Studies and Reports
Taxonomical Series 17 (2): 363-380, 2021

Studies on the genus *Taphrocerus* Solier, 1833 (Coleoptera: Buprestidae: Agrilinae) part XII.

Jaroslav MAREK

Sýkořice 29, CZ-270 24 Zbečno, Czech Republic

Taxonomy, new species, new synonymy, lectotype designation, Coleoptera, Buprestidae, *Taphrocerus*

Abstract. Five species are newly described and illustrated as follows: *Taphrocerus cordillerae* sp. nov. (Paraguay), *T. hroni* sp. nov. (Brazil), *T. irenei* sp. nov. (French Guiana), *T. lucidicollis* sp. nov. (Argentina) and *T. macraei* sp. nov. (Brazil). The new species are compared to the most related taxa. The following nomenclatural changes are proposed: *T. szekessyi* Apt, 1954 (= *T. subcarinulosus* Cobos, 1967 syn. nov.); *T. wendleri* Obenberger, 1924 (= *T. kapczyhaberi* Apt, 1954 syn. nov.). Lectotype of *T. wendleri* is designated.

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 from various institutions and private collections all over the world.

MATERIALS AND METHODS

Lectotype designation is 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). There are two or more different species mixed in type-series of previously described species mostly and lectotype designation is necessary. For this reason I consistently give exact number of known syntypes or the notice that the exact number of syntypes is unknown. The designation of the lectotype is provided by printed white label with wide 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 designation: the slash mark \ is used to indicate data from separate labels; my notations are in parentheses [ ], with the abbreviation [h] = handwritten, [p] = printed, [Obenberger´s MS] = Obenberger´s manuscript.

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

Further abbreviations used in the text: ( ) = my remarks and additions; (h) = handwritten, (p) = printed; HT = holotype, 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, FLV = fronto-lateral view.

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 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:

CEIOC Instituto Oswaldo Cruz, Rio de Janeiro, Brazil;
CHAH collection of Henry A. Hespenheide, Los Angeles, U.S.A.;
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;
NMPC National Museum, Praha, Czech Republic;
TCMC collection of Ted C. MacRae, Wildwood, U.S.A.

TAXONOMY

Taphrocerus irenei sp. nov.

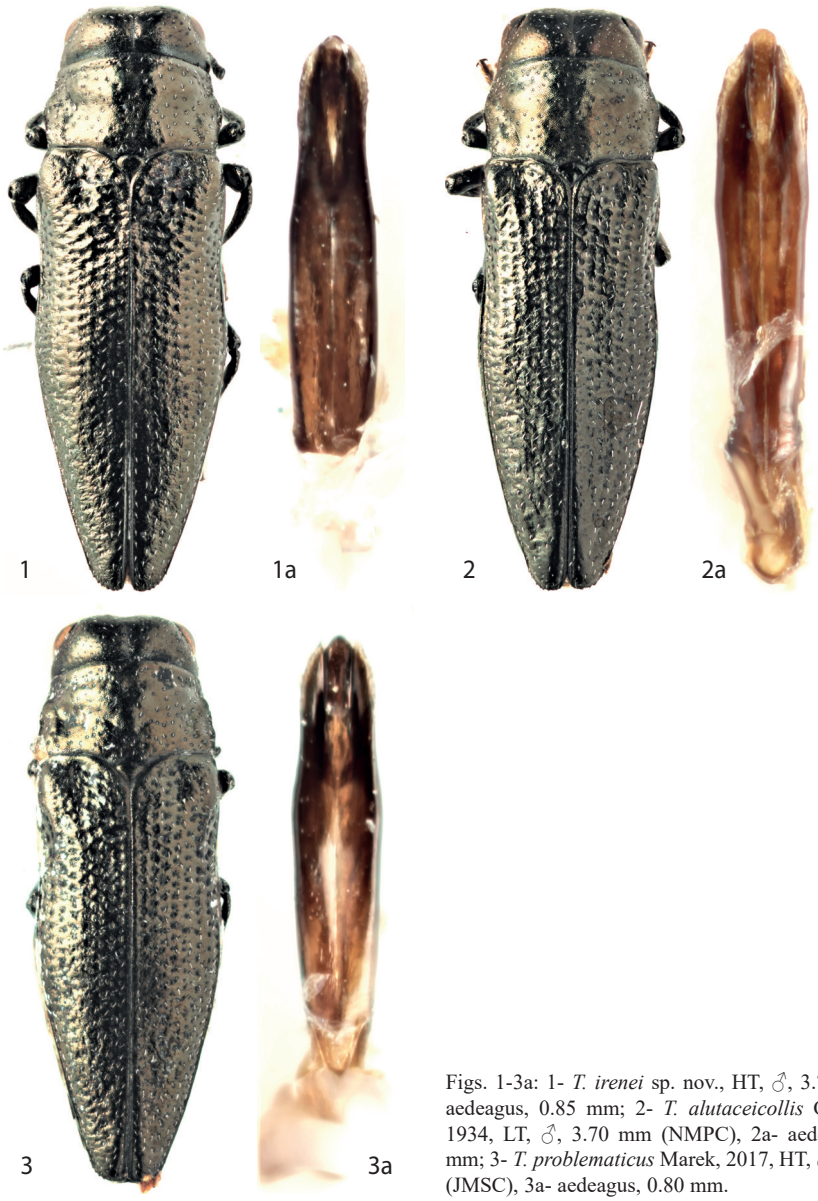
(Figs. 1, 1a)

Type locality. French Guiana, Le Larivot env.

Type specimens. Holotype (♂): „FR. GUYANE bor., LE LARIVOT env., 3.-6. 11. 1995, lgt. M. Snížek“, (JMSC). Paratypes: (1 ♂, 1 ♀): the same data as holotype, (JMSC); (1 ♀): „Guyane French NW, Mana env., 11. x. 2006, M. Snížek lgt.“, (JMSC).

Diagnosis. Medium-sized (3.65-3.95 mm), rather broadly elongate, about 3.05 times longer than wide, widest just before the elytral midlength, moderately convex above, strongly lustrous; dorsal surface aeneous with strong golden-coppery tinge; beneath black with slight purple lustre including legs and antennae; above sparsely pubescent by very short, thin, white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head medium-sized, wide, slightly narrower than posterior pronotal margin; clypeus widely „V-shaped“, strongly shagreened, separated from frons by well elevated carina, epistomal pores large, slightly elongate transversely, separated by their own diameter; frons rather strongly convex, strongly shagreened, deeply and rather narrowly depressed at middle longitudinally, the depression merging into short but well distinct longitudinal sulcus in central part of frons, very sparsely punctate by simple punctures, sparsely pubescent by short, thin, white setae along inner sides of eyes and at posterior



Figs. 1-3a: 1- *T. irenei* sp. nov., HT, ♂, 3.75 mm, 1a- aedeagus, 0.85 mm; 2- *T. alutaceicollis* Obenberger, 1934, LT, ♂, 3.70 mm (NMPC), 2a- aedeagus, 0.95 mm; 3- *T. problematicus* Marek, 2017, HT, ♂, 3.50 mm (JMSC), 3a- aedeagus, 0.80 mm.

half; vertex broadly convex, slightly depressed at middle longitudinally, with a fine groove at middle longitudinally, surface rather strongly shagreened, sparsely ocellate-punctate by small punctures, each puncture with a short, thin, white seta, the setae are longer at anterior half and almost inconspicuous posteriorly along anterior pronotal margin; eyes medium-sized, narrowly ovoid, very slightly projecting beyond outline of head, poorly visible from above; antennae rather short, antennomeres 6-11 distinctly widened.

Pronotum rather strongly convex at anterior half, moderately convex at posterior one, 1.72 times as wide as long, widest at the end of second third; narrowly and shallowly transversely depressed along anterior margin, the depression is almost interrupted at the middle, largely and rather shallowly depressed lateroposteriorly, very weakly so on the disc at middle and in front of scutellum; with a vague prominence lateroposteriorly; anterior margin widely, regularly rounded, posterior margin biemarginate, widely emarginate in front of scutellum, of the same width as base of elytra, sides weakly dilated at anterior fourth posteriorly, then angulately, strongly dilated to the end of second-third, narrowly rounded and then straight contricted to the base; surface strongly shagreened, sparsely ocellate-punctate by small punctures, each puncture with short, thin, white seta; scutellum rather small, cordiform, rather strongly rounded anteriorly, strongly shagreened.

Elytra moderately convex, 2.33 times as long as wide, widest just before the middle, slightly but distinctly wider at humeri than pronotum at the widest part; lateral margins very weakly and widely emarginate behind humeri, rather strongly and narrowly rounded at middle, then very slowly arcuately tapering towards rather narrowly and separately rounded apices; apices finely serrate; humeral swelling rather poorly developed, laterobasal depression medium-sized, rather deep, well marked; surface shagreened, punctures in rows longitudinally deeper and larger at basal third becoming fine posteriorly, disappearing at apical third which is somewhat corrugate; sparsely pubescent by short, thin, white setae in rather regular rows longitudinally; posthumeral elytral carina absent.

Ventral surface strongly shagreened, abdomen strongly lustrous, sparsely punctate by small, „U-turned up-shaped“ punctures becoming finer posteriorly, sparsely pubescent by short, white setae; anal ventrite rather broadly rounded, somewhat protruding and truncate apically, with wide, shallow, square emargination on apical margin, preapical groove following outline of margin wide, truncate apically; antennal grooves rather deep, widened on prosternum; prosternal process rather broadly elongate, strongly shagreened, sides strongly constricted between procoxae, strongly dilated behind, apex rhomboidal, asetose, impunctate, with deep and wide sulcus longitudinally.

Sexual dimorphism. Observed in the structure of anal ventrite and the shape of preapical groove following outline of margin: the squared emargination on apical margin is markedly deeper and wider and the preapical groove is slightly emarginate apically in the female.

Measurements. Length 3.65-3.95 mm (holotype 3.75 mm); width 1.20-1.30 mm (holotype 1.25 mm).

Variability. Except for the size observed in more or less intensive golden-coppery tinge of the dorsal side.

Differential diagnosis. *T. irenei* sp. nov. belongs among number of species of *T. nugator* species-group (definition of species-group in prep.) (see also Marek 2017: 142, 145, 2018: 106 and 2020a: 150). The species are characterized by sculpture of dorsal side (namely by

unsculptured pronotum relatively), similar male genitalia and by a characteristic sexual dimorphism. From the most similar and closely related species probably, *T. alutaceicollis* Obenberger, 1934 (Figs. 2, 2a) (described and so far known from French Guiana only) and *T. problematicus* Marek, 2017 (Figs. 3, 3a) (described and so far known from northeast of Argentina only) it can be distinguished by stouter body, wider pronotum relatively, by male genitalia and mainly by presence of deep and wide longitudinal sulcus on prosternal process.

Etymology. Named in honour of Iréne Anayahan (Cayenne, French Guiana), with thanks for all her help during my „trip" to French Guiana in 1992-1993; patronymic.

Taphrocerus macraei sp. nov.
(Figs. 4, 4a)

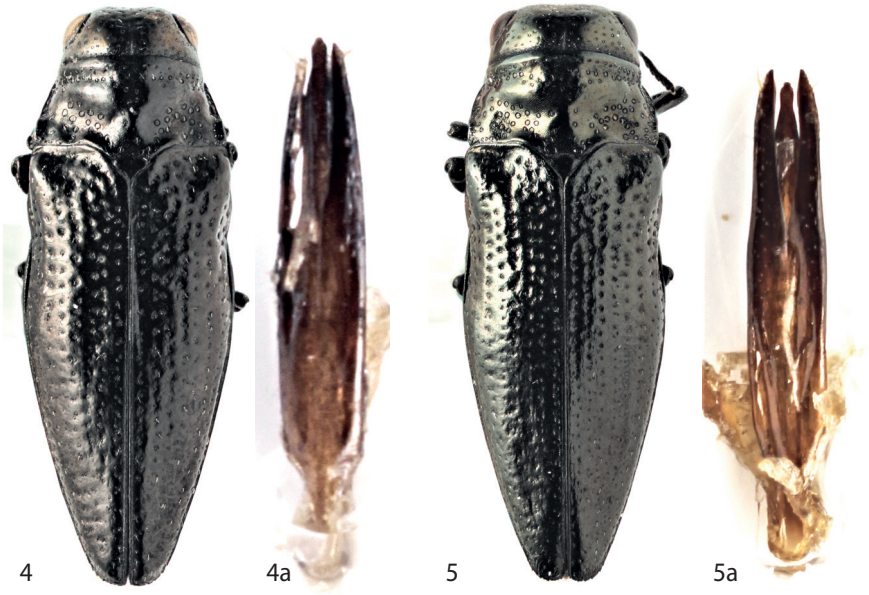
Type locality. Brazil, Sao Paulo State, Marcilac, 23°55´S 46°39´W.

Type specimens. Holotype (♂): „Brasil: São Paulo St., Marcilac, 23°55´S 46°39´W / 2. ii. 1972, V. N. Alin / T 1027 according to Hespenheide", (JMSC). Paratypes: (1 ♂): „Brasil: São Paulo St., Cipó, 23°49´S 46°47´W / 12. xi. 1966, V. N. Alin / T 1027 according to Hespenheide", (CHAH); (1 ♀): the same data but with date of collecting: „18. x. 1965" and label „Taphrocerus T1027 det Hespenheide", (TCMC).

Diagnosis. Medium-sized (3.00-3.20 mm), elongate, fusiform, 2.8-2.9 times longer than wide, widest at the end of second-third of elytra, moderately convex above, strongly lustrous; above black, head with slight purple-coppery tinge, beneath black, legs and antennae black with slight purple-coppery tinge; above almost inconspicuously and very sparsely pubescent by extremely short, thin, white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head rather small, distinctly narrower than posterior pronotal margin, sides subparallel (DV); clypeus very widely „V-shaped", strongly shagreened, separated from frons by rather well elevated carina, epistomal pores large, circular, separated less than their own diameter; frons moderately convex, rather finely shagreened, very slightly depressed at middle, with very fine groove at middle longitudinaly at posterior half, impunctate, with a few, almost inconspicuous, white setae around epistomal pores only; vertex strongly convex (FV), very slightly depressed at middle anteriorly, with a fine groove at middle longitudinally, rather finely shagreened, sparsely punctate by very small, ocellate punctures, each puncture with extremely short, almost inconspicuous, thin, white seta; eyes rather large, moderately visible from above, broadly oval (FLV), very slightly projecting beyond outline of head; antennae rather long, narrow.

Pronotum moderately convex, 1.91 times as wide as long, widest just before the base; rather narrowly transversely depressed along anterior margin, more deeply laterally and almost interruptly at middle, largely and deeply so lateroposteriorly, with shallow depression on the disc anteriorly; with moderately elevated longitudinal bump laterally at the middle; anterior margin widely rounded, straight at middle, posterior margin strongly biemarginate, the same width as elytra at base, widely and weakly emarginate in front of scutellum, sides very shortly subparallel anteriorly, then widely arcuately dilated to ~~the~~ just before the base



Figs. 4-5a: 4- *T. macraei* sp. nov., HT, ♂, 3.15 mm, 4a- aedeagus, 0.75 mm; 5- *T. preissi* Obenberger, 1924, LT, ♂, 3.70 mm (NMPC), 5a- aedeagus of *T. preissi* LT, 1.05 mm.

and then weakly and very shortly constricted to the base; surface rather finely shagreened, with small, ocellate punctures at anterior transverse depression and at the shallow depression on the disc anteriorly and with medium-sized, ocellate punctures at the lateroposterior depressions, each puncture with extremely short, thin, white seta; scutellum medium-sized, cordiform, widely rounded anteriorly, weakly shagreened, moderately lustrous.

Elytra moderately convex, slightly wider at humeri than pronotum at ~~the~~ widest part, 2.11 times as long as wide, widest in the end of second-third; lateral margins rather deeply, narrowly emarginate behind humeri, rather widely regularly rounded at middle, then very slowly arcuately tapering towards rather narrowly and almost conjointly rounded apices; apices serrate by almost indistinct, very shallow and fine teeth; humeral swelling well developed, laterobasal depression medium-sized and rather deep; surface finely shagreened, punctures in rows longitudinally larger and deeper at basal half becoming fine posteriorly, almost inconspicuous at apical fourth, which is slightly corrugate; pubescent by extremely short, almost inconspicuous, very sparse, thin, white setae; posthumeral elytral carina absent.

Ventral surface lustrous, strongly shagreened, abdomen very sparsely pubescent by extremely short, almost inconspicuous, thin, white setae, rather densely punctate by large, „U-turned up-shaped“ punctures on first visible sternite, the punctures becoming ~~more~~ finer apically; anal ventrite narrowly rounded, somewhat protruding apically, with shallow but well distinct, semicircular emargination on apical margin, preapical groove following outline of margin regularly semicircular, wide; antennal grooves deep and long; prosternal process elongate, sides strongly constricted between procoxae, very strongly dilated behind, apex rhomboidal, asetose, impunctate, strongly shagreened, with deep sulcus between procoxae longitudinally.

Aedeagus (Fig. 4a).

Sexual dimorphism. Female is somewhat wider than male only.

Measurements. Length 3.00-3.20 mm (holotype 3.15 mm); width 1.05-1.15 mm (holotype 1.15 mm).

Variability. Except for the size observed in the general shape of males only: the two males studied (HT + PT) vary in being 2.8-2.9 times longer than wide.

Differential diagnosis. *T. macraei* sp. nov. is very similar and closely related probably to *T. preissi* Obenberger, 1924 (described from Brazil, Sao Paulo also) (Figs. 5, 5a) and to *T. hroni* sp. nov. (described from Sao Paulo also, see below) (Figs. 6, 6a). *T. macraei* sp. nov., *T. preissi* and *T. hroni* sp. nov. can be distinguished by the characters given in Table A below.

Table A. Diagnostic characters of *T. macraei* sp. nov., *T. preissi* Obenberger, 1924 and *T. hroni* sp. nov.

♂♂	*T. macraei*	*T. preissi*	*T. hroni*
Size	smaler species, 3.00-3.20 mm	larger species, 3.70-3.80 mm	larger species, 3.50-3.80 mm
General shape of body	fusiform	broadly oval	narrowly oval
Colouration	above black, head with slight purple-coppery tinge; beneath black, legs and antennae black with slight purple-coppery tinge	above black, head and pronotum with very slight golden reflections; beneath black, legs and antennae black with slight coppery tinge	above bright coppery with strong golden lustre, pronotal disc with dark coppery tinge; beneath bright coppery with strong golden lustre including legs and antennae
Pronotum	widest just before the base; anterior margin narrower relatively (ratio anterior pronotal margin to posterior one is about 0.72); sides less dilated posteriorly	widest just before the base; anteior margin wider relatively (ratio anterior pronotal margin to posterior one is about 0.82); sides more dilated posteriorly	widest at the beginning of basal third; anterior margin wider relatively (ratio anterior pronotal margin to posterior one is about 0.85); sides more dilated posteriorly
Elytral apices	narrowly conjointly rounded; almost inconspicuously serrate	narrowly separately rounded; distinctly serrate	broadly separately rounded; distinctly serrate
Prosternal process	rather slender, sides strongly constricted between procoxae, very strongly dilated behind, surface with deep sulcus between procoxae longitudinally	more robust, sides regularly dilated posteriorly, surface coarsely corrugate (without any sulcus or groove)	rather slender, sides strongly constricted between procoxae, very strongly dilated behind, surface with shallow but well distinct sulcus longitudinally

Aedeagus	parameres widely arcuately constricted proximally at apical half (Fig. 4a)	parameres slightly but distinctly emarginately constricted proximally at apical half (Fig. 5a)	parameres very slightly, almost indistinctly emarginately constricted proximally at apical half (Fig. 6a)

Etymology. Named in honour of Ted C. MacRae (Wildwood, U.S.A), well known specialist in Nearctic and Mexican Buprestidae; patronymic.

Taphrocerus hroni sp. nov.
(Figs. 6, 6a)

Type locality. Brazil, Sao Paulo.

Type specimens. Holotype (♂): „Brasil: São Paulo St., São Paulo, 25. ii. 1977, V. N. Alin / T 1016 according to Hespenheide“, (JMSC). Paratype (1 ♂): „BRASIL: Est. São Paulo, São Paulo, 12. xi. 1971, V. N. Alin / T 1058 according to Hespenheide“, (CHAH).

Diagnosis. Medium-sized (3.50-3.80 mm), elongate, slender, 3.1-3.2 times longer than wide, widest at humeri and before the middle of elytra, moderately convex and very lustrous above; above bright coppery with strong golden lustre, pronotal disc with dark coppery tinge; beneath bright coppery with strong golden lustre including legs and antennae, very strongly lustrous; above sparsely pubescent by extremely short, almost inconspicuous, thin, white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head medium-sized, wide, moderately narrower than posterior pronotal margin; clypeus widely „V-shaped“, strongly shagreened, separated from frons by obsolete carina, lateral branches wide, epistomal pores rather small, round, separated more than their own diameter; frons moderately convex, widely and rather deeply depressed at middle anteriorly, the depression merging into short and shallow sulcus towards vertex, surface strongly shagreened, punctate by fine, simple punctures laterally only, with a few very short, white setae at the depression and along the inner sides of the eyes only; vertex moderately convex, moderately depressed at middle anteriorly, rather strongly shagreened, with a fine groove at middle longitudinally, sparsely ocellate-punctate by very small punctures, each puncture with medium-sized relatively, thin, white seta; eyes large, broadly oval (FLV), very slightly projecting beyond outline of head, rather well visible from above; antennae very long and narrow, antennomeres 6-11 widened.

Pronotum moderately convex, 1.72 times as wide as long, widest at the beginning of basal third; rather narrowly and shallowly transversely depressed along anterior margin, almost interruptly at middle, largely and rather deeply so lateroposteriorly, with a vague, shallow depression on the disc anteriorly and very shallow depression in front of scutellum; with a vague prominence lateroposteriorly; anterior margin very widely rounded, posterior margin strongly biemarginate, very slightly narrower than base of elytra, widely emarginate in front of scutellum, sides very shortly subparallel anteriorly, then widely arcuately dilated to the beginning of basal third, then weakly angulate and then more arcuately constricted to

the base; surface rather strongly shagreened except for pronotal disc laterally, which is very finely shagreened, sparsely ocellate-punctate by small punctures at the depressions, each puncture with short, thin, white seta; scutellum rather small, cordiform, widely rounded anteriorly, strongly shagreened, moderately lustrous.

Elytra moderately convex, 2.39 times as long as wide, widest at humeri and before the middle, very slightly wider at humeri than pronotum at the widest part; lateral margins slightly and widely emarginate behind humeri, slightly and narrowly rounded at middle, then very slowly arcuately tapering towards broadly and separately rounded apices; apices serrate by sharp, well distinct teeth; humeral swelling moderately developed, laterobasal depression rather small but well distinct; surface rather finely shagreened, punctures in rows longitudinally larger and deeper at basal third becoming fine posteriorly, disappearing at apical fifth, the apical third is finely corrugate; sparsely covered by very short, almost inconspicuous, thin, white setae; posthumeral elytral carina absent.

Ventral surface strongly shagreened, moderately lustrous, abdomen densely, almost regularly punctate by very small ocellate punctures opening posteriorly, rather densely and regularly pubescent by short, thin, white setae; anal ventrite rather broadly rounded, with rather deep, wide, semicircular emargination on apical margin, preapical groove following outline of margin regularly semicircular, wide; antennal grooves very long and rather deep; prosternal process elongate, strongly shagreened, sides strongly constricted between procoxae, very strongly dilated behind, apex rhomboidal, surface asetose, impunctate, with rather shallow but well distinct, wide sulcus at middle longitudinally.

Aedeagus (Fig. 6a).

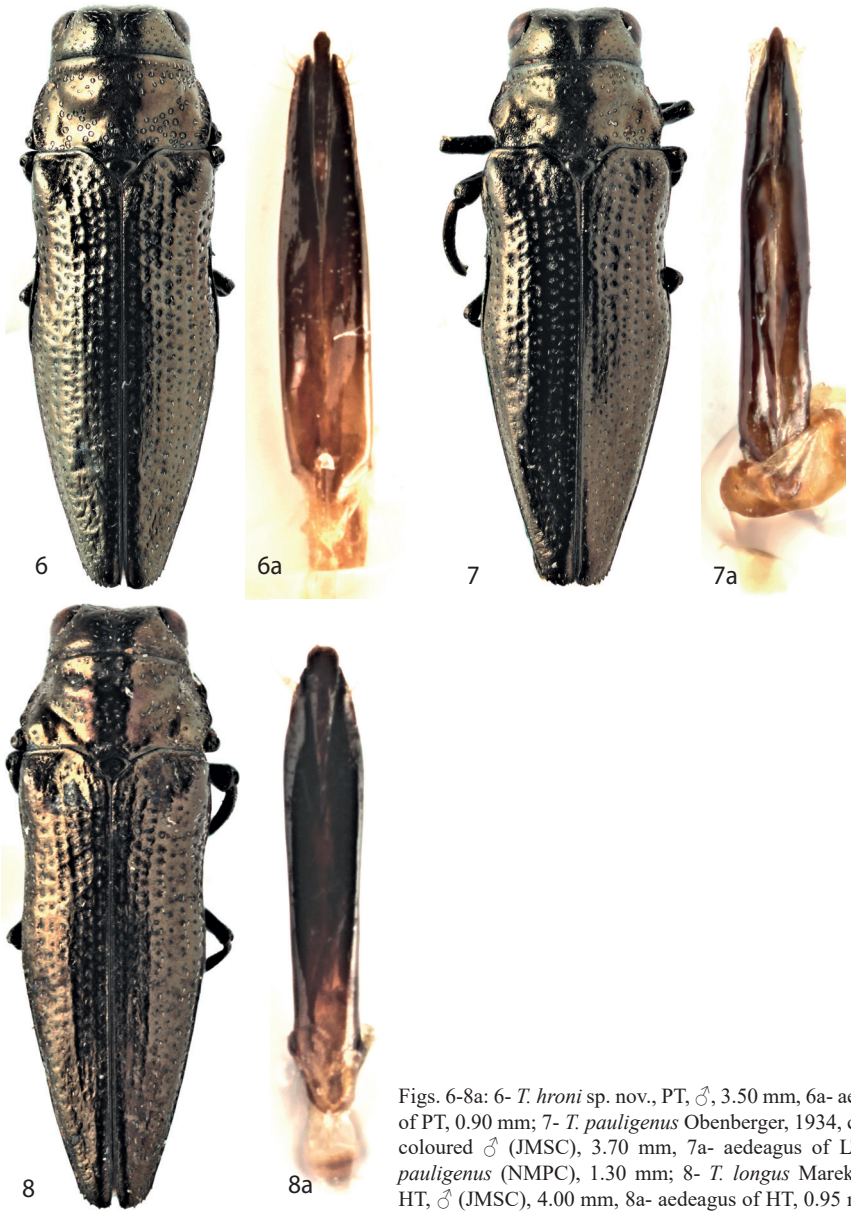
Sexual dimorphism. Female unknown.

Measurements. Length 3.50-3.80 mm (holotype 3.80 mm); width 1.15-1.20 mm (holotype 1.20 mm).

Variability. Except for the size, the pronotal sides are almost regularly rounded and the elytral apical third is less corrugate in the paratype.

Differential diagnosis. *T. hroni* sp. nov. is similar and probably closely related to *T. macraei* sp. nov. (Figs. 4, 4a) and *T. preissi* (Figs. 5, 5a), from which it can be distinguished by the charcters given in Table A above. *T. hroni* sp. nov. is also similar by its colouration, larger size and slender body shape to coppery coloured specimens of *T. pauligenus* Obenberger, 1934 (described from Sao Paulo) (Figs. 7, 7a) and to *T. longus* Marek, 2019 (described from Brazil, Rio de Janeiro) (Figs. 8, 8a), but it can be easily distinguished from both *T. pauligenus* and *T. longus* by the pronotal shape and by strongly different male genitalia, as well as many other details of morphology.

Etymology. Named in honour of my friend and excellent sport gymnast Jiří Hron (Brno, Czech Republic); patronymic.



Figs. 6-8a: 6- *T. hroni* sp. nov., PT, ♂, 3.50 mm, 6a- aedeagus of PT, 0.90 mm; 7- *T. pauligenus* Obenberger, 1934, coppery coloured ♂ (JMSC), 3.70 mm, 7a- aedeagus of LT of *T. pauligenus* (NMPC), 1.30 mm; 8- *T. longus* Marek, 2019, HT, ♂ (JMSC), 4.00 mm, 8a- aedeagus of HT, 0.95 mm.

Taphrocerus lucidicollis sp. nov.
(Fig. 9)

Type locality. Argentina, Misiones, Puerto Esperanza.

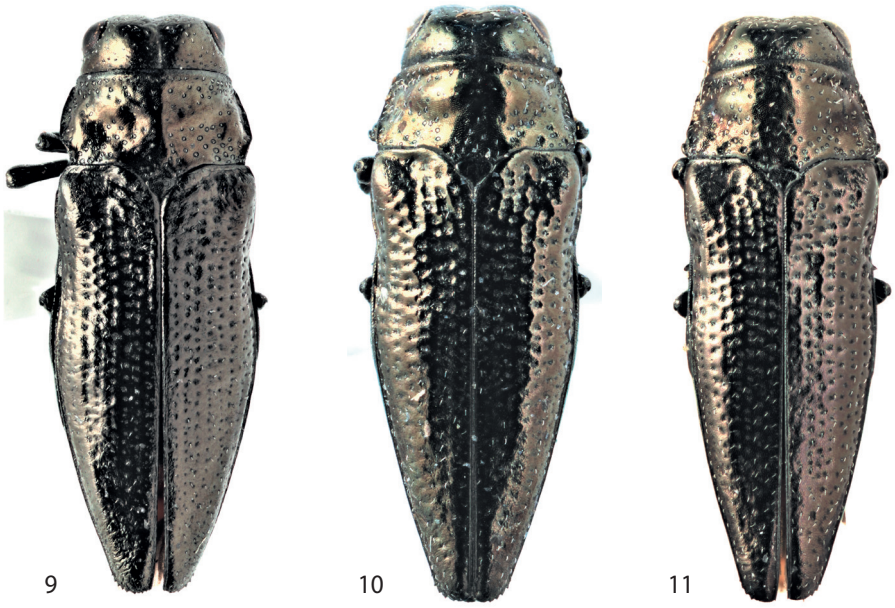
Type specimens. Holotype (♀): „ARGENTINA, Mis., Pt. Esperanza, I-21-1989, C & L. O´Brien & G. Wibmer / T1043 according to Hespenheide“, (JMSC).

Diagnosis. Medium-sized (3.20 mm), broadly elongate, stout, 2.84 times as long as wide, widest at humeri and before the middle of elytra, moderately convex above, very strongly lustrous; above bicoloured: head and pronotum coppery with slight purple lustre, elytra black with very feeble brownish lustre; beneath black with slight purple tinge and golden lustre including legs and antennae, moderately lustrous; sparsely pubescent by extremely short, almost inconspicuous, thin, white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head medium-sized, wide, slightly narrower than posterior pronotal margin, sides weakly attenuate anteriorly (DV); clypeus widely „V-shaped“, strongly shagreened, separated from frons by well elevated carina, lateral branches wide, epistomal pores large, very slightly elongate transversely, separated by their own diameter; frons moderately convex, strongly shagreened, moderately depressed at middle anteriorly, the depression merging into shallow sulcus towards vertex, impunctate, with a few short, thin, white setae around epistomal pores and along the inner sides of the eyes only; vertex strongly convex, rather finely shagreened, very weakly depressed at middle anteriorly (DV), with a fine groove at middle longitudinally, sparsely punctate by fine, simple punctures, with short, thin, white setae at anterior half only; eyes medium-sized, broadly oval, moderately projecting beyond outline of head, moderately visible from above; antennae rather long, antennomeres 6-11 widened.

Pronotum moderately convex, 1.76 times as wide as long, widest at the beginning of basal third; very shallowly, almost indistinctly transversely depressed along anterior margin, interruptly at middle, largely and deeply so lateroposteriorly, with very vague, small depression on the disc anteriorly and very weakly depressed in front of scutellum; with a vague longitudinal prominence lateroposteriorly; anterior margin very widely rounded, posterior margin rather strongly biemarginate, slightly but markedly narrower than elytra at base, widely emarginate in front of scutellum, sides very shortly subparallel anteriorly, then very widely arcuately dilated to the beginning of basal thirth, then distinctly angulate and feebly emarginately constricted to the base; surface rather strongly shagreened at middle, finely so laterally, sparsely ocellate-punctate by small punctures at the depressions, each puncture with extremely short, almost inconspicuous, thin, white seta; scutellum rather small, cordiform, widely rounded anteriorly, strongly shagreened, moderately lustrous.

Elytra moderately convex, 2.10 times as long as wide, widest at humeri and before the middle, slightly wider at humeri than pronotum at the widest part; lateral margins slightly and rather widely emarginate behind humeri, widely regularly rounded at middle, then very slowly, widely arcuately tapering towards rather broadly and separately rounded



Figs. 9-11: 9- *T. lucidicollis* sp. nov., HT, ♀, 3.20 mm; 10- *T. bolivianus* Marek, 2018, HT, ♀, 3.20 mm (HNHM); 11- *T. mixtus* Marek, 2016, HT, ♀, 3.30 mm (NMPC).

apices; apices minutely serrate by sharp teeth; humeral swelling well developed, laterobasal depression medium-sized and deep, well marked; surface rather finely shagreened, punctures in rows longitudinally larger at basal fourth becoming finer posteriorly, very fine at apical fourth, apical eight somewhat corrugate; very sparsely pubescent by extremely short, almost inconspicuous, thin, white setae; posthumeral elytral carina absent.

Ventral side strongly shagreened and very strongly lustrous, abdomen punctate by very small, „U-turned up-shaped" punctures, very sparsely pubecsent by very short, almost inconspicuous, thin, white setae; anal ventrite rather narrowly rounded, slightly protruding apically, with short but well distinct, wide, semicircular emargination on apical margin, preapical groove following outline of margin wide, regularly semicircular; antennal grooves widened on prosternum, deep and long; prosternal process rather elongate, strongly constricted between procoxae, very strongly dilated behind, surface strongly shagreened, apex very large, rhomboidal, asetose, impunctate.

Sexual dimorphism. Male unknown.

Measurements. Length 3.20 mm; width 1.15 mm.

Differential diagnosis. *T. lucidicollis* sp. nov. is unique among bicoloured (head+pronotum x elytra) *Taphrocerus* species without pronotal prehumeral and elytral posthumeral carinae and with asetose dorsal side (with extremely short, almost inconspicuous setae respective).

Nevertheless it is somewhat similar to *T. bolivianus* Marek, 2018 (described from Bolivia, Beni) (Fig. 10) and *T. mixtus* Marek, 2016 (described from Brazil, Santa Catarina) (Fig. 11), but it is easily distinguishable by the general body shape and especially by the widest part of pronotum being at the basal third (near the base both in *T. bolivianus* and *T. mixtus*) and by pronotal base markedly narrower than base of elytra (the same width both in *T. bolivianus* and *T. mixtus*).

Etymology. The specific epithet is derived from the Latin adjective *lucidus* (bright, lucid) and noun *collum* (neck) in reference of dorsal colouration of this species.

***Taphrocerus cordillerae* sp. nov.**
(Fig. 12)

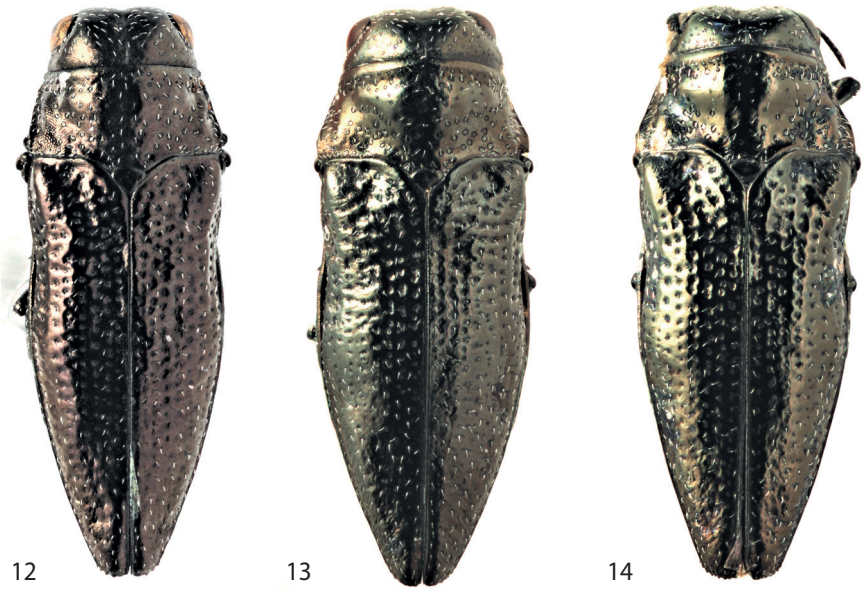
Type locality. Paraguay, Cordillera, Caacupé, Instituto agronomico nacional.

Type specimens. Holotype (♀): „Paraguay: Cordillera, Caacupé, Inst. Agro. Nac., 17-20 - I - 1983, E.G. Riley / T 1053 according to Hespenheide“, (JMSC).

Diagnosis. Small (2.75 mm), elongate, 2.94 times as long as wide, widest just before the pronotal base, at humeri and just before the middle of elytra, moderately convex above, very strongly lustrous; above brownish-black with very strong dark purple tinge; beneath black, very strongly lustrous, legs and antennae black with strong purple-violet tinge; sparsely pubescent by short, thin, white setae; prehumeral pronotal and posthumeral elytral carinae absent.

Description of holotype. Head medium-sized, distinctly narrower than posterior pronotal margin, sides weakly attenuate anteriorly (DV); clypeus very widely „V-shaped“, strongly shagreened, separated from frons by well elevated carina, epistomal pores large, elongate transversely, separated more than their own diameter; frons moderately convex, moderately depressed above clypeus at middle, the depression merging into rather deep and wide sulcus towards vertex, impunctate, with a few short, thin, white setae around epistomal pores only; vertex moderately convex, strongly shagreened, slightly but distinctly depressed anteriorly at middle (DV), with a fine groove at middle longitudinally, very sparsely ocellate-punctate by very small punctures, each puncture with medium-sized, thin, white seta, somewhat more densely anteriorly and at middle; eyes large, broadly oval, slightly projecting beyond outline of head, moderately visible from above; antennae medium-sized, rather narrow.

Pronotum moderately convex, 1.93 times as wide as long, widest near the base; shallowly and rather narrowly transversely depressed along anterior margin, almost interruptly at middle, largely and shallowly so lateroposteriorly, with shallow, circular depression on the disc anteriorly and very weakly depressed in front of scutellum; with moderately elevated londitudinal bump at middle laterally; anterior margin very widely rounded, posterior margin rather strongly biemarginate, slightly but distinctly wider than elytra at base, widely emarginate in front of scutellum, sides very widely arcuately, almost straight dilated posteriorly to just before the base and then very shortly constricted to the base; surface



Figs. 12-14: 12- *T. cordillerae* sp. nov., HT, ♀, 2.75 mm; 13- *T. riparius* Obenberger, 1934, LT, ♀, 2.95 mm (NMPC); 14- *T. parvus* Obenberger, 1924, LT, ♀, 3.00 mm (NMPC).

strongly shagreened, sparsely ocellate-punctate by small punctures at the depressions and at middle longitudinally, each puncture with a short, thin, white seta; scutellum medium-sized, cordiform, very widely rounded anteriorly, strongly shagreened, feebly lustrous.

Elytra moderately convex, 2.17 times as long as wide, widest at humeri and just before the middle, the same width at humeri as pronotum at the widest part; lateral margins moderately and rather narrowly emarginate behind humeri, widely regularly rounded at middle, then very slowly, widely arcuately tapering towards rather narrowly and slightly separately rounded apices; apices minutely serrate by a few sharp teeth; humeral swelling moderately developed, laterobasal depression small but rather deep, well marked; surface weakly shagreened, punctures in rows longitudinally larger and deeper at basal third becoming finer posteriorly, almost disappearing at apical fourth; very sparsely pubescent by short, thin, white setae in rows longitudinally; posthumeral elytral carina absent.

Ventral side strongly shagreened and lustrous, abdomen punctate by very small, „U-turned up-shaped“ punctures, more densely on first visible sternite and becoming sparser and finer apically, pubecsent by thin, white setae laterally and apically; anal ventrite rather narrowly rounded, with short but wide and rather deep semicircular emargination on apical margin, preapical groove following outline of margin rather narrowly rounded, wide; antennal grooves rather wide, deep and long, markedly widened on prosternum; prosternal process elongate, sides regularly, feebly dilated posteriorly, surface strongly shagreened, apex rhomboidal, asetose, impunctate, with wide sulcus between procoxae.

Sexual dimorphism. Male unknown.

Measurements. Length 2.75 mm; width 0.95 mm.

Differential diagnosis. *T. cordillerae* sp. nov. belongs to *T. dudai* species-group (definition and revision of the species-group in prep., see also Marek 2016: 407, 2019: 107-108 and 2020b: 428-429). From the most similar species *T. riparius* Obenberger, 1934 (described from Brazil, Paraná) (Fig. 13) and *T. parvus* Obenberger, 1924 (described from Paraguay) (Fig. 14) it can be distinguished by the characters given in Table B below.

Table B. Diagnostic characters of *T. cordillerae* sp. nov., *T. riparius* Obenberger, 1934 and *T. parvus* Obenberger, 1924.

♀♀	*T. cordillerae*	*T. riparius*	*T. parvus*
Colouration of dorsal side	brownish-black with very strong dark purple tinge	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	mostly olive green, pronotum with rather strong golden lustre, sometimes (♀♀ mostly) uniformly brown-coppery
Vertex	strongly shagreened; slightly depressed at middle anteriorly; the groove at middle longitudinally deeper, well marked	finely shagreened; slightly depressed at middle anteriorly; the groove at middle longitudinally very fine, almost indistinct	finely shagreened; rather strongly depressed at middle anteriorly; the groove at middle longitudinally very fine, almost indistinct
Pronotum	transverse depression along anterior margin very shallow, weakly distinct; sides rather weakly dilated posteriorly; posterior margin very slightly wider than base of elytra only	transverse depression along anterior margin deeper, well distinct; sides strongly dilated posteriorly; posterior margin distinctly wider than base of elytra	transverse depression along anterior margin deeper, well distinct; sides strongly dilated posteriorly; posterior margin distinctly wider than base of elytra
Elytra	narrower, about 2.2 times longer than wide; apices narrowly rounded	wider, about 2.05 times longer than wide; apices narrowly rounded	wider, about 2.05 times longer than wide; apices broadly rounded

Etymology. The specific epithet is derived from Paraguayan department Cordillera where the holotype was collected; adjective.

LECTOTYPE DESIGNATION AND NEW SYNONYMY

***Taphrocerus wendleri* Obenberger, 1924**
(Figs. 15, 16, 16a)

Taphrocerus Wendleri Obenberger, 1924: 62, 82-83.
Taphrocerus Kapczy-Haberi Apt, 1954: 232. **syn. nov.**

Type material. *Taphrocerus wendleri*: lectotype (NMPC, ♀) by present designation: „Costa Rica [h] \ TYPUS [p] [red label with black margin] \ Taphrocerus Wendleri m. Type [h] [Obenberger´s MS] Det. Dr. Obenberger [p]". The exact number of syntypes unknown. *Taphrocerus kapczyhaberi*: holotype (HNHM, ♂): „Mexico [h] COLL. KAPCZY-H. [p] \ Taphrocerus Kapczy-Haberi m. Typus [h] det. Apt 195 . [p] \ Holotypus [p, red letters] Taphrocerus Kapczyhaberi Apt [h] [white label with red margin]". Described for unique specimen.

The holotype of *T. kapczyhaberi* is conspecific with the lectotype of *T. wendleri*. The name *T. kapczyhaberi* is a new subjective synonym of the name *T. wendleri*.

Distribution. Costa Rica (Obenberger 1924, without precise locality data); Mexico (Apt 1954, without precise locality data under *T. kapczyhaberi*).

Variability. The holotype of *T. kapczyhaberi* has longer, rather well distinct setae on dorsal side and denser setae in the elytral ornamental pubescence (vague pattern), the lectotype of *T. wendleri* has the setae on dorsal side extremely short and very sparse in the place of elytral ornamental pubescence (the place is well distinct by brighter colouration). The holotype of *T. kapczyhaberi* has more stronger golden-coppery lustre of dorsal side, especially on pronotum and finer punctures in rows longitudinally on elytra, especially at basal third.

Remarks. So far known from the two mentioned specimens above. *T. wendleri* belongs among number of very similar species externally and by aedeagus around *T. guyanae* Obenberger, 1934, which occur in the Amazonia and Central America.

Figs. 15-16a: 15- *T. wendleri* Obenberger, 1924, LT, ♀, 2.95 mm (NMPC); 16- *T. kapczyhaberi* Apt, 1954, HT, ♂, 3.50 mm (HNHM), 16a- aedeagus, 0.95 mm.

Taphrocerus szekessyi Apt, 1954
(Figs. 17, 17a, 18)

Taphrocerus Szekessyi Apt, 1954: 232-233.
Taphrocerus subcarinulosus Cobos, 1967: 184-185 (fig. 12), 186, 192 (fig. 19). **syn. nov.**

Type material. *Taphrocerus szekessyi*: lectotype (HNHM, ♂): „Pernambuco, Bras. E. Horvath 1930. [p] \ Taphrocerus Székessyi m. Typ. [h, blue letters, Apt´s MS] det. Apt 195 [p] 2 [h, blue letter] \ Syntypus [p, red letters] Taphrocerus szekessyi Apt 1952 [h, !not Apt´s MS!] [white label with red margin]". Paralectotype the same data as lectotype but with „m. Type." on Apt´s determination label (1 PLT, sex not examined, HNHM). Lectotype designated Marek 2018: 103-104. Described from two specimens. *Taphrocerus subcarinulosus*: holotype (MNCN, ♂): „I. Bananal, Sta. Isabel do Morro, Goiás, Brasil (M. Alvarenga coll. VI-1961)". Paratypes: the same data as holotype (1 PT sex not examined, MNCN); „Natal, Rio Grande do Norte, Brasil (M. Alvarenga coll. 3-I-1952)" (1 PT sex not examined, MNCN). Described from 5 specimens.
(note: not studied type specimens (according to the list of types in CEIOC): „Natal, Rio Grande do Norte, Brasil, M. Alvarenga coll. 3-I-1952, det. A. Cobos 1962") (2 PTs sex not examined in coll. CEIOC (nr. 4794 + nr. 19840).

The holotype of *T. subcarinulosus* is conspecific with the lectotype of *T. szekessyi*. The name *T. subcarinulosus* is a new subjective synonym of the name *T. szekessyi*.

Other specimens examined: BRAZIL: „Santarem Bates / Saunders. 74.18.", (1 ♀, BMNH); „Brazil: Mato Grosso., 12°49´S, 51°45´W, 20. xi. 1968, W. J. Knight / Grassland / Brit. Mus. 1973 - 292 / Roy. Soc- Roy.Georg. Soc., Xavantina-Cachimbo Exped. 1967-69." (1 ♀, BMNH); „BRAZIL Bahia, Itaparica, 18. vii. 1982, P. Maret lgt.", (1 ♂, JMSC).

Figs. 17-18: 17- *T. szekessyi* Apt, 1954, LT, ♂, 3.00 mm (HNHM), 17a- aedeagus of LT, 0.70 mm; 18- *T. subcarinulosus* Cobos, 1967, HT, ♂, 3.75 mm (MNCN), photo S. Bílý.

Distribution. Brazil: Bahia (Marek 2019), Goiás (Cobos 1967 under *T. subcarinulosus*), Mato Grosso (Marek 2019), Pará (Marek 2019), Pernambuco (Apt 1954), Rio Grande do Norte (Cobos 1967 under *T. subcarinulosus*).

Variability. Except for the size observed in more or less intense golden-purple lustre on pronotum and elytra and in the length and elevation of the posthumeral elytral carina (very rudimentally, obsoletely manifesting along the entire length to well elevated, with sharp edge basally and/or apically).

ACKNOWLEDGEMENTS. I would like to thank the curators in National Museum in Prague, namely Jiří Hájek, Vítězslav Kubáň and Lukáš Sekerka for possibility of examining material in their care and for possibility to make photos of the specimens mentioned in the present paper. Thanks are due also to the curators in Hungarian Natural History Museum in Budapest (Hungary), namely Ottó Merkl, for possibility of examining material in their care. My thanks go also to Ted MacRae (Wildwood, U.S.A.) for possibility of examination (and donation partially) material of *Taphrocerus* comming from his collection. Thanks are due also to Svatopluk Bílý (Praha, Czech Republic) for providing me with the photos of Cobos´ *Taphrocerus*-types which he took in MNCN. Special thanks are due to Henry Hespenheide (Los Angeles, U.S.A.) who provided me with his very rich and important material of *Taphrocerus* comming from his collection and donated kindly the holotypes of newly described species in „collection *Taphrocerus* Obenberger/Marek“ stored in NMPC.

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Received: 23.4.2021
Accepted: 30.5.2021
Printed: 5.10.2021