

Assessment of the proper nomenclature of *Loepa* Moore, 1859 and its type species (Saturniidae)

WOLFGANG A. NÄSSIG^{1,2}

¹ Entomologie II, Forschungsinstitut und Museum Senckenberg, Senckenberganlage 25, 60325 Frankfurt am Main, Germany; e-mail: wolfgang.naessig@senckenberg.de

² Contributions to the knowledge of the Saturniidae, no. 70.

Loepa Moore, 1859 is a well-known genus of the family Saturniidae, occurring with about 30 species in the southern Palaearctic and tropical Oriental regions, between India in the west, China (northern Hebei) in the north, Sulawesi, Mindanao and Amami-Oshima in the east and Java in the south. Species are frequently reared in captivity on Vitaceae; in the wild the caterpillars feed mainly on Vitaceae, Dilleniaceae, Saxifragaceae and Actinidaceae (Nässig et al. 1996: 137–138; Yen et al. 2000: 159). The genus has also received renewed taxonomic attention in recent years (e.g., Nässig & Treadaway 1988; Nässig & Suhardjono 1989; Nässig et al. 1989; Brechlin 1997, 2000; Naumann 1998, 2003; Naumann & Kishida 2001; Nässig & Ragus 2001; Yen et al. 2000). However, the nomenclatural accounts of the genus in the literature are marred by several errors. These are explained and corrected here.

Nässig & Treadaway (1988: 175) noted that the accepted type species of *Loepa*, *Saturnia katinka* Westwood, appeared to be based on a misidentification, and later (Nässig & Treadaway 1998: 389) they noted that the accepted authorship of the genus, as Moore, 1860 in Horsfield & Moore, “1858–1859“, was incorrect. Nässig & Treadaway (1998) corrected the latter to Moore, 1859 but reserved resolving the apparent type species misidentification until a thorough literature study had been conducted and, if necessary, the case had been prepared for submission to the ICZN. The confused nomenclature of *Loepa* may be summed up as follows:

Fletcher & Nye (1982) stated that *Loepa* Moore was originally published in 1860 (= “1858–1859“, in Horsfield & Moore 1860: 399). This catalogue (although cited even by Moore 1859: 260 as having been published in 1858) was not available before 1860 (see Cowan 1975; Fletcher & Nye 1982). Consequently, Fletcher & Nye interpreted *Saturnia katinka* Westwood, 1848 [but see below for this publication date] as the type species of *Loepa* by monotypy, as this was the only species included in the genus by Moore in Horsfield & Moore (1860).

This delay in the publication of the Horsfield & Moore catalogue resulted in a synopsis by Moore (1859: 260) that also contained the new genus name *Loepa* being published before. The name is accompanied by a short but nevertheless valid description and includes, in addition to *katinka*, *Saturnia thibeta* Westwood, 1853, which Moore (1862a, 1862b) shortly afterwards placed in a new genus *Caligula*. *Saturnia thibeta* is today included in the genus *Saturnia* von Paula Schrank, 1802, subgenus *Rinaca* Walker, 1855 (Nässig 1994). In this first description of *Loepa*, Moore (1859) provided no designation of a type species, neither by monotypy nor by original designation.

The potential type species *Saturnia katinka* was described by Westwood in 1847, not in 1848. The “Cabinet of Oriental Entomology” was published in monthly fascicles, starting in ca. January 1847, each consisting of three colour plates and their text, according to the information sheet bound into the copy of Westwood’s book in the University Library Johann Christian Senckenberg, Frankfurt am Main (formerly property of the entomologist Carl von Heyden, 1793–1866). The illustration of *Saturnia katinka* was published on plate XII, text page 25, and the publication date of its fascicle is 1847 (probably April/May), although the work as a whole was completed only in 1848.

In the Horsfield & Moore catalogue, Moore (1860) appeared to have misidentified *Saturnia katinka* as he explicitly dealt only with Javanese specimens (ex coll. Atkinson), whereas Westwood (1847/48) had given the origin of *Saturnia katinka* as “Assam and Sylhet” and did not list Java, and the true *Loepa katinka* does not occur in Sundaland (see Nässig et al. 1996 and citations therein) but is a solely northern Indian/Himalayan species (see also Nässig & Treadaway 1998: 389). Moore (1859: 260), however, recorded the range of *L. katinka* as “Hab. Assam; Silhet; Java” and is therefore deemed to have correctly identified Westwood’s species (ICZN 1999: Art. 70.1), even though he included another species in his concept of *L. katinka*. The two *Loepa* species known from Java are discussed by Nässig & Suhardjono (1989).

Swinhoe (1892: 247) designated a specimen from Assam from Westwood’s type series as lectotype of *Saturnia katinka* and thereby fixed the type locality of the species, but he did not deal with generic types and left the issue regarding the type species of *Loepa* unresolved.

Kirby (1892: 935) apparently was the first author to designate a type species for *Loepa*, in the Appendix to his “Synonymic Catalogue” placing an asterisk before the entry “*L. katinka* Westw.”, his method of denoting generic type species (Kirby 1892: vi). This type designation is valid as *S. katinka* is one of the two species included in Moore’s (1859) original description of the genus. Shortly after, Hampson (1893) stated more specifically “Type, *L. katinka*, Westw.” under the heading of the genus, but Kirby (1892) is deemed to have fixed the type species of *Loepa* validly by subsequent designation (ICZN 1999: Art. 69).

From this state of affairs it can be concluded that:

- a) the genus *Loepa* Moore was originally validly described by Moore (1859), not by Moore in Horsfield & Moore (1860), as established by Nässig & Treadaway (1998),
- b) Moore (1859) correctly identified *Saturnia katinka* Westwood when establishing the new genus *Loepa* for it and for *S. thibeta*, but he did not designate either of them as type species for the genus,
- c) the first valid type species designation of *Loepa* is that of *Saturnia katinka* by Kirby (1892), and
- d) the type locality of *L. katinka* is Assam, as fixed by Swinhoe’s (1892) lectotype designation.

Thus, only minor changes to the authorship of *Loepa* and its type species are required to correct its nomenclature, but no major emendments to the long-held acceptance of the type species of *Loepa* and of its type locality. The correct nomenclature of *Loepa* therefore is as follows:

Genus *Loepa* Moore, 1859

Loepa: Moore (1859: 260).

Type species: *Saturnia katinka* Westwood, 1847 (Westwood 1847/48: pl. XII, p. 25), by subsequent designation by Kirby (1892: 935); type locality: Assam, by lectotype designation by Swinhoe (1892: 247).

Acknowledgements

Ulrich Brosch, Hille, prompted and supported the research with copies of some rare references. Stefan Naumann, Berlin, and especially Rolf G. Oberprieler, Canberra, critically read the manuscript. Thanks are due to two anonymous referees for helpful hints.

References

- Brechlin, R. 1997. Zwei neue Saturniiden aus dem Gebirgsmassiv des Fan Si Pan (nördliches Vietnam): *Salassa fansipana* n. sp. und *Loepa roseomarginata* n. sp. (Lepidoptera: Saturniidae). – Nachrichten des Entomologischen Vereins Apollo, N.F. **18** (1): 75–87.
- Brechlin, R. 2000. Zwei neue Arten der Gattung *Loepa* Moore, 1859 (Lepidoptera: Saturniidae). – Nachrichten des Entomologischen Vereins Apollo, N.F. **21** (3): 165–170.
- Cotes, E. C. & C. Swinhoe 1887. A catalogue of the moths of India. Part II, Bombyces. – Calcutta (Trustees of the Indian Museum). Pp. [41]–255.
- Cowan, C. F. 1975. Horsfield, Moore, and the catalogues of the East India Company Museum. – Journal of the Society for the Bibliography of Natural History **7** (3): 273–284.
- Fletcher, D. S. & I. W. B. Nye 1982. – In: I. W. B. Nye (ed.), The generic names of moths of the world, vol. 4. – London (Trustees of the BMNH). xiv + 192 pp.
- Hampson, G. F. 1893 [imprint “1892”]. The fauna of British India, including Ceylon and Burma. Moths, vol. 1. – London (Taylor & Francis). xxiii + 527 pp.
- Horsfield, T. & F. Moore 1860 [imprint “1858/59”]. A catalogue of the lepidopterous insects in the Museum of Natural History at the East-India House, vol. 2. – London (Wm. H. Allen). Here: pp. 383–410 + pls 18–20.
- ICZN 1999. International Code of Zoological Nomenclature, fourth edition, adopted by the International Union of Biological Sciences. – London (International Trust for Zoological Nomenclature, BMNH). xxix + 306 pp.
- Kirby, W. F. 1892. A synonymic catalogue of Lepidoptera Heterocera (moths). Vol. I. Sphinges and Bombyces. – London (Gurney & Jackson). xii + 951 pp.
- Moore, F. 1859. Synopsis of the known Asiatic species of silk-producing moths, with descriptions of some new species from India. – Proceedings of the Zoological Society of London **27**: 237–270, pls Annulosa LXIV–LXV.
- Moore, F. 1862a. Notes on the silk-producing insects of India and its adjacent countries. – The Technologist, London **2**: 410–418.
- Moore, F. 1862b. On the Asiatic silk-producing moths. – The Transactions of the Entomological Society of London (3) **1**: 313–322.
- Nässig, W. A. 1994. Vorschlag für ein neues Konzept der Gattung *Saturnia* Schrank 1802 (Lepidoptera: Saturniidae). – Nachrichten des Entomologischen Vereins Apollo, N.F. **15** (3): 253–266.
- Nässig, W. A., R. E. J. Lampe & S. Kager 1989. A new species of *Loepa* from Sumatra (Lepidoptera, Saturniidae). – Heterocera Sumatrana **2** (7): 145–152.
- Nässig, W. A., R. E. J. Lampe & S. Kager 1996. The Saturniidae of Sumatra (Lepidoptera). – Heterocera Sumatrana **10**: 3–110. [With Appendix I: The preimaginal instars of some Sumatran and South East Asian species of Saturniidae, including general notes on the genus *Antheraea* (Lepidoptera). – Heterocera Sumatrana **10**: 111–170.]

- Nässig, W. A. & G. Ragus 2001. Annotations on selected *Loepa* species and their preimaginal instars. 1. The larval morphology of *Loepa miranda* Atkinson in Moore, 1865 (Lepidoptera: Saturniidae, Saturniinae). – Nachrichten des Entomologischen Vereins Apollo, N.F. **21** (4): 247–251. – Corrigendum: Nachrichten des Entomologischen Vereins Apollo, N.F. **22** (1): 36.
- Nässig, W. A. & Y. R. Suhardjono 1989. A new species of the genus *Loepa* (Saturniidae) from Java. – Tinea **12** (23): 205–210.
- Nässig, W. A. & C. G. Treadaway 1988. Bemerkungen über die *Loepa*-Arten der Philippinen (Lepidoptera, Saturniidae). – Nachrichten des Entomologischen Vereins Apollo, N.F. **9** (3): 159–176.
- Nässig, W. A. & C. G. Treadaway 1998. The Saturniidae (Lepidoptera) of the Philippines. – Nachrichten des Entomologischen Vereins Apollo, Supplementum **17**: 223–424.
- Naumann, S. 1998. *Loepa obscuromarginata* n. sp., eine neue Saturniide aus der Volksrepublik China (Lepidoptera: Saturniidae). – Entomologische Zeitschrift **108** (2): 49–56.
- Naumann, S. 2003. Two new *Loepa* species from Tibet and Shaanxi, China (Lepidoptera: Saturniidae). – Nachrichten des Entomologischen Vereins Apollo, N.F. **24** (4): 161–165.
- Naumann, S. & Y. Kishida 2001. A new species of the genus *Loepa* Moore, 1859 (Lepidoptera, Saturniidae) from southern China. – Tinea **16** (5): 337–341.
- Swinhoe, C. 1892. Catalogue of the Eastern and Australian Lepidoptera Heterocera in the collection of the Oxford University Museum. Part 1, Sphinges and Bombyces. – Oxford (Clarendon). viii + 324 pp., 8 pls.
- Westwood, J. O. 1847/48. The cabinet of Oriental entomology; being a selection of some of the rarer and more beautiful species of insects, natives of India and the adjacent islands, the greater portion of which are now for the first time described and figured. – London (W. Smith). 88 pp., 42 pls.
- Yen, S.-H., W. A. Nässig, S. Naumann & R. Brechlin 2000. A new species of the *miranda*-group of the genus *Loepa* from Taiwan (Lepidoptera: Saturniidae). – Nachrichten des Entomologischen Vereins Apollo, N.F. **21** (3): 153–162.