

**Two new species of the genus *Taphrocerus* Solier, 1833 from Ecuador
(Coleoptera: Buprestidae: Agrilinae)**

Jaroslav MAREK

Sýkořice 29, CZ-270 24 Zbečno, Czech Republic

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Abstract. Two species of the genus *Taphrocerus* Solier, 1833 from Ecuador are newly described and illustrated: *T. ecuadorensis* sp. nov. and *T. regularis* sp. nov. The new species are compared to the most related taxa.

INTRODUCTION

The large Buprestid genus *Taphrocerus* is distributed in a New World except for unique species known from an Old World - *T. capensis* Hesperheide in Bellamy et Hesperheide, 1988 described from South Africa, Natal. The genus comprises 206 species at present (Bellamy 2008, Brůlé 2012, Marek 2014, 2015, 2016a, 2016b, 2017a, 2017b, 2018), but three species only are known from Ecuador: *T. mirai* Marek, 2016, *T. pseudomirai* Marek, 2016 and *T. purpureus* Marek, 2017. The next two species from Ecuador are described in the present paper.

MATERIALS AND METHODS

Designation of holotype specimens are provided by printed red label with black margin. Data from locality labels are cited „verbatim“.

Abbreviations used in the text: () = my remarks and additions, HT = holotype, ST = syntype; DV = dorsal view.

A Canon D-550 digital camera with the Canon MP-65 mm f/2.8 1-5x macro lens was used to capture the colour images; multiple photographs taken were combined with Helicon Focus image stacking software.

Specimens were measured to the nearest 0.05 mm.

The following collection codens are used throughout the text:

JMSC collection of Jaroslav Marek, Sýkořice, Czech Republic (it will be deposited in NMPC);

NMPC Národní Museum, Praha, Czech Republic.

TAXONOMY

Taphrocerus regularis sp. nov.

(Figs. 1, 1a)

Type locality. Ecuador, Machala.

Type specimens. Holotype (♂): „Ecuador CW, Prov. de El Oro, N of Machala, S of Naranjal, lgt. Snížek, 4. i. 2011“, (JMSC).

Diagnosis. Medium-sized (3.40 mm), elongate, convex above, very lustrous; above slightly bicoloured: head and pronotum black with slight violet tinge, scutellum and elytra black, beneath black, abdomen with coppery lustre, legs and antennae black with feeble violet lustre; sparsely covered by extremely short, almost inconspicuous, thin white setae, in regular rows longitudinally on elytra; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head rather large, wide, the same width as anterior pronotal margin; clypeus very widely „V-shaped“, strongly shagreened, separated from frons by well elevated carina, epistomal pores large, elongate transversely, separated by their own diameter; frons very slightly convex, widely and rather deeply depressed at middle, strongly shagreened, aetose; vertex convex, finely grooved at middle longitudinally, very finely shagreened, sparsely punctate by small ocellate punctures, each puncture with short thin white seta; eyes large, widely oval, moderately projecting beyond outline of head; antennae long and rather narrow.

Pronotum convex, 1.86 times as wide as long, widest at the beginning of basal third; narrowly transversely depressed along anterior margin, more deeper laterally, broadly and rather deeply depressed lateroposteriorly; with very vague longitudinal bump at lateroposterior angles; anterior margin widely regularly rounded, posterior margin rather strongly biemarginate, widely and shallowly emarginate in front of scutellum, sides subparallel at first fourth, then straight dilated to the beginning of basal third, angulate and slightly constricted to the base; surface rather strongly shagreened, with medium-sized ocellate punctures in the depressions and on the disc at middle longitudinally, each puncture with short thin white seta; scutellum medium-sized, regularly triangular, almost smooth.

Elytra moderately convex, moderately wider at humeri than pronotum at base, 2.20 times as long as wide, widest at humeri and just before the middle; lateral margins slightly and narrowly emarginate behind humeri, rather narrowly rounded at middle, then very slowly arcuately tapering towards conjointly rounded apices; apices strongly serrate laterally; humeral swelling moderately developed, basal depression small and rather deep; surface very finely, almost inconspicuously shagreened at basal half, very finely shagreened at apical half, punctures in longitudinal rows larger and deeper at basal third becoming fine posteriorly and very fine, almost inconspicuous at apical fourth; very short thin white setae sparsely in regular rows longitudinally; posthumeral elytral carina absent.

Ventral surface rather strongly shagreened, moderately lustrous; abdomen punctate by large „U-turned-up-shaped“ punctures, with a few thin white setae on the last sternite apically only; anal ventrite elongate, rather narrowly elongately rounded at apex, preapical groove following outline of margin wide, regularly semicircular, with a wide shallow emargination on apical margin; antennal grooves long, narrow; prosternal process elongate, slightly dilated behind, apex rhomboidal, surface strongly shagreened with rather small but deep circular depression at middle, asetose.

Aedeagus (Fig. 1a).

Sexual dimorphism. Female unknown.

Measurements. Length 3.40 mm; width 1.15 mm.

Differential diagnosis. *T. regularis* sp. nov. belongs to the *T. punctuliceps* Obenberger, 1934 species complex (see Marek 2016b) and is the most similar to *T. picator* Marek, 2016 (Figs. 2, 2a) (described from Brazil, Sao Paulo). It can be distinguished by the colouration of dorsal side, not so projecting eyes beyond outline of head, strongly different male genitalia as well as many other details of morphology. See also Table A below.

Table A. Diagnostic characters of *T. regularis* sp. nov. and *T. picator* Marek, 2016.

	<i>T. regularis</i>	<i>T. picator</i>
Colouration	slightly bicoloured: head and pronotum black with slight violet tinge, scutellum and elytra black	brown with strong purple tinge
Body shape	more slender, about 2.95 times longer than wide	more robust, about 2.80 times longer than wide
Eyes	moderately projecting beyond outline of head	strongly projecting beyond outline of head
Pronotal sides	less angulate at the widest part	more angulate at the widest part
Aedeagus	parameres slightly, straight dilated at basal four fifths, constricted proximally at apical fifth (Fig. 1a)	parameres subparallel at basal two thirds, constricted proximally at apical third (Fig. 2a)
Distribution	CW Ecuador (Machala)	SE Brazil (Sao Paulo)

Etymology. The specific epithet is the Latin adjective *regularis* (regular). The name reflects the body shape and the body proportions including male genitalia.

***Taphrocerus ecuadorensis* sp. nov.**

(Figs. 3, 3a)

Type locality. Ecuador, Gualaquiza.

Type specimens. Holotype (♂): „Ecuador SE, Prov. de Morona Santiago, NW of Gualaquiza (Rt. 45), 10. i. 2011, lgt. Snižek“, (JMSC).

Diagnosis. Medium-sized (3.55 mm), rather broadly elongate, moderately convex above, very lustrous; above slightly bicoloured: head, pronotum and scutellum black with purple-brown tinge and very strong golden reflection, elytra black with slight golden reflections, beneath black with slight coppery tinge including legs and antennae; sparsely covered by very short thin white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head large, wide, the same width as anterior pronotal margin; clypeus very widely „V-shaped“, strongly shagreened, separated from frons by fine carina, epistomal pores large, elongate transversely, separated less than their own diameter; frons moderately convex, deeply and very widely depressed at middle, finely shagreened, with very short, almost inconspicuous thin white setae in a row along inner margin of the eyes and between epistomal pores only; vertex convex, finely grooved at middle longitudinally, rather strongly shagreened, sparsely punctate by small ocellate punctures, each puncture with short thin white seta; eyes large, very widely oval, feebly projecting beyond outline of head; antennae long and narrow, antennomeres 6-10 widened.

Pronotum moderately convex, 1.88 times as wide as long, widest at the beginning of basal third; relatively unsculptured, narrowly and shallowly depressed lateroanteriorly, largely and shallowly so lateroposteriorly, narrowly and shallowly so above scutellum, with very small but deep circular depression near sides at the widest part; without bump or prominence at lateroposterior angles; anterior margin widely regularly rounded, posterior margin rather strongly biemarginate, widely and shallowly emarginate in front of scutellum, sides shortly subparallel anteriorly, then feebly arcuately dilated to the beginning of basal third, markedly angulate and straight constricted to the base; surface strongly shagreened, very sparsely ocellate-punctate by small punctures, each puncture with short thin white seta; scutellum medium-sized, cordiform, finely shagreened, moderately lustrous.

Elytra moderately convex, very slightly wider at humeri than pronotum at base, 2.16 times as long as wide, widest at humeri and before the middle; lateral margins slightly and narrowly emarginate behind humeri, rather narrowly rounded at middle, than very slowly arcuately tapering towards almost conjointly rounded apices; apices strongly serrate; humeral swelling moderately developed, basal depression small and rather deep; surface finely shagreened, punctures in longitudinal rows larger and deeper at basal third becoming fine posteriorly, disappearing at apical fourth which is finely corrugate; very short thin white setae sparsely in regular rows longitudinally; posthumeral elytral carina absent.

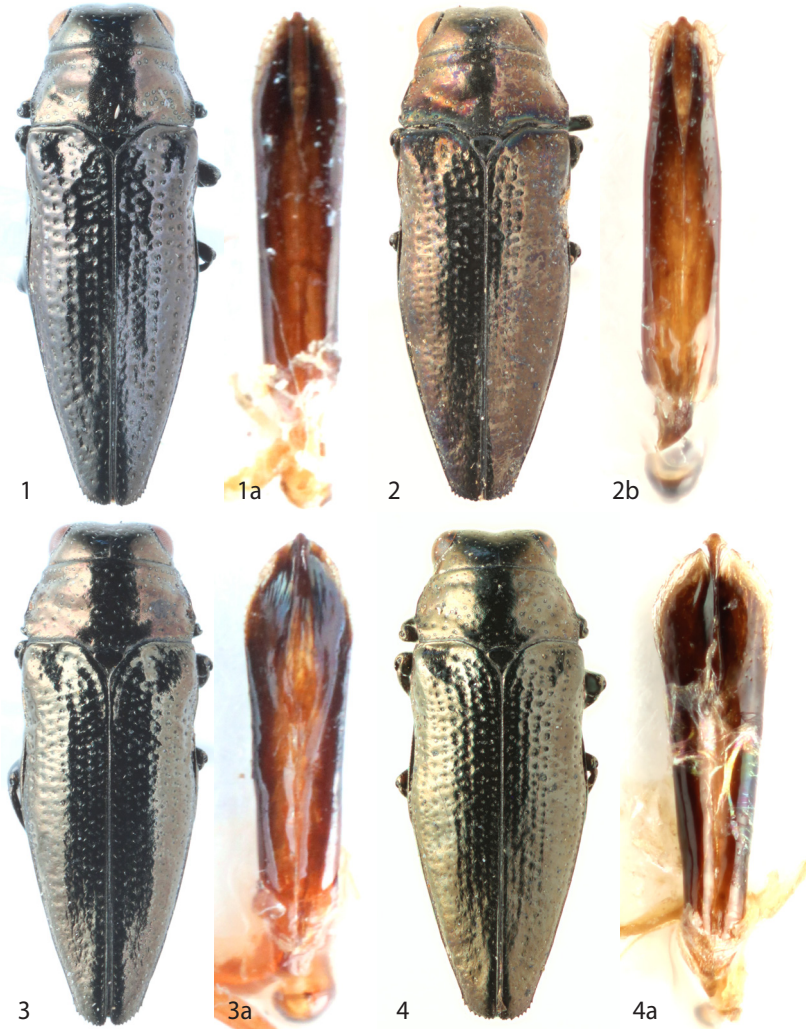
Ventral surface strongly shagreened, rather strongly lustrous, abdomen ocellate-punctate by small regularly circular punctures, sparsely covered by very short thin white setae, somewhat denser laterally and apically; anal ventrite rather wide, subtruncate at apex, preapical groove following outline of margin regularly semicircular, widened apically; antennal grooves long, wide; prosternal process elongate, feebly constricted between procoxae, apex rhomboidal, surface strongly shagreened, coarsely rugose, aetose.

Aedeagus (Fig. 3a).

Sexual dimorphism. Female unknown.

Measurements. Length 3.55 mm; width 1.25 mm.

Differential diagnosis. *T. ecuadorensis* sp. nov. is very similar to *T. regularis* sp. nov. described above by colouration and by general characters of morphology but with strongly different male genitalia. In fact it belongs to *T. elongatus* species-group (definition and revision of the species-group in preparation), which is characterized by larger size (3.40-5.60 mm), relatively unsculptured pronotum and by wide head with more or less strongly projecting eyes beyond outline of head. The known species of this species-group are known from southeastern Brazil, Uruguay, North Argentina and Paraguay. *T. ecuadorensis* sp. nov. is the first species of this species-group known from Ecuador and is very similar and



Figs. 1–4a: 1- *T. regularis* sp. nov., HT ♂, 3.40 mm, 1a- aedeagus, 0.85 mm; 2- *T. picator* Marek, 2016, HT ♂, 3.70 mm (NMPC), 2a- aedeagus, 0.95 mm; 3- *T. ecuadorensis* sp. nov., HT ♂, 3.55 mm, 3a- aedeagus, 1.00 mm; 4- *T. vimmeri* Obenberger, 1924, ST ♂, 3.80 mm (NMPC), 4a- aedeagus, 0.90 mm.

probably closely related to *T. vimmeri* Obenberger, 1924 (Figs. 4, 4a) (described from Brazil, Sao Paulo). It can be distinguished by the characters given in Table B below.

Table B. Diagnostic characters of *T. ecuadorensis* sp. nov. and *T. vimmeri* Obenberger, 1924.

	<i>T. ecuadorensis</i> (♂)	<i>T. vimmeri</i> (♂)
Colouration of dorsal side	slightly bicoloured: head, pronotum and scutellum black with purple-brown tinge and very strong golden reflection, elytra black with slight golden reflections	monochromatic: black with very strong golden-brown tinge
Body shape	more slender, about 2.80 times longer than wide; the maximum width of body at humeri and just before the middle of elytra	more robust, about 2.66 times longer than wide; the maximum width of body before the middle of elytra
Eyes	feebly projecting beyond outline of head	strongly projecting beyond outline of head
Aedeagus	parameres strongly emarginate on inner margin at apical half (DV); phallus (median lobe) well visible at apical half, pointed at the top (DV) (Fig. 3a)	parameres very narrowly emarginate (almost touching) on inner margin at apical half (DV); phallus (median lobe) almost invisible at apical half, rounded at the top (DV) (Fig. 4a)
Distribution	CW Ecuador (Gualaquiza)	SE Brazil (Sao Paulo)

Etymology. The specific epithet is derived from the country of origin (Ecuador); adjective.

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