Revisional studies on the Luciolinae fireflies of Asia (Coleoptera: Lampyridae): 1. The genus Pyrophanes Olivier with two new species. 2. Four new species of Pteroptyx Olivier and 3. A new genus Inflata Boontop, with redescriptions of Luciola indica (Motsch.) as Inflata indica comb. nov.

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Abstract

The Luciolineae firefly genus Pyrophanes is redescribed and a key is provided for 7 species, viz. appendiculata Olivier, beccarii Olivier, quadriracmaculata Olivier, semilimbata (Olivier) and similis Olivier, with Py. elongata Ballantyne sp. nov. and Py. similissima Ballantyne sp. nov. described as new. Macropterous females associated for several species have 2 pairs of broad bursa plates.

Following an enlarged phylogenetic analysis of morphological characters, an expanded generic description of Pteroptyx Olivier now accommodates four new species with metafemoral combs. Three of these have an entire light organ in ventrite 7 but are without the generic hallmark of deflexed elytral apices in the male. The first species of Pteroptyx to possess these features are Pt. sayangia Ballantyne sp. nov., Pt. galbina Jusoh sp. nov. and Pt. surabaya Ballantyne sp. nov. Based on a single unusual specimen Pt. gombakia Ballantyne sp. nov. is here described with deflexed elytral apices and bipartite light organ in ventrite 7, but with exceptional incurving lobes along the posterior margin of ventrite 7, which is a characteristic of Pyrophanes. The description of Luciola testacea Motschulsky is discussed and many morphological characters of its type specimen are correctly outlined. Its place as the type for Pteroptyx is addressed.

Inflata gen. nov. Boontop is erected for specimens of Luciola indica Motschulsky as Inflata indica (Motsch.) comb. nov., and is described from males and reliably associated females. Discussion overviews the present situation regarding Luciolineae taxonomy of southeast Asian and the Australopacific regions.

Key words: Pyrophanes Olivier, Pteroptyx Olivier, Inflata Boontop gen. nov., taxonomy, new species, morphological phylogenetic analysis, identification keys