



Taxonomic review of *Syzeuxis* Hampson, 1895, with a discussion of biogeographical aspects (Lepidoptera, Geometridae, Larentiinae)

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Abstract

The genus *Syzeuxis* Hampson, 1895 is reviewed. In addition to the 11 species known worldwide, two new species are described: *S. furcalineas* sp. nov. from Assam, India and *S. pavonata* sp. nov. from Yunnan, China. One new synonymy is given: *S. miniocalaria* Xue, 1999 is sunk in *S. heteromeces* Prout, 1926. All the known species are redescribed and lectotypes are designated for *S. magnidica* Prout, *S. subfasciaria* (Wehrli) and *S. nigrinotata* (Warren). Generic characters based on all species are summarized. Illustrations of moths and genitalia are presented. The tribal placement of the genus is discussed, with the conclusion that it should be placed in the tribe Trichopterygini. A pilot phylogenetic study based on morphological characters of *Syzeuxis* indicates that four species-groups can be identified. The biogeographical aspects of the genus are also discussed.

Key words: *Syzeuxis*; taxonomy; new species; tribe; Trichopterygini; biogeography

Introduction

The genus *Syzeuxis* Hampson is a natural but rarely studied genus, which includes 11 known species. After its establishment in 1895 on the basis of the type species *Osicerda trinotaria* Moore, 1868, it has been treated in very few works. Warren (1896) established a new genus *Aphantoloba* based on a new Indian species, *Aphantoloba nigrinotata*, which was treated as a synonym of *Syzeuxis* by Hampson (1898). Prout (1926a, b) brought four new species from Northeast India into *Syzeuxis*. Inoue (1982) and Yazaki (1994) recorded two previously named species from Nepal. Parsons *et al.* (1999) only listed seven species, including *S. subfasciaria* (Wehrli, 1924), which was transferred from the genus *Lobogonia* Warren, 1893.

Xue and Zhu (1999) included detailed descriptions of four new species, *S. extritonaria*, *S. neotritonaria*, *S. calamisteria*, and *S. miniocalaria*, from Yunnan and Tibet in China, but without explicitly indicating them to be new. In fact, these four species were expected to have been published in 1998 in a separate paper, “A study on genus *Syzeuxis* Hampson, with descriptions of four new species from China (Lepidoptera: Geometridae)”. This paper was accepted on 20 October 1997 by the journal *Acta Zootaxonomica Sinica* and cited as ‘in press’ by Xue and Zhu (1999), but unfortunately owing to an error it was not published until 2000. According to the Code (4th Edition, 1999, Article 16), names published before 2000 should be considered as available even if they were not explicitly indicated as new names (‘Every new name published after 1999, including new replacement names (*Nomina nova*), must be explicitly indicated as intentionally new.’ Code Article 16.1). Under this rule, the names published in 1999 should be available names.

In recent years, new material has been collected or discovered in collections and new taxa need to be described; some synonymic problems have arisen, and lectotype designation is desirable for three species, hence a review of the genus based on a wider study of material available in collections is now timely. Meanwhile, a phylogenetic analysis based on the morphological characters derived from the study materials was proposed in order to better understand the relationship between the species and the generic system of this small but special larentiine genus.