

***Protolissodema ulrikae*, a new genus and species (Coleoptera: Tenebrionoidea: Salpingidae) from Baltic amber**

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The first representative of the family Salpingidae Leach, 1815 is described from Baltic amber. *Protolissodema ulrikae* gen. et sp. nov. is the most similar to the extant genera *Sphaeriestes* Stephen, 1829, *Rabocerus* Mulsant, 1859 and especially *Lissodema* Curtis, 1833 and differs by the shape of pronotum, by the distinctly separated procoxae, by the not striate-punctate elytra and by the structure of antennae.

Key words: Coleoptera, Salpingidae, *Protolissodema ulrikae*, new genus, new species, Baltic amber, Upper Eocene.

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INTRODUCTION

The family narrow-waisted bark beetles (Salpingidae Leach, 1815) has a worldwide distribution and includes about 350 extant species from 7 subfamilies: Othiniinae LeConte, 1861; Prostominiinae Grouvelle, 1914; Agleninae Horn, 1878; Inopeplinae Grouvelle, 1908; Dacoderinae LeConte, 1862; Aegialitinae LeConte, 1862; Salpinginae Leach, 1815. The Salpinginae subfamily includes 23 recent genera, which are usually associated with dead, often burnt, twigs and brushwood.

The narrow-waisted bark beetles have been also known from Baltic amber. The recent salpingid beetles are generally not numerous in nature at present. The fossil representatives are very rare in the collections of Baltic amber too: 4 specimens are known from the former Klebs' collec-

tion, 2 specimens from Copenhagen collection, 2 specimens in Berlin collection (Hieke, Pietrzeniuk, 1984). That is, this group is representing only 0.13 % of the total beetles specimens (6039 spp.) recorded in the three above-mentioned great European repositories. Two following extant genera belonging to Salpinginae are reported from succinite: *Salpingus* Illiger, 1802 and *Lissodema* Curtis, 1833 (Klebs, 1910). No species and genera from Baltic amber have been described (Alekseev, 2013). Only one extinct genus of the family is described till now: *Eopeplus stetzenkoi* Kirejtshuk et Nel, 2009 (subfamily Inopeplinae) from lowermost Eocene French amber.

In present paper, one new species of Salpingidae, from Priabonian Baltic amber, assigned to the new genus *Protolissodema*, is described and illustrated.

MATERIALS AND METHODS

A piece of amber was collected from the Baltic seacoast near Yantarny settlement, Kaliningrad region, Russia, in the surf zone in December 2011. This piece with the inclusion was polished by hand to enhance the dorsal, ventral and frontal views of the included specimen. The photos were taken with a Nikon digital sight camera DS-F11 using a stereomicroscope Nikon SMZ 745T.

SYSTEMATIC PART**Family Salpingidae Leach, 1815****Subfamily Salpinginae Leach, 1815****Genus *Protolissodema* gen.nov.****Type species: *Protolissodema ulrikae* sp.nov.**

Diagnosis. The new fossil genus may be referred to the Salpinginae subfamily due to a combination of morphological characters (such as full elytra and thickened subapical antennomeres). At the same time it shows mixed characters of the different extant genera of Salpinginae (above all it is similar to the genera without rostrum, such as *Lissodema* Curtis, 1833; *Rabocerus* Mulsant, 1859 and *Sphaeriestes* Stephen, 1829) as well as some new characters. The newly described genus is easily distinguishable from the very similar *Lissodema* by the not three-segmented antennal club and non-striate elytra, from *Sphaeriestes* by the denticulate margin of the pronotum, from *Rabocerus* by the labrum form, by the absence of basal impression on elytra and by the shorter epypleura. In addition, *Protolissodema* gen.nov. is distinguished from the related genera by the almost oval and transverse form of pronotum, by the distinctly separated procoxae, by the antenna with the 7-segmented loose club, by the not striate-punctate elytra.

Derivatio nominis. The name of the new genus is derived from the Latin for “ancestor”, and the name of recent genus “*Lissodema*”. Gender neutral.

Protolissodema ulrikae* sp.nov.*(Figs. 1-4)**

Material examined: Holotype: Nr. AWI-012, sex unknown; deposited in the private collection of the author (Kaliningrad, Russia). The type will be deposited in the Paleontological Institute, Russian Academy of Science (Moscow) for permanent preservation.

The complete beetle with distal parts of right posterior wing partly exposed from under apex of elytron is included in a polished piece of the natural transparent amber with a yellow shade and a reddish crust in some parts. The amber was not subjected to any fixation. Measurements of the amber piece are 22 mm x 9 mm x 4 mm. In addition to the beetle specimen, this amber piece also contains a number of syninclusions. There are 10 stellate hairs (possibly from the buds of an oak), as well as remains (head capsule, legs, wing) and superficial body impression (1.1 mm long) of one specimen of Nematocera (Diptera).

Type strata: Baltic Amber, Upper Eocene, Prussian Formation.

Type locality: Baltic Sea coast, Yantarny settlement [formerly Palmnicken], the Kaliningrad region, Russia.

Diagnosis. As for genus (see above).

Description. Body length: ca. 2.25 mm; body length/maximum body width is 2.62. Small, elongated, flattened (Figs. 1-2), unicolorous: dorsal surface, underside, head, head appendages and legs are dark brown.

Head prognathous, weakly flattened dorsoventrally, without constricted neck, subparallel-sided posterior to eyes, not developed into a rostrum anteriorly. The head with eyes is broad (slightly narrower than pronotum), transverse. The temples are 2/3 of eye diameter. Mandibles sharp, left mandible of the specimen visible from above. The labrum is transversal. Eyes strongly protuberant, without bristles, coarsely faceted. Maxil-



Figs. 1-2. *Protolissodema ulrikae* sp.nov. Habitus: 1- lateral view; 2- dorsal view.



Fig. 3. *Protolissodema ulrikae* sp.nov. Antenna.

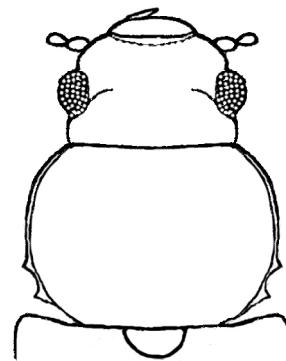


Fig. 4. *Protolissodema ulrikae* sp.nov. Forebody. [Note: the denticles are pure visible from above].

lary palps with elongate last palpomere (3 time longer as wide). Antenna 11-segmented (Fig.3), relatively short, with short and thin hairs on antennomeres. Antennal club loose, 7-segmented (antennomeres 5.-11. are dilated, obconical). The basal antennomeres (1.-4.) cylindrical, subequal in size.

Pronotum diffusely punctured, identically rounded anteriorly and posteriorly, transverse, length approx. 0.5 mm, maximum width = 0.7 mm (proportion "pronotal length/maximum pronotal width" approximately 0.7). Side margin of pronotum bordered laterally; with 2 small, triangular denticles on each side. The pronotal denticulation of the specimen is pure visible from above (Fig. 2), because the denticles are directed slightly downwards. In the drawing (Fig. 4) all denticles are imaged in its sizes, forms and positions. The basal impressions or foveae on the pronotum are absent. Scutellum rounded, almost semicircular, transverse (length/width = 2:1). Base of prothorax is slightly narrower than the combined elytral bases. Prosternum and mesosternum irregularly punctured like pronotum.

Elytra shining, elongate, covering most part of the abdomen; exposing part of the terminal tergite only. Width of elytra (humeral area) – 0.72 mm, maximum width (2/3 of elytra) – 0.86 mm; length of elytra – 1.36 mm. The proportion elytral length/maximum width across the elytra consists 1.58; the proportion elytral length/pronotal length is 2.72. Elytral interstices with the irregular punctures, giving the elytra a confusedly punctate appearance, especially at suture and on the disc. Elytra maximally with 5-6 incomplete irregular rows of punctures in the last third of each elytron and behind humerus. Other (the most) part of elytra is diffusely punctured. The separation between punctures is approximately 1-3 of its diameter. The punctation is slightly denser at the basis of elytron and near the scutellum. The punctures are deep and large (equal to eye facet diameter or slightly larger). The punctures of the head are finer than on the pronotum and, especially, elytra. Scutellar striole absent. Basal impression

on elytra absent. Epipleuron present, widest at base, reaching the first ventrite.

Metathoracic wings fully developed.

Legs (Fig.5) relatively short, with tarsal formula 5-5-4. Tarsi slender, sparse pubescent. Claws well-developed, long (approximately 1/2 of the ultimate tarsomere length). All tarsomeres simple, not bilobed. Last tarsomere is shorter than all other tarsomeres together. Tibiae slender, subequal in length, non-widened distally. Femurs comparatively wide, rounded. All coxae distinctly and narrowly separated, intercoxal spaces is approximately 1/2 of correspondent coxal widths. Procoxal cavities oval, open posteriorly.

Abdomen with five ventrites. The first ventrite slightly longer than each from the subequal in length 2.-4. ventrites.

Derivatio nominis. Patronymic, specific epithet is formed from the name of my friend Ulrike Eith (Freiburg, Germany) in appreciation of her kindly assistance over a long period of time.



Fig. 5. *Protolissodema ulrikae* sp.nov. Prothoracic leg with intercoxal process

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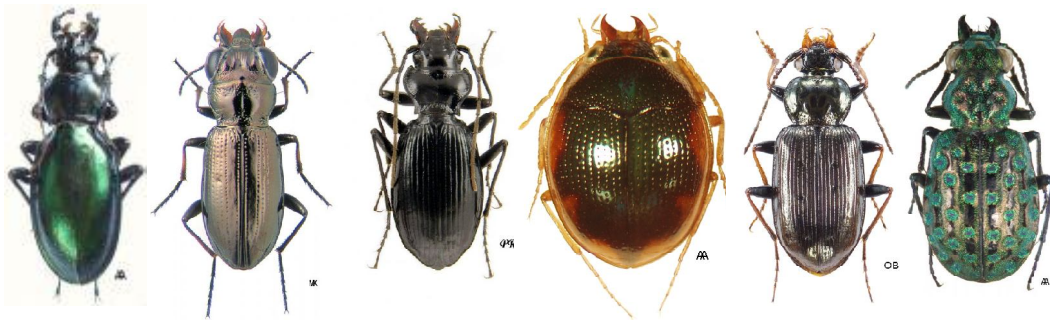
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