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TWO NEW SPECIES OF *BOLBAPIUM* BOUCOMONT, 1910 (COLEOPTERA, GEOTRUPIDAE, BOLBOCERATINAE)

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ABSTRACT. Two new species of South American genus *Bolbapium* Boucomont, 1910, *B. paralucidulum*, sp. n. from Brazil, Argentina, and Uruguay and *B. sulcifrons*, sp. n. from Brazil are described and illustrated.

KEYWORDS. *BOLBAPIUM*; BOLBOCERATINAE; GEOTRUPIDAE; NEW SPECIES; SCARABAEOIDEA.

INTRODUCTION

Bolbapium, now an exclusively South American genus, when erected by BOUCOMONT (1910) as a subgenus of *Bolboceras* Kirby, 1818, included 5 species from South America and 2 species from Australia. HOWDEN (1954) according to CARTWRIGHT (1953) changed the status of *Bolbapium* to genus. MARTÍNEZ (1976) enrolled 12 South American species to the genus. HOWDEN & COOPER (1977) transferred the 2 Australian species to genus *Bolbobaineus* Howden & Cooper, 1977.

In this paper we describe and illustrate 2 new species of *Bolbapium*: *B. paralucidulum*, sp. n. and *B. sulcifrons*, sp. n.. These two new species are included in the genus *Bolbapium* by the following: trapezoidal clypeus; frontoclypeal suture trituberculate; elytra with 5 striae between suture and humerus and base not marginated; sternite 8 with less than 20 long setae on posterior margin; sternite 9 without median broad process on anterior margin.

MATERIAL AND METHODS

For the morphological studies the specimens were treated in the traditional way and the illustrations were made using microscope and stereomicroscope both equipped with camera lucida.

The material belongs to the following collections (codens according to ARNETT & SAMUELSON (1986)): AMIC, Antonio Martínez private collection, Rosario de Lerma; DZUP, Departamento de Zoologia, Universidade Federal do Paraná, Curitiba (Dr. R.C. Marinoni, M. Sc. L. Iannuzzi); IBSP, Instituto Biológico, São Paulo (Dr. E.C. Bergmann); MCNZ, Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre (Dr. M.H.M. Galileo); MNRJ, Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro (Dr. M.A. Monné); MZSP, Museu de Zoologia, Universidade de São Paulo, São Paulo (Dr. C. Costa).

The map was prepared based on data taken from labels. Localities not found are preceded by a question mark. Wrong or incomplete names are, preceded by equals sign and cited in parentheses.

1. Museu de Zoologia, Universidade de São Paulo, Caixa Postal 7172; 01064-970 São Paulo SP, Brazil.
2. Bolsista CAPES.
3. Instituto de Investigaciones Entomológicas de Salta INESALT, 9 Julio 14; 4405 Rosario de Lerma Salta, Argentina.
4. Investigador de Carrera, CONICET.

Bolbapium paralucidulum, sp. n.

(Figs. 1-40, 78, 80)

Etymology. Greek. *para* (= beside, near), in allusion to the similarity to *B. lucidulum* (Klug, 1843).

Length: 5-9 mm. Width: 3-5 mm. Integument shining; coloration uniform, variable from light yellowish brown to dark reddish brown.

Head. Dorsal region (Fig. 1) heavily punctate; punctures variably distributed on labrum, clypeus, frons and canthus. Canthus (Fig. 1) rugous, punctate. Antenna (Fig. 2, 4): club densely pilose and oval in lateral view; segment 11 (Fig. 4): distal face with 18-24 openings. Clypeus (Fig. 1) densely punctate, punctures coalescent becoming the integument rugose and multicarinate; dorsal region glabrous; posterior margin curved anteriorly or feebly bilobed. Frontoclypeal suture (Fig. 1) bilobed or curvate anteriorly; median tubercle carinate and taller than the lateral ones. Front (Fig. 1) slightly convex; anterior region strongly punctate, punctuation coalescent; lateral carinae curvate towards the middle region, bifurcate at the end; paraocular lobes absent. Labrum (Fig. 3): anterior margin almost straight; lateral margins not lobulate; carina unbroken, reaching or not the lateral margins, horizontal or slightly curved posteriorly; basal region narrowed. Epipharynx (Fig. 7): anterior margin bilobed; pedium with a longitudinal and a transversal bands of sensorial pits; sclerite of posterior region rounded and with few sensorial pits. Mandibles (Figs. 5, 6, 8, 9): external margin curved; unidentate, tooth carinate ventrally; prosthema bilobed, lobes sometimes indistinct, setae of basal lobe thicker; lateral side densely and uniformly setose; dorsal face (Figs. 5, 6) with group of short setae next to internal margin. Maxillae (Figs. 10, 13): cardo with moderately long; stipes with long and short setae, long setae longer than palpal segments 1 and 2 together; palpifer dorsally with rounded borders, setae concentrated on external margin; palpus: segment 4 as long as segments 2 and 3 together and with many setae. Labium (Fig. 12): mentum with 15 pairs of long and thick setae, anterior margin strongly project forwardly, lateral margins weakly curved, posterior region slightly larger than anterior. Hypopharynx (Fig. 11): paraglossa membranous, translucent, longitudinal, reaching the segment 2 of palpus.

Thorax. Prothorax (Fig. 14, 16). Pronotum (Fig. 14): median sulcus absent; inermis; large punctuation on median transverse area; margins sulcate and punctate; anterior and posterior borders completely marginated. Prosternum (Fig. 16): anterior margin sinuous and pilous; median region semilunar; posterior margin with a median longitudinal and narrow process. Basisternum (Fig. 16) partially divided by prosternum; anterior region transverse; median region elongate, apex tuberculiform and setose. Coxal cavity (Fig. 16) delimited by basisternum, prosternellum, proepimeron and proepisternum.

Mesothorax (Figs. 17, 21, 25). Scutum: median carina not reaching the scutellum. Scutellum (Figs. 21, 25) pentagonal; anterior and lateral margins straight; apex rounded; dorsal side (Fig. 25) micropunctate; ventral side (Fig. 21) with setae distributed in a large band. Mesosternum (Fig. 17): glabrous areas intercalate with pilous areas.

Elytra (Fig. 24). Anteroexternal angle with a small spiniform process; sutural line of punctures short (1-3 punctures), sometimes present in only one elytron; striae

marked by serial row of punctures; stria 1 curving around the scutellum and terminating at the base; striae 2-5 terminating next base; stria 6 reaching the humeral base; stria 7 terminating basally or laterally to humerus; stria 8 reaching the anterior elytral third; stria 9 jointed to stria 10; stria 10 finishing laterally to humerus; stria 11 jointed apically to stria 10, not reaching the base; stria 1 and 10, 2 and 9, 3 and 8, 4 and 5 jointed apically.

Membranous wing (Fig. 19). Microtrichiae present on basal margin; proximal region with basal lobe; apex without triangular appendix; group of setae on A; line of setae and small hooks on C.

Legs. Prothoracic leg (Figs. 22, 23): anterior coxal side (Fig. 22) pilose basally and distally, a transverse carina present on median region; posterior coxal side (Fig. 23) with 2 setose cavities, the proximal one U-shaped; anterior femoral face with median setose band; posterior femoral face with setae on 2 bands; tibia with 9 basal teeth. Metathoracic leg: posterior tibial face with median region sparsely setose.

Abdomen. Dorsal side (Figs. 15, 20): tergite 1 pilose on anterior angles; tergites 2-5 with anterior narrow sclerotized band, areas or bands of pilose microscales on posterior region; tergite 2 strongly arched on median region; tergite 3 carinate; tergite 7 pilose; tergite 8 (Fig. 15) subtriangular, densely pilose. Ventral side: sternite 8 (Fig. 18) crescent-shaped, setae concentrated on median and posterior regions, posterior margin with 5 pairs of long setae.

Male genitalia. Genital capsule (Figs. 26, 30). Tergite 9 (Fig. 26) transverse; apical margin setose and almost straight. Sternite 9 (Fig. 30); apex rounded or slightly angular; anterior border curved anteriorly; posterior margin densely pilose; median longitudinal sclerotization broadened anteriorly and posteriorly, median region with angular dilatation.

Aedeagus (Figs. 27-29, 31-36). Internal sac introverted (Figs. 27, 31): basal piece with anterior median process large, measuring about half of basal piece length; parameres rounded apically, separated dorsally, approximate ventrally, with many sensorial structures (Fig. 32); median lobe with spiny integument. Internal sac extroverted (Figs. 28, 29, 33-36): internal sac with well developed spines (Fig. 35) on base, latero- and mesobasal regions bearing scales as in figs. 33 and 34, scales (Fig. 36) on lateral and posterior region, apex (Fig. 36) without setae.

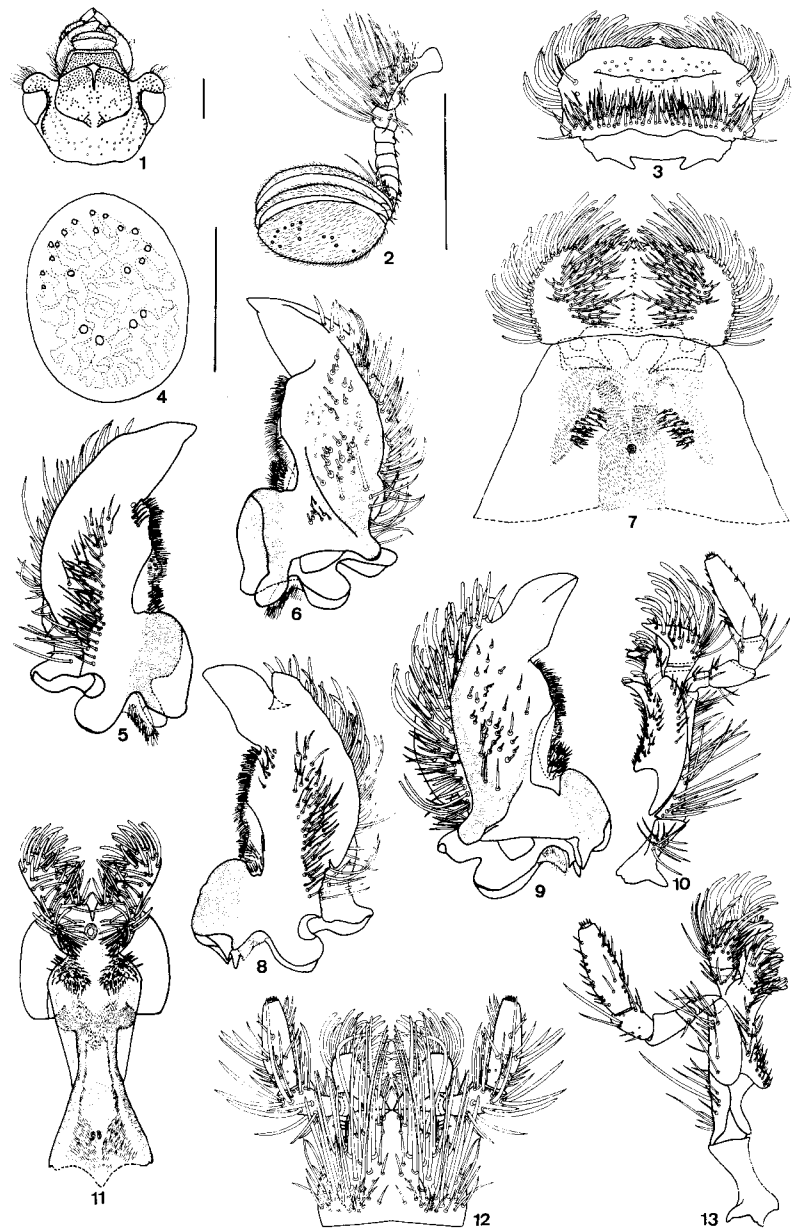
Female genitalia. Tergite 9 (Fig. 37) transverse; posterior margin with 6-8 setae; a pair of elongate, sinuous and sclerotized areas on lateral regions. Pleurite 9 (Figs. 37, 39): tegument slightly sclerotized; ornamented with microspines; apex pilose.

Bursa copulatrix (Fig. 40) subrectangular; bearing rounded sclerites. Spermatheca (Figs. 38, 40) globose; duct opening enlarged; spermathecal gland rounded, opening in the spermatheca. Coxites (Fig. 40) transverse; ventral and basal sides setose and sclerotized.

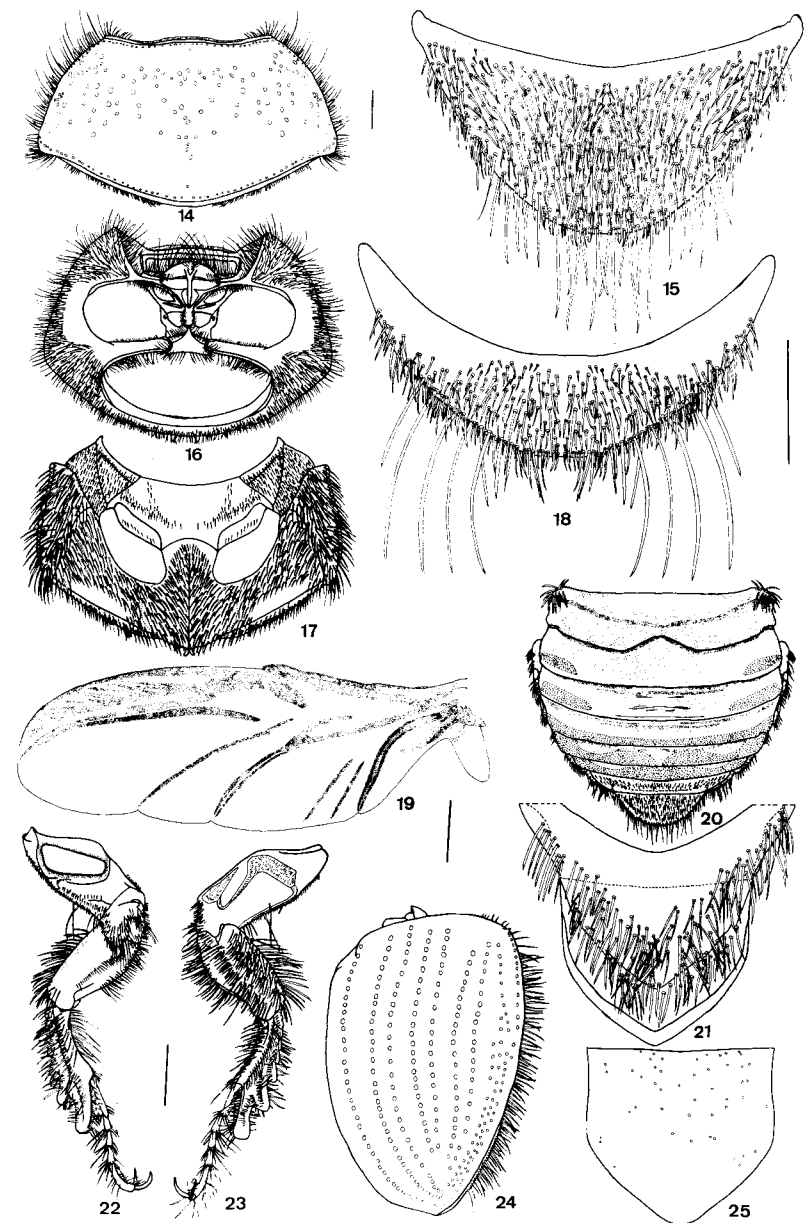
Remarks. *Bolbapium paralucidulum*, sp. n. may be separated from other species of the genus by a lateral frontal carinae bifurcate at the end and curvate towards the middle region.

Type locality: Brazil, São Paulo, Ribeirão Preto (*Faculdade de Medicina*).

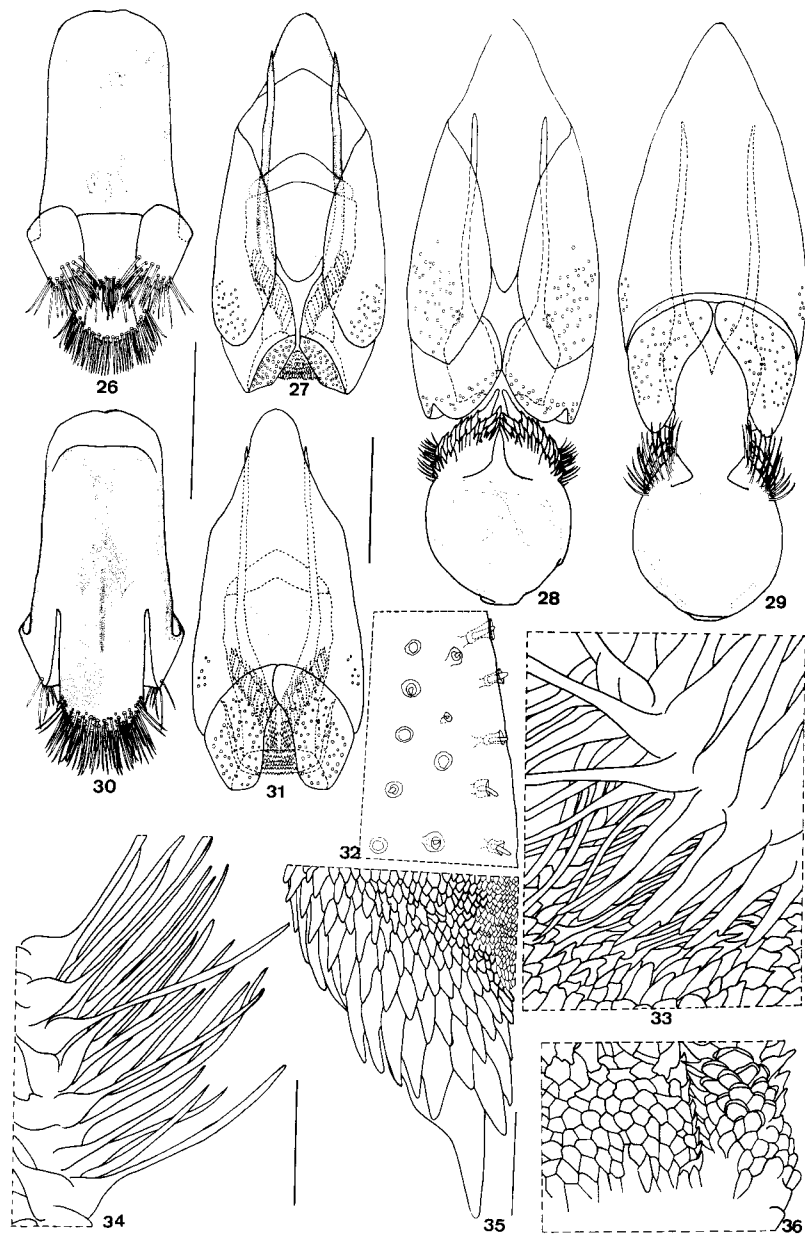
Distribution (Fig. 80). Brazil (Mato Grosso do Sul, Goiás, São Paulo, Rio Grande do Sul); Argentina (Misiones, Corrientes, Santa Fé); Uruguay (Artigas, Rivera).



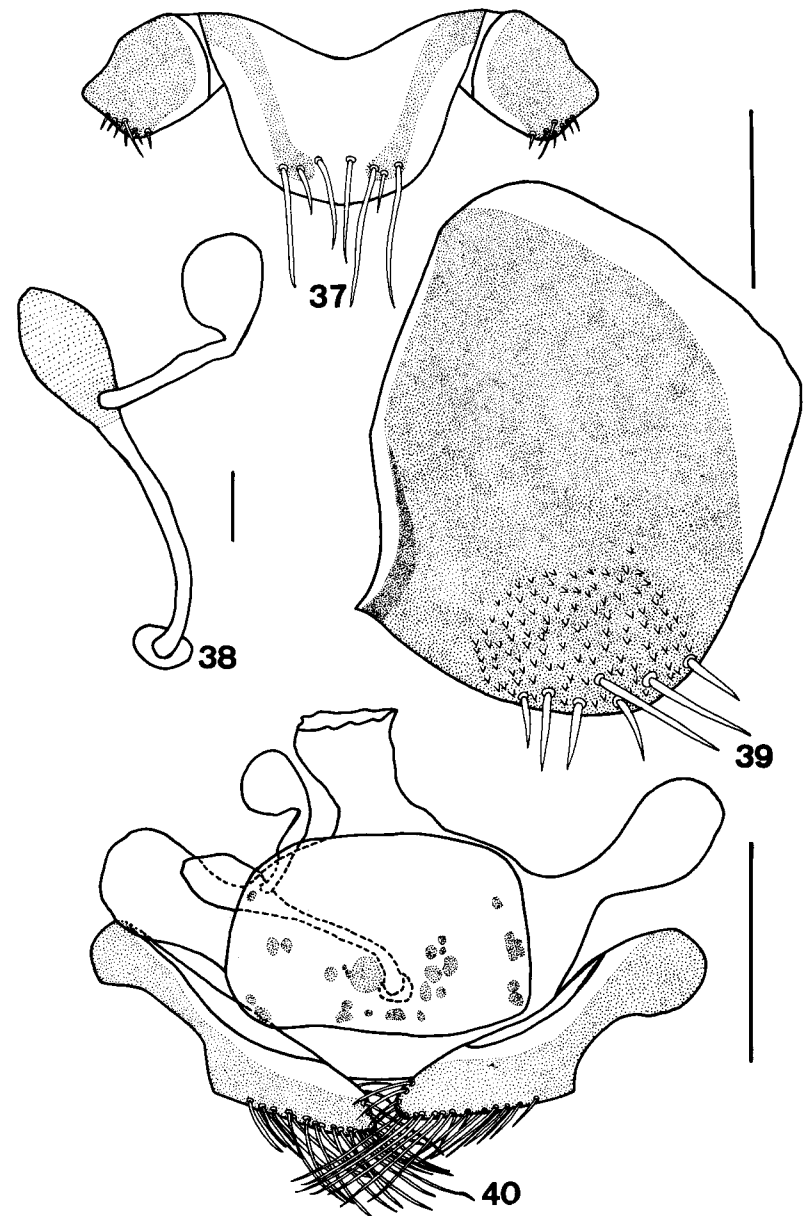
Figs. 1-13. *Bolbapium paralucidulum*, sp. n. Holotype, ♂. Head: 1, dorsal. Paratype, ♂. Left antenna: 2, general view; 4, segment 11 (distal). Mouthparts: 3, labrum; 7, epipharynx; 5, 6, left mandible (dorsal, ventral); 8, 9, right mandible (dorsal, ventral); 10, 13, left maxilla (ventral, dorsal); 12, labium (anterior region); 11, hypopharynx. Scales (mm): Figs. 1, 2 = 1; 3-13 = 0.5.



Figs. 14-25. *Bolbapium paralucidulum*, sp. n. Holotype, ♂. Pronotum: 14. Paratype, ♂. Prothorax: 16, ventral. Meso- and metathorax: 17, ventral. Scutellum: 21, ventral; 25, dorsal. Right elytron: 24, dorsal. Left membranous wing: 19. Prothoracic leg: 22, anterior; 23, posterior. Abdomen: 20, general view (dorsal); 15, tergite 8; 18, sternite 8. Scales (mm): Figs. 14, 16, 17, 20, 24; 19; 22, 23 = 1; Figs. 15, 18, 21, 25 = 0.5.



Figs. 26-36. *Bolbapium paralucidulum*, sp. n. Holotype. ♂. Aedeagus (internal sac extroverted): 28, 29, general view (dorsal, ventral); 32, parameral sensilla; 33-36, internal sac ornamentation. Paratype. ♂. Genital capsule: 26, dorsal; 30, ventral. Aedeagus (internal sac introverted): 27, 31, general view (dorsal, ventral). Scales (mm): Figs. 26, 30 = 1; 27-29, 31 = 0.5; 32-34, 36 = 0.05; 35 = 0.1.



Figs. 37-40. *Bolbapium paralucidulum*, sp. n. Paratype. ♀. Tergite and pleurite 9: 37. Left pleurite 9: 39. Spermatheca and spermathecal gland: 38. Genitalia: 40, dorsal. Scales (mm): Figs. 37, 40 = 0.5; 38, 39 = 0.1.

Type material. Holotype. ♂. BRAZIL. *São Paulo*: Ribeirão Preto (= Riberão Prêto) (Fac. Medicina), xi.1954, Barretto col., ex-coll. M.P. Barretto 1969, (MZSP). Paratypes. 37 ♂♂, 33 ♀♀, 1 specimen without genitalia. BRAZIL. *Mato Grosso do Sul* (= Mato Grosso): Maracaju, iii.1937, Shannon Lane leg., 2 ♀♀ (MZSP). *Goias*: Jataí, x.1972, F.M. Oliveira, ex-coll. M. Alvarenga, 1 ♂, 1 ♀ (MZSP). *São Paulo*: Itapira, E. Dente col., 1 ♂ (AMIC), 2 ♂♂, 1 ♀ (MZSP); Manduri (H. Florestal), 31.xii.1989, L.R. Fontes col., 1 ♂ (MZSP); Pirassununga (cachoeira, noite), 22.xi.1940, Schubart, 1 ♀ (MZSP); *ibidem* (EECP, luz), 05.ii.1945, Schubart, 1 ♀ (MZSP); *ibidem*, 01.iii.1945, Schubart, 1 ♂ (AMIC); *ibidem*, 28.x.1945, Schubart, 1 ♂ (MZSP); *ibidem* (EE, noite), 02.v.1946, Schubart, 1 ♂ (MZSP); Ribeirão Preto (= Ribeirão Prêto) (Fac. Medicina), x.1954, Barretto col., ex-coll. M.P. Barretto 1969, 1 ♀ (MZSP); *ibidem*, xi.1954, Barretto col., ex-coll. M.P. Barretto 1969, 1 ♂, 1 ♀ (AMIC), 5 ♂♂, 8 ♀♀ (MZSP); *ibidem*, xii.1954, Barretto col., ex-coll. M.P. Barretto 1969, 5 ♂♂, 1 ♀ (MZSP); *ibidem*, i.1955, Barretto col., ex-coll. M.P. Barretto 1969, 3 ♂♂, 1 ♀ (MZSP). *Rio Grande do Sul*: Esteio, xi.1942, Negrini leg., 1 ♂, 1 ♀ (MZSP); Porto Alegre (= Pto. Alegre), 1945, 1 ♂, 1 specimen without genitalia (MZSP); Rio Grande (Est. Ecol. Taim), 04.xi.1986, H.A. Gastal leg., col. MCN 64726, 1 ♂ (MCNZ); São Jerônimo (= S. Jerônimo), 10-15.ix.1982, C.J. Becker leg., col. MCN 60087, 1 ♀ (MCNZ); *ibidem*, 16-23.ix.1982, C.J. Becker leg., col. MCN 59925, 1 ♂ (MCNZ); *ibidem*, 24.ix.1982, H.A. Gastal leg., col. MCN 60045, 1 ♀ (MCNZ); *ibidem*, 03.xi.1982, T. Arigony leg., col. MCN 60666, 1 ♀ (MCNZ). ARGENTINA. *Misiones*: Concepción de la Sierra (= Concep.) (Sta. Maria), M.J. Viana, 1 ♂, 1 ♀ (AMIC); 1 ♀ (MZSP); ? Frontera (San Antonio), x.1951, A. Martínez, 1 ♂ (AMIC); ? Loreto (Exp. St.), 22.vii.1929, Dr. A. Ogloblin, 1 ♂ (AMIC); *ibidem*, i.1955, F.H. Walz-leg., 1 ♀ (AMIC); Posadas (Itambé Mini), ii.1986, A. Martínez, 1 ♂, 1 ♀ (AMIC), 1 ♂ (MZSP); *ibidem*, iii.1986, H. Martínez (= Horacio)-leg., 2 ♀♀ (AMIC). *Corrientes*: Ituzaingó (Isla Apípe Grande), xi.1945, A. Martínez, 1 ♂ (AMIC). *Santa Fé* (= S. Fe): Romang, xii.1931, C. y A. Rodrigues C.I., 1 ♂ (AMIC). URUGUAY. *Artigas*: ? El Fortín, ii.1973, Rufinelli-leg., 3 ♂♂, 3 ♀♀ (AMIC), 1 ♂, 1 ♀ (MZSP). *Rivera*: ? Sierra de la Aurora, 15.i.1961, C.S. Carbonell y L.C. Zolessi, 1 ♀ (IBSP).

Bolbapium sulcifrons, sp. n.

(Figs. 41-77, 79, 80)

Etymology. Latin. *sulci* (= furrow, groove); *frons* (= front), in allusion to the groove on the front.

Length: 9 mm. Width: 5 mm. Integument lustrous; unicolorate, coloration reddish brown or dark reddish brown.

Head. Canthus (Fig. 41) almost whole smooth; punctuation sparse; posterior margin punctate and slightly sulcate. Antenna (Figs. 44-46): club flattened in lateral view; pore plate of segment 10 (Fig. 46) pilose, pore numerous, opening irregular; segment 11 (Fig. 45) with 85-87 circular openings on central region. Clypeus (Fig. 41) rugous and multicarinate due the coalescent punctuation; posterior margin slightly angulate or bilobate. Front (Fig. 41) weakly concave anteriorly; anterior region finely punctate; median region bearing some large punctures and a pair of feeble carinae; posterior region with a transverse sulcus, sulcus bent forwardly and with large punctuation, area after sulcus punctate; lateral carinae reaching the basal margin of the eyes; margin adjacent to eyes sulcate and punctate, sulcus contiguous to the transversal one; paraocular lobes absent. Labrum (Fig. 42): anterior margin slightly curvate, bilobate on median region; anterior angles broad and rounded; lateral margins straight; carina straight at the middle, curvate backwardly in the lateral regions, almost attaining the lateral margin. Epipharynx (Fig. 43): anterior margin not bilobed; chaetoparie densely setose. Mandibles (Figs. 49, 50, 52, 53): external margin slightly sinuous; dorsal face carinate and pilose near the internal margin; right mandible (Figs. 49, 50) bidentate; left mandible (Figs. 52, 53) bilobed. Maxillae (Figs. 47, 48): stipes with a very long seta, almost as long as palpal segments 1-3 together; lacinia ventrally with sensorial pits next median and external regions; palpifer with few setae; palpus with long setae on

segments 3 and 4. Labium (Fig. 54): mentum with reduced number of setae, 3 pairs long and thick. Hypopharynx (Fig. 51): central area of basal region elongate and slightly V-shaped.

Thorax. Prothorax (Figs. 55, 57). Pronotum (Fig. 55) completely inermis; median furrow absent; large punctures on lateral regions and on median longitudinal line. Prosternum (Fig. 57): posterior margin with a pair of longitudinal processes. Basisternum (Fig. 57) divided in 3 parts; median region high and pilous at the base; lateral regions with median transversal fringe; internal margins setose. Coxal cavity (Fig. 57) delimited by basisternum, prosternum, prosternellum, proepimeron and proepisternum.

Mesothorax (Figs. 56, 58, 59). Scutum: median carina not attaining the scutellar base. Scutellum (Figs. 56, 58) elongate, rectangular; dorsal side (Fig. 56): base with many setose carinae, punctuation on median region; setae on ventral side (Fig. 58) distributed on a lateromedian band. Mesosternum (Fig. 59): setae delimitating an oval area; setae next to anterior margin shorter. Mesepimeron (Fig. 59) with 2 groups of short setae on anterior region.

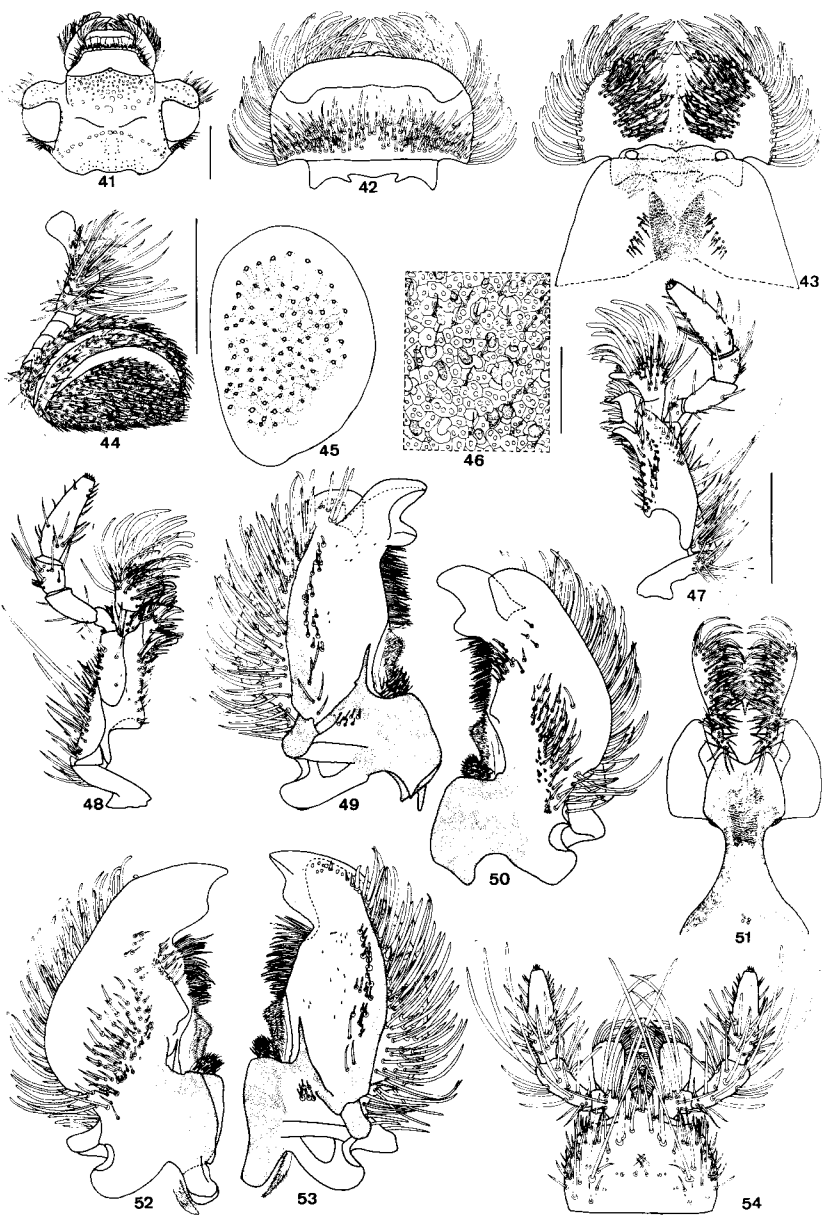
Elytra (Fig. 61). Small spine on anteroexternal angles present; line of punctures adjacent to suture short (2 or 3 punctures); striae impressed unconnected punctures in longitudinal rows, stria 1 ending at the base; striae 2-5 almost reaching the base; stria 6 attaining the humeral base; stria 7 terminating laterally to humerus; striae 8 and 9 finishing next to anterior third (stria 8 slightly longer than 9); stria 10 abruptly sinuous next anterior third, reaching the lateral region of humerus; stria 11 short and jointed to 10.

Legs. (Figs. 60, 62, 63-67). Prothoracic leg (Figs. 60, 62, 65): coxa not dilated; anterior coxal side with a transverse and interrupted carina near dorsal region; posterior coxal side with proximal depression L-shaped; anterior femoral side with setose bands on median and dorsal regions; posterior femoral face with a setose band next to dorsal region; tibia with 8-9 basal teeth; tarsus (Fig. 65): claws excavate at the apex. Mesothoracic leg: anterior tibial face (Fig. 64) with setose carina next to basal margin. Metathoracic leg (Figs. 63, 66, 67): posterior coxal side (Fig. 63) with a pilose carina adjacent to articulation with coxal cavity; anterior tibial face (Fig. 66) with setose carina adjacent to basal margin; posterior tibial face (Fig. 67) with setose line near dorsal margin.

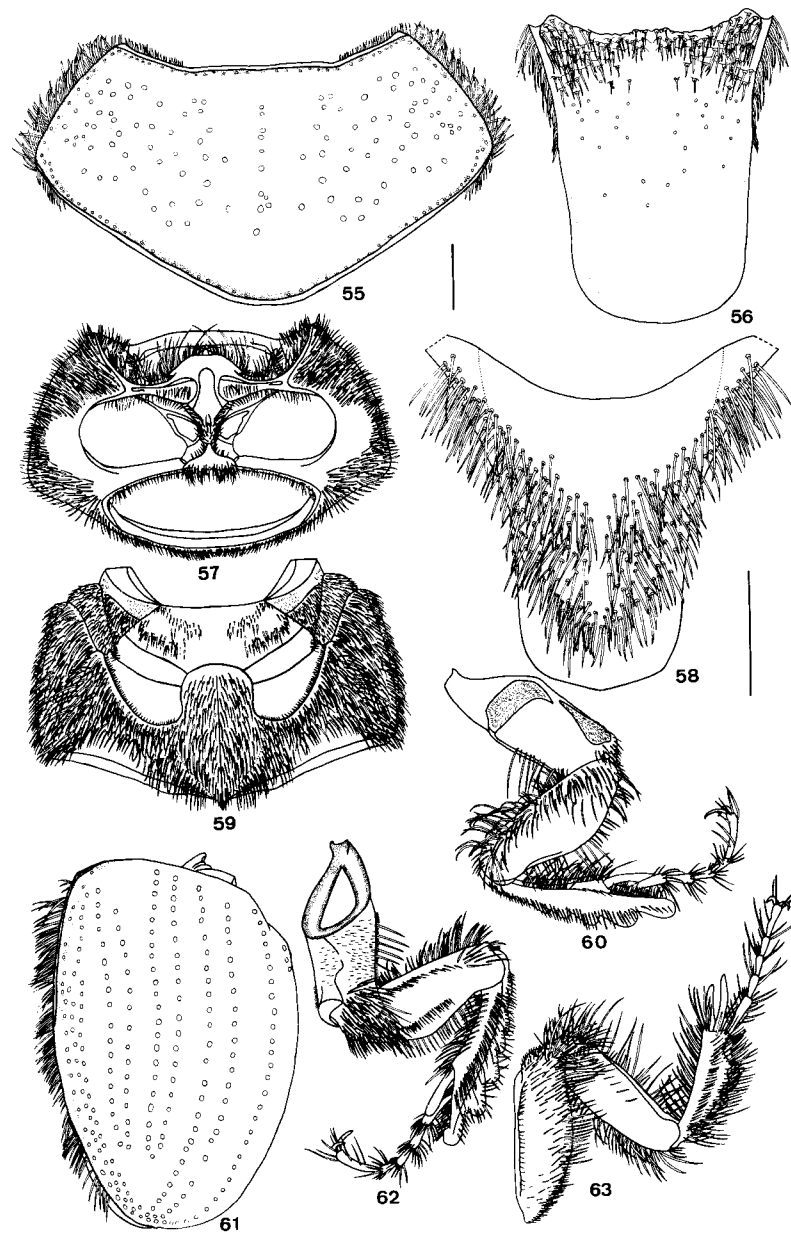
Abdomen. Dorsal side (Figs. 73, 75): tergite 1 with setae on anterior angles and on median line; tergite 2 with median band of setae, anterior margin slightly bilobed and curvate forwardly on median region; tergite 3 setose medially and striped on anterior region; tergites 4-6 transversely sclerotized anteriorly; tergite 8 (fig. 73) transversal and subtrapezoidal. Ventral side: sternite 8 (fig. 72) with 6 pairs of long setae on posterior margin; weakly curvate posteriorly.

Male genitalia. Genital capsule (Figs. 68, 70). Elliptical; lateral strut curvate inwardly. Tergite 9 (Fig. 68) subpentagonal; 8 setae on apex. Pleurite 9 (Figs. 68, 70) subtriangular; apex setose. Sternite 9 (Figs. 68, 70) narrow and pilose on apex; basal and median regions broad; median sclerotization rounded on base, narrow on median and apical regions.

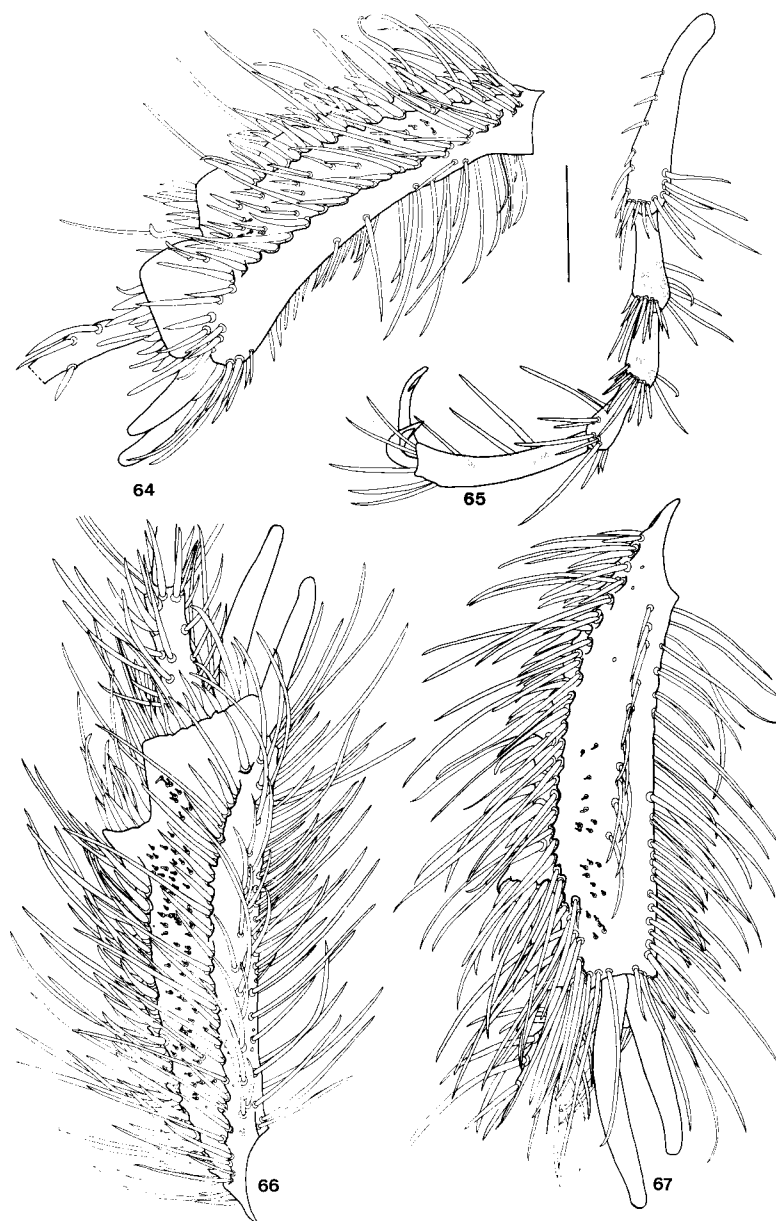
Aedeagus. Internal sac introverted (Figs. 69, 71): basal piece without anterior median process, dorsally narrow and elongate; parameres broad basally, with long and basal curvate processes; median lobe large, with posterior margin straight.



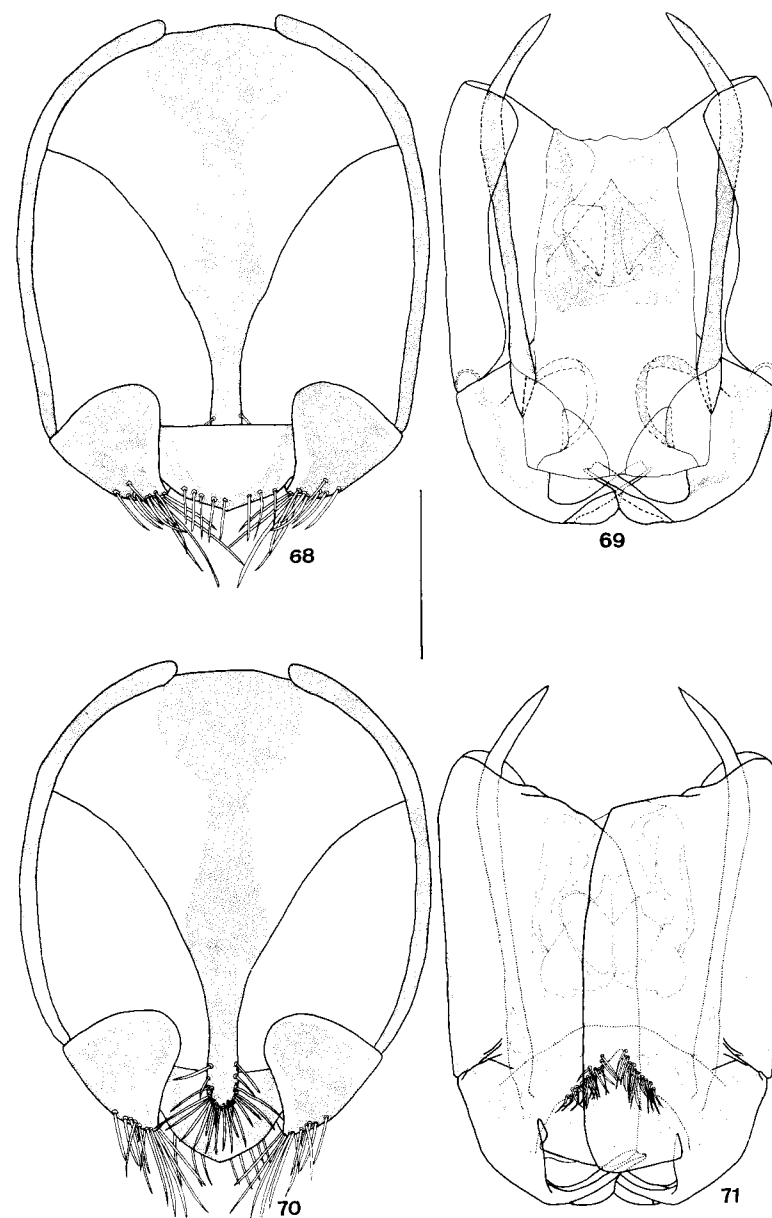
Figs. 41-54. *Bolbapium sulcifrons*, sp. n. Holotype. ♂. Head: 41, dorsal. Paratype. ♀. Mouthparts: 42, labrum; 43, epipharynx; 47, 48, left maxilla (ventral, dorsal); 49, 50, right mandible (ventral, dorsal); 52, 53, left mandible (dorsal, ventral); 54, labium (anterior region); 51, hypopharynx. Right antenna: 44, general view; 45, segment 11 (distal); 46, segment 10 (pore plate detail). Scales (mm): Figs. 41, 44 = 1; 42, 43, 45, 47-54 = 0.5; 46 = 0.1.



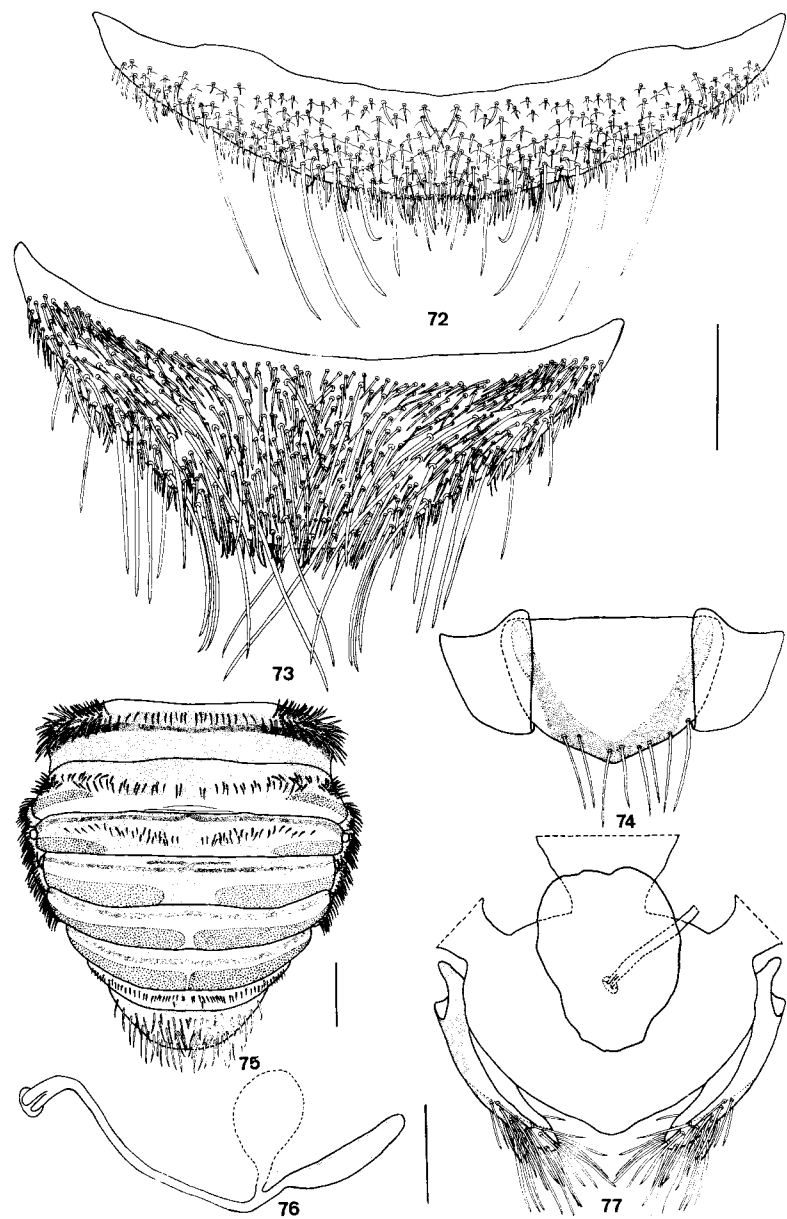
Figs. 55-63. *Bolbapium sulcifrons*, sp. n. Holotype. ♂. Pronotum: 55. Paratype. ♀. Prothorax: 57, ventral. Meso- and metathorax: 59, ventral. Scutellum: 56, dorsal; 58, ventral. Left clytron: 61, dorsal. Left legs: 60, 62, prothoracic (posterior, anterior); 63, metathoracic (posterior). Scales (mm): Figs. 55, 57, 59-63 = 1; 56, 58 = 0.5.



Figs. 64-67. *Bolbapium sulcifrons*, sp. n. Paratype. ♀. Left tibiae: 64, mesothoracic (anterior); 66, 67, metathoracic (anterior, posterior). Left tarsus: 65, prothoracic. Scale (mm) = 0.5.



Figs. 68-71. *Bolbapium sulcifrons*, sp. n. Holotype. ♂. Genital capsule: 68, dorsal; 70, ventral. Aedeagus (internal sac introverted): 69, dorsal; 71, ventral. Scale (mm) = 0.5.



Figs. 72-77. *Bolbapium sulcifrons*, sp. n. Paratype. ♀. Abdomen: 72, sternite 8; 73, tergite 8; 75, general view (dorsal). Tergite and pleurite 9: 74. Spermatheca and spermathecal gland: 76. Genitalia: 77. Scales (mm): Figs. 72-74, 77 = 0.5; 75 = 1; 76 = 0.1.



Figs. 78, 79. Habitus, dorsal. Holotype. ♂. 78, *Bolbapium paracalcidulum*, sp. n.; 79, *Bolbapium sulcifrons*, sp. n. Scale (mm) = 2.

Female genitalia. Tergite 9 (Fig. 74) almost triangular; a sclerotized band adjacent to lateral and posterior margins; apex with 8 setae. Pleurite 9 (Fig. 74) without pilosity on apex.

Bursa copulatrix (Fig. 77) rounded; large; destitute of ornamentation. Spermatheca (Fig. 76) elongate; spermathecal gland opening on spermathecal channel.

Remarks. *Bolbapium sulcifrons*, sp. n. is separated from other species of the genus by the following combination of characters: front with a pair of weak carinae adjacent to a transverse groove, pronotum inermis and without median furrow and scutellum rectangular shaped.

Type-locality: Brazil, Rio de Janeiro, Itatiaia.

Distribution (Fig. 80). Brazil (Rio de Janeiro).

Type-material. Holotype. ♂ BRAZIL, *Rio de Janeiro*: Itatiaia (= Itatiaya) (700 m), 02.vi.1934, W. Zikán (MZSP). Paratypes. 2 ♀♀. BRAZIL, *Rio de Janeiro* (= Guanabara): Rio de Janeiro (Galeão), i.1936, M. Alvarenga, ex-coll. M. Alvarenga, 1 ♀ (MZSP); *ibidem* (Represa Rio Grande), iii.1967, F.M. Oliveira, ex-coll. M. Alvarenga, 1 ♀ (DZUP).

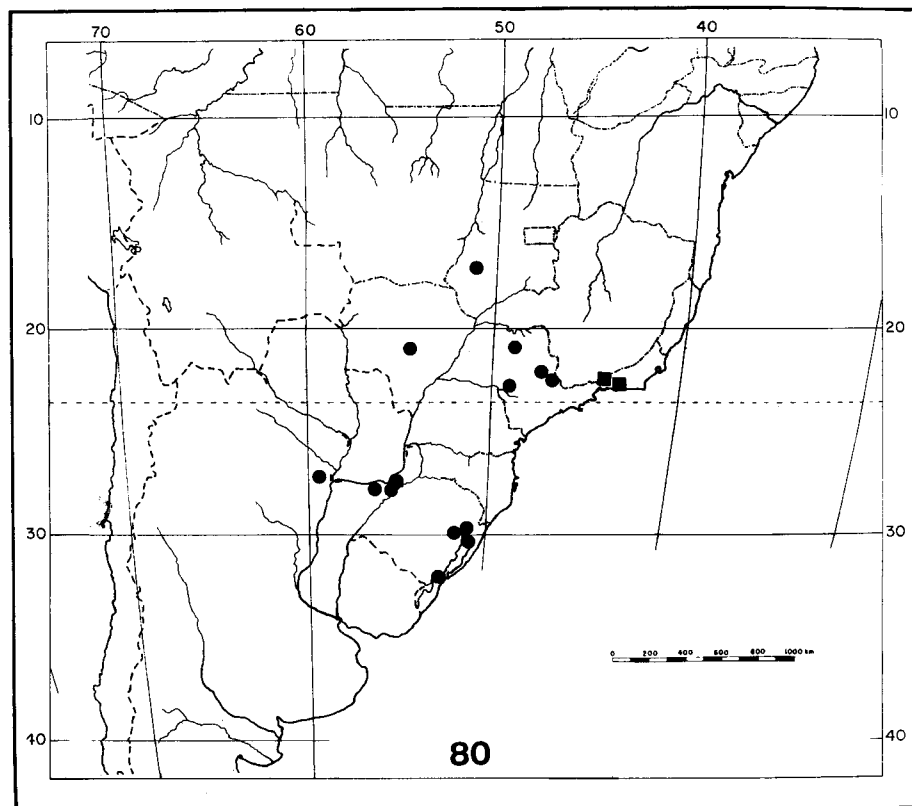


Fig. 80. Distribution records. *Bolbapium paralucidulum*, sp. n. (●); *Bolbapium sulcifrons*, sp. n. (■).

DISCUSSION

Bolbapium paralucidulum, sp. n. is quite similar to *B. lucidulum* (Klug, 1843). Both species share the following characters: pronotum completely inermis and without median sulcus, prosternum with median longitudinal process on posterior margin; posterior side of metatibia with few setae on median region. The main differences between the 2 species are (in parentheses, *B. lucidulum* characters): lateral frontal carinae bifurcate at the end and curvate towards the middle (lateral frontal carinae straight and short), labral carina continuous (interrupted), tergite of genital capsule with median sclerotization broad on median region (with 2 extension), anterior process of basal piece broad (narrow), internal sac bearing scale with long process on latero- and mesobasal regions (absent), internal sac with apex without ornamentation (setose).

Bolbapium sulcifrons, sp. n. is related to *B. quiquestriatum* (Boucomont, 1932) by presence of frontal sulcus and to *B. lucidulum* and *B. paralucidulum*, sp. n. by absence of median sulcus and ornamentation of pronotum. From *B. quiquestriatum*, it differs by the elytral striae, and from *B. lucidulum* and *B. paralucidulum*, sp. n. by frontal sulcus. Furthermore *B. sulcifrons*, sp. n. presents some highly distinctive characters such as: rectangular scutellum, genital capsule with sternite with narrow apex and elongate parameral processes.

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