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Psyllototus groehni sp. nov. (Coleoptera: Chrysomelidae), a new species of the palaeoendemic genus from Baltic amber

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Psyllototus groehni sp. nov. is described and illustrated from Upper Eocene Baltic amber of Yantarny, Kaliningrad region, Russia. It is the third known species of this palaeoendemic genus. A new record of *P. doeberli* Bukejs & Nadein, 2013 is also presented.

Key words: palaeontology, Alticini, *Psyllototus*, new species, Baltic amber, Eocene, new fossil record.

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INTRODUCTION

Baltic amber is mainly found from the southern coasts of the Baltic sea and originates from the Eocene strata within the region. Although most estimates of the age of Baltic amber have placed it as deriving from the early Middle Eocene (Lutetian) (48.6–40.4 Ma), based largely on K-Ar dating (Ritzkowski 1997), palynological biostratigraphy of the specific region where the sample originated suggests a younger, Priabonian age (37.2–33.9 Ma) (Aleksandrova & Zaporozhets 2008). A detailed discussion of the stratigraphic basis for the age of Baltic amber deposits can be found in Perkovsky et al. (2007). According to Turkin (1997), Baltic amber was produced by *Pinus succinifera* (Conw.) Schub., which together with oak dominated the humid mixed forest cover of Northern and Central Europe in the Eocene. More recent work on the chemical composition of Baltic amber has also suggested that trees within the family Araucariacea or Sciadopityaceae might be candidates for the production of this amber deposit (Langenheim 2003; Wolfe et al. 2009; Lambert et al. 2014).

Fossil Alticini are poorly known. Only ten species belonging to 8 genera are known from fossil resin – Lower Miocene Dominican amber (Dominican Republic), Lowermost Eocene Oise amber (France), Middle Miocene Chiapas amber (Mexico), Upper Eocene Rovno amber (Ukraine), Upper Eocene Baltic amber (Russia) (Bukejs & Nadein 2013, Bukejs & Konstantinov 2013, Bukejs 2014, Biondi 2014). Of them, four species [*Psyllototus doeberli* Bukejs & Nadein, 2013; *Ambraaltica baltica* Konstantinov & Bukejs,

2013; *Crepidodera svetlanae* Bukejs, 2014; and *Paolaltica eocenica* Biondi, 2014] were described from Baltic amber.

Until now, the palaeoendemic genus *Psyllototus* Nadein, 2010 contained two described species: *P. progenitor* Nadein, 2010 from Rovno amber, and *P. doeberli* Bukejs & Nadein, 2013 from Baltic amber. In the current paper, a third species of *Psyllototus* is described from Baltic amber of Yantarny, Kaliningrad region (Russia).

MATERIAL AND METHODS

The examined material is deposited in the private collection of Carsten Gröhn (Glinde, Germany). Observations were made using a Nikon SMZ 745T stereomicroscope. The photographs were taken using a Leica MZ12 stereomicroscope with AxioCam MRc5 digital camera.

SYSTEMATIC PALAEONTOLOGY

Family Chrysomelidae Latreille, 1802
Subfamily Galerucinae Latreille, 1802
Tribe Alticini Newman, 1834
Genus *Psyllototus* Nadein, 2010

***Psyllototus groehni* sp. nov.**
(Figs. 1–2)

Type material. Holotype: No. "C 4073", "Holotype / *Psyllototus groehni* sp. nov. / des. Bukejs A. & Nadein K." [red printed label]; sex unknown. A complete beetle; dorsal and especially ventral sides of the specimen are obscured by a "milky" cover. The specimen is embedded in a small subrectangular amber piece (length 13 mm, width 9 mm). There are a few stellate hairs and few small gas vesicles diffusely spread throughout the amber, although other animal syninclusions are absent. The amber was not subjected to any fixation.

Type strata. Baltic amber, Upper Eocene, Prussian formation.

Type locality. Yantarny, Kaliningrad region, Russia.

Etymology. Patronymic, the species name is dedicated to Carsten Gröhn (Glinde, Germany).

Differential diagnosis. *P. groehni* sp. nov. differs from *P. progenitor* Nadein in smaller elytral punctation, strongly rugose frons, longer and slender antennae, wider pronotum with weakly bisinuate posterior margin, sparser pronotal punctures, and smaller body size.

From *P. doeberli* Bukejs & Nadein the new species differs in denser and slightly larger pronotal punctation, longer and slender antennae, smaller body size, and dark brown antennae and tarsi.

Description. Body length 1.35 mm, oblong; unicolourously dark brown; dorsally weakly convex, glabrous, ventrally moderately convex, covered with fine, semi-erect pubescence.

Head hypognathous, transverse, dorsally weakly convex; strongly rugose frons, vertex impunctate, smooth. Eyes laterad, convex, large, with distinct facets; vertical diameter about 1.4 times longer than transverse diameter; distance between eyes nearly equal to vertical diameter of one eye. Antenna filiform, 11-segmented, slender, covered with fine, semi-erect setae; inserted close to each other, distance between antennal sockets subequal to diameter of one socket; long, extends beyond the middle of elytra. Scape weakly longer and wider than antennomere 2; pedicel thick, subcylindrical, approximately 1.6 times longer than wide; antennomeres 3–6 thin and long, 3.7–5.5 times longer than wide, distally very weakly widened; antennomeres 7–10 subequal, distally weakly widened, comparatively thicker than antennomere 6, antennomere 9 about 3 times longer than wide; antennomere 11 spindle-shaped with pointed apex. Antennal calli weakly convex; supracallinal sulcus narrow, curved; frontal ridge short.

Pronotum transverse, weakly convex, anteriadly slightly narrowed, widest in basal 1/3; covered with dense, small punctures (nearly as large as

Figs. 1–2. *Psyllototus groehni* sp. nov., holotype: 1 – habitus, dorsolateral view; 2 – habitus, ventrolateral view

elytral punctures), interspaces 0.5–2 times larger than diameter of one puncture, covered with distinct microsculpture; anterior margin straight (in dorsal view), arcuate (in frontal view); posterior margin weakly bisinuate, with narrow bordering; lateral margins nearly straight; base of pronotum barely narrower than base of elytra.

Scutellum small, subtriangular, flat, with widely rounded apex. Elytra elongate oval, with subparallel sides, moderately convex, widest near middle, elytral apices rounded. Humeral calli well developed, distinctly projecting. Elytral punctures moderately small, dense, arranged in regular striae; striae distinct throughout entire length of elytra; distance between punctures in striae equal to 0.5–1.0 times the diameter of one puncture; interstriae weakly convex, covered with microsculpture; distance between striae approximately 2.0–3.0 times the diameter of one puncture. Pygidium covered with punctures and semi-erect fine setae. Epipleura subhorizontal, anteriorly wide, posteriorly gradually narrowing, reaching elytral apex. Procoxae round; intercoxal prosternal process large, nearly as wide as procoxa.

Legs moderately long, covered with semi-erect fine setae. Metafemur strongly swollen, about 1.9 times longer than wide, shagreened; metatibiae thin, about 6.5 times longer than wide, nearly as long as metafemur, its distal half dorsally with two longitudinal lateral ridges bearing minute denticles, metatibial spur simple, moderately long, submedially inserted; metatarsus attached nearly at middle of metatibia, metatarsomere 1 twice as long as metatarsomere 2 and about 0.6 times the length of metatibia. Tarsomere 3 bilobed; tarsomere 4 deeply inserted into tarsomere 3. Claws small, thin, appendiculate.

NEW FOSSIL RECORD

***Psyllototus doeberli* Bukejs & Nadein, 2013**

Material examined. One specimen with the collection number "C 8048"; Baltic amber, Yantarny, Kaliningrad Region, Russia; deposited in the private collection of Carsten Gröhn (Glinde, Germany). Body length 1.9 mm.

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