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# *Succinapion telnovi* n. gen. et n. sp. of the tribe Kalcapiini (Coleoptera: Brentidae: Apioninae) in Baltic amber

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A new genus and species, *Succinapion telnovi* n. gen. et n. sp. (Coleoptera: Curculionoidea: Brentidae: Apioninae: Kalcapiini) is described and illustrated from Upper Eocene Baltic amber. The new genus is similar to the genus *Melanapion* Wagner, 1930 but differs from it in having femora ventrally with spine at distal 1/3, simple claws, a longer rostrum, elytra weakly widened towards apex, longer antennae and slightly narrower elytral striae.

http://www.zoobank.org/urn:lsid:zoobank.org:pub:2A95C49D-5589-4ACA-8A87-0DDF635BA25E

**Keywords:** Brentidae; Apioninae; Kalcapiini; new taxa; Baltic amber

## Introduction

The superfamily Curculionoidea is well represented in fossil deposits. The first discoveries of representatives of the superfamily Curculionoidea date from the Jurassic (Martynov 1926; Arnoldi 1977; Gratshev and Zherikhin 1996; Legalov 2010a, 2010b, 2011, 2012b, 2013a; Gratshev and Legalov 2011). The weevil family Brentidae is the second largest family of Curculionoidea and widely distributed. The composition of this family is discussed by Thompson (1992), Kuschel (1995), Legalov (2006) and Bouchard et al. (2011). The Brentidae includes approximately 400 genera and more than 6100 species worldwide (Thompson 1992). The oldest members of the subfamily Apioninae are known from Aptian deposits (Lower Cretaceous) in Mongolia (Legalov 2012b, 2013b). The two subfamilies, Nanophyinae (Klebs 1910) and Apioninae, are found in Baltic amber (Wagner 1924; Voss 1953, 1972; Zherikhin 1971; Legalov 2012a).

In this paper, a new genus and species of Apioninae from Baltic amber is described.

## Materials and methods

The Baltic amber mines are located along the Baltic Sea coast at the Amber quarry of Yantarny near Kaliningrad (formerly Koenigsberg) in the Kaliningrad region (Russia). Amber from this deposit was produced by *Pinus succinifera* (Goeppert) Conwentz (Schuber 1961). Baltic amber from this Prussian Formation is dated from Upper Eocene (Grigjalis et al. 1971), although sometimes older (even Lowermost Eocene) (Weitschat and Wichard 2010).

Observations were made using a Nikon SMZ 745T stereomicroscope. The photographs were taken with a Zeiss Luminar 63-mm lens mounted on a Canon 50D body.

## Systematics

**Curculionoidea** Latreille, 1802

**Brentidae** Billberg, 1820

**Apioninae** Schoenherr, 1823

**Kalcapiini** Alonso-Zarazaga, 1999

***Succinapion*** Legalov and Bukejs, n. gen. (Figures 1–3)

*Type species*

*Succinapion telnovi* n. sp.

Body elongate, convex dorsally and ventrally, black; with contiguous pale setae; head short; rostrum distinctly curved, not thickened laterally nor widened at base; not widened at location of antennal insertion; frons weakly convex; eyes small, convex; antennae inserted ventrally in basal 1/3 of rostrum; scape elongate-oval; antennal club with distinct sutures; pronotum transverse, almost bell shaped, weakly convex; greatest width in middle, punctuate; pronotal vestiture centrifugal; elytra elongate, distinctly convex; humeri convex; elytral punctures suboval, larger than pronotal punctures; scutellar striole absent; striae distinct; intervals weakly convex, narrow; precoxal and postcoxal parts of prothorax short; metepisternum narrow; first and second ventrites equal in length, strongly convex; third to fifth ventrites flattened; first and second ventrites coarser and with larger punctures

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Figure 1. Lateral view of *Succinapion telnovi* (habitus) in Baltic amber.

than on other ventrites; legs long and thin; femora weakly clavate, ventrally with spine at distal 1/3; tibiae slender, weakly flattened, almost straight, weakly biconcave at inner margin, with apical dark setose fringe; tarsi long, with thick, light, erect setae ventrally; first tarsomere elongate-triangular; second tarsomere triangular; third tarsomere bilobed; fifth tarsomere subcylindrical and elongate; claws relatively large, simple, without teeth.

***Diagnosis***

This new genus is similar to the genus *Melanapion* Wagner, 1930, but differs from it in having femora ventrally with spine at distal 1/3, simple claws, longer rostrum, elytra weakly widened towards apex, longer antennae and slightly narrower elytral striae.

***Etymology***

The generic name is formed from the words 'succinum' – 'amber' and '*Apion*'; masculine gender.

***Succinapion telnovi*** Legalov and Bukejs, **n. sp.**
(Figures 1–3)

*Description*

Body length (without rostrum) 3.03 mm; rostrum length 1.14 mm. Body elongate, convex dorsally and ventrally;

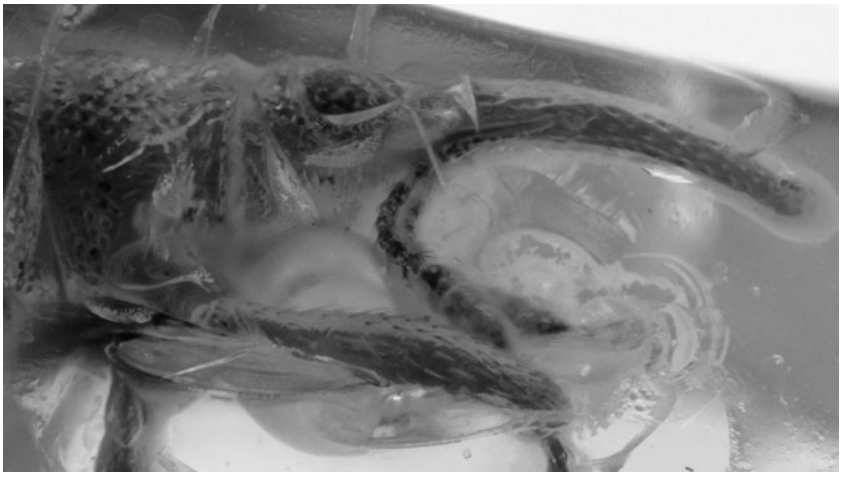

Figure 2. Lateral view of anterior portion of body of *Succinapion telnovi* in Baltic amber.

Figure 3. Right protibiae and protarsus of *Succinapion telnovi* in Baltic amber.

uniformly black; dorsally and ventrally with short, contiguous pale setae, appearing silvery shiny from the presence of cavities between specimen and internal surface of its impression.

*Head*

Head short, 0.35 times as long as rostral length; rostrum distinctly curved, cylindrical, laterally not widened at base, about 1.75 times as long as pronotum, with moderately dense and finely punctate; distance between punctures 1.0–2.5 times their diameter; basal 1/3 with longitudinal rugosity-punctate; frons weakly convex; eyes small, oval, moderately convex, 1.5 times as long as wide; temples short, about 0.7 times as long as length of eye; densely punctate; antennae inserted ventrally at basal 1/3 of rostrum; moderately long, reaching basal 1/3 of pronotum; scape elongate-oval, 6.5 times as long as wide, about 0.29 times as long as rostrum; flagellomeres distinctly widened distally; first flagellomere semi-oval, 2.08 times as long as wide, 0.39 times as long as scape; second to seventh flagellomeres subequal, second fagellomere about 2.18 times as long as wide, 0.7 times as long as first flagellomere; third flagellomere 1.8 times as long as wide, 1.03 times as long as second; fourth flagellomere 1.5 times as long as wide, 0.83 times as long as third; fifth flagellomere 1.81 times as long as wide, 0.89 times as long as fourth; sixth flagellomere 1.3 times as long as wide, 0.82 times as long as fifth; seventh flagellomere 1.21 times as long as wide, 1.15 times as long as sixth; club compact, 0.55 times as long as flagellum; first club article trapezoidal, 1.08 times as long as wide, 1.22 times as long and 1.37 times as wide as seventh flagellomere; second club article 0.93 times as long as wide, 0.9 times as long as the first article; third club article 2.63 times as long as wide, 2.14 times as long as the second article, weakly acuminate.

*Pronotum*

Pronotum transverse, almost bell shaped, weakly convex; greatest width in middle; moderately large with dense round punctures, distance between punctures 0.5–1.0 times as long as diameter of punctures, intervals weakly convex, smooth.

*Elytra*

Elytra elongate, distinctly convex, about 3.0 times as long as pronotum; greatest width in apical 1/3; humeri convex; elytral punctures suboval, larger than pronotal punctures, deep and dense, arranged in regular striae; scutellar striole absent; striae distinct throughout entire length of elytra; distance between strial punctures 0.3–1.0 times as long as diameter of puncture; intervals weakly convex, narrow, with one to two rows of small points; distance between striae approximately 1.0–2.0 times as long as diameter of punctures; apices of elytra separately rounded.

*Thorax*

Thorax and abdomen with moderately large and dense round punctures similar to punctures of pronotum; distance between punctures distinctly less than diameter of single puncture, intervals weakly convex; precoxal and postcoxal parts of prothorax short; pro- and mesocoxal cavities round; metacoxal cavity transversely elongate; metepisternum narrow, about 6.0 times as long as wide.

*Abdomen*

First and second ventrites equal in length, strongly convex; third to fifth ventrites flattened; third ventrite narrow, about 0.25 times as long as the second ventrite; fourth ventrite barely longer than the third ventrite, fifth ventrite about 3.6 times as long as the fourth ventrite.

*Legs*

Legs long and narrow, with thin sparse, semierect setae; femora weakly clavate, ventrally with spine at distal 1/3; profemora length/max. width = 4.57; mesofemora length/max. width = 3.5; metafemora length/max. width = 4.88; trochanter triangular; tibiae slender, weakly flattened, almost straight, weakly biconcave at inner margin, with apical dark setose fringe; protibiae length/max. width = 7.44; mesotibiae length/max. width = 5.6; metatibiae length/max. width = 6.41; tarsi long, about 1/2 as long as tibiae, with thick, light, erect setae ventrally; first tarsomere elongate triangular; second tarsomere triangular; third tarsomere bilobed; fifth tarsomere subcylindrical and elongate; claws relatively large, free, without teeth; protarsi: first tarsomere 2.57 times as long as wide; second tarsomere 1.09 times as long as wide, 0.58 times as long as the first tarsomere; third tarsomere 0.53 times as long as wide, 0.67 times as long as the second tarsomere; fifth tarsomere 2.57 times as long as wide, 1.8 times as long as the third tarsomere; metatarsi: fifth tarsomere 2.7 times as long as wide.

*Type*

Holotype: 'Nr. 024' (white printed label), 'Holotype/*Succinapion telnovi*/det. Legalov A. and Bukejs A.' (red printed label); female; deposited in the private collection of Andris Bukejs (Daugavpils, Latvia). A complete beetle; the left side of the specimen is obscured by a 'milky' deposit. The specimen is embedded in a small, thin subquadrangular amber piece (length about 11 mm, width 7 mm and weight 0.4 g). Plant syninclusions in the studied amber piece are stellate oak hairs; small cracks are also present.

*Type locality*

Amber mines located along the Baltic Sea coast and Yantarny Amber quarry near Kaliningrad (formerly Koenigsberg), Kaliningrad region, Russia; Upper Eocene, Prussian Formation.

*Etymology*

The epithet of this new species honours our dear colleague Dr Dmitry Telnov (Rīga, Latvia).

*Remarks*

Elongate rostrum, convex first and second ventrites and flattened additional ventrites show that the sex is female.

## Discussion

The new genus belongs to the family Brentidae based on the elongated first and second ventrites, shortened third and fourth ventrites, rostrum with scrobes directed obliquely downward, elongate trochanters and a compact club. The elongated trochanters, femora not touching the coxa, straight antennae and compact antennal club, suggest placement in the subfamily Apioninae. The antennal club with distinct sutures, first and second ventrites coarser and with larger punctures than the other ventrites, the pronotal vestiture centrifugal, not widened at the point of antennal insertion, and the uniformly narrow rostrum, provides evidence that the new genus belongs to the tribe Kalcapiini. This new genus is similar to the representatives of the tribe Ceratapiini regarding the claws lacking teeth, but differs from it is having the antennal club with distinct sutures and not widened at the point of antennal insertion. The femora bearing a spine ventrally in the distal 1/3 is a special character of the new genus. This character occurs independently in different groups of this subfamily (genera *Apiomorphus Wagner*, 1911 and *Megatracheloides Lucas*, 1920). Trophic connections of the new species are unknown.

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## Note

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