



Monograph

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***Umbyquyra* gen. nov., a new tarantula spider genus from the Neotropical region (Araneae, Mygalomorphae, Theraphosidae), with a description of eight new species**

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Abstract. *Umbyquyra* gen. nov., a new Theraphosinae genus with stridulatory bristles on the palpal trochanter of pedipalp trochanter and first leg, is proposed. The genus differs from the other genera with stridulatory bristles on the same segments, *Acanthoscurria* Ausserer, 1871, *Cyrtopholis* Simon, 1892, *Longilyra* Gabriel, 2014 and *Nesipelma* Schmidt & Kovarik, 1996, by having a palpal bulb with a very short and acuminate embolus and four short keels; separated tibial apophysis; and female spermathecae resembling those of *Cyrtopholis*, with two seminal receptacles with elongated ducts emerging from a common area. *Cyrtopholis palmarum* Schiapelli & Gerschman, 1945 and *C. schmidti* Rudloff, 1996 from Brazil and *Acanthoscurria acuminata* Schmidt & Tesmoingt in Schmidt, 2005 from Bolivia are transferred to the new genus. The female of *Umbyquyra palmarum* (Schiapelli & Gerschman, 1945) gen. et comb. nov. and the male of *U. schmidti* (Rudloff, 1996) gen. et comb. nov. are described for the first time. *Cyrtopholis zorodes* Mello-Leitão, 1923 is considered a junior synonym of *Acanthoscurria gomesiana* Mello-Leitão, 1923 and *Cyrtopholis meridionalis* (Keyserling, 1891) is considered a *nomen dubium*. Eight new species from Brazil are described: *Umbyquyra paranaiba* gen. et sp. nov., *U. cuiaba* gen. et sp. nov., *U. araguaia* gen. et sp. nov., *U. sapezal* gen. et sp. nov., *U. belterra* gen. et sp. nov., *U. caxiuana* gen. et sp. nov., *U. tucurui* gen. et sp. nov. and *U. tapajos* gen. et sp. nov. Data and maps on the geographic distribution are provided.

Keywords. Theraphosinae, taxonomy, stridulatory bristles, new genus.

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Introduction

The family Theraphosidae Thorell, 1869 currently has eleven subfamilies (Guadanucci 2014), four of them with species described from tropical and subtropical regions: Aviculariinae, Theraphosinae, Schismatothelinae and Ischnocolinae. The latter was established by Simon (1903) based on the presence of a divided tarsal scopula on the posterior legs. He included several genera in this subfamily, among them *Cyrtopholis* Simon, 1892, which he cited as being the only genus with a type IV stridulatory apparatus (stridulatory bristles on palp trochanter and leg I). Raven (1985) transferred *Cyrtopholis* to Theraphosinae based on the large subtegulum, presence of keels on palpal bulb and retrolateral femur IV with scopula.

At present, the following four Theraphosinae genera are described as having stridulatory bristles on the palpal trochanter and on the first legs: *Acanthoscurria* Ausserer, 1871, which includes 25 species distributed in South America and one from Lesser Antilles (Fig. 1); *Cyrtopholis* Simon, 1892, with 23 species from the Caribbean region and four species from Brazil (Fig. 2), *C. meridionalis* (Keyserling, 1891), *C. palmarum* Schiapelli & Gerschman, 1945, *C. zorodes* Mello-Leitão, 1923 and *C. schmidtii* Rudloff, 1996 (World Spider Catalog 2016); *Nesipelma* Schmidt & Kovarik, 1996, a monotypic genus with the type species *N. insulare* Schmidt & Kovarik, 1996 from the Lesser Antilles (Fig. 4); and *Longilyra* Gabriel, 2014, also monotypic with the type species *L. johnlonghorni* Gabriel, 2014 from El Salvador (Fig. 3).

While revising the four Brazilian species of *Cyrtopholis*, we found that none of them could be included in this genus. Studies of the type species, *Cyrtopholis cursor* (Ausserer, 1875), revealed differences in the spermathecae when compared to the Brazilian species. Also, a very different morphology of the male palp bulb was observed when compared to the Caribbean species of *Cyrtopholis*.

The study of type material and large samples of specimens from several Brazilian collections allowed us to establish the new genus *Umbyquyra* gen. nov., which includes eleven species: two transferred from *Cyrtopholis*, another from *Acanthoscurria* and eight new species. The female of *Umbyquyra palmarum* (Schiapelli & Gerschman, 1945) gen. et comb. nov. and the male of *U. schmidtii* (Rudloff, 1996) gen. et comb. nov. are herein described for the first time. Data on the geographical distribution are provided for all species.

Material and methods

The examined specimens are deposited in the following taxonomic collections (curators indicated between parentheses):

FIT/UNAMA	=	Faculdades Integradas do Tapajós/Faculdade da Amazônia, Santarém, Pará, Brazil (H. Chalkidis)
IBSP	=	Instituto Butantan, São Paulo, Brazil (A.D. Brescovit)
MACN	=	Museo Argentino de Ciencias Naturales "Bernadino Rivadavia", Buenos Aires, Argentina (C. Scioscia and M.J. Ramírez)
MNHNSD	=	Museo Nacional de Historia Natural Eugenio Marcano, Santo Domingo, Dominican Republic (G. de Los Santos)
MPEG	=	Museu Paraense Emilio Goeldi, Belém, Pará, Brazil (A.B. Bonaldo)
MZSP	=	Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil (R. Pinto da Rocha)
SMF	=	Senckenberg Museum, Frankfurt, Germany (P. Jäger)
UFMT	=	Universidade Federal de Mato Grosso, Cuiabá, Brazil (A. Chagas)
ZMB	=	Zoologisches Museum Berlin, Berlin, Germany (J. Dunlop)

Male palpal bulb terminology follows Bertani (2000) with some modifications in the abbreviations. Spine number and disposition follow Petrunkevitch (1925), with modifications proposed by Bertani (2001). All measurements are in millimeters and were taken using a Leica DFC425 stereo microscope with camera lucida. Length of leg segments were measured between joints, in dorsal view. Total body length excludes chelicerae and spinnerets. Extended focal range images were composed with Leica Application

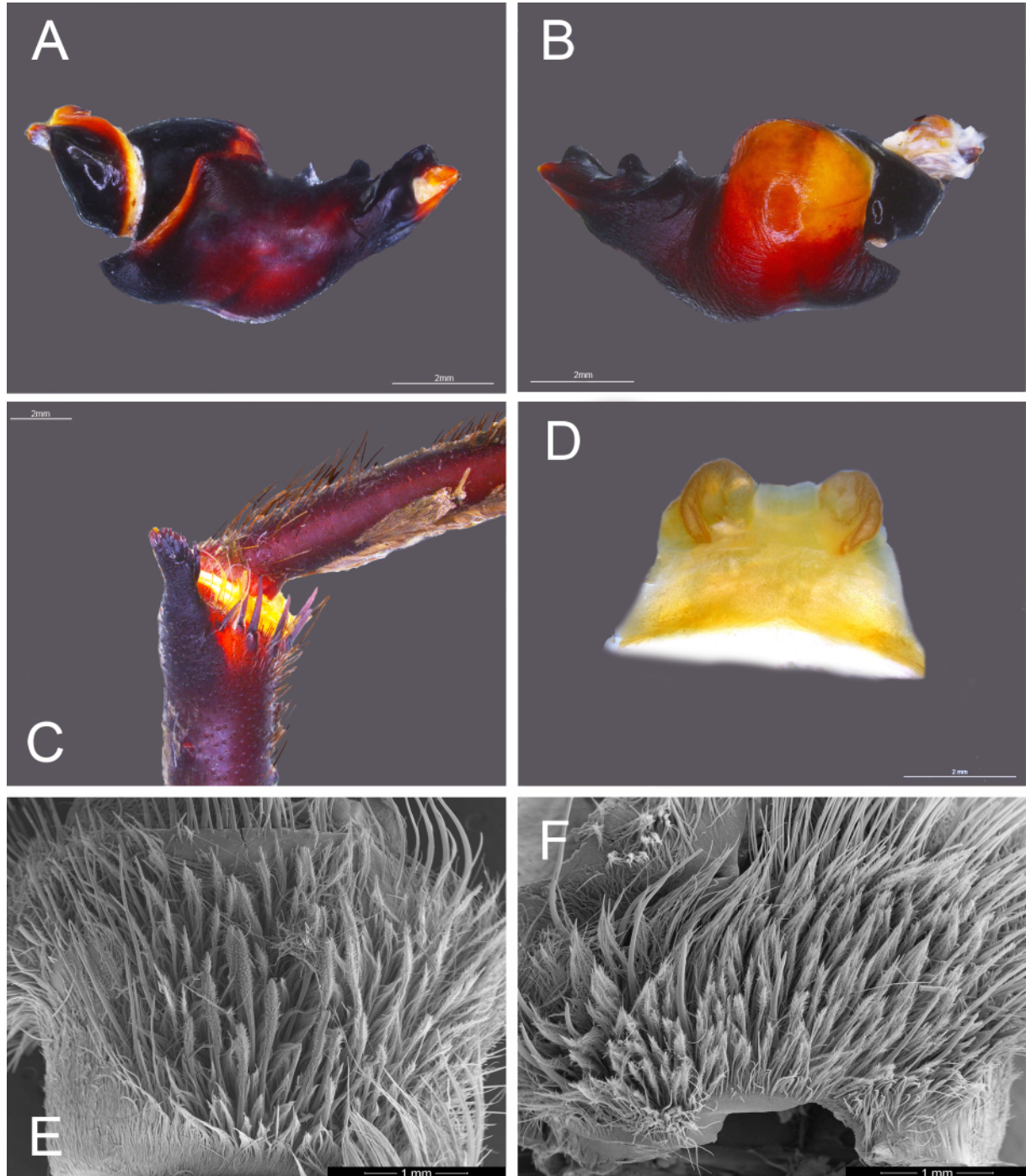


Fig. 1. *Acanthoscurria geniculata* Ausserer, 1871, ♂ and ♀, Santarém, Pará, Brazil (IBSP 151260). A–B. Palpal bulb. A. Retrolateral. B. Prolateral. C. Tibial apophysis, retrolateral. D. Spermathecae, dorsal. E. Male palp, trochanter, stridulatory organ. F. Trochanter I, stridulatory organ.

Suite version 2.5.0 (available from <http://www.heliconsoft.com/heliconsoft-products/helicon-focus/>). All photos of scanning electronic microscopy (SEM) were taken under high vacuum with a FEI Quanta 250 SEM at the Laboratório de Biologia Celular of the Instituto Butantan. Spermathecae were dissected and immersed in enzyme (Ultrazyme[®]) for 72 hours for soft tissue digestion to allow observation of internal structures.

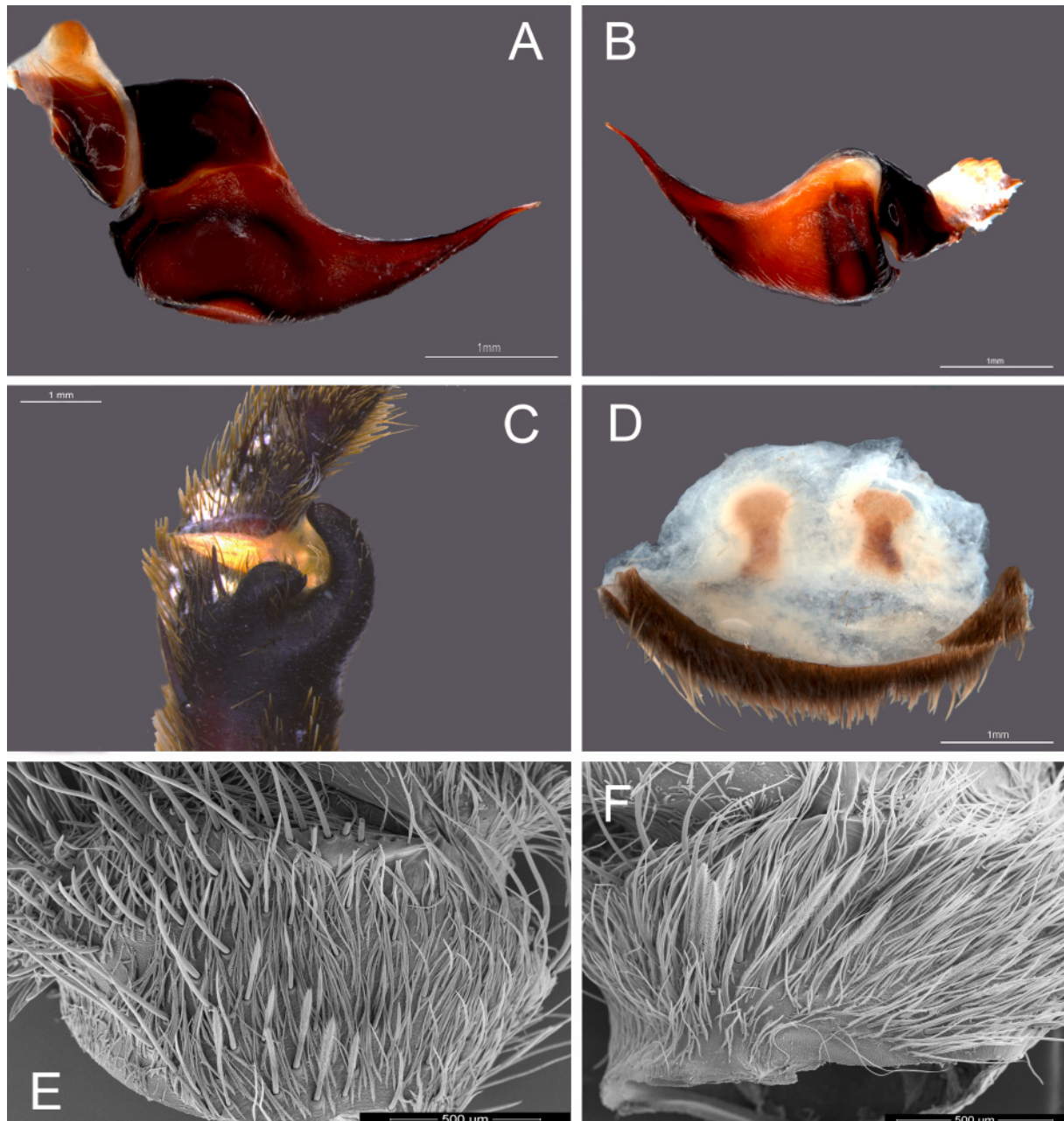


Fig. 2. *Cyrtopholis* sp., ♂ (MNHNSD 09.1463) and ♀ (MNHSD 1454), Parque Nacional Valle Nuevo, Dominican Republic. **A–B.** Palpal bulb. **A.** Retrolateral. **B.** Prolateral. **C.** Tibial apophysis, retrolateral. **D.** Spermathecae, female, dorsal. **E.** Male palp, trochanter, stridulatory organ. **F.** Trochanter I, stridulatory organ.

Geographic coordinates were obtained using a GPS, for specimens collected by us, or through information on the Museum original labels. Localities from museum samples without coordinates were georeferenced using Google Earth®.

Morphological abbreviations

A	=	apical keel
ALE	=	anterior lateral eyes
AME	=	anterior median eyes
ap	=	apical
app	=	apical prolateral
apr	=	apical retrolateral
BA	=	basal area
d	=	dorsal
p	=	prolateral
PAC	=	prolateral accessory keel
PB	=	prolateral branch
PI	=	prolateral inferior keel
PLE	=	posterior lateral eyes

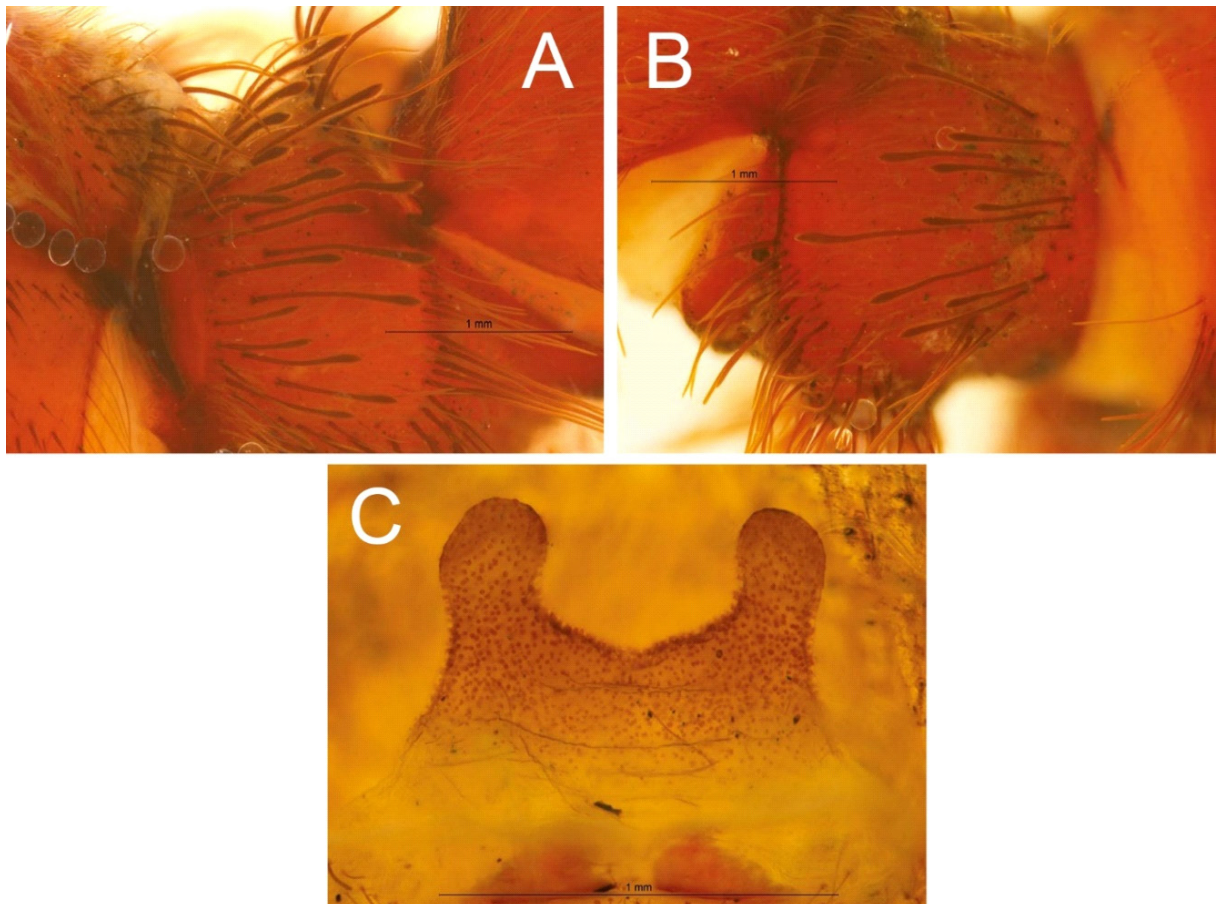


Fig. 3. *Longilyra johnlonghorni* Gabriel, 2014, ♀, Santa Ana, Laguna de Las Ninfas, El Salvador (SMF 8582/2). **A.** Palp, trochanter, stridulatory organ. **B.** Trochanter I, stridulatory organ. **C.** Spermathecae, dorsal. From Gabriel (2014: figs 1, 2, 5).

- PLS = posterior lateral spinnerets
PME = posterior median eyes
PS = prolateral superior keel
r = retrolateral
RB = retrolateral branch
SA = subapical keel
SR = seminal receptacle
STC = superior tarsal claws
v = ventral

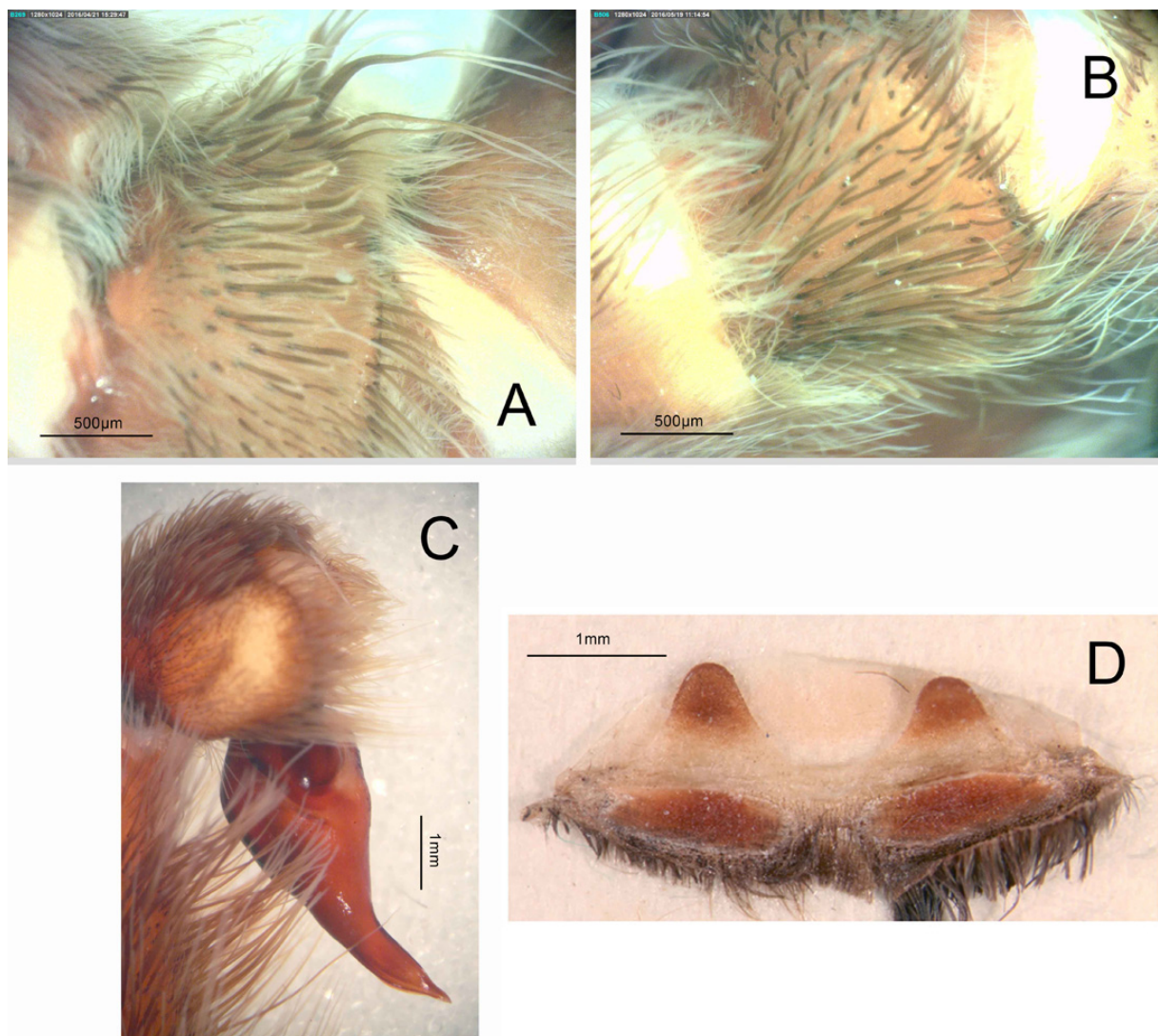


Fig. 4. *Nesipelma insulare* Schmidt & Kovarik, 1996, ♂ (SMF 38557-84) and ♀ (SMF 39188-84) from the Lesser Antilles, Nevi Island. **A–C.** Male palp. **A.** Trochanter, stridulatory organ. **B.** Trochanter I, stridulatory organ. **C.** Retrolateral. **D.** Spermathecae, female, dorsal (Photos by P. Jäger and C. Perafán).

Comparative material

Acanthoscurria geniculata Ausserer, 1871

BRAZIL: 1 ♂, 1 ♀, Pará, Santarém, Comunidade de Cucurunã, 2°27'13.01" S, 54°47'22.74" W, 25 Dec. 2009, A.P. Silva leg. (IBSP 151260) (Fig. 1).

Cyrtopholis sp.

DOMINICAN REPUBLIC: 1 ♂, Parque Nacional Valle Nuevo, La Vega, 18°51'22.2" N, 70°41'09.9" W, 10 May 2001, D. Veloz leg. (MNHNSD 09.1463); 1 ♀, same data, 29 Aug. 2009, G. de Los Santos leg. (MNHNSD 09.1454) (Fig. 2).

Longilyra johnloughorni Gabriel, 2014

EL SALVADOR: 2 ♀♀, Santa Ana, Laguna de Las Ninfas, 13°52'44" N, 89°47'48" W, 17 Aug. 1951 (SMF 8582/2A) (Fig. 3).

Nesipelma insulare Schmidt & Kovarik, 1996

LESSER ANTILLES: 1 ♂, holotype, Nevi Island, 17 Apr. 1993, Bezder leg. (SMF 38557-84); 1 ♀, same data as for holotype (SMF 39188-84) (Fig. 4).

Results

Class Arachnida Cuvier, 1812
Order Araneae Clerck, 1757
Family Theraphosidae Thorell, 1869
Subfamily Theraphosinae Thorell, 1869

Umbyquyra gen. nov.

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Type species

Umbyquyra paranaiba gen. et sp. nov.

Diagnosis

Umbyquyra gen. nov. presents stridulatory bristles on the palpal trochanter and first leg as the genera *Acanthoscurria*, *Cyrtopholis*, *Nesipelma* and *Longilyra*. It differs from these genera by a projected and well marked cephalic region (Fig. 5) and mainly by the aspect of the genitalia: male palpal bulb compact and globose, tegulum short, embolus, palpal bulb with a short embolus presenting four keels, tibial apophysis with two branches not originating from a common base, and metatarsus I, when flexed, touches the retrolateral branch laterally (Figs 7C, 8D); female spermathecae with SR connected to a sclerotized basal plate with conspicuous ducts (Fig. 7D).

Etymology

Umbyquyra gen. nov. originates from the Tupi Indian language and means 'pointed bird beak', relative to the aspect of the short embolus of the palpal bulb. The gender is neuter.

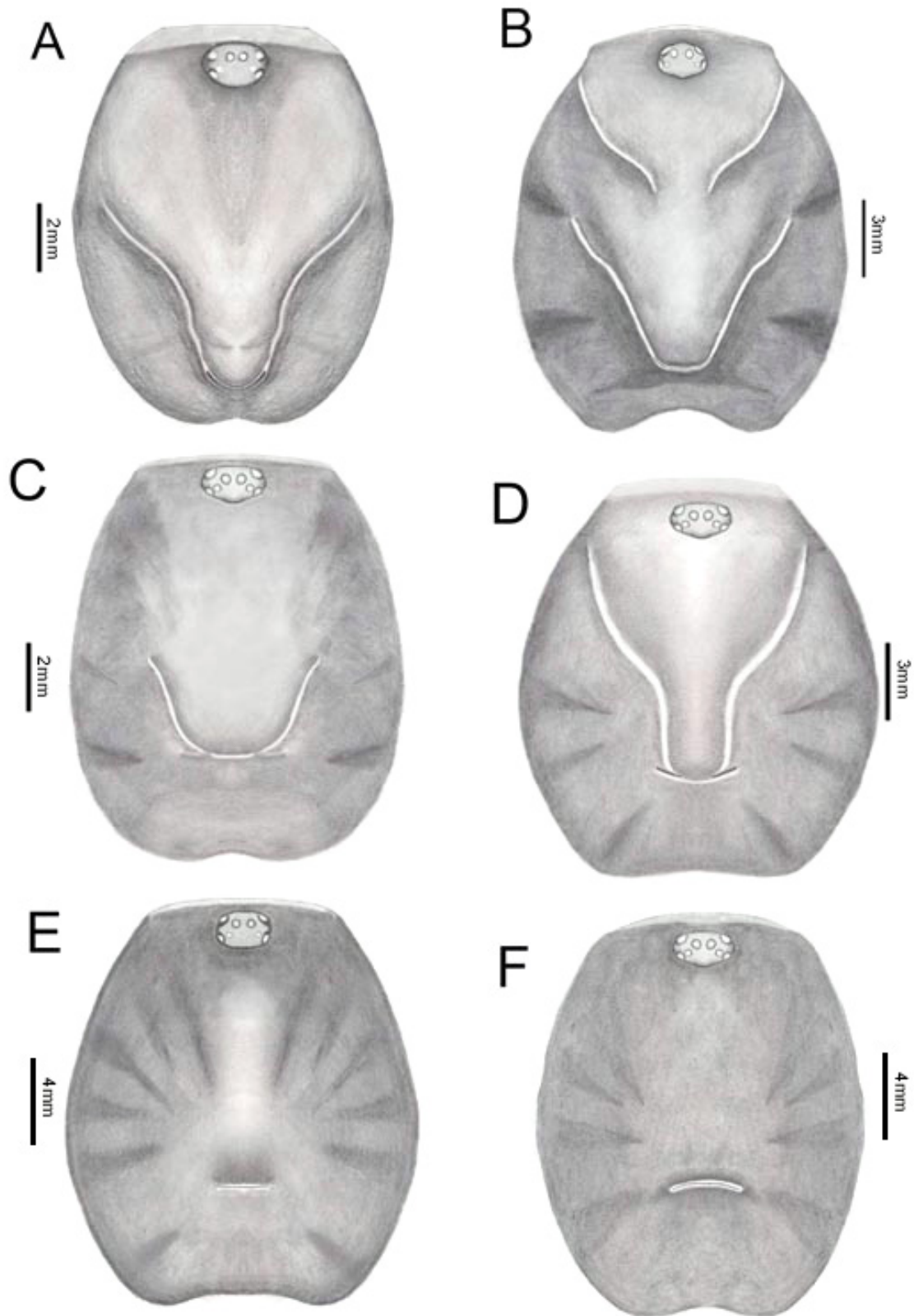


Fig. 5. Fovea, carapace. **A.** *Umbyquyra schimidti* gen. et sp. nov. **B.** *U. sapezal* gen. et sp. nov. **C.** *U. caxiuana* gen. et sp. nov. **D.** *U. cuiaba* gen. et sp. nov. **E.** *U. paranaiba* gen. et sp. nov. **F.** *U. belterra* gen. et sp. nov.

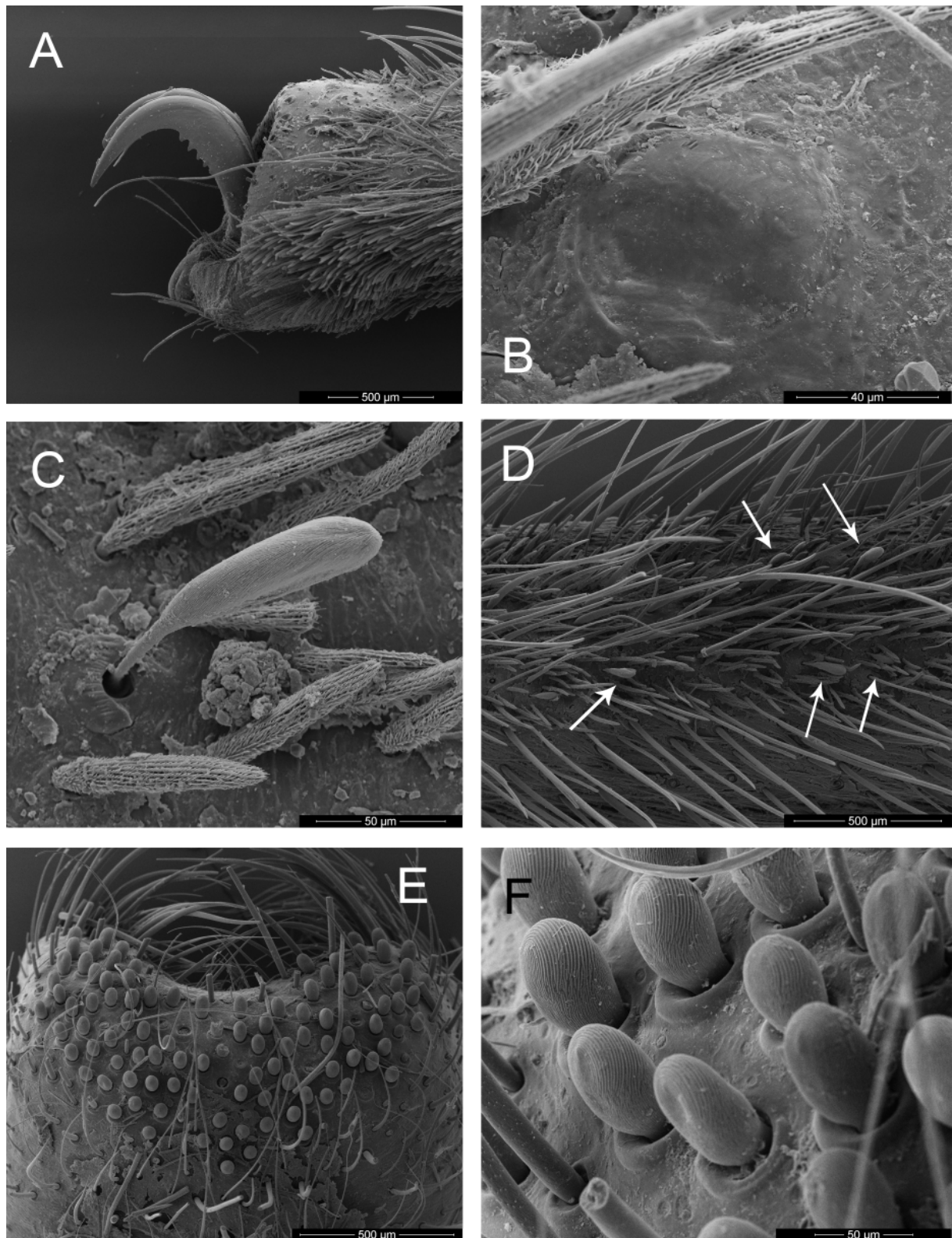


Fig. 6. *Umbyquyra tucurui* gen. et sp. nov., ♂, from Tucuruí, Pará, Brazil (IBSP 104716). **A.** Tarsal claws, leg I, prolateral view. **B.** Tarsal organ, dorsal. **C.** Trichobothrium, tarsi I, lateral. **D.** Row of trichobothria, tarsi I, dorsal (arrows indicate the trichobothria). **E.** Labium, ventral. **F.** Cuspules of labium, detail.

Description

Total length: males 18–40, females 20–44. General color is dark brown with legs lighter brown. The dorsal side of abdomen covered with long reddish or golden hairs with a dark patch (Fig 16F), ventral side of abdomen dark brown, legs with long yellowish or reddish hairs (Fig. 16F). Carapace longer than wide. Cephalic region with a projection slightly raised defined by the thoracic grooves. Fovea procurve (Fig. 5A–B, D), straight (Fig. 5C, E) or recurve (Fig. 5F), some species with projection over the fovea (Fig. 15E). Eye tubercle slightly raised, wider than long. Eight eyes, ringed with black. Anterior row of eyes procurved, posterior row slightly recurved or straight (Fig. 16E). Labium as wide as long, quadrate, with 130 cuspules (Fig. 6E). Endites with distinct anterior lobe, with 90–230 cuspules on internal basal angle. Sternum oval with six sigilla. Tarsal scopulae dense and integral, only tarsus IV with some bristles in longitudinal line. STC with 4–5 small teeth (Fig. 6A). Tarsi I–IV with two rows of clavate trichobotria (Fig. 6C–D). Scopulae on all tarsi and metatarsi I–II integral and only apical on metatarsi III–IV. Stridulatory bristles on palpal trochanter with 13–25 bristles and 30–38 on trochanter of leg I, sometimes with very long bristles similar as the described for *Longilyra*, occupying all the length of trochanter in other difficult to observe as in *Umbyquyra acuminata* (Schmidt & Tesmoingt in Schmidt, 2005) gen. et comb. nov. (Fig. 14E–F). *Umbyquyra palmarum* gen. et comb. nov. (Fig. 12E–F), *U. tapajos* gen. et sp. nov. (Fig. 24E–F), *U. tucurui* gen. et sp. nov. (Fig. 26E–F), *U. caxiuana* gen. et sp. nov. (Fig. 28E–F) have bristles long and very large, varying in size and number. PLS three-segmented with digitiform apical segment. Male palpal bulb with oval tegulum, short embolus, four or five keels resembles *Acanthoscurria*, but differs by distribution of keels. Tibia I with two branches, not originating from common base, retrolateral and prolateral branch with strong spines; palpal bulb with oval tegulum (Figs 7A–C, 8A–D), in general with four keels (PS, PI, SA, A), but two species have a prolateral accessory keel (PAc). *Umbyquyra palmarum* gen. et comb. nov. have four keels. Female genitalia: spermatheca with heavy sclerotized basal area (Fig. 7D), in *U. cuiaba* gen. et sp. nov. basal area reduced, SR with short (Fig. 11D) or elongated (Figs 7D, 15D) ducts emerging or not from the basal area. Urticating hairs of type I and III present in both sexes.

Species included

Umbyquyra paranaiba gen. et sp. nov., *U. cuiaba* gen. et sp. nov., *U. araguaia* gen. et sp. nov., *U. sapezal* gen. et sp. nov., *U. belterra* gen. et sp. nov., *U. caxiuana* gen. et sp. nov., *U. tucurui* gen. et sp. nov., *U. tapajos* gen. et sp. nov., *U. palmarum* gen. et comb. nov., *U. acuminata* gen. et comb. nov. and *U. schmidtii* gen. et comb. nov.

Distribution

Species of *Umbyquyra* gen. nov. are registered in the Brazilian states of Acre, Pará, Mato Grosso, Tocantins, Goiás, Mato Grosso do Sul, São Paulo and Bolivia, Province Sara (Figs 29–31).

Umbyquyra paranaiba gen. et sp. nov.

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Figs 5E, 7–8, 18G–H, 29

Cyrtopholis palmarum – Bertani 2000: 30–31 (misidentification).

Diagnosis

Males of *U. paranaiba* gen. et sp. nov. differ from those of the other species by the short and straight fovea (Fig. 5E), a palpal bulb with a short embolus, the prolateral inferior (PI) and apical keel (A) parallel near the rear distancing from each other in the middle region, becoming more evident and narrowing again at the rear (Figs 7A, 8B) and tibial apophysis with a very short prolateral branch with

two strong distinct spines (Figs 7C, 8D). Females resemble those of *U. palmarum* gen. et comb. nov. by an SR with short ducts, but differ by a rectangular and broader sclerotized basal area (Fig. 7D).

Note

Bertani (2000: 30–31) identify a male as *C. palmarum* (IBSP 4730). The specimen was examined by us and identified as *U. paranaiba* gen. et sp. nov. and we detected that the number of keels is four (PS, PI, A and SA, Fig. 8) and not three.

Etymology

The species epithet is a noun in apposition taken from the type locality.

Type material

Holotype

BRAZIL: ♂, Mato Grosso do Sul, Paranaíba, 19°40'30.4" S, 51°1'27.1" W, May 1985, R.R. da Silva leg. (IBSP 107411).

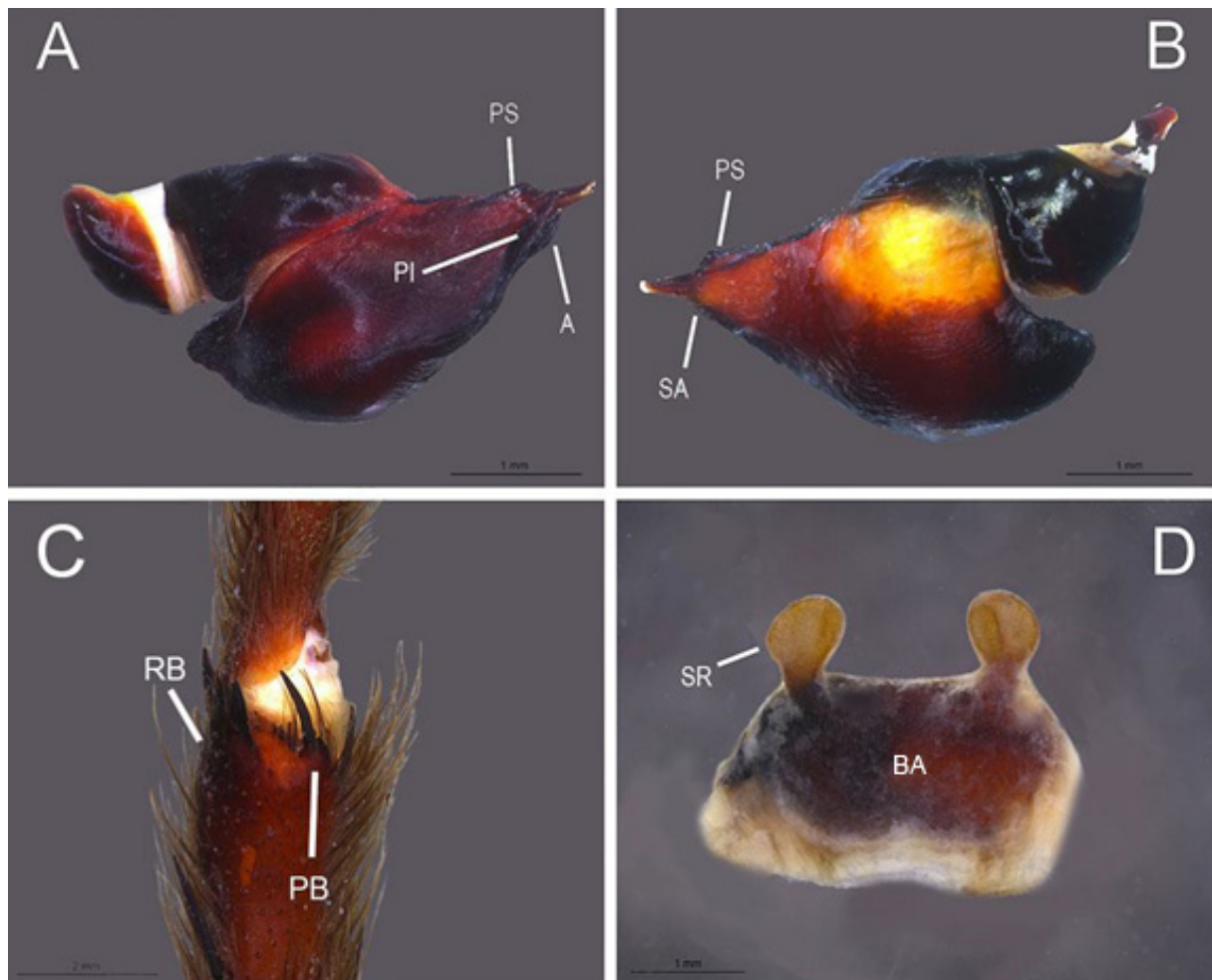


Fig. 7. *Umbyquyra paranaiba* gen. et sp. nov. A–C. Holotype, ♂ (IBSP 107411). A. Palp, prolateral. B. Retrolateral. C. Tibial apophysis, ventral. D. Paratype, ♀ (IBSP 111695), spermathecae, dorsal. Abbreviations: see Material and methods.

Paratypes

BRAZIL: **Acre:** 1 ♂, Rio Branco, 9°58'25.7" S, 67°49'29.7" W, 13 Oct. 1952, C.A. Souza leg. (IBSP 103054). – **Goiás:** 1 ♂, Mineiros, 17°33'44.2" S, 52°32'51.9" W (IBSP 108090). – **Mato Grosso do Sul:** 1 ♀, Paranaíba, 19°40'30.4" S, 51°11'27.1" W, 20 Jul. 1988, R.R. da Silva leg. (IBSP 111695). – **Mato Grosso:** 1 ♂, Canarana, 13°31'19.0" S, 52°15'45.6" W, 16 Dec. 2000, R.A.K. Ribeiro and C.A. Falcetti leg. (IBSP 110469). – **São Paulo:** 2 ♂♂, Morro Agudo, 20°43'48.6" S, 48°03'15.0" W, Oct. 1987, J.H.B. Medeiros leg. (IBSP 107421).

Other material examined

BRAZIL: **Mato Grosso:** 1 ♂, Juara, 11°15'20.8" S, 57°30'29.5" W, 14 Aug. 2007, R.A.K. Ribeiro leg. (UFMT 0964); 1 ♂, Cuiabá, 15°36'44.9" S, 56°04'05.8" W, 2002 (UFMT 0965); 1 ♂, same collection data as for preceding, 3 Oct. 1982, S. Silva leg. (UFMT 0965); 1 ♂, Chapada dos Guimarães, 15°27'46.9" S, 55°44'59.2" W, Jan. 2009 (IBSP 167417); 1 ♂, Santa Cruz do Xingu, 10°09'16.9" S, 52°23'28.5" W, 16 Aug. 2010, Carvalho *et al.* leg. (IBSP 167418); 1 ♂, Cuiabá, Campus UFMT, 15°36'44.9" S, 56°04'05.8" W, Oct. 2009, Thiago leg. (IBSP 167424); 1 ♂, Lucas do Rio Verde, 13°04'24.9" S, 55°55'11.1" W, V. Azarias leg. (IBSP 167425); 1 ♂, Nova Xavantina, 10 Oct. 1969, Destacamento da FAB leg. (IBSP 103988); 2 ♂♂, São Felix do Araguaia, 11°37'03.1" S, 50°39'59.8" W, Nov. 1984, R. Korte leg. (IBSP 104829); 3 ♂♂, 1 ♀, Rondonópolis, 16°27'59.6" S, 54°38'07.8" W, 7 Nov. 1985, Secretaria Municipal de Saúde leg. (IBSP 104896); 1 ♂, Parque Nacional do Xingu, 11°32'45" S, 53°34'23" W, Jun. 1985, D.S.T. Xingu leg. (IBSP 107418); 1 ♂, Sinop, 11°51'35.4" S, 55°30'28.7" W, Oct. 1988, C. Barbieri Filho leg. (IBSP 107432); 1 ♂, Torixoréu, 16°12'04.9" S, 52°33'30.0" W, Sep. 1989, W. Garcia leg. (IBSP 107620); 1 ♂, Ribeirão Cascalheira, 12°56'25.7" S, 51°49'27.5" W, 17 Nov. 2011 (IBSP 166975); 1 ♂, same collection data as for preceding (IBSP 166976); 1 ♂, same collection data as for preceding (IBSP 166977); 1 ♂, same collection data as for preceding (IBSP 166978). – **Mato Grosso do Sul:** 8 ♂♂, 1 ♀, Paranaíba, Sep. 1982, R.R. Silva leg. (IBSP 104730); 9 ♂♂, same collection data as for preceding, Oct. 1982 (IBSP 104733A); 6 ♂♂, same collection data as for preceding, Oct. 1985 (IBSP 104733B); 1 ♂, same collection data as for preceding, May 1985 (IBSP 107410); 1 ♂, same collection data as for preceding, Jun. 1985 (IBSP 107419); 1 ♂, same collection data as for preceding, Jun. 1985 (IBSP 107420); 1 ♂, same collection data as for preceding, Aug. 1983 (IBSP 107621); 2 ♂♂, Três Lagoas, 20°47'22.1" S, 51°42'14.4" W, 20 Oct. 1997 (IBSP 111145); 1 ♀, same collection data as for preceding, Sep. 1997, C. Gerbi leg. (IBSP 111145); 1 ♂, Campo Grande, 20°28'06.8" S, 54°37'07.1" W, 20 Oct. 1985, Vera and Cesar leg. (IBSP 111693); 1 ♂, Chapadão do Sul, Fazenda São Roque, 18°47'42.5" S, 52°37'05.5" W, Oct. 2007, C. Pritsch leg. (IBSP 115381).

Natural History

Very aggressive when disturbed; specimens raise the abdomen resembling the defensive display of the species of *Avicularia* and of some spiders of Nemesiidae, or raise pedipalps and legs I resembling species of *Acanthoscurria* (Fig. 18D, H; Gonzalez-Filho *et al.* 2012) and *Aguapanela* Perafán, Cifuentes & Estrada-Gomez, 2015 (Perafán *et al.* 2015).

Description

Male (holotype, IBSP 107411)

Color in life carapace and dorsal face of abdomen dark brown, ventral side lighter brown, legs covered with reddish hairs. In ethanol: carapace reddish-brown as dorsal face of abdomen, ventral side and legs light brown.

Total length 27. Carapace 11 long, 13 wide. Clypeus 0.2. Eye tubercle 1.6 long, 2.2 wide. AME 0.2 long, 0.3 wide; PME 0.2 long, 0.2 wide; ALE 0.4 long, 0.4 wide; PLE 0.3 long, 0.2 wide. Basal segment of chelicerae with 10 teeth. Labium 2.1 long, 1.7 wide, with 115 pointed cuspules. Endites with 115–117

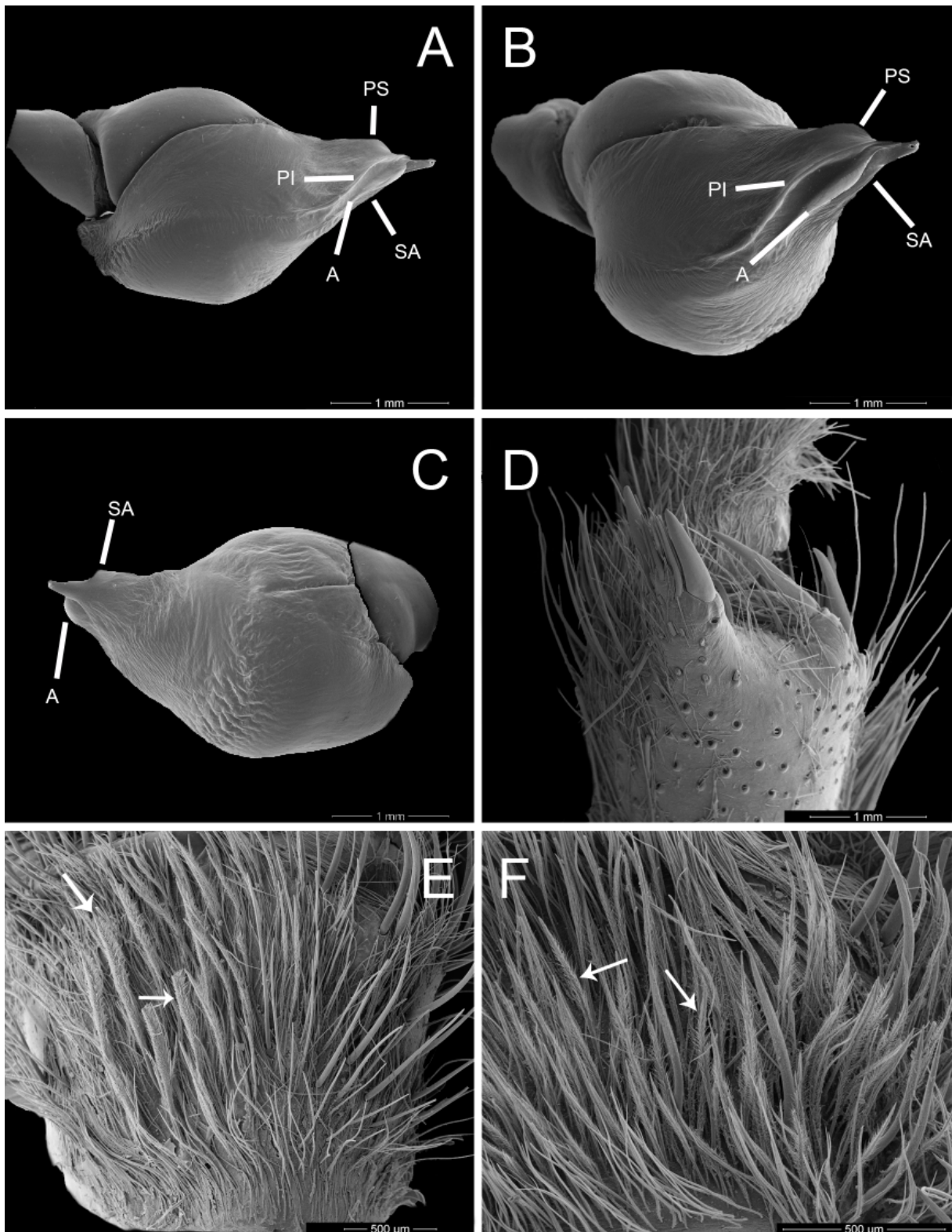


Fig. 8. *Umbyquyra paranaiba* gen. et sp. nov. Holotype, ♂ (IBSP 107411). **A–C.** Palpal bulb. **A.** Prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, trochanter, male palp. **F.** Stridulatory organ, trochanter I (arrows in E–F pointed the stridulatory bristles). Abbreviations: see Material and methods.

pointed cuspules. Stridulatory bristles with around 15 bristles on palp trochanter and 45 on leg I. Palp: femur 7.8, patella 4.3, tibia 7.1, tarsus 3.4, total 22.6. Leg I femur 14, patella 6.5, tibia 10.7, metatarsus 11.5, tarsus 6.7, total 49.4. II 13, 6.1, 9.8, 9.8, 6.2, 44.9. III 12, 5.5, 8.5, 10.3, 6.3, 42.6. IV 14, 6.5, 11.2, 17, 6.3, 54.5. Spination: palp: femur d0-0-1-0ap, patella p0-1-0-1-0ap tibia d0-0-1app, v0-1-2-1p-1p-1r-0-0ap, p0-1-1-1-2-1-1-2-1-2-1ap, r0-0-1ap. Legs I femur d0-0-1app, patella p0-1-0ap, tibia v0-2-1r1r-1apr-1ap-1app, p0-1-0-1ap, metatarsus v0-1-0-0-1ap. II femur d0-0-1app, patella d 0-1r-0ap, p0-1-0ap, tibia v0-1r1p-0-1-1p-1p-1r-0-1apr, p0-1-0-1-0ap, metatarsus d0-1r-0-0ap, v0-1p-0-1r-0-0-2app-1ap-1apr. III femur d0-0-1apr, p0-0-1-0ap, patella d0-1r-0-0-0ap, tibia v0-1-2-1r-1-1-1apr-2ap-1app, p0-0-1-1-0ap, r2-1-1-1-1-2ap, metatarsus d0-0-1r-1p-0-1r-1p-0ap, v1r-1p-1p-1r-0-1apr-1ap-1app, p0-0-1-0-0-1-0ap, r1-1-1-1-1-3ap. IV femur d0-0-1apr, tibia v0-0-1-1r-2-0-2apr-1ap-1app, p0-1-0-0-1ap, r0-1-0-1-1ap, metatarsus d0-0-1r-0-0ap, v, 1r-1p-1r1-1r-1p-2-2-1r-1p-1r-1p-2app-1ap-1app, r1-0-0-1-0-0-1ap. Palpal bulb with short embolus and four keels: PS, PI, A, SA. Tibial apophysis of leg I: retrolateral branch and two strong distal spines with three median setae (Figs 7C, 8D). PLS: basal, median and apical segments 2.2, 2, 2.2 long, respectively.

Female (paratype IBSP 111695)

In ethanol, color as in male. Total length 32. Carapace 13 long, 9.5 wide. Clypeus 0.3. Eye tubercle 1.5 long, 2 wide. AME 0.4 long, 0.4 wide; PME 0.4 long, 0.3 wide; ALE 0.2 long, 0.3 wide; PLE 0.3 long, 0.2 wide. Basal segment of chelicerae with eight teeth. Labium 1.6 long, 1.8 wide, with 120 pointed cuspules. Endites with 115–117 pointed cuspules. Stridulatory bristles as in male. Palp: femur 6, patella 2, tibia 3, tarsus 2.5, total 13.5. Leg I femur 8, patella 3.5, tibia 5, metatarsus 4, tarsus 2, total 22.5. II 7, 3, 3.5, 4.5, 2, 20. III 6, 2, 3, 5, 2.2, 27.7. IV 9, 2.5, 5.2, 9.2, 2.5, 28.4. Spination: palp: femur p0-0-1app, tibia v0-1r-1apr-1ap-2app, p0-0-1ap. Leg I tibia v0-1r-0ap, r0-0-1-0ap, metatarsus v0-1-0-0-1ap. II tibia 1-0-1-1-1-0-2ap, metatarsus v0-1-1-0-0-1ap. III tibia v0-1-1app, p0-1-0-1-0-1ap, 0-1-1-1-0-1-1ap, metatarsus v1-1r-1r-1p-0-0ap, r2-0-1-0-1ap. IV tibia v0-0-1-1-1-1ap-1app, p0-1-0-1ap-r0-1-0-1-0ap, metatarsus d0-1r-0-0-1ap, v1-1p-1-1-1-1p-1p-1-2ap, p0-1-0-0ap, r0-0-1-1ap. PLS basal, median and apical segments 2.7, 1.9, 2.7 long, respectively. Spermathecae with RS rounded at apex, distant from each other by approximately its diameter (Fig. 7D).

Distribution

Umbyquyra paranaiba gen. et sp. nov. has the widest distribution, occurring in the following Brazilian states: Acre, Mato Grosso, Mato Grosso do Sul and São Paulo (Fig. 29).

Umbyquyra sapezal gen. et sp. nov.

[urn:lsid:zoobank.org:act:291244D4-A64B-4204-8A63-2038F2357CE5](https://zoobank.org/act:291244D4-A64B-4204-8A63-2038F2357CE5)

Figs 5B, 9, 10, 30

Diagnosis

Males of *Umbyquyra sapezal* gen. et sp. nov. have a strong procurve projection of the cephalic region resembling those of *U. palmarum* gen. et comb. nov. but differ by the two long stretch marks (Fig. 5B) and palpal bulb with the most enlarged A and SA keels (Figs 9A, 10A–B).

Etymology

The species epithet is a noun in apposition taken from the type locality.

Type material

Holotype

BRAZIL: ♂, Mato Grosso, Sapezal, Usina Hidrelétrica de Sapezal, 13°32'55.2" S, 58°47'27.2" W, 2007, F.D. de Godoy leg. (IBSP 113753).

Paratypes

BRAZIL: 1 ♂ (IBSP 113751), 2 ♂♂ (IBSP 113752), same data as for holotype.

Description

Male (holotype IBSP 13753)

In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length 30. Carapace 15 long, 12.8 wide. Clypeus 0.3. Eye tubercle 1.2 long, 1.8 wide. AME 0.35 long, 0.3 wide; PME 0.25 long, 0.2 wide; ALE 0.45 long, 0.25 wide; PLE 0.35 long, 0.25 wide. Basal segment of chelicerae with 11 teeth. Labium 2 long, 2.2 wide, with 97 cuspules. Endites with 130–132 cuspules. Stridulatory bristles with around 15 bristles on palp trochanter and 45–50 on leg I (Fig. 10E–F). Palp: femur 8, patella 3.7 tibia 8.2, tarsus 2.8, total 22.7. Leg I femur 13.4, patella 5.6, tibia 11, metatarsus 11, tarsus 6.6, total 47.6. II 13, 4, 10, 10.2, 6.3, 43.5. III 10.6, 3.4, 8.3, 11, 6.6, 60. IV 13.5, 4.8, 12, 15.8, 6.7, 52.8. Spination: palp: femur d0-0-1app, tibia d0-0-0-1p-1p-2p-2app, v0-0-1-1-0ap, r0-0-1-1ap. Legs I femur d0-0-1app, tibia v1-1-1r-1r-1-1-1p-1r-1p-1app-2apr, r1-0-1-0-1-0-0ap, metatarsus d0-0-1app. II femur 0-0-0-1app, tibia v1-1r-2-1-1-1ap, metatarsus v0-1-1-0-0-1apr, p0-1-0-0ap. III femur d0-0-1apr, tibia v1-1-1-0-0ap, p0-0-1-0ap, r0-1-1-0ap, metatarsus v0-1-1-0-1ap, p1-0-0-1-1-1ap, r0-1-0-0-1ap. IV tibia v0-1-1ap-1r-1apr, p0-1-1ap, r0-1-0-1ap, metatarsus v1-1r-1-1p-1r-1r-1p-1app-3apr, p1-0-1-0-0ap, r0-1-0-1ap. Tibial apophysis of leg I: retrolateral branch with two strong distal spines with 3–6 median setae; prolateral branch with

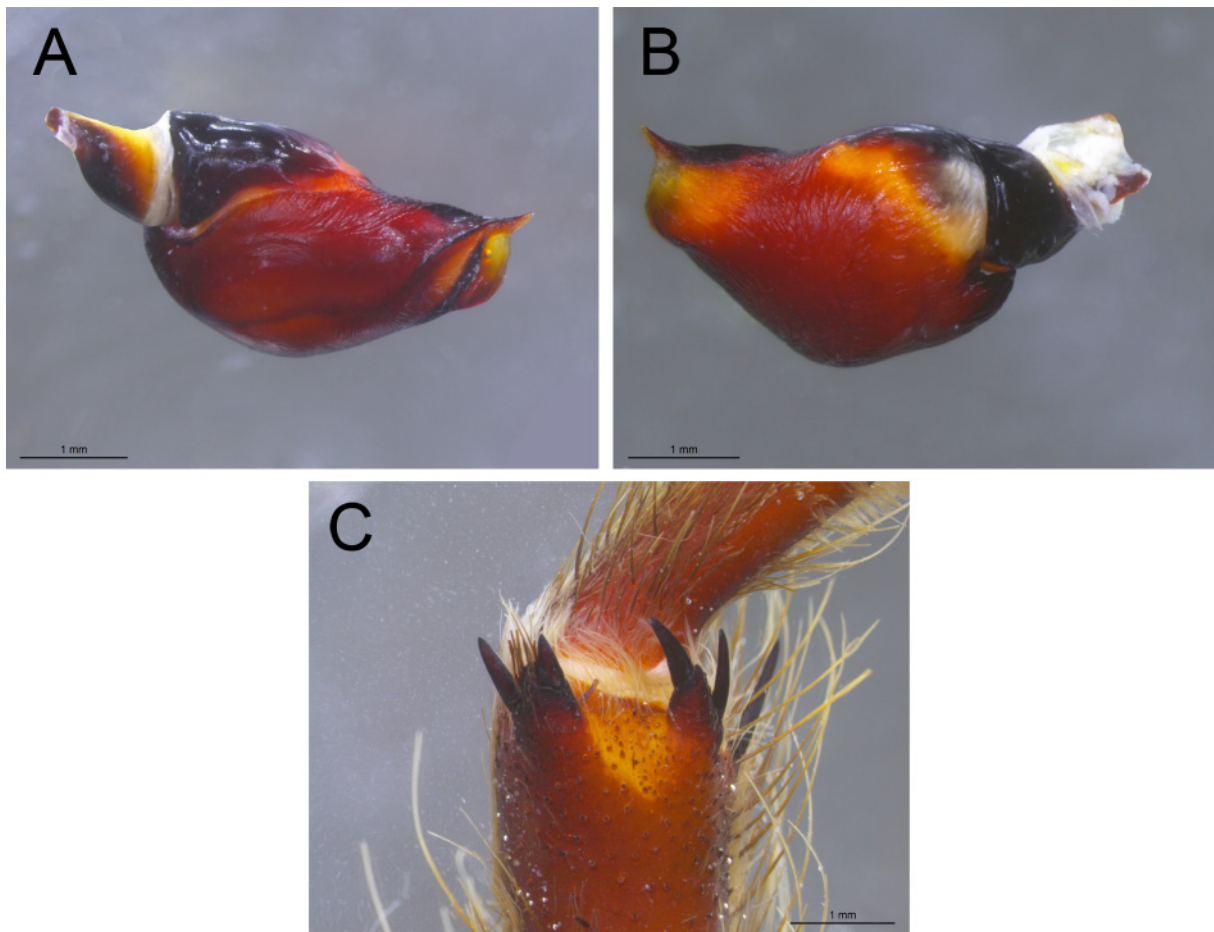


Fig. 9. *Umbyquyra sapezal* gen. et sp. nov., holotype, ♂, Sapezal, Mato Grosso (IBSP 113753). **A.** Palp prolateral. **B.** Retrolateral. **C.** Tibial apophysis, retrolateral.

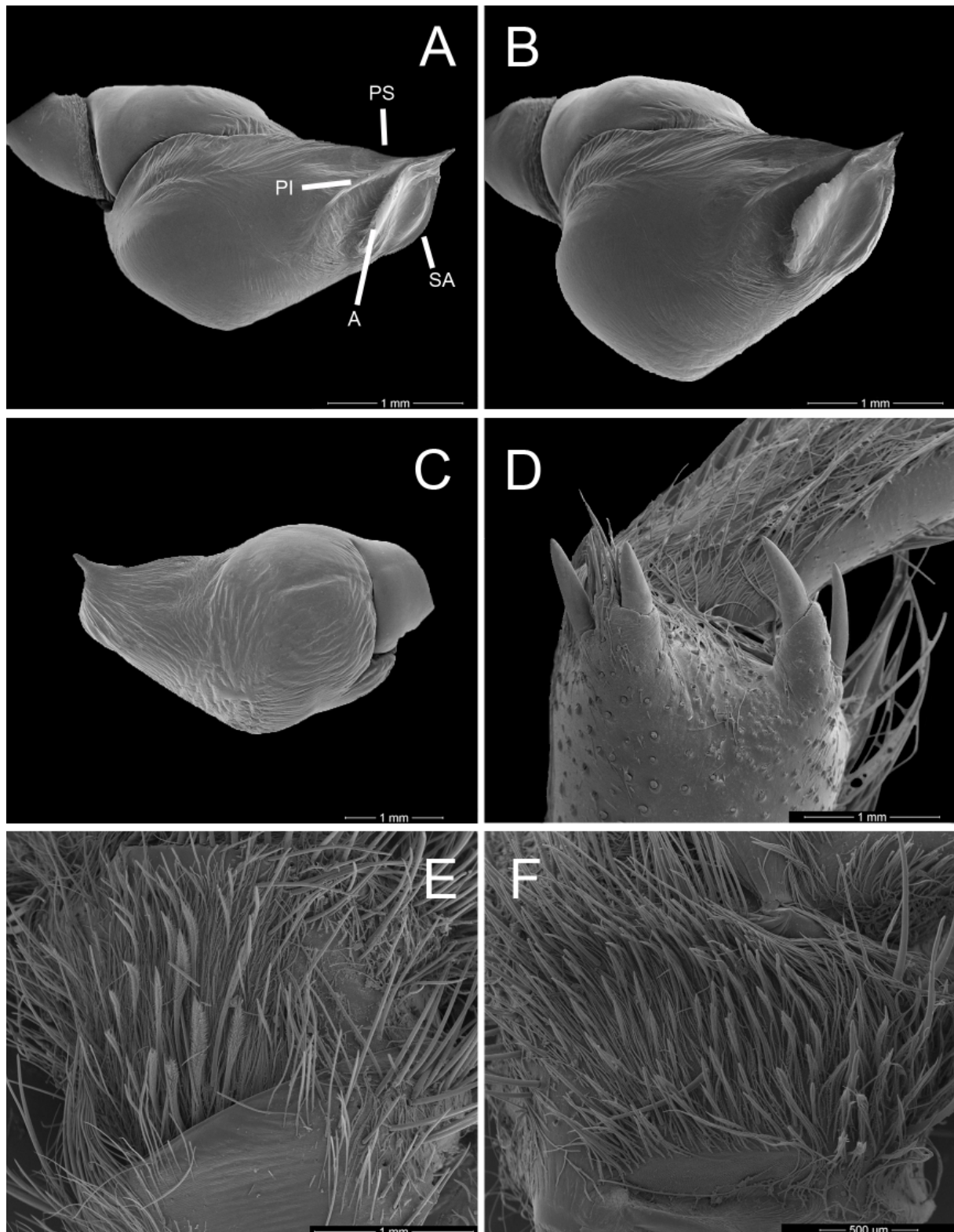


Fig. 10. *Umbyquyra sapezal* gen. et sp. nov., holotype, ♂, Sapezal, Mato Grosso (IBSP 113753). **A.** Palp prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, palp trochanter. **F.** Trochanter I. Abbreviations: see Material and methods.

one distal and one sub basal spines (Figs 9C, 10D). PLS basal, median and apical segments 2.1, 2.1, 2.8 long, respectively.

Female

Unknown.

Distribution

Brazil: state of Mato Grosso (Fig. 30).

Umbyquyra palmarum (Schiapelli & Gerschman, 1945) gen. et comb. nov.
Figs 5C, 11, 12, 30

Cyrtopholis palmarum Schiapelli & Gerschman, 1945: 182, pl. IX.

Cyrtopholis palmarum – Gerschman & Schiapelli 1973: 68, figs 1–5. — Schmidt 1993: 63, figs 68–69;
1997: 18, 149–150.

Acanthoscurria palmarum – Schmidt 2003: 133, 142, figs 170–171.

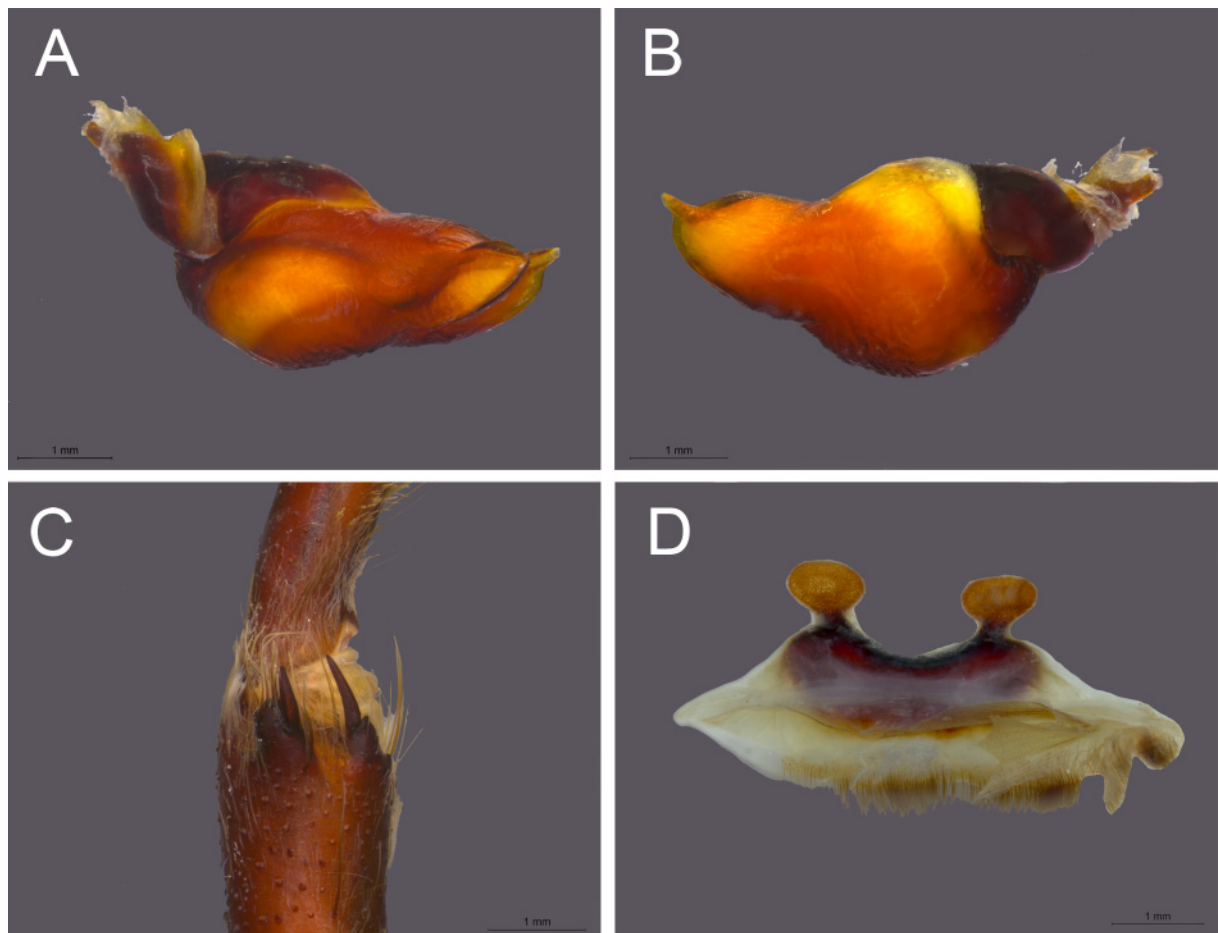


Fig. 11. *Umbyquyra palmarum* (Schiapelli & Gerschman, 1945) gen. et comb. nov. **A–C.** Holotype, ♂, Barão de Melgaço River, Rondônia, Brazil (MACN 832). **A.** Palp prolateral. **B.** Retrolateral. **C.** Tibial apophysis, retrolateral. **D.** ♀, Chapada dos Guimarães, Mato Grosso, Brazil (IBSP 107257), spermathecae, dorsal.

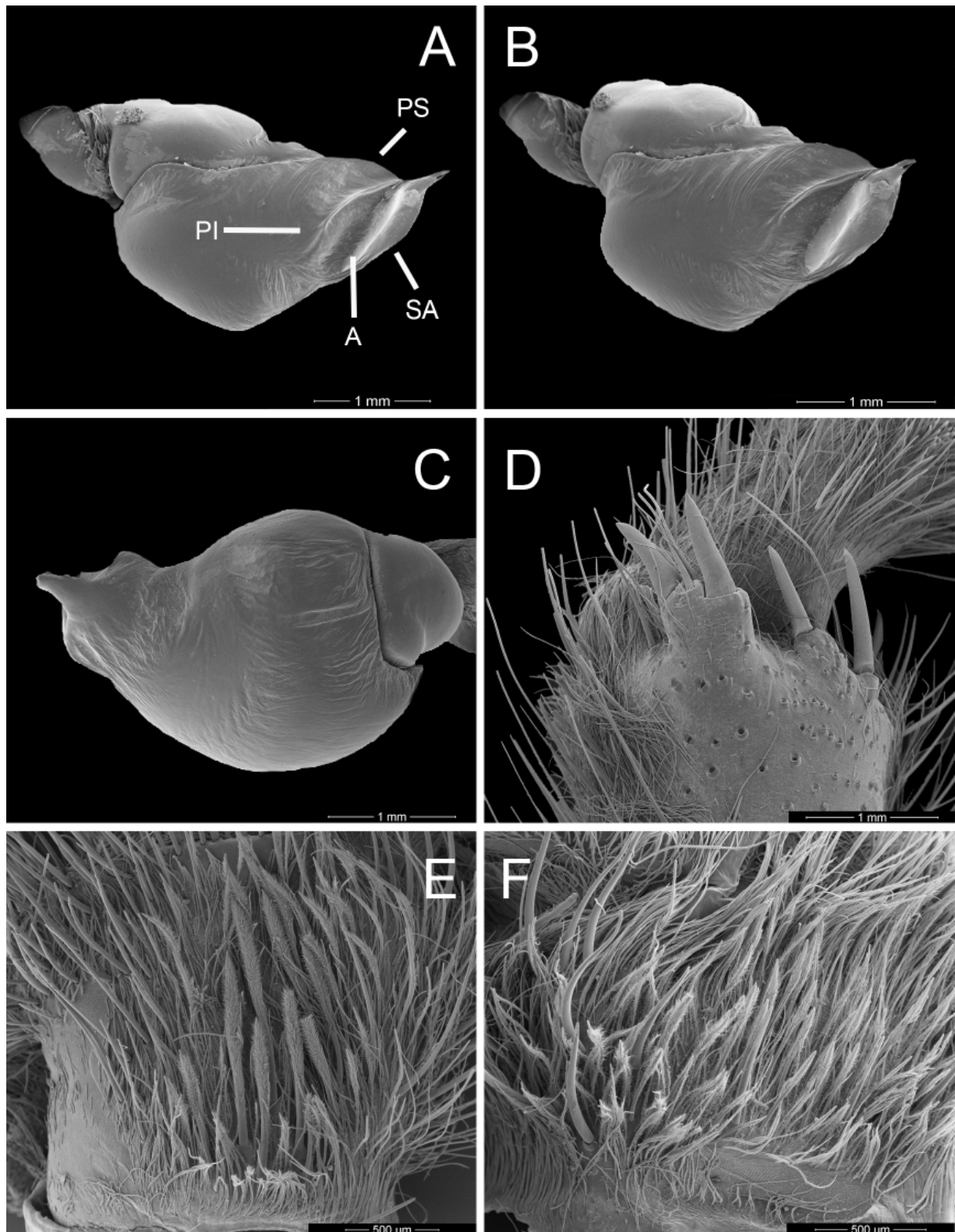


Fig. 12. *Umbyquyra palmarum* (Schiapelli & Gerschman, 1945) gen. et comb. nov. ♂, Canoa Quebrada, Mato Grosso, Brazil (IBSP 167427). **A.** Palp prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, palp trochanter. **F.** Trochanter I. Abbreviations: see Material and methods.

Diagnosis

Males and females of *U. palmarum* gen. et comb. nov. differ from those of the other species by the strongly procurved fovea, like a half moon, delimitating the very long projection of the cephalic region (Fig. 5D) and male palpal bulb with well-developed A and SA keels (Figs 11A, 12A–B). Female spermathecae with antero-medially excavated base and SR with very short ducts (Fig. 11D).

Type material

Holotype

BRAZIL: ♂, Rondônia, Barão de Melgaço River, 11°45'11.3" S, 60°56'24.1" W, Sep. 1936, Vellard leg. (MACN 832).

Additional material

BRAZIL: **Mato Grosso**: 1 ♀, Chapada dos Guimarães, 15°27'46.9" S, 55°44'59.2" W, 1982. R.R. da Silva leg. (IBSP 107257); 2 ♂♂, Lucas do Rio Verde, PCH Canoa Quebrada, 13°04'24.9" S, 55°55'11.1" W, V. Azarias leg. (UFMT 0963, IBSP 167427); 1 ♂, Porto dos Gauchos, 11°21'57.1" S, 57°28'48.1" W, 31 Aug. 1962, H. Schulze leg. (IBSP 103628).

Description

Male (holotype, MACN 832)

In life: according to Vellard (1945), reddish brown color with golden bristles covering all dorsal face of body. In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length 23. Carapace 8.8 long, 8.4 wide. Clypeus 0.2. AME 0.37 long, 0.35 wide; PME 0.25 long, 0.2 wide; ALE 0.25 long, 0.25 wide; PLE 0.35 long, 0.22 wide. Basal segment of chelicerae with 10 teeth. Labium 1.3 long, 1.8 wide, with 120 cuspules. Endites with 135–132 cuspules. Eye tubercle: 1.2 long, 2.0 wide. Stridulatory bristles with around 15 bristles on palp trochanter and 45 on leg I (Fig. 11E–F). Palp: femur 8.5, patella 2.6, tibia 6.9, tarsus 2.3, total 20.3. Leg I femur 12.3, patella 4.5, tibia 11, metatarsus 9.6, tarsus 5.6, total 43. II 10.8, 3.5, 9, 9, 5.2, 37.5. III 9.6, 3.3, 8, 10.2, 4.4, 35.5. IV 12.3, 4, 11, 14.5, 5.6, 47.4. Spination: palp: femur d0-0-1app, tibia d0-1p-2p-2p-1app, v0-0-2p-0ap, p0-0-1-2-2-1-1-1-1-1ap. Legs I femur d0-0-1app, tibia v1-0-1-1-1-1ap-1app, p1-0-1-0ap, metatarsus v0-0-0-1ap. II femur d0-0-1app, tibia d0-1p-0-1p-1p-0-1app, v1-0-1-2-1ap, metatarsus v0-1-0-1-0-0-2ap-1app. III tibia v0-1-1r-1apr-1ap-1app, p0-2-0-1ap, r1-1-1ap, metatarsus v1-1-0-1-2ap, p1-1-1-1-0-2ap, r0-1-0-1-1ap, r0-1-0-1ap. IV tibia d0-1r-0-1r-0-1apr, v0-2-1-1r-1-1apr-2app, p0-1-1-0ap, metatarsus d0-1r-0app, v1-1-1p-2r-1r-1-1p-2-1r-1p-1p-1r-2app-1ap, p0-0-1-0-1ap. Tibial apophysis of leg I: retrolateral branch well-developed with two strong distal spines and two median setae; prolateral branch weakly projected with distal spine and sub basal spine (Figs 11C, 12D). PLS basal, median and apical segments 2.3, 1.7, 2.0 long, respectively.

Female (IBSP 107257)

In ethanol: same as *U. paranaiba* gen. et sp. nov. Total length 40.0. Carapace 13.5 long, 12.5 wide. Clypeus 0.3. AME 0.35 long, 0.3 wide; PME 0.2 long, 0.2 wide; ALE 0.25 long, 0.45 wide; PLE 0.3 long, 0.3 wide. Basal segment of chelicerae with 11 teeth. Labium 2.1 long, 2.7 wide, with 125 cuspules. Endites with 140–142 cuspules pointed. Eye tubercle: 1.9 long, 2.4 wide. Stridulatory bristles as in male. Palp: femur 9, patella 5.3, tibia 6.9, tarsus 5.8, total 27. Leg I femur 13.4, patella 7.4, tibia 9.4, metatarsus 4.2, tarsus 5.4, total 39.8. II 12, 6.5, 6.5, 6.4, 7.2, 35.7. III 10.3, 7.2, 6.2, 9.1, 5.1, 37.9. IV 12.8, 6.3, 8.8, 10, 5.1, 43. Spination: palp: tibia v0-0-0-1p-1r-3ap, p0-0-1-1ap. Legs I femur d0-0-1apr, tibia v0-1-2app, r0-1-0-3ap, metatarsus v-0-1ap, r0-1ap. II femur d0-0-1apr, tibia v0-1-0-3ap, p0-1-0-1ap, metatarsus v0-1-0-0-2apr. III femur 0-0-1apr, tibia v0-3-0-1app-1ap-1apr, p0-2-0-0ap, r1-1-1ap, metatarsus d1-2p-0-2ap, v1-1r-1p-0-1ap, p1-1p-1p-1r-1r-1-1ap. IV femur 0-0-1app, tibia v0-1p-2-1-1ap, 0-1-2ap, r0-1-0ap, metatarsus v1r-1r-2p-0-1p-1p-1p-1r-1r-1-2p-2ap, 0-0-1-0ap, p0-0-1-0ap,

r0-1-0-1ap. PLS basal, median and apical segments 2.1, 2.6, 3.5 long, respectively. Spermathecae with RS rounded, apart from each other by approximately its own diameter (Fig. 11D).

Distribution

Brazil: states of Rondônia and Mato Grosso (Fig. 30).

Natural history

Jean Vellard, in 1945, collected two males in a rotten palm tree. According to the author, the spiders were very aggressive and no webs in the rotten palm tree, were was found.

Umbyquyra schmidti (Rudloff, 1996) gen. et comb. nov.

Figs 5, 13, 14, 31

Cyrtopholis schmidti Rudloff, 1996: 3, figs 1–2.

Acanthoscurria schmidti – Schmidt 2003: 143, fig. 345.

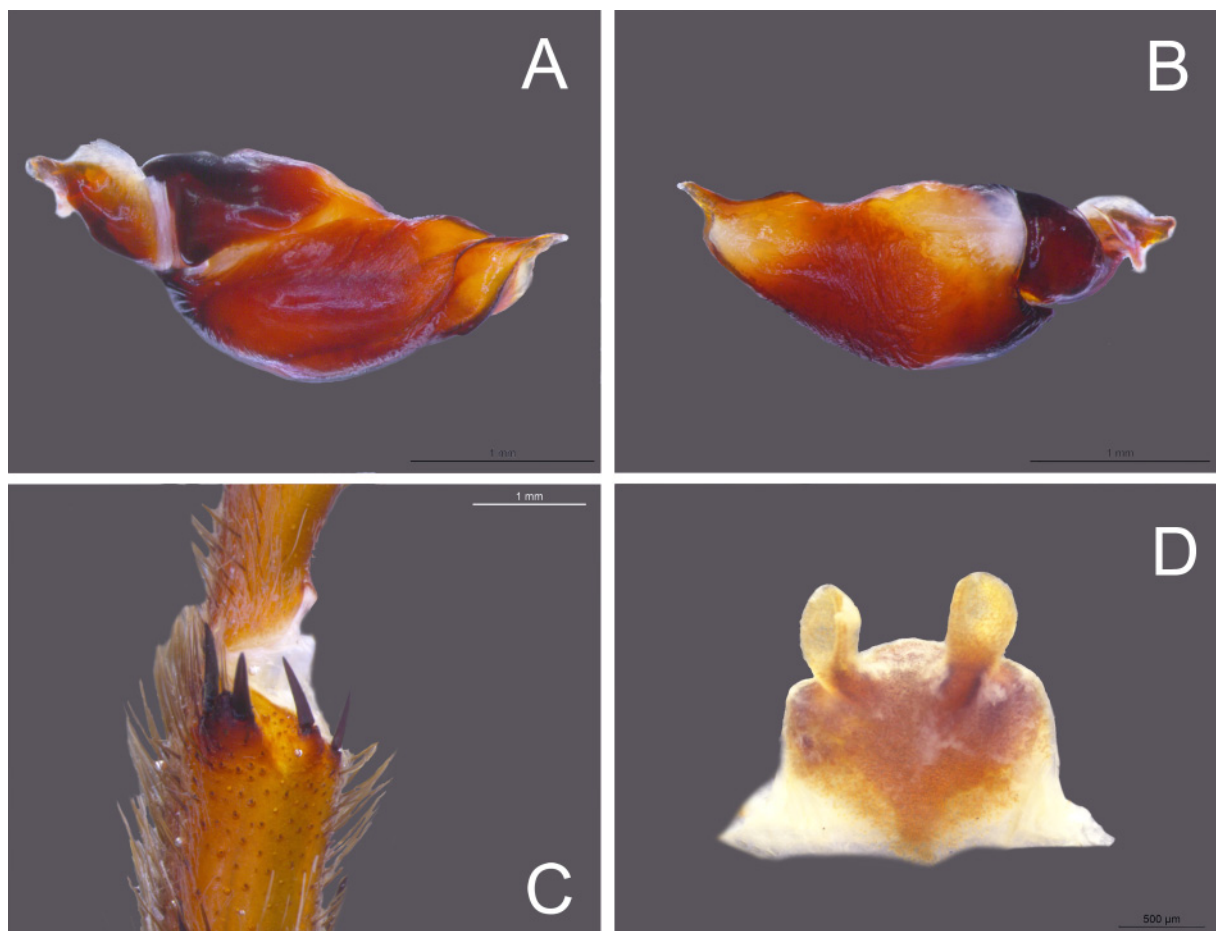


Fig. 13. *Umbyquyra schmidti* (Rudloff, 1996) gen. et comb. nov. **A–C.** ♂, Cuiabá, Mato Grosso, Brazil (IBSP 110728). **A.** Palp prolateral. **B.** Retrolateral. **C.** Tibial apophysis, retrolateral. **D.** ♀, spermathecae, dorsal (IBSP 107159).

Diagnosis

Males and females of *U. schmidti* gen. et comb. nov. differ from those of the other species by a carapace with large procurve fovea and a cephalic region projected over the same (Fig. 5A), less than 15 stridulatory bristles on palp trochanter, less than 30 stridulatory bristles on leg I (Fig. 14E–F), conspicuous SA and A (Fig. 13A–B) and tibial apophysis with prolateral reduced branch reduced (Figs 13C, 14D). Females differ from those of the other species by spermathecae with a cordiform basal area and SR close to each other emerging from the middle basal area (Fig. 13D).

Material examined

Type material

Holotype

BRAZIL: ♀, São Paulo, south of the city of São Paulo (no coordinates), Sep. 1995, H.U. Rechsteiner leg., examined by photos (ZMB 30790).

Additional material

BRAZIL: **Mato Grosso**: 1 ♂, Cuiabá, 15°36'10.2" S, 56°05'47.9" W, 8 Oct. 1989, M. Serrano leg. (IBSP 110728); 1 ♂, same collection data as for preceding, Oct. 1972, G.R. Kloss and F. Val leg. (MZSP 28890); 1 ♀, Pontes e Lacerda, 15°14'01.4" S, 59°19'47.0" W, 5 Jun. 2002, I. Knysak leg. (IBSP 110250).

Description

Male (IBSP 110728)

In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length 25. Carapace 7.5 long, 6.7 wide. Clypeus 0.4. AME 0.3 long, 0.33 wide; PME 0.1 long, 0.2 wide; ALE 0.2 long, 0.4 wide; PLE 0.3 long, 0.2 wide. Basal segment of chelicerae with 10 teeth. Labium 1 long, 1.5 wide, with 110 cuspules. Endites with 125–127 cuspules. Eye tubercle: 1.0 long, 1.6 wide. Stridulatory bristles with less than 15 bristles on palp trochanter and less than 30 on leg I (Fig. 14E–F). Palp: femur 6.0, patella 2.2, tibia 5.2, tarsus 2.2, total 15.6. Leg I femur 9.8, patella 2.8, tibia 8.6, metatarsus 7.5, tarsus 4.4, total 33.1. II 7.5, 3.6, 6, 7, 4.1, 28.2. III 7.4, 3.3, 5.4, 8.1, 3.6, 27.8. IV 7, 3.2, 8.3, 10, 6.1, 34.6. Spination: palp: tibia v0-0-0-1p-1r-3ap, p0-0-1-1ap. Leg I femur d0-0-1apr, tibia v0-1-2app, r0-1-0-3ap, metatarsus v-0-1ap, r0-1ap. II femur d0-0-1apr, tibia v0-0-1-1r-0-0-1app, metatarsus v0-1r-1p-1r-0-1apr-1ap-1app. III tibia v0-0-1-1p-1ap-1app, r0-0-1-0ap, metatarsus d0-0-0-1apr, v0-0-1p-0-1apr-1-1app, p0-1-1ap, r0-1-1ap. IV tibia v0-0-1-1r-1r-0ap, p0-0-1-0ap, r0-1-0-1-0ap, metatarsus d0-0-1r-1p-0-0ap, v1p-1r-1-1-1p-1r-1-1r-1-1p-1r-1p-1ap, p0-0-1-0ap. Tibial apophysis of leg I: retrolateral branch large and slightly projected with two strong distal spines and two median setae on projection; prolateral branch inconspicuous with distal and sub distal spines (Figs 13C, 14D). PLS: basal, median and apical segments 2.0, 2.2, 0.9 long, respectively.

Female (IBSP 110250)

In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length 17.8. Carapace 5.7 long, 5.1 wide. Clypeus 0.4. Eyes: anterior row slightly procurved and posterior row recurved. AME 0.38 long, 0.35 wide; PME 0.2 long, 0.15 wide; ALE 0.4 long, 0.3 wide; PLE 0.23 long, 0.3 wide. Basal segment of chelicerae with eight teeth. Labium 1.5 long, 2.0 wide, with 115 cuspules. Endites with 130–134 cuspules. Eye tubercle 1.5 long, 2.0 wide. Stridulatory bristles as in male. Palp: femur 5.8, patella 2.5, tibia 6.4, tarsus 3.3, total 18. Leg I femur 6.7, patella 2.7, tibia 6.3, metatarsus 4, tarsus 3.5, total 23.2. II 6.0, 2.5, 3.7, 3.3, 3.2, 18.7. III 5.4, 1.6, 3.4, 4, 3.2, 17.6. IV 6.4, 2.3, 6, 6.5, 3.5, 24.7. Spination: palp: femur d0-0-1app, tibia v0-1r-1apr, r0-0-1ap. Legs I tibia v0-1-0ap, metatarsus v0-1-0-0-0ap. II tibia v0-1-0ap, metatarsus v0-0-1-0ap. III tibia v0-0-1p-1r-0app, p0-1-1-0-0app, metatarsus d0-0-0-1-1ap, v0-0-1p-1r-1r-2apr-1app, p1-1-1-0-1app, r0-0-1-0-1ap. IV tibia d0-0-1p-1r-0-0-1apr-1app, metatarsus d0-0-1p-1r-0-0-1apr-1app, v1-1-1-1-1r-1p-1-1-1p-1r-1-1r-1ap, 0-0-1-0-0-1app, r0-0-1-0-1ap. PLS basal, median and apical segments 1.6, 1.8, 1.6 long, respectively. Spermathecae with oval RS, apart from each

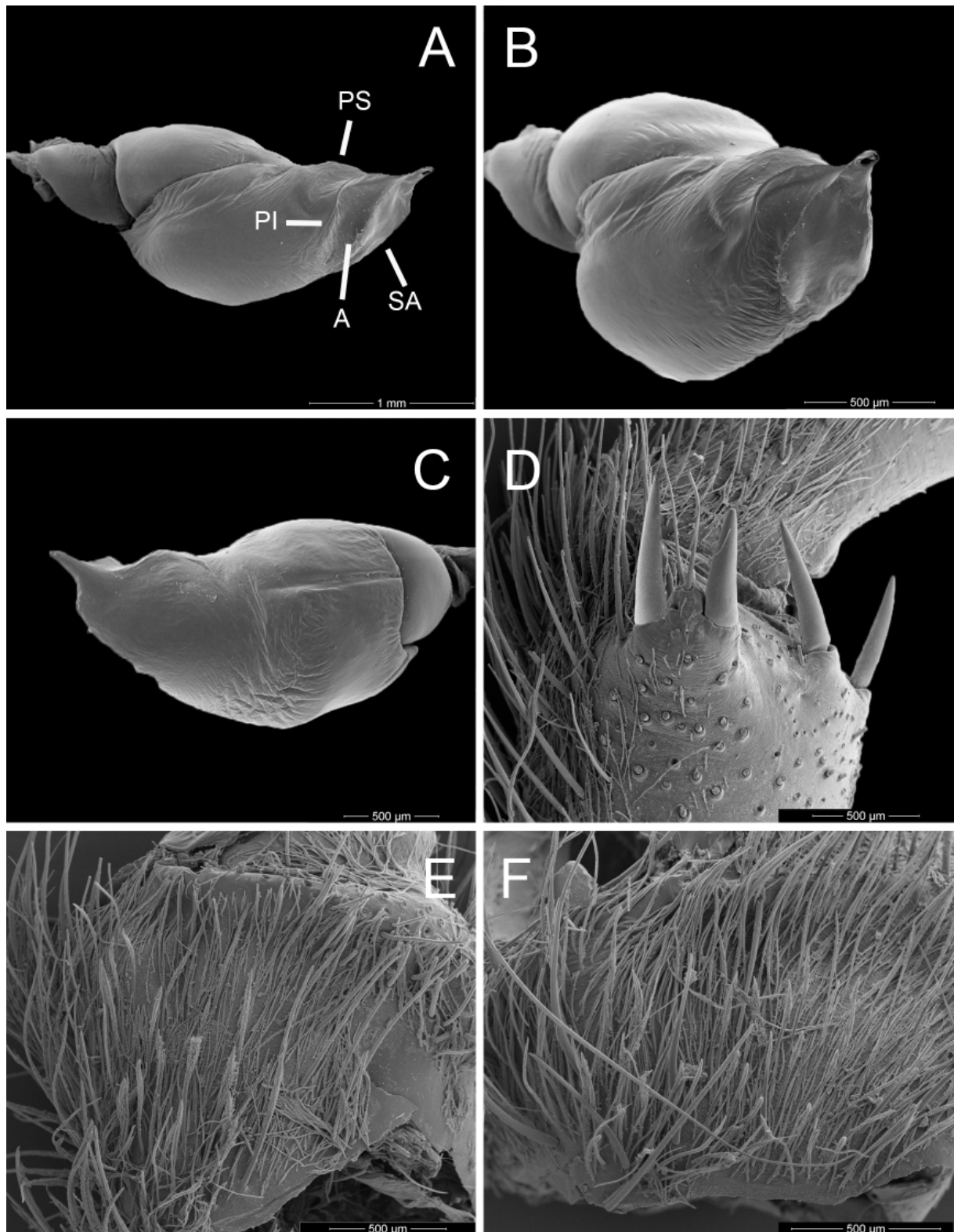


Fig. 14. *Umbyquyra schmidti* (Rudloff, 1996) gen. et comb. nov., ♂, Cuiabá, Mato Grosso, Brazil (IBSP 110728), A. Palp prolateral. B. Anterolateral. C. Retrolateral. D. Tibial apophysis, retrolateral. E. Stridulatory organ, palp trochanter. F. Trochanter I. Abbreviations: see Material and methods.

other by approximately their own diameter, and elongated ducts (Fig. 13D) emerging from a rounded basal area resembling *U. caxiuana* gen. et sp. nov. but the apex of the SR is not so globular.

Remark

The other female from the same locality cited in Rudloff (1996), not designated as a type, was not located.

Distribution

Brazil: states of Mato Grosso and São Paulo (Fig. 31).

Umbyquyra acuminata (Schmidt & Tesmoingt in Schmidt, 2005) gen. et comb. nov.
Figs 15, 18A–B, 30

Acanthoscurria acuminata Schmidt & Tesmoingt, 2000: 2, figs 1–2. (nom. nud., no type depository).

Acanthoscurria acuminata Schmidt & Tesmoingt in Schmidt, 2005: 4, figs 1–2, 7.

Acanthoscurria acuminata – Schmidt 2000: 1, figs 1–2; 2003: 141, figs 235–238.

Diagnosis

Males and females of *U. acuminata* gen. et comb. nov. differ from those of the other species by a procurve fovea overlapped by a large projection of the cephalic region (Fig. 15E) and by a retrolateral branch of the tibial apophysis with three strong spines (Fig. 15C). Female spermathecae have a cordiform basal area resembling those of *U. schmidtii* gen. et comb. nov., but differs from this species by the RS being more apart when compared to the other species (Fig. 15D).

Material examined

Holotype

BOLIVIA: 1 ♀, Province Sara, Santa Cruz de la Sierra, 16°27'37.2" S, 63°10'52.4" W, 1995, Verdez leg. (SMF 3979).

Additional material

BOLIVIA, 1 ♂, Province Sara, Santa Cruz de la Sierra, 16°58'16.4" S, 63°34'22.5" W, 29 Dec. 2005, Steinbach leg. (ZMB 47188); 2 ♀♀, same data as for preceding (ZMB 47189, ZMB 47190).

Description

Male (ZMB 47188)

In life: dark brown with light brown joints and golden hairs completely covering dorsal side of body (Fig. 16). In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length 37.8. Carapace 17.4 long, 15 wide. Clypeus 0.3. Eye tubercle 2.2 long, 1.7 wide. AME 0.4 long, 0.4 wide; PME 0.28 long, 0.23 wide; ALE 0.4 long, 0.3 wide; PLE 0.4 long, 0.25 wide. Basal segment of chelicerae with 12 teeth. Stridulatory bristles with around 15 bristles on palp trochanter and 45 on leg I (Fig. 17E–F). Palp: femur 8.3, patella 3.7, tibia 8.4, tarsus 3.7, total 24.1. Leg I femur 13.4, patella 4.5, tibia 12.5, metatarsus 12.7, tarsus 7.8, total 51. II 13.3, 4.6, 11.2, 6, 7.2, 42.3. III 11.6, 3.1, 9.5, 11.5, 6.8, 42.5. IV 15.8, 5.5, 12.8, 16.8, 7.5, 58.4. Spination: palp: tibia v0-1p-0ap, r0-1-2-1-2-1-1-1ap. Leg I femur d0-0-1app, patella v0-1-1-1-0ap, tibia d0-1p-0-0ap, v2-1r-1-0-1-1-1-1r-1-2apr, p0-0-1-0ap, r0-0-0-1-0ap, metatarsus v0-1r-0-0ap. II femur, 0-0-0-1app, tibia v3-1r-1-1-1-1r-1-0-1apr-1app-1ap, p0-1-0-1-0-1ap, metatarsus v0-1p-1-0-0-0-1app-1ap-1apr, p0-0-0ap. III femur d0-0-1apr, tibia v2-1-0-1-2-1p-1r-0-1apr-1app, p0-1-1-1-1-1-1ap, r0-1-0-1-0-0ap, metatarsus v0-0-1p-1r-0-1p-1r-0-2apr-1ap-1app, p2-1-1-1-1-0-0ap, r0-0-1-0-0ap. IV femur d0-0-1apr, tibia v2-1-1p-1-1-1-2-1r-1apr-1app, r0-0-1-0ap, metatarsus d0-0-1r-1-1p-0-

0ap, r0-0-1-0-0ap, v1p-1r-1r-1-1p-1r-1-1-1p-1-1-1apr-1app. Tibial apophysis of leg I: prolateral branch inconspicuous with distal and sub distal spines. (Fig. 15C). PLS basal, median and apical segments 1.8, 1.1, 2.8 long, respectively.

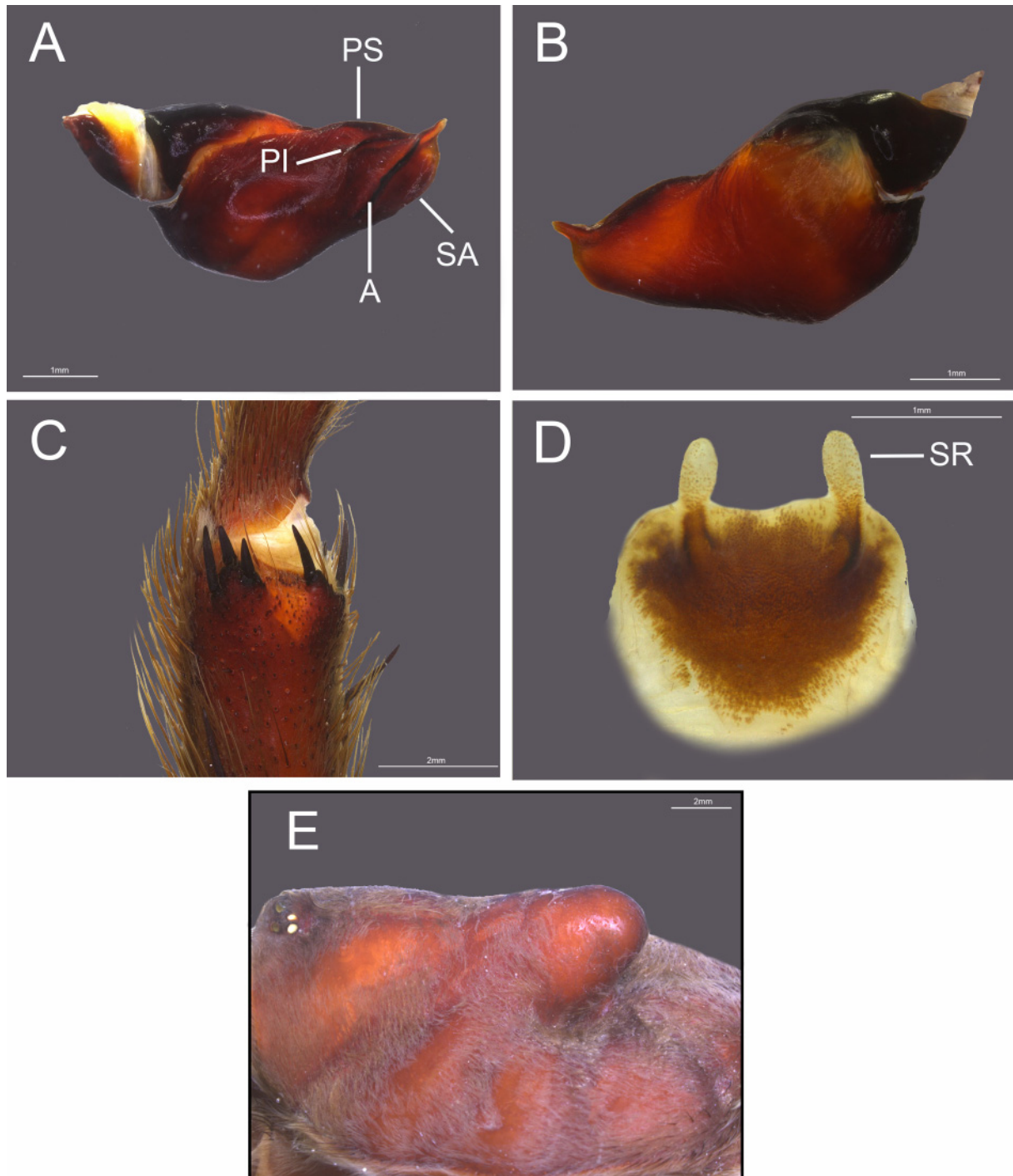


Fig. 15. *Umbyquyra acuminata* (Schmidt & Tesmoingt in Schmidt, 2005) gen. et comb. nov. **A–C.** ♂, Santa Cruz de la Sierra, Bolivia (ZMB 47188). **A.** Palp, prolateral. **B.** Retrolateral. **C.** Tibial apophysis, retrolateral. **D–E.** ♀, same locality (ZMB 47189). **D.** Spermathecae, dorsal. **E.** Carapace, lateral. Abbreviations: see Material and methods.

Female (ZMB 47189)

In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length 32.2. Carapace 16.6 long, 13 wide. Clypeus 0.3. Eyes: anterior row slightly procurved and posterior recurved. AME 0.4 long, 0.4 wide; PME 0.27 long, 0.27 wide; ALE 0.48 long, 0.33 wide; PLE 0.35 long, 0.22 wide. Basal segment of chelicerae with 12 teeth. 7.0 long, 7.0 wide. Eye tubercle 1.7 long, 2.4 wide. Stridulatory bristles as in male. Palp: femur 7.6, patella 2.7, tibia 6.0, tarsus 5.5, total 21.8. Legs I femur 9.7, patella 3.5, tibia 5.3, metatarsus 4.6, tarsus 4.6, total 27.7. II femur 9.0, patella 3.0, tibia 7.0, metatarsus 5.5, tarsus 3.7, total 28.2. III femur 8.3, patella 3.0, tibia 5.5, metatarsus 6.5, tarsus 4.1, total 27.4. IV femur 8.6, patella 4.0, tibia 4.6, metatarsus 6.4, tarsus 4.2, total 27.8; Spination: palp: tibia v0-0-1p-1apr-2app, r0-0-1-0-1ap. Leg I femur d0-0-1app, tibia v0-1-0-1-1-1-1-0-1ap-1app, metatarsus v0-1-1-0-1app-1ap-1apr. II femur d0-0-1app, tibia v0-1-0-1-1-1-1-0-1ap-1apr, metatarsus v0-1-1-0-1app-1ap-1apr. III femur d0-0-1apr, tibia v0-2-0-1-2app-1apr, p0-1-1-0-2ap, metatarsus d0-1p-1r-0-1app-2apr, p0-1-1-1-0-2ap. IV v0-1-1-0-1app-2apr, p0-1-0-1ap, r1-1-1-0ap, metatarsus d0-1p-1r-0-1app-2apr, v1-1p-1-1p-1r-0-1apr-1app, p1-1-1-0-1ap, r0-0-0-1ap. PLS basal, median and apical segments 2.5, 1.4, 2.0 long, respectively. Spermathecae with oval RS and long ducts, apart by approximately twice their diameter (Fig. 15D).

Remark

Schmidt & Tesmoingt (2000) described *Acanthoscurria acuminata* based on a female and a juvenile male and exuvia, respectively from Santa Cruz de la Sierra, Province Sara, Bolívia and Cuiabá, Mato Grosso, Brazil. They presented figures of the carapace with a large projection over the fovea and the aspect of the SR. Later, Schmidt & Tesmoingt (2005) described another male of this species, collected in Santa Cruz de la Sierra, Bolivia, and deposited it in the regional museum of Santa Cruz. This specimen could not be located. The female holotype is deposited in the SMF and does not have the spermathecae anymore. Moreover, the juvenile male and exuvia could not be located. The species here is transferred to *Umbyquyra* gen. nov. due to the presence of stridulatory bristles on the palp trochanter and leg I, male palpal bulb with short embolus, four keels and spermathecae emerging from a common base (Fig. 15D).

Distribution

Brazil: Cuiabá, Mato Grosso; Bolivia: Santa Cruz de la Sierra, Province Sara (Fig. 30).

Umbyquyra cuiaba gen. et sp. nov.

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Figs 16, 17, 18C–D, 31

Diagnosis

Males and females of *Umbyquyra cuiaba* gen. et sp. nov. resemble those of *U. palmarum* gen. et comb. nov. by a large procurved fovea delimitating the projection of the cephalic region (Fig. 5D) and by a male palpal bulb with the shape and size of keels, but differ by the tegulum being more compact (Figs 16A–B, 17A–C) and by females having a spermathecae with a very narrow basal area (Fig. 16D).

Etymology

The species epithet is a noun in apposition taken from the type locality.

Type material

Holotype

BRAZIL: ♂, Mato Grosso, Cuiabá, 15°36'10.2" S, 56°05'47.9" W, 21 Oct. 2007, M. Shiraiwa leg. (IBSP 167423).

Paratypes

BRAZIL: **Mato Grosso:** 1 ♀, Canarana, 13°33'32.3" S, 52°16'06.8" W, 16 Jul. 2000, R.A.K. Ribeiro leg. (IBSP 108933); 1 ♂, Cuiabá, 15°36'10.2" S, 56°05'47.9" W, 03 Sep. 2013, F.B.P. Bettiol leg.

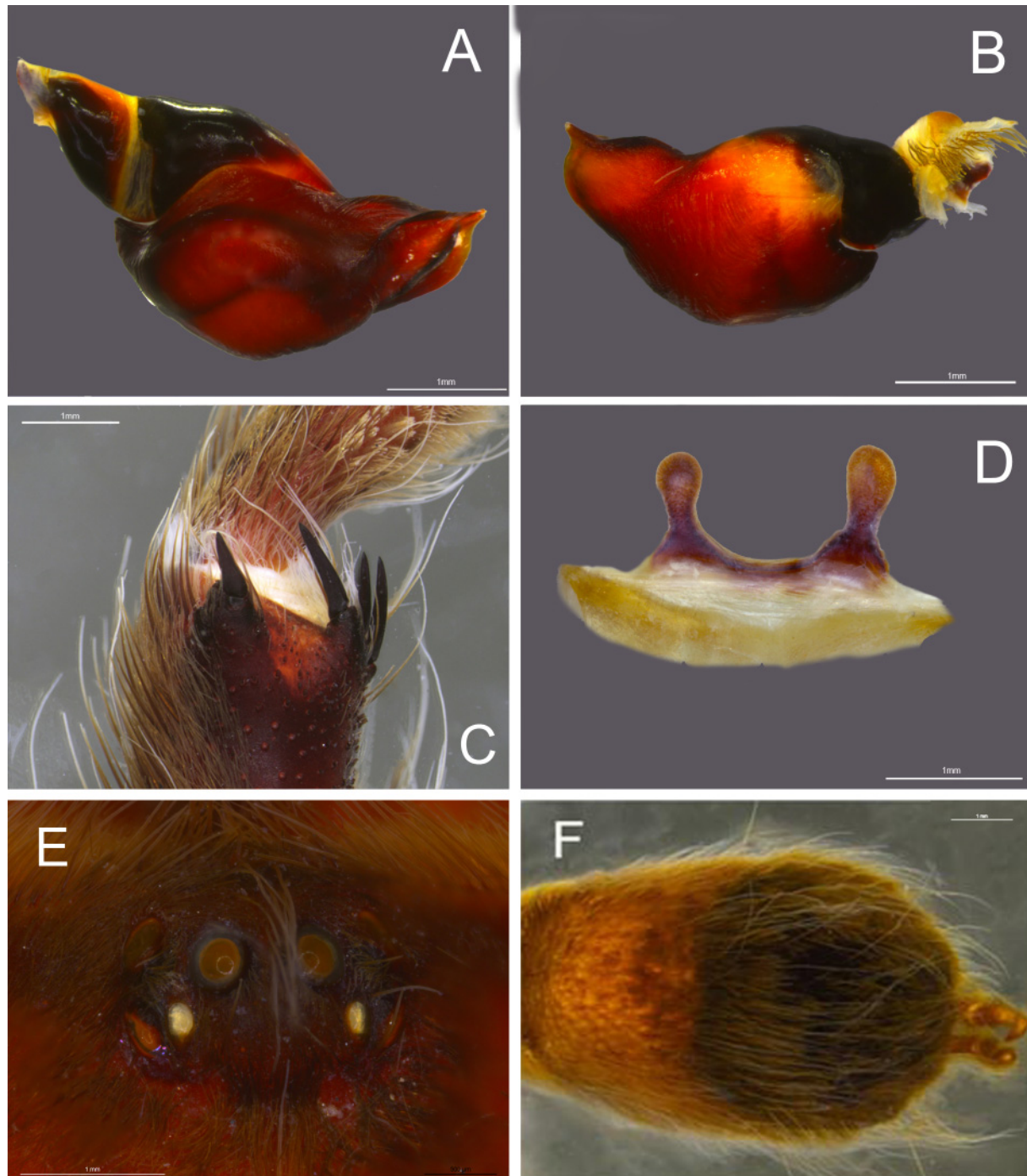


Fig. 16. *Umbyquyra cuiaba* gen. et sp. nov. **A–C.** Holotype, ♂, Cuiabá, Mato Grosso, Brasil (IBSP 167423). **A.** Palp prolateral. **B.** Retrolateral. **C.** Tibial apophysis, retrolateral. **D–F.** Paratype, ♀, Canarana, Mato Grosso, Brazil (IBSP 108933). **D.** Spermathecae, dorsal. **E.** Eye tubercle, dorsal. **F.** Abdomen, dorsal.

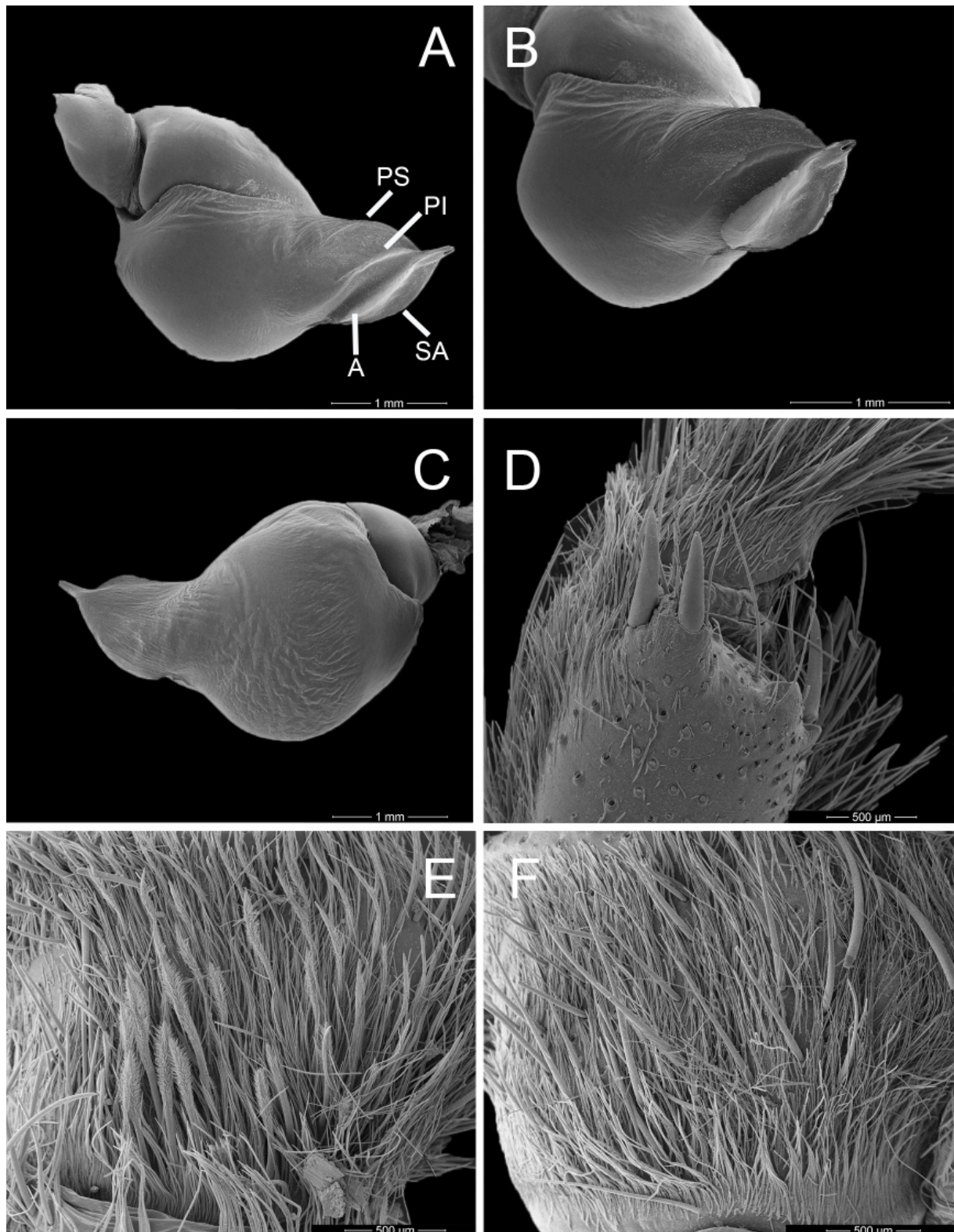


Fig. 17. *Umbyquyra cuiaba* gen. et sp. nov., holotype, ♂, Cuiabá, Mato Grosso, Brazil (IBSP 167423). **A.** Palp, prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, palp trochanter. **F.** Trochanter I. Abbreviations: see Material and methods.

(UFMT 0974); 1 ♂, same collection data as for preceding, Oct. 1972, G.R. Kloss and F. Val leg. (MZSP 28890); 1 ♂, same collection data as for preceding, Nov. 2006 (UFMT 0972).

Additional material

BRAZIL: **Pará:** 2 ♂♂, Marabá, 5°21'26.5" S, 49°06'33.3" W (IBSP 107423). – **Mato Grosso:** 1 ♂, Cuiabá, 15°36'10.2" S, 56°05'47.9" W, 8 Oct. 1989, M. Serrano leg. (IBSP 167428); 1 ♂, same collection data as for preceding, 8 Sep. 2000, M. Shiraiwa leg. (UFMT 0969); 1 ♀, Barra do Garças, 15°53'26.7" S, 52°15'43.1" W, Feb. 1990, F.T. Carvalho leg. (IBSP 107159); 1 ♀, Parque Nacional da Chapada dos Guimarães, near Cachoeira Véu de Noiva, 15°24'22.9" S, 55°50'1.1" W, 11 Aug. 2015, R.P. Indicatti and B. Gambaré leg. (IBSP 167419); 1 ♂, Base UFMT, Pirizal, 16°14'26.8" S, 56°22'33.1" W, 28 Dec. 2012, A. Junior leg. (UFMT 0971); 1 ♂, Acorizal, 15°11'53.0" S, 56°21'59.8" W, 2 Sep. 2013, A.S. Santos leg. (UFMT 0973); 2 ♂♂, Várzea Grande, 15°39'23.1" S, 56°08'12.0" W, 17 Jun. 1989, G.A. Silva leg. (IBSP 107159).

Description

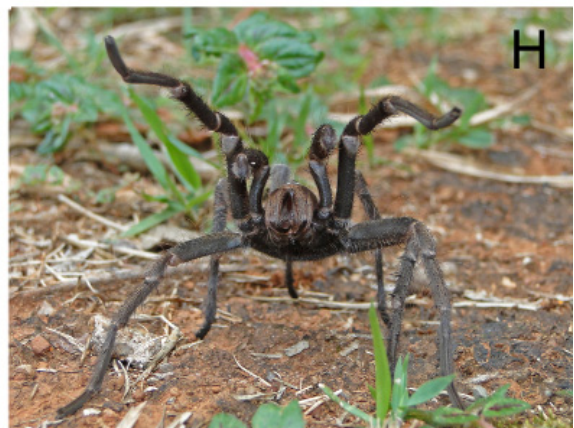
Male (holotype, IBSP 10728)

In life: light brown carapace and legs. Abdomen dark brown covered by red hairs with dark patch on dorsal side (Fig. 16F). In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length: 33.0. Carapace: 13.5 long, 12.5 wide. Clypeus: 0.4. Eye tubercle: 1.6 long, 2.1 wide. Eyes: anterior row slightly procurved and posterior recurved (Fig. 16E). AME: 0.3 long, 0.3 wide; PME: 0.25 long, 0.17 wide; ALE: 0.2 long, 0.35 wide; PLE: 0.2 long, 0.35 wide. Basal segment of chelicerae with 11 teeth. Labium: 2.0 long, 2.0 wide, with 112 cuspules. Endites with 150–155 cuspules. Stridulatory bristles with around 15 bristles on palp trochanter and 45 on leg I (Fig. 17E–F). Palp: femur 7, patella 2.6, tibia 7.4, tarsus 2.7, total 20. Leg I femur 10.8, patella 4.5, tibia 9.4, metatarsus 10.3, tarsus 6.7, total 41.7. II 12.7, 2.5, 8.5, 10.1, 6.6, 40.4. III 10.5, 2.0, 8.4, 9.7, 5.7, 36.3. IV 11.4, 3.0, 9.6, 11.2, 5.8, 50. Spination: palp: femur d0-0-2app, tibia v0-1p-0ap, p1-2-1-1-1-2-1-1-3ap, r0-1-3ap. Legs I tibia v2-1-1r-1-1r-1-lap-1apr-1app, r0-1-3ap, metatarsus v-1-0-0-1ap. II tibia v1-1r-1-1-lap, p0-1-0-1-0ap, metatarsus v0-1-1-0-0-1ap, p0-1-0ap. III femur d0-0-1apr, tibia d0-0-1r-1apr, v1-1-0-1apr-2app, p0-1-1ap, r1-1-0-1ap, metatarsus d0-1p-1r-1p-0-0ap, v1-1p-1-1p-0-1apr-1ap-1app, p0-1-0-0ap, r1-1-1-1ap. IV tibia v1-1-1-2-1r-1p-1-0ap, p0-1-1-0ap, r0-1-0-1-0-1ap, metatarsus d0-1r-1p-0-1ap, v1-1-1p-1r-1p-1r-2app-2apr, p0-0-1-0ap, r0-1-0-0-1ap. Metatarsus I with a slight basal curvature. Tibial apophysis of leg I: retrolateral branch projected with two strong distal spines with 2-3 median setae; prolateral branch very short with a distal spine and a sub basal spine (Figs 16C, 17D). PLS basal, median and apical segments 1.8, 1.8, 2.0 long, respectively.

Female (paratype, IBSP 8933)

In ethanol: same color as *Umbyquyra paranaiba* gen. et sp. nov., except black abdomen in the posterior half (Fig. 16F). Total length: 31. Carapace 13.5 long, 11 wide. Clypeus 0.35. Eye tubercle 1.2 long, 2.0 wide. AME 0.4 long, 0.35 wide; PME 0.25 long, 0.25 wide; ALE 0.25 long, 0.45 wide; PLE 0.25 long, 0.2 wide. Basal segment of chelicerae with 10 teeth. Labium 1.5 long, 2 wide, with 100 cuspules. Endites with 120–125 cuspules. Stridulatory bristles as in male. Palp: femur 8.1, patella 1.7 tibia 4.2, tarsus 5, total 19. Leg I femur 9.6, patella 3.0, tibia 8.3, metatarsus 5.6, tarsus 4.2, total

Fig. 18 (opposite page). **A–B.** *Umbyquyra acuminata* (Schmidt & Tesmoingt in Schmidt, 2005) gen. et comb. nov. Live specimen from Santa Cruz de la Sierra, Bolivia (photos by Cristian Grismado). **C–F.** *Umbyquyra cuiaba* gen. et sp. nov. **C.** Live specimen from Parque Nacional Chapada dos Guimarães, Mato Grosso, Brazil, dorsal. **D.** Defensive display. **E.** Inside burrow. **F.** Detail of burrow interior without web. **G–H.** *Umbyquyra paranaiba* gen. et sp. nov. **G.** Live specimen from São Paulo, São Paulo, Brazil, dorsal. **H.** Defensive display, frontal (C–H, photos by Rafael Indicatti).



30.7. II femur 6.8, patella 3.5, tibia 6.1, metatarsus 4.8, tarsus 3.8, total 25. III femur 6.8, patella 4.0, tibia 4.7, metatarsus 6.7, tarsus 4.0, total 26.2. IV femur 7.0, patella 4.0, tibia 10, metatarsus 10.5, tarsus 4.2, total 35.7. Spination: palp: femur d0-0-2app, tibia v0-1p-0ap, p1-2-1-1-1-1-2-1-1-3ap, r0-1-3ap. Leg I tibia v2-1-1r-1-1r-1-1ap-1apr-1app, r0-1-3ap, metatarsus v-1-0-0-1ap. II tibia v1-1r-1-1-1ap, p0-1-0-1-0ap, metatarsus v0-1-1-0-0-1ap, p0-1-0ap. III femur d0-0-1apr, tibia d0-0-1r-1apr, v1-1-0-1apr-2app, p0-1-1ap, r1-1-0-1ap, metatarsus d0-1p-1r-1p-0-0ap, v1-1p-1-1p-0-1apr-1ap-1app, p0-1-0-0ap, r1-1-1-1ap. IV tibia v1-1-1-2-1r-1p-1-0ap, p0-1-1-0ap, r0-1-0-1-0-1ap, metatarsus d0-1r-1p-0-1ap, v1-1-1p-1r-1p-1r-2app-2apr, p0-0-1-0ap, r0-1-0-0-1ap. Metatarsus I with a slight basal curvature. PS basal, median and apical segments 1.8, 1.8, 2.0 long, respectively. Spermathecae with oval and elongated RS, with short ducts, apart from each other by approximately three times their diameter (Fig. 16D).

Distribution

Brazil: states of Mato Grosso and Pará (Fig. 31).

Natural history

This species is very aggressive, raising the abdomen or legs I when disturbed (Fig. 18D, H). The female from Parque Nacional da Chapada dos Guimarães (IBSP 167419) was collected in a dirt hill, inside a hole with a 3 cm opening diameter which did not contain any silk.

Umbyquyra araguaia gen. et sp. nov.

[urn:lsid:zoobank.org:act:E0F14424-01E1-4C65-8C76-BA55DC150B86](https://doi.org/10.21203/rs.3.rs-14424-01E1-4C65-8C76-BA55DC150B86)

Figs 19–20, 30

Diagnosis

Males of *Umbyquyra araguaia* gen. et sp. nov. differ from those of the other species by an inconspicuous tibial apophysis (Figs 19C, 20D) and a retrolateral branch with two strong spines, and by a straight fovea without any projections on the carapace (Fig. 5E).

Etymology

The species epithet is a noun in apposition taken from the type locality.

Type material

Holotype

BRAZIL: ♂, Pará, Conceição do Araguaia, 8°15'10.8" S, 49°19'11.7" W, Jun. 1979, W. Lourenço leg. (IBSP 112531).

Paratype

BRAZIL: Tocantins, 1 ♂, Palmas, Serra do Lajeado, 10°06'08.6" S, 48°14'35.8" W, 20 Nov. 2002, J. Nunes leg. (IBSP 110473).

Description

Male (holotype, IBSP 110473)

In ethanol: same color as *U. paranaiba* gen. et sp. nov. Total length 18. Carapace 10.1 long, 8.3 wide. Clypeus 0.1. Eye tubercle 1.0 long, 1.6 wide. AME 0.25 long, 0.27 wide; PME 0.25 long, 0.2 wide; ALE 0.3 long, 0.2 wide; PLE 0.3 long, 0.2 wide. Basal segment of chelicerae with 11 teeth. Labium 1.3 long, 2.2 wide, with 103 cuspules. Endites with 122–124 cuspules. Stridulatory bristles with around 15 bristles on palp trochanter and 45 on leg I (Fig. 19E–F). Palp: femur 3.8, patella 2.7, tibia 4.5, tarsus 2.1, total 13.1. Leg I femur 6.7, patella 5.0, tibia 8.6, metatarsus 6.7, tarsus 4.7, total

31.7. II 6.8, 4.2, 7, 7, 3, 28. III 5.8, 3.5, 9, 11.5, 5.2, 35. IV 6.6, 3.6, 9.2 10.4, 3.7, 33.5. Spination: palp: femur tibia d0-0-1apr. Leg I tibia p0-1-0-1-2ap, metatarsus v1-0-1-1-0-1ap. II femur, 0-0-0-1app, tibia v1-2-1ap-2app, p0-1-0-1-0ap, metatarsus d0-0-1p-0ap, v0-1-1-0-1apr-1ap-1app, p0-1-0ap. III tibia v0-0-0-1-1r-1p-0-1-0-2app-1apr, p0-0-1-0-0ap, r0-1-0-1ap, metatarsus v0-1-1p-1r-0-1-1r-1p-1-1p-2-2ap, p0-0-1-1-0-1ap, r0-1-0-0ap. IV tibia v0-0-1-1p-1r-1-2apr, 1-1-1ap, r0-1-0ap, metatarsus d1r-0-1r-1p-0-1app-1apr, v1-1-1-1-2-1-1app-apr-1ap, p0-1-0-1ap, r0-1-0-1ap. Tibial apophysis of leg I: proteral branch absent and two strong distal spines on retrolateral branch (Figs 19C, 20D). Palpal bulb with semicircular projected A and long SA (Figs 19A, 20A). PLS basal, median and apical segments 1.4, 1.4, 2.3 long, respectively.

Female

Unknown.

Distribution

Brazil: states of Pará and Tocantins (Fig. 30).

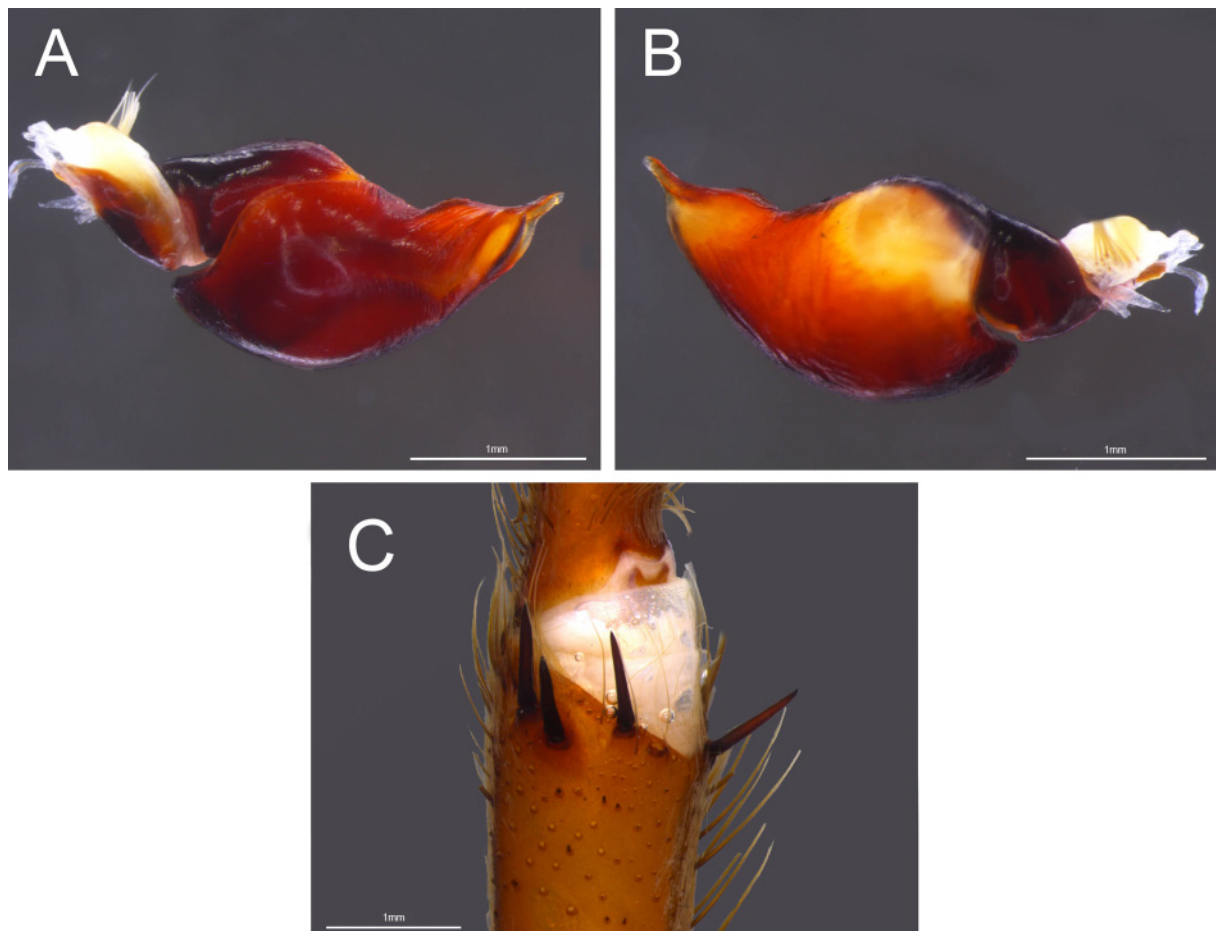


Fig. 19. *Umbyquyra araguaia* gen. et sp. nov., paratype, ♂, Serra do Lajeado, Tocantins, Brazil (IBSP 110473). **A.** Palp, prolateral. **B.** Retrolateral. **C.** Tibial apophysis, retrolateral.

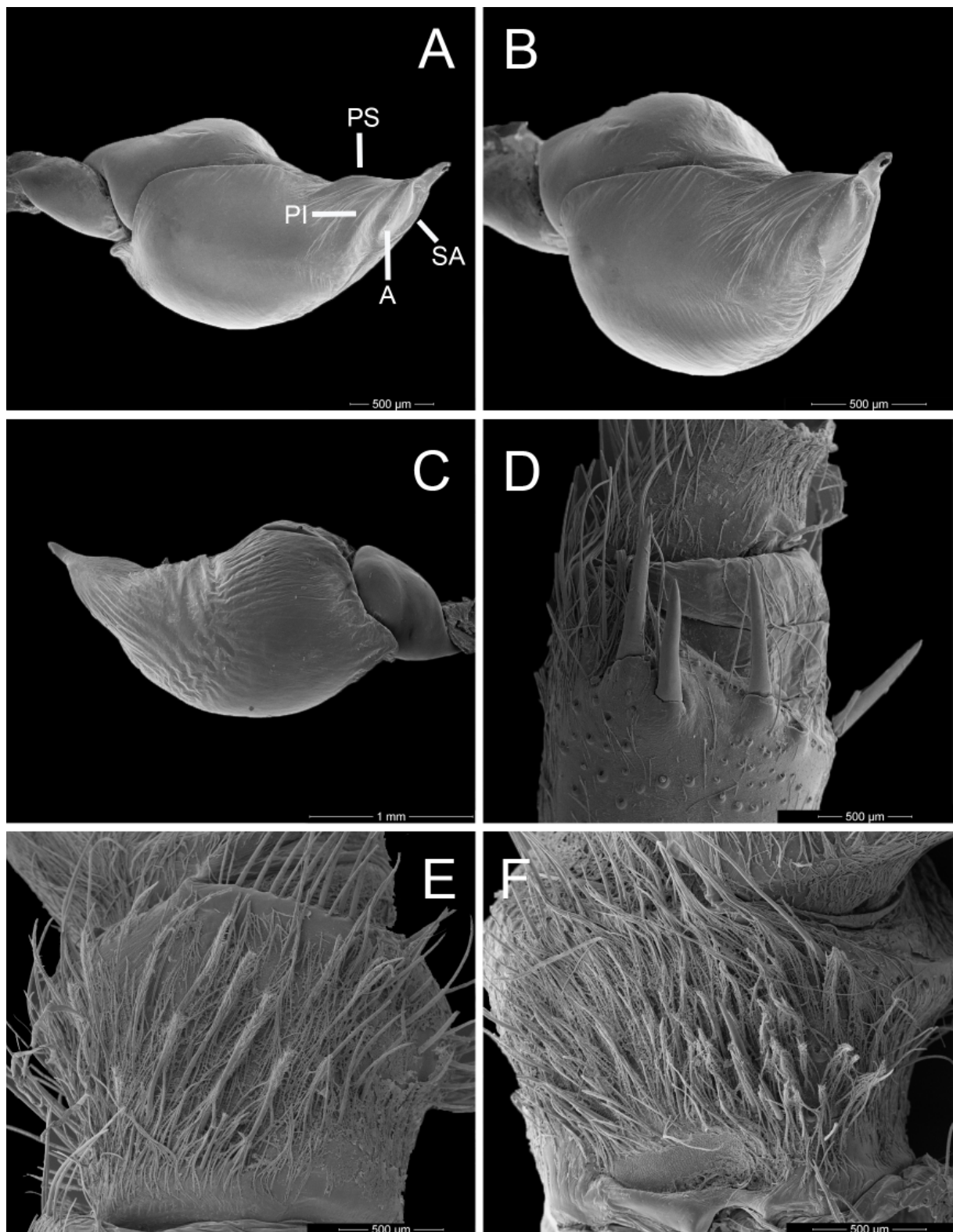


Fig. 20. *Umbyquyra araguaia* gen. et sp. nov., paratype, ♂, Serra do Lajeado, Tocantins, Brazil (IBSP 110473). **A.** Palp, prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, palp trochanter. **F.** Trochanter I. Abbreviations: see Material and methods.

Umbyquyra belterra gen. et sp. nov.

[urn:lsid:zoobank.org:act:E6C30EB4-D131-4060-8B26-F5394BE3AAD9](https://zoobank.org/urn:lsid:zoobank.org:act:E6C30EB4-D131-4060-8B26-F5394BE3AAD9)

Figs 21–22, 29

Diagnosis

Males and females of *Umbyquyra belterra* gen. et sp. nov. differ from those of all other species by a recurved fovea (Fig. 5F) and a very long prolateral inferior keel of the male palpal bulb which extends for more than half of the prolateral face of the tegulum (Fig. 22C). This species presents five keels, including the PAc keel near the PS keel. This is a character shared only between two species of *Umbyquyra* gen. nov. Females differ from those of the other species by a spermathecae with SR curved sideways, with long ducts and apart from each other by more than five times their diameter (Fig. 21D).

Etymology

The species epithet is a noun in apposition taken from the type locality.

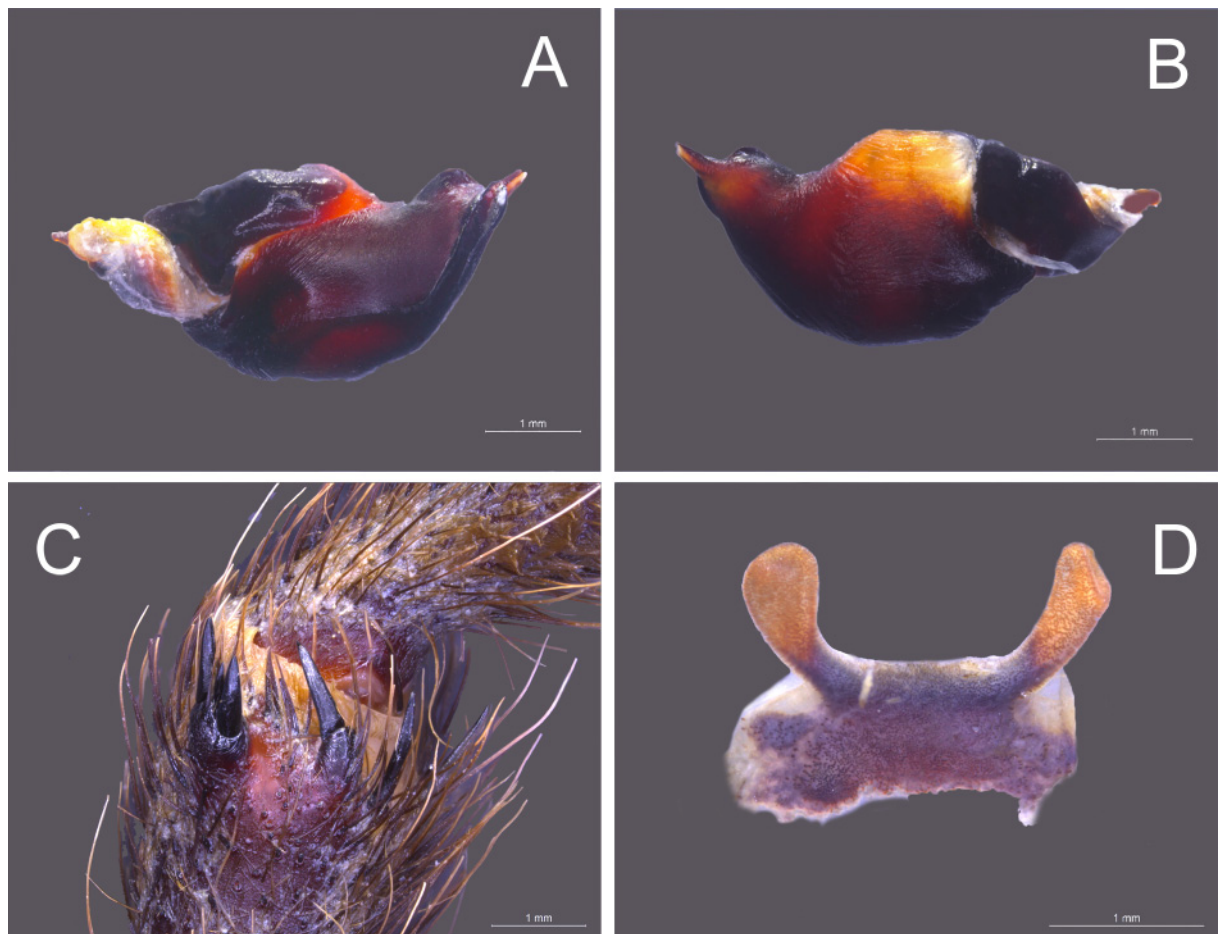


Fig. 21. *Umbyquyra belterra* gen. et sp. nov. **A–C.** Holotype, ♂, Flona do Tapajós, Belterra, Pará, Brazil (IBSP 167421). **A.** Palp, prolateral. **B.** Retrolateral. **C.** Tibial apophysis, retrolateral. **D.** Paratype, ♂, spermathecae, dorsal (IBSP 167420).

Type material

Holotype

BRAZIL: ♂, Pará, Belterra, Flona do Tapajós, 2°35'46.2" S, 54°55'50.7" W, Oct. 2011, A. Brescovit *et al.* leg. (IBSP 167421).

Paratypes

BRAZIL: Pará, 1 ♀, Belterra, Flona do Tapajós, 2°35'46.2" S, 54°55'50.7" W, Oct. 2011, A.D. Brescovit *et al.* leg. (IBSP 167420); 6 ♂♂ (IBSP 167422, IBSP 170011, IBSP 170012, FIT/UNAMA 1195, FIT/UNAMA 615, FIT/UNAMA 616), 2 ♀♀ (FIT/UNAMA 486, FIT/UNAMA 482), same data as for preceding.

Description

Male (holotype, IBSP 167421)

In ethanol: carapace dark-brown as dorsal face of long, 0.5 abdomen. Total length 41. Carapace 19.4 long, 16.3 wide. Clypeus 0.3. Eye tubercle 1.8 long, 2.7 wide. AME 0.5 wide; PME 0.3 long, 0.2 wide; ALE 0.3 long, 0.6 wide; PLE 0.3 long, 0.4 wide. Basal segment of chelicerae with 10 teeth. Labium: 2.2 long, 3.1 wide, with 128 cuspules. Endites with 165–168 cuspules. Stridulatory organ contains more than 10 very evident bristles on palp trochanter and leg I (Fig. 22E–F). Palp: femur 9.8, patella 4.2, tibia 9, tarsus 2.8, total 25.8. Tarsi II very short. Leg I femur 18.4, patella 4.7, tibia 16, metatarsus 14.3, tarsus 8.3, total 61.7. II 15.5, 3.5, 14.5, 14, 5.4, 52.9. III 16, 5.7, 12.2, 15.3, 7.8, 57. IV 18.2, 8, 16, 22.9, 9, 74. Spination: palp: tibia v0-0-1r0ap, p1-1-1-1-1-1-1-1-1ap, r0-0-1-0ap. Legs I femur d0-0-1app, tibia v2-0-2-0-2ap, p0-1-0-1-0ap, metatarsus v0-1-0-0-1apr-1-1app. II tibia v2-0-2-1r-1r-1app-1apr, p0-1-0-1-0ap, metatarsus v0-1-1-0-1app-1apr, p0-1-0-1ap. III femur d0-0-1apr, tibia v1-1p-1p-1-0-1app-1apr, p0-1-0-1-0ap, r1-1-1-1app, metatarsus d0-0-0-1app-1apr, v1-1p-1p-1r-1-1p-1p-1r-1app-1-1apr, p1-0-1-1-0-1-1ap, r0-0-1-0-0-1ap. IV tibia v1-1-1r-1p-1-1p-1-1apr, p0-1-1-0-2ap, r1-0-0-1-1ap, metatarsus v1-1-1-1p-1r-1-1p-1-1r-1-1-1p-1-1r-1p-1-1-1app-1ap-1apr, p0-0-1-0-1ap, r0-0-1-0-0-1-0ap. Metatarsus I with a slight basal curvature. Tibial apophysis of leg I: retrolateral branch projected with two strong distal spines with two median setae; prolateral branch projected with a distal spine and sub basal one (Figs 21C, 22D). PLS basal, median and apical segments 3.1, 2.6, 3.2 long, respectively. Male palp with PAc (Fig. 22A).

Female (paratype, IBSP 167420)

In ethanol, same color as male. Total length (damaged). Carapace (damaged). Clypeus: 0.2. AME: 0.5 long, 0.5 wide; PME 0.4 long, 0.3 wide; ALE: 0.4 long, 0.2 wide; PLE: 0.4 long, 0.3 wide. Basal segment of chelicerae with 11 teeth. Labium: 2.3 long, 3 wide. Eye tubercle 2.8 long, 2.1 wide. Stridulatory bristles as in male. Palp: femur 11.2, patella 4.5, tibia 9.8, tarsus 7.5, total 33. Tarsi II short as in male. Leg I femur 15.5, patella 9, tibia 14.2, metatarsus 11, tarsus 7.4, total 57.2. II 12.6, 8.1, 12.6, 11, 7.2, 51.5. III 13, 7.7, 12, 11, 7.1, 50.8. IV absent. Spination: palp: femur p0-1-0ap. Legs I tibia v0-0-1p-1r-1app-1ap-2apr, metatarsus d0-1p-0ap, v-0-1-2ap. II tibia v0-1-1app-1ap-1apr, p-0-1-0ap, metatarsus v01-1-0-1app-1apr. III tibia v0-1-0-1-0-1p-1p-1apr, p0-1-0ap, metatarsus v0-1-1-0-1apr-1ap-1app, p0-1-0ap. IV tibia d1r-1r-1apr, v0-1-1p-1ap-2app, p0-1-0-1-0ap, r0-1-0-1-0-1ap, metatarsus d1p-1r-1app, v2r-1p-1r-1p-1r-1apr-1ap, p0-1-0ap, r0-1-0ap. Spermathecae with two RS with long ducts and more or less pentagonal basal area (Fig. 21D).

Remarks

The female is in bad condition, so total length and carapace could not be measured.

Distribution

Brazil: state of Pará (Fig. 29).

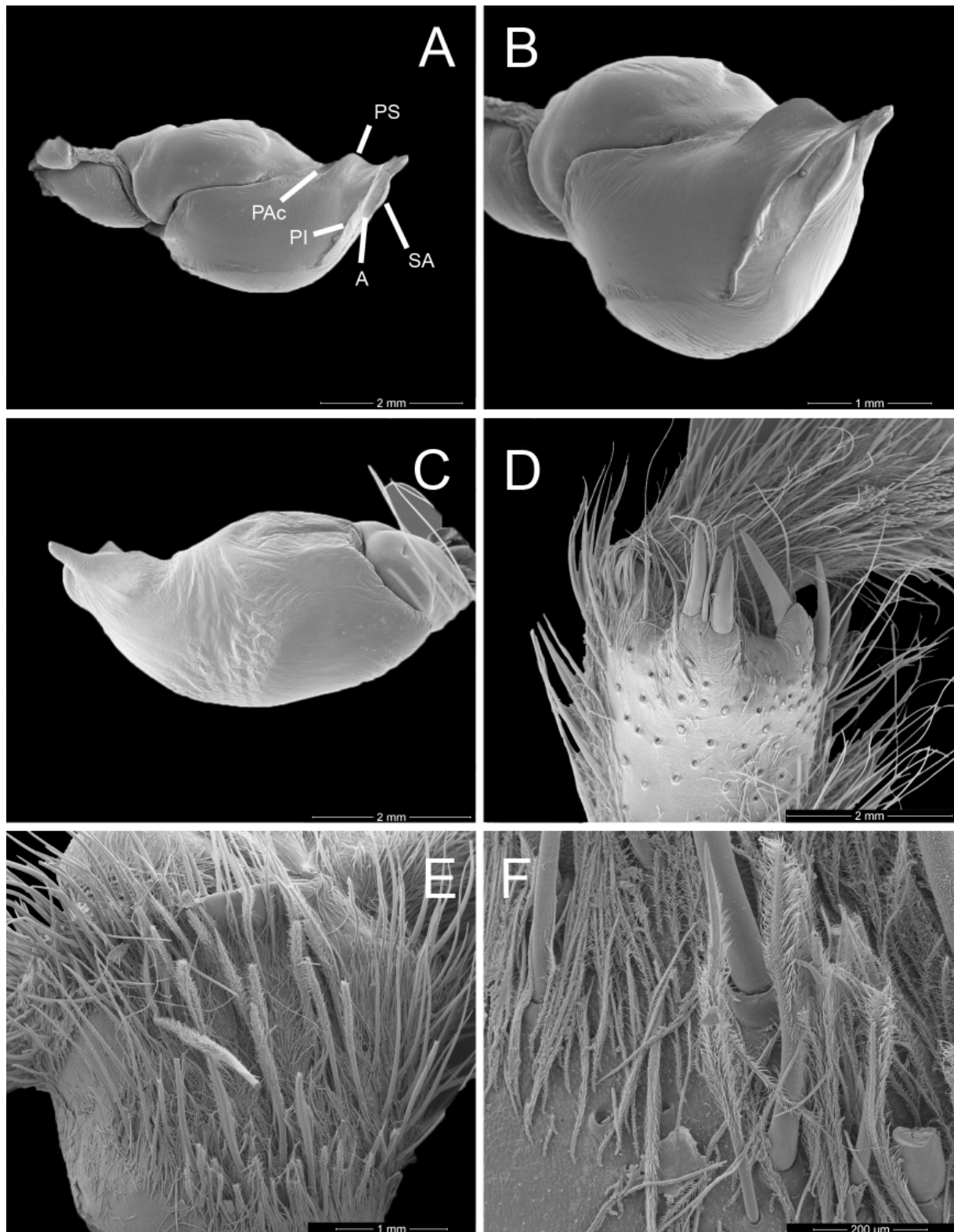


Fig. 22. *Umbyquyra belterra* gen. et sp. nov., holotype, ♂, Flona do Tapajós, Belterra, Pará, Brazil (IBSP 167421). **A.** Palp, prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, trochanter. **F.** Trochanter I. Abbreviations: see Material and methods.

Umbyquyra tapajos gen. et sp. nov.

urn:lsid:zoobank.org:act:C862CAB2-4585-4B9C-8364-3DB8978445E7

Figs 23–24, 29

Diagnosis

Males of *Umbyquyra tapajos* gen. et sp. nov. resemble those of *U. belterra* gen. et sp. nov. by the presence of a PAc (Fig. 23C), but differ by a more compact tegulum and keels being parallel to each other (Figs 23A–C, 24A–C). *Umbyquyra tapajos* gen. et sp. nov. presents a short and straight fovea while *U. belterra* have a recurve fovea.

Etymology

The species epithet is a noun in apposition taken from the type locality.

Type material

Holotype

BRAZIL: ♂, Pará, Belterra, Flona do Tapajós, 2°35'46.2" S, 54°55'50.7" W, Oct. 2011, A.D. Brescovit *et al.* leg. (IBSP 161738).

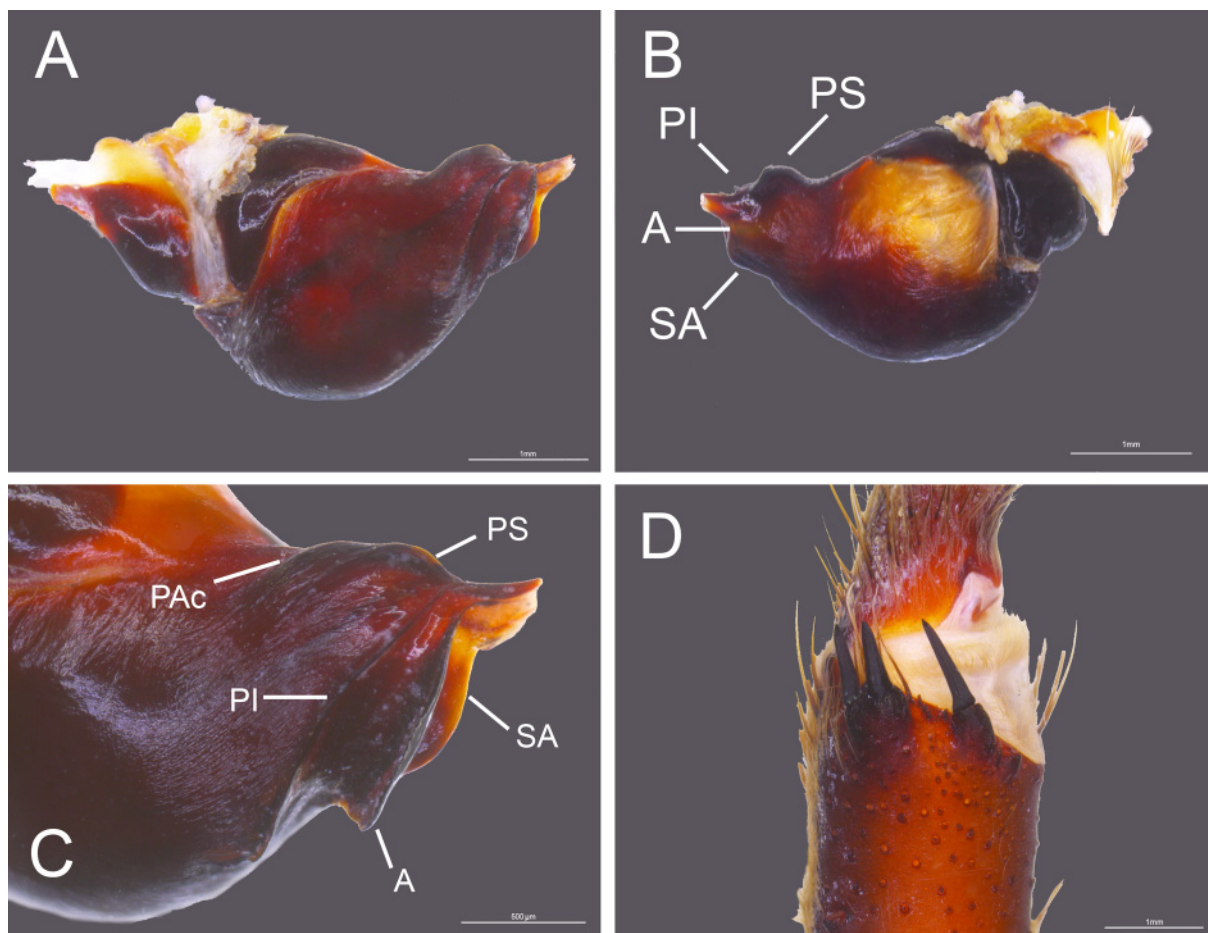


Fig. 23. *Umbyquyra tapajos* gen. et sp. nov., paratype, ♂, Flona do Tapajós, Belterra, Pará, Brazil (IBSP 161728). **A.** Palp, prolateral. **B.** Retrolateral. **C.** Anterolateral, distal area. **D.** Tibial apophysis, retrolateral. Abbreviations: see Material and methods.

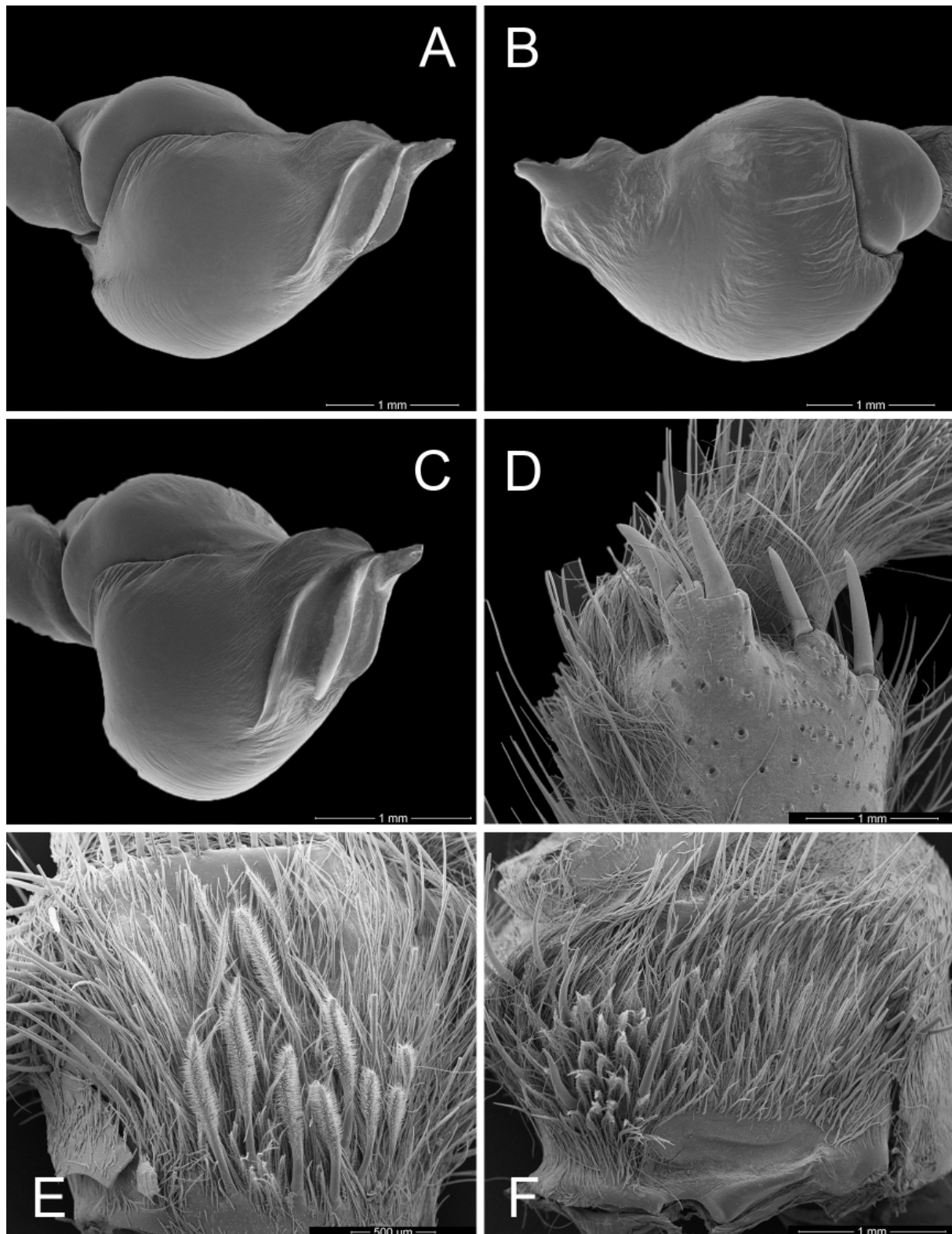


Fig. 24. *Umbyquyra tapajos* gen. et sp. nov., paratype, ♂, Flona do Tapajós, Belterra, Pará, Brazil (IBSP 161728). **A.** Palp, prolateral. **B.** Retrolateral. **C.** Anterolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, trochanter. **F.** Trochanter I.

Paratype

BRAZIL, 1 ♂, same data as for holotype (IBSP 161728).

Description

Male (holotype, IBSP 161738)

In ethanol: same color as *U. belterra* gen. et sp. nov. Total length 32. Carapace 12.3 long, 16.4 wide. Clypeus 0.6. Eye tubercle 2.3 long, 1.6 wide. Eyes: anterior row slightly procurved and posterior recurved. AME 0.41 long, 0.45 wide; PME 0.2 long, 0.3 wide; ALE 0.27 long, 0.53 wide; PLE 0.25 long, 0.44 wide. Basal segment of chelicerae with 12 teeth. Labium: 2.2 long, 1.7 wide, with 120 cuspules. Endites with 180–183 cuspules. Stridulatory bristles with around 10–12 bristles on palp trochanter and 35–45 on leg I (Fig. 24E–F). Palp: femur 7.7, patella 3.2, tibia 7.6, tarsus 2.7, total 21.2. Leg I femur 14.3, patella 4.8, tibia 12.5, metatarsus 12.6, tarsus 7.5, total 51.7. II 13.8, 4.1, 9.7, 12.5, 6.4, 46.5. III 13.0, 4.6, 9.7, 14.0, 7.0, 48.3. IV 14.7, 4.2, 13.3, 18.7, 7.1, 58. Spination: palp: femur d0-0-1app, tibia v0-1r-0ap, p1-1-2-1-1-1-2-1-2ap, r0-0-1-0ap. Legs I femur d0-0-1app, tibia v3-1-1-1-1apr-1app, p0-1-0-0-0ap, p0-1-0-0-0ap, metatarsus v0-0-0-1app-1apr, p0-1-0-0ap, r0-1-0-0ap. II femur, 0-0-0-1app, tibia v0-0-1-1-0ap, p0-1-0-1-0ap, r1-0-1-1-0ap, metatarsus v1-2-1-1p-1r-0-1app, p1-0-1-0-0ap, r0-1-0-0-1ap. III femur d0-0-1apr, patella r0-1-0ap, tibia v0-0-1-1-0ap, 0-1-0-1-0ap, r1-0-1-1-0ap, metatarsus v1-2-1-1p-1r-0-1app, p1-0-1-0-0ap, r0-1-0-0-1ap. IV femur d0-0-1apr, tibia v0-1p-1-1p-1r-1p-1app-1ap-1apr, p1-1-1-1-1ap, metatarsus v1-1r-1p-1-1-1p-2-1p-1r-1app-1ap-1apr, p1-0-1-0-1-0ap, r0-1-0-0-1-0ap. Tibial apophysis of leg I: retrolateral branch projected with two strong distal spines with two median setae; prolateral branch slightly projected with distal and sub basal spines (Figs 23D, 24D). PLS basal, median and apical segments 2.5, 2.3, 3.0 long, respectively.

Female

Unknown.

Distribution

Brazil: state of Pará (Fig. 29).

Umbyquyra tucurui gen. et sp. nov.

[urn:lsid:zoobank.org:act:B9C76D3F-B8D8-4DA1-B47C-315D34E05706](https://zoobank.org/act:B9C76D3F-B8D8-4DA1-B47C-315D34E05706)

Figs 6, 25–26, 29

Diagnosis

Males and females of *Umbyquyra tucurui* gen. et sp. nov. resemble those of *U. paranaiba* gen. et sp. nov. by a straight fovea (Fig. 5E), but this species can be distinguished from *U. paranaiba* gen. et sp. nov. and the other species by a retrolateral branch of the tibial apophysis with 5–6 strong distal spines (Figs 25C, 26D), and prolateral inferior and accessory keels being parallel to each other (Figs 25A, 26A–B). The female spermathecae resemble those of *Umbyquyra paranaiba* gen. et sp. nov., but in *U. tucurui* gen. et sp. nov. the base is narrower (Fig. 25D).

Etymology

The species epithet is a noun in apposition taken from the type locality.

Type material

Holotype

BRAZIL: ♂, Pará, Tucuruí, 3°46'02.9" S, 49°41'10.2" W, 17 Nov. 1987, S.M. Lucas leg. (IBSP 104834).

Paratype

BRAZIL: Pará, 1 ♀, Tucuruí, 3°46'02.9" S, 49°41'10.2" W, Equipe Resgate de Fauna leg. (IBSP 107431).

Additional material examined

BRAZIL: **Pará:** 1 ♂, Tucuruí, Usina Hidrelétrica de Tucuruí, 3°49'58.3" S, 49°39'02.0" W, 25 Jun. 1987 (IBSP 111694); 1 ♂, Ilha do Bananal, 3°17'45.4" S, 49°39'26.4" W, (IBSP 107465); 1 ♀, same collection data as for preceding, 1984 (IBSP 113965); 1 ♀, Ilha de Tocantins, 3°17'36.1" S, 49°39'20.7" W, Equipe Resgate de Fauna leg. (IBSP 107414); 1 juv., same collection data as for preceding (IBSP 107625); 1 ♂, same collection data as for preceding, 1984 (IBSP 107931); 1 ♂, same collection data as for preceding (IBSP 107413); 1 ♂, same collection data as for preceding (IBSP 107707); 1 ♂, same collection data as for preceding (IBSP 107466); 1 ♀, same collection data as for preceding (IBSP 107417); 1 ♂, same collection data as for preceding (IBSP 107419); 1 ♀, same collection data as for preceding (IBSP 107622); 1 ♂, same collection data as for preceding (IBSP 107416); 1 ♂, Vale do Caraipé, 3°37'57.3" S, 49°38'56.6" W (IBSP 107708); 2 ♂♂, 1 ♀, Marabá, 5°22'47.7" S, 49°07'57.4" W (IBSP 102657), Equipe Resgate de Fauna leg.; 1 ♂, same collection data as for preceding, 17 Nov. 1987 (IBSP 102834); 1 ♂, Brejo Grande do Araguaia, 5°42'04.7" S, 48°24'24.0" W, Sep. 2015, R.M. Guedes leg. (IBSP 168766); 1 ♂, same collection data as for preceding, Sep. 2015 (IBSP 168767); 1 ♀, same collection data as for preceding, Sep. 2015 (IBSP 168764); 1 ♂, same collection data as for preceding, Sep. 2015 (IBSP 168765).

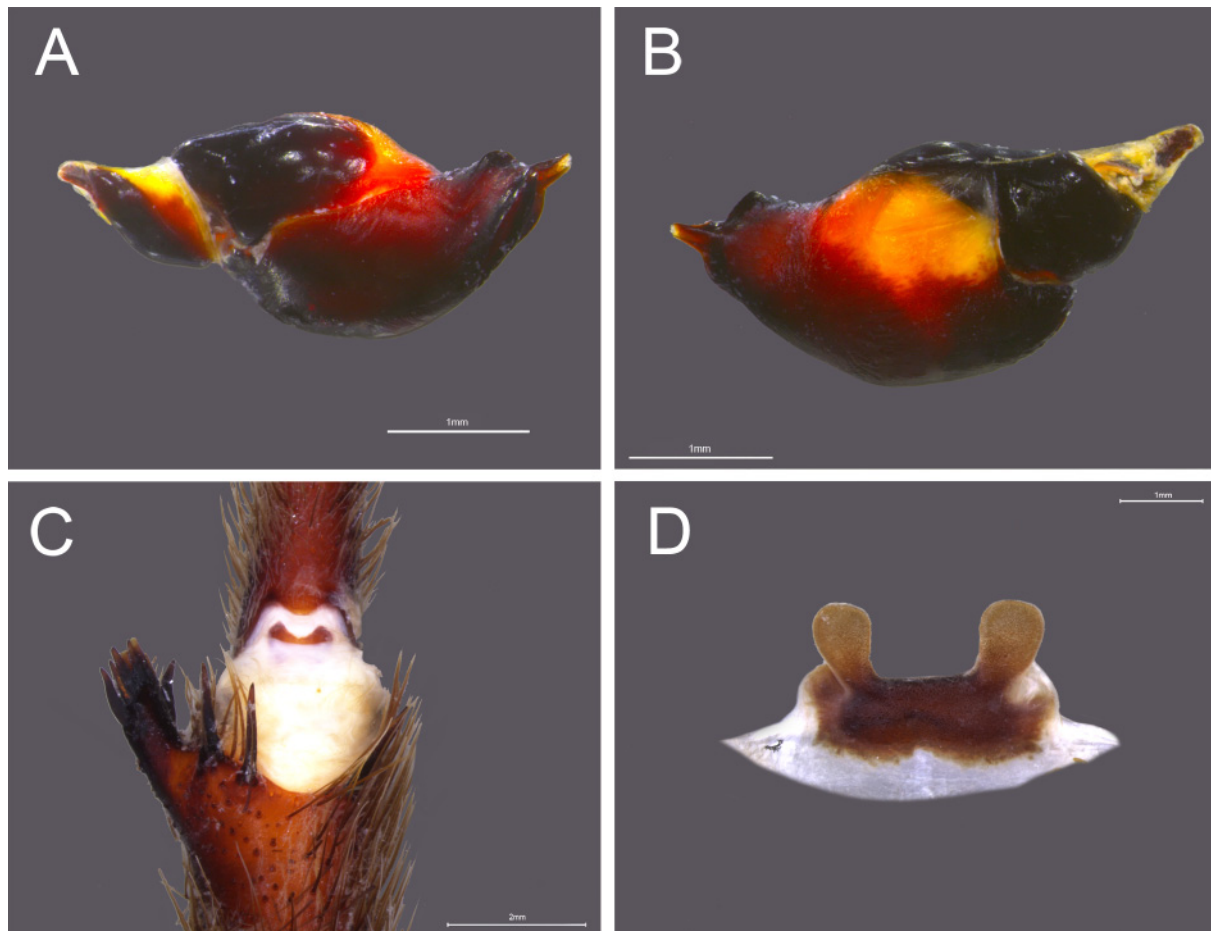


Fig. 25. *Umbyquyra tucuruui* gen. et sp. nov. **A–C.** Holotype, ♂, Tucuruí, Pará, Brazil (IBSP 104834). **A.** Palp, prolateral. **B.** Retrolateral. **C.** Tibial apophysis, ventral. **D.** Paratype, ♀, spermathecae, dorsal (IBSP 107431).

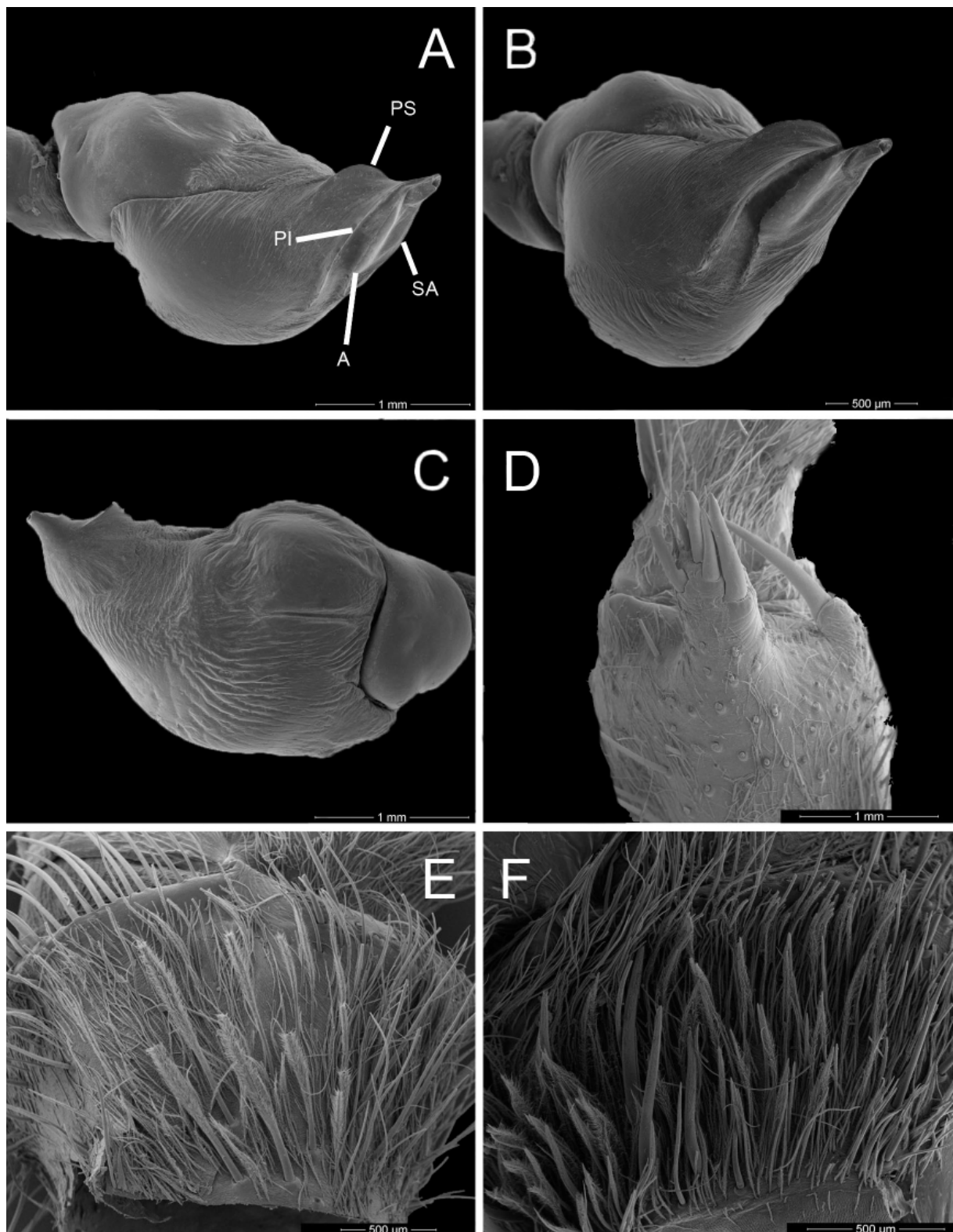


Fig. 26. *Umbyquyra tucuruí* gen. et sp. nov., holotype, ♂, Tucuruí, Pará, Brazil (IBSP 104834). **A.** Palp, prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, trochanter. **F.** Trochanter I. Abbreviations: see Material and methods.

Type material

Holotype

BRAZIL: ♂, Pará, Melgaço, Floresta Nacional de Caxiuanã, 1°47'32.3" S, 51°26'2.5" W, 28 May 2003, J.A.P. Barreiros and C.O. Araújo leg. (MPEG 0967).

Paratypes

BRAZIL: Pará, 1 ♀, Melgaço, Floresta Nacional de Caxiuanã, 1°47'32.3" S, 51°26'2.5" W, 4 Oct. 2002, A. Chagas leg. (MPEG 0177); 1 ♂, same collection data as for preceding, 22 Oct. 2003, J.A. Barreiros leg. (IBSP 168432); 1 ♀, same collection data as for preceding, Nov. 2002 (IBSP 168431).

Additional material examined

BRAZIL: **Pará:** 1 ♂, Belém, 1°24'18.3" S, 48°28'30.1" W, 18 Nov. 1978, R.F. da Silva leg. (IBSP 111213); 1 ♂, Santarém, 2°27'34.6" S, 54°42'17.1" W, 1991, no data on collector (IBSP 107574); 1 ♀, Floresta Nacional de Caxiuanã, 1°47'32.3" S, 51°26'2.5" W, 26 May 2003, J.A.P. Barreiros leg. (MPEG 0963); 1 ♀, same collection data as for preceding, 27 Mar. 2002 (MPEG 0194); 1 ♂, same collection data as for preceding (MPEG 05108); 1 ♂, same collection data as for preceding, Oct. 2003, J.A.P. Barreiros leg. (MPEG 0937); 1 ♂, São Miguel do Guama, 1°36'43.0" S, 47°28'52.3" W, 27 Jun. 2004, Feitosa leg.

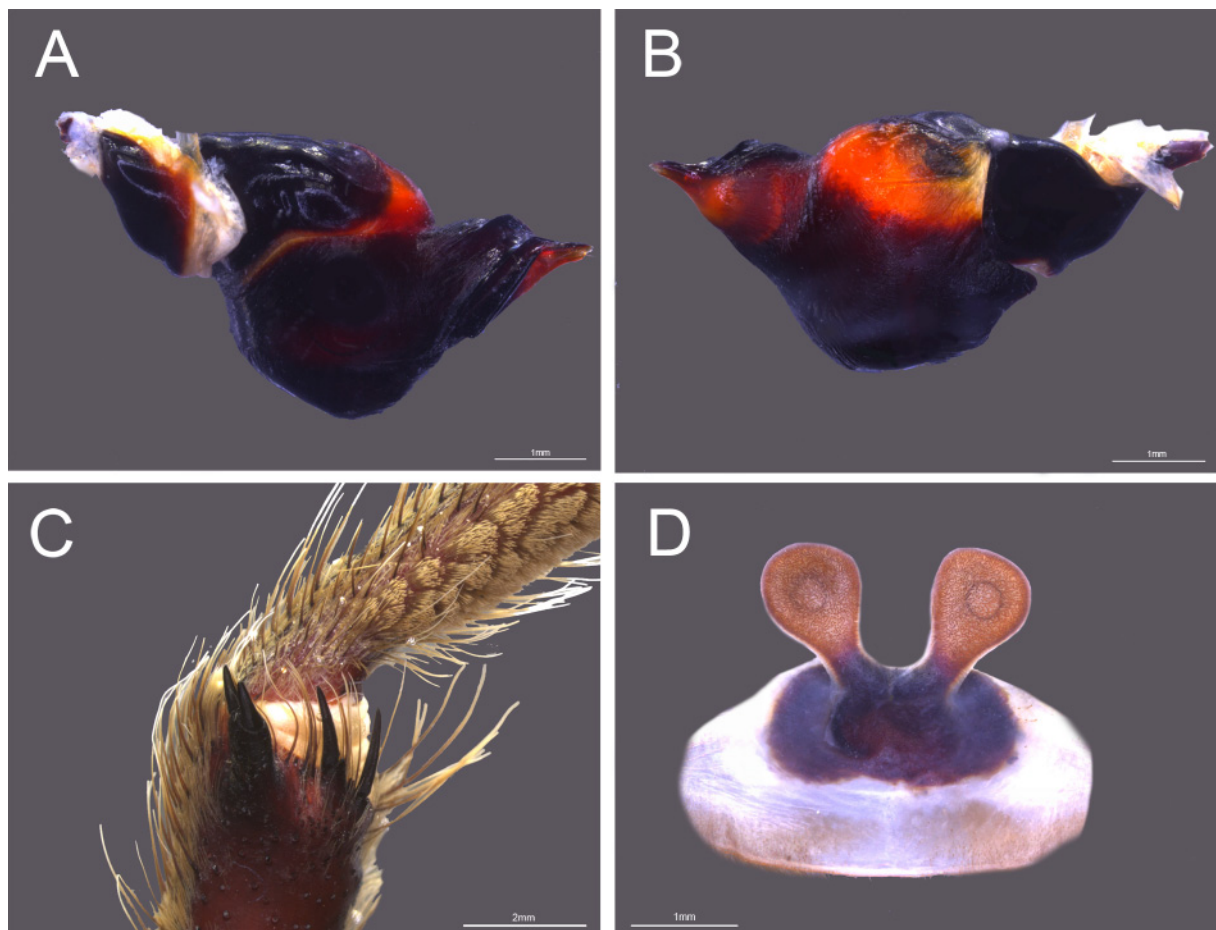


Fig. 27. *Umbyquyra caxiuana* gen. et sp. nov. **A–C.** Holotype, ♂, Floresta Nacional de Caxiuanã, Pará, Brazil (MPEG 0967). **A.** Palp, proteral. **B.** retrolateral. **C.** Tibial apophysis, retrolateral. **D.** Paratype, ♀, same locality, spermathecae, dorsal (MPEG 0177).

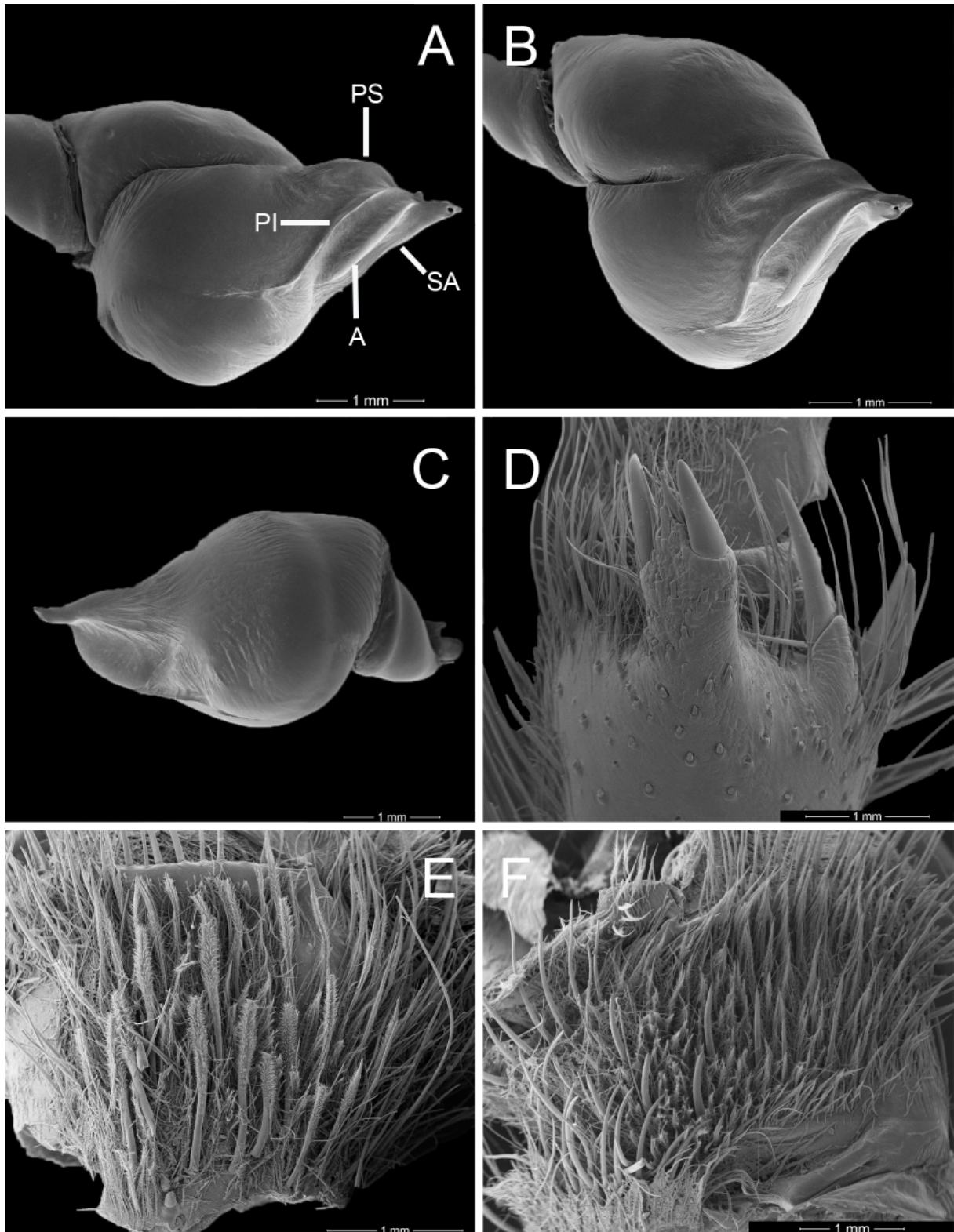


Fig. 28. *Umbyquyra caxiuana* gen. et sp. nov., holotype, ♂, Floresta Nacional de Caxiuana, Pará, Brazil (MPEG 0967). **A.** Palp, prolateral. **B.** Anterolateral. **C.** Retrolateral. **D.** Tibial apophysis, retrolateral. **E.** Stridulatory organ, trochanter. **F.** Same, trochanter I. Abbreviations: see Material and methods.

(MPEG 5158); 1 ♂, same collection data as for preceding, 23 Jul. 2003, J.A.P. Barreiros leg. (MPEG 0965); 1 ♀, same collection data as for preceding (MPEG 0197); 1 ♂, same collection data as for preceding, 2003, J.A. Barreiros leg. (MPEG 0966); 1 ♂, same collection data as for preceding, 2002, M. Santos and Santos leg. (MPEG 09698); 1 ♂, Juruti, 02°28'22.1" S, 56°12'29.4" W, 14 Feb. 2007, A. Lima and I. Pimenta leg. (MPEG 15450); 1 ♀, same collection data as for preceding, 8 Jun. 2007, A. Lima and I. Pimenta leg. (MPEG 15451); 1 ♂, same collection data as for preceding, 9 Jun. 2007, N.F. Lo-Man-Hung leg. (MPEG 15452); 1 ♀, same collection data as for preceding, 17 Nov. 2007, Souza leg. (MPEG 15453).

Description

Male (holotype MPEG 0967)

In ethanol: same color as *U. belterra* gen. et sp. nov. Total length: 47.0. Carapace: 20.8 long, 17.4 wide. Clypeus: 0.5. Eye tubercle 2.0 long, 2.8 wide. AME; 0.5 long, 0.5 wide; PME 0.4 long, 0.3 wide; ALE: 0.7 long, 0.5 wide; PLE 0.35 long, 0.4 wide. Basal segment of chelicerae with 10 teeth. Labium: 2.4 long, 2.5 wide, with 123 cuspules. Endites with 210–206 cuspules. Stridulatory bristles with around 20 bristles on palp trochanter, large and very long; stridulatory bristles on trochanter of leg I not so large, but surpassing 50 bristles (Fig. 28E–F). Palp: femur 9.7, patella 3.1, tibia 9.7, tarsus 3.6, total 26.1. Leg I femur 17.4, patella 6.2, tibia 14.7, metatarsus 14, tarsus 9.4, total 61.7. II 16.5, 5.3, 15.1, 13.4, 8.5, 58.8. III 16.2, 7, 12.7, 15.7, 8.4, total 60. IV 16.2, 8.0, 16.7, 22, 9.4, 72.3. Spination: palp: femur d0-0-1app, tibia d0-0-1p-1p-1-2ap, p0-0-1-1-1-0ap. Legs I femur d0-0-1app, tibia v0-0-0-1r-1ap, p0-1-0-0ap, r0-1-0-1-0-0-0ap, metatarsus v0-1r-0-0ap. II femur, 0-0-0-1app, tibia v0-1-0-1apr-1app, p0-0-0-1-0ap, metatarsus v0-1-1-0-0app, p0-1-0-0ap. III femur d0-0-1apr, tibia v0-0-1-1-0-1app-1apr, p0-1-0-1-0ap, r0-1-0-1-0-1ap, metatarsus v0-1r-1p-0-1r-1p-0-1app-1ap-2apr, p1-0-1-0-1-1ap, r0-1-0-0ap. IV tibia v0-0-1r-1p-1p-1r-1p-1app-1ap-1apr, p0-1-0-1-0ap, r0-0-1-1ap, metatarsus d0-0-1r-0-0ap, v1p-1-1r-1-1p-1-1p-1r-1-1r-1p-1r-1r-1apr-1app, p1-0-1-0-0-1ap, r0-1-0-1-2ap. Tibial apophysis of leg I: retrolateral branch elongated with two strong distal spines with three median setae on tubercle; prolateral branch projected with long distal and subdistal spines (Figs 27C, 28D). PLS basal, median and apical segments 2.1, 2.6, 3.5 long, respectively.

Female (paratype, MPEG 0177)

In ethanol: same color as male. Total length 52. Clypeus 0.4. AME 0.4 long, 0.4 wide; PME 0.2 long, 0.2 wide; ALE 0.2 long, 0.5 wide; PLE 0.2 long, 0.4 wide. Basal segment of chelicerae with 10 teeth. Labium 2 long, 2.5 wide, with 98 cuspules. Endites with 111–100 cuspules pointed. Eye tubercle 1.6 long, 2.8 wide. Stridulatory bristles as in male. Palp: femur 7.8, patella 4.6, tibia 4.1, tarsus 4.2, total 20.7. Leg I 11, 8.2, 6.3, 3.8, 3.5, 32.8. II 9.6, 6, 6.6, 7, 3.8, 33. III 8.1, 5.8, 7, 8.3, 4.1, 33.3. IV 10.5, 6.1, 8.6, 11.6, 4.2, 41. Spination: palp: tibia v1-0-1r-1r-1apr, p0-1-0ap. Legs I femur d0-0-1p-0ap, tibia v0-1-0-0-1ap, metatarsus v0-1-0-0-0-1ap-1apr. II tibia v0-1-0-1ap, p0-1-1-0ap, metatarsus v0-1-0-1app-1apr, p0-1-0ap, r0-0-2ap. III tibia v0-0-1app-1apr, p1-0-0ap, metatarsus d0-0-1r-0-0-1-0ap, v0-1-1p-1r-0-1r-1app, p1-1-1ap. IV tibia v-0-1p-1-1app-1apr, p0-1-1ap, metatarsus d0-0-1-0ap, v1r-1r-1p-1r-2r-1p-1r-1r-1apr. PLS: basal, median and apical segments 4.0, 3.4, 3.8 long, respectively. Spermathecae with oval basal area (Fig. 27D).

Distribution

Brazil: state of Pará (Fig. 29).

Species considered as nomen dubium

Cyrtopholis meridionalis (Keyserling, 1891) nom. dub.

Cyrtosternum meridionalis Keyserling, 1891: 6.

Cyrtopholis meridionalis – Petrunkevitch 1911: 58. — Mello-Leitão 1926: 4.

Metriopelma meridionalis – Mello-Leitão 1923: 170.

Keyserling (1891) described *Cyrtosternum meridionalis* based on a female from Taquara do Mundo Novo (nowadays Taquara), state of Rio Grande do Sul, Brazil, and did not mention where the holotype was deposited. Mello-Leitão (1923) translated the original text and transferred the species to *Metriopelma* Becker, 1878 with no further explanation. Later, Mello-Leitão (1926) transferred the species to *Cyrtopholis*. The original description (Keyserling 1891) does not allow an identification of the species, and the holotype supposedly in The Natural History Museum of London could not be located. Therefore, as the record in southern Brazil for this species is out of the distribution range of *Umbyquyra* gen. nov., *Cyrtopholis meridionalis* is herein considered as a *nomen dubium*.

Synonymy

Acanthoscurria gomesiana Mello-Leitão, 1923

Acanthoscurria gomesiana Mello-Leitão, 1923: 306, figs 51–55, 167.

Cyrtopholis zorodes Mello-Leitão, 1923: 143–144 (holotype ♀ from São Paulo, São Paulo, Brazil, deposited in MNRJ 29, examined). syn. nov.

Phormictopus pheopygus Mello-Leitão, 1923: 273, figs 150–152.

Acanthoscurria violacea Mello-Leitão, 1923: 292, fig. 182.

Acanthoscurria pugnax Vellard, 1924: 142, pl. VIII, fig. 34a–d.

Acanthoscurria aurita Piza, 1939: 5, figs 2–3.

Acanthoscurria gomesiana – Schiapelli & Gerschman 1964: 412, pl. III, fig. 9. — Gonzalez-Filho *et al.* 2012: 2, figs 1a–d, 2a–f, 5a–f.

Cyrtopholis zorodes – Bücherl *et al.* 1971: 124. — Silva-Moreira *et al.* 2010: 68.

Phormictopus pheopygus – Lucas 1983: 350 (syn.).

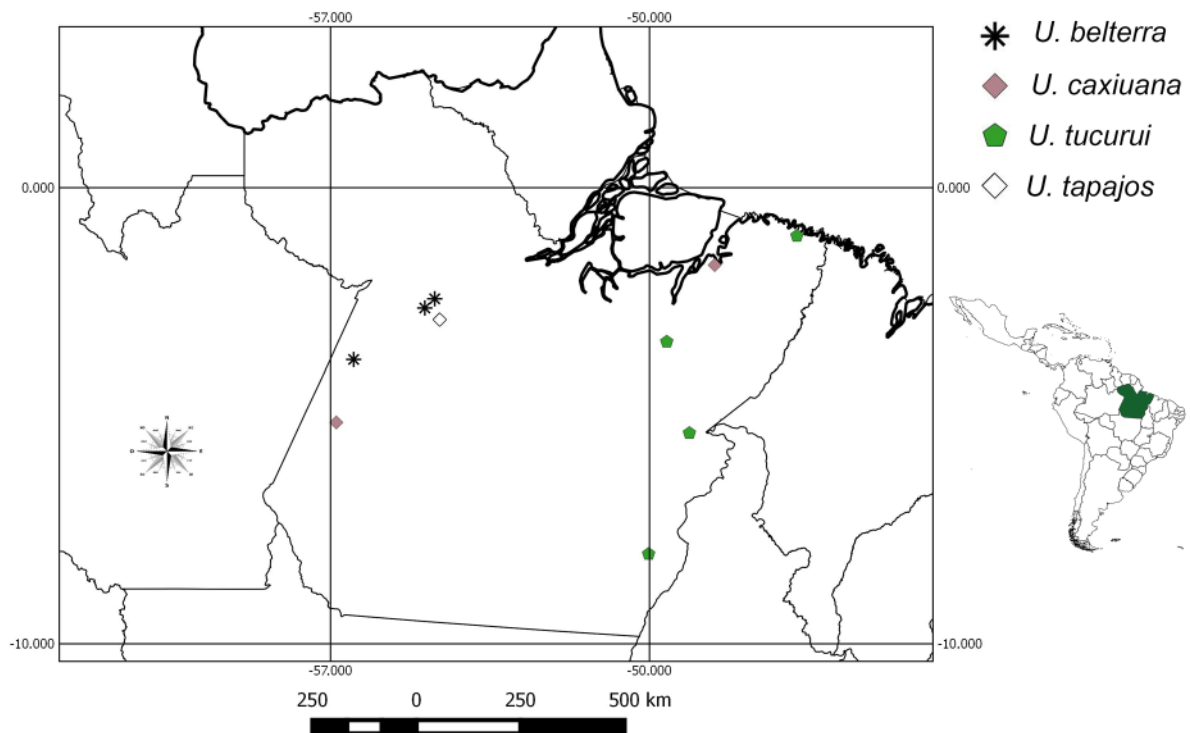


Fig. 29. Geographic distribution records of species of *Umbyquyra* gen. nov.: *U. belterra* gen. et sp. nov., *U. caxiuana* gen. et sp. nov., *U. tucurui* gen. et sp. nov. and *U. tapajos* gen. et sp. nov.

Acanthoscurria violacea – Schiapelli & Gerschman 1964: 415, pl. III, figs 19–21. — Gonzalez-Filho *et al.* 2012: 2 (syn.).

Acanthoscurria pugnax – Gonzalez-Filho *et al.* 2012: 2 (syn.).

Acanthoscurria aurita – Gonzalez-Filho *et al.* 2012: 2 (syn.).

Remark

The original description indicates MZSP as the type repository; however, no specimen of *Cyrtopholis zorodes* was located. Bücherl *et al.* (1971: 124) and Silva-Moreira *et al.* (2010: 68) agree that the specimen MNRJ 29, holotype ♀ from São Paulo, in the state of São Paulo, Brazil is the true holotype. The holotype is in bad condition without SR and legs. Bücherl mentioned stridulatory bristles on the palp trochanter and first leg. The aspect of the SR and the type locality (São Paulo, state of São Paulo, Brazil) allow us to establish *Cyrtopholis zorodes* as a junior synonymy of *Acanthoscurria gomesiana* Mello-Leitão, 1923.

Discussion

Spiders of Theraphosinae in general present few morphological characters and several taxonomic problems (Raven 1990). Simon (1903) proposed the use of the stridulatory bristles, present in some Theraphosinae (Aviculariinae) to distinguish genera, according the localization on legs segments and pedipalps. He established four types of stridulatory bristles and the type IV, on the retrolateral face of the pedipalp and prolateral face of trochanter of leg I are nowadays recognized as distinctive characters in four genera: *Acanthoscurria*, *Cyrtopholis*, *Nesipelma* and *Longilyra*. According to this character, three species from South America were described: *Cyrtopholis palmarum*, *C. schmidtii* and *Acanthoscurria acuminata*.

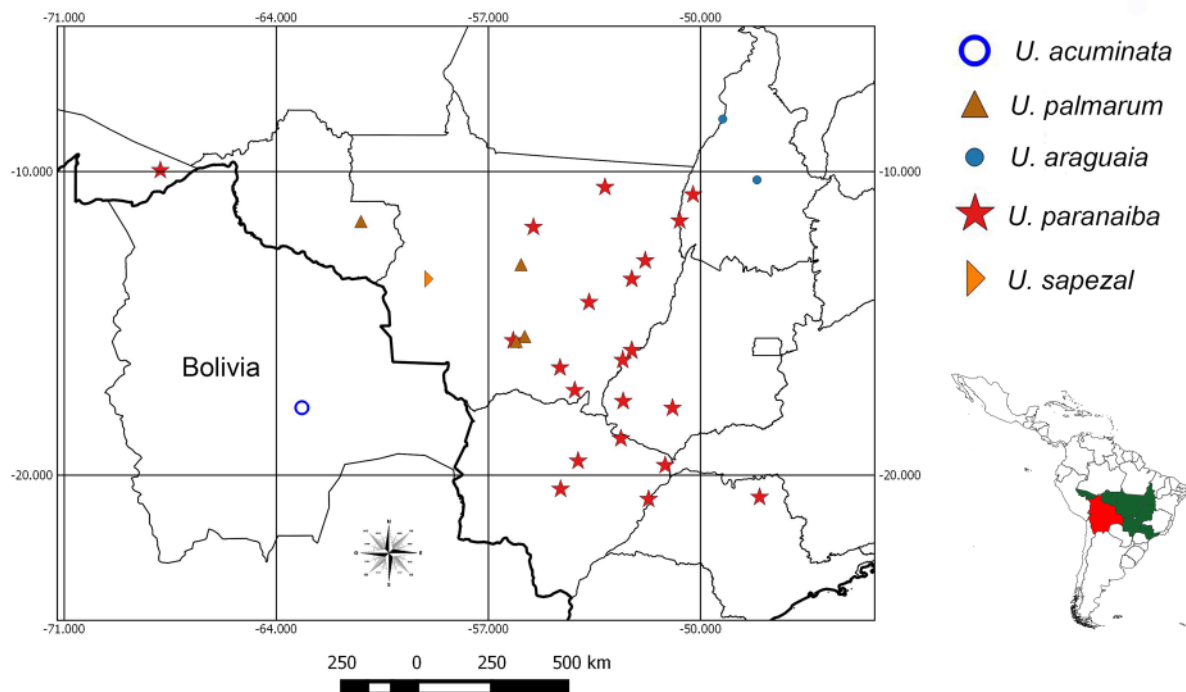


Fig. 30. Geographic distribution records of species of *Umbyquyra* gen. nov.: *U. acuminata* (Schmidt & Tesmoingt in Schmidt, 2005) gen. et comb. nov., *U. palmarum* (Schiapelli & Gerschman, 1945) gen. et comb. nov., *U. araguaia* gen. et sp. nov., *U. paranaiba* gen. et sp. nov. and *U. sapezal* gen. et sp. nov.

Historically, the relationship between *Cyrtopholis* and *Acanthoscurria* has been referenced in the literature (Pérez-Miles *et al.* 1996; Bertani 2001), but *Nesipelma* and *Longilyra* have never been phylogenetically tested. *Umbyquyra* gen. nov. presents the same disposition of the stridulatory bristles, showing their relationship with these genera and this character could be a synapomorphy for this group within Theraphosinae.

It is noteworthy that the three species mentioned above, *Umbyquyra palmarum* gen. et comb. nov., *U. schmidti* gen. et comb. nov. and *U. acuminata* gen. et comb. nov. show a prominent projection of the cephalic region (Fig. 15E), another characteristic common in species of the Antillean genus *Cyrtopholis* (see Schmidt 2003: 268), were mistakenly included in *Acanthoscurria*. This character should be treated as plesiomorphic in Theraphosidae, as it also occurs in *Ceratogyrus* Pocock, 1897, an African Harpacterinae (De Wet & Dippenaar-Schoeman 1991; Peters 2000) while *Umbyquyra* gen. nov. is included in Theraphosinae. Unfortunately, this character, highly variable among species, could hardly be used as diagnostic for these genera (Gallon, 2001). These structures range from almost absent to protruding projections on the back of the carapace (Fig. 5; De Wet & Dippenaar-Schoeman 1991: fig. 4A–H) and their homology has not yet been studied among the various occurrences in Theraphosidae.

On the other hand, this study shows that in *Umbyquyra* gen. nov., as in general for Theraphosidae, the shape of the palp of the males and their structures are fundamental in the determination of the genera and their relations (Bücherl 1957; Pérez-Miles *et al.* 1996; Bertani 2000; Pérafan & Pérez-Miles 2014; Ortiz & Francke 2015). The pattern presented by *Umbyquyra* gen. nov. is very different from that of *Cyrtopholis* and *Nesipelma*, where the male palp bulb lacks an apophysis and has an elongated and tapered embolus (Figs 2A–B, 4C). In *Longilyra* the males are still unknown, only females have been described. The palps of the males of *Umbyquyra* gen. nov. appear closer to *Acanthoscurria* since they

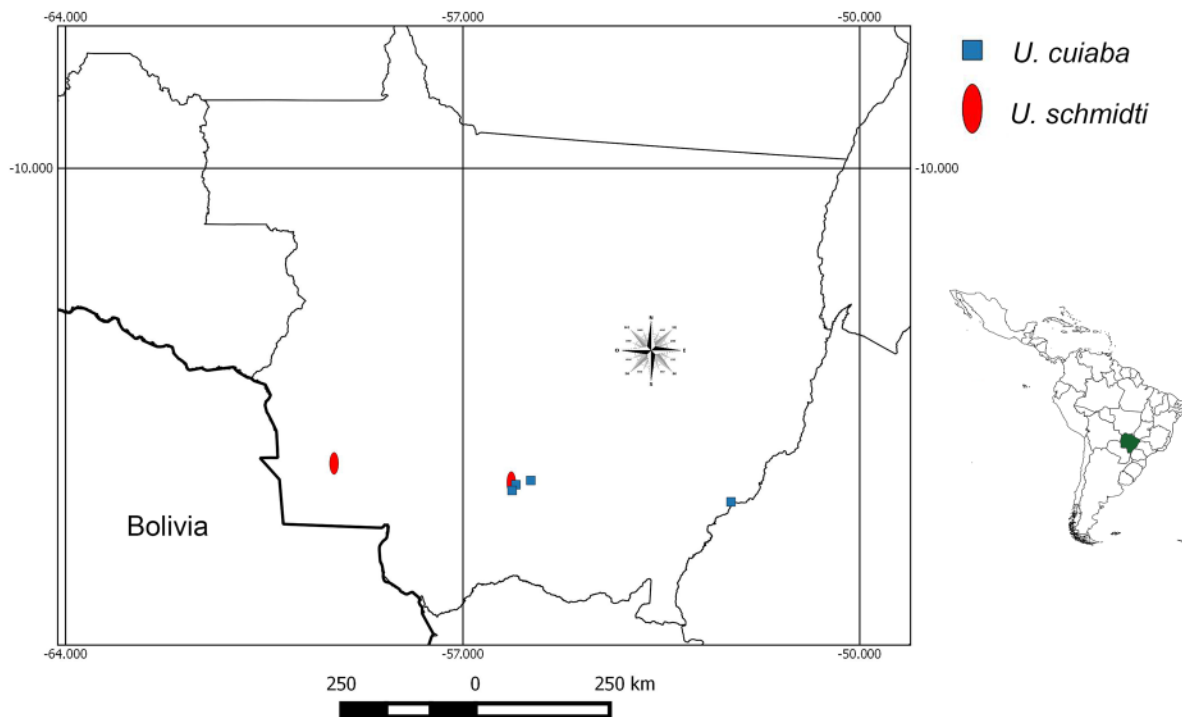


Fig. 31. Geographic distribution records of species of *Umbyquyra* gen. nov.: *U. cuiaba* gen. et sp. nov. and *U. schmidti* (Rudloff, 1996) gen. et comb. nov.

present an apophysis, but are distinguished by the bulb of the palp with an acuminate and protruding bulb, and two tibial apophyses, whereas in the species of *Acanthoscurria* the apex of the embolus forms a spoon or furrow and presents only one tibial apophysis (Fig. 1C). The female genitalia in this group appears to be more conservative, but in *Umbyquyra* gen. nov. the seminal receptacles of the spermathecae have short ducts emerging from a large, sclerotic base (Fig. 7D).

Although we found some putative relationships, a phylogeny of this group is still necessary, but it would be equally important to review of *Cyrtopholis*, a genus with a wide diversity in the Antilles, and to increase the knowledge of the monotypic *Nesipelma* and *Longilyra*, the latter known only by females.

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