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Reconsidering *Pholeuon* C. Hampe (Coleoptera: Leiodidae: Cholevinae), with the description of a new subgenus

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Abstract

Mesopholeuon Moldovan, Racoviță & Dunay, subgen. nov. is described for *Pholeuon comani* Ieniştea, 1955 known from the central part of the Apuseni Mountains (Transylvania, Romania). The subgenus is characterized mainly by distinct shape of the body and the aedeagus. *Pholeuon comani* is redescribed. A key to subgenera of *Pholeuon* is provided. Present-day distribution of *Pholeuon* is described and palaeogeographic conditions are discussed to reconstruct the history of the cave fauna in north-western Romania, a remote area in the distribution of subterranean Cholevinae in Europe.

Key words: Coleoptera, Leiodidae, Cholevinae, Leptoderini, cave beetles, *Pholeuon*, taxonomy, biogeography, new subgenus

Introduction

The tribe Leptodirini Lacordaire, 1854 (= Bathysciini Reitter, 1906) of the family Leiodidae (Newton 1998; Perreau 2000) is the second largest group (after Carabidae) of subterranean Coleoptera. More than 800 species (Perreau, personal communication) are distributed mostly in the Palearctic region, many species sharing the unique adaptations to life in the darkness such as lack of eyes, long appendages, slender body, false physiogastry etc. Such features developed under relatively strict environmental requirements (e.g., darkness, constant temperature, saturated air humidity), but may become "handicaps" if small changes occur. Often restricted to very small areas, or even to one single cave, subterranean beetles have many endemic species, which makes them vulnerable to direct and indirect human impacts. Their study is important not only for conservation purposes but also because they can be important indicators of past climatic history. Their present distribution and speciation processes can be related to past geological and palaeoclimatic events (Juberthie 1984; Peck 1984; Barr & Holsinger 1985; Caccone & Sbordoni 2001).

In Transylvanian caves (north-western Romania) three endemic genera of cave beetles belonging to the *Drimeotus* phyletic line of the subtribe Pholeuoina (Cholevinae: Leptodirini) can be found. These genera are *Protopholeuon* Jeannel, 1923; *Pholeuon* C. Hampe, 1856; and *Drimeotus* L. Miller, 1856. Geographically they represent the tribe's most remote north-eastern cave populations in Europe. Representatives of *Pholeuon* and *Protopholeuon* are more specialized than *Drimeotus* and they are presumed to be earlier colonists of the caves. Both *Pholeuon* and *Protopholeuon* have a slender body, long antennae and pronounced physiogastry. Jeannel (1930) considered the cave beetles of Transylvania as the descendants of the Tertiary surface fauna that had come from Asia and colonized the European continent. Later, after the formation of the Alpine system, the ancestors of the present-day lineages migrated from the Mediterranean centers of dispersions. This hypothesis is supported by recent contributions in historical biogeography of Leptodirini (Giachino & Vailati 1993; Giachino *et al*. 1998).

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