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XYLETINUS (S. STR.) *THIENEMANNI* SP. NOV., A NEW SPECIES OF XYLETININAE (COLEOPTERA: PTINIDAE) FROM EOCENE BALTIC AMBER

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Third extinct species of the extant genus *Xyletinus* Latreille, 1809 is figured and described from Baltic amber. A key to fossil species of *Xyletinus* is provided.

Key words: Coleoptera, new taxon, death-watch beetle, Cenozoic, Tertiary, fossil resin.

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INTRODUCTION

The extant genus *Xyletinus* Latreille, 1809 is distributed mainly in the Holarctic Region (Zahradník 2017) and includes six subgenera: *Calypterus* Mulsant et Godart, 1859; *Evaniocerius* Gottwald, 1983; *Pseudocalypterus* Gottwald, 1977; *Xeronthobius* Morawitz, 1863; *Xyletinus* Latreille, 1809; and *Xyletomimus* Reitter, 1901. The largest subgenus (about 70 described extant and two fossil species) is the nominative one.

The representatives of the genus *Xyletinus* Latreille, 1809 were reported in Baltic amber since beginning of 20th century (Klebs 1910) and later (Hieke & Pietrzeniuk 1984, Zahradník & Háva 2014). Two fossil species of this genus have been described from Baltic amber until now (Alekseev & Bukejs 2019).

In the year 2018, one of us (V.A.), examining amber collection of Mr. Friedhelm Eichmann (Hannover, Germany) found specimen of *Xyletinus*, which was considered to be new species. The new species is formally described and figured in the current paper.

MATERIAL AND METHODS

The single specimen was examined during this study. The amber with inclusion is deposited in the private collection of Friedhelm Eichmann (Hannover, Germany) [CFE] and likely to be later deposited in the museum of the Geological-Palaeontological Institute [Geologisch-Paläontologisches Museum] of Hamburg University, now: CeNak, Centre of Natural History [Centrum für Naturkunde], Germany. The piece was polished by hand only. The measurements were made using an ocular

micrometer in a stereoscopic microscope. The figures were edited using Adobe Photoshop CS8. Illustration of antenna was based on free-hand drawings made during examination of the original specimens.

The following references were used for the generic attribution and comparison with recent taxa: Kofler (1969), White (1973), Español (1979), Gottwald (1983), Logvinovskij (1985), Lundberg (1991), Toskina (2002, 2005, 2009, 2015), Arango & Young (2012), and Zahradník (2017).

SYSTEMATIC PALAEOENTOMOLOGY

Family Ptinidae Latreille, 1802
Subfamily Xyletininae Gistel, 1856
Tribe Xyletinini Gistel, 1856
Genus *Xyletinus* Latreille, 1809
Subgenus *Xyletinus* Latreille, 1809
***X.* (s. str.) *thienemanni* sp. nov.**
(Figs 1–3)

Material examined. Holotype: No. 779 [CFE]. Adult, sex unknown. The complete beetle inclusion is preserved in a small polished piece of transparent amber with a yellow shade and with approximate dimensions 24×15×4 mm without any further fixation. Right side of thorax and head of the specimen are partially obscured by "milky" opacity. Syninclusions: two stellate fagacean trichomes.

Type horizon. Baltic Amber, Upper or mid-Eocene.
Type locality. The Samland (Sambian) peninsula, the Kaliningrad region, Russia.

Description. Total body length 2.47 mm; elytra length 1.9 mm, maximum combined width of elytra 1.25 mm; pronotum length 0.57 mm, pronotum maximum width 1.14 mm. Body elongate, subparallel, convex dorsally; pubescence homogenous, fine, moderately dense, semirecumbent; appear unicolorous dark (as preserved).

Head hypognathous, turned downwards and not visible in dorsal view; double punctured: with very fine, uniformly dispersed punctures and with additional larger, irregular, moderately dense punctures (distance between punctures about 0.5–1.5× diameter of one puncture); frons evenly flat, without carina, with shallow impression anteriorly. Compound eyes relatively small, rounded, slightly convex, entire, with small distinct facets, without ommatidial setae; widely separated, frontal distance between compound eyes nearly equal to 3.0× transverse diameter of one eye. Antennae 11-segmented, serrate, reaching elytral base; antennomeres 1–2 elongate and rounded; scape widest; antennomere 3 as long as antennomere 4, narrowly triangular; antennomeres 4–8 almost equilaterally triangular, antennomere 9 elongate triangular, antennomere 10 elongate; antennomere 11 elongate, about 3.0× as long as wide. Relative length ratios of antennomeres equal to 2.0–1.5–1.0–1.0–0.9–0.9–1.0–1.0–1.5–1.5–2.1. Terminal labial palpomere dilated apically, triangular. Terminal maxillary palpomere triangular, dilated apically, with semicirculary concave distal margin, forming acute triangular angles.

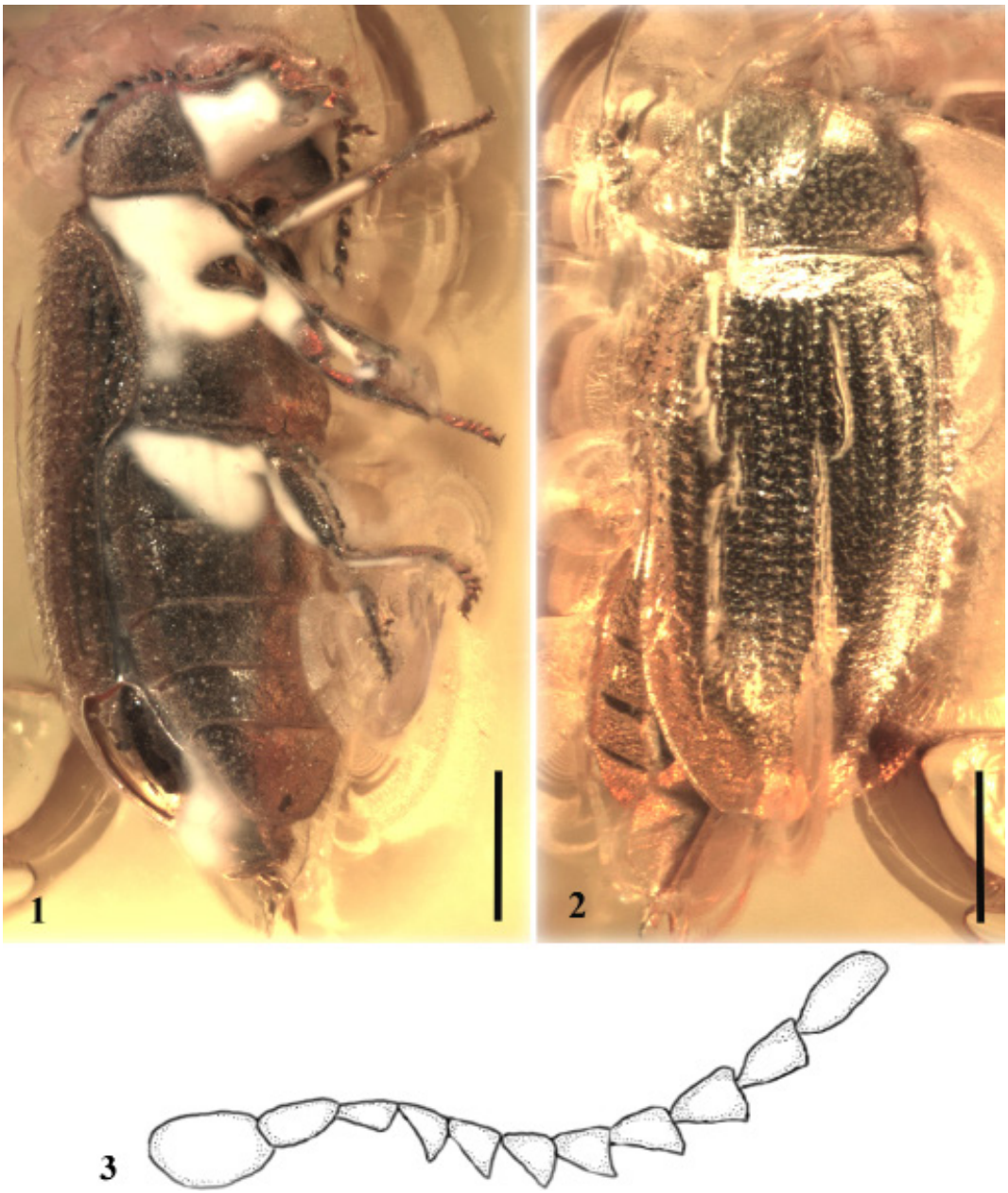
Pronotum convex, margined, finely pubescent, transverse, 2× as wide as long, widest before the middle; punctured like head, larger punctures denser and almost rugose laterally, and sparser medially. Anterior pronotal angles acute and triangular; posterior pronotal angles widely rounded and barely marked. Lateral margins not visible in dorsal view.

Scutellar shield rounded, semicircular.

Elytra moderately short, elongate, 1.5× as long as wide, with distinct humeri, longitudinally striate. Striae with regular distinct round punctures laterally, and without separate punctation on disc and apex. Elytral intervals slightly convex, pubescent. Interval pubescence semierect, curved, arranged in rows and directed backwards. Metathoracic wings not apparent. Metaventrite without excavation for reception of mesothoracic legs.

Legs slender, comparatively short, pentamerous. Procoxae contiguous. Tarsus shorter than tibia. Tarsomere 1 longest, as long as tarsomeres 2 and 3 combined. Meso- and metarsomeres 2–4 widened. Tarsal claws simple, thin, falcate, symmetrical.

Abdomen with five freely articulated, visible ventrites, without excavation for reception of metathoracic legs; finely and densely punctured, distance between punctures approximately 0.5–1.0× diameter of one puncture; with very fine and sparse setae. Relative length ratios of



Figs. 1–3. *Xyletinus thienemanni* **sp. nov.**, holotype, No. 779 [CFE]: 1 – habitus, ventro-lateral view (scale bar represens 0.5 mm); 2 – habitus, dorsal view (scale bar represents 0.5 mm); 3 – reconstruction of antenna.

ventrites 1–5 equal to 4–4–3–3–4.

Differential diagnosis. The specimen No 779 is placed within the subfamily Xyletininae of Ptinidae due to cylindrical body, convex non-flattened prothorax, margined pronotum, hypognathous head, striate elytra with semicircular projection laterally, pentamerous tarsi with enlarged basal tarsomere and simple claws, and elongate distal antennomeres. This combination of characters differs the specimen under study from the similar-looking small representatives of Dasytidae or Cleridae, which are also not extremely rare in Baltic amber.

The new fossil species is diagnosed as belonging to the genus *Xyletinus* based on following morphological characters: head deflexed; metathoracic ventrite and abdomen without excavation for reception of mesothoracic and metathoracic legs; antennae serrate; eyes widely separate; elytra striate; three terminal antennomeres not long in comparison with preceding segments. The combination of the following features allows the assignment of *Xyletinus thienemanni* **sp. nov.** to the nominate subgenus: eyes comparatively small, slightly convex, not strongly prominent; frons wide; terminal maxillary and labial palpomeres triangular, dilated apically; tarsi short; and elytral pubescence directed backwards.

Xyletinus (s. str.) *thienemanni* **sp. nov.** resembling recent European species of the genus and the subgenus, but differs in dual punctation of head and pronotum, shape of antennomeres, elytral strial punctures distinct laterally, frons without carina, and shape of last maxillary palpomere.

Xyletinus (s. str.) *thienemanni* **sp. nov.** differs from two described Baltic amber congeners in following characters:

(1) from *Xyletinus* (s. str.) *besseli* Alekseev et Bukejs, 2019 in longer and more slender antennae with antennomeres 10–11 not transverse and dilated; in elytral striae with distinct punctures laterally; in lesser body size (2.47 mm in *X. thienemanni* sp. nov. in contrast to 3.1 mm in *X. besseli*); in dual and denser pronotal punctation;

(2) from *Xyletinus* (s. str.) *barsevskisi* Alekseev et Bukejs, 2019 in antennomeres 2–10 not serrate; in elytra striate on disc and elytral striae with distinct punctures; in pronotum without small, in dense granulation antero-laterally; in pronotal anterior angles visible in dorsal view; in lesser body size.

Derivatio nominis. Patronymic, this new species is named after Johannes Thienemann (1863 – 1938), German ornithologist and a pioneer bird ringing who established the Rossitten bird observatory on the Curonian Spit (now Rybachy, Kaliningrad Region, Russia), the world's first bird ringing station.

KEY TO FOSSIL SPECIES OF *XYLETINUS*

(1) Elytral disc without distinct striae. Antennomeres 2–10 serrate, triangular. Body length 4.0 mm..... .....*X. barsevskisi* Alekseev et Bukejs – Elytral disc with distinct striae. Antennomere 2 not triangular. Body length lesser 2
(2) Elytra with impunctate striae. Antennae short, antennomeres 10–11 strongly transverse and dilated. Body length 3.1 mm …….....*X. besseli* Alekseev et Bukejs
(3) Elytra with two lateral striae consisting of distinct punctures. Antennomeres 10–11 elongate, longer than wide. Body length 2.47 mm ..... *X. thienemanni* **sp. nov.**

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