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Lolodorfus, a new genus of net-winged beetles (Coleoptera: Lycidae: Dexorinae) from Cameroon

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Abstract

A new genus *Lolodorfus* is proposed within the subfamily Dexorinae and *Lolodorfus flavus* **sp. nov**. from Cameroon is described. Illustrations of diagnostic characters are given. The genus *Mimolibnetis* Pic, 1936 is transferred to the Dexorinae Bocak *et* Bocakova, 1989, and consequently the subfamily Mimolibnetinae Kazantsev, 2013 is considered to be a younger synonym of Dexorinae Bocak *et* Bocakova, 1989.

Key words: taxonomy, Dexorinae, new genus, new species, Afrotropical Region

Introduction

The subfamily Dexorinae is a presumably neotenic group of lycid beetles distributed in Afrotropical Region. Comparative morphological studies (Bocak & Bocakova 1990, Kazantsev 2005) and phylogenetic analyses (Kazantsev 2005, 2013) of the family Lycidae largely suggested monophyly of neotenic taxa. Most neotenics share several morphological features such as female aptery, reduction of male mouth parts (these two features we can see in the new genus), absence of elytral reticulate cells, and reduction of antennomere number. In agreement with Crowson (1972), morphological studies given above assumed these features as synapomorphies. As females of neotenic lycids are largely unknown, these studies were predominantly based on males. The impact of neoteny on male morphology of net-winged beetles was first discussed by Miller (1991) who presented a revision of American Leptolycini, and assumed reduction of mouth parts and antennomere number were homoplasies. Consequently, Miller (1991) considered neotenic Leptolycinae evolved independently within Calopterini lineage, and considered the Leptolycinae (Bocak & Bocakova 1990) as polyphyletic suggesting independent origins of Asiatic, African, and American neotenic lineages. This concept was supported by revision and phylogenetic analysis of the tribe Calopterini: Lycinae (Bocakova 2003, 2004) who found neotenic subtribe Acroleptina evolved within fully winged American Calopterini. Further studies supported this view by presenting other possibly neotenic Calopterini lineages (Nascimento & Bocakova 2009, 2010a, 2010b).

Recent analyses of DNA sequences rejected monophyly of neotenic lycids (Bocak *et al.* 2008, Malohlava & Bocak 2010) and proposed that neotenic lineages evolved at least 3 times within Lycidae (in Lyropaeinae, Ateliinae, and Leptolycinae lineages). Detailed studies of other cantharoid groups (Bocak & Brlik 2008, Bocakova 2006, Janisova & Bocakova 2011, 2013) and particularly extensive analyses of DNA sequences (Bocakova *et al.* 2007, Kundrata & Bocak 2011) were used to testify single-origin hypothesis of neotenic taxa. DNA sequence analyses rejected monophyly of cantharoids which were found to be nested among winged click beetle and false click beetle lineages, and consequently, repeated origins of neoteny in elateroid clade were highly supported. The only exception was the analysis of morphological characters (Lawrence et al. 2011) which largely corroborated previous morphological concepts, and supported monophyly of cantharoids as well as elateroids, the latter including one of the formerly cantharoid groups, the Brachypsectridae. Latest molecular studies (Bocakova et al. 2007, 2012) further tested evolution of soft-bodiedness, which often correlates with neoteny, and supported multiple origins of soft-bodied lineages within elateroid beetles.

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