



## A new bark-gnawing beetle (Coleoptera, Trogossitidae) from the middle Eocene of Europe, with a checklist of fossil Trogossitidae

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### Abstract

A new fossil bark-gnawing beetle, *Ancyrona eocenica* Schmied, Wappler, Kolibáč, **new species** (Coleoptera: Cleroidea: Trogossitidae), is described and figured from a specimen preserved in Eocene limnic sediments of the Eckfeld Maar, Germany. *Ancyrona eocenica* **sp. nov.** (Peltinae: Ancyronini) is the first trogossitid described from the Eckfeld Maar as well as the first fossil ever of this genus. The species is distinguished from recent congeners which are distributed in Ethiopian and Oriental regions by the following: minute body (2.6 mm), anterior margin of pronotum weakly concave, body broadly oval. A taxonomic catalogue of previously described fossil bark-gnawing beetles has been compiled and is given here.

**Key words:** Coleoptera, Trogossitidae, Peltinae, Ancyronini, insect fossil, taxonomic catalogue, middle Eocene, Eckfeld Maar.

### Introduction

The late middle Eocene lacustrine deposit of the Eckfeld Maar is known for its great variety of fossil remains which range from organic molecules (Sabel *et al.* 2005; Zink & Püttmann 1994) to articulated mammals exhibiting soft tissue preservation and stomach contents (e.g. Neuffer *et al.* 1996; Wappler *et al.* 2004). Both the flora and fauna are clearly indicative of a humid, paratropical to tropical climate (e.g. Lutz & Neuffer 2004; Nickel 1996; Wappler 2003a; Wilde & Frankenhäuser 1998). The total material collected from the Eckfeld Maar insect taphocoenosis consists of nearly 4,700 fossil specimens. These specimens are deposited in the Naturhistorisches Museum Mainz / Landessammlung für Naturkunde Rheinland-Pfalz (NHMM). The fossil deposit is located near the southern margin of the Tertiary Hocheifel Volcanic Field. Argon<sup>40/39</sup> dating of basalt from the diatreme breccia underlying the lake sediments at Eckfeld has established its age at 44.3±0.4 Ma (Mertz *et al.* 2000), which is equivalent to mid Lutetian in age (Gradstein *et al.* 2004). The fossil record documents a highly diverse terrestrial fauna and flora, whereas aquatic life is rather species-depauperate. The insect taphocoenosis of the Eckfeld maar is quite unique because 80–90 % of all specimens belong to the Coleoptera. This unusual composition reflects a strong taphonomic bias caused primarily by variations in factors influencing biostratigraphical processes such as floatability, wettability, and decay (e.g. Lutz 1988, 1998a, b; Wappler 2003a). Thus far, Coleoptera are represented by 22 families, including: Cupedidae, Carabidae, Dytiscidae, Staphylinidae, Lucanidae, Geotrupidae, Eucnemidae, Throscidae, Lycidae, Dermestidae, Cleridae, Trogossitidae, Coccinellidae, Colydiidae, Cerambycidae, Scarabeidae, Buprestidae, Elateridae, Tenebrionidae, Chrysomelidae, Brentidae, and Curculionidae. Trogossitidae, like Lycidae and Coccinellidae, are represented by single specimens.