

A New Genus and Species of Dryophthorid Weevils (Coleoptera, Dryophthoridae: Stromboscerinae) from the Rovno Amber

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Received July 20, 2008

Abstract—*Stenommatomorphus hexarthrus* gen. et sp. nov. (Dryophthoridae: Stromboscerinae) is described from the Late Eocene Rovno amber. This is the first fossil representative of the subfamily. The new genus is most close to *Synommatus* Pascoe, from which it differs in the pronotum and elytra less coarsely sculptured, the intervals not carinate, and the scutellum present.

DOI: 10.1134/S003103010909010X

Key words: new genus and species, dryophthorid weevils, Coleoptera, Dryophthoridae: Stromboscerinae, Rovno amber.

INTRODUCTION

The inclusion containing a representative of the subfamily Stromboscerinae of the family Dryophthoridae, described below, was discovered in the private collection of the Late Eocene Rovno amber belonging to S.A. Suvorkin (Kyiv). It was collected in the Vladimirets District of the Rovno Region. The type will be deposited in the amber collection of the Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine. No fossil representatives of the subfamily Stromboscerinae have been previously known (Zherikhin, 2000; Davis, and Engel, 2006).

Measurements were made on a MBS-9 stereomicroscope equipped with a measuring eyepiece. Photographs were taken using an Olympus digital camera mounted on a LOMO microscope. Drawings were made using an eyepiece drawing grid. The classification of the family Dryophthoridae follows Alonso-Zarazaga and Lyal (1999).

SYSTEMATIC PALEONTOLOGY

Family Dryophthoridae Schoenherr, 1825

Genus *Stenommatomorphus* Nazarenko, gen. nov.

Etymology. From the genus name *Stenommatomorphus* and the Greek *morphe* (form).

Type species. *Stenommatomorphus hexarthrus* sp. nov.

Description. The rostrum is almost cylindrical, somewhat widened at the antennal sockets and at the apex, weakly curved. The dorsal surface of the rostrum with a longitudinal sulcus between the antennal bases;

the rostrum apex is smooth. The frons with a transverse sulcus at the rostrum base. The head between eyes is slightly narrower than the rostrum base. The eyes are small and narrowly oval, flat. The antennae are attached near the midlength of the rostrum. The funicle with six antennomeres. The club is obliquely truncate at the apex. The apical surface (true club) is very slightly convex. The pronotum is the widest before its midlength, with its sides at that point rounded; in the anterior one-third it is strongly narrowed and with a constriction on each side. The scutellum is dot-shaped. The elytra are ovate, with striae, formed by large punctures. The intervals are convex, approximately as wide as the striae. The femora are slightly clavate, without dentiform projections, densely and coarsely punctate; the tibiae are straight, with two indistinct longitudinal rows of large punctures in the apical half. The spurs at the tibia apex (uncus) are large, bent inside. The tarsi are falsely 4-segmented, the true 4th tarsomere is hidden within a notch on the 3rd tarsomere.

Species composition. Type species.

Comparison. In its appearance, sculpture of integument, as well as the shapes of the pronotum, elytra, elytral intervals, femora, and tibiae, the described genus is most similar to *Stenommatomorphus* Wollaston (Dryophthorinae), differing from it in having the antennal funicle 6-segmented, the antennal club asymmetrical, with the apex almost flat, the tarsi 4-segmented, and in the larger size. The antennal and tarsal characters listed above preclude placement of the new genus into the subfamily Dryophthorinae, but correspond well to the main diagnostic characters of the closely related subfamily Stromboscerinae (Morimoto,



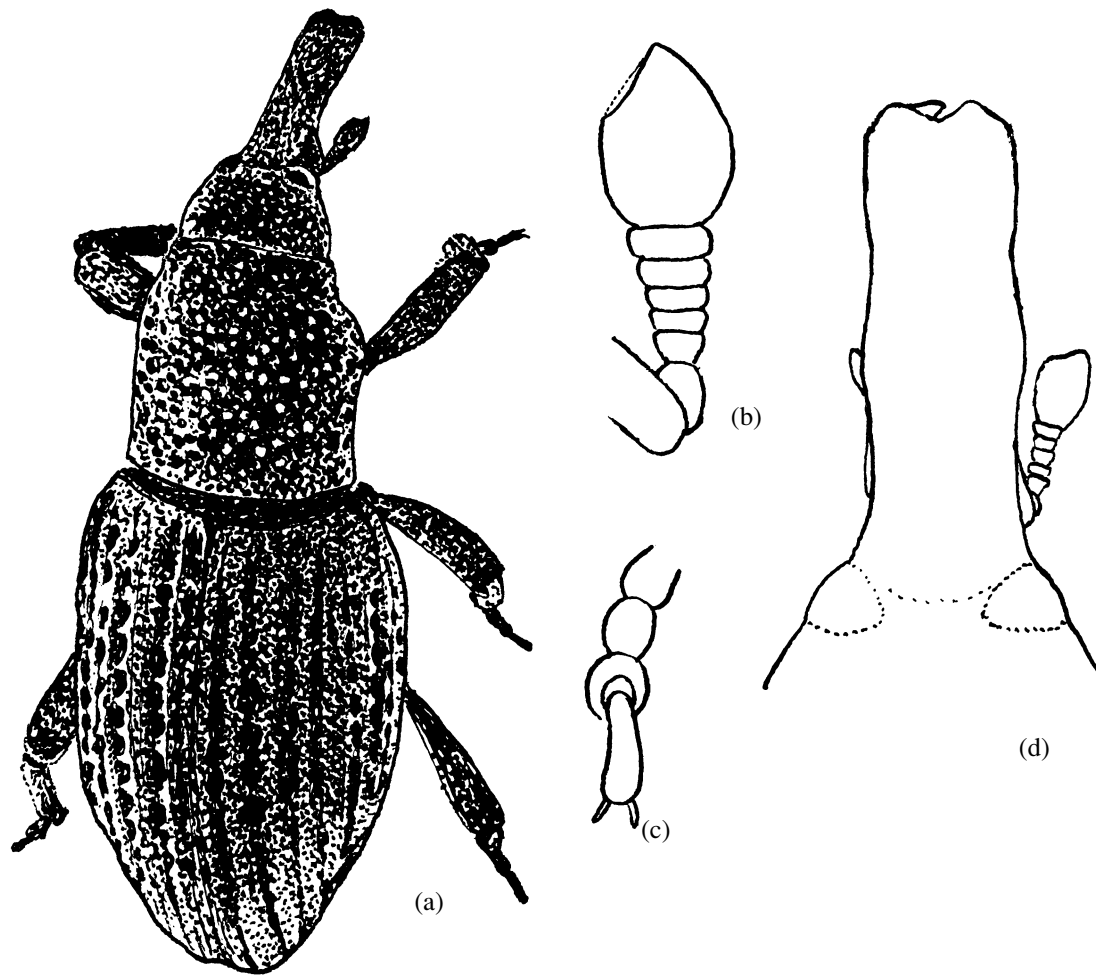


Fig. 1. *Stenommatomorphus hexarthrus* Nazarenko, sp. nov., holotype: (a) habitus; (b) right antenna; (c) tarsus; (d) head.

1978; 1985; Zimmermann, 1993; Riedel, 1995; Zherikhin, 2000), in which we are placing the described genus. From the genus *Besuchetiella* Osella, which comprises two species with 4- and with 6-segmented antennal funicle (Riedel, 1995), *Stenommatomorphus* differs primarily in the pronotum being transverse, the elytra ovate, the even and odd intervals equally wide, as well as in the structure of the rostrum, head, and legs and the external sculpture. The new genus differs from other stromboscerine genera with 6-segmented antennal flagellum primarily in the structure of the elytral intervals (all being equally wide in the described genus; the even intervals being narrow and carinate in the recent taxa), and partly in the structure of the tibiae and the punctuation of the pronotum. From the genera *Nephius* Pascoe and *Tasactes* Faust it differs also by the

nearly flat apical surface of the antennal club. From genera having a smaller number of funicular segments the new genus differs, in addition to the funicle structure, in the following: from *Tetrasyntommatum* Morimoto, to which it is similar in the shape of the elytra and the size, in having the elytra ovate and the intervals not carinate, from *Syntommatum* Pascoe, *Dryophthoroides* Roelofs, and *Syntommatoides* Morimoto, to all of which it is similar in the elytron shape, the rostrum structure, and the structure of the funicular segments and club, in the pronotum and elytra less coarsely punctate, the intervals not carinate, and the scutellum present.

Remarks. The condition of the amber precludes seeing the ventral parts of the specimen, including such taxonomically important characters as the lower margins of eyes, the antennal scape, and the anterior coxal

Explanation of Plate 3

Figs. 1–3. *Stenommatomorphus hexarthrus* Nazarenko, sp. nov., holotype: (1) habitus; (2) rostrum, antenna, right leg; (3) fore tibia and tarsus.

pits. Therefore, the proposed taxonomic placement of the fossil remains somewhat tentative.

The similarity of the newly described genus to the recent East Asian genera suggests a similarity between the Eocene European insect fauna and the recent insect fauna of Southeast Asia.

Stenommatomorphus hexarthrus Nazarenko, sp. nov.

Plate 3, figs. 1–3

Ety m o l o g y. From the Greek *hexarthrus* (with six joints), referring to the antennal funicle structure.

H o l o t y p e. Specimen no. 24 in S.A. Suvorkin's collection; after publication will be deposited in the amber collection of the Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine (Kiev); a whole beetle in good condition, but inaccessible for study in ventral aspect; sex unknown; Rovno amber; Late Eocene.

D e s c r i p t i o n. (Fig. 1). The body is black, densely and continuously coated with yellowish gray dust. The cuticular punctures are also partly filled with a yellowish gray substance. The antennal flagella are reddish brown.

The rostrum is densely punctate. The head behind eyes is strongly widened, hemispherical, covered with punctures; the average distance between adjacent punctures is exceeding the puncture diameter; the puncture diameter is 1.5–2.0 times smaller than that of the pronotal punctures. The 1st funicular segment is oval and broad, the 2nd is conical, almost as long as the 1st. The 3rd to 6th funicular segments are strongly transverse, each wider than the preceding one, forming together with the 2nd segment and the club an elongate cone; the 6th segment is somewhat longer than the 5th. The club is smooth and oval, almost as long as the five apical funicular segments combined. The elytra with striae, formed by coarse punctures; the puncture diameter is approximately 1.2–2.0 times as large as that of the pronotal punctures. The legs are short; the femora are broad; the tarsi are narrow; the first two tarsomeres are

of equal width, the 3rd tarsomere is as long as the 2nd, but somewhat wider.

M e a s u r e m e n t s (mm): length of body (without rostrum), 3.55; rostrum, 1.0; head, 0.4; funicle with club, 0.5; pronotum, 1.05; elytra, 2.1; width of rostrum, 0.25; head, 0.3; pronotum, 0.95; elytra, 1.4.

M a t e r i a l. Holotype.

ACKNOWLEDGMENTS

The authors are grateful to S.A. Suvorkin for providing us with the material and to A.P. Rasnitsyn for useful advice and great help in preparing this paper.

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