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The oldest Calopterygidae in the Eocene Baltic amber (Odonata: Zygoptera)

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Abstract

A larva of the damselfly family Calopterygidae is described from Eocene Baltic amber. It is the oldest record of this family partially filling the gap between previous records from the Oligocene and the Mesozoic inferred from molecular analyses for this family.

Keywords: Odonata, Calopterygidae, larva, Baltic amber, Eocene, oldest record

Introduction

Odonata are rare amber fossils, even in the Cenozoic Dominican (about 20 specimens), Oise, France (three specimens), and Baltic amber (less than 50 specimens), where several thousands of other arthropod inclusions are known (Bechly 1998, Nel & Arillo 2006, May & Carle 2005). Lak *et al.* (2009) described the first two (adult) Odonata in Cretaceous amber from France and Jordan. Amber larvae or larval exuviae are rarer than adults. Bechly (1998) cited three larvae from the Baltic amber, all probably related to the Coenagrionoidea or of uncertain affinities. The present discovery of a well preserved exuviae of Calopterygidae in the Baltic amber is of interest for the age of this family.

Wing venation terminology follows Fleck *et al.* (2003), based on Riek & Kukalová-Peck (1984).

Material

Specimen in Palaeontological department, Muséum national d'Histoire naturelle, Paris, Jacek Serafin leg. (Figs. 1–5).

Description

The fossil is female, probably an exuviae since thorax is opened dorsally showing possible evidence of eclosion. Head mostly missing; basal part of mask present, flat, but distal half missing. Thorax 6.0 mm long. Only left hind leg complete, fragments of other legs preserved. Hind femur 8.0 mm long, 0.5 mm wide, tibia 9.0 mm long, 0.4 mm wide, tarsus 2.5 mm long; hind tibia with a strong basal outer spine, 0.3 mm long, and a longitudinal outer row of smaller spines (fig. 3); femur with a strong apical outer spine, and a dorsal longitudinal carina. Fore wing sheath 5.5 mm long, hind wing sheath 6.5 mm long, 2.5 mm wide, more or less triangularly-shaped, with tracheation as in Fig. 4.

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