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Trinodes puetzi sp. nov., a new fossil species described from the Baltic Amber (Coleoptera: Dermestidae)

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Abstract. A new fossil dermestid beetle *Trinodes puetzi* sp. nov. from the Baltic amber (Eocene–Oligocene) of the Russia (Kaliningradskaya oblast) is described and compared with related extant species. New species differs from all known species by the form of antennal club, especially by the relative length and the form of terminal antennomere.

Taxonomy, fossil, new species, distribution, Coleoptera, Dermestidae, Trinodinae, amber, Tertiary, Eocene, Oligocene

INTRODUCTION

The present study follows the preceding paper about fossil Dermestidae from the Dominican amber (Háva & Prokop 2004). Baltic amber is the world most well-known source of amber dated from Late Eocene to Early Oligocene between 40 to 35 Ma. Although, the plant producer of Baltic amber is still uncertain, sharing characters with pines and araucarians (Poinar 1992).

The genus *Trinodes* Dejean, 1821 contains 16 species distributed in the Palaearctic, Afrotropical and Oriental regions, with six known species from the Palaearctic region (Háva 2003). The fossil record of genus *Trinodes* is entirely known from Baltic amber and noticed by Larsson (1978), Spahr (1981) and Hieke & Pietrzeniuk (1984).

MATERIAL AND METHODS

Insect inclusions are preserved in polished pieces of transparent amber without any further fixation. Standard techniques of observation by stereomicroscope (Olympus SZX 9) and digital photography (Olympus 5060) were used.

Because the size of beetles or their body parts can be useful in species recognition, following measurements were made:
(a) total length (TL) – linear distance from anterior margin of pronotum to apex of elytra.
(b) elytral width (EW) – maximal linear transverse distance.

We follow classification of Dermestidae as proposed by Zhantiev (2000) amended by Háva (2003, 2004).

SYSTEMATIC PALAEONTOLOGY

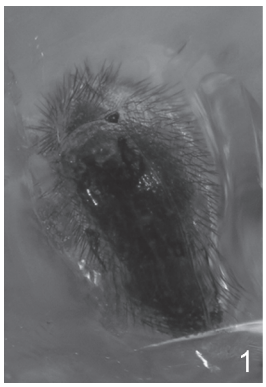
Trinodes puetzi sp. nov.
(Figs 1–3)

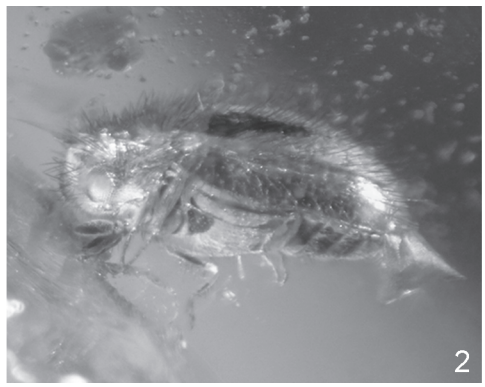
Trinodes rufescens: Háva 2003: 52.

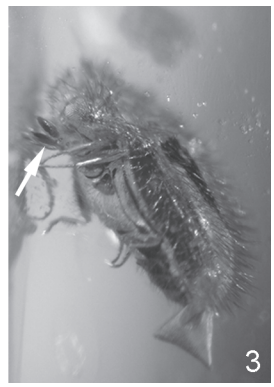
Type material. **Holotype** (male): Amber inclusion from the "Baltischer Bernstein, Fundort: Jantarnyi bei, Kaliningrad", Eocene–Oligocene age. **Paratype** (male): the same data as holotype. Holotype deposited in the coll. A. Pütz (Eisenhüttenstadt, Germany) [later in Deutches Entomologisches Institut, Müncheberg, former in Eberswalde,

Germany] and paratype deposited in the coll. J. Háva (Prague, Czech Republic). Holotype and paratype specimens provided with label: "HOLOTYPE [PARATYPE respectivelly] *Trinodes puetzi* sp. nov. Jiří Háva & Jakub Prokop det. 2004" [red label, printed].

DESCRIPTION OF THE HOLOTYPE. Male. Measurements (mm): TL 1.6 EW 1.0. Head and pronotum dark brown to black, elytra dark brown to black, body oval, convex (Figs 1, 2). Head dark brown finely punctate with long black erected pubescence. Palpi entirely brown. Frontal median ocellus presented. Antennae with 11 antennomeres, antennal club dark brown with three antennomeres (Fig. 3). Pronotum finely punctate like head with long black erected pubescence. Scutellum triangular finely punctate as pronotum, with short black pubescence. Elytra finely punctate; cuticle unicolorous, dark brown to black; pubescence black, long, erect. Apex of each elytron with long blackish pubescence. Legs brown with black pubescence. Meso-metasternum with short black pubescence. Abdominal sternites with long black pubescence. Genitalia not visible.
PARATYPE. Measurements (mm): TL 1.8 EW 1.1.







Figs 1–3. *Trinodes puetzi* sp. nov.: 1 – habitus dorsal view; 2 – habitus lateral view; 3 – antennal club.

ETYMOLOGY. Patronymic, dedicated to Andreas Pütz (Eisenhüttenstadt, Germany), a well known specialist of the family Byrrhidae (Coleoptera).
DIFFERENTIAL DIAGNOSIS. *T. puetzi* sp. nov. is habitually similar to *T. rufescens* Reitter, 1877 and *T. hirtus* (Fabricius, 1781), but clearly differ from both and other described species by the form of antennal club, especially by the relative length and shape of terminal antennomere.
DISCUSSION. According to the keys by Peacock (1978) and Háva (2004), the new species is attributed to the genus *Trinodes* of the tribe Trinodini (Trinodinae), differing by the combination of the following characters: pronotum without carina or furrow, antennae with 11 antennomeres, antennal club with three antennomeres, prosternum with distinct antennal grooves, first visible abdominal sternite ussually with two short oblique lines diverging from inner edges of hind coxae, prosternoum extended as an acuminate process fitting into a deep notch in mesosternum. Nevertheless, the genus *Trinodes* is rather uniform varying in structure of anntenae and male genitalia (Peacock 1978). Newly described species *T. puetzi* sp. nov. is habitually similar to *T. rufescens* and *T. hirtus*, but clearly differ from both and other described species by the form of antennal club, especially by the relative length and shape of terminal antennomere.

The currently described new species was erroneously mentioned by Háva (2003: 52) as *T. rufescens* from the Sibirian amber differs from all so far known species by the unique combination of the previously mentioned characters.

A c k n o w l e d g e m e n t s

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