A new species of *Tychobythinus* Ganglbauer, 1896 (Coleoptera: Staphylinidae: Pselaphinae) from Turkey

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Abstract

A new species of the genus *Tychobythinus* Ganglbauer, 1896, *T. oculatus* sp. n., is described from Asian part of Turkey.

Keywords

Pselaphinae, Bythinini, *Tychobythinus oculatus*, new species, taxonomy, Turkey, Asia

Introduction

The genus *Tychobythinus* includes about 84 known species from the Palaearctic region (Besuchet 2008, Hlaváč and Jalžić 2009, Löbl and Besuchet 2004). Almost all species are rarely collected and are of limited distribution. Up to date only one species is known from Turkey (Besuchet 1978). A second species from Turkey was discovered in the collection of the Museum für Naturkunde der Humboldt Universität in Berlin and is described here as *Tychobythinus oculatus* sp. n. The new species differs from all known congeners manly by the shape of gular region, and the aedeagus.

Materials and methods

Dissections were made using standard techniques. Genitalia and small parts were mounted in Euparal or Canada balsam on acetate labels which are pinned with the specimens. All photos were done with a Zeiss Stemi 2000 microscope equipped an AxioCam ERc 5s camera. Image stacks were processed using COMBINE ZP (Hadley 2010).

The material used for this study is deposited in the following collections:

MNHB – Museum für Naturkunde der Humboldt Universität zu Berlin, Germany (Johannes Frisch)

NMNHS – National Museum of Natural History, Sofia, Bulgaria

PCVB - Personal collection Volker Brachat, Geretsried, Germany

Taxon treatment

Tychobythinus oculatus Bekchiev, sp. nov.

- ZooBank urn:lsid:zoobank.org:act:A3498013-439A-4B8B-B49C-AF10425DED1C

Materials

Holotype:

a. country: Turkey; verbatimLocality: Mugla, SE Köyceğiz; verbatimElevation: 10 m; locationRemarks: flood-plain wood; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28°43'56"E; eventDate: 28.03.2002; individualCount: 1; sex: male; recordedBy: P. Wunderie, V. Assing; institutionCode: MNHB; occurrenceID: A6E22D55-93D9-5607-A2D9-5B24F5D03B04

Paratypes:

a. country: Turkey; verbatimLocality: Mugla, SE Köyceğiz; verbatimElevation: 10 m; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28°43'56"E; eventDate: 28.03.2002; individualCount: 3; sex: 2 males, 1 female; recordedBy: P. Wunderie, V. Assing; institutionCode: MNHB; occurrenceID: 215E1824-73A0-51BD-8B97-925916166142

b. country: Turkey; verbatimLocality: Mugla, SE Köyceğiz; verbatimElevation: 10 m; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28°43'56"E; eventDate: 28.03.2002; individualCount: 2; sex: males; recordedBy: P. Wunderie, V. Assing; institutionCode: NMNHS; occurrenceID: A7BA78D3-D484-59C1-86A1-3900C24CEB37

c. country: Turkey; verbatimLocality: Mugla, SE Köyceğiz; verbatimElevation: 10 m; verbatimLatitude: 36°56'50"N; verbatimLongitude: 28°43'56"E; eventDate: 28.03.2002; individualCount: 7; sex: 2 males, 5 females; recordedBy: P. Wunderie, V. Assing; institutionCode: PCVB; occurrenceID: EE3A795D-F9F0-5542-8ADE-5A44E39B73E7

Description

Male: Body dark brown (Fig. 1a); pubescent with short, golden semierectet setae and some long, erect setae. Length 1.10-1.19 mm. Head (Fig. 1b) wider than long (0.25/0.20 mm), covered with dense, semierected setae. Frontal rostrum distinctly wider than long (0.13/0.07 mm); antennal tubercles well-developed, median depression shallow. Vertex convex, with distinct median ridge. Ventral side of the head with narrow and deep depression in gular region, the depression distinctly longer than wide, shining; anterior border of depression carinate, with two obtuse teeth; posterior border simple, with one thick and long seta. Eyes well developed, each composed of 10-12 ommatidia. Maxillary palpi long (Fig. 1b), almost as long as

antennae, palpomeres II–III granular, palpomeres IV with dense, short and recumbent seate. Antennae (Fig. 1b) short – 0.43-0.44 mm; scapes longer than wide (0.09-0.1/0.04-0.05 mm), with a small tubercule in anteromesal part; pedicel globular (0.034/0.034 mm); antennomeres III slightly longer than wide (0.025/0.022); antennomeres IV – VIII about same length (0.017/0.025 mm each); antenommeres IX wider than long (0.043/0.017 mm); antenommeres X wider than long (0.067/0.017 mm); XI longer than wide (0.12/0.068 mm). Pronotum convex (0.27/0.30 mm), widest part before middle, covered with dense, long, semierected setation; disk shiny; lateral antebasal foveae well-defined, connected by well-defined antebasal sulcus. Elytra wider than long (0.510/0.425 mm) each with two basal foveae, sutural stria well-defined through whole length of elytron; covered with long, golden and semierected setae, with deep and irregular punctation. Abdomen slightly narrower than elytra, covered with a long, semierected setae, first two visible tergites of same length. Legs long and slender, protibia simple, metatibia with strong spur in apical inner part.

Aedeagus as in Fig. 2, length – 0.20-0.22 mm.

Sexual dimorphism: The female is with a simple scapes, gular region of the head is without modifications, metatibia is simple.

Diagnosis

Tychobythinus oculatus sp. n. is morphologically closely related to *T. abnormipes* Reitter, 1910, and *T. pauper* Kiesenwetter, 1858, both from Greece, they shares similar shape of the scape (longer than wide, with a small tubercule). The new species clearly differs from *T. abnormipes, and T. pauper* by the very simplified internal armature of the edeagus (in *T. abnormipes* and *T. pauper* the aedeagus has a long and crossed internal aphophyses), and by the shape of the gular depression (simplified and narrow in *T. oculatus*; wide and triangular in *T. abnormipes;* strongly modified in *T. pauper*). It can be readily distinguished from the other known species from Turkey –*T. vignai*. *T. oculatus* sp. n. differs by the presence of eyes, related to its way of life, and by the specific shapes of antennae, gular region and aedeagus.

Etymology

The name of the new species refers to its well developed eyes, as opposite to the other *Tychobythinus* species known from Turkey (*T. vignai* Besuchet, 1987) which is anophthalmos.

Distribution

Turkey.

Acknowledgements

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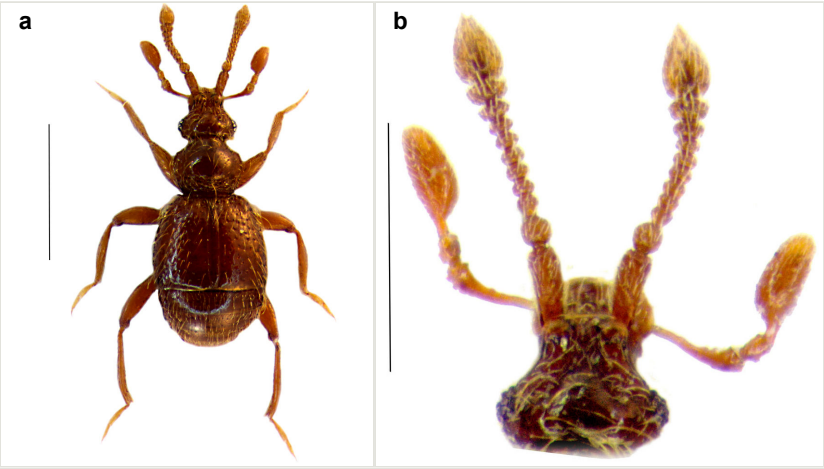

Figure 1.

Tychobythinus oculatus sp. n.

a: habitus, scale: 0.6 mm
b: head, scale: 0.3 mm

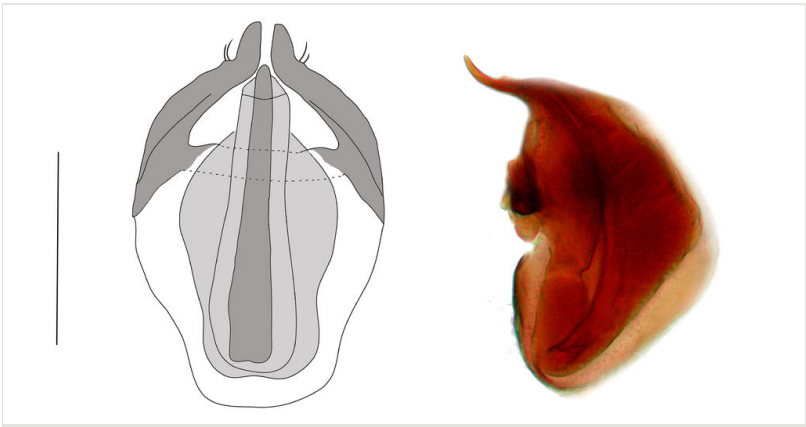

Figure 2.

Tychonythinus oculatus sp.n., aedeagus - dorsal and lateral view (scale: 0.1 mm).