

## ***Sucinoptinus bukejsi* sp.nov. (Coleoptera:Ptinidae:Ptinini), the second species of the Tertiary genus from the Baltic amber**

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A new fossil spider beetle, *Sucinoptinus bukejsi* sp. nov. from the Baltic amber (Eocene) is described and compared with the related fossil species *Sucinoptinus sucini* Bellés et Vitali, 2007. The new species differs from *S. sucini* in the morphology of antennae, comparatively longer onychium and shape of punctuation on elytra.

Key words: new fossil species, Coleoptera, Ptinidae, Ptininae, Baltic amber, Tertiary, Eocene

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### **INTRODUCTION**

Baltic amber is mainly found on the southern coasts of the Baltic Sea and originates from the Upper Eocene. According to today's view, it was formed by trees from genus *Pinus* (Turkin, 1997), which dominate together with oaks in the humid mixed forests. The "amber forests" were situated at the boundary separating sub-tropic and temperate climates and were consisting (Larsson, 1978) of conifers (different pines, cypress, sequoias etc.), numerous broad-leaved trees (different oaks, chestnut, beech, magnolia etc.), several sub-tropical palms and others. The knowledge of the fauna of Baltic amber forests must be regarded as still inadequate. A study of Coleoptera from the Baltic amber is necessary for solving problems of evolution and the phylogeny of recent groups and also to understand present-day distribution of recent taxa.

Spider beetles have been noticed in Baltic amber already in XIX century (Bellés & Vitali, 2007).

Most of the references on Baltic amber identify the beetle simply at the *Ptinidae* family level. Larsson (1978) mentions, that the old Klebs collection of Baltic amber of Eastern Prussia has included 3 *Niptus* sp. and 16 *Ptinus* sp. According to Hieke & Pietrzeniuk (1984) spider beetles are comparatively rare in Baltic amber, representing only 0.4 % of the total beetles recorded in museums. So, 14 specimens of this subfamily are deposited in the Museum für Naturkunde [Berlin], 17 specimens - in the Institut und Museum für Geologie and Paläontologie [Göttingen], 6 specimens – in the Zoologisk Museum [Copenhagen], 5 – in the Museum of the Earth [Warsaw] (Kulicka & Ślipiński, 1996), 3 in the Museum of Natural History of ISEA [Kraków] (Kubisz, 2000), and 2 specimens of Ptininae are housed (Kubisz, 2001) in the Museum of amber inclusions [Gdańsk]. Until now only two species have been described from Baltic amber: *Ptinus (Gynopterus) inclusus* Bellés et Vitali, 2007 and *Sucinoptinus sucini* Bellés et Vitali, 2007. Moreover, two ptinid species, *Electrognostus interme-*

*dius* Philips & Mynhardt, 2011 and *Oviedinus hispaniolensis* Bellés, 2010 have been recently discovered from Dominican amber (Bellés, 2010). This paper deals with the description of a new fossil species increasing the number of the known Baltic amber Ptininae to three species.

## MATERIALS AND METHODS

The amber piece with the beetle inclusion was obtained from commercial sources in Kaliningrad and polished by hand at its two sides allowing best dorsal and ventral views of the included beetle. The photos were taken with a Nikon digital camera using a stereomicroscope Nikon SMZ 745T.

## SYSTEMATIC PART

**Ptinidae Latreille, 1802**

**Ptininae Latreille, 1802**

**Ptinini Latreille, 1802**

***Sucinoptinus* Bellés et Vitali, 2007**

***Sucinoptinus bukejsi* sp. nov.**

(Figs. 1-2)

### Material examined

**Holotype:** Nr. AWI-019; sex indeterminate; mined in 2011. It is deposited in the author's private collection (Kaliningrad, Russia). The beetle inclusion is preserved in a polished piece of transparent amber with a yellowish-orange shade without any further fixation. The piece is medium-sized, elongate, with a length of about 20 mm and width of about 16 mm. Other animals or plant parts (syninclusions) are absent in the studied amber piece. The amber piece was subjected to thermal or high-pressure processing in an autoclave.

### Type strata

Baltic Amber; Upper Eocene, Prussian Formation (Priabonian).

### Type locality

Russia, the Kaliningrad region, the Sambian [Samland] peninsula, Yantarny village [formerly Palmnicken].

### Differential diagnosis

The *S. bukejsi* sp. nov. is a member of the genus *Sucinoptinus* Bellés et Vitali, 2007 including one fossil representative - *S. sucini* Bellés et Vitali, 2007, which is also originated from Baltic amber. The new species differs from *S. sucini* in elongate-shaped (not round-shaped) stria punctures on the elytral disk, relative length and the proportions of antennomeres, long onichium (1.5 time longer than tarsomere 1 whereas the same by *S. sucini* is slightly shorter than metatarsomere 1), and also the smaller total body size (ca. 1.6 mm whereas the length of *S. sucini* is 1.8-2.1 mm).

### Description

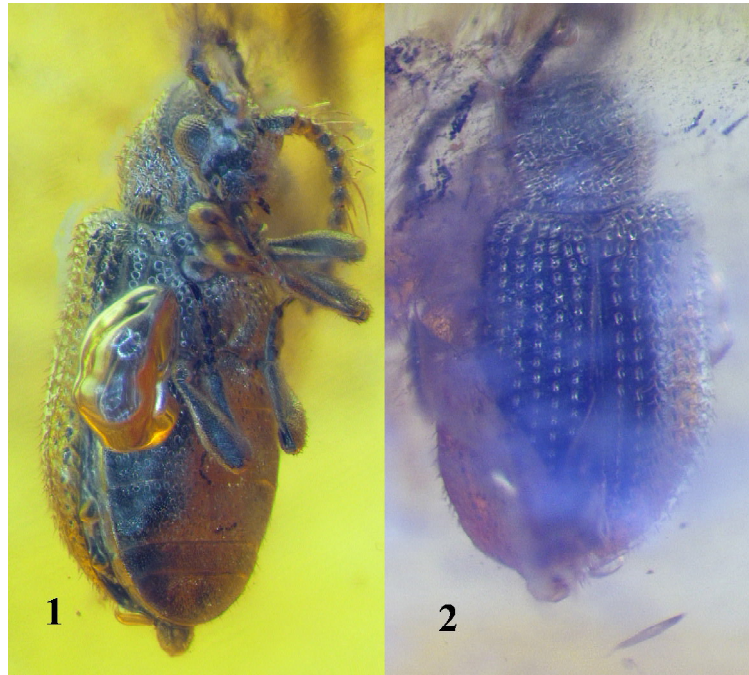
Body length: ca. 1.6 mm; max. wide: ca. 0.6 mm. Small, elongated, compact, parallel-sided; dorsal surface unicolorous dark brown.

Head vertical, interantennal space narrow, flat; finely and densely punctuated and pubescent. Eyes hemispherical, not very prominent, with fine and distinct facets, without emargination. Antennae 11-segmented, moderately slender and long, reaching basal third of the elytra; antennomere lengths proportions according to the formula: 14-5-5-5-6-7-7-7-7-13.

Pronotum about as long as wide, subcylindrical, distinctly wider than a single elytron; apical margin widely convex anteriorly and covering the head; weakly constricted near the base, slightly convex at the disk, and with feeble and transverse depression in the posterior third; surface with dense coarse round punctures (larger than facets of eyes); pubescence mainly formed by short semi-recumbent hairs evenly covered the surface.

Scutellum triangular and well apparent.

Elytra subparallel; with well-developed humeri; discal surface regularly punctuated by elongate-



Figs. 1 - 2. 1. *Sucinoptinus bukejsi* sp. nov.: latero-ventral view; 2. *Sucinoptinus bukejsi* sp. nov.: dorsal view.

shaped strial punctures (twice so long as wide); pubescence formed by moderately long semierect setae.

Pro-, meso- and metathorax covered with moderately dense and large punctures (approximately as punctures on pronotum), interspaces between punctures smaller than a puncture in diameter. Mesosternum short. Metasternum transverse, flat, space between metacoxae long, approximately as long as the length of the metafemur. Abdomen with five visible segments, covered with smaller and sparser punctures than on thorax; abdominal ventrites 1-3 and 5 subequal in length, ventrite 4 shorter, approximately half the length of the others.

Legs short and robust, covered with short recumbent pubescence; femora club-shaped; tibiae feebly bowed, apically enlarged, obliquely truncated at the apex. Tarsi 5-segmented in all legs. Metatarsi relatively long, nearly as long as tibiae: first tarsomere 1.5 times longer as the tarsomere

2; tarsomere 2 and 3 subequal; tarsomere 4 slightly shorter and narrower than previous two; onychium 1.5 time longer than tarsomere 1, with simple claws.

#### **Etymology**

Patronymic, the new species is named in honor of my colleague Dr. Andris Bukejs, coleopterologist from Daugavpils (Latvia).

#### **DISCUSSION**

At present, *Sucinoptinus bukejsi* sp. nov. is the second known species of the fossil genus and the third of the spider beetles from Baltic amber. This newly described species from Baltic amber is habitually similar and closely related to another Baltic species of the fossil genus *Sucinoptinus*, but clearly differs from the previously described species by a number of morphological characteristics. In general, the fossil ptinids are quite rare inclusions in the ambers.

The spider beetles fauna of the Baltic amber is still incomplete studied and the future researches of materials deposited at the museum collections might be fruitful. The presence of other new fossil species from minimum two genera (*Ptinus* and *Niptus*) in Baltic amber is highly probable. The preservation potential of the individual animal groups is primarily determined by their habitats in the amber forest. Animals living on the resin-producing trees themselves or in the immediate vicinity were by the most frequent victims of the resin traps. Possibly, this is not the case for the spider beetles. Both the larvae and the adults of the majority of the recent species are scavengers and are not associated with the living conifers. A number of the spider beetles in the strict sense, i.e., excluding the *Anobiidae*, lives under the dry bark or in the hollows of old broad-leaved trees. Hypothetically, these representatives of *Sucinoptinus* had a similar mode of life and were associated with rotten wood of dead trees (conifers or broad-leaved).

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