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Studies on the genus *Taphrocerus* (Coleoptera: Buprestidae: Agrilinae) part VIII.

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Taxonomy, new species, lectotype designations, new record, Coleoptera, Buprestidae, *Taphrocerus*, Neotropical Region

Abstract. The eighth part of the study on the genus *Taphrocerus* Solier, 1833 (Coleoptera: Buprestidae: Agrilinae) is presented. Nine species are newly described and illustrated as follows: *T. abscondus* sp. nov. (French Guiana), *T. chassaini* sp. nov. (French Guiana), *T. hovorkai* sp. nov. (Brazil), *T. inca* sp. nov. (Peru), *T. muehlei* sp. nov. (Brazil), *T. myersi* sp. nov. (Venezuela), *T. somoliki* sp. nov. (Ecuador), *T. stareki* sp. nov. (Brazil, Peru) and *T. zahradniki* sp. nov. (Brazil). The new species are compared to the most related taxa. Lectotypes of *Brachys albopictus* Kerremans, 1896, *Taphrocerus amazonicus* Kerremans, 1896, *T. minutus* Kerremans, 1903, *T. missionarius* Obenberger, 1934, *T. parallelus* Kerremans, 1896, *T. parvus* Obenberger, 1924, *T. putillus* Obenberger, 1934 and *T. riparius* Obenberger, 1934 are designated. A record new to country is presented for *T. parvus* (Brazil).

INTRODUCTION

The present paper is further in the series of studies on the genus *Taphrocerus* Solier, 1833 resulting from the study of type material and examination of extensive number of specimens. The vast majority of species can only be identified by a comparison of specimens directly together with the study of male genitalia due to their external similarity. Females of closely related species are mostly unidentified.

I am currently working (besides description of new species) on revisions of previously described species. As I mentioned before (Marek 2014), there are mixed two or more species in larger type-series of previously described species usually (mostly in Obenberger´s syntype-series) and lectotype designation (redescription, synonymization or description of new species eventually) is necessary. New synonymy may be done on a study of primary types only.

MATERIALS AND METHODS

Lectotype designations are provided in order to preserve the stability of nomenclature by fixing the status of the specimen as the sole name-bearing type of a particular nominal taxon (in agreement with article 74.7 ICZN (1999). Designation of all lectotypes (and all available paralectotypes) are provided by printed white label with red border containing all relevant data as: type status (red capital letters), taxon name in the original combination, author name, year of publication, an inscription J. Marek design., year of designation.

Abbreviations for lectotype designations: the slash mark \ is used to indicate data from separate labels; my notations are in parentheses [ ], with the abbreviation [h] =

handwritten, [p] = printed, [Kerremans´ MS] = Kerremans´ manuscript, [Obenberger´s MS] = Obenberger´s manuscript.

Designation of holotype specimens are provided by printed red label with black margin. Designation of paratype(s) specimen(s) is provided by white label with wide red border and red capital letters paratype. Data from locality labels are cited „verbatim".

Further abbreviations used in the text: ( ) = my remarks and additions; HT = holotype, AT = allotype, PT (PTs) = paratype (paratypes), ST = syntype, ST 1 (ST 2, ST 3 …) - specimen labelled as syntype number 1 (nr 2, nr 3 …); DV = dorsal view, FV = frontal view, FVV = fronto-ventral view, LV = lateral view; (p) = printed, (h) = handwritten.

A Canon D-550 digital camera with the Canon MP-65 mm f/2.8 1-5x macro lens was used to captured the colour images, multiple photographs taken were combined with Helicon Focus image software, occasional exceptions are noted at relevant places.

Specimens were measured to the nearest 0.05 mm. The length of body was measured as distance between anterior margin of the head and the apex of elytra, the width of body was measured across the widest part (usually at humeri). The pronotal length was measured in the middle, the width across the widest part (usually the beginning of basal third). The elytral length was measured as the maximal perpendicular distance between anterior margin (base) and the tip of elytra, the width across the widest part. The length of aedeagus was measured as distance between its base and apex of the parameres, the width across the widest part.

The following collection codens are used throughout the text:

BMNH The Natural History Museum, London, United Kingdom;
HNHM Hungarian Natural History Museum, Budapest, Hungary;
JMSC collection of Jaroslav Marek, Sýkořice, Czech Republic (it will be deposited in NMPC);
MNCN Museo Nacional de Ciencias Naturales, Madrid, Spain;
MNHN Muséum national d´Histoire naturelle, Paris, France;
NMPC National Museum, Praha, Czech Republic;
ZSMC Zoologische Staatssammlung, München, Germany.

RESULTS

DESCRIPTIONS OF NEW SPECIES

Taphrocerus abscondus sp. nov.

(Figs. 1, 1a, 1b)

Type locality. French Guiana, Roura.

Type specimens. Holotype (♂): „FR. GUYANE bor., ROURA env., 18. xi. 1995, lgt. M. Snížek" (JMSC). Paratypes (3): „GUYANE Francaise, Cayenne, Mt. Bourda, J. Marek lgt. v. 1992" (1 ♂, JMSC); „GUYANE Francaise, Fourgassier env., J. Marek lgt. xii. 1992" (1 ♂, JMSC); „GUYANE Francaise, Kourou, Guatemala, 15. xii. 2006, Snížek lgt." (1 ♂, JMSC).

Diagnosis. Medium-sized (3.00-3.55 mm), elongate, oval, convex above, very lustrous; above black with more or less strong golden-coppery lustre; beneath black, very lustrous, legs

and antennae black with strong coppery tinge; sparsely covered by extremely short, almost inconspicuous thin white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head medium-sized, slightly narrower than anterior pronotal margin; clypeus very widely „V-shaped", very strongly shagreened, separated from frons by well elevated carina, epistomal pores large, circular, separated less than their own diameter; frons rather strongly convex, widely depressed at middle, somewhat more deeper above clypeus, the depression becoming in short sulcus towards vertex, strongly shagreened, asetose, impunctate; vertex convex, slightly depressed at middle, with a fine groove at middle longitudinally, very finely shagreened, very sparsely ocellate-punctate by extremely small punctures, each puncture with extremely short, almost inconspicuous thin white seta; eyes medium-sized, reniform, very slightly projecting beyond outline of head; antennae long, narrow, antennomeres 6-10 distinctly widened.

Pronotum rather strongly convex at anterior half, somewhat flattened at basal half, 1.81 times as wide as long, widest at the beginning of basal third; narrowly and deeply depressed along anterior margin, largely and deeply so lateroposteriorly, with rather large but shallow transversely oval depression on the disc, with narrow sulcus along the sides; with well elevated longitudinal bump lateroposteriorly; anterior margin very widely rounded, straight at middle, posterior margin strongly biemarginate, widely emarginate in front of scutellum, slightly narrower than base of elytra, sides very shortly subparallel anteriorly, then arcuately dilated to the beginning of basal third, moderately angulate and then slightly emarginately constricted to the base; surface finely shagreened at anterior half and on the disc, rather strongly shagreened lateroposteriorly, with small ocellate punctures at the anterior transverse depression and on the disc and with distinctly larger ocellate punctures at basal third, each puncture with very short thin white seta; scutellum small, regularly cordiform, widely rounded anteriorly, very finely shagreened, moderately lustrous.

Elytra rather strongly convex, somewhat flattened at apical third, 2.25 times as long as wide, widest at humeri and at the middle, slightly wider at humeri than pronotum at the widest part, lateral margins narrowly and rather deeply emarginate behind humeri, rather narrowly rounded at middle, then very slowly, almost straight tapering towards narrowly conjointly rounded apices; apices finely sharply serrate; humeral swelling well developed, laterobasal depression medium-sized and deep, well marked; surface rather strongly shagreened, punctures in rows longitudinally larger and deeper at basal third becoming more finer apically, almost inconspicuous at apical fourth, which is rather coarsely corrugate; sparsely covered by extremely short, almost inconspicuous thin white setae; posthumeral elytral carina absent.

Ventral side very lustrous, strongly shagreened, abdomen impunctate (!), very sparsely covered by extremely short, almost inconspicuous thin white setae; anal ventrite rather narrowly rounded, with short but wide and rather deep emargination on apical margin; preapical groove following outline of margin regularly semicircular, very wide; antennal grooves long and narrow, somewhat more wider and shallower on prosternum; prosternal process constricted between procoxae, apex rhomboidal, surface strongly shagreened, asetose, with row of large simple punctures along the sides.

Aedeagus (Figs. 1a, 1b).

Sexual dimorphism. Female unknown.

Measurements. Length 3.00-3.55 mm (holotype 3.55 mm); width 1.00-1.10 mm (holotype 1.10 mm).

Variability. Observed in: the strong coppery lustre of dorsal side is somewhat less distinct in the paratype from Kourou-Guatemala; frons is coarsely corrugate along inner sides of the eyes in the holotype only (the monstrosity probably); anterior pronotal margin is regularly widely rounded in both paratypes (straight at middle in the holotype); pronotal sides are distinctly more angulate in both paratypes; scutellum is widely cordiform in both paratypes (regularly cordiform in the holotype).

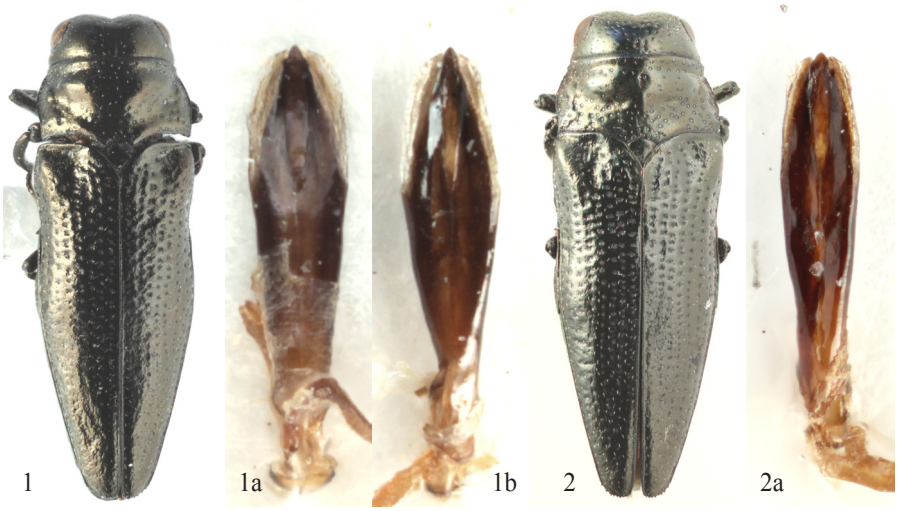
Differential diagnosis. *T. abscondus* sp. nov. is the most similar to *T. obscurellus* Obenberger, 1934 (Figs. 2, 2a) (described from French Guiana also). Both species belong to an extremely difficult species complex of the genus (uniformly black species, sometimes with slight coopery, green or golden lustre, without pronotal prehumeral and elytral posthumeral carinae, sparsely uniformly pubescent by very short thin white setae, without „fronto-clypeal pubescent stripe“ in male, with the pronotal posterior margin the same width or very slightly narrower than base of elytra and by many other details of its morphology). The species complex comprises about ten previously described species and large number of undescribed species with the centre of distribution in the Amazonia. The species can only be identified by a comparison of specimens directly together with the study of male genitalia. The differences in general shape of body are unusable mostly for reason of the variability in correlation between the body shape and body size in many species of this complex. Females are unidentified mostly. The main diagnostic characters for distinguishing *T. abscondus* sp. nov. and *T. obscurellus* are given in Table A bellow.

Table A. Diagnostic characters of *T. abscondus* sp. nov. and *T. obscurellus* Obenberger, 1934.

	T. abscondus (♂)	*T. obscurellus* (♂)
Eyes	smaller, slightly reniform (LV); less projecting beyond outline of head (DV)	larger, oval (LV); more projecting beyond outline of head (DV)
Vertex	very sparsely and finely punctate (namely at anterior half)	densely and coarsely punctate (namely at anterior half)
Pronotum	narrower, about 1.80 times as wide as long	wider, about 1.95 times as wide as long
Aedeagus	stouter, about 3.8 times as long as wide; apical semimembranous part wide, well distinct* (Figs. 1a, 1b)	slender, about 4.4 times as long as wide; apical semimembranous part narrow, less distinct (Fig. 2a)

Etymology. The specific epithet is the Latin adjective *abscondus* (hidden) to stress the fact, that I have mixed the type-specimens of *T. abscondus* sp. nov. in a large number of similar *T. obscurellus* in my collection for many years due to their external similarity.

Remarks.* The apical semimembranous part of male genitalia is sometimes withered (see Fig. 1b).



Figs. 1-2a: 1- *T. abscondus* sp. nov., HT ♂, 3.55 mm, 1a- aedeagus, 0.85 mm, 1b- aedeagus of PT from Kourou, 0.80 mm (somewhat withered apical semimembranous part); 2- *T. obscurellus* Obenberger, 1934, LT ♂, 4.00 mm (NMPC), 2a- aedeagus, 1.35 mm.

Taphrocerus chassaini sp. nov.

(Figs. 3, 3a)

Type locality. French Guiana, Fourgassier.

Type specimens. Holotype (♂): „GUYANE Francaise, Fourgassier env. (MSA)*, iii. 1993, J. Marek lgt.“ (JMSC). Paratype: „GUYANE Francaise, St. Laurent du Maroni, J. Marek lgt., v. 1993“ (1 ♂, JMSC).
*See Remarks bellow.

Diagnosis. Medium-sized (3.75-3.80 mm), elongate, rather widely oval, moderately convex above, lustrous; above uniformly black, head with very feeble green lustre, anterior half of frons with well markant purple tinge, pronotum and elytra with very feeble violet lustre; beneath black including legs and antennae; sparsely covered by short thin white setae, somewhat more longer on elytra; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head medium-sized, narrower than anterior pronotal margin; clypeus very widely „V-shaped“, strongly shagreened, separated from frons by well elevated

carina, epistomal pores absent; frons convex, strongly shagreened, largely and deeply depressed at middle, the depression becoming in short but deep sulcus towards vertex; with wide and dense „fronto-clypeal pubescent stripe“ (♂) of rather wide golden-white setae; vertex strongly convex, slightly depressed at middle, more stronger anteriorly, with a fine groove at middle longitudinally, finely shagreened at middle becoming almost smooth laterally, sparsely ocellate-punctate by small punctures posteriorly, sparsely pubescent by short thin white setae anteriorly and along the sides; eyes medium-sized, narrowly ovoid, not projecting beyond outline of head; antennae short and rather narrow, antennomeres 6-10 widened.

Pronotum moderately convex, somewhat flattened posteriorly, 1.85 times as wide as long, widest at the beginning of basal fourth; transversely depressed along anterior margin, narrowly and shallowly laterally, rather widely and shallowly at middle, very largely and shallowly depressed lateroposteriorly, with narrow sulcus along the sides; with rather well developed bump at middle of basal half laterally; anterior margin very widely rounded, slightly and widely emarginate at middle, posterior margin strongly biemarginate, widely emarginate in front of scutellum, the same width as base of elytra, sides shortly subparallel anteriorly, than almost straight dilated to the beginning of basal fourth, angulate and shortly, feebly constricted to just before the base, than angulate and very shortly but more stronger constricted to the base; surface rather strongly shagreened, finely shagreened on the disc laterally, with rather small ocellate punctures in the anterior transverse depression and small ocellate punctures in the lateroposterior depressions (these punctures are markedly smaller than punctures in the anterior depression!), each puncture with short thin white seta; scutellum rather small, cordiform, strongly, almost angularly rounded anteriorly, slightly depressed at middle longitudinally, strongly shagreened, moderately lustrous.

Elytra moderately convex, 2.13 times as long as wide, widest at humeri and before the middle, very slightly narrower at humeri than pronotum at the widest part; lateral margins rather narrowly and slightly emarginate behind humeri, widely regularly rounded at middle, then very slowly tapering towards narrowly conjointly rounded apices; apices rather strongly but bluntly serrate apically; humeral swelling well developed, laterobasal depression small but rather deep; surface strongly shagreened, punctures in rows longitudinally larger and deeper at basal third becoming fine apically, apical third coarsely corrugate; thin, rather long white setae sparsely in rows longitudinally; posthumeral elytral carina absent.

Ventral side moderately lustrous, abdomen strongly shagreened, impunctate, sparsely pubescent by extremely short, almost inconspicuous thin white setae; anal ventrite widely rounded, with shallow and wide semicircular emargination on apical margin and deep quadrate emargination at the top of apical margin, preapical groove following outline of margin regularly semicircular, wide; antennal grooves deep, very narrow on the head, very wide on the prosternum; prosternal process elongate, slightly constricted between procoxae, strongly dilated behind, apex rhomboidal, surface rather strongly shagreened, with a few shallow simple punctures, asetose (slightly deformed).

Aedeagus (Fig. 3a).

Sexual dimorphism. Female unknown.

Variability. Except for the size observed in: the paratype is somewhat slender than the holotype; prosternal process is sulcated longitudinally in the paratype; semimembranous part in apex of parameres is wider, distinctly projecting beyond outline of male genitalia in the paratype.

Measurements. Length 3.75-3.80 mm (holotype 3.75 mm); width 1.20-1.25 mm (holotype 1.25 mm).

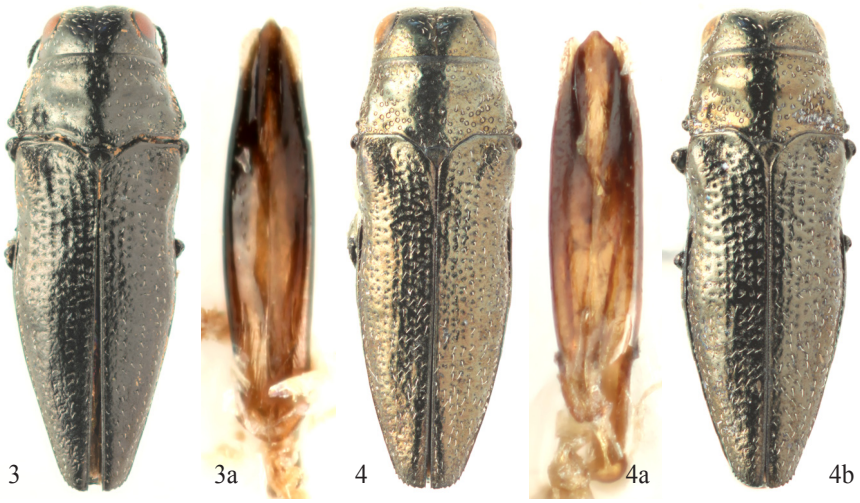
Differential diagnosis. *T. chassaini* sp. nov. is similar to *T. difficilis* Obenberger, 1924 (Figs. 4, 4a, 4b) (described from Mexico), which is widely distributed in Central America (see also Distribution in Table B bellow), namely by very similar male genitalia (Figs. 3a, 4a), some details of morphology and by sparse, uniform but well distinct white pubescence of dorsal side. It can be distinguished mainly by wider but more attenuate body anteriorly and posteriorly, presence of „fronto-clypeal" pubescent stripe of wide and dense cream-white setae in male (sparse thin white setae in male of *T. difficilis*) and pronotal punctation. See also Diagnostic characters in Table B below.

Table B. Diagnostic characters of *T. chassaini* sp. nov. and *T. difficilis* Obenberger, 1924.

	T. chassaini (♂)	*T. difficilis* (♂)
General shape of body	more robust, rather widely oval, more attenuate anteriorly and posteriorly; about 2.8 times longer than wide	more slender, rather narrowly oval, less attenuate anteriorly and posteriorly; about 3.1 times longer than wide
Colouration	uniformly black, head with very feeble green lustre, anterior half of frons with well marked very strong purple tinge, pronotum and elytra with very feeble violet lustre	vary from black with coppery lustre to bright coppery with golden lustre, sometimes slightly bicoloured: head and pronotum black with markedly bright coppery tinge, elytra almost black
„Fronto-clypeal pubescent stripe"	wide, consisting of dense and wide golden-white setae	consisting of sparse and thin white setae, sometimes interrupted
Pronotum	wider, about 1.85 times wider than long	narrower, about 1.70 times wider than long
Pronotal ocellate punctures	small punctures, smaller in the anterior transverse depression, markedly larger in the lateroposterior depressions	medium-sized, almost the same measurements in the anterior transverse depression as in the lateroposterior depressions
Elytral apices	bluntly obsoletely serrate	sharply serrate
Aedeagus	more attenuate proximally, parameres slightly emarginately constricted at proximal fourth; phallus (median lobe) markedly narrower (Fig. 3a)	less attenuate proximally, parameres arcuately constricted at proximal fourth; phallus (median lobe) markedly wider (Fig. 4a)
Distribution	so far known from French Guiana only	distributed widely along the Pacific side from the U.S.A. as far south as Costa Rica

Etymology. It´s pleasure for me to name this new species in honour of Jacques Chassain (Combs-la-Ville, France), a specialist in taxonomy of Elateridae, for his efforts and contributions to knowledge of Neotropical fauna; patronymic.

Remarks.*(MSA) on locality label means „Mission Saint Antoinnei“. This name was found on an old handwritten map from the period of „prisoner colonies“ in French Guiana, the present name of this place is Fourgassier.



Figs. 3-4b: 3- *T. chassaini* sp.nov., HT ♂, 3.75 mm, 3a- aedeagus, 0.80 mm; 4- *T. difficilis* Obenberger, 1924, ST ♂ of *T. sinaloensis* Obenberger, 1934 syn., 3.80 mm (NMPC), 4a- aedeagus, 0.70 mm, 4b- *T. difficilis* Obenberger, 1924, ST ♀, 3.50 mm (NMPC).

Taphrocerus stareki sp. nov.

(Figs. 5, 5a)

Type locality. Peru, Junin, Satipo.

Type specimens. Holotype (♂): „Peru: Junin, Satipo, 18. i. 1984, leg. L. Huggert“ (JMSC). Paratype: „BRAZIL: RONDONIA, Fazenda Rancho Grande, 62 km. S Ariquemes, 165 m., S10,32 W62,48, 12-22 November 1991, E. M. Fisher collector“ (1 ♂, JMSC).

Diagnosis. Medium-sized (3.35-3.45 mm), rather broadly elongate (3.00 times longer than wide), cuneiform, stout, pronotum strongly convex anteriorly, elytra moderately convex, very lustrous; above very slightly bicoloured: head and pronotum black with feeble coppery tinge and strong golden lustre, scutellum black, elytra black with rather strong golden lustre laterally; clypeus coppery; beneath black with golden lustre including legs and antennae; very sparsely pubescent by extremely short thin white setae, almost inconspicuous at elytral basal half; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head rather large, the same width as anterior pronotal margin; clypeus very widely „V-shaped“, strongly shagreened, moderately lustrous, separated from frons by rather well elevated carina; epistomal pores medium-sized, elongate transversely, separated more than their own diameter; frons moderately convex, widely and deeply

depressed at middle, the depression becoming in short sulcus towards vertex, strongly shagreened in the depression, finely so laterally, impunctate, asetose; vertex moderately convex, finely shagreened, slightly and widely depressed at middle anteriorly, with fine but well distinct carina (!) at middle longitudinally, extending from anterior pronotal margin to the frontal sulcus, sparsely ocellate-punctate by very fine and small punctures, each puncture with very short thin white seta; eyes large, very widely oval, rather strongly projecting beyond outline of head; antennae rather short, antennomeres 6-11 widened.

Pronotum strongly convex at anterior half, 1.98 times as wide as long, widest along basal fourth; narrowly transversely depressed along anterior margin but interruptly at middle, largely and rather deeply so lateroposteriorly, shallowly so above scutellum; with very vague bump at lateroposterior angles; anterior margin very widely regularly rounded, posterior margin strongly biemarginate, widely and rather strongly emarginate in front of scutellum, the same width as base of elytra; sides shortly subparallel anteriorly, then straight dilated to the beginning of basal fourth, obtusely angulate and subparallel to just before the base and then shortly constricted to the base; surface rather finely shagreened, sparsely ocellate-punctate by small punctures in the depressions, each puncture with extremely short thin white seta; scutellum medium-sized, cordiform, feebly rounded anteriorly, finely shagreened, lustrous.

Elytra moderately convex, somewhat flattened at apical fifth, 2.10 times as long as wide, slightly wider at humeri than pronotum at the widest part, widest at humeri and before the middle; elytral margins slightly and narrowly emarginate behind humeri, rather narrowly, regularly rounded at middle, then straight tapering towards rather narrowly conjointly rounded apices; apices minutely sharply serrate laterally; humeral swelling moderately developed, laterobasal depression rather large and deep; surface very finely shagreened, almost inconspicuously at basal third, apical third finely corrugate, punctures in rows longitudinally larger and deeper at basal third becoming fine apically, almost inconspicuous at apical third; thin short white setae distinct at apical half only, extremely short, almost inconspicuous setae at basal half; posthumeral elytral carina absent.

Ventral side strongly shagreened, abdomen very lustrous, sparsely ocellate-punctate by very fine circular punctures opening posteriorly, sparsely pubescent by rather long thin white setae laterally and apically; anal ventrite narrowly rounded, apex somewhat protruding, with a shallow but wide semicircular emargination on apical margin, preapical groove following outline of margin regularly semicircular, very narrow; antennal grooves rather long, shallow, wide on prosternum; prosternal process elongate, sides straight dilated behind, apex rhomboidal, surface strongly shagreened, with short but deep sulcus (not groove!) between procoxae, asetose, very finely punctate.

Aedeagus (Fig. 5a).

Sexual dimorphism. Female unknown.

Measurements. Length 3.35-3.45 mm (holotype 3.35 mm); width 1.15-1.20 mm (holotype 1.15 mm).

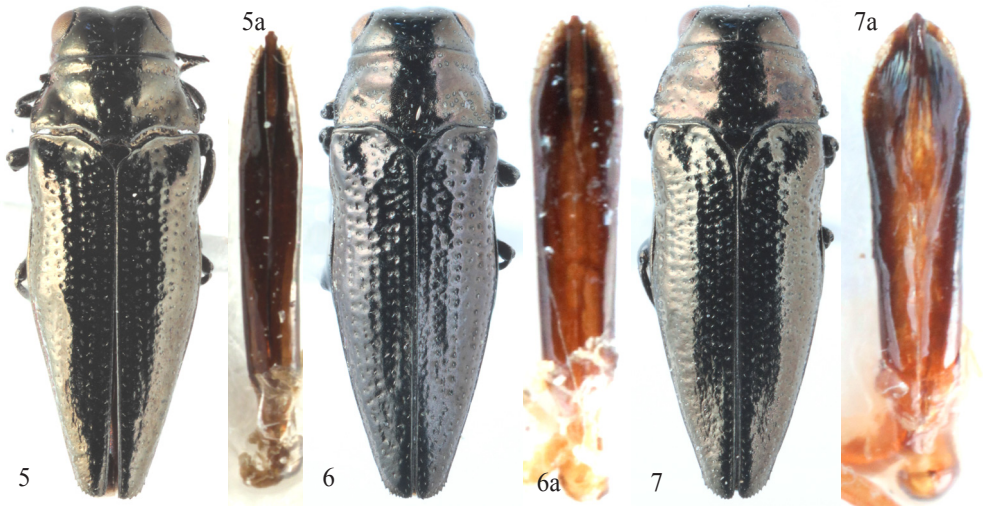
Variability. Observed in: base of pronotum is slightly but distinctly wider than base of elytra in the paratype (the same width in the holotype); apex of prosternal process is without the deep sulcus and rather coarsely punctate in the paratype.

Differential diagnosis. Although *T. stareki* sp. nov. is unique among all known species of the genus by its body shape together with details of its morphology, it is very similar to *T. regularis* Marek, 2018 (described from Ecuador, Machala) (Figs. 6, 6a) and *T. ecuadorensis* Marek, 2018 (described from Ecuador, Gualaquiza) (Figs. 7, 7a) by slightly bicoloured surface of dorsal side which is very lustrous and looks like „lacquered" at first sight. *T. stareki* sp. nov. can be well distinguished from *T. regularis* and *T. ecuadorensis* namely by cuneiform body shape and by slender male genitalia. See also Diagnostic characters in Table C bellow.

Table C. Diagnostic characters of *T. stareki* sp. nov., *T. regularis* Marek, 2018 and *T. ecuadorensis* Marek, 2018.

	T. stareki	*T. regularis*	*T. ecuadorensis*
Colouration of dorsal side	less distinctly bicoloured: head and pronotum black with feeble coppery tinge and strong golden lustre, scutellum black, elytra black with rather strong golden lustre laterally	more distinctly bicoloured: head and pronotum black with slight violet tinge, scutellum and elytra black	more distinctly bicoloured: head, pronotum and scutellum black with purple-brown tinge and very strong golden reflection, elytra black with slight golden reflections
Body shape	cuneiform	oval	oval
Head	narrower (less than 2.9 times wider than long); eyes more visible from above (DV)	wider (more than 3,1 times wider than long); eyes less visible from above (DV)	wider (more than 3.4 times wider than long); eyes less visible from above (DV)
Vertex	with fine short carina at middle longitudinally	finely grooved at middle longitudinally	finely grooved at middle longitudinally
Pronotal sculpture	pronotal depressions (laterobasal especially) deep	pronotal depressions moderately deep	relatively unsculptured, pronotal depressions shallow
Pronotal punctation	small ocellate punctures	medium-sized ocellate punctures	small ocellate punctures
Apical half of elytra	straight tapering towards apices	very slowly but distinctly arcuately tapering towards apices	very slowly but distinctly arcuately tapering towards apices
Aedeagus	slender, parameres about 6.9 times longer than wide (Fig. 5a)	parameres about 5.2 times longer than wide (Fig. 6a)	robust, parameres about 4.4 times longer than wide (Fig. 7a)

Etymology. Named in honour of my very good friend Filip Stárek (Lažany, Czech Republic), schoolfellow in 1984-1989.



Figs. 5-7a: 5- *T. stareki* sp. nov., HT ♂, 3.35 mm, 5a- aedeagus, 1.15 mm; 6- *T. regularis* Marek, 2018, HT ♂, 3.40 mm, 6a- aedeagus, 0.85 mm; 7- *T. ecuadorensis* Marek, 2018, HT ♂, 3.55 mm, 7a- aedeagus, 1.00 mm.

Taphrocerus somoliki sp. nov.
(Figs. 8, 8a)

Type locality. Ecuador, Napo, Puerto Napo.

Type specimens. Holotype (♂): „ECUADOR Napo prov., Tena, Puerto Napo, 400 m, 22. ii. 2002, Halada jr. lgt.“ (JMSC).

Diagnosis. Medium-sized (3.25 mm), elongate, slender (3.05 times longer than wide), pronotum rather strongly convex, elytra somewhat flattened, very lustrous; above slightly bicoloured: head, scutellum and elytra black, pronotum black with slight coppery tinge and golden-green reflections; beneath black including legs and antennae; sparsely pubescent by short thin white setae, in regular rows on elytra longitudinally; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head medium-sized, slightly narrower than anterior pronotal margin; clypeus almost „T shaped“, strongly shagreened, lustrous, separated from frons by fine carina; epistomal pores large, circular, separated more than their own diameter; frons feebly convex, rather largely and deeply depressed at middle, strongly shagreened, coarsely punctate at anterior half, each puncture with short thin white seta; vertex moderately convex, strongly shagreened, depressed at middle, the depression is more wider and deeper anteriorly, with fine groove at middle longitudinally, sparsely ocellate-punctate by small punctures, each puncture with somewhat longer thin white seta; eyes medium-sized, widely reniform, moderately projecting beyond outline of head; antennae long and rather narrow, antennomeres 6-11 widened.

Pronotum rather strongly convex, 1.76 times as wide as long, widest at the beginning of basal third and at the base; rather widely transversely depressed along anterior margin, somewhat more deeper laterally and almost interruptly at middle, largely and rather shallowly depressed lateroposteriorly, very narrowly depressed along the sides, markedly deeper anteriorly and with small shallow circular depression on the disc anteriorly; with very vague prominence lateroposteriorly; anterior margin very widely rounded, very slightly and widely emarginate at middle, posterior margin strongly biemarginate, rather narrowly and deeply emarginate in front of scutellum, very slightly narrower than base of elytra, sides shortly subparallel anteriorly, than rather strongly straight dilated to the beginning of basal third, angulate and then markedly emarginate at basal third; surface strongly shagreened, sparsely ocellate-punctate by medium-sized punctures at the depressions, each puncture with short thin white seta; scutellum rather small, regularly triangular, feebly rounded anteriorly, strongly shagreened, lustrous.

Elytra convex, 2.28 times as long as wide, widest at humeri, slightly wider at humeri than pronotum at the widest part; elytral margins widely and very feebly emarginate behind humeri, rather narrowly rounded at middle, then very slowly, widely arcuately tapering towards rather widely conjointly rounded apices; apices strongly serrate laterally; humeral swelling well developed, laterobasal depression small and rather deep; surface finely shagreened at basal half, almost smooth at apical third but apex markedly strongly shagreened, punctures in longitudinal rows larger and deeper at basal half becoming fine apically, disappearing at apical sixth, which is corrugate; thin short white setae regularly in rows longitudinally, somewhat more longer at apical fourth; posthumeral elytral carina absent.

Ventral side strongly shagreened, abdomen very lustrous, densely punctate by rather small „U-turned-up-shaped“ punctures, pubescent by short thin white setae laterally and apically; anal ventrite narrowly rounded, with a narrow emargination on apical margin, preapical groove following outline of margin narrow, regularly semicircular; antennal grooves rather short, wide and shallow on prosternum; prosternal process wide, sides graduately dilated apically, apex rhomboidal, surface strongly shagreened, impunctate, asetose.

Aedeagus (Fig. 8a).

Sexual dimorphism. Female unknown.

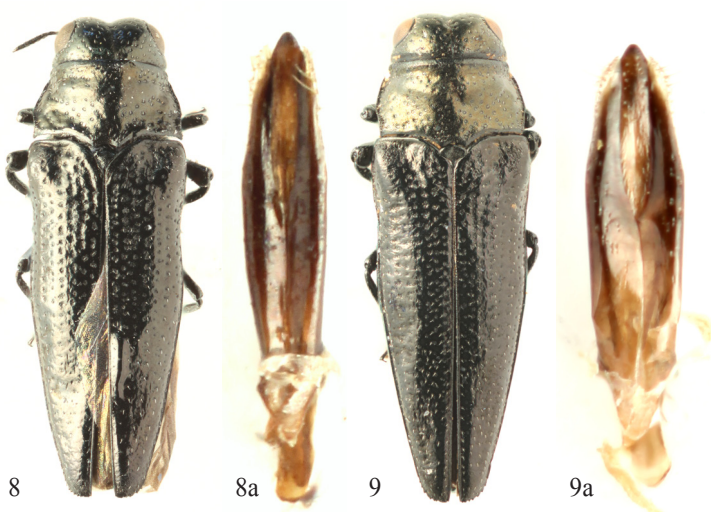
Measurements. Length 3.25 mm; width 1.05 mm.

Differential diagnosis. *T. somoliki* sp. nov. belongs to a complex of very similar species around *T. finitimus* Obenberger, 1924 (described from Costa Rica) (see also Marek 2017a, 2017b) by its morphological characters and is very similar to *T. paradoxus* Marek, 2017 (Figs. 9, 9a) (described from French Guiana) habitually (namely by bicoloured dorsal side of body) and by male genitalia (parameres more or less emarginate at proximal third). It can be distinguished by the characters given in Table D bellow.

Table D. Diagnostic characters of *T. somoliki* sp. nov. and *T. paradoxus* Marek, 2017.

	T. somoliki (♂)	*T. paradoxus* (♂)
Size	smaller, 3.25 mm	larger, 3.55-4.00 mm
Colouration	above slightly bicoloured: head, scutellum and elytra black, pronotum black with slight coppery tinge and golden-green reflections	above slightly bicoloured: head and pronotum black with strong golden-green tinge, elytra and scutellum black
Frons	deeply depressed at middle (DV)	feebly depressed at middle (DV)
Eyes	smaller, widely reniform (LV)	larger, widely oval (LV)
Pronotal sides	strongly emarginate at basal third; apex of posterior pronotal angles extremely sharp and protruding laterally	feebly emarginate at basal third; apex of posterior pronotal angles rectangular, not protruding laterally
Base of pronotum	very slightly narrower than base of elytra	distinctly narrower than base of elytra
Scutellum	regularly triangular	widely cordiform
Aedeagus	slender, parameres about 5.5 times longer than their maximal width (Fig. 8a)	robust, parameres about 4.4 times longer than their maximal width (Fig. 9a)
Distribution	Ecuador (so far known from HT only)	French Guiana, Suriname

Etymology. Named in honour and memory of Vít Somolík (1945-1994) (Prague, Czech Republic), the man with great heard; patronymic.



Figs. 8-9a: 8- *T. somoliki* sp. nov., HT ♂, 3.25 mm, 8a- aedeagus, 0.75 mm; 9- *T. paradoxus* Marek, 2017, HT ♂, 3.85 mm, 9a- aedeagus, 0.80 mm.

Taphrocerus myersi sp. nov.
(Fig. 10)

Type locality. Venezuela, Mt. Roraima.

Type specimens. Holotype (♀): „Type (circle with red margin) / S. AMERICA, Venezuela, Mt. Roraima, 1932, Dr. J. G. Myers. (h) / 3231. (h) / Pres. by Imp. Inst. Ent. B. M. 1936-506. (p) / Taphrocerus myersi Thery (h) TYPE (p, red capital letters)“ (BMNH).

Diagnosis. Medium-sized (3.40 mm), elongate, slender, cylindrical, head and anterior half of pronotum strongly convex above, basal half of pronotum and elytra moderately convex, very lustrous above; dorsal side black, basal half of pronotum with distinct coppery tinge; beneath black including legs and antennae, abdomen with slight violaceous lustre; sparsely pubescent by short thin white setae, somewhat more denser on head and pronotum; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head large, wide, slightly wider than anterior pronotal margin; clypeus widely „V-shaped“, very strongly shagreened, matt, separated from frons by well elevated carina; epistomal pores large, very slightly elongate transversely, separated by their own diameter; frons rather strongly convex, widely and rather shallowly depressed at middle longitudinally, the depression becoming in rather deep sulcus towards vertex, surface strongly shagreened, with a few short thin white setae between the epistomal pores and at the depression only; vertex strongly convex, distinctly protruding between the eyes (FVV, DV), rather strongly shagreened, with a fine groove at middle longitudinally, sparsely ocellate-punctate by small punctures, sparsely pubescent by short thin white setae anteriorly, asetose along anterior pronotal margin; eyes small, semicircular, not projecting beyond outline of head; antennae* short, antennomeres 6-10 distinctly widened.

Pronotum strongly convex at anterior half, somewhat flattened posteriorly, 1.64 times as wide as long, widest before the base; narrowly and rather deeply transversely depressed along anterior margin but almost interruptly at middle, largely and rather deeply so lateroposteriorly, narrowly and shallowly so at base in front of scutellum; with very vague prominence at lateroposterior angles; anterior margin very widely regularly rounded, posterior margin moderately biemarginate, widely and rather deeply emarginate in front of scutellum, the same width as base of elytra; sides subparallel, very feebly rounded only, almost straight, anterior margin the same width as posterior one; surface strongly shagreened, sparsely ocellate-punctate by small to medium-sized punctures (mixed), each puncture with a short thin white seta; scutellum small, regularly cordiform, widely rounded anteriorly, strongly shagreened, strongly lustrous.

Elytra moderately convex, somewhat flattened at apical fourth, 2.34 times as long as wide, widest at middle, slightly narrower at humeri than pronotum at the widest part; elytral margins narrowly and feebly emarginate behind humeri, widely arcuately rounded at middle, then almost straight tapering towards narrowly, almost conjointly rounded apices; apices with a few very shallow, very indistinct but sharp teeth; humeral swelling moderately developed, laterobasal depression small but rather deep; surface rather strongly shagreened, somewhat corrugate at apical fourth, punctures in rows longitudinally large and deep at basal

half becoming more finer apically; thin short white setae sparsely along the suture, laterally and at basal fifth only; posthumeral elytral carina absent.

Ventral side very strongly shagreened, abdomen very lustrous, sparsely punctate by small and fine „U-turned-up-shaped“ punctures on first two visible sternites only, sparsely regularly pubescent by thin white setae; anal ventrite rather narrowly rounded, with a wide and rather deep emargination following apical margin, preapical groove following outline of margin rather wide but short; antennal grooves short and rather narrow and shallow; prosternal process rather strongly constricted between procoxae, strongly dilated behind, apex rhomboidal, surface strongly shagreened, very lustrous, asetose, impunctate.
*antennomeres 2-11 missing in the right antenna

Sexual dimorphism. Male unknown.

Measurements. Length 3.40 mm; width 1.10 mm.

Differential diagnosis. *T. myersi* sp. nov. is unique among all known species of *Taphrocerus* by cylindrical body shape, large head with very small eyes and by many details of its morphology. Nevertheless it is somewhat similar to *T. szekessyi* Apt, 1954 (Fig. 11) (described from Brazil, Pernambuco and known to me from Brazilian states Bahia, Goias, Pará and Rio Grande do Norte also), but it can be easily distinguished by the distinctly wider head, by pronotum the same width at anterior margin as at the base and by absence of posthumeral elytral carina.

Etymology. Named in honour and memory of John Golding Myers (1897-1942), a British entomologist, who collected the type specimen of this species in his travel to Venezuela (Mt. Roraima) in 1932; patronymic.

Remarks. The holotype of *T. myersi* sp. nov. is labelled by Théry´s determination label „Taphrocerus myersi Théry TYPE“ (see Type specimens above), but the name is „unpublished manuscript name“. I follow Théry´s idea of naming this new species according to its collector.

The second specimen of this newly described species with the same collection data is stored in MNHN (Paris), but I didn´t have the opportunity to study it in detail. For this reason I do not include it into the type-series of this species.

Figs. 10-11: 10- *T. myersi* sp. nov., HT ♀, 3.40 mm; 11- *T. szekessyi* Apt, 1954, LT ♂, 2.90 mm (HNHM).

Taphrocerus inca sp. nov.
(Figs. 12, 12a)

Type locality. Peru, Junin , Satipo.

Type specimens. Holotype (♂): „Peru: Junin, Satipo, 21. i. 1984, leg. L. Huggert“ (JMSC).

Diagnosis. Medium-sized (3.05 mm), elongate, slender, very lustrous above; dorsal side black with strong golden-coppery tinge; beneath black, abdomen very lustrous, legs, antennae and clypeus black with golden-coppery lustre; sparsely pubescent by short thin white setae; prehumeral pronotal carina absent; posthumeral elytral carina present very obsoletely, with a blunt edge, at basal second-fifth and apical third only.

Description of holotype. Head rather large, wide (3.95 times wider than long), narrower than anterior pronotal margin; clypeus very widely „V-shaped“, feebly lustrous, strongly shagreened, separated from frons by a fine carina; epistomal pores large, transversely elongate, separated less than their own diameter; frons feebly convex, with a shallow triangular depression above clypeus, sulcated longitudinally at middle from the depression to the vertex, surface finely shagreened, coarsely corrugate and ocellate-punctate by a few small punctures in the triangular depression, with a few short white setae above clypeus only; vertex moderately convex, finely shagreened, sparsely punctate by simple punctures, each puncture with short white seta; eyes large, oval, very slightly projecting beyond outline of head; antennae long and narrow.

Pronotum convex, 1.82 times as wide as long, widest at the beginning of basal third; rather deeply and widely transversely depressed along anterior margin, more wider and shallower at middle, largely and deeply depressed lateroposteriorly, narrowly and deeply depressed along the sides; with well elevated bump lateroposteriorly; anterior margin arcuately rounded, posterior margin rather feebly biemarginate, widely emarginate in front of scutellum, slightly narrower than base of elytra; sides shortly subparallel anteriorly, then almost straight dilated to the beginning of basal third, then obtusely angulate, then very slightly emarginate and straight constricted to the base; surface rather strongly shagreened, ocellate-punctate by medium-sized to large punctures in the depressions and on the disc longitudinally at middle, each puncture with short thin white seta; scutellum rather small, triangular, widely rounded anteriorly, strongly shagreened, lustrous, markedly depressed at middle.

Elytra moderately convex, somewhat flattened apically, 2.23 times as long as wide, widest at humeri and just before the middle, slightly wider at humeri than pronotum at the widest part; elytral margins slightly and widely emarginate behind humeri, rather narrowly rounded just before the middle, then very slowly, widely arcuately tapering towards widely, almost conjointly rounded apices; apices finely sharply serrate; humeral swelling well developed, laterobasal depression small and shallow; surface finely shagreened, coarsely corrugate at basal half along suture, punctures in longitudinal rows larger and deeper at basal third becoming fine apically, apical fourth smooth; thin short white setae in almost regular rows longitudinally; posthumeral elytral carina present very obsoletely, with a blunt edge, at basal second-fifth and apical third only.

Ventral side strongly shagreened, feebly lustrous, abdomen somewhat more lustrous and rather finely shagreened, ocellate-punctate by large circular and „U-turned-up-shaped" punctures at base becoming to medium-sized circular ocellate punctures laterally at middle and to very small ocellate punctures laterally at apex, sparsely pubescent by short thin white setae, somewhat more denser laterally; anal ventrite elongate, widely rounded apically, with an emargination on apical margin, preapical groove following outline of margin wide, regularly semicircular; antennal grooves deep and narrow; prosternal process slightly constricted between procoxae, very strongly dilated behind, apex rhomboidal, surface very coarsely corrugate. Aedeagus (Fig. 12a).

Sexual dimorphism. Female unknown.

Measurements. Length 3.05 mm; width 1.05 mm.

Differential diagnosis. *T. inca* sp. nov. belongs to *T. theryi* species-group (definition of the species-group and revision in prep.). The species-group is characterized by smaller size mostly (2.40-3.50 mm (3.80 mm exceptionally in the largest specimens of *T. theryi* Obenberger, 1924), uniformly black colouration, sometimes with slight coppery or green tinge, very lustrous surface of body, oval body shape (widest at the beginning of pronotal apical third, at humeri and about the middle of elytra), absence of pronotal prehumeral carina, by sparsely uniformly pubescent elytra by short thin white setae and namely by very similar male genitalia and presence of rudimental elytral posthumeral carina (never entire sharp from humeri to near of apex). The species of this species-group are distributed from Costa Rica (*T. shannoni* Fisher, 1933, *T. pygmaeus* Cobos, 1967) through the Amazonia including the South American shelf islands along the north coast (f.e. *T. fisherellus* Obenberger, 1937, *T. szekessyi* Apt, 1954) as south as Bolivia and South-Eastern Brazil (f.e. *T. theryi*).

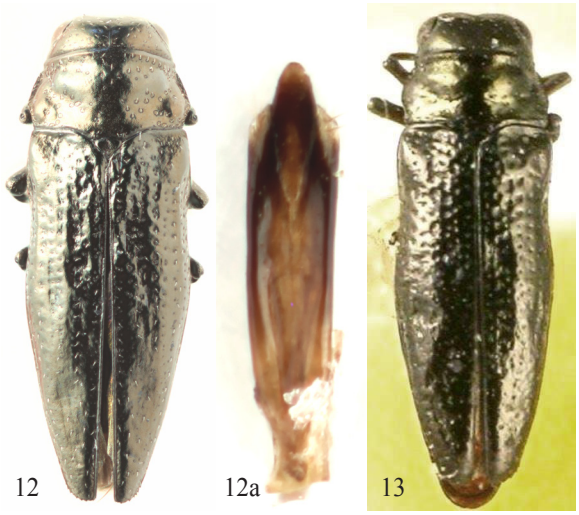
T. inca sp. nov. is the most similar to *T. pygmaeus* (Fig. 13) (described from Costa Rica, Turrialba) by posthumeral elytral carina, which is present very obsoletely, with a blunt edge, at basal second-fifth and apical third only (a fold at apical third only in *T. pygmaeus*) and it can be distinguished by characters given in Table E bellow.

Table E. Diagnostic characters of *T. inca* sp. nov. and *T. pygmaeus* Cobos, 1967.

	T. inca	*T. pygmaeus*
Size	larger, 3.05 mm	smaller, 2.50 mm
Body shape	more robust, about 2.9 times as long as wide	more slender, about 3.1 times as long as wide
Eyes	very slightly projecting beyond outline of head; feebly visible from above	rather strongly projecting beyond outline of head; well visible from above
Anterior pronotal margin	arcuately rounded	very widely rounded (almost straight)
Pronotal punctures ocellate	medium-sized (at anterior transverse depression) to large (at laterobasal depressions)	small

Aedeagus	parameres more or less subparallel; semimembranous apical part small, not projecting beyond outline of genitalia	parameres distinctly constricted at apical fourth; semimembranous apical part larger, projecting beyond outline of genitalia
Distribution	Peru	Costa Rica

Etymology. The specific epithet is the name Inca, the old nation lived in Peru; noun in apposition.



Figs. 12-13: 12- *T. inca* sp. nov., HT ♂, 3.05 mm, 12a- aedeagus, 0.55 mm; 13- *T. pygmaeus* Cobos, 1967, HT ♂, 2.50 mm, (MNCN) (photo S. Bílý).

***Taphrocerus hovorkai* sp. nov.**
(Figs. 14, 14a)

Type locality. Brazil, Sao Paulo, Fazenda Souzas de Campinas.

Type specimens. Holotype (♂): „Brazil Sao Paulo, Fazenda Souzas de Campinas, 1994, W. Witmer lgt.“ (JMSC).

Diagnosis. Small (2.75 mm), elongate, rather robust, subcylindrical, convex above, elytra moderately flattened at apical half; above uniformly dark coppery with strong golden lustre, head with slight green tinge, beneath black including legs and antennae, tibiae and femurs with very feeble purple lustre; very sparsely covered by thin but rather long white setae, which creating very obsolete ornamental pubescence on elytra; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head rather large, wide, slightly narrower than anterior pronotal margin; clypeus very widely „V-shaped“, strongly shagreened, separated from frons by well elevated carina, epistomal pores medium-sized, regularly circular, separated by their own diameter; frons feebly convex, widely and rather deeply depressed at middle, the depression becoming in short sulcus towards vertex, finely shagreened, with row of short thin white

setae along inner sides of the eyes and with somewhat longer thin white setae between epistomal pores and at the depression; vertex convex, slightly protruding between the eyes (FVV), very slightly depressed at middle, with fine groove at middle longitudinally, finely shagreened, sparsely punctate by small ocellate punctures, very sparsely pubescent by thin white setae anteriorly; eyes large, semicircular, not projecting beyond outline of head, feebly visible from above; antennae long and narrow.

Pronotum moderately convex, 1.80 times as wide as long, widest at the beginning of basal third; narrowly transversely depressed along anterior margin, largely and rather deeply so lateroposteriorly, very narrowly and deeply so along the sides posteriorly; with a vague longitudinal bump lateroposteriorly; anterior margin very widely regularly rounded, pronotal lobe almost straight, posterior margin rather feebly biemarginate, the same width as elytra at base, feebly and widely emarginate in front of scutellum, sides shortly subparallel anteriorly, then almost straight dilated to the beginning of basal third, then feebly angulate and very slightly emarginately constricted to the base; surface rather strongly shagreened, with medium-sized ocellate punctures in the depressions, each puncture with a thin but rather long white seta; scutellum small, triangular, strongly arcuately rounded anteriorly, very strongly shagreened, feebly lustrous.

Elytra moderately convex, somewhat flattened at apical half, 2.17 times as long as wide, widest at the middle, the same width at humeri as pronotum at the widest part; lateral margins slightly and widely emarginate behind humeri, widely regularly rounded at middle, then widely arcuately tapering towards conjointly, rather narrowly rounded apices; apices with a few small teeth laterally only, the top smooth; humeral swelling rather well developed, laterobasal depression rather small and shallow; surface finely shagreened, punctures in longitudinal rows rather large, almost the same size at basal half, disappearing relatively suddenly at the middle, third-fourth almost smooth, apical fourth finely corrugate; thin and rather long white setae in sparse regular rows longitudinally at basal half, very sparse pubescent stripe of somewhat longer white setae transversely just behind the middle, two (1+1) very sparse spots at the beginning of apical fourth of somewhat longer white setae, short white setae sparsely irregularly at apical fifth; posthumeral elytral carina absent.

Ventral surface very lustrous, strongly shagreened, abdomen punctate by small circular ocellate punctures opening posteriorly on first two visible sternites, impunctate apically, sparsely regularly covered by very short thin white setae; anal ventrite narrowly rounded, with wide and shallow emargination on apical margin, preapical groove following outline of margin regularly semicircular, wide; antennal grooves long and narrow; prosternal process elongate, rather feebly constricted between procoxae, very strongly dilated behind, apex impunctate, flat, strongly shagreened only.

Aedeagus (Fig. 14a).

Sexual dimorphism. Female unknown.

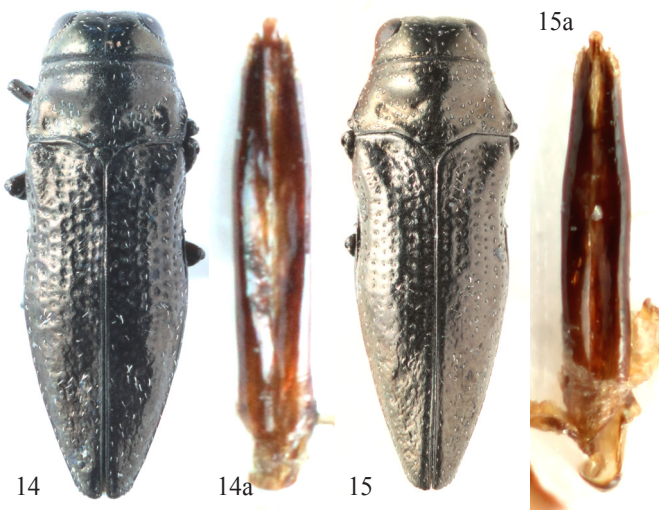
Measurements. Length 2.75 mm; width 0.85 mm.

Differential diagnosis. *T. hovorkai* sp. nov. is very similar and probably closely related to *T. acutus* Obenberger, 1924 (Figs. 15, 15a) (described from Brazil, Sao Paulo and Argentina, Misiones) from which it can be distinguished by the characters given in Table F bellow.

Table F. Diagnostic characters of *T. hovorkai* sp. nov. and *T. acutus* Obenberger, 1924.

	T. hovorkai (♂)	*T. acutus* (♂)
General shape of body	subcylindrical	cuneiform
Head	sides attenuate anteriorly (DV)	sides subparallel (DV)
Eyes	not projecting beyond outline of head; feebly visible from above	projecting beyond outline of head; well visible from above
Pronotal shape generally	rectangular, anterior margin slightly narrower than posterior one only	trapezoidal, anterior margin markedly narrower than posterior one
Width of pronotum	widest at the beginning of basal third	widest at the beginning of basal fourth
Pronotal sides	very slightly angulate at the widest part	strongly angulate at the widest part
Pronotal punctation	medium-sized ocellate punctures	small ocellate punctures
Scutellum	cordiform, semicircular anteriorly	regularly triangular, very widely rounded anteriorly
Elytra	without any fold at apical fourth laterally	distinct fold present at apical fourth laterally
Aedeagus	more stouter, parameres slightly arcuately constricted at apical third; phallus (median lobe) wider, apex widely rounded (Fig. 14a)	more slender, parameres slightly emarginately constricted at apical third; phallus (median lobe) slender, apex circular (Fig. 15a)

Etymology. It´s pleasure for me to name this new species in honour of my friend Oldřich Hovorka (Praha, Czech Republic), a specialist in taxonomy of Carabidae, especially Pterostichini, Rhysodini and Galeritini; patronymic.



Figs. 14-15a: 14- *T. hovorkai* sp. nov., HT ♂, 2.75 mm, 14a- aedeagus, 0.70 mm; 15- *T. acutus* Obenberger, 1924, ST 1 ♂, 3.00 mm, Brazil – Sao Paulo (NMPC), 15a- aedeagus, 0.90 mm.

Taphrocerus muehlei sp. nov.
(Fig. 16)

Type locality. Brazil, Paraná, Vila Velha.

Type specimens. Holotype (♀): „Brasilia, Paraná, Vila Velha, 4. 4. 1981, leg. G. Scherer“ (JMSC). Paratypes (3): the same data as holotype (2 ♀♀, ZSMC); „NOVA TEUTONIA Br., Santa Catarina, H. Pochon 10. XI. 52 / Taphrocerus pochoni Obb., Det. H. Pochon, Paratype“ (1 ♀, ZSMC).

Diagnosis. Medium-sized (3.55-3.95 mm), broadly elongate, stout, moderately convex above, lustrous; slightly bicoloured above: head and pronotum black with strong golden-orange lustre, elytra black with very strong blue-violet tinge and slight golden-orange lustre at basal third, scutellum black, beneath black with coppery tinge and strong golden lustre, legs and antennae black; sparsely irregularly pubescent by short thin white setae, elytra with an ornamental pubescence of wider, longer and denser white setae; prehumeral pronotal carina absent; posthumeral elytral carina absent, but more or less well marked fold present at apical third laterally near the sides.

Description of holotype. Head rather large, wide, very slightly narrower than anterior pronotal margin; clypeus very widely „V-shaped“, strongly shagreened, not separated from frons by any carina (!), epistomal pores large, circular, separated by their own diameter; frons rather strongly convex, with deep and wide sulcus at middle longitudinally, finely shagreened, with sparse rows of thin white setae along inner sides of the eyes and with somewhat longer white setae above clypeus (♀); vertex moderately convex, slightly depressed at middle, with very fine groove at middle longitudinally, not shagreened, sparsely punctate by fine simple punctures, each puncture with short thin white seta; eyes large, widely oval, very slightly projecting beyond outline of head; antennae long and narrow, antennomeres 6-11 widened.

Pronotum moderately convex, 2.03 times as wide as long, widest near the base; rather widely and shallowly transversely depressed along anterior margin, almost interruptly at middle, broadly and rather deeply depressed lateroposteriorly, with shallow circular depression on the disc; with a rather well elevated bump lateroposteriorly; anterior margin very widely regularly rounded, posterior margin strongly biemarginate, slightly narrower than elytra at base, widely emarginate in front of scutellum, sides very feebly dilated posteriorly at first-fourth, then markedly stronger dilated to the beginning of basal fourth, which is regularly arcuately rounded and shortly constricted to the base; surface finely shagreened at the middle longitudinally and along the sides, smooth on the disc laterally, sparsely punctate by small ocellate punctures at the depression along anterior margin and by medium-sized ocellate punctures at the lateroposterior depressions and on the disc at middle, each puncture with short thin white seta; scutellum triangular, widely rounded anteriorly, strongly shagreened, feebly lustrous.

Elytra moderately convex, somewhat flattened along the suture, 1.96 times as long as wide, widest at humeri and just before the middle, distinctly wider at humeri than pronotum at the widest part; lateral margins narrowly and rather deeply emarginate behind

humeri, widely rounded at middle, then almost straight tapering towards narrowly, almost conjointly rounded apices; apices minutely sharply serrate; humeral swelling moderately developed, basal depression rather large and deep; surface not shagreened, punctures in rows longitudinally well marked at basal half becoming fine posteriorly, apical fourth corrugate; very sparse and short white setae at lateroanterior angles near base and at apex; an ornamental pubescence of long, somewhat wide and dense white setae as follows: short but rather wide perisutural stripe behind scutellum, irregular interrupted transverse stripe just behind the middle becoming in short perisutural stripe at the beginning of apical half, two (1+1) large transversely elongate spots at the beginning of apical fourth; posthumeral elytral carina absent, but more or less well marked fold present at apical third laterally near the sides.

Ventral surface rather strongly lustrous, strongly shagreened, abdomen punctate by „U-turned-up-shaped" punctures, larger on first two visible sternites and becoming very small and fine apically, with rather long thin white setae laterally and apically; anal ventrite narrowly rounded, with wide and deep semicircular emargination on apical margin (♀), preapical groove following outline of margin regularly semicircular, wide; antennal grooves long and very wide on prosternum; prosternal process elongate, slightly constricted between procoxae, surface finely shagreened, apex rhomboidal with one large ocellate puncture at the middle only*.

Sexual dimorphism. Male unknown.

Measurements. Length 3.55-3.95 mm (holotype 3.95 mm); width 1.40-1.50 mm (holotype 1.50 mm).

Variability*. Except for the size observed in absence of large ocellate puncture at apex of prosternal process in all paratypes - it seems to be the monstrosity in the holotype, all paratypes have the surface coarsely punctate.

Differential diagnosis. *T. muehlei* sp. nov. belongs to very difficult complex of species for distinguishing around *T. meridionalis* Obenberger, 1934 (Fig. 17) (described from Argentina, Chaco) and it can be distinguished from other species of that complex by a comparison of specimens/species only (very subtle but relatively stable differences in body shape (namely ratio „length of pronotum : length of elytra"), pronotal shape (namely sides „angulate x not angulate"), colouration, pronotal punctation, elytral sculpture, elytral ornamental pubescence (density and extension) and male genitalia (f. e. see also Figs. 18-20 below).

Etymology. It´s pleasure for me to name this new species in honour of Hans Mühle (München, Germany), specialist in the Buprestidae; patronymic.

Remarks. *T. pochoni* Obenberger (Pochon´s determination of paratype from Santa Catarina (see above Type specimens) is „unpublished manuscript name" and other „syntypes" of *T. pochoni* stored in NMPC are not conspecific with specimen mentioned herein.

Taphrocerus zahradniki sp. nov.
(Fig. 18)

Type locality. Brazil, Sao Paulo, Bocaina.

Type specimens. Holotype (♀): „Bocaina, Ostgr. Sao Paulo, Coll. Kißel, 23. II. 15 (the date written by pencil on reverse side of locality label)“ (JMSC).

Diagnosis. Large (5.00 mm), broadly elongate, stout, rather strongly convex above, elytra flattened apically, very lustrous; dorsal surface slightly bicolorous: head and pronotum black with strong brown tinge and strong golden lustre, elytra black with slight violet tinge, somewhat more intensive laterally and at apical half, scutellum black; beneath black with feeble coppery tinge, legs and antennae black; elytra with an ornamental pubescence of white setae; prehumeral pronotal carina absent; posthumeral elytral carina absent, but more or less well marked fold present at apical fourth laterally near the sides.

Description of holotype. Head rather small, slightly narrower than anterior pronotal margin; clypeus very widely „V-shaped“, strongly shagreened, separated from frons by well elevated carina, epistomal pores large, slightly elongate transversely, separated more than their own diameter; frons largely depressed at middle, the depression becoming in deep sulcus towards vertex, finely shagreened, impunctate, with a few thin white setae around epistomal pores only; vertex convex, somewhat slightly protruding between the eyes (FVV), slightly depressed at middle, with very fine carina at middle longitudinally, very finely, almost inconspicuously shagreened, with a few very fine simple punctures only, each puncture with a short thin white seta; eyes large, ovoid, very slightly projecting beyond outline of head; antennae very long and narrow.

Pronotum strongly convex anteriorly, 2.01 times as wide as long, widest at base; narrowly transversely depressed along anterior margin, somewhat deeper laterally and almost interruptly at middle, broadly and shallowly depressed lateroposteriorly, with small shallow circular depression on the disc; without any prominence or bump laterally; anterior margin very widely regularly rounded, posterior margin slightly narrower than elytra at base, strongly biemarginate, widely emarginate in front of scutellum, sides shortly subparallel anteriorly, then strongly straight dilated to the beginning of basal fifth, angulate and then feebly dilated to the base; surface finely shagreened, sparsely punctate by rather small ocellate punctures in the depressions and on the disc longitudinally at middle, each puncture with short thin white seta; scutellum medium-sized, widely triangular, widely rounded anteriorly, strongly shagreened, lustrous.

Elytra moderately convex, slightly flattened at apical half, 2.16 times as long as wide, widest just before the middle, distinctly wider at humeri than pronotum at the widest part; lateral margins rather feebly and widely emarginate behind humeri, narrowly and strongly rounded at middle, then very slowly, very widely arcuately tapering towards narrowly, slightly separately rounded apices; apices minutely sharply serrate; humeral swelling feebly developed, laterobasal depression small and shallow; surface very finely shagreened,

somewhat more stronger behind scutellum, at middle near suture and at apex only, punctures in rows longitudinally well marked at basal half only becoming very fine at apical half, apex coarsely corrugate; sparsely covered by very short thin white setae at the basal depressions, laterally and at apical half, and by long wider white setae creating an ornamental pubescence as follows: a few setae at laterobasal depressions, wide but sparse short perisutural stripe behind scutellum, wide irregular interrupted stripe at the middle transversely, consisting of six (3+3) wide stripes longitudinally, two (1+1) large and dense spots at the beginning of apical fourth; posthumeral elytral carina absent, but more or less well marked fold present at apical fourth laterally near the sides.

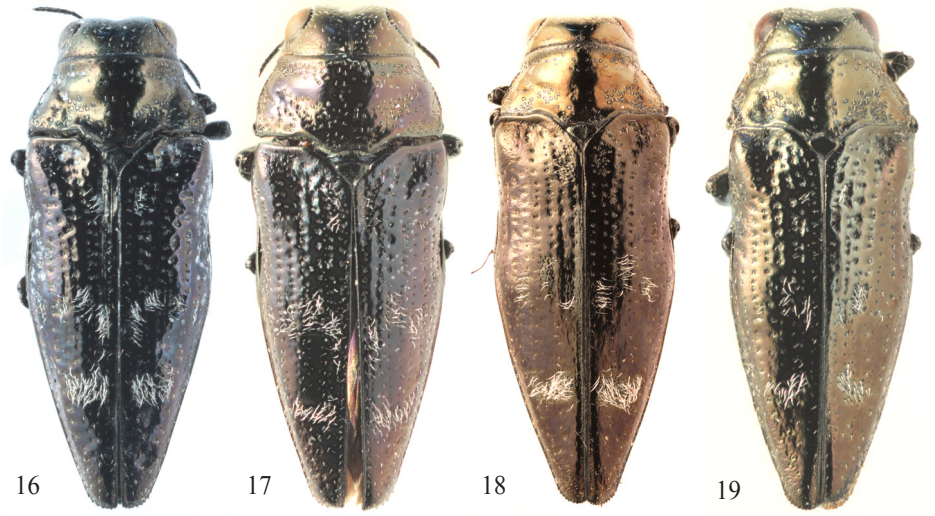
Ventral surface very lustrous, strongly shagreened, abdomen rather densely ocellate-punctate by circular punctures opening posteriorly, which are medium-sized on first two visible sternites becoming small apically, almost inconspicuously pubescent by extremely short thin white setae laterally and apically; anal ventrite narrowly rounded, preapical groove following outline of margin narrowly rounded apically and wide; antennal grooves long and rather narrow; prosternal process broadly elongate, sides straight dilated behind, apex rhomboidal, surface strongly shagreened, asetose, irregularly punctate by a few large punctures.

Sexual dimorphism. Male unknown.

Measurements. Length 5.00 mm; width 1.85 mm.

Differential diagnosis. *T. zahradniki* sp. nov. belongs to the same species-group as *T. muehlei* sp. nov. (see Differential diagnosis under *T. muehlei* sp. nov. above), but differs from all known species of this species-group at first sight by the large size together with very unusual ratio length of elytra : length of head + pronotum = elytra about 3.75 times longer than head + pronotum. The other species of this species-group have this ratio more or less about 3.00 times longer elytra than head + pronotum only (f.e. see *T. bucki* Cobos, 1958 (Fig. 19) and *T. pseudovolitans* Obenberger, 1941 (Fig. 20) with the same area of distribution (South-Eastern Brazil) as *T. zahradniki* sp. nov.

Etymology. Named in honour of Jiří Zahradník (Lomnice nad Popelkou, Czech Republic), entomologist, photographer and musician, with many thanks for his help in my entomological „student years"; patronymic.



Figs. 16-20: 16- *T. muehlei* sp. nov., HT ♀, 3.95 mm; 17- *T. meridionalis* Obenberger, 1934, ST ♂, 3.60 mm, „Argentinien, Chaco“ (NMPC); 18- *T. zahradniki* sp. nov., HT ♀, 5.00 mm; 19– *T. bucki* Cobos, 1958, PT ♀, 3.95 mm, „Porto Alegre, Brasil“ (NMPC); 20- *T. pseudovolitans* Obenberger, 1941, ST ♀, „Sta. Catharina“ (NMPC), 3.80 mm.

LECTOTYPE DESIGNATIONS, NOTES

Taphrocerus albopictus (Kerremans, 1896)

Brachys albopictus Kerremans, 1896b: 165-166, 687.

Type material studied. *Brachys albopictus*: lectotype (BMNH, ♂) by present designation: „Type [p] [circle with red margin] \ Brésil Manuf. Tabacs [h] \ albopictus Kerr. Type [h] \ B. albopictus Kerr. Ann. Fr. 1896. 16 Brésil [h] [white label with three intermissing printed lines and with frame of two printed lines \ Kerremans. 1903–59. [p]“. The exact number of syntypes unknown.

Distribution. Brazil (Kerremans 1896b): so far known to me from the lectotype designated herein only without precise locality data.

Remarks. This species was described in the genus *Brachys* Dejean, 1833 by Kerremans originally, but after seven years ago the same author listed this species under *Taphrocerus* (Kerremans 1903: 328). The species belongs to the genus *Taphrocerus*, but it is near to the species-groups, which are on the border between *Taphrocerus* and *Brachys* (see also Marek 2014: 128) and another study is necessary in the relationship between these two genera.

Taphrocerus amazonicus Kerremans, 1896

Taphrocerus amazonicus Kerremans, 1896a: 310-311.

Type material studied. *Taphrocerus amazonicus*: lectotype (BMNH, ♂) by present designation: „Type [p] [circle with red margin] \ amazone Chevrolat [h] \ Collection Chevrolat [p] [white label with black frame] \ amazonicus Ker. Type [h] \ T. amazonicus Kerr. Ann. Belg. 1896. 309 Bresil [h] [white label with three intermissing printed lines and with frame of two printed lines \ Kerremans. 1903–59. [p] \ g. Taphrocerus [h] Théry det. [p]". The exact number of syntypes unknown.

Distribution. Brazil: Amazonas (Kerremans 1896a).

Remarks. *T. amazonicus* was described from an unstated number of syntype(s), but very probably from the male-specimen(s) only according to the description („front, antennes et fémurs vert doré" … „élytres d'un noir verdâtre") and it was described in the genus *Taphrocerus* by Kerremans originally, but seven years later the same author listed this species under *Brachys* (Kerremans 1903: 325).

T. amazonicus belongs undoubtedly to the genus *Taphrocerus* and probably in the complex of species associated with palms (according its similarity including male genitalia to the species confirmed to be associated with palms (f.e. to *T. michaeli* Marek, 2017 (taken on the palm leaves, pers. comm. with S. Gottwald and M. Hornburg), *T. hornburgi* Marek, 2017 (taken on palm by H. Hespenheide in Peru, Loreto) etc. The species of *Taphrocerus* associated with palms are somewhat more variable in colouration, body shape and relationships of length and width of body, pronotum and elytra than the larger part of *Taphrocerus*-species, which are associated with the sedges (Cyperacae) mostly.

Taphrocerus minutus Kerremans, 1903

Taphrocerus minutus Kerremans, 1903: 328, 336.

Type specimens studied. *Taphrocerus minutus*: lectotype (BMNH, ♂) by present designation: „Type [p] [circle with red margin] \ R^{EP} BRASIL [p] III [h] 190 [p] 1 [h] C. Bruch [p] [white label with black margin] \ minutus Kerr. Type [p] \ T. minutus Kerrem. Brésil [h] [white label with three intermissing printed lines and with frame of two printed lines] \ Kerremans. 1903–59. [p]". The exact number of syntypes unknown.

Diagnosis. Medium-sized (length 3.15 mm, width 1.00 mm (note: „3.00 x 0.70 mm" given in the description), elongate, slender, subcylindrical, strongly convex above, very lustrous;

above uniformly black, beneath black with strong coppery tinge including legs and antennae; epistomal pores medium-sized, regularly circular, separated by their own diameter; „fronto-clypeal pubescent stripe“ of dense white setae present (♂); eyes rather large, widely oval (LV); prehumeral pronotal carina present at basal two-thirds laterally; without posthumeral elytral carina, elytral apices strongly serrate laterally, elytra very sparsely pubescent by short, almost inconspicuous white setae and with two (1+1) spots elongate transversely of dense, somewhat more longer white setae at the beginning of apical fourth; prosternal process narrowly elongate, sides slightly constricted between procoxae, rather strongly dilated behind, apex rhomboidal, surface finely shagreened, rather finely punctate.

Distribution. Brazil (Kerremans 1903): so far known to me only from the lectotype designated herein without precise locality data.

Remarks. *T. minutus* was described in the *Genera Insectorum* in the list of *Taphrocerus* as the footnote (in two sentences only (Kerremans 1903). Although the picture given there also (Kerremans 1903: Tab. 4., Fig. 12) very well corresponds to the type-specimen designated herein as the lectotype, I contribute the short diagnosis.

This species is well distinguished from all similar species by the body shape (slender, subcylindrical) together with presence of two (1+1) white pubescent spots at the beginning of apical fourth well distinct together with presence of the „fronto-clypeal pubescent stripe“ of dense white setae and presence of distinct prehumeral pronotal carina.

Taphrocerus missionarius Obenberger, 1934

Taphrocerus missionarius Obenberger, 1934: 25, 52.

Type specimens studied. *Taphrocerus missionarius*: lectotype (NMPC, ♂) by present designation: „Loreto. Arg. Ogloblin. [h] \ TYPUS [p] [red label with black margin] \ Taphrocerus missionarius m. Typ [h] [Obenberger´s MS] Det. Dr. Obenberger [p]“. The exact number of syntypes unknown.

Sexual dimorphism. Female unknown.

Distribution. Argentina: Misiones (Obenberger 1934) (so far known to me from the lectotype only).

Remarks. *T. missionarius* belongs to *T. dudai* species-group (definition in prep.) which is extremely difficult taxonomically (see also Marek 2016: 407). The species-group is characterized by general shape of body, measurements from small to medium-sized, by uniformly black or dark-brown colouration, sometimes with slight purple or coppery lustre, by the dorsal surface regularly, sparsely but distinctly pubescent by thin white setae, by absence of pronotal prehumeral and elytral posthumeral carinae and namely by base of pronotum, which is wider than elytra at humeri. The species-group comprises number of species and the centre of distribution is in North Argentina, Paraguay and South-Eastern Brazil.

Taphrocerus parallelus Kerremans, 1896

Taphrocerus parallelus Kerremans, 1896a: 310.

Type specimens studied. *Taphrocerus parallelus*: lectotype (BMHN, ♂) by present designation: „Type [p] [circle with red margin] \ Brésil Tarnier. [h] \ parallelus Kerr. Type [h] \ T. parallelus Kerr. ann. Belg. 1896. 310 Brésil [h] [white label with three intermissing printed lines and with frame of two printed lines \ Kerremans. 1903–59. [p]". Exact number of syntypes unknown.

Distribution. Brazil (Kerremans 1896): so far known to me from the lectotype designated herein without precise locality data.

Remarks. *T. parallelus* is very similar and probably closely related to *T. gentilis* (Gory, 1841) (described from French Guiana, Cayenne and known from Brazil, Manaos also (Marek 2018), from which it can be distinguished by more slender body, by wider head with larger (LV) and eye more protruding (DV) beyond outline of head, somewhat different elytral ornamental pubescence (pattern), elytral apices minutely serrate by sharp teeth (strongly serrate by sharp teeth in *T. gentilis*) and very well by male genitalia (distinctly slender).

Taphrocerus parvus Obenberger, 1924
(Fig. 22a)

Taphrocerus parvus Obenberger, 1924: 57, 76.

Type specimens studied. *Taphrocerus parvus*: lectotype (NMPC, ♀) by present designation: „Reimoser, Paraguay, Rinconada [p] \ TYPUS [p] [red label with black margin] \ Taphrocerus parvus m. Type [h] [Obenberger´s MS] Det. Dr. Obenberger [p]". The exact number of syntypes unknown.

Other specimens examined. ARGENTINA: „Misiones-Argentina, Dep. Concep. - Sta. Maria, M. J. Viana" (1 ♂, 1 ♀, NMPC, under *T. nepos* – Obenberger´s unpublished manuscript name); „Loreto. Arg. Ogloblin. 28" (1 ♂, NMPC, under *T. ogloblini* PLT/ST 1 (see above); „Argentina: Missiones pr., Campo Viera, -. xii. 1964" (1 specimen sex not examined, JMSC); „Argentina: Mis., Iguazu Nat. Park, c. 140 m, 8.-11. iv. 1974., Malaise trap, C. & M. Vardy, B. M. 1974-204" (1 ♀, BMNH); „Argentinia/Missiones, Rio Uruguaí, x. 1987" (1 ♀, ZSMC); „Argentine, Misiones, Dos de Mayo, 16. XI. 1987. R. Foerster" (3 ♂♂, JMSC); „Argentina, Misiones, Puerto Iguazu, 4. XI. 1989" (1 ♂, JMSC); „Argentina, Misiones, Iguazu, X. 1991" (1 ♀, JMSC); „Argentine, Misiones, Puerto Iguazu, XI. 1991-II. 1992, R. Foerster" (4 ♂♂, 1 ♀, JMSC); for other examined specimens from Argentina see Marek 2018a. BRAZIL: „Páráná" (1 ♀, NMPC, under *T. riparius* Obenberger, 1934 PLT/ST 2 (see Remarks below); „Brasilien, Nova Teutonia, 27°11´B 52°23´L, Fritz Plaumann, 10. xi. 1947, 300-500" (1 ♂, NMPC, under *T. nepos* - Obenberger´s unpublished manuscript name); „Brasilien, Rondon, 24°38´B. 54°07´L., Fritz Plaumann, 6. i. 1958, 500m" (1 ♂, NMPC, under *T. Ogloblini* var. det. Dr. Obenberger); „Brasilien, Nova Teutonia, 27°11´B 52°23´L, Fritz Plaumann, 29. vii. 1967, 300-500 m" (1 specimen sex not examined, JMSC). PARAGUAY: „Paraguay, Central, near Nemby, 11. i. 1983, E. G. Riley" (1 specimen sex not examined, JMSC); „Paraguay: Cordillera, Caacupé, Inst. Agro. Nac., 17.-20. i. 1983, E. G. Riley" (1 ♂, JMSC).

Sexual dimorphism. Observed in body shape only: male is somewhat slender than female.

Measurements. Length 2.85-3.10 mm (lectotype 3.00 mm); width 1.10-1.20 mm (lectotype 1.15 mm).

Variability. Observed in colouration of dorsal side: mostly olive green, pronotum with rather strong golden lustre, sometimes (♀♀ mostly) uniformly brown-coppery.

Distribution. Argentina (Marek 2018a), Paraguay (Obenberger 1924), new to Brazil.

Remarks. Described from unstated number of syntypes from Paraguay (there is only one female in NMPC designated as the lectotype herein), but included in the type-series of a few another Obenberger´s species by him (see Other specimens examined above). It seems that *T. parvus* is widely distributed and abundant in North Argentina, Paraguay and South-Eastern Brazil. From the similar species it can be easily distinguished by male genitalia, which are unique among all known species of the genus (note: I know another else undescribed species of *Taphrocerus* with the same type of male genitalia, but it is surprisingly strongly different habitually and by larger size).

Taphrocerus putillus Obenberger, 1934
(Fig. 21)

Taphrocerus putillus Obenberger, 1934: 28, 57-58.

Type specimens studied. *Taphrocerus putillus*: lectotype (NMPC, ♀) by present designation: „Loreto. Arg., III. Ogloblin [h] \ TYPUS [p] [red label with black margin] \ Taphrocerus putillus m. Typ [h] [Obenberger´s MS] Det. Dr. Obenberger [p] \ Taphrocerus putillus Obenberger, 1934 SYNTYPE 2 V. Kubáň labelled 2014 [p] [red label]". Paralectotype: „St. Anna Ogl., Missiones [p] \ TYPUS [p] [red label with black margin] \ Taphrocerus putillus m. Typ [h] [Obenberger´s MS] Det. Dr. Obenberger [p] \ Taphrocerus putillus Obenberger, 1934 SYNTYPE 1 V. Kubáň labelled 2014 [p] [red label]" (1 ♂, NMPC, conspecific with the lectotype of *T. bruchi* Obenberger, 1924). The exact number of syntypes unknown.

Other specimens examined. ARGENTINA: „Argentine, Misiones, Puerto Iguazu, xi. 1991 - ii. 1992, R. Foerster" (2 ♂♂, JMSC).

Diagnosis. Medium-sized to large (3.80-4.00 mm), elongate, rather stout, moderately convex above, very lustrous; above slightly bicoloured: head and pronotum black with slight golden-purple tinge, scutellum and elytra black, beneath black with slight golden lustre; sparsely uniformly pubescent by short thin white setae, in regular rows on elytra longitudinally; prehumeral pronotal and posthumeral elytral carinae absent.

Redescription of lectotype. Head large, wide, very slightly narrower than anterior pronotal margin; clypeus very widely „V-shaped", strongly shagreened, separated from frons by well elevated carina, moderately lustrous; epistomal pores large, circular, separated by their own diameter; frons convex, rather strongly shagreened, widely and deeply depressed at middle, the depression becoming in sulcus towards vertex, asetose, punctate by fine punctures anterolaterally only; vertex rather strongly convex, strongly shagreened, narrowly but rather deeply depressed at middle longitudinally, distinctly grooved at middle longitudinally, sparsely ocellate-punctate by very small punctures, each puncture with a short thin white seta; eyes large, almost regularly oval, rather strongly projecting beyond outline of head; antennae long and rather narrow.

Pronotum moderately convex, 1.88 times as wide as long, widest at the beginning of basal third; rather widely transversely depressed along anterior margin, largely and rather shallowly so lateroposteriorly, with very shallow circular depression on the disc at middle; anterior margin widely, regularly arcuately rounded, posterior margin strongly biemarginate, widely and rather deeply emarginate in front of scutellum, sides shortly subparallel anteriorly, then straight dilated to the beginning of basal third, then very strongly angulate and slightly emarginately constricted to the base; base distinctly narrower than base of elytra; surface strongly shagreened, sparsely ocellate-punctate by small punctures at anterior half and by medium-sized punctures at posterior one, each puncture with short thin white seta; scutellum medium-sized, cordiform, rather strongly rounded anteriorly, very strongly shagreened, moderately lustrous.

Elytra moderately convex, somewhat flattened at apical third, 2.23 times as long as wide, widest at humeri and just before the middle, distinctly wider at humeri than pronotum at the widest part; elytral margins moderately and narrowly emarginate behind humeri, rather narrowly rounded at middle, then very slowly arcuately tapering towards widely and slightly separately rounded apices; apices strongly and sharply serrate laterally; humeral swelling moderately developed, laterobasal depression small but rather deep; surface finely shagreened except for strongly shagreened area at basal fifth at the middle, apical fourth coarsely corrugate, punctures in rows longitudinally rather fine, larger and deeper at basal fourth at middle only, at apical fourth very fine; thin short white setae in longitudinal rows almost inconspicuous, somewhat more distinct along the suture and along the sides only; posthumeral elytral carina absent.

Ventral surface very lustrous, rather strongly shagreened, abdomen rather densely punctate by small circular punctures opening posteriorly, pubescent by very short, almost inconspicuous thin white setae laterally and apically only; anal ventrite widely rounded, preapical groove following outline of margin regularly semicircular, very wide; antennal grooves rather long and narrow; prosternal process shortly elongate, sides rather strongly constricted between procoxae, strongly dilated behind, apex rhomboidal, very strongly shagreened, impunctate, asetose, with short elongate depression longitudinally at middle.

Sexual dimorphism. Male is somewhat slender than female.

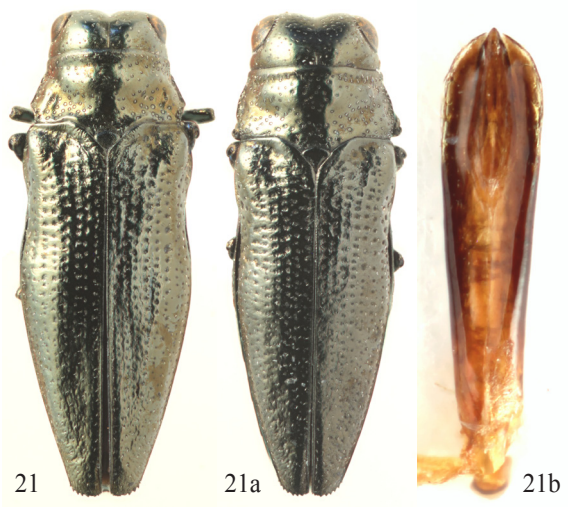
Measurements. Length 3.80-4.00 mm (lectotype 4.00 mm); width 1.30-1.40 mm (lectotype 1.40 mm).

Variability. Not apparent except for the size.

Distribution. Argentina: Misiones (Obenberger 1934).

Remarks. There are mixed two different species in Obenberger´s type-serie of *T. putillus* stored in NMPC. The lectotype female (Fig. 21) designated herein belongs to *T. elongatus* species-group, the paralectotype male (Figs. 21a, 21b) is conspecific with *T. bruchi* Obenberger, 1924. The Obenberger´s description is combination of features of both species

together with a few mistakes (f. e. „ … sans chagrination microscopique au fond en dessus …, … Pubescence de dessus nulle. …“ etc.). For this reason I contribute the redescription of *T. putillus* lectotype (see above).



Figs. 21-21b: type-specimens of *T. putillus* Obenberger, 1934. 21- *T. putillus* Obenberger, 1934, LT / ST 2 ♀, 4.00 mm (NMPC), 21a- *T. putillus* PLT / ST 1 ♂ (= *T. bruchi* Obenberger, 1924), 4.05 mm (NMPC), 21b- aedeagus of *T. putillus* PLT / ST 1 ♂ (= *T. bruchi*), 1.40 mm.

***Taphrocerus riparius* Obenberger, 1934**
(Fig. 22)

Taphrocerus riparius Obenberger, 1934: 31, 60.

Type specimens studied. *Taphrocerus riparius*: lectotype (NMPC, ♀) by present designation: „Páráná [h] \ TYPUS [p] [red label with black margin] \ Taphrocerus riparius m. Type [h] [Obenberger´s MS] Det. Dr. Obenberger [p] \ Taphrocerus riparius Obenberger, 1934 SYNTYPE 1V. Kubáň labelled 2014 [p] [red label]“. Paralectotype the same data as lectotype except for syntype-label: „Taphrocerus riparius Obenberger, 1934 SYNTYPE 2 V. Kubáň labelled 2014 [p] [red label]“ (1 ♀, NMPC). The exact number of syntypes unknown.

Diagnosis. Small (2.95 mm), elongate, cuneiform, convex above, rather strongly lustrous; head black with very strong golden-green lustre, pronotum black with very strong golden-coppery tinge, elytra and scutellum black with very feeble purplish lustre; beneath black with slight purple tinge including legs and antennae; sparsely regularly covered by thin but rather long and well distinct white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Redescription of lectotype. Head large, wide, slightly narrower than anterior pronotal margin; clypeus very widely “V-shaped, epistomal pores large, elongate transversely, separated less than their diameter; frons rather strongly convex, rather deeply depressed at middle, finely shagreened; vertex convex, very feebly depressed at middle longitudinally, somewhat more deeper anteriorly, with a fine groove at middle longitudinally, finely shagreened, rather densely ocellate-punctate by small punctures, each puncture with thin but rather long white seta and

with a row of short white setae along the inners sides of the eyes; eyes medium-sized, oval, very feebly projecting beyond outline of head; antennae long, narrow.

Pronotum moderately convex, 1.95 times as wide as long, widest at the beginning of basal fifth; narrowly and shallowly transversely depressed along anterior margin, largely and shallowly so lateroposteriorly, with rather large but shallow depression on the disc at middle; with a vague prominence lateroposteriorly; anterior margin very widely regularly rounded, posterior margin strongly biemarginate, widely and rather deeply emarginate in front of scutellum, distinctly wider than base of elytra, sides shortly subparallel anteriorly, then straight dilated to the beginning of basal fifth, distinctly angulate and then straight and very feebly constricted to the base; surface strongly shagreened except for the laterobasal prominence, which is almost smooth, with small ocellate punctures at the anterior transverse depression and at the depression on the disc, and with medium-sized ocellate punctures at the laterobasal depressions, each puncture with thin but rather long white seta; scutellum small, widely cordiform, anterior margin regularly and rather strongly rounded, strongly shagreened, moderately lustrous.

Elytra moderately convex, 2.04 times as long as wide, widest just before the middle, slightly narrower at humeri than pronotum at the widest part (!); lateral margins very feebly emarginate behind humeri, widely regularly rounded at middle, then very widely arcuately tapering towards narrowly and slightly separately rounded apices; apices almost inconspicuously bluntly serrate; humeral swelling rather well developed, laterobasal depression small but rather deep; surface strongly shagreened at laterobasal depressions and along the suture becoming finely shagreened laterally, punctures in rows longitudinally larger and deeper at basal third becoming fine apically, almost inconspicuous at apical third, apical fourth corrugate; thin white setae sparsely in rows longitudinally, somewhat more longer at apical half; posthumeral elytral carina absent, very obsolete fold present at apical five-sixth laterally.

Ventral side rather strongly shagreened, abdomen strongly lustrous, sparsely pubescent by thin white setae laterally and apically; anal ventrite rather widely rounded, preapical groove following outline of margin wide, regularly semicircular; antennal grooves long and rather wide; prosternal process elongate, sides very slightly regularly constricted behind, apex subrhomboidal, rather strongly shagreened, asetose, impunctate.

Sexual dimorphism. Male unknown.

Measurements. Length 2.95 mm; width 1.05 mm.

Distribution. Brazil: Paraná (Obenberger 1934).

Remarks. There are mixed two different species in Obenberger´s type-serie of *T. riparius* stored in NMPC. The lectotype female (Fig. 22) designated herein belongs to *T. dudai* species-group, the paralectotype female (Fig. 22a) is conspecific with lectotype of *T. parvus* Obenberger, 1924 (LT designation see above). The Obenberger´s description is combination of features of both species. For this reason I contribute the redescription of *T. riparius* lectotype (see above).

22 22a

Figs. 22-22a: type-specimens of *T. riparius* Obenberger, 1934. 22- *T. riparius* LT / ST 1 ♀, 2.95 mm (NMPC); 22a- *T. riparius* PLT / ST 2 ♀ (= *T. parvus* Obenberger, 1924), 3.05 mm (NMPC).

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REFERENCES

Apt Ö. 1954: Neue Trachydinen aus dem ungarischen Naturwissenschaftlichen Museum (Col., Buprestidae). *Annales Historico-naturales Musei Nationalis Hungarici* (Series Nova) 5: 231-242.

ICZN 1999: *International Code of Zoological Nomenclature, Fourth Edition, adopted by the International Union of Biological Sciences.* London: International Trust for Zoological Nomenclature, xxix + 305 pp.

Kerremans C. 1896a: Trachydes nouveaux. *Annales de la Société Entomologique de Belgique* 40: 306-333.

Kerremans C. 1896b: Buprestides recueillis dans les tabacs par les soins de M. A. Grouvelle II. Sumatra, III. Brésil. *Annales de la Société Entomologique de France* 65: 138-176.

Kerremans C. 1903: Coleoptera Serricornia, Fam. Buprestidae. *In*: P. Wytsman. (Ed.). *Genera Insectorum*, Fasc. 12b, 12c, 12d. Verteneuil & Desmet, Bruxelles, pp. 49-338.

Marek J. 2014: Studies on the genus *Taphrocerus* (Coleoptera: Buprestidae: Agrilinae) part I. *Studies and Reports, Taxonomical Series* 10(1): 127-133.

Marek J. 2016. Studies on the genus *Taphrocerus* (Coleoptera: Buprestidae: Agrilinae) part IV. *Studies and Reports, Taxonomical Series* 12(2): 403-434.

Marek J. 2017a. Studies on the genus *Taphrocerus* (Coleoptera: Buprestidae: Agrilinae) part V. *Studies and Reports, Taxonomical Series* 13(1): 139-165.

Marek J. 2017b. Studies on the genus *Taphrocerus* (Coleoptera: Buprestidae: Agrilinae) part VI. *Studies and Reports, Taxonomical Series* 13(2): 383-404.

Marek J. 2018a. Studies on the genus *Taphrocerus* (Coleoptera: Buprestidae: Agrilinae) part VII. *Taphrocerus* in collection of Hungarian Natural History Museum. *Studies and Reports, Taxonomical Series* 14(1): 101-127.

Marek J. 2018b. Two new species of the genus *Taphrocerus* Solier, 1833 from Ecuador (Coleoptera: Buprestidae: Agrilinae). *Studies and reports, Taxonomical Series* 14(1): 129-135.
Obenberger J. 1924. Révision monographique du genre *Taphrocerus* Solier. (Col. Buprestidae). *Acta Entomologica Musei Nationalis Pragae* 2: 45-83.
Obenberger J. 1934. Monographie du genre Taphrocerus Sol. (Col. Bupr.). *Acta Entomologica Musei Nationalis Pragae* 12: 5-62.

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