankhe, 1700 m, 87°57'E, 27°26'N, 6-7. IV. 1996, leg. G. Csorba & G. Ronkay. 1 ♀, E. Nepal, Surke Danda, 2000 m, 1 km W of Kesawa, 10. V. 1997, leg. M. Hreblay & Szecsényi. 1 ♀, E. Nepal, Deorali Danda, Anpan, 1900 m, 11. V. 1997, leg. M. Hreblay & L. Szecsényi.

All four females in our disposal are certainly conspecific and very similar in wing pattern and coloration. Expanse 73–82 mm, forewing length 39–44 mm. Wings dark reddish brown with undulate fasciae and a darker medial stripe between M_1 and M_2 . In the external band of the forewing, teeth between R_4-R_5 and R_5-M_1 of the same size as the tooth between R_3-R_4 , slightly larger than the one between M_1-M_2 . Two distinct dark-cream coloured transversal fasciae typical for the hindwing.

The females differ from all known species of *Pyrosis* from Nepal by darker and more contrast coloration, peculiarities of pattern, and especially by their flight period being April to May. Most of *Pyrosis* are monocyclics and their flight time is limited to 1–1.5 months, to 2 months maximally. These female can be considered neither as *P. undulosa* Moore nor as *P. hreblayi* sp. nov. Females of the third Nepalese species, *P. fulviplaga* Joannis, are still unknown, but its flight period is limited also to early autumn. The specific identification of these females can be decided only after males will be collected in the same localities of Nepal in the same season.

***Odonestis pruni oberthueri* Tams, 1935 (Pl. 173: 14)**

Odonestis pruni oberthueri Tams, 1935, *Mém. Mus. r. Hist. nat. Belg.* 4 (12): 57. Type locality: Frontière orientale du Thibet. Holotype: ♂ (BMNH).

Material. 1 ♂, Ganesh Himal, 3 km NE of Sunpati, 2330 m, 13. VII. 1993, leg. M. Hreblay & G. Csorba.

Firstly noted from Nepal.

***Syrastrena sumatrana* Tams, 1935**

Syrastrena minor sumatrana Tams, 1935, *Mém. Mus. r. Hist. nat. Belg.* 4 (12): 47, fig. d. Type locality: Sumatra. Holotype: ♂ (? BMNH).

Material. 1 ♂, Nepal occ., 18 km N of Surkhet, 1600 m, 27. VII. 1996, leg. M. Hreblay & B. Szin. 2 ♂, W. Nepal, 8 km N of Surkhet, 1800 m, Tal Pokari, 25. IV. 1997, leg. M. Hreblay & L. Szecsényi.

Firstly noted from Nepal. Subspecific status is not clear. Probably it belongs to ssp. *sinensis* Lajonquière, 1973.

***Syrastrena lajonquierei* Holloway, 1982**

Syrastrena lajonquierei Holloway, 1982, in Barlow, *Intr. Moths SE Asia*: 198, fig. 27. Type locality: North-eastern Burma, Kambaiti. Holotype: ♂ (BMNH).

Recorded from Nepal for the first time.

***Syrastrena lajonquierei fortelineata* ssp. n. (Pl. 173: 15)**

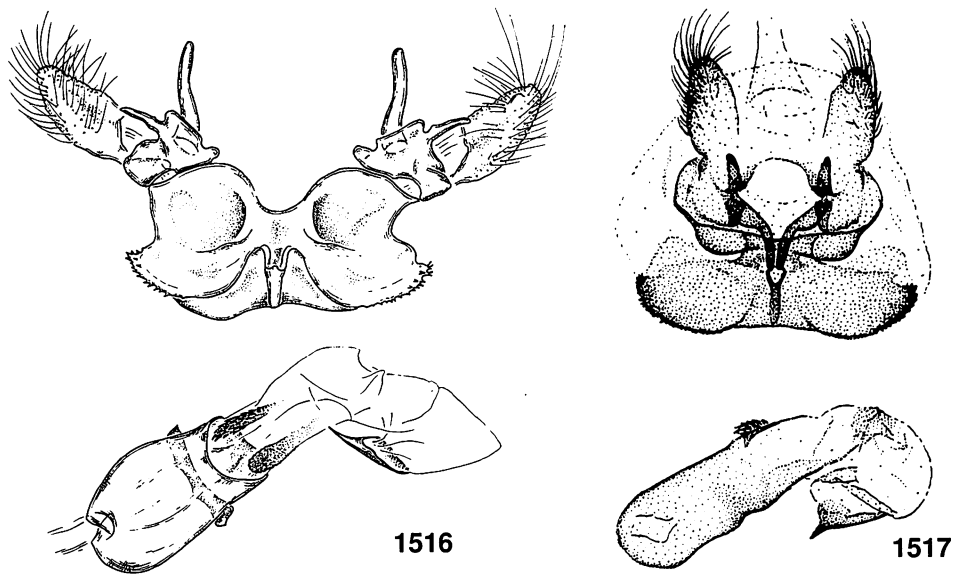
Holotype. ♂, C. Nepal, Godavari, Mt Phutchouki, ca 30 km S Kathmandu, 1850 m, V-VI. 1991, ex coll. A. Schintlmeister (GenPr. Het 3867-MWM). Paratypes. 1 ♂, Langtang 5 km NNE of Dunche, Barkhu, 1835 m, 85°18'E, 28°08'N, 16. IX. 1994, leg. M. Hreblay & T. Csóvári (MWM). 1 ♂, Dhumre, Bimal Nager, 500 m, 84°26'E, 27°55'N, 26-28. III. 1995, leg. M. Hreblay & L. Nemeth (MWM). 1 ♂, Ganesh Himal, 2 km W of Thangjet, 2300 m, 85°17'E, 28°10'N, 23. IX. 1994, leg. M. Hreblay & T. Csóvári (MWM). 1 ♂, Taplejung area, Shimbu (Pakora), 1615 m, 11. X. 1994, leg. M. Hreblay & T. Csóvári (MWM). 1 ♂, Rapti Tal, Monachari khola, Belwa, 350 m, 9. V. 1967, leg. Dierl-Forster-Schacht (ZSSM). 1 ♂, Prov. N 2 East, Jiri 2000 m, 13. VII. 1964, leg. W. Dierl (ZSSM). 1 ♂, Sikkim, Pemayangtse, 2000 m, 21-31. VII. 1989, leg. W. Thomas (GenPr. Het 4002) (MWM). 1 ♂, Indien, U. P., Naini-Tal, 2100 m, 14-20. VI. 1978, leg. W. Thomas (GenPr. Het 4004) (MWM).

Clearly differing from the nominate subspecies from northeastern Burma and northern Vietnam by broader wings, paler dark cream, not reddish brown, coloration and more distinct fasciae of forewing. Resembling *Syrastrena minor* Moore from northern India (Darjeeling), but easily distinguished by the structure of genitalia. Expanse 30–32 mm, forewing length 17–18 mm.

Male genitalia (Fig. 1516). As illustrated. For the genitalia of the nominate subspecies see Fig. 1517.

Females are still unknown.

This subspecies has supposedly two generations per year: in May to June and in September to October.



Figs 1516–1517. Male genitalia of *Syrastrena*. 1516. *S. lajonquierei fortelineata* ssp. nov., paratype. 1517. *S. lajonquierei lajonquierei* (after Holloway (1982, fig. 27)).

Argonestis flammans (Hampson, 1892) (Pl. 173: 16)

Bharetta flammans Hampson, 1892, *Fauna Br. India* (Moths) **1**: 416. Type locality: Northern India, Manipur.

Material. 2 ♂, Taplejung area, Tambowa, 2115 m, 12. X. 1994, leg. M. Hreblay & T. Csovári. 1 ♂, Taplejung area, Lal Kharka, 2250 m, 10. X. 1994, leg. M. Hreblay & T. Csovári.

Recorded from Nepal for the first time.

List of the Lasiocampidae from Nepal

53 species of the Lasiocampidae are known so far from the Nepal.

- | | |
|---|--|
| <i>Malacosoma indica</i> (Walker, 1855) | <i>Lebeda nobilis</i> Walker, 1855 |
| <i>Amurilla subpurpurea</i> (Butler, 1881) | <i>Lebeda trifascia</i> (Walker, 1855) |
| <i>Baodera khasiana</i> (Moore, 1879) | <i>Metanastris hyrtaca</i> (Cramer, 1779) |
| <i>Lenodora castanea</i> (Hampson, 1892) | <i>Metanastris gemella</i> (de Lajonquière, 1979) |
| <i>Lenodora semihyalina</i> Swinhoe, 1890 | <i>Suana concolor</i> (Walker, 1855) |
| <i>Eteinopla signata</i> (Moore, 1870) | <i>Streblote siva</i> (Lefebvre, 1827) |
| <i>Euthrix laeta</i> Walker, [1855] | <i>Streblote igniflua</i> (Moore, 1883) |
| <i>Euthrix decisa</i> (Walker, 1855) | <i>Pyrosis fulviplaga</i> (de Joannis, 1929) |
| <i>Euthrix inobtrusa</i> (Walker, 1862) | <i>Pyrosis undulosa</i> (Walker, 1855) |
| <i>Euthrix isocyma</i> (Hampson, 1893) | <i>Pyrosis undulosa undulosa</i> (Walker, 1855) |
| <i>Micropacha lidderdalii</i> (Druce, 1899) | <i>Pyrosis undulosa gadrangana</i> Zolotuhin & Witt,
ssp. nov. |
| <i>Trabala vishnou</i> (Lefebvre, 1827) | <i>Pyrosis hreblayi</i> Zolotuhin & Witt, 1999 |
| <i>Gastropacha sikkima</i> Moore, 1879 | <i>Pyrosis</i> sp. |
| <i>Gastropacha philippinensis swanni</i> Tams, 1935 | <i>Odonestis pruni oberthueri</i> Tams, 1935 |
| <i>Gastropacha pardale</i> (Walker, 1855) | <i>Odonestis bheroba</i> Moore, 1858-1859 |
| <i>Gastropacha xenapates</i> Tams, 1935 | <i>Syrastrena sumatrana</i> Tams, 1935 ssp. |
| <i>Gastropacha encausta</i> (Hampson, 1900) | <i>Syrastrena lajonquierei fortelineata</i> Zolotuhin &
Witt, ssp. nov. |
| <i>Gastropacha eberti</i> Lajonquière, 1967 | <i>Bharetta cinnamomea</i> Moore, 1865 |
| <i>Paradoxopla sinuata</i> (Moore, 1879) | <i>Syrastrenopsis bilinea</i> Kishida, 1995 |
| <i>Paradoxopla undulifera</i> (Walker, 1855) | <i>Radhica flavovittata</i> Moore, 1879 |
| <i>Dendrolimus himalayanus</i> Tsai & Hou, 1964 | <i>Arguda vinata</i> (Moore, 1865) |
| <i>Dendrolimus phantom</i> Zolotuhin & Witt, sp. nov. | <i>Arguda decurtata</i> Moore, 1879 |
| <i>Kunugia latipennis</i> (Walker, 1855) | <i>Arguda nepalina</i> Kishida, 1992 |
| <i>Kunugia ampla</i> (Walker, 1855) | <i>Argonestis flammans</i> (Hampson, 1892) |
| <i>Kunugia undans</i> (Walker, 1855) | <i>Alompra ferruginea</i> Moore, 1879 |
| <i>Kunugia fulgens</i> (Moore, 1879) | <i>Kosala flavosignata</i> (Moore, 1879) |
| <i>Kunugia lineata</i> (Moore, 1879) | |
| <i>Paralebeda plagifera</i> (Walker, 1855) | |
| <i>Paralebeda femorata karmata</i> Zolotuhin, 1996 | |

Acknowledgements

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References

- Hampson, G. F., 1892. *Fauna Br. Ind.* (Moths) **1**: 1-527.
 Joannis, J. de, 1929. Lépidoptères Hétérocères du Tonkin. 3e partie. *Ann. Soc. ent. Fr.* **48**: 559-569.
 Lajonquière, Y. de, 1975. Le Genre *Pyrosis* Moore, 1888. *Bull. Soc. ent. Fr.* **80**: 141-153.

Color Plates

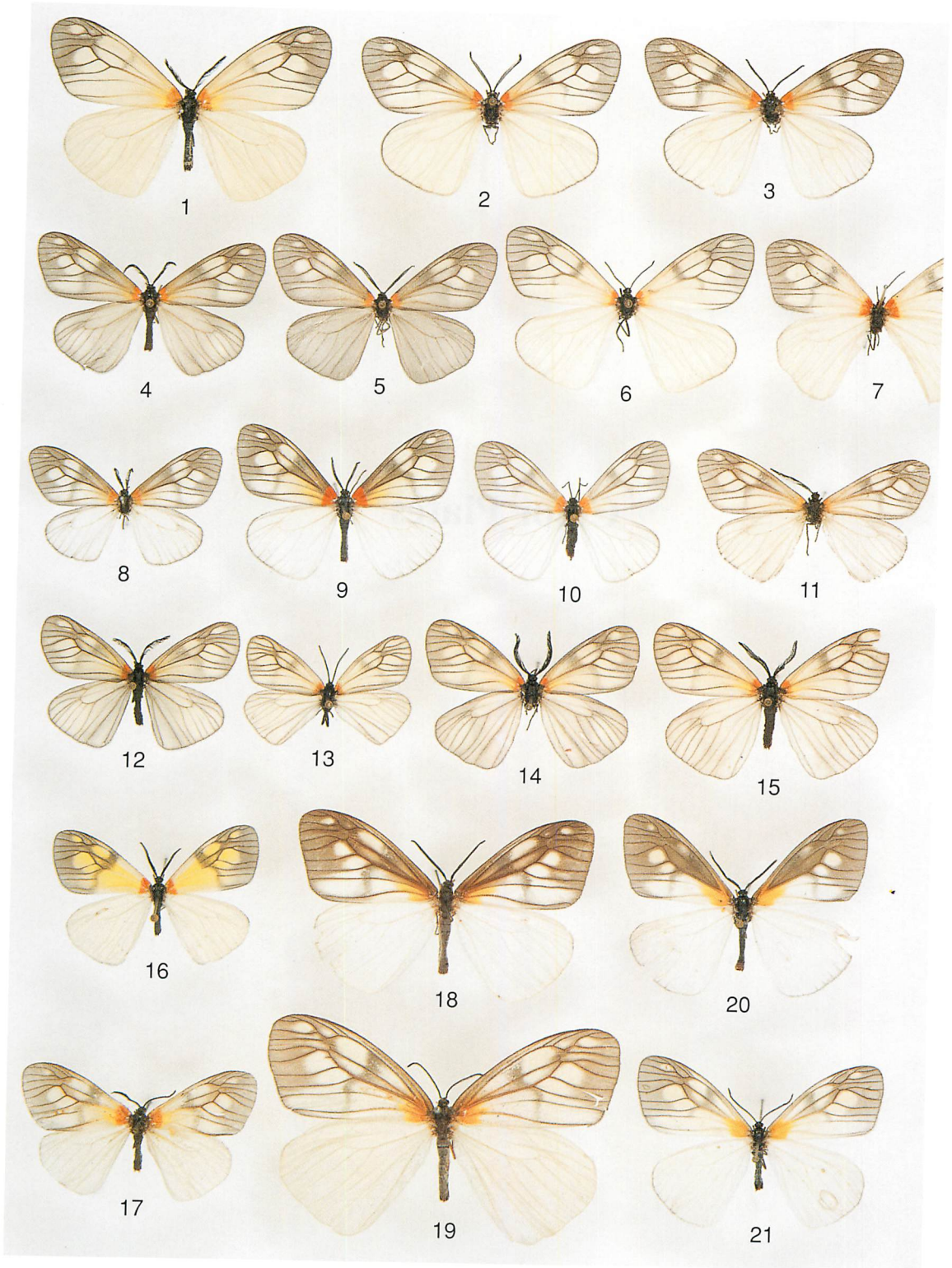


Plate 161

1. *Agalope hyalina*, ♂, Kashmir. 2-7. *Ditto*, Nepal. 2-5: ♂; 6-7: ♀. 8-11. *A. butleri* Owada et Horie. 8-9: ♂, Nepal; 10: ♀, Nepal; 11: ♀, Bhutan. 12. *A. suzukikojii* Horie, ♂, holotype. 13. *Ditto*, ♀, paratype. 14. *A. harutai* Horie, ♂, holotype. 15. *Ditto*, ♂, paratype. 16. *A. primularis*, ♂, Nepal. 17. *A. mineti* Owada, ♂, holotype, 'Thibet'. 18. *A. grandis*, ♂, lectotype, 'Kuangtung'. 19. *Ditto*, paralectotype, ♀, 'Kuangtung'. 20. *A. kishidaograndis* Owada et Horie, ♂, holotype, N Vietnam. 21. *Ditto*, paratype, ♀, N Vietnam.



Plate 162

1. *Comibaena nepalensis* 2. *Antitrygodes vicina* 3. *Isoloba bifasciata* 4. *Cryptoloba minor* 5. *C. mesta* 6. *Stannodes elwesi* 7. *Nebula cupreata* 8. *Dysstroma planifasciata* 9. *D. dentifera* 10. *D. tenebricosa* 11. *D. aquilum* 12. *D. shirakawai* 13. "*Melanthia*" *exquisita* 14. *Hydrelia elegans* 15. *Acolutha pictaria* 16. *Cidaria basharica* 17. "*Coenotephria*" *brevifasciata* 18. *Oxymacaria penumbrata* 19. *O. nepalensis* 20. *O. brunneata* 21. *O. intersectaria* 22. *O. penumbrata* 23. *O. brunneata* 24. *O. intersectaria* 25. *O. maculosata*

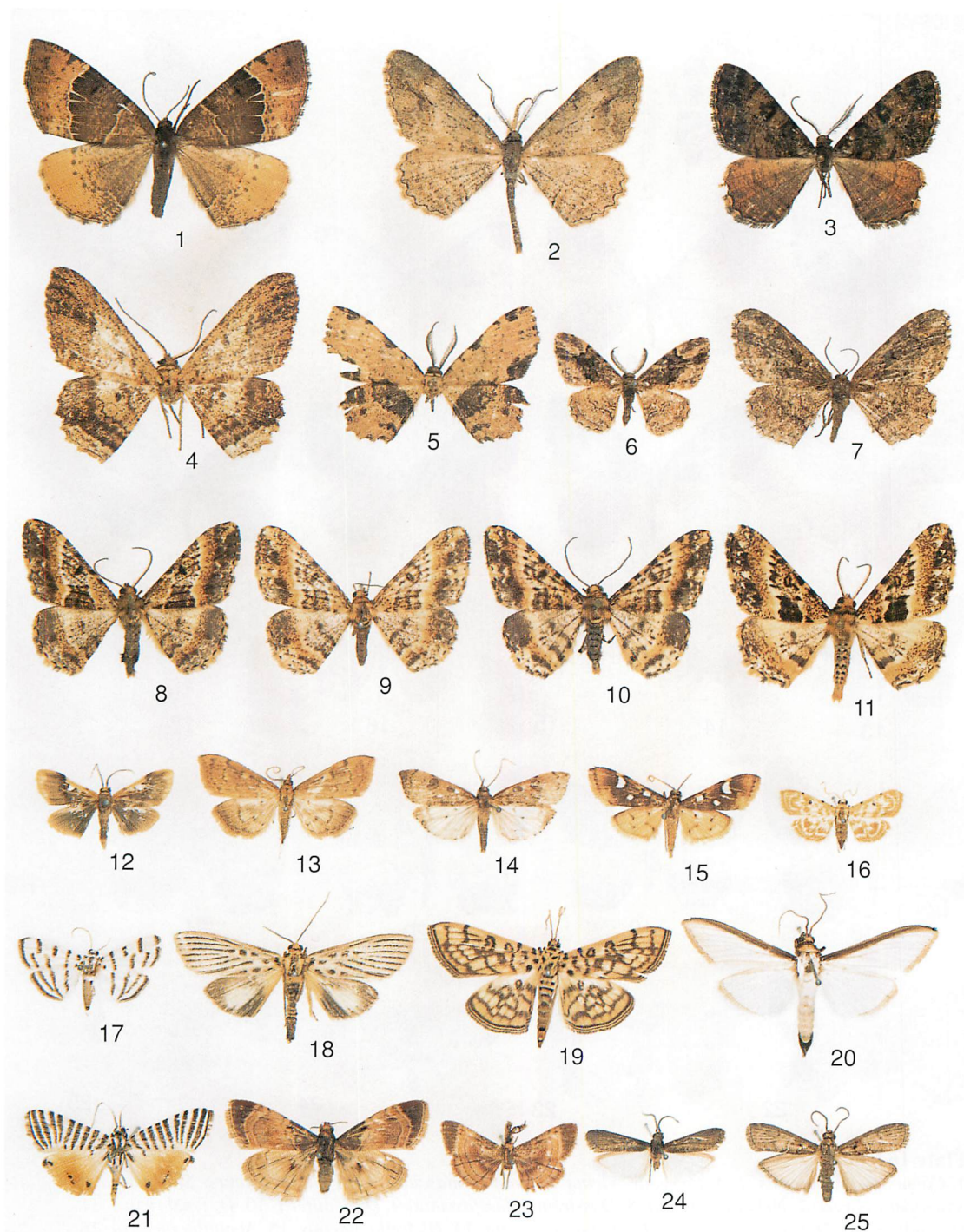


Plate 163

1. *Arichanna subaenescens* 2. *Alcis leucophaea* 3. *A. miyashitai* 4. *Ruttelevona pseudocessaria* 5. *Microcalicha melanosticta* 6. *Parapholodes fuliginea*, ♂ 7. Ditto, ♀ 8. *Harutaea flavizona*, ♂, Thailand 9. Ditto, ♀, Malaysia 10. Ditto, ♂, Sumatra 11. *H. sumatrana*, ♂, Sumatra 12. *Callibotys hyalodiscalis* 13. *Anania fuscofulvalis* 14. *Udea stigmatalis* 15. *Cotachena nepalensis* 16. *Notarcha quaternalis* 17. *Pycnarmon virgatalis* 18. *Tyspanodes hypsalis* 19. *Haritalodes basipunctalis* 20. *Cydalima conchylalis* 21. *Dichrocrocis zebraalis* 22. *Lista variegata* 23. *L. monticola* 24. *Faveria leucophaeella* 25. *Ceroprepes naga*



Plate 164

1. *Hyblaea constellata* 2. *H. firmamenta* 3. *Amata multigutta* 4. *Cueneressa diaphana* 5. *Olene tenebrosa* 6. *O. magnalia* 7. *Iema kosemponica* 8. *I. bhana* 9-10. *Cifuna glaucozona* 11. *Euproctis antiphales* 12. *E. stenosacca* 13. *Miltochrista flammealis* 14. *M. sauteri* 15-16. *M. defecta* 17-18. *M. mactans*

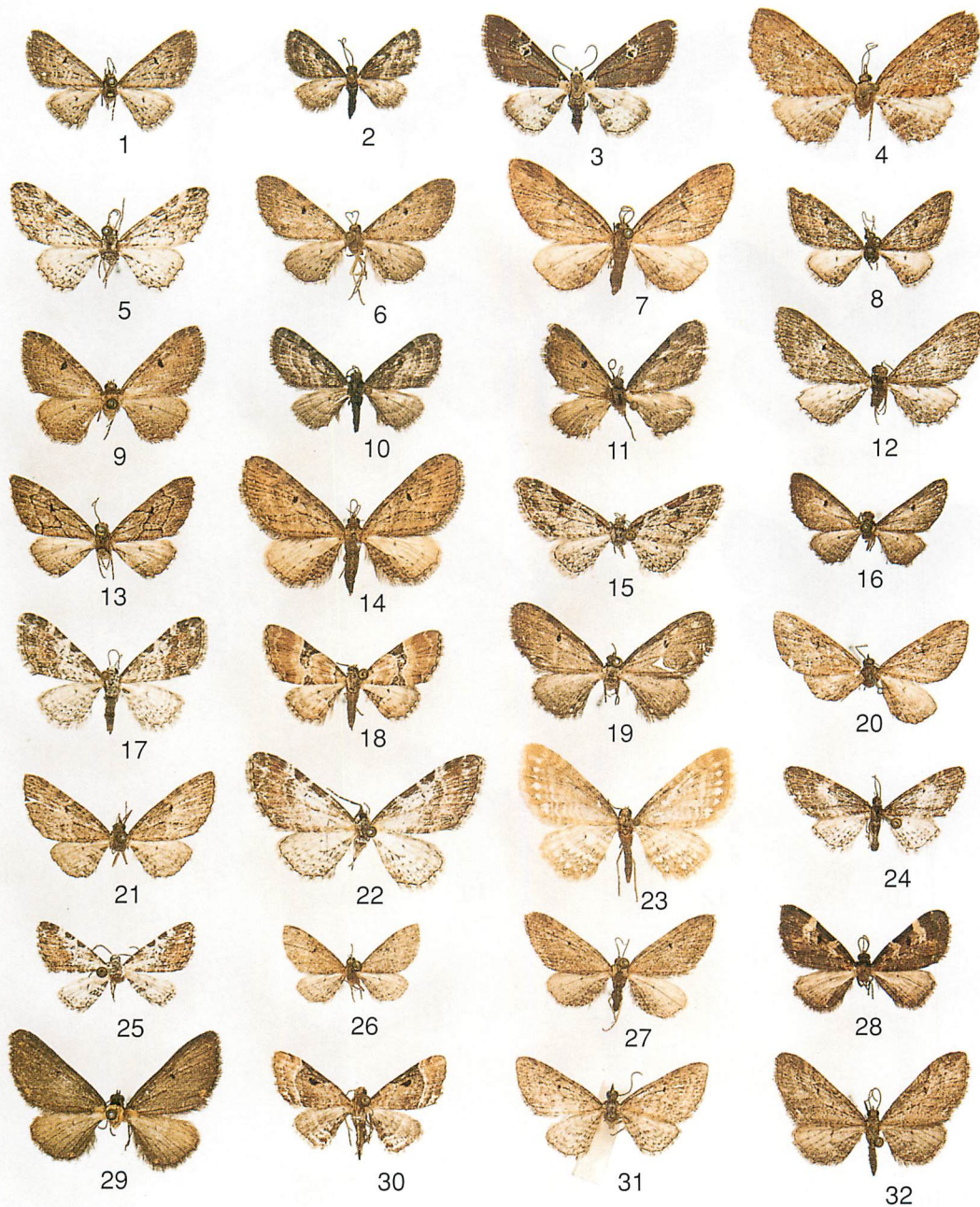


Plate 165

1. *Eupithecia acuta* 2. *E. albibaltea* 3. *E. albigutta* 4. *E. amplificata* 5. *E. apparatissima* 6. *E. apparticeps* 7. *E. asempiterna* 8. *E. atrisignis* 9. *E. balintzolti* 10. *E. circumacta* 11. *E. commiserenda* 12. *E. concinna* 13. *E. conjunctiva* 14. *E. contraria* 15. *E. costinotata* 16. *E. darjeelica* 17. *E. delaeveri* 18. *E. fletcheri* 19. *E. fusca* 20. *E. iracunda* 21. *E. karnaliensis* 22. *E. lactibasis* 23. *E. leucostaxis* 24. *E. liberata* 25. *E. likiangi* 26. *E. lilliptana* 27. *E. lobbichlerata* 28. *E. lucigera* 29. *E. maculosa* 30. *E. melanotopha* 31. *E. mira* 32. *E. mustangata*

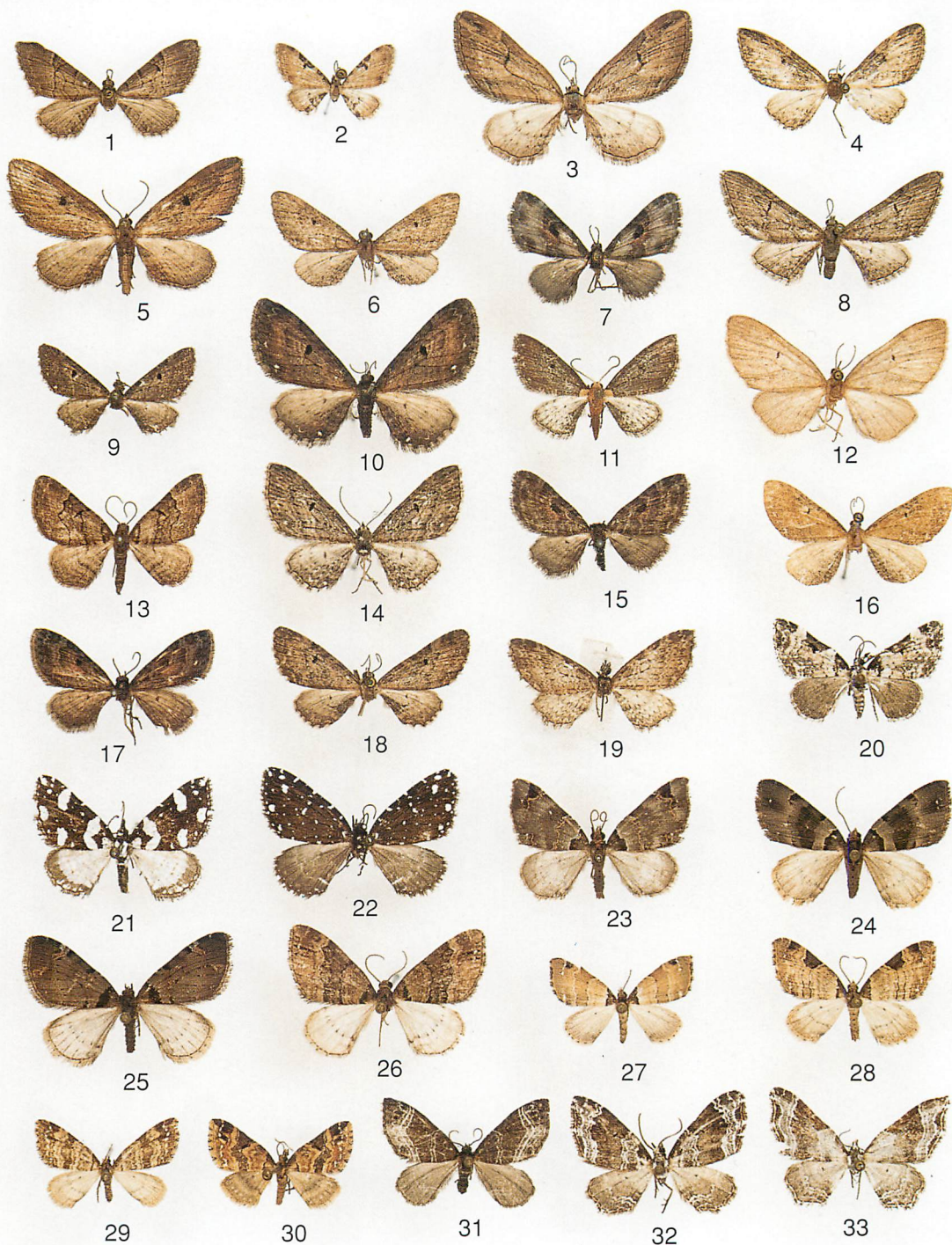


Plate 166

1. *Eupithecia nigrilinea* 2. *E. nigrinotata* 3. *E. noncoacta* 4. *E. pallescens* 5. *E. peguensis* 6. *E. pengata* 7. *E. pyricoetes* 8. *E. quadripunctata* 9. *E. raniata* 10. *E. robiginascens* 11. *E. rubridorsata* 12. *E. stramineata* 13. *E. subrubescens* 14. *E. tenuisquama* 15. *E. tricrossa* 16. *E. uniformis* 17. *E. violacea* 18. *E. xerophila* 19. *E. yasudai* 20. *Perizoma conjuncta* 21. *P. maculata* 22. *P. lacteigutta* 23. *P. plumbeata* 24. *P. schistacea* 25. *P. antisticta dentalva* 26. *P. subbicolor* 27. *P. lacernigera* 28. *P. hockingii* 29. *P. decorata* 30. *P. quadrinotata* 31. *P. parvaria* 32. *P. minuta* 33. *P. albifrons*

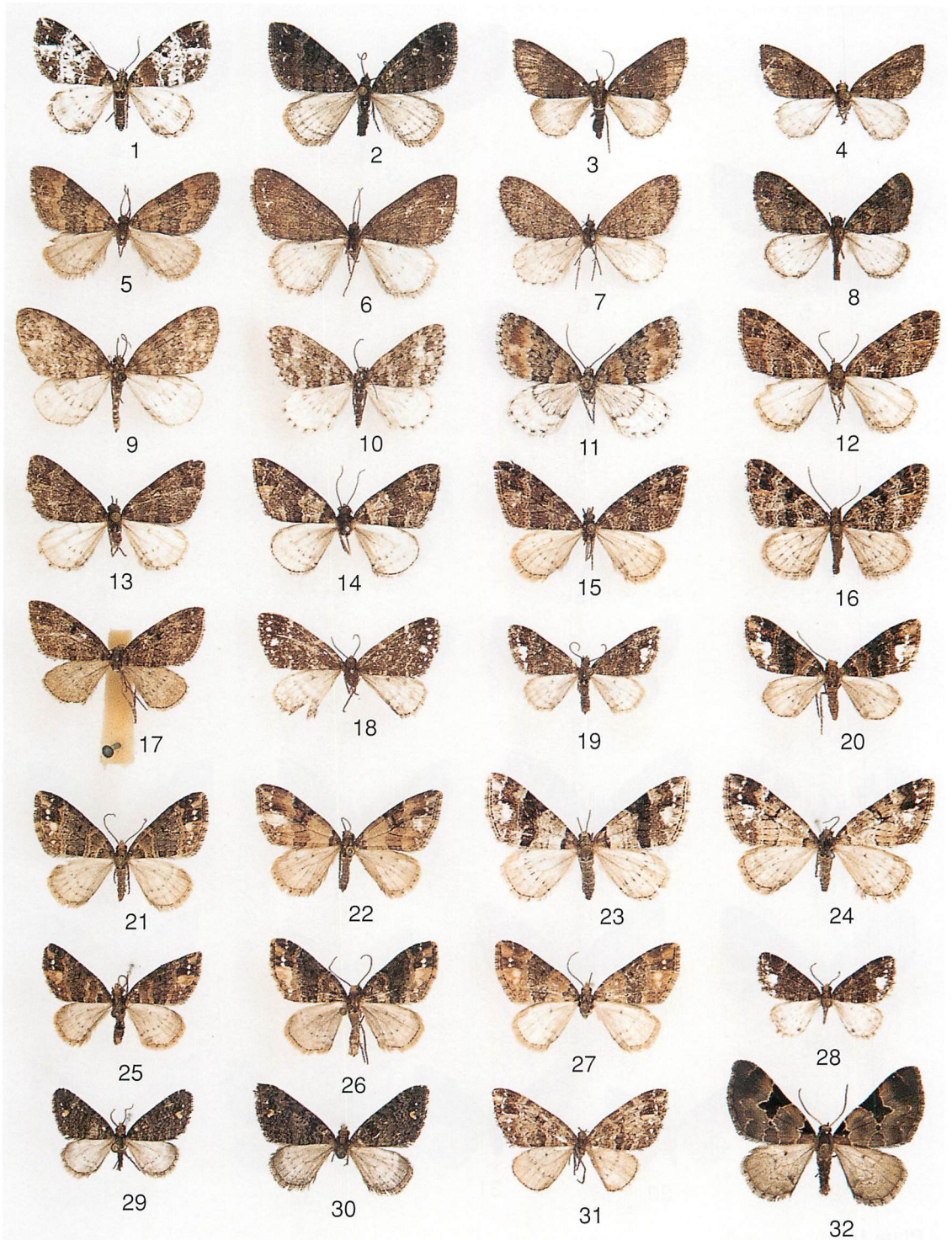


Plate 167

1. *Perizoma albofasciata* 2. *P. variabilis* 3. *P. lucifrons* 4. *P. acutipennis* 5, 6. *P. bicolor* 7. *P. fumosum* 8. *P. obligatum* 9–11. *P. molybda* 12. *P. fulvimacuala* 13, 14. *P. affinis* 15, 16. *P. constricta* 17. *P. restrictum* 18. *P. paramordax* 19–21. *P. seriata* 22–24. *P. owadai* 25–27. *P. peculiare* 28. *P. lilliptanum* 29–30. *P. micropunctum* 31. *P. amblyodes* 32. *P. olivacea*

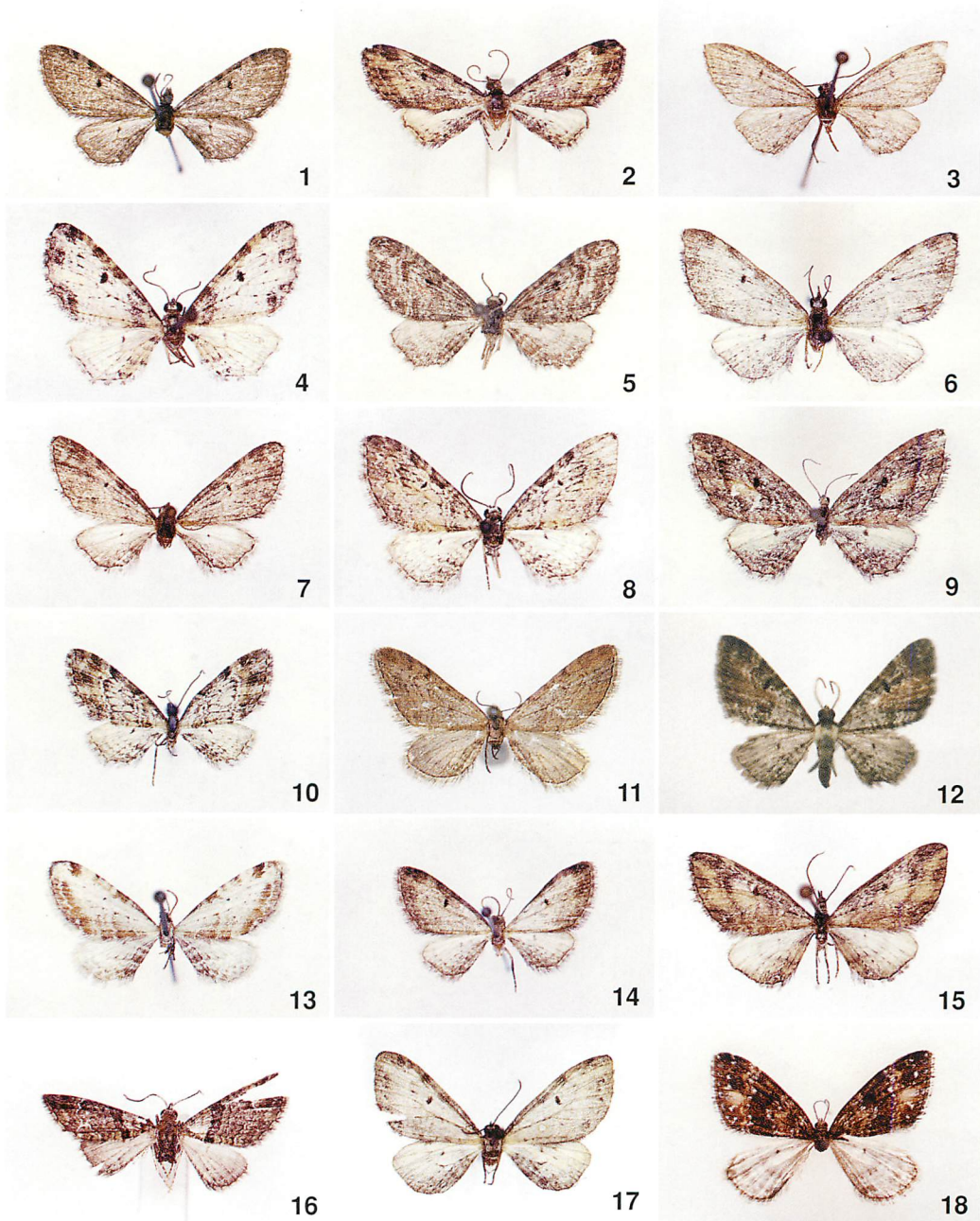


Plate 168

1–18. Holotype specimens. 1. *Eupithecia bini* 2. *E. coccinea* 3. *E. damnosa* 4. *E. emendata* 5. *E. forsteri* 6. *E. improva* 7. *E. lata* 8. *E. lineidistincta* 9. *E. marmorea* 10. *E. matura* 11. *E. nepalata* 12. *E. phulchokiana* 13. *E. ruficorpus* (=albicans) 14. *E. seditiosa* 15. *E. sola* 16. *E. subviridis* 17. *E. vojnitzi* (=tenebricosa) 18. *Perizoma fasciata* (=caeruleofascia)

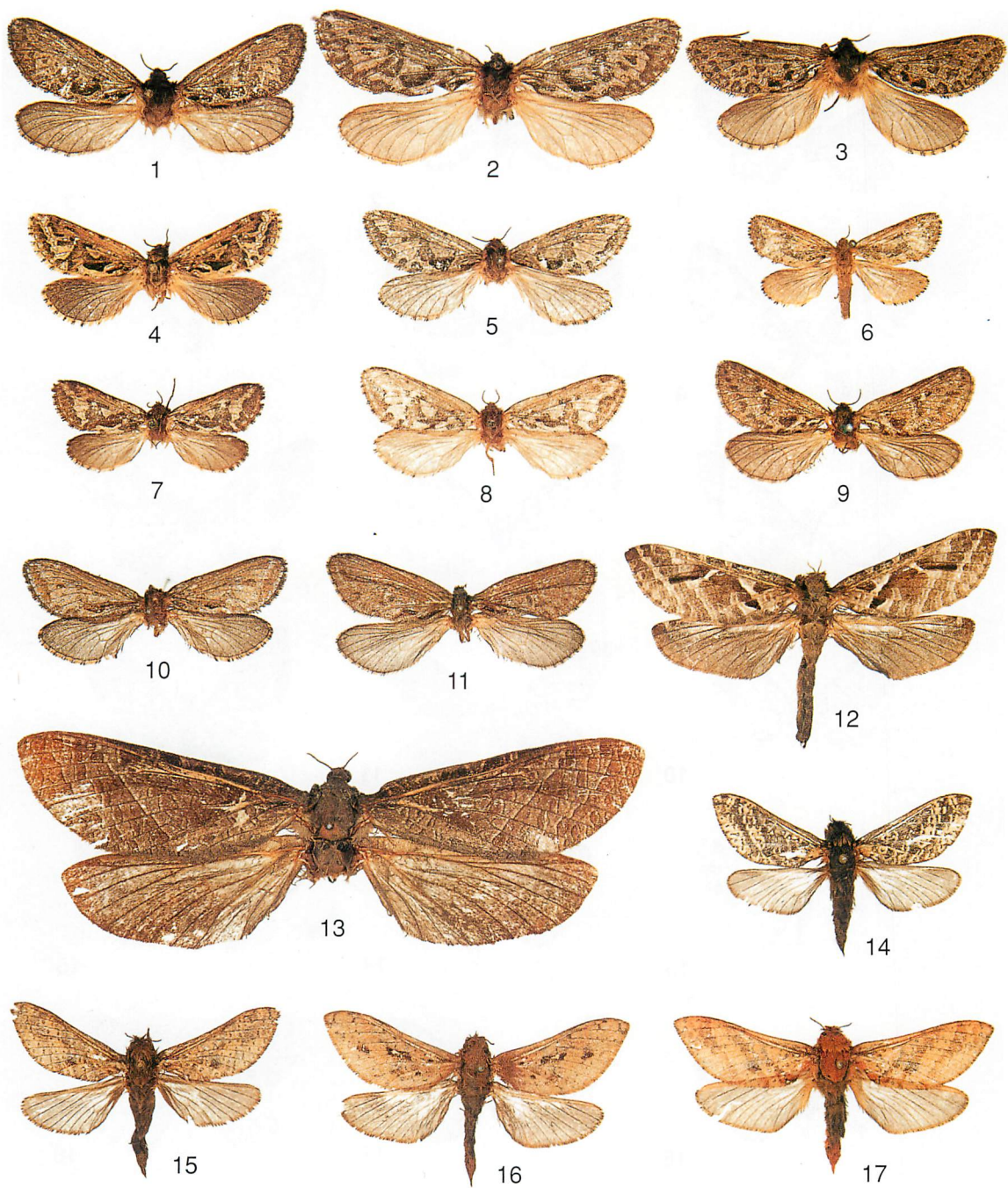


Plate 169

1. *Thitarodes danieli*, ♂ 2. Ditto, ♀ 3. *T. maculatum*, ♂ 4. *T. eberti*, ♂ 5. Ditto, ♀ 6. *T. dierli*, ♂ 7. Ditto, ♀ 8. *T. kishidai*, ♂ 9. *T. kingdonwardi*, ♂ 10. *T. harutai*, ♀ 11. *T. limbui*, ♀ 12. *E. damor*, ♀ 13. *Endoclita aboe*, ♀ 14-16. *Hepialiscus nepalensis*, ♂ 17. Ditto, ♀

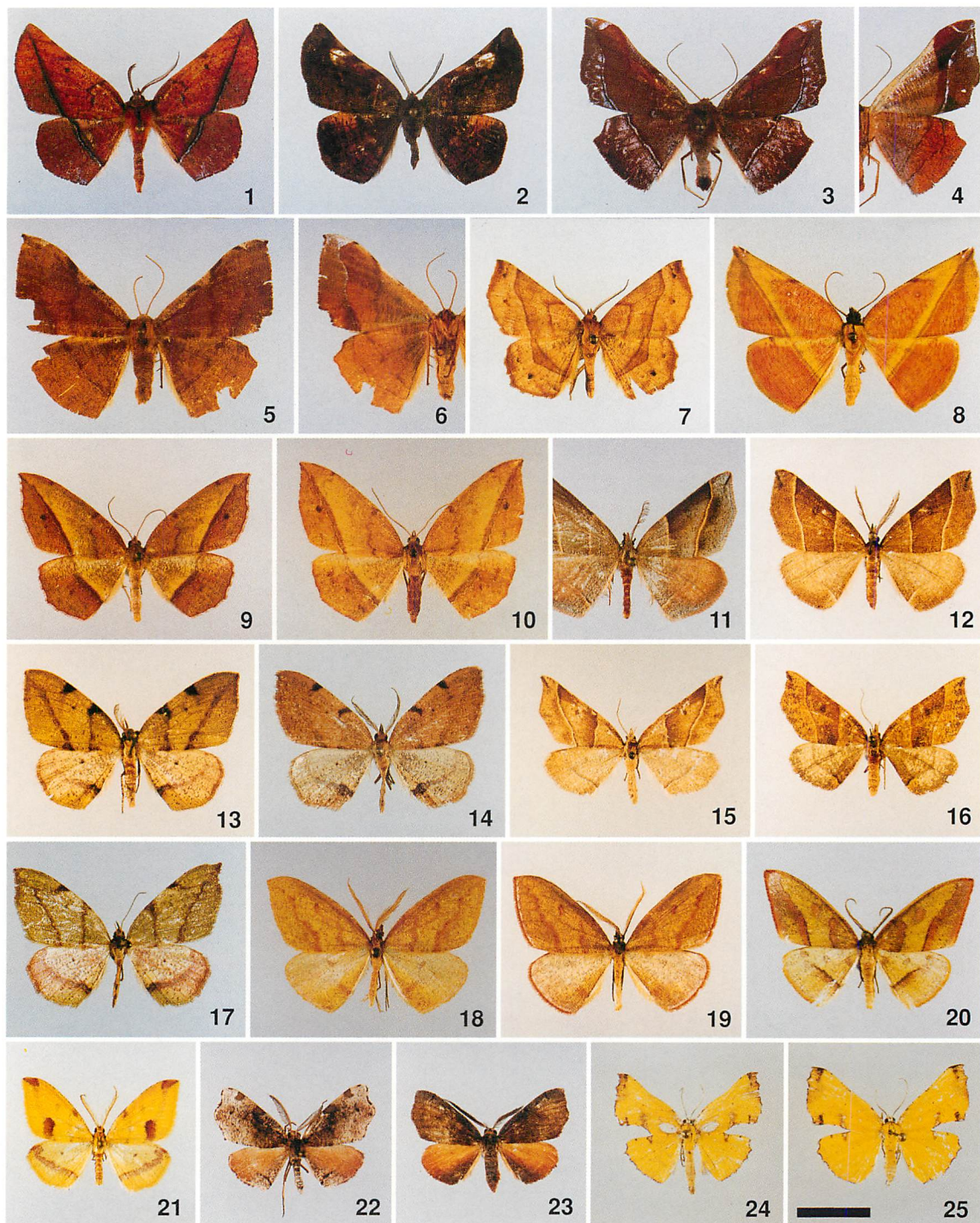


Plate 170

1. *Garaeus fulvata*, ♂ 2. *G. absona*, ♂ 3. *Fascellina porphyreofusa*, ♀ 4. Ditto (underside) 5. *F. inornata*, ♀ 6. Ditto (underside) 7. *Mimochroa gynopteridia*, ♂ 8. *Dissoplaga flava*, ♂ 9. *Leptomiza dentilineata*, ♂ 10. Ditto, ♀ 11. *Artemidora disistaria*, ♂ 12. Ditto 13. *Apheterolocha patalata*, ♂ 14. Ditto 15. *Artemidora disistaria*, ♀ 16. Ditto 17. *Apheterolocha patalata*, ♀ 18. *Heterolocha rubrifusa*, ♂ 19. Ditto 20. *Heterolocha mariailgae*, ♂ holotype 21. *Heterolocha phoenicotaeniata*, ♂ 22. *Achrosis rondelaria*, ♂ 23. Ditto 24. *Corymica vesicularia*, ♂ 25. Ditto, ♀. Scale bar: 10 mm.



Plate 171

1. *Heterostegania lumulosa*, ♂ 2. *H. nigrofusa*, ♀ 3. "*Xenographia*" *semifusca*, ♂ 4. *Euryobeidia languidata*, ♀ 5. *Pseudomiza cervina*, ♂ 6. *Ditto* (underside) 7. *Ocoelophora basipuncta*, ♂ 8. "*Arichanna*" *subaenescens*, ♀ 9. *Xenographia lignataria*, ♀ 10. *Ditto* (underside) 11. *Seleniopsis* sp., ♀ (underside) 12. *Seleniopsis* sp. 13. *Ourapteryx chrisbahri*, ♂ holotype 14. *O. inouei*, ♂ holotype 15. *Ditto*, ♀ paratype 16. *O. excellens*, ♂ 17. *Dalima lucens*, ♂ 18. *D. warreni*, ♂ paratype 19. *Ditto* (underside) 20. ♀ paratype 21. *Deinotrichia scotosiaria*, ♂ 22. *Deinotrichia* sp., ♂ 23. *Uliura albidentata*, ♂ 24. *U. dierli*, ♀ paratype (underside) 25. *Ditto*, ♂ holotype. Scale bars: 10 mm (1-12); 15 mm (13-25).



Plate 172

1. *Arichanna (A.) albolineata*, ♂ (dark form) 2. Ditto, ♀ 3. *A. (A.) interplagata*, ♂ ("ramosa-type") 4. *A. (A.) interplagata*, ♂ ("interplagata-type") 5. *A. (A.) furcifera*, ♂ (dry-season form) 6. Ditto, ♀ 7. *A. (A.) peniculifera*, ♂ paratype (wet-season form) 8. *A. (Paricterodes) luciguttata*, ♂ 9. *A. (P.) albivertex*, ♂ 10. Ditto (underside) 11. Ditto, ♀ 12. *A. (P.) schnitzleri*, ♂ paratype 13. Ditto (underside) 14. Ditto, ♀ 15. *A. (Icterodes) transectata*, ♀ 16. Ditto (underside) 17. *A. (Phyllabraxas) rubrivena*, ♂ 18. *A. (Ph.) subtilis*, ♂ 19. *A. (Ph.) albovittata*, ♀ 20. Ditto (underside) 21. *Calcyopa prasina*, ♂ paratype 22. Ditto (underside). Scale bar: 15 mm.



Plate 173

1. *Malacosoma indica* ♂ 2. Ditto ♀ 3. *Lenodora semihyalina* ♂ 4. *L. castanea* ♂ 5. *Euthrix laeta* ♂ 6. *Gastropacha pardale* ♂ 7. *Lenodora castanea* ♀ 8. *Gastropacha encausta* ♂ 9. Ditto ♀ 10. *Lebeda trifascia* ♂ 11. *Gastropacha eberti* ♂ 12. *Suana concolor* ♂ 13. *Streblote igniflua* ♂ 14. *Odonestis pruni oberthueri* ♂ 15. *Syrastrena lajonquieri fortelineata* ♂ 16. *Argonestis flammans* ♂



Plate 174

1. *Baodera khasiana* ♂ 2. Ditto ♀ 3. *Paradoxopla undulifera* ♂ 4. Ditto ♀ 5. *Dendrolimus phantom* ♂ 6. *D. cheela* ♂ 7. *Streblothe siva* ♀ 8. *Pyrosis fulviplaga* ♂ 9. *P. undulosa undulosa* ♂ 10. *P. undulosa gadrangana* ♂ 11. *P. hreblayi* ♂ 12. Ditto ♀ 13. *Pyrosis* sp. ♀