



A revision of the genus *Lycomorphon* (Coleoptera: Lycidae)

ELYNTON ALVES DO NASCIMENTO¹ & MILADA BOCAKOVA²

¹Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, USP, Av. Bandeirantes, 3900, Monte Alegre, 14040-901, Ribeirão Preto, São Paulo, Brazil. E-mail: elynton@yahoo.com

²Department of Biology, Faculty of Education, Palacky University, CZ-77140 Olomouc, Czech Republic.

E-mail: milada.bocakova@upol.cz

Abstract

The Neotropical genus *Lycomorphon* Pic, 1922 is revised. Eleven species are classified in the genus, six of them are redescribed, five species (*Lycomorphon brasiliense* sp. n., *L. amazonicum* sp. n., *L. bimaculatum* sp. n., *L. bolivianum* sp. n., *L. fulvohumeralis* sp. n.) are proposed as new to science. *Lycomorphon elongaticolle* v. *diversicolle* Pic, 1926 is raised to species status, and *Idiopteron irregularis* is transferred to the genus *Lycomorphon*. The new subgenus *Spinolycus* sg. n. is proposed within *Lycomorphon*.

Key words: Taxonomy, *Lycomorphon*, new species, new subgenus, Neotropical Region

Introduction

The genus *Lycomorphon* Pic is a group of American lycid tribe Calopterini. *Lycomorphon* together with *Falsocaenia* were described by Pic (1922) as subgenera of *Idiopteron* Bourgeois (1905). Bocakova (2004) raised both *Lycomorphon* and *Falsocaenia* to generic rank. Phylogenetic relationships of Calopterini genus-group taxa were tested by Bocakova (2005) on the basis of morphological characters. These analyses showed *Lycomorphon* to be the most basal split of Acroleptina clade, and close relationships of *Lycomorphon* to *Idiopteron* supposed by Pic (1922) were refuted.

One of remarkable features of all the acroleptin genera (*Lycomorphon*, *Lycinella* Gorham, *Ceratopriomorphus* Pic and *Acroleptus* Bourgeois) is presumed female neoteny, when adults develop reproductive organs while morphology expresses many larval features. Sometimes the females are fully larviform. Although evidence for female neoteny is largely based on the absence of females in collections, and in fact females of acroleptin taxa are unknown. Similarly like in other lycid groups with unknown females, acroleptins are suspected to be wingless or larviform. Known or assumed presence of larviform females caused by female neoteny misled previous authors to suppose close mutual relationships of these taxa (Crowson, 1972, Bocak and Bocakova, 1990). On the contrary to this, the latest molecular analysis of the family Lycidae (Bocak et al., 2008) showed three independent origins of lycid neotenic lineages. Regarding Calopterini the molecular data supported close relationships of fully winged *Calopteron* and one undescribed neotenic genus formerly understood as a member of the leptolycin clade (Miller, 1991). Further, these molecular data support sister group relationships of Calopterini to *Lycus* + *Lycostomus* clade which was proposed on the basis of larval characters by Bocak and Matsuda (2003). Therefore, although *Lycomorphon* was not included in the molecular analysis of Lycidae (Bocak et al. 2008) the analyses showed neotenic groups (e.g. leptolycins) nested within winged lineages, and in this respect supported results of previous morphological analysis (Bocakova 2005), i.e. inclusion of neotenic lineages within Calopterini.

In this work we present a revision of the genus *Lycomorphon*. An undescribed species was lately collected in Brazil. One species was found in the collection of Zoology Museum of São Paulo University, another three undescribed species were found in the collection of the Natural History Museum in Paris together with one