

Plectrocnemia zolotuhini sp.n., a new fossil species of Polycentropodidae (Insecta: Trichoptera) from Eocene Rovno amber

Plectrocnemia zolotuhini sp.n. — новый ископаемый вид семейства Polycentropodidae (Insecta: Trichoptera) из эоценового ровенского янтаря

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Ключевые слова: ископаемые, смолы, Trichoptera, ручейники, Polycentropodidae, *Plectrocnemia*, палеонтология, таксономия, эоцен.

Abstract. A new caddisfly species *Plectrocnemia zolotuhini* Melnitsky, Ivanov, sp.n. (Polycentropodidae) is described and illustrated from Rovno amber (Upper Eocene, 37 million years old). Now the family Polycentropodidae is represented in Rovno amber by 18 species, and the genus *Plectrocnemia* includes 7 species.

Резюме. Описан и проиллюстрирован *Plectrocnemia zolotuhini* Melnitsky, Ivanov sp.n. (Polycentropodidae) из ровенского янтаря (верхний эоцен, 37 млн. лет). Теперь семейство Polycentropodidae представлено в ровенском янтаре 18 видами, а род *Plectrocnemia* включает 7 видов.

Introduction

Diversity of Trichoptera in the European Baltic amber was described by Ulmer [1912] in his monograph on caddisflies of the Baltic amber comprised 152 species. Studies of the Baltic amber caddisflies continued during the following century [Ivanov, Melnitsky, 2005, 2013, 2015; Melnitsky, 2009, 2013; Wichard, 2013; Melnitsky, Ivanov, 2016a]. Caddisflies from the Saxonian amber were described at the end of last century [Mey, 1985, 1986, 1988]. Recently found Rovno amber caddisflies were treated in the last decades [Melnitsky, Ivanov, 2010, 2013, 2016a, b, 2023; Ivanov et al., 2016; Perkovsky 2017; Melnitsky et al., 2021a, b, c]. Now forty-seven species of caddisflies are known from Rovno amber [Melnitsky, Ivanov, 2023]. Totally 25 caddisfly families have been found in the European fossil resins.

The family Polycentropodidae includes more than 900 species in the modern world fauna, of which about 100 are fossils [Morse, 2023]; the genus *Plectrocnemia* is widespread in the Holarctic and Oriental realms and contains over 160 species. This genus is repre-

sented by 28 fossil species in the Paleogene resins of Europe, 6 of which are present in the Rovno amber [Melnitsky, Ivanov, 2023]. Four species, *Plectrocnemia nastigermania* Melnitsky et Ivanov 2013, *Plectrocnemia ucrainum* Melnitsky et Ivanov 2013, *Plectrocnemia kirmikhia* Melnitsky, Ivanov et Perkovsky, 2021 and *Plectrocnemia aristovi* Melnitsky et Ivanov 2023, are endemic to Rovno amber.

Material and methods

We have used the conventional methods for studying the insects in ambers [Rasnitsyn, Quicke, 2002]. The amber sample that we examined is deposited in the Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine, Kiev (SIZK), amber collection; the types are deposited in that collection.

Nomenclatural acts introduced in the present work are registered in ZooBank (www.zoobank.org) under LSID urn:lsid:zoobank.org:pub:B31907E9-3807-4C09-B37A-22A2721AAA1F

Results (Systematic paleontology)

Trichoptera Kirby, 1813
Annulipalpia Martynov, 1924
Polycentropodidae Ulmer, 1903
Plectrocnemia Stephens, 1836

Plectrocnemia zolotuhini Melnitsky, Ivanov sp.n.
Figs 1, 2.

Urn:lsid:zoobank.org:act:51F6995C-257E-4EBD-9220-0AC042926C3F.

Material. Rovno amber: Holotype, ♂: SIZK K-8732b, late Eocene.

Distribution. Priabonian Rovno amber.

Etymology. The species is named in memory of the late Russian entomologist Vadim Viktorovich Zolotuhin.

Description. Body length 2.7 mm; forewing length 3.1 mm. Head, antennae, abdomen and thorax brown. Head with black hairs, palps yellowish, wings light brown. Lateral sternal processes of the 5th abdominal segment long and strong, with well sclerotized oval basal part and rounded apex.

Male genitalia. Segment IX with well-developed ventral part. Segment X sclerotized, in the form of two lobes; posterior margin of lobes with small processes and paired short setae. The preanal appendages (cerci) elongate with rounded apex. Aedeagus massive and wide, apex with a well-sclerotized narrow medial plate and two inferior black spines directed towards the head. Ventral side of inferior appendages rounded, dorsal in the form of finger-like process directed upwards and covered with different light hairs.

Comparison. The new species *Plectrocnemia zolotuhini* Melnitsky et Ivanov, sp.n. is similar to *Plectrocnemia aristovi* Melnitsky et Ivanov, 2023 from Rovno amber; it differs from the latter in the shape of the inferior appendages and apex of aedeagus: the inferior appendages in *P. aristovi* with elongate ventral part and clavate dorsal process, aedeagus with sharply narrowed apex. The new species is much smaller than *P. aristovi* having the forewing length 4.8 mm.

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Fig 1. *Plectrocnemia zolotuhini* sp.n., holotype male, general view, ventrolateral. Scale bar 1 mm.

Рис. 1. *Plectrocnemia zolotuhini* sp.n., голотип, самец, общий вид вентро-латерально. Масштаб 1 мм.

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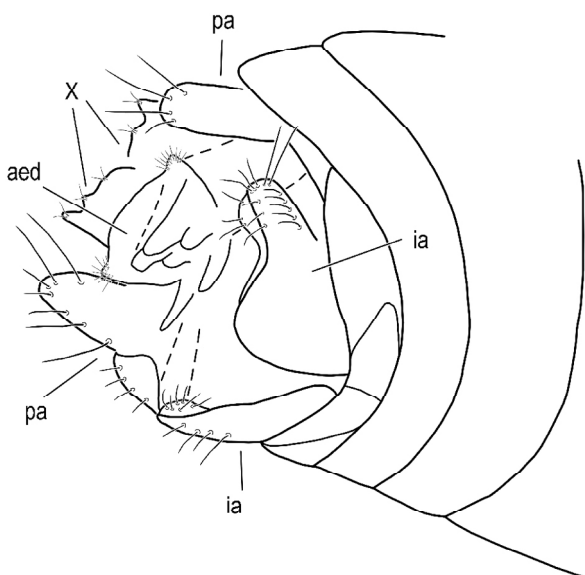


Fig. 2. *Plectrocnemia zolotuhini* sp.n., holotype male, genitalia. Abbreviations: X — segment X; aed — aedeagus, ia — inferior appendages, pa — preanal appendages.

Fig. 2. *Plectrocnemia zolotuhini* sp.n., голотип, самец, гениталии. Обозначения: X — десятый сегмент; aed — эдеагус, ia — нижние придатки, pa — преанальные придатки.

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