



On the taxonomy of the *Exophyla-Isoura-Perinaenia* generic-complex (Lepidoptera, Noctuidae, Catocalinae)

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Abstract

The genera *Perinaenia* and *Isoura* are revised, and four new species, *P. mingchyrica* **sp. n.** (Taiwan), *P. atripunctum* **sp. n.** (China, Shaanxi), *P. nigrifascia* **sp. n.** (Vietnam) and *I. clara* **sp. n.** (Nepal, Vietnam and Indonesia) are described. The systematic relationships of the genera *Perinaenia*, *Isoura* and *Exophyla* are discussed on the basis of their external and genitalic features.

Key words: Noctuidae, Catocalinae, *Exophyla*, *Isoura*, *Perinaenia*, new species, Himalayan-Sino-Tibetan region

Introduction

The higher taxonomy of the Noctuoidea has been changed radically in the last fifteen years and the distinction of the family-rank taxa is still debatable. The catocaline trunk is placed most recently (Lafontaine & Schmidt 2010) as a tribe of the subfamily Erebininae within the broadly defined family Erebidae. In our work we follow a more traditional concept and consider this phyletic group as a subfamily (Catocalinae) within the old sense of the family Noctuidae. The genus *Perinaenia* Butler, 1878 has long been considered as a trifine noctuid group and the position of its only known type-species was clarified only in 1948 by Boursin. A similar case exists with *Isoura fuscicollis* (Butler, 1889) which had been described in “*Triphaena*”, actually a synonym of *Noctua* Linnaeus, 1758.

A general survey of this phyletic line indicated the close relationships of the genera *Perinaenia* Butler, 1878, *Isoura* Hampson, 1894, and *Exophyla* Guenée, 1841, and their position in the tribe Toxocampini Guenée, 1852. The detailed characterisation of their morphological features and systematic considerations are provided here.

Morphology and phylogeny

The three genera under discussion, *Perinaenia*, *Isoura* and *Exophyla*, form a compact clade according to their morphological and bionomical features. The first two genera stand closer to each other, and *Exophyla* represents its sister-group. The characterisation of the external and genitalia morphology of the clade, as well as the bionomic features typical for the three genera are provided below.

External morphology (Plate 1, figs 1–8):

- head, thorax and abdomen covered with smooth, flat, easily removable hair-like scales;
- head small, eyes large, globular, palpi slender, upturned;
- antennae filiform and ciliate in both sexes;
- forewing narrow, long, apically finely rounded, hindwing broad and rounded;
- forewing pattern obsolescent, finely rippled pattern;