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A new fossil species of the genus *Coptodera* Dejean, 1825 (Coleoptera: Carabidae: Lebiinae) from Baltic amber

SARA GAMBOA[1] & VICENTE M. ORTUÑO[2,3]

[1]*PMMV Team. Department of Paleontology, Faculty of Geology. University Complutense of Madrid (UCM). José Antonio Novais 2, E-28040, Madrid, Spain. E-mail: saragamb@ucm.es*

[2]*Research Team on Soil Biology and Subterranean Ecosystems. Department of Life Sciencies. Faculty of Biology, Chemistry and Environmental Sciences. University of Alcalá (UAH). A.P. 20. Campus Universitario. E-28805, Alcalá de Henares, Madrid, Spain*

[3]*Corresponding author. E-mail: vicente.ortuno@uah.es*

Abstract

In this paper a new species of fossil ground-beetle, *Coptodera elektra* **n. sp.** (Coleoptera: Carabidae) preserved in a piece of Baltic amber (Eocene) is described and the paleobiology of the species is studied. This new species represents the first known fossil record for the genus, as well as the first record of its presence in Europe.

Key words: Arthropoda, Hexapoda, Pericalina, taxonomy, paleoentomology

Introduction

Ground beetles (Carabidae) probably were originated in the Mesozoic. The oldest known fossil of carabids belong to the Triassic of Virginia (USA) (Grimaldi & Engel 2005). At present, Carabidae is a speciose family with more than 34000 described species (Lorenz 2005) widely distributed, being present in all continents but Antarctica. Althought amber carabid fossil known are from the Tertiary, only a small number of them have been described, thirty two in Baltic amber (Alekseev 2013), none of them belonging to the subfamily Lebiinae Bonelli 1810. However, there are some other mentions in classic literature (19th century) which include some references to this subfamily, but they must be regarded with caution as they were never redescribed and some type material is lost; for a complete list and further information see Larsson (1978).

Several tribes are included in the subfamily Lebiinae. One of them, Lebiini Bonelli 1810, is a markedly complex worldwide tribe. The absence of a known synapomorphy has suggested that the tribe constitutes a non-monophyletic lineage (Ober & Maddison, 2008). Herewith, the relationship of the tribe is not clearly defined and the supraspecific classification is debated. In this paper, we follow Ball & Bousquet (2000), who considered the tribe divided in 16 subtribes, being Pericalina Hope 1838 the richest in species, with 825 species distributed worldwide (Lorenz 2005: 454-464). Pericalina includes the genus *Coptodera* Dejean 1825 with 106 species (Lorenz 2005: 457-458; Baehr 2014) widely distributed in the tropical and subtropical regions of all continents but Europe (Baehr 2014)

In this work, a new species of *Coptodera,* preserved in Eocene Baltic amber, is described, establishing the first known fossil record for the genus and the first reference of this genus in Europe.

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