

## ***Obrium damgaardi* sp. n. (Coleoptera: Cerambycidae), the first fossil species of the genus *Obrium* Dejean from the Baltic amber**

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A new fossil cerambycid from Baltic amber, *Obrium damgaardi* sp. n. (Cerambycinae, Obriini) is described and compared with extant congeners. The species is characterised by regularly punctured elytra, relatively large head and, possibly, uniform colouration. The first character is probably archaic, being rare among current species.

Key words: Coleoptera, Cerambycidae, fossil, Baltic amber, new species.

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### **INTRODUCTION**

Until today, 20 valid cerambycid species have been recognised from succinite (Vitali, 2014, 2015), 18 of them being only known from Baltic amber (Vitali, 2011).

The first fossil species of the genus *Obrium* Dejean, 1821, whose presence in Baltic amber was generically signalled since 1832, is described in this article. Currently, this genus includes 84 species with sub-cosmopolitan distribution, lacking in the Australian region.

### **MATERIALS AND METHODS**

At the beginning of May 2015, I received for the study some cerambycids included in Baltic amber from Anders L. Damgaard, Holstebro (Denmark), webmaster of the Website devoted to the world of amber, “amber-inclusions.dk”.

The examination of this material has revealed the presence of some unknown species, one of which is presented here.

The beetle is preserved inside a subtriangular piece of amber measuring 17x17x7 mm and including several “stellate hairs”, usually identified as rests of oak flowers.

Observations on the fossils were made using a stereomicroscope Antares Geminar 3 with 20–40x eyepieces equipped with a micrometer system. Pictures were taken by A. L. Damgaard using a camera Imaging Source DFK 72AUC02 attached to a trinocular microscope Nikon SMZ 745T. The reconstruction of the habitus has been obtained with a mixed traditional-computer graphic techniques.

According to the owner’s intentions, the holotype will be deposited at the Zoological Museum University of Copenhagen (Denmark).

## SYSTEMATIC PART

### Cerambycinae Latreille, 1802

#### Obriini Mulsant, 1839

#### *Obrium* Dejean, 1821

#### *Obrium damgaardii* sp. n.

(Figs. 1-4)

**Holotype.** Specimen ALDC0069. The beetle misses the apical part of the left antenna, cut after the half of the article IX, due to the amber modelling.

#### Differential diagnosis

The general habitus (Figs. 1 and 4) and the metepisterna posteriorly shortened (moreover longitudinally furrowed) make of this species a patent member of *Obrium* Dejean, 1821.

Though numerous species have been recently described, no author provided worldwide keys; nonetheless, this fossil is characterised by regularly punctured elytra, relatively large head and, possibly, uniform colouration.

The first character is a rare feature among current species, as well as in the whole tribe, being only present in the Sonoran *O. mozinnae* Linell, 1897 and in the Vietnamese *O. elongatum* Niisato, 1998 and *O. huae* Niisato, 1998. On the other hand, body shape and sparse punctuation remind of the Indochinese *O. coomani* Pic, 1927 and *O. helvolum* Holzschuh, 2008, which, nonetheless, show the irregular punctuation shared by most congeners.

Thus, the regular elytral punctuation is probably an archaic character, which nowadays is present only in some species with split distribution.

#### Description

Male, body length 3.8 mm. Body small, seemingly uniformly testaceous, covered with some sparse short setae, longer on pronotum.

Head (Fig. 2) short; forehead oblique, smooth; antennal tubercles widely separated and not el-

evated; inter-antennal furrow obsolete; eyes large, finely faceted, strongly reniform, very prominent laterally (larger than pronotum including lateral teeth), separated above by about one-fifth of the greatest width of head. Palpi small; last maxillar palpomere long, subcylindrical, obliquely truncate at apex. Antennae eleven-segmented, filiform, evidently longer than body (antennomere X surpasses the elytral apex), covered with short recumbent pubescence and some apical setae; scape club-shaped, bowed, without subapical cicatrix; pedicle nearly squared, one-fourth as long as scape; antennomere III–IV equal, one-fourth shorter than scape; antennomere V one-tenth longer than scape; antennomere VIII–IX equal, one-fifth longer as scape; antennomere X as long as scape; antennomere XI longest, more than one-fourth longer than scape (antennomere proportions according to the formula: 2.0: 0.5: 1.5: 1.5: 2.2: 2.4: 2.4: 2.4: 2.0: 2.6).

Prothorax cylindrical, elongate, one-fourth longer than wide, hardly larger at apex than at base; sides armed with a blunt conical tubercle at the middle; base one-half as wide as elytral base, coarsely furrowed along the posterior margin; disc extremely finely punctured and covered with some fairly long setae frontward directed. Scutellum shaped as equilateral triangle.

Elytra feebly enlarged posteriorly, 2.3 times as long as wide at shoulders; base straight; shoulders feebly prominent; sides weakly constricted; apex largely rounded and feebly convex; disc weakly concave from behind scutellum to the apical third, covered with five regular rows (three on disc and two lateral) of sparse punctures, each bearing a short oblique hair.

Ventral side (Fig. 3) extremely finely punctured and covered with a very thin pubescence; procoxae globose, procoxal cavities rounded; metepisterna longitudinally furrowed, convex inferiorly, pointed apically, not reaching the metacoxal cavities; urosternite visible I longest, urosternite II three-fifth as long as previous, urosternite III two-third as long as previous;



Fig. 1. *Obrium damgaardii* sp. n., habitus, dorsal view



Fig. 2. *Obrium damgaardii* sp. n., head, dorsal view



Fig. 3. *Obrium damgaardii* sp. n., habitus, lateral view

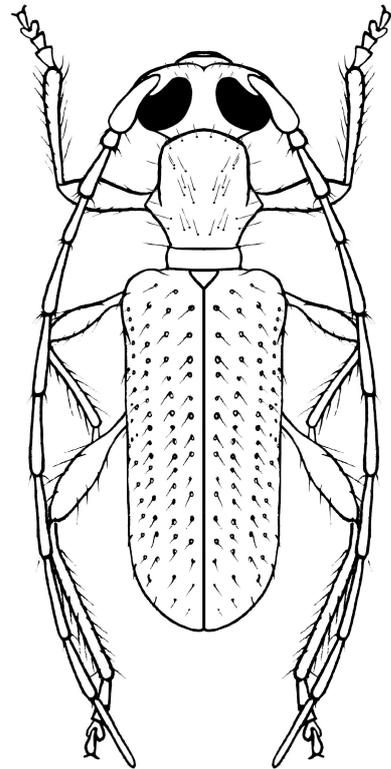


Fig. 4. *Obrium damgaardii* sp. n., reconstruction

urosternite IV one-half as long as II, urosternite V covered by turbidity (urosternite proportions according to the formula: 1.0: 0.6: 0.4: 0.3: ?).

Legs relatively thin, covered with some long raised setae, femora club-shaped; tibiae feebly curved; tarsi short; metatarsi one-fifth as long as

metatibiae; metotarsomere I as long as two following tarsomeres together.

#### Etymology

This new species is dedicated to Anders L. Damgaard, who kindly allowed me to examine his valuable collection of amber Cerambycids.

**Remarks**

*Obrium damgaardii* sp. n. is the first fossil species of this genus and the second known fossil member of the tribe Obriini after *Stenhomalus hoffeinsorum* Vitali, 2014. This genus was recorded from Baltic amber by Burmeister (1832) as “*Obrium prope testaceum*” and later by Klebs (1910) as “*Obrium* sp.” Subsequent authors mentioned such data (Giebel, 1856; Scudder, 1885; Handlirsch, 1907; Statz, 1938; Linsley, 1961; Abdullah, 1967; Larsson, 1978; Spahr, 1981; Poinar, 1992; Vitali, 2009, 2011, 2014).

Adults of current species are diurnal, while larvae are related to both coniferous and broadleaf trees. Moreover, though some species of the Recent reach cold regions, such as Canada (Linsley, 1963) or the central Fennoscandia (Bílý & Mehl, 1989), the genus *Obrium* is focused on the Inter-Tropical region, with numerous species in America and Indochina. The biology of *O. damgaardii* sp. n. remains questionable; nonetheless, the death position might throw more light on this topic.

The specimen is included with half opened elytra and all legs directed backwards, suggesting that it was attracted by flowing resin and drowned, searching to escape flying.

Butovitsch (1939) listed several cerambycid species attracted by resin of trees for feeding but none of them as related to conifers. Thus, a possible explanation might be that the yellow colour of the flowing resin attracted the beetle like a yellow Moericke pan trap.

Since several *Obrium* of the Recent are associated to conifers, another explanation might be that this specimen was trapped on its host-tree, as it occurs to fossil and current *Nothorhina* (Vitali, 2006). Nonetheless, fossil *Obrium* should be much more common in Baltic amber, as it occurs to *Nothorhina granulicollis* Zang, 1905. Consequently, *Obrium damgaardii* sp. n. was most probably related to broadleaf trees.

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