



***Eogyropsylla sedzimiri* sp. nov. from Eocene Baltic amber with
a key to the species of the fossil genus *Eogyropsylla* Klimaszewski, 1993
(Hemiptera: Sternorrhyncha: Psylloidea)**

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Abstract

A new species, *Eogyropsylla sedzimiri* sp. nov. from Eocene Baltic amber is described. Illustrations of head, thorax, forewing, hind wing, antennae, legs and female terminalia are given. A key to the species of the fossil genus *Eogyropsylla* Klimaszewski, 1993 is also provided.

Key words: *sedzimiri* sp. nov., *Eogyropsylla*, Sternorrhyncha, Hemiptera, Psyllidae, Aphalarinae, taxonomy, fossil record, Baltic amber, Eocene

Introduction

The psyllids, or jumping plant-lice, are a group of small sap-sucking sternorrhynchous Hemiptera. The extant representatives of Psylloidea comprise 3000–3500 described species (Burckhardt *et al.* 2005; Ouvrard *et al.* 2008). Psyllids have a worldwide distribution—from arctic and subarctic parts of Alaska (Hodkinson 1978; Hodkinson & MacLean 1980a), Chukotka and Northeast Russia (Hodkinson MacLean 1980b), to the hot zones of South America (Burckhardt 1987 a, b, 1988), Africa (Hollis 1984) and Australia (Hollis 2004), but they exhibit greatest diversity in tropical regions. Most psyllids are monophagous, having only one host plant, or oligophagous, with a few, closely-related host-plants, and only a few are polyphagous (Ossiannilsson 1992). The vast majority of psyllids are associated with dicotyledonous plants, a few with monocotyledonous angiosperms and only four species colonising conifers (Hodkinson, 1974; Burckhardt 2005). The life history of psyllids is always synchronised with that of their hosts. Many species are gall-formers and some also transmit plant diseases (Hodkinson 1984). Extant jumping plant-lice constitute a morphologically well defined group (Ouvrard *et al.*, 2010). Psylloidea are poorly represented in the fossil record from the Early Jurassic (Grimaldi & Engel 2005). The Mesozoic Psylloidea have been assigned to the extinct families Liadopsyllidae and Malmopsyllidae (Ouvrard *et al.*, 2010). The extant representatives of Psylloidea have been found in the fossil record since the Eocene (Klimaszewski 1997a, b).

The genus *Eogyropsylla* was established on the basis of two female specimens from the Eocene Baltic amber, *E. eocenica* and *E. jantaria* (Klimaszewski 1993). Klimaszewski (1997a) included in the genus two additional species, *E. magna* and *E. parva*, which were also found in the Baltic amber and supplemented the diagnosis of *E. eocenica* and *E. jantaria* with descriptions of two additional females. The only fossil final instar nymph found until now was classified by Klimaszewski as one that “in all probability” belonged to the genus *Eogyropsylla* – as this genus was represented in the Baltic amber in the greatest numbers and the larva was characterised by a body design (a specific morphology of the wing pads, which form humeral lobes at the anterior margin base and prothoracic tergite seems to be a narrow, uniform plate) very similar to contemporary Aphalarinae Löw to which *Eogyropsylla* seems to belong based on the adult morphology. Klimaszewski (1993) included *Eogyropsylla* in the tribe Paleopsylloidini Becker-Migdisova which he compared to Gyropsyllini White & Hodkinson. Unfortunately, he did not specify the similarities between the two taxa. Later, Klimaszewski (1997a) pointed out morphological similarities between *Eogyropsylla* and the contemporary genus *Gyropsylla* Brèthes, 1921. Simultaneously, he drew attention to different geographical distributions of these two genera. He concluded, however, by transferring *Eogyropsylla* into the Gyropsyllini White & Hodkinson without a detailed explanation.