A new Mexican species of Stenus LATREILLE, 1797 (Coleoptera: Staphylinidae: Steninae)

107-111

T. MAINDA

Abstract

Stenus vitzliputzli sp.n. (Coleoptera: Staphylinidae: Steninae) is described from Mexico (Veracruz). It belongs to the *S. hostilis* species group and is very similar to *S. baranowskii* PUTHZ, 2001.

Key words: Coleoptera, Staphylinidae, Steninae, Stenus, new species, taxonomy, Mexico, Veracruz, Tuxtlas Mountains.

Introduction

PUTHZ (2001, 2014) revised the Nearctic/Neotropical *Stenus hostilis* species group, which currently includes 38 species. Members of this group are characterized by distinct abdominal paratergites, simple tarsi and by the apical mesotibial spine of the males. An additional new species of the *S. hostilis* group is described herein from Mexico (Veracruz).

Material and methods

The material mentioned below is deposited in the following collections:

CNIN Colección Nacional de Insectos, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico

NMW Naturhistorisches Museum Wien, Vienna, Austria

The following acronyms are used: BL (length of body; except mandibles), DE (distance between eyes), EL (maximal length of elytra), EW (maximal width of elytra), FBL (length of forebody; head, pronotum, elytra), HT (holotype), HW (head width), PL (pronotal length), PT (paratype), PW (pronotal width), SL (sutural length of elytra).

The morphological studies were carried out using a stereoscopic microscope (Euromex DZ 1105) and a compound microscope (Euromex BB.1153.PLI). Images were taken using a Canon EOS R camera. A Mitutoyo $10 \times$ ELWD Plan Apo objective was used for the habitus photos. The objective was attached to a Carl Zeiss Jena Sonnar 3.5/135 MC as focus lens. Three SN-1 LED segments from Stonemaster were used for illumination (www.stonemaster-onlineshop.de). Image stacks were created using a Stackmaster macro rail (Stonemaster). The stacks were fused using Helicon Focus v. 7.61 on a MacPro 2019 (Apple Inc.) with a Radeon Pro 6800X MPX GPU. The image of the aedeagus was obtained using a Touptek microscope camera (ToupCam 14MP). Image stacks were captured with ToupView Lite (MacOS) and processed using Zerene Stacker.

Stenus vitzliputzli sp.n.

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TYPE LOCALITY: Mexico, Veracruz State, Tuxtlas Mountains, Ruiz Cortinez, 15 km NNW of Catemaco, ca. 1140 m a.s.l., ca. 18°33.00'N 95°9.35'W.

TYPE MATERIAL: Holotype σ (CNIN): "MEXICO: Veracruz Los Tuxtlas, Ruiz Cortinez, 15 km NNW of Catemaco; 18°33.0'N 95°9.349'W; 1140 m; 3.ix.2016 Arriaga-Varela, Fikáček & Seidel lgt. 2016-MX06" | "sifting of small accumulations of leaf litter in depressions and along fallen trunks + at base of a large tree, in one place with

rotten *Beilschmiedia* fruits, in mesophilous cloud forest" | " σ HOLOTYPE, *Stenus vitzliputzli* sp. nov. design. Mainda, 2024" [red label]. **Paratype** $_{\mathbb{Q}}$ (NMW): "**MEXICO**: Veracruz Los Tuxtlas, Ruiz Cortinez, 14.2 km NNW of Catemaco; 18°32.7'N 95°9.0'W; 1120 m; 3.ix.2016 Arriaga-Varela, Fikáček, Ramírez & Seidel lgt. **2016-MX05**" | "sifting of small accumulations of leaf litter mixed with decaying fruits of *Beilschmiedia* at sides of road through mesophilous cloud forest [= sifting 2]" | " $_{\mathbb{Q}}$ PARATYPE, *Stenus vitzliputzli* sp. nov. design. Mainda, 2024" [yellow label].



Fig. 1: Stenus vitzliputzli, holotype. Scale: 1 mm.

DESCRIPTION: Measurements of the male HT: BL: 4.40 mm, DE: 0.55 mm, FBL: 2.40 mm, EL: 1.05 mm, EW: 1.13 mm, HW: 1.03 mm, PL: 0.75 mm, PW: 0.78 mm, SL: 0.90 mm. Meas-

urements of the female PT: BL: 4.40 mm, DE: 0.52 mm, FBL: 2.50 mm, EL: 1.05 mm, EW: 1.15 mm, HW: 0.98 mm, PL: 0.75 mm, PW: 0.75 mm, SL: 0.97 mm.

Habitus as in Fig. 1. Macropterous, body black, moderately shiny, with aeneous hue; segments I– III of maxillary palpi brown, segment IV yellow; antennae brown; base of femora yellowish, apical portion brown, base and apical part of tibiae brownish, middle part yellow, tarsi brownish; labrum black.

Median portion of head distinctly narrower than each of the lateral portions, shiny and slightly elevated, not extending to level of medial eye margin; largest punctures as large as maximal width of antennomere III; punctation of lateral portions rugose and dense. Clypeus and labrum with silvery pubescence. Antennae long and slender, extending to posterior margin of pronotum when reflexed.

Pronotum with distinct median furrow, 1.04 times as broad as long, broadest at middle, sides towards anterior margin convex, towards posterior margin concavely narrowed. Punctation of posteromedian portion coarse and dense, punctation of anteromedian portion less coarse but very dense. Punctation on lateral sides coarse, largest punctures as large as maximal width of antennomere II, interstices smooth.

Metatarsi 0.72 times as long as metatibia; metatarsomere I as long as combined length of metatarsomeres II-IV.

Elytra 1.17 times as broad as head, 1.1 times as broad as long, humeral angles distinct, suture unmodified. Punctation of anterior part and on sides coarse, diameter of punctures as large as apical cross-section of antennomere III, interstices smooth; at median part, rugae obliquely passing from shoulder toward sutural apex.

Abdomen microsculptured, with distinct paratergites and golden pubescence; paratergites of tergites III–V broader than maximal diameter of antennomere I; on tergites III–V interstices as wide as diameters of punctures, their size about as large as an ommatidium at medial eye margin up to width of antennomere III; punctation of tergites VI–VIII finer and denser, more microsculptured, interstices larger than diameter of punctures, their size about as large as an ommatidium at medial eye margin.

MALE: Femora dilated; mesotibiae with strong apical tooth; metatibiae distinctly dilated at apex; metafemora with distinct inner tooth. Aedeagus (Fig. 2a–b) strongly resembling that of *Stenus baranowskii* PUTHZ, 2001 (PUTHZ 2001: fig. 19, 2014: fig. 57); in ventral view, apex of median lobe distinctly sinuately acuminate toward narrow triangular apex; posteromedial cavity densely covered with sclerotized teeth; parameres shorter than median lobe, with about 20 long setae in apical part. Sternite VII ventrally flattened, apically emarginate, posterior margin convex. Sternite VIII (Fig. 2c) with densely arranged, thick setae, especially in middle; apex distinctly emarginate. Tergite VIII simple.

FEMALE: Legs unmodified, femora and tibiae not distinctly dilated. Elevated median portion of head completely shiny, lacking punctures (intraspecific variation?).

DIAGNOSIS: *Stenus vitzliputzli* belongs to the *S. hostilis* group and is most similar to *S. baranowskii* from the Mexican states of Mexico, Michoacán, and Oaxaca. The new species can be distinguished from the latter by the broader frons, the structure of the elytra, and by the narrower triangular apex of the aedeagus.

HABITAT: The specimens were sifted from leaf litter in a cloud forest at 1,140 resp. 1,120 m a.s.l.

DISTRIBUTION: So far known only from the Tuxtlas Mountains in Mexico (Veracruz State).



Fig. 2: *Stenus vitzliputzli*, holotype: a) photograph of aedeagus, b) apex of aedeagal median lobe, enlarged, c) sternite VIII, embedded in Euparal. Scales: 0.25 mm (a), 0.10 mm (b), 0.25 mm (c).

ETYMOLOGY: The epithet refers to Huītzilōpōchtli, also known as Vitzliputzli, the patron saint of the Aztecs and their capital Tenochtitlan, who was also worshipped as the god of the sun and war.

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Tobias MAINDA

Friedrich-Loeffler-Straße 56, D – 17489 Greifswald, Germany (tobias.mainda@gmx.de)

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