

# **Article**



# First record of the genus *Sympherobius* (Neuroptera: Hemerobiidae) from Baltic amber

## VLADIMIR N. MAKARKIN1 & SONJA WEDMANN2

<sup>1</sup>Institute of Biology and Soil Sciences, Far East Branch of the Russian Academy of Sciences, Vladivostok, 960022, Russia. E-mail: vnmakarkin@mail.ru.

<sup>2</sup>Research Institute Senckenberg, Messel Research Station, Markstr. 35, D-64409 Messel, Germany.

E-mail: swedmann@senckenberg.de

#### **Abstract**

*Sympherobius completus* **sp. n.** from the Eocene Baltic amber is described. Its venation is probably the most generalized in the genus. The systematic position of the species, as well as hemerobiid wing venational terminology are discussed.

Key words: Baltic amber, Eocene, fossil Hemerobiidae, Sympherobius, new species

### Introduction

The family Hemerobiidae is today one of the most widely distributed groups of Neuroptera, with some 550 extant species described. They have been found as far back as the Jurassic, and are known to occur in all major Tertiary localities. See Oswald (1993) and Makarkin *et al.* (2003) for a review of their fossil record and Engel & Grimaldi (2007) for a list of named taxa.

Until now, three hemerobiid species of monotypic extinct genera have been known from Baltic amber: *Prolachlanius resinatus* (Hagen in Pictet & Hagen, 1856), *Prospadobius moestus* (Hagen in Pictet & Hagen, 1856), and *Prophlebonema resinatum* (Krüger, 1923) (Pictet & Hagen 1856; Krüger 1923), all strongly in need of re-description. Photographs of three other, possibly new species were provided by Bachofen-Echt (1949: Fig. 121) and Weitschat & Wichard (1998: Pl. 56, Figs. c, e). In this paper, we describe a new species of *Sympherobius* Banks, 1904, a genus which, with *Hemerobius* Linnaeus, 1758, *Micromus* Rambur, 1842, *Wesmaelius* Krüger, 1922 is today one of the most speciose of hemerobiid genera. Hitherto, the fossil record of *Sympherobius* was limited to a single unnamed species from Miocene Dominican amber (Engel & Grimaldi 2007).

#### Material and methods

The specimen examined is from the part of the former amber collection of the University of Koeningsberg (today Kaliningrad) now kept at the Geowissenschaftliches Zentrum der Georg-August-Universität Göttingen, Germany.

Venational terminology principally follows Comstock (1918) as modified by Archibald & Makarkin (2006). Further, we use the 'oblique radial branches' ("ORB") concept of Oswald (1993), used to designate the several 'radial sectors' that appear to independently originate from the radius in the hemerobiid forewing, a feature peculiar to the family. It should be kept in mind that individual ORB's may not be unambiguously, immediately recognizable as homologous to particular branches of Rs as expressed in other groups. Some