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NEW SPECIES OF *STILBUS* (COLEOPTERA, CLAVICORNIA, PHALACRIDAE) FROM THE LATE EOCENE ROVNO AMBER

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New Species of *Stilbus* (Coleoptera, Clavicornia, Phalacridae) from the Late Eocene Rovno Amber. Lyubarsky G. Yu., Perkovsky E. E. — The first Eocene species of *Stilbus* Seidlitz, 1872, *S. bedovoyi* Lyubarsky et Perkovsky, sp. n., is described from Late Eocene Rovno amber. *S. bedovoyi* is most similar to *Stilbus atomarius* (Linnaeus) and differs from it by smaller body size, strong and large punctation of elytra, and broadly oval apex of elytra.

Key words: Phalacridae, *Stilbus*, Late Eocene, Rovno amber.

Новый вид рода *Stilbus* (Coleoptera, Clavicornia, Phalacridae) из позднеэоценового ровенского янтаря. Любарский Г. Ю., Перковский Е. Э. — Первый эоценовый вид рода *Stilbus* Seidlitz, 1872 — *S. bedovoyi* Lyubarsky et Perkovsky описан из позднеэоценового ровенского янтаря. Вид наиболее близок к современному виду *Stilbus atomarius* (Linnaeus), отличается от него меньшим размером тела, сильной пунктировкой и широко округленной вершиной надкрылий.

Ключевые слова: Phalacridae, *Stilbus*, поздний эоцен, ровенский янтарь.

Introduction

The family Phalacridae comprises over 600 species worldwide (Gimmel, 2008: 52 genera, 638 species), including 146 species in Palaearctic (Švec, 2007). Beetles are associated with fungi (Basidiomycota, Ascomycota); adults are usually found on flowers, feeding pollen; larvae feed in flower heads of Compositae or on spores and stomata of rusts and smuts. Some genera (*Acylomus* Sharp) dwell in litter and grass hanging dead-leaf clusters.

The family is represented in all biogeographic realms. In the fossil record, Phalacridae is known in the Late Eocene Baltic amber where representatives of *Phalacrus* Paykull, *Olibrus* Erichson, and *Stilbus* Seidlitz are recorded (Berendt, 1845; Klebs, 1910).

The new Late Eocene phalacrid species from Rovno amber was found in the amber collection of the Schmalhausen Institute of Zoology of National Academy of Sciences of Ukraine (SIZK). Rovno amber is a southern coeval analogue of the famous Baltic amber (Perkovsky et al., 2007). The collection contains more than 800 beetle inclusions, and yet the fossil under description is the only specimen indentifiable as Phalacridae without doubts. It is quite characteristic for the family Phalacridae, with convex and glabrous dorsal surface, essentially flat ventral surface; one sutural stria, 3-segmented club of antennae, and tarsal formula 5–5–5.

The new species shows the characters indicative of the genus *Stilbus* Seidlitz (Phalacrinae) including small scutellum; prosternal process not extending behind the anterior coxae; posterior tibia with spurs and crown of thorns; 1st joint of posterior tarsus not longer than 2nd; tarsal formula 5–5–5; tarsi with ventral lobes on segments 1–4; legs not thickened; elytra not covered by oblique reticulation, with one sutural stria. Representatives of the genus *Stilbus* (77 species) found in all biogeographic realms; 16 of them are recorded in the Palaearctic Region (Švec, 2007).

Photographs are taken at the Paleontological Institute, Russian Academy of Sciences (Moscow) by A. V. Mazin and by the second author with the microscope Leica MZ16.

Family PHALACRIDAE Leach, 1815

Subfamily PHALACRINAE Leach, 1815

Genus *Stilbus* Seidlitz, 1872

Stilbus bedovoyi Lyubarsky et Perkovsky, sp. n. (fig. 1, 2)

Material. Holotype, SIZK K-5112, Klesov, Rovno amber, Late Eocene, in very little transparent piece of amber (1 gram after primary treatment). Syninclusions: two workers of dolichoderine ant *Ctenobethylus goepperti* (Mayr), a female of a chironomid midge, and a mite.

Description. Body 1.2 mm long, short-oval, 1.6 times as long as broad; convex, glabrous; dorsal and ventral surface uniformly dark brown, with antennae, mouth parts and legs brownish.

Pronotum distinctly transverse, about 2.1 times as broad as long, posterior margin with medial lobe, not bordered at base. Posterior angle obtuse. Pronotal surface shining, with sparse small punctures, approximately 2 diameters apart each other. Prosternal process bordered laterally, not extending behind the anterior coxae, truncate apically.

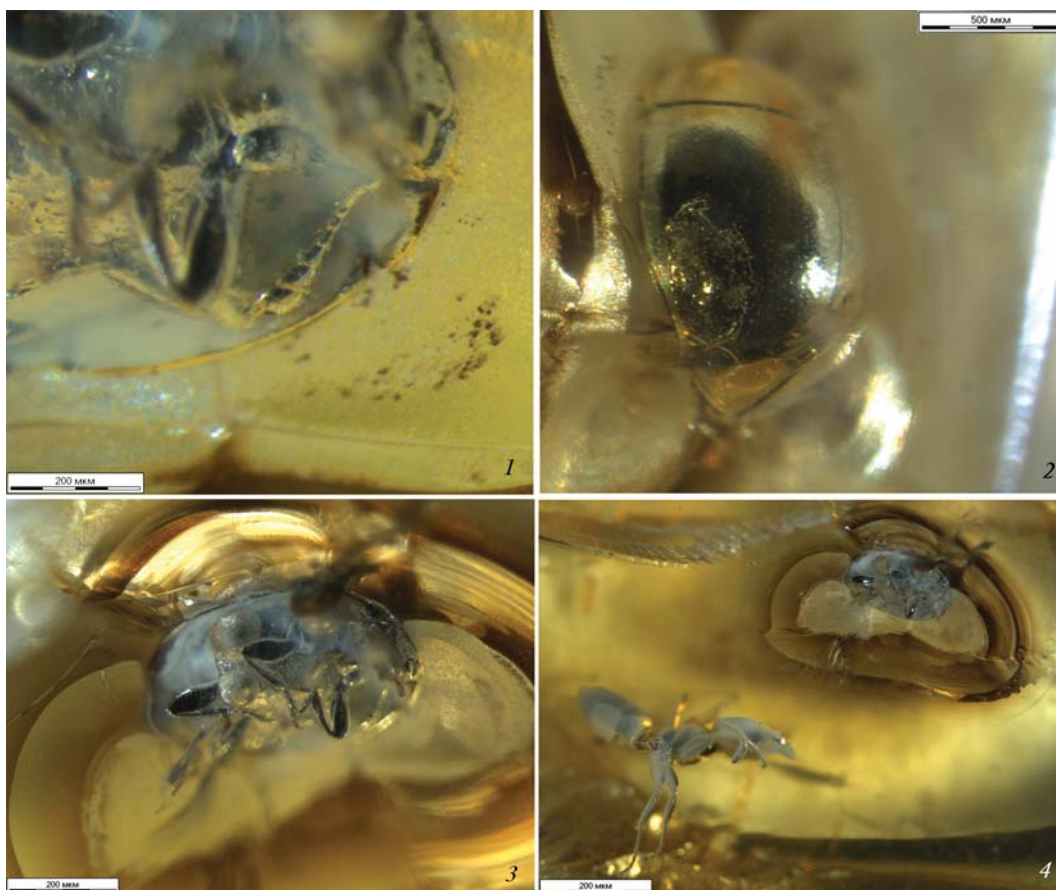


Fig. 1. *Stilbus bedovoyi*, Holotype (SIZK K-5112), Klesov, Rovno amber, Late Eocene: 1 – antenna; 2 – body, dorsal; 3 – body, ventral; 4 – a part of amber piece with the beetle and worker ant *Ctenobethylus goepperti*. Scale bars: 1, 3, 4 – 0.2 mm; 2 – 0.5 mm.

Рис. 1. *Stilbus bedovoyi*, голотип (инв. номер К-5112 коллекции Института зоологии НАН Украины, Киев), Клёсов, ровенский янтарь, поздний эоцен: 1 – усик; 2 – вид сверху; 3 – вид снизу; 4 – часть янтаря с жуком и рабочим муравьем *Ctenobethylus goepperti*. Масштабные линейки: 1, 3, 4 – 0,2 мм; 2 – 0,5 мм.

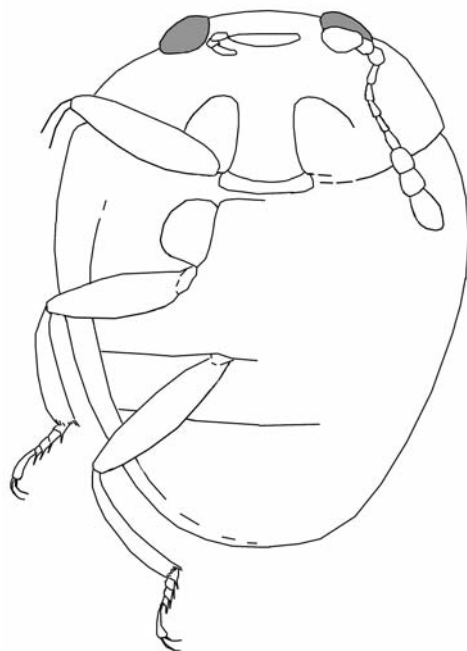


Fig. 2. Holotype *Stilbus bedovoyi*, ventral.

Рис. 2. Голотип *Stilbus bedovoyi*, вид снизу.

Metasternum as in figure 2. Metasternal process long, broad, trapeziform, with minute punctuation. Metasternum covered by small rounded punctures approximately 1 diameter apart.

Scutellum small, transverse, approximately 1.5 times as long as broad. Elytra oval, 2.1 times as long as pronotum, 1.1 times as long as their combined width. Elytral surface distinctly striate, covered by large rounded punctures, indistinctly seriate, approximately 1–2 diameters apart laterally. Elytra with one sutural stria, not covered by oblique reticulation.

Stilbus bedovoyi sp. n. differs from other species of the genus in the following features: pronotum not bordered at base; elytra striate, covered by punctures, seriate, 1–2 diameters of puncture apart laterally; metasternum entirely punctured. Metasternal lines not visible in the specimen, therefore it cannot be assigned to any subgenus. *Stilbus bedovoyi* sp. n. most similar to *Stilbus atomarius* (Linnaeus) but differs by smaller body size, strong and large elytral punctation, and broadly oval elytral apex.

Myrmecophily is not recorded for recent *Stilbus*, except that seven specimens of Nearctic *Stilbus* have been recorded in *Formica* nest and gallery (Park, 1935), so finding *Stilbus* in syninclusion with ants is of interest.

Etymology. Specific epithet in honor of Konstatin Bedovoy (Kyiv).

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Berendt G. Die im Bernstein befindlichen organischen Reste der Vorwelt gesammelt in Verbindung mit mehreren bearbeitet. Erster Band. Abtheilung I // Der Bernstein und die in ihm befindlichen Pflanzenreste der Vorwelt. Nikolaische Buchhandlung. — Danzig, 1845. — 125 S.

- Gimmel M. L.* World Checklist of Valid Names in Phalacridae. — 2008. — <http://entomology.lsu.edu/lam/world%20phalacrid%20checklist.htm>
- Klebs R.* Über Bernsteineinschlüsse im allgemeinen und die Coleopteren meiner Bernsteinsammlung // Schriften der Physikalischen-Ökonomischen Gesellschaft zu Königsberg. — 1910. — Bd 51. — S. 217–242.
- Park O.* Beetles Associated with the Mound-Building Ant, *Formica ulkei* Emery // Psyche. — 1935. — **42**. — P. 216–231.
- Perkovsky E. E., Rasnitsyn A. P., Vlaskin A. P., Taraschuk M. V.* A comparative analysis of the Baltic and Rovno amber arthropod faunas: representative samples // African Invertebrates. — 2007. — **48**, N 1 — P. 229–245.
- Švec Z.* Catalogue of Palaearctic Coleoptera. Vol. 4. / Eds I. Löbl, A. Smetana. — Stenstrup : Apollo Books, 2007. — P. 509–513.