

ARTÍCULO:

Two new species of *Lacronia* Strand from southern Brazil (Opiliones, Gonyleptidae, Pachylinae)

Adriano B. Kury
 Departamento de
 Invertebrados, Museu
 Nacional/UFRJ
 Quinta da Boa Vista,
 São Cristóvão,
 20.940-040, Rio de Janeiro,
 RJ, Brazil
 adrik@alternex.com.br

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Grupo de trabajo en Aracnología
 de la Sociedad Entomológica
 Aragonesa (SEA)
 Avda. Radio Juventud, 37
 50012 Zaragoza (ESPAÑA)
 Tef. 976 324415
 Fax. 976 535697
 C-elect.: amelic@telefonica.net
 Director: A. Melic

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**TWO NEW SPECIES OF *LACRONIA* STRAND
 FROM SOUTHERN BRAZIL
 (OPILIONES, GONYLEPTIDAE, PACHYLINAE)**

Adriano B. Kury

Abstract

Two new species of the hitherto monotypic genus *Lacronia* Strand are described from the southern Brazilian coast: *Lacronia camboriu* sp. n. from Santa Catarina state and *Lacronia ricardo* sp. n. from São Paulo state.

Key words: Gonyleptidae, *Lacronia*, taxonomy, Brazil, Atlantic forest, São Paulo, Santa Catarina.

Taxonomy:

Lacronia camboriu sp. n., *Lacronia ricardo* sp. n.

Dos nuevas especies de *Lacronia* Strand del sur de Brasil (Opiliones, Gonyleptidae, Pachylinae)

Resumen

Se describen dos nuevas especies de la costa meridional brasileña del hasta ahora monotípico género *Lacronia* Strand: *Lacronia camboriu* sp. n., del estado de Santa Catarina, y *Lacronia ricardo* sp. n., del estado de São Paulo.

Palabras clave: Gonyleptidae, *Lacronia*, taxonomía, Brasil, selva atlántica, São Paulo, Santa Catarina.

Taxonomía:

Lacronia camboriu sp. n., *Lacronia ricardo* sp. n.

Introduction

Mello-Leitão (1923) created the new genus *Luederwaldtia* for a new species he described from Alcatrazes Island, on mid-coast of São Paulo State, Brazil. This generic name was preoccupied, and Strand (1942) proposed the replacement name *Lacronia*. As usual, subsequent authors (e. g. Soares & Soares, 1954; Muñoz-Cuevas, 1973) overlooked the change and continued using *Luederwaldtia*. *Lacronia* has been only recently resurrected in the Catalogue of Laniatores (Kury, 2003). The genus has remained monotypic and its distinctive species not cluttered with junior synonyms.

Now, there came to my hands a few individuals from the Southern coast of São Paulo State, and from the coast of Santa Catarina State. They are here described as two new species of *Lacronia*. Abbreviations of depositories are MNRJ (Museu Nacional, Rio de Janeiro) and MZSP (Museu de Zoologia, São Paulo). All measurements are in mm.

Genus *Lacronia* Strand, 1942

Luederwaldtia Mello-Leitão, 1923: 518 [preocc. Schmidt, 1922]; 1926: 337; Roewer, 1929: 218; Mello-Leitão, 1932: 166; 1935: 99; Kästner, 1937: 389; Soares & Soares, 1954: 269; H. Soares, 1966: 286; Muñoz-Cuevas, 1973: 226 (type species *Luederwaldtia serripes* Mello-Leitão, 1923, by original designation).

Lacronia Strand, 1942: 397 [replacement name].

DIAGNOSIS. Eye mound with two spines which can be fused at base. Areas I and IV divided in two halves by longitudinal groove. Femur III of both sexes with apical spur, incrassate in males. Tibia III of male incrassate with two distal ventral rows of spines growing towards apex. Coxa IV of male with strong lanceolate dorso apical apophysis and posterior retrolateral apophysis. Trochanter IV of male with strong medial prolateral apophysis. Metatarsus IV of male with dorsal row of spiniform processes. Tarsal counts 5-6/9-12/7/7-8 (counts for each species in Table I). Ventral plate of penis subrectangular, not cleft at apical border with 3 - 4 + 1 + 3 pairs of macrosetae. Ventral process of glans narrow flabelliform with serrate margins. Stylus with distal part covered with small denticles.

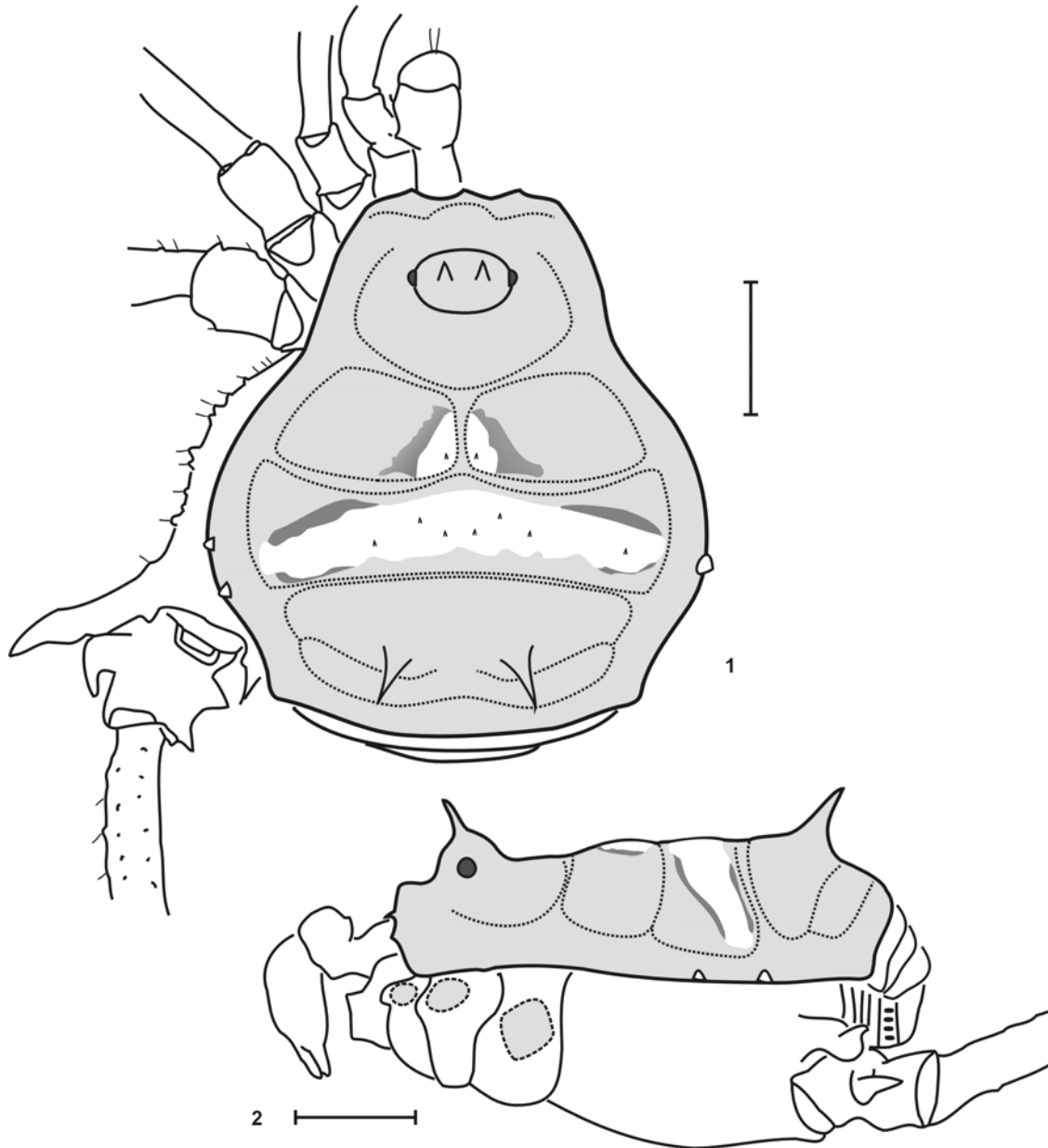


Fig. 1-2. *Lacronia ricardoii*, male holotype (MZSP 21373). **1:** Habitus, dorsal view; **2:** Habitus, lateral view. Scale bars = 1 mm.

***Lacronia serripes* (Mello-Leitão, 1923)**

Luederwaldtia serripes Mello-Leitão, 1923: 519, fig 5; Roewer, 1929: 218; Mello-Leitão, 1932: 166; B. Soares, 1946: 520; Soares & Soares, 1954: 270; H. Soares, 1966: 284, figs 7-10 (types MZSP 550, # holotype, 1 # paratype, examined)

Lacronia serripes: Strand, 1942: 397 [by implication].

TYPE LOCALITY: BRAZIL. São Paulo. Ilha dos Alcatrazes.

RECORDS: BRAZIL. São Paulo. Ilha dos Búzios; Ilha da Vitória (H. Soares, 1966e).

OTHER MATERIAL EXAMINED: BRAZIL. São Paulo. Salesópolis: Boracéia (MZSP 9973) 2% 1♂ - new record.

DIAGNOSIS: White spots of scute absent, only groups of contrasting yellow granules present in area III and IV. Spines of eye mound independent. Spines of dorsal row in metatarsus IV as long as half diameter of metatarsus. Prolateral apophysis of trochanter IV of male straight.

Table I

Tarsal counts of the three species of *Lacronia*

	l e g			
	I	II	III	IV
<i>L. serripes</i> males (n=6)	5	11-12	7	7
<i>L. serripes</i> females (n=2)	5	11	7	7
<i>L. ricardoii</i> males (n=2)	5	10-11	7	7
<i>L. ricardoii</i> females (n=4)	5	10-11	7	7
<i>L. camboriu</i> males (n=8)	5-6	10-11	7	7-8
<i>L. camboriu</i> females (n=12)	5	9-10	7	7-8

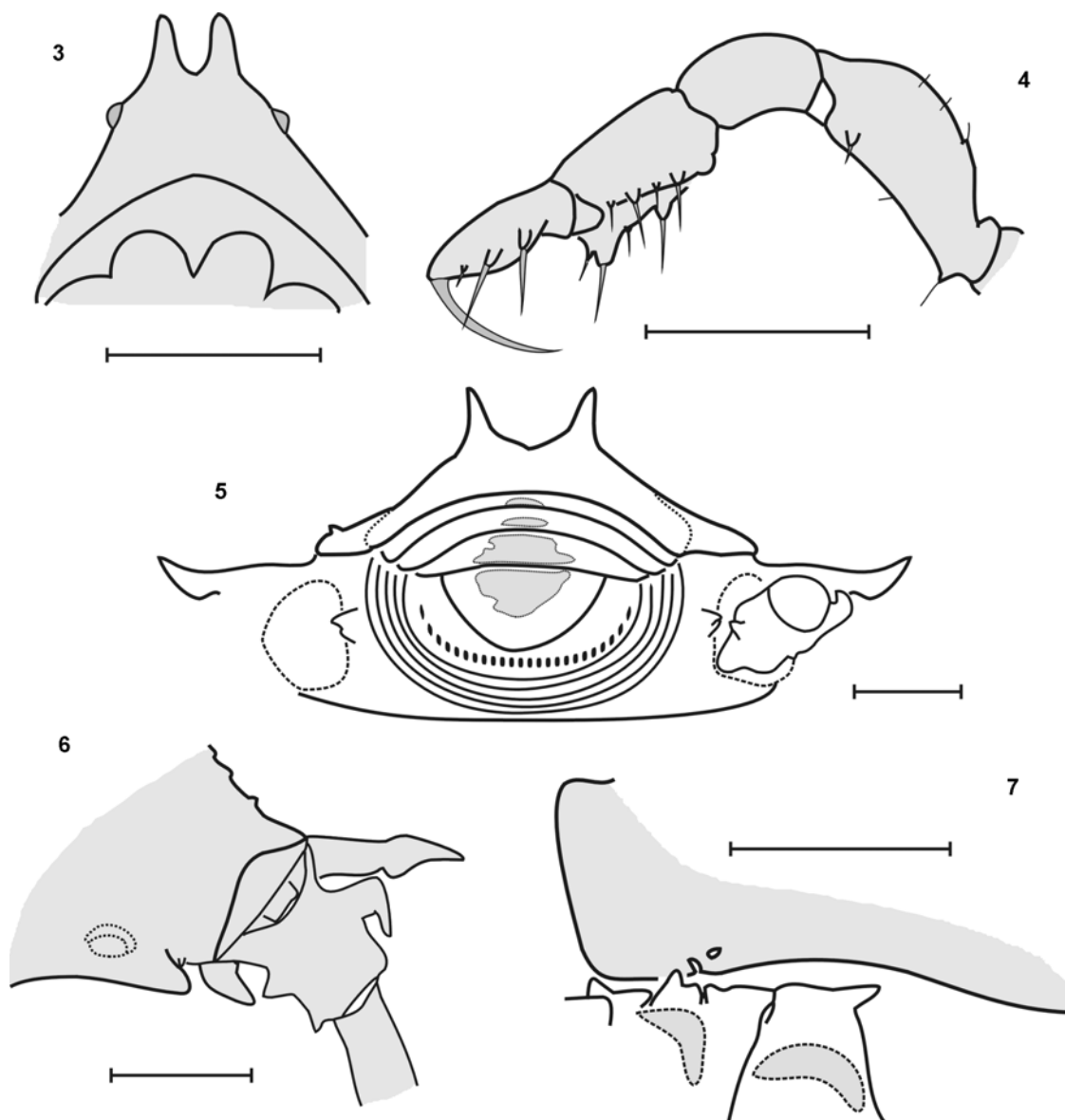


Fig. 3-7. *Lacronia ricardoi*, male holotype (MZSP 21373). **3:** Eye mound, frontal view; **4:** Right pedipalp, mesal view; **5:** Free tergites and sternites and coxa IV, posterior view; **6:** Left trochanter IV, ventral view; **7:** Dorso basal apophyses of coxae I-III, dorso lateral view. Scale bars = 1 mm.

***Lacronia ricardoi* new species**

Fig. 1-14.

TYPE MATERIAL: ♀ holotype, 1 & 1 juv paratypes (MZSP 21373), 1 & paratype (MZSP 10589) Brazil, São Paulo state, Peruíbe, in bromeliads, 28-30.vi.1982 Expedition of Museum col.

ETYMOLOGY: The species name is for my friend, the Brazilian arachnologist Dr Ricardo Pinto-da-Rocha, who has been giving steady support over the years.

DIAGNOSIS: White spots of scute present as a triangle in area I and extending across almost all area II. Spines of eye mound separate. Spines of dorsal row of metatarsus IV half the metatarsal diameter. Prolateral apophysis of trochanter IV of male elbow-like.

DESCRIPTION – male holotype

Measurements – Carapace 2.1 wide, 1.5 long, abdominal scute 3.8 wide, 2.6 long. Femora I-IV 1.6/3.8/2.8/3.5. Tibiae I-IV 1.1/2.8/1.9/2.4.

Outline of dorsal scute pyriform (Fig 1), with carapace much smaller than abdominal scute. Abdominal scute with lateral margins strongly convex, widest at area II. Eye mound (Figs 2,3) well defined, high oval, removed from anterior border of carapace, with a pair of independent parallel spines; frontal hump low, unarmed. Anterior margin of carapace smooth and unarmed. Mesotergum divided in four areas, area I divided in left and right halves by longitudinal groove. Area IV very short, its boundary with area III effaced in the middle. All areas unarmed, except area III armed with a pair of

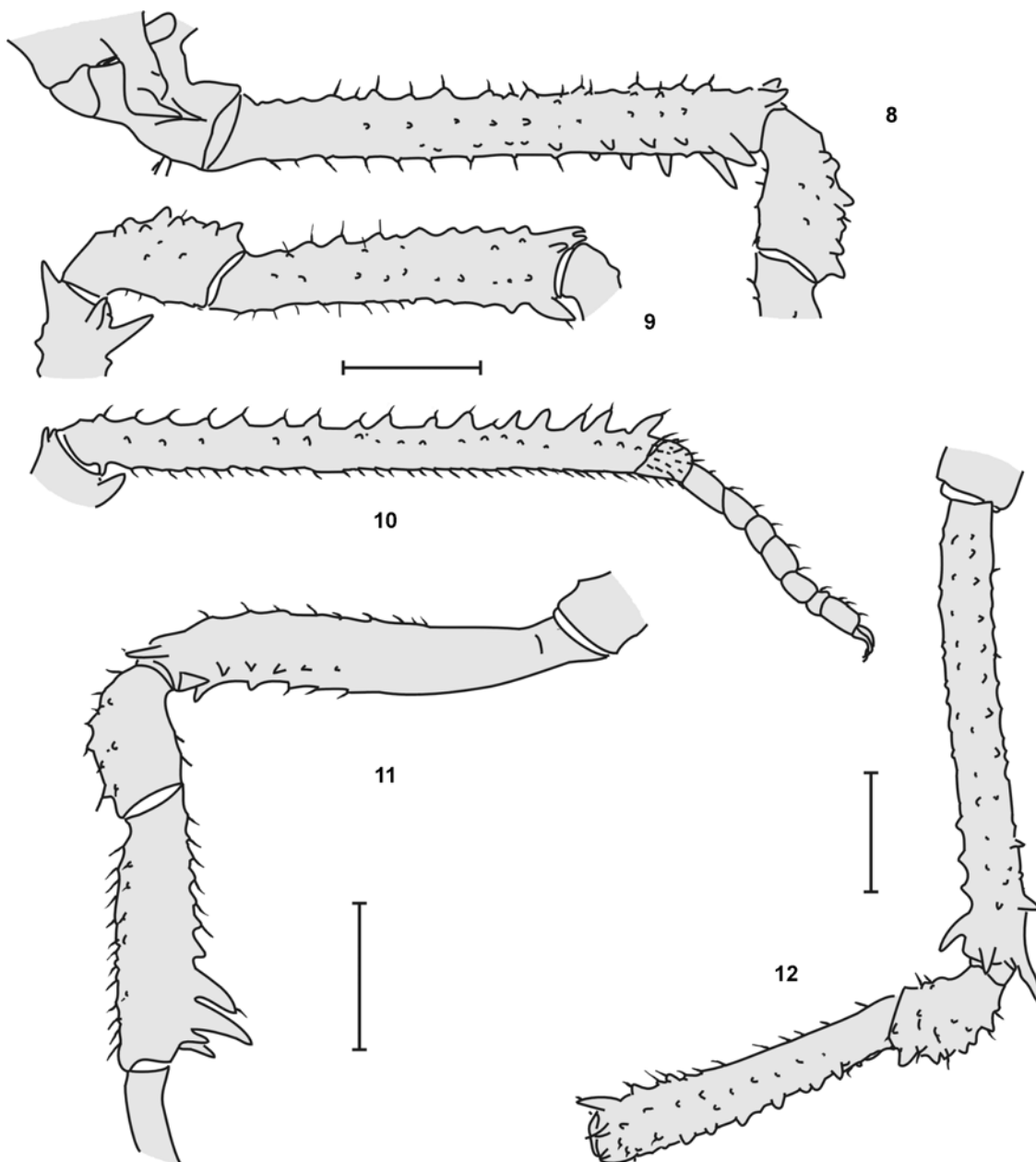


Fig. 8-12. *Lacrotonia ricardoii*, male holotype (MZSP 21373). **8-10:** Left leg IV, proteral view; **11:** Femur to tibia III, retrolateral view; **12:** Right femur to tibia IV, ventral view. Scale bars = 1 mm.

paramedian pointed spines. Free tergites and sternites and anal opercle smooth and unarmed.

Pedipalps (Fig. 4) and chelicerae (Fig. 2) weak, without remarkable features. Trochanter with two unequal ventral setiferous tubercles, femur with one ventro basal setiferous tubercle and one subdistal mesal setiferous tubercle. Pedipalpal tibia with 4 spines at each ventro-ectal (IiIi, last two joined at base) and ventro-mesal (IiIi) borders. Tarsus with 3 ventro-mesal (Iii) + 2 ventro-ectal (IiIi) spines.

Anterior and posterior dorso-basal apophyses (linked with ozopores) present in coxa I-III (Fig. 7). In coxa I both are simple, in coxa II are roughly and unequally bifurcate.

Femur II straight, with small apical retrolateral spur. Tibia II with two ventral rows of granules becoming tubercles apically. Femur III (Fig. 11) incrassate, with six rows (dorsal, lateral and ventral) of small setiferous granules and strong apical retrolateral spur. Tibia III (Fig. 11) incrassate, with two ventral rows of spines, growing longer apically. Metatarsus III robust and sinuous.

Coxa IV with stout lanceolate apical dorso-proteral apophysis (Fig. 1), bearing retrolateral crenulations and a well defined basal tooth and apical ventro-retrolateral spiniform apophysis (Fig. 5) with a secondary short branch. Trochanter IV (Fig. 6) with powerful proteral elbow-like apophysis and two retrolateral

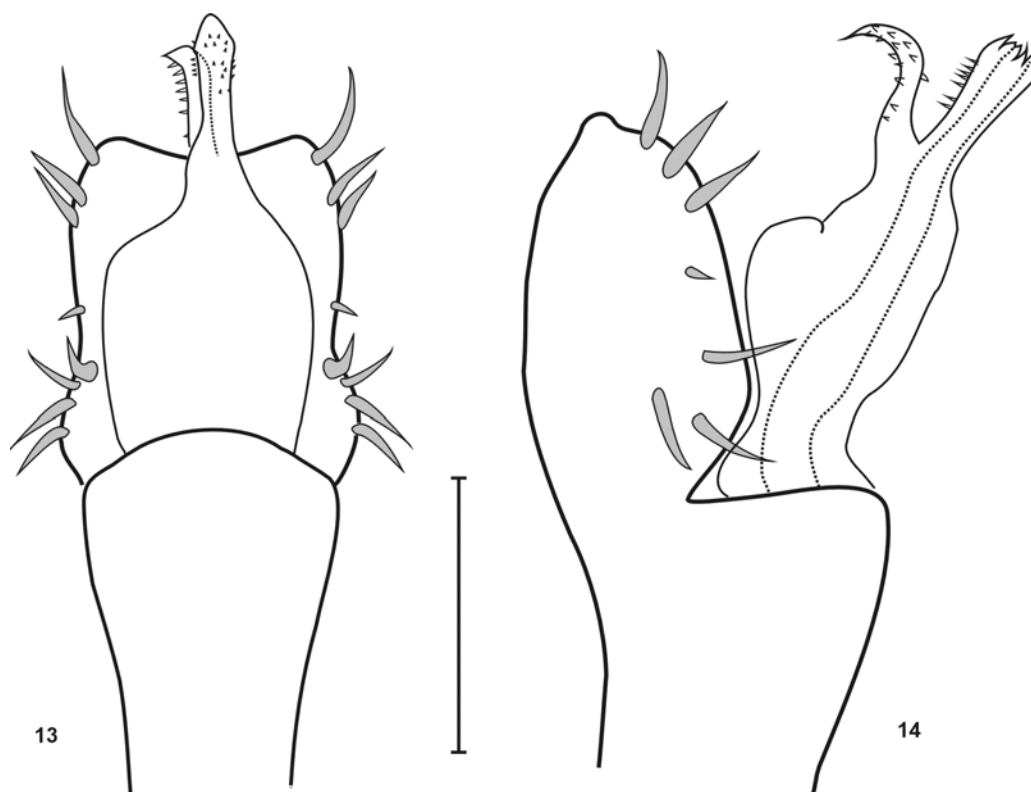


Fig. 13-14. *Lacronia ricardoii*, male holotype (MZSP 21373), distal part of penis. **13:** dorsal view, **14:** lateral view. Scale bar = 0.1 mm.

spiniform apophyses. Femur IV straight, with rows of short tubercles, and subapical prolateral (shorter) and retrolateral spurs. Patella and tibia IV with short pointed tubercles. Metatarsus IV with dorsal row of spines as long as half diameter of metatarsus.

Ventral plate of penis subrectangular, not cleft at apical border with 4 + 1 + 3 pairs of macrosetae. Ventral process of glans narrow flabelliform with serrate margins. Stylus with distal part covered with small denticles.

Color (in alcohol): background of body and appendages reddish-brown. Spots of mesotergal areas I and II greenish-white surrounded by black areas.

DIMORPHISM OF FEMALE PARATYPES: Armature of area III, eye mound, granules and spots of scutal areas I-II identical to male, but armature of legs III and IV much reduced. Coxa IV only with straight spiniform dorso-apical apophysis, femora II-III not incrassate but with apical spur, tibia III and metatarsus IV unarmed.

***Lacronia camboriui* new species**

Figs. 15-28.

TYPE MATERIAL: % holotype, 1 % paratype (MNRJ 4956) Brazil, Santa Catarina State, Balneário Camboriú, Praia da Laranjeira, 23.ii.2002, Alessandro P.L. Giupponi col., 2 %% 6 && paratypes (MNRJ 5990) Brazil, Santa Catarina State, Itajaí, slope of hill close to the sea,

in bromeliads, 09.iii.1999, Adriano B. Kury, Alessandro P.L. Giupponi & Ricardo Pinto-da-Rocha col.

ETYMOLOGY: The species name is a noun in apposition from the type locality.

DIAGNOSIS: White spots of scute restricted to central third of areas I-III. Spines of eye mound fused at base. Spines of dorsal row in metatarsus IV longer than metatarsal diameter. Prolateral apophysis of trochanter IV of male elbow-like.

DESCRIPTION OF MALE HOLOTYPE

Measurements – Carapace 3.8 wide, 2.6 long, abdominal scute 4.4 wide, 2.8 long. Femora I-IV 1.5/3.8/3.1/3.6. Tibiae I-IV 1.2/3.0/2.0/2.6.

Outline of dorsal scute (Fig 15) pyriform, with carapace much smaller than abdominal scute. Abdominal scute with lateral margins strongly convex, widest at area II. Eye mound (Fig. 15-17) well defined, oval, removed from anterior border of carapace, with a pair of spines fused at base (alternatively it can be said that eye mound is very high with short spines at apex, because there is no trace of fusion at base of spines); frontal hump low, unarmed. Anterior margin of carapace smooth and unarmed. Mesotergum divided in four areas, area I divided in left and right halves. Area IV very short, its boundary with area III effaced in the middle. All areas unarmed, except area III with a pair of

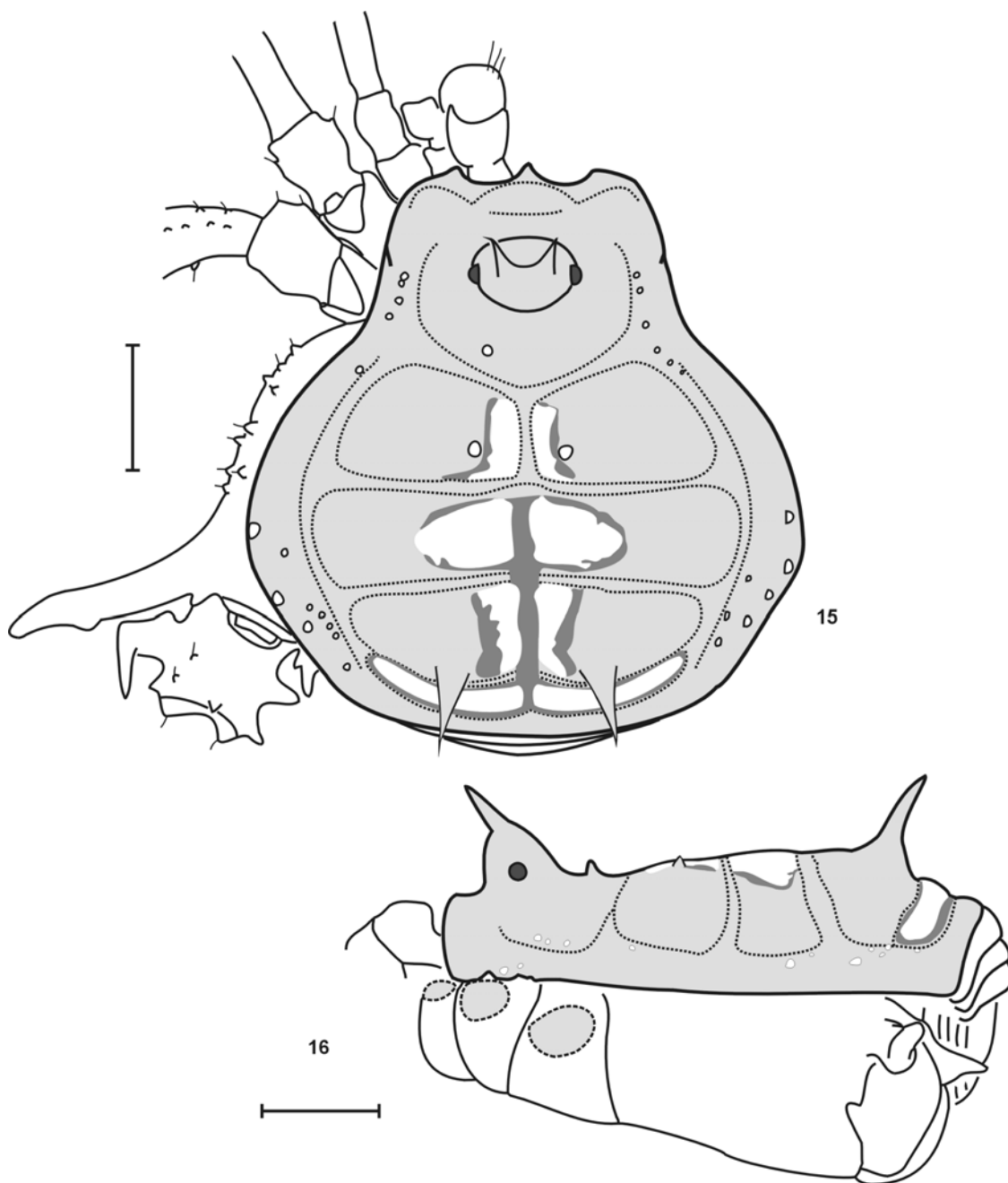


Fig. 15-16. *Lacronia camboriu*, male holotype (MNRJ 4956). **15:** Habitus, dorsal view; **16:** Habitus, lateral view. Scale bars = 1 mm.

paramedian pointed spines. Free tergites and sternites and anal opercle smooth and unarmed (Fig. 19).

Pedipalps (Fig. 18) and chelicerae weak, without notable swelling, processes and/or spines. Pedipalpal tibia with 4 spines (IiIi) at each ventro-ectal and ventromesal borders. Tarsus with 4 ventro-ectal + 3 ventromesal spines.

Anterior and posterior dorso-basal apophyses (linked with ozopores) present in coxa I-III (Fig. 21). In coxa I anterior is simple, posterior roughly bifurcate, both of coxa II are roughly and unequally bifurcate.

Femur II straight, with small apical retrolateral spur. Tibia II with two ventral rows of granules becoming tubercles apically. Femur III (Fig. 25) incrassate, with six rows (dorsal, lateral and ventral) of small setiferous granules and strong apical retrolateral spur. Tibia III (Fig. 25) incrassate, with two ventral rows of spines, growing longer apically. Metatarsus III robust and sinuous. Coxa IV with stout lanceolate apical dorso-prolateral apophysis, bearing retrolateral crenulations and a well defined basal tooth and apical ventro-retrolateral spiniform apophysis with a secondary short

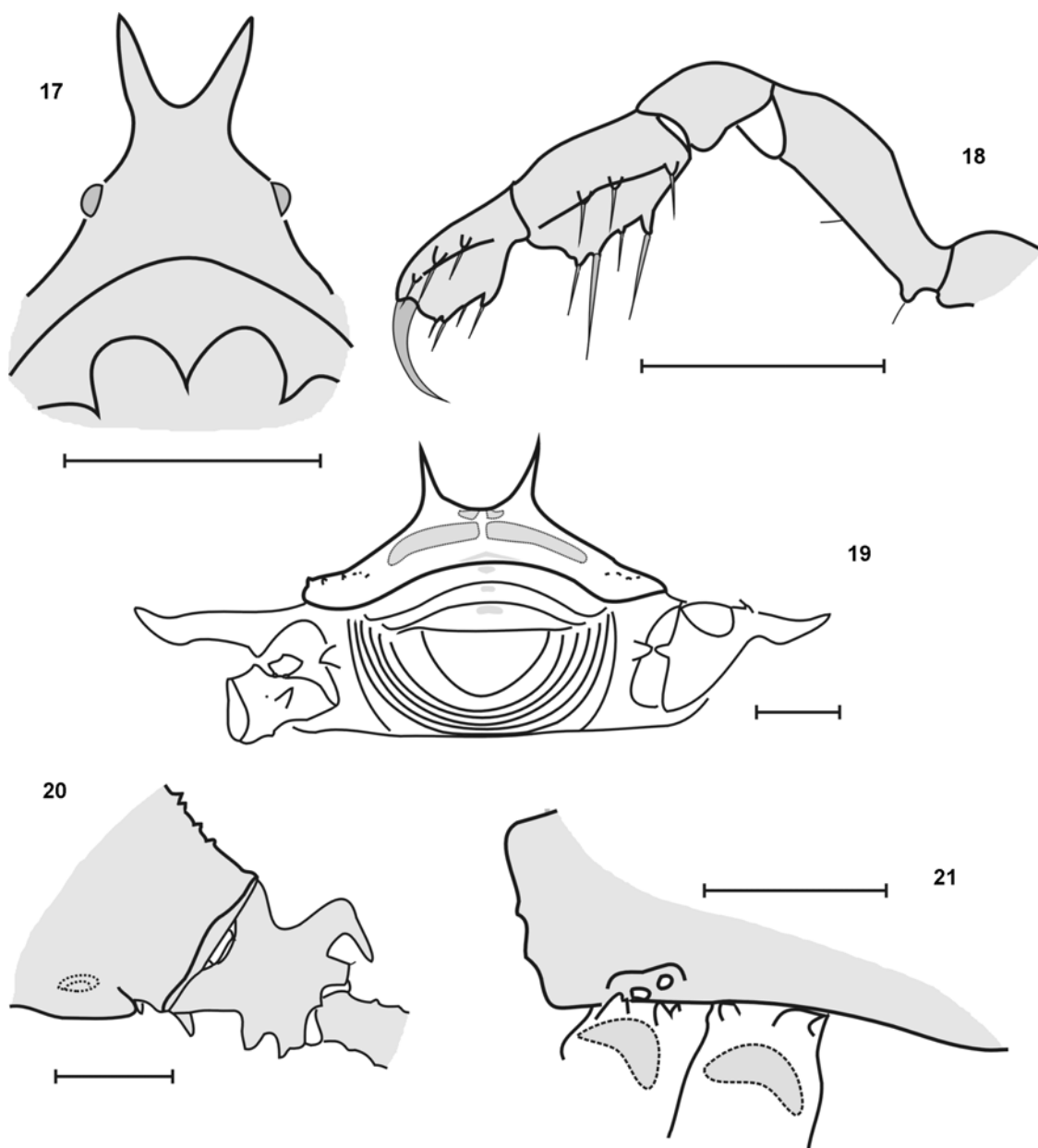


Fig. 17-21. *Lacronia camboriu*, male holotype (MNRJ 4956). **17:** Eye mound, frontal view; **18:** Right pedipalp, mesal view; **19:** Free tergites and sternites and coxa IV, posterior view; **20:** Left trochanter IV, ventral view; **21:** Dorso basal apophyses of coxae I-III, dorso lateral view. Scale bars = 1 mm.

branch. Trochanter IV with powerful prolateral elbow-like apophysis and two retrolateral spiniform apophyses. Femur IV (Fig. 22, 26) straight, with rows of short tubercles, and subapical prolateral (shorter) and retrolateral spurs. Patella and tibia IV (Fig. 23) with short pointed tubercles. Metatarsus IV (Fig. 24) with dorsal row of spines longer than the whole diameter of metatarsus.

Ventral plate of penis subrectangular, not cleft at apical border with 3 + 1 + 3 pairs of macrosetae. Ventral process of glans narrow flabelliform with serrate margins. Stylus with distal part covered with small denticles.

Color (in alcohol): background of body and appendages orange-brown. Mesotergal areas I to IV with spots of greenish-white surrounded by black areas (Fig. 15-16), in area I only in central fourth of each left and right halves, in area II an ellipsoid in middle third, in area III two elongate spots in middle fourth, in area IV two wide stripes occupying entire width of each half. Scutal granules whitish contrasting with background.

DIMORPHISM OF FEMALE PARATYPES

Armature of area III, eye mound, granules and spots of scutal areas I-IV identical to male, but armature of legs III and IV much reduced. Coxa IV only with straight

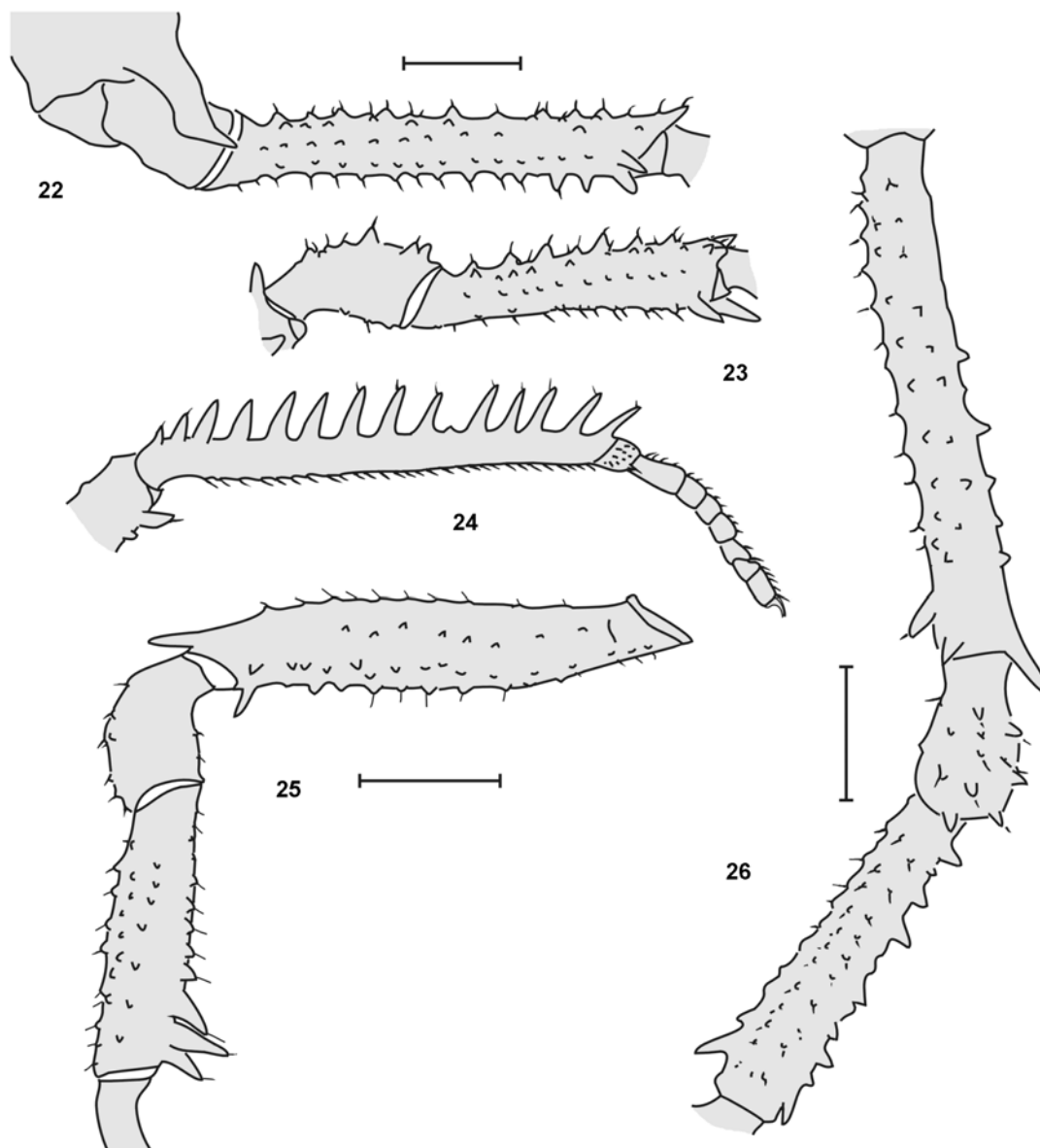


Fig. 22-26. *Lacronia camboriu*, male holotype (MNRJ 4956). **22-24:** Left leg IV, proteral view; **25:** Femur to tibia III, retrolateral view; **26:** Right femur to tibia IV, ventral view. Scale bars = 1 mm.

spiniform dorso-apical apophysis, femora II-III not incrassate but with apical spur, tibia III and metatarsus IV unarmed.

Discussion

— Relationships of and in *Lacronia*

Genera of Pachylinae are not well defined. A search has been conducted for possible relatives of *Lacronia*. White markings on the scute are rare in this subfamily (present e. g. in *Graphinotus* Koch, 1839, *Parapucroliia* Roewer, 1917 and *Metesarcoides* Mello-Leitão, 1922). *Parapucroliia* also has area IV divided and white spots of mesotergal areas, but *Parapucroliia ocellata* Roewer, 1917 (male MNRJ 58210 examined) does not possess any of the synapomorphies for *Lacronia* listed below.

Some species of *Graphinotus* possess greenish-white markings very similar to those of *Lacronia* species. Male genitalia are similar, and it is possible that this is a close relative of *Lacronia*.

The monophyly of the three species of *Lacronia* seems to be supported by 1) posterior retrolateral apophysis of coxa IV, 2) tibia III of male with two distal ventral rows of spines growing towards apex, 3) metatarsus IV of male with dorsal row of spiniform processes and 4) strong lanceolate apical dorso-proteral apophysis in coxa IV of male. *Lacronia camboriu* n.sp. and *Lacronia ricardoii* n.sp. appear to form a clade supported by 1) proteral elbow-like apophysis of trochanter IV of male and 2) mesotergal areas I and II with greenish-white spots surrounded by black areas against orange-brown background.

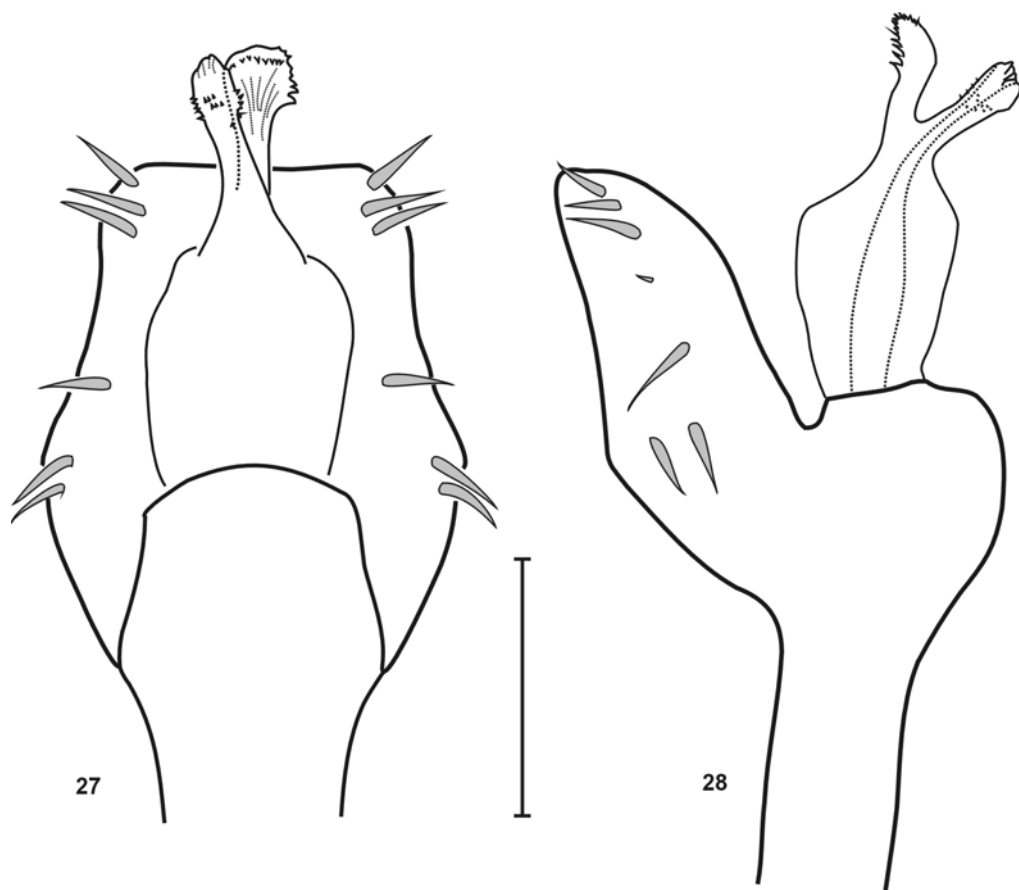


Fig. 27-28. *Lacronia camboriu*, male holotype (MNRJ 4956), distal part of penis. 27: dorsal view, 28: lateral view. Scale bar = 0.1 mm.

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