



## A new species of brown lacewing (Neuroptera: Hemerobiidae) from Eocene Baltic amber

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### Abstract

A new species of brown lacewing (Insecta: Neuroptera: Hemerobiidae) is described from Eocene Baltic amber. *Symphorobius siriae* **sp. nov.** is the second fossil species of the genus so far described. The other, *Symphorobius completus* Makarkin et Wedmann is also from Baltic amber. The fossil record of Hemerobiidae is reviewed.

**Key words:** Fossil record, Hemerobiiformia, Neuropterida, *Symphorobius*

### Introduction

Hemerobiidae is a widely distributed neuropteran family found on all continents except Antarctica (Oswald 1993). There are 550 extant hemerobiids described (Oswald 1993). Extant hemerobiids, both larvae and adults, inhabit emergent terrestrial vegetation where their prey is found (Oswald 1993). The fossil record of Hemerobiidae is very sparse in the Mesozoic with some material in need of re-examination; however they are much more common in the Tertiary (Oswald 1993; Makarkin *et al.* 2003). The first known fossil representative of Hemerobiidae (*Promegalomus anomalus* Panfilov, 1980) is from the Jurassic of Karatau, Kazakhstan (Panfilov 1980), with fossils known from the Cretaceous and all major Tertiary localities (Oswald 1993; Makarkin *et al.* 2003; Engel & Grimaldi 2007). In Baltic amber, there have been four species of hemerobiid described (Table 1), and also undescribed taxa have been found probably representing new species (see Makarkin & Wedmann 2009).

The genus *Symphorobius* has a sparse fossil record. It is first recorded in Baltic amber (Eocene) represented by two species, *S. completus* Wedmann et Makarkin, 2009 and *S. siriae* **sp. nov.** There is also one unidentified specimen reported from Dominican amber (Miocene) (Engel & Grimaldi 2007). There are 55 recognized extant species of the genus (Oswald 1993). *Symphorobius* is widely distributed; with the majority of species being found in the Palearctic with others known from the Nearctic, Neotropical and Ethiopian regions (Oswald 1988, 1993).

**Geological setting.** Baltic amber is by far the most famous and richest fossiliferous amber deposit. There have been more than 3,000 species of arthropod described (Weitschat & Wichard 2010). The amber is dated as mid Eocene (Lutetian) (Ritzkowski 1997) and is thought to have been produced by an umbrella pine (*Sciadopitys* sp.) (Wolfe *et al.* 2009). The fossil assemblage is indicative of a tropical-subtropical forest; with lightly wooded areas and plenty of freshwater habitats (Weitschat & Wichard 2010).