



<http://dx.doi.org/10.11646/zootaxa.3682.3.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:50B82368-6A4F-4B43-BF99-493AAEDFEC4B>

## A review of *Psyra* Walker, 1860 (Lepidoptera, Geometridae, Ennominae) from China, with description of one new species

ZULIAN LIU<sup>1,2</sup>, DAYONG XUE<sup>1</sup>, WENKAI WANG<sup>2,3</sup> & HONGXIANG HAN<sup>1,3</sup>

<sup>1</sup>Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beijing, China

<sup>2</sup>School of Agriculture, Yangtze University, Hubei, China

<sup>3</sup>Corresponding author. E-mail: hanhx@ioz.ac.cn, w\_wenkai@hotmail.com

### Abstract

The genus *Psyra* Walker, 1860 in China is reviewed. Thirteen species are recognized, of which, *P. breviprotrusa* **sp. nov.** is described as new to science, and *P. moderata* Inoue, 1982, *P. gracilis* Yazaki, 1992 and *P. boarmiata* (Graeser, 1892) are recorded for the first time from China. *P. cuneata szetschwana* Wehrli, 1953 and *P. cuneata dsagara* Wehrli, 1953 are upgraded to specific level, i.e. *P. szetschwana* **stat. nov.** and *P. dsagara* **stat. nov.**, and a lectotype is designated for *P. dsagara*. One new synonym is established: *P. szetschwana* Wehrli, 1953 = *P. cuneata lidjangica* Wehrli, 1953 **syn. nov.** The diagnoses for all species are given. Illustrations of external features and genitalia are presented.

**Key words:** *Psyra*, Gnophini, taxonomy, synonym

### Introduction

The genus *Psyra* was described by Walker (1860) as a monotypic genus based on *P. cuneata* Walker, 1860 from India. *Orbasia* Swinhoe, 1894 and *Oncodocnemis* Rebel, 1901 were listed as junior synonyms of *Psyra* by Parsons *et al.* (1999). *Psyra*, characterized by black wedge-shaped patches on the forewing, has not been formally placed into any known tribe by any publication. Holloway (1994) treated the tribe Boarmiini in a very broad concept, bringing within it 15 tribes, including the Gnophini, Cleorini, Bistonini, and summarized the characters of the tribe as follows: some genera possess a fovea on the male forewing; members of the tribe usually have a transverse setal comb on the third abdominal sternite. He also pointed out that there are no unambiguous tribal features in the genitalia, but stated that: the male valva usually has a cucullus, the sacculus is often ornamented with spines or processes bearing spine-like setae, and the uncus is often bifid. Viidalepp *et al.* (2007) highlighted three main characters of the moths belonging to the Boarmiini s. str. as: a well delimited harpe and cucullus on the male valva, a setal comb on sternite A3, and a fovea on the male forewing. Of these characters of Boarmiini s. lat. and Boarmiini s. str., *Psyra* shares only the possession of the setal comb. Viidalepp *et al.* (2007) recognised the Gnophini as a separate tribe, and summarized five characters for it, of which *Psyra* shares the following two: the absence of a fovea on the male forewing and the presence of a costal projection and an apical spine on the valva. But *Psyra* has a setal comb on the third abdominal sternite, which is absent in the concept of the Gnophini of Viidalepp *et al.* (2007). *Psyra* therefore falls between the tribes Boarmiini and Gnophini based on the characters of the male genitalia, the lack of a fovea on the forewing, and the presence of the setal comb. This intermediate position between Viidalepp's Boarmiini s. str. and his concept of the Gnophini may cast some doubt on the decision to separate the two taxa, and further research in this area is certainly needed.

The species of *Psyra* are mainly distributed in East Asia. Parsons *et al.* (1999) listed 15 species and 7 subspecies in *Psyra*. Among them, Walker (1860, 1863, 1866) described 3 species from India; Moore (1868) named 2 species from India; Bastelberger (1909, 1911) added 2 species from Taiwan; Wehrli (1953) described 3 subspecies of *P. cuneata* from China, which were listed as synonyms of *P. cuneata* in Parsons *et al.* (1999); Inoue (1954, 1982a, 1982b, 1983) established 2 new species and 2 new subspecies from Japan, Taiwan and Nepal. The