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A new species of the genus *Globicornis* Latreille, 1829 (Coleoptera: Dermestidae) from Eocene Danish amber

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Abstract

A new species of the tribe Megatomini (Dermestidae: Megatominae), *Globicornis (Hadrotoma) vitusberingi* sp. nov., has been described and illustrated in Priabonian Danish amber. This new species differs from *Globicornis (Hadrotoma) ambericus* Háva, Prokop et Herrmann, 2006 by its broad body, which is covered in decumbent black setae and subparallel elytral sides in the first and second thirds. It can be distinguished from *Globicornis (Hadrotoma) ingelehmannae* Háva et Damgaard, 2015 by last antennomere that is 2.5 times as long as two preceding antennomeres combined, its finely punctate pronotum and elytra, and its larger body size. This is the first record of the genus *Globicornis* Latreille, 1829 in Danish amber. A list of the Eocene *Globicornis* species has been compiled.

Key words Bostrichoidea, Megatominae, *Hadrotoma*, palaeodiversity, new species, Priabonian, Europe.

Introduction

The genus *Globicornis* Latreille, 1829, belonging to the subfamily Megatominae, comprises four subgenera and includes 40 described species (Háva 2025b). The species of the subgenus *Elania* Mulsant et Rey, 1868 are distributed in the Western Palaearctic; the species of the subgenera *Globicornis* s. str. and *Hadrotoma* Erichson, 1846 are distributed in the Western and Central Palaearctic; and the species of the subgenus *Pseudomesalia* Ganglbauer, 1900 are distributed in the Palaearctic (Háva 2025b). The oldest record of this genus of the nominative subgenus was found in Cenomanian Burmese amber (Háva

2025a). Five species were known from late Eocene Baltic amber (Háva *et al.* 2006; Háva 2008, 2023; Háva & Damgaard 2015; Bukejs & Háva 2018; Bukejs *et al.* 2023).

This paper describes a new species of the genus *Globicornis* from the European Priabonian.

Material and methods

The origin of late Eocene Danish amber and biota of Danish amber forest were discussed in Larsson (1978), Nadein *et al.* (2016) and Legalov *et al.* (2024a). We suppose that amber was originated on the south and southwest of Sweden (Simutnik *et al.* 2025).

Images of the holotype were made using digital imaging setup with flash lightning and P-51Camlift Driver ver. 2.6.1 to control the camera or using a Canon R7 with the Canon MP-E 65mm 1-5x Macro Lens fitted (stacking was performed with the StackShot 3X Macro Rail with 20 to 25 photos stacked using the PMax function in Zerene Stacker).

Holotype is housed in the Natural History Museum of Denmark (NHMD).

The terminology follows Lawrence *et al.* (2010).

Systematic palaeontology

Family Dermestidae Latreille, 1804

Subfamily Megatominae Leach, 1815

Tribe Megatomini Leach, 1815

Genus *Globicornis* Latreille, 1829

Subgenus *Hadrotoma* Erichson, 1846

***Globicornis (Hadrotoma) vitusberingi* sp. nov.**

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(Fig 1)

Type material. Holotype: No. NHMD-154728 with hand-written label “Dermestidae C. V. Hennigsen/1-12 1966”; Danish amber, late Eocene.

Etymology. The species is named after late Vitus Jonassen Bering (1681–1741), who was a Danish-born Russian cartographer and explorer.

Diagnosis. This new species differs from *Globicornis (Hadrotoma) americus* Háva, Prokop et Herrmann, 2006 by its broad body, which is covered in decumbent black setae and subparallel elytral sides in the first and second thirds. It can be distinguished from *Globicornis (Hadrotoma) ingelehmannae* Háva et Damgaard, 2015 by last antennomere that is 2.5 times as long as two preceding antennomeres combined, nearly equilateral scutellum, finely punctate pronotum and elytra, and larger body size.

Description. Holotype. Body black with red-brown antennae and tarsi, suboval. Cuticle punctate, covered with decumbent black setae. Head hypognathous, with large rounded, compound finely-faceted eyes. Median ocellus distinct and well developed. Forehead wide, convex, finely punctate. Antennae with 10 antennomeres. Antennomere 1 trapezoid, 2 suboval. Antennomere 1 about 1.3 times as long as wide. Antennomere 2 about 1.3 times as long as wide at apex, slightly shorter and narrower than antennomere 1. Antennomeres 3 and 4 subconical. Antennomere 3 subconical, about 1.3 times as long as wide at apex, distinctly shorter and narrower than antennomere 2. Antennomere 4 about as long as wide, 0.7 as long in length and about 0.8 times as narrow as antennomere 3. Antennomeres 5–7 wide-conical. Antennomere 5 about 0.5 times as long as wide at apex, about 0.7 as long and distinctly wider than antennomere 4. Antennomere 6 about 0.6 times as long as wide at apex, shorter and slightly wider than antennomere 5. Antennomere 7 about 0.4 times as long as wide at apex, of same length and distinctly wider than antennomere 6. Antennal club consists of three antennomeres. Antennomere 8 about 0.6 times as long as wide at apex, distinctly wider than antennomere 7. Antennomere 9 about 0.55 times as long as wide at apex, about 0.85 times as long as and about 1.3 times as wide as antennomere

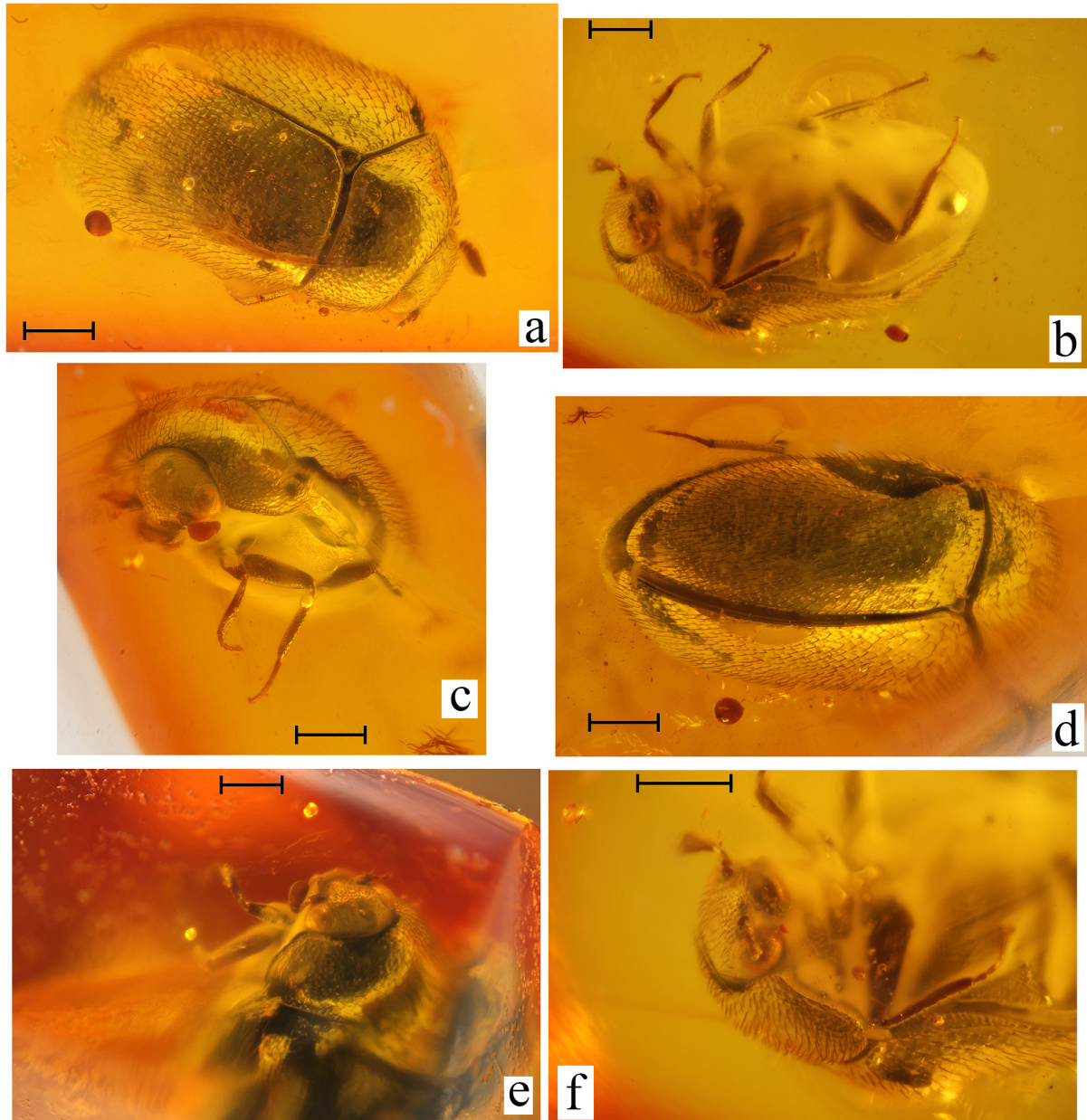


Figure 1. Photographs of *Globicornis (Hadrotoma) vitusberingi* sp. nov., holotype NHMD-154728, Danish amber, late Eocene. A, body, dorso-frontal view. B, body, latero-ventral view. C, body, frontal view. D, body, dorsal view. E, head and pronotum, dorsal view. F, head and pronotum, ventral view. Scale bars = 0.5 mm.

8. Antennomere 10 about 1.6 times as long as wide at base, 2.5 times as long as 8 and 9 antennomeres combined, about 5 times as long as and about 1.5 times as wide as antennomere 9. Pronotum campaniform, transverse, about 0.6 times as long as wide, with distinct lateral margin. Disc convex, finely punctate. Base of pronotum biconcave. Scutellum triangular, finely punctate, 0.9 times as long as basal width. Elytra about two times as long as wide, about 2.7 times as long as pronotum. Humeral calli indistinct. Elytral suture not convex. Sides of elytra subparallel in first and second thirds. Metaventrite convex, punctate. Abdomen convex, punctate. Ventrite 1 distinctly longer than ventrite 2. Ventrite 3 slightly shorter than ventrite 2. Legs weakly flattened. Mesofemora 9.0 times as long as wide in middle. Metafemora about 9.1 times as long as wide in middle. Tibiae narrow, with spines on inner edge. Tarsi long and narrow, distinctly shorter than tibiae. Tarsomere 5 long, slightly shorter than tarsomere 2-4 combined. Tarsal claws simple and free. Mesotarsi: tarsomeres 1-4 subequal in width; tarsomere 1 about 2.9 times as long as wide at apex; tarsomere 2 about 2.1 times as long as wide at apex, about 0.8 times as long as tarsomere 1; tarsomere 3 about 1.4 times as long as wide at apex, about 0.7 times as long as

tarsomere 2; tarsomere 4 slightly longer than width at apex, 0.8 times as long as tarsomere 3; tarsomere 5 about 3.9 times as long as wide at apex, about 4.1 times as long as and about 1.2 times as wide as tarsomere 4. Metatarsi: tarsomere 1 about 4.4 times as long as wide at apex; tarsomere 2 about 4.1 times as long as wide at apex, about 0.9 times as long as and slightly narrower than tarsomere 1; tarsomere 3 3.0 times as long as wide at apex, about 0.7 times as long as and of same width to tarsomere 2; tarsomere 4 2.5 times as long as wide at apex, about 0.7 times as long as and slightly narrower than tarsomere 3; tarsomere 5 7.0 times as long as wide at apex, about 2.8 times as long as and of same width to tarsomere 4. Body length: 3.2 mm, width: 1.5 mm.

Remarks. Based on the well-developed median ocellus, body covering setae and non-convex elytral suture, the new species belongs to the subfamily Megatominae. The antennae, with a distinct club and metatarsomere 1 significantly longer than metatarsomere 2, suggest placement in the tribe Megatomini. The ten-segmented antennae suggest that the new species belongs to the genus *Globicornis*. The species is placed in the subgenus *Hadrotoma* based on the elongated antennal club.

Unlike the nominative subgenus (Háva 2025a, 2025b), the subgenus *Hadrotoma* is only known from the Western Palearctic (Europe and the Caucasus) and the western part of the Eastern Palearctic (two species known also in Iran, Kazakhstan and Western Siberia). This, in combination with the speciosity of the subgenus in European amber and its absence in Africa, could indicate a European origin for the subgenus.

The subgenus includes both temperate and cryophobic species (Háva 2025b). Currently, two species of the subgenus are known from Northern Europe, both of which are extremely rare in Denmark (Jan Pedersen, pers. comm. 2025). Three species have been found in Eocene ambers in Russo-Scandia, suggesting that cryophobic species of the subgenus were also present in European ambers. This has also been demonstrated for other beetle families, such as erotylids (Lyubarsky *et al.* 2023) and scaptiids from the subgenus *Spanisa* Emery, 1876 of the genus *Anaspis* Geoffroy, 1762 (Telnov & Perkovsky 2025).

A list of the Eocene *Globicornis* species

Globicornis (*Globicornis*) *groehni* Bukejs & Háva, 2018 – Baltic amber

Globicornis (*Globicornis*) *rakovici* Háva, 2008 – Baltic amber

Globicornis (*Globicornis*) *samlandensis* Bukejs, Háva, McKellar & Alekseev, 2023 – Baltic amber

Globicornis (*Hadrotoma*) *americus* Háva, Prokop & Herrmann, 2006 – Baltic and Polish amber

Globicornis (*Hadrotoma*) *ingelehmannae* Háva & Damgaard, 2015 – Baltic amber

Globicornis (*Hadrotoma*) *vitusberingi* Legalov, Háva, Vasilenko & Perkovsky, sp. nov. – Danish amber

Discussion

Larsson (1978) recorded more than 20 groups of beetles at the family level from Danish amber stored in the Natural History Museum of Denmark. New species and genera have been described from families Staphylinidae (Shavrin *et al.* 2025 and references therein), Cantharidae (Kazantsev 2013; Kazantsev *et al.* 2025), Cryptophagidae (Lyubarsky *et al.* 2024a, 2024b), Erotylidae (Lyubarsky *et al.* 2024c), Mycetophagidae (Legalov *et al.* 2024c, 2025d), Ciidae (Legalov *et al.* 2024b, 2025b), Chrysomelidae (Nadein *et al.* 2016) and Brentidae (Legalov 2022) in recent years.

The Dermestidae were previously unknown from Danish amber. Larsson (1978) recorded the following genera in the collection of the Natural History Museum of Denmark: *Dermestes* Linnaeus, 1758; *Trinodes* Dejean, 1821; *Orphinus* Erichson, 1846; and the larva of *Anthrenus* Geoffroy, 1762. This is the first time that the genus *Globicornis* has been recorded in Danish amber.

This is the second species of Dermestidae to be described from the NHMD collection. The first was *Orphilus dudkoi* Legalov, Háva, Vasilenko & Perkovsky, 2025, which was found in Baltic amber (Legalov *et al.* 2025a).

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