A new species and redescriptions of three species of *Atractosomus* Lacordaire from Brazil (Elateridae, Elaterinae)

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ABSTRACT. A new species and redescriptions of three species of *Atractosomus* Lacordaire from Brazil (Elateridae, Elaterinae). A new species, *Atractosomus amazonicus* **sp. nov.** is described and three species, *A. robustus* Candèze, 1859, *A. carinatus* Candèze, 1859 and *A. conicicollis* Candèze, 1859 are redescribed and illustrated. A comparison among these species and with the type-species, *A. flavescens* (Germar 1839) is presented. *A.amazonicus* **sp. nov.** and *A. robustus* belong to group of species with 3rd and 4th antennomeres equal in size and the other studied species, to group with 3rd antennomere smaller than 4th.

KEYWORDS. Ampedini; Dicrepidiina; Morphology; Neotropical; Taxonomy.

RESUMO. Uma espécie nova e redescrições de três espécies de *Atractosomus* Lacordaire do Brasil (Elateridae, Elaterinae). Uma espécie nova, *Atractosomus amazonicus* **sp. nov.** é descrita e três espécies, *A. robustus* Candèze, 1859, *A. carinatus* Candèze, 1859 e *A. conicicollis* Candèze, 1859 são redescritas e ilustradas. É apresentada a comparação entre essas espécies e com a espécie-tipo do gênero, *A. flavescens* (Germar 1839). *A.amazonicus* **sp. nov.** e *A. robustus* pertecem ao grupo de espécies com 3º e 4º antenômeros iguais em comprimento e as demais espécies estudadas, ao grupo de espécies com 3º antenômero menor que o 4º.

PALAVRAS-CHAVE. Ampedini; Dicrepidiina; Morfologia; Neotropical; Taxonomia.

The genus *Atractosomus* Lacordaire, 1857 is characterized especially by borders of mesosternal cavity horizontal, frons convex or slightly concave and weak or strongly carinate, 3rd antennomere smaller or equal 4th and well developed prothoracic channel.

The last study of this genus was that of Candèze (1859) who divided it in two groups of species according to size of third antennomere: "plus petit que le quatrième" or "aussi grand que le quatrième". The first group was composed by 6 species (including *A. carinatus*, *A. conicicollis* and *A. flavescens*) and the second by 9 species (including *A. robustus*). In fact, in species of the first group, the 3rd antennomere has almost the same length of 4th, being narrower than 4th.

Except for Champion (1895) who treated of 6 species of Central America (including 4 new species) and provided a key, subsequent authors only described new species. Recent studies include those of Casari (2008), who redescribed the type-species of the genus, *A. flavescens*, and conducted a cladistic analysis of Dicrepidiina, and Chassain (2008), who described one species from French Guyana. The genus is currently composed of 32 species, the majority known only from original description (Schenkling 1925; Blackwelder 1944; Casari 2008; Chassain 2008). It is recorded from South America except 6 species from Mexico and Central America. Fourteen species are recorded from Brazil.

The type-species of the genus, *A. flavescens* (Germar, 1829) is very common in Brazil, and it is easily recognized by integument coloration, yellow or brownish-yellow dorsally and black ventrally (including antennae and sometimes head and legs); pubescence long, bristle, pale (yellowish or yellowish-white) and dense dorsally and ventrally; pronotum trapezoidal. It is very similar to *A. carinatus* Candèze, 1859, which according to Candèze (1959), differs especially by presence of strong carina at hind angles of pronotum.

Another species common in Brazil is *A. conicollis* differing from anterior ones especially by coloration. To help the identification of these three species, *A. carinatus* and *A. conicicollis* are here redescribed, illustrated and compared with *A. flavescens*. In addition, *A. robustus* is redescribed and illustrated to permit a better comparison with *A. amazonicus* **sp. nov.**, both belonging to second group of Candèze (1859).

MATERIAL

The studied material belongs to Museu Paraense Emilio Goeldi, Belém, Pará (MPEG) and Museu de Zoologia da Universidade de São Paulo (MZSP).

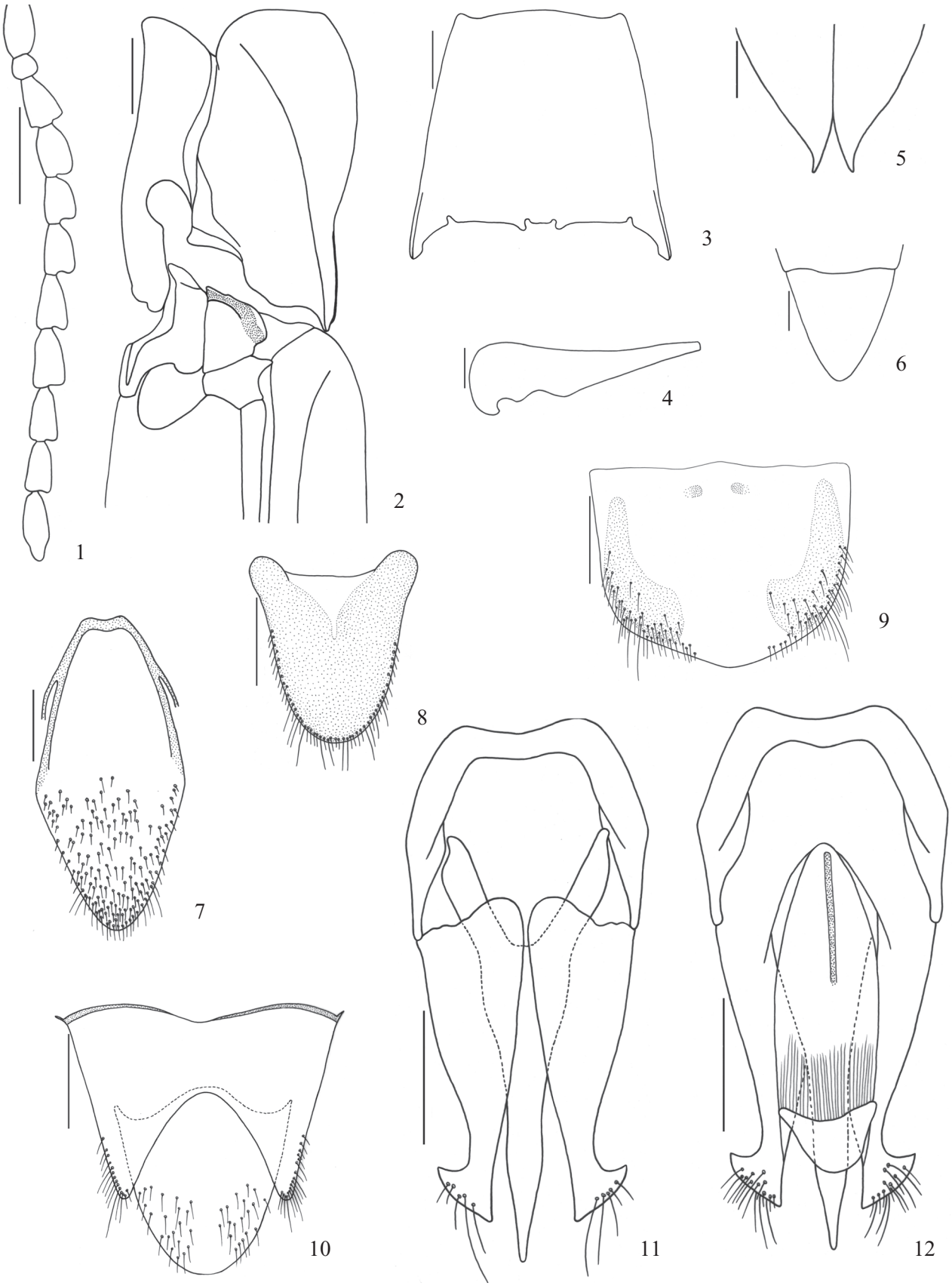
RESULTS

Atractosomus amazonicus sp. nov.

(Figs. 1–12, 63, 64)

Type-material. Holotype: Brasil. *Pará:* Belém, IX.1964, E. Dente (MZSP).

Paratypes: Brasil. *Amapá*: Serra do Navio, Bicelli col.; Coleção J. Lane, 1 ex. (MZSP). *Pará*: Coaraci, 19.12.1961, J. & B. Bechyné, 1 ex. (MPEG); Sta Isabel do Pará, 30.III.1962, J. Bechyné col. (1 ex. dissected) (MZSP).



Figs. 1–12. *Atractosomus amazonicus* **sp. nov.** Male: 1, antenna; 2, pro- and mesothorax (lateral); 3, pronotum; 4, metacoxal plate; 5, elytral apex; 6, last ventrite; 7, sternite IX; 8, tergite VIII; 9, sternite VIII; 10, tergites IX-X; 11, 12, aedeagus (dorsal, ventral). Bars = 1 mm, except Fig. 4 = 0.5 mm; Figs. 7, 9-12 = 5 mm; Fig. 8 = 10 mm.

Length: 17 mm (holotype); 18–20 mm (paratypes).

General integument (Figs. 63–64) dark reddish-brown dorsally and ventrally; antennae and legs clearer; antennae with a darker longitudinal median line. Pubescence (Figs. 63-64) yellowish, very long and sparse, not masking integument.

Frons longer than wide, slightly widened anteriorly; concave and prominent anteriorly; carina surpassing nasal; grooved at middle in a triangular area; fore angles truncate making frons trapezoidal; punctuation moderately coarse and sparse, irregularly distributed. Nasal high. Antennae (Figs. 1, 64) surpassing hind angles of pronotum at maximum one antennomere; slightly serrate; 3rd antennomere as long as 4th, strongly narrowed at base and at apex, wider than 4th.

Pronotum (Figs. 3, 63) as long as wide (including hind angles), gradually narrowed anteriad; strongly convex anteriorly, declivous at base between hind angles; lateral margins not visible dorsally; grooved longitudinal medially at basal half and innerly each hind angle; punctuation moderately coarse and sparse, more concentrate on anterior half; hind angles slightly divergent and strongly carinate. Prosternum (Figs. 2, 64) convex; punctuation coarser and sparser than that of pronotum. Pronotosternal sutures almost straight and wide, opened frontally f**or**ming a well developed prosternal channel. Prosternal spine flattened laterally behind procoxae; apex rounded with small subapical dorsal rounded lobe. Mesosternal cavity (Figs. 2, 64) V-shaped with borders wide and horizontal on basal half; mesepimeron and mesepisternum making mesosternal cavity. Metacoxal plate (Figs. 4, 64) narrowed laterally, with small lobe at free margin. Tibial spurs well developed. Tarsomeres 1-3 lamelllate beneath; lamellae very long, increasing in size to claws direction. Last ventrite (Figs. 6, 64) as long as wide, gradually narrowed apicad.

Elytra at base slightly narrower than pronotum at hind angles apex; strongly convex; strongly narrowed on distal third; apex (Fig. 5) sharpened with well developed spine; punctuate-striate; striae marked by row of coarse punctures, grooved near base; interstices flat and punctuate.

Male. Tergite VIII (Fig. 8) slightly longer than wide, slightly narrowed apicad; translucent mediobasally; distal margin rounded; setae of varied sizes near margins of distal 2/3. Sternite VIII (Fig. 9) transverse, translucent with one elongate yellowish band each side and two small patches at middle near base; distal margin prominent at middle; setae of varied sizes near fore angles. Stenite IX (Fig. 7) elongate, wider at middle; yellowish at distal 2/3; setae of moderately sizes on distal half. Tergite IX (Fig. 10) transverse, slightly narrowed apicad; distal margin wide- and deeply notched at middle forming one narrow angle each side; 1.3 time wider than tergite X (at point of union with fore angles); long setae laterally each angle. Tergite X longer than wide, slightly narrowed apicad; distal margin widely rounded; long setae laterally at distal half. Aedeagus (Figs. 11, 12) 2.4 times longer than wide; parameres dorsally 1.5 time longer than basal piece; parameres with apex cuneiform; subapical region of parameres widely notched forming a sharpened angle with lateral margin; cuneiform area wide and roundly inclined to apex; many ventral and some dorsal setae; median lobe as long as parameres dorsally (excluding basal struts); median lobe with lateral margins sinuous and strongly narrowed apicad.

Etymology.The specific epithet is a derivative of the word "amazonica" referring to the region of the type-locality.

Remarks. *Atractosomus amazonicus* **sp. nov.** is easily recognized by presence of elytra strongly narrowed on distal third and with a sharpened and well developed apical spine. In addition, the 3rd antennomere is wider than 4th and cuneiform area of parameres preceded by a strong emargination, forming a sharpened angle, becoming roundly inclinate towards apex.

Comparing it to *A. robustus*, which presents similar 3rd and 4th antennomeres and frontal shape, *A. amazonicus* **sp. nov.** presents general punctuation finer and weakly marked, striae not grooved and apex of elytra with well developed spine. In addition, the aedeagus and genital segments are differents.

Atractosomus robustus Candèze, 1859

(Figs. 13–24, 65, 66)

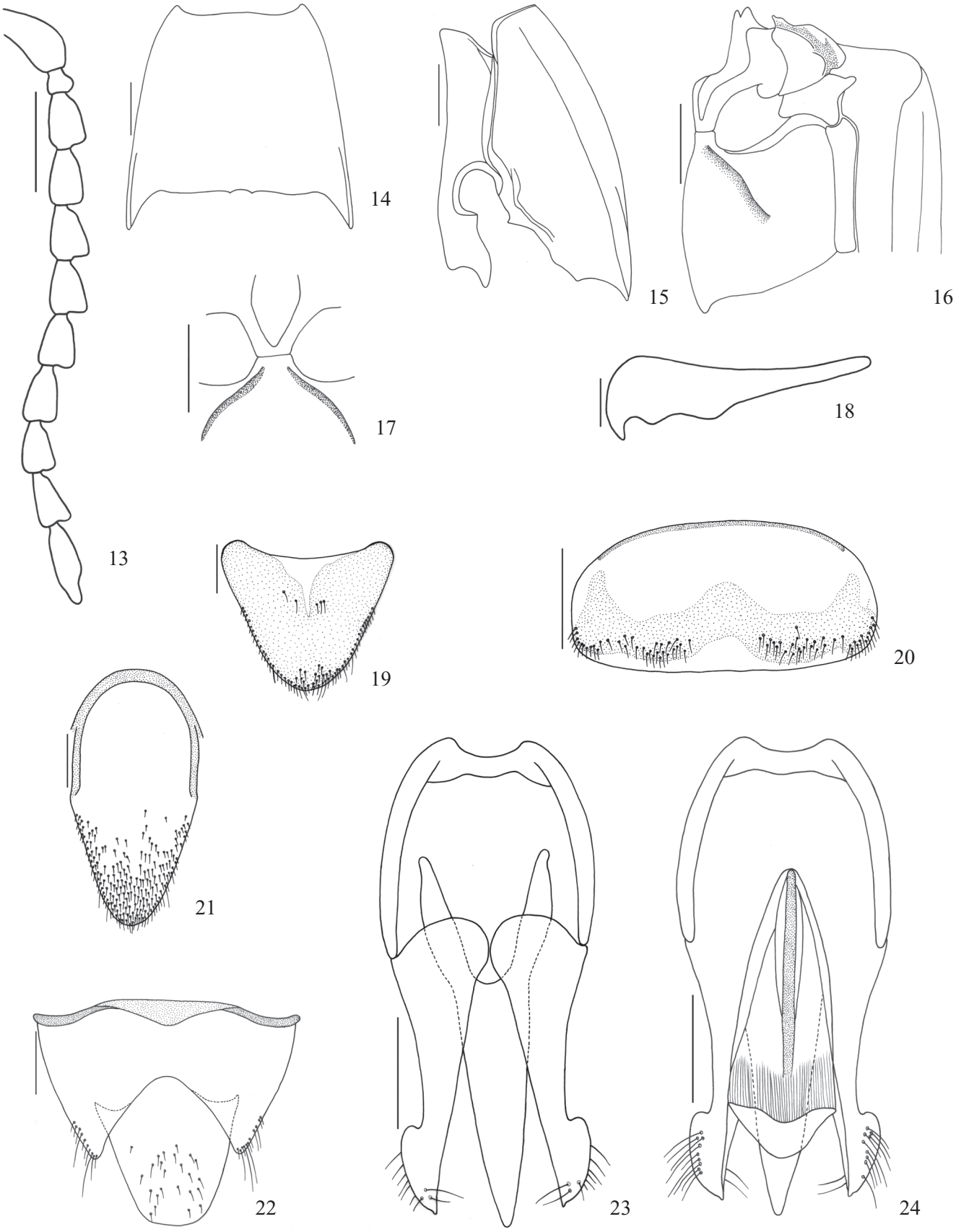
Atractosomus robustus Candèze, 1859: 140; Schenkling, 1925: 86 (cat.); Blackwelder, 1944: 299 (checkl.).
Atractodes robustus; Candèze, 1891: 63 (cat.)

Length: 16.0-20.5 mm.

General integument (Figs. 65–66) dark-brown or dark reddish-brown dorsally and ventrally; usually clearer ventrally; antennae and legs usually yellowish or yellowish-brown. Pubescence (Figs. 65, 66) yellowish, long, dense and moderately thick, masking integument bright.

Frons longer than wide, wider anteriorly; concave and prominent anteriorly; carina surpassing nasal; anterior margin slightly depressed and prominent at middle, making frons trapezoidal with rounded angles; punctuation coarse and dense. Nasal high. Antennae (Figs. 1, 66) not reaching hind angles of pronotum; slightly serrate; 3rd antennomere same shape and length of 4th.

Pronotum (Figs. 14, 65) as long as wide (including hind angles) slightly narrowed anteriad; moderately convex, declivous between hind angles; lateral margins partially visible dorsally; moderately convex and grooved longitudinal medially near base and innerly hind angles; hind angles backwardly directed and strongly carinate; punctuation very coarse and dense. Prosternum (Figs. 15, 66) convex; punctuation coarser and sparser than that of pronotum. Pronotosternal sutures almost straight and wide, opened frontally making a well developed prosternal channel. Prosternal spine (Fig. 15) moderately compressed laterally; apex slightly widened forming two lobes: ventral lobe shorter and rounded. Mesosternal cavity (Figs. 16, 66) V-shaped with borders wide and horizontal at basal half; mesepimeron and mesepisternum forming mesosternal cavity. Metasternum (Figs. 16, 17, 66) with one narrow and inclined groove each side, behind mesocoxal cavity, each bordered anteriorly by carina. Metacoxal plate



Figs. 13–24. *Atractosomus robustus* Candèze, 1859. Male: 13, antenna; 14, pronotum; 15, prothorax (lateral); 16, meso- and metathorax (lateral); 17, fossseta mesosternal and anterior region of metathorax (ventral); 18, metacoxal plate; 19, tergite VIII; 20, sternite VIII; 21, sternite IX; 22, tergites IX-X; 23, 24, aedeagus (dorsal, ventral). Bars = 1 mm, except Fig. 18 = 2 mm; Figs. 19-24 = 5 mm.

(Fig. 18) with small lobe at free margin. Tibial spurs well developed. Tarsomeres 1-3 lamellate beneath; lamellae well developed, increasing in size towards claws. Last ventrite wider than long, slightly narrowed apicad.

Elytra at base as wide as pronotum at hind angles; strongly convex, gradually narrowed on apical half; apex with tiny spine; punctuate-striate; striae grooved, marked by row of very coarse and deep punctures; interstices slightly convex and sparsely punctuate.

Male. Tergite VIII (Fig. 19) wider than long, gradually narrowed apicad; triangular, translucent mediobasally; distal margin rounded; punctuate with marginal setae moderately long at basal 2/3. Sternite VIII (Fig. 20) transverse, translucent with tranverse irregular yellowish band near apex and very narrow sclerotized band at base; long setae in irregular band, interrupted at middle, near apex. Sternite IX (Fig. 21) elongate, narrowed at distal half; apex rounded; setae moderately long on distal third. Tergite IX (Fig. 22) transverse, slightly narrowed apicad; wide- and deeply notched at middle forming two wide distal lobes; 1.4 time wider than tergite X (at point of union with hind angles) setae of varied sizes laterodistal. Tergite X slightly longer than wide, slightly narrowed apicad with distal margin rounded; long setae near middle of distal half. Aedeagus (Figs. 23, 24) 2.3 times longer than wide; parameres dorsally 1.4 time longer than basal piece; parameres with cuneiform apex; subapical region slightly notched; cuneiform area narrow, limited by rounded angle and roundly inclined to apex; with many setae ventral and some dorsal; median lobe (excluding basal struts) 0.8 time parameres length dorsally, gradually narrow apicad.

Material examined. BRAZIL. *Amazonas*: Maturacá (alto Rio Cauaburi), 1 ex. (MZSP); Tapuruquara (Rio Negro), 5 exs. (MZSP); Tapurucuara [Tapuruquara] (Rio Negro) 3 exs. (MPEG); Taracuá (Rio Uaupés), 2 exs. (MZSP). *Pará*: Belém, 3 exs. (MZSP), (Utinga), 1 ex. (MZSP); Icoaraci, 1 ex. (MZSP); Melgaço (ECFPn Estrada Principal), 1 ex. (MPEG), (Caxiuanã-ECFPn), 1 ex. (MPEG); Serra Norte (Manganês), 3 exs. (MPEG); (Casa de Pedra), 2 exs. (MPEG). *Rondônia*: Garapá, 2 exs. (MZSP). *Mato Grosso*: Vera, 1 ex. (MZSP).

Remarks. *A. robustus* is easily recognized by coarse punctuation and presence, on metasternum, of two divergent narrow grooves limited anteriorly by carina, behind mesosternal cavity.

This species was known only from the state of Pará. Here, it is also recorded from the states of Amazonas, Rondônia and Mato Grosso.

Atractosomus carinatus Candèze, 1859

(Figs. 25–41, 67)

Atractosomus carinatus Candèze, 1859: 135; Schenkling, 1925: 86 (cat.); Blackwelder, 1944: 299 (checkl.).
Atractodes carinatus; Candèze, 1891: 63 (cat.)

Length: 13-17mm.

General integument (Fig. 67) usually clear reddish-brown, brownish-yellow or yellow dorsally and brown ventrally; head and legs brown or yellow; antennae brown; sometimes elytral base yellow and/or apex black and/or meso-, metasternum and ventrites or only ventrites reddish-brown. Pubescence (Fig. 67) yellowish, long, dense, bristle and moderately thick, masking integument bright.

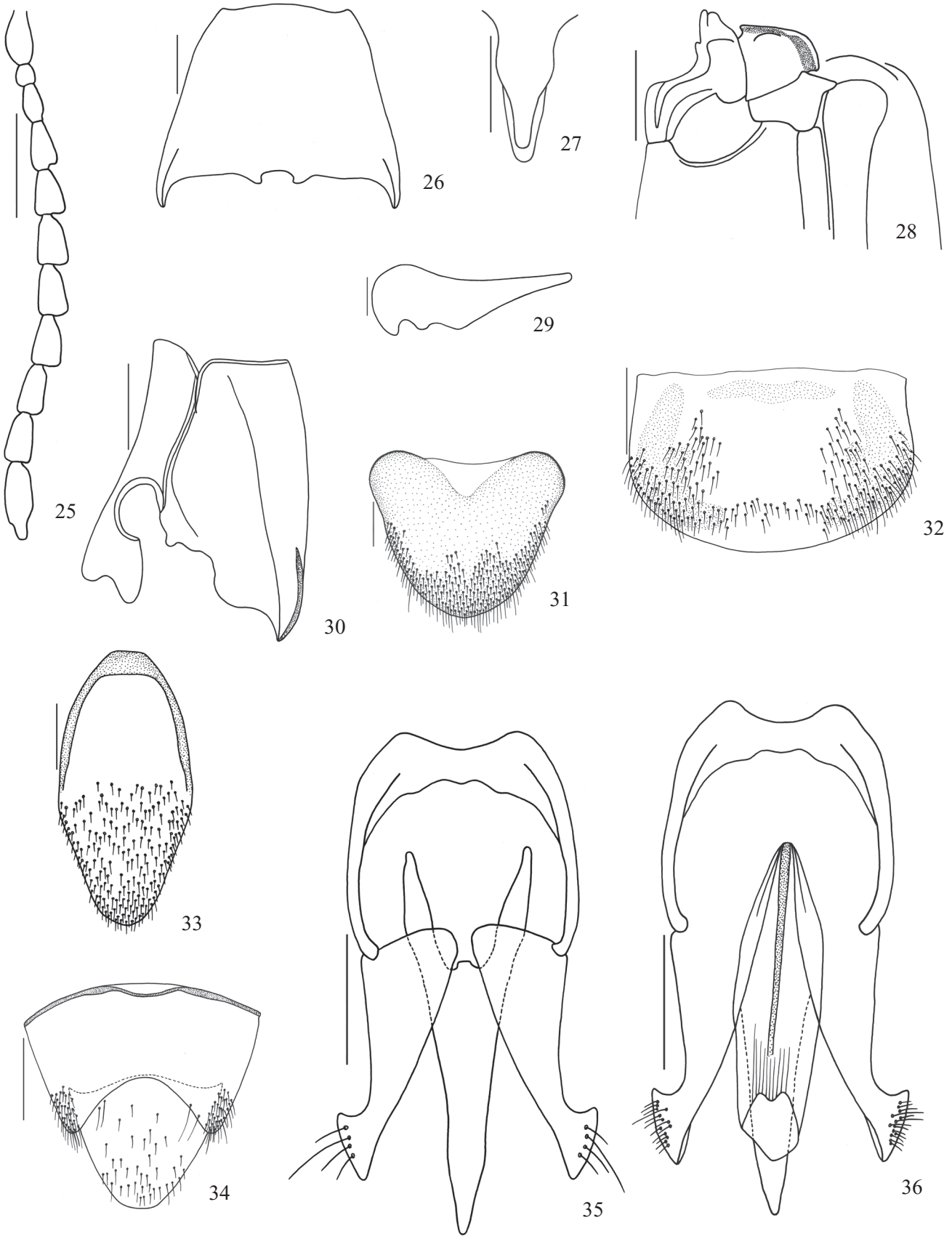
Frons wider than long, convex, weak or incompletely carinate; anterior margin at nasal level; punctuation moderately coarse and dense. Antennae (Fig. 25) slightly serrate, longer than hind angles of pronotum; third antennomere narrower and shorter than fourth.

Pronotum (Figs. 26, 67) wider than long, trapezoidal, moderately convex anteriorly, flattened at base; lateral margins not visible dorsally; punctuation moderately coarse and dense, more concentrate lateroanterioly, sparser and finer basally between hind angles; hind angles backwardly directed with apex inwardly directed and well developed carina at middle; median basal tubercle indistinct. Prosternum (Fig. 30) convex with punctuation coarse, denser near sutures. Pronotosternal sutures slightly sinuous, wide and opened frontally making a well developed prosternal channel. Prosternal spine (Figs. 27, 30) wide between procoxae, gradually narrowed ventrally at distal half and declivous laterally at basal half; strongly compressed laterally with bilobed apex; both lobes with rounded apex. Mesosternal cavity (Fig. 28) V-shaped with borders wide and horizontal on basal half; mesepimeron and mesepisternum making mesosternal cavity. Metacoxal plate (Fig. 29) with small lobe at free margin.Tibial spurs well developed. Tarsomeres 1-3 lamellate beneath.

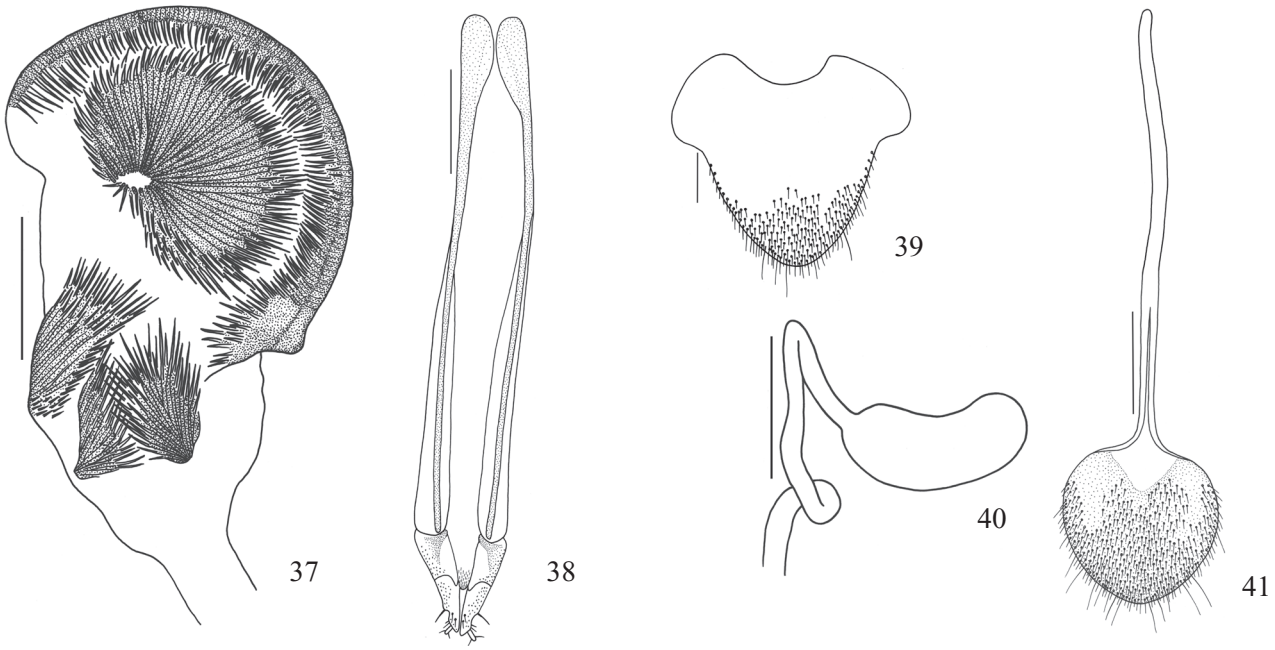
Elytra wider than hind angles of pronotum, gradually narrow on distal third; convex, declivous at base; punctuate-striate; striae weakly marked by row of punctures; interstices flat and punctuate; striae grooved at base; interstices slightly convex at distal half.

Male. Tergite VIII (Fig. 31) wider than long, slightly narrowed apicad; apex rounded; translucent mediobasally; punctuated; punctuation denser laterally near base; setae moderately long, more concentrate on distal third. Sternite VIII (Fig. 32) transverse with anterior margin rounded; translucent with one small basal and two lateral yellowish areas; irregular band of setae moderately long at anterior margin. Sternite IX (Fig. 33) elongate, slightly widened near middle, rounded at extremities; setae moderately long on distal half. Tergite IX (Fig. 34) transverse, slightly narrowed apicad; anterior margin widely notched at middle, forming two wide rounded lobes; 1.2 time wider than tergite X (at point of union with fore angles); coarsely punctuated laterally near base; many setae laterally each lobe. Tergite X wider than long, slightly narrowed apicad; distal margin rounded; moderately long setae irregularly distributed. Aedeagus (Figs. 35, 36) 2.2 times longer than wide; parameres dorsally 1.2 time longer than basal piece; parameres with cuneiform apex; subapical region of parameres notched and slightly inclined apicad; many setae ventrally and some dorsally; median lobe as long as parameres (excluding basal struts), gradually narrowed apicad.

Female. Tergite VIII (Fig. 39) almost as long as wide, wider on basal third, narrowed apicad on distal 2/3; distal margin rounded; densely punctuated; setae moderately long



Figs. 25–36. *Atractosomus carinatus* Candèze, 1859. Male: 25, antenna; 26, pronotum; 27, prosternal spine (ventral); 28, mesothorax (lateral); 29, metacoxal plate; 30, prothorax (lateral); 31, tergite VIII; 32, sternite VIII; 33, sternite IX; 34, tergites IX-X; 35, 36, aedeagus (dorsal, ventral). Bars = 1 mm, except Fig. 29 = 0.5 mm; Figs. 31, 33-36 = 5 mm.



Figs. 37–41. *Atractosomus carinatus* Candèze, 1859. Female: 37, bursa copulatrix (lateral); 38, ovipositor (dorsal); 39, tergite VIII; 40, spermatheca; 41, sternite VIII. Bars = 10 mm, except Fig. 40 = 1mm; Fig. 41 = 5 mm.

laterally on distal 2/3 and at apex. Sternite VIII (Fig. 41) as long as wide, rounded; covered with moderately long setae, except basal region; longer setae near base; baculum 2.8 times longer than sternite. Ovipositor (Fig. 38) with one-segmented stylus; spermatheca (Fig. 40) cylindrical, slightly curved; bursa copulatrix (Fig. 37) with 6 spiny areas: one elongate longitudinal median with one rounded and well developed each side and three smaller near base.

Material examined. BRAZIL.*Minas Gerais*: Serra do Caraça, 1380m, 7 exs. (MZSP); Vila Monte Verde, 1 ex. (MZSP). *Espírito Santo*: Santa Teresa, 4 exs. (MZSP). *Rio de Janeiro*: Corcovado, 2 exs.; Itatiaia, 2 exs. (MZSP; Parque Nacional Itatiaia, 2 exs. (MZSP). *São Paulo*: Cajuru, 1 ex. (MZSP); Itu (Faz. Pau d´Alho) 1 ex. (MZSP); Salesópolis (Estação Biológica de Boracéia), 3 exs. (MZSP); São Paulo (Cantareira), 3 exs. (MZSP); (Morumbi), 1 ex. (MZSP). *Paraná*: Marumby [Marumbi], 1 ex. (MZSP). *Santa Catarina*: Rio Vermelho, 1 ex. (MZSP).

Remarks. *A. carinatus* is easily recognized by coloration and presence of well developed carina at hind angles of pronotum. It was recorded only from "Brazil". Here, is recorded from the states of Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Santa Catarina.

Atractosomus flavescens (Germar, 1839)

(Figs. 42–51, 68)

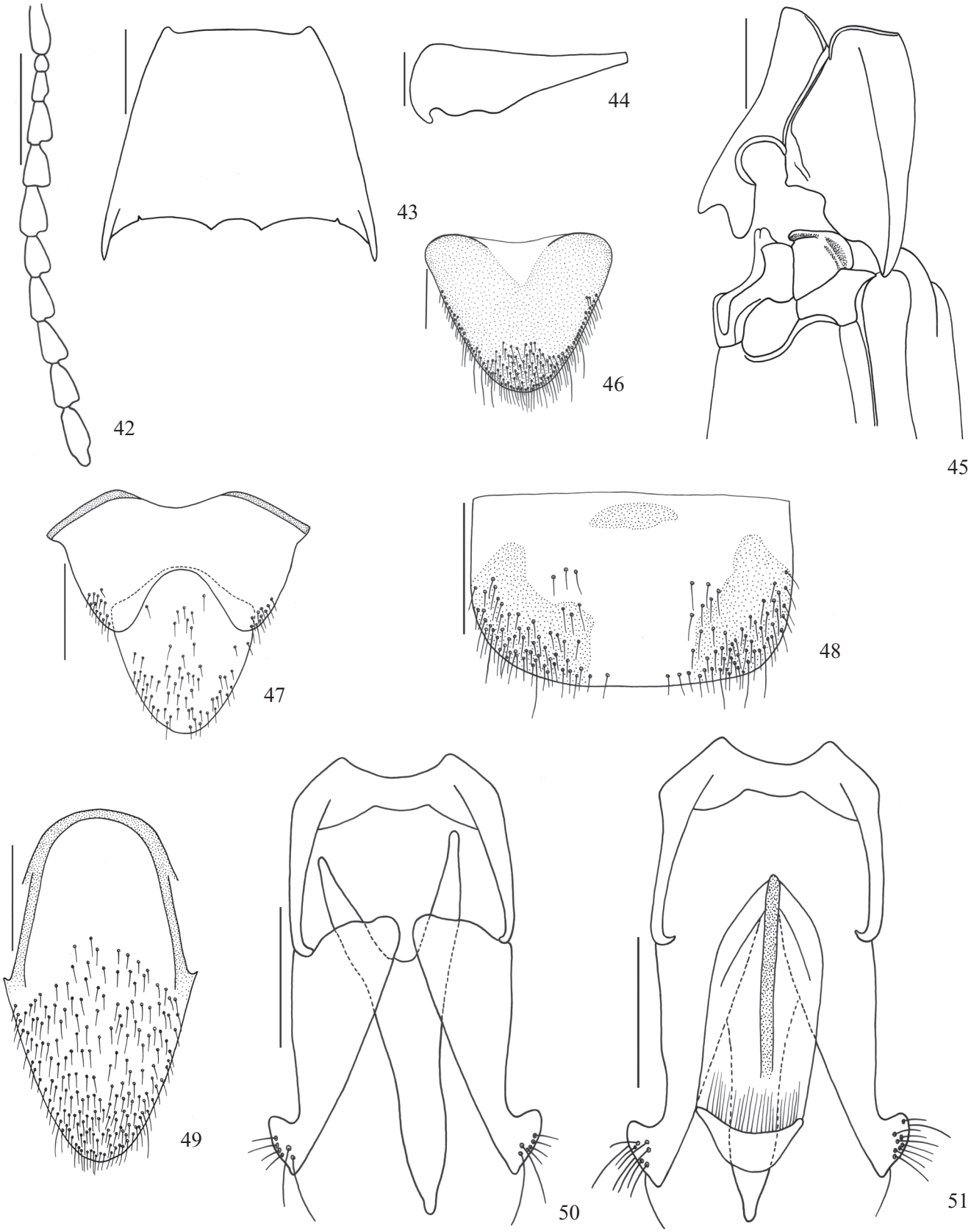
Atractodes flavescens Germar, 1839: 219; Candèze, 1891: 63 (cat.).
Atractosomus flavescens; Candèze, 1859: 135; Schenkling, 1925: 86 (cat.); Blackwelder, 1944: 299 (checkl.); Casari, 2008: 203 (redesc.).

It is similar to *A. carinatus*, except for the following: hind angles of pronotum not carinate at middle; carina short and located at internal margin of hind angles; prosternal spine bilobed at apex being ventral lobe (subapical) with sharpened apex and dorsal with rounded apex.

Male. Tergite VIII (Fig. 46) wider than long, slightly narrowed apicad; subtriangular, translucent mediobasally; distal margin widely rounded; setae moderately long laterally on distal 2/3 and at middle. Sternite VIII (Fig. 48) transverse, translucent with one wide irregular yellowish band on each side and a small transversal median at base; long setae near fore angles.

Sternite IX (Fig. 49) elongate, widened at middle, gradually narrowed at distal half; many long setae on distal half. Tergite IX (Fig. 47) transverse, slightly narrowed apicad; anterior margin strongly notched forming two wide rounded lobes; slightly wider than tergite X (at point of union with fore angles); many setae laterally on each angle. Tergite X longer than wide, slightly narrowed apicad; many moderately long setae irregularly distributed. Aedeagus (Figs. 50, 51) 2 times longer than wide; parameres dorsally 1.4 time longer than basal piece; apex of parameres cuneiform; subapical region of parameres notched and slightly rounded; setae more concentrate ventrally; median lobe (excluding basal struts) slightly shorter than parameres dorsally; median lobe gradually narrowed apicad, more strongly narrowed near middle and at apex.

Material examinado (after Casari 2008). BRAZIL. *Minas Gerais*: Vila Monte Verde, 10 exs. (MZSP). *Rio de Janeiro*: Corcovado, 1 ex. (MZSP); Itatiaia, 1 ex. (MZSP). *São Paulo*: Batêa (?), 1 ex. (MZSP); Paranapiacaba, 1 ex. (MZP); Pindamonhangaba (Eugênio Lefèvre), 2 exs. (MZSP); São Paulo (Água Funda),1 ex. (MZSP); (Jabaquara), 2 exs. (MZSP); São Roque, 1 ex. (MZSP). *Paraná*: Rolândia, 8 exs. (MZSP). *Santa Catarina*: Joinvile, 1 ex. (MZSP); Timbó, 2 exs. (MZSP). *Rio Grande do Sul*: Marcelino Ramos, 1 ex. (MZSP).



Figs. 42–51. *Atractosomus flavescens* (Germar, 1839). Male: 42, antenna; 43, pronotum; 44, metacoxal plate; 45, pro- and mesothorax (lateral); 46, tergite VIII; 47, tergites IX-X; 48, sternite VIII; 49, sternite IX; 50, 51, aedeagus (dorsal, ventral). Bars = 1 mm, except Fig. 44 = 0.5 mm; Figs. 46-51 = 5 mm.

Remarks. After examining several specimens identified as *A. carinatus* and *A. flavescent*, it was observed that *A. flavescens*, which is considered not to have a carina at hind angles of pronotum, does have a short carina located at internal margin. In *A. carinatus* the carina is stronger, longer and located at middle of hind angles of pronotum. The bilobed apex of prosternal spine of *A. carinatus* presents two rounded lobes with the dorsal shorter; when observed ventrally, the lateral declivity of prosternal spine starts at apex. In *A. flavescens*, the dorsal lobe is more sharpened and almost as long as ventral; when observed ventrally, the lateral declivity of prosternal spine is present only at basal half. It was also observed small differences in the aedeagus and genital segments of both species, especially related to shape and chaetotaxy.

Atractosomus conicicollis Candèze, 1859

(Figs. 52–62, 69, 70)

Atractosomus conicicollis Candèze, 1859: 136; Schenkling, 1925: 86 (cat.); Blackwelder, 1944: 299 (checkl.).
Atractodes conicicollis; Candèze, 1891: 63 (cat.)

Length: 14–18mm.

General integument (Figs. 69, 70) reddish-brown or dark-brown dorsally and/or ventrally; usually legs and antennae yellowish or clearer than body. Pubescence (Figs. 69, 70) yellowish, long, dense, bristle and moderately thick, masking integument bright, shorter and clearer ventrally.

Frons wider than long, convex, weak or incompletely carinate; anterior margin at nasal level; punctuation moderately coarse and dense. Antennae (Fig. 52) slightly serrate, longer than hind angles of pronotum; third antennomere narrower and shorter than fourth.

Pronotum (Figs. 53, 69) wider than long, trapezoidal, moderately convex medioanteriorly, flattened basally; lateral margins not visible dorsally; punctuation moderately coarse and dense, coarser lateroanteriorly, sparser and finer basally between hind angles; hind angles wide, backwardly directed not carinate at middle; median basal tubercle indistinct. Prosternum (Fig. 56) convex with punctuation moderately fine and sparse, more concentrate laterally, almost smooth at middle. Pronotosternal sutures almost straight, wide, grooved frontally (in almost half of length), making a long and very developed channel. Prosternal spine (Figs. 55, 56), ventrally with narrowed apex, declivous laterally at basal half; strongly compressed laterally with bilobed apex; dorsal lobe with sharpened apex and ventral rounded. Mesosternal cavity narrow, V-shaped with borders wider and horizontal on basal half; mesepimeron and mesepisternum making mesosternal cavity. Metacoxal plate (Fig. 54) with small lobe at free margin. Tibial spurs well developed. Tarsomeres 1–3 lamellate beneath.

Elytra wider than hind angles of pronotum, convex, declivous at base; narrowed on apical third; punctuate-striate; striae weakly marked by row of coarse punctures; interstices flat and punctuate; striae grooved at base.

Male. Tergite VIII (Fig. 57) wider than long, slightly narrowed apicad; translucent mediobasally; apex widely rounded; setae moderately long, more concentrate on distal third. Sternite VIII (Fig. 59) transverse with anterior margin rounded and slightly prominent at middle; translucent with one irregular yellowish band on each side and one small transversal basal; irregular band of setae moderately long on anterior and lateroanterior margins. Sternite IX (Fig. 58) elongate, widened near middle, rounded at extremities; setae moderately long on distal half. Tergite IX (Fig. 60) transverse; anterior margin widely notched at middle, forming two wide rounded lobes; 1.3 time wider than tergite X (at point of union with fore angles); many short setae laterally on each lobe. Tergite X as long as wide, slightly narrowed apicad; apex widely rounded; moderately long setae more concentrate on distal third. Aedeagus (Figs. 61, 62) 2.2 times longer than wide; parameres dorsally 1.2 time longer than basal piece; apex of parameres cuneiform; subapical region of parameres strongly notched and sinuously declivous apicad; some dorsal and ventral setae (dorsal longer); median lobe slightly shorter than parameres dorsally (excluding basal struts), wider on basal fourth and gradually narrowed apicad; constricted near apex.

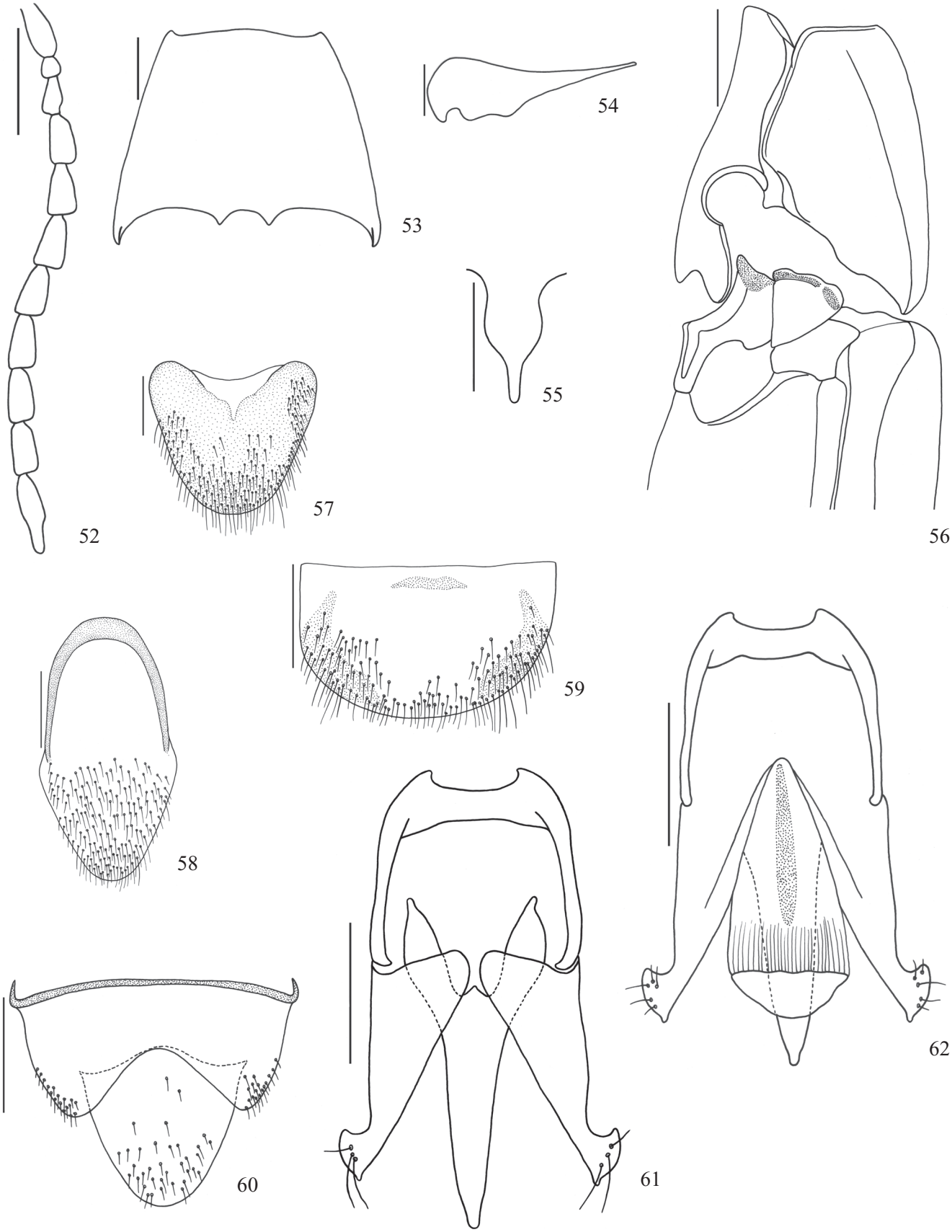
Material examined. Brazil. *Minas Gerais*: Serra do Caraça, 1380m, 1 ex. (MZSP); Vila Monte Verde, 1 ex. (MZSP). *Espírito Santo*: Santa Teresa, 4 exs. (MZSP). *Rio de Janeiro*: Corcovado, 1 ex. (MZSP); Parque Nacional do Itatiaia, 3 exs. (MZSP). *São Paulo*: Cajuru, 1 ex. (MZSP); Itu (Fazenda Pau d'Alho), 1 ex. (MZSP); Salesópolis (Estação Biológica de Boracéia), 3 exs. (MZSP); São Paulo (Cantareira), 3 exs. (MZSP); (Morumbi), 1 ex. (MZSP). *Paraná*: Marumby [Marumbi], 1 ex. (MZSP). *Santa Catarina*: Rio Vermelho, 1 ex. (MZSP).

Remarks. *A. conicicollis* is similar to *A. flavescens*, differing especially by brown coloration and presence of a very long prosternal channel in the former. Besides, it presents small differences on the aedeagus and genital segments. Up to now, it was recorded only from "Brazil". Here it is recorded from the states of Rio de Janeiro, Espírito Santo, São Paulo, Minas Gerais, Paraná e Santa Catarina.

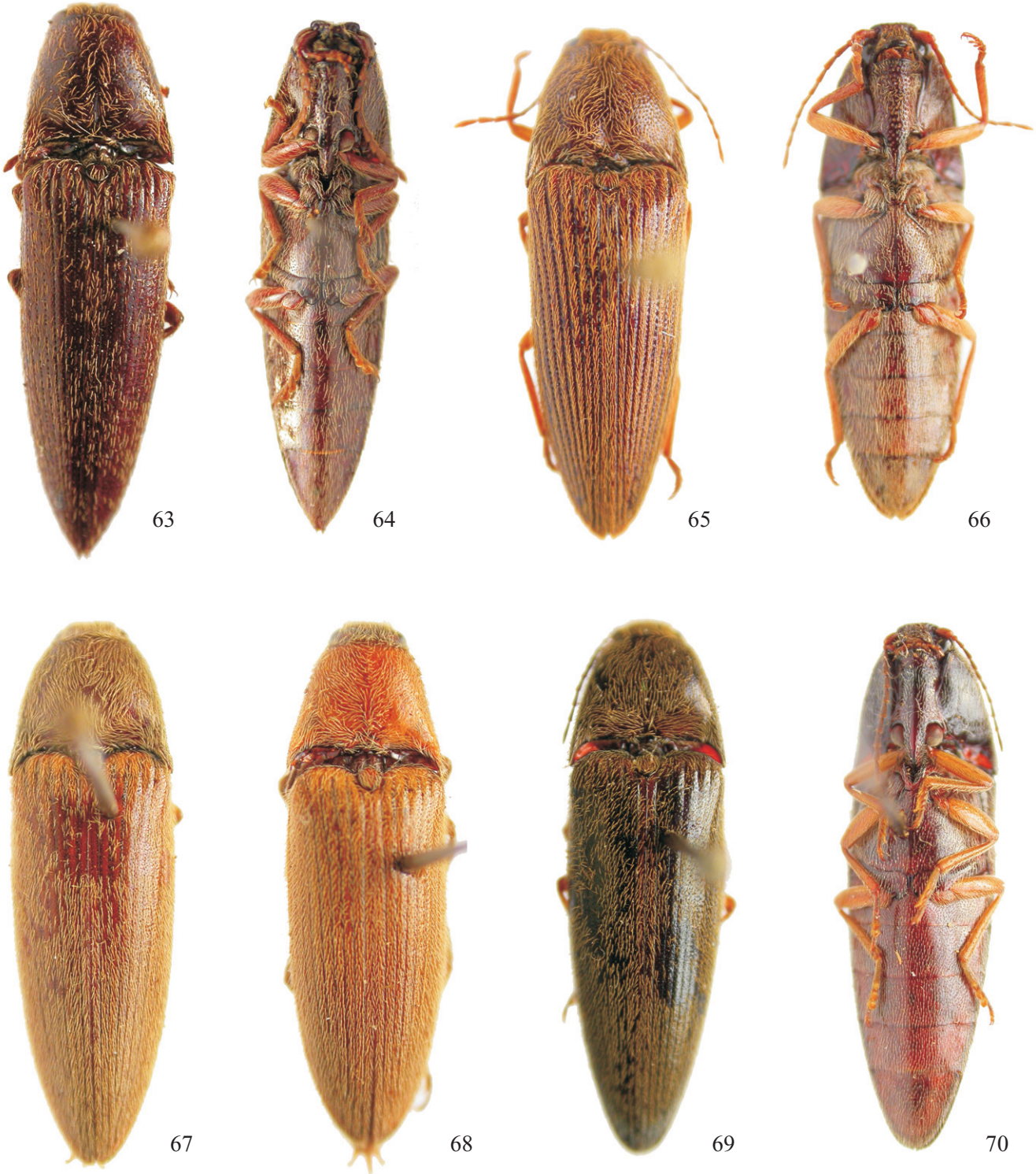
CONCLUSIONS

Based on studied material it was possible to verify that in species with 3rd antennomere smaller than 4th, the frons is convex with anterior margin at nasal level. On those with 3rd antennomere equal to 4th, the frons is concave with anterior margin prominent, surpassing nasal. In species with 3rd antennomere smaller than 4th, the prosternal spine is strongly compressed laterally behind procoxae, with two well developed lobes at apex. These lobes are few developed in species with 3rd antennomere equal to 4th.

A. amazonicus **sp. nov.** and *A. robustus* are related to Brazilian Amazon region, the former recorded from the states of Pará and Amapá and the latter from Amazonas, Pará, Rondônia and Mato Grosso. The remainder studied species



Figs. 52–61. *Atractosomus conicicollis* Candèze, 1859. Male: 52, antenna; 53, pronotum; 54, metacoxal plate; 55, prosternal spine (ventral); 56, pro- and mesothorax (lateral); 57, tergite VIII; 58, sternite IX; 59, sternite VIII; 60, tergites IX-X; 61, 62, aedeagus (dorsal, ventral). Bars = 1 mm, except Fig. 54 = 0.5 mm; Figs. 57-62 = 5 mm.



Figs. 63–70. Habitus. 63, 64, *Atractosomus amazonicus* **sp. nov.** (holotype: dorsal, ventral); 65, 66, *Atractosomus robustus* Candèze, 1859 (dorsal, ventral); 67, *Atractosomus carinatus* Candèze, 1859 (dorsal); 68, *Atractosomus flavescens* (Germar, 1839) (dorsal); 69, 70, *Atractosomus conicicollis* Candèze, 1859 (dorsal, ventral).

are recorded from Southeast and Southern regions, from the states of Minas Gerais, Espírito Santo (exceto *A. favescens*), Rio de Janeiro, São Paulo, Paraná and Santa Catarina; *A. flavescens* is also recorded from Rio Grande do Sul.

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