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Description of the male of *Mizotrechus gorgona* Erwin, 2011 from Mera, Napo province, Ecuador (Coleoptera: Carabidae: Perigoninae)

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Abstract. In the present paper the description of the male of *Mizotrechus gorgona* Erwin, 2011, previously known from a single female only, is provided. The species is morphologically close to *M. costaricensis* Erwin, 2011 and *M. fortunensis* Erwin, 2011 by sharing the similar shape of profemora bearing a strongly serrate ventral margin. It differs from those two species by the non-sinuate posterolateral angles of pronotum, and the morphology of the aedeagus.

Riassunto. *Descrizione del maschio di* Mizotrechus gorgona *Erwin, 2011 di Mera, Provincia Napo, Ecuador (Coleoptera: Carabidae: Perigoninae)*. In questa nota viene fornita la descrizione del maschio di *Mizotrechus gorgona* Erwin, 2011, descritto su un'unica femmina. La specie è morfologicamente vicina a *M. costaricensis* Erwin, 2011 e *M. fortunensis* Erwin, 2011, con cui condivide la forma dei femori anteriori che hanno un margine seghettato ventralmente. Differisce da queste due specie per gli angoli pronotali posteriori, non sinuati, e per la morfologia dell'edeago.

Resumen. *Descripción del macho de* Mizotrechus gorgona *Erwin, 2011 de Mera, Provincia de Napo, Ecuador (Coleoptera: Carabidae: Perigoninae).* En el presente trabajo se describe el macho de *Mizotrechus gorgona* Erwin, 2011, hasta ahora conocido en un solo espécimen hembra. La especie es morfológigamente cercana a *M. costaricensis* Erwin, 2011 y *M. fortunensis* Erwin, 2011, con los que comparte la forma de los fémures anteriores, que tienen un margen dentado ventralmente. Se diferencia de la dos especies mencionadas en los ángulos pronotales posteriores, y en su morfólogia edeágica.

Key words. Coleoptera, Carabidae, Perigoninae, *Mizotrechus.*

Introduction

A dozen years ago Terry Erwin, a worldwide known specialist on Coleoptera Carabidae, reviewed the genus *Mizotrechus* Bates, 1872 within Perigonini (ERWIN, 2011), describing 17 new species, some of them from a single female only (ERWIN, 2011).
I recently received a number of unidentified Carabidae collected in Ecuador. Among these specimens, I found a male belonging to *Mizotrechus* that, after a careful study, was identified as *Mizotrechus gorgona*. In this paper the male of *Mizotrechus gorgona* Erwin, 2011 is described for the first time.

Material and methods

The material examined is preserved in the author's collection (ADC) (Bubano di Mordano, Bologna, Italy).

Abbreviations used in the text (summarized in Table 1):
LU total body length from labrum apex to extremity of elytra;
LAC maximum head width, across compound eyes;
LUA length of antenna;

LAP maximum width of pronotum;
LUP pronotal length along the midline;
LBP basal width of pronotum;
LUE length of elytra from base of scutellar shield to apex;
LAE maximum length of elytra;
RMP pronotal maximum width/length ratio;
RME elytral width/length ratio;
RMEP elytral width/pronotal width ratio.

Nomenclature and terminology related to the morphology follow DEGIOVANNI (2023). The male genitalia armature is mounted in Euparal glued on a vinyl acetate card to the same pin below the studied specimen. Two white paper printed labels added to the same pin: first with locality, date, and collector's name, second one with the species name followed by "Degiovanni det., 2024".
Images of the male *M. gorgona* were taken by the author: for the aedeagus a Pentax K20D camera, mounted on a Nikon Labophot 1 stereomicroscope, with apochromatic 5x lens was used, whereas for habitus images a Pentax K20D digital camera, placed on a micrometric stand and a Lomo 3,7x lens were used. Images were subsequently processed with CombineZP software.
Images of the aedeagi of *M. costaricensis* and *M. fortunensis* and image of the profemur of *M. gorgona* are taken from ERWIN (2011).

Mizotrechus gorgona Erwin, 2011
(Figs. 1-3)

New material examined.
Ecuador: 1 ♂, Mera, Napo prov., 1300 m, X.2022, O. Boilly leg. (ADC).

Diagnosis

A large *Mizotrechus* (8,9 mm); colour brown reddish, femorotibial joint and tarsi slightly darker than pronotum and elytra; head glossy, dorsally sparsely micro-punctate and with some wrinkles just beyond compound eyes; pronotum slightly wider than long, barely narrowing posteriorly, posterolateral angles square-angled and denticle-like produced lateral; elytral striae one to five distinctly impressed, six to eight shallow, slightly punctate; profemur with a strongly serrate ventral margin; habitus as in Fig. 1.

Description

Head glossy, dorsally micro-punctate; frons and sub ocular area with some wrinkles; visible part of labrum square shaped with anterior margin medially with a shallow dorsal impression; compound eyes moderately large and convex; gena glabrous, moderately long and straight. Pronotum slightly wider than long (RMP 1,16), barely narrowing posteriorly, sub-glossy, dorsally micro-punctate and micro-reticulate, transverse microsculpture discernible only at high magnification, with some short wrinkles both sides of mid line just around base; lateral bead gradually widens from apex towards base; base slightly punctate at middle, with posterolateral angles of pronotum nearly right-angled, slightly denticulate-produced laterally. Elytra slightly convex; elytral lateral margin posthumerally barely serrate with small denticle alternated with setae; elytral striae one to five distinctly impressed, six to eight shallows, only first stria extends towards apical edge; interstriae slightly convex; distal margin oblique, sutural apex rounded. Profemur with postero-ventral margin distinctly serrate (Fig. 2). Abdomen with moderately bristled sternites; apical half of sternite VII with a V-shaped furrow, in male; six apical setae present. Metasternum barely punctate. Male genitalia: median lobus as in Fig. 3.

Table 1 - Size (in mm) and ratio parameters of the examined male of *Mizotrechus gorgona.*

	LU	LAC	LUA	LAP	LUP	LBP	LUE	LAE	RMP	RME	RMEP
Myzotrechus gorgona - ♂	8,90	1,68	3,70	2,32	2,00	1,80	5,20	3,00	1,16	1,73	1,29

Fig. 1 - Habitus of the male of *Mizotrechus gorgona* Erwin, 2011. LU = 8,9 mm, from Napo Province, Ecuador (ADC).

Fig. 2 - Profemur of *Mizotrechus gorgona* Erwin, 2011 (from ERWIN, 2011).

Fig. 3 - Male genitalia of *Mizotrechus gorgona* Erwin, 2011, median lobe of the aedeagus in lateral and ventral view (ADC).

Ecological notes

The studied specimen was collected in a primary rainforest using a FIT (flight interception trap).

Distribution

Hitherto, the species was known only from the type locality in Colombia, Cauca District, Gorgona Island, La Mancora beach. First record for Ecuador: Napo Province, Mera.

Comparative remarks

Mizotrechus gorgona shares the similar morphology of the profemoral margin with *M. costaricensis* and *M. fortunensis*; it differs from the two congeners in the shape of the habitus and morphology of the aedeagus (Figs. 4-5).

Fig. 4 - Male genitalia of *Mizotrechus costaricensis* Erwin, 2011, median lobe of the aedeagus in lateral and ventral view (from ERWIN, 2011).

Fig. 5 - Male genitalia of *Mizotrechus fortunensis* Erwin, 2011, median lobe of the aedeagus in lateral and ventral view (from ERWIN, 2011).

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