

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

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### Taxonomy, new species, new synonyms, Coleoptera, Buprestidae, *Taphrocerus*, Neotropical Region

**Abstract.** The second part of the study on the genus *Taphrocerus* Solier, 1833 (Coleoptera: Buprestidae: Agrilinae) is presented. Eight species are newly described (all from French Guiana): *T. seidli* sp. nov., *T. nigricollis* sp. nov., *T. krepelkai* sp. nov., *T. snizeki* sp. nov., *T. bourdaensis* sp. nov., *T. anayahani* sp. nov., *T. fragilis* sp. nov., *T. hrnyi* sp. nov. The following nomenclatural changes are proposed: *T. bruchi* Obenberger, 1924 (= *T. kormilevi* Cobos, 1956 syn. nov.); *T. exiguus* Obenberger, 1934 (= *T. subpolitus* Cobos, 1967 syn. nov.); *T. scutellatus* Obenberger, 1934 (= *T. sericeicollis* Cobos, 1959 syn. nov.). The correction of sex and locality data of the *T. balthasari* lectotype is proposed. Records new to country are presented for *T. fasciatus* Waterhouse, 1889 and for *T. depilis* Kerremans, 1896 (both French Guiana).

### INTRODUCTION

This is the second part of the studies on the genus *Taphrocerus*, which contains one hundred sixty seven valid species at present (Bellamy 2008, Brûlé 2012, Marek 2014). The studies are made as a basis serving for a revision of this very difficult buprestid genus, which is not possible without the study and comparison of the type-specimens due to the wide distribution of many species and due to their external similarity and variability.

### MATERIALS AND METHODS

Abbreviations used in the text: HT = holotype, AT = allotype, PT(PTs) = paratype (paratypes), DV = dorsal view, FV = frontal view; ( ) = my notations in text, Obnb. = Obenberger.

The following collection codens are used throughout the text:

IRSNB Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium;

JMSC private collection of J. Marek, Sýkořice, Czech Republic (will be deposited in NMPC);

MNHN Muséum national d'Histoire naturelle, Paris, France;

MNCN Museo Nacional de Ciencias Naturales, Madrid, Spain;

NMPC National Museum, Praha, Czech Republic.

A Canon D-550 digital camera with the Canon MP-65mm f/2.8 1-5x macro lens was used to capture the colour images, occasional exceptions are noted at relevant place.

## RESULTS

### DESCRIPTIONS OF NEW SPECIES

#### *Taphrocerus seidli* sp. nov.

(Figs. 1, 9)

**Type locality.** French Guiana, Matoury.

**Type specimens.** Holotype (JMSC, ♂): „Guyane Francaise, Matoury-Balata, J. Marek lgt. xi. 1992“. Paratypes: the same data as HT (JMSC, ♀); „Guyane Francaise, Kourou Guatemala, 15.xii.2006, M. Snížek lgt.“ (JMSC, ♀).

**Diagnosis.** Large (4.7-4.9 mm), elongate, strongly flattened above, shining; elytra metallic violet-brown, except of areas covered by white pubescence, which are greyish-gold, pronotum metallic golden-purple, lateral part and posterior angles black, base with violet lustre, frons green with dense, cream-white pubescence between frons-clypeus („fronto-clypeal pubescent strip“ - male) or golden-orange with sparse, white pubescence (female), vertex golden-orange; ventral surface very lustrous, black; legs black; antennae black with green lustre; posthumeral elytral carina present, sharp, entire.

**Description of male holotype.** Head large, wider than anterior pronotal margin; clypeus „V-shaped“, epistomal pores missing; frons flat, indistinctly shagreened, with dense white pubescence along clypeus („fronto-clypeal pubescent strip“); vertex strongly convex, irregularly finely punctured, with very fine groove at middle; eyes medium-sized, oval, distinctly projecting beyond outline of head; antennae long, rather broad.

Pronotum moderately convex, 2.1 times as wide as long, widest just behind the middle; narrow, shallow transverse depression along anterior margin, deep and large depressions at lateroposterior angles, shallow and small medial depression; anterior margin slightly biarcuate, median lobe widely rounded, posterior margin strongly biemarginate, sides arcuately rounded, narrowly emarginate near base; surface finely shagreened; irregular, shallow punctures and bump in lateroposterior angles; scutellum rather large, cordiform, longitudinally depressed at middle, shagreened.

Elytra slightly convex, more flattened apically, wider than pronotum at base, 2.2 times as long as wide, widest at humeri; elytral margins slightly emarginate at basal third, widely, arcuately rounded just behind the middle, and then regularly tapering towards separately rounded apices; apices finely serrate; humeral swelling feebly developed; laterobasal depression broad, moderately deep; subhumeral carina strongly elevated, sharp, sinuate, present from humeral swelling to near the apex, not reaching apices; surface finely shagreened, in basal third with rows of large, deep punctures, disappearing at apical third; elytral pubescence as follows: rather sparse, but long white setae at lateroanterior angles and laterobasal depressions; sparse, short white setae at small, longitudinal spot along suture behind of scutellum and in irregular, narrow, transversal strip at basal third; longer white setae at irregular, wider, transversal strip just behind the half of elytra; short, but more dense white setae at apical third.

Ventral surface lustrous, abdomen sparsely longitudinally punctured at middle, more rugose laterally; anal ventrite rounded, lateroapical margin with preapical groove following outline of margin; antennal grooves broad and rather shallow; prosternal process elongate, constricted between procoxae, dilated behind, subrhomboidal at apex, surface rugose, coarsely punctured.

Aedeagus (Fig. 9).

**Sexual dimorphism.** Only by different coloration and pubescence of frons (see „Diagnosis“).

**Measurements.** Length 4.7-4.9 mm (holotype 4.7 mm); width 1.4-1.5 mm (holotype 1.4 mm).

**Variability.** Female paratype from „Kourou, Guatemala“ possess a setose part of elytra darker, almost black with strong blue tinge; prosternal process with fine, longitudinal groove at middle.

**Differential diagnosis.** *T. seidli* sp. nov. belongs to a group of species characterized by strongly flattened, wide dorsal surface (especially elytra), large size, metallic colours of dorsal surface (blue, green, red), subhumeral elytral carina strongly elevated, entire and sharp, similar elytral pubescence (design). *T. seidli* sp. nov. differs from the species of this group mainly in having colour of head and pronotum, that is golden-purple, then red, blue or green, in the pattern of setae on the elytra, as well as many other details of morphology.

**Etymology.** Named in honour of my friend Pavel Seidl, (Praha, Czech Republic), who crossed the Amazonian forest with me „without any orientation“ in 1992 - 1993.

### ***Taphrocerus nigricollis* sp. nov.**

(Figs. 2, 10)

**Type locality.** French Guiana, St. Georges de Oiapoque.

**Type specimens.** Holotype (JMSC, ♂): „Guyane Francaise, St. Georges de Oiapoque, J. Marek lgt., viii.1992“. Paratype: „French Guyane, Fourgassie (error) near Roura, 16-30. ix.1995, M. Trýzna lgt“, (JMSC, ♂).

**Diagnosis.** Medium-sized (3.7-4.0 mm), stout, moderately convex; head shining, feebly shagreened, pronotum and elytra dull with feeble lustre, coarsely shagreened; dorsal surface distinctly bicolorous: head, pronotum and scutellum black, elytra brown with slight violet tinge, ventral side back, lustrous, including legs and antennae; elytra very sparsely, almost inconspicuously covered by very short, white setae; posthumeral elytral carina present, entire and sharp.

**Description of male holotype.** Head large, slightly narrower than anterior pronotal margin; clypeus widely „V-shaped“, separated from frons by wide, transverse groove, extending from inner sides of eyes to epistomal pores; epistomal pores large, separated by one and half puncture diameter; frons rather finely, widely depressed, very inconspicuously shagreened, almost smooth; vertex convex, finely shagreened, sparsely, finely punctured, with very fine, longitudinal groove; eyes medium-sized, almost circular, slightly projecting beyond outline of head; antennae rather short, narrow.

Pronotum convex, 1.8 times as wide as long, widest at two thirds; narrowly, rather shallowly transversely depressed along anterior margin, with deep and large laterobasal depressions, small bump in lateroposterior angles; anterior margin very widely rounded, medial lobe almost straight, posterior margin arcuately, widely emarginate in front of elytra and feebly, arcuately emarginate in front of scutellum, sides almost straightly dilated to 2/3 length, then straightly constricted to base; surface densely shagreened, large, circular punctures with flat central grains along posterior margin only; scutellum medium-sized, cordiform.

Elytra moderately convex, strongly wider than pronotum at base, 2.0 times as long as wide, widest at half; lateral margins rather narrowly emarginate at basal fourth, widely rounded at middle, gradually tapering towards slightly, separately rounded apices; apices lateroposteriorly strongly serrate; humeral swelling moderately

developed, basal depression small and shallow; subhumeral carina strongly elevated, sharp, present from humeral swelling to just before the apex, not reaching apices; surface finely shagreened, in basal half with rows of large, shallow and irregular punctures, disappearing posteriorly, apical half smooth.

Ventral surface lustrous, abdomen very finely shagreened, with shallow but large, circular punctures, asetose; antennal grooves rather short, wide and shallow; anal ventrite widely rounded, lateroapical margin with preapical groove following outline of margin, more wide apically; prosternal process wide, constricted between procoxae, strongly dilated behind, rhomboid at apex, with two „V-turned-up-shaped“ fine grooves.

Aedeagus (Fig. 10).

**Sexual dimorphism.** Female unknown.

**Measurements.** Length 3.7-4.0 mm (holotype 4.0 mm); width 1.3-1.4 mm (holotype 1.4 mm).

**Variability.** Male paratype possesses elytra more light brown, surface of vertex almost smooth, anal ventrite more narrowly rounded.

**Differential diagnosis.** *T. nigricollis* sp. nov. belongs to a lot of black species with sharp, entire, posthumeral carina, but it can be distinguished from all known species by larger size together with smooth apical half of elytra, elytra without pubescent ornamentation and by dorsal coloration, which is distinctly two-coloured (head + pronotum x elytra).

**Remarks.** *T. nigricollis* sp. nov. is also very similar to *T. collarti* Cobos, 1959 (HT stored in IRSNB) by general shape of body and by structure of elytra and pronotum, from which it can be distinguished by absence of elytral pubescence ornamentation, by absence of prehumeral carina and namely by strongly different aedeagus.

**Etymology.** The specific epithet is an adjective derived from the Latin adjective *niger* (black) and noun *collum* (neck) to stress the coloration of head and pronotum in contrast to elytra.

***Taphrocerus krepelkai* sp. nov.**

(Fig. 3)

**Type locality.** French Guiana, Sinnamary.

**Type specimens.** Holotype (JMSC, ♀): „Guyane Francaise, Sinnamary 20 km E, 15.i.2007, M. Snížek lgt.“. Paratype: the same data as HT (JMSC, ♀).

**Diagnosis of female holotype.** Large (4.4-4.8 mm), stout, almost oval, moderately convex above, shining; dorsal surface black with slight violet lustre; sparse, white pubescence creating design on each elytron; ventral surface shiny black, antennae black with violet lustre; subhumeral elytral carina present at apical fourth only, obsolete, blunt.

**Description of female holotype.** Head large, slightly wider than anterior pronotal margin; clypeus „V-shaped“, separated from frons by fine groove; epistomal pores missing; frons widely, deeply depressed longitudinally, indistinctly shagreened; indistinctly covered by extremely short, white setae; vertex convex, sparsely, finely punctate, sparsely covered by white setae, longer than on frons, with very fine, longitudinal groove extending from clypeus to anterior pronotal margin; eyes large, semicircular, distinctly projecting beyond outline of head; antennae long, rather narrow.

Pronotum convex, 2.1 times as wide as long, maximum width just before the base; narrowly, transversely depressed along anterior pronotal margin, lateroposterior depressions large; rather deeply, strongly elevated bump in lateroposterior angles; sparsely covered by long, white setae, denser lateroposteriorly; surface very finely shagreened, very sparsely punctured by large, circular, very shallow punctures, covered by sparse, long white setae, denser laterally; scutellum rather small, widely triangular, shagreened.

Elytra moderately convex, slightly narrower at humeral part than pronotum at base, 1.9 times as long as wide, widest at middle; lateral margins rather strongly emarginate at anterior fifth, broadly rounded at middle,

gradually tapering towards almost conjointly rounded apices; apices strongly serrate lateroposteriorly, the top of apex smooth; humeral swelling rather feebly developed, basal depression deep, not large; posthumeral carina present at apical fourth only, obsolete, with rather wide, blunt edge; surface consisting of rugose punctures in longitudinal rows, well marked at basal fourth only, than disappearing; irregularly shagreened, shagreened parts

alternate with smooth, very lustrous ones, most of all at middle; sparse, rather long white setae denser on apical third only, where create large, longitudinally oval spot on each elytron, with asetose centre.

Ventral surface lustrous, abdomen sparsely, finely punctured, sparsely covered by white setae; antennal grooves on prosternum deep and rather narrow; anal ventrite broadly rounded, lateroapical margin with sharp preapical groove following outline of margin; prosternal process elongate, gradually dilated behind procoxae, apex rhomboid, surface shagreened with deep longitudinal depression.

**Sexual dimorphism.** Male unknown.

**Measurements.** Length 4.4-4.6 mm (holotype 4.4 mm); width 1.6-1.7 mm (holotype 1.6 mm).

**Variability.** Slight variability observed in the elytral shape: elytra 1.9-2.0 times as long as wide (1.9 times in the HT).

**Differential diagnosis.** *Taphrocerus krepelkai* sp. nov. is very similar to *T. squamulatus* Kerremans, 1896 described from Bahia (Brasil) and *T. tigrensis* Obenberger, 1947 described from Buenos Aires - Tigre (Argentina) by general shape of body (oval - widest at humeri and at the middle of elytra), longitudinally grooved frons, eyes slightly projecting beyond outline of head, shape of pronotum (almost straightly dilated to base, widest near base), almost conjointly rounded apices, and namely by very similar pubescent design on elytra and posthumeral elytral carina (present at apical fourth only - obtuse with blunt edge, not sharp). It differs from both by the characters given in Table 1.

Table 1. Diagnostic characters of *T. krepelkai* sp. nov. and related species.

	<i>T. krepelkai</i>	<i>T. squamulatus</i>	<i>T. tigrensis</i>
Vertex	moderately convex	moderately convex	moderately depressed
Elytral pubescence	short, thin white setae	longer, wider cream-white setae	short, thin white setae
(including pattern)			
Elytral apices	laterally strongly serrate, the top smooth	entirely finely serrate	entirely finely serrate
Ventral surface	black	black with coppery reflections	dark brown, elytra with violet lustre

**Etymology.** This new species is dedicated to my friend Jindřich Křepelka, (Sýkořice, Czech Republic).

***Taphrocerus snizeki* sp. nov.**

(Fig. 4)

**Type locality.** French Guiana, Sinnamary.

**Type specimens.** Holotype (JMSC, ♀): „Guyane Francaise, Sinnamary 20 km E, 15.i.2007, M. Snížek lgt.“. Paratype: the same data as HT (JMSC, ♀).

**Diagnosis.** Large (4.6-4.7 mm), elongate, convex above, moderately shining; entirely black, including legs and antennae, head and pronotum with feeble cupreous lustre; elytra with sparse, but long white pubescence, creating design on each elytron; posthumeral elytral carina present at apical fifth only, blunt.

**Description of female holotype.** Head large, slightly wider than anterior pronotal margin; clypeus widely „V-shaped“, separated from frons by fine groove; epistomal pores large, separated half diameter; frons widely depressed, with deep, moderately wide groove longitudinally at middle, with rather sharp bump laterally; sparsely covered by long white

setae; with narrow strip („frontoclypeal“) of sparse, long white-gold setae; vertex convex, feebly depressed longitudinally, with fine groove, extending from anterior pronotal margin to frons, finely shagreened and punctured, with a few, but distinctly marked long, white setae along inner side of eyes; eyes medium-sized, semi-circular, not projecting beyond outline of head; antennae short and narrow.

Pronotum convex in anterior half, flattened at base, 1.7 times as wide as long, widest at basal fourth; narrowly transversely depressed along anterior margin, deeply and largely, almost conjointly depressed lateroposteriorly, with large bump in lateroposterior angles, sharper and narrower anteriorly; anterior margin

widely rounded, with slightly and narrowly rounded median lobe, posterior margin strongly biemarginate, straight in front of scutellum, sides almost parallel in anterior fifth, then arcuately rounded to the base; surface finely shagreened, sparsely covered by circular, shallow punctures with flat central grains and with sparse, white pubescence, densely at lateroposterior angles; scutellum triangular, medium-sized, distinctly shagreened.

Elytra convex, distinctly wider than pronotum at base, 2.5 times as long as wide, widest at middle; lateral margin widely, slightly emarginate at basal third, widely rounded at middle, gradually tapering towards separately rounded apices; apices rather strongly serrate; humeral swelling rather feebly developed, basal depression large but rather shallow; surface finely shagreened, punctures in longitudinal rows coarse, large on basal third, almost disappearing at apical half; pubescence of very sparse, but long white setae, denser at basal depressions, along elytral suture behind of scutellum and on apical half, where create large, longitudinally oval spot on each elytron, with large asetose centre; posthumeral carina present in apical fifth, short, with wide, blunt edge.

Ventral surface lustrous, abdomen finely shagreened, irregularly punctured by large, shallow punctures and sparsely covered by white, short setae; antennal grooves long, narrow and rather shallow; anal ventrite narrowly rounded, lateroapical margin with rather wide preapical groove following outline of margin, prosternal process elongate, constricted between procoxae, then dilated with rhomboid apex, surface distinctly shagreened, without punctures or grooves.

**Sexual dimorphism.** Male unknown.

**Measurements.** Length 4.6-4.7 mm (holotype 4.6 mm); width 1.2-1.25 mm (holotype 1.2 mm).

**Variability.** Variability observed in width of pronotal base. Female paratype possess width of pronotal base the same width as elytra at humeri.

**Differential diagnosis.** *T. snizeki* sp. nov. belongs to a group of species characterized mainly by pubescent design on elytra and by the form of posthumeral elytral carina (present apically only, obtuse, with blunt edge - f.e. *T. squamulatus*, *T. tigrensis*, *T. krepelkai*- see above), from which it differs by markedly slender shape of body (especially of elytra - 2.5 times as long as wide), almost subparallel sides of elytra at  $\frac{3}{4}$  of their length, separately rounded elytral apices, presence of sharp bumps laterally on frons, as well as many other details of morphology. *T. snizeki* sp. nov. is similar to *T. argentinus* Bruch, 1909 (it belongs to the same group of species) by markedly slender shape of body, but differs from it by colour (dark

brown with violet lustre in *T. argentinus*), by thin setae on elytral pubescent design (more dense, wider in *T. argentinus*), by frons and vertex less and narrowly depressed, by frons with bumps laterally, more slender body and by separately rounded apices of elytra (almost conjointly rounded in *T. argentinus*).

**Etymology.** This new species is dedicated to Miroslav Snížek, (České Budějovice, Czech Republic), one of the best collectors of insects at present, who collected this species.

***Taphrocerus bourdaensis* sp. nov.**

(Figs. 5, 11)

**Type locality.** French Guiana, Cayenne.

**Type specimen.** Holotype (JMSC, ♂): „Guyane Francaise, Cayenne Mt. Bourda, J. Marek leg., xi.1992“.

**Diagnosis of male holotype.** Small (2.8 mm), slender, strongly convex above, shining third; black with very slight cupreous tinge, ventral surface shiny black; entire body asetose, except for apex of elytra, covered by white pubescence and „fronto-clypeal“ white pubescent strip (male); legs and antennae black; posthumeral elytral carina present, entire, sharp.

**Description of male holotype.** Head large, as wide as anterior pronotal margin; clypeus widely „V-shaped“, separated from frons by fine carina, epistomal pores small, separated by own diameter; frons deeply, narrowly grooved longitudinally, finely; fronto-clypeal pubescent strip (male) consisting of short, wide, dense white setae; vertex strongly convex, inconspicuously shagreened, with very fine longitudinal groove at middle, sparsely, finely punctured; eyes rather large, widely reniform, very slightly projecting beyond outline of head; antennae long and moderately wide, black with feeble cupreous lustre.

Pronotum strongly convex at anterior part, flattened posteriorly, 1.7 times as wide as long, maximum width at basal third; rather deeply and narrowly depressed along anterior margin, very deeply, largely depressed at lateroposterior angles; with well developed, sharp, long prehumeral carina, reaching to anterior  $\frac{3}{4}$  length of pronotum, strongly arcuate (LV); anterior margin widely, regularly rounded, posterior margin biarcuate with straight part in front of scutellum, sides slightly, arcuately dilated to basal third, then slightly emarginate, lateroposterior angles very sharp; surface finely shagreened, with large, extremely shallow and very sparse punctures; scutellum finely shagreened, cordiform.

Elytra rather strongly convex, less at humeral part, distinctly wider at humeri than basal pronotal margin, 2.2 times as long as wide, widest at humeri and half of elytra; lateral margins rather narrowly, deeply emarginate at basal fourth, widely, very arcuately rounded at middle, then gradually tapering towards separately rounded apices; apices very finely serrate; humeral swelling well developed, laterobasal depression shallow; subhumeral carina well

marked, present from humeral swelling to just before of apex, not reaching apices; surface finely shagreened, covered by large, rather deep punctures in longitudinal rows, less marked at apical half.

Ventral surface lustrous, abdomen finely shagreened, sparsely pubescent by white setae on lateroposterior angles of ventrites; antennal grooves long, narrow and rather deep; anal ventrite regularly rounded, lateroapical margin with narrow preapical groove following outline of margin; prosternal process elongate, strongly constricted between procoxae, dilated behind, apex subrhomboidal, shagreened, with rather fine, longitudinal groove.

Aedeagus (Fig. 11).

**Sexual dimorphism.** Female unknown.

**Measurements.** Length 2.8 mm; width 0.9 mm.

**Differential diagnosis.** *T. bourdaensis* sp. nov. belongs to a group of a few species characterized by black coloration, by strongly convex vertex, by presence of entire, strongly elevated, sharp posthumeral elytral carina and with markedly subparallel sides of body. *T. bourdaensis* sp. nov. differs from the species of this group by small size (2.8 mm) and namely by presence of strongly elevated, sharp, long prehumeral pronotal carina, as well as many other details of morphology.

**Etymology.** The specific name is derived from the type locality (Mt. Bourda, Cayenne).

***Taphrocerus fragilis* sp. nov.**

(Figs. 6, 12)

**Type locality.** French Guiana, Cayenne.

**Type specimens.** Holotype (JMSC, ♂): „Guyane Francaise, Cayenne Mt. Bourda, J. Marek lgt., V. 1992“. Paratype: the same data as HT (JMSC, ♀).

**Diagnosis of male holotype.** Small (2.4-2.8 mm), moderately elongate, shining; entire black with slight greenish lustre; elytra with very short, sparse, white pubescence, except of asetose, longitudinally oval area on  $\frac{3}{4}$  of each elytron; legs black with brownish lustre, antennae black; posthumeral elytral carina present, entire, sharp.

**Description of male holotype.** Head large, distinctly narrower than anterior pronotal margin; clypeus „V-shaped“, separated from frons by very fine transverse groove; epistomal pores absent; frons deeply, widely depressed longitudinally, feebly shagreened, with row of coarse, large, rather shallow punctures along inner margin of eyes; vertex slightly convex, extremely sparsely covered by rather large, shallow punctures, disappearing along anterior pronotal margin, longitudinal groove at middle very fine, almost indistinct; eyes medium-sized, reniform, not projecting beyond outline of head; antennae narrow, long.

Pronotum strongly convex at anterior half, posteriorly flattened, 2.2 times as wide as long, maximum width near base; rather deeply, narrowly depressed along anterior margin, deeply at lateroposterior angles; bump in lateroposterior angles vague, but relatively large; sides widely rounded, near base strongly, angularly constricted; surface very finely shagreened, a few large, very shallow punctures present on anterior margin at middle only; scutellum cordiform, shagreened.

Elytra moderately convex, wider at humeri than base of pronotum, 2.0 times as long as wide, widest at humeri and just before middle; lateral margins widely emarginate at basal fourth, widely rounded at middle, gradually tapering towards nearly conjoined apex; apices very finely serrate; humeral swelling rather well developed, laterobasal depression small and shallow; surface finely shagreened, large punctures in longitudinal rows well marked at base only, missing at apical half; subhumeral carina well marked, present from humeral swelling to near of apex, not reaching apices.

Ventral surface lustrous, abdomen feebly shagreened with sparse, white pubescence denser than above; antennal grooves long, narrow, deep; anal ventrite almost regularly rounded, lateroapical margin with narrow preapical groove following outline of margin; prosternal process elongate, sides parallel, subtruncate at apex, distinctly shagreened, rather deeply, widely depressed longitudinally.

Aedeagus (Fig. 12).

**Sexual dimorphism.** Observed in the shape of body: male slightly slender (2.7 times as long as wide), female stouter (2.6 times as long as wide).

**Measurements.** Length 2.4-2.8 mm (holotype 2.4 mm); width 0.9-1.1 mm (holotype 0.9 mm).

**Variability.** Paratype female possesses elytra with slightly dense, white pubescence at anterior sides of asetose elytral area.

**Differential diagnosis.** *T. fragilis* sp. nov. is similar to *T. theryi* Obenberger, 1924 described from Sao Paulo (Brasil) by general shape and structure of body and coloration. It differs namely by presence of entire elytral posthumeral carina (at basal part only in *T. theryi*) and by aedeagus, as well as many other details of morphology.

**Etymology.** The specific epithet is Latin adjective *fragilis* (fragile) to stress very small length of aedeagus of this species.

### ***Taphrocerus anayahani* sp. nov.**

(Figs. 7, 13)

**Type locality.** French Guiana, Fourgassier.

**Type specimen.** Holotype (JMSC, ♂): „Guyane Francaise, Fourgassier env. MSA (MSA means Mission Saint Antoinne \*), vi.1992, J. Marek lgt.“.

**Diagnosis.** Small (2.9 mm), stout, convex, very shining; dorsal surface dark brown with very strong cupreous tinge, ventral surface black with brownish lustre; head and pronotum asetose, elytra with very short, extremely sparse, nearly indistinct white pubescence; legs and antennae black; posthumeral elytral carina present at apical third, sharp.

**Description of male holotype.** Head large, as wide as anterior pronotal margin; clypeus widely „V-shaped“, epistomal pores missing; frons deeply, widely grooved medially, indistinctly shagreened; vertex moderately convex, almost smooth; eyes medium-sized, circular, not projecting beyond outline of head; antennae long, rather narrow.

Pronotum strongly convex, 2.1 times as wide as long, maximum width near base; narrowly, transversely depressed along anterior margin, with very large, deep laterobasal depressions, obsolete depressed in front of scutellum, bump in lateroposterior angles very vague; anterior margin widely rounded, posterior margin rather slightly biemarginate, lateral margins slightly arcuate, strongly dilated to base; surface inconspicuously shagreened, almost smooth; scutellum cordiform, finely shagreened, black.

Elytra moderately convex, distinctly narrower at humeral part than pronotum at base, 1.9 times as long as wide, widest just before middle; lateral margins rather strongly emarginate at anterior fourth, broadly rounded at middle, very gradually tapering towards conjointly rounded apices; apices very finely serrate; humeral swelling very strongly developed, basal depression deep and large; surface consisting of shallow, rather large punctures in longitudinal rows, almost disappearing at apical third, very feebly, irregularly shagreened; posthumeral elytral carina present at apical third only, not reaching apices.

Ventral surface lustrous, more shagreened than above, abdomen finely punctured; antennal grooves on prosternum rather wide, shallow; anal ventrite narrowly rounded, lateroapical margin with sharp, fairly wide preapical groove following outline of margin; prosternal process elongate, feebly constricted between procoxae, with rather deep, wide, longitudinal groove.

Aedeagus (Fig. 13).

**Sexual dimorphism.** Female unknown.

**Measurements.** Length 2.9 mm; width 1.1 mm.

**Differential diagnosis.** *T. anayahani* sp. nov. is related to *T. depilis* Kerremans, 1896 described from Brasil, from which it differs by brown colour with cupreous tinge of dorsal surface, narrower and more convex body, eyes not so projecting beyond outline of head, frons narrower and more slightly depressed, by aedeagus, as well as many details of morphology (see also Table 2.).

**Etymology.** Named in honour of my friend René Anayahan, in 1992-93 in Cayenne (French Guiana); on his „garden“ in forest the species was collected.

\*„Mission Saint Antoinne“ is a locality in French Guiana, which was found on old handwritten map from the period of „prisoner colonies“, the present name of this place is Fourgassier.

***Taphrocerus hrnyi* sp. nov.**

(Fig. 8)

**Type locality.** French Guiana, Saint Laurent du Maroni.

**Type specimen.** Holotype (JMSC, ♀): „Guyane Francaise, St. Laurent du Maroni, J. Marek lgt., v.1993“.

**Diagnosis.** Small (2.8 mm), fusiform, convex, shining; entire black, with extremely short, sparse, white pubescence; legs and antennae black; posthumeral elytral carina present in apical third only, sharp.

**Description of female holotype.** Head small, distinctly narrower than anterior pronotal margin; clypeus widely „V-shaped“, separated from frons by obsolete carina; epistomal pores missing; frons deeply, rather narrowly grooved longitudinally, indistinctly shagreened; vertex very slightly depressed at middle, with very fine groove from anterior pronotal margin to frons; eyes small, reniform, very slightly projecting beyond outline of head; antennae narrow and long.

Pronotum strongly convex, 1.9 times as wide as long, maximum width just near the base; narrowly, transversely depressed along anterior margin, more deeply laterally, broadly transversely depressed along base, deeply at lateroposterior angles; sides widely rounded, gradually dilated to near base; at lateroposterior angles with

a vague prominence only, narrow and elongate; surface of the middle almost smooth, at laterobasal angles and in front of scutellum with shallow, rather large punctures; scutellum triangular with rounded anterior margin, finely shagreened.

Elytra convex, of the same width as base of pronotum, 1.9 times as long as wide, widest just before the middle; lateral margins parallel at humeri, deeply, narrowly emarginate at basal fifth, arcuately rounded at middle, very slowly, almost straightly tapering toward nearly conjoined apices; apices finely serrate; humeral swelling strongly developed, basal depression rather shallow, longitudinal at anterolateral angle; surface feebly

shagreened, consisting of rows of large, shallow punctures, at basal part sometimes conjoining, less apparent at apical third; subhumeral carina present at apical third, not reaching apices, strongly produced, sharp.

Ventral surface lustrous, abdomen more shagreened than above, with very shallow, sparse, irregular but large punctures; antennal grooves on prosternum long, deep and relatively broad; anal ventrite narrowly rounded, lateroapical margin with sharp, rather narrow preapical groove following outline of margin; prosternal process elongate, feebly dilated behind procoxae, longitudinally, rather shallowly grooved.

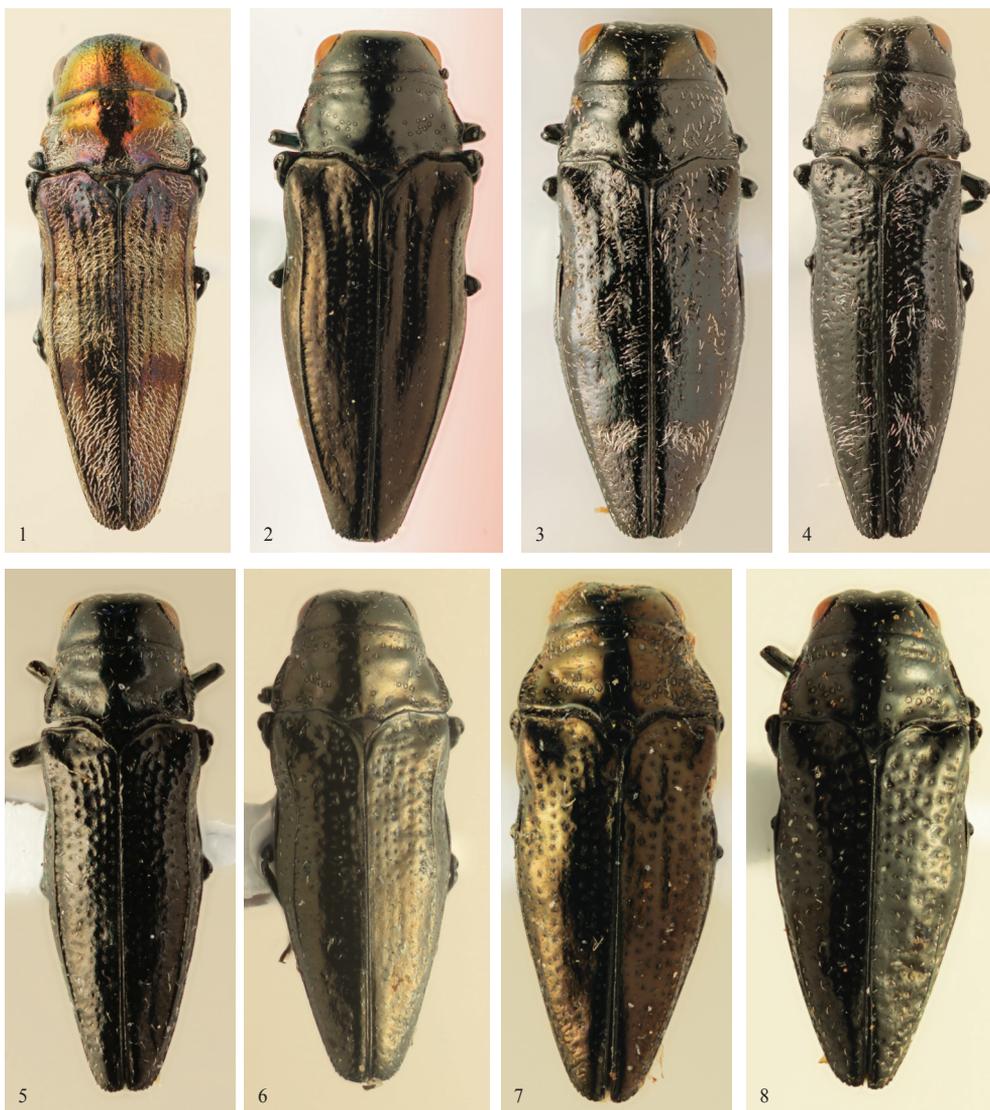
**Sexual dimorphism.** Male unknown.

**Measurements.** Length 2.8 mm; width 1.1 mm.

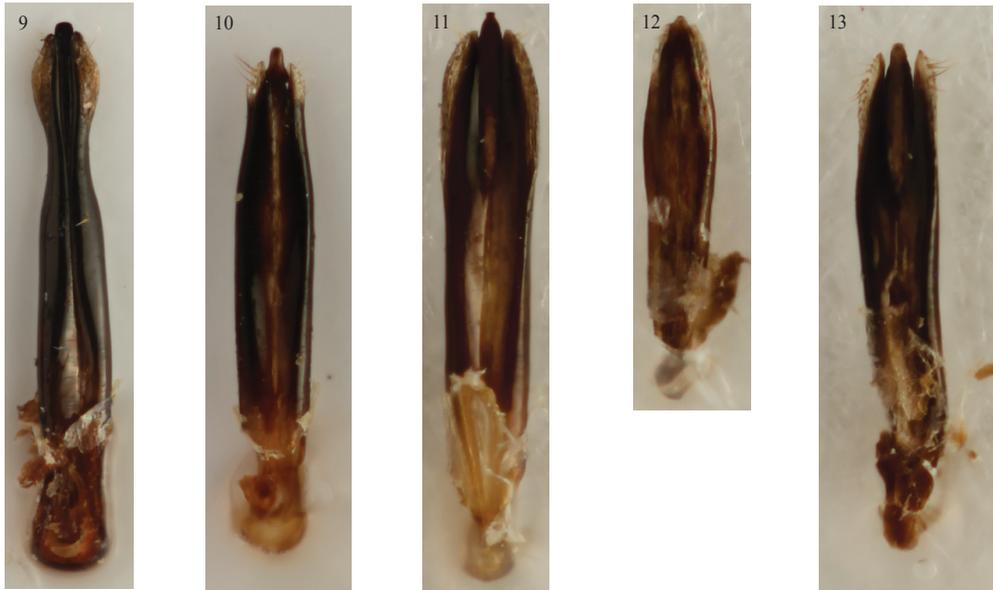
**Differential diagnosis.** *T. hrnyi* sp. nov. is closely related to *T. depilis*, from which it differs by fusiform shape and narrower, more convex body, eyes small and very slightly projecting beyond outline of head, frons narrow and more narrowly depressed, as well as many details of morphology (see also Table 2).

**Remarks.** Specimen holotype of *T. hrnyi* sp. nov. was collected on type locality (French Guiana, Saint Laurent du Maroni) together with numerous specimens of closely related *T. depilis* and numerous specimens of *T. fasciatus* Waterhouse, 1889 (record new to the country for both *T. depilis* and *T. fasciatus*), which seem to be common all over the Amazonia by my observations.

**Etymology.** Named in honour of Jiří Hrdý (George Herdy), Saint Laurent du Maroni (French Guiana), Czech emigrant in 1949, „legionére avec une jambe“, the man with great heart.



Figs. 1-8. Habitus: 1- *T. seidli* sp. nov. HT male, 4.7 mm; 2- *T. nigricollis* sp. nov. HT, male, 4.0 mm; 3- *T. krepelkai* sp. nov. HT female, 4.4 mm; 4- *T. snizeki* sp. nov. HT, female, 4.6 mm; 5- *T. bourdaensis* sp. nov. HT male, 2.8 mm; 6- *T. fragilis* sp. nov. HT male, 2.4 mm; 7- *T. anayahani* sp. nov. HT male, 2.9 mm; 8- *T. hrnyi* sp. nov. HT, female 2.8 mm;



Figs. 9-13. 9- *T. seidli* sp. nov. HT aedeagus, 1.82 mm; 10- *T. nigricollis* sp. nov. HT aedeagus, 1.09 mm; 11- *T. bourdaensis* sp. nov. HT aedeagus, 1.03 mm; 12- *T. fragilis* sp. nov. HT aedeagus, 0.40 mm; 13- *T. anayahani* sp. nov. HT aedeagus, 0.80 mm.

Table 2. Diagnostic characters f *T. depilis*, *T. anayahani* sp. nov. and *T. hrnyi* sp. nov. (posthumeral elytral carina present at apical third only, sharp)

	<i>T. depilis</i>	<i>T. anayahani</i>	<i>T. hrnyi</i>
Frons (DV)	widely depressed	moderately depressed	narrowly depressed
Shape of body	wider, moderately convex	narrower, convex	fusiform, strongly convex
Eyes	large, projecting beyond outline of head	large, moderately projecting beyond outline of head	small, very slightly projecting beyond outline of head
Coloration	black	brown with coppery tinge	black

## NEW SYNONYMS

### *Taphrocerus bruchi* Obenberger, 1924

(Figs. 14, 15, 21)

*Taphrocerus bruchi* Obenberger, 1924: 79.

*Taphrocerus loretanus* Obenberger, 1934: 50. syn.

*Taphrocerus kormilevi* Cobos, 1956: 77. **syn. nov.**

**Type material.** *Taphrocerus bruchi*: lectotype (♂, NMPC): LT designation see Marek 2014; paralectotype (♀, NMPC); paralectotype, sex not examined (MNHN).

*Taphrocerus loretanus*: lectotype (♂, NMPC): LT designation Marek 2014.

*Taphrocerus kormilevi*: holotype (♀, MNCN): „Riocho Tohué, ruta °11 A. Martínez, ii.1949 (Argentina, Formosa)”.

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

**Remarks.** *T. kormilevi* was described from two females (HT, PT) (Cobos, 1956) and resembled to *T. loretanus* Obenberger, 1924, *T. rotundicollis* Obenberger, 1924, *T. rambouseki* Obenberger, 1924 and *T. bruchi*. *T. rotundicollis* and *T. rambouseki* belong to different species groups, morphological details for distinguishing *T. kormilevi* from *T. bruchi* given in description (proportions of head, pubescence, sculpture and width of abdomen) are in extent of variability of species (Cobos have worked with Obenberger's descriptions and key of genus only, he have never seen Obenberger's types). Lectotype of *Taphrocerus loretanus* Obenberger, 1934 is a slightly deformed specimen (depressed elytra and aedeagus). The aedeagus of this species (Fig. 21) is the most important and very good character for distinguishing *T. bruchi* from the similar species.

**Other material examined:** See Marek (2014).

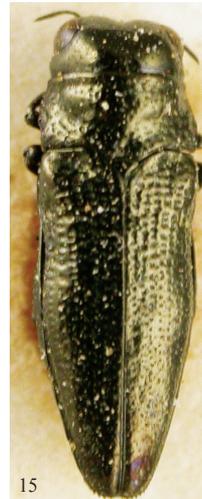
**Distribution.** Argentina, Paraguay.



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Fig. 14 *T. bruchi* Obnb., 1924 LT (NMPC)

Fig. 15 *T. kormilevi* Cobos, 1956 HT (MNCN) (photo S. Bílý)



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## *Taphrocerus exiguus* Obenberger, 1934

(Figs. 16, 17, 18, 22)

*Taphrocerus exiguus* Obenberger, 1934: 58.

*Taphrocerus erbeni* Obenberger, 1941: 94.

*Taphrocerus subpolitus* Cobos, 1967: 188. **syn. nov.**

**Type material.** *Taphrocerus exiguus*: lectotype (♂, NMPC): LT designation Marek 2014.

*Taphrocerus erbeni*: lectotype (♂, NMPC): LT designation Marek 2014.

*Taphrocerus subpolitus*: holotype (♂, MNCN): „Costa Rica, San Isidro (E. Reimoser)”.

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

**Remarks.** *T. subpolitus* was described from a unique male specimen collected in Costa Rica and was resembled to *T. alutaceicollis* Obenberger, 1934 and to *T. sericans* Cobos, 1967. Both species belong to different species group (characterized namely by outline of head, shape of pronotum and elytra, structure of elytra). Cobos didn't work with Obenberger's types but with descriptions only and Obenberger incorrectly described and included *T. exiguus* among species without pubescent elytra in his key (Obenberger, 1934). Aedeagus of *T. exiguus* is unique among aedeagi of all known species (Fig. 22).

**Other material examined:** See Marek 2014.

**Distribution.** See Marek 2014.



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Fig. 16- *T. exiguus* Obnb., 1934 LT (NMPC)

Fig. 17- *T. erbeni* Obnb., 1941 LT (NMPC)

Fig. 18- *T. subpolitus* Cobos, 1967 HT (MNCN) (photo S. Bily)

## *Taphrocerus scutellatus* Obenberger, 1934

(Figs. 19, 20, 23)

*Taphrocerus scutellatus* Obenberger, 1934: 54.

*Taphrocerus pumilus* Obenberger, 1934: 53.

*Taphrocerus sericeicollis* Cobos, 1959: 35. **syn. nov.**

**Type material.** *Taphrocerus scutellatus*: lectotype (♂, NMPC): LT designation Marek 2014.

*Taphrocerus pumilus*: lectotype (♀, NMPC): LT designation Marek 2014.

*Taphrocerus sericeicollis*: paratype (♂, MNCN): „Guyane Francaise: Roches de Kourou, ex coll. Le Moulte”.

The paratype of *T. sericeicollis* is conspecific with the lectotype of *T. scutellatus*. The name *T. sericeicollis* is a new subjective synonym of the name *T. scutellatus*.

**Remarks.** *T. sericeicollis* was described from 32 specimens (HT♂, AT♀, 25 PTs) from French Guiana and was resembled to *T. purpureipennis* Waterhouse, 1889 and *T. alutaceicollis* Obenberger, 1934. Male genitalia is the most significant character for distinguishing *T. scutellatus* from similar species (species group characterized namely by shape of body, regularly, sparsely, almost conspicuously pubescent elytra without lateral elytral carina). Aedeagus is unique among aedeagi of all known species (fig. 23).

**Other material examined:** See Marek 2014.

**Distribution.** So far known from French Guiana only.

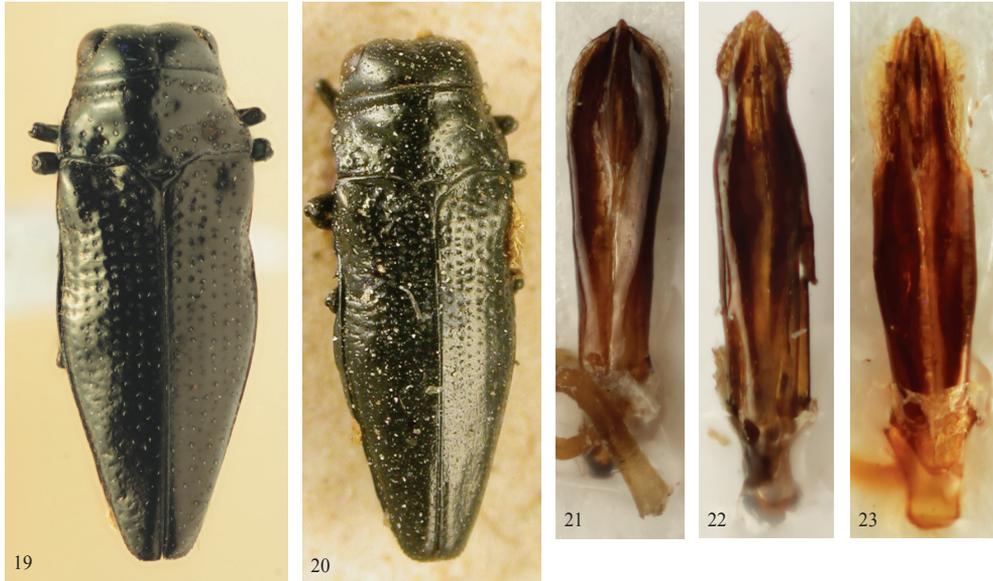


Fig. 19 *T. scutellatus* Obnb., 1934 LT (NMPC)

Fig. 20 *T. sericeicollis* Cobos, 1959 PT (MNCN) (photo S. Bílý)

Fig. 21- *T. bruchi* Obnb., 1924 LT aedeagus, 1.50 mm; Fig. 22- *T. exiguus* Obnb., 1934 LT aedeagus, 1.05 mm; Fig. 23- *T. scutellatus* Obnb., 1934 LT aedeagus, 0.95 mm.

TYPE LOCALITIES OF SYNONYMIZED SPECIES



*T. exiguus* - red circle („Cayenne“)  
*T. erbeni* - red ellipse („Venezuela“)  
*T. subpolitus* - red square („Costa Rica, San Isidro“)



*T. scutellatus* - red circle („Cayenne“)  
*T. sericeicollis* - yellow circle („Roches de Kourou“)



*T. bruchi* - red circle („Corrientes“)  
*T. loretanus* - yellow circle („Loreto“)  
*T. kormilevi* - red square (Riocho Tohué“)

## ERRATUM

In the Studies on the genus *Taphrocerus* (Coleoptera: Buprestidae: Agrilinae) part I. (Marek 2014) the erroneous sex and locality data were printed for designation of lectotype of *T. balthasari* Obenberger, 1934: „Lectotype (♂), (NMPC), Bolivia Sta Cruz 450m [p] \ TYPUS [p][red label with black margin] \ *Taphrocerus Balthasari* m. Type [h][Obenberger's MS] Det. Dr. Obenberger [p]“**. The right data are:** Lectotype (♀), (NMPC): „Bolivia 450m Dépt. S. Cruz, Umg. Buenavista, Steinbach coll. [p] \ TYPUS [p][red label with black margin] \ I.č. 3715 [p] \ *Taphrocerus Balthasari* m. Type [h][Obenberger's MS] Det. Dr. Obenberger [p]“.

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