



<http://dx.doi.org/10.11646/zootaxa.3745.4.8>

<http://zoobank.org/urn:lsid:zoobank.org:pub:BCC9CB57-EA01-4CC4-A726-C1644FF60A64>

A new species of *Mataeomera*, formerly misidentified as *M. obliquisigna* (Hampson, 1894) from Japan (Lepidoptera, Erebidae, Boletobiinae)

JAE-CHEON SOHN^{1,2,4} & KEITARO EDA³

¹Department of Entomology, University of Maryland, 4112 Plant Sciences Building, College Park, MD 20742, USA.

E-mail: jsohn@umd.edu

²Department of Entomology, Smithsonian Institution, National Museum of Natural History, 10th & Constitution NW, Washington, DC 20560, USA

³4-3-24-303, Kita-ando, Aoiku, Shizuoka 420-0881, Japan. E-mail: eda@air.ocn.ne.jp

⁴Corresponding author

Mataeomera Butler, 1886, currently referred to the tribe Eublemmini in Boletobiinae (Holloway 2011), was proposed by Butler (1886) to accommodate an Australian species, *Mataeomera dubia* Butler. This genus was once regarded as a junior synonym of *Autoba* Walker by Poole (1989) but resurrected by Edwards (1996). Another related genus, *Catoblemma* Hampson, 1910 originally proposed for *Catoblemma sumbavensis* Hampson, 1910 from Lesser Sunda was revised to include the Australian and East and Southeast Asian species. Edwards (1996) found the Australian species of *Catoblemma* and *Mataeomera dubia* congeneric and established the synonymy of those two genera. Following Edwards (1996), Yoshimoto (1999) transferred the Asian species of *Catoblemma* to *Mataeomera*. *Mataeomera* currently includes 21 species (Poole 1989; Edwards 1996; Holloway 2009). Following Holloway (2009), we note that *Catoblemma* appears to include several unrelated species and is probably polyphyletic. In fact, the Indo-Himalayan and East Asian species currently assigned to *Mataeomera* are distinct from the Australian congeners in external appearance and larval feeding habits (Sohn & Ronkay 2001; Holloway 2009). As such these may merit generic status but this possibility is still under study by the first author (JCS).

Almost all species of *Mataeomera* have narrow distributions. In contrast, *Mataeomera obliquisigna* (Hampson, 1894) was originally described from India and has been recorded from Japan in the Palearctic Region. It is actually the only species of *Mataeomera* which occurs in two different zoogeographic regions. *Mataeomera obliquisigna* was first reported from Japan by Wileman (1912). This identification has never been doubted but repeatedly cited in subsequent Japanese publications (Sugi 1959, 1982; Yamamoto 1965). Poole (1989) indicated that the illustrations of the species are available from Sugi (1982) and Yoshimoto (1999) illustrated the male and female genitalia of *M. obliquisigna*. But these were based on the Japanese specimens that the authors had assumed conspecific with *M. obliquisigna*. In fact, *M. obliquisigna* from India has never been illustrated and thus its identity remains unclear. The first author (JCS) examined the holotype and topotype of *M. obliquisigna* from the Natural History Museum, London and found these specimens are distinct from the Japanese specimens.

The aims of this paper are to describe the new species of *Mataeomera* from Japan, to correct the previous misidentifications of *M. obliquisigna*, and to illustrate the imago and the male genitalia of true *M. obliquisigna* for the first time. Pinned specimens were obtained from the following institutions: BMNH (Natural History Museum, formerly known as British Museum of Natural History, London, UK); CNU (Chungbuk National University, Cheongju, South Korea); HNHM (Hungarian Natural History Museum, Budapest, Hungary); and NMNS (National Museum of Nature and Science, Tsukuba, Japan). Specimens were dissected for genitalia, following Clarke (1941), except that chlorazol black was used for staining, and mounted on the micro-slides in euparal resin. Pinned specimens were examined under a Leica MZ APO stereo zoom microscope and slide-mounted specimens under a Leica LETTZ-DMRX compound microscope. Images were captured using the VDBK digital imaging systems, installed in the Department of Entomology, United Museum of Natural History and the authors' digital cameras (Nikon D40 by JCS; Olympus E-510 by KE). Terminology follows Klots (1970) for genitalia and Heppner (1998) for other body parts.

Acknowledgements

We thank Paul Z. Goldstein (University of Maryland, College Park and United States Department of Agriculture, Smithsonian Institution, Washington DC) for critically editing the manuscript and Geoff Martin, Martin Honey, Kevin Tuck (Natural History Museum, London), and Laszlo Ronkay (Hungarian Museum of Natural History, Budapest) for allowing to access to the collections under their care. The first author thanks Shigehiko Shiyake (Osaka Museum of Natural History, Osaka) for helping his field work at Osaka; the second author thanks Yasunori Kishida (Tokyo) and Akihiko Miyano (Gifu) for providing research materials, and Hiroshi Yoshimoto (Tokyo) for useful information on *Mataeomera*.

References

- Clarke, J.F.G. (1941) The preparation of slides of the genitalia of Lepidoptera. *Bulletin of the Brooklyn Entomological Society*, 36, 149–161.
- Butler, A.G. (1886) Descriptions of 21 new genera and 103 new species of Lepidoptera-Heterocera from Australian region. *Transactions of the Entomological Society of London*, 1886, 381–441.
<http://dx.doi.org/10.1111/j.1365-2311.1886.tb01633.x>
- Edwards, E.D. (1996) Noctuidae. In: Nielsen, E.S., Edwards, E.D. & Rangei, T.V. (Eds.), *Checklist of the Lepidoptera of Australia*. CSIRO, Canberra, pp. 291–333.
- Hampson, G.F. (1910) *Catalogue of the Lepidoptera Phalaenae in the British Museum*. Volume 9. Taylor and Francis, London, 829 pp.
- Heppner, J.B. (1998) Classification of Lepidoptera, Part 1. Introduction. *Holarctic Lepidoptera*, 5 (Suppl. 1), 1–148.
- Holloway, J.D. (2009) The Moths of Borneo: Family Noctuidae, subfamilies Pantheinae (part), Bagisarinae, Acontiinae, Aediinae, Eustrotiinae, Bryophilinae, Araeopteroninae, Aventiinae, Eublemminae and further miscellaneous genera. *Malayan Nature Journal*, 62 (1 & 2), 1–240.
- Holloway, J.D. (2011) The Moths of Borneo, Part 2. *Malayan Nature Journal*, 63 (1 & 2), 1–548.
- Klots, A.B. (1970) Lepidoptera. In: Tuxen, S.L. (Ed.), *Taxonomist's Glossary of Genitalia in Insects*, Munksgaard, Copenhagen, pp. 115–130.
- Lower, O.B. (1894) A catalogue of Victorian Heterocera, Part XI. *The Victorian Naturalist*, 11, 93–96.
- Poole, R.W. (1989) *Lepidopterorum Catalogus (New Series)*. Fascicle 118 Noctuidae, Part 1. E. J. Brill/ Flora & Fauna Publications, Leiden, New York, København & Köln, 500 pp.
- Sohn, J.C. & Ronkay, L. (2001) New records of Korean Noctuidae (Lepidoptera), with descriptions of a new species. *Insecta Koreana*, 18 (3), 219–227.
- Sugi, S. (1959) Noctuidae. In: Inoue, H. & Shirozu, T. (Eds.), *Iconographia Insectorum Japonicorum Colore naturali edita, Vol. 1. (Lepidoptera)*. Hokuryukan, Tokyo, pp. 105–159.
- Sugi, S. (1982) Noctuidae [except Herminiinae]. In: Inoue, H., Sugi, S., Kuroko, H., Moriuti, S. & Kawabe, A. (Eds.), *Moths of Japan, Vol. 1*. Kodansha, Tokyo, pp. 669–913
- Wileman, A.E. (1912) New and unrecorded species of Lepidoptera Heterocera from Japan. *Transactions of the Entomological Society of London*, 1911, 189–406.
<http://dx.doi.org/10.1111/j.1365-2311.1911.tb03088.x>
- Yamamoto, M. & Sugi, S. (1987) Noctuidae [except Herminiinae]. In: Sugi, S., Yamamoto, M., Nakatomi, K., Sato, R., Nakajima, H. & Owada, M. (Eds.), *Larvae of Larger Moths in Japan*. Kodansha, Tokyo. pp. 185–239.
- Yamamoto, Y. (1965) Noctuidae. In: Issiki, S., Mutuura, A., Yamamoto, Y. & Hattori, I. (Eds.), *Early Stages of Japanese Moths in Color, Vol. 1*. Hoikusha Publishing Co., Ltd, Osaka, pp. 61–166.
- Yoshimoto, H. (1999) A new and some unrecorded acontiine moths (Noctuidae) from Japan, mostly collected in the Ryukyu. *Japan Heterocerists' Journal*, 202, 23–30.