

A new genus of the tribe Ceutorhynchini (Coleoptera: Curculionidae) in Baltic amber

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A new genus, *Baltocoeliodes* **gen. n.** (type species: *B. sontagae* **sp. n.**) is described and illustrated from Eocene Baltic amber. *Baltocoeliodes* is close to *Coeliodinus* Dieckmann, 1972 but differs by having the femora with a large tooth, robust elytra, and elytral intervals with rasp-like granules. It differs from the genus *Brevicoeliodes* Korotyaev, 1997 by the short apical comb of setae on the protibiae, the long and curved rostrum, femora with a large tooth, and elytral intervals with rasp-like granules.

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1. Introduction

Weevils of the subfamily Conoderinae include more than 7,500 species placed in four supertribes in the Recent fauna (Prena *et al.* 2014). Previously, these four supertribes were treated as different subfamilies (Alonso-Zarazaga & Lyal 1999, Anderson 2002, Bouchard *et al.* 2011), but only one subfamily is accepted now (Prena *et al.* 2014). The six earliest known fossil species of Conoderinae of the supertribes Ceutorhynchitae and Bariditae have been described from the early-middle Eocene Green River Formation (Scudder 1893, Legalov 2015). Three species of the genus *Ceutorhynchus* Germar, 1823 (Ceutorhynchini) have been described (Legalov 2013, 2016) and one species of the genus *Rhinoncus* Schoenherr, 1825 (Phytobiini) has been recorded from middle-upper Eocene Baltic amber (Klebs 1910). The most ancient Conoderitae known are from

Early-Middle Miocene Dominican and Mexican amber (Zimmermann 1971, Davis & Engel 2006, Poinar & Legalov 2014). A species of the tribe Phytobiini is known from the Oligocene of Germany (Théobald 1937), and another of the tribe Cnemogonini from the late Eocene of Florissant (Scudder 1893). A few Ceutorhynchini species have been described from the Eocene of Florissant (Scudder 1893, Wickham 1916), Oligocene of France (Förster 1891) and Germany (Heyden & Heyden 1866), and also the Neogene of France (Piton & Théobald 1935).

In the present paper, a new genus and species of the tribe Ceutorhynchini are described from Baltic amber.

2. Materials and methods

The amber piece from Kaliningrad region, Russia was polished by hand, allowing an improved

view of the included specimen, and was not subjected to any supplemental fixation. The material examined is deposited in the collection of the Museum of Amber Inclusions, University of Gdańsk, Poland [MAIG].

The observations of the specimen were made using a Nikon SMZ 745T stereomicroscope. The photographs were taken using a camera Canon 70D with macrolens Canon MPE-65mm. Extended depth of field at high magnifications was achieved by combining multiple images from a range of focal planes using Helicon Focus software. Measurements in millimeters were taken using an ocular micrometer.

The systematic placement of the studied taxon is according to Prena *at al.* (2014) and Colonnelli (2004).

3. Description of *Baltocoeliodes* gen. n. and *B. sontagae* sp. n.

Curculionidae Latreille, 1802
 Conoderinae Schoenherr, 1833
 Ceutorhynchitae Gistel, 1848
 Ceutorhynchini Gistel, 1848

Baltocoeliodes gen. n.

Type species: *Baltocoeliodes sontagae* sp. n., described below.

Diagnosis. This new genus is close to the extant genus *Coeliodymus* Dieckmann, 1972 but differs in the femora possessing a large ventral tooth, robust elytra, and elytral intervals with denticulate granules. Additionally, *Baltocoeliodes* gen. n. differs from the genus *Brevicoeliodes* Korotyaev, 1997 by the short apical comb of setae on the protibiae, long rostrum, femora with a large ventral tooth, and elytral intervals with denticulate granules.

Etymology. The name is formed from the Latin word for “Baltic” – “balticum” and the generic name “Coeliodes”. The gender is masculine.

Note. The new genus is monotypic, represented by the type species only. Therefore, the generic description considerably overlaps that of the species.

Description of *Baltocoeliodes sontagae* sp. n. (Figs 1, 2)

Type material. Holotype: Nr. 5952 [MAIG]; possibly male. A complete beetle is included in an elongate, transparent yellow amber piece (length 35 mm, width 17 mm, and maximum thickness 8 mm). Syninclusions: plant leaf (length about 25 mm), few small pieces of organic material, numerous small stellate Fagaceae trichomes, and small gas vesicles.

Type locality and type strata. Amber deposits located along the Baltic Sea coast, Yantarny settlement [formerly Palmnicken], Kaliningrad region, Russia; mid-Eocene to Upper Eocene.

Description. Body length (without rostrum and head) 2.5 mm, maximum width 1.7 mm; body shape widely oval; body colour (as preserved) rufous with head and pronotum slightly darker, reddish-brown. Pronotum sparsely covered with short, stout erect filiform scales with curved apices; elytra with short semirecumbent scales; head, ventral side of body and legs with dense, short recumbent scales.

Head. Hypognathous, with fine and dense punctation. Rostrum weakly curved, longer than head and pronotum combined, reaching apical margin of metaventrite; eyes large, rounded, weakly convex; temples short; antennae geniculate, inserted apparently near middle of rostrum laterally; antennae quite long (poorly visible in examined specimen), antennomere 1 long, not extending to eyes; antennomeres 2–8 subconical; antennomere 2 about 2.2 times as long as wide, nearly equal in width to antennomere 1; antennomere 3 about 2.5 times as long as wide, 0.5 times as long as and 0.4 times as wide as antennomere 2; club compact with fused articles.

Pronotum. Bell-shaped, widest before middle, distinctly narrower than elytral base, convex; transverse, about 1.6 times as wide as long; densely covered with large punctures, distance between punctures less than diameter of one puncture, interspaces convex, shiny; with shallow longitudinal impression medially, without lateral tubercles; anterior margin almost straight in dorsal view; posterior margin bi-sinuate with two teeth medially (at scutellum); lateral margins widely rounded. Scutellum elongate, narrow, small, about 2.5 times as long as wide.

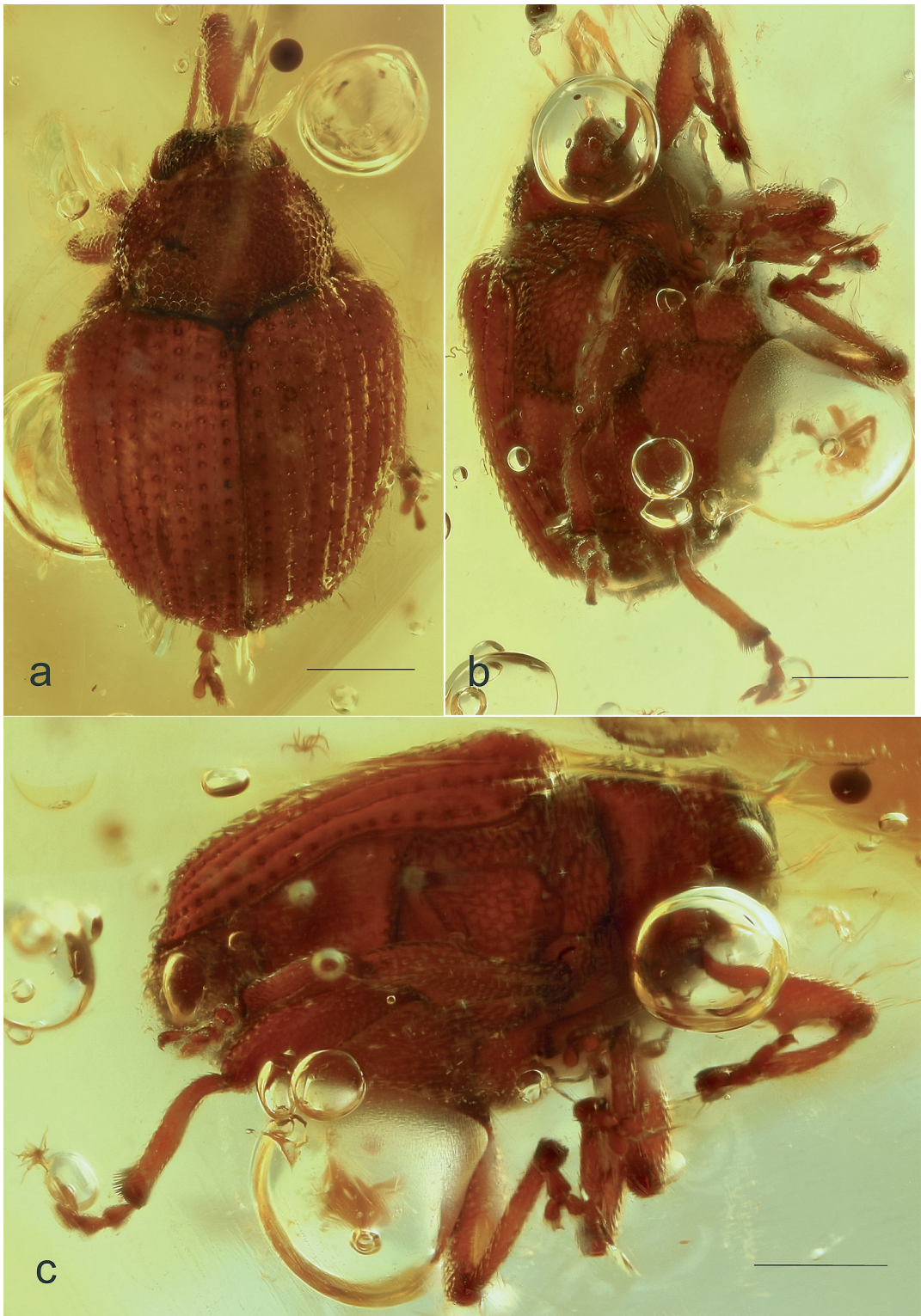


Fig. 1. *Baltocoeliodes sontagae* gen. n. et sp. n., habitus of holotype. – a. Dorsal view. – b. Ventro-lateral view. – c. Lateral view. Scale bar 0.5 mm.

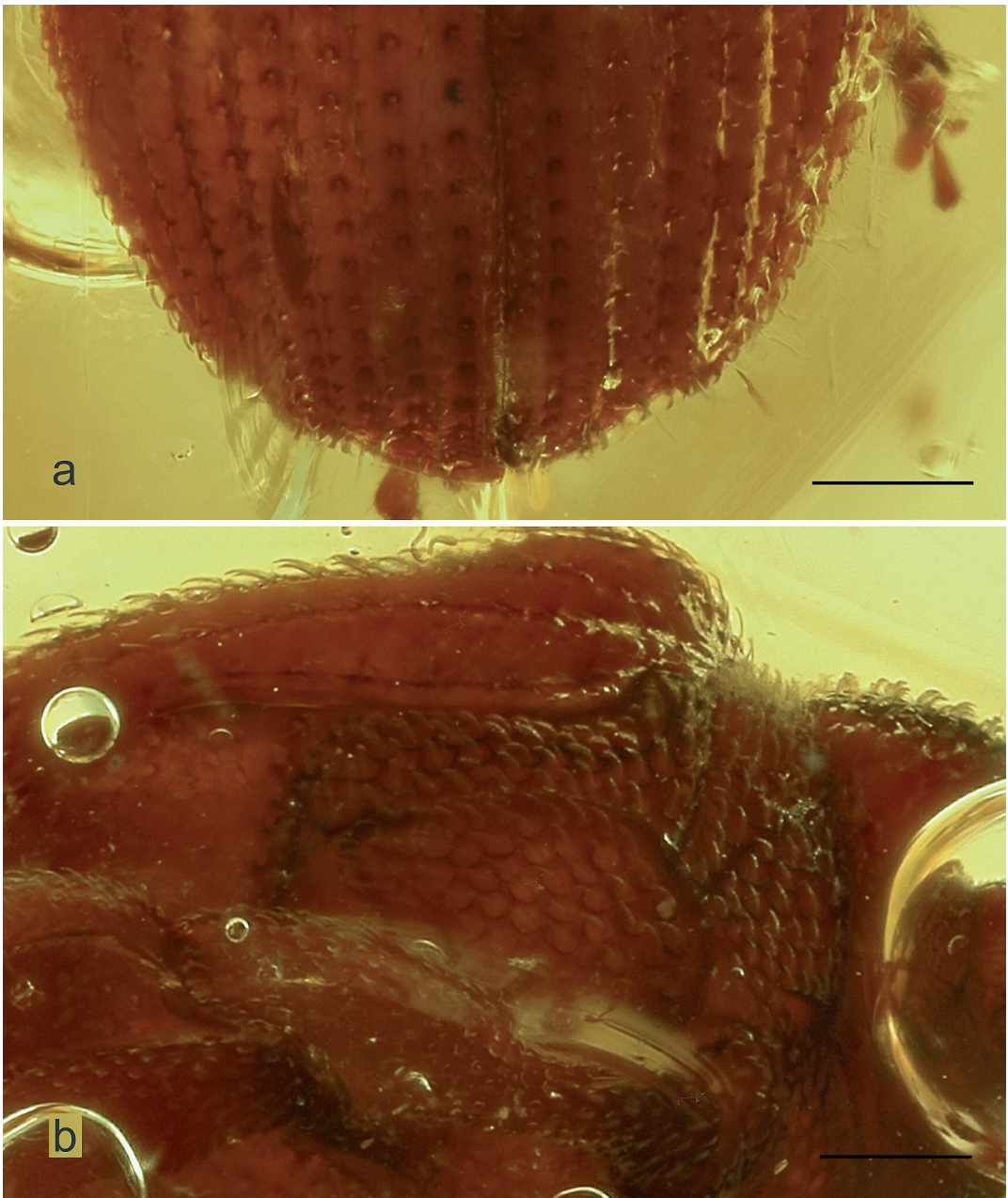


Fig. 2. *Baltocoeliodes sontagae* **gen. n.** et **sp. n.**, details of holotype. – a. Elytral apical portion, dorsal view. – b. Thorax, lateral view. Scale bar 0.25 mm.

Elytra. Widely oval, nearly as long as wide at base, 2.3 times as long as pronotum; humeri weakly rounded, protruding. Elytral punctures small, round, sparse (distinctly denser in apical portion), distance between strial punctures equal to 1.5–2.5 times diameter of one puncture; arranged in regular striae, each elytron with 10

striae, striae distinct throughout entire length of elytron, stria 10 complete; interstrial intervals shiny, convex, with small denticles (distinctly visible in apical half), arranged in regular row, distance between striae about 2.0–4.0 times diameter of one strial puncture; with denticulate granules.

Thorax. Pro-, meso- and metathorax coarsely and densely punctate, distance between punctures less than diameter of one puncture. Prosternum apparently with ventral channel; precoxal part of prosternum quite long; postcoxal part of prosternum short, procoxal cavities separated; mesepimeron enlarged, visible between bases of prosternum and elytra, mesosternum with ventral channel; metasternum quite long, about 1.9 times as long as length of metacoxa, metepisternum about 3.0 times as long as wide, metepimeron fused with metepisternum.

Legs. Long and quite robust; procoxae conical, mesococae round, metacoxae transverse; femora weakly swollen, spindle-shaped, with large ventral tooth; tibiae weakly curved, dilated apically, without uncus and mucro; protibia with apical comb of setae extending along external margin for distance about one-fifth of tibial length; mesotibia with apical comb of setae extending along external margin for distance about one-fourth of tibial length; metatibia with apical comb of setae extending along external margin for distance about one-sixth of tibial length; tarsi long, apparently with thick light erect setae dorsally, with two claws, tarsomeres 1 and 2 trapezoidal, tarsomere 3 bilobed, tarsomere 4 minute, tarsomere 5 elongate; claws large, fused at base, with teeth.

Abdomen. Slightly convex, with small and dense punctation, distance between punctures equal to 0.8–1.2× diameter of one puncture; all ventrites oriented in one plane; ventrites 1 and 2 fused; posterior angles of ventrites 2–4 extended towards ventrites 3–5; ventrite 1 about as long as width of metacoxa; ventrite 2 about 0.4 times as long as ventrite 1 medially; ventrites 3 and 4 subequal in length; ventrite 3 about 0.5 times as long as ventrite 2; pygidium convex, not covered by elytra.

Etymology. Patronymic. The name of this new species is dedicated to our colleague Dr. Elżbieta Sontag (Gdańsk, Poland), who provided us the opportunity to study this interesting fossil specimen.

Remarks. The new species belongs to the family Curculionidae based on the geniculate antennae, ventrites 1 and 2 being fused and elongate, ventrites 3 and 4 short, and ventrites 1–5 oriented in one plane. The enlarged mesepimeron

being visible between the bases of the prosternum and elytra, the posterior angle of ventrite 2 extending towards ventrite 3, and the metepimeron being fused with metepisternum, suggest placement in the subfamily Conoderinae. The tibiae being without an uncus, pygidium not covered by elytra, and prosternum with a ventral channel allow this taxon to belong to Ceutorhynchitae. The tarsi having two claws, metafemora being weakly swollen, and elongate rostrum confirm the assignment of *Baltocoeliodes sontagae* **gen. n. et sp. n.** to the tribe Ceutorhynchini.

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