INSECTA MUNDI 0560: 1–21 2017

Descriptions, notes and reassignments in Neoibidionini (Coleoptera: Cerambycidae: Cerambycinae) with a new genus, three new species and keys to species of *Brechmoidion* Martins, 1969, *Compsibidion* Thomson, 1864 and *Rhysium* Pascoe, 1866

Antonio Santos-Silva
Museu de Zoologia
Universidade de São Paulo
CP 188, 90001-970
São Paulo, SP, Brazil
toncriss@uol.com.br

Maria Helena M. Galileo
Museu Anchieta de Ciências Naturais
Porto Alegre, Rio Grande do Sul, Brazil
galileomh@yahoo.com

James E. Wappes
American Coleoptera Museum
8734 Paisano Pass
San Antonio, Texas 78255-3523, USA
wappes@earthlink.net

Abstract. *Chiquitano* gen. nov. *Chiquitano volcanesensis* sp. nov., *Compsibidion achiraensis* sp. nov. and *Compsibidion amboroensis* sp. nov. (Coleoptera: Cerambycidae: Cerambycinae: Neoibidionini) are described from Bolivia. Notes on *Rhysium* Pascoe, 1866 and *Rhysium bimaculatum* Pascoe, 1866 are provided, and *Brechmoidion separatum* Martins and Galileo, 2007 is transferred to *Rhysium*. Keys to species of *Compsibidion* Thomson, 1864, *Brechmoidion* Martins, 1969 and *Rhysium* Pascoe, 1866 are also provided.

Key Words. Key, Neotropical region, taxonomy.

Introduction

Neoibidionini is a large tribe of American Cerambycinae, currently including 56 genera in three subtribes: 15 in Neoibidionina, 26 in Compsina and 15 in Tropidina (Galileo and Santos-Silva 2016; Monné 2016).

Usually it is problematic to assign genera and/or species to the subtribes, because of the variability in features chosen as differential among them. For example, procoxal cavities from distinctly open to distinctly closed behind (variable including among species in the same genera), shape of scape from distinctly pyriform to cylindrical and varying length of antennomeres III–V.

The new genus described here has characters aberrant to all three subtribes and is provisionally included in Neoibidionina on a "best fit" premise. During our study to determine the generic placement of the new species described, we found some problems in the previous placement of *Brechmoidion seperatum* Martins and Galileo, 2007. Thus, a detailed analysis of both *Rhysium* and *Brechmoidion*, to substantiate transferring *B. separatum* to *Rhysium* Pascoe, 1866, is provided.

Material and Methods

Photographs were taken with a Canon EOS Rebel T3i DSLR camera and Canon MP-E 65mm f/2.8 1-5x macro lens, with stacking of composite images controlled by Zerene Stacker AutoMontage software. Measurements were taken in "mm" using a micrometer ocular Hensoldt/Wetzlar - Mess 10 in the Leica

MZ6 stereomicroscope, also used in the study of the specimens.

The collection acronyms used in this study are as follows:

ACMT	American Coleoptera Museum (James E. Wappes), San Antonio, Texas, USA
FWSC	Frederick W. Skillman, Jr. Collection, Pearce, Arizona, USA
MNKM	Museo de Historia Natural, Noel Kempff Mercado, Santa Cruz de la Sierra, Bolivia
MZSP	Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
PERC	Purdue Entomological Research Collection, West Lafayette, Indiana
RFMC	Roy F. Morris Collection, Lakeland, Florida, USA
USNM	National Museum of Natural History, Smithsonian Institution, Washington, DC, USA

Taxonomy

Chiquitano gen. nov.

Type species: *Chiquitano volcanesensis* sp. nov.

Etymology. Chiquitano: a native ethnic people living in Santa Cruz Department, Bolivia, where the specimens of the type species were collected. Masculine gender.

Diagnosis. Male meso- and metatibiae cylindrical, tumid and not laterally carinate.

Description. Head not notably constricted behind eyes. Eyes not divided; upper eye lobes with 3–4 rows of ommatidia. Antennal tubercles separated. Antennae 11-segmented and surpassing elytral apex in both sexes; scape subcylindrical, slightly widened toward apex; antennomeres III–XI filiform, not carinate; basal antennomeres in male not distinctly tumid; antennomere III about 1.3 times longer than IV and 1.1 times longer than V. Prothorax cylindrical, about 1.4 times longer than wide in both sexes. Pronotum not microsculptured, with 5 moderately distinct gibbosities, not striate, nearly entirely pubescent. Procoxal cavities slightly open behind. Prosternum entirely pubescent in basal half, not forming V-shaped area. Elytra elongate, parallel-sided, apex subtruncate, without spines, pubescent, with long, erect, moderately abundant setae. Profemora fusiform; meso- and metafemora moderately pedunculate-clavate; apex of femora without spine or projection; apex of metafemora distinctly not reaching elytral apex. Tibiae lacking lateral carina in both sexes; male meso- and metatibiae cylindrical, tumid; female meso- and metatibiae not tumid, somewhat flattened laterally. Metatarsomere I about as long as II and III together in both sexes.

Remarks. Although the new genus has some features aberrant to Neoibidionina (Martins and Galileo 2007), such as female basal antennomeres not carinate, prosternum with pubescence not V-shaped and metatibiae not carinate laterally, it is included here especially because of its cylindrical scape and open procoxal cavities.

Chiquitano volcanesensis sp. nov.

(Fig. 1–6)

Description. **Holotype male**. Integument mostly dark brown, except: head and prothorax darker, almost black (dark reddish brown on parts of antennal tubercles, genae and frons); mouthparts yellowish brown; antennae reddish brown; legs brown with reddish-brown areas; elytra with yellow irregular spot near midlength. Pubescence pale yellow, more whitish depending on angle of light source; erect setae golden.

Head. Frons finely, densely, confluently punctate; pubescence distinctly not obscuring integument, especially toward clypeus. Area between antennal tubercles and anterior margin of upper eye lobes finely, abundantly, confluently punctate; pubescence as on frons, slightly denser closer to antennal

tubercles. Area between upper eye lobes shallowly, almost indistinctly punctate; pubescence as on frons, but almost absent centrally. Area of vertex closer to prothoracic margin with minute, transverse, abundant striae; pubescence gradually vanishing toward prothoracic margin. Area behind upper eye lobes nearly smooth close to eye, with minute striae as on vertex on area close to prothoracic margin; pubescence gradually sparser toward lower eye lobe in area closer to eye, almost glabrous in area closer to prothorax;. Area behind lower eye lobes nearly smooth close to upper eye lobe, transversely striate toward ventral side (with fine, sparse punctures close to eye). Antennal tubercles finely, sparsely punctate; pubescence gradually denser toward apex. Genae finely, confluently punctate close to eye, smooth close to apex; pubescence sparse close to eye, absent close to apex; with some long, erect setae in pubescent area. Postclypeus with central plate opaque, minutely, densely, transversely striate, interspersed with sparse, fine, shallow punctures; minutely punctate on sides of central plate, smooth laterally; almost glabrous on central plate, pubescent on sides of central plate, glabrous laterally; with one long, erect seta in each pubescent area. Labrum coplanar with anteclypeus on base, inclined in distal area (margin between these two regions concave); almost glabrous in basal area, with some long setae directed forward in inclined area, primarily on sides. Distance between upper eye lobes 0.4 times length of scape; distance between lower eye lobes in frontal view 0.6 times length of scape. Antennae 2.1 times elytral length, reaching elytral apex at midlength of antennomere VIII. Scape subcylindrical, slightly widened toward apex, arched in side view; with some long, erect setae throughout. Antennomeres III–IV with long, erect setae on ventral side, denser on III. Antennal formula (ratio) based on length of antennomere III: scape = 0.64; pedicel = 0.15; IV = 0.77; V = 0.88; VI = 0.88; VII = 0.88; VIII = 0.82; IX = 0.77; X = 0.74; XI = 0.77.

Thorax. Prothorax 1.4 times longer than wide, with basal constriction distinct and distal constriction slightly marked. Pronotum somewhat opaque, primarily in basal half, except shining transverse central area; moderately coarsely, very sparsely punctate; shining area glabrous; with sparse erect setae throughout, except in glabrous area. Sides of prothorax moderately coarsely, very sparsely punctate, except for impunctate, transverse finely striate area close to distal margin (this area widened ventrally); pubescent and interspersed with long, erect setae, except for nearly glabrous, oblique wide band close to prosternum and close to distal margin. Prosternal process narrowly constricted centrally (width about 1/7 times width of procoxal cavity). Mesosternum sparsely pubescent centrally, pubescence denser laterally and on mesosternal process. Metepisternum and metasternum with pubescence moderately abundant, but not obscuring integument. Scutellum with pubescence not obscuring integument.

Elytra. Coarsely, moderately sparsely punctate (punctures finer toward apax), with a long, erect, thick seta issuing from most punctures.

Legs. Femora and tibiae with coarse, shallow, sparse punctures, each with a long, erect, thick seta; remaining surface with abundant pubescence not obscuring integument.

Abdomen. Ventrites finely, sparsely punctate; with abundant pubescence, not obscuring integument, interspersed with long, erect setae; apex of ventrite V truncate.

Female. Differs from male primarily by shorter antennae, 1.7 times elytral length, reaching elytral apex at apex of antennomere IX or basal quarter of X, and apex of abdominal ventrite V rounded to obtuse.

Color variation in paratypes. Ventral side of the meso- and metathorax and abdomen from orange to dark brown; legs from entirely brown to reddish brown; head and prothorax from reddish brown (with brown areas) to almost black.

Dimensions (holotype/ paratype males/ paratype females). Total length 10.10/10.50–12.80/7.05–15.70; prothorax: length 2.00/2.20–2.90/1.45–3.30; anterior width 1.35/1.50–2.00/1.05–2.20; posterior width 1.30/1.60–2.00/1.05–2.25; max. prothoracic width 1.45/1.70–2.20/1.10–2.50; humeral width 1.85/2.20–2.75/1.50–3.30; elytral length 6.15/6.65–8.05/4.75–9.60.

Type material. Holotype male from BOLIVIA, *Santa Cruz*: Refugio Los Volcanes (18º06'S / 63º36'W; 3400-4200 ft), 16-20.IX.2012, Wappes, Skelley, Bonaso, Hamel col. (MNKM). Paratypes – BOLIVIA, *Santa Cruz*: 4 males, 11 females, same data as holotype (3m, 9f ACMT; 1m, 1f FWSC; 1f MZSP); 1 female, same data as holotype (RFMC); 4 km N Bermejo (Refugio Los Volcanes; 1045-1350 m; 18º06'S /

63º36'W), 1 female, 4-8.X.2007, Wappes & Morris col. (ACMT); 2 females, 17-24.X.2014, Wappes & Morris col. (MZSP); Refugio Los Volcanes (3363"), 1 female, 1-10.X.2008, Morris & Wappes col. (RFMC); 3 males, 1 female, 18-24.X.2014, Morris & Wappes col. (2m, 1f RFMC ; 1m MZSP); Pampagrande (Florida Province), 1 female, 18.IX.1995, F.A. Langer col. (MNKM); Amboro road above Achira Campo (5-5,800 ft), 1 male, 1 female, 9-11.X.2004, Wappes & Morris col. (ACMT).

Etymology. Named for the locality, Refugio los Volcanes, where most of the type series was collected.

***Compsibidion achiraensis* sp. nov.**
(Fig. 7–11, 18)

Description. **Holotype female**. Head and prothorax mostly dark brown dorsally, gradually reddish brown toward ventral side; mouthparts mostly yellowish brown; antennae reddish brown; ventral side of meso- and metathorax and abdominal ventrites mostly reddish brown, lighter or darker in some areas; legs dark reddish brown; elytra dark brown except for irregular, wide yellow spot near midlength. Pubescence and erect setae yellowish white.

Head. Frons finely, densely, confluently punctate, laterally separated from antennal tubercles by oblique, deep depression; pubescence not obscuring integument. Area between antennal tubercles finely, confluently punctate, with narrow carina on each side of coronal suture; pubescence not obscuring integument. Area between upper eye lobes with slightly elevated, subelliptical plate centrally (depressed toward posterior ocular edge, surpassing posterior ocular edge), finely, confluently punctate (punctures coarser than on frons); pubescence not obscuring integument. Remaining surface of vertex finely, abundantly punctate; pubescence not obscuring integument; with one long, erect seta on each side near eye. Area behind upper eye lobes finely striate-punctate close to eye, finely, sparsely punctate toward prothorax; pubescence clearly not obscuring integument close to eye, glabrous toward prothorax. Area behind lower eye lobes moderately coarsely, sparsely punctate close to eyes, finely, sparsely punctate toward prothorax; with long, erect, sparse setae close to eyes, glabrous toward prothorax. Antennal tubercles finely, abundantly punctate; pubescence not obscuring integument, slightly denser than on frons. Genae finely, abundantly punctate, except smooth area close to apex; with sparse pubescence and some long, erect setae. Postclypeus glabrous, smooth laterally, narrow finely, abundantly punctate centrally; with one long, erect seta on each side close to glabrous area. Labrum glabrous, smooth, coplanar with anteclypeus except inclined in center of distal area, fringed with setae. Distance between upper eye lobes 0.45 times length of scape; distance between lower eye lobes 0.65 times length of scape; upper eye lobes with 3 rows of ommatidia. Antennae 1.75 times elytral length, reaching elytral apex at apex of antennomere IX. Scape subcylindrical, slightly widened toward apex, arched in side view; with some long, erect setae throughout. Antennomeres not carinate. Antennomeres III–V with long, erect, sparse setae ventrally (sparser toward V). Antennal formula (ratio) based on length of antennomere III: scape = 0.75; pedicel = 0.19; IV = 0.77; V = 0.85; VI = 0.87; VII = 0.87; VIII = 0.81; IX = 0.75; X = 0.67; XI = 0.67.

Thorax. Prothorax subcylindrical, 1.35 times longer than wide, with similar basal and distal constrictions. Pronotum with five slightly elevated gibbosities (one on each side of basal quarter; one on each side of anterior third; one centrally at about midlength); moderately coarsely, very sparsely punctate; somewhat opaque, microsculptured, except large, smooth, shining area medially (this area including anterolateral and central gibbosities); pubescence partially obscuring integument, interspersed with long, erect setae, except in glabrous smooth area. Sides of prothorax mostly smooth, except striate basal and distal areas (more distinct in basal area); nearly glabrous centrally, with short, sparse setae toward pronotum and ventral side; with a few long, erect setae in anterior third. Prosternum with short, sparse setae throughout, more abundant in basal half (forming slightly distinct V-shaped pubescent area); nearly smooth in basal half, finely, transversely striate in distal half. Prosternal process narrowly constricted centrally. Mesosternum sparsely pubescent centrally, denser laterally. Metepisternum and metasternum with pubescence moderately abundant, but not obscuring integument. Scutellum with pubescence not obscuring integument.

Elytra. Finely, sparsely punctate, interspersed with coarse punctures; with minute, sparse, decumbent setae throughout, interspersed with long, erect, sparse setae (slightly denser in distal third); sides slightly widened behind basal half; apex rounded.

Legs. Femora pedunculate-clavate (mainly meso- and metafemora); pubescence not obscuring integument, interspersed with long, erect, sparse setae. Tibiae not longitudinally carinate. Metatarsomere I about as long as II–III together.

Abdomen. Ventrites with abundant pubescence, not obscuring integument, interspersed with long, erect setae; apex of ventrite V rounded.

Dimensions (holotype female). Total length 8.25; prothorax: length 1.45; anterior width 1.15; posterior width 1.10; max. prothoracic width 1.25; humeral width 1.70; elytral length 5.65.

Type material. Holotype female from BOLIVIA, *Santa Cruz*: Achira Campo, 9-11.X.2004, Wappes & Morris col. (MNKM).

Etymology. Named after Achira Campo, where the type was collected.

Remarks. The elytral pattern of *Compsibidion achiraensis* sp. nov. is similar to that of many species placed in several genera of Neoibidionini. In *Compsibidion* it is most similar to *C. inflatum* Martins and Galileo, 2014 and *C. amboroensis* sp. nov. It differs from the former primarily by the prothorax more cylindrical, antennomere IV slightly shorter than V, and elytra with sparse long, erect setae. In females of *C. inflatum* the prothoracic constrictions are also stronger, making the central area wider, the antennomere IV is distinctly shorter than V, and the elytra clearly have more abundant erect setae. It differs from *C. amboroensis* as follows: ommatidia slightly coarser; upper eye lobes with 3 rows of ommatidia (Fig. 18); prothorax longer and narrower; and decumbent elytral setae sparser throughout. In *C. amboroensis* the ommatidia are finer, upper eye lobes with 5 rows of ommatidia (Fig. 17), prothorax shorter and wider, and decumbent elytral setae distinctly denser toward apex.

Compsibidion amboroensis sp. nov.

(Fig. 12–17)

Description. **Holotype female**. Head and prothorax dark brown, more reddish brown in gular area; palpi light reddish brown; antennae reddish brown; ventral side of meso- and metathorax dark reddish brown, gradually lighter toward apex of metasternum; legs reddish brown, darker on some areas; abdominal ventrites mostly reddish brown; elytra dark brown in basal half, gradually reddish brown toward apex, except irregular, somewhat transverse yellow spot medially. Pubescence and erect setae yellowish white (more grayish depending on angle of light source).

Head. Frons finely, abundantly, confluently punctate, more so toward antennal tubercles; laterally separated from antennal tubercles by deep depression; pubescence not obscuring integument. Area between antennal tubercles and with narrow carina on each side of coronal suture, gradually divergent, less distinct toward posterior edge of upper eye lobes, then confluent toward prothoracic margin; coronal suture gradually more distinct from between antennal tubercles and apex of lateral carinae; area between carinae moderately coarsely, abundantly punctate; remaining surface of vertex nearly smooth; pubescence on vertex not obscuring integument. Surface behind upper eye lobes nearly smooth and glabrous; area behind lower eye lobes finely punctate and with long, erect setae close to eye, smooth, glabrous toward prothorax. Antennal tubercles finely, abundantly punctate; pubescence not obscuring integument, slightly denser toward apex. Genae minutely punctate, close to eye interspersed with coarser punctures toward smooth apex; pubescence not obscuring integument, interspersed with long, erect setae. Postclypeus finely rugose-punctate in large central area, smooth laterally; with sparse pubescence in rugose-punctate area, glabrous laterally; with one long, erect seta on each side of rugose-punctate area. Labrum coplanar with anteclypeus basally and laterally, distinctly concave in center of distal area; glabrous in coplanar area, with short and long setae in concave area. Distance between upper eye lobes 0.55 times length of scape; distance between lower eye lobes 0.80 times length of scape;

upper eye lobes with 5 rows of ommatidia. Antennae 1.65 times elytral length, reaching elytral apex near apex of antennomere IX. Scape gradually widened toward apex, arched in side view; with some long, erect setae throughout. Antennomeres not carinate. Antennomeres III–VII/III–VIII with long, erect setae ventrally (gradually sparser toward VII/VIII). Antennal formula (ratio) based on length of antennomere III: scape = 0.69; pedicel = 0.19; IV = 0.71; V = 0.82; VI = 0.85; VII = 0.84; VIII = 0.73; IX = 0.72; X = 0.62; XI = 0.50.

Thorax. Prothorax subcylindrical, 1.2 times longer than wide, basal constriction distinct and distal constriction absent. Pronotum with five barely visible gibbosities (one on each side of basal quarter; one on each side slightly behind midlength; one centrally elongated, less distinct); surface nearly smooth; sparsely pubescent (primarily in anterior central region), except in central area between lateral gibbosities, interspersed with long, erect setae. Sides of prothorax sparsely pubescent, interspersed with long, erect, sparse setae, nearly glabrous toward ventral side; surface smooth centrally, striate and interspersed with fine, sparse punctures near anterior margin. Prosternum smooth in basal half, transversely striate in distal half; with sparse pubescence, slightly more abundant in basal half (forming slightly distinct V-shaped pubescent area). Central constriction of prosternal process 0.20 times width of procoxal cavity. Mesosternum nearly glabrous centrally, pubescent laterally (pubescence not obscuring integument). Metepisternum and lateral sides of metasternum with pubescence moderately abundant, but not obscuring integument, gradually glabrous toward central region; with long, erect, sparse setae, except near longitudinal sulcus. Scutellum centrally depressed, with pubescence not obscuring integument.

Elytra. Coarsely, sparsely punctate in basal half, gradually finer, denser toward apex; basal half with sparse, decumbent minute setae, gradually denser toward apex, more so laterally; with short, suberect, very sparse setae throughout; apex rounded; sides slightly, gradually widened from humerus to apical fifth.

Legs. Femora pedunculate-clavate; pubescence not obscuring integument, interspersed with long, erect setae. Tibiae not longitudinally carinate. Metatarsomere I slightly longer than II–III together.

Abdomen. Ventrites with abundant pubescence, not obscuring integument, interspersed with long, erect setae, denser laterally and on ventrite V; apex of ventrite V slightly rounded.

Dimensions (holotype female). Total length 15.00; prothorax: length 2.85; anterior width 2.15; posterior width 2.15; max. prothoracic width 2.35; humeral width 3.10; elytral length 9.90.

Type material. Holotype female from BOLIVIA, *Santa Cruz*: Amboro Road, above Achira Campo (5,000-5,800'), 9-11.X.2004, Wappes & Morris col. (MNKM).

Etymology. Named for Amboro National Park, where the holotype and only known specimen was collected along an old logging road entering the park.

Remarks. *Compsibidion amboroensis* sp. nov. is similar to, but differs from, *C. inflatum* as follows: prothorax without distal constriction, central area not widened laterally and shorter and wider than in *C. inflatum*; elytra with very sparse erect setae; antennomere XI distinctly shorter than X. In *C. inflatum* (female) the prothorax has a distinct anterior constriction, with central region widened laterally, and is longer and narrower than in *C. amboroensis*; the elytra have erect setae distinctly more abundant; and antennomere XI is longer than X. See remarks for *Compsibidion achiraensis* sp. nov.

Key to species of *Compsibidion* Thomson, 1864 (adapted from Martins and Galileo 2007)

Obs.[1]: For comparison images see Bezark (2017).
Obs.[2]: *Compsibidion trinidadense* (Gilmour, 1963) was not included as it may not be a *Compsibidion*, but this cannot be determined without seeing the type.

1. Basal antennomeres not carinate dorsally (males unknown) **2**
– Basal antennomeres carinate dorsally at least from IV **5**

2(1). Outer angle of elytral apex spiniform **3**
– Outer angle of elytral apex unarmed **4**

3(2). Antennomeres and legs yellow; elytral apex whitish; Nicaragua ..... ***C. marqueti*** **Audureau**
– Antennomeres, legs and elytral apex dark brown; Brazil (Maranhão) ..... ***C. maculatum*** **Martins, Galileo and Limeira-de-Oliveira**

4(2). Upper eye lobes with 5 rows of ommatidia; elytra at least partially with moderately abundant, decumbent pubescence; Bolivia ..... ***C. amboroensis*** **sp. nov.**
– Upper eye lobes with 3 rows of ommatidia; elytra with very sparse, decumbent pubescence; Bolivia ..... ***C. achiraensis*** **sp. nov.**

5(1). Upper eye lobes with 3 rows of ommatidia **6**
– Upper eye lobes with 4 or 5 rows of ommatidia (also see *C. crassipede* with 3 or 4 rows of ommatidia) **12**

6(5). Prosternum without sericeous pubescence **7**
– Prosternum with sericeous pubescence **9**

7(6). Elytral punctation restricted to poriferous punctures; Brazil (Amazonas, Pará) ..... ***C. sphaeriinum*** **(Bates)**
– Elytra with other, additional punctures between poriferous punctures **8**

8(7). Center of pronotum sparsely pubescent; antennomere III in male cylindrical; antennae in female longer than body; Brazil (Minas Gerais, São Paulo) ..... ***C. megarthron*** **(Martins, 1962)**
– Center of pronotum without pubescence; antennomere III in male fusiform; antennae in female only as long as body; Brazil (Bahia, São Paulo) ..... ***C. inornatum*** **(Martins, 1962)**

9(6). Outer angle of elytral apex unarmed; Brazil (Amazonas, Rondônia) ..... ***C. uniforme*** **Galileo and Martins, 2011**
– Outer angle of elytral apex spiniform **10**

10(9). Elytra mostly reddish brown, lacking distinct markings; Bolivia, Brazil (Maranhão) ..... ***C. ytu*** **Martins, Galileo and Limeira-de-Oliveira, 2011**
– Elytra with distinct markings **11**

11(10). Elytra with transverse dark band at distal third; Panama ..... ***C. mysticum*** **Martins, 1969**
– Elytra without transverse dark band at distal third; Brazil (Piauí) ..... ***C. pictum*** **Galileo, Martins and Nascimento, 2014**

12(5). Elytral setae whitish, thick **13**
– Elytral setae of other colors and/or slender **14**

13(12). Elytral setae more concentrated along suture, not organized in longitudinal rows in central area; prothorax equal in width at apex and base; Ecuador ..... ***C. decemmaculatum*** **(Martins, 1960)**
– Elytral setae equally distributed throughout, organized in rows in central area; prothorax wider at apex than base; Brazil (Goiás) ..... ***C. singulare*** **(Gounelle, 1909)**

14(12). Elytral color pattern simple, formed by light maculae and/or band on dark colors, or sometimes completely unicolorous **29**
– Elytral color pattern complex, formed by several bands or with moderately abundant contrasting punctures **15**

15(14). Elytral apex lacking spine at outer angle **16**
– Elytral apex with spine at outer angle **17**

16(15). Head dark brown; elytral apex with brown band; Colombia ..... ***C. pumilium*** **Martins and Galileo, 1999**
– Head orangish; elytral apex without dark band; Brazil (Amazonas) ..... ***C. aegrotum*** **(Bates, 1870)**

17(15). Elytra with sericeous pubescence very distinct on at least part, if not entire, surface **18**
– Elytra shining, pubescence sparse or absent **20**

18(17). Sericeous pubescence of elytra present only in distal half; French Guiana, Venezuela, Brazil (Amazonas, Pará) ..... ***C. mulizonatum*** **Martins, 1969**
– Sericeous elytral pubescence present throughout **19**

19(18). Head black, with reddish macula on vertex; pronotum black, opaque, with reddish macula in center of base, center of basal region with whitish V-shaped pubescent area; Peru, Brazil (Pará, Mato Grosso, Goiás), Bolivia ..... ***C. thoracicum*** **(White, 1855)**
– Head orangish, with dark bands; pronotum orangish, with dark anterior area, dark macula in central area, densely pubescent; Bolivia, Brazil (Goiás, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, Paraná, Santa Catarina), Argentina (Misiones) ..... ***C. sommeri*** **(Thomson, 1865)**

20(17). Laterobasal tubercles of pronotum elevated and directed backward; antennal tubercles spiniform; Brazil (Bahia, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul) ..... ***C. zikani*** **(Melzer, 1933)**
– Laterobasal tubercles of pronotum not elevated and not directed backward; antennal tubercles rounded at apex **21**

21(20). Basal antennomeres with long abundant setae; elytra yellowish, irregularly spotted by black or brown elevated punctures on base; Brazil (Amapá, Minas Gerais, Espírito Santo, Rio de Janeiro) ..... ***C. amantei*** **(Martins, 1960)**
– Setae on basal antennomeres sparse and not especially long **22**

22(21). Basal quarter of elytra with black or brown macula/band **23**
– Basal quarter of elytra without dark areas **26**

23(22). Elytra orangish, with 4 or 5 brown or reddish bands; Brazil (Pará) ..... ***C. polyzonum*** **(Bates, 1870)**
– Elytra with 3 dark bands **24**

24(23). Each elytron with dark oblique fascia basally, narrowed from humerus to suture; Peru ..... ***C. psydrum*** **Martins, 1969**
– Each elytron with distinct dark basal macula slightly widened toward suture **25**

25(24). Club of meso- and metafemora entirely brown; Brazil (Espírito Santo, Rio de Janeiro) ..... ***C. guanabarinum*** **(Martins, 1962)**
– Club of meso- and metafemora partially darkened dorsally and ventrally; Ecuador, French Guiana, Brazil (Amazonas, Pará, Rondônia) ..... ***C. charile*** **(Bates, 1870)**

26(22). Elytra with black, triangular area before midlength, delimited by whitish band anteriorly; Peru, French Guiana, Brazil (Amazonas, Pará) ..... ***C. rutha*** **(White, 1855)**
– Elytra with different color pattern **27**

27(26). Elytra with orange, triangular area from base to middle, externally bordered by brown, narrow band; antennomeres III and IV in males brown and swollen, contrasting with the remaining antennomeres; French Guiana, Brazil (Amazonas, Pará) ..... ***C. basale*** **(White, 1855)**

– Elytra with different color pattern **28**

28(27). Elytra pale yellow, with narrow, orange or orangish-brown bands; antennomere III not swollen in males; Mexico (Jalisco, Veracruz, Chiapas), Guatemala, El Salvador, Nicaragua, Costa Rica, Panama, Venezuela, Guyana, French Guiana, Brazil (Amazonas, Pará, Mato Grosso, Goiás, Maranhão, Alagoas, Ceará, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Argentina (Misiones) ..... ***C. vanum*** **(Thomson, 1867)**

– Elytra pale yellow, spotted by black maculae and punctures; antennomere III in males thickened; Brazil (Espírito Santo) ..... ***C. balium*** **Napp and Martins, 1985**

29(14). Elytral apex unarmed **30**

– Elytral apex spiniform **42**

30(29). Entire distal half of elytra dark, contrasting with lighter-colored basal half; Bolivia ..... ***C. reichardti*** **(Martins, 1962)**

– Distal half of elytra partially, or not at all, contrasting in color with basal half **31**

31(30). Elytra without contrasting maculae and/or bands; Brazil (Rio de Janeiro, Paraná, Santa Catarina) ..... ***C. niveum*** **(Martins, 1962)**

– Elytra with contrasting maculae and/or bands **32**

32(31). Each elytron with a single pale yellow macula before middle, distinctly removed from suture; Ecuador ..... ***C. inflatum*** **Martins and Galileo, 2014**

– Each elytron without or with two, or more pale yellow maculae (if only a single macula, it is horizontal, placed at about midlength and reaching or nearly reaching suture) **33**

33(32). Each elytron with large triangular yellow macula near middle; Colombia ..... ***C. paradoxum*** **Martins, 1971**

– Each elytron without large triangular yellow macula near middle **34**

34(33). Apical quarter of elytra with distinct, well delimited pale yellow macula **35**

– Apical quarter of elytra without pale yellow macula **36**

35(34). Basal 2/3 of each elytron with a large, pale yellow, elliptical macula clearly removed from base; Brazil (Minas Gerais) ..... ***C. novalimae*** **Martins and Galileo, 2012**

– Basal 2/3 of each elytron with a large, pale yellow macula almost reaching base, partially and obliquely divided by brown band; Brazil (Bahia, Minas Gerais, Espírito Santo) ..... ***C. capixaba*** **(Martins, 1962)**

36(34). Pale yellow band of elytra placed near center, horizontal (not slanted) **37**

– Pale yellow band of elytra placed near center, ascending from side to suture **38**

37(36). Antennomeres III and IV in males widened, carinate, and without abrupt change in thickness compared to remaining antennomeres; Bolivia, Brazil (Goiás, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Paraguay, Argentina (Misiones) ..... ***C. truncatum*** **(Thomson, 1865)**

– Antennomeres III and IV in males with abrupt change in thickness compared to remaining antennomeres, slightly carinate only at base; Venezuela ..... ***C. clivum*** **Martins, 1971**

38(36). Pale yellow maculae of elytra not well delimited or not distinctly contrasting with surrounding surface, or completely absent **39**
– Pale yellow maculae of elytra very conspicuous, well delimited and contrasting with remaining surface **40**

39(38). Metafemora in male notably widened; elytra slightly longer than twice length of prothorax; Brazil (Bahia, São Paulo, Mato Grosso do Sul), Paraguay, Argentina (Salta) ..... ***C. crassipede* Martins, 1971**
– Metafemora in male not distinctly widened; elytra about 3 times longer than prothorax; Brazil (Minas Gerais, São Paulo) ..... ***C. triviale* Napp and Martins, 1985**

40(38). Apical elytral pale yellow macula V-shaped; Uruguay ..... ***C. monnei* Martins, 1969**
– Apical elytral pale yellow macula not V-shaped, usually oblique, J-shaped or U-shaped **41**

41(40). Antennomeres III and IV in male not tumid; apical pale yellow macula of each elytron narrower and more elongate than basal macula; Bolivia, Brazil (Bahia), Argentina (Salta, Catamarca, Tucumán, Santiago del Estero, La Rioja, Córdoba, San Juan, Chaco, Entre Ríos, Buenos Aires), Paraguay ..... ***C. circunflexum* Martins, 1971**
– Antennomeres III and IV in male tumid; apical pale yellow macula of each elytron about as wide as basal macula; Bolivia, Brazil (Maranhão, Goiás, Mato Grosso, Sergipe, Alagoas, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Paraguay, Argentina (Jujuy, Salta, Catamarca, Tucumán, Santiago del Estero, Chaco, Buenos Aires), Uruguay ..... ***C. fairmairei* (Thomson, 1865)**

42(29). Elytra with a transverse yellowish-white band at midlength **43**
– Elytra with different markings **45**

43(42). Antennal tubercles distinctly projected and acute at apex; antennomeres III–VI in male slightly widened, without abrupt change in thickness compared to remaining antennomeres; Brazil (Bahia, Minas Gerais, Rio de Janeiro) ..... ***C. divisum* Martins, 1969**
– Antennal tubercles slightly projected, with apices nearly blunt; antennomere III in male tumid, with abrupt change in thickness compared to IV **44**

44(43). Apices of femora acutely spiny; humeri reddish; antennomere III not carinate in male; Brazil (Goiás, Espírito Santo, São Paulo) ..... ***C. unifasciatum* (Gounelle, 1909)**
– Apices of femora with triangular lobes; entire anterior half of elytra reddish; antennomere III carinate in male; Brazil (Espírito Santo) ..... ***C. carenatum* Martins, 1969**

45(42). Elytra unicolorous except for dark apex **46**
– Elytra with light maculae and/or bands **47**

46(45). Elytra, scape, basal antennomeres and legs pale yellow; Brazil (Bahia, Minas Gerais, Rio de Janeiro) ..... ***C. nigroterminatum* (Martins, 1965)**
– Elytra reddish; scape, basal antennomeres and legs dark brown or black; Brazil (Bahia, Minas Gerais, Rio de Janeiro) ..... ***C. trichocerum* (Martins, 1962)**

47(45). Distal area of elytra same color as base, without light bands and/or maculae **48**
– Distal area of elytra with band or macula, or distinctly contrasting with basal color **66**

48(47). Pronotal pubescence not arranged in bands **49**
– Pronotal pubescence arranged into either two longitudinal bands or a V-shaped pattern **57**

49(48). Elytra dark, with light macula and/or fascia **50**
– Elytra with different color pattern (general color usually reddish) **52**

50(49) Apices of meso- and metafemora not spiny; Bolivia ..... ***C. morrisi*** **Galileo and Santos-Silva, 2016**
– Apices of meso- and metafemora distinctly spiny, longer on inner side **51**

51(50) General appearance robust; antennomeres III–VI in male distinctly tumid; spines at apices of meso- and metafemora short; Brazil (Santa Catarina) ..... ***C. meridionale*** **Martins, 1969**
– General appearance slender; antennomeres III–VI in male slightly tumid; spines at apices of meso- and metafemora long; Brazil (Maranhão, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina) ..... ***C. cleophile*** **(Thomson, 1865)**

52(49). Base and apex of elytra with same color **53**
– Base and apex of elytra with different colors **55**

53(52). Each elytron with one large pale yellow band from near base to past midlength; Brazil (Goiás, Piauí) ..... ***C. elianae*** **Martins and Galileo, 2012**
– Each elytron with two pale yellow maculae **54**

54(53). Each elytron with two elliptical or subrounded pale yellow maculae; Bolivia, Brazil (Mato Grosso) ..... ***C. ybyra*** **Martins and Galileo, 2012**
– Each elytron with pale yellow band in basal half and another wide, oblique one ascending from margin to suture in apical half; Brazil (Mato Grosso) ..... ***C. derivativum*** **Martins, 1971**

55(52). Prothorax reddish; basal pale yellow macula of elytron small and rounded; Brazil (Espírito Santo) ..... ***C. tuberosum*** **Martins, 1971**
– Prothorax dark; basal pale yellow macula of elytron narrow and elongate **56**

56(55). Metafemora mostly dark brown; antennomere III in male not tumid; Brazil (São Paulo) ..... ***C. paulista*** **(Martins, 1962)**
– Metafemora light reddish; antennomere III in male tumid; Brazil (Minas Gerais) ..... ***C. peti*** **Martins and Galileo, 2012**

57(48). Pronotal pubescence forming V-shaped pattern **58**
– Pronotal pubescence arranged into two longitudinal bands **61**

58(57). Pronotal pubescence confined to base and inner side of laterobasal tubercles; Brazil (Bahia, Minas Gerais, Espírito Santo) ..... ***C. concisum*** **Napp and Martins, 1985**
– Pronotal pubescence covers laterobasal tubercles and also reaches laterodistal tubercles **59**

59(58). Antennomere III in male tumid and not carinate; light macula in basal half of elytron elliptical; Brazil (Espírito Santo) ..... ***C. punga*** **Martins and Galileo, 2007**
– Antennomere III in male tumid and carinate; light macula in basal half of elytron distinctly longitudinal **60**

60(59). Prothorax reddish; elytron lacking pale yellow macula close to margin in basal half; Brazil (Rio Grande do Sul) ..... ***C. rubricolle*** **(Melzer, 1935)**
– Prothorax dark brown; elytron with pale yellow macula close to margin in basal half; Ecuador, Bolivia, Brazil (Pará, Goiás, Mato Grosso, Maranhão, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Paraguay, Argentina (Jujuy, Salta, Tucumán, Misiones, Corrientes) ..... ***C. graphicum*** **(Thomson, 1867)**

61(57). Elytra with basal half reddish and apical half black, separated by pale yellow band which projects forward along suture; Brazil (Alagoas, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro) ..... ***C. simillimum*** **Martins, 1969**
– Basal and apical halves of elytra with same color **62**

62(61). Elytra reddish, with pale yellow maculae **63**
– Elytra dark, with pale yellow maculae **64**

63(62). Distal lobes of meso- and metafemora acute; antennomeres III and IV in males thickened; Venezuela, Peru, Bolivia, Brazil (Mato Grosso, Goiás, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Santa Catarina) ..... ***C. ilium*** **(Thomson, 1864)**
– Inner distal lobe of mesofemora spined; both lobes of metafemora spined (inner longer); antennomeres in males not thickened; Brazil (Goiás, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina) .... ***C. quadrisignatum*** **(Thomson, 1865)**

64(62). Anterolateral tubercles of pronotum rounded, of moderate size; light band in middle of elytron narrow, oblique, ascending from margin to suture; Brazil (Pernambuco, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro) ..... ***C. angulare*** **(Thomson, 1867)**
– Anterolateral tubercles of pronotum subacute, distinct; light band in middle of elytron completely or partially transverse **65**

65(64). Pale macula and band wide, covering more than half of elytra; larger species (length 13.7–16.3 mm); antennomere III in male carinate; Venezuela, Bolivia, French Guiana, Brazil (Pará, Piauí) ..... ***C. callispilum*** **(Bates, 1870)**
– Pale macula and band narrow, covering less than one-fourth of elytra, smaller species (length 8.2 mm); antennomere III in male slightly carinate; Brazil (Mato Grosso) ..... ***C. melancholicum*** **Martins, 1969**

66(47). Pronotal pubescence covering entire surface except tip of central tubercle; if covering lesser part of surface, then not arranged in bands or V-shaped **67**
– Pronotal pubescence arranged in two bands, V-shaped pattern, or subparallel (reaching at most anterolateral tubercles) **70**

67(66). Basal half of elytra pale yellow, slightly reddish only at base, with light macula of each elytron elongate; light apical band of each elytron placed at apical third; antennomeres III and IV in male thickened; Brazil (Espírito Santo) ..... ***C. muricatum*** **Martins, 1971**
– Basal half of elytra from reddish to black **68**

68(67). Pale yellow band of elytron nearly horizontal; Peru, Ecuador, French Guyana, French Guiana, Brazil (Amazonas, Pará) ..... ***C. tethys*** **(Thomson, 1867)**
– Pale yellow band of elytron ascending from margin to suture **69**

69(68). Antennomeres III and IV in male not thickened; distal lobes of meso- and metafemora rounded; Panama, Trinidad and Tobago, Venezuela, Colombia, Guyana, Suriname, French Guiana, Peru, Bolivia, Brazil (Amapá, Amazonas, Pará, Rondônia, Mato Grosso, Maranhão) ..... ***C. maronicum*** **(Thomson, 1867)**
– Antennomeres III and IV in male thickened; inner distal lobe of mesofemur projected, distal lobes of metafemora spiniform; Brazil (Piauí) ..... ***C. paragraphycum*** **Martins and Galileo, 2013**

70(66). Pronotal pubescence V-shaped **71**
– Pronotal pubescence not V-shaped **74**

71(70). Elytra lacking narrow, subcircular dark bands in basal half; Brazil (Amazonas). ..... ***C. manauara*** **Martins and Galileo, 2012**
– Elytra with narrow, subcircular dark bands in basal half **72**

72(71). Elytron with narrow, elongate, longitudinal pale yellow band in basal half; Ecuador, Bolivia, Brazil (Pará, Goiás, Mato Grosso, Maranhão, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul), Paraguay, Argentina (Jujuy, Salta, Tucumán, Misiones, Corrientes) ..... ***C. graphicum*** **(Thomson, 1867)**
– Elytron without pale yellow longitudinal band in basal half **73**

73(72). Antennomeres III and IV not thickened in male; larger species; Brazil (Pará) ..... ***C. orpa*** **(White, 1855)**
– Antennomeres III and IV thickened in male; smaller species; Brazil (Pará) ..... ***C. taperu*** **Martins and Galileo, 2007**

74(70). Elytra with basal half reddish or yellowish and apical half black (except apex) **75**
– Elytra unicolorous (except apex) **76**

75(74). Elytron without light macula in basal half; pubescence of pronotum not surpassing anterolateral tubercles; Peru ..... ***C. virgatum*** **Martins, 1969**
– Elytron with light macula in basal half; pubescence of pronotum surpassing anterolateral tubercles; Bolivia, Brazil (Maranhão, Piauí, Alagoas, Paraíba, Bahia, Mato Grosso, Mato Grosso do Sul, Goiás, Minas Gerais, São Paulo), Argentina (Jujuy, Salta, Tucumán, Santiago del Estero) ..... ***C. campestre*** **(Gounelle, 1909)**

76(74). Elytral base with reddish area; Panama, Colombia, Venezuela ..... ***C. litturatum*** **(Martins, 1960)**
– Elytral base without reddish area **77**

77(76). Light macula in basal half of elytron reaching humerus; Colombia, Venezuela ..... ***C. varipenne*** **Martins, 1969**
– Light macula in basal half of elytron not reaching humerus **78**

78(77). Central band of elytron curved, not reaching margin or suture; Brazil (Goiás) ..... ***C. omissum*** **Martins, 1969**
– Central band of elytron straight **79**

79(78). Elytron with small, rounded, pale subapical macula (not covering apex), and a narrow central band (about as wide as antennomere III); Brazil (Pernambuco, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro) ..... ***C. angulare*** **(Thomson, 1867)**
– Elytron with pale apical macula extending on apex proper, and a wide central band (about twice width of antennomere III) **80**

80(79). Central oblique band of elytron narrowly separated from basal macula (distance between them nearly equal to width of antennomere III); Brazil (Goiás, Mato Grosso, Piauí) ..... ***C. decoratum*** **(Gounelle, 1909)**
– Central oblique band of elytron widely separated from basal macula (distance between them more than 3 times width of antennomere III); Bolivia, Brazil (Goiás, Mato Grosso, Mato Grosso do Sul, Maranhão, Piauí, Alagoas, Paraíba, Bahia, Minas Gerais, São Paulo), Argentina (Jujuy, Salta, Tucumán, Santiago del Estero) ..... ***C. campestre*** **(Gounelle, 1909)**

On *Rhysium* Pascoe, 1866 and *Rhysium bimaculatum* Pascoe, 1866
(Fig. 19–26, 38)

Pascoe (1866) defined *Rhysium* as follows: "The head is short and concave in front; the antennary tubers are stout and divergent; the eyes are broadly emarginate; the antennae are without spines, as long as the body in the female, and half as long again in the male, the scape is subpyriform, the third

joint is twice the length of the scape in both sexes; the rest of the joints in the female are not longer than the scape, in the male they are considerably longer; the prothorax is oblong, broader in the middle, its disk marked with three nearly obsolete tubercles; the elytra are narrow and elongate, and rounded at the apices; the legs are compressed, the femora thickened, the four posterior tarsi equal; the pro- and mesosterna depressed, the latter elongate."

According to Martins (1969), *Rhysium* is characterized as follows (translated): "Frons irregular, pubescent; lateral foveae well-marked; antennal tubercles slightly developed, rounded at apex, with longitudinal carinae and sulci between its bases; vertex with sericeous pubescence. Scape gradually thickened toward apex, without sulcus on dorsal side of the base, finely pubescent; antennomere III slightly (male) or longer (female) than IV, carinate; antennomere IV slightly shorter or subequal than V; antennae in male distinctly longer than in females. Prothorax cylindrical, slightly constricted anteriorly and posteriorly; pronotum pubescent, with 5 slightly distinct tubercles, without transverse roughness. Elytra unarmed at apex; setae variable. Profemora thickened, with peduncle not very short and not depressed on outer side; metafemora unarmed at apex; hind tibiae finely or not (*bimaculatum*) carinate; metatarsomere I (male of *bimaculatum*) slightly elongate."

Later, Martins and Galileo (2007) defined the genus as follows (translated): "Antennal tubercles rounded at apex, with sulci and carinae between its bases. Antennae in male longer than in female. Scape subcylindrical, without basal sulcus. Antennomere III (male) slightly longer than IV that is subequal or slightly shorter than V. Prothorax cylindrical. Pronotum pubescent and with 5 slightly marked tubercles. Elytra with rounded apex. Apex of metafemora normal. Metatibiae carinate or not."

The following inconsistencies (considering only specimens of *R. bimaculatum*) were found in the description and redescriptions of *Rhysium*:

Pascoe (1866):

1. Antennae in female (Fig. 19–20) are usually slightly longer than body (surpassing elytral apex by about 1.5 antennomere), but may be distinctly longer (surpassing elytral apex by about 2.5 antennomeres);
2. Antennae in male are longer than 1.5 times body length (including in a syntype male), in some males examined more than 1.7 times body length (Fig. 21);
3. Antennomere III (Fig. 19–21) is shorter than twice the length of scape in both sexes (including in syntypes);
4. Antennomeres IV–VIII in females (Fig. 19–20) may be at times longer than scape.

Martins (1969):

1. In the redescription of *R. bimaculatum* it was pointed out that (translated): "In the scape: one of the specimens examined, a female, shows on dorsal side of the base a very distinct and elongate sulcus; in all other specimens this sulcus does not exist." We are sure that this specimen is the paratype female of *R. contracticorne* Martins, 1960 from Peru, belonging to MZSP collection. We find that this sulcus is distinct from base to near apex, although somewhat deeper in basal third (Fig. 22). Also, according to Charyn Micheli (USNM) regarding the types of *R. contracticorne* (personal communication): "The two specimens from Peru do have a very slight sulcus as you mention, though it is harder to see from some angles. In the others from Bolivia, including the holotype, I do not see anything." And, according to Eugenio H. Nearns (PERC – personal communication) there is no sulcus on dorsal side of the scape of the syntype male of *R. bimaculatum*. In the series of specimens of *R. bimaculatum* examined by us, the sulcus is absent (Fig. 26) or slightly indicated (except in the paratype female of R. contracticorne). This suggests that the presence of a distinct sulcus, although not common, is not an aberration. As Martins (1969) recorded that the scape in *Rhysium* is not dorsally sulcate, apparently he also considered the sulcus in the paratype female to be an aberration.
2. Although the metatibia is not carinate, it is longitudinally sulcate laterally. The sulcus is shallow and in some specimens can be less distinct.
3. Additionally, the elytral pubescence is variable in the specimens examined: sparse in basal third and gradually somewhat denser toward apex (Fig. 23, 25), or sparse throughout (Fig. 24).

Summary: Variable character states in *Rhysium bimaculatum* include: the length of both male and female antenna; the presence of a dorsal basal sulcus on the scape of females; the development of the lateral carina on the metatibia; and the location and amount of elytral pubescence.

Material examined of *R. bimaculatum*. BOLIVIA, Chaco (Yungas; 3000 m), 1 male, G. Garlepp col. (no date) (MZSP). *Santa Cruz*: Refugio Los Volcanes (3400-4200 ft.; 18º06'S / 63º36'W), 1 male, 14 females, 16-20.IX.2012, Wappes, Skelley, Bonaso & Hamel col. (ACMT); 4 km N Bermejo (Refugio Los Volcanes; 1000 m; 18º06'S / 63º36'W), 2 females, 4-8.X.2007, Wappes & Morris col. (ACMT); Refugio Los Volcanes; 1045-1350 m; 18º06'S / 63º36'W), 1 female, 17-24.X.2014, Wappes & Morris col. (ACMT); (Refugio Los Volcanes; 3363'), 1 female, 1-10.X.2008, Morris & Wappes col. (RFMC). *La Paz*: Mapiri (no other data), 1 female (MZSP). PERU, San Miguel (5000 ft.), 1 female (paratype of *R. contracticorne*), 1.IX.1911, Yale Peruv Exp. col. (MZSP). *Junín*: Pampa Hermosa (Lodge, nr. San Ramon; 1220 m), 1 female, 6-7.XI.2009, J. Heppner col. (RFMC). *Pasco*: Palomas (Eneñas), 1 female, 26.VIII.1983, P. Hockins col. (MZSP).

***Rhysium separatum* (Martins and Galileo, 2007), comb. nov.**
(Fig. 27–30)

Brechmoidion separatum Martins and Galileo, 2007: 188; Monné 2016: 570 (cat.).

Discussion: Martins and Galileo (2007) described *R. separatum* as follows (translated): "Head, prothorax and ventral side of body reddish. Frons and vertex with yellowish, relatively long pubescence. Antennae orange-red; in male reaching elytral apex at apex of antennomere VII; in female as long as body. Scape cylindrical, with long pubescence primarily in basal half. Antennomere III carinate, slightly longer than IV (male) or longer than IV (female). Prothorax laterally slightly rounded at about midlength. Pronotum with slightly marked tubercles and yellowish setae except along center; in large males there is a small central, slightly rugose area. Elytra brownish, with sutural area reddish; each elytron with yellowish long band, starting on humerus and ending in distal quarter; this band is acuminate toward apex, involving small brownish spot behind midlength. Elytra with yellowish setae; with setiferous, asperous punctures on base; elytral apex unarmed. Femora orange-red, pubescent. Apices of metafemora not projected."

Originally, *Brechmoidion* Martins, 1969 was separated from *Rhysium* in the alternative of couplet "12" from Martins (1969) (translated):

"12(11).Pronotum with five very evident tubercles, the central flattened on tip; apices of meso- and metafemora acute; apex of elytra acute at outer angle .....*Brechmoidion*
Tubercles of pronotum slightly marked, the central similar to the others; apices of meso- and metafemora rounded; elytral apex unarmed .....*Rhysium*"

Later, Martins and Galileo (2007) modified the description of *Brechmoidion* to include their new species *B. separatum*. *Brechmoidion* and *Rhysium* were separated in the alternative of couplet "12" (translated):

"12(11).Pronotal tubercles well marked, the central elongated, when they are slightly marked the elytra are pubescent primarily in distal half; pronotum with abundant pubescence..... ..... *Brechmoidion* Martins 1969
Pronotal tubercles slightly marked; pronotum without pubescence in wide central area (except *R. bivulneratum*) ..... *Rhysium* Pascoe, 1866"

The second half of couplet 12 includes some problems: 1) The pronotal pubescence is not different between *Rhysium* and *Brechmoidion*, being moderately abundant except in a cross-shaped glabrous central area (usually the longitudinal axis of the cross is shorter in *Rhysium*); and 2) the elytra could be

distinctly pubescent in some species of *Rhysium*, as for example in *R. bimaculatum*, although usually distinctly shorter than in *B. separatum*.

When the second species was included in the genus, *B. falcatum* (Fig. 31–33), two features used in the original description of the genus should have been changed: elytral apex is variable in *Brechmoidion* (outer elytral apex not spiniform in *B. falcatum*), and apices of meso- and metafemora not spiniform (triangular lobe with blunt apex in *B. falcatum*). If *Brechmoidion separatum* is kept in this genus, it would make *Brechmoidion* synonymous with *Rhysium*. It is possible that *Brechmoidion exicisifrons* (Martins, 1960) (Fig. 34–37) and *B. falcatum* Napp and Martins, 1985 are only extreme variations of *Rhysium*. However, this is not certain, so for the time being we prefer to keep *Brechmoidion* and *Rhysium* as distinct genera. We are, however, formally transferring *B. separatum* to *Rhysium*, based on the following:

1. Antennal tubercles not acute and elevated (Fig. 29). Actually, they are very similar to those in *Rhysium* (Fig. 38), whereas in *Brechmoidion* they are more acute and elevated (Fig. 33, 36).
2. Central pronotal tubercle nearly absent (Fig. 30). In *Brechmoidion* it is very distinct (Fig. 37).
3. Elytra without thick, erect, white setae. In *Brechmoidion* they are present.
4. Apices of meso- and metafemora rounded and slightly projected (Fig. 28). In *Brechmoidion* they are projected, forming at least a triangular lobe (Fig. 32, 35).

Key to species of *Brechmoidion*

1. Elytra with abundant decumbent white setae among thick erect setae; elytral apex not spiniform at outer angle; Venezuela ..... ***B. falcatum* Napp and Martins, 1985**
– Elytra with sparse decumbent setae among thick erect setae; elytral apex spiniform at outer angle; Colombia, Ecuador ..... ***B. exicisifrons* (Martins, 1960)**

Key to species of *Rhysium*

1 Elytra with pale yellow, longitudinal band from humerus to near apical quarter; Bolivia ..... ***R. separatum* (Martins and Galileo, 2007)**
– Elytra without longitudinal yellow band **2**

2(1). Each elytron with at most two small yellow spots; Colombia ***R. guttiferum* (Thomson, 1867)**
– Each elytron with at least one large yellow spot **3**

3(2). Each elytron with a large yellow spot bordered distally by a curved yellow fascia placed near midlength; Bolivia ..... ***R. spilotum* Martins and Galileo, 2007**
– Each elytron with a single large yellow spot **4**

4(3). Yellow elytral spot transverse, not reaching basal third; elytral apex rounded; Peru, Bolivia ..... ***R. bimaculatum* Pascoe, 1866**
– Yellow elytral spot subelliptical, reaching basal quarter; elytral apex truncate (slightly concave); Brazil (?), Colombia ..... ***R. bivulneratum* (Thomson, 1867)**

Acknowledgments

We express our appreciation to Charyn Micheli (USNM) for the information on the types of *R. contracticorne*, and to Eugenio H. Nearns (PERC) for the information on and photographs of the types of *R. bimaculatum*. Thanks to Roy F. Morris II (RFMC) for the loan of specimens to include in our study. Lastly, thanks also to John Leavengood, Tampa, Florida, USA and to Donald Thomas, Weslaco, Texas, USA for their excellent reviews of the pre-submission manuscript, providing valuable suggestions to improve it.

Literature Cited

Bezark, L. G. 2017. A photographic Catalog of the Cerambycidae of the New World. (Available at ~ https://apps2.cdfa.ca.gov/publicApps/plant/bycidDB/wsearch.asp?w=n/. Last accessed April 2017.)

Galileo, M. H. M., and A. Santos-Silva. 2016. New genus and new species of Neoibidionini from the Neotropical region (Coleoptera, Cerambycidae, Cerambycinae). Zootaxa 4137(3): 391–404.

Martins, U. R. 1969. Monografia da tribo Ibidionini (Coleoptera, Cerambycinae). Parte III. Arquivos de Zoologia 16(3): 631–877.

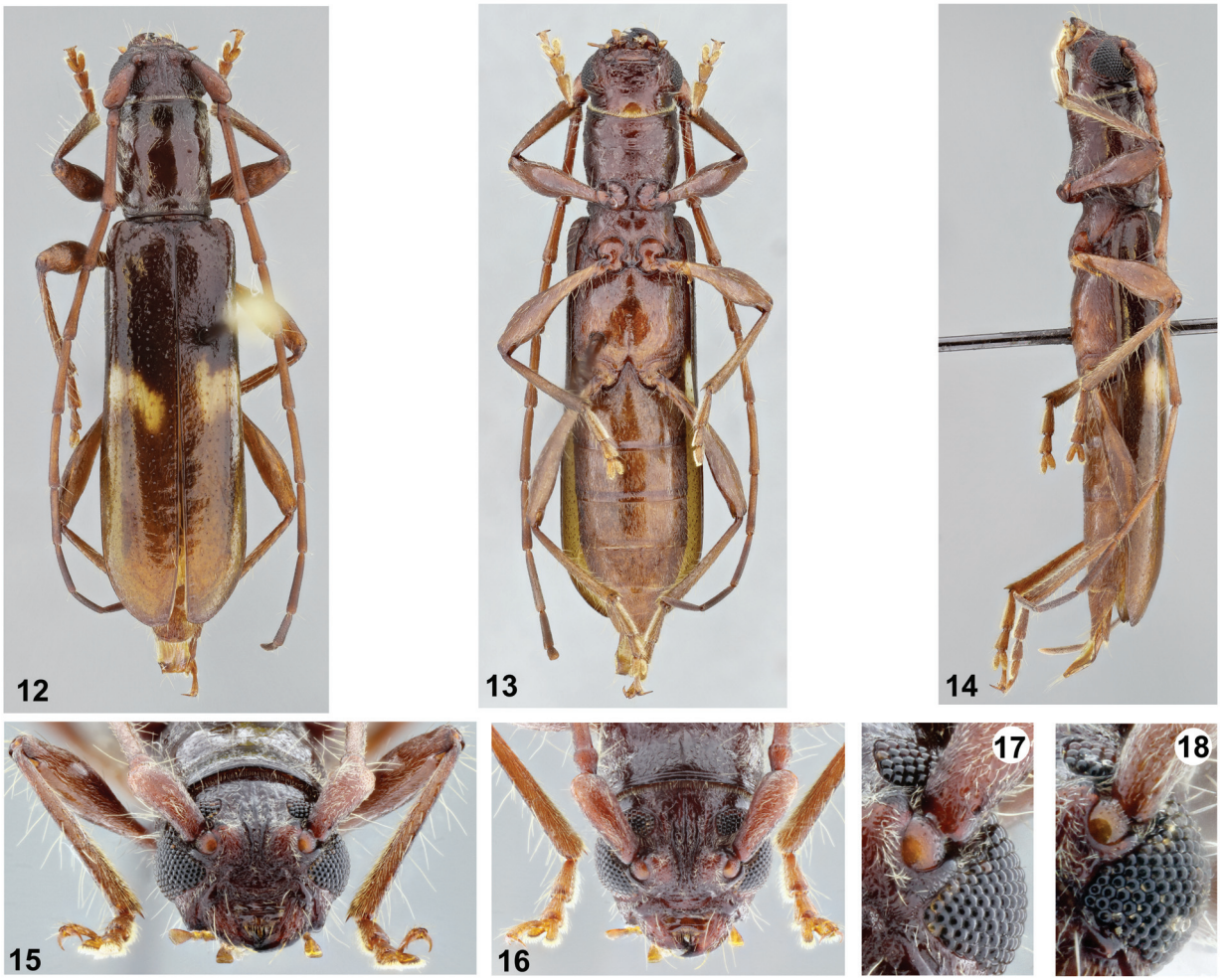
Martins, U. R., and M. H. M. Galileo. 2007. Tribo Ibidionini, Subtribo Ibidionina, p. 177–330. *In*: U. R. Martins (ed.), Cerambycidae sul-americanos (Coleoptera) Taxonomia. V. Sociedade Brasileira de Entomologia ii + 349 p.

Monné, M. A. 2016. Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part I. Subfamily Cerambycinae. (Available at ~ http://www.cerambyxcat.com/. Last accessed January 2017.)

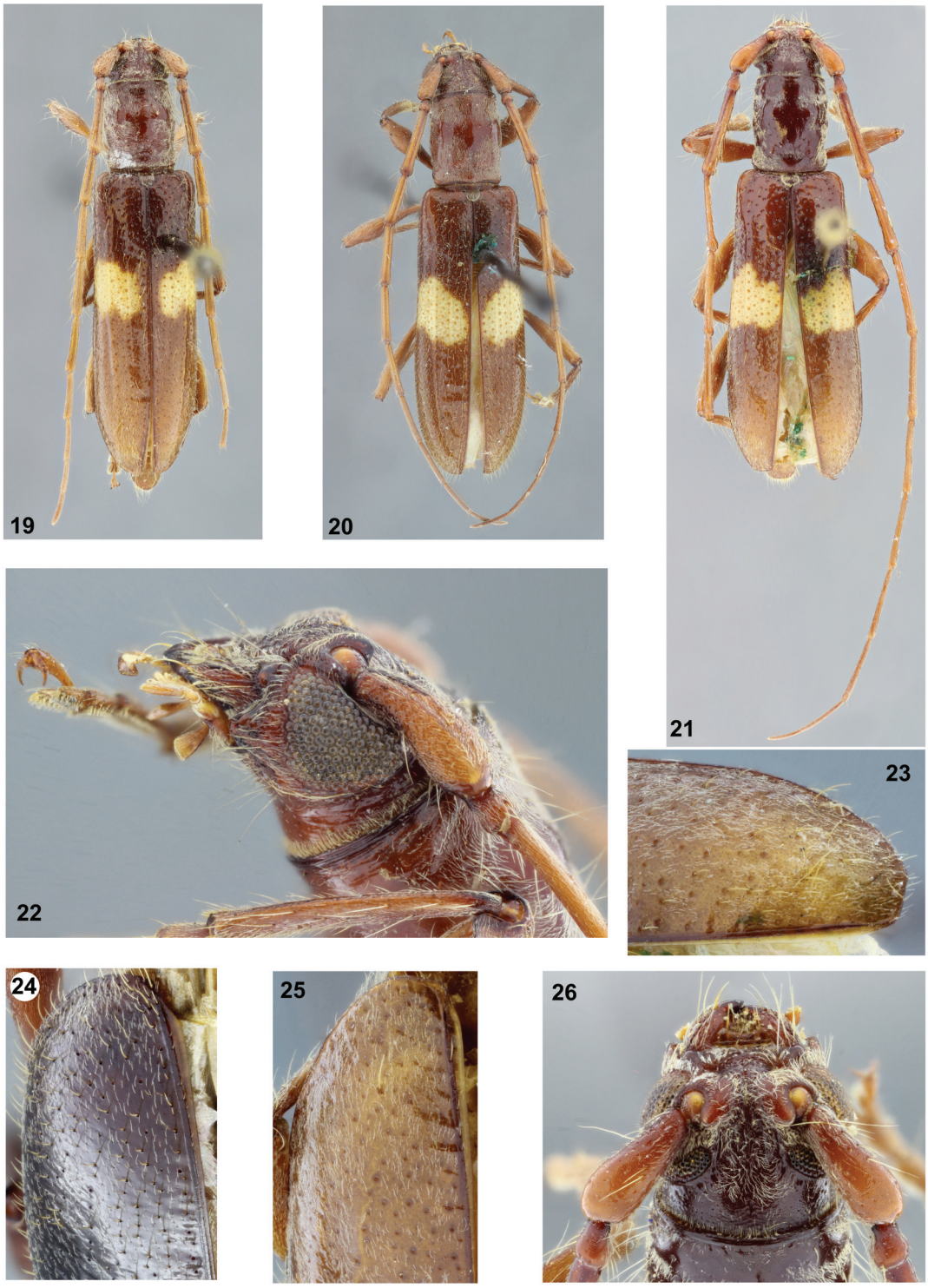
Pascoe, F. P. 1866. Notes on *Sphaerion* and *Mallocera*. The Annals and Magazine of Natural History (3)18: 477–484.

Received April 11, 2017; Accepted June 7, 2017.
Review Editor Jiri Zidek.

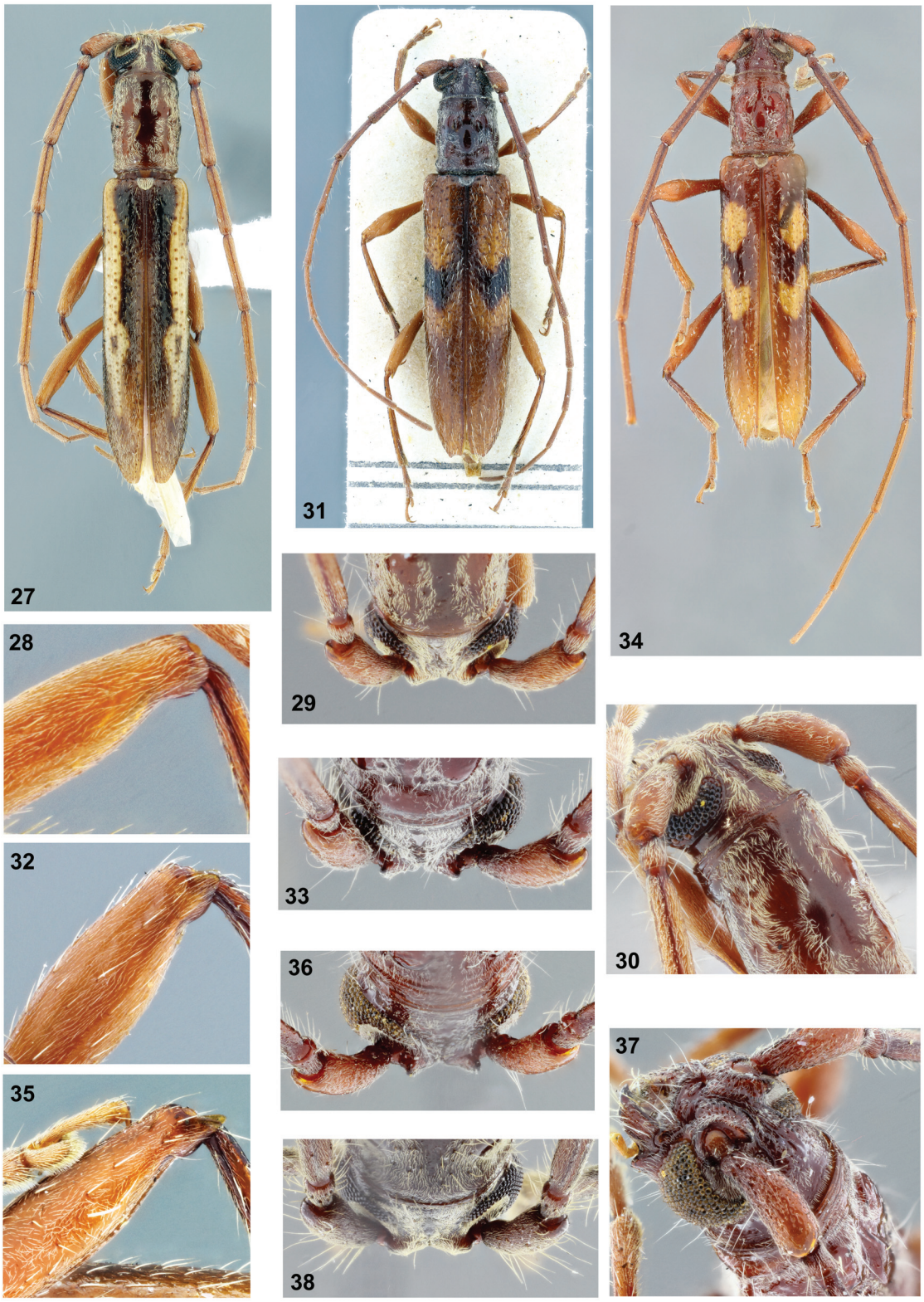
Figures 1–11. New species of Neoibidionini.**1–6**, *Chiquitano volcanesensis* sp. nov. **1)** Holotype male, dorsal habitus. **2)** Holotype male, ventral habitus. **3)** Holotype male, lateral habitus. **4)** Holotype male, head, frontal view. **5)** Holotype male, head and scape, dorsal view. **6)** Paratype female, dorsal habitus. **7–11**, *Compsibidion achiraensis* sp. nov., holotype female: **7)** Head, frontal view. **8)** Head and scape, dorsal view. **9)** Dorsal habitus. **10)** Ventral habitus. **11)** Lateral habitus.



Figures 12–18. New species of *Compsibidion*. **12–17**, *Compsibidion amboroensis* sp. nov. **12)** Dorsal habitus. **13)** Ventral habitus. **14)** Lateral habitus. **15)** Head, frontal view. **16)** Head and scape, dorsal view. **17)** Eye, frontal view. **18**, *Compsibidion achiraensis* sp. nov.: holotype female, eye, frontal view.



Figures 19–26. *Rhysium bimaculatum*. **19)** Dorsal habitus, female from Bolivia. **20)** Dorsal habitus, paratype female of *R. contracticorne* from Peru. **21)** Dorsal habitus, male from Bolivia. **22)** Head and scape, lateral view, paratype female of *R. contracticorne* from Peru. **23)** Elytral apex, male from Bolivia. **24)** Elytral apex, paratype female of *R. contracticorne* from Peru. **25)** Elytral apex, female from Bolivia. **26)** Head and scape, dorsal view, male from Bolivia.



Figures 27–38. Adult habitus and structures of *Rhysium* and *Brechmoidion* spp. **27–30**, *Rhysium separatum*, paratype male: **27)** Dorsal habitus. **28)** Apex of metafemur. **29)** Antennal tubercles. **30)** Pronotum. **31–33**, *Brechmoidion falcatum*: **31)** Dorsal habitus, paratype female. **32)** Apex of metafemur, paratype male. **33)** Antennal tubercles, paratype male. **34–37**, *Brechmoidion exicisifrons*, paratype male: **34)** Dorsal habitus. **35)** Apex of metafemur. **36)** Antennal tubercles. **37**, Pronotum. **38**, *Rhysium bimaculatum*, male, antennal tubercles.