

tibia with longer distal projection, and longer tarsus with shorter basal segment when compared to material from Thailand. In the case of *A. arcuata* Moore, 1867, the two "variants" from Thailand and moths from Borneo differ in shape of costa, longer in "no. 6770" (*A. hemithearia* Guenée, 1858?), in presence of an additional flap-like projection medially in costa and in some other minor niceties that might fall within the limits of infraspecific variation, or characterise a vicarious species.

Taking measurements is a scrupulous and time-consuming activity. Why to do it?

It is easiest to identify butterflies and moths according to color pictures in atlases, in web, etc. It works when differences between taxa are clear-cut enough. It does not work when moths are similar one to another. And this case we must go in details.

The emerald genus *Agathia* is used here as an example. Within this genus, there are groups of externally similar species, examples of clinal variation or vicarious taxa. Study of genitalia is essential for correct identification of most species. To save time, the material must be sorted somehow, in advance.

References

- Holloway, J. D. 1996. The Moths of Borneo. Part 9. – *Malayan Nat. J.* 49:147-326
– & M. Sommerer 1984. *Spolia Sumatrensis*: three new Geometridae. – *Heteroc. Sumatr.* 2: 20-25
Prout, L. B. 1932. *Hemitheinae*. – In Seitz, A. (ed.): *Die Gross-Schmetterlinge der Erde* 12: 44-142
Yazaki, K. 1996. The genus *Agathia* (Lepidoptera, Geometridae) of Wallacea. – *Tinea* 14(4): 237-253

New Geometridae from the Indopacific region

Dayong Xue & Hongxiang Han

Xue, D. & H. Han (2003): New Geometridae from the Indopacific region. – *Spixiana* 26/3: 202-203

Some species relationships in the genus *Metallophya* Warren are discussed. Diagnostic characters between *Parasthena flexilinea* Warren and a potential new species from Seram and Papua New Guinea are presented.

Dr. Dayong Xue & Hongxiang Han, Institute of Zoology, Chinese Academy of Sciences, Beijing, China; e-mail: xuedy@panda.ioz.ac.cn

1. Heterospecificity of *Metallophya ocellata* (Warren, 1897) and *M. devecisi* Herbulot, 1989.

M. devecisi is very similar to the Indian species *M. ocellata* and has been thought as conspecific. The differences of male antennae, wing markings and distribution range show that they are different species. The diagnostic characters were given to distinguish these two species: (1) The underside of these two species are similar to each other. But in *devecisi*, the postmedian fascia on forewing is rounded from costa to M_3 , then continuous to Cu_2 , and forms a distinct angle at its inner margin. Postmedian fascia on hindwing in *M. devecisi* is round, but that fascia on *M. ocellata* is angled. Yellow area in *devecisi* is fairly extended. (2) There are differences in genitalia. The apex of valva is slightly different. *M. ocellata* is narrower than that of *M. devecisi*. The basal lobe of *M. devecisi* is a little shorter.

2. The relationship between *Metallophya variegata* Holloway, 1996 and *M. cineracea* Holloway, 1996.

After comparing the materials and original descriptions of both species it is concluded that these two species might be conspecific, the wing colour differences might represent different colour forms. Three main points support this result:

- Size, wing shape, wing markings of holotypes are almost the same except slight differences in colour.
- Male genitalia of both species are almost the same except for slight differences in the width of valva and saccular process, these differences are distinctly smaller than infraspecific variation in the genitalia of *M. arenaria* (Leech, 1889).
- The localities of holotypes, Sarawak: Gunung Mulu for *M. variegata* and Brunei, Telisai for *M. cineracea* are very close to each other, only 50-70 kilometers apart.

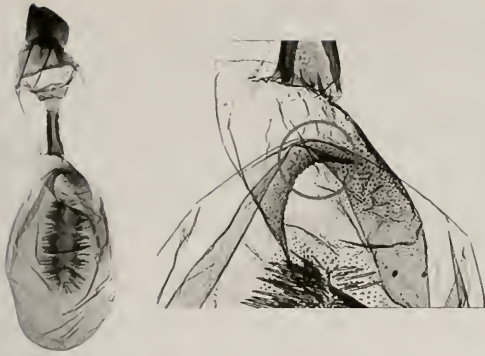


Fig. 1. *P. flexilinea* Warren.



Fig. 2. Potential new species.

3. A potential new species in the genus *Parasthena* Warren.

Specimens from Seram and Papua New Guinea were mentioned by Holloway (1997: 184) as "a related, somewhat more strongly marked, undescribed species", and the taxonomic status of this material has not been decided in the paper of Xue & Scoble (2002). Further female genitalia evidence has been found (Figs 1-2) now for separation: The potential new species shows an additional spinose crest in the posterior part of the corpus bursae, while this structure is absent in *P. flexilinea* Warren, 1902. The signum is much wider than in *P. flexilinea*. So, the material might belong to a potential new species in *Parasthena*.

References

- Holloway, J. D. 1996. The Moths of Borneo. Part 9. – Malayan Nat. J. 49:147-326
-- 1997. The Moths of Borneo. Part 10. – Malayan Nat. J. 51: 1-242, 608 figs, 12 pls.
Xue, D. Y. & M. J. Scoble 2002. A Review of the genera associated with the tribe Asthenini (Lepidoptera: Geometridae, Larentiinae). – Bull. nat. Hist. Mus. Lond. 71(1): 77-133, 295 figs.

The work was carried out with the help of Dr. A. Hausmann of ZSM, Mr. M. Sommerer of Munich, Mr. G. Orhant of France, the Trustees and Staff of the BMNH, and many colleagues. It is also supported by the CAS Innovation Program.

The Identity of the Australian Archiearinae

Peter B. McQuillan

McQuillan, P. B. (2003): The Identity of the Australian Archiearinae. – Spixiana 26/3: 203-204

Dr. Peter B. McQuillan, School of Geography and Environmental Studies, University of Tasmania, Hobart; e-mail: P.B.McQuillan@utas.edu.au

The small subfamily Archiearinae is putatively basal in the Geometridae and amphipolar in distribution. The Australian members comprise 5 described and 2 undescribed diurnal species in two genera (*Acalyphes* Turner and *Dirce* Prout) restricted to the mountains of Tasmania. They have been allocated to the Archiearinae (sensu Fletcher 1953) on morphological criteria, but features such as their general hairiness, melanized cuticle, bright colours and

rapid flight may be homoplasious.

New molecular evidence (28S D2) from a cross-section of ennomine genera and including *Archiearinae* Hübner, identifies *Acalyphes* and *Dirce* as a clade embedded in the Australian generalised Ennominae, and the sister group to a cluster of southern Australian genera, including *Mnesampela* Guest and *Paralaea* Guest, which have a full complement of prolegs in the larvae. *Acalyphes* larvae have extra

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Spixiana, Zeitschrift für Zoologie](#)

Jahr/Year: 2003

Band/Volume: [026](#)

Autor(en)/Author(s): Xue Dayong, Han Hongxiang

Artikel/Article: [New Geometridae from the Indopacific region 202-203](#)