



Revision of the Neotropical spider genus *Acanthoctenus* (Araneae: Ctenidae: Acanthocteninae)

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Abstract

We revise the genus *Acanthoctenus* Keyserling, 1877 recognizing thirteen valid species, of which five are new species and two are re-validated. Further, we find one new synonymy and transfer one species. We describe *Acanthoctenus alux* **sp. nov.** from Guatemala, *A. chickeringi* **sp. nov.** and *A. lamarrei* **sp. nov.** from Panama, *A. manauara* **sp. nov.** from Brazil and *A. torotoro* **sp. nov.** from Bolivia. We revalidate *Acanthoctenus dumicola* Simon, 1906 **stat. res.** from Venezuela, and *A. virginea* (Kraus, 1955) **stat. res., comb. nov.** from El Salvador. We transfer *Acanthoctenus mammifer* to *Viracucha mammifer* (Mello-Leitão, 1939) **comb. nov.**, from Brazil. *Acanthoctenus maculatus* Petrunkevitch, 1925 and *Gephyroctenus kolosvaryi* Caporiacco, 1947 are considered *species inquirendae* in Acanthocteninae and Ctenidae, respectively, and *A. obauratus* Simon, 1906 and *A. rubrotaeniatus* Mello-Leitão, 1947 are considered *incertae sedis* in Acanthocteninae and Acantheinae, respectively. We also describe for the first time the female of *Acanthoctenus spiniger* Keyserling, 1877, the type species of the genus. We provide illustrations of male and female diagnostic characters, genitalia, habitus, and measurements to support the genus re-description and further identification of its species. We yield a distributional map of the specimens recorded and the description of the natural history of *Acanthoctenus manauara* **sp. nov.**

Key words: Central America, cribellate spiders, Lycosoidea, morphology, new species, South America, taxonomy

Introduction

The erection of the spider genus *Acanthoctenus* Keyserling, 1877 first included two species with long and spinose legs from the Neotropics. Keyserling (1877) described the genus in the family Ctenidae Keyserling, 1877, based on the resemblance of the ocular pattern with the species of the genus *Ctenus* Walckenaer, 1805 (Silva-Dávila 2003: fig. 26d). Since the original description of *Acanthoctenus* until today, several authors described another eight Neotropical species (Simon 1906: 289; Petrunkevitch 1925: 95; Mello-Leitão 1939: 528, Mello-Leitão 1947: 268; Chickering 1960: 81; Lehtinen 1967: 256). The genus never had a comprehensive taxonomic revision, making its limits and relationships with the remaining Ctenidae genera elusive.

Acanthoctenus are medium-sized spiders (ranging from 7.26 to 16.20 millimeters of total body length) (Fig. 1A–C), which are rare in collections and hard to find in the field. Unlike the conspicuous wandering Ctenidae genera, such as *Ctenus* and *Phoneutria* Perty, 1833, frequently found in lower strata of tropical forests (Höfer *et al.* 1994; Torres-Sánchez & Gasnier 2010; Hazzi 2014), we found at least two *Acanthoctenus* species with shelters between leaves of palm trees and under tree bark (Fig. 2A–B). Most of the species have few specimens or even only the type-specimen deposited in collections. Species of *Acanthoctenus* are easier identified by the female genitalia, while the male palp presents a conserved morphology. All species present tufts of elongated setae in the abdomen and between the posterior median eyes (Figs 3A; 4B). According to Polotow & Brescovit (2014: character 22), the unique synapomorphy supporting the genus is a cylindrical embolus in the male.



FIGURE 1. *Acanthoctenus manauara* sp. nov., female live specimen (IBSP). A, dorsal; B, lateral, right view; C, frontal (Photos taken in laboratory conditions by Thiago G. Carvalho).

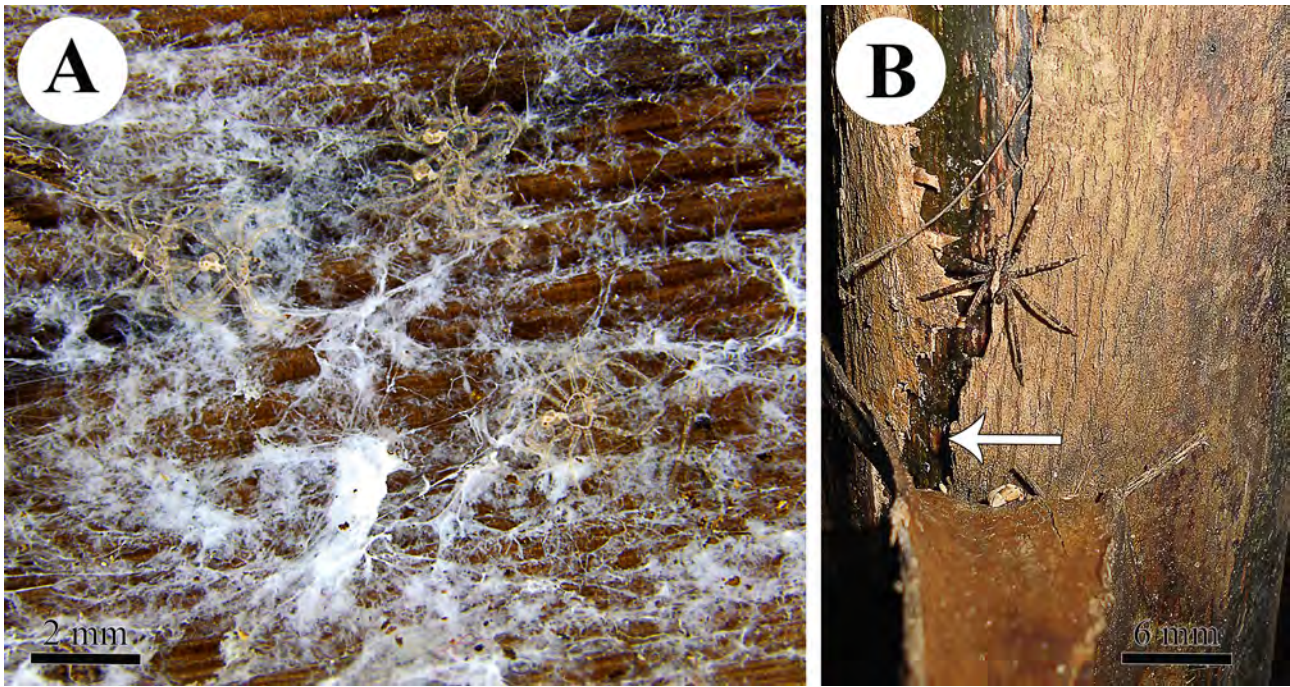


FIGURE 2. *Acanthoctenus manauara* sp. nov. A, immature exuviae under palm leaf sheath; B, female outside shelter in palm leaf sheath (arrow pointing to shelter entrance).

Acanthoctenus is the type genus of the subfamily Acanthocteninae, which includes two additional genera: *Nothroctenus* Badcock, 1932, and *Viracucha* Lehtinen, 1967. According to the phylogenetic results of Polotow & Brescovit (2014: fig. 2), the subfamily presents the following synapomorphies: a swollen patella on the male palp, three retromarginal cheliceral teeth with the proximal one distant from the remaining two teeth, and the first pair of spines on tibia I distant from the apical margin of the tibia. The presence of a cribellum/calamistrum is useful to distinguish the subfamily from other Ctenidae (Silva-Dávila 2003: char. 129; Polotow & Brescovit 2014: 351).

The higher classification of *Acanthoctenus* has a complex taxonomic history, mostly related to the great importance once given to the cribellum (Simon 1892, 1906; Dahl 1901a, b; Lehtinen 1967; Coddington & Levi 1991: 571; Griswold *et al.* 2005: 2). After a decade from the original description (Keyserling 1877), Simon (1892: 229; 1906: 288) transferred *Acanthoctenus* from Ctenidae to Zoropsidae (subfamily Acanthocteninae). This transference reflected the then newly proposed division of the “true spiders” (Araneomorphae) into “Cribellatae” and “Ecribellatae” (Simon 1892; Dahl 1901a, b). Pickard-Cambridge (1902: 351) kept the arrangement of cribellate spiders for convenience but ranked the taxa as a family, Acanthoctenidae. Subsequent authors (Petrunkevitch 1925; Mello-Leitão 1936, 1939, 1947; Chickering 1960) continued to treat Acanthoctenidae as a separate family, including also the genus *Nothroctenus* after Badcock (1932). Finally, Lehtinen (1967) transferred Acanthocteninae back to Ctenidae, and also proposed a new genus, *Viracucha*. Recently, a total evidence analysis (Polotow *et al.* 2015) used a cribellate Ctenidae identified as *Acanthoctenus* and the results support the inclusion of Acanthocteninae in Ctenidae.

The present study is the first detailed taxonomic revision of *Acanthoctenus*. The goal of this survey is to revise this genus and re-describe its species, bringing its taxonomy to modern standards. After examining the type and general material provided from loans of 19 zoological collections, we recognized 13 species of *Acanthoctenus*. Five new species are herein described, two species are revalidated, and we also propose a new synonymy and transfer one species to *Viracucha*.

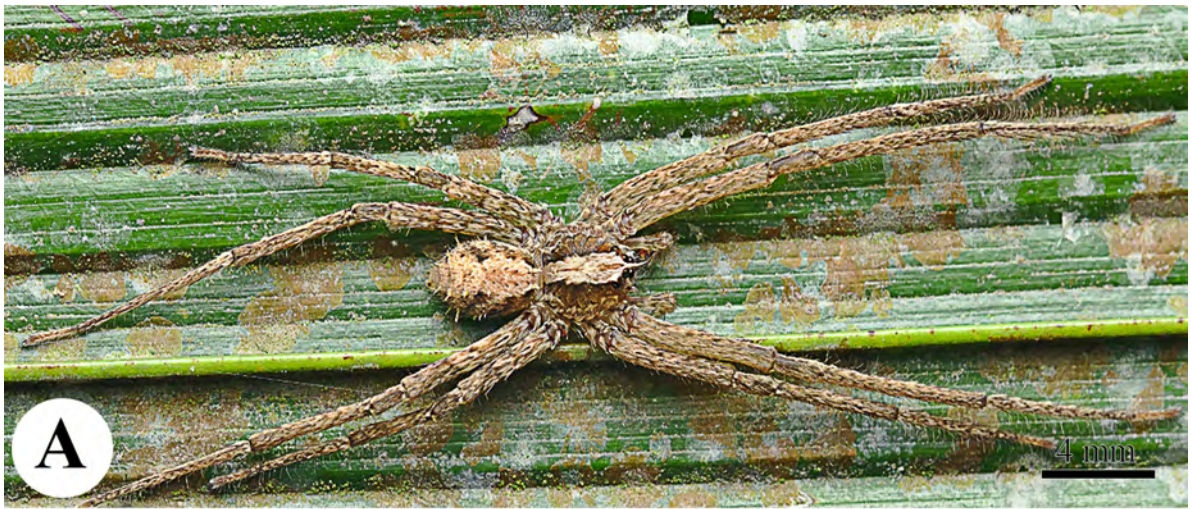


FIGURE 3. *Acanthoctenus manauara* sp. nov., male live specimen. A, dorsal; B, lateral, left view; C, frontal (Photos taken in laboratory conditions by Thiago G. Carvalho).

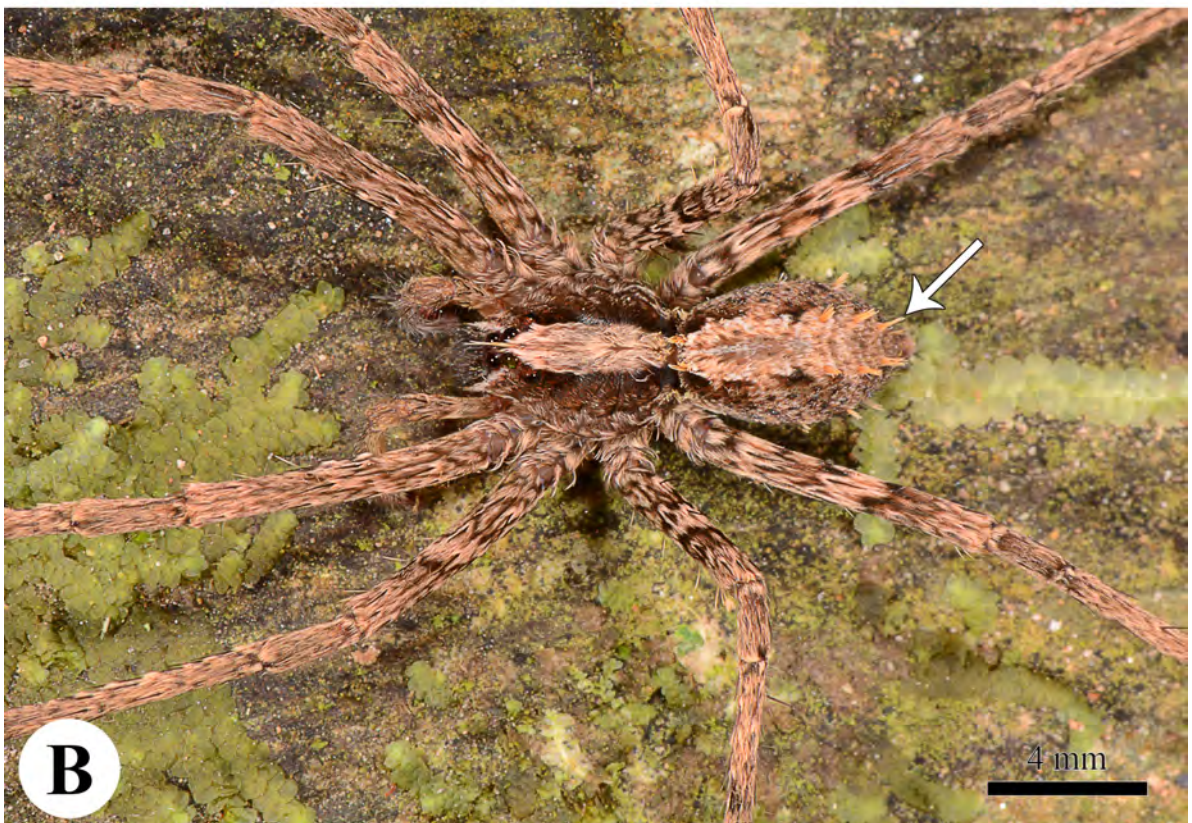


FIGURE 4. *Acanthoctenus torotoro* **sp. nov.**, male live specimen (holotype, UFMG 22307) on log, Torotoro Canyon. A, dorso-lateral, left view; B, dorsal (arrow to tufts of setae) (Photos by Pedro H. Martins).

Material and methods

The material examined is deposited in the following institutions (curators in parentheses): CAS, California Academy of Sciences, San Francisco, USA (L. Esposito); CeNaK, Centre of Natural History, Zoologisches Museum, Hamburg, Germany (D. Harms); CZPB, Coleção Zoológica Paulo Bührnheim, Universidade Federal do Amazonas, Manaus, Brazil (F.S.P. de Godoi); HMW, Naturhistorisches Museum Wien, Wien, Switzerland (C. Hörweg); IBSP, Instituto Butantan, São Paulo, Brazil (A.D. Brescovit); ICN-Ar, Colección Aracnológica del Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá, Colombia (E. Flórez); MCZ, Museum of Comparative Zoology, Harvard University, Cambridge, USA (G. Giribet); MHCI, Museu de História Natural 'Capão do Imbuia', Curitiba, Brazil (J.C. de Moura-Leite); MNHN, Museum National d'Histoire Naturelle, Paris, France (C. Rollard); MPEG, Museu Paraense Emílio Goeldi, Belém, Brazil (A. Bonaldo); MZUF, Museo di Storia Naturale, Università degli Studi di Firenze, Florence, Italy (L. Bartolozzi); NHM, Natural History Museum, London, England (J. Becaloni); SMF, Senckenberg Museum Frankfurt am Main, Frankfurt, Germany (P. Jäger); SMNK, State Museum of Natural History, Karlsruhe, Germany (H. Höfer); UFMG, Centro de Coleções Taxonômicas, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil (A. Santos); CAFM, Facultad de Ciencias, Laboratorio de Aracnología, Universidad Nacional Autónoma de México (F. Álvarez-Padilla); YPM, Yale Peabody Museum of Natural History, New Haven, USA (D. Briggs); ZMB, Museum für Naturkunde der Humboldt-Universität zu Berlin, Berlin, Germany (J. Dunlop).

The specimens were preserved in 70% ethanol for morphological observation. Illustrations of external structures were made using a Leica M165C stereomicroscope fitted with a camera lucida. Drawings of male palpi represent the left one. Digital SEM photographs were taken on a JSM 5800LV scanning electron microscope from Laboratório de Microscopia Eletrônica of Instituto de Biologia (IB) of Universidade Estadual de Campinas (UNICAMP), Campinas, Brazil. Preparation of specimens for digesting soft tissues follows Álvarez-Padilla & Hormiga (2008). For scanning electron microscope preparation, specimens were cleaned, transferred to 100% ethanol for at least 48 hours, before critical-point drying. After drying, specimens were mounted on stubs using copper conductive tape, then sputter-coated with gold using a Sputter Balzers SCD-050 from Laboratório de Microscopia Eletrônica (IB/UNICAMP). All measurements are in millimeters. Mapping of species records were made using Diva-Gis 7.5.0 (Hijmans et al. 2001). With the exception of the coordinates found in the labels, all coordinates are approximations obtained from Google Earth (not provided when the specimen data only has country or province information) and are presented between brackets.

Abbreviations: A, atrium; AC, aciniform gland spigot(s); ALE, anterior lateral eyes; ALS, anterior lateral spinneret; AME, anterior median eyes; BS, base of spermathecae; C, conductor; CD, copulatory ducts; CO, copulatory opening; CT, claw tufts; CTP, claw tuft plate; CY, cylindrical gland spigot(s); Cy, cymbium; E, embolus; EO, embolus outlet; FD, fertilization ducts; HS, head of spermathecae; Ls, lateral sector; MA, median apophysis; MAP, major ampullate gland spigot(s); mAP, minor ampullate gland spigot(s); MS, modified spigot; Ms, median sector; Pa, patella; PI, piriform gland spigot(s); PLE, posterior lateral eyes; PLS, posterior lateral spinneret; PME, posterior median eyes; PMS, posterior median spinneret; RCP, retrolateral cymbial process; RTA, retrolateral tibial apophysis; T, tegulum; Ti, tibia; S, spermathecae; ST, subtegulum.

Taxonomy

Family Ctenidae Keyserling, 1877

Subfamily Acanthotheninae Simon, 1897

Genus *Acanthothenus* Keyserling, 1877

Acanthothenus Keyserling, 1877: 693, plate 8, fig. 60. Type species *Acanthothenus spiniger* Keyserling, 1877, designated by Simon (1892: 229).—Simon 1893: 430.—F.O. Pickard-Cambridge 1897: 101.—Dahl, 1901b: 186.—F.O. Pickard-Cambridge 1902: 354.—Tullgren 1905: 19.—Kraus 1955: 51.—Simon 1906: 288.—Strand 1909: 402.—Petrunkevitch 1925: 95.—Mello-Leitão 1936: 181.—Reimoser 1939: 364.—Mello-Leitão 1945: 256.—Soares & Soares 1946: 53.—Caporacco 1947: 28, 1948: 684, 1955: 290.—Chickering 1960: 81.—Lehtinen 1967: 208.—Forster & Wilton 1973: 293.—Gris-

wold 1993: 3.—Bosselaers 2002: 141.—Silva-Dávila 2003: 3.—Griswold *et al.* 2005: 17.—Polotow & Brescovit 2008: 706, 2012: 40, 2014: 334.—Ramirez 2014: 28.—Polotow *et al.* 2015: 134.—World Spider Catalog 2020.
Paracanthis Kraus, 1955: 51. Type species *Paracanthis virginea* Kraus, 1955 by original designation.—Lehtinen 1967: 256 (Syn).—World Spider Catalog 2020.

Diagnosis. *Acanthoctenus* species resemble other Acanthocteninae as *Nothroctenus* and *Viracucha* by the presence of a cribellum and calamistrum (Figs 5E, F; 6E), three retromarginal teeth on the chelicerae (Fig. 5A; Polotow & Brescovit 2014: char. 64) and the distal pair of spines on tibia I distant from the apical margin of tibia (Polotow & Brescovit 2014: char. 73). Males resemble those of *Nothroctenus* and *Viracucha* by the palp with swollen patella (Polotow & Brescovit 2014: char. 1, fig. 5a), retrolateral cymbial process (Fig. 8A; Polotow & Brescovit 2014: char. 16, fig. 5A; Silva-Dávila 2003: fig. 19c–d), and curved papal tibia (Fig. 11C; Polotow & Brescovit 2014: fig. 5a). Males of *Acanthoctenus* can be distinguished from those genera by the short and cylindrical embolus (Fig. 8B) and by the elongated and thin median apophysis with an apical hook (Fig. 8B) whereas the males of *Nothroctenus* (Silva-Dávila 2003: fig. 19c) and *Viracucha* (Polotow & Brescovit 2014: fig. 5a) have embolus with a laminated base and median apophysis reduced or massive, respectively. Furthermore, males can be distinguished from *Nothroctenus* by the absence of a folded spermatic duct (Fig. 11C), present in the latter (Dias & Brescovit 2004: figs 7–8). Females resemble those of *Nothroctenus* (Dias & Brescovit 2004: fig. 9) and *Viracucha* (Lehtinen 1967: fig. 415) by the lack of lateral projections on the epigynum (Fig. 9A; Polotow & Brescovit 2014: char. 52). Females of *Acanthoctenus* can be distinguished from *Nothroctenus* (Lehtinen, 1967: fig. 417; Dias & Brescovit 2004: fig. 9) and *Viracucha* (Lehtinen 1967: fig. 415) by their large atrium (Figs. 13C, 16C; Lehtinen, 1967: fig. 414), reduce or absent in the other genera, respectively, and from *Nothroctenus* by the shorter copulatory ducts (Fig. 9B), elongated and convoluted in the latter (Dias & Brescovit 2004: fig. 10).

Description. Small to medium-sized cribellate spiders. Total body length (males and females) 7.26–16.20. Carapace piriform, light brown with a wide longitudinal stripe of lighter coloration (from light brown to beige) from ocular area to the posterior border; thoracic groove longitudinal and located in the posterior third (Figs 1A, 3A, 4A–B, 11A, 13A, 15A, 17A, 20A, 22A, 24A, 27A, 30A, 31A, 33A, 36A, 38A, 40A, 42A, 44A, 46A, 48A). Carapace profile higher at the ocular area (Figs 1B, 3B). Clypeus with long dark bristles (Fig. 13B, 15C). Ctenid eye pattern 2-4-2, with the anterior and posterior row recurved in dorsal view (Figs 4B, 5B, 13B). Eyes round, except oval anterior lateral eyes, mounted over black mounds (Figs 5B, 13B, 20C), with grade-shaped tapetum (barely shown in Fig. 22C). Anteriorly with a dark band with two lateral stripes of white setae extending from the anterior border of the carapace to the anterior median eyes (Figs 1C, 3C, 13B, 15C, 20C, 22C, 24C, 27C, 30B, 36C, 38C, 40C, 42C, 44C, 46C, 48C). Chelicerae with a large boss (Fig. 40C), thickened setae next to the fang base (Fig. 5A), three promarginal teeth, median largest, three retromarginal teeth, basal smaller, and without intermarginal denticles (Figs 5A, 22B). Chilum divided (Fig. 15C). Long endites and labium short in relation to the size of the endites; light brown sternum, oval, not extending between legs IV (Figs 11B, 15B, 17B, 20B, 22B, 24B, 27B, 31B, 33B, 36B, 38B, 40B, 42B, 44B, 46B, 48B). Leg formula 1423 in males, female leg formula is variable and is described for each species. Shallow trochanteral notch (Fig. 15B). Legs usually longer in males than females. Spination: ventral surfaces of tibia I–II with nine pairs of spines and metatarsus I–II with five pairs of spines, except *A. remotus* (tibia I with seven pairs, tibia II with six pairs and metatarsus I–II with three pairs of spines). All legs in males and females with a patch of tenant setae (claw tufts) arising from a movable plate (claw tuft plate) (Fig. 6C). Third small tarsal claw present on each leg tarsus (Fig. 6D, arrow). Trichobothria bases with four transversal grooves on proximal hood (Fig. 6A). Distal capsulated tarsal organ with a drop-shaped opening (Fig. 6B). Calamistrum oval with several rows of setae (Fig. 6E). Pedicel divided (Fig. 5C). Opisthosoma oval with tufts of elongated white setae in two longitudinal rows (Figs 1A, 4B, 5D). Cribellum divided into two fields of strobilate spigots that are clumped in short, longitudinal linear rows (Fig. 5E–F; Griswold *et al.* 2005: figs 97a, 115a), larger in females than males. Six spinnerets, ALS, and PLS two-segmented (Fig. 7A, C), PMS one-segmented (Fig. 7B). The ALS has a bare margin, a two large MAP, and several PI spigots interspersed with tartipores (Fig. 7A; Griswold *et al.* 2005: figs 115b, 116b, 117a). The PMS has a pair of mAP spigots with a tartipore in between and many small AC spigots interspersed with three large CY spigots; without paracribellar spigots (Fig. 7B; Griswold *et al.* 2005: figs 115c–e, 116d, 117d). The PLS has several AC spigots and an apical anterior MS (Fig. 7C; Griswold *et al.* 2005: figs 115d, 116c, 117b–c). The silks used for the construction of egg sacs and shelters are irregular (Fig. 7D–F). Males lack epiandrous spigots. Male palp: patella swelled (Fig. 11A, D); tibia curved with only one tibial projection (RTA) (Figs 11C, D, 12A–B); conical RTA; cymbium longer than tibia and with a basal retrolateral projection (Figs 11C, 12A); subtegulum prolateral, partially visible behind embolus; tegulum suboval with a central hyaline area where the median apophysis emerges

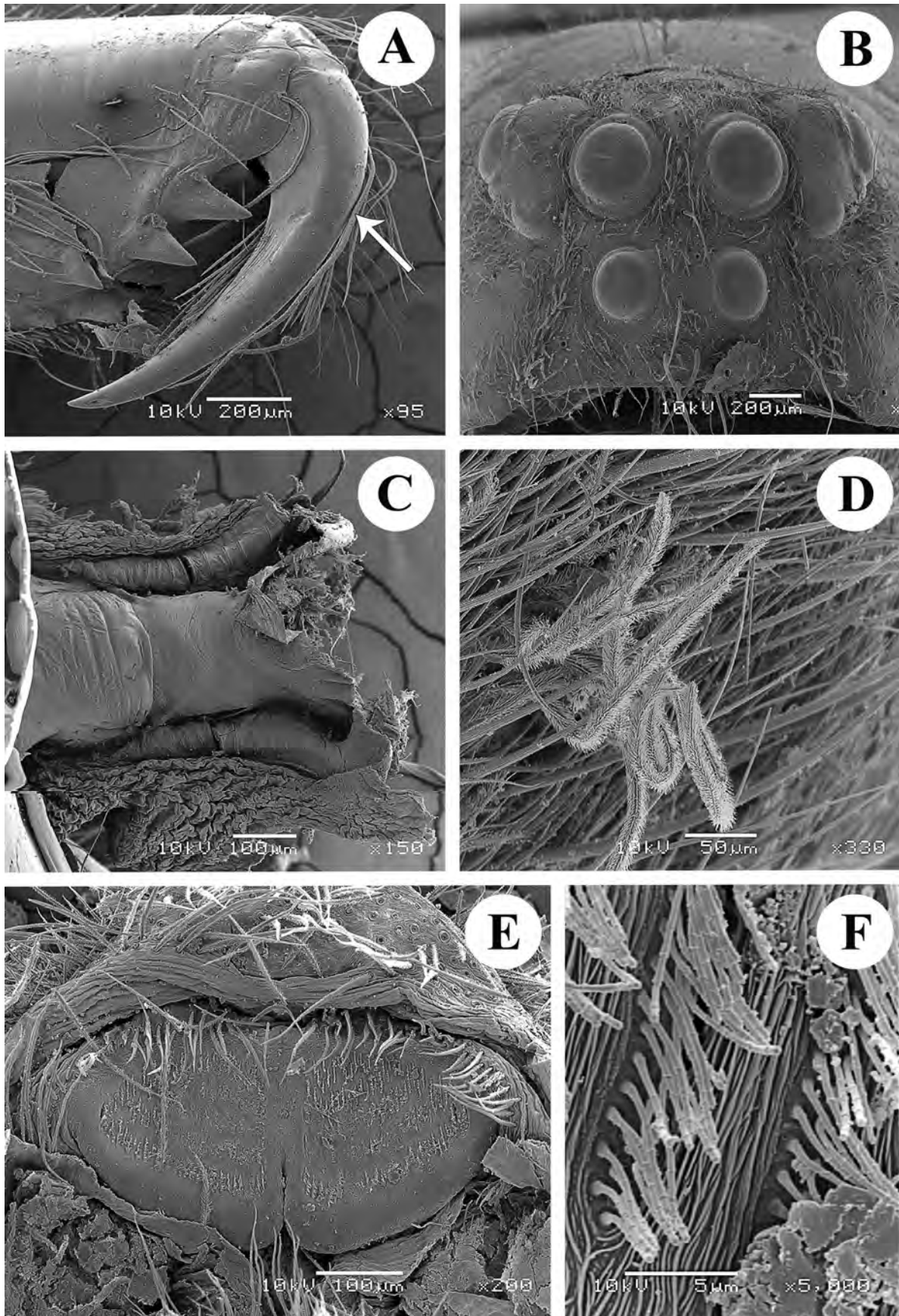


FIGURE 5. *Acanthoctenus chickeringi* sp. nov., female. A, left chelicera, retromargin (arrow to thickened setae); B, ocular area, frontal; C, lorum of the pedicel (divided), dorsal; D, tufts of setae on opisthosoma; E, divided cribellum; F, cribellar spigots clumped in short, longitudinal linear rows.

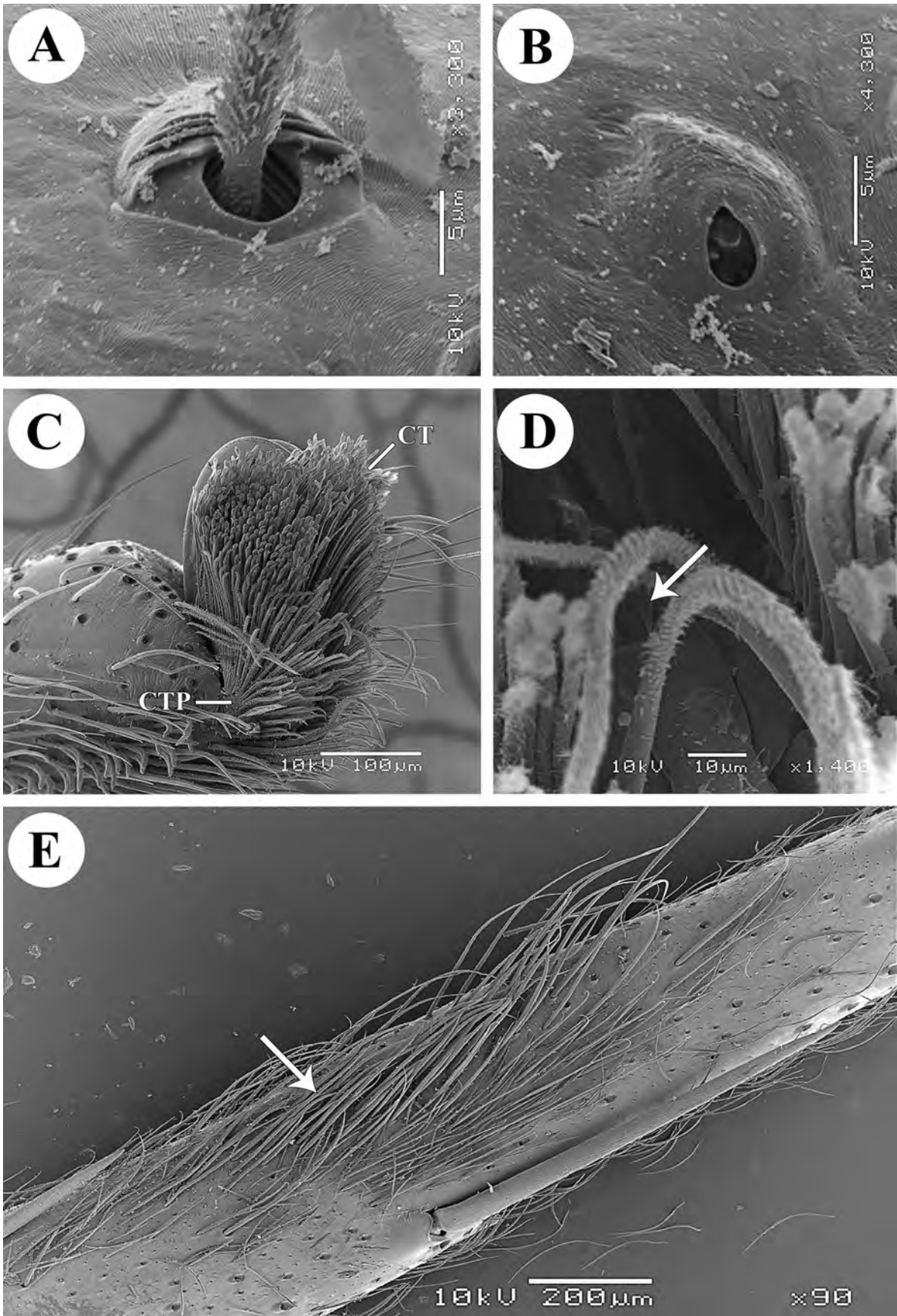


FIGURE 6. *Acanthoctenus chickeringi* sp. nov., female. A–D: leg I; A, trichobothria; B, tarsal organ; C, distal tarsus showing claw tufts; D, small third tarsal claw (arrow); E, leg IV, oval calamistrum (arrow).

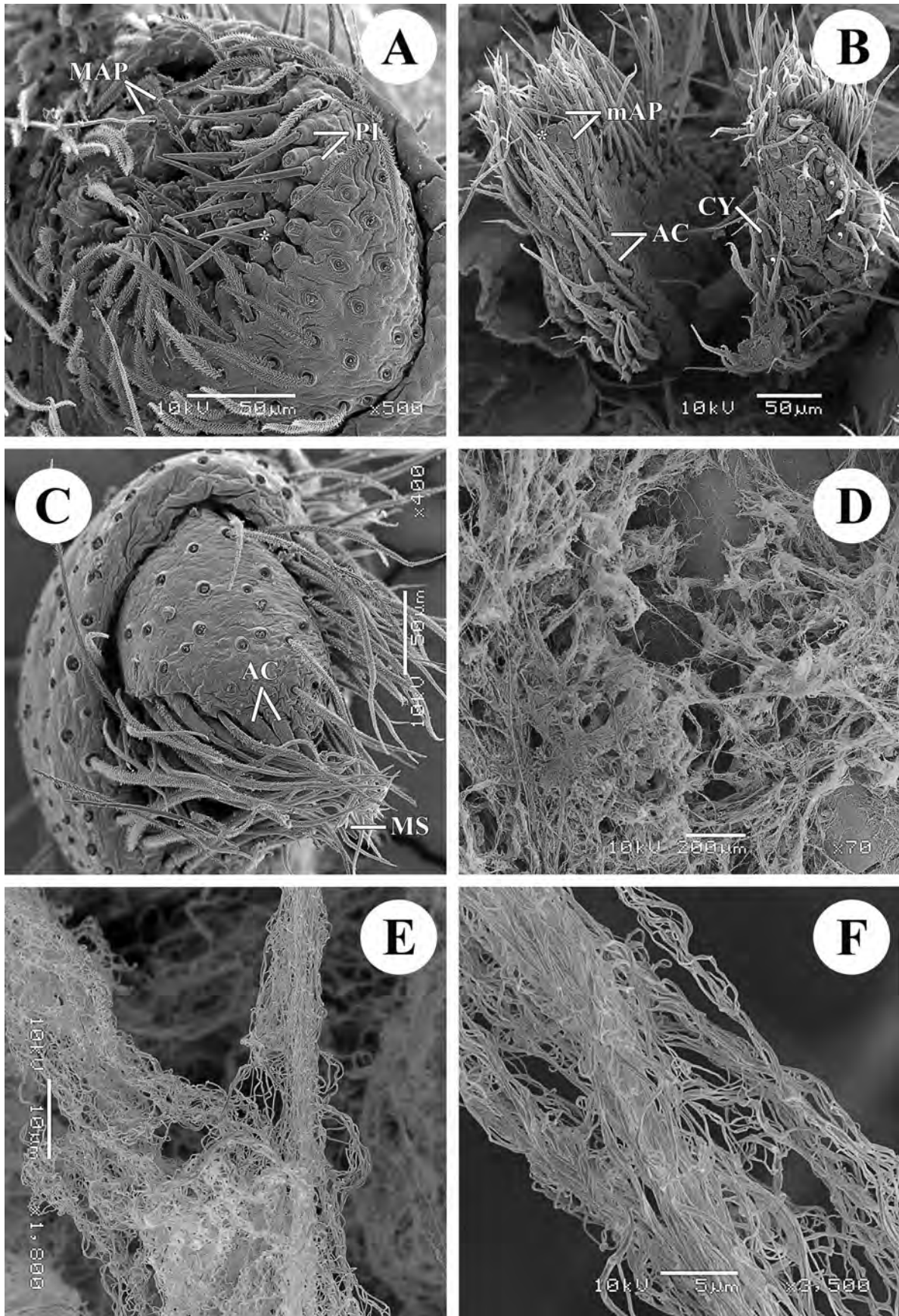


FIGURE 7. A–C, *Acanthoctenus chickeringi* sp. nov., female spinnerets; A, left ALS field (asterisk to tartipore); B, PMS field (asterisk to nubbin, semicolon to CY spigots); C, right PLS field. D–F, *Acanthoctenus manauara* sp. nov., silk detail from shelter (see Fig. 2).

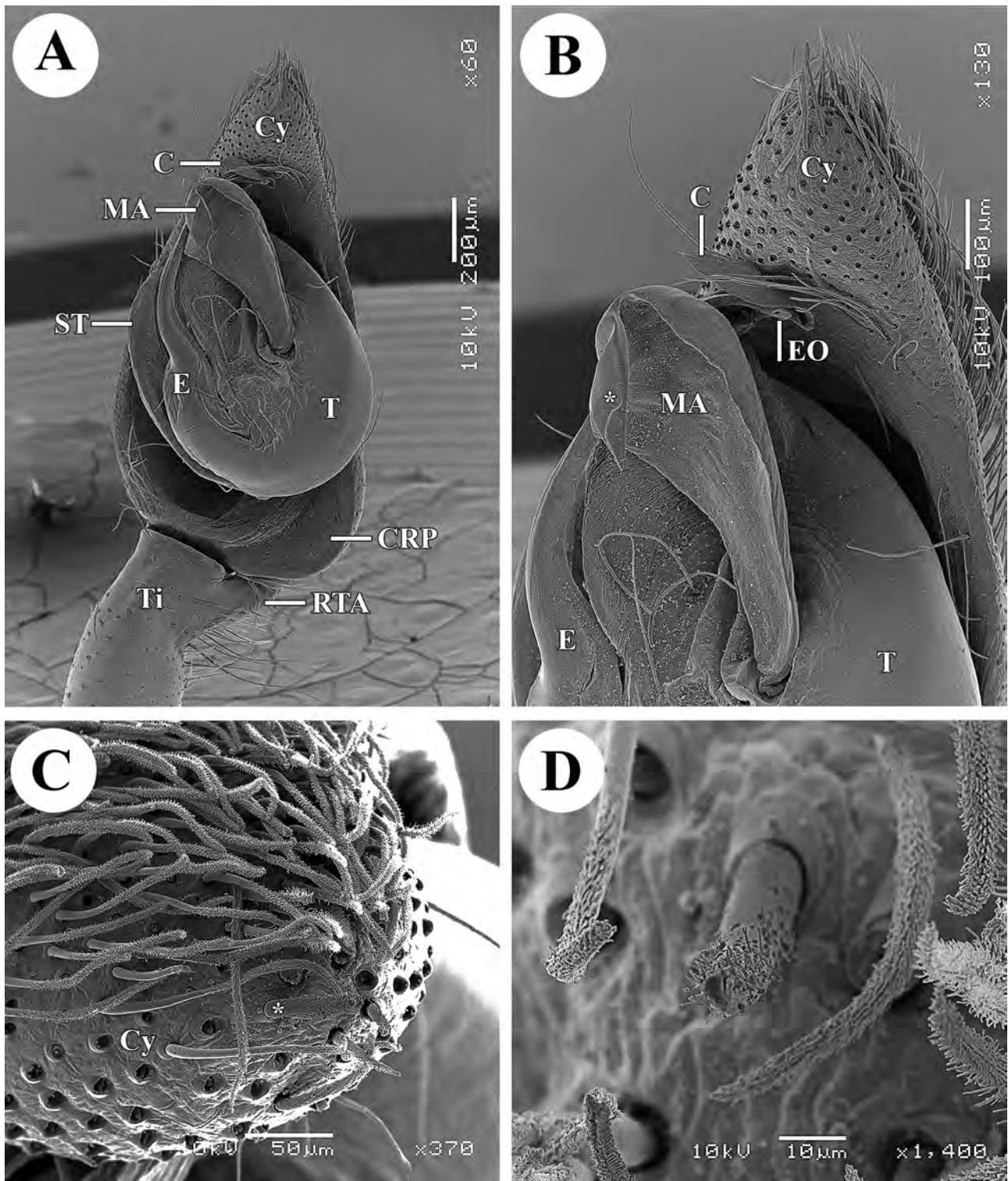


FIGURE 8. *Acanthoctenus chickeringi* sp. nov., male left palp (MCZ). A, general view, ventral; B, apical bulb detail, ventral (asterisk to proapical hook); C, cymbium, apical (asterisk to modified setae); D, detail, modified cymbium setae.

(Figs 11C, 12A); embolus emerging prolaterally, flexibly attached to the tegulum, cylindrical, with a larger base tapering distally (Fig. 8A); median apophysis elongated and scoop-shaped, with a subtriangular distal projection (Fig. 8A–B); conductor apical and hyaline (Figs 8A–B, 12B); some species with modified setae distally on the cymbium (Fig. 8C–D). Female genitalia: epigynum divided into the median and lateral sectors (Figs 9A, 12C); median sector suboval, subpentagonal, or subrectangular, longitudinally elongated, extending or not into the atrium, partially covered by the lateral sectors (Figs 9A, 12C, 14A, 17C); lateral sectors large, anteriorly straight or curved, forming

an angle between 30° and 90° with the median sector longitudinal axis, partially transparent, spermathecae visible through transparency (Figs 14A, 17C, 18A, 20D); copulatory opening small, connected to the lateral sector (Figs 14A, 16C, 19A, 21A, 23C); copulatory ducts sinuous, first half bordered by the lateral sectors, strongly or slightly S-shaped (left side) (Figs 12D, 14B, 16D, 18B, 21B); head of spermathecae quote-shaped, with apical glandular openings (Figs 12D, 14B, 18B, 21B); the base of spermathecae scalloped (Figs 12D, 14B, 18B, 21B); fertilization ducts short, tubular and sclerotized, emerging from the base of spermathecae (Figs 9B, 14B, 21B, 25B).

Distribution. Neotropical region, from Bolivia to Mexico, in tropical humid forest and mountains (Fig. 10).

Composition. Thirteen species: *Acanthoctenus spiniger* Keyserling, 1877, *Acanthoctenus spinipes* Keyserling, 1877, *Acanthoctenus dumicola* Simon, 1906 **stat. res.**, *Acanthoctenus gaujoni* Simon, 1906, *Acanthoctenus plebejus* Simon, 1906, *Acanthoctenus kollari* (Reimoser, 1939), *Acanthoctenus virginea* (Kraus, 1955) **stat. res.**, **comb. nov.**, *Acanthoctenus remotus* Chickering, 1960, *Acanthoctenus alux* **sp. nov.**, *Acanthoctenus chickeringi* **sp. nov.**, *Acanthoctenus lamarrei* **sp. nov.**, *Acanthoctenus manauara* **sp. nov.**, and *Acanthoctenus torotoro* **sp. nov.**

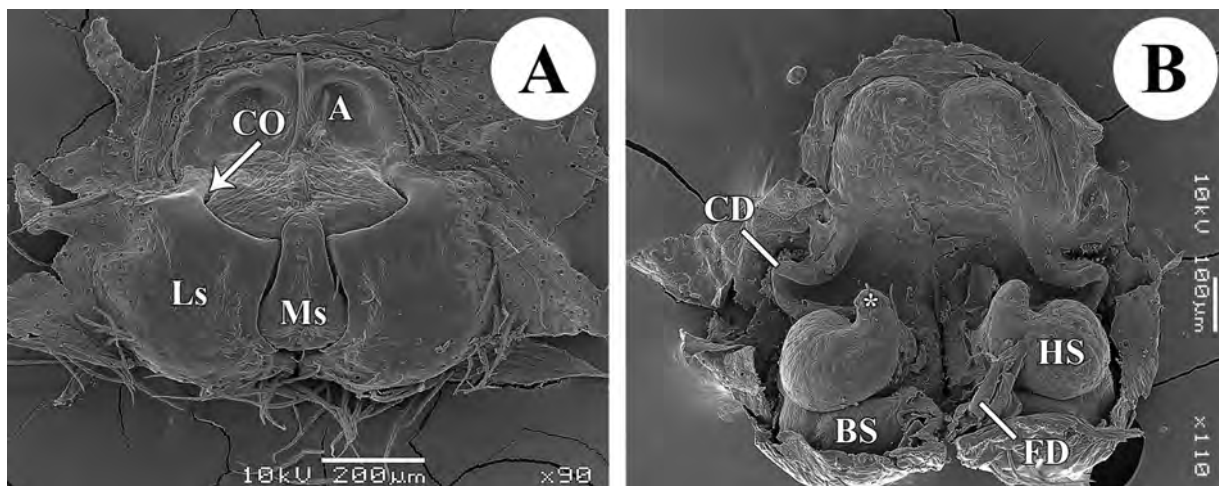


FIGURE 9. *Acanthoctenus chickeringi* **sp. nov.**, female genitalia. A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

Acanthoctenus spiniger Keyserling, 1877

Figs 10A, 11–14

Acanthoctenus spinigerus Keyserling, 1877: 693, plate 8, fig. 60 (male holotype from Mexico, Veracruz, Córdoba, [18°53'15.9"N, 96°56'03.2"W], deposited in NHM 1890.7.1.2924, examined).—F.O. Pickard-Cambridge 1897: 103, plate 4, fig. 3b—Mello-Leitão 1936: 192, fig. 12.—Forster & Wilton 1973: 293, fig. 1042.—World Spider Catalog 2020.

Acanthoctenus spiniger—Simon 1892: 229.—Silva-Dávila 2003: 49, fig. 19d.—World Spider Catalog 2020.

Other material examined. MEXICO. Veracruz: Orizaba, [18°51'01.7"N, 97°06'13.1"W], 1 male, 2 females, N. Banks coll. (MCZ); San Luis Potosí: Xilitla City, Las Pozas, 21°23'50"N, 98°59'38"W, 600 m.a.s.l., 1 female, 14–18.XI.2011, UNAM AracnoLab coll. (UNAM JAM231); Tamazunchale, [21°20'28.4"N, 98°57'49.9"W], 1 female, 23.XI.1946, E.S. Ross coll. (CAS); Chiapas: Selva el Ocote Biosphere Reserve, 32Km NW Ocosocauatla, [16°59'35.5"N, 93°38'27.8"W], 762 m.a.s.l., 1 female, 27.VIII.1972, C. Mullinex & D.E. Breedlove coll. (CAS).

Diagnosis. Males of *Acanthoctenus spiniger* (Figs 11C–D, 12A–B) resemble those of *A. virginea* **stat. res.**, **comb. nov.** (Figs 31C–D, 32A–B) by the palpal tibia retrolaterally swollen and the RTA short, wider than long. It can be distinguished by the cymbial projection with a slightly anterior slope in ventral view and by the median apophysis with a wider than long proapical hook. *Acanthoctenus virginea* **stat. res.**, **comb. nov.** presents a pronounced anterior slope in the cymbial projection and a longer than wide proapical hook in the median apophysis. Females of *Acanthoctenus spiniger* (Figs 12C–D, 13C, 14A–B) resemble those of *A. virginea* **stat. res.**, **comb. nov.** (Figs 32C–D, 33C–D) by the median sector subpentagonal, but it can be distinguished by the anterior border of lateral sectors forming a 90° angle with the median sector longitudinal axis, and by the atrium subtriangular, whereas *A. virginea* **stat. res.**, **comb. nov.** presents straight anterior border of the lateral sectors forming a 60° angle with the median sector longitudinal axis and a suboval atrium.

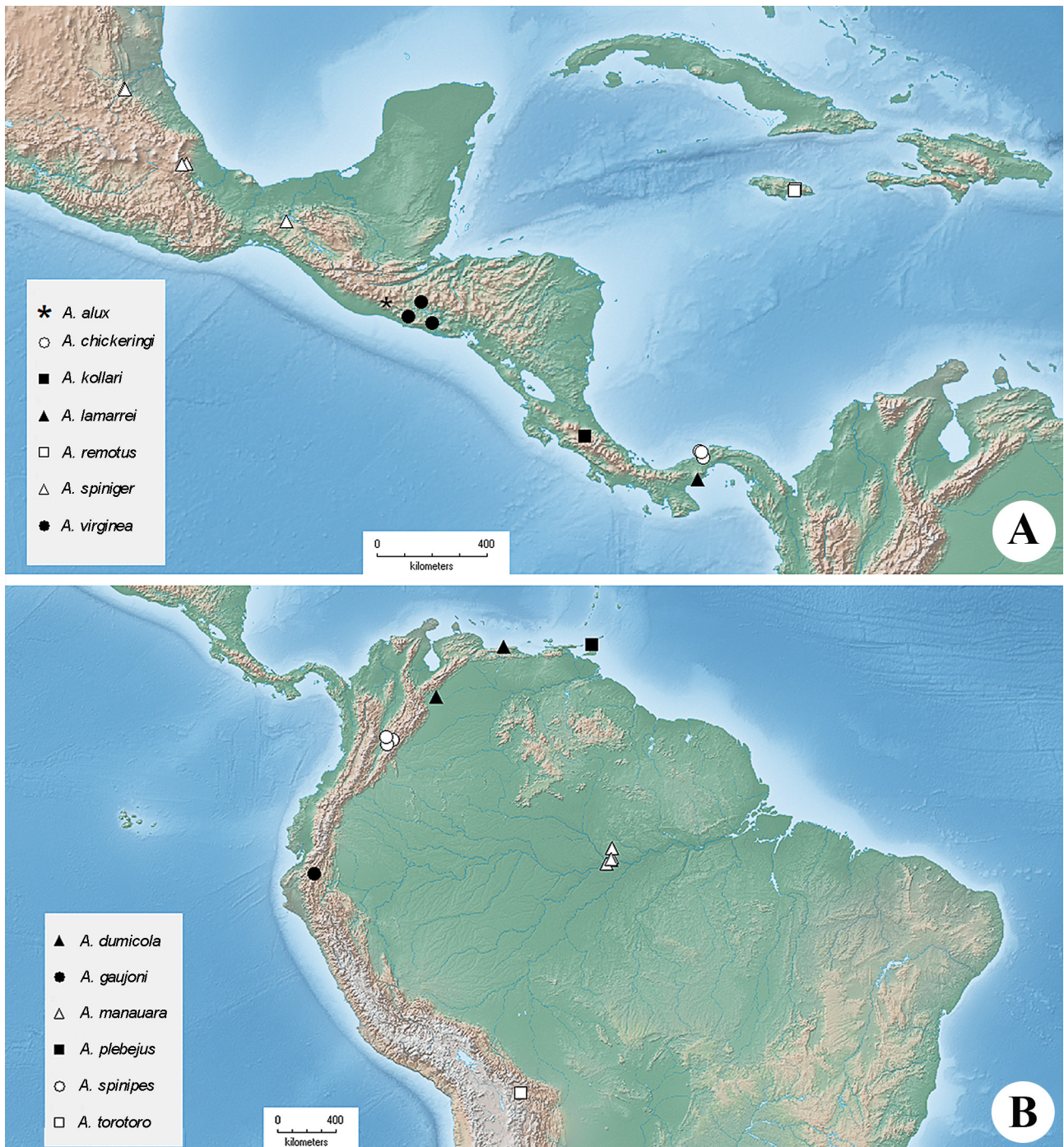


FIGURE 10. Distribution map of *Acanthoctenus* species. A, south of North America and Central America; B, north of South America.

Description. Male (holotype NHB 1890.7.1.2924). Total length 11.30. Carapace 6.00 long and 5.00 wide. Clypeus 0.25 high. Eye diameters: AME 0.23, ALE 0.10, PME 0.30, PLE 0.25. Leg measurements: I: femur 8.00/ patella 4.00/ tibia 9.00/ metatarsus 8.40/ tarsus 2.80/ total 32.2; II: 7.00/ 4.00/ 7.00/ 7.00/ 2.00/ 27.00; III: 6.00/ 2.00/ 4.90/ 5.80/ 2.10/ 20.80; IV: 8.40/ 3.80/ 7.00/ 9.00/ 3.00/ 31.20. Leg formula 1423. Leg spination: tibia I and II v-2-2-2-2-2-2-2-2, p-1-1-0-1, r-1-0-1-1, III and IV v-2-2-2, r1-1, p1-1; metatarsus I and II v-2-2-2-2-2, p-1-1-1, r-1-1, III v-1-1-1-1-1, p-1-1-1, r-1-1, IV v-1-1-1-1-1, p-1-1, r-1-1-1. Palp (Figs 11C–D, 12A–B): tibia shorter than cymbium, swollen retrobasally; RTA with blunt tip; cymbium elongated and with retrobasal projection; embolus elongated, cylindrical, and curved; conductor hyaline and following the tip of embolus; median apophysis laminar and long, spatula-shaped, with a proapical hook.

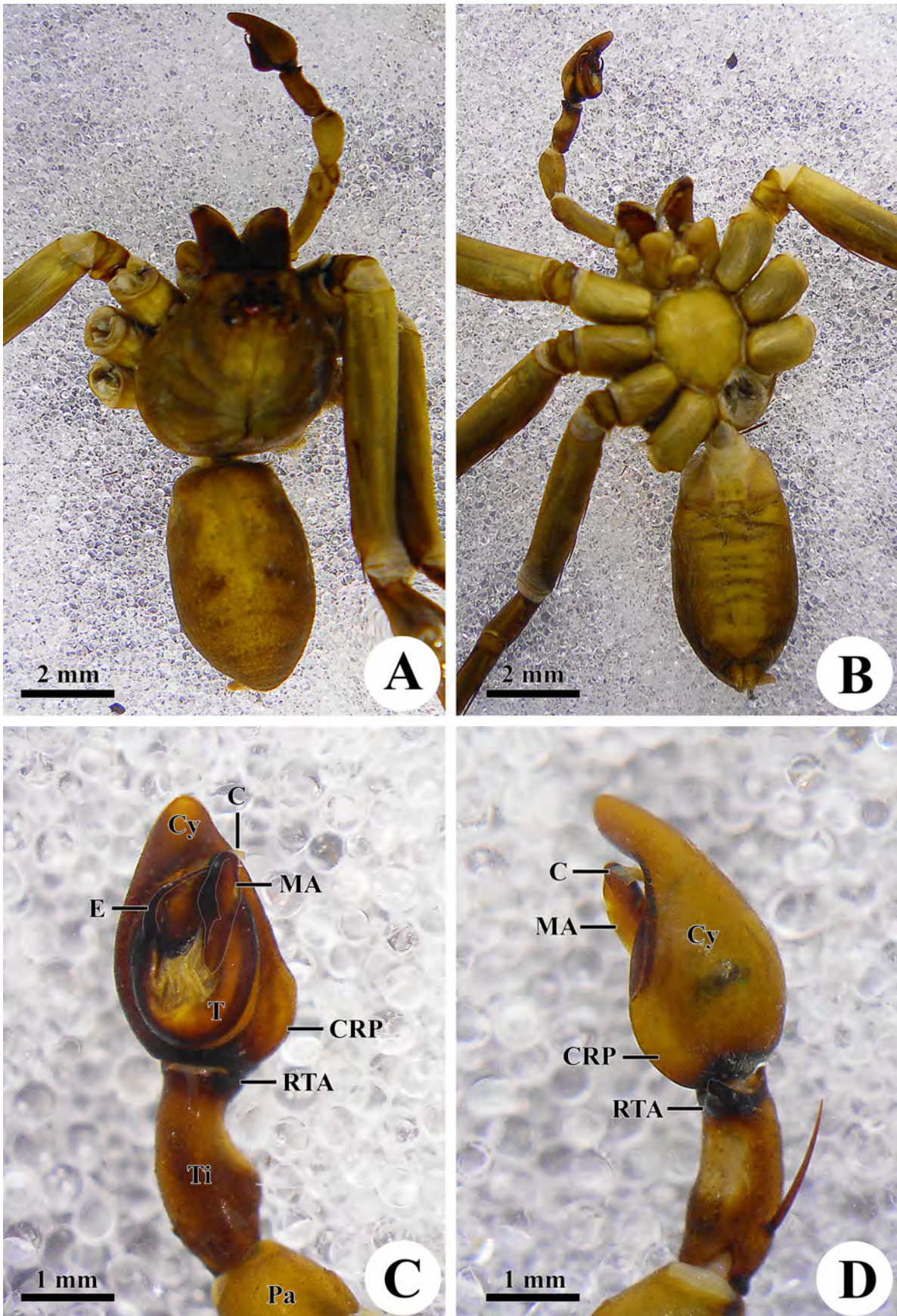


FIGURE 11. *Acanthoctenus spiniger* Keyserling, 1877, male holotype (NHB 1890.7.1.2924). A–B, habitus; A, dorsal; B, ventral. C–D, male palp; C, ventral; D, retrolateral.

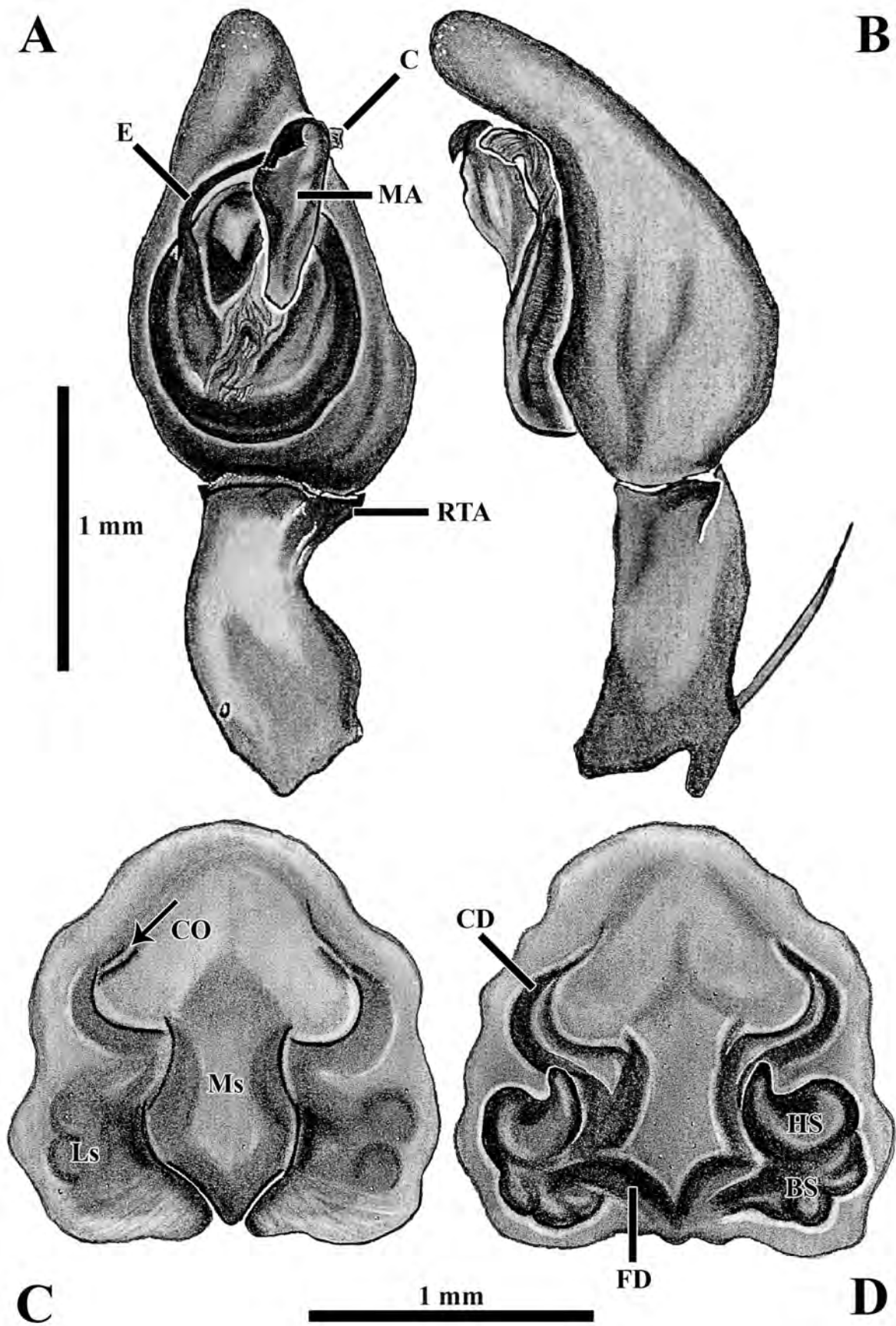


FIGURE 12. *Acanthoctenus spiniger* Keyserling, 1877, copulatory organs. A–B, male palp (holotype NHB 1890.7.1.2924); A, ventral; B, retrolateral. C–D, female genitalia (CAS); C, epigynum, ventral; D, internal genitalia, dorsal.



FIGURE 13. *Acanthoctenus spiniger* Keyserling, 1877, female (CAS). A, habitus, dorsal; B, ocular area, frontal; C, epigynum, ventral.

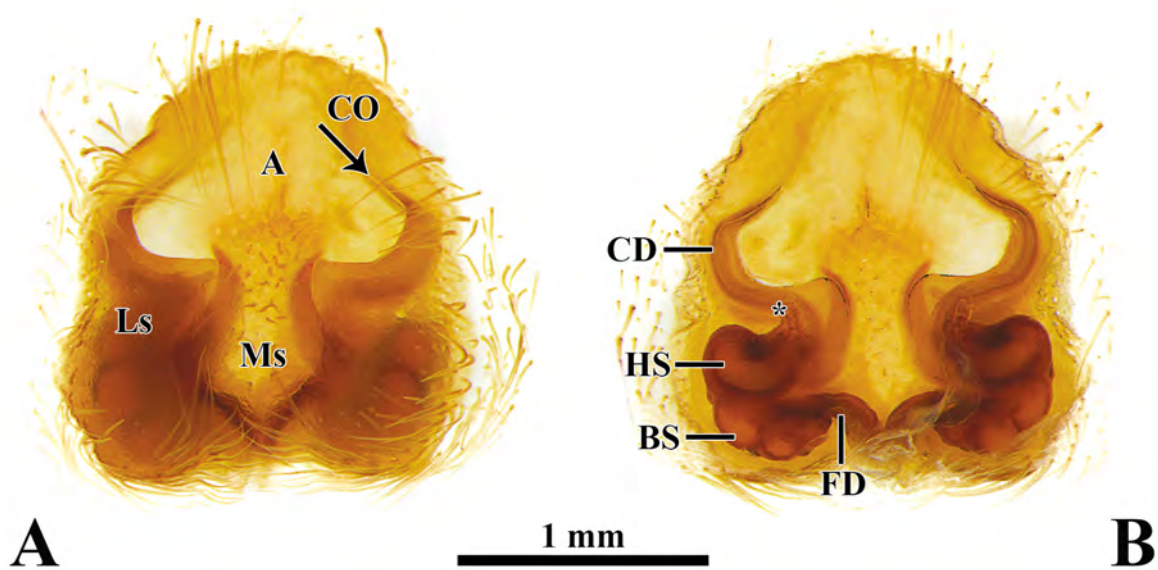


FIGURE 14. *Acanthoctenus spiniger* Keyserling, 1877, female (CAS). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

Female (CAS, Chiapas). Total length 10.50. Carapace 4.92 long and 4.36 wide. Clypeus 0.28 high. Eye diameters: AME 0.20, ALE 0.14, PME 0.28, PLE 0.23. Leg measurements: I: femur 6.08/ patella 2.51/ tibia 6.90/ metatarsus 5.71/ tarsus 1.85/ total 23.05; II: 5.57/ 2.49/ 5.30/ 4.87/ 1.54/ 19.77; III: 4.24/ 1.57/ 3.68/ 4.46/ 1.39/ 15.34; IV: 5.62/ 2.16/ 5.46/ 6.68/ 2.08/ 22.00. Leg formula 1432. Leg spination: tibia I v-2-2-2-2-2-2-2-2, p-1-0-1-1-1, r-0-1-0,1,1, II v 2-2-2-2-2-2-2-2, p-0-0-1-1, r-0-1-1-1, III v-2-2-2, p-1-1, r1-1-1, IV v-2-2-2, p-1-1, r 1-1; metatarsus I, II v-2-2-2-2-2, p-1, r-1, III and IV v-1-1-1-1, p-1-1-, r-1-1-1. Epigynum (Figs 12C–D, 13C, 14A–B): median sector subpentagonal, wide anteriorly and extending into the atrium, projected posteriorly; anterior border of the lateral sectors strongly curved; atrium subtriangular, slightly sclerotized; copulatory ducts curved, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Variation. Four females: total body length 10.50–16.20; carapace length 4.92–6.20.

Distribution. Central-east Mexico (Fig. 10A).

Acanthoctenus spinipes Keyserling, 1877

Figs 10B, 15–18

Acanthoctenus spinipes Keyserling, 1877: 695, plate 8, fig. 61 (female holotype from Colombia, Santa Fé de Bogota, [4°35'39.5"N, 74°01'56.9"W] deposited in NHM, examined).—F.O. Pickard-Cambridge 1897: 103, plate 4, fig. 3d.—Polotow & Brescovit 2008: 706.—World Spider Catalog 2020.

Other material examined. COLOMBIA. *Cundinamarca*: Fusagasugá (Río Cuja) [4°17'30.3"N, 74°25'02.4"W], 1 female, C. Hernández coll. (ICN-Ar73); Anolaima [4°45'42.2"N, 74°27'50.4"W], 1 male, 1 immature, G. Botero coll. (ICN-Ar4667).

Diagnosis. Males of *Acanthoctenus spinipes* (Figs 15D–E, 16A–B) resemble those of *A. lamarrei* **sp. nov.** (Figs 42 D–E, 43A–B) by the median apophysis massive, the apex at least five times wider than the base, and RTA elongated, longer than wide. It can be distinguished by the embolus elongated, the base slightly swollen and starting at 9 o'clock and the apex ending at 2 o'clock, and RTA distally straight and round. *A. lamarrei* **sp. nov.** presents a shorter embolus, the apex ending at 12 o'clock, the base swollen at least four times the apex width, and RTA distally curved. Females of *Acanthoctenus spinipes* (Figs 16C–D, 17C, 18A–B) resemble those of *A. chickeringi* **sp. nov.** (Figs 39C–D, 40D, 41A–B) by the atrium massive, subquadrangular, as wide as long. It can be distinguished by the anterior and lateral borders of the atrium strongly sclerotized, the median sector not extending into the atrium, and the copulatory ducts S-shaped, not bended apically. *A. chickeringi* **sp. nov.** presents slightly sclerotized lateral borders on the atrium, an extension of the median sector into the atrium, and apically bended copulatory ducts.

Description. Male (ICN-Ar4667). Total length 14.73. Carapace 6.75 long and 5.50 wide. Clypeus 0.30 high. Eye diameters: AME 0.38, ALE 0.24, PME 0.39, PLE 0.44. Leg measurements: I: femur 8.80/ patella 3.28/ tibia 9.28/ metatarsus 8.37/ tarsus 2.42/ total 32.15; II: 7.71/ 2.84/ 7.46/ 7.22/ 2.18/ 27.11; III: 6.11/ 2.38/ 5.34/ 6.33/ 2.09/ 22.25; IV: 7.62/ 2.64/ 7.24/ 9.27/ 2.65/ 29.42. Leg formula 1423. Leg spination: tibia I and II v-2-2-2-2-2-2-2-2, r-1-1-0-1-1-1, p-1-0-1-1, III and IV v-2-2-2, r-1-0-1-1, p-0-1-1; metatarsus I and II v-2-2-2-2-2, r-1-0-1-1, p-1-1-0-1; III and IV v-2-2-2, r-1-1-1, p-1-1-0-1. Palp (Figs 15D–E, 16A–B): tibia shorter than cymbium, slightly curved; RTA with round tip; cymbium elongated and with retrobasal projection; embolus elongated, cylindrical, and bent; conductor hyaline and following the tip of embolus; median apophysis laminar, spatula-shaped, narrow at the base and wider at the apex, with an apical hook.

Female (holotype NHM). Total length 11.00. Carapace 5.10 long and 3.90 wide. Clypeus 0.14 high. Eye diameters: AME 0.20, ALE 0.14, PME 0.28, PLE 0.23. Leg measurements: I: femur 3.20/ patella 1.60/ tibia 2.90/ metatarsus 2.30/ tarsus 1.00/ total 11.00; II: 3.00/ 1.50/ 2.40/ 2.20/ 1.00/ 10.10; III: 2.60/ 1.20/ 2.10/ 2.40/ 1.10/ 9.40; IV: 3.50/ 1.40/ 3.20/ 4.00/ 1.40/ 13.50. Leg formula 4123. Leg spination: tibia I and II v-2-2-2-2-2, r1-1-0, p-0-1-0, III and IV v-2-2-2, r-1-1, p-1-1; metatarsus I, II and III v-2-2-2, r-1-1-1, p-1-1-1, IV v1-1-1-1-1-2, r1-1-1, p1-1-1. Epigynum (Figs 16C–D, 17C, 18A–B): median sector subpentagonal, wide anteriorly, not extending into the atrium and projected posteriorly; anterior border of the lateral sectors straight forming approximately a 70° angle with the median sector longitudinal axis; subquadrangular atrium; copulatory ducts curved, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

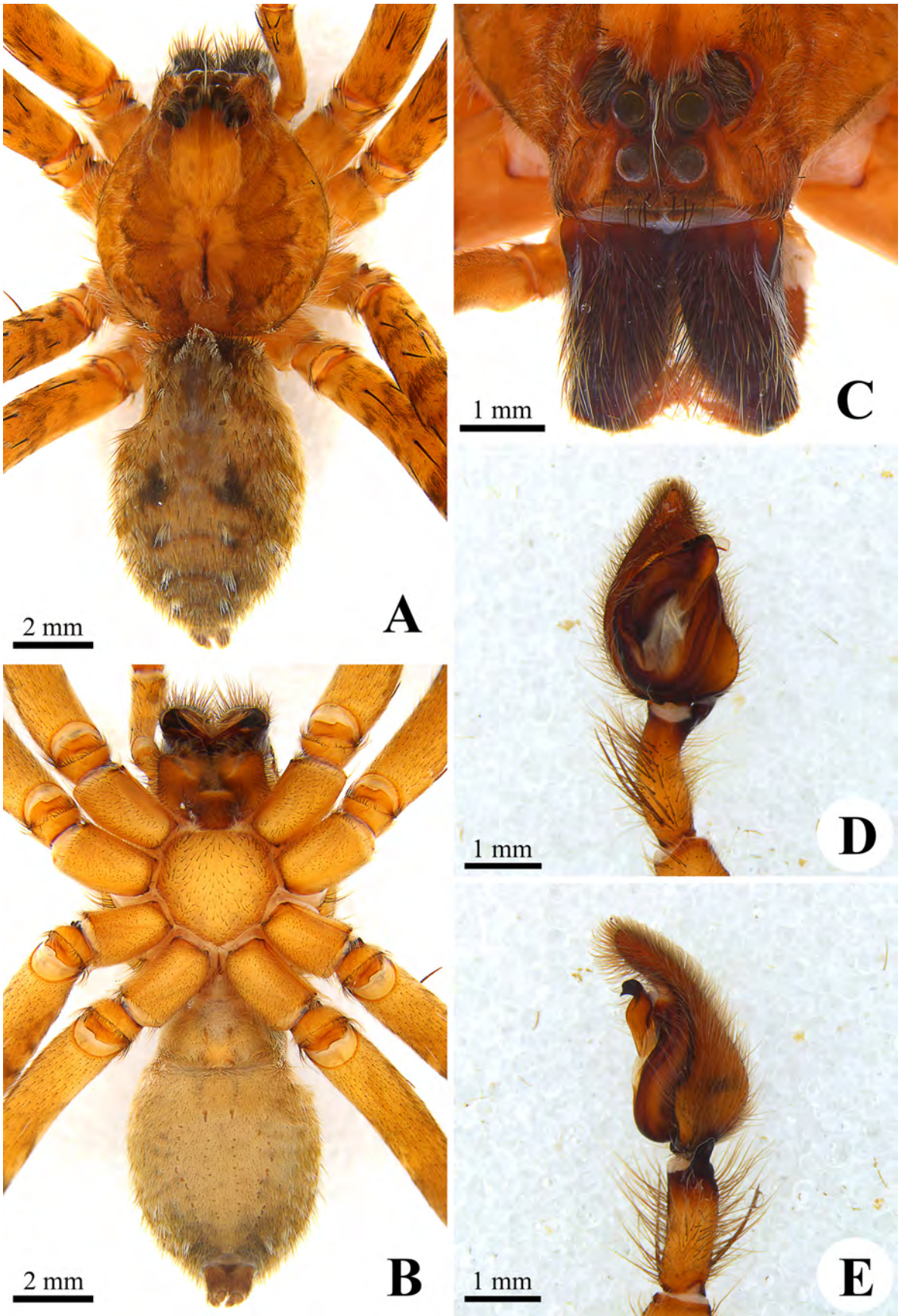


FIGURE 15. *Acanthoctenus spinipes* Keyserling, 1877, male (ICN-Ar4667). A–C, habitus A, dorsal; B, ventral; C, frontal; D–E, male palp; D, ventral; E, retrolateral.

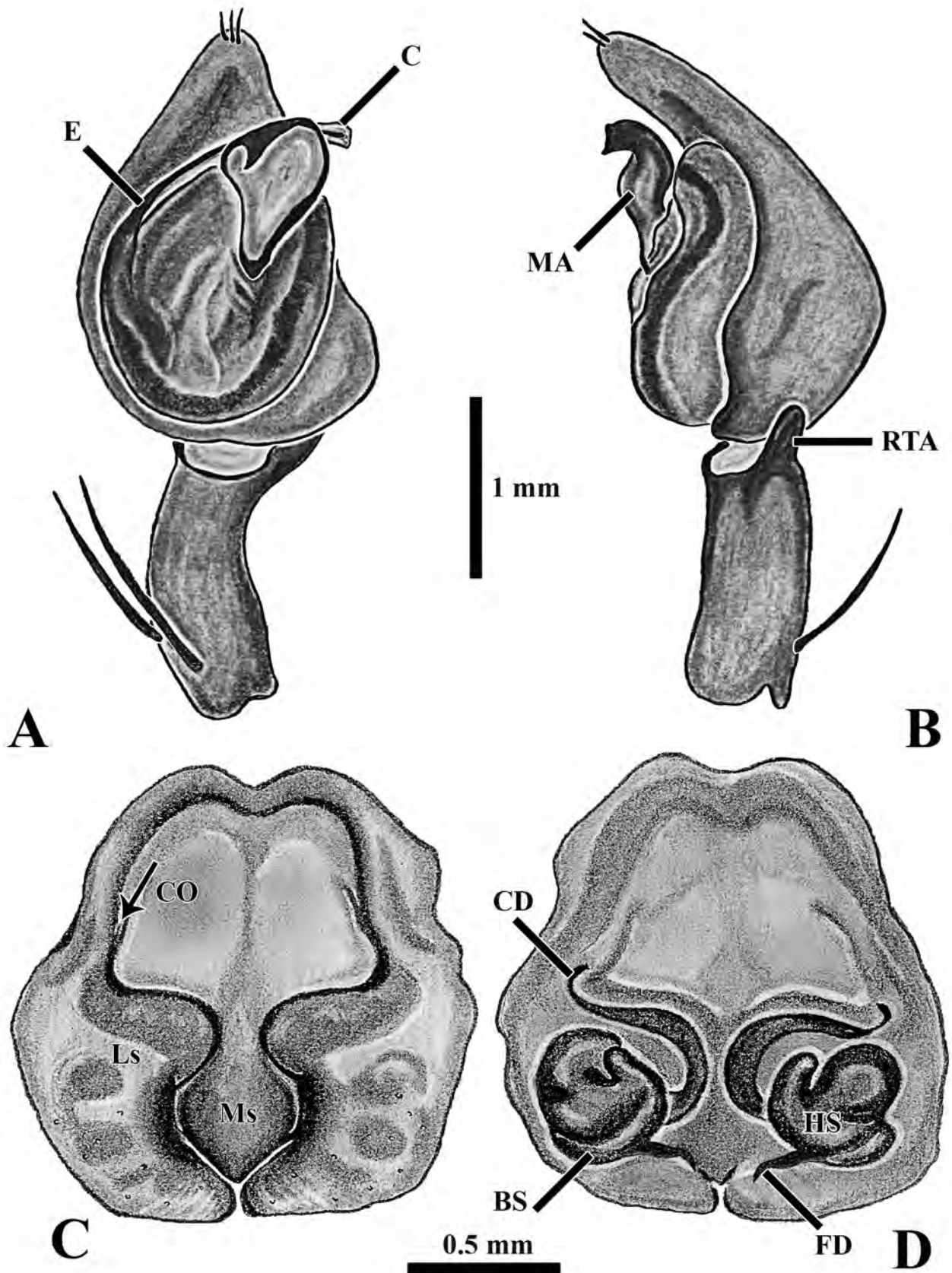


FIGURE 16. *Acanthoctenus spinipes* Keyserling, 1877, copulatory organs. A–B, male palp (ICN-Ar4667); A, ventral; B, retro-lateral. C–D, female genitalia (ICN-Ar73); C, epigynum, ventral; D, internal genitalia, dorsal.

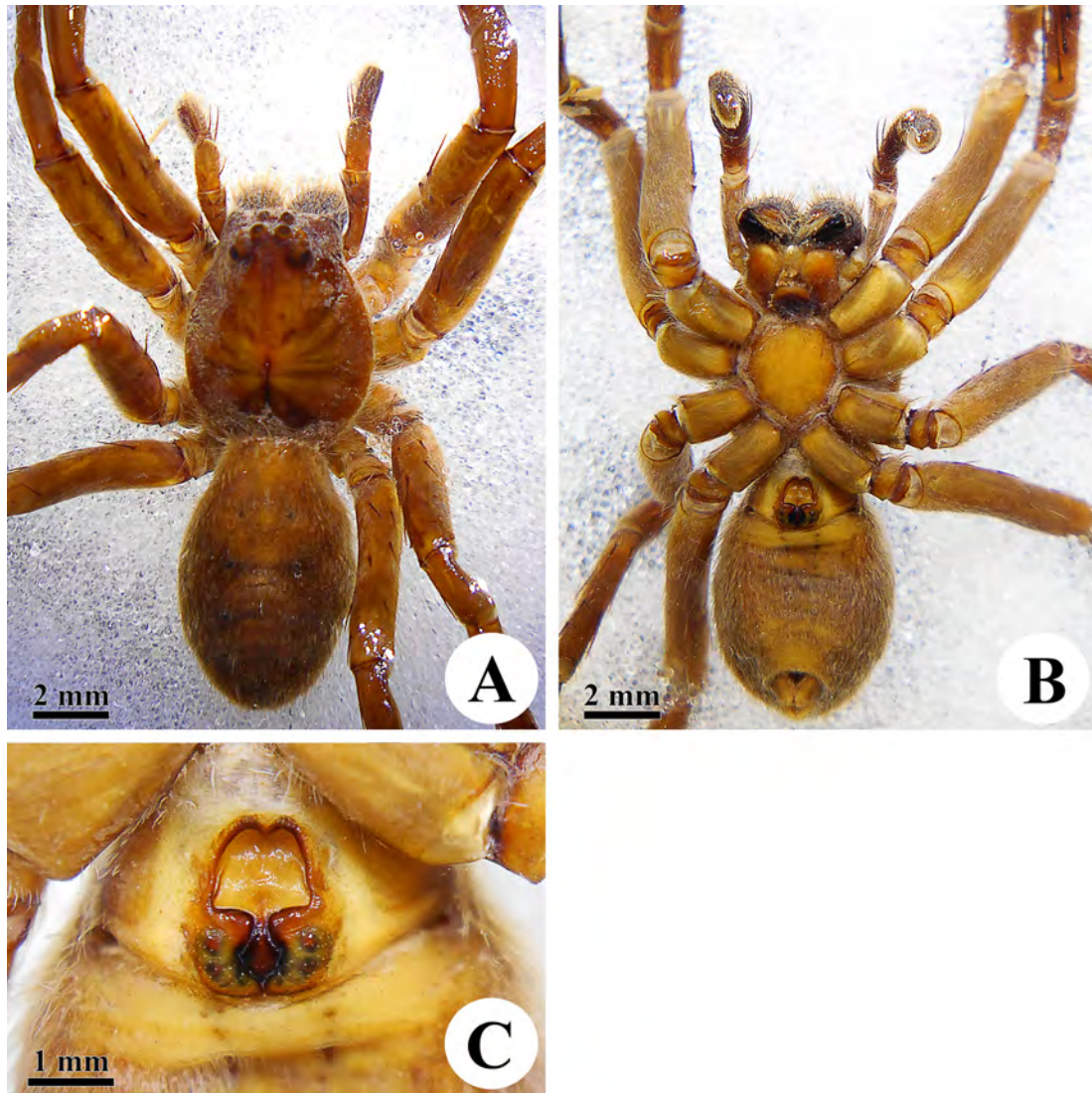


FIGURE 17. *Acanthoctenus spinipes* Keyserling, 1877, female holotype (NHM). A–B, habitus; A, dorsal; B, ventral. C, epigynum, ventral.

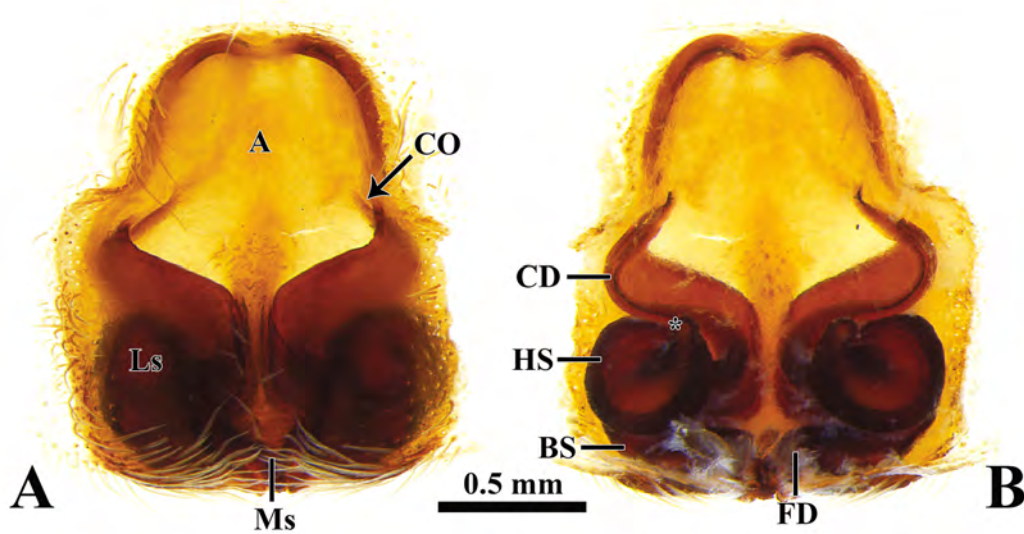


FIGURE 18. *Acanthoctenus spinipes* Keyserling, 1877, female (ICN-Ar73). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

Variation. Two females: total body length 10.50–16.20; carapace length 4.92–6.20.

Distribution. Central Colombia (Fig. 10B).

Acanthoctenus dumicola Simon, 1906 stat. res.

Figs 10B, 19–21

Acanthoctenus dumicola Simon, 1906: 289 (female holotype from Venezuela, La Guaira, [10°35'15.0"N, 66°55'17.0"W], deposited in MNHN AR14426, examined).—Mello-Leitão 1936: 201.—World Spider Catalog 2020.

Acanthoctenus spiniger—Lehtinen, 1967: 208 (Syn.).—World Spider Catalog 2020.

Other material examined. VENEZUELA. *Apure*: Mararay [7°20'35.4"N, 71°15'00.4"W], 1 female (SMF 69661).

Diagnosis. Females of *Acanthoctenus dumicola* stat. res. (Figs 19A–B, 20D, 21A–B) resemble those of *A. remotus* (Fig. 34C–D; Polotow & Brescovit 2012: 41, fig. 1c–d) by the atrium with two strongly sclerotized anterior borders and the lateral sectors anterior border forming a 30° angle with the median sector longitudinal axis. It can be distinguished by the median sector 1.5 times longer than wide, the atrium narrowed, and the presence of an adesmatic joint in the metatarsus IV (Fig. 20E–F). *A. remotus* presents an elongated median sector, more than two times longer than wide, a broader atrium, and an entire metatarsus IV.

Description. Male. Unknown.

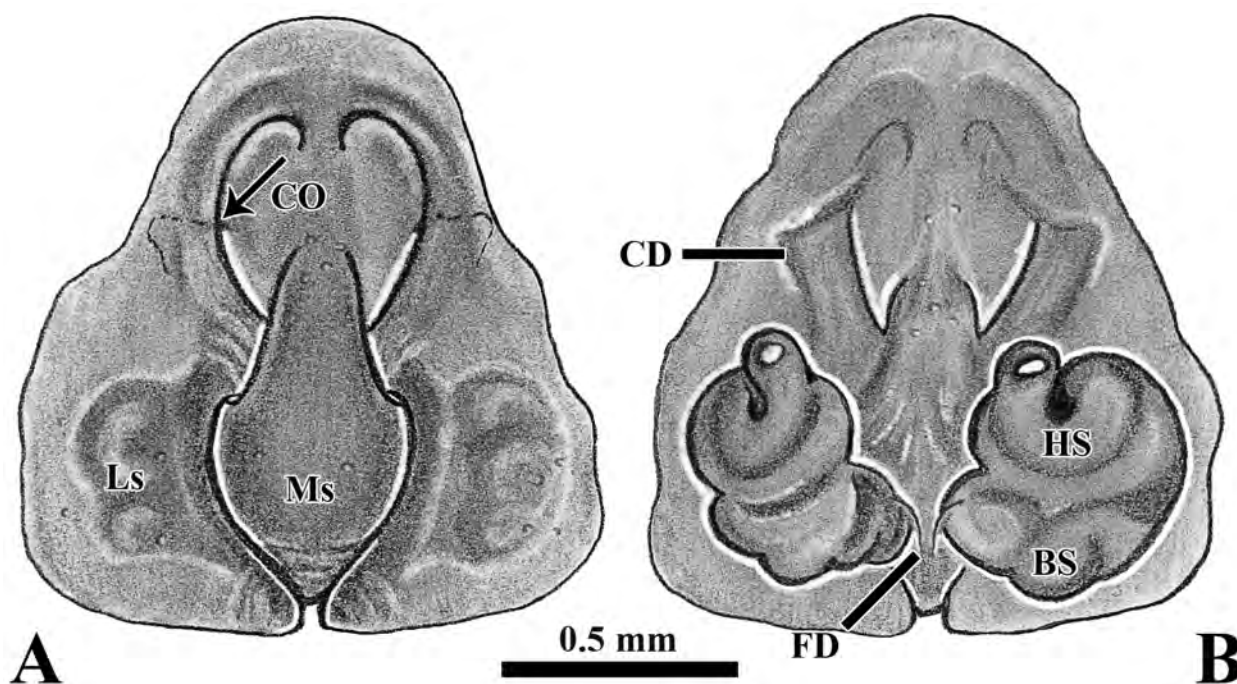


FIGURE 19. *Acanthoctenus dumicola* Simon, 1906 stat. res., female (SMF 69661). A, epigynum, ventral; B, internal genitalia, dorsal.

Female (holotype MNHN AR14426). Total length 13.38. Carapace 5.31 long and 4.87 wide. Clypeus 0.38 high. Eye diameters: AME 0.29, ALE 0.20, PME 0.35, PLE 0.47. Leg measurements: I: femur 6.50/ patella 2.56/ tibia 6.67/ metatarsus 5.85/ tarsus 1.81/ total 23.39; II: 6.51/ 2.67/ 6.19/ 5.39/ 1.62/ 22.38; III: 5.12/ 2.10/ 4.30/ 5.15/ 1.70/ 18.37; IV: 6.94/ 2.35/ 5.67/ 7.53/ 2.20/ 24.69. Leg formula 4123. Leg spination: tibia I and II v2-2-2-2-2-2-2-2, p-1-1-1-1-1, r-1-0-1-1-1, III v2-2-2, p-1-1, r-1-1-1, IV v-2-2-2, p-1-1, r-1-1; metatarsus I and II v-2-2-2-2-2, p-1-0-1-1, r-1-1-0-1, III v-2-2-2, p-1-1-1, r-1-1 and IV v-1-1-1-1-1, p-1-1-1, r-1-1. Epigynum (Figs 19A–B, 20D, 21A–B): median sector subpentagonal, elongated, wide anteriorly, extending into the atrium, and projected posteriorly; anterior border of the lateral sectors straight; atrium small; copulatory ducts strongly sclerotized, curved, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards

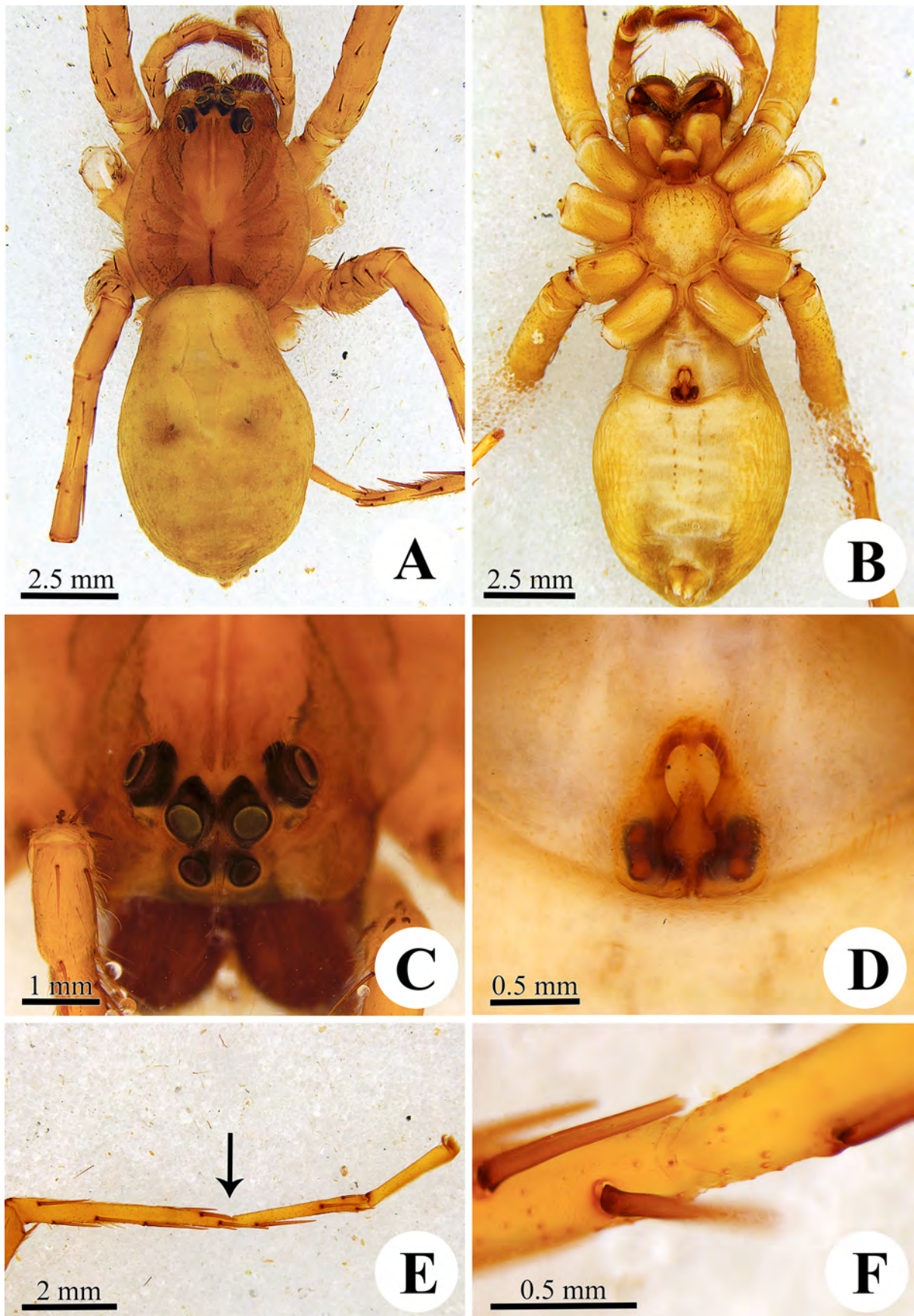


FIGURE 20. *Acanthoctenus dunicola* Simon, 1906 **stat. res.**, female holotype (MNHN AR14426). A–C, habitus; A, dorsal; B, ventral; C, frontal. D, epigynum, ventral. E–F, leg metatarsus-tarsus IV, prolateral; E, arrow to adesmatic joint; F, detail.

Distribution. Northern Venezuela (Fig. 10B).

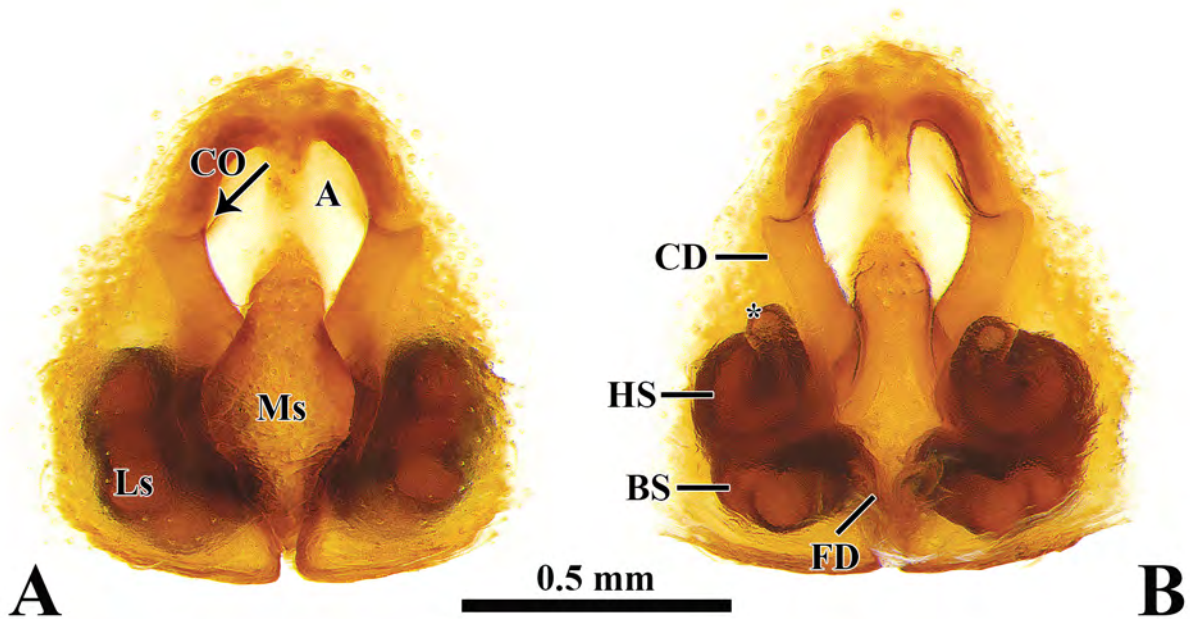


FIGURE 21. *Acanthoctenus dunicola* Simon, 1906 **stat. res.**, female (SMF 69661). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

***Acanthoctenus gaujoni* Simon, 1906**

Figs 10B, 22–25

Acanthoctenus gaujoni Simon, 1906: 290, fig. 2b (male lectotype and female paralectotype from Ecuador, Loja/Zamora, Gaujon coll., deposited in MNHN AR5168; 3 males, 9 females, 8 immatures paralectotypes, same locality as the lectotype, MNHN AR229, here designated; all examined).—Mello-Leitão 1936: 194.—Bosselaers 2002: figs 3b, 5a–b.—World Spider Catalog 2020.

Acanthoctenus spiniger—Simon 1893: 430 (misidentification).—Griswold 1993: 7 (voucher specimens).—World Spider Catalog 2020.

Note 1. The syntypes were kept together in the MNHN AR229 until A.D. Brescovit separated a female and a male in the MNHN AR5168, for later designation as lectotype and paralectotype (A.D. Brescovit, personal communication). Bosselaers (2002) examined the MHNH AR5168 and listed the male incorrectly as a holotype, probably following the information on the label of the vial.

Note 2. Simon (1906: 290) described the locality of the syntypes as “Ecuador merid.: Loja, Zamora” (MNHN AR229 and MNHN AR5168). Loja is the capital city of Loja Province [4°00′26.1″S 79°12′40.7″W] and Zamora is the capital city of Zamora Chinchipe Province [4°03′43.6″S 78°56′48.7″W], the southern Provinces of Ecuador. Both cities are separated by 63.5 Km and connected by the Pan-American Highway (National Highway E45), north to the Podocarpus National Park. It is possible that Gaujon collected the specimens somewhere between those two cities, however there is no information on a specific locality. Thus, we will refer to the locality as Lojas/Zamora and used a middle point in the Pan-American Highway between the two cities [3°58′44.9″S 79°05′06.9″W] to indicate the specimen record in the map (Fig. 10B).

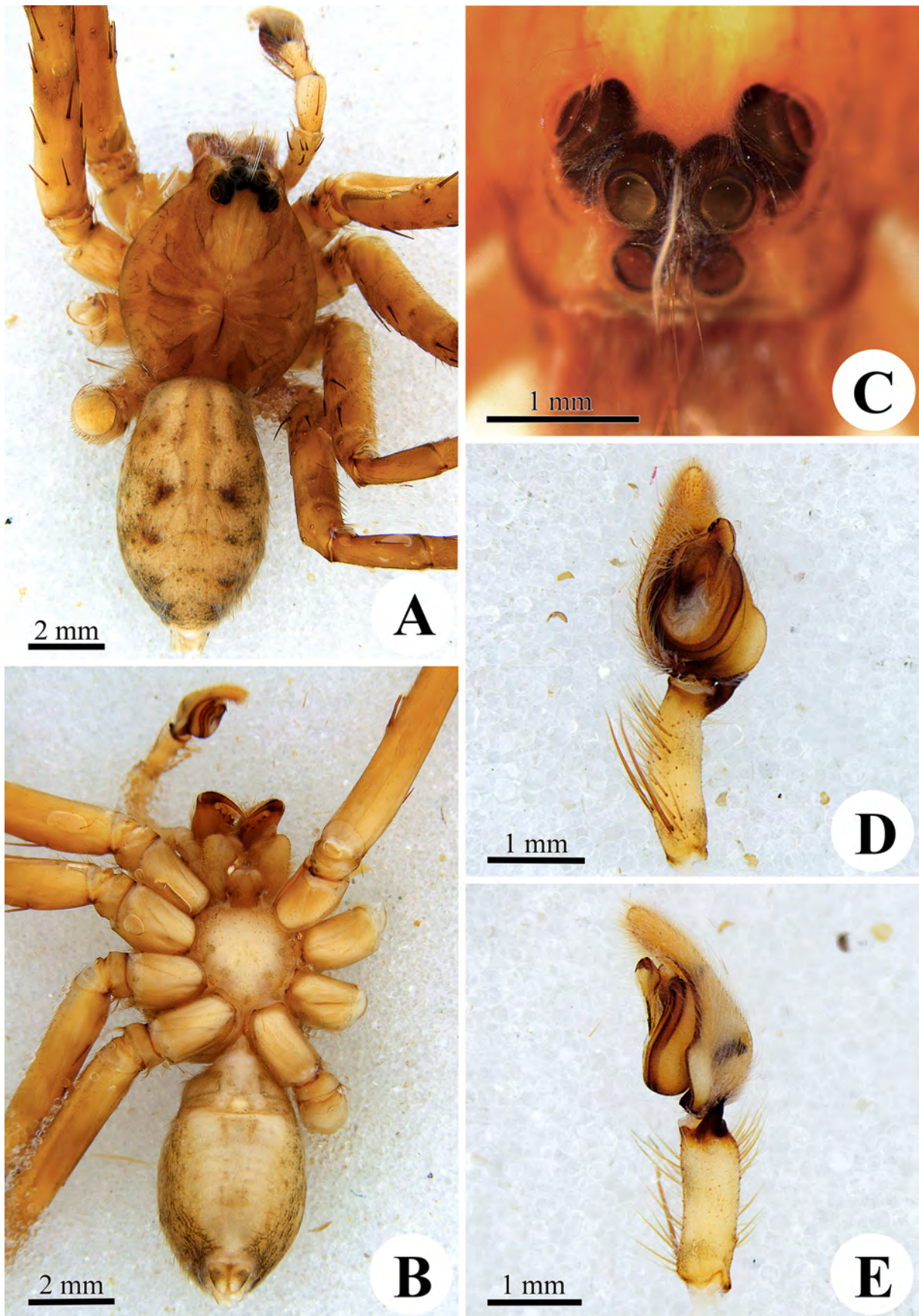


FIGURE 22. *Acanthoctenus gaujoni* Simon, 1906, male (MNHN). A–C, habitus; A, dorsal; B, ventral; C, frontal. D–E, male palp; D, ventral; E, retrolateral.

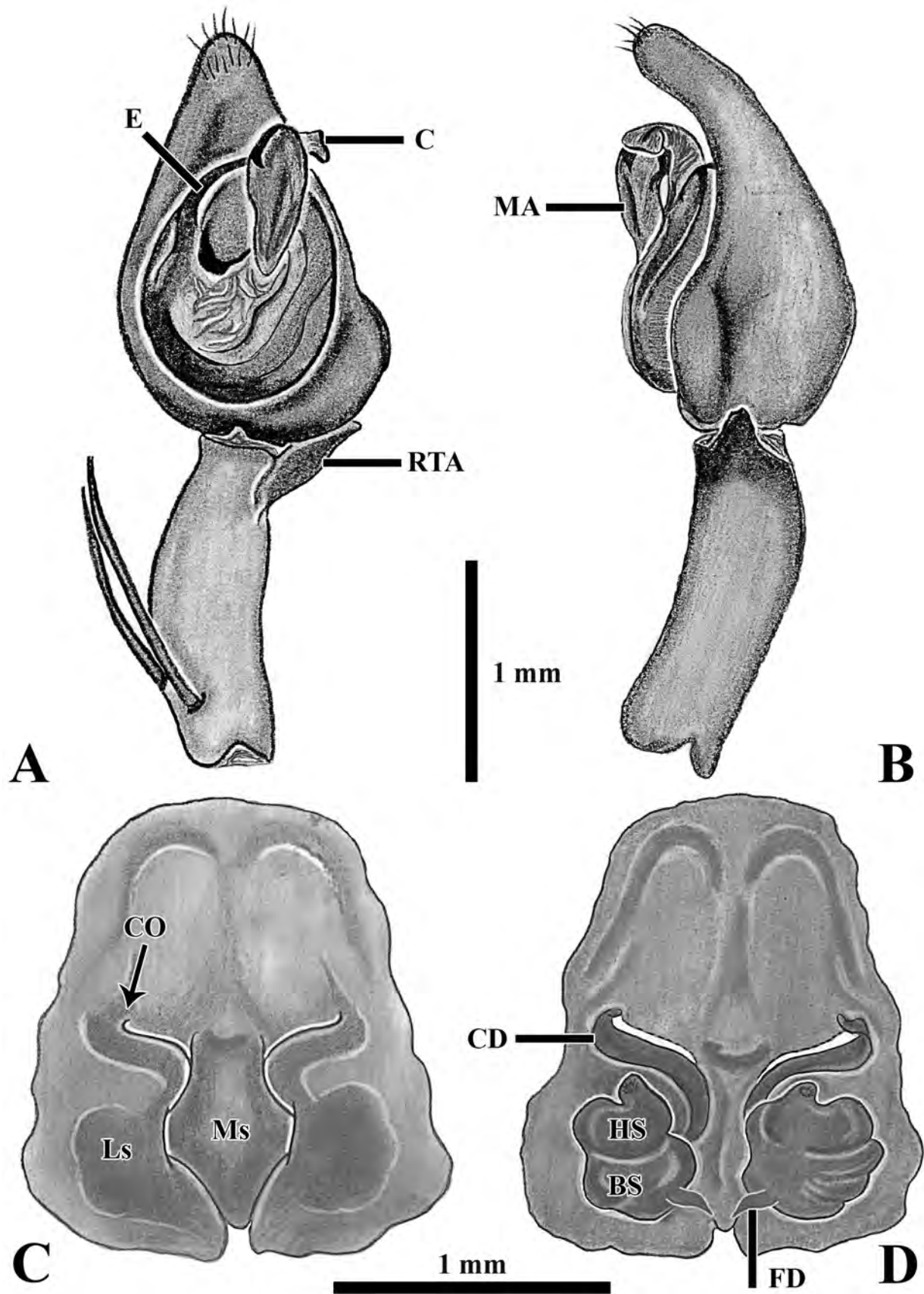


FIGURE 23. *Acanthoctenus gaujoni* Simon, 1906, copulatory organs. A–B, male palp (MNHN); A, ventral; B, retrolateral. C–D, female genitalia (MNHN); C, epigynum, ventral; D, internal genitalia, dorsal.

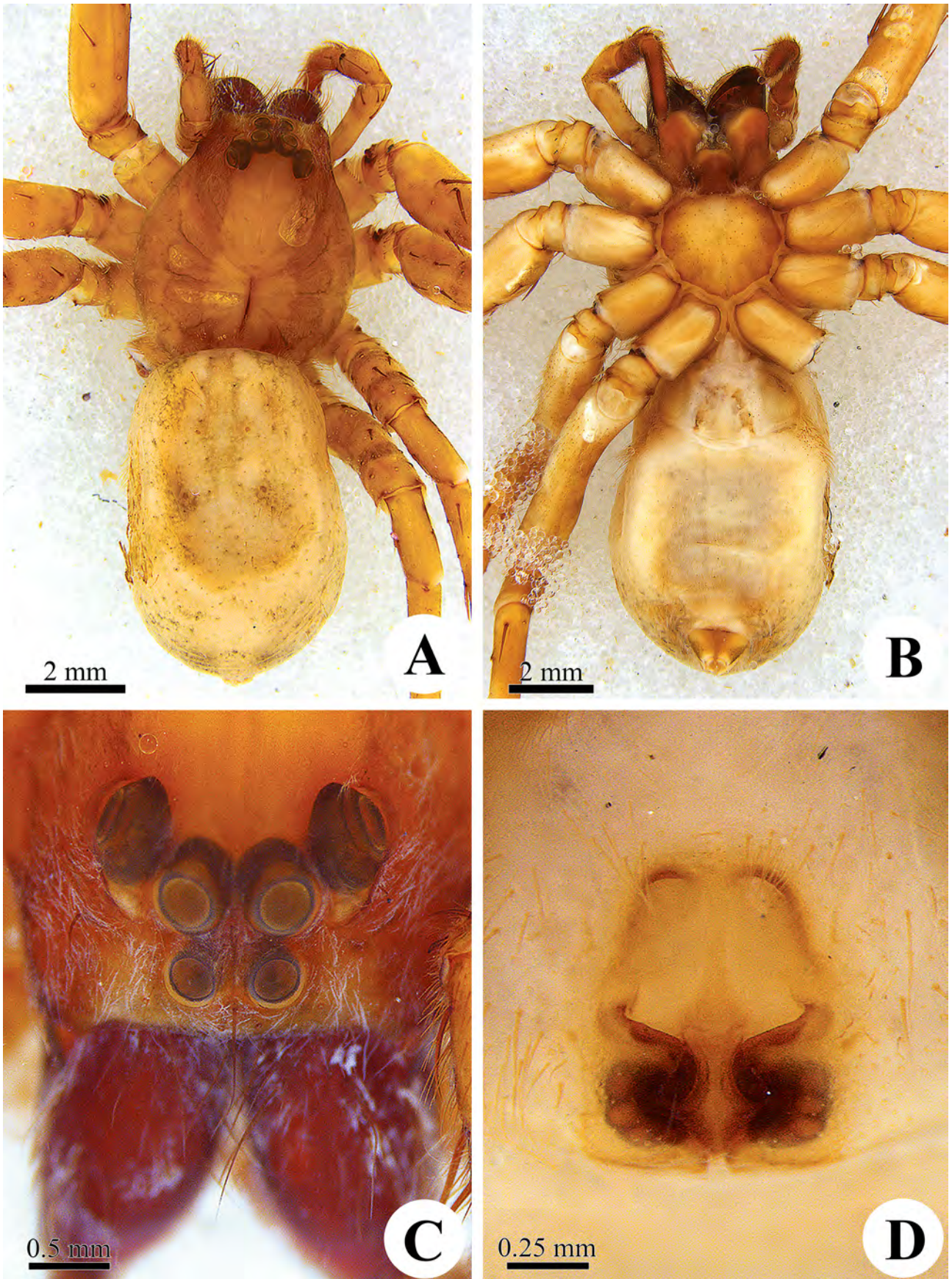


FIGURE 24. *Acanthoctenus gaujoni* Simon, 1906, female (MNHN). A–C, habitus; A, dorsal; B, ventral; C, frontal. D, epigynum, ventral.

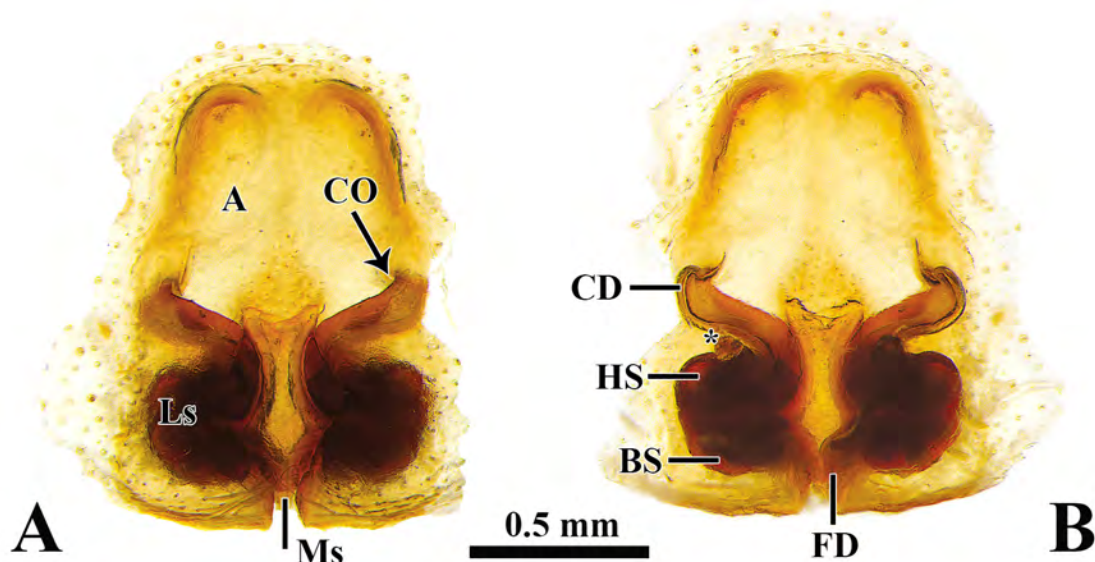


FIGURE 25. *Acanthoctenus gaujoni*, Simon, 1906, female (MNHN). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

Other material examined. ECUADOR, 11 females, 7 males and 9 immatures, collected in Hamburg in banana imports from Ecuador (CeNaK); same data, 2 males (CeNaK); 1 female, V.1954, collected in Frankfurt in banana imports from Ecuador (SMF 69660).

Diagnosis. Males of *Acanthoctenus gaujoni* (Figs 22D–E, 23A–B) resemble those of *A. manauara* **sp. nov.** (Figs 44D–E, 45A–B) by the palpal tibia elongated, at least 2.5 times longer than wide, and RTA elongated, longer than wide. It can be distinguished by the median apophysis suboval, with the apex 1.5 times wider than the base. *A. manauara* **sp. nov.** presents a basally thin median apophysis, the apex more than 3 times wider than the base. Females of *Acanthoctenus gaujoni* (Figs 23C–D, 24D, 25A–B) resemble those of *A. manauara* **sp. nov.** (Figs 45C–D, 46D, 47A–B) by the median sector subpentagonal, wide anteriorly, extending into the atrium, and the copulatory ducts bended apically. It can be distinguished by the lateral sectors' anterior border forming a 60° angle with the median sector's longitudinal axis, and the atrium with two strongly sclerotized borders anteriorly. *A. manauara* **sp. nov.** presents the anterior border of the lateral sectors forming a 40° angle with the median sector's longitudinal axis, and one anterior strongly sclerotized border in the atrium.

Description. Male (lectotype MNHN AR5168). Total length 12.28. Carapace 5.28 long and 4.64 wide. Clypeus 0.34 high. Eye diameters: AME 0.30, ALE 0.21, PME 0.36, PLE 0.42. Leg measurements: I: femur 9.10/ patella 3.08/ tibia 10.07/ metatarsus 9.50/ tarsus 2.35/ total 34.10; II: 6.11/ 2.95/ 7.81/ 7.31/ 1.98/ 26.16; III: 5.82/ 2.24/ 5.31/ 5.30/ 1.93/ 20.60; IV: 6.57/ 2.33/ 7.23/ 10.07/ 2.60/ 28.80. Leg formula 1423. Leg spination: tibia I and II v-2-2-2-2-2-2-2-2-2, p-1-0-1-1-1, r-0-0-1-1, III v-2-2-2, p-1-1, r-1-1-1, IV v-2-2-2, p-1-1, r-1-1; metatarsus I and II v2-2-2-2-2, p-1-1, r-1, III v-2-2-2, p-1-1-1, r-1-1, IV v1-1-1-1-1, p1-1-, r-1-1-1. Palp (Figs 22D–E, 25A–B): tibia shorter than cymbium; RTA with large base, tapering to apex; cymbium elongated and with retrobasal projection; embolus elongated, cylindrical, and curved; conductor hyaline and following the tip of embolus; median apophysis laminar, elongated, narrow at the base and wider at the apex, with a proapical hook.

Female (paralectotype MNHN AR5168). Total length 12.86. Carapace 5.80 long and 4.82 wide. Clypeus 0.32 high. Eye diameters: AME 0.28, ALE 0.24, PME 0.34, PLE 0.40. Leg measurements: I: femur 6.38/ patella 2.85/ tibia 6.72/ metatarsus 5.52/ tarsus 1.65/ total 23.12; II: 5.77/ 2.56/ 5.42/ 4.86/ 1.67/ 20.28; III: 4.81/ 2.11/ 3.85/ 4.47/ 1.60/ 16.84; IV: 6.22/ 2.21/ 5.09/ absent/ absent. Leg spination: tibia I v-2-2-2-2-2-2-2-2-2, p-0-1-1-1, r-0-1-1-1, II v-2-2-2-2-2-2-2-2-2, p-1-0-1-1, r-1-1-0-1-1, III v-2-2-2, p-1-1, r-1-1-1-1, IV v-2-2-2, p1-1, r1-1; metatarsus I v-2-2-2-2-2, p-1, r-1-1, II v-2-2-2-2-2, p-1-1, r-1, III v-2-2-2, p-1-1-1-1, r-1-1-1-1, IV absent. Epigynum (Figs 23D, 24A–B, 25C–D): median sector subpentagonal, elongated, wide anteriorly extending into the atrium, projected posteriorly; anterior border of the lateral sectors straight; atrium large, subquadrangular; copulatory ducts strongly sclerotized, curved, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Variation. Seven males: total body length 9.63–12.91; carapace length 4.43–6.01. Eleven females: total length 15.63–11.21; carapace length 6.75–4.93.

Distribution. Southern Ecuador (Fig. 10B).

***Acanthoctenus plebejus* Simon, 1906**

Figs 10B, 26–28

Acanthoctenus plebejus Simon, 1906: 291, fig. 2A (female lectotype from Trinidad, Trinidad and Tobago, [10°41'30.5"N, 61°13'21.0"W], deposited in MNHN AR5169, here designated, examined).—Mello-Leitão 1936: 201.—World Spider Catalog 2020.

Acanthoctenus spinipes—Simon 1893: 430 (misidentification).—World Spider Catalog 2020.

Note. In the original description, Simon (1906: 291) mentioned several localities for *Acanthoctenus plebejus* including: Caracas and San Esteban cities, and a locality close to the intersection between Orinoco and Caroni rivers (Venezuela), Trinidad Island (Trinidad and Tobago), and Tarapoto city (Peru) (“—Venezuela: Caracas! San Esteban! Orinoco: Caroni.—Trinidad.—Amazonas: Tarapoto!”). It seems that Simon studied a syntype series, however, he did not provide a list of examined material in the original description (1906: 291). Also, Simon described (1906: 291) and illustrated (1906: fig. 2a) one female, but it might not be the same specimen. As the MNNH holds only a female specimen of *A. plebejus* (MNNH AR5169) from Trinidad, we consider it as part of the syntype series and here designate it as lectotype.

Diagnosis. Females of *Acanthoctenus plebejus* (Figs 26, 27D, 28) resemble those of *A. spinipes* (Figs 16C–D, 17C, 18A–B) by the atrium massive, subquadrangular, and the copulatory ducts strongly sclerotized. It can be distinguished by the median sector wide anteriorly extending into the atrium, the atrium anterior border slightly sclerotized, and the lateral sectors anterior border strongly curved. *A. spinipes* lacks an extension of the median sector into the atrium, presents strongly sclerotized anterior and lateral borders of the atrium, and straight anterior borders in the lateral sectors.

Description. Male. Unknown.

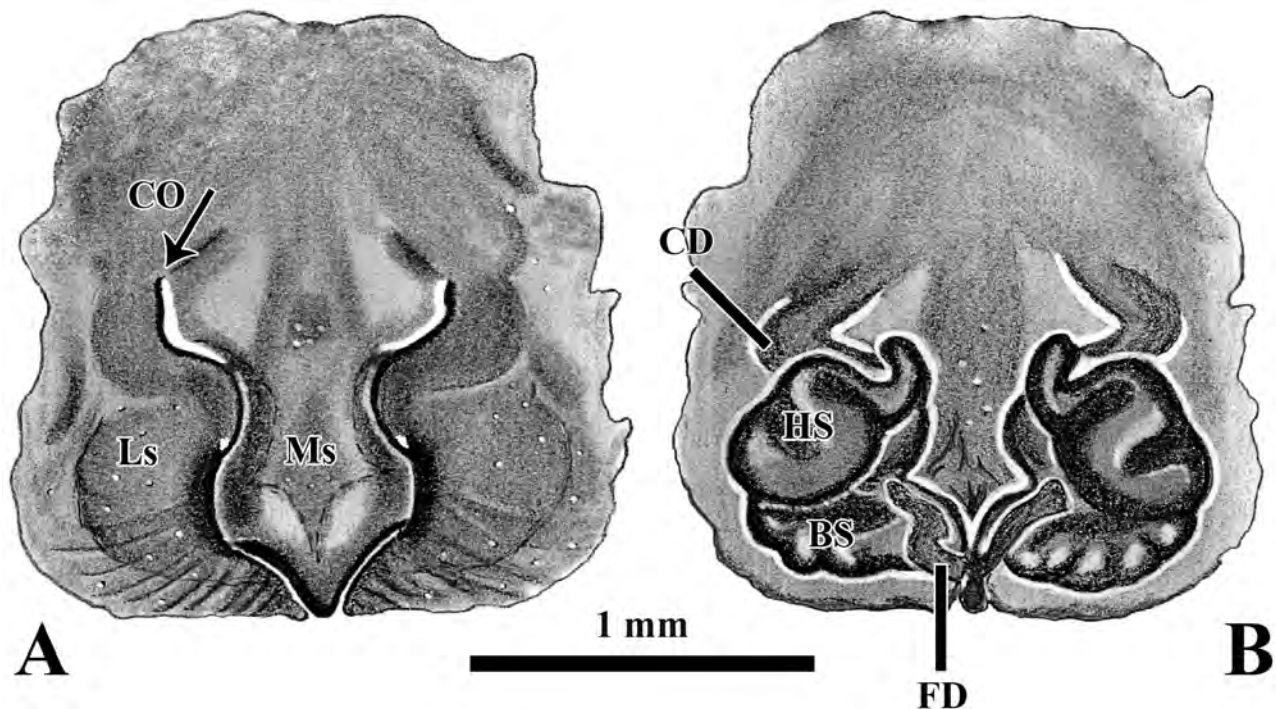


FIGURE 26. *Acanthoctenus plebejus* Simon, 1906, female holotype (MNHN AR5169). A, epigynum, ventral; B, internal genitalia, dorsal.

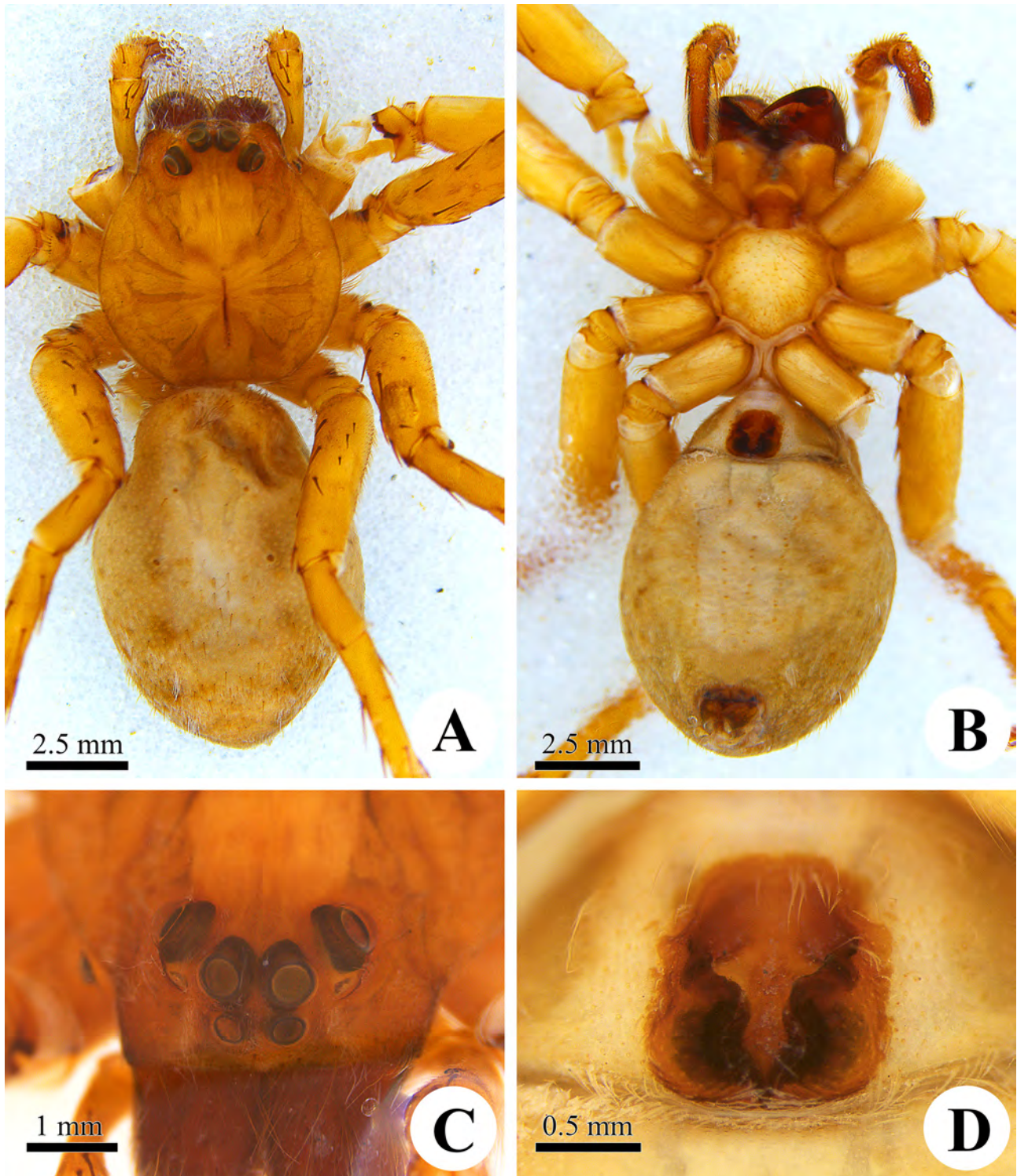


FIGURE 27. *Acanthoctenus plebejus* Simon, 1906, female holotype (MNHN AR5169). A–C, habitus; A, dorsal; B, ventral; C, frontal. D, epigynum, ventral.

Female (holotype MNHN AR5169). Total length 15.02. Carapace 6.29 long and 5.18 wide. Clypeus 0.32 high. Eye diameters: AME 0.27, ALE 0.17, PME 0.34, PLE 0.47. Leg measurements: I: femur 7.12/ patella 2.69/ tibia 8.38/ metatarsus 7.01/ tarsus 1.95/ total 27.15; II: 7.07/ 2.96/ 6.85/ 5.90/ 1.88/ 24.66; III: 5.47/ 2.29/ 4.70/ 5.72/ 1.94/ 20.12; IV: 6.78/ 2.24/ 6.29/ 6.29/ 2.01/ 23.61. Leg formula 1243. Leg spination: tibia I and II v2-2-2-2-2-2-2-2, p-1-1-0-1-1-1, r-0-1-1-1, III v-2-2-2, p-1-1, r-1-1, IV v-2-2-2, p-1-1-1, r-1-1-1-1; metatarsus I and II v-2-2-2-2-2-2, p-1-0-1-1, r-1-0-1, III and IV v-2-2-2, r-1-1-1, p-1-1-1. Epigynum (Figs 26, 27D, 28): median sector subpentagonal, as wide as long, wide anteriorly extending into the atrium, projected posteriorly; anterior border of the lateral sec-

tors curved; atrium large, subquadrangular; copulatory ducts strongly sclerotized, curved, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Distribution. Known only from the type locality in Trinidad and Tobago (Fig. 10B).

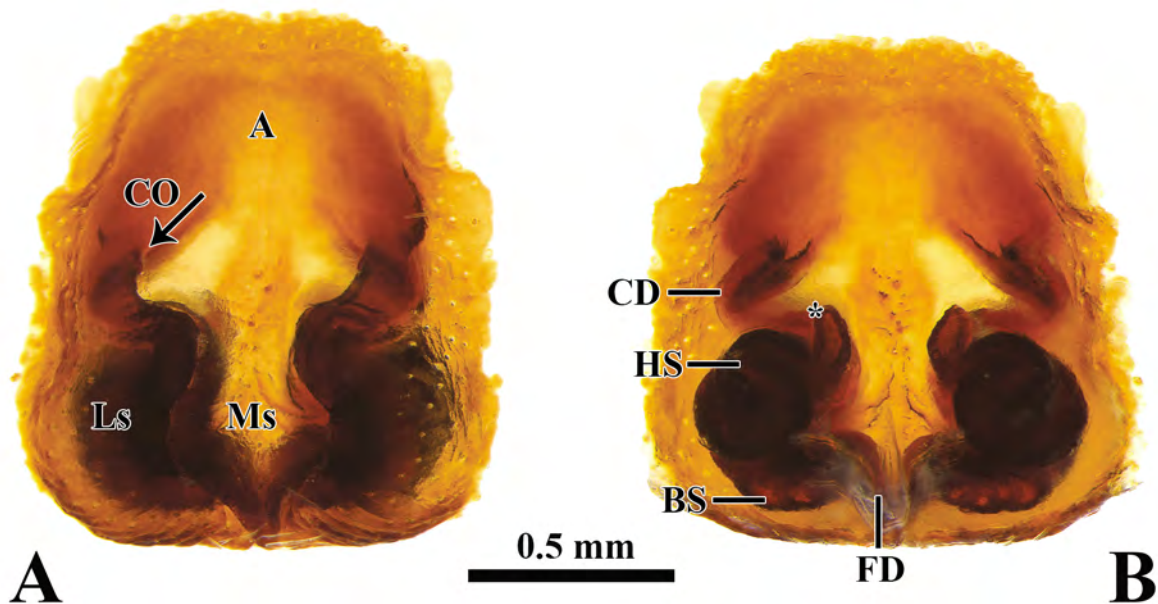


FIGURE 28. *Acanthoctenus plebejus* Simon, 1906, female holotype (MNHN AR5169). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

***Acanthoctenus kollari* (Reimoser, 1939)**

Figs 10A, 29–30

Phymatoctenus kollari Reimoser, 1939: 369, fig. 9 (female holotype from Reventazón River, Cartago [9°51'54.8"N, 83°44'09.8"W], Costa Rica, deposited in HMW 9276, examined).—World Spider Catalog 2020.

Paracanthoctenus kollari—Kraus 1955: 51 (Trans.).—World Spider Catalog 2020.

Acanthoctenus kollari (lapsus)—Lehtinen 1967: 208, 259 (Trans.).—World Spider Catalog 2020.

Diagnosis. Females of *Acanthoctenus kollari* (Figs 29, 30D–E) resemble those of *A. chickeringi* sp. nov. (Figs 39C–D, 40D, 41) by the atrium with two strongly sclerotized anterior borders, and the copulatory ducts bended anteriorly. It can be distinguished by the atrium subtriangular, and the median sector wider anteriorly, as wide as the margins of its lateral extensions. *A. chickeringi* sp. nov. presents a subquadrangular atrium, and an anterior thin median sector, half the width of the margins of its lateral extensions.

Description. Male. Unknown.

Female (holotype HMW 9276). Total length 13.00. Carapace 6.00 long, 5.00 wide. Clypeus 0.30 high. Eye diameters: AME 0.30, ALE 0.23, PME 0.30, PLE 0.37 Leg measurements: I: femur 7.00/ patella 4.00/ tibia 7.80/ metatarsus 6.20/ tarsus 2.00/ total 27.00; II: 6.20/ 3.00/ 6.00/ 5.20/ 2.00/ 22.40; III: 5.50/ 2.20/ 5.20/ 7.20/ 2.20/ 22.30; IV: 6.50/ 2.30/ 6.00/ 7.60/ 2.20/ 24.60. Leg formula 1423. Leg spination: tibia I and II v-2-2-2-2-2-2-2-2, p-2-2-1, r-1-0-1-1-1, III v-2-2-2, p-1-0-1-1, r-1-0-1-1, IV v-2-2-2, p-1-1, r-1.1; metatarsus I and II v-2-2-2-2-2, p-1, r-1 III v-1-1-1, p-1-1-1-1, r-1-1-1-1, IV v-1-1-1-1, p-1-1-1, r-1-1-1. Epigynum (Figs 29A–B, 30D–E): median sector subpentagonal, as wide as long, wide anteriorly and extending into the atrium, projected posteriorly; anterior border of the lateral sectors straight; atrium large, subtriangular; copulatory ducts bended, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Distribution. Costa Rica (Fig. 10A).

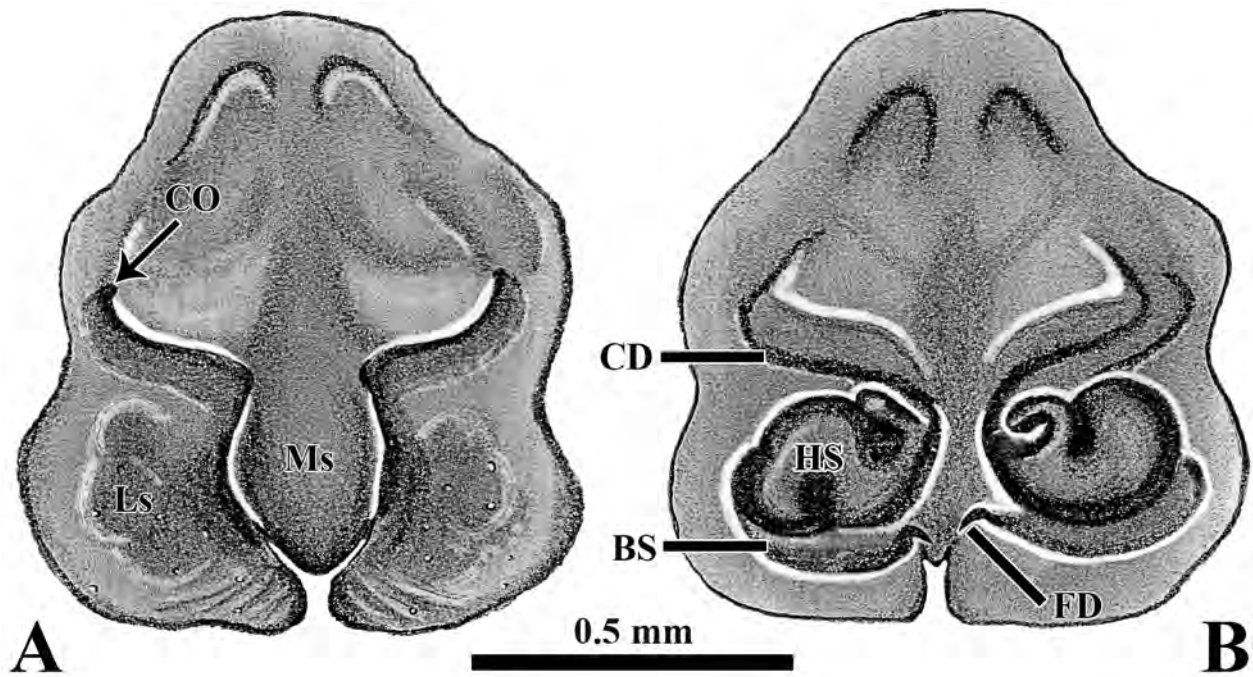


FIGURE 29. *Acanthoctenus kollari* (Reimoser, 1939), female holotype (HMW 9276). A, epigynum, ventral; B, internal genitalia, dorsal.

***Acanthoctenus virginea* (Kraus, 1955) stat. res., comb. nov.**

Figs 10A, 31–33

Paracanthais virginea Kraus, 1955: 51–52, figs 134–137 (male holotype from Vulcano San Vicente, Finca El Carmen, San Vicente Department [13°37'35.7"N, 88°48'32.0"W], El Salvador, 1300 m.a.s.l., 30.VII.1951, A. Zilch coll., deposited in SMF 8676; female paratype from east of Vulcano Izalco, bottom of Cerro Verde, Sonsonate Department [13°49'49.4"N, 89°36'55.7"W], El Salvador, 1200 m.a.s.l., 26.VII.1951, A. Zilch coll., deposited in SMF 8674; female paratype from road south of La Palma, El Refugio, [14°18'57.8"N, 89°10'31"W], Chalatenango Department, El Salvador, 1100 m.a.s.l., 4.XI.1951, A. Zilch coll., deposited in SMF 8675; all examined).—World Spider Catalog 2020.

Acanthoctenus spinipes—Lehtinen 1967: 256 (Syn.).—World Spider Catalog 2020.

Note. Lehtinen (1967: 208) synonymized *Paracanthais virginea* Kraus, 1955 with *Acanthoctenus spinipes* Keyserling, 1877 without seeing the type specimens of the former. Here we examine the type specimens of *P. virginea* and recognize it as a distinct species.

Diagnosis. Males of *Acanthoctenus virginea* **stat. res., comb. nov.** (Figs 31C–D, 32A–B) resemble those of *A. spiniger* (Figs 11C–D, 12A–B) by the palpal tibia retrolaterally swollen and the RTA short, wider than long. It can be distinguished by the cymbial projection with a pronounced anterior slope in ventral view and by the median apophysis proapical hook elongated, longer than wide. *A. spiniger* presents a slightly anterior slope in the cymbial projection and a reduced, wider than long median apophysis proapical hook. Females of *Acanthoctenus virginea* **stat. res., comb. nov.** (Figs 32C–D, 33C–D) resemble those of *A. spiniger* (Figs 12C–D, 14A–B) by the median sector subpentagonal, but it can be distinguished by lateral sectors' anterior border straight, forming a 60° angle with the median sector's longitudinal axis, and the atrium suboval. *A. spiniger* presents curved anterior border of the lateral sectors forming a 90° angle with the median sector's longitudinal axis, and a subtriangular atrium.

Description. Male (holotype SMF 8676). Total length 11.20. Carapace 4.75 long and 4.00 wide. Clypeus 0.32 high. Eye diameters: AME 0.24, ALE 0.18, PME 0.34, PLE 0.40. Leg measurements: I: femur 7.0/ patella 2.38/ tibia 7.98/ metatarsus 7.56/ tarsus 2.52/ total 27.35; II: 6.02/ 2.24/ 6.58/ 5.88/ 1.82/ 22.54; III: 5.18/ 1.82/ 4.34/ 5.17/ 1.82/ 18.33; IV: absent. Leg spination: tibia I v-2-2-2-2-2-2-2-2, r-1-0-0-1, p-1-0-1-1-1; II v-2-2-2-2-2-2-2-2, r-1-1-0-1-1, p-1-0-1-1, III and IV v-2-2-2, r-1-0-1, p-0-1-1; metatarsus I and II v-2-2-2-2-2, r-0-1, p-1-0-1; III and IV v-2-2-2, r-1-1-1, p-1-1-0-1. Palp (Figs 31C–D, 32A–B): tibia shorter than cymbium, swollen retrobasally;

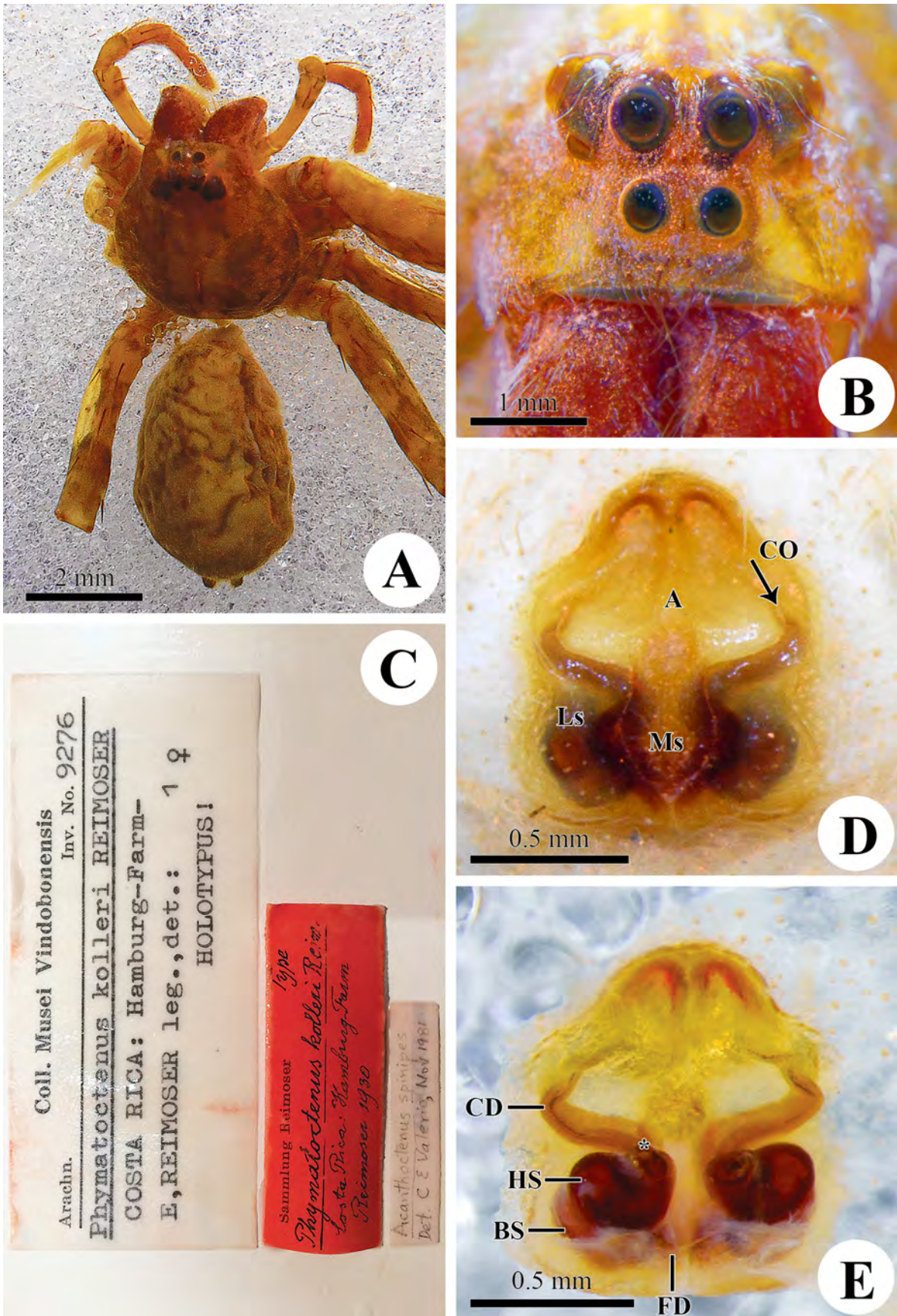


FIGURE 30. *Acanthoctenus kollari* (Reimoser, 1939), female holotype (HMW 9276). A–B, habitus; A, dorsal; B, frontal. C original collection labels. D, epigynum, ventral. E, internal genitalia, dorsal.

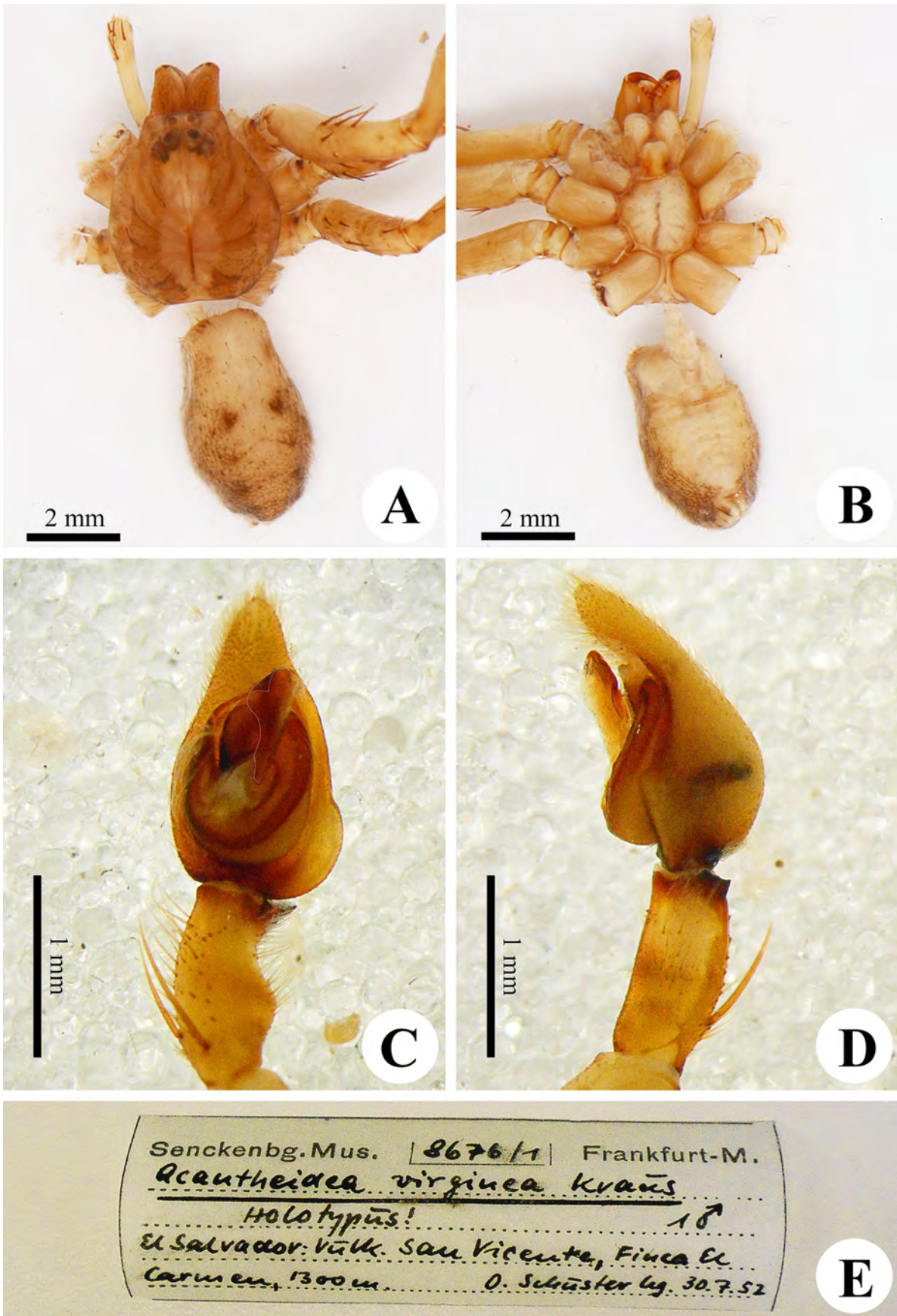


FIGURE 31. *Acanthoctenus virginea* (Kraus, 1955) **stat. res., comb. nov.**, male holotype (SMF 8676). A–B, habitus; A, dorsal; B, ventral. C–D, male palp; C, ventral; D, retrolateral. E, original collection label.

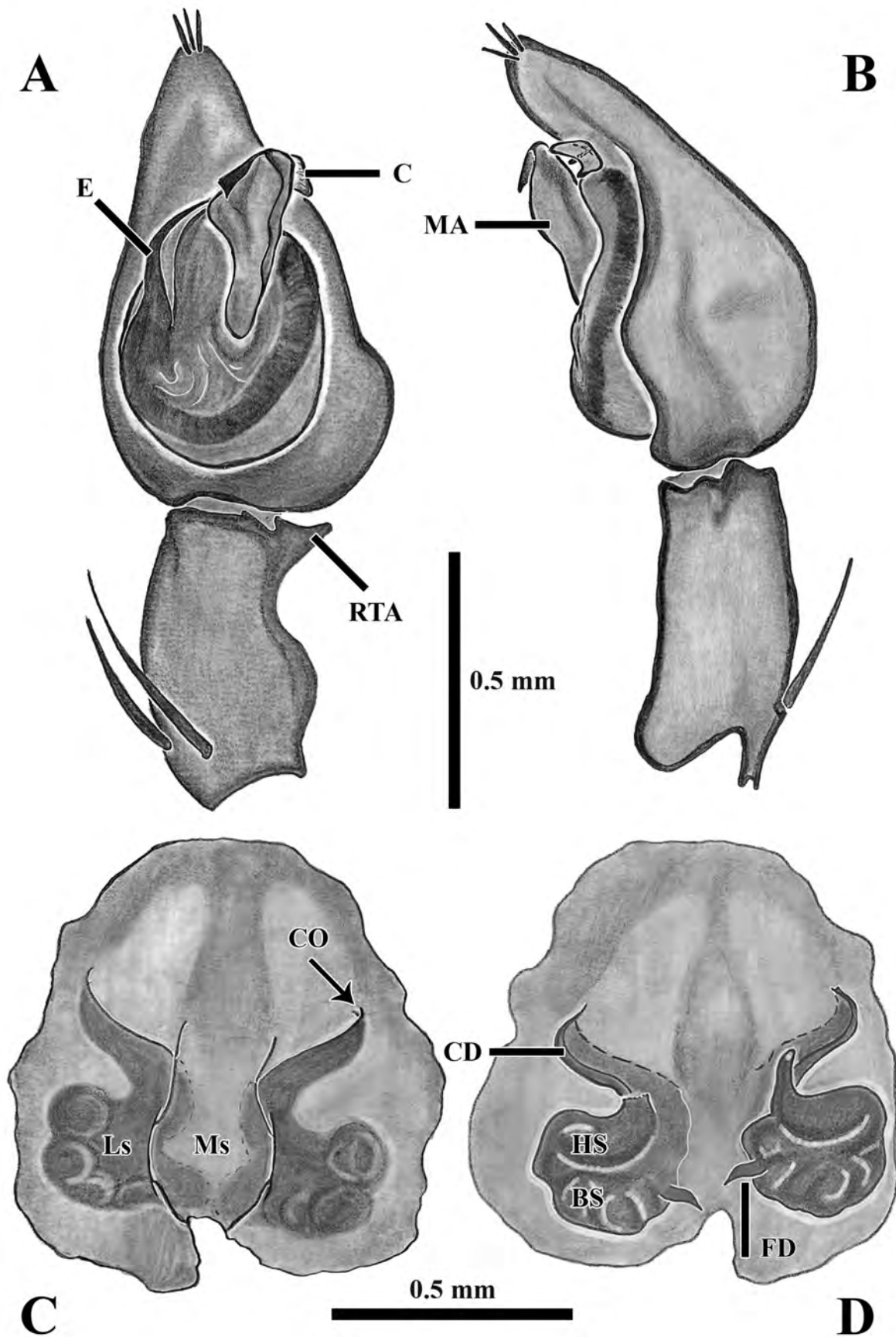


FIGURE 32. *Acanthoectenusa virginea* (Kraus, 1955) **stat. res., comb. nov.**, copulatory organs. A–B, male palp (holotype, SMF 8676); A, ventral; B, retrolateral. C–D, female genitalia (paratype, SMF 8674); C, epigynum, ventral; D, internal genitalia, dorsal.

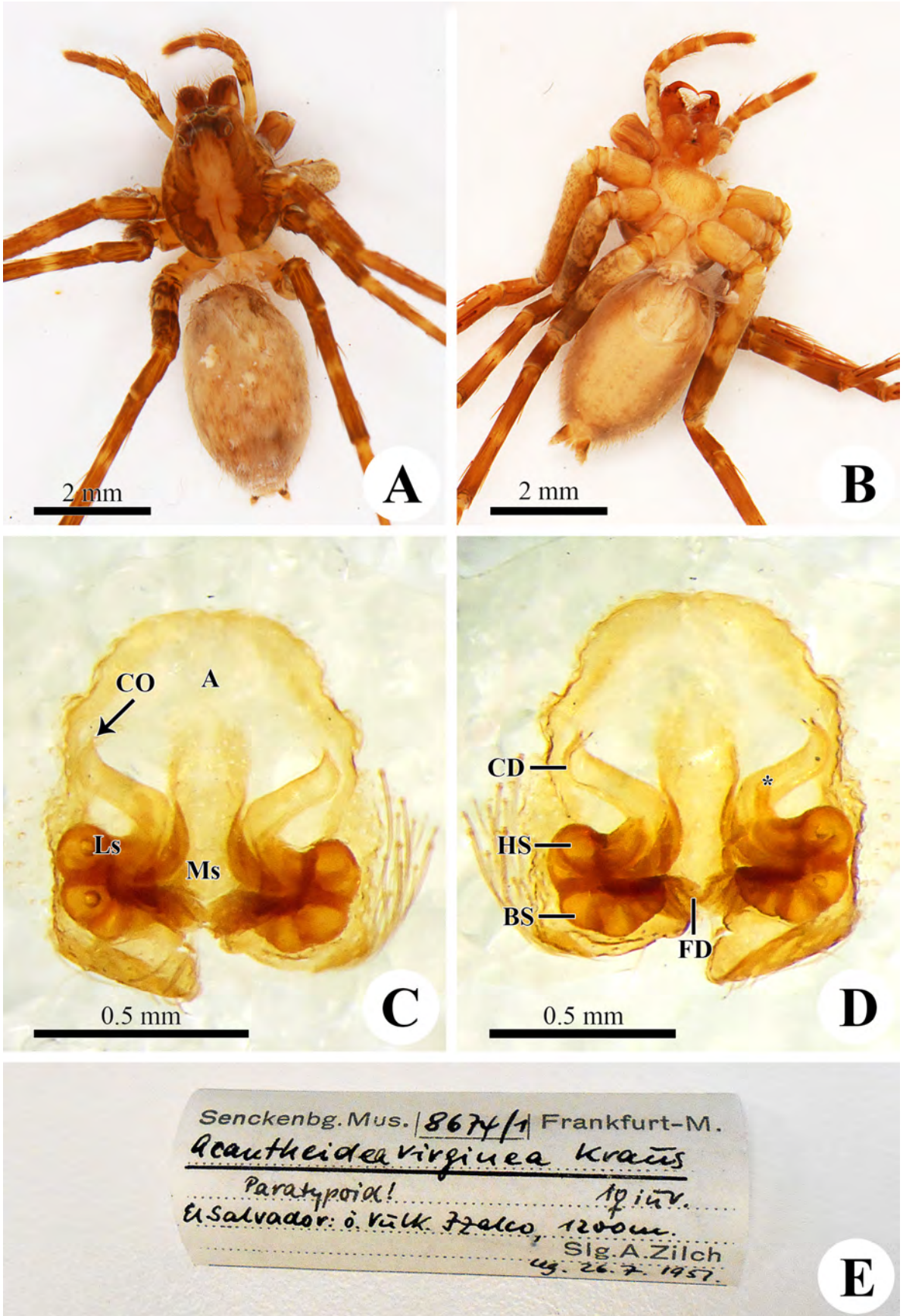


FIGURE 33. *Acanthoctenus virginea* (Kraus, 1955) **stat. res., comb. nov.**, female paratype (SMF 8674). A–B, habitus; A, dorsal; B, ventral. C, epigynum, ventral. D, internal genitalia, dorsal (asterisk to gland openings). E, original collection label.

RTA short and blunt; cymbium elongated and with retrobasal projection; embolus elongated, cylindrical, and curved; conductor hyaline and following the tip of embolus; median apophysis laminar, elongated, narrow at the base and wider at the top, with a proapical hook and a retrolateral ridge.

Female (SMF 8674). Total length 9.50. Carapace 4.50 long and 3.00 wide. Clypeus 0.35 high. Eye diameters: AME 0.20, ALE 0.14, PME 0.30, PLE 0.34. Leg measurements: I: femur 4.10/ patella 1.70/ tibia 4.50/ metatarsus 3.80/ tarsus 1.30/ total 15.30; II: 6.022.24/ 6.58/ 5.88/ 1.82/ 22.54; III: 5.18/ 1.82/ 4.34/ 5.17/ 1.82/ 18.33; IV: absent. Leg spination: tibia I v-2-2-2-2-2-2-2-2, r-1-0-0-1, p-1-0-1-1-1; II v-2-2-2-2-2-2-2-2, r-1-1-0-1-1, p-1-0-1-1, III and IV v-2-2-2, r-1-0-1, p-0-1-1; metatarsus I and II v-2-2-2-2-2, r-0-1, p-1-0-1; III and IV v-2-2-2, r-1-1-1, p-1-1-0-1. Epigynum (Figs 32C–D, 33C–D): median sector suboval, elongated, wide anteriorly extending into the atrium, projected posteriorly; anterior border of the lateral sectors straight; atrium large, suboval; copulatory ducts S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Distribution. El Salvador (Fig. 10A).

Acanthoctenus remotus Chickering, 1960

Figs 10A, 34

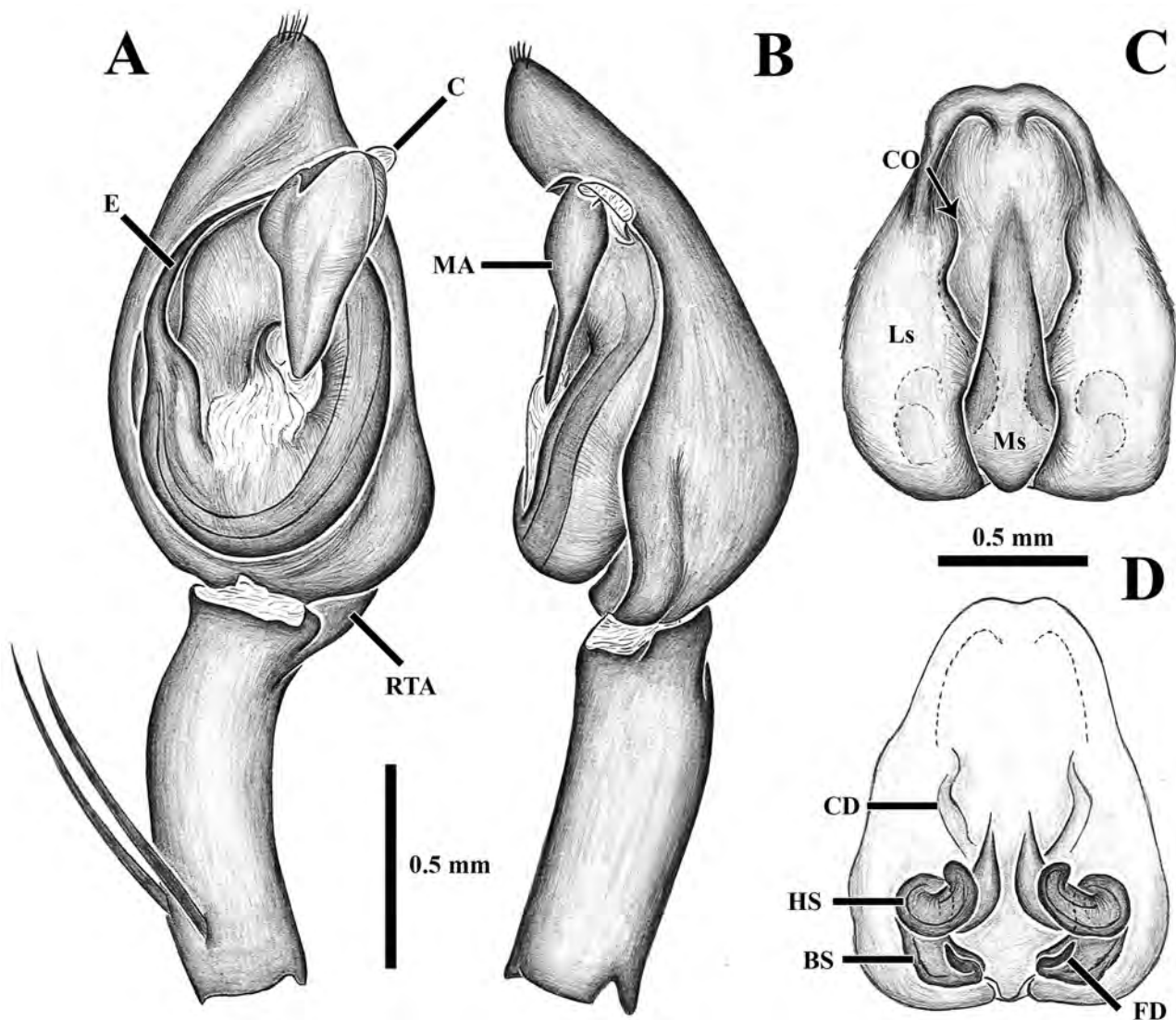


FIGURE 34. *Acanthoctenus remotus* Chickering, 1960, copulatory organs. A–B, male palp (holotype, MCZ 22882); A, ventral; B, retrolateral; C–D, female genitalia (paratype, MCZ 22882); C, epigynum, ventral. D, internal genitalia, dorsal.

Acanthoctenus remotus Chickering, 1960: 81, figs 1–6 (male holotype and female paratype from Upper Mountain View [18°02'51.6"N, 76°46'14.5"W], St. Andrew Parish, Jamaica, 15.I.1950, C.B. Lewis coll., deposited in MCZ 22882; male paratype, same locality as holotype, 15.V.1950, C.B. Lewis coll., deposited in MCZ; female paratype from Cross Roads [17°59'32.8"N, 76°47'26.5"W], St. Andrew Parish, Jamaica, 3.XII.1950, R.P. Bengry coll., deposited in MCZ 43945, all examined).—Polotow & Brescovit 2012: 40, figs 1a–d.—World Spider Catalog 2020.

Diagnosis. Males of *Acanthoctenus remotus* (Fig. 34A–B; Polotow & Brescovit 2012: fig. 1a–b) resemble those of *A. lamarrei* **sp. nov.** (Figs 42D–E, 43A–B) by the median apophysis massive, the apex at least five times wider than the base, and the palpal tibia elongated, at least 2.5 times longer than wide. It can be distinguished by the embolus elongated, the base slightly swollen and starting at 9 o'clock, and the apex ending at 2 o'clock, and the RTA reduced, wider than long. *A. lamarrei* **sp. nov.** presents a shorter embolus, the apex ending at 12 o'clock, the base swollen at least four times the apex width, and RTA elongated, longer than wide. Females of *Acanthoctenus remotus* (Fig. 34C–D; Polotow & Brescovit 2012: 41, fig. 1d–c) resemble those of *A. dumicola* **stat. res.** (Figs 19A–B, 20D, 21A–B) by the atrium with two strongly sclerotized anterior borders and the lateral sectors anterior border forming a 30° angle with the median sector longitudinal axis. It can be distinguished by the median sector elongated, more than two times longer than wide, and the atrium broader. *A. dumicola* **stat. res.** presents a reduced media sector, 1.5 times longer than wide, and a narrowed atrium.

Description. See Polotow & Brescovit (2012).

Distribution. Jamaica (Fig. 10A).

Acanthoctenus alux **sp. nov.**

Figs 10A, 35–37

Acanthoctenus spinigerus—F.O. Pickard-Cambridge 1902: 356, plate 33, fig. 12 (misidentification).—World Spider Catalog 2020.

Acanthoctenus spiniger—Lehtinen 1967: 208, figs 414, 420 (misidentification).—World Spider Catalog 2020.

Acanthoctenus spinipes—F.O. Pickard-Cambridge, 1902: 356, plate 33, fig. 15 (misidentification).—World Spider Catalog 2020.

Type material. Female holotype from Guatemala, 1930, Peckham coll., deposited in MNHN AR222; female paratype from Sabanetas, near Barberena [14°17'38.3"N, 90°17'22.1"W], Santa Rosa Department, Guatemala, deposited in MCZ.

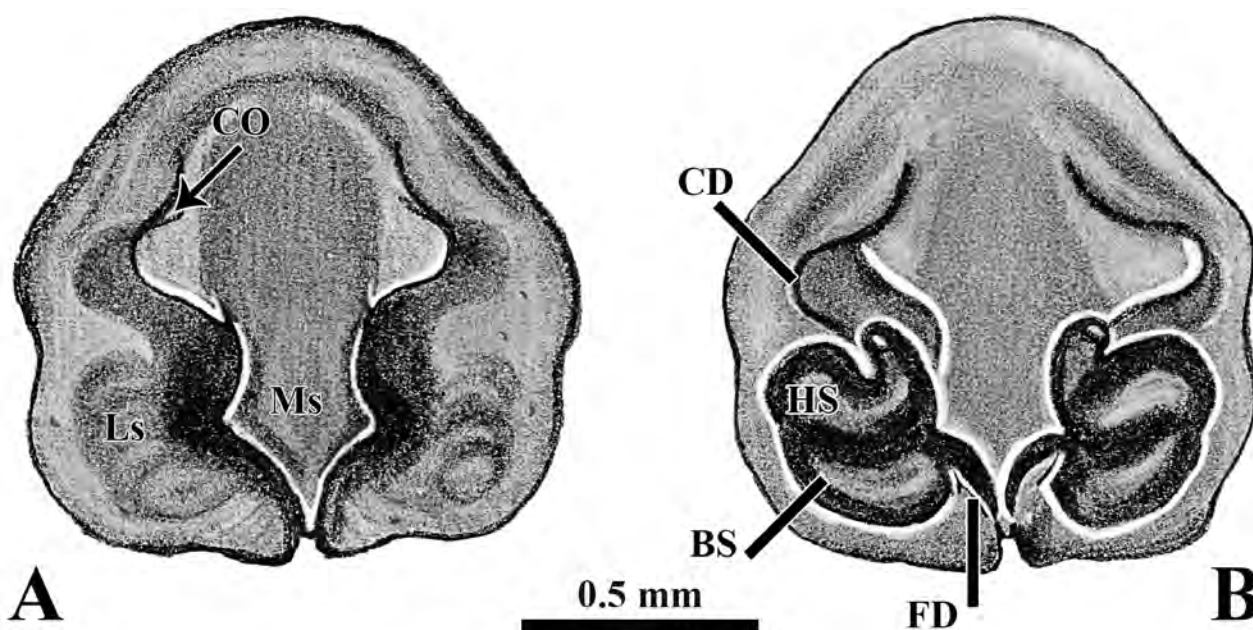


FIGURE 35. *Acanthoctenus alux* **sp. nov.**, female holotype (MNHN AR222). A, epigynum, ventral; B, internal genitalia, dorsal.

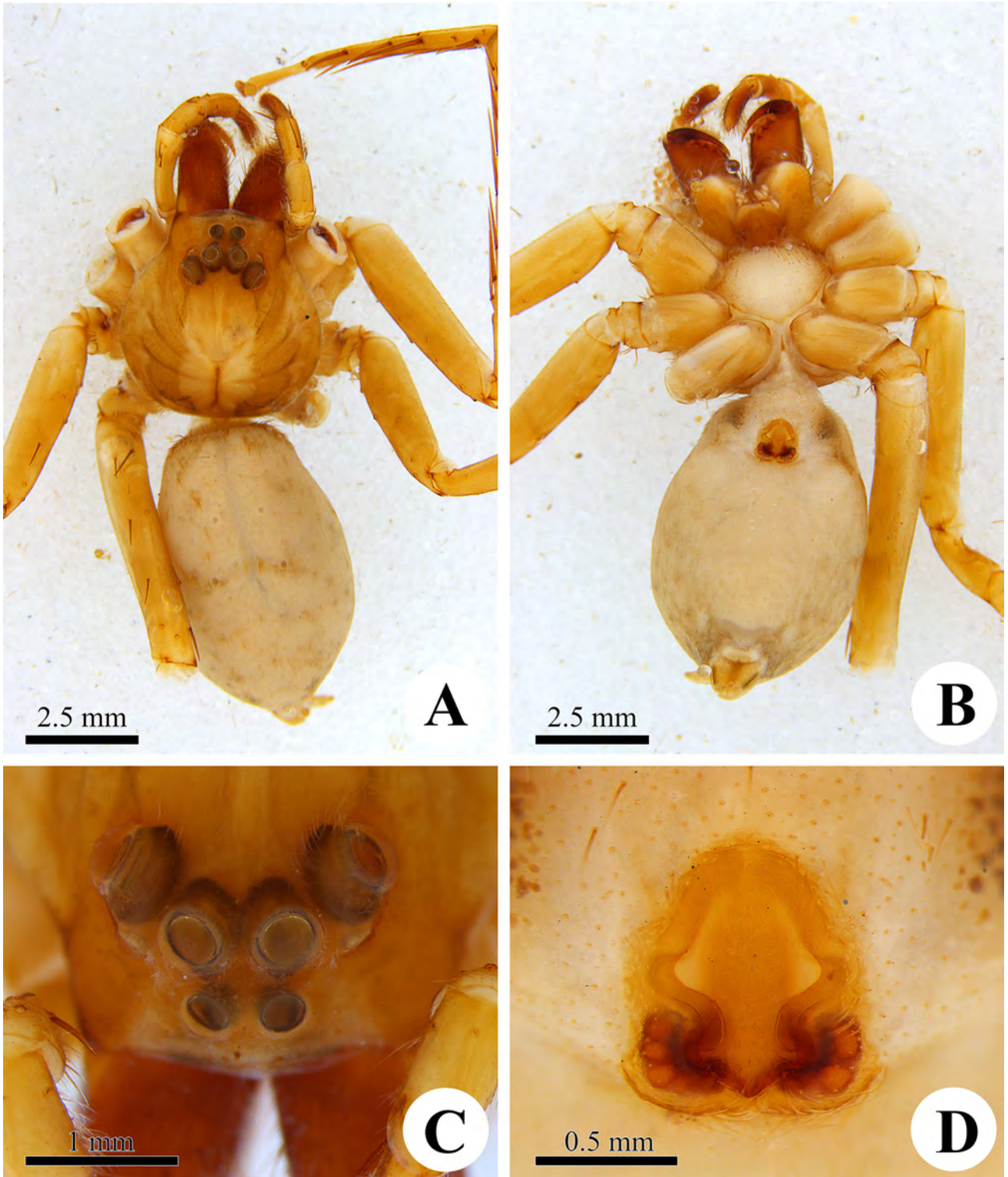


FIGURE 36. *Acanthoctenus alux* sp. nov., female holotype (MNHN AR222). A–B, habitus (A, dorsal; B, ventral C, frontal); D, epigynum, ventral.

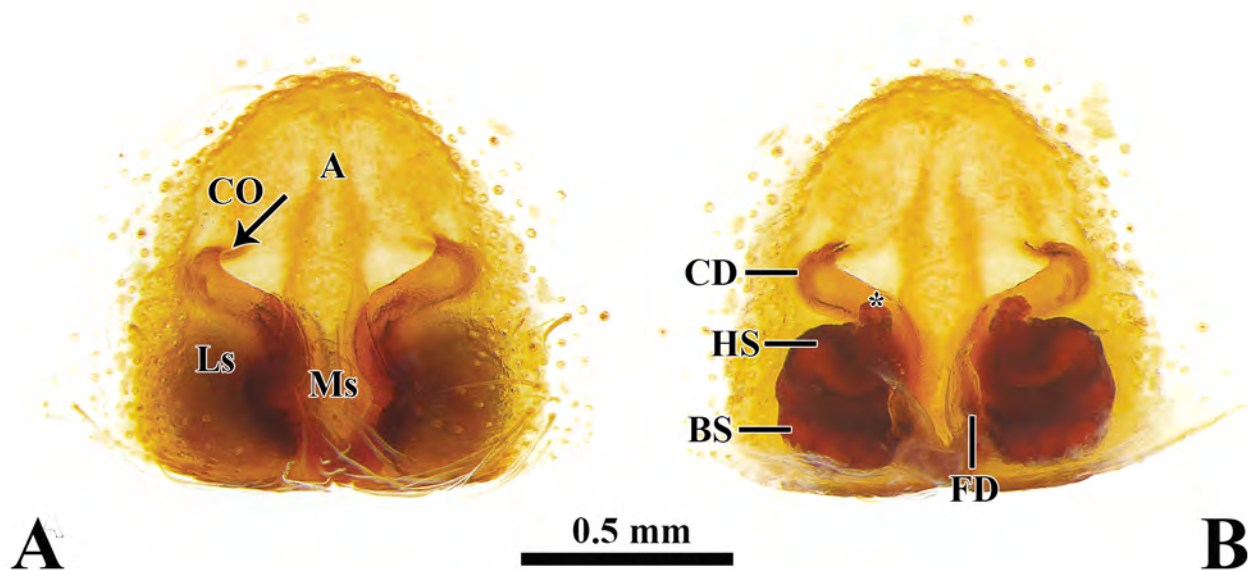


FIGURE 37. *Acanthoctenus alux* sp. nov., female holotype (MNHN AR222). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

Etymology. The species name is derived from the Maya word *Alux* and means “sprite” or “spirit” in the Mayan mythological tradition, generally associated with natural features such as forests.

Diagnosis. Females of *Acanthoctenus alux* (Figs 35, 36D, 37) resemble those of *A. virginea* stat. res., comb. nov. (Figs 32C–D, 33C–D) by the median sector subpentagonal, and the lateral sectors’ anterior border straight, forming a 60° angle with the median sector’s longitudinal axis. It can be distinguished by the atrium subtriangular, and the copulatory ducts relatively smaller. *A. virginea* stat. res., comb. nov. presents a suboval, slightly sclerotized atrium, and relatively longer copulatory ducts.

Description. Male. Unknown.

Female (holotype MNHN AR222). Total length 10.94. Carapace 4.26 long, 4.33 wide. Clypeus 0.20 high. Eye diameters: AME 0.28, ALE 0.18, PME 0.37, PLE 0.39. Leg measurements: I: missing; II: femur 5.06/ patella 2.41/ tibia 5.68/ metatarsus 3.78/ tarsus 1.36/ total 18.29; III: 4.10/ 1.80/4.12/ 3.40/ 1.51/ 14.93; IV: 5.78/ 2.12/ 5.74/ 7.41/ 2.23/ 23.28. Leg spination: I absent, tibia II v-2-2-2-2-2-2-2-2, p-1-1-0-1-1, r-1-0-1-1-1, III and IV v-2-2-2, p-1-1, r-1-1; metatarsus II v-2-2-2-2-2, p-1-1, r-1 III v-2-2-2, p-1-1-1, r 1-1-1, IV v-1-1-1-1-1, p-1-1-1, r-1-1-1. Epigynum (Figs 35A–B, 36D, 37A–B): median sector subpentagonal, short, wide anteriorly extending into the atrium, projected posteriorly; anterior border of the lateral sectors straight; atrium subtriangular; copulatory ducts S-shaped, small; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Variation. Two females: total body length 10.94–14.24, carapace length 4.26–6.18.

Distribution. Guatemala (Fig. 10A).

Acanthoctenus chickeringi sp. nov.

Figs 10A, 38–41

Type material. Female holotype from San Lorenzo, Fort Sherman, [9°21’45.4”N, 79°57’17.7”W], Panama. 15.VIII.1939, A.M. Chickering coll., deposited in MCZ; 1 male paratype, same data as the holotype, MCZ; 6 female paratypes, same data, MCZ.

Etymology. The specific name is a patronym in honor of Arthur Chickering, in recognition to his many contributions to the knowledge of Panamanian spiders.

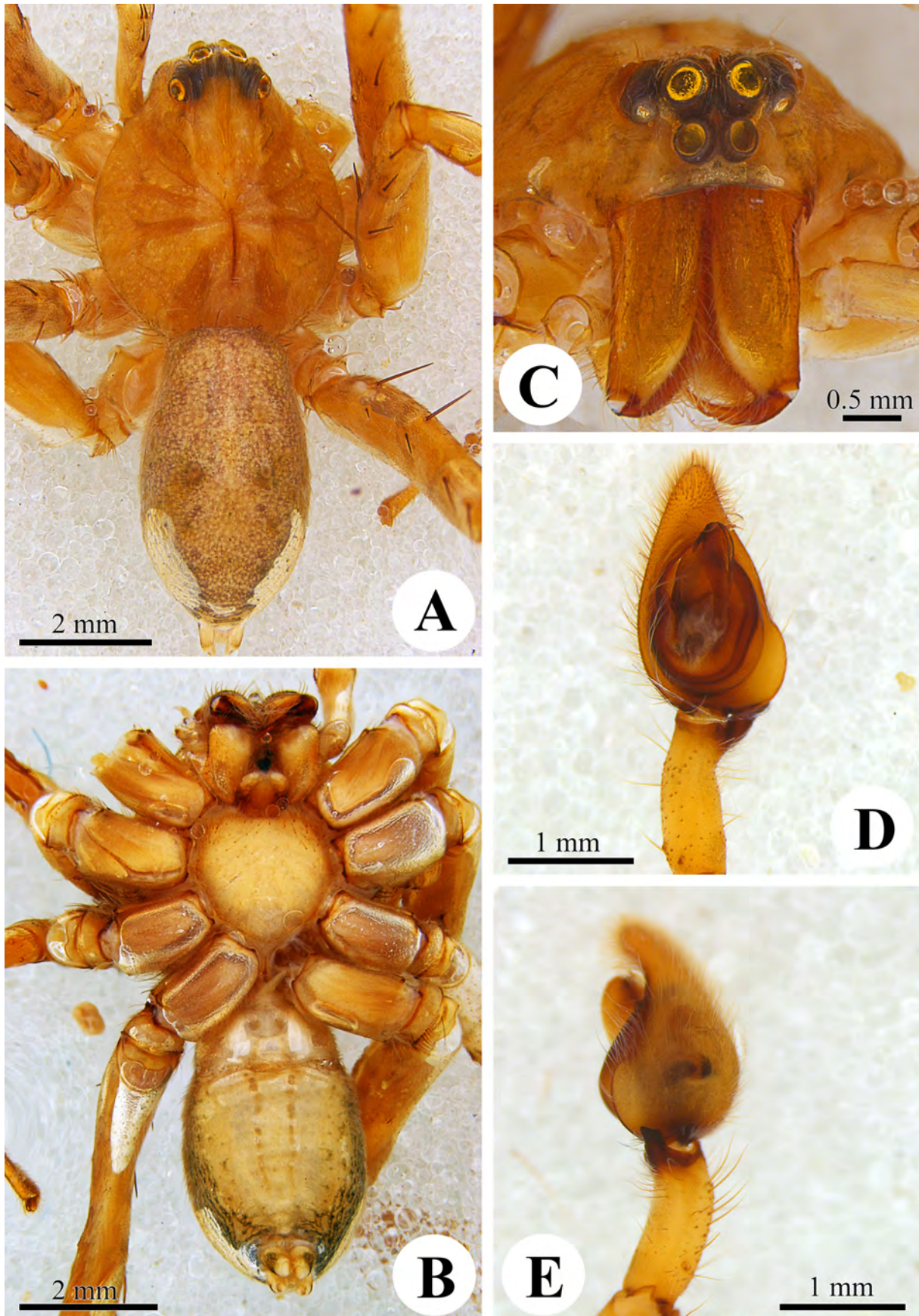


FIGURE 38. *Acanthoctenus chickeringi* sp. nov., male paratype (MCZ). A–C, habitus; A, dorsal; B, ventral; C, frontal. D–E, male palp; D, ventral; E, retrolateral.

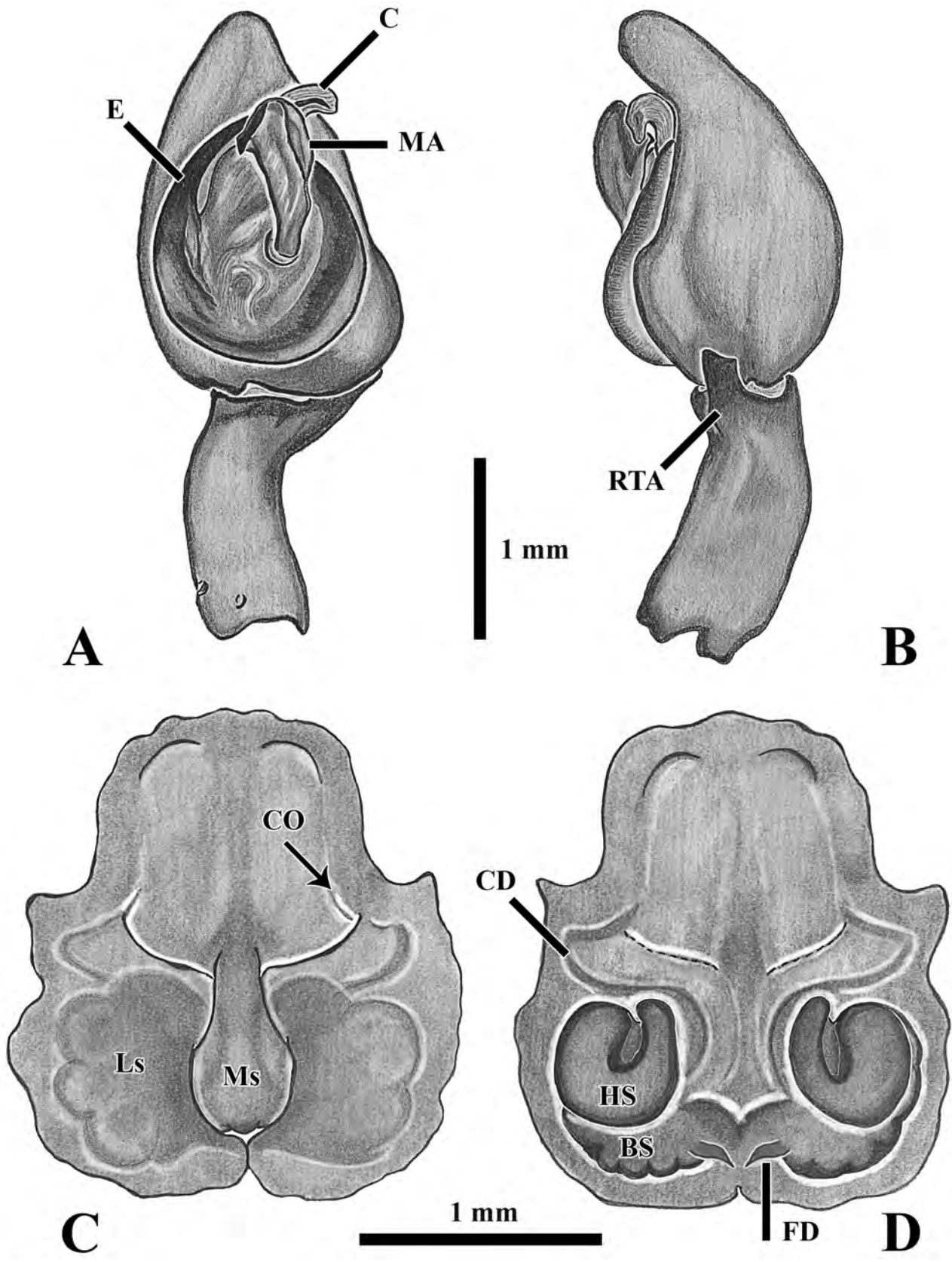


FIGURE 39. *Acanthoctenus chickeringi* sp. nov., copulatory organs. A–B, male palp (paratype, MCZ); A, ventral; B, retrolateral. C–D, female genitalia (holotype, MCZ); C, epigynum, ventral; D, internal genitalia, dorsal.

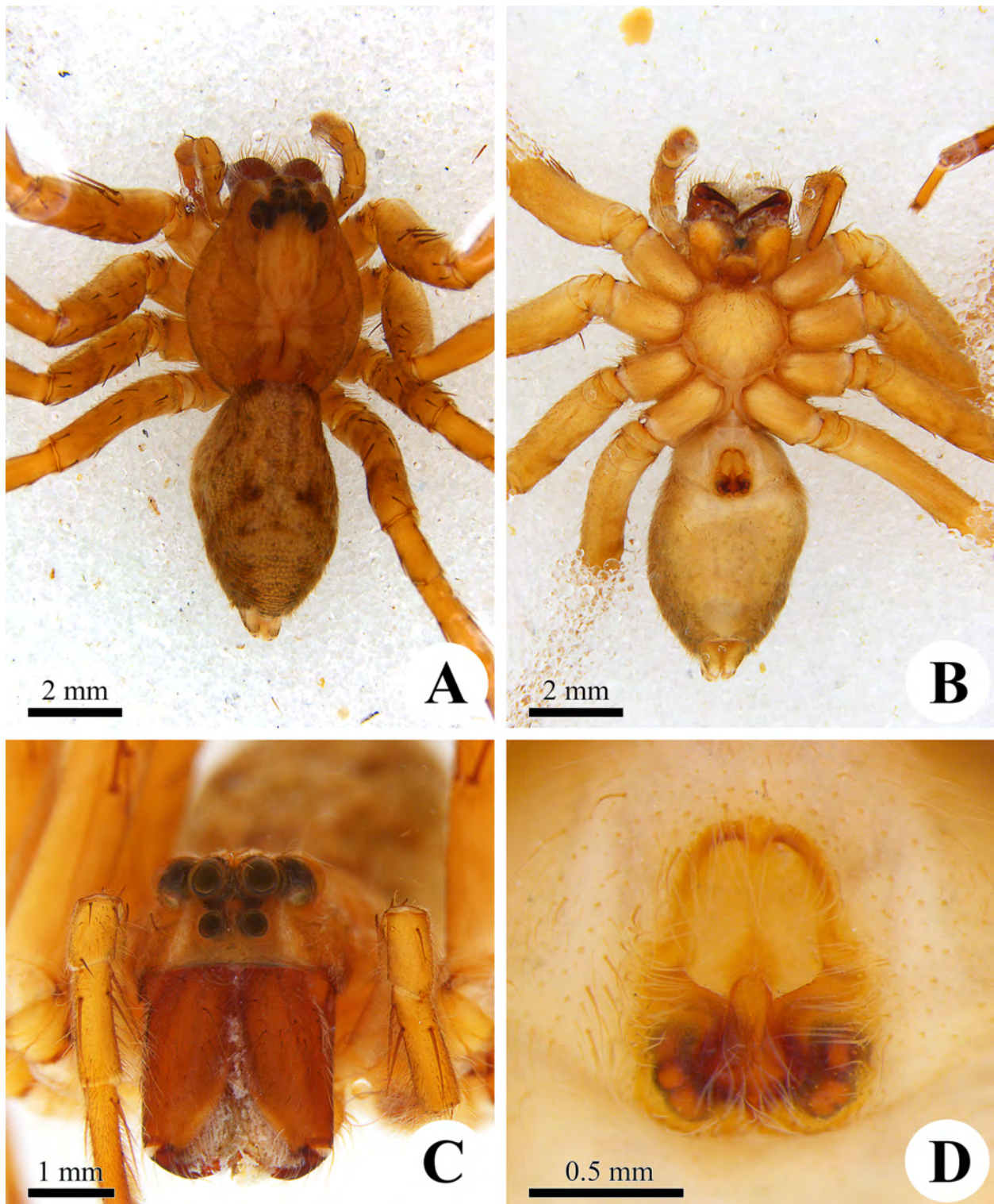


FIGURE 40. *Acanthoctenus chickeringi* sp. nov., female holotype (MCZ). A–B, habitus; A, dorsal; B, ventral; C, frontal. D, epigynum, ventral.

Other material examined. PANAMA. *Canal Zone*: Barro Colorado Island, [9°09'15.2"N, 79°50'46.1"W], 1 female, VII.1954, A.M. Chickering coll. (MCZ); same locality and collector, 1 female, VI.1950 (MCZ); same locality and collector, 1 female, VII.1950 (MCZ); same locality, 1 female, 30.XII.1935, Griswold coll. (MCZ); France Field [9°20'53.2"N, 79°52'51.9"W], 1 female, 8.XI.1939, A.M. Chickering coll. (MCZ).

Diagnosis. Males of *Acanthoctenus chickeringi* sp. nov. (Figs 38D–E, 39A–B) resemble those of *A. virginea* stat. res., comb. nov. (Figs 31C–D, 32A–B) by the palpal tibia reduced, 1.5 times longer than wide. It can be distin-

guished by the RTA elongated, longer than wide, the embolus relatively wider, not bended basally, and palpal tibia not swollen basally. *A. virginea* **stat. res., comb. nov.** presents a short, wider than long RTA, a relatively thinner embolus, which is bended basally, and a basally swollen palpal tibia. Females of *Acanthoctenus chickeringi* **sp. nov.** (Figs 39C–D, 40D, 41) resemble those of *A. spinipes* (Figs 16C–D, 17C, 18A–B) by the atrium massive, subquadrangular, as wide as long. It can be distinguished by the lateral borders of the atrium slightly sclerotized, the median sector extending into the atrium, and the copulatory ducts S-shaped, bended apically. *A. spinipes* presents strongly sclerotized anterior and lateral borders of the atrium, no extension of the median sector into the atrium, and no apically bended copulatory ducts.

Description. Male (paratype MCZ). Total length 8.50. Carapace 4.37 long and 3.78 wide. Clypeus 0.23 high. Eye diameters: AME 0.28, ALE 0.21, PME 0.35, PLE 0.38. Leg measurements: I: femur 6.69/ patella 2.44/ tibia 7.86/ metatarsus 7.11/ tarsus 1.93/ total 26.03; II: 5.25/ 2.26/ 5.75/ 4.71/ 1.35/ 19.32; III: 4.50/ 1.65/ 3.86/ 4.73/ 1.39/ 16.13; IV: 5.89/ 1.65/ 6.01/ 7.89/ 2.18/ 23.62. Leg formula 1423. Leg spination: tibia I, II v-2-2-2-2-2-2-2-2, p-1-1-0-1-1, r-1-0-1-1-1; III v-2-2-2, p-1-1-0-1, r-0-1-1-1, IV v-2-2-2, p-0-1-0-1, r-1-0-1; metatarsus I, II v-2-2-2-2, p-1-0-1-0, r-0-1-0-1, III v-2-2-2-2, p-1-1-0-1, r-0-1-1-1-1, IV v-2-2-2-2 p-1-0-1-1, r-1-1-1. Palp (Figs 38D–E, 39A–B): tibia shorter than cymbium; RTA with large base, elongated and with blunt apex; cymbium elongated and with retrobasal projection; embolus elongated, cylindrical, and bent; conductor hyaline and following the tip of embolus; median apophysis laminar, elongated, narrow at the base and wider at the apex, with a proapical hook and retrolateral ridge.

Female (holotype MCZ). Total length 9.81. Carapace 4.66 long and 3.84 wide. Clypeus 0.27 high. Eye diameters: AME 0.28, ALE 0.21, PME 0.39, PLE 0.42. Leg measurements: I: femur 5.18/ patella 2.19/ tibia 5.65/ metatarsus 4.52/ tarsus 1.34/ total 18.88; II: 4.72/ 2.04/ 4.38/ 3.96/ 1.23/ 16.33 III: 3.94/ 1.66/ 3.16/ 3.57/ 1.23/ 13.56; IV: 4.78/ 1.63/ 4.24/ 5.17/ 1.74/ 17.56. Leg formula 1432. Leg spination: tibia I v-2-2-2-2-2-2-2-2, p-1-0-1-1-1, r-1-1-1-1-1; II v-2-2-2-2-2-2-2, p-1-1-1, r-0-1-1-1-1-1, III v-2-2-2, p-0-1-1, r-0-1-1-1, IV v-2-2-2, p-0-1-1, r-0-1-1-1; metatarsus I v-2-2-2-2, p-0-1-0, r-0-1, II v-2-2-2-2, p-0-1-1, r-0-1, III v-2-2-2, p-1-1-1, r-0-1-1, IV v-2-2-2 p-0-1-1, r-0-1-1. Epigynum (Figs 39C–D, 40D, 41): median sector elongated, narrow anteriorly extending into the atrium, not projected posteriorly; anterior border of the lateral sectors slightly curved; atrium massive, subquadrangular; copulatory ducts bended apically, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Variation. Five females: total length 8.38–10.34, carapace length 3.99–4.59.

Distribution. Panama (Fig. 10A).

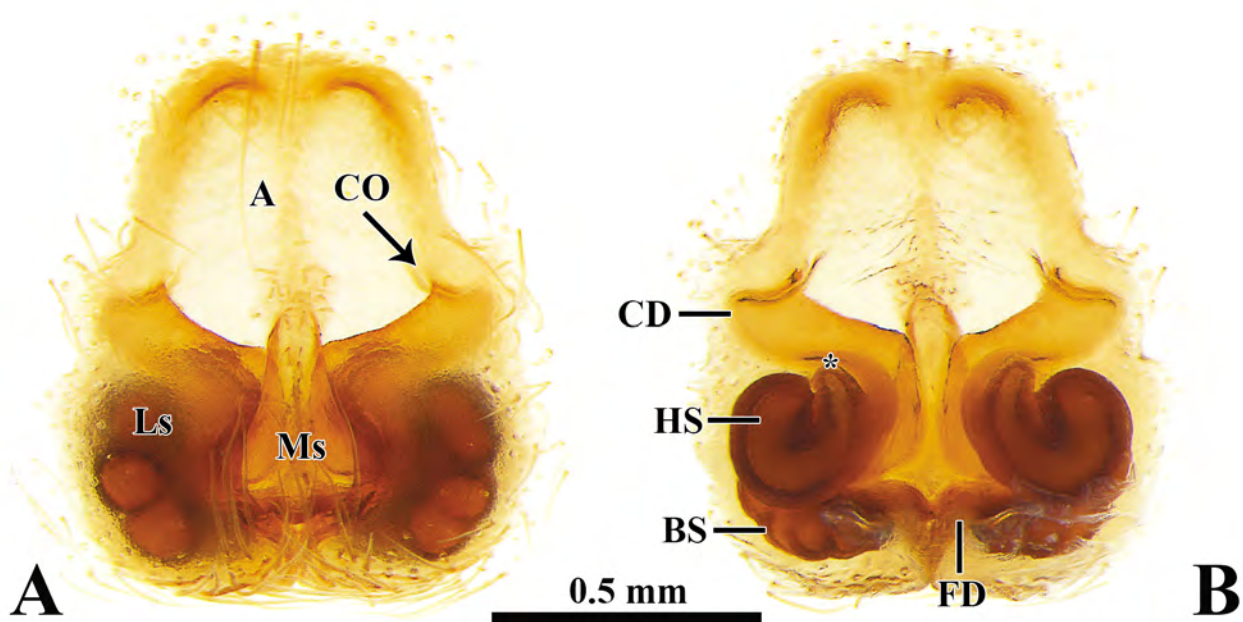


FIGURE 41. *Acanthoctenus chickeringi* **sp. nov.**, female (MCZ). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

Acanthoctenus lamarrei sp. nov.

Figs 10A, 42–43

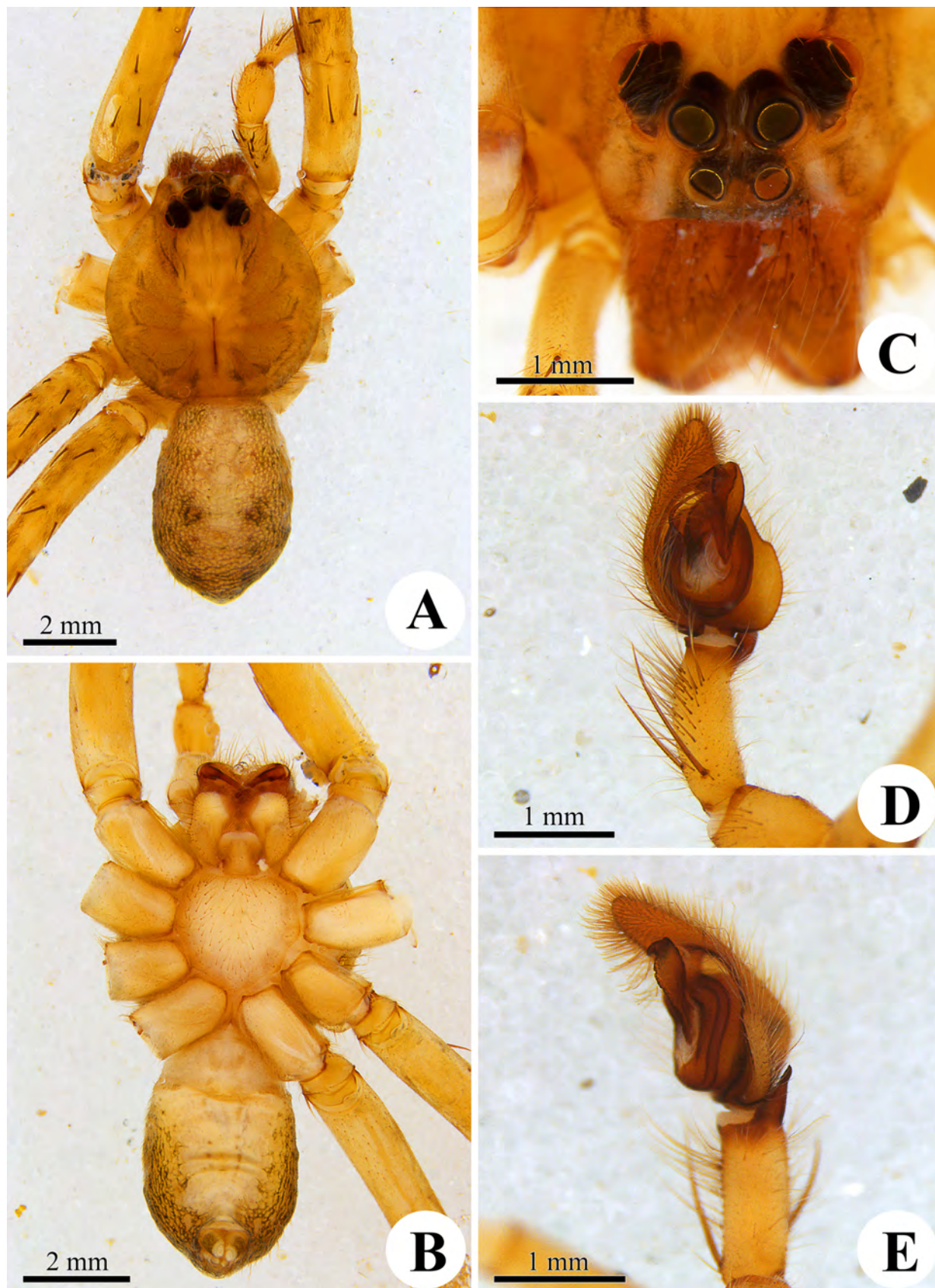


FIGURE 42. *Acanthoctenus lamarrei* sp. nov., male holotype (MCZ). A–C, habitus; A, dorsal; B, ventral; C, frontal. D–E, male palp; D, ventral; E, retrolateral.

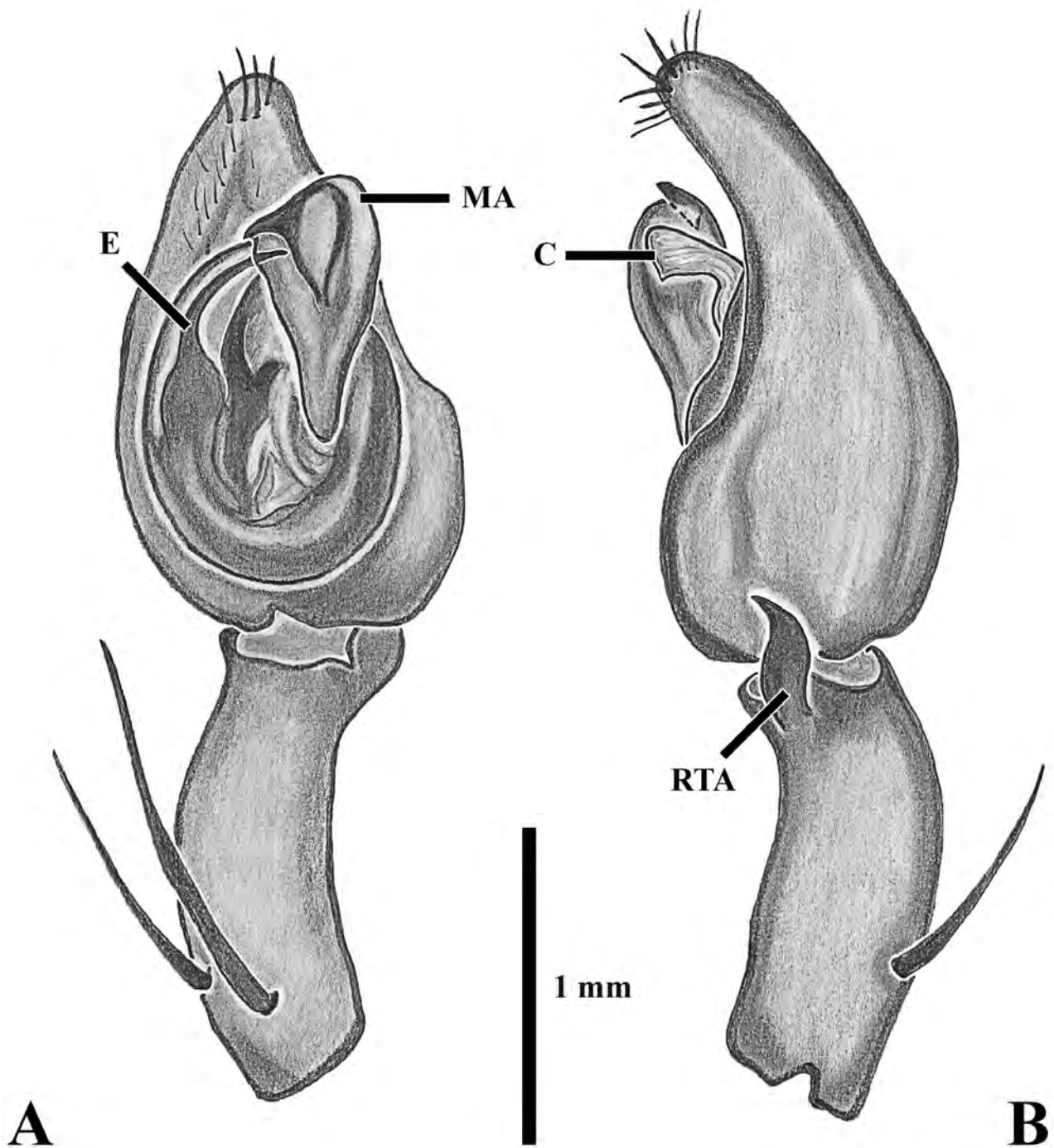


FIGURE 43. *Acanthoctenus lamarrei* sp. nov., male holotype (MCZ). A–B, male palp; A, ventral; B, retrolateral.

Type material: male holotype from Playa Corona, near San Carlos [8°25'59.0"N, 80°00'21.7"W], Panama Province, Panama, 08.VIII.1983. H. & L. Levi coll., deposited in MCZ.

Etymology. The specific name is a patronym in honor of the entomologist Greg P. A. Lamarre, in recognition of many contributions to the knowledge on Panamanian spiders and friendship to the first author.

Diagnosis. Males of *Acanthoctenus lamarrei* sp. nov. (Figs 42D–E, 43) resemble those of *A. spinipes* (Figs 15D–E, 16A–B) by the median apophysis massive, the apex at least five times wider than the base, and RTA elongated, longer than wide. It can be distinguished by the embolus short, the apex ending at 12 o'clock and the base swollen at least four times the apex width, and RTA curved distally. *A. spinipes* presents an elongated embolus, the base slightly swollen starting at 9 o'clock and the apex ending at 2 o'clock, and RTA straight distally.

Description. Male (holotype MCZ). Total length 9.37. Carapace 4.93 long and 4.33 wide. Clypeus 0.26 high.

Eye diameters: AME 0.26, ALE 0.19, PME 0.36, PLE 0.49. Leg measurements: I: femur 6.75/ patella 2.53/ tibia 8.55/ metatarsus 8.25/ tarsus 2.29/ total 28.37; II: 6.65/ 2.54/ 6.38/ 6.59/ 1.97/ 24.13; III: 5.18/ 1.91/ 4.50/ 5.33/ 1.63/ 18.55; IV: 6.70/ 1.96/ 6.10/ 8.46/ 2.71/ 25.93. Leg formula 1423. Leg spination: tibia I and II v-2-2-2-2-2-2-2, p-1-0-1-1, r-1-0-1-1-1, III v-2-2-2, p-1-1-1, r-0-0-1 and IV v-2-2-2, p-1-1-1, r-1-0-1-1; metatarsus I, II v-2-2-2-2-2, p-1-0-1, r-1, III v-2-2-2, p-1-0-1, r-1-1, IV v-2-0-1-1-1, p1-1-1, r-1-0-1-1. Palp (Figs 42D–E, 43): tibia shorter than cymbium, slightly curved; RTA elongated and sinuous; cymbium elongated and with retrobasal projection; embolus elongated but shorter than in most *Acanthoctenus* spp., cylindrical, and curved; conductor hyaline and following the tip of embolus; median apophysis laminar, elongated, narrow at the base and wider at the top, with a proapical hook.

Female. Unknown.

Distribution. Panama (Fig. 10A).

Acanthoctenus manauara sp. nov.

Figs 1–3, 10B, 44–47

Type material. Female holotype from Campus da Universidade Federal do Amazonas [3°05′53.3″S, 59°58′07.9″W], Manaus, state of Amazonas, Brazil, VIII.2011–XII.2013, T.G. Carvalho, J.P.C. Pinto Neto & P.K.M. Almeida coll., deposited in CZPB AR126; male paratype from the same locality, 15.XII.2015, T.G. Carvalho coll., IBSP 233864.

Etymology. The species name is a word in Portuguese that identifies residents or natives from the city of Manaus.

Other material examined. BRAZIL. *Amazonas*: Manaus, Reserva Florestal Adolpho Ducke [2°57′48.0″S, 59°55′22.2″W], 1 female, 15.XII.1994, T. Gasnier coll. (IBSP 14528); Bosque da Ciência INPA, [3°05′50.8″S, 59°59′16.1″W], 1 female, 9.VIII.2018, DNA-voucher, S. Arizala coll. (IBSP 258333); Iranduba, Lago Januári, 3°20′S, 60°17′W, 1 male, 14.I.1988, J. Adis *et al.* coll. (IBSP 120219); same locality and collectors, 1 female, 31.VIII.1987 (IBSP 120277); same locality and collectors, 1 male, 30.IX.1987 (IBSP 120218); Rio Preto da Eva, Fazenda Dimona, Reserva PDBFF, [2°21′S, 59°57′W], 1 male, 27.XII.2001, F.N.N. Rego coll. (IBSP 97263).

Diagnosis. Males of *Acanthoctenus manauara* sp. nov. (Figs 44D–E, 45A–B) resemble those of *A. gaujoni* (Figs 22D–E, 23A–B) by the palpal tibia elongated, at least 2.5 times longer than wide, and RTA elongated, longer than wide. It can be distinguished by the median apophysis basally thin, the apex more than 3 times wider than the base. *A. gaujoni* presents a suboval median apophysis, the apex 1.5 times wider than the base. Females of *Acanthoctenus manauara* sp. nov. (Figs 45C–D, 46D, 47) resemble those of *A. gaujoni* (Figs 23C–D, 24D, 25A–B) by the median sector subpentagonal, wide anteriorly, extending into the atrium, and the copulatory ducts bended apically. It can be distinguished by the lateral sectors' anterior border forming a 40° angle with the median sector's longitudinal axis, and the atrium with a single anterior border. *A. gaujoni* presents the anterior border of the lateral sectors forming a 60° angle with the median sector's longitudinal axis, and divided anterior border in the atrium.

Description. Male (paratype IBSP 233864). Total length 7.93. Carapace 3.84 long and 3.29 wide. Clypeus 0.10 high. Eye diameters: AME 0.24, ALE 0.15, PME 0.28, PLE 0.32. Legs measurements: I: femur 5.98/ patella 1.82/ tibia 7.03/ metatarsus 6.41/ tarsus 1.91/ total 23.15; II: 5.13/ 1.87/ 4.89/ 5.33/1.63/ 18.85; III: 4.12/ 1.45/ 3.36/ 4.21/ 1.52/ 14.66; IV: 5.73/ 1.49/ 5.10/ 6.58/ 1.83/ 20.95. Leg formula:1423. Leg spination: tibia I and II v-2-2-2-2-2-2-2, p-1-0-1-1-1, r-1-1-0-1-1, III and IV v-2-2-2, p-1-1-1, r-0-1-1-1; metatarsus I and II v-2-2-2-2-2, p-1-0-1, r-0-1-1, III and IV v-2-2-2, p-1-1-1-1, r-1-1. Palp (Figs 44D–E, 45A–B): tibia shorter than cymbium, slightly curved; RTA robust and elongated; cymbium elongated and with retrobasal projection; embolus elongated, cylindrical, and curved; conductor hyaline and following the tip of embolus; median apophysis laminar, elongated, narrow at the base and wider at the top, with a proapical hook and retrolateral ridge.



FIGURE 44. *Acanthoctenus manauara* sp. nov., male paratype (IBSP 233864). A–C, habitus; A, dorsal; B, ventral; C, frontal. D–E, male palp; D, ventral; E, retrolateral.

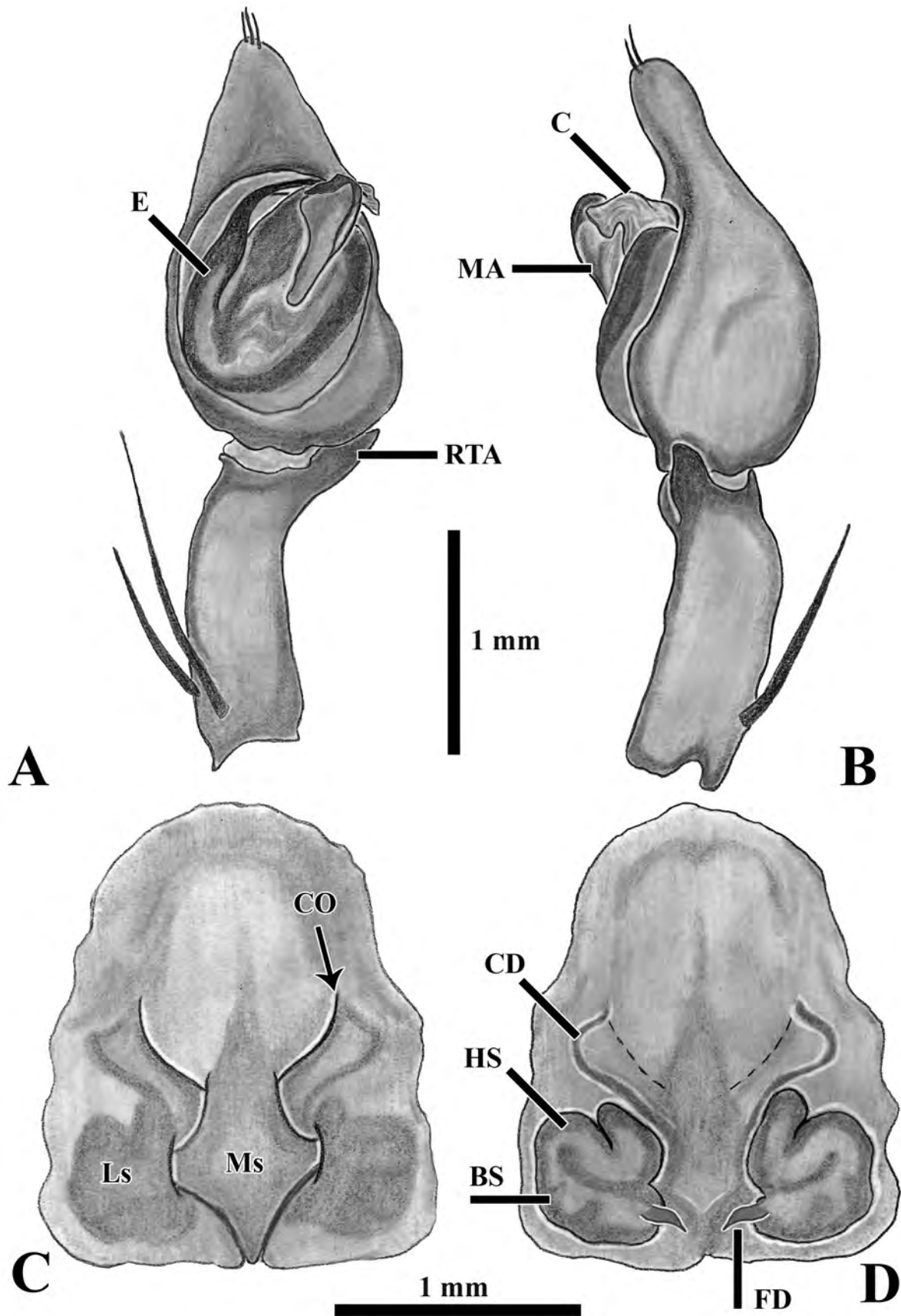


FIGURE 45. *Acanthoctenus manauara* sp. nov., copulatory organs. A–B, male palp (paratype, IBSP 233864); A, ventral; B, retrolateral. C–D, female genitalia (holotype, CZPB AR126); C, epigynum, ventral. D, internal genitalia, dorsal.

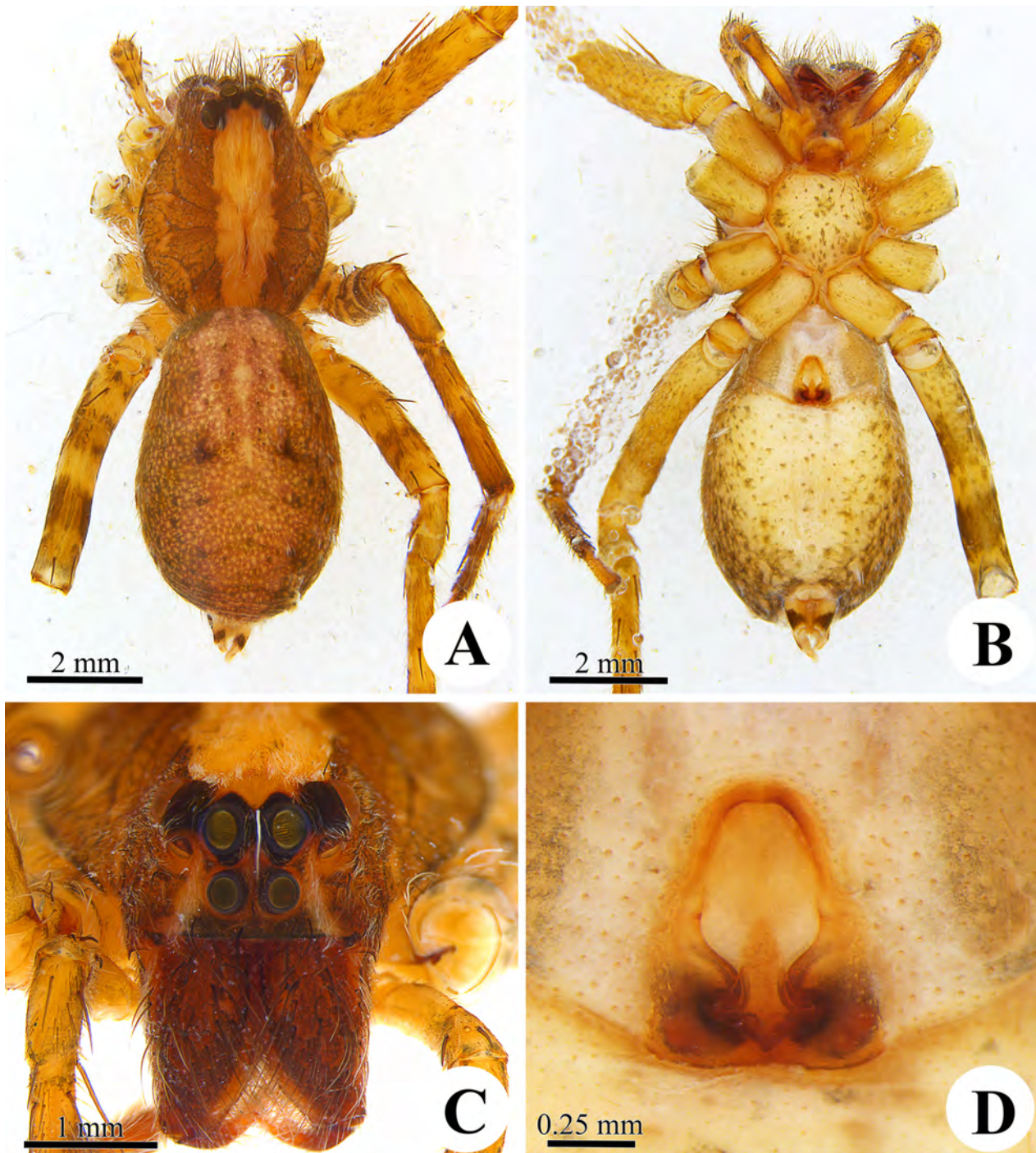


FIGURE 46. *Acanthoctenus manauara* sp. nov., female holotype (CZPB AR126). A–B, habitus; A, dorsal; B, ventral; C, frontal. D, epigynum, ventral.

Female (holotype CZPB AR126). Total length 9.68. Carapace 3.95 long and 3.14 wide. Clypeus 0.28 high. Eye diameters: AME 0.25, ALE 0.19, PME 0.27, PLE 0.30. Leg measurements: I: femur 4.37/ patella 1.88/ tibia 4.81/ metatarsus 4.08/ tarsus 1.34/ total 16.48; II: 4.09/ 1.73/ 3.75/ 3.58/ 1.14/ 14.29; III: 3.38/ 1.27/ 2.59/ 2.80/ 1.21/ 11.25; IV: 3.95/ 1.20/ 3.58/ 3.88/ 1.59/ 14.2. Leg formula 1243. Leg spination: tibia I and II v-2-2-2-2-2-2-2-2-2, p-1-1-1-1-1, r-0-1-1-0, III v-2-2-2, p-1-1-1, r-1-1-1, IV v-2-2-2, p-1-1, r-1-1; metatarsus I and II v2-2-2-2-2, p-1, r-1, III v-2-2-2, p-1-1-, r-1-1, IV v-2-2-2, p1-1-1, r-0-1-0. Epigynum (Figs 45C–D, 46D, 47): median sector subpentagonal, wide anteriorly extending into the atrium, projected posteriorly; anterior border of the lateral sectors straight; atrium massive, subquadrangular; copulatory ducts bended apically, S-shaped; spermathecae head quote-shaped, with apical glandular openings, spermathecae base curled; fertilization ducts tubular, slanting outwards.

Variation: Four females: total body length 7.26–8.61, carapace length 2.47–4.38; two males: 7.70–8.72, 3.37–4.16.

Natural history. Females of this species have been collected inside shelters under leaf sheath and dry leaves of palms and similar plants (*Astrocaryum* G. Mey; *Attalea* Kunt; *Musa* L.; and *Mauritia* L., Fig. 2B).

Distribution. Northern Brazil, state of Amazonas (Fig. 10B).

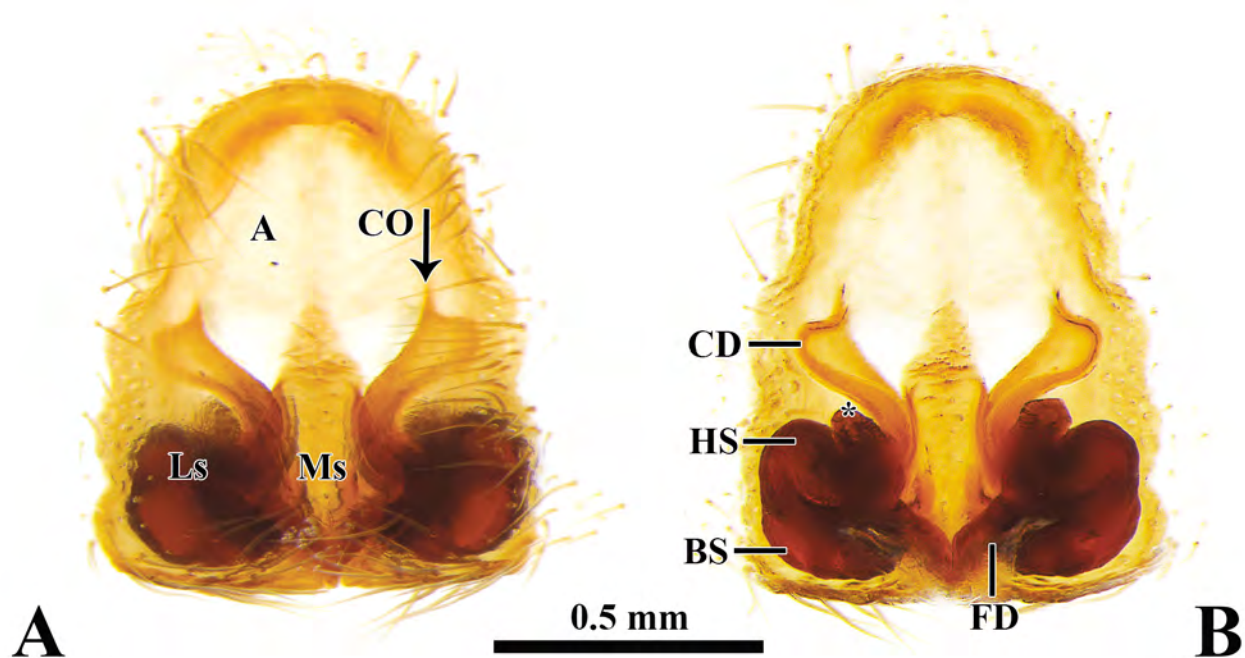


FIGURE 47. *Acanthoctenus manauara* sp. nov., female holotype (CZPB AR126). A, epigynum, ventral; B, internal genitalia, dorsal (asterisk to gland openings).

***Acanthoctenus torotoro* sp. nov.**

Figs 4, 10, 48–49

Type material. Male holotype from Torotoro Canyon, Charcas, Potosí Department, 18°06′47.6″S, 65°46′28.24″W, Bolivia, 15.VII.2017, A. Anker & P.H. Martins coll., deposited in UFMG 22307.

Etymology. The species name is a toponym in apposition referring to the type locality. It is a word in the Quechua language meaning “mud”.

Diagnosis. Males of *Acanthoctenus torotoro* sp. nov. (Figs 48D–E, 49) resemble those of *A. manauara* sp. nov. (Figs 44D–E, 45A–B) by the palpal tibia elongated, at least 2.5 times longer than wide, and RTA elongated, longer than wide. It can be distinguished by the embolus straight, not bended basally. *A. manauara* sp. nov. presents a basally bended embolus.

Description. Male (holotype UFMG 22307). Total length 8.32. Carapace 3.98 long and 3.34 wide. Clypeus 0.15 high. Eye diameters: AME 0.26, ALE 0.17, PME 0.27, PLE 0.35. Leg measurements: I: femur 6.51/ patella 2.01/ tibia 7.53/ metatarsus 6.78/ tarsus 2.00/ total 24.83; II: 5.37/ 1.99/ 5.16/ 4.94/ 1.58/ 19.04; III: 4.32/ 1.57/ 3.80/ 4.45/ 1.49/ 15.63; IV: 6.11/ 1.55/ 5.25/ 7.25/ 2.23/ 22.39. Leg formula 1423. Leg spination: tibia I and II v-2-2-2-2-2-2, p-1-0-1-1, r-0-1-1-0, III v-2-2-2, p-1-1, r-1-1-1, IV v-2-2-2, p-1-1, r-1-1; metatarsus I, II v2-2-2-2-2, p-1-1, r-1, III v-2-2-2, p-1-1-1, r-1-1, IV v1-1-1-1-1, p1-1-, r-1-1-1. Palp (Figs 48D–E, 49): tibia shorter than cymbium, slightly curved; RTA elongated with bifid tip; cymbium elongated and with retrobasal projection; embolus elongated, cylindrical, and bent; conductor hyaline and following the tip of embolus; median apophysis laminar, elongated, narrow at the base and wider at the top, with a proapical hook and retrolateral ridge.

Female. Unknown.

Distribution. Known only from the type locality in western Bolivia (Fig. 10B).

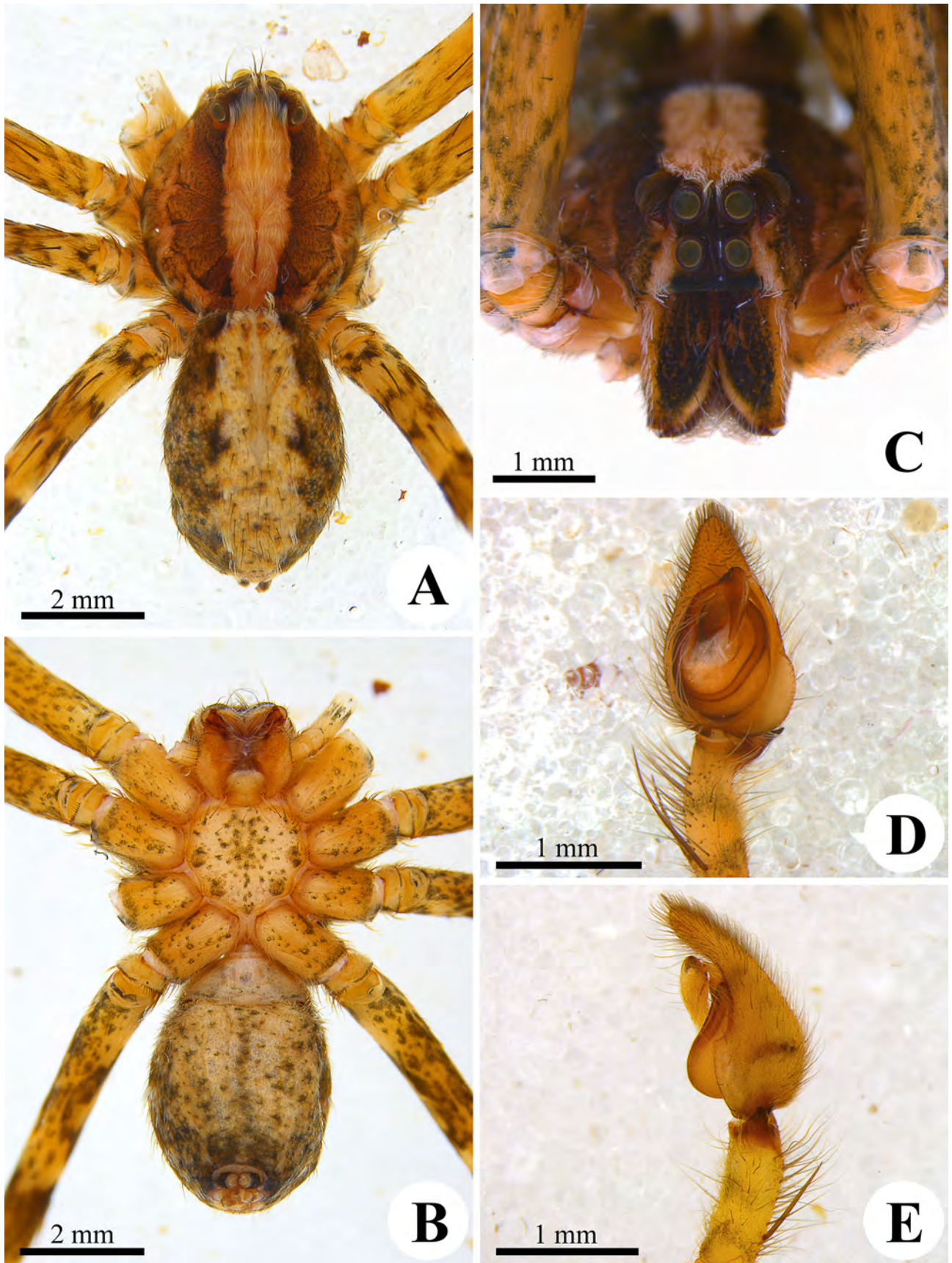


FIGURE 48. *Acanthoctenus torotoro* sp. nov., male holotype (UFMG 22307). A–C, habitus; A, dorsal; B, ventral; C, frontal. D–E, male palp; D, ventral; E, retrolateral.

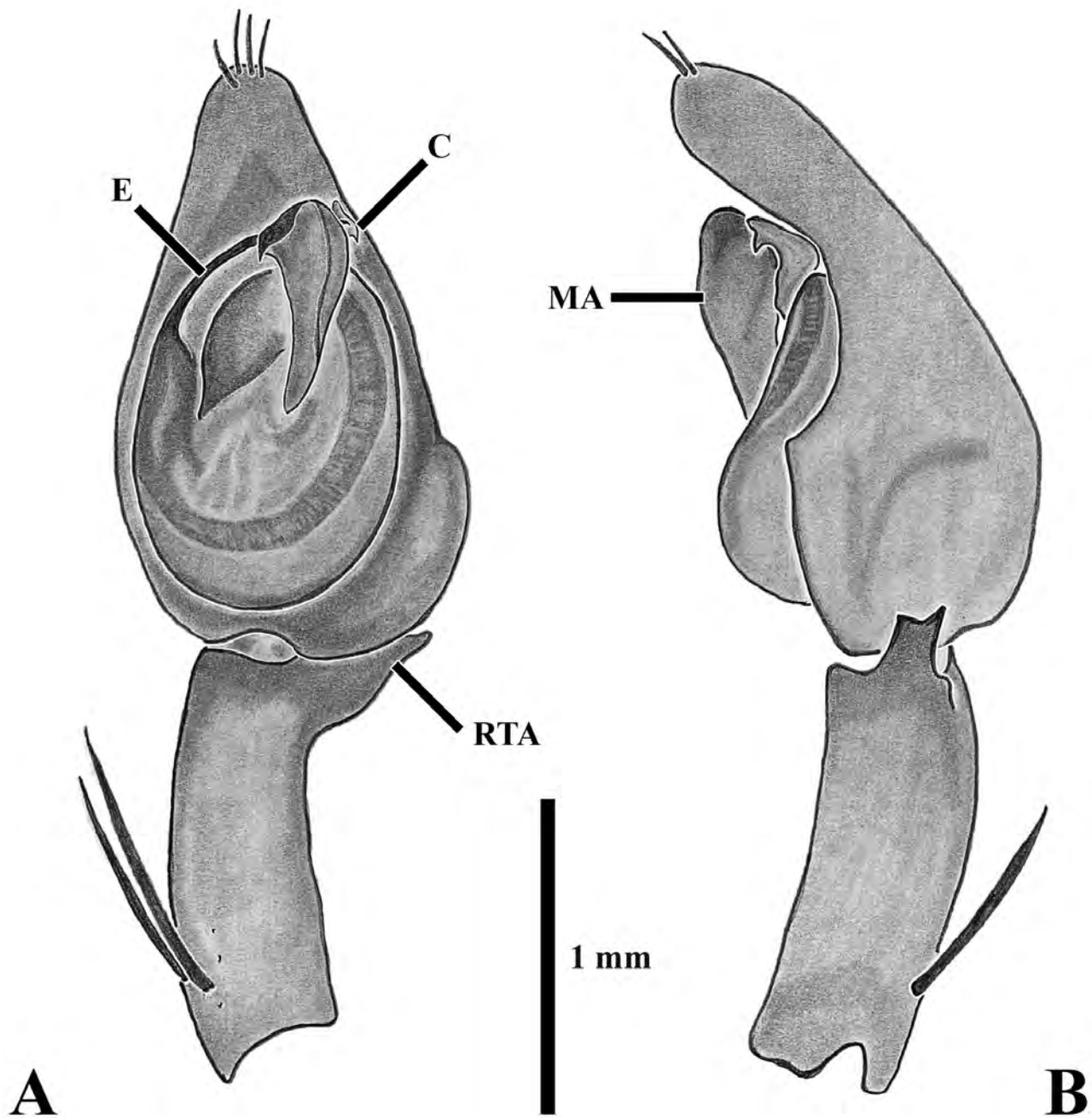


FIGURE 49. *Acanthoctenus torotoro* sp. nov., male holotype (UFMG 22307). A–B, male palp; A, ventral; B, retrolateral.

Species transferred to other genera

Viracucha mammifer (Mello-Leitão, 1939) comb. nov.

Acanthoctenus mammifer Mello-Leitão, 1939: 528, figs 11–13 (male holotype from São Paulo, Brazil, deposited in IBSP 368, examined).—World Spider Catalog 2020.

Note. The transference of *Acanthoctenus mammifer* to *Viracucha* is established by the following characters: embolus with laminated base and median apophysis massive (Mello-Leitão, 1939: figs 11–13). Males of *Acanthoctenus* were here diagnosed by the short and cylindrical embolus and the elongated and thin median apophysis.

Species inquirenda

Acanthoctenus maculatus Petrunkevitch, 1925: 95 (immature holotype from Santiago, Panama, 1.IV.1924, A & W. Petrunkevitch coll., deposited in YPM-ENT 502041, examined).—World Spider Catalog 2020.

Note. The type specimen of *Acanthoctenus maculatus* was examined and considered related to the remaining Acanthocteninae by the presence of cribellum and leg spination pattern. However, the type specimen is an immature and its genus identity is doubtful, needing further investigation.

Gephyroctenus kolosvaryi Caporiacco, 1947: 28 (immature holotype from Guyana, Beccari & Romiti coll., deposited in MZUF, not examined).—Caporiacco 1948: 684, fig. 102.—World Spider Catalog 2020.

Acanthoctenus spinipes—Polotow & Brescovit 2008: 706 (syn.).—World Spider Catalog 2020.

Note. *Gephyroctenus kolosvaryi* was synonymized with *Acanthoctenus spinipes* by Polotow & Brescovit (2008), but is here considered a misidentification and is now placed as *species inquirenda* in Ctenidae. The type specimen is an immature and its genus identity is doubtful, needing further investigation.

Incertae sedis

Acanthoctenus obauratus Simon, 1906: 289, fig. 2C (female holotype from Caraça, Minas Gerais, Brazil, E. Gounelle coll., deposited in MNHN AR14425, examined).—World Spider Catalog 2020.

Note. The type of *Acanthoctenus obauratus* was examined and considered related to the remaining Acanthocteninae by the presence of cribellum and leg spination pattern, but cannot be assigned to any of the currently described genera, needing further investigation.

Acanthoctenus rubrotaeniatus Mello-Leitão, 1947: 268, pl. 37, fig. 23 (female lectotype from Barigüí, Curitiba, Paraná, Brazil, R.B. Lange coll., deposited in MHCI 2524; 3 immatures paralectotypes, same locality same data, deposited in MHCI (2525, 2526, 2527), all examined). **syn. nov.**—World Spider Catalog 2020.

Note. The type of *Acanthoctenus rubrotaeniatus* was examined and considered related to the remaining Acanthocteninae by the leg spination pattern and the lack of cribellum and calamistrum, but cannot be assigned to any of the currently described genera, needing further investigation.

Acknowledgements

Thanks to Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP, processes 2017/17263, 2018/22762-3 and 2015/22000-8) for financial support. Special thanks to the reviewers Charles Griswold, Nadine Dupérré and Cristina Rheims for comments and suggestions. We thank Adalberto J. Santos, Alexandre B. Bonaldo, Antonio D. Brescovit, Celio Magalhães, Eduardo Floréz, Jason Dunlop, Peter Jäger, Christoph Hörweg, Christine Rollard, and Thierry R. Gasnier for the loan, shipping and access to specimens from the collections. We are thankful to Marta R. Pereira, Adriel M. Sierra, Dirce Komura and Charles Zhartmam for helping us during field collecting. Thanks to Pedro Martins and Thiago Carvalho for providing photographs, German Villanueva and Leonardo Carvalho for helping us to sort specimens for revision.

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