

ORIGINAL ARTICLE

Geophilomorph centipedes (Chilopoda) from termite mounds in the northern Pantanal wetland of Mato Grosso, Brazil

LUIS A. PEREIRA¹, MARCO ULIANA² & ALESSANDRO MINELLI²

¹Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, La Plata, Argentina, and ²Dipartimento di Biologia, Università degli Studi di Padova, Padova, Italy

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Abstract

Of two species of geophilomorph centipedes collected above high waters in termite mounds in the Pantanal of Mato Grosso, one (*Schendylops inquilinus*) is described here as new; the other (*Aphilodon angustatus* Silvestri, 1909) is redescribed.

Keywords: Brazil, Chilopoda, Geophilomorpha, Pantanal, *Schendylops*, *Aphilodon*, taxonomy

Introduction

The Pantanal of Mato Grosso (Junk et al., 2006) represents one of the largest wetlands of the world and is situated in the center of South America. It is formed in a large depression by the river Paraguay and its tributaries. The study area, situated on the right bank of Rio Cuiabá and the left bank of Rio Bento Gomes, is subject to annual flooding of 0.6–1.5 m height, generally between December and March. To inhabit the floodplain forests and open grasslands of this environment, terricolous arthropods have to adapt to the unfavorable external conditions to enhance their ability of survival (Adis et al., 2001). One retreat to avoid inundation seems to be termite mounds, where geophilomorph centipedes have been collected above high water in a monodominant forest of *Vochysia divergens* (Vochysiaceae) during a bilateral cooperation between the Federal University of Mato Grosso (UFMT) at Cuiabá (Prof. Marinêz M. Marques and students) and the Max-Planck-Institute for Limnology at Plön, Germany (Prof. Joachim Adis and collaborators) (cf. Marques et al., 2006; Scheller, 2006).

The few findings of “termitophilous” centipedes recorded to date were summarized by Pereira et al. (2000): as for geophilomorphs, in particular, the list

includes the Central American *Taeniolinum integer* (Chamberlin, 1926) from a nest of the termite *Anoplotermes gracilis* Snyder and three African species collected in abandoned nests of *Macrotermes bellicosus* (Smeathman) on Mont Nimba (Guinea), cited by Demange (1993).

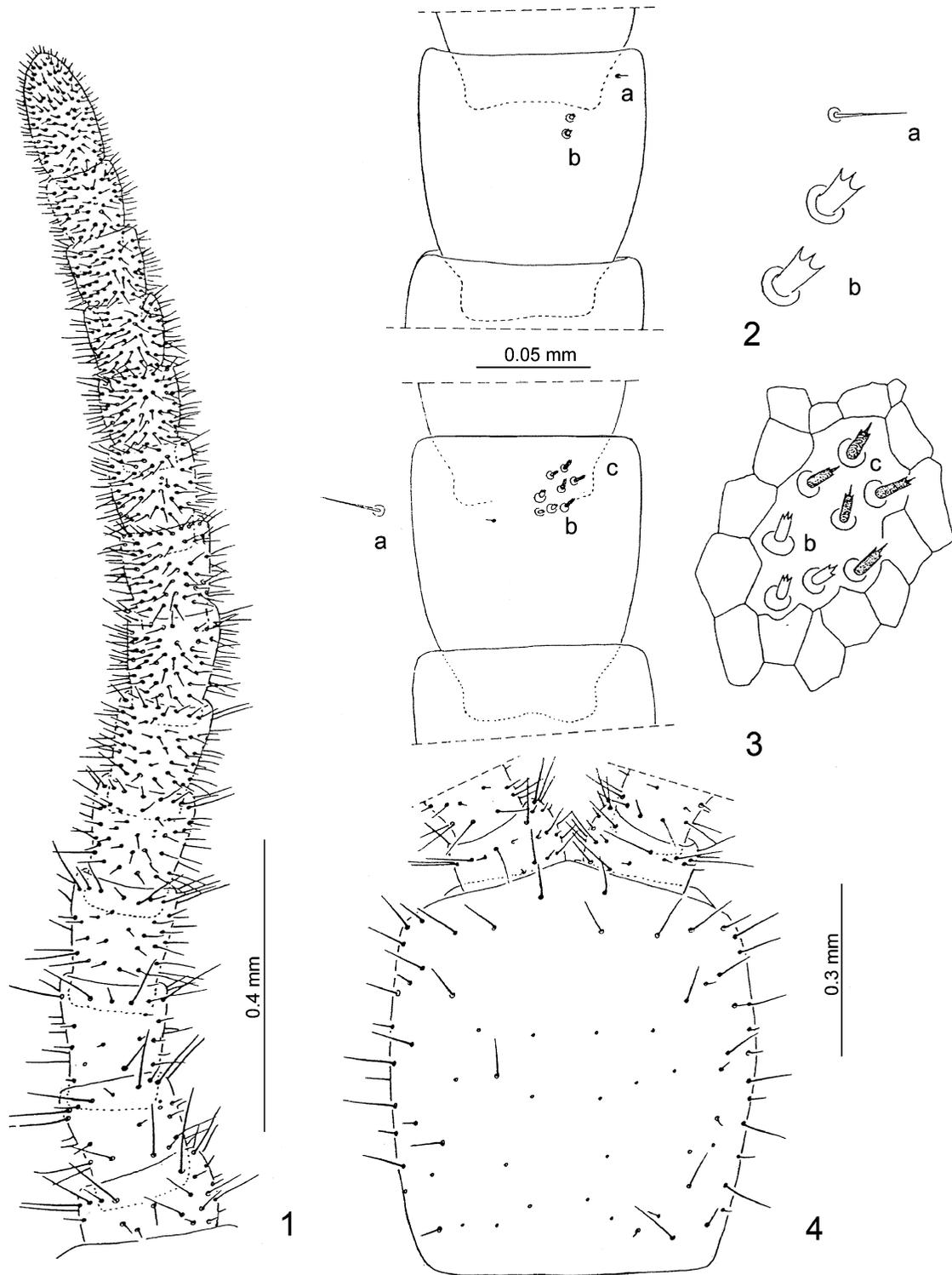
The following abbreviations are used in the text: a.a., antennal article; b.l., body length; d., dorsal; l., left; p.l., pairs of legs; r., right; v., ventral; AM, coll. A. Minelli, Padova, Italy; JA, coll. J. Adis, Plön, Germany; MZUSP, Museu de Zoologia da Universidade de São Paulo, Brazil; MLP, Museo de La Plata, La Plata, Argentina.

Family SCHENDYLIDAE

Schendylops inquilinus sp. n. (Figures 1–37)

Diagnosis

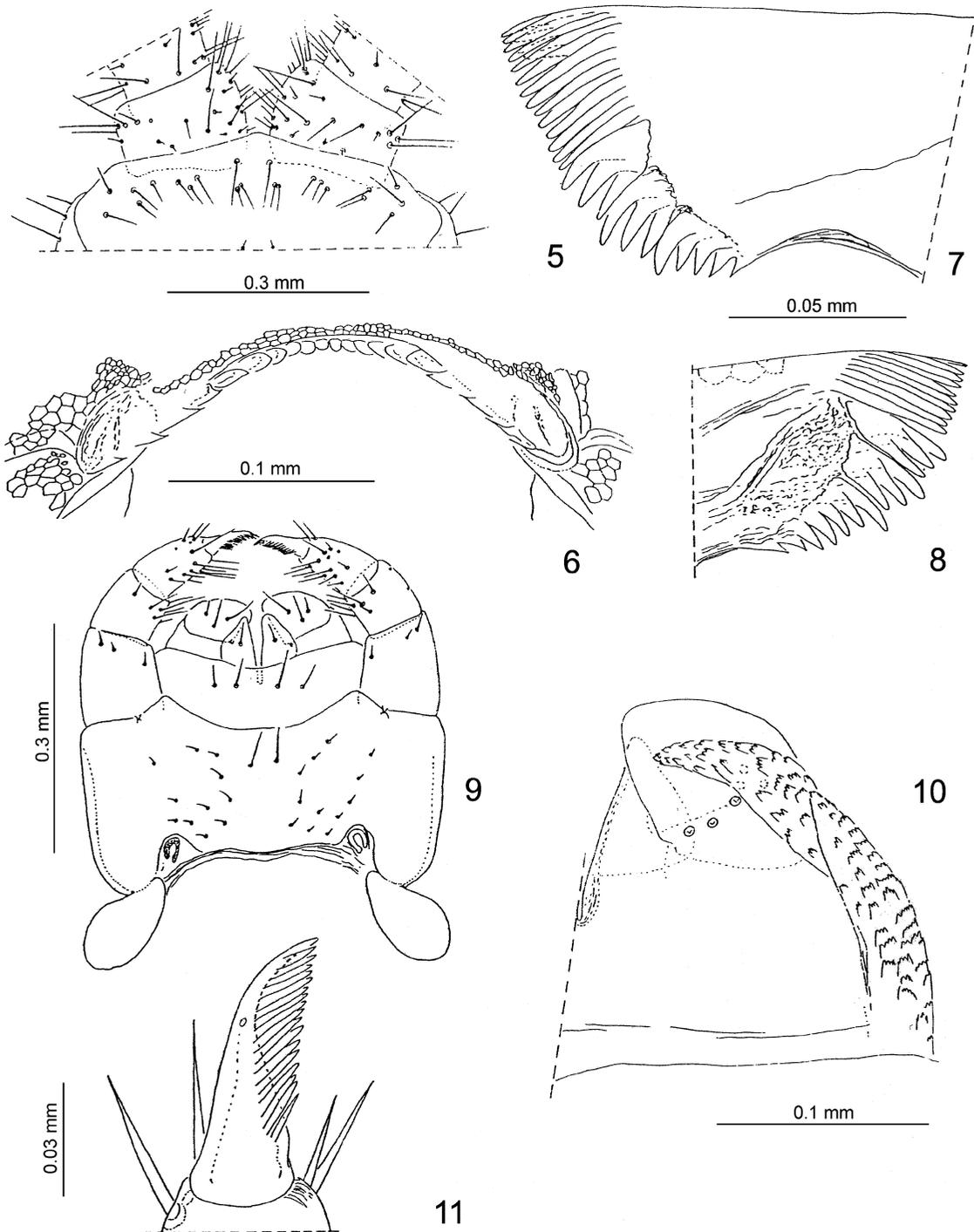
A species of *Schendylops* with ventral pores on first sternum; pore areas present in an uninterrupted series all along the body, undivided on anterior and posterior sterna but divided into two subsymmetrical areas on intermediate sterna. Of the Neotropical species in the same genus, *S. inquilinus* sp. n. shares these characters with *S. marchantariae*



Figures 1–4. *Schendylops inquilinus* sp. n. (female holotype; Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé). (1) Right antenna, v. (2) Right a.a. XIII, v. (a, b: a, b type setae). (3) Right a.a. XIII, d. (a, b, c: a, b, c type setae). (4) Cephalic shield and base of antennae.

(Pereira, Minelli & Barbieri, 1995), *S. iguapensis* (Verhoeff, 1938) and *S. coscaroni* (Pereira & Minelli, 1996). The new species differs from them in uniquely combining the following traits: antennae not sexually dimorphic, ca. 2.8 times as long as

the cephalic shield; a ventral pore area on the penultimate sternum; ventral pore areas with additional mid-lateral pores; some ventral pore areas of anterior region of the body nearly diamond-shaped.

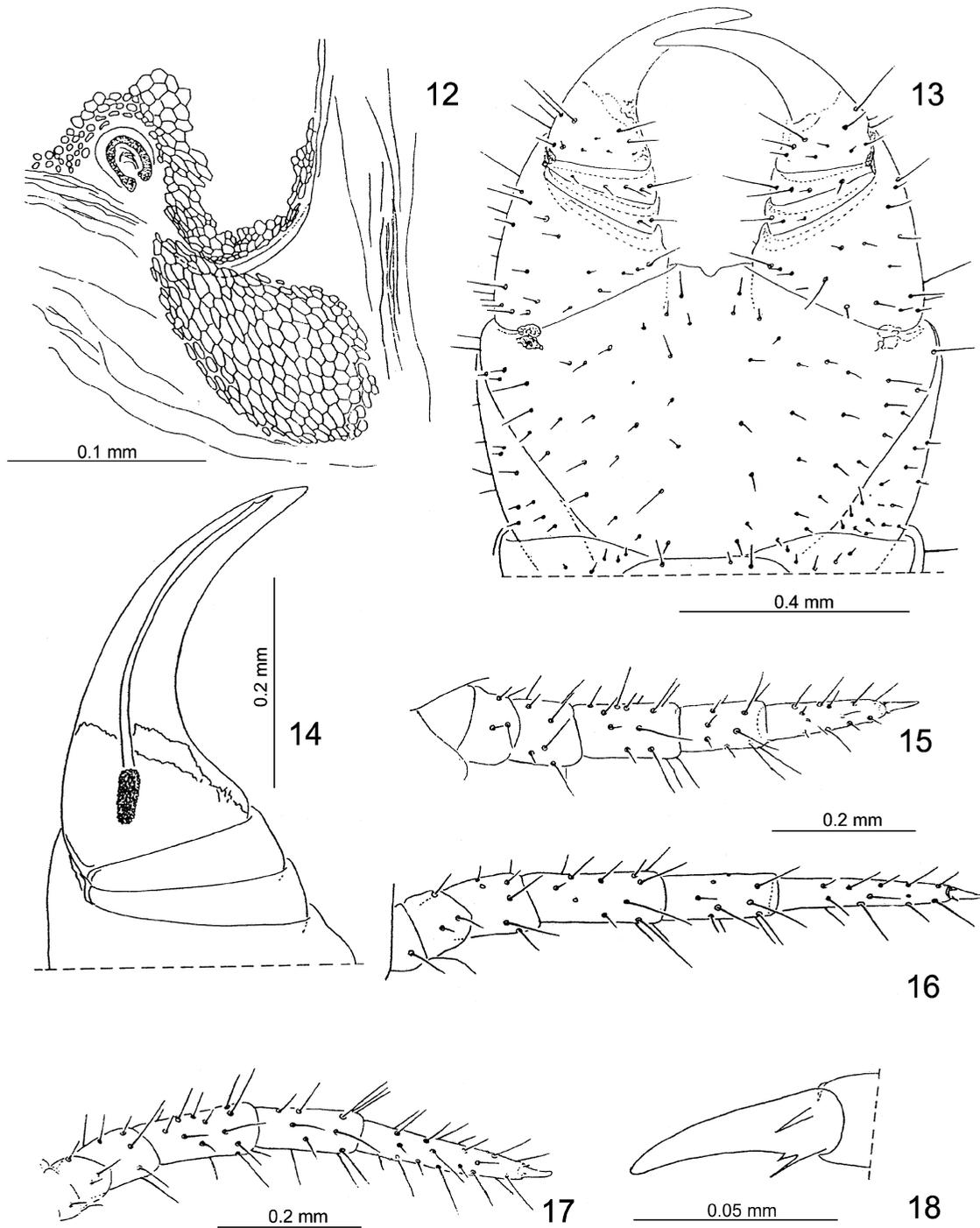


Figures 5–11. *Schendylops inquilinus* sp. n. (female holotype; Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé). (5) Clypeus and base of antennae. (6) Labrum. (7) Right mandible, d. (8) Left mandible, d. (9) First and second maxillae. (10) Right first maxilla, d. (11) Claw of right second maxilla, v.

Material examined

All type specimens from Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé (termite mound no. 2), Jorge Luiz Silva leg., 29 February 2004: holotype ♀, 55 p.l., b.l. 30 mm; paratype A (♂), 51 p.l., b.l. 28 mm; paratype B (♂), 53 p.l., b.l.

24 mm; paratype C (♀), 53 p.l., b.l. 31 mm; paratype D (♀), 55 p.l., b.l. 30 mm; paratype E (♂), 53 p.l., b.l. 28 mm; paratype F (♀), 53 p.l., b.l. 25 mm; paratype G (♂), 53 p.l., b.l. 25 mm; paratype H (♂), 53 p.l., b.l. 27 mm; paratype I (♀), 53 p.l., b.l. 25 mm; paratype J (♀), 55 p.l., b.l. 28 mm; paratype K (♂), 53 p.l., b.l. 26 mm; paratype L (♀), 53 p.l., b.l. 26 mm;

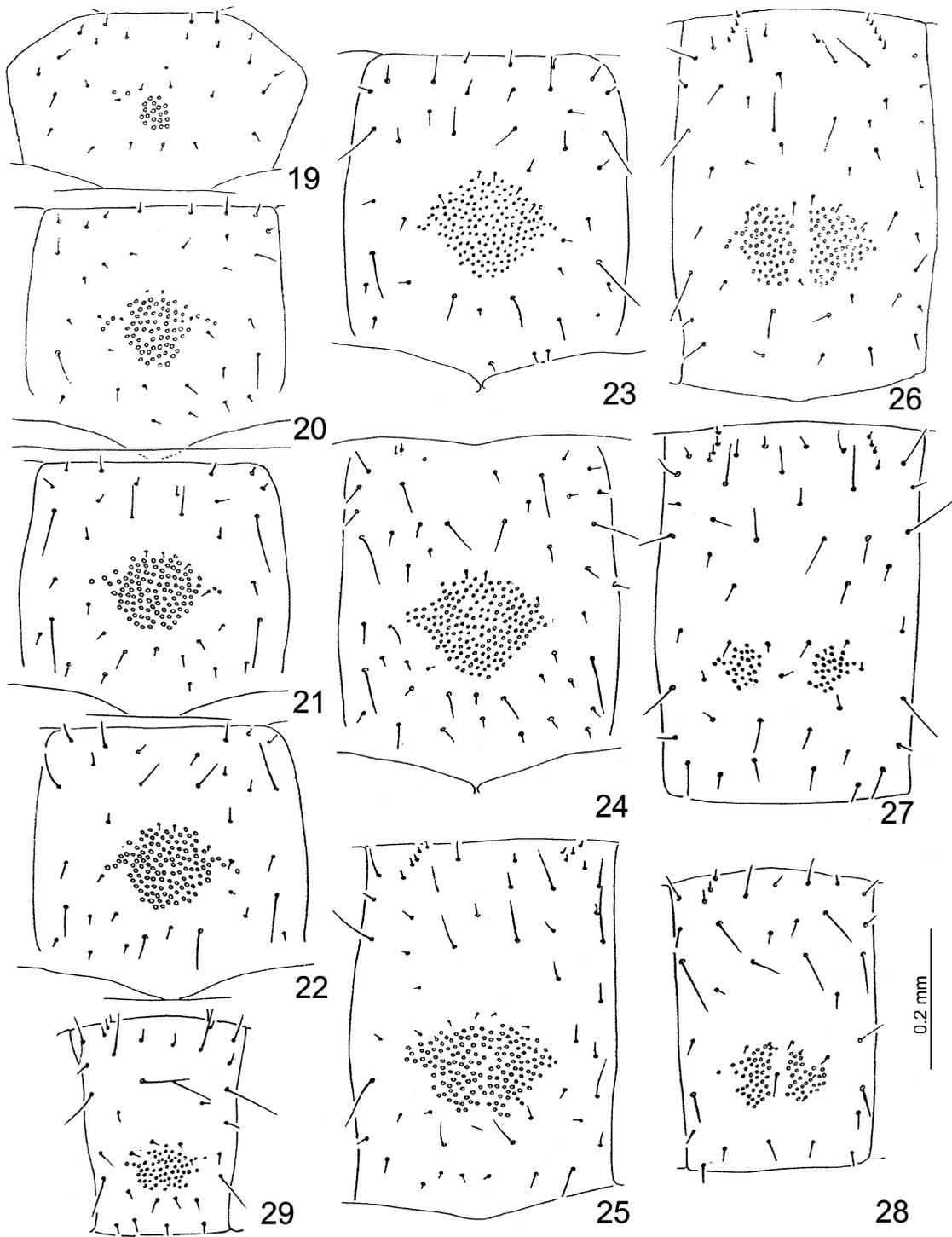


Figures 12–18. *Schendylops inquilinus* sp. n. (female holotype; Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé). (12) Detail of postero-external region of left second maxilla, v. (13) Forcipular segment, v. (14) Detail of calyx of poison gland in right poison claw, v. (15–17) Left legs II, XL and LIV, ventral. (18) Claw of right leg LIV, antero-ventral.

paratype M (♂), 51 p.l., b.l. 26 mm; paratype N (♀), 55 p.l., b.l. 30 mm; paratype O (♂), 53 p.l., b.l. 25 mm; paratype P (♀), 55 p.l., b.l. 25 mm; paratype Q (♂), 53 p.l., b.l. 25 mm; paratype R (♀), 55 p.l., b.l. 30 mm; paratype S (♂), 53 p.l., b.l. 29 mm; paratype T (♀), 55 p.l., b.l. 31 mm; paratype U (♀), 55 p.l., b.l. 27 mm; paratype V (♂), 53 p.l., b.l. 25 mm; paratype

W (♀), 55 p.l., b.l. 28 mm; paratype X (♀), 55 p.l., b.l. 27 mm; paratype Y (♀), 53 p.l., b.l. 25 mm; paratype Z (♀), 53 p.l., b.l. 25 mm.

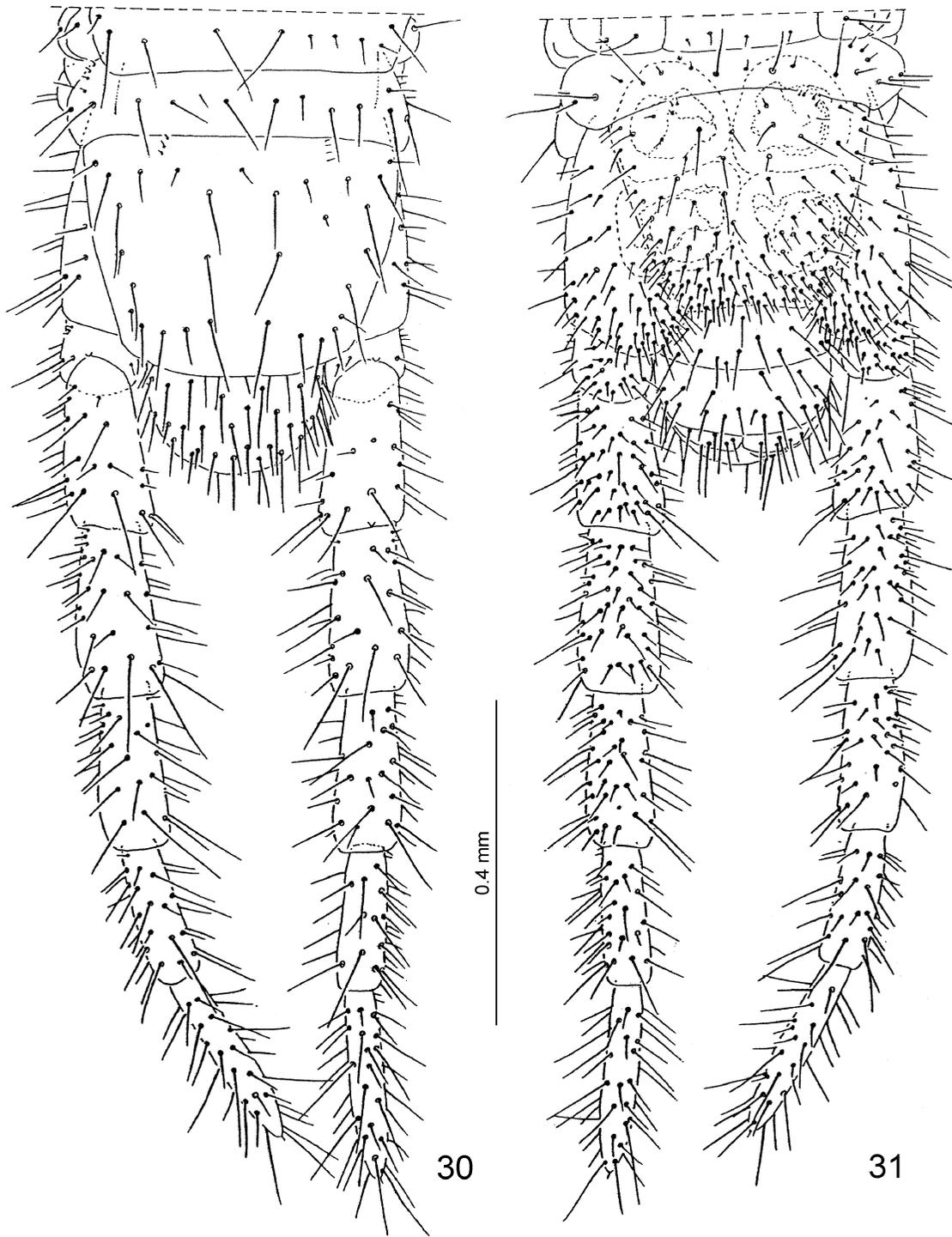
Depository of types. MZUSP (holotype, paratypes A–M), AM (paratypes N–Q), JA (paratypes R–U), MLP (paratypes V–Z).



Figures 19–29. *Schendyllops inquilinus* sp. n. (female holotype; Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé): Sterna I, II, III, IV, X, XII, XX, XXI, XXXII, L, LIV.

Other material examined. Same locality, date and collector as the type series, termite mound no. 2: 2♀♀, 55 p.l., b.l. 18, 25 mm; 1♂, 51 p.l., b.l. 22 mm; 3♂♂, 53 p.l., b.l. 22, 23, 23 mm (MZUSP). 4♂♂, 53 p.l., b.l. 22, 22, 22, 22 mm; 3♀♀, 55 p.l., b.l. 20, 23, 24 mm (AM). 2♀♀, 53 p.l., b.l. 23, 26 mm; 4♀♀, 55 p.l., b.l. 20, 21, 25, 25 mm; four fragmentary

specimens (JA). 2♂♂, 51 p.l., b.l. 20, 25 mm; 2♂♂ 53 p.l., b.l. 20, 25 mm; 4♀♀, 55 p.l., b.l. 16, 20, 25, 25 mm (MLP). Ibid, termite mound no. 3: 1♂ (head missing), 53 p.l., b.l. 25 mm; 2♀♀, 55 p.l., b.l. 25, 25 mm (AM). Ibid, termite mound no. 4: 1♂, 53 p.l., b.l. 27 mm; 1♀, 55 p.l., b.l. 20 mm (AM).



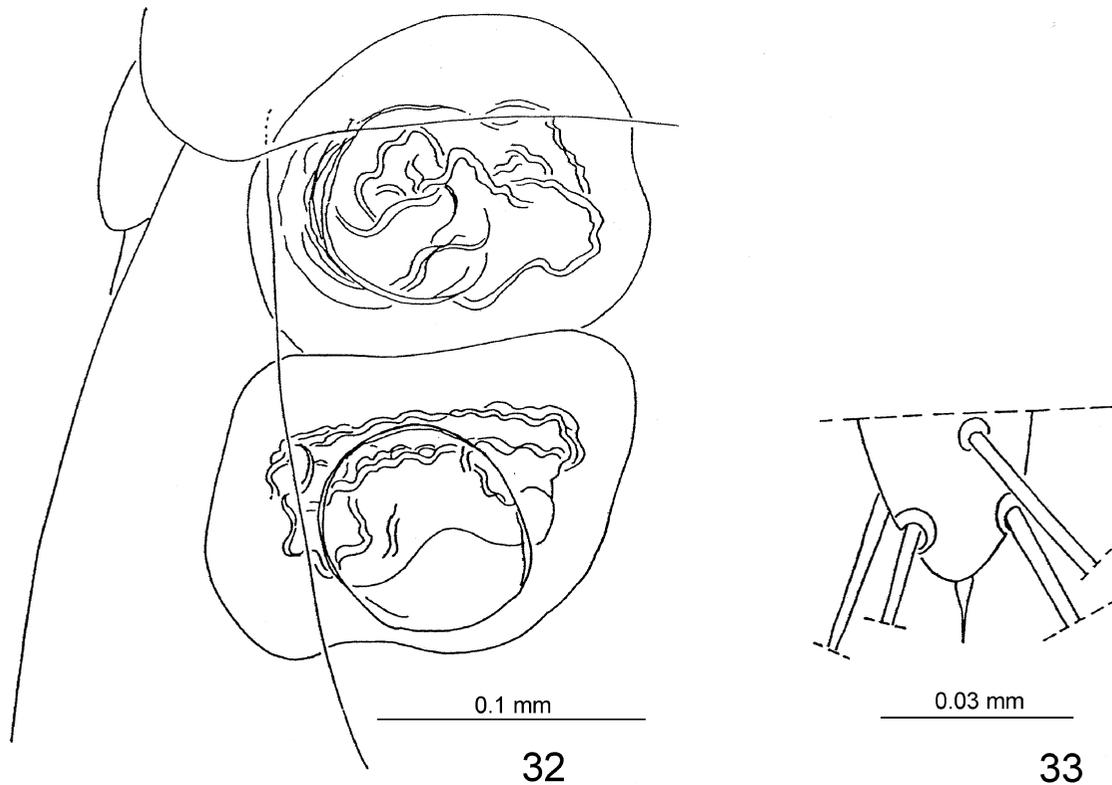
Figures 30, 31. *Schendylops inquilinus* sp. n. (female holotype; Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé). (30) Last leg-bearing segment and terminal segments, d. (31) Last leg-bearing segment and terminal segments, v.

Etymology

The specific epithet *inquilinus* (a lodger, or someone who dwells in a place not his own) refers to the fact that this centipede has been collected in termite mounds.

Description

Female (holotype). Fifty-five pairs of legs, body length 30 mm, maximum body width 0.8 mm, length of cephalic plate 0.7 mm, width of forcipular coxosternum 0.75 mm. Color (of preserved



Figures 32, 33. *Schendyllops inquilinus* sp. n. (female holotype; Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé). (32) Detail of right coxal organs, v. (33) Detail of distal end of last podomere of left last leg, d.

specimen in alcohol): head, forcipular segment and leg-bearing segments I–X (–XII) bright ferruginous, rest of the body pale orange-brownish.

Antennae: ca. 2.8 times as long as the cephalic plate, distally slightly attenuate; all articles, the first excepted, longer than wide. Setae on a.a. I–III (–IV) of different length, few in number, those of remaining articles progressively shorter and more numerous towards the tip of the appendage (Figure 1). Terminal a.a. with ca. 20 claviform sensory setae on the external border and ca. 10 on the internal border. Distal end of this a.a. with ca. five very small specialized setae ending in three small apical branches. Dorsal and v. surface of a.a. II, V, IX and XIII with very small specialized setae occurring in a hyaline unreticulated, unpigmented area. Specialized setae on ventral side restricted to an internal latero-apical area, represented by two different types: a and b. Type a setae very thin, not divided apically; type b setae very similar to those of the apex of the terminal article (Figure 2: a and b). Specialized setae on dorsal side represented by three different types: a and b similar to a and b of the ventral side and type c setae a little larger than type b, with two very small apical branches, much darker (ochreous in color) (Figure 3: a–c). Position of type a setae varies from median-external in a.a. II to apical-internal in a.a. XIII, whereas type b and c setae

always occur on the external apical-lateral region of the specified a.a. Distribution of type a, b and c sensilla as in Table I.

Cephalic plate: slightly longer than wide (ratio 1.1:1), shape and chaetotaxy as in Figure 4.

Clypeus: with 1+1 postantennal setae, 10+10 median setae and 1+1 praelabral setae (Figure 5).

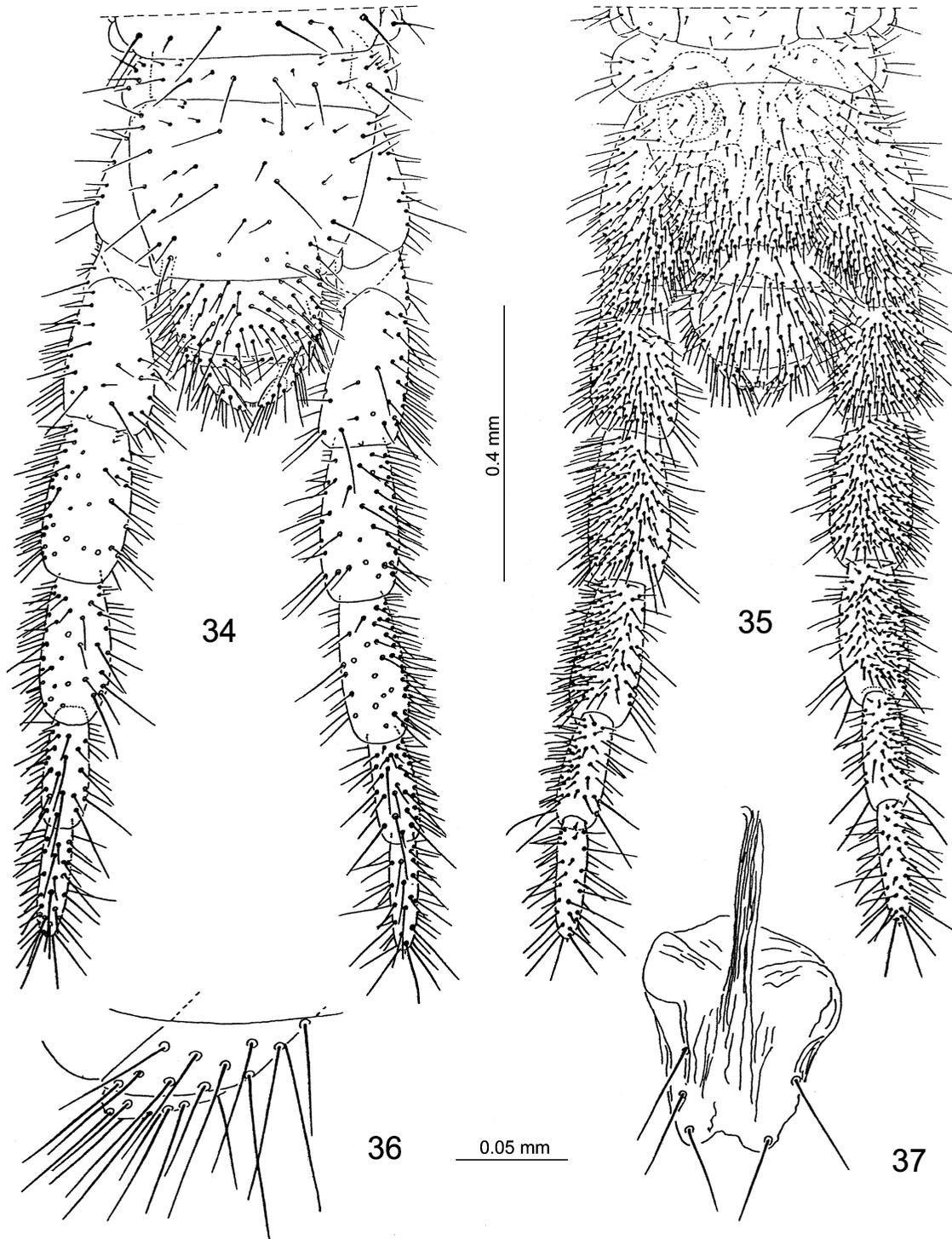
Labrum: with 20 teeth, those of the central arc dark and round tipped, the lateral ones less sclerotized, each with a relatively long, very sharp medial extension (Figure 6).

Mandible: dentate lamella subdivided into three distinct blocks, with 3,3,5 teeth on the r. mandible (Figure 7) and 3,3,7 on the l. (Figure 8); pectinate lamella with ca. 19 hyaline teeth.

First maxillae: with large palps on both coxosternum and telopodites (Figure 10). Coxosternum with 2+2 setae, median projections of coxosternum with 1+1 setae and 1+1 small sensilla. Article II of telopodite with 3+3 v. setae and 6+6 d. sensilla (Figures 9, 10).

Second maxillae (Figures 9, 11, 12): with 12+13 setae on the coxosternum, arranged as in Figure 9. Apical claw of telopodite bipectinate, d. edge and v. edge (Figure 11) with ca. 17 teeth.

Forcipular segment: tergum trapeziform with an irregular transverse median row of ca. 11 large setae and a few additional smaller setae on the remaining



Figures 34–37. *Schendylops inquilinus* sp. n. (male paratype “A”; Brazil: Mato Grosso, Pirizal: 16°15’S, 56°22’W, Pantanal de Poconé). (34) Last leg-bearing segment and terminal segments, d. (35) Last leg-bearing segment and terminal segments, v. (36) Left gonopod, v. (37) Penis, v.

surface. All articles of telopodites without teeth. Calyx of poison gland cylindrical (Figure 14), chaetotaxy of coxosternum and telopodites as in Figure 13.

Walking legs: with chaetotaxy (Figures 15–17) uniform throughout the body length. Claws ventrobasally

with two spines, one anterior one posterior; a third smaller spine occurs internally, very close to the posterior one (Figure 18).

Sterna: ventral glands purple in color; pore fields present on first to penultimate sternum. Fields undivided on sterna I–XX and LI–LIV, divided in

Table I. Number of type a, b and c setae on a.a. II, V, IX and XIII in the holotype of *Schendylops inquilinus* sp. n.

	Ventral		Dorsal			Figures
	a	b	a	b	c	
II		2	1	2		
V	1	2	1	2	3	
IX	1	2	1	2	6	
XIII	1	2	1	3	5	2, 3

two subsymmetrical areas on sterna XXI–L. Sternum I with two additional pores on r. side of anterior border of the main pore area; sterna II–XI with ca. two to four additional pores on each side of mid-lateral border of the main pore area; most remaining sterna with mid-lateral pores integrated to the main pore areas. Shape of fields changes along the trunk as in Figures 19–29. Number of pores on selected sterna: sternum I, 2+19+0 pores; II, 3+64+3; III, 4+96+2; IV, 4+109+3; X, 147; XII, 164; XX, 149; XXI, 2+64+68; XXXII, 29+28; L, 1+43+32; LIV, 1+57+1.

Last leg-bearing segment: with pleurites at the sides of praetergum. Praesternum not divided along the sagittal plane; shape and chaetotaxy of tergum and sternum as in Figures 30, 31. Coxopleura slightly protruding at their distal ventral ends, setae small and numerous on the distal-internal ventral area, the remaining surface with few bigger setae. Two single (“homogeneous”) coxal organs in each coxopleuron (Figures 31, 32). Coxal organs opening on the membrane between coxopleuron and sternum, covered by the latter. Last legs with seven podomeres, shape and chaetotaxy as in Figures 30, 31. Praetarsus as a diminutive tubercle with one small apical spine (Figure 33).

Terminal segments: posterior margin of intermediate tergum, intermediate sternum and first genital sternum convex (Figures 30, 31). Gonopods uniaarticulate, well separated on the sagittal plane (Figure 31).

Male (paratype A). Fifty-one pairs of legs, body length 28 mm, maximum body width 0.9 mm.

All features similar to those in the female except for the shape and chaetotaxy of the last leg-bearing segment and terminal segments.

Last leg-bearing segment: form and chaetotaxy of tergum and sternum as in Figures 34, 35. Coxopleura protruding at their distal ventral ends, setae numerous on the distal ventral half, the remaining surface with few setae. Podomeres of terminal legs inflated, shape and chaetotaxy as in Figures 34, 35.

Terminal segments: intermediate tergum, intermediate sternum and first genital sternum with

posterior margin convex (Figures 34, 35). Gonopods biarticulate, basal article with ca. 12 setae, apical article with ca. eight setae (Figure 36), penis dorsally with 3+2 setae (Figure 37).

Variation

The number of pairs of legs in the females is 53 (eight specimens examined) or 55 (26 specimens) and in the males 51 (five specimens) or 53 (20 specimens). No significant variation in the other characters.

Remarks

Most specimens examined are adult, the males having mature spermatozoa in the tubula seminifera and the females having mature ova and spermathecae full of spermatozoa.

Characters differentiating *S. inquilinus* sp. n. from the other Neotropical species of *Schendylops* with ventral pores on first sternum, fields present in an uninterrupted series all along the body, undivided on anterior and posterior sterna but divided in two subsymmetrical areas on intermediate sterna are given in Table II.

Family APHILODONTIDAE

Aphilodon angustatus Silvestri, 1909 (Figures 41–62)

Aphilodon angustatus Silvestri, 1909a, p. 269.

Aphilodon angustatus: Silvestri, 1909b, p. 56–57.

Aphilodon angustatus (sic): Chamberlin, 1914, p. 209.

Aphilodon angustatus: Attems, 1929, p. 316.

Aphilodon angustatus (sic): Bücherl, 1940, p. 313.

Aphilodon angustatus: Dobroruka, 1978, p. 98.

Aphilodon angustatus: Foddai et al., 2000, p. 105.

Diagnosis

A species of *Aphilodon* with forcipular telopodites not reaching, when closed, the anterior margin of the head and provided with one basal and one distal tooth on their first articles; sternum of last leg-bearing segment wider than long. Of the Neotropical species in the same genus *A. angustatus* shares these characters with *A. modestus* and differs from this last in uniquely combining the following traits: female with 55–63 pairs of legs; body length 19 mm; seven coxal organs; coxal pores relatively large.

Material examined

Brazil: Mato Grosso, Pirizal: 16°15'S, 56°22'W, Pantanal de Poconé (termite mound no. 2), Jorge

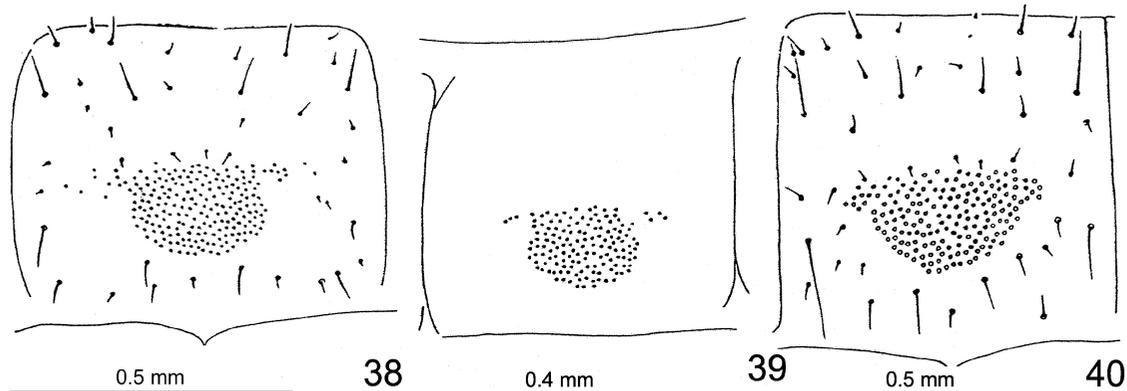
Table II. Diagnostic characters for some Neotropical *Schendylops* species.

	<i>S. marchantariae</i>	<i>S. iguapensis</i>	<i>S. inquilinus</i> n. sp.	<i>S. coscaroni</i>
Ratio of antenna to head length	ca. 4.2:1	ca. 3.2:1	ca. 2.8:1	ca. 3.2:1
Proximal a.a. with few setae of different length	♂ ♀: I-IV	♂: ? ♀: I	♂ ♀: I-IV	♂: I ♀: I-III
Specialized setae of a.a. II, V, IX and XIII placed on unreticulated, hyaline, unpigmented surface	Yes	No, surface like the remaining a. a.	Yes	Yes
a.a. XIV: number of claviform setae on external (E) and internal (I) border	E: ca. 20-35 I: ca. 11-15	E: ca. 9 I: ca. 5	E: ca. 20 I: ca. 10	E: ca. 20-23 I: ca. 8-10
Antennae sexually dimorphic	No	?	No	Yes
Lappets of coxosternum of first maxillae	Very well developed	Very short, not extending over the distal border of the first article of the telopodite	Very well developed	Very well developed
Pairs of legs	♂: 45, 47 (Peru); 53, 55 (Brazil) ♀: 47, 49, 51 (Peru); 53, 55 (Brazil)	♂: ? ♀: 49	♂: 51, 53 ♀: 53, 55	♂: 49 ♀: 51
Posterior limit of ventral pore field series	Antepenultimate	Antepenultimate	Penultimate	Penultimate
Trunk segments with additional antero-lateral pores on the sternal areas	I-II (-III)	II to XIV	I (-II) to ca. XI	II to penultimate
Trunk segments with additional mid-lateral pores on the sternal areas	No	No	Yes	No
Form of undivided pore fields of anterior region of the trunk	As in Figure 40	As in Figure 39	As in Figure 23	As in Figure 38
Posterior coxal organs externally bilobed	No	No	No	Yes
♀: width to length of tergum of last leg-bearing segment	1.2:1	2.0:1	1.3:1	1.2:1
♀: width of tarsus/width of metatarsus of last legs	1.3:1	1.7:1	1.3:1	2.0:1

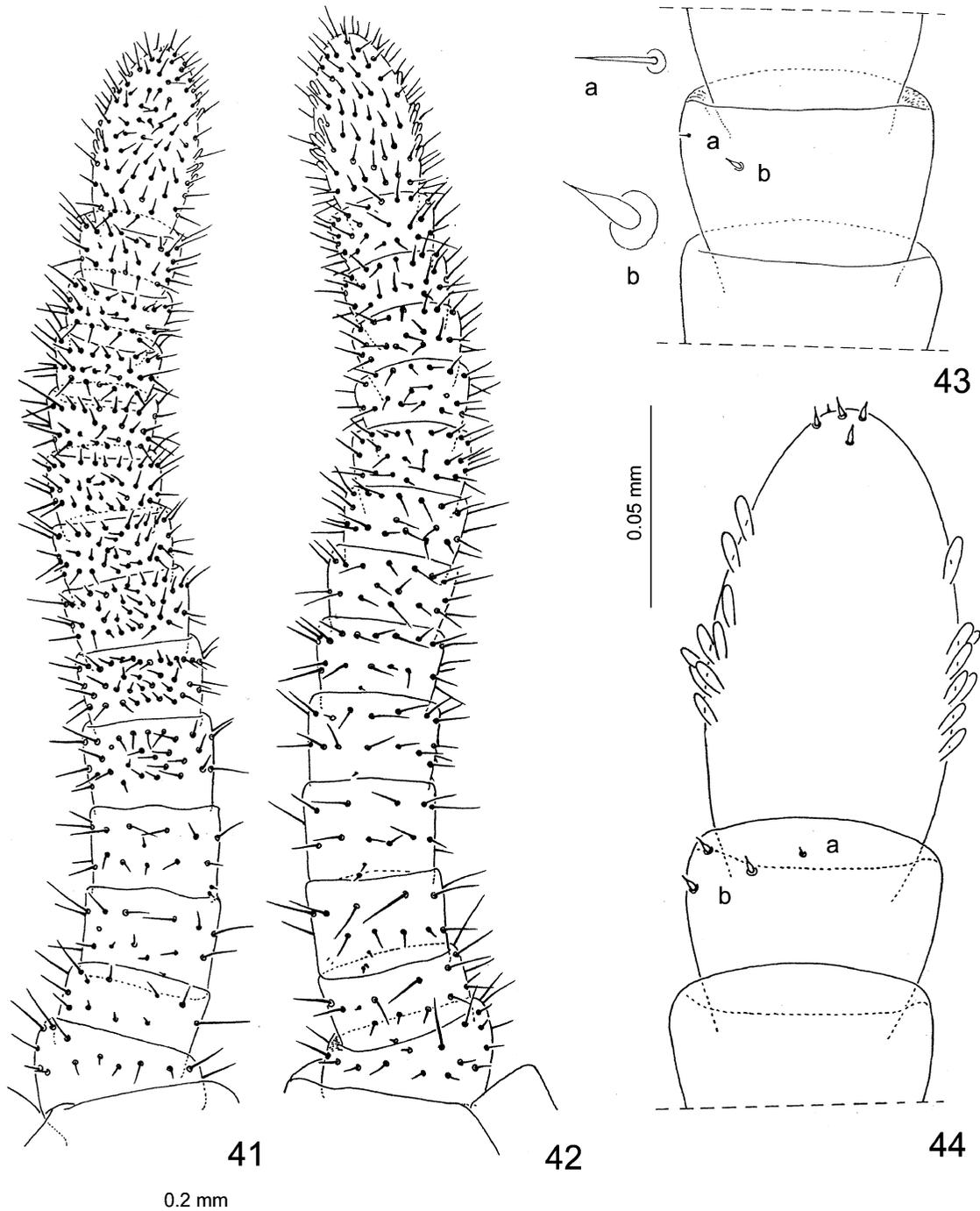
Luiz Silva leg., 29 February 2004: 1♀ (specimen "A", see below), 61 p.l., b.l. 19 mm; 1♀ (specimen "B", with spermathecae full of spermatozoa), 63 p.l., b.l. 16 mm; 1♀, 63 p.l., b.l. 15 mm (AM).

Type locality

Type series from "Corrientes, S. Pedro (Misiones (sic), Argentina), Paraguari (Paraguay), Urucum (Corumbà, Matto Grosso, Brasile)".



Figures 38-40. Typical sternum from the anterior part of the trunk. (38) *Schendylops coscaroni* (Pereira & Minelli, 1996), female holotype (Brazil: São Paulo: Serra do Mar): sternum X (from Pereira & Minelli, 1996). (39) *Schendylops iguapensis* (Verhoeff, 1938), female holotype (Brazil: São Paulo: Iguape): sternum VIII, setae not shown (from Pereira & Minelli, 1996). (40) *Schendylops marchantariae* (Pereira, Minelli & Barbieri, 1995), female holotype (Brazil: Amazonas: Rio Solimoes: Ilha de Marchantaria): sternum VIII (from Pereira, Minelli & Barbieri, 1995).



Figures 41–44. *Aphilodon angustatus* Silvestri, 1909 (female specimen “A”; Brazil: Mato Grosso, Pirizal: 16°15’S, 56°22’W, Pantanal de Poconé). (41) Left antenna, v. (42) Left antenna, d. (43) Left a.a. XIII, v. (a, b: a, b type setae). (44) Left a.a. XII–XIV, d.

Known range

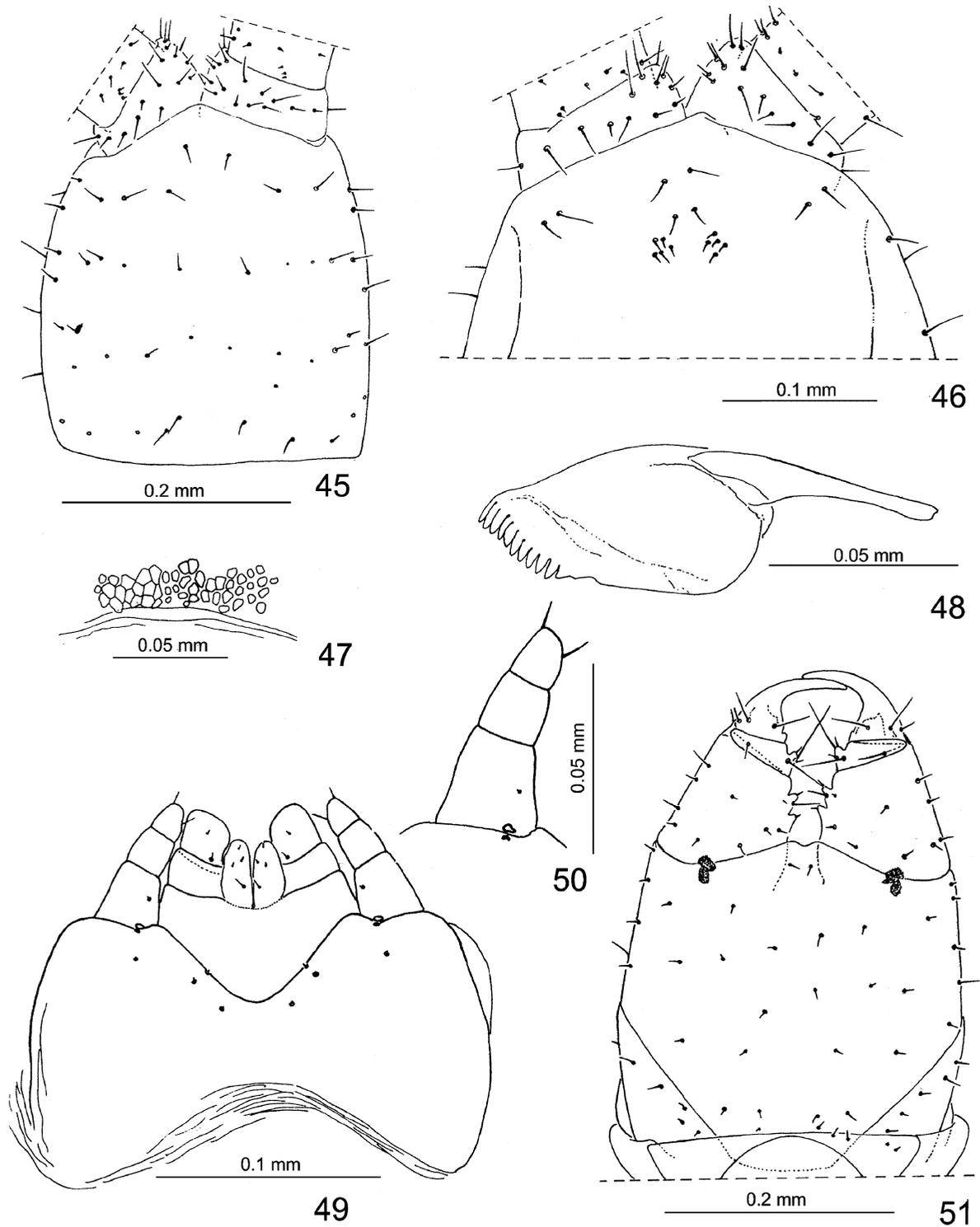
Argentina: Misiones. Brazil: Mato Grosso: Urucum, Corumbá; Pirizal; “São Paulo”. Paraguay.

Redescription

Female (specimen “A”). Sixty-one pairs of legs, body length 19 mm, maximum body width 0.35 mm, length of cephalic plate 0.33 mm, width of

forcipular coxosternum 0.28 mm. Color of preserved specimen in alcohol: forcipular segment pale ochreous, rest of the body pale yellow.

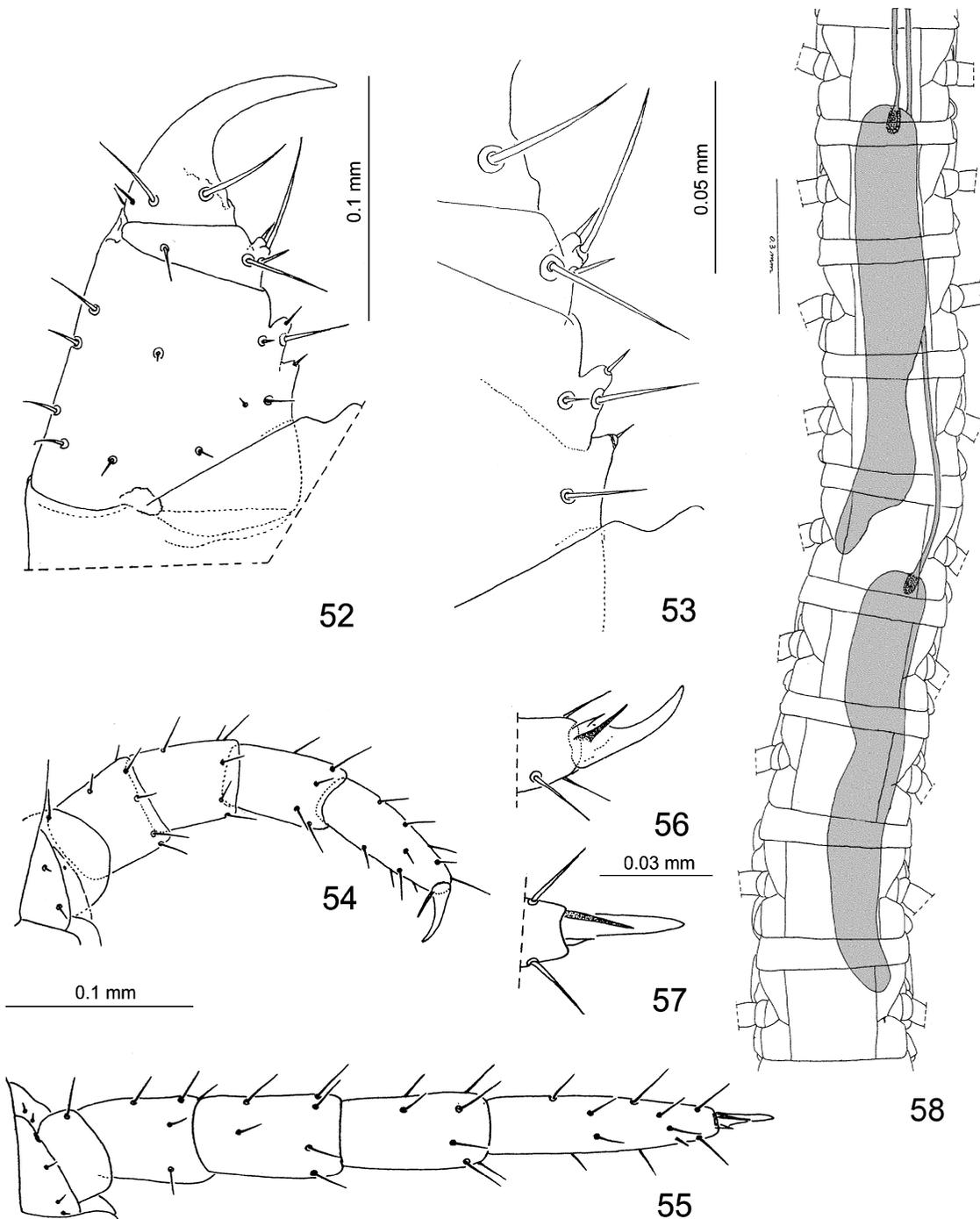
Antennae: ca. 2.0 times as long as the cephalic plate, distally slightly attenuate; all articles, the last excepted, wider than long. Ventral chaetotaxy: setae on a.a. I–IV of various length and few in number, those of remaining articles progressively shorter and increasingly numerous towards the tip of the appendage (Figure 41). Dorsal chaetotaxy: setae on



Figures 45–51. *Aphilon angustatus* Silvestri, 1909 (female specimen “A”; Brazil: Mato Grosso, Pirizal: 16°15’S, 56°22’W, Pantanal de Poconé). (45) Cephalic shield and base of antennae. (46) Clypeus and base of antennae. (47) Middle portion of labrum. (48) Left mandible. (49) First and second maxillae, v. (50) Telopodite of right second maxilla, v. (51) Forcipular segment, v.

a.a. I–V(–VI) of various length and few in number, those of remaining articles progressively shorter and more numerous towards the tip of the appendage (Figure 42). Terminal a.a. with ca. nine claviform sensory setae on the external border and ca. eight on the internal border (Figure 44). Distal end of this

a.a. with ca. five very small specialized setae apparently not split apically (Figure 44). Dorsal and v. surface of a.a. II, V, IX and XIII with very small specialized setae which on the v. side are restricted to an internal latero-apical area and are represented by two different types: a and b. Type a



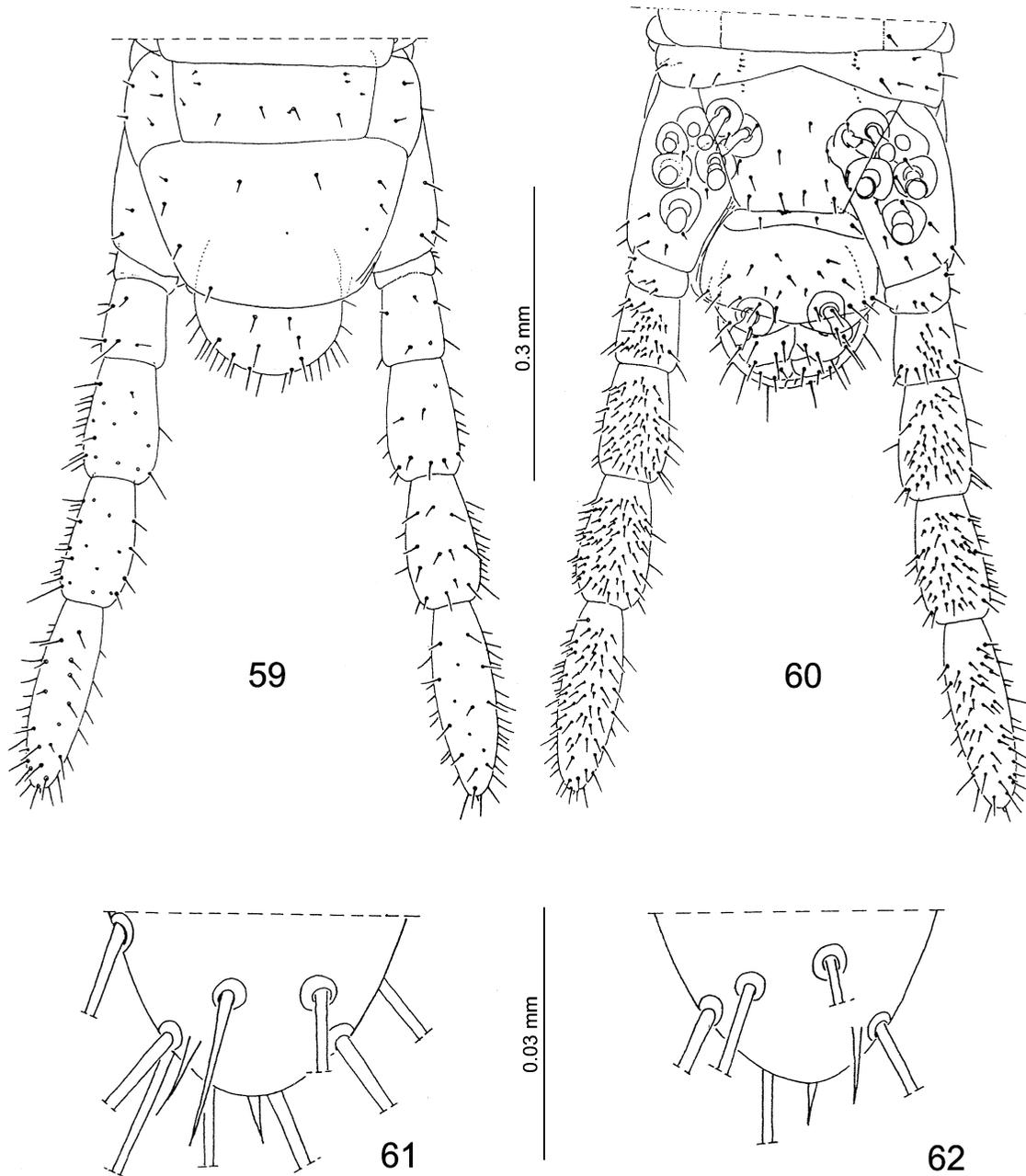
Figures 52–58. *Aphilonon angustatus* Silvestri, 1909 (female specimen “A”; Brazil: Mato Grosso, Pirizal: 16°15’S, 56°22’W, Pantanal de Poconé). (52) Right forcipular telopodite, v. (53) Internal border of right forcipular telopodite, v. (54) Left leg IV, v. (55) Left leg LX, v. (56) Claw of right leg XVII, antero-ventral. (57) Claw of left leg LX, v. (58) Ventral view of trunk segments XV–XXIII to show the position of poison glands.

setae are very thin and not divided apically, type b setae are very similar to those of the apex of the terminal article (Figure 43: a and b). Similar specialized setae are also present on the d. side, where they are restricted to an external latero-apical area (Figure 44). Distribution of type a and b sensilla as in Table III.

Cephalic plate: approximately as long as wide (ratio 1.05:1.00), shape and chaetotaxy as in Figure 45.

Clypeus: with 5+5 small setae in the middle and 4+4 larger setae in the anterior half (Figure 46).

Labrum: very poorly developed, posterior border membranous and hyaline, without teeth. Shape of middle portion as in Figure 47.



Figures 59–62. *Aphilodon angustatus* Silvestri, 1909 (female specimen “A”; Brazil: Mato Grosso, Pirizal: 16°15’S, 56°22’W, Pantanal de Poconé). (59) Last leg-bearing segment and terminal segments, d. (60) Last leg-bearing segment and terminal segments, v. (61) Detail of distal end of last podomere of left last leg, v. (62) Detail of distal end of last podomere of right last leg, v.

Table III. Number of type a and b setae on a.a. II, V, IX and XIII in *Aphilodon angustatus* Silvestri, 1909 specimen “A”.

	Ventral		Dorsal		Figures
	a	b	a	b	
II		1		1	
V	1	1	1	1	
IX	1	1	1	2	
XIII	1	1	1	3	3, 4

Mandible: pectinate lamella with ca. 11–12 hyaline teeth (Figure 48).

First maxillae: coxosternum with diminutive membranous lappets only visible from the d. side, telopodites without lappets. Coxosternum without setae, median projections of coxosternum with 1+1 basal setae and 3+3 small sensilla. Article II of telopodite with 1+1 small basal setae and 1+1 apical sensilla (Figure 49).

Table IV. Differential characters for the Neotropical species of *Aphilodon* (data for *A. spegazzinii*, *A. intermedius* and *A. modestus* from Silvestri, 1909a, 1909b).

	<i>A. spegazzinii</i>	<i>A. intermedius</i>	<i>A. angustatus</i>	<i>A. modestus</i>
Pairs of legs	♂: 61–63 ♀: 63–65	♂: 57 ♀: ?	♂: 55–57 ♀: 55–63	♂: ? ♀: 45
Body length (mm)	42	20	19	9
Body width (mm)	1.1	0.6	0.39	0.3
Closed forcipular telopodites reaching the anterior margin of the head	Yes	Yes	No	No
Length to width ratio of the sternum of the last leg-bearing segment	>1	<1	<1	<1
Number of coxal organs in each coxopleuron	ca. 32	ca. 16	ca. 7	ca. 5
Size of pores of coxal organs	Very small	Very small	Relatively large (Figure 20)	Very small

Second maxillae (Figures 49, 50): coxosternum with 4+4 diminutive setae distributed as in Figure 49. Telopodites of three articles with shape and chaetotaxy as in Figures 49, 50.

Forcipular segment: when closed, the telopodites do not reach the anterior margin of the head. Tergum with an irregular transverse median row of ca. 11 setae. Telopodite of three articles: first article with an anterior and a posterior tooth, both teeth provided with an apical spine; second article with two partly fused teeth, the proximal one with a large apical seta, the distal one with a much smaller apical spine; tarsungulum with a very small basal internal protuberance. Chaetotaxy of coxosternum and telopodites as in Figures 51–53.

Poison glands: as first described for an *Aphilodon* species, the South African *A. porosus* Verhoeff, 1937, by Verhoeff (1937), in this species too the poison glands are located in the trunk rather than in the forcipular segment or its appendages. The duct that carries the poisonous secretion to the tip of the forcipular tarsungulum is thus very long. In Geophilomorpha, a similar arrangement of the poison apparatus is only known for *Henia vesuviana* (Newport, 1845) (Duboscq, 1898) and *Geoperingueyia* spp. (Verhoeff, 1940). In *A. angustatus*, the calyx of the right gland is found at the level of the posterior margin of trunk segment XV and the corresponding gland extends over trunk segments XVI–XIX; the calyx of the left gland is close to the posterior margin of trunk segment XIX and the corresponding gland extends over trunk segments XX–XXIII.

Walking legs: with chaetotaxy (Figures 54, 55) uniform throughout the whole series. Claws ventrobasally with two spines: the anterior is well developed and strongly pigmented, the posterior much smaller and hyaline (Figures 56, 57).

Sterna: ventral glands absent. Trunk segments XV–XXIII hosting poison glands (Figure 58).

Last leg-bearing segment: with pleurites at the sides of praetergum. Praesternum not divided along

the sagittal plane; shape and chaetotaxy of tergum and sternum as in Figures 59, 60. Coxopleura not protruding at their distal ventral ends, setae very few and small, distributed on the whole surface; right coxopleuron with seven and left with six single (“homogeneous”) coxal organs opening on the ventral surface (Figure 60). Last legs with six podomeres, shape and chaetotaxy as in Figures 59, 60. Praetarsus as a diminutive apical spine (Figures 61, 62).

Remarks

Silvestri (1909a, 1909b) described this species as provided with 55–59 pairs of legs in the females and 55–57 in the males. In our sample, the female specimens have 61–63 pairs of legs, but we do not see any other difference that might raise doubt as to their conspecificity. Dobroruka (1978, p. 98) identified as *Aphilodon angustatus* two specimens with 55 and 45 pairs of legs, from Brazil (labeled “São Paulo” only), stating in his paper that “The last number mentioned is very low, in my opinion exceptionally in this species only”. Indeed, we doubt the identification of the specimen with 45 as *A. angustatus*.

Characters differentiating *A. angustatus* from the other Neotropical species of *Aphilodon* are given in Table IV.

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