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A new species of the genus *Orchesia* Latreille (Coleoptera: Melandryidae) from Baltic amber with a key to species described from fossil resins

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Abstract

Orchesia (*Orchestera*) *canaliculata* **sp. nov.** is described and illustrated from Eocene Baltic amber (Kaliningrad Region, Russia). New fossil records on *O. turkini* Alekseev & Bukejs and *O. rasnitzyni* Nikitsky are presented. A key to species of *Orchesia* Latreille, described from fossil resins, is provided.

Key words: false darkling beetles, *Orchesia (Orchestera) canaliculata*, new species, Tertiary, Eocene, fossil resin, new records

Introduction

The Melandryidae are relatively well represented by fossils in Baltic amber but have, however, remained incompletely examined (Alekseev 2013). False darkling beetles, and particularly representatives of the genus *Orchesia* Latreille, 1807, have been known from Baltic amber for a long time (Hope 1836; Helm 1896; Handlirsch 1907; Klebs 1910; Bachofen-Echt 1949; Larsson 1978; Spahr 1981; Kubisz 2000, 2001), but the species were left undescribed. One fossil species of *Orchesia* has been described from Eocene Baltic amber (*O. turkini* Alekseev & Bukejs, 2012) and one from Rovno amber (*O. rasnitzyni* Nikitsky, 2011), both of approximately similar age.

This work is the fourth paper describing false darkling beetles found in Baltic amber (Seidlitz 1898; Alekseev & Bukejs 2012; Alekseev 2014). In the current paper, the third extinct species of *Orchesia* is described, figured, compared with other fossil species, and a key provided.

Material and methods

The material examined is deposited in the following collections: Private collection of Christel and Hans Werner Hoffeins (Hamburg, Germany) [CCHH]; Private collection of Andris Bukejs (Daugavpils, Latvia) [CAB]; Private collection of Vitalii I. Alekseev (Kaliningrad, Russia) [CVIA]; Private collection of Andrzej Górski, (Bielsko-Biala, Poland) [CAG].

The CVIA amber material (Nr. AWI-055, the holotype of *Orchesia canaliculata* **sp. nov.**) is currently housed in the private collection of Vitalii I. Alekseev (Kaliningrad, Russia), but will be deposited in the Paleontological Institute, Russian Academy of Science (Moscow) for permanent preservation. The CCHH ambers (Nr. 882-4 and Nr. 1799-4) are currently deposited in the private collection of Christel and Hans Werner Hoffeins (Hamburg, Germany) and will be donated to the Senckenberg Deutsches Entomologisches Institut in Müncheberg, Germany (SDEI) for the institute's amber collection.

The amber pieces from the CCHH have been prepared manually and embedded in polyester resin (Hoffeins 2001). The pieces from the CVIA, CAG and CAB were polished by hand only, thus allowing dorsal and lateral views of the included beetle.

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A key to species of *Orchesia* described from fossil resins

1. Elytra with longitudinal furrows; metatibial spurs as long as metatarsomere 1; smaller, body length 2.7 mm. Baltic amber (Kaliningrad Region, Russia) . . . . . ***O. canaliculata* sp. nov.**
- Elytra without longitudinal furrows, metatibial spurs slightly shorter than metatarsomere 1; lager, body length larger than 3.0 mm. 2
2. Elytra with transverse rugosity in basal 1/10; antennomere 11 is more than twice as long as antennomere 10; Body length 3.6–4.1 mm. Rovno amber (Ukraine), Baltic amber (Kaliningrad Region, Russia) . . . . . ***O. rasnitzyni* Nikitsky**
- Elytra without transverse rugosity; antennomere 11 is 1.7 times longer than antennomere 10; body length 3.25–3.6 mm. Baltic amber (Kaliningrad Region, Russia). . . . . ***O. turkini* Alekseev & Bukejs**

Discussion

The material described herein demonstrates that *Orchesia rasnitzyni* Nikitsky, described from Rovno amber, occurs in true "East" or "Sambian" Baltic amber as well. With the inclusion of this species, there are three known species of beetles from three different families which occur in both types of amber (*Orchesia rasnitzyni* Nikitsky, 2001 [Melandryidae], *Anaspis horaki* Perkovsky & Odnosum, 2009 [Scraptiidae] and *Mimoplatycis notha* Kazantsev, 2013 [Cantharidae]). This discovery suggests the need for a more detailed comparison between the beetle fauna from these two amber types.

The occurrence of pear-like, drop-like and other natural forms of amber pieces corresponding to natural resin incrustations contradicts the general opinion regarding possible distant transport of Baltic amber by river or sea currents. The number of such natural-formed amber pieces (and also the presence of larger, heavier amber pieces) in deposits make it possible to conclude the proximity (and possibly the identity) of contemporaneous Baltic amber deposits relative to the territories roughly corresponding to Eocene amberiferous forests of the eastern Baltic region and on southern parts of the Baltic Sea.

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