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Taxonomic revision of the spider genus *Azilia* Keyserling, 1881 (Araneae: Tetragnathidae)

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Abstract

The species of the spider genus *Azilia* Keyserling, 1881 from the Americas are revised. *Cardimia* Mello-Leitão, 1940 is removed from the synonymy with *Azilia* and is newly synonymized with *Diphya* Nicolet, 1849, with its type species, *Cardimia eximia* Mello-Leitão, 1940, considered synonymous of *Diphya bicolor* Vellard, 1926. The genus type species, *Azilia formosa* Keyserling 1881 described from Peru is redescribed. The type material is considered lost, but here a neotype is designed based on specimens next to the type locality in Peru. *Azilia boudeti* Simon, 1895, *Azilia marmorata* Mello-Leitão, 1948, *Arochoides integrans* Mello-Leitão, 1935 and *Cyrtophora vachoni* Caporiacco, 1954 had their types examined and are synonymized with *Azilia histrio* Simon, 1895. The males of *Azilia formosa* and *A. histrio* are described for the first time. *Azilia affinis* O. Pickard-Cambridge, 1893, *A. guatemalensis* O. Pickard-Cambridge, 1889, *A. rojasi* Simon, 1895 and *A. montana* Bryant, 1940 are redescribed and illustrated. Finally, eight new species are described based on males and females, including six from Brazil: *Azilia arrebitada* sp. nov.; *A. catita* sp. nov.; *A. fabulosa* sp. nov.; *A. guapa* sp. nov.; *A. joinha* sp. nov.; *A. supimpa* sp. nov. and two from Mexico: *Azilia esplendida* sp. nov., and *A. hermosa* sp. nov.

Key words: Neotropical, Nearctic, Brazil, Metinae, Mexico, taxonomy

Introduction

Currently, *Azilia* Keyserling, 1881 has 10 valid species and almost all species inhabit exclusively the Neotropics, with the exception of *Azilia affinis* O. Pickard-Cambridge,

1893, which also occurs in the Nearctic region along the northern plateau of the Gulf of Mexico (Levi 1980; World Spider Catalog 2025). Two species are distributed in the Antilles, *A. montana* Bryant, 1940 from Cuba, and *A. guatemalensis* O. Pickard-Cambridge, 1889, commonly found from Central America and the Caribbean (Saint Vincent) to Peru. The other eight species are distributed mainly in the Amazon region (World Spider Catalog 2025).

Two monotypic genera have been synonymized with *Azilia*: *Cardimia* Mello-Leitão, 1940 by Levi (2002) and recently transferred as a synonym to *Diphya* Nicolet, 1849 (Ott *et al.* 2023), and *Arochoides* Mello-Leitão, 1935 recently synonymized with *Azilia* by Benavides & Hormiga (2020).

The relationships of *Azilia* with other Tetragnathidae are still poorly understood. Nevertheless, structures such as paper-walls spermathecae and coiled spermathecae ducts are morphological characters that relate *Azilia* to the leucaugines (Álvarez-Padilla *et al.* 2020). However, these features are homoplastic in other tetragnathid genera, and sperm duct spirals vary considerably among *Azilia* species. Other characters such as eyes without a reflexive tapetum and posterior lateral eyes on separate tubercles also relate this genus to *Diphya*, as some molecular results suggest, giving a putative synapomorphy for this clade. Despite this, the ocular similarities with the Australian genus *Iamarra* Álvarez-Padilla, Kallal & Hormiga, 2020 (see Álvarez-Padilla *et al.* 2020) combined with its phylogenetic position, make this character optimization ambiguous, at best, highlighting the need for further evolutionary studies on the relationship of this genus with other relatives.

In this work we present a taxonomic revision of the genus *Azilia*. Our revision includes the designation of a

neotype for the type species, *A. formosa* Keyserling, 1881, based on a specimen from Peru, in addition to the first description of its male, as well as the male of *A. histrio* Simon, 1895, and new synonymies for these two species. Finally, eight new species are described from Brazil and Mexico, increasing to 14 the number of species described for the genus.

Material and Methods

The material examined is deposited in the following arachnological collections (curators in parenthesis): CNAN, Colección Nacional de Arácnidos, Instituto de Biología UNAM, Mexico (E. González-Santillán); IBSP, Instituto Butantan, São Paulo, Brazil (A. D. Brescovit); MCN, Museu de Ciências Naturais, Secretaria do Meio Ambiente, Porto Alegre, Brazil (R. Ott); MCTP, Museu de Ciência e Tecnologia, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil (R. A. Teixeira); MCZ, Museum of Comparative Zoology, Mass., USA (G. Giribet); MHCI, Museu de História Natural do Capão da Imbuia, Curitiba, Brazil (D. Kososki); MNHN, Museu national d'Histoire Naturelle, Paris, France (K. Privet); MPEG, Museu Paraense Emílio Goeldi, Belém, Brazil (A.B. Bonaldo); MUSM, Museo de Historia Natural de San Marcos, Lima, Peru (D. Silva); NHMUK, Natural History Museum of the United Kingdom, London, England (J. Beccaloni); UFMG, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil (A. J. Santos).

Description of species follows Álvarez-Padilla & Hormiga (2011). Epigynum terminology partially adapted from Marusik & Omelko (2017). All measurements are in millimeters and the descriptions follow Levi (1980). Female vulva was digested using one tablet of enzymatic eye lens cleaner (Ultrazyme® enzymatic cleaner) into 5mL distilled water for 24 hours and cleared in clove oil. Spermathecae tend to collapse in contact with clove oil or methyl salicylate.

Incident light images were taken through a stereomicroscope Leica M205C and compound microscope with attached camera for photos of the specimens using Leica Application Suite ver. 3.0.0 and processed with Helicon Focus multi-range program. Drawings were made using printed images as models and compound microscope and stereomicroscope as three-dimensional shape confirmation tools.

For scanning electron microscopy (SEM) images, the structures were removed and dehydrated through a series of graded ethanol (80–100%), dried by critical-point drying, mounted on metal stubs using adhesive copper tape for fixation, and sputter coated with gold. SEM images were taken with an FEI Quanta 250 scanning electron microscope at the Laboratório de Biologia Estrutural of the Instituto Butantan, São Paulo.

The geographic distribution map was listed through a data set by the Diva GIS 7.5 for sample of the occurrence in the map. All images as plates and maps were edited in CorelDRAW Graphics Suite X5 and Adobe Photoshop CS 5.1.

Abbreviations in the descriptions: AME, anterior median eye; ALE, anterior lateral eye; PLE, posterior lateral eye; PME, posterior median eye; RTA, palpus tibia retrolateral apophysis. MA, median apophysis.

Abbreviations in figures: AG, accessory glands; BD, basal diverticulum; CD, copulatory duct; CEBP, cymbial ectobasal process; C, cymbium; CO, copulatory opening; E, embolus; EA, embolar apophysis; EF, elongated folds; FD, fertilization ducts; FP, distal projection of palpal femur; MP, median plate; P, paracymbium; PB, paracymbium basal projection; S, spermatheca; T, tegulum, TP, tegular projection, TO, tarsal organ, VP, ventral plate.

Results

Family Tetragnathidae Menge, 1866

Genus *Azilia* Keyserling, 1881

Azilia Keyserling, 1881: 270–271. Type species: *Azilia formosa* Keyserling, 1881.

Arochoides Mello-Leitão, 1935: 323–325. Type species: *Arochoides integrans* Mello-Leitão, 1935: 324–325; Benavides & Hormiga, 2020: 178 (Syn.).

Note. *Cardimia* Mello-Leitão was removed from the synonymy with *Azilia* by Ott *et al.* (2023) and synonymized with *Diphyia* Nicolet, 1849.

Diagnosis. *Azilia* can be distinguished from *Leucauge* White, 1841 and *Metabus* O. Pickard-Cambridge, 1899 (the only other known American Leucauginae) by the presence of male palpus with a distal projection on the femur (FP, Figs 1f, 3d, 8d, 10e, 44b), bulb without a conductor (Figs 1e, 4a–f, 8f), and the presence of a tegular projection near the base of the embolus (TP, Figs 1f, 4a–b, 6h, 8a, e, 10e, 13c) (structures absent in males of *Leucauge* and *Metabus*). Females differ by presenting epigynal plate flattened (Figs 2g, h, 5e, 7d, g) (vs narrow and arched in *Leucauge*; and flat, well sclerotized and with a rectangular atrium in *Metabus*) (Padilla & Hormiga 2011, figs 45D, 63A, B); copulatory ducts short, straight to curved with variable degrees of sclerotization (Figs 2j, 7f, 15e, 19h) (vs coiled around the copulatory ducts in *Leucauge*; and coiled over the copulatory ducts in *Metabus*) (Padilla & Hormiga 2011, figs 45D, 50D, 63B).

Description. Male (body length from 2.5–9.0 mm). Female (body length 3.7–9.9). Carapace background white, yellow or brown, usually with dark-brown pattern covering the ocular area and lateral sides (Figs 1c, 6a, 8a, 13c, 16c) with some exceptions (Figs 12c, 37c). Eyes proportional in size (Figs 1d, 2c). Clypeus narrower than the diameter of the ALE (Figs 1d, 2c). Fovea short, longitudinally grooved (Fig. 1c, 2e). Chelicerae coloration dark yellow to brown, usually darker than rest of the carapace (Fig. 1d, 2c). Chelicera with 2–4 promarginal and 3–4 retromarginal teeth in males (Figs 3a); 3 promarginal and 4–5 retromarginal teeth in females (Figs 5a, 34a); glands located on inner side just below row of retromarginal teeth (Fig. 3b, 5b). Labium rectangular

and short (Fig. 2f). Maxillae parallel, with straight borders (Fig. 2f). Sternum triangular, furrowed on anterior border, not exceeding coxae IV and generally with clear median longitudinal band (Figs 2f, 6d, 9b). Female palpus: tibia ectal surface with 5–6 trichobothria (Fig. 5d); claw short, truncated at tip and 10 small denticles (Fig. 5c). Legs elongated, formula 1243, in males and females.

Abdomen cylindrical to oval, and without tubercles except in *A. arrebitada* **sp. nov.** (Fig. 37 a, b), *A. guapa* **sp. nov.** (Fig. 29 a, b) and *A. histrio* (Fig. 31a, b). Abdomen surface pattern varies among species, but commonly has guanine white patches either homogeneously scattered (Figs 7a, 31b, c) or forming diverse patterns (Figs 6a, 8a, 12a–c) combined with brown or black patches, also diversely arranged among species (Figs 1a–c, 12a–c, 16a–c, 21a–c). Spinnerets see Padilla & Hormiga (2011, fig. 13). Male palpus: femur with conical distal projection (DP, Fig. 3d); patella with one dorsal macroseta (Fig. 3c); tibia equal or shorter than cymbium (Figs 1h, 8d) or 2- to more than 4x longer than the cymbium (Figs 46e–f, 52e–f); tibial ectal surface with four trichobothria (Fig. 3c); cymbium globose, generally longer than the tibia, with small ectobasal process (CEBP); CEBP with variable size, either small and covered with numerous strong setae (Fig. 20b–d), or conspicuous bearing projections or setae in addition to tufts of bristles (Figs 28c, d, 32e, 35g), CEBP absent in *A. affinis* and *A. guatemalensis* (Figs 8d; 13d); paracymbium claviform and curved, covered with macrosetae (Figs 1f, g, 6g, h), sometimes with a basal projection (PB) with or without spines (Figs 24e, 32f); bulb oval presenting small and basal subtegulum; tegulum oval with a tegular projection, embolus and coiled sperm duct (Figs 1g, 4a–d, 6g, 22g–h, 30e–g); tegular projection (TP) located close to the base of the embolus and with a semicircular shape (Figs 4a, b, 8a, 13c); and embolus lamelliform (Figs 1e, 6h) or cylindrical (Figs 25d–f, 29c, d, 54d), which may have one or more apophysis (Figs 4f, 25d, 33d). Epigynum flattened, posterior margin with very short or absent lobe (Figs 2h, 9e); median plate (MP) weakly sclerotized (Fig. 2i); copulatory openings visible posteriorly, close to the inner anterior margin (Fig. 2j); spermathecae with weakly sclerotized walls of oval (Figs 12f, g, 15e), cylindrical (Fig. 2j) or rounded (Fig. 19h) shape; accessory glands generally arranged in the internal basal area of the spermathecae with various shapes (Figs 2j, 11e, 13h); basal diverticulum small, in the base of spermathecae only in *A. formosa* (Fig. 2j); and fertilization ducts short, curved and usually positioned at the inner base of the spermathecae (Figs 2j, 48f).

Composition. Fourteen species, including eight new species here described: *Azilia affinis*; *A. arrebitada* **sp. nov.**; *A. catita* **sp. nov.**; *A. splendida* **sp. nov.**; *A. fabulosa* **sp. nov.**; *A. formosa* (type-species); *A. guapa* **sp. nov.**; *A. guatemalensis*; *A. hermosa* **sp. nov.**; *A. histrio*; *A. joinha* **sp. nov.**; *A. montana*; *A. rojasi* Simon, 1895; and *A. supimpa* **sp. nov.**

Distribution. Part of the Nearctic region and Neotropical region (Figs 56–58).

Azilia formosa Keyserling, 1881

Figures 1a–h, 2a–j, 3a–f, 4a–f, 5a–f, 56

Azilia formosa Keyserling 1881: 271–272, plate 11, fig. 2.

Azilia formosa: Keyserling 1893: 268–270, plate 14, fig. 199.

Type material. Holotype ♀ from Chorillos, Lima, Peru. Supposed to be deposited in the Polish Academy of Sciences, Warsaw, Poland [not located, **considered lost**].

Neotype ♀, herein designated, from Pithecia (05°11'S, 72°42'W), Loreto, Peru, 17.V.1999, D. Silva coll. (MUSM 0519493).

Other material examined. PERU, Loreto: *Pithecia* (05°11'S, 72°42'W), 17.V.1999, D. Silva coll., 1♂, 1♀ (MUSM 0519494); **Madre de Dios**: Zona Reservada Pakitza (11°58'S, 71°18'W), 30.IX.1987, J. Coddington & D. Silva coll., 1♀ (MUSM 0519495). BRAZIL, **Roraima**: *Alto Alegre*, Aldeia Hale Kato-U (03°13.256'N, 63°12.134'W), 13.III–14.IV.2009, C. Kirsch coll., 1♂ (IBSP 149630; SEM); **Acre**: *Marechal Thaumaturgo*, Parque Nacional da Serra do Divisor, Taboquinha (08°2'39"S, 73°33'55"W), 17.XI.1996, 2♀ (IBSP 9235); Várzea Gibraltar-Pedro, 19.XI.1996, R.S. Vieira coll., 1♂, 2 imm. (IBSP 9340); same locality as previous, 20.XI.1996, R.S. Vieira coll., 1♀ 1 imm. (IBSP 9356); *Cruzeiro do Sul/Mancio Lima*, Parque Nacional da Serra do Divisor, 18.III.1997, L. Resende & R.S. Vieira coll., 1♀ (IBSP 12213); *Rio Branco*, Reserva Extrativista Humaitá (10°06'11"–10° 58'39"S, 67°56'13"–69°48'00"W), 12.IV.1996, Equipe IBSP/SMNK coll., 2♀, 4 imm. (IBSP 8721; SEM); *Senador Guimard*, Estação Experimental Catuaba (10°4'24"S, 67°37'26"W, 231 m a.s.l.), XI.2010, G.H.F. Azevedo & A.J. Santos coll., 2♂, 1♀ (UFMG 10585); same locality as previous, except 214 m a.s.l., 06–19.VII.2013, P.R. Zanoli & I.A. Barros coll., 1♀ (UFMG 19176); **Amazonas**: *São Gabriel da Cachoeira*, Cachoeira do Tucano, 100m a.s.l., 24.IX.2007, 1♀ (IBSP 276641); same locality as previous, 22.IX.2007, D. Candiani coll., 1♀ (IBSP 276642); *Barcelos*, Serra do Tapirapecó (01°9'55"N 64°58'15"W), X.2006, A. Nogueira coll., 1♀ (IBSP 214037); *Manicoré*, Rio Atininga (5°48'32"S, 61°18'0"W), 19.IV.1996, Equipe IBSP/SMNK coll., 3♂, 3♀, 1 imm. (IBSP 8857; SEM); *Borba*, Rio Mapiá (4°23'16"S 59°35'38"W), 22.IV.1996, Equipe IBSP/SMNK coll., 1♀ (IBSP 41726); *Manaus*, Reserva do Km 41 (02°26'25"S, 59°45'43"W), VIII.2005, A.J. Santos coll., 1♀, 2 imm. (IBSP 57668).

Diagnosis. Males of *A. formosa* resemble those of *A. affinis* and *A. guatemalensis* by the cymbium with cymbial ectobasal basal process (CEBP) with large spines (Fig. 3f, 6f, 10d) (absent in *A. affinis* and *A. guatemalensis*), but can be separated by having an acute subdistal embolic apophysis (Figs 1e, 4d) and paracymbium with truncated apex (Fig. 1g) (vs paracymbium rounded at apex in *A. affinis* and *A. guatemalensis*) (Figs 8c, 10e, 13e).

Females of *A. formosa* resembles *A. affinis* and *A. guatemalensis* by the rectangular plate of epigynum but can be separated by the very small posterior lobe of the epigynum in *A. formosa* (Figs 2h, 5e), (vs inconspicuous in *A. affinis* and *A. guatemalensis* (Figs 7g, 9a, 11e), the

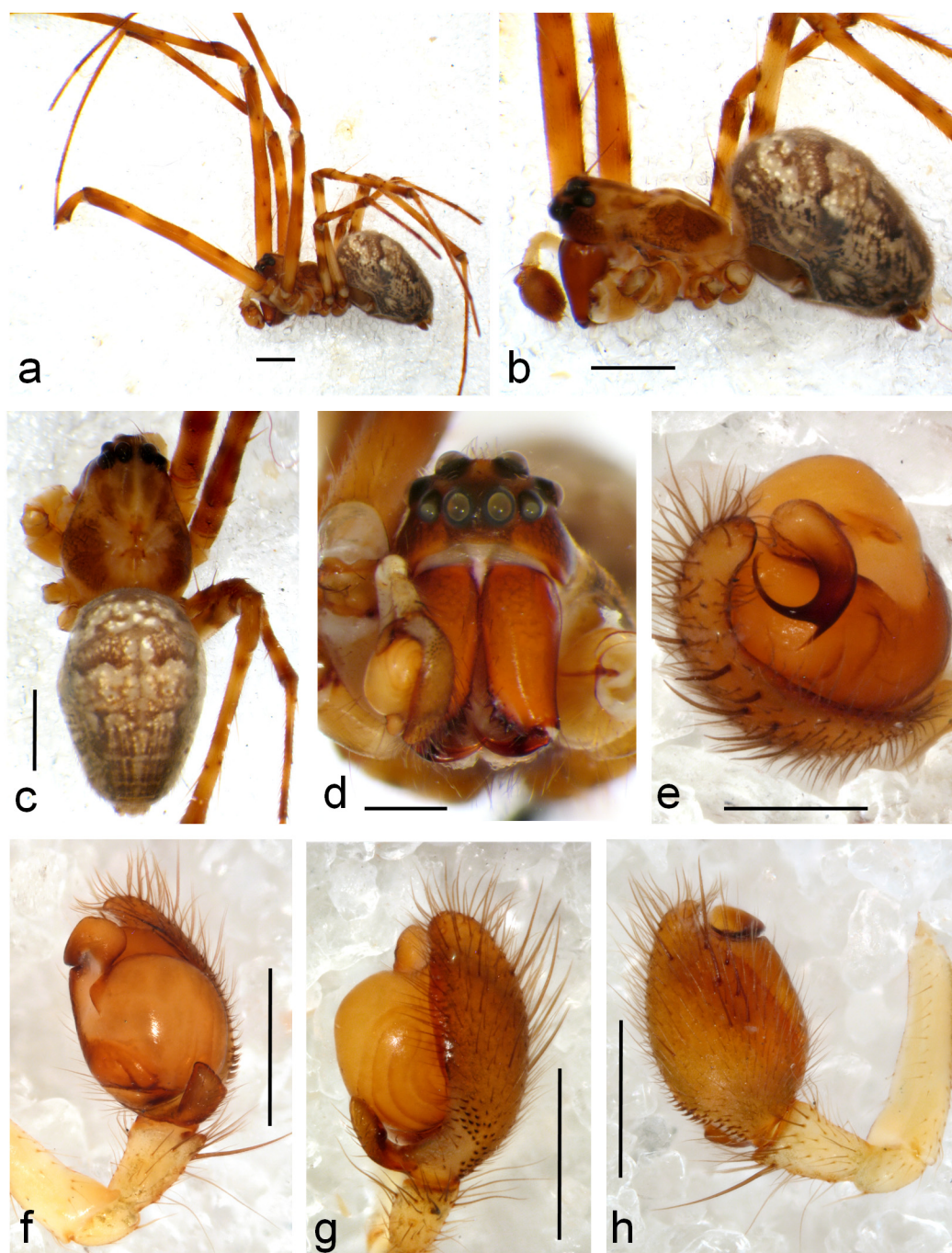


FIGURE 1. *Azilia formosa* Keyserling, 1881. Male (MUSM 0519494, Pithecia): a–d habitus, a–b, lateral view; b, detail; c dorsal view; d carapace, frontal view; e–h left palpus, e anterior view, f ventral view; g retrolateral view; h dorsal view. Scales: 0.25mm.

epigynal plate posterior margin almost straight (Fig. 2h, i) and median plate (MP) hexagonal and medially enlarged in *A. formosa* (Fig. 5e, f) (vs oval in *A. affinis* or with no septum in *A. guatemalensis* (Figs 7d, e, 11g). Females of *A. formosa* also differ from other species by the exclusive presence of a small basal diverticulum at the base of the spermathecae (Fig. 2j).

Description. Male (based on MUSM 0519494). Carapace (Fig. 1a–c) orange, with brown clypeus, paramedian edges and thoracic groove. Chelicerae (Fig. 1d) reddish brown. Eye region greenish gray with black

eye borders. Legs yellowish, banded in reddish brown. Abdomen oval, gray, dorsally with brown transverse bands and scattered guanine spots (Figs 1a–c); ventrally dark brown in central area, with two guanine bands and dark brown lateral striations. Measurements: total length 6.2; carapace 2.8 long, 2.4 wide. Eye sizes and interdistances: AME 0.12; ALE 0.11; PME 0.10; PLE 0.11; AME–AME 0.04; AME–ALE 0.13; PME–PME 0.14; Femur I 7.3; Patella + Tibia I 8.9; Metatarsus I 9.0; Tarsus I 1.9; Patella + Tibia II 6.3; Patella + Tibia III 2.4; Patella + Tibia IV 4.5. Palpus: tibia more than 2x shorter than cymbium (0.4 vs.

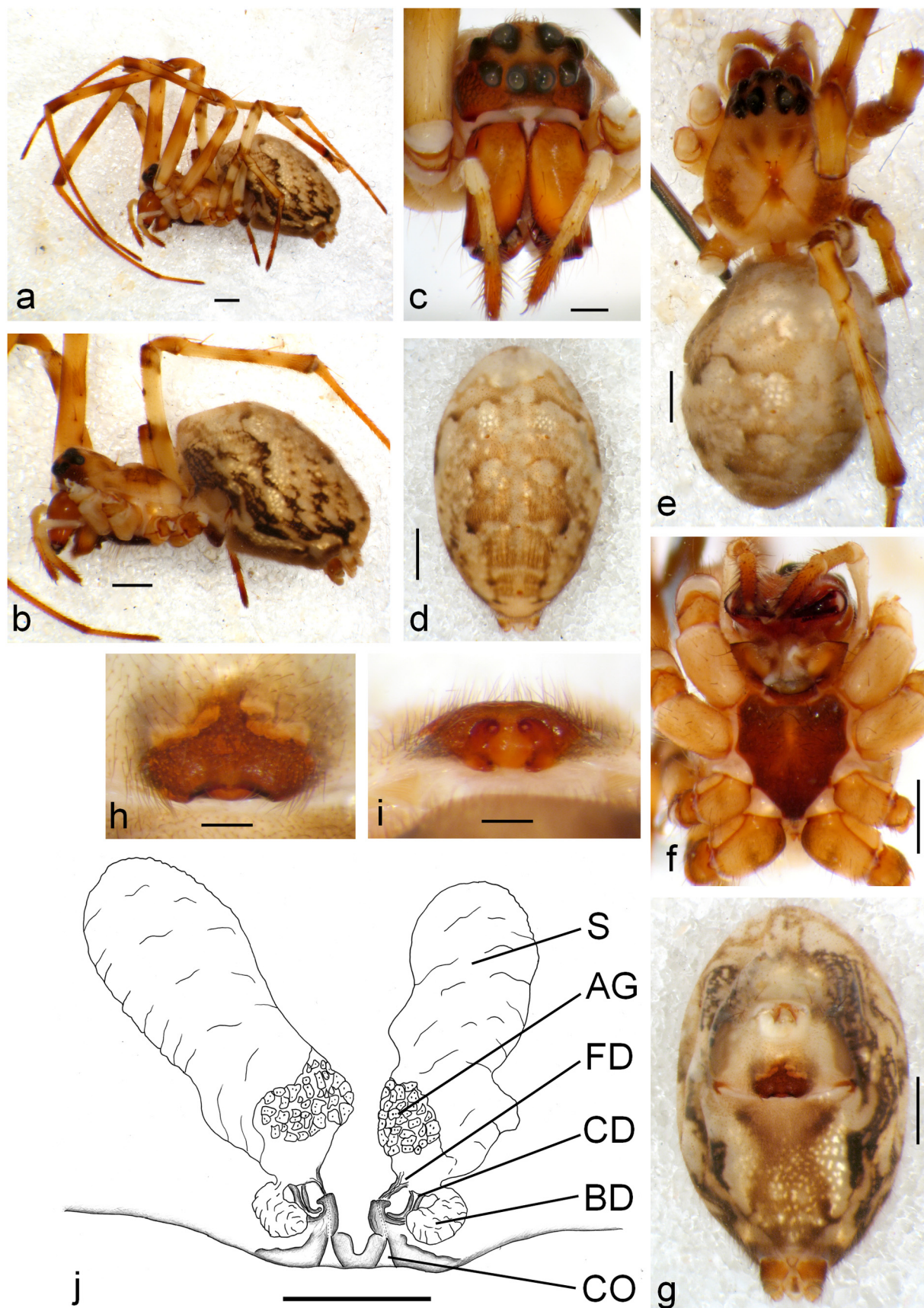


FIGURE 2. *Azilia formosa* Keyserling, 1881. Female (MUSM 0519494), Pithecia): a–g habitus, a–b, lateral view; b, detail; c frontal view; d abdomen, dorsal view; e body, dorsal view; f carapace, ventral view; g abdomen, ventral view; h–j epigynum, h ventral view; i posterior view; j dorsal view. Abbreviations: AG, accessory glands; BD, basal diverticulum; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

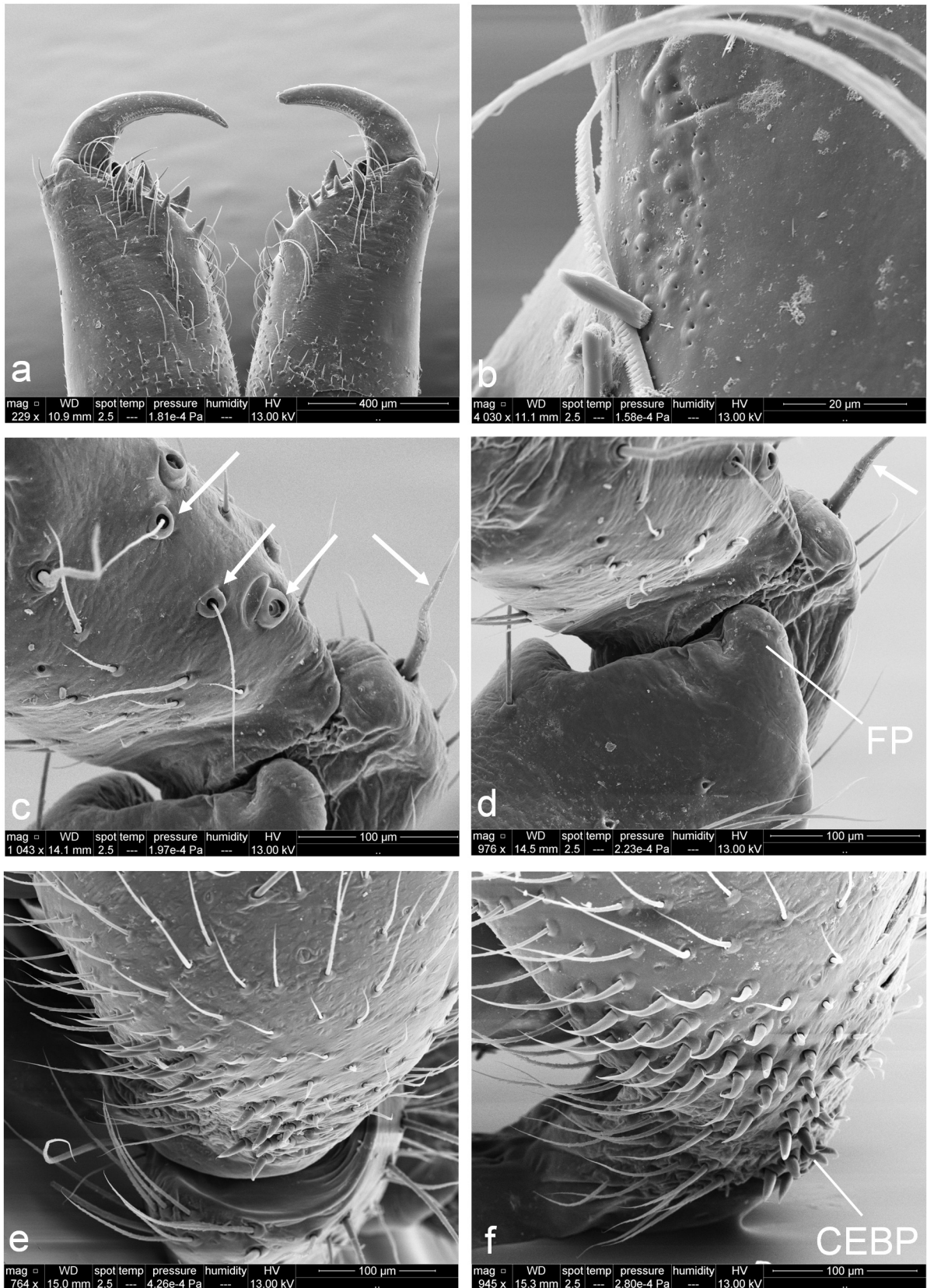


FIGURE 3. *Azilia formosa* Keyserling, 1881. Male (MUSM 0519494, Pithecia): a chelicera, ventral view; b cheliceral glands, ventral view; c tibia, basal, trichobothria area (arrows); d distal projection of palpal femur; e–f cymbial ectobasal projection, dorsal view. Abbreviations: CEBP, cymbial ectobasal projection; FP, projection of palpal femur.

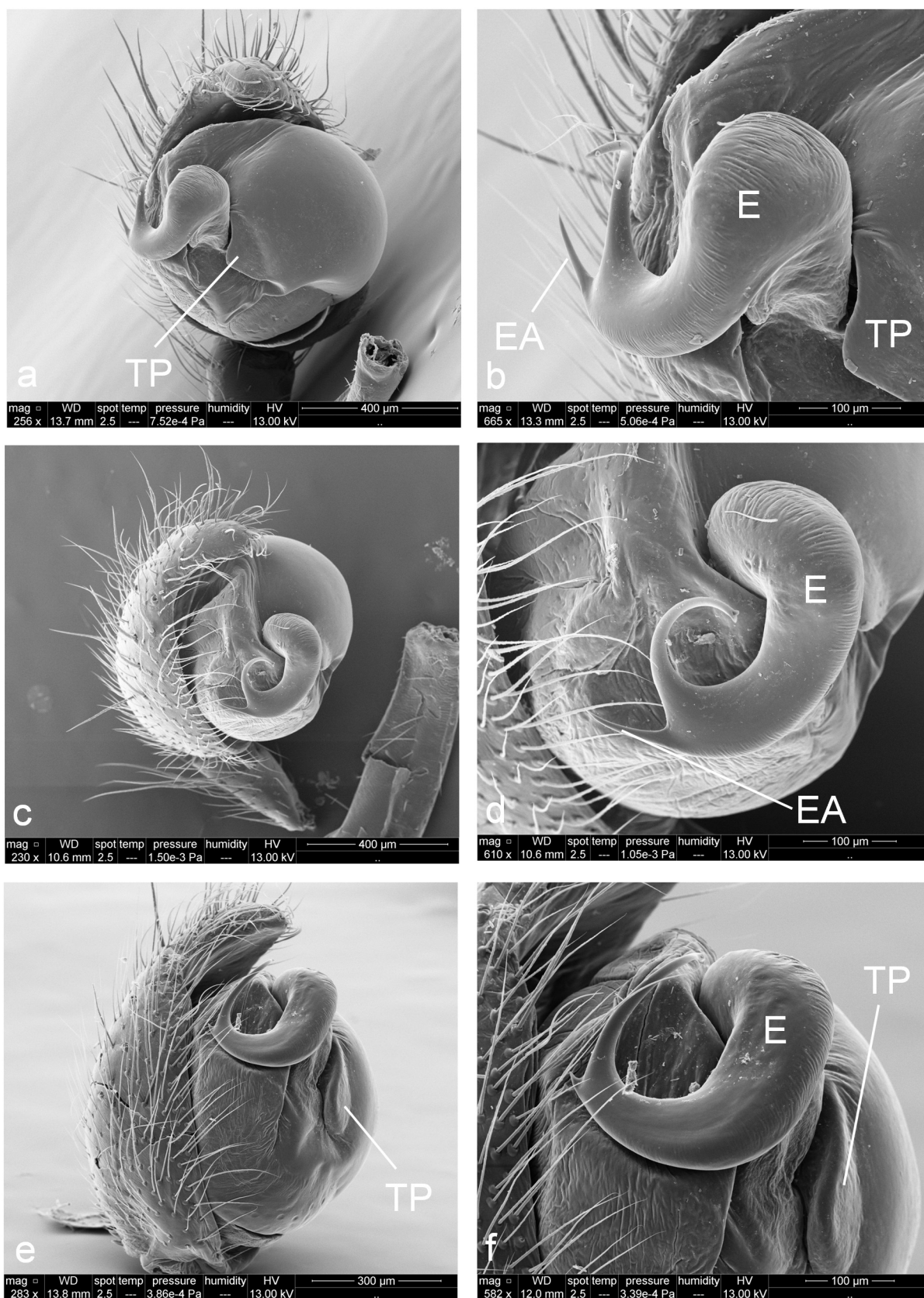


FIGURE 4. *Azilia formosa* Keyserling, 1881. Male palpus (MUSM 0519494, Pithecia): a bulb, ventral view; b embolus, detail; c bulb, retro-ventral view; d embolus, anterior view; e bulb, retrolateral view; e embolus, retrolateral view. Abbreviations: E, embolus; EA, embolar apophysis, TP, tegular projection.

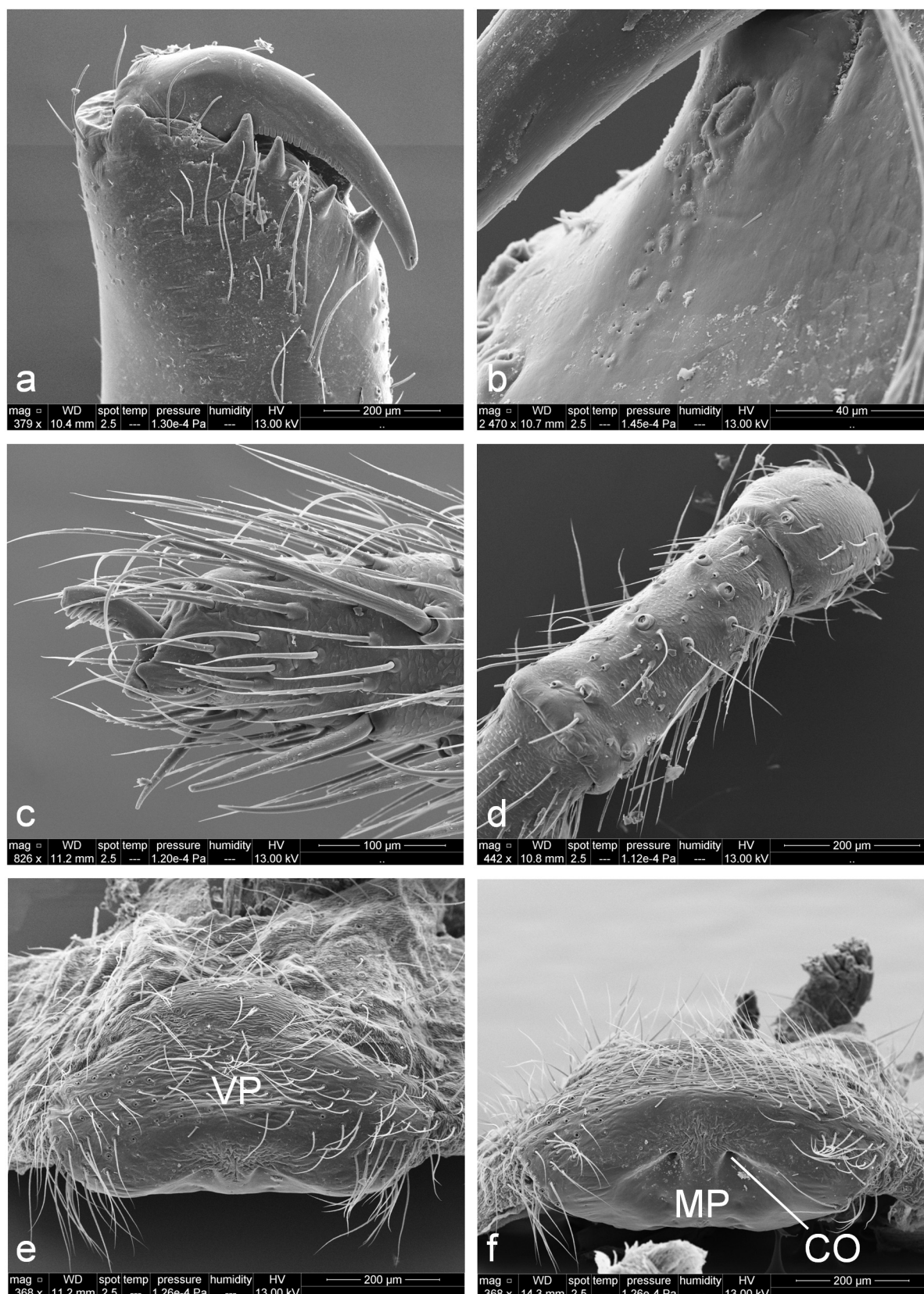


FIGURE 5. *Azilia formosa* Keyserling, 1881. Female (MUSM 0519494, Pithecia): a chelicerae, ventral view; b cheliceral glands, ventral view; c palpus, claw, lateral view; d pedipalp, tibia, dorsal view; e epigynum, ventral view; f same, posterior view. Abbreviations: CO, copulatory opening; MP, median plate; VP, ventral plate.

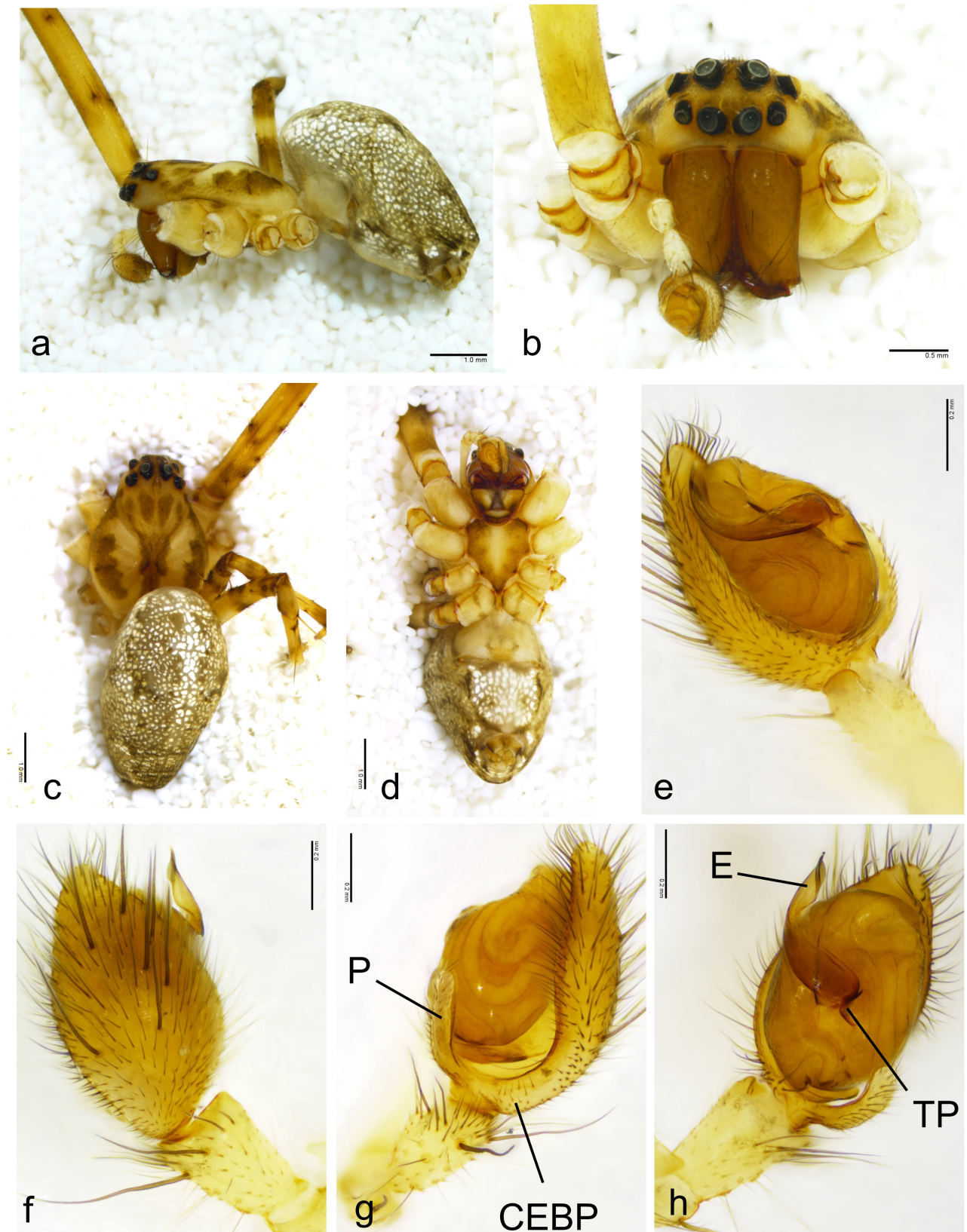


FIGURE 6. *Azilia affinis* O. Pickard-Cambridge, 1893. Male (CNAN-JAM 888) a–d habitus, a lateral view; b frontal view; c dorsal view; d ventral view; e–h left palp, e prolateral view, f dorsal view; g retrolateral view; h ventral view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; P, paracymbium; TP, ventral projection. Scales: 0.25.

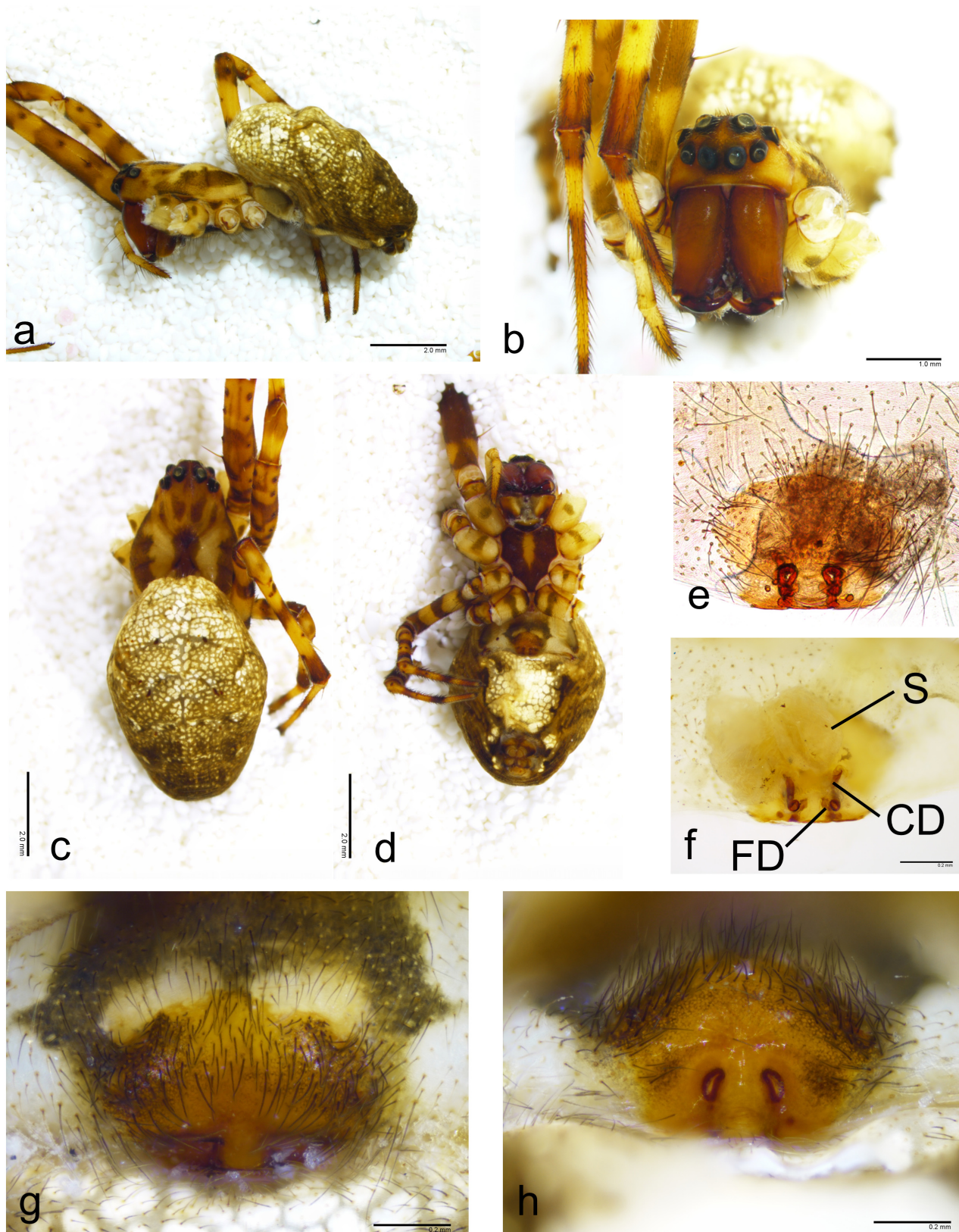


FIGURE 7. *Azilia affinis* O. Pickard-Cambridge, 1893. Female (CNAN-JAM 888) a–d habitus, a lateral view; b frontal view; c dorsal view; d ventral view; e–h epigynum, d ventral view; e same, cleared; f dorsal view; g, posterior view. Abbreviations: CD, copulatory ducts; FD, fertilization ducts; S, spermathecae.

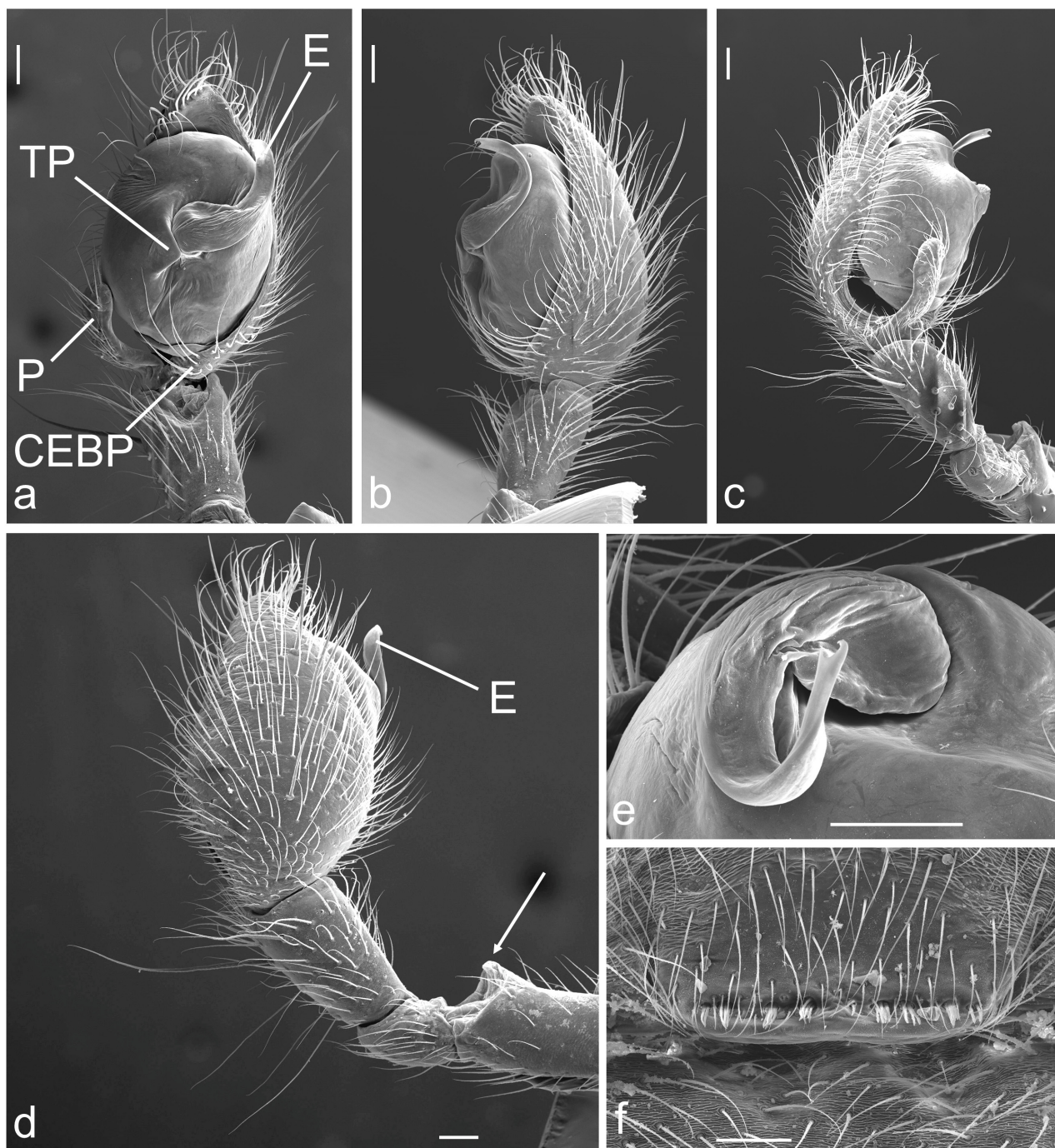


FIGURE 8. *Azilia affinis* O. Pickard-Cambridge, 1893. Male (CNAN-JAM 888) a–d palp, a ventral view, b prolateral view, c retrolateral view, d dorsal view (arrow indicating distal projection of palpal femur); e anterior view; f epiandric plate. Abbreviations: CEBP, cymbial ectobasal projection, E, embolus; P, paracymbium, TP, ventral projection. Scales: 0.25.

0.9) (Figs 1f–h); small cymbial ectobasal process (CEBP) with many strong setae (Figs 1g, h, 3e, f); paracymbium (PC) curved with triangular distal area, basal projection lacking (Fig. 1g); tegular projection (TP) short (Fig. 4a, b, e, f); embolus cylindrical, thickened at base and tip with an acute subdistal embolar apophysis which can be elongated (Fig. 4c, d) or short (Fig. 4e, f).

Female (Neotype, MUSM 0519493). Coloration as in male (Figs 1a, b, e, f, 2d, g). Measurements: total length 8.3; carapace 3.1 long, 2.5 wide. Eyes sizes and

interdistances: AME 0.14; ALE 0.08; PME 0.13; PLE 0.11; AME–AME 0.05; AME–ALE 0.14; PME–PME 0.16; Femur I 5.1; Patella + Tibia I 6.1; Metatarsus I 5.6; Tarsus I 1.5; Patella + Tibia II 4.6; Patella + Tibia III 2.3; Patella + Tibia IV 4.2. Epigynal plate subtriangular, wider than long, posterior margin with very short lobe (lobe is not shown on fig. 2h); spermathecae much longer than wide; accessory glands located posteriorly, forming a rounded group of glands; copulatory ducts (CD) shorter than spermathecae; fertilization ducts narrow and curved (Fig. 2j).

Variation. Males (n=6): total length 6.0–6.5; carapace length 1.9–3.0; femur I length 7.1–7.4. Females (n=10): total length 7.9–8.5; carapace length 2.9–3.4; femur I length 4.8–5.4.

Remarks. A neotype is proposed here for *Azilia formosa* as the holotype is considered lost. It was collected in a locality in Peru that, although not entirely close to the type locality, is considered to be the one originally described by Keyserling (1881). Even though *A. formosa* coexists with *A. histrio* in Peru, only these occur in this country and are easily distinguished by the oval shape of the abdomen of the type species.

Distribution. Known from Peru to the north of Brazil (Fig. 56).

***Azilia affinis* O. Pickard-Cambridge, 1893**

Figures 6a–h, 7a–h, 8a–f, 9a–d, 57

Azilia affinis O. Pickard-Cambridge 1893: 115, pl. 15, fig. 4.

Azilia affinis: Álvarez-Padilla & Hormiga 2011: 745, figs 13A–H, 14A–H, 15A–G, 16A–F, 17A–C (♂ ♀).

Azilia vagepicta Simon 1895: 153–154.

Azilia mexicana Banks 1898: 258, pl. 15, fig. 19.

For a complete list of references see World Spider Catalog (2025).

Type material. *Azilia affinis*: holotype ♀ from Teapa, Tabasco, Mexico, deposited in NHMUK, examined by Levi, 1980.

Azilia vagepicta: syntypes ♀ ♀ from “Amer. sept. Georgia”, deposited in the MNHN, not examined; Levi 1980: 72, figs 290–308 (Syn.)

Azilia mexicana: syntypes from Mexico, deposited in the California Academy of Sciences, destroyed; one subadult ♂ and one juvenile from Tepic, Mexico, deposited in MCZ, not examined; Levi, 1980: 72 (Syn.)

Material examined. MEXICO, San Luis Potosí: Xilitla City, Las Pozas (21°39.722'N, 98°99.388'W, 662 m a.s.l.), tropical wet forest, low vegetation, 14–18.XI.2011, Aracnolab coll., 1♂ (CNAN-JAM189); same locality as previous, 26–30.III.2012, 1♀ (CNAN-JAM 254); same data as previous, 1♂, 2♀ (CNAN-JAM 888); same locality as previous, 10–15.VI.2012, 2♂, 3♀ (CNAN-JAM 001).

Diagnosis. Males of *A. affinis* resemble those of *A. formosa* and *A. guatemalensis* in that the embolus does not have a basal apophysis and the cymbium bears, whenever it is present, an indistinct ectobasal process (Fig. 6f), but it can be separated from them by having a flattened embolus slightly longer than the tegulum (Fig. 6e) (vs cylindrical in *A. formosa* and long and thread-like in *A. guatemalensis*) (Figs 1e, 10d). Females of *A. affinis*

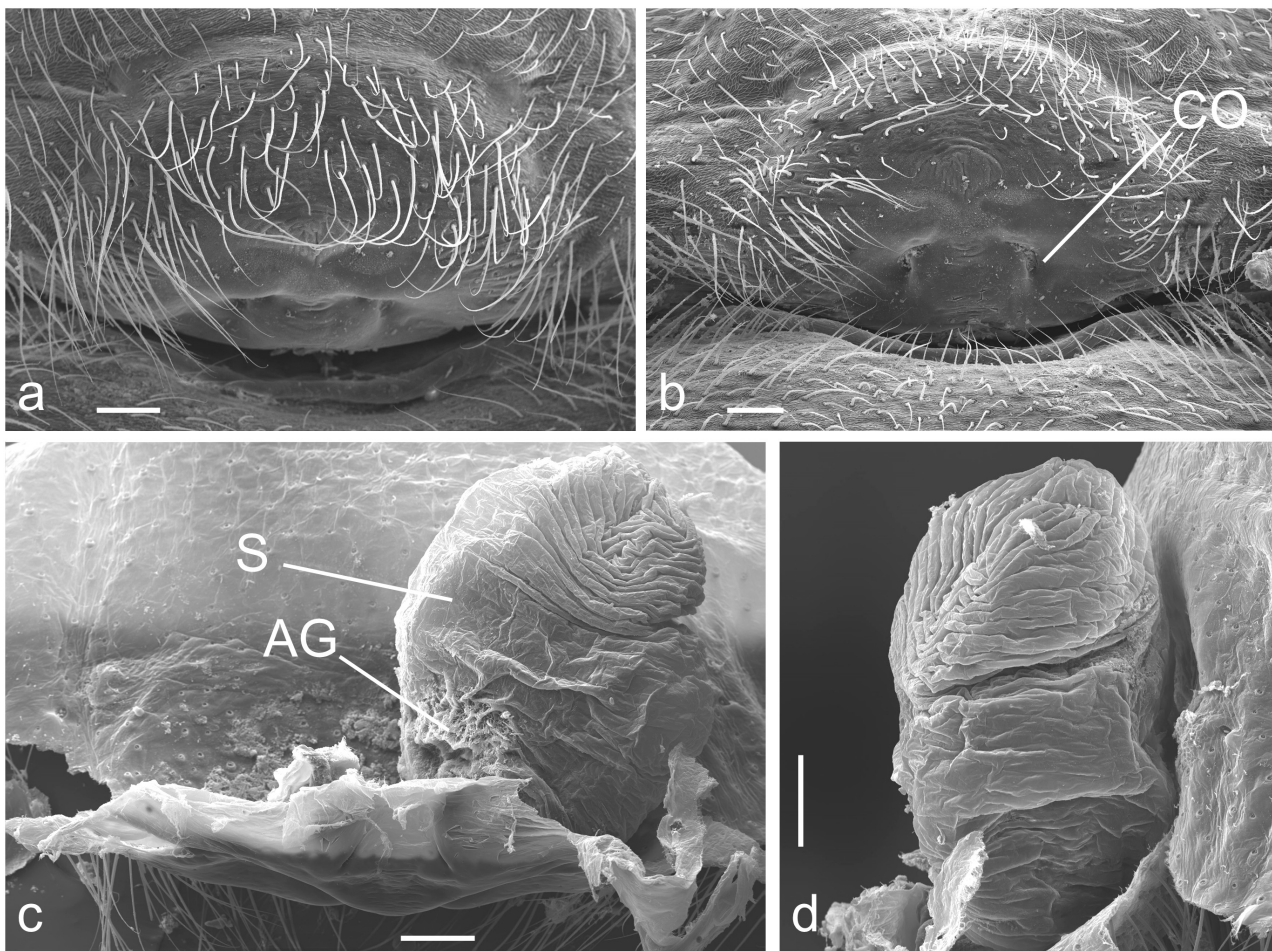


FIGURE 9. *Azilia affinis* O. Pickard-Cambridge, 1893. Female (CNAN-JAM 888) a–d epigynum, a ventral view, b posterior view, c spermathecae, ventral view, cleared, f same, lateral view. Abbreviations: AG, accessory glands; CO, copulatory opening; S, spermathecae. Scales: 0.25.

resemble those of *A. formosa* and *A. guatemalensis* by the lobe in the epigynum, but can be separated from them by the large and rounded median lobe in the posterior margin of the epigynum (Fig. 7g; Levi, 1980, fig. 291) (vs. small in *A. formosa* and inconspicuous in *A. guatemalensis*) (Figs 2h, 11e).

Complimentary description. Male (CNAN-JAM189). Epiandrous area with six groups of spigots (Fig. 8f); palpus with tibia as long as cymbium (Figs 6e–h, 8d); paracymbium enlarged distally (Figs 6g, 8c); tegular projection sclerotized, half-moon shaped (Figs 6e, 8e); embolus twisted without apophysis (Figs 6h, 8e).

Female (based on CNAN-JAM 254). Epigynum with oval spermathecae; accessory glands inconspicuous; fertilization ducts short and curved; internally with coiled copulatory ducts (Figs 7e–h, 9a–d). For a complete description of males and females, see Levi (1980, figs 290–308). Complementary illustrations in Álvarez-Padilla & Hormiga (2011, figs 13A–H, 14A–H, 15A–G, 16A–F, 17A–C).

Distribution. South of United States of America (Georgia, northern Florida and Gulf states), Mexico to Costa Rica (Levi, 1980) (Fig. 57).

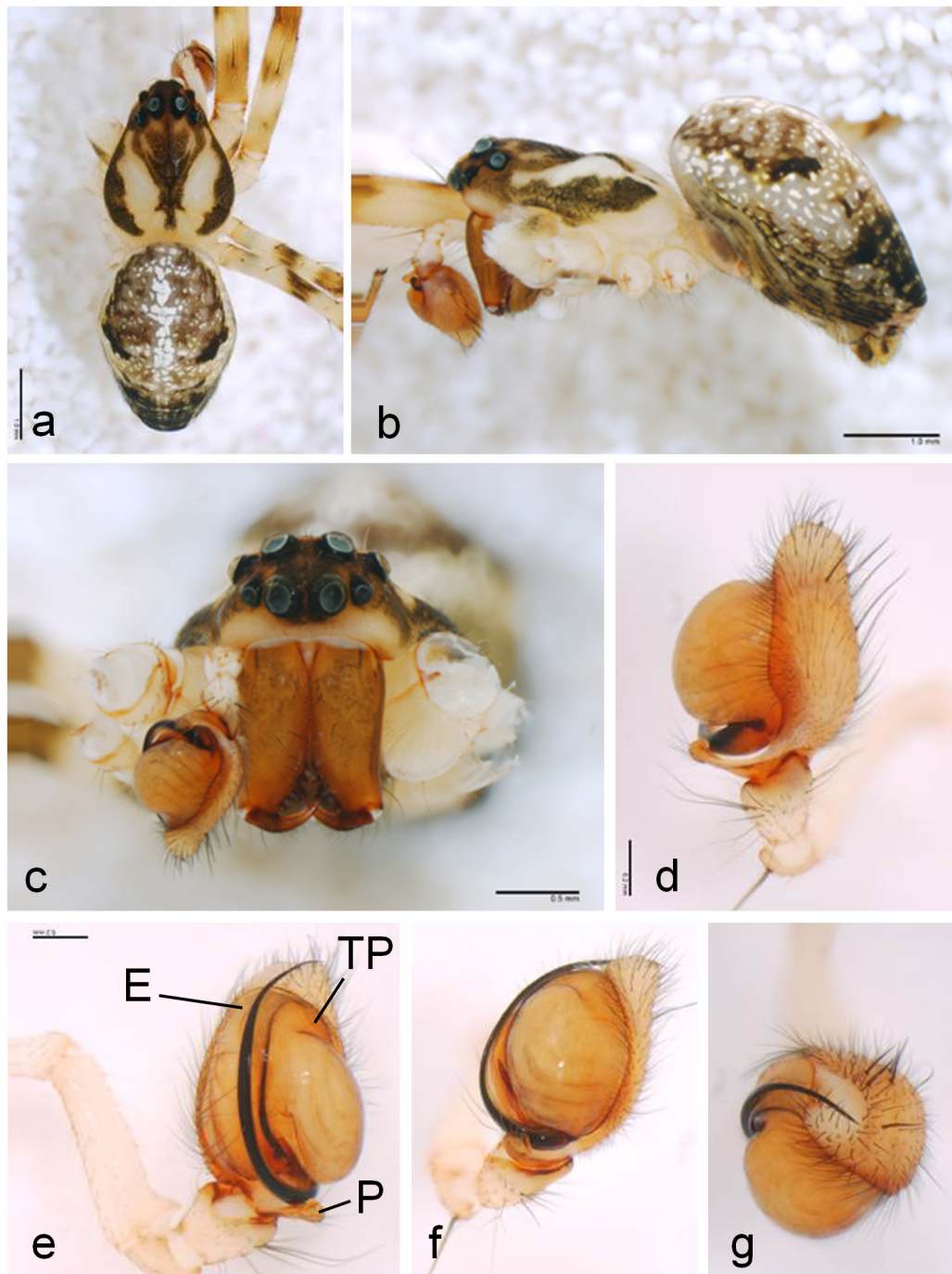


FIGURE 10. *Azilia guatemalensis* O. Pickard-Cambridge, 1889. Male (CNAN 11691) a–c habitus, a dorsal view; b, lateral view; c, frontal view; d–g left palp, d retrolateral view, e prolateral view; f ventral view; g anterior view. Abbreviations: E. embolus; TP, tegular projection. Scales: 0.25.

***Azilia guatemalensis* O. Pickard-Cambridge, 1889**
 Figures 10a–g, 11a–g, 12a–g, 13a–f, 14a–d, 58

Azilia guatemalensis O. Pickard-Cambridge 1889: 12–13, plate 3, figs 3, 4.

Azilia guatemalensis: Keyserling 1893: 267–268, plate 14, fig. 198.

Typematerial. Lectotype ♂ (NHMUK 1305.4.28.2371.30) and paralectotypes 5 ♀ (NHMUK 1305.4.28.2371.30a–

e), from the municipalities of Salinas de Nueve Cerros, between Dolores and Chapallal, Encuentros de Boloneb; Senahu; Cahabon; Tamahu and Salama, in Guatemala, **examined**.

Other material examined. MEXICO, Veracruz: *San Andrés Tuxtla*, Estación de Biología Tropical Los Tuxtlas (18°35'11"N, 95°04'30.5"W), 18–31.VII.2014, A. M. Girotti *et al.* coll. (IBSP 308574); same locality as previous (except 18°34.935'N, 95°4.5348'W) 217–172 m a.s.l.), lower vegetation and tree buttresses, 16–22.V.2016,

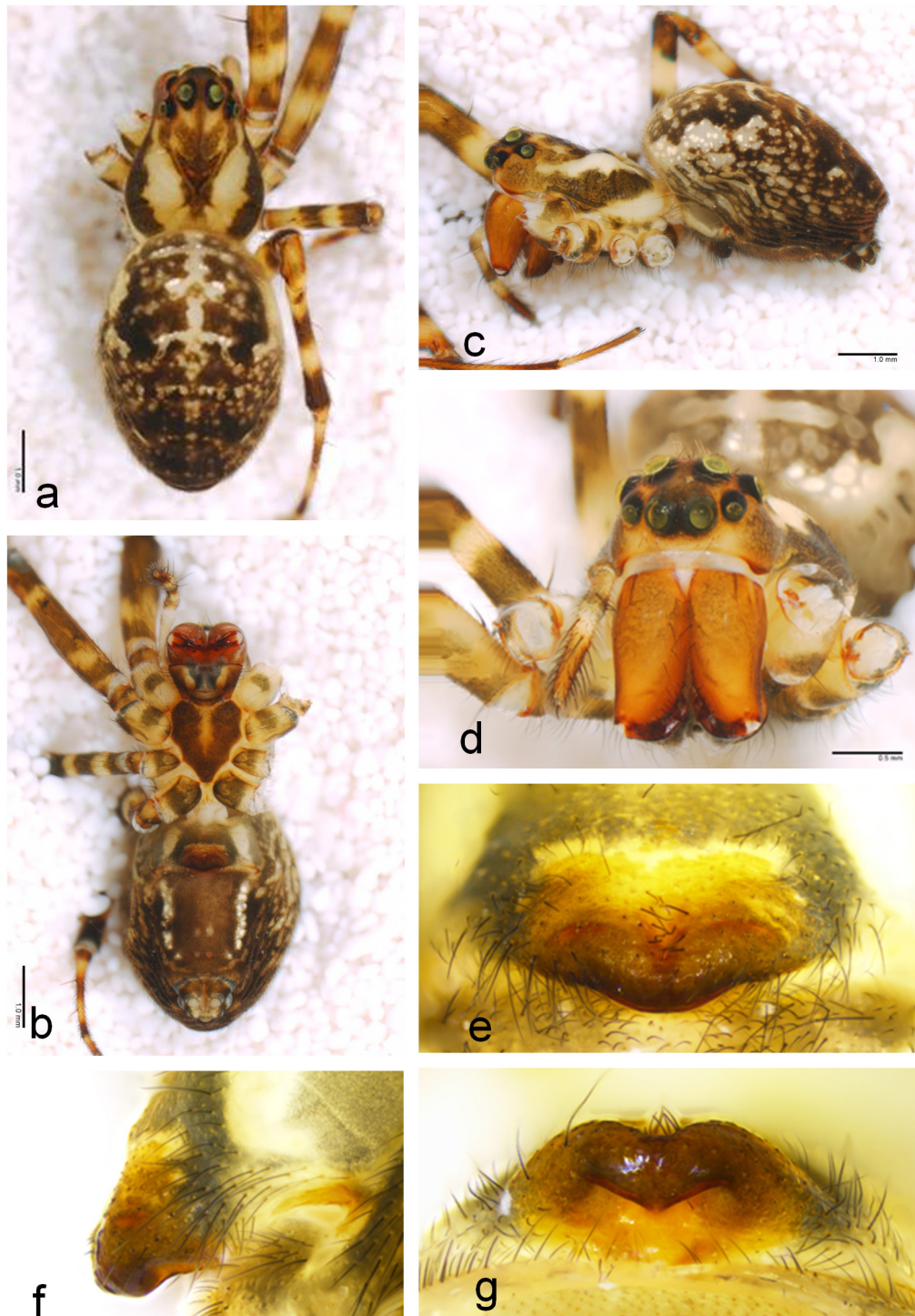


FIGURE 11. *Azilia guatemalensis* O. Pickard-Cambridge, 1889. Female (CNAN 11691) a–d habitus, a dorsal view; b, ventral view; c lateral view; d frontal view; e–g epigynum, e ventral view; f lateral view; g posterior view. Scales: 0.25.

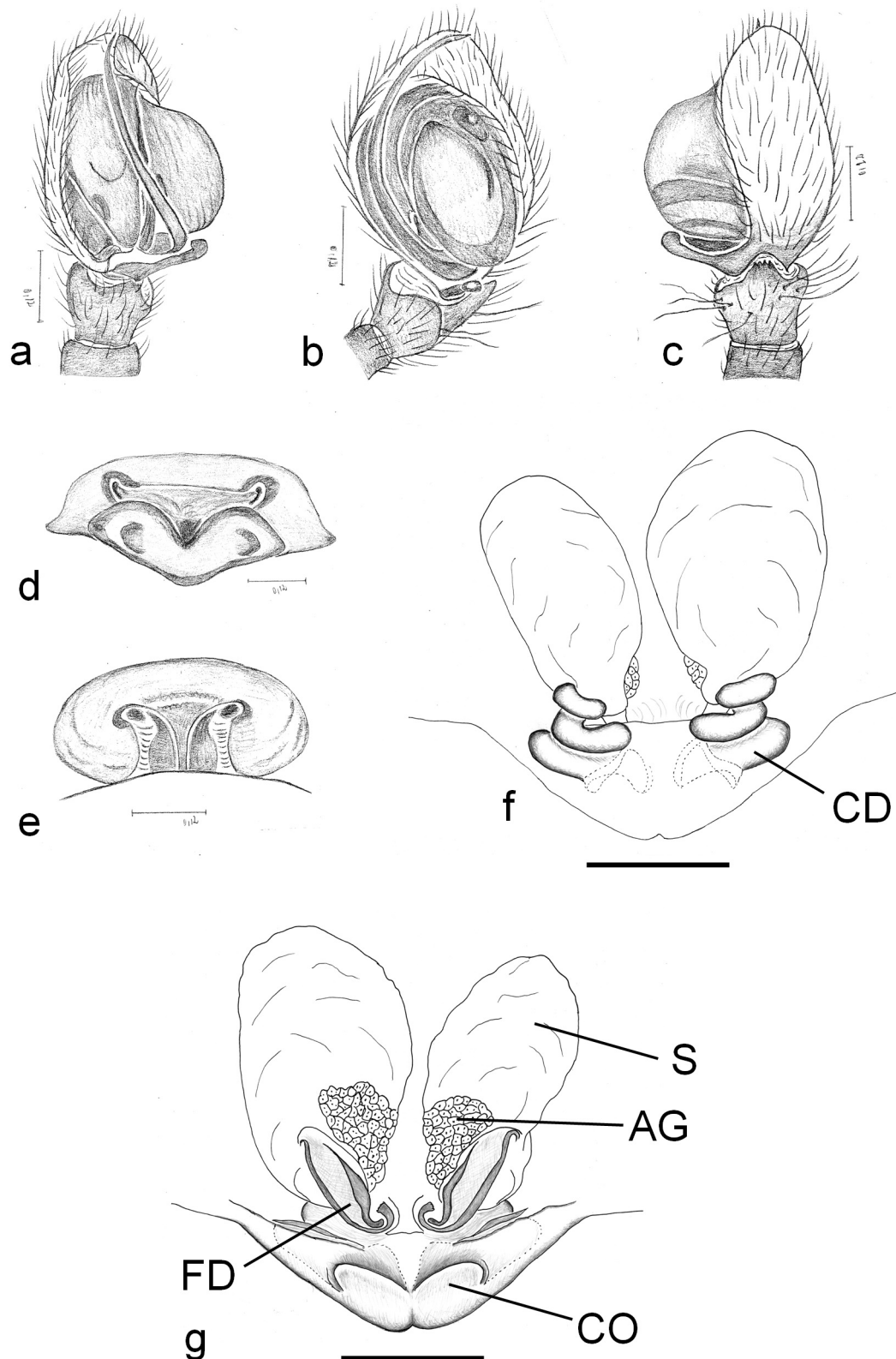


FIGURE 12. *Azilia guatemalensis* O. Pickard-Cambridge, 1889. Male (Syntype), left palp a prolateral view; b ventral view; c retrolateral view; d–g female (Syntype) epigynum, d ventral view; e posterior view; f ventral view, cleared; f dorsal view, cleared. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae.

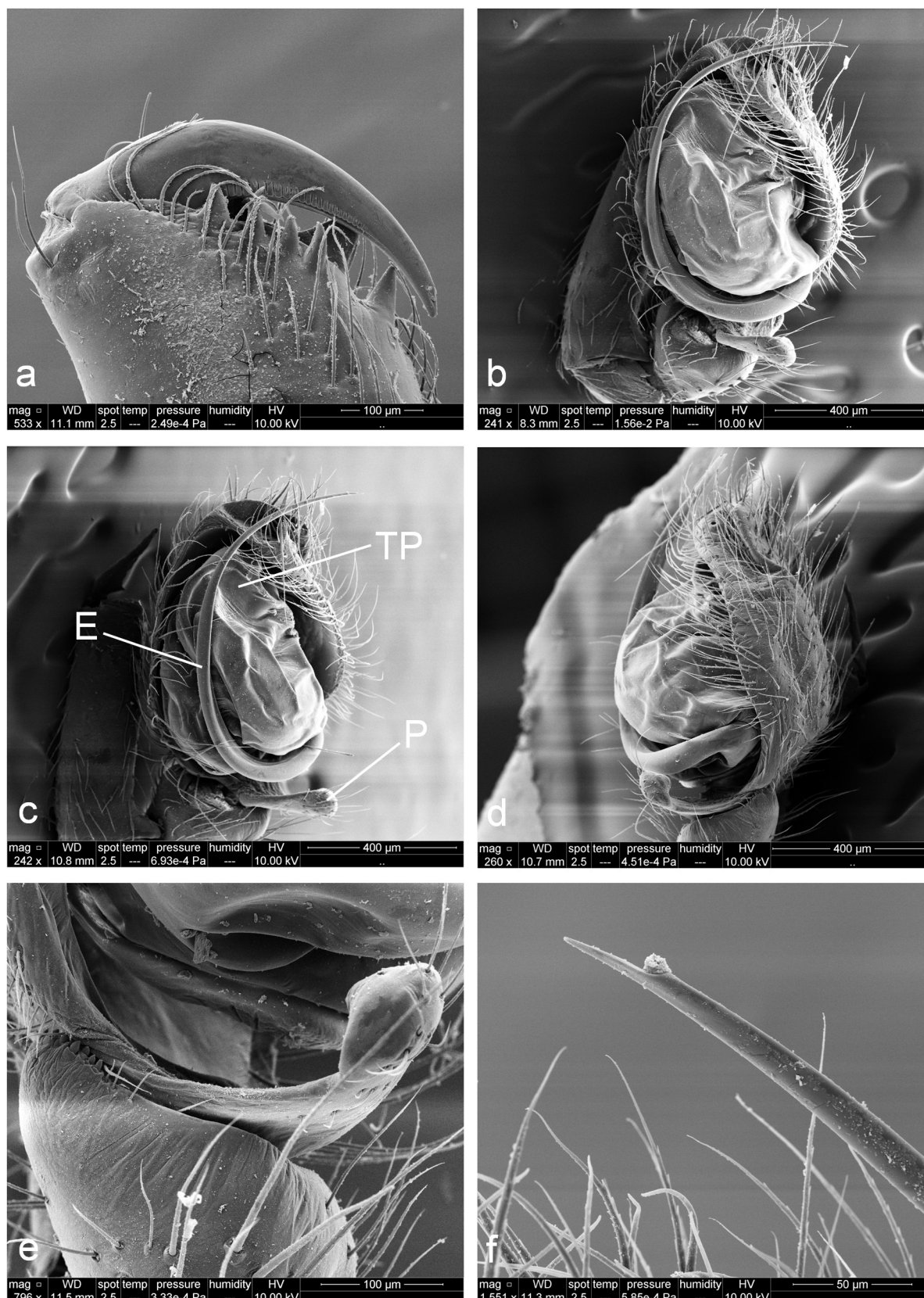


FIGURE 13. *Azilia guatemalensis* O. Pickard-Cambridge, 1889. Male (IBSP 344654) a chelicerae, ventral view, b–f left palp, b ventral view; c ventroprolateral view; d retrolateral view, e paracymbium, lateral view, f embolus, distal area. Abbreviations: E, embolus; P, paracymbium, TP, tegular projection.

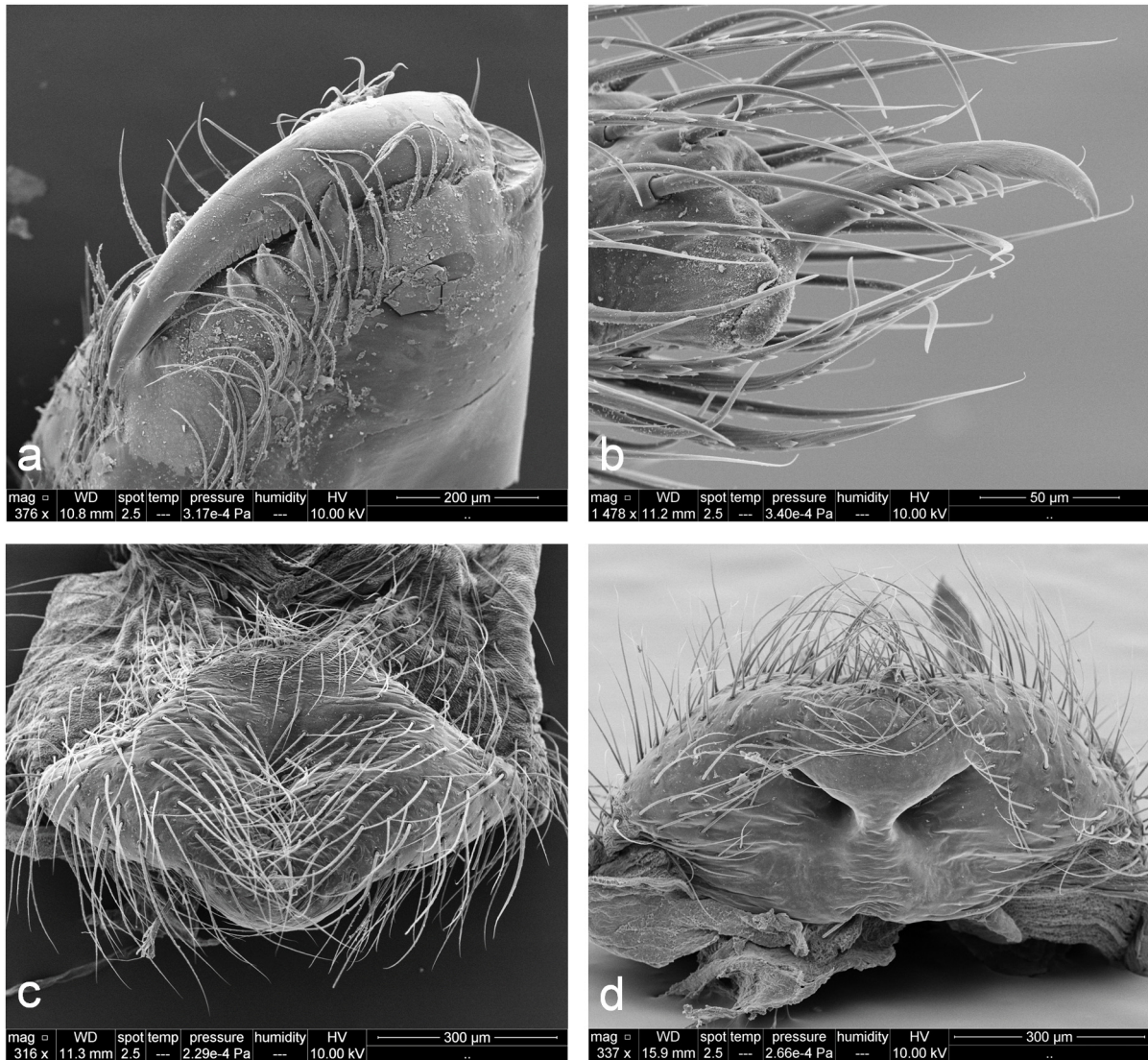


FIGURE 14. *Azilia guatemalensis* O. Pickard-Cambridge, 1889. Female (IBSP 344654), a chelicera, ventral view, b, palpus claw, lateral view; c–d epigynum, c ventral view; e posterior view.

Aracnolab coll., 7♂, 20♀ (CNAN 11691); same data as previous, 8♂, 18♀ (CNAN); same locality as previous, 20–27.IX.2017, 10♂, 23♀ (CNAN 11692); same data as previous, 1♀ (CNAN 11693); same locality as previous, 09–16.II.2018, 6♂, 13♀ (CNAN 11694); same data as previous, 1♂ (CNAN 11695); same data as previous, 1♂, 1♀ (IBSP 344653); same data as previous, 1♂, 1♀ (IBSP 344654; SEM). HONDURAS, **Atlántida**: Refugio de Vida Silvestre Cuero y Salado (15°46'30.08"N, 87°7'56.32"W), 2020–2021, A. Cubas coll., 4♀ (IBSP 325856).

Diagnosis. Males of *A. guatemalensis* resemble those of *A. affinis* and *A. formosa* in that the cymbium does not have CEBP, differing by having a long and slender embolus that curves around the prolateral part of the tegulum (Figs 10e–g, 13c) (vs embolus short in *A. affinis* and cylindrical in *A. formosa*) (Figs 10a, 13d). Females of *A. guatemalensis* resemble those of *A. affinis* and *A. formosa* by the posterior epigynum margin wide, swollen, convexly curved, and M-shaped in posterior

view overhanging the median plate (Figs 10e–g, 14c–d), but differs by the aspect concave in *A. formosa* (Fig. 2h) and with a median knob in *A. affinis* (Fig. 7h; Levi, 1980, fig. 291).

Description. Male (CNAN 11691). Carapace (Fig. 10a) cream-colored with dark brown median anterior area and lateral edges. Clypeus yellowish. Chelicerae reddish brown, with four teeth on the promargin and three teeth on the retromargin (Fig. 13a). Maxillae and labium brown, with yellowish white distal area. Sternum brown with an interrupted median yellowish band at the base. Legs cream-colored, with bands of brown and yellowish brown in all articles (Fig. 10a). Abdomen oval, dorsally greyish brown, with short incomplete transverse black bands and a light longitudinal dorsal band made of guanine, laterally with scattered blackish gray streaks, and ventrally brown with two white lateral stripes. Spinnerets grayish yellow (Figs 10a–c). Measurements: total length 6.1; Carapace 2.8 long, 2.3 wide. Eye diameters and interdistances:

AME 0.12; ALE 0.10; PME 0.10; PLE 0.07; AME–AME 0.10; AME–ALE 0.10; PME–PME 0.10; Femur I 5.6; Patella+Tibia I 6.8; Metatarsus I 6.1; Tarsus I 1.6; Patella+Tibia II 4.0; Patella+Tibia III 2.2; Patella+Tibia IV 3.1. Palpus: tibia (0.3) smaller than cymbium (0.7) (Fig. 10d–e); cymbial ectobasal process absent (Figs 10d, 13d–e); paracymbium globose at tip, with half the length of the cymbium (Figs 10d, 13d); tegular projection rounded and next to the base of the embolus (Figs 10e, 13c); embolus lamelliform, without apophysis and longer than the cymbium (Figs 10e–f, 13b–c, f).

Female (CNAN 11691). Coloration as in male, except lighter cephalic area, clypeus yellow and chelicerae orange with teeth as in male (Fig. 14a). Maxillae and labium brown, with yellowish white distal area. Sternum brown with an interrupted anterior median band yellowish. Abdomen oval (Fig. 11a–c). Measurements: total Length 7.9; Carapace 3.0 long, wide 2.5. Eye diameters and interdistances: AME 0.14; ALE 0.12; PME 0.16; PLE 0.10; AME–AME 0.12; AME–ALE 0.13; PME–PME 0.14; Femur I 5.0; Patella+Tibia I 6.1; Metatarsus I 5.2;

Tarsus I 1.6; Patella+Tibia II 5.0; Patella+Tibia III 2.1; Patella+Tibia IV 4.1. Palpus claw with eight ventral teeth (Fig. 14b). Epigynum swollen with convex margins (Figs 11g, 14d); spermathecae oval (Fig. 12f, g); accessory glands on the inner base of the spermathecae; short copulatory ducts; fertilization ducts elongated, curved and usually positioned at the inner base of the spermathecae (Fig. 12f, g).

Variation. Females (n=5): total length 7.9–9.0; carapace length 3.0–3.7; femur I length 4.9–5.2.

Distribution. Mexico, Honduras and Guatemala (Fig. 58). The material from Panama cited in Keyserling (1893) was not found.

Azilia rojasi Simon, 1895

Figures 15a–e, 58

Azilia rojasi Simon 1895: 153.

Type material. Lectotype ♀ MNHN 10146a designated

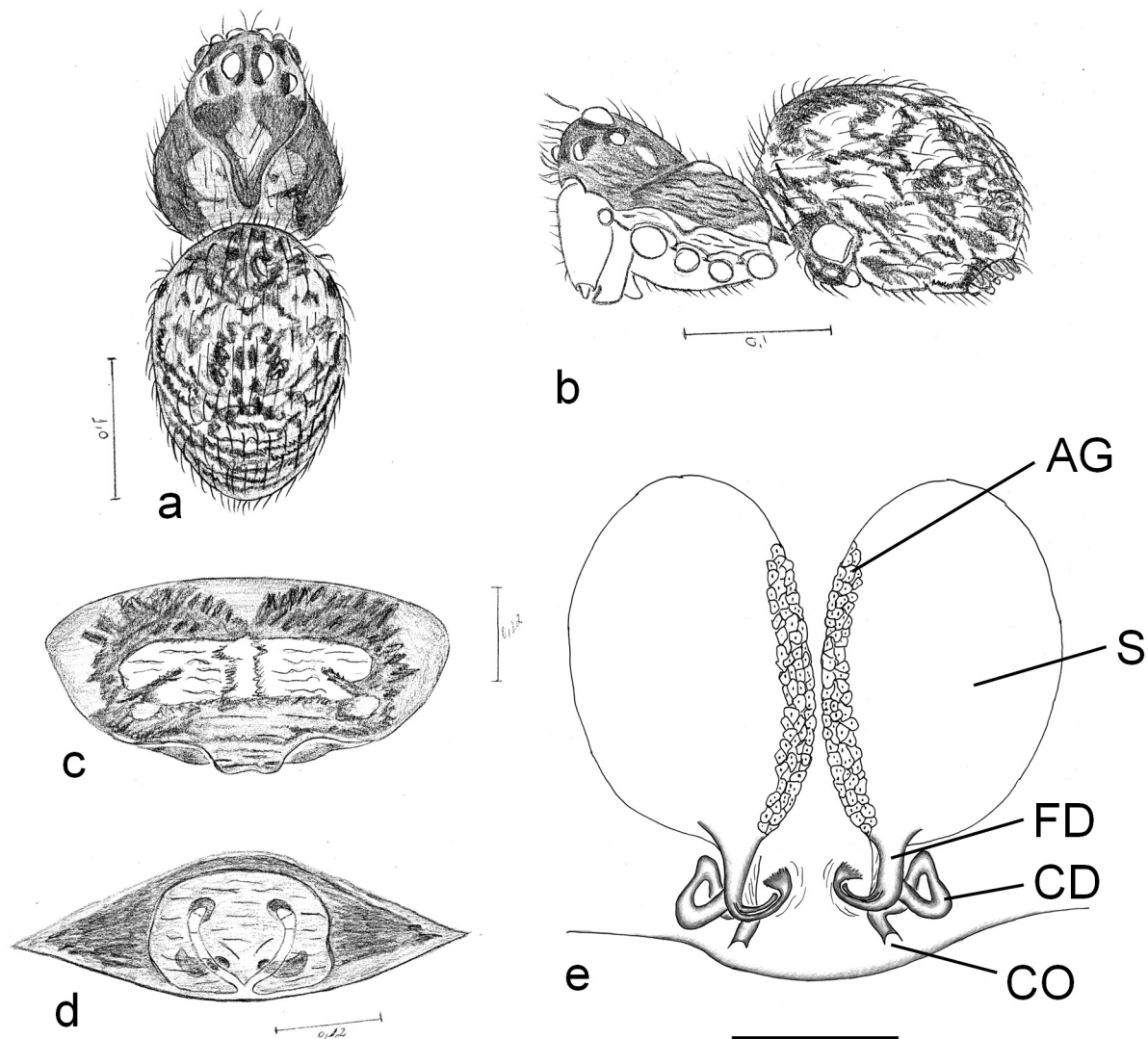


FIGURE 15. *Azilia rojasi* Simon, 1895. Female (MNHN 10146b), a–b habitus, a dorsal view; b lateral view; c–e epigynum c ventral view; d posterior view; e dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

here and paralectotype ♀ MNHN 10146b from Caracas, Venezuela, E. Simon coll., deposited in MNHN 10146, examined.

Other material examined. None.

Diagnosis. The female of *A. rojasi* is distinguished from the other females by the posterior border of the epigynal plate accentuated with a sinuous median lobe and wide V-shaped posterior plate (Fig. 15c–d).

Description. Male. Unknown. **Female** (based on lectotype MNHN 10146a). Carapace (Fig. 15a, b) with yellowish middle area, brown lateral edges, and clypeus cream-colored. Chelicerae reddish brown with four retromarginal teeth. Maxillae and labium reddish-brown, with yellowish distal area. Sternum brown with yellowish anterior area. Legs banded in yellow and brown in all joints. Abdomen oval, dorsally dark brown, mixed with short white transverse bands of guanine; and laterally and ventrally brown with two whitish longitudinal lateral stripes. Spinnerets brown. Measurements: total length

6.0; carapace 4.3 long, wide 3.2. Eye diameters and interdistances: AME 0.18; ALE 0.10; PME 0.20; PLE 0.18; AME–AME 0.10; AME–ALE 0.21; PME–PME 0.16. Femur I 2.6; Patella+Tibia I 3.3; Metatarsus I 2.9; Tarsus I 0.9; Patella+Tibia II 2.4; Patella+Tibia III 1.4; Patella+Tibia IV 2.0. Epigynal plate subrectangular with posterior border protruding (Fig. 15c); spermathecae oval (Fig. 15e); accessory glands inconspicuous, on the inner base of the spermathecae; coiled and basal copulatory ducts; fertilization ducts short and curved (Fig. 15e).

Distribution. Known only from the type locality (Fig. 58).

Azilia montana Bryant, 1940

Figures 16a–f, 17a–c, 58

Azilia montana Bryant, 1940: 348, figs 112, 115 (Syntypes, two ♀♀ from south side of Pico Turquino, 3,000–5,000 feet, Oriente,

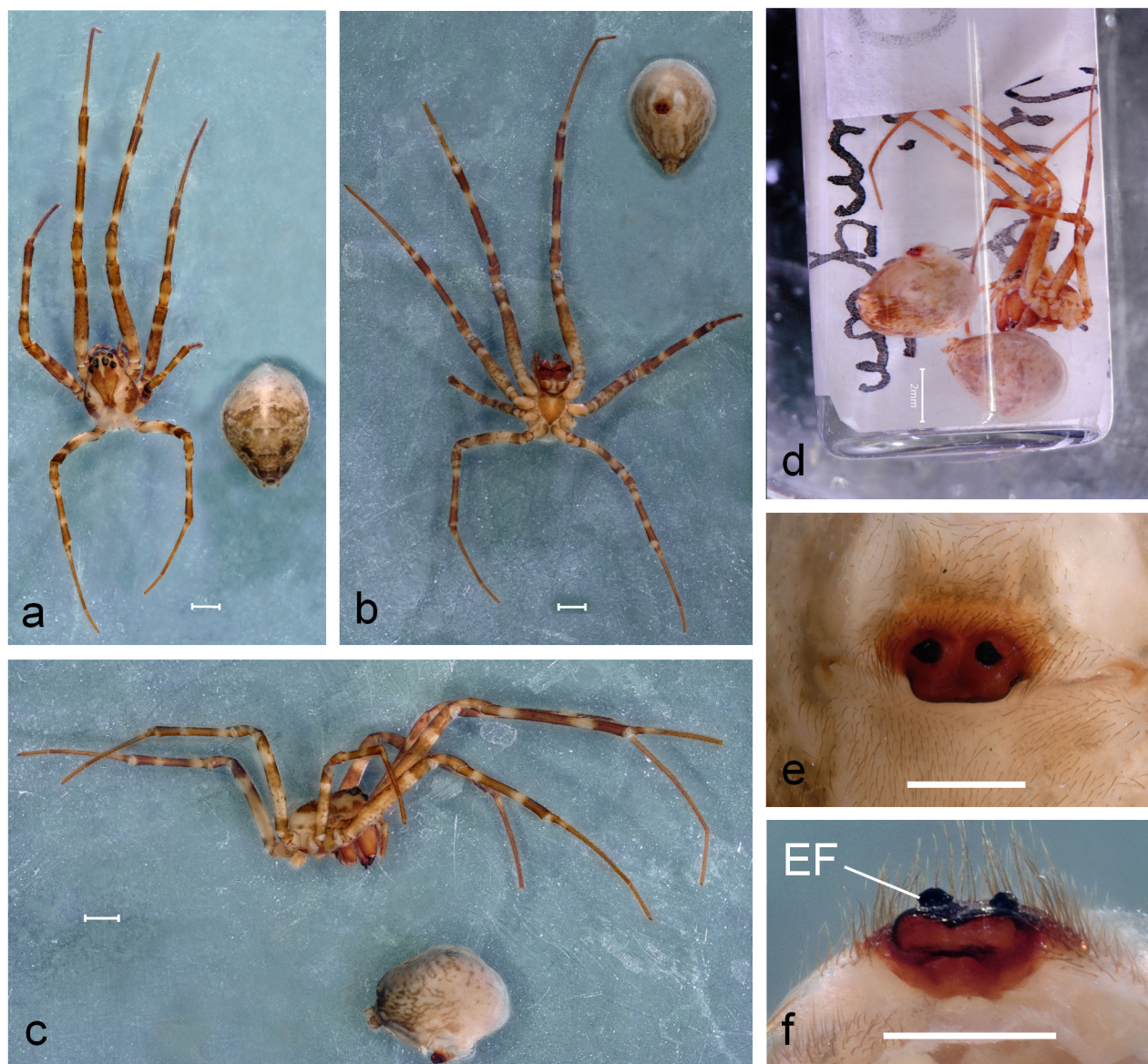


FIGURE 16. *Azilia montana* Bryant, 1940. Female (MCZ syntype) a–c habitus, a dorsal view; b, ventral view; c lateral view; d vial with syntypes; e–f epigynum, e ventral view; f posterior view. Abbreviation: EF, elongated folds. Scales: 0,25.

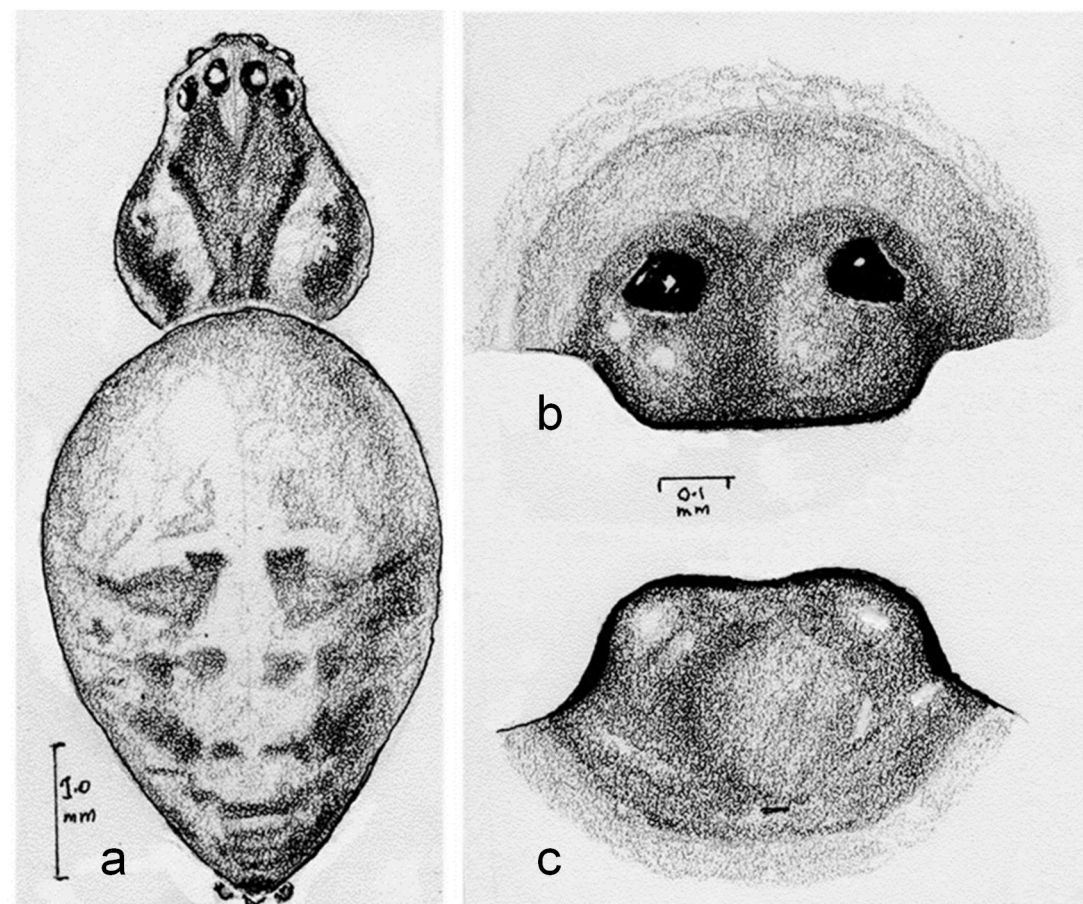


FIGURE 17. *Azilia montana* Bryant, 1940. Female (MCZ syntype), type drawings by H.W. Levi. Female, a habitus, dorsal view, b–c epigynum, b ventral view; c posterior view. Scales: 1,0.

Cuba, 1936, Darlington coll., deposited in MCZ. (examined only by images).

Type material. 2 syntypes ♀ from south side of Pico Turquino, 3,000–5,000 feet, Oriente, Cuba, 1936, Darlington coll., deposited in MCZ, **examined** (photos).

Other material examined. None.

Note. In the vial of types (Figs 16a–c), two specimens were found: an entire female and a second female with loose abdomen. Both abdomens are from adult spiders, with formed genital plates. One of them (Fig. 16a–c) was associated with the cephalothorax and is considered to be the specimen described by Bryant (1940), since the coloration is the same as in the original description.

Diagnosis. *Azilia montana* is diagnosed from other species in the genus by the presence of two black elongated folds on the anterior ventral edge of the epigynal plate (Figs 16e, f, 17b) and an omega-shaped atrium (Fig. 16f).

Description. Male. Unknown.

Female. Described by Bryant (1940: 348–349). Description added: carapace brown medially with lateral area with bands cream-colored (Figs 16a, 17a). Abdomen with dark brown posterior bands on the posterior dorsal half of the abdomen. Legs banded, alternating light brown, dark brown and white. Epigynal plate rectangular, with

straight posterior edge. Wide atrium and the entire edge of the plate is heavily chitinized (Figs 16e, f, 17b, c).

Distribution. Known only from the type locality (Fig. 58).

Azilia fabulosa sp. nov.

Figures 18a–g, 19a–h, 20a–f, 21a–f, 56

Type material. Holotype ♂, Estação Biológica de Boracéia (23°38'S. 45°52'W), Salesópolis, São Paulo, Brazil, 20–26.IX.2001, Equipe Biota coll. (IBSP 41731). Paratypes: 1♀, same locality as holotype, 18–24.V.2003 (IBSP 41708); 1♀, Reserva Florestal do Morro Grande (23°41'19"S. 47°01'15"W), Caucaia do Alto, Cotia, São Paulo, Brazil, 13–30.VI.2002, Equipe Biota coll. (IBSP 97331); 1♀, same locality, Quilombo Fragment area, 10.III.2003, A. Nogueira coll. (IBSP 85962); 1♂, Parque Nacional da Serra dos Órgãos (22°27'S. 42°59'W), Teresópolis, Rio de Janeiro, Brazil, 18–22.VIII.2001, Equipe Biota coll. (IBSP 85982).

Other material examined. BRAZIL, **Rio de Janeiro:** Teresópolis, Parque Nacional da Serra dos Órgãos (22°27'S, 42°59'W), 18–22.VIII.2001, Equipe Biota coll., 2♂ (IBSP 41717; SEM). **São Paulo:** Salesópolis, Estação Biológica de Boracéia (23°38'S,

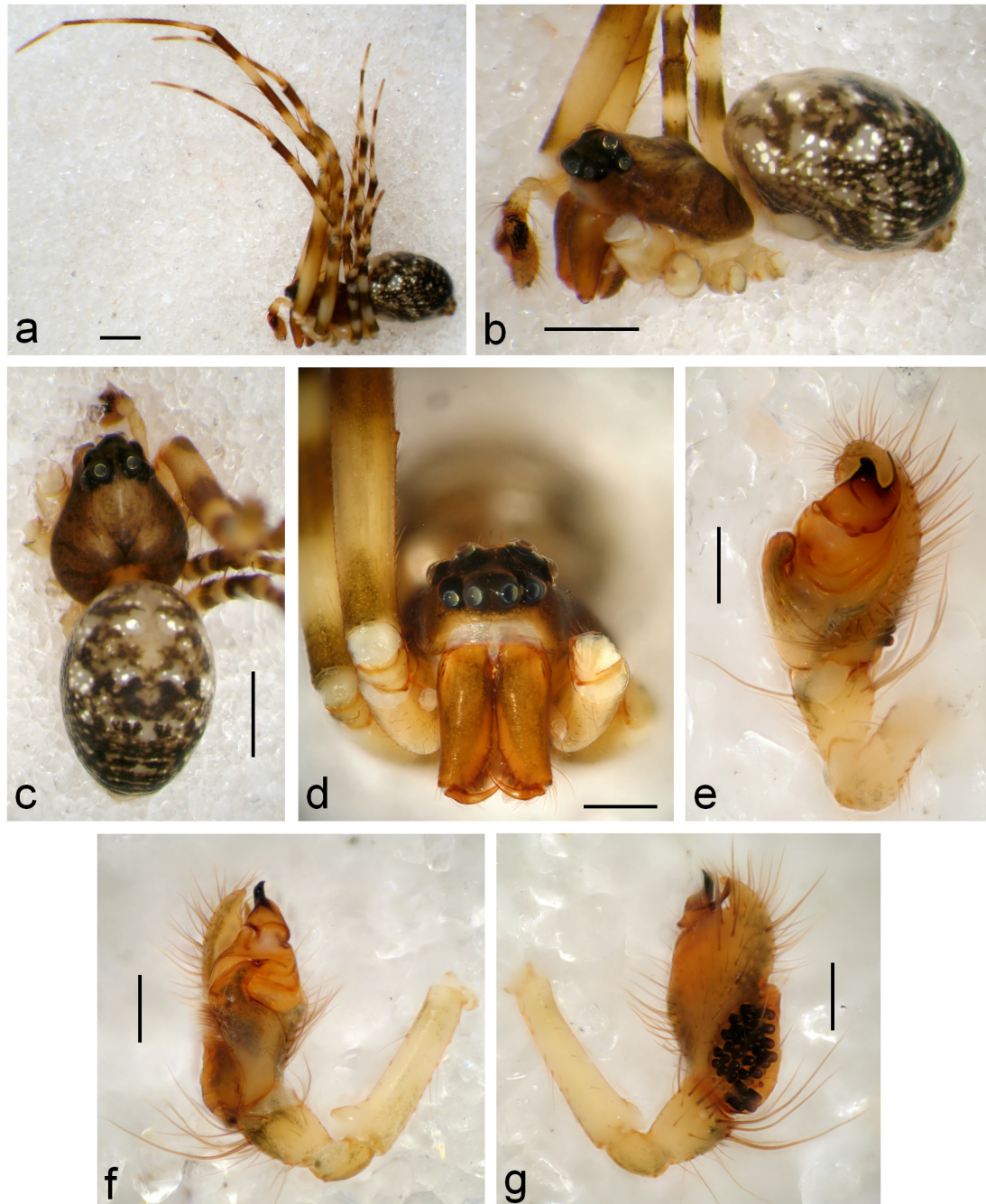


FIGURE 18. *Azilia fabulosa* sp. nov. Male (IBSP 41731) a–d habitus, a lateral view; b, same, detail; c, dorsal view; d frontal view; e–g left palp, e ventral view, e prolateral view; f retrolateral view. Scales: 0.25.

45°52'W), 18–24.V.2003, Equipe Biota coll., 3♀ (IBSP 41732); *Jundiaí*, Reserva Municipal da Serra do Japi (23°14'S, 46°58'W), 05–06.X.2013, Alunos Curso USP coll., 2♀ (IBSP 229466); *Cotia*, Caucaia do Alto, Reserva Florestal do Morro Grande (23°41'19"S, 47°01'15"W), 18–28.VI.2002, Equipe Biota coll., 1♂ (IBSP 85937); same data as previous, 1♀ (IBSP 85939); same data as previous, 1♀ (IBSP 85941); same locality as previous, 13–30.VI.2002, Equipe Biota coll., 2♀ (IBSP 97325); same data as previous, 3♀ (IBSP 97327); same locality as previous, III.2003, A. Nogueira coll., 2♀ (IBSP 85967); same data as previous, 1♂ (IBSP 85964); same locality

as previous, 28.IV–03.V.2002, A. Nogueira coll., 1♂ (IBSP 85963); André Fragment, 19.III.2003, A. Nogueira coll., 1♂ (IBSP 81521); Quilombo Fragment, 24.III.2003, A. Nogueira coll., 1♂ (IBSP 85965); same locality as previous, 10.III.2003, A. Nogueira coll., 1♂ (IBSP 85966); same locality as previous, 10.III.2003, F.S. Cunha coll., 2♀ (IBSP 41711); Grilos Fragment, 11.III.2003, A. Nogueira coll., 1♂ (IBSP 85968); *Itirapina* (22°15'10"S, 47°49'22"W), 2001, A. Nogueira coll., 1♀ (IBSP 41801); *Tapirai* (23°57'49"S, 47°30'26"W), 11–13.IX.1997, C. A. Rheims & V. C. Onófrio coll., 1♀ (IBSP 13246).

Etymology. The specific epithet is an adjective

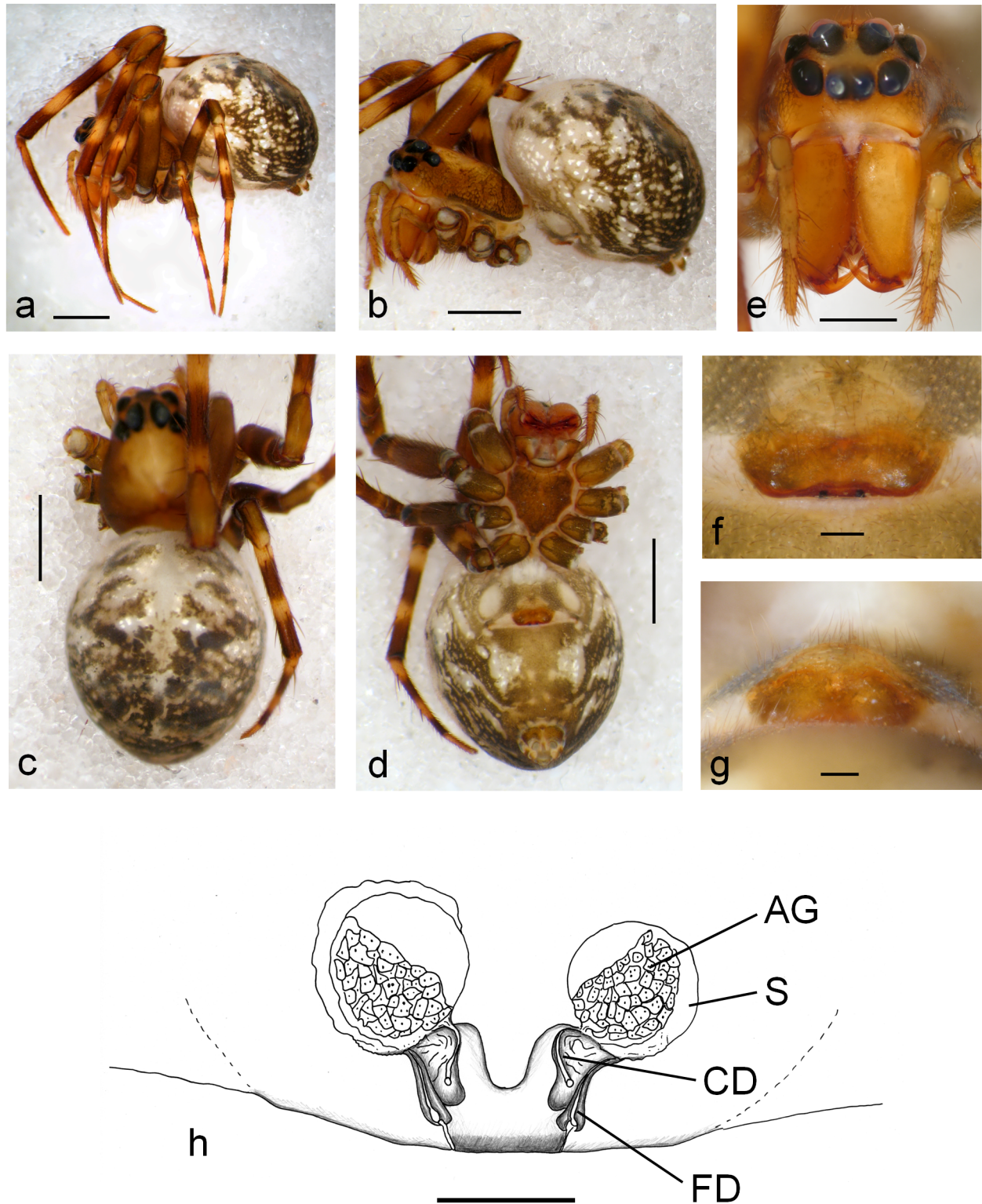


FIGURE 19. *Azilia fabulosa* sp. nov. Female (IBSP 41708) a–e habitus, a lateral view; b, same, detail; c dorsal view; d ventral view; e frontal view; f–h epigynum, f ventral view; g posterior view; h dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

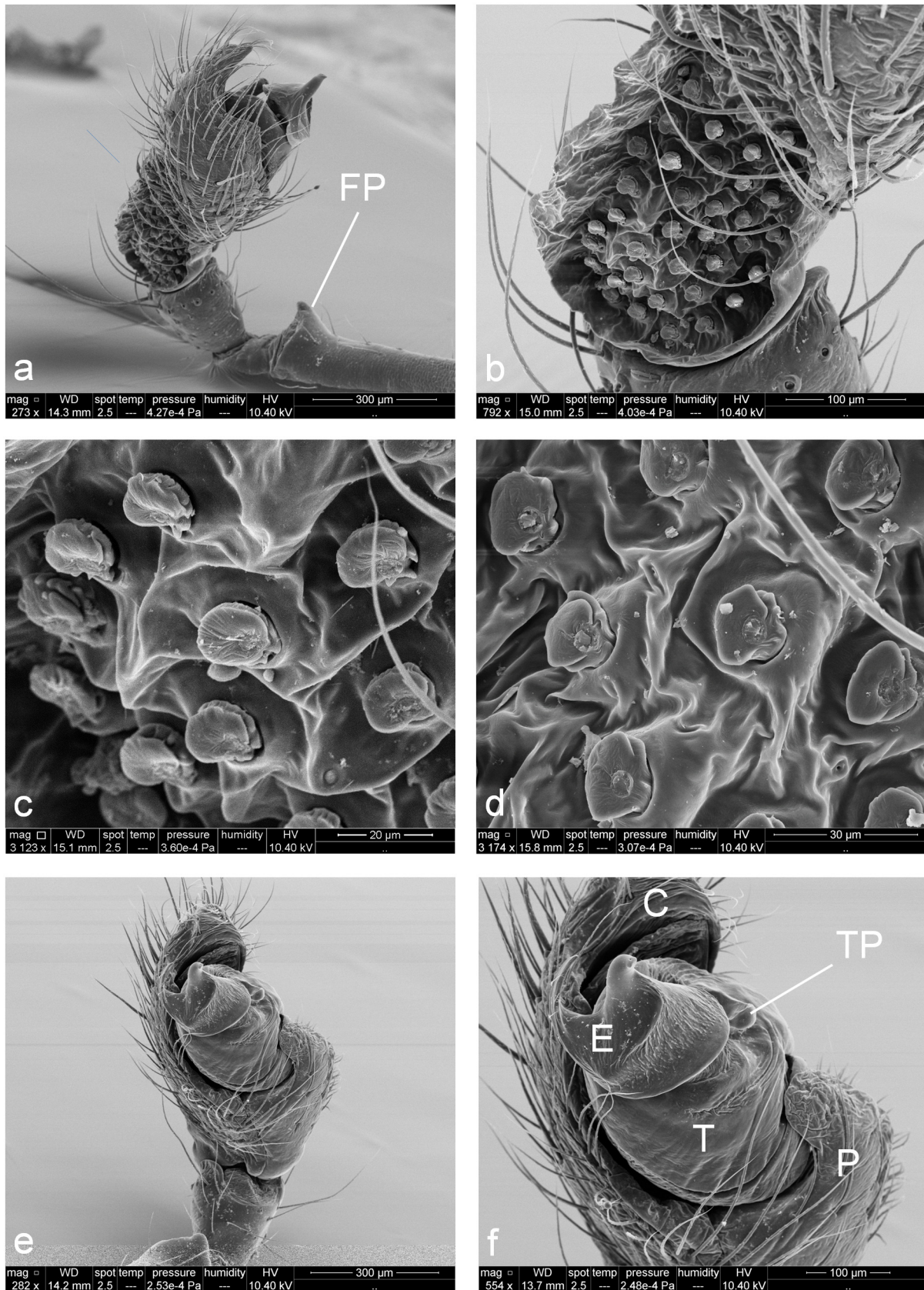


FIGURE 20. *Azilia fabulosa* sp. nov. Male palp (IBSP 41717) a retrolateral view; b same, detail; c, cymbial projections, detail; d, same, detail; e ventral view, f same, detail. Abbreviations: C conductor; E, embolus; FP, distal projection of palpal femur; P, paracymbium; T, tegulum, TP, tegular projection.

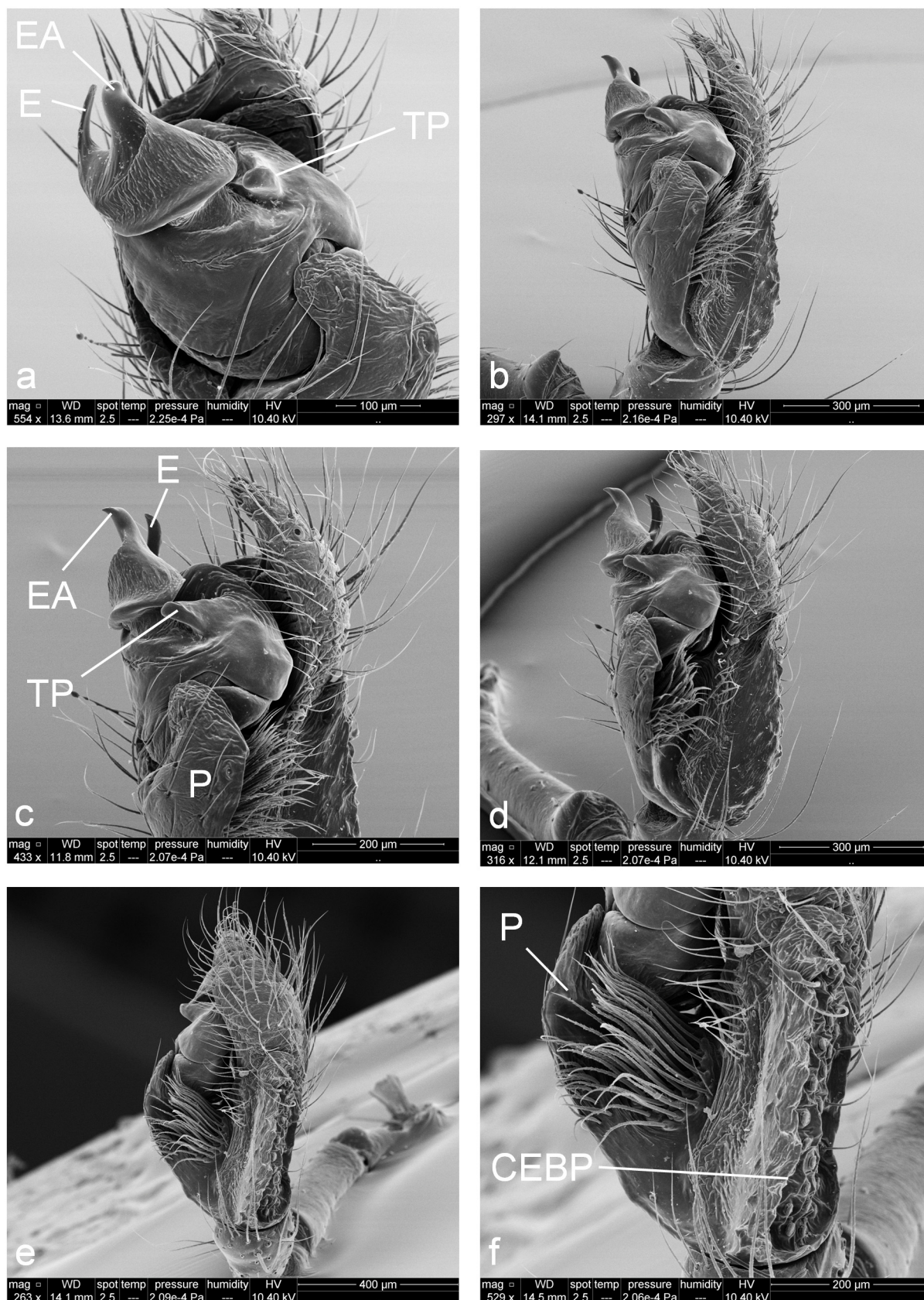


FIGURE 21. *Azilia fabulosa* sp. nov. Male palp (IBSP 85982) a ventral view; b retrolateral view; c, same, detail apical; d, retro-dorsal view; e dorsal view, f same, cymbium base, detail. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; P, paracymbium; T, tegulum, TP, tegular projection.

from Portuguese language for the bizarre, but beautiful, structures of the cymbium.

Diagnosis. Males of *Azilia fabulosa* sp. nov. are identified from other species by the cymbium with a widely excavated CEBP with a set of more than 30 modified setae (Figs 18g, 19a–d) and the presence of a tuft of long bristles at the base of the paracymbium (Figs 21e, f). Females differ from congeners by the narrow epigynal plate, with a straight posterior margin (Fig. 19f) and globose spermathecae (Fig. 19h) (vs enlarged, generally rectangular epigynal plate and elongated spermathecae) (e.g., *A. supimpa* sp. nov., fig. 23g, i).

Description. **Male** (Holotype, IBSP 41731). Carapace (Figs 18b, c) orange, with dark brown edges and black eye area. Clypeus yellowish. Chelicerae (Fig. 18d) reddish brown with three promarginal and four retromarginal teeth. Maxillae and labium brown, distally whitish. Sternum brown. Legs cream-colored with brown bands. Abdomen oval, dorsally grayish black, with an anterior area with white guanine spots, laterally and ventrally blackened with white streaks (Figs 18a–d). Measurements: total length 4.3; carapace 2.1 long, 1.6 wide. Eye diameters and interdistances: AME 0.08; ALE 0.10; PME 0.09; PLE 0.10; AME–AME 0.04; AME–ALE 0.13; PME–PME 0.07. Femur I 3.4; Patella + Tibia I 4.1; Metatarsus I 5.6; Tarsus I 1.1; Patella+Tibia II 2.8; Patella+Tibia III 1.4; Patella+Tibia IV 2.1. Palpus: tibia (0.4) measuring one third of the length of the cymbium (0.5) (Figs 18g, 20e); CEBP very large with the modified setae in a wide rounded groove; paracymbium shorter than the cymbium length, covered with few macrosetae, enlarged medially and rounded at tip; tegular projection elongated and triangular, close to the base of the embolus; embolus lamelliform, short and with narrow base, with an embolar apophysis, presenting very large base (Figs 18e–g, 20f, 21a, c).

Female (Paratype, IBSP41708). Coloration as in male, except carapace cream-colored on the median region and venter of the abdomen with two white paramedian spots (Figs 19a–e). Measurements: total length 5.4; Carapace 2.4 long, wide 1.8. Eye diameters and interdistances: AME 0.08; ALE 0.10; PME 0.12; PLE 0.11; AME–AME 0.04; AME–ALE 0.14; PME–PME 0.09. Chelicerae with teeth as in male. Femur I 3.6; Patella+Tibia I 4.3; Metatarsus I 3.6; Tarsus I 1.2; Patella+Tibia II 3.3; Patella+Tibia III 1.8; Patella+Tibia IV 2.5. Epigynal plate with sclerotized posterior edge and absent lobe; median plate hourglass shaped (Fig. 19f, g); spermathecae globose, separated by their diameters; accessory glands generally occupying half of the spermatheca wall; uncoiled copulatory ducts, shorter than spermathecae; fertilization ducts short (Fig. 19h).

Variation. Males (n=4): total length 4.0–4.3; carapace length 2.1–2.3; femur I length 3.0–3.4. Females (n=10): total length 5.4–7.2; carapace length 2.3–3.2; femur I length 3.0–4.1.

Distribution. Known from southeast of Brazil, in the states of Rio de Janeiro and São Paulo (Fig. 56).

Azilia supimpa sp. nov.

Figures 22a–h, 23a–i, 24a–f, 25a–f, 56

Type material. Holotype ♂, Barragem do Rio Biritiba (23°36'12.144"S, 46°5'13.653"W), Biritiba Mirim, São Paulo, Brazil, collected in 2003, Equipe IBSP coll. (IBSP 87914). Paratypes: 1 ♀, Parque Nacional da Serra da Bocaina (23°2'30"S, 44°39'42"W), São José do Barreiro, São Paulo, Brazil, 28.IV–03.V.2002, Equipe Biota coll. (IBSP 41710).

Other material examined. BRAZIL, São Paulo: São José do Barreiro, Parque Nacional da Serra da Bocaina (23°2'30"S, 44°39'42"W), 28.IV–03.V.2002, Equipe Biota coll., 1 ♂ (IBSP 41709; SEM).

Etymology. The specific epithet is a Brazilian adjective indicating ostentation, in relation to the exotic cymbium structure.

Diagnosis. Males of *A. supimpa* sp. nov. resemble *A. catita* sp. nov. and *A. guapa* sp. nov. by the presence of a basal projection on the paracymbium, differing from them by the presence of three embolar apophyses (Fig. 25d–f), while *A. catita* sp. nov. has only one embolar apophysis (Fig. 30e) and *A. guapa* sp. nov. has two embolic apophyses (Fig. 35f). Females of *A. supimpa* sp. nov. resemble those of *A. joinha* sp. nov. (Fig. 27g) by the narrow and rectangular epigynum median plate, and the shallow genital openings ventrally delineated by two comma-shaped sclerotized edges formed by the posterior edge median projection, but can be differentiated from the other species by the deeper, more sclerotized pits edges, and the more posteriorly projected posterior border (Fig. 23h).

Description. **Male** (Holotype, IBSP87914). Carapace yellowish, with brown edges and dark brown cephalic area (Fig. 22b, c). Clypeus orange (Fig. 22d). Chelicerae reddish brown (Fig. 22d) with three promarginal teeth with different sizes (Fig. 24a) and cheliceral glands in a rounded area (Fig. 24b). Maxillae and labium greenish gray with whitish distal area. Sternum brown with a yellow distal median band. Legs yellowish, banded with brown, except tarsi and metatarsals I–II, both without bands. Abdomen oval, dorsally with a cream-colored stripe, with lateral bands of black spots and with grayish black striations, laterally with black longitudinal striations and ventrally greenish gray with sparse white guanine spots (Fig. 22a–d). Measurements: total length 3.8; Carapace 2.1 long, 1.8 wide. Eye diameters and interdistances: AME 0.14; ALE 0.16; PME 0.17; PLE 0.16; AME–AME 0.08; AME–ALE 0.19; PME–PME 0.04. Femur I 3.7; Patella+Tibia I 4.8; Metatarsus I 3.8; Tarsus I 1.4; Patella+Tibia II 3.2; Patella+Tibia III 1.5; Patella+Tibia IV 2.4. Conspicuous rounded femoral projection (Fig. 24c). Palpus: tibia (0.6) slightly shorter than cymbium (0.8) (Fig. 16e, f); cymbial ectobasal process large, with numerous strong setae (Figs 22h, 24e, f, 25a, b); paracymbium wide, triangular, slightly longer than half of the cymbium length, and presenting a short and smooth basal projection (Figs 16h, 18d, e); tegular projection short and conical (Figs 24d, 25d); embolus filiform, enlarged at tip, with three basal embolic apophysis, two short proximal and prolateral, and one long, curved and retrolateral (Figs 22g, 24d, 25d–f).

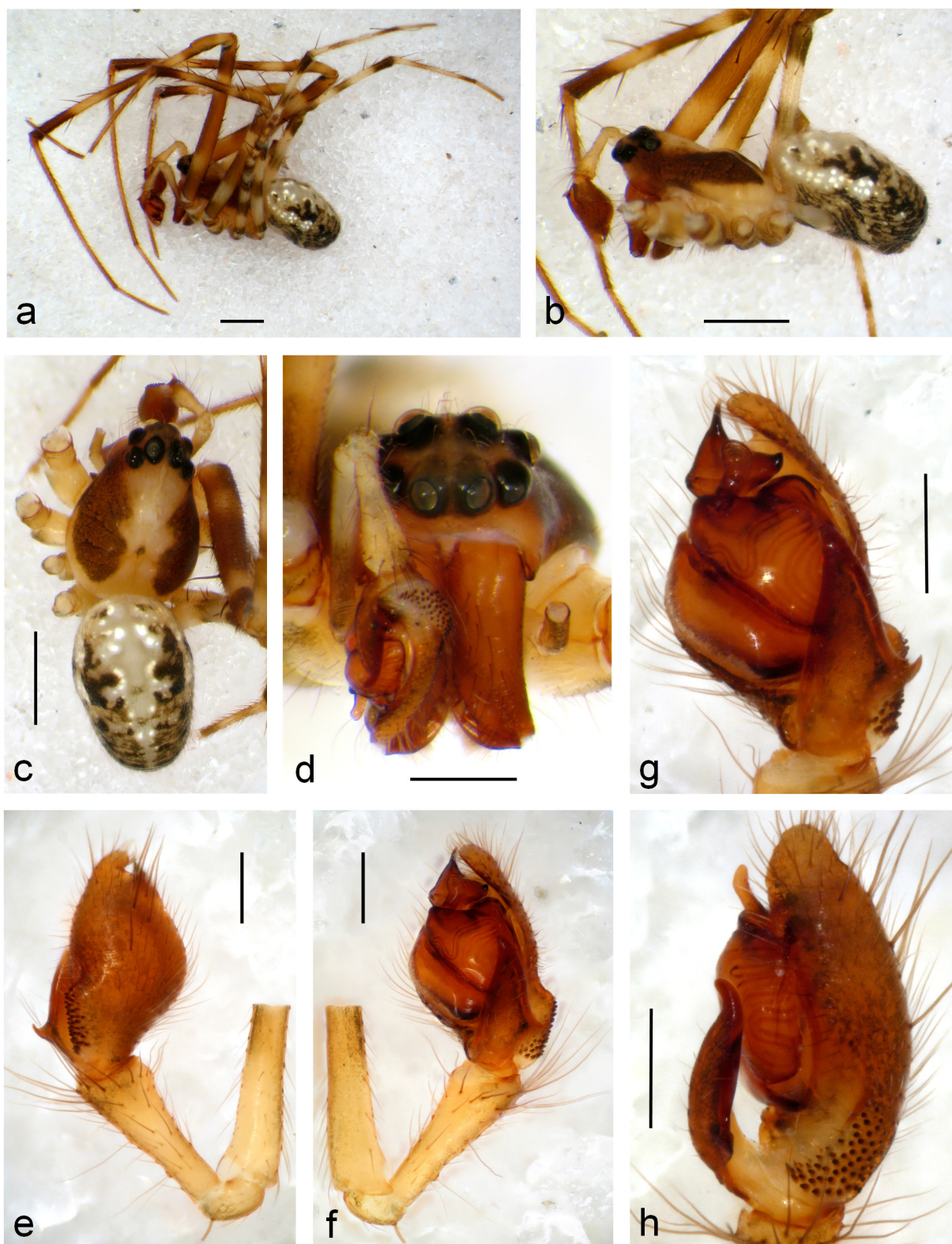


FIGURE 22. *Azilia supimpa* sp. nov. Male (IBSP 87914) a–d habitus, a lateral view; b, same, detail; c, dorsal view; d frontal view; e–h left palp, e dorsal view, f ventroretrolateral view; g ventral view; h retrolateral view. Scales: 0.25.

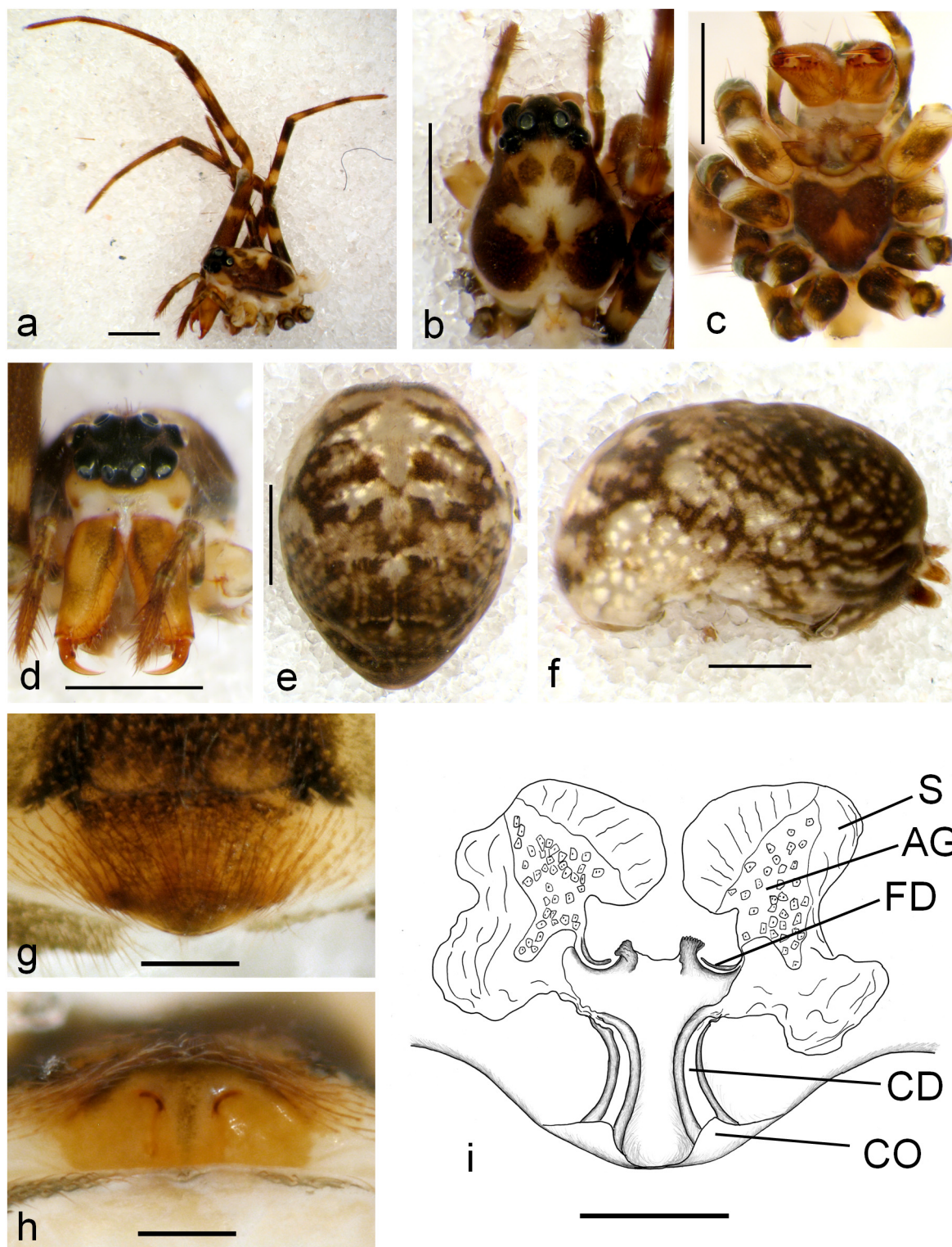


FIGURE 23. *Azilia supimpa* sp. nov. Female (IBSP 41710) a–f habitus, a lateral view; b, carapace, dorsal view; c same, ventral view; d same, frontal view; e abdomen, dorsal view; f same, lateral view; g–i epigynum, g ventral view; h posterior view; i dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

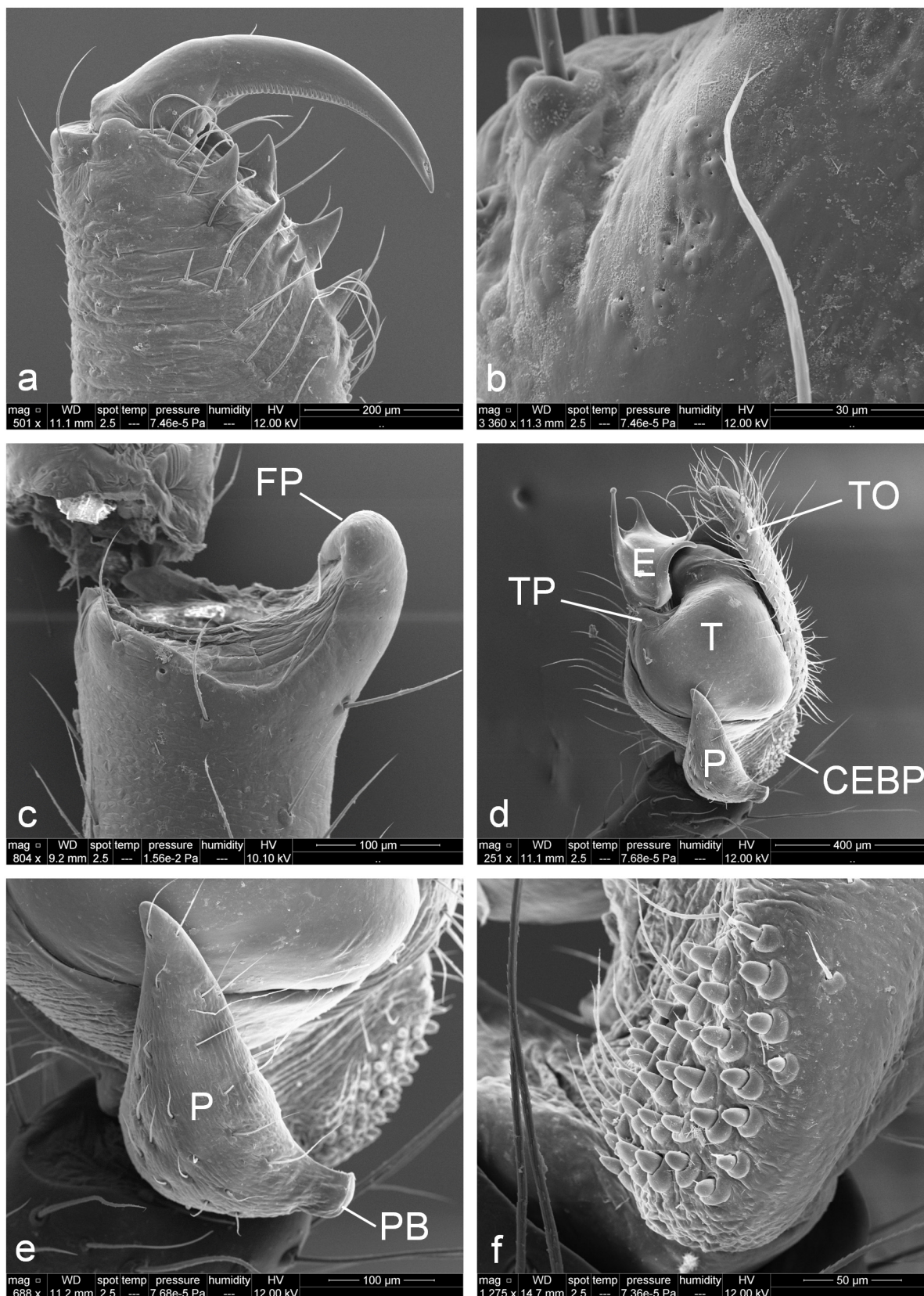


FIGURE 24. *Azilia supimpa* sp. nov. Male (IBSP 41709): a helicera, ventral view; b heliceral glands, ventral view; c distal projection of palpal femur; d–f palp; d bulb, ventral view; e paracymbium, retrolateral view; f cymbial ectobasal projection, dorsal view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; FP, distal projection of palpal femur; P, paracymbium; PB, paracymbium basal projection; T, tegulum, TO, tarsal organ; TP, tegular projection.

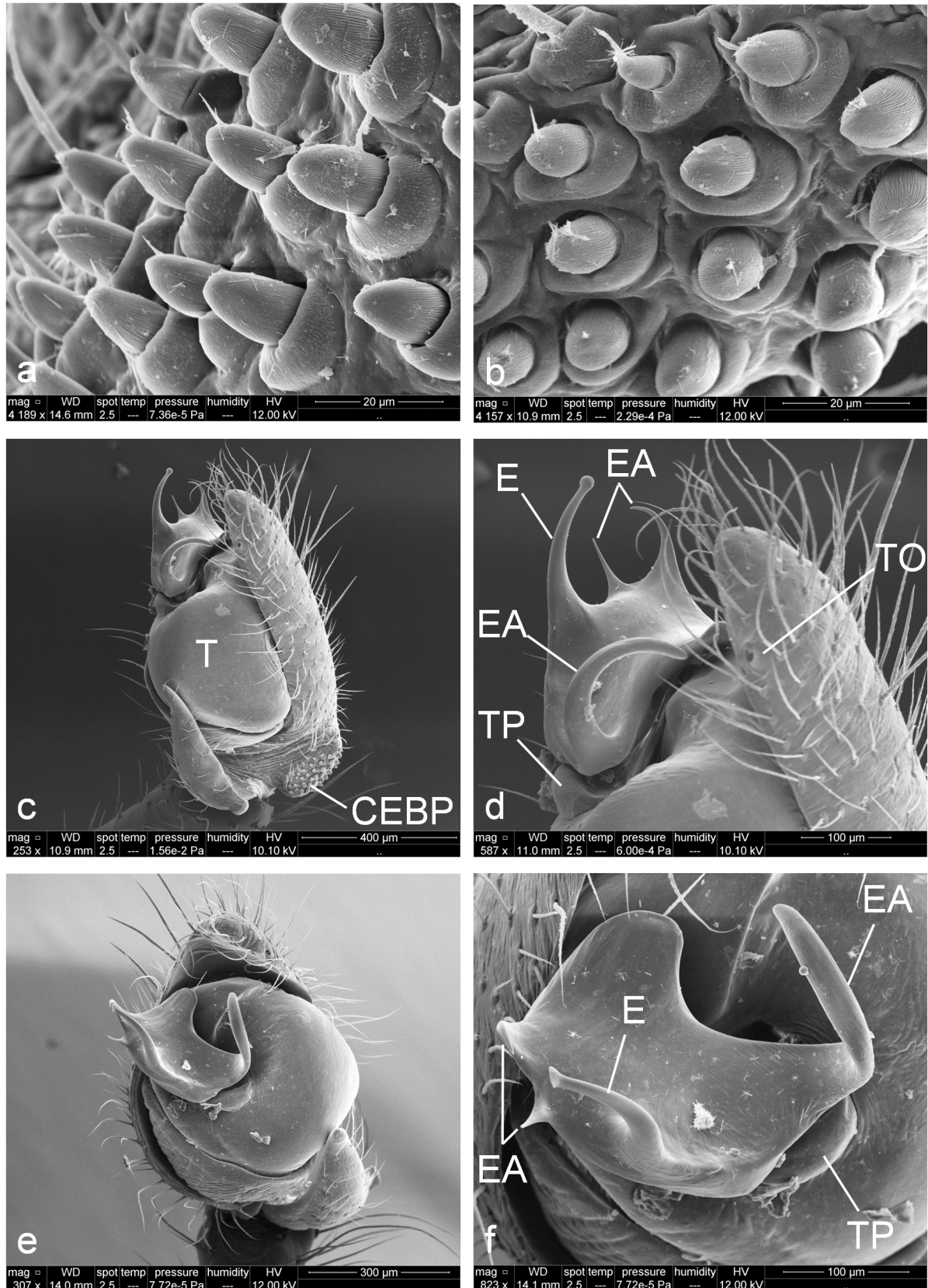


FIGURE 25. *Azilia supimpa* sp. nov. Male palp (IBSP 41709): a cymbial ectobasal projection, dorsal view, detail; b same, detail; c bulb, retrolateral view; d same, detail apical; e same, ventral; f embolar area, detail, anterior view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; PB, paracymbium basal projection; T, tegulum, TO, tarsal organ; TP, tegular projection.

Female (Paratype, IBSP 41710). Coloration as in male, except cephalic area black, sternum black with central yellow diamond spot, and abdomen oval gray, with dorsal black striations (Figs 23a–g). Measurements: total length 5.7; Carapace 2.1 long, wide 1.7. Eye diameters and interdistances: AME 0.16; ALE 0.20; PME 0.18; PLE 0.20; AME–AME 0.10; AME–ALE 0.24; PME–PME 0.18. Chelicerae with teeth as in male. Femur I 2.8; Patella+Tibia I 3.1; Metatarsus I 2.1; Tarsus I 1.0; Patella+Tibia II 2.4; Patella+Tibia III 1.5; Patella+Tibia

IV 1.8. Epigynal plate with posterior border without lobe (Fig. 23h); spermathecae large, hourglass-shaped, showing median narrowing; accessory glands in the middle area of the spermathecae; not coiled copulatory ducts, shorter than spermathecae; fertilization ducts short, curved and positioned in the inner median area of the spermathecae (Fig. 23j).

Distribution. Known only from the east of the state of São Paulo, Brazil (Fig. 56).

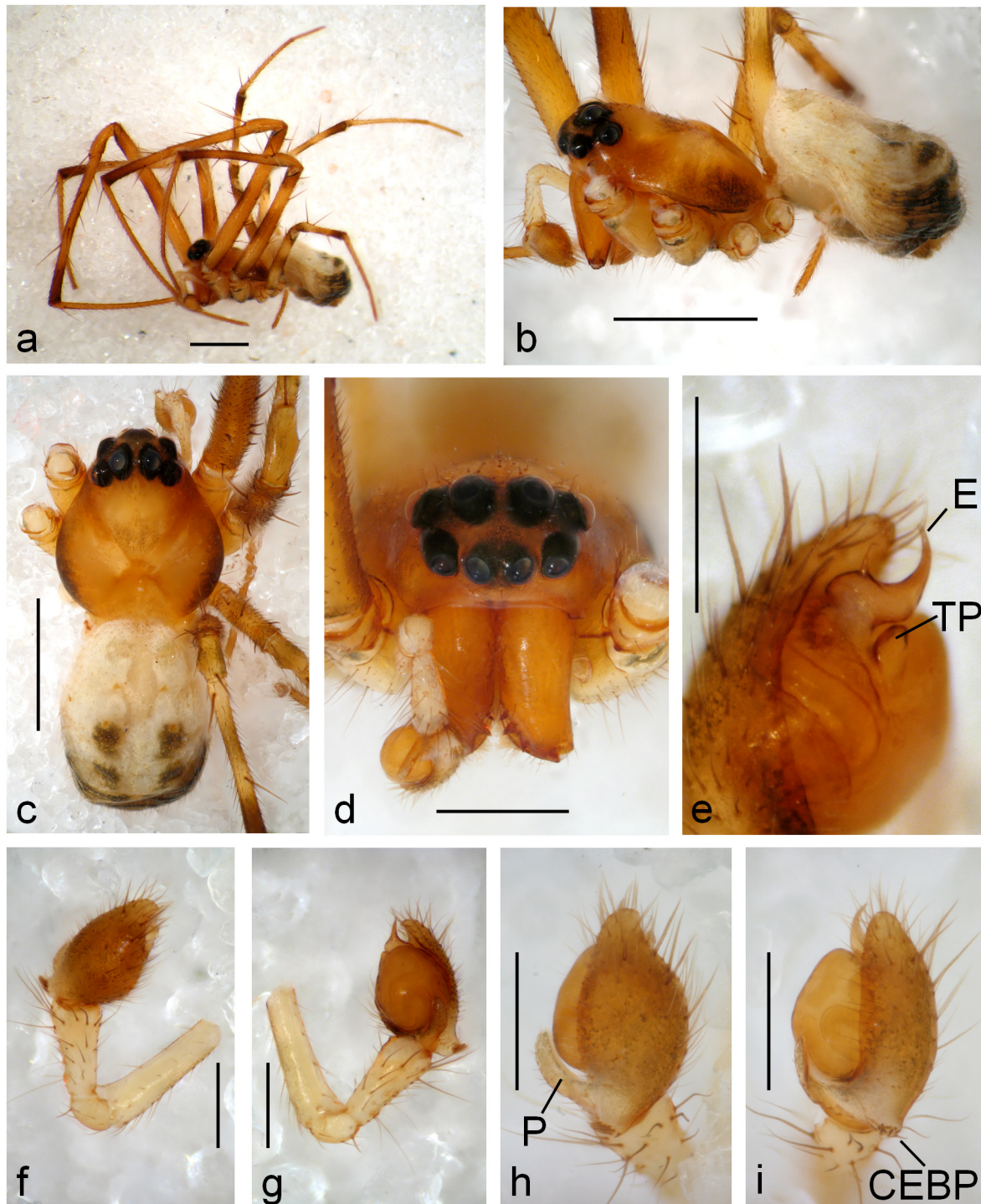


FIGURE 26. *Azilia joinha* sp. nov. Male (IBSP 85975) a–d habitus, a lateral view; b, same, detail; c, same, dorsal view; d frontal view; e–i left palp, e bulb, prolateral view, f prolateral view; g retrolateral view; h dorsal view; i prolateral view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; P, paracymbium; TP, tegular projection. Scales: 0.25.

***Azilia joinha* sp. nov.**

Figures 26a–i, 27a–h, 28a–d, 29a–d, 58

Type material. Holotype ♂ and paratype ♀, Floresta da Cicuta (22°32'53"S, 44°5'34"W), Volta Redonda, Rio de Janeiro, Brazil, 11–18.VI.2001, Equipe Biota coll.

(IBSP 85975). Paratypes: Reserva Florestal do Morro Grande (23°36'14"S 6°55'8"W), Cotia, São Paulo, Brazil, III/2003, 1♀ (IBSP 85985); 1♀ (IBSP 85990); 1♀ (IBSP 85991); 1♂ (IBSP 85983).

Other material examined. BRAZIL, Bahia: Una, Reserva Biológica do Una, Mata Brauna (15°10'S,

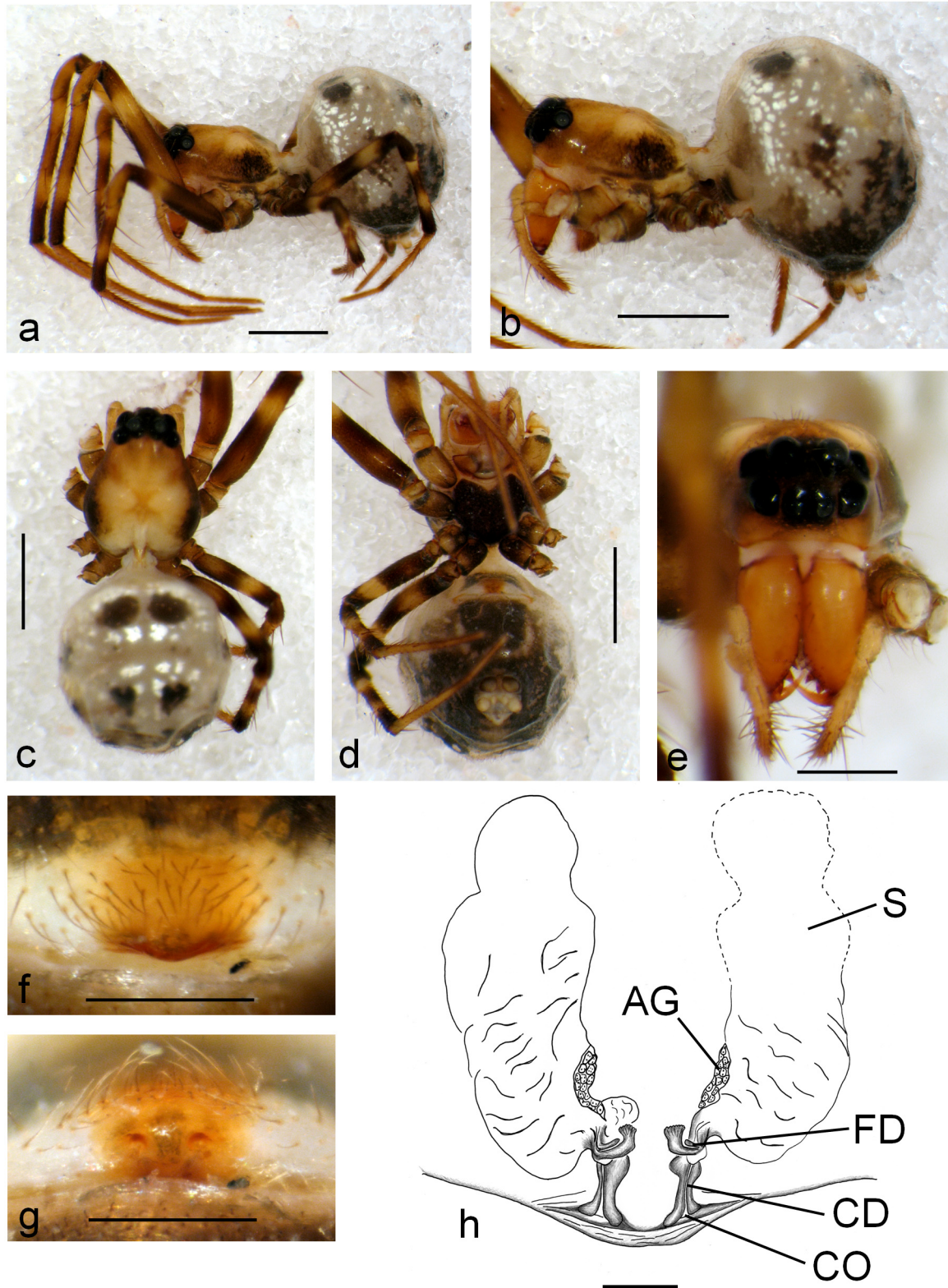


FIGURE 27. *Azilia joinha* sp. nov. Female (IBSP 85975) a–e habitus, a lateral view; b, same, detail; c same, dorsal view; d same, ventral view; e same, frontal view; f–h epigynum, f ventral view; g posterior view; h dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

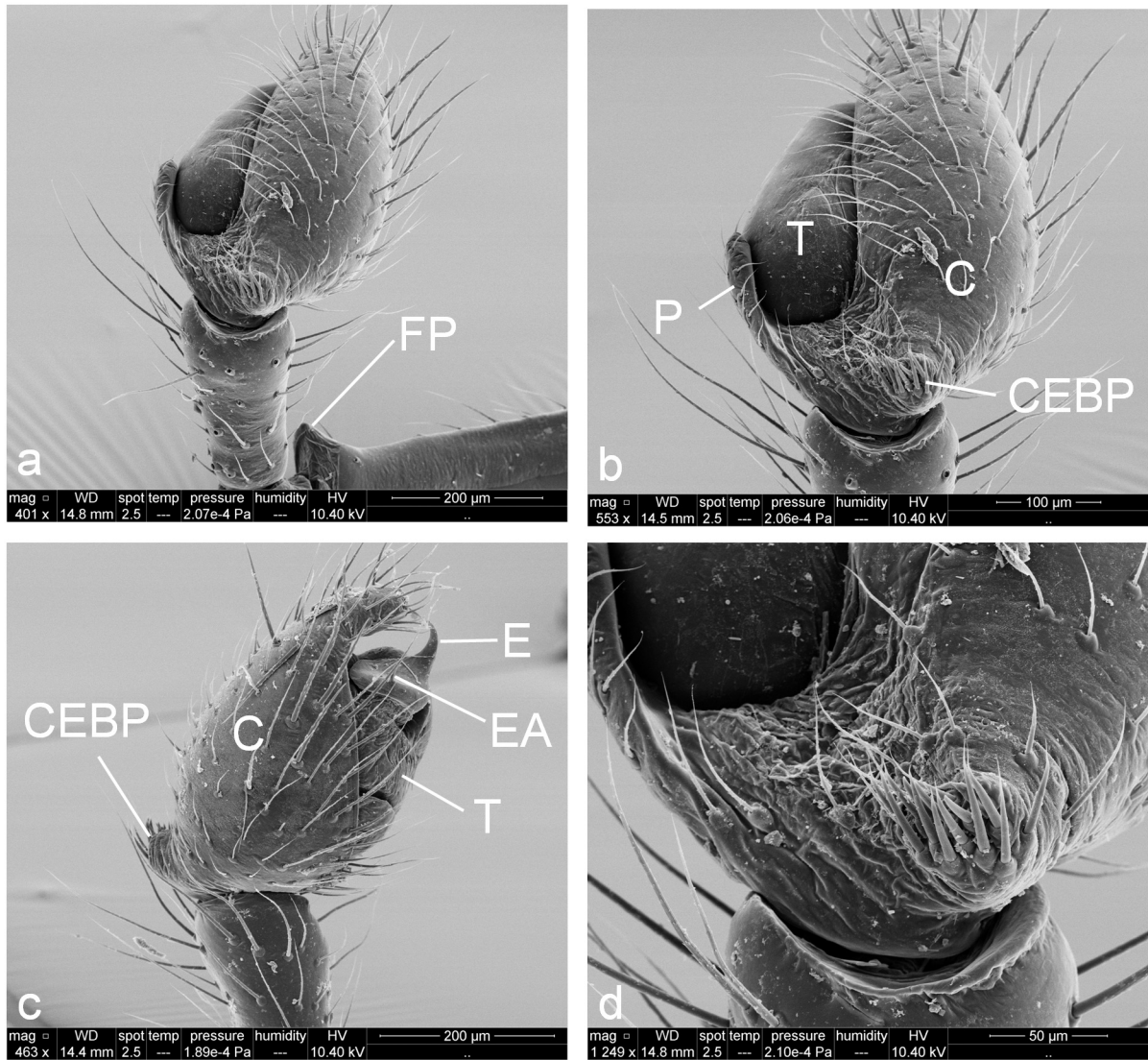


FIGURE 28. *Azilia joinha* sp. nov. Male left palp (IBSP 41716) a–d retrolateral view, b same, detail; c prolateral view; d cymbial ectobasal projection, retrolateral view. Abbreviations: C, cymbium; CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis, FP, distal projection of palpal femur; P, paracymbium; T, tegulum.

39°03'W), 21.XI.2000, D.F. Candiani coll., 1♂ (IBSP 42297); **Minas Gerais:** *Catas Altas*, Reserva Particular do Patrimônio Natural da Serra do Caraça (20°05'S, 43°29'W), 24.IV–01.V.2002, Equipe Biota coll., 1♂, 1♀ (IBSP 41716; SEM); *Caeté*, Cave AP-31, 06.VIII.2011, Empresa Amplo coll., 1♂ (IBSP 161962); *Mariana*, 2009, R. Bessi coll., 1♂ (IBSP 276654); **Rio de Janeiro:** *Petrópolis*, Fazenda Rancho Porto da Roça, km 78.5, BR 40 (22°30'S, 43°06'W), 08–15.II.2002, F.S. Cunha coll., 1♂ (IBSP 41713); *Resende*, Parque Nacional de Itatiaia (22°22'31"S, 44°39'44"W), 08–15.VI.2001, Equipe Biota coll., 1♂ (IBSP 85944); *Volta Redonda*, Mata da Cicuta (22°24'–22°38'S, 44°09'–44°20'W), 11–18.VI.2001, F.S. Cunha *et al.* coll., 1♂ (IBSP 33065); same locality as previous, 11–18.VI.2001, Equipe Biota coll., 1♀, 1 imm. (IBSP 85979); **São Paulo:** *Ubatuba*, Fazenda Angelim (23°23'6"S, 45°03'8"W), 14.II.2012, Alunos Curso USP coll., 1♂ (IBSP 223611); *São Paulo*,

Reservatório Guarapiranga, Jardim Ângela (23°40'17"S, 46°43'39"W), 07–13.IV.2005, I. Cizauskas & C.R.M. Garcia coll., 1♂ (IBSP 61800); *Parque Estadual Serra da Cantareira*, Sede (23°24'5"S, 46°35'24"W), 22.XII.2000, 1♀ (IBSP 81514); *Iporanga*, Parque Estadual Turístico do Alto da Ribeira (27°32'S, 48°41'W), 08–15.XI.2001, Equipe Biota coll., 1♂ (IBSP 41714); *Cotia*, Caucaia do Alto (23°41'19"S, 47°01'15"W), 18–28.VI.2002, Equipe Biota coll., 1♀ (IBSP 85936); same data as previous, 1♀ (IBSP 85943); same locality as previous, 18–26.VI.2002, Equipe Biota coll., 1♂ (IBSP 236777); *Reserva Florestal do Morro Grande* (23°36'14"S, 6°55'8"W), 23.III.2003, A. Nogueira *et al.* coll., 1♀ (IBSP 85986); same data as previous, 1♀ (IBSP 85994); same locality as previous, III.2003, A. Nogueira *et al.* coll., 1♀ (IBSP 85988); same data as previous, 1♂ (IBSP 85995); same data as previous, 1♀ (IBSP 85997); same data as previous, 1♀ (IBSP 85999); same locality as previous, 26.III.2003, A.

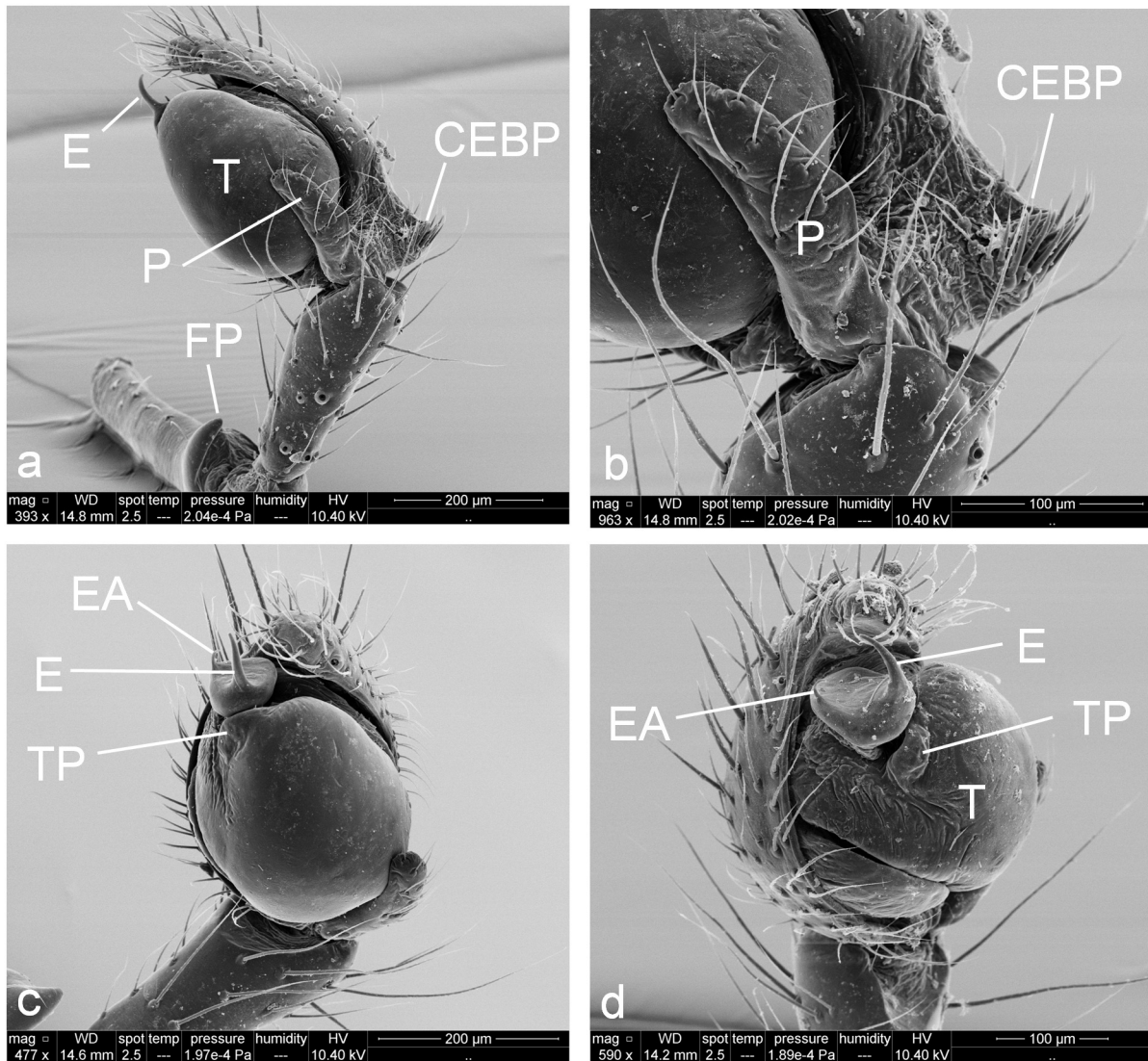


FIGURE 29. *Azilia joinha* sp. nov. Male left palp (IBSP 85987) a–d retrolateral view, b same, detail; c ventral view; d prolatero-ventral view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; FP, distal projection of palpal femur; P, paracymbium; T, tegulum; TP, tegular projection.

Nogueira *et al.* coll., 1♂ (IBSP 85996); Pedra Fragment, 13.III.2003, A. Nogueira *et al.* coll., 1♀ (IBSP 85984); same data as previous, 1♀ (IBSP 85987; SEM); Lacerda Fragment, 16.III.2003, A. Nogueira *et al.* coll., 1♀ (IBSP 85989); André Fragment, III.2003, A. Nogueira *et al.* coll., 1♂ (IBSP 85992); same locality as previous, 19.III.2003, A. Nogueira *et al.* coll., 1♀ (IBSP 85993); Pedroso Fragment, 20.III.2003, A. Nogueira *et al.* coll., 1♂ (IBSP 85998); **Paraná:** *Candói*, Usina Hidrelétrica de Segredo (25°47'25"S, 52°6'45"W), 1996, R. Bertani coll., 1♀ (IBSP 7966);

Etymology. The specific epithet is a Brazilian adjective that indicates a small jewel among the *Azilia* species.

Diagnosis. Males of *Azilia joinha* sp. nov. differ from those of the other species by presenting a concave cymbial ectobasal process projected with 10–15 spines and paracymbium without basal projection on the

palpus (Figs 26h–i, 28a–d, 29b). Females differ from the others by the epigynum posterior border convex and heavily sclerotized (Fig. 27f, g), median plate similar to *A. supimpa* sp. nov., but differ by the more sclerotized edge and posterior plate less sclerotized with median area narrow (Fig. 23g–h) (vs less sclerotized edge and sclerotized enlarged median area in *A. joinha* sp. nov.) (Fig. 27f–g).

Description. **Male** (Holotype, IBSP 85975). Carapace orange brown with blackened lateral edges. Eye region black (Fig. 26a–c). Clypeus and chelicerae orange (Fig. d). Maxillae and labium orange, with white distal area. Sternum orange-brown, formerly lighter. Legs orange with black bands on coxae III–IV and distal on tibiae I–II. Abdomen oval, dorsally cream-colored with four black spots on the posterior third and black posterior border. Ventrally dark gray, with orange spinnerets (Figs 26a–c). Measurements: total length 2.8; Carapace 1.3

long, 1.2 wide. Eye diameters and interdistances: AME 0.10; ALE 0.12; PME 0.14; PLE 0.12; AME–AME 0.10; AME–ALE 0.14; PME–PME 0.10. Chelicerae with three promarginal and four retromarginal teeth. Femur I 2.7; Patella+Tibia I 3.2; Metatarsus I 2.7; Tarsus I 1.0; Patella+Tibia II 2.3; Patella+Tibia III 1.1; Patella+Tibia

IV 1.6. Palpus: tibia (0.75) slightly shorter in length than the cymbium (0.8) (Fig. 26f, g); cymbial ectobasal process projected retrolaterally (Figs 26i, 28a–d, 29a, b), paracymbium shorter than the cymbium length, covered with macrosetae, without basal projection (Figs 26h, 29a, b); tegular projection rounded and a half-moon shape

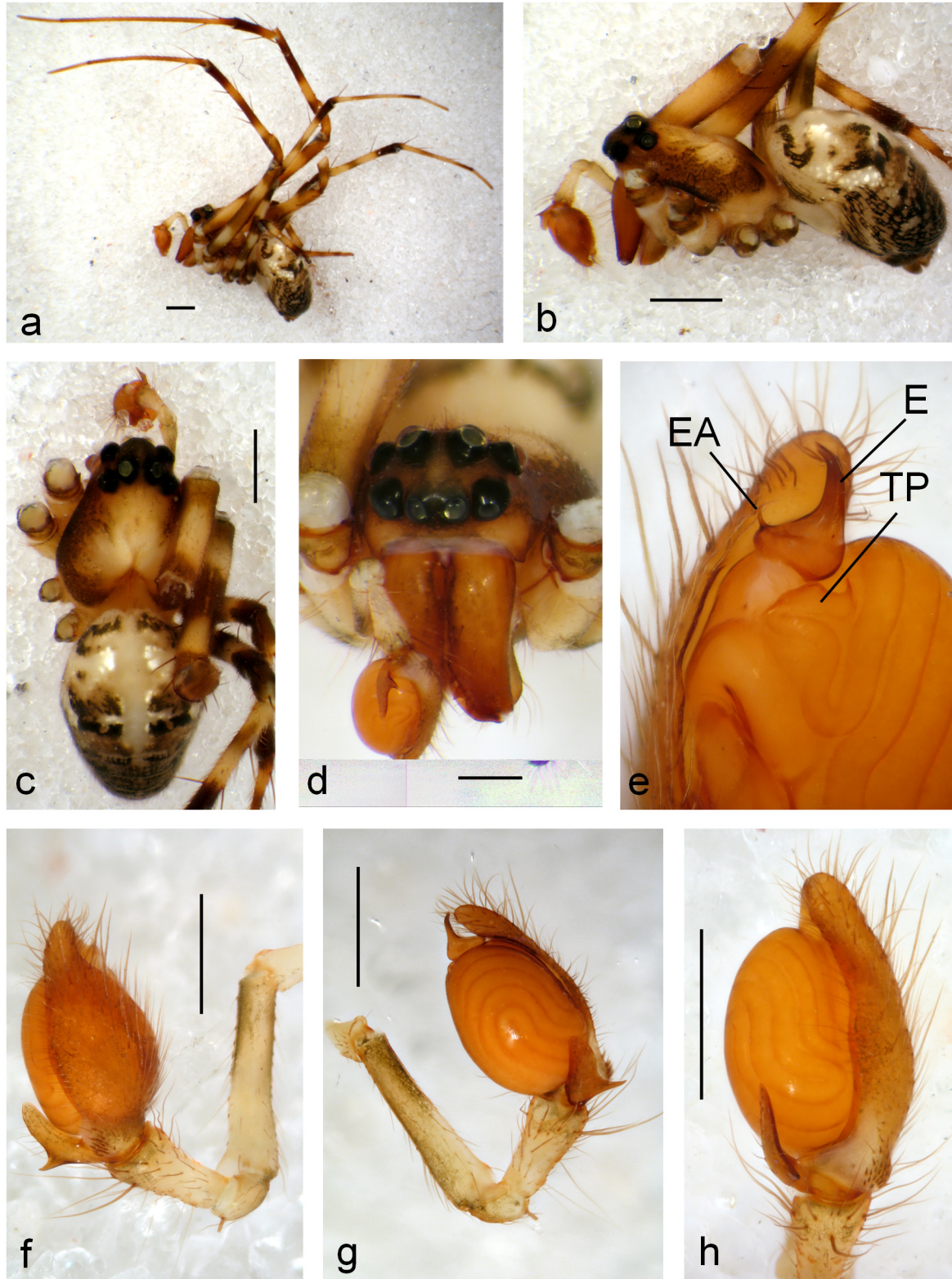


FIGURE 30. *Azilia catita* sp. nov. Male (IBSP 81518) a–d habitus, a lateral view; b, same, detail; c, same, dorsal view; d same, frontal view; e–h left palp, e bulb apex, ventral view, f prolateral view; g retrolateral view; h same, retrolateral view. Abbreviations: E, embolus; EA, embolar apophysis; TP, tegular projection. Scales: 0.25.

(Figs 26a, 29c, d); embolus with large base and with one short embolic basal apophysis (Fig. 29c, d).

Female (Paratype, IBSP 85975). Coloration as in male, except sternum almost black, bands on legs and venter of abdomen almost black (Fig. 27a–e). Measurements total length 3.7; Carapace 1.5 long, wide 1.2. Eye diameters and interdistances: AME 0.12; ALE 0.14; PME 0.14; PLE 0.14; AME–AME 0.06; AME–ALE 0.18; PME–PME 0.10. Chelicerae with teeth as in male. Femur I 2.1; Patella+Tibia I 2.4; Metatarsus I 1.5; Tarsus I 1.0; Patella+Tibia II 1.9; Patella+Tibia III 1.0; Patella+Tibia IV 1.5. Epigynal plate with posterior border slightly projected and without a lobe (Fig. 21f); median plate subtriangular (Fig. 12g), spermathecae cylindrical, with small accessory glands, arranged on the inner base, forming groups with few glands; short and not coiled copulatory ducts; fertilization ducts short (Fig. 27h).

Variation. Males (n=10): total length 2.5–3.7; carapace length 1.3–1.7; femur I length 2.6–3.0. Females (n=10): total length 3.7–4.6; carapace length 1.5–1.9; femur I length 2.1–2.6.

Distribution. Known from south Northeast region to north South region of Brazil (Fig. 58).

***Azilia catita* sp. nov.**

Figures 30a–h, 31a–j, 32a–f, 33a–f, 34a–d, 58

Type material. Holotype ♂, Parque Estadual Serra da Cantareira, Pinheirinho (23°24'5"S, 46°35'24"W), São Paulo, São Paulo state, Brazil, 29.X.2000, R. Pinto da Rocha *et al.* coll. (IBSP 81518); Paratype ♀, same data as holotype (IBSP 81516).

Other material examined. BRAZIL, Bahia: *Iguai*

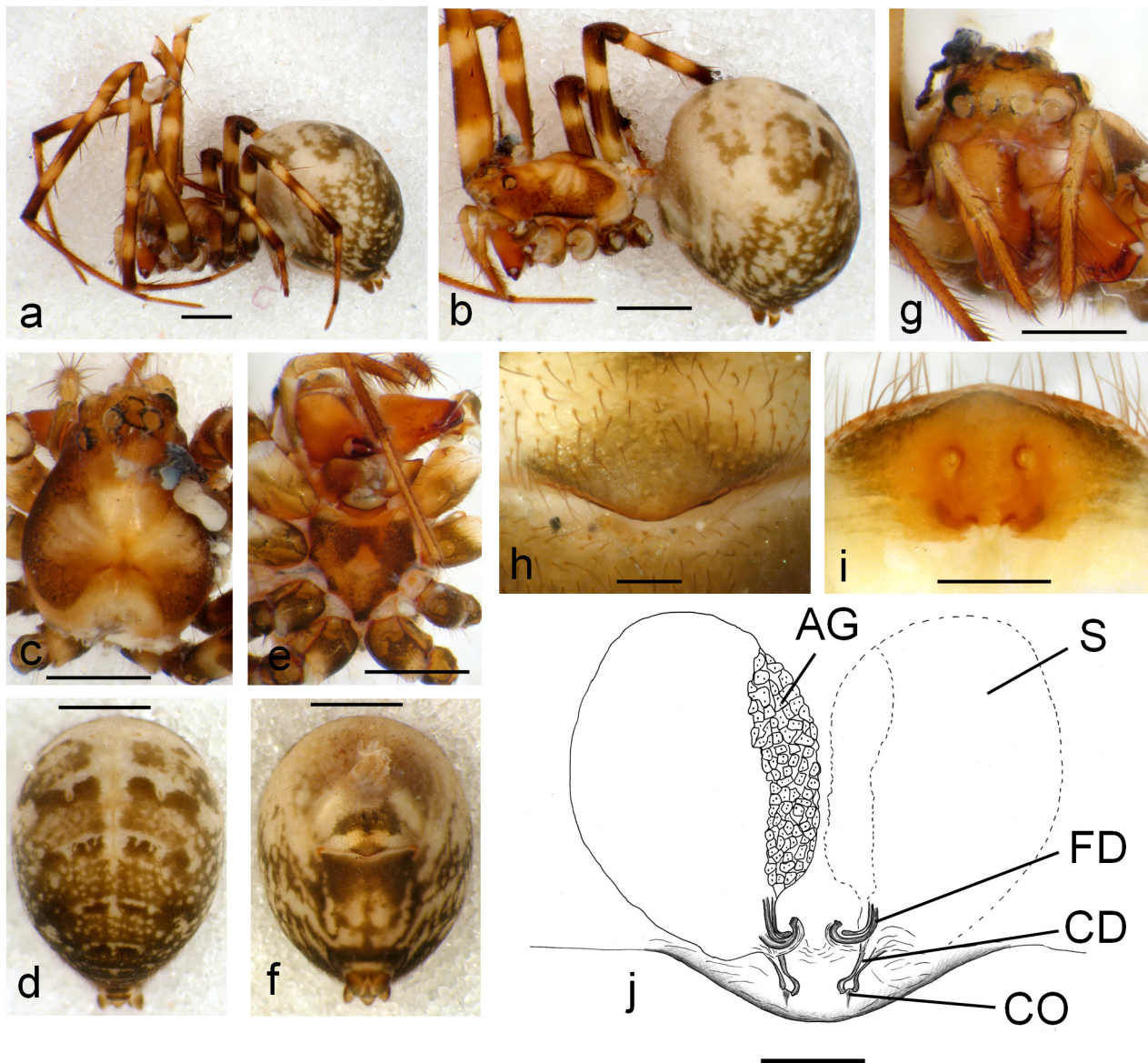


FIGURE 31. *Azilia catita* sp. nov. Female (IBSP 81516) a–g habitus, a lateral view; b, same, detail; c carapace, dorsal view; d abdomen, dorsal view; e carapace, ventral view; f abdomen, ventral view; g carapace, frontal view; h–j epigynum, h ventral view; i posterior view; j dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

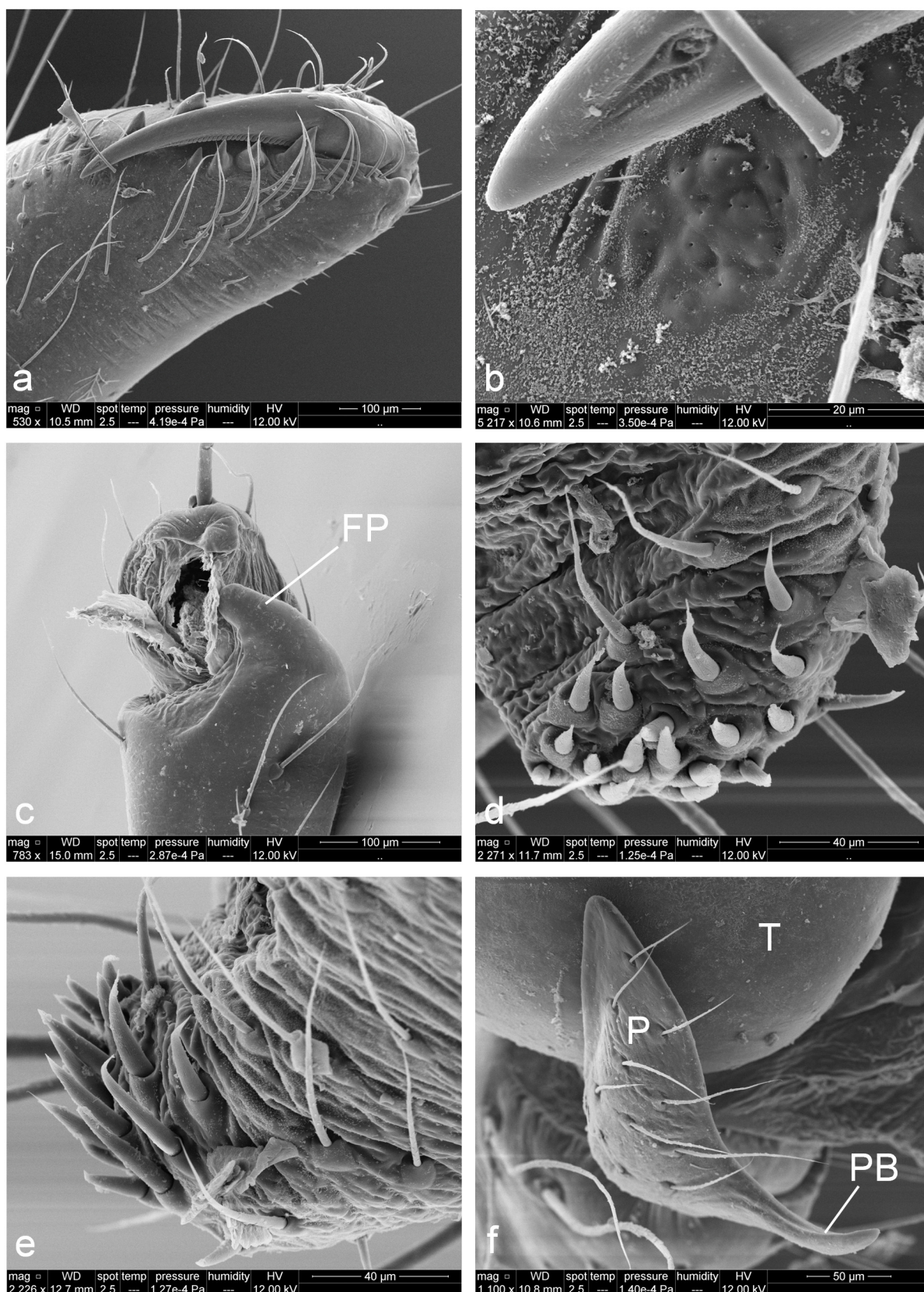


FIGURE 32. *Azilia catita* sp. nov. Male (IBSP 41724): a chelicera, ventral view; b cheliceral glands, ventral view; c distal projection of palpal femur; d cymbial ectobasal projection, prolateral view; e same, dorsal view; f paracymbium, retrolateral view. Abbreviations: FP, distal projection of palpal femur; P, paracymbium; PB, paracymbium basal projection; T, tegulum.

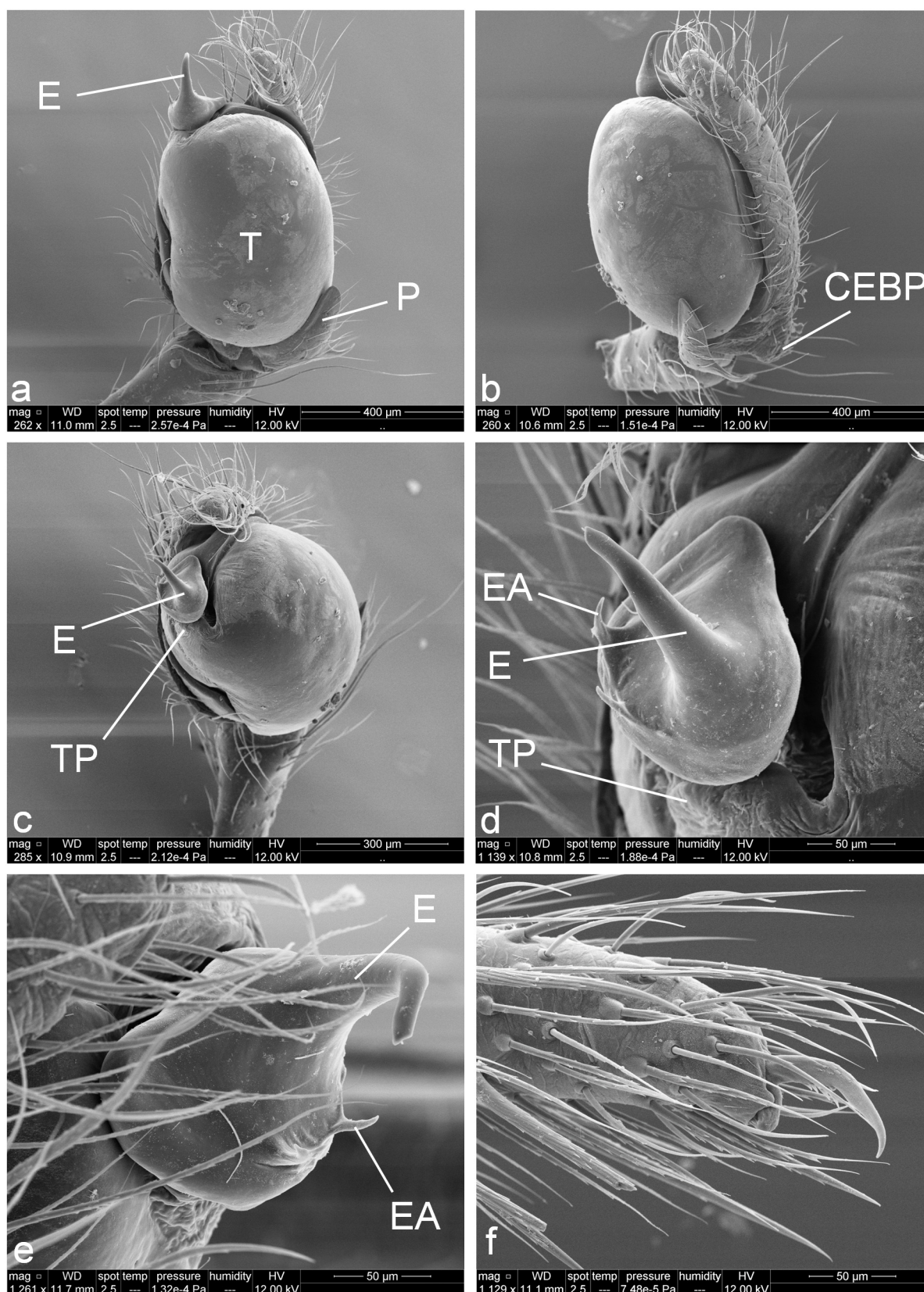


FIGURE 33. *Azilia catita* sp. nov. Male (IBSP 41724) a–e left palp: a ventral view; b same, prolateral view; c anterior view; d embolar area, detail, apical view; e same, prolateral view. Female palpus (IBSP 85981), f, claw, distal area. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; P, paracymbium; T, tegulum; TP, tegular projection.

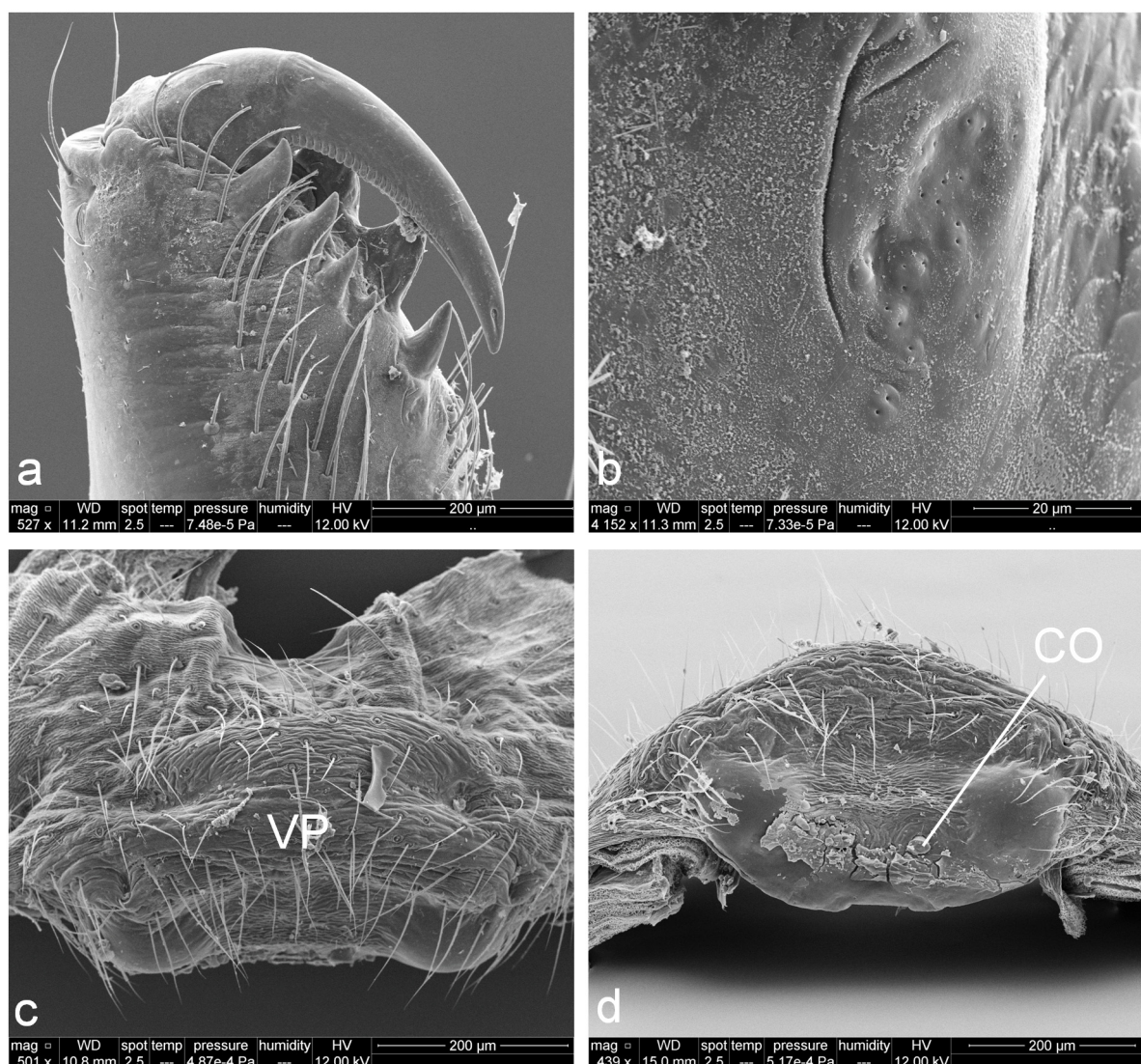


FIGURE 34. *Azilia catita* sp. nov. Female (IBSP 8589): a chelicera, ventral view; b cheliceral glands, ventral view; c epigynum, ventral view; f same, posterior view. Abbreviations: CO, copulatory opening; VP, ventral plate.

(14°45'21"S, 40°5'20"W), 02.IV.2012, 1♀ (IBSP 270193); *Ubaira* (13°16'4"S, 39°39'46"W), 18.XI.2011, 1♀ (IBSP 270429); same locality as previous, 20.XI.2011, 1♀ (IBSP 270430); same data as previous, 1♀ (IBSP 270431); same locality as previous, 21.XI.2011, 1♀ (IBSP 270432); same locality as previous, 19.XI.2011, 1♀ (IBSP 270530); **São Paulo:** *Miracatu*, Fazenda Iterei (24°03'47.2"S, 47°13'65.8"W), 20–26.IX.2001, Equipe Biota coll., 1♂ (IBSP 41724; SEM); *Salesópolis*, Estação Biológica de Boracéia (23°32'S, 45°51'W), 20–26.IX.2001, Equipe Biota coll., 1♀ (IBSP 85891; SEM).

Etymology. The specific epithet is a Brazilian adjective indicating that this species is elegant and beautiful.

Diagnosis. Males of *Azilia catita* sp. nov. resemble those of *A. supimpa* sp. nov. and *A. guapa* sp. nov. by the presence of a basal projection in the paracymbium, but differ from them by the presence of a single embolar apophysis (Figs 30e, 33d) (vs three embolar apophyses in *A. supimpa* sp. nov. and two embolic apophysis in

A. guapa sp. nov.) (Figs 25f, 35f). Females of *A. catita* sp. nov. resemble those of *A. formosa* (Fig. 2h–i) by the circular genital openings but differ by the convex posterior border and by the triangular median plate (Fig. 31h, i).

Description. Male (Holotype, IBSP 81518). Carapace cream-colored, with dark brown lateral edges and cephalic region (Fig. 30a–c). Clypeus yellowish and chelicerae reddish brown (Fig. 30d). Maxillae and labium orange. Sternum greenish brown with an orange central spot. Legs yellowish, with brown bands on legs I–II, and dark brown on legs III–IV. Abdomen oval, cream-colored, with two blackish dorsal longitudinal bands, and dorsal anterior guanine spots. Laterally with black streaks and ventrally dark gray and sparse white guanine dots (Fig. 30a–d). Measurements: total length 4.8; Carapace 1.8 long, 1.6 wide. Eye diameters and interdistances: AME 0.09; ALE 0.11; PME 0.09; PLE 0.11; AME–AME 0.04; AME–ALE 0.15; PME–PME 0.10. Chelicerae with three promarginal teeth and four retromarginal teeth, all similar in size (Fig. 32a) and cheliceral glands in a

circular area (Fig. 32b). Femur I 4.2; Patella+Tibia I 5.3; Metatarsus I 4.7; Tarsus I 1.3; Patella+Tibia II 4.0; Patella+Tibia III 1.9; Patella+Tibia IV 2.7. Conspicuous subtriangular femoral projection (Fig. 32c). Palpus: tibia (0.5) slightly smaller in size than the cymbium (0.7) (Fig. 30f, g); cymbial ectobasal process present, small and with many strong setae (Figs 30h, 32d–e); paracymbium three times shorter in length than the cymbium, covered with few macrosetae, presenting a small triangular basal projection, without spines (Fig. 32f); tegulum with short tegular projection, partially covered by the embolus (Figs 30e, 33c, d); embolus distally cylindrical, with wide base and having only one embolic apophysis (Figs 30e, 33a, d, e).

Female (Paratype, IBSP 81516). Coloration as in male except for the sternum brown with yellow

triangular central spot and lighter abdomen (Fig. 31a–g). Measurements: total length 5.5; Carapace 2.2 long, wide 1.6. Eye diameters and interdistances: AME 0.09; ALE 0.11; PME 0.11; PLE 0.10; AME–AME 0.03; AME–ALE 0.14; PME–PME 0.07; Femur I 3.1; Patella+Tibia I 3.8; Metatarsus I 2.8; Tarsus I 1.1; Patella+Tibia II 2.8; Patella+Tibia III 1.4; Patella+Tibia IV 2.3. Chelicerae as in male (Fig. 34a) and cheliceral glands in an oval area (Fig. 34b). Palpus with elongated claw, presenting four teeth (Fig. 33f). Epigynal plate with triangular posterior border, without lobe (Figs 31h, 34c–d); spermathecae oval, accessory glands arranged in the internal lateral border; copulatory ducts very short and not coiled, and fertilization ducts curved (Fig. 31j).

Distribution. Known only from the states of Bahia and São Paulo in Brazil (Fig. 58).

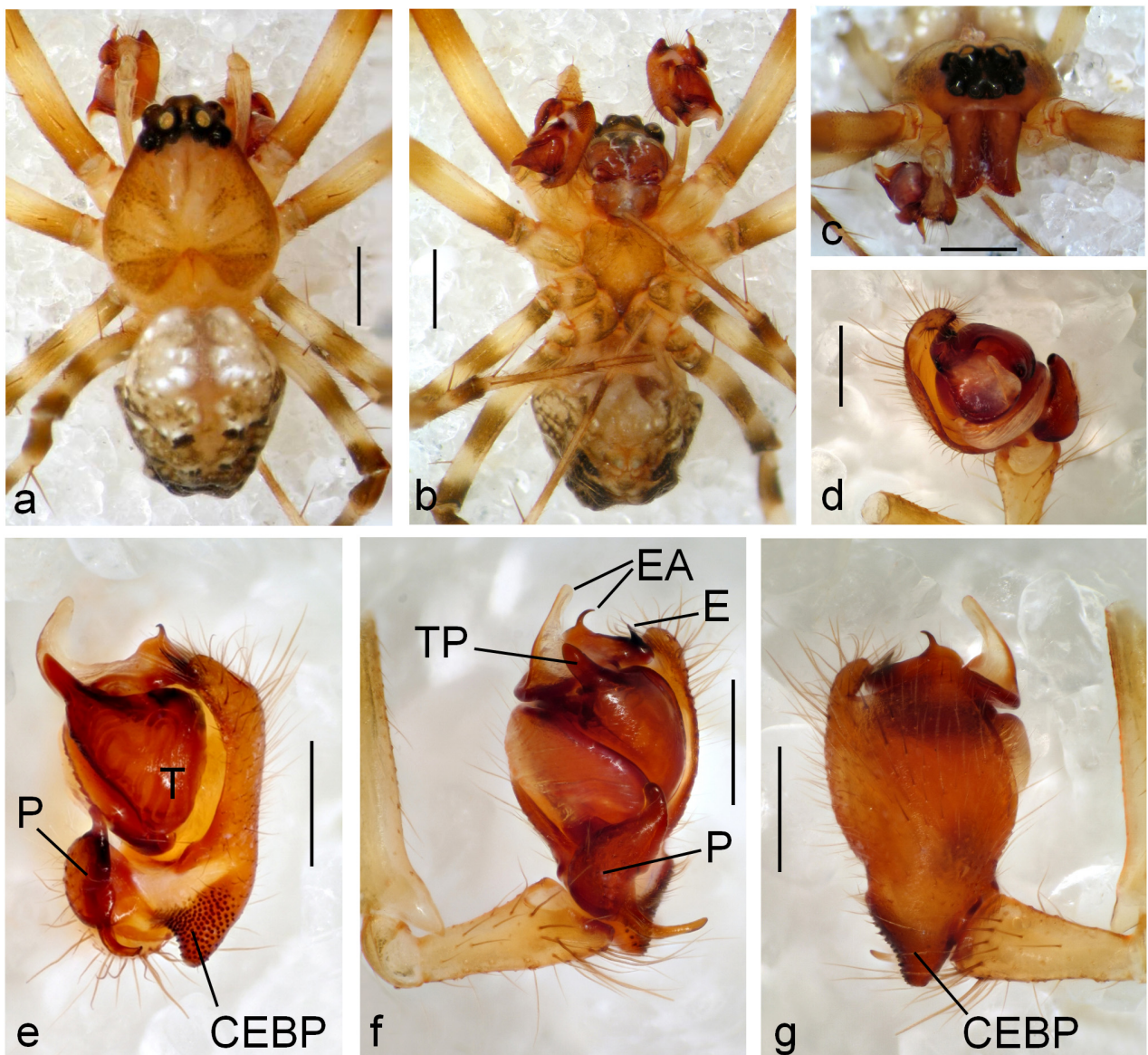


FIGURE 35. *Azilia guapa* sp. nov. Male (Holotype) a–c habitus, a dorsal view; b, same, ventral view; c, same, frontal view; d–g palp, d bulb, ventral view; e same, retrolateral view, f retrolateral view; g dorsal view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; P, paracymbium; TP, tegular projection. Scales: 0.25.

***Azilia guapa* sp. nov.**

Figs 35a–g, 36a–h, 58

Type material. Holotype ♂, CPCN Pró-Mata (29°26'17"–29°34'42"S, 50°08'14"–50°14'18"W), Potreiro Velho, São Francisco de Paula, Rio Grande do Sul, Brazil, 11.X.2001,

R. Ott coll. (MCN 39693). Paratypes: 1♀, same data as holotype (MCN 39694), 1♀, Área de Preservação Celulose Cambará (29°8'2"S, 49°59'40"W), Cambará do Sul, Rio Grande do Sul, Brazil, 19–21.XII.1998, A. Franceschini coll. (MCN 26056).

Other material examined. None.

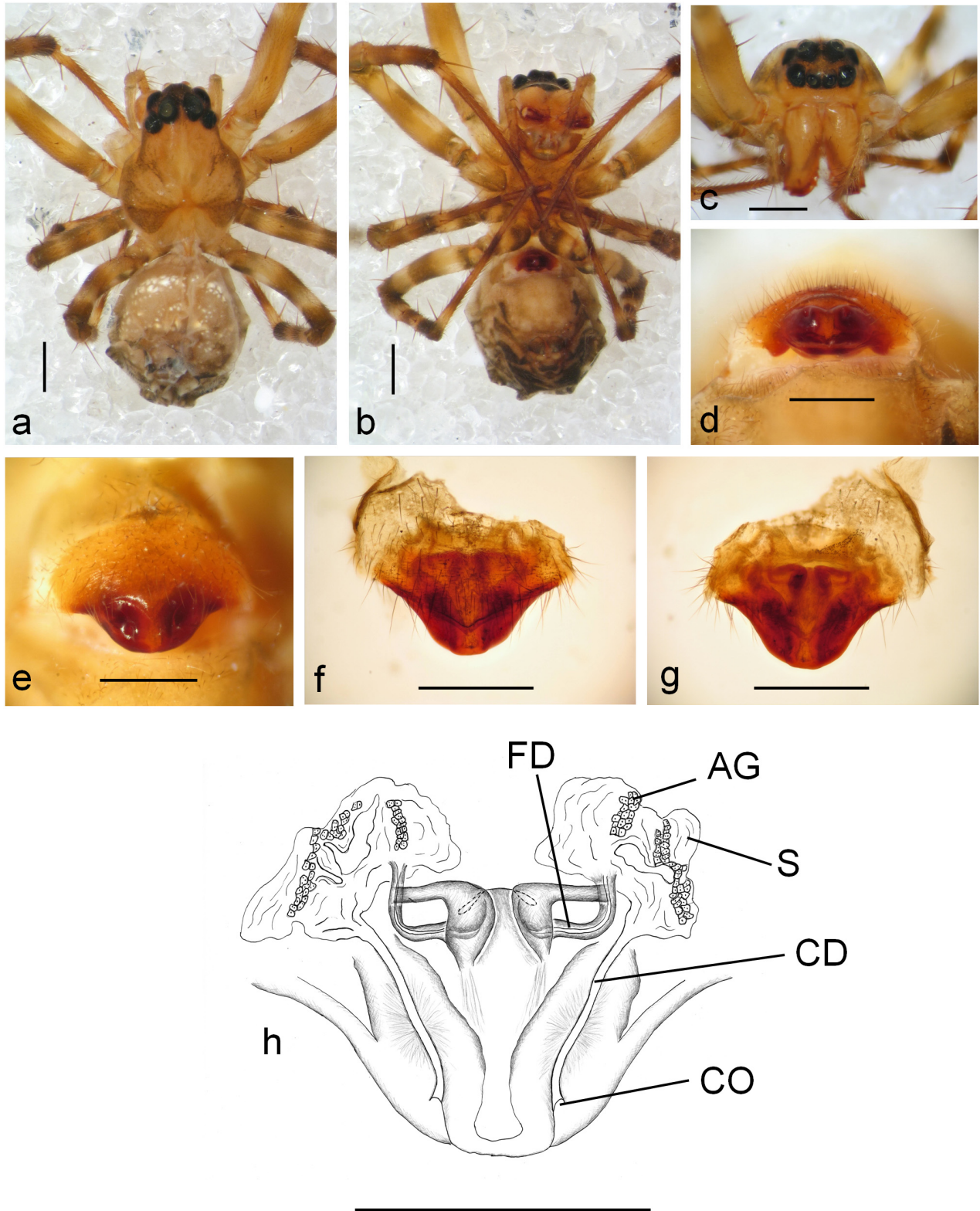


FIGURE 36. *Azilia guapa* sp. nov. Female (MCN 36694) a–c habitus, a dorsal view; b, ventral view; c frontal view; e–h epigynum, ventral view; f same, dorsal view, clarified; g same, posterior view; h dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

Etymology. The specific epithet is an adjective slang from the so-called “Gaucho language” of the state of Rio Grande do Sul that indicates that this species is graceful and beautiful.

Diagnosis. Males of *Azilia guapa* **sp. nov.** resembles *A. supimpa* **sp. nov.** and *A. catita* **sp. nov.** by the presence of basal projection on the paracymbium, but differs from both by the presence of two embolar apophyses (Fig. 35e–f) (vs three embolar apophyses in *A. supimpa* **sp. nov.** and one embolar apophysis in *A. catita* **sp. nov.**) (Figs 25f, 30e). Females of *A. guapa* **sp. nov.** differs from all other *Azilia* species by the epigynum posterior border projected resembling a wide scape (Fig. 36e–f), and the copulatory openings located near the tip of this scape (Fig. 36f–h).

Description. **Male** (Holotype, MCN 39693). Carapace yellow, with orange lateral and posterior border. Eye area black. Clypeus yellow. Chelicerae reddish brown. Maxillae and labium dark yellow. Sternum yellow with gray edges. Legs yellow, banded in brown. Abdomen oval, light gray with black dorsal bands. Laterally and ventrally with light gray and striated of black (Fig. 35a–c). Measurements: total length 5.3. Carapace 2.7 long, 1.9 wide. Eye diameters and interdistances: AME 0.09, ALE 0.12, PME 0.10, PLE 0.11; AME–AME 0.05, AME–ALE 0.14, PME–PME 0.11. Chelicerae with 3 large promarginal teeth and 4 retromarginal teeth, similar in size. Femur I 1.4, patella+tibia I 5.2, metatarsus I 4.5, tarsus I 1.6, patella+tibia II 3.7, patella+tibia III 2.1, patella+tibia IV 2.9. Palpus: tibia (0.6) smaller than cymbium (1.1) (Fig. 35f–g); cymbium elongated posteriorly, with cymbial ectobasal process small, with dozens of strong setae (Fig. 35e, g); paracymbium with half of the cymbium length, tapering distally and presenting a basal projection, narrow and curved, without spines (Fig. 35d, f); tegular projection conical, narrow and elongated, with parallel tip with embolus; embolus lamelliform, with two embolic apophysis (Fig. 35f).

Female (Paratype, MCN 39694). Coloration as in male, except for the abdomen dorsally lighter (Fig. 36a–c). Measurements: total length 6.8. Carapace 2.7 long, 2.0 wide. Eye diameters and interdistances: AME 0.07, ALE 0.11, PME 0.11, PLE 0.10; AME–AME 0.04, AME–ALE 0.14, PME–PLE 0.09. Chelicerae as in male by with orange coloration. Femur I 3.0, patella+tibia I 3.7, metatarsus I 2.9, tarsus I 1.2, patella+tibia II 2.7, patella+tibia III 1.6, tibia+patella IV 2.2. Epigynal plate with posterior border without lobe (Fig. 36e–g); median plate anteriorly narrowed (Fig. 36d); spermathecae small, with accessory glands forming small groups in the external border; fertilization ducts curved (Fig. 36h).

Natural History. Specimens collected on the soil with pitfall traps in an approximately 30-year-old *Pinus taeda* L. silviculture area, at an altitude of approximately 900m a.s.l.

Distribution. Known only for the type locality (Fig. 58).

***Azilia esplendida* sp. nov.**

Figures 37a–i, 38a–d, 39a–f, 40a–f, 41a–f, 42a–e, 58

Type material. Holotype ♀, Atotonilco, Plot I, 1 ha (19°07'32.5"N, 97°04'03.2"W), 2,300m a.s.l., Oak Forest fragment, lower vegetation and tree trunks, Atotonilco de Calcahualco, Veracruz, Mexico 4–14.X.2012, Aracnolab Team coll. (CNAN-T01626, AZILM008). Paratypes: 1♂, Atotonilco, Plot II, 1 ha (19°17'41.4"N, 97°12'16.2"W), 2,388m a.s.l., Oak forest fragment, 4–14.X.2012 (CNAN-T01632, AZILM001); 1♂, same locality as previous (CNAN-T01633, AZILM001); 1♂, 2♀, same locality data as the holotype, 15–24.II.2013 (CNAN-T01628, PXF001); 3♂, 1♀, Atotonilco, Plot II, 1 ha (19°17'41.4"N, 97°12'16.2"W), 2,388m a.s.l., Oak forest fragment, 15–24.II.2013 (CNAN-T01625, AZILM006); 1♂, 1♀, same data as holotype (IBSP 344623); 1♂, 1♀, same data as holotype (CNAN-T01626, PXDF01).

Other material examined. MEXICO, Veracruz: *Atotonilco de Calcahualco*, Atotonilco, Plot I, 1 ha (19°07'32.5"N, 97°04'03.2"W, 2,300m a.s.l.), Oak forest fragment, searching in lower vegetation and tree trunks, 15–24.II.2013, Aracnolab Team coll., 6♂, 9♀ (CNAN-Ar011671); same data as previous, 1♀ (CNAN-Ar011670, AZILM002); same locality as previous, cryptic searching in lower vegetation, 21–30.V.2012, 1♀ (CNAN-Ar011672); same locality as previous, searching in lower vegetation and tree trunks, 5♀, 1♂ (CNAN-Ar011673, AZILM007); same locality as previous, cryptic searching in lower vegetation, 04–14.X.2012, 1♀ (CNAN-Ar011675); same locality as previous, searching in lower vegetation and tree trunks, 2♂, 18♀ (CNAN-Ar011676); Atotonilco, Plot II, 1 ha (19°17'41.4"N 97°12'16.2"W, 2,388m a.s.l.), Oak forest fragment., beating lower vegetation, 15–24.II.2013, Aracnolab Team coll., 1♂, 3♀ (CNAN-Ar011678); same data as previous, 1♂ (CNAN-Ar011677, AZILM003); same locality as previous, searching in lower vegetation and tree trunks, 12♂, 17♀ (CNAN-Ar011680); same data as previous 1♂ 1♀ (CNAN-Ar011679, AZILM004); same locality as previous, cryptic searching in lower vegetation, 21–30.V.2012, 1♀ (CNAN-Ar011681); same locality as previous, searching in lower vegetation and tree trunks, 2♂ (CNAN-Ar011682); same locality as previous, beating lower vegetation, 04–14.X.2012, 1♀ (CNAN-Ar011683); same locality as previous, searching in lower vegetation and tree trunks, 8♂, 20♀ (CNAN-Ar011685); same data as previous, 1♂, 2♀ (CNAN-Ar011684, AZILM005). Xamaticpac, Plot I, 1ha (19°08'30.2"N, 97°12'21.5"W, 1,710m a.s.l.), Oak and tropical wet forest fragment, searching in lower vegetation and tree trunks, Aracnolab Team coll., 1♂, 2♀ (CNAN-Ar011686); same locality as previous, 02–11.X.2013, 1♂ (CNAN-Ar011687); Xamaticpac, Plot II, 1ha, (19°07'34.1"N, 97°04'01.5"W, 1,700m a.s.l.), Oak and tropical wet forest fragment, searching in lower vegetation and tree trunks, 02–11.X.2013, Aracnolab Team coll., 4♀, 2♂ (CNAN-Ar011688); same locality as previous, beating lower

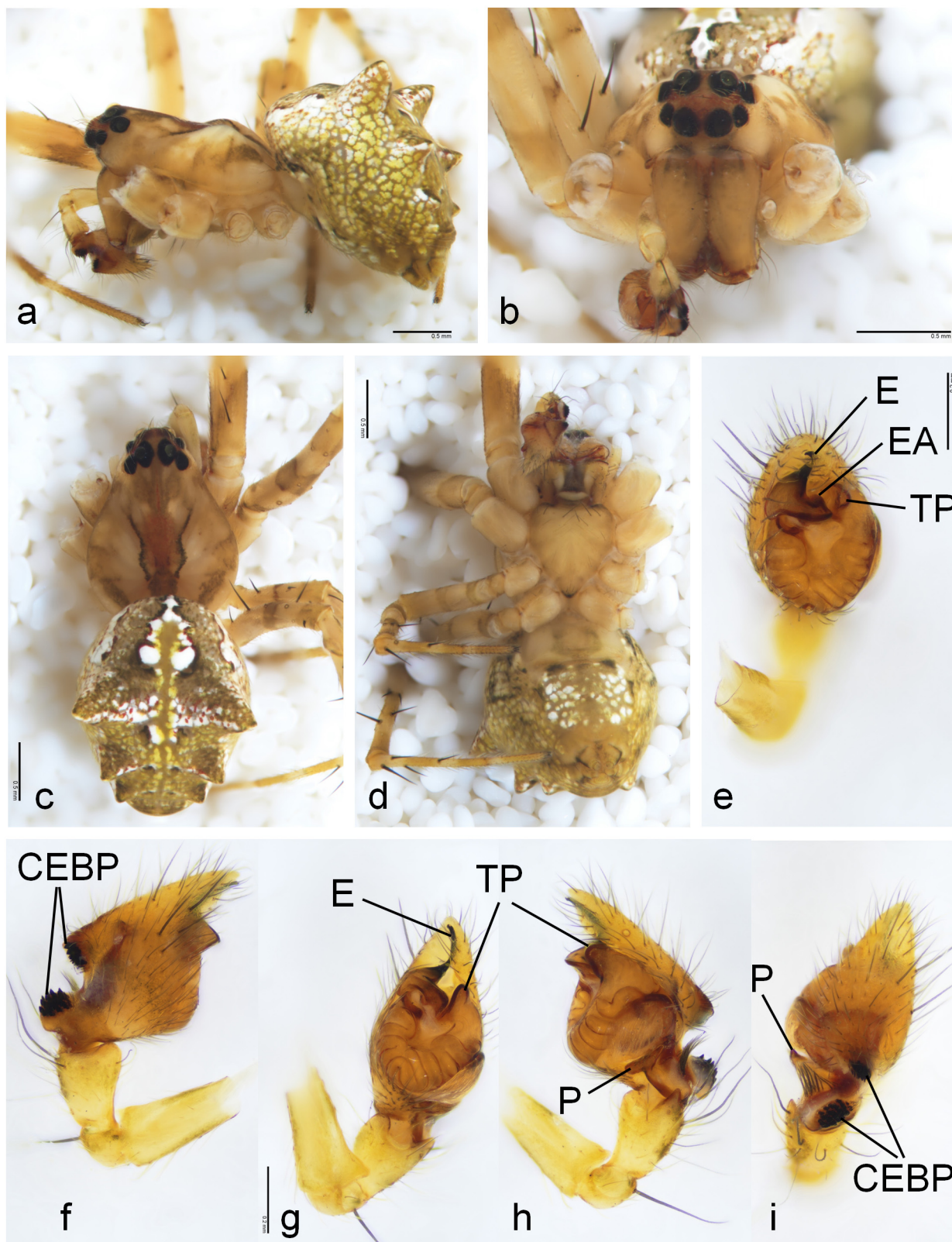


FIGURE 37. *Azilia splendida* sp. nov. Male (CNAN-T01631, AZILM001) a–d habitus, a lateral view; b, frontal view; c, dorsal view; d ventral view; e–i palp, bulb, e anterior view; f prolateral view, g ventral view; h retrolateral view; i dorsal view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; P, paracymbium; TP, tegular projection.

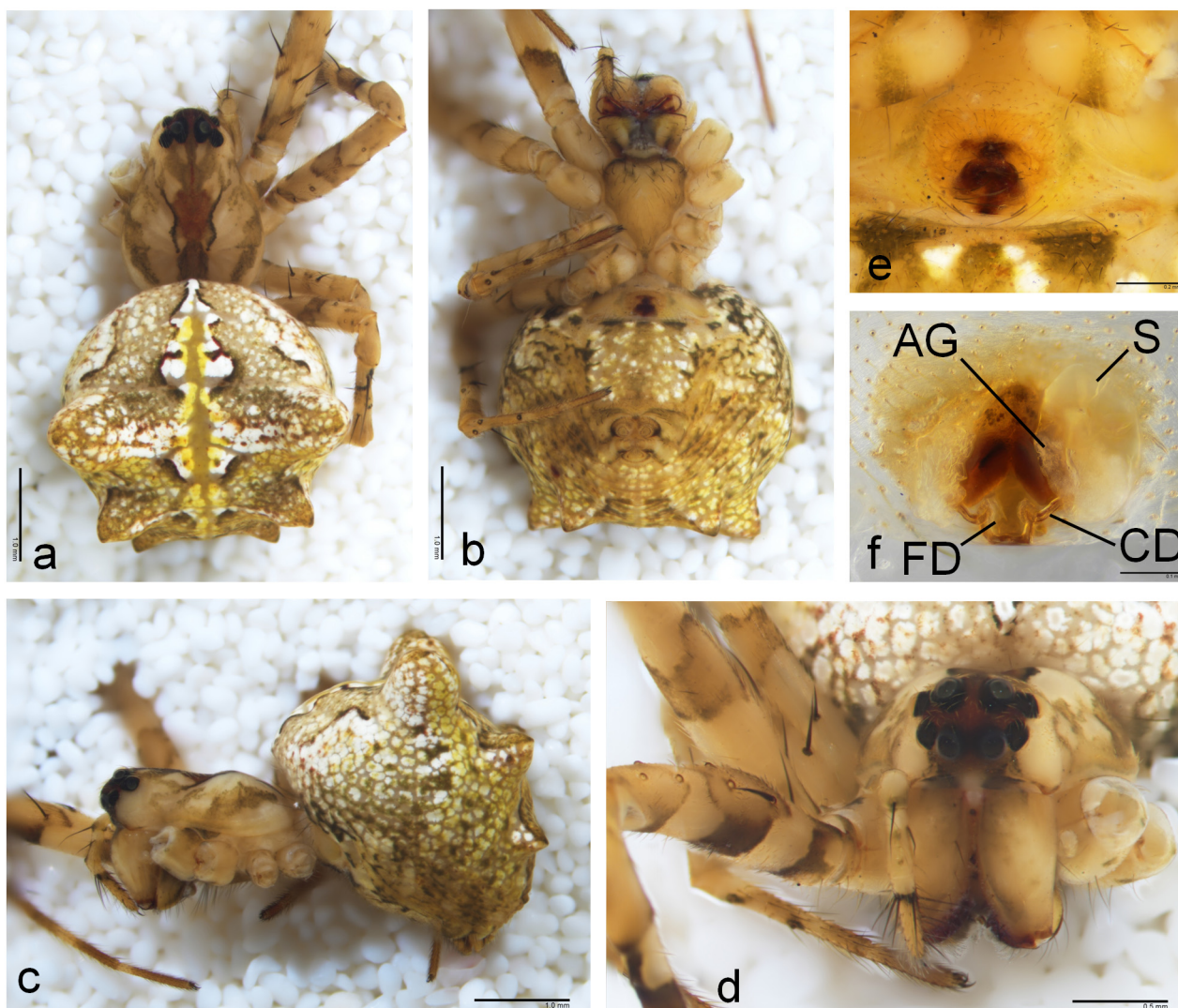


FIGURE 38. *Azilia splendida* **sp. nov.** Female (CNAN-T01626, AZILM008) a–c habitus, a dorsal view; b, ventral view; c lateral view; d frontal view; e–f epigynum, e ventral view; f posterior view. Abbreviations: AG, accessory glands; CD, copulatory ducts; FD, fertilization ducts; S, spermathecae.

vegetation, 04–17.II.2014, 1♀ (CNAN-Ar011689); same locality as previous, searching in lower vegetation and tree trunks, 2♂, 3♀ (CNAN-Ar011690); same data as previous, 1♂, 1♀ (IBSP 344622; SEM).

Etymology. The specific epithet is a Portuguese and Spanish adjective that means full of splendor and brilliance.

Diagnosis. Males and females of *A. splendida* **sp. nov.** differ from all other *Azilia* species by the presence of six abdominal tubercles on the dorsal surface of the abdomen (Figs 37a, c; 38a, c). The species *A. histrio* and *A. arrebitada* **sp. nov.** also present abdominal modifications, but shaped as posterior projections (Figs 46a, b, 52a, b). Males of *A. splendida* **sp. nov.** differ from all other species by the embolar apophysis with coiled lamella (Fig. 40d) and tegular projection apically projected and with a sclerotized edge (Fig. 40d) (vs lamella absent and tegular projection not projected in other species) (e.g., Figs 50d, 54c, d). More specifically, they share with *A.*

fabulosa **sp. nov.** the presence of a cymbial ectobasal process with teeth-like modified setae (Figs 18g, 37f, 39a, d, 41a, b), but they present in two sets of short and thicker conical modified setae in *A. splendida* **sp. nov.** (Figs 37f, i, 39a, c, d, 41a, b) (vs modified setae larger, more numerous and concentrated in one broad set in *A. fabulosa* **sp. nov.**) (Figs 18g, 20a, b). Epigynum anterior border with sclerotized central triangular plate (Figs 39f; 42d–e) vs. absent in other species, and copulatory ducts heavily sclerotized (Fig. 39g) vs. not sclerotized in other females.

Description. Male (Paratype, CNAN-T01632, AZILM001). Cephalothorax brownish, with posterior edge of ocular area and fovea delineated laterally with black curved lines. Legs yellow, femora to metatarsi with intercalated brown bands, tarsi surface dark, except at the base. Abdomen with six tubercles, covered with white and yellow guanine patches over a dark yellow background (Figs 37a–d). Total length 4.9; Carapace 2.0 long, wide

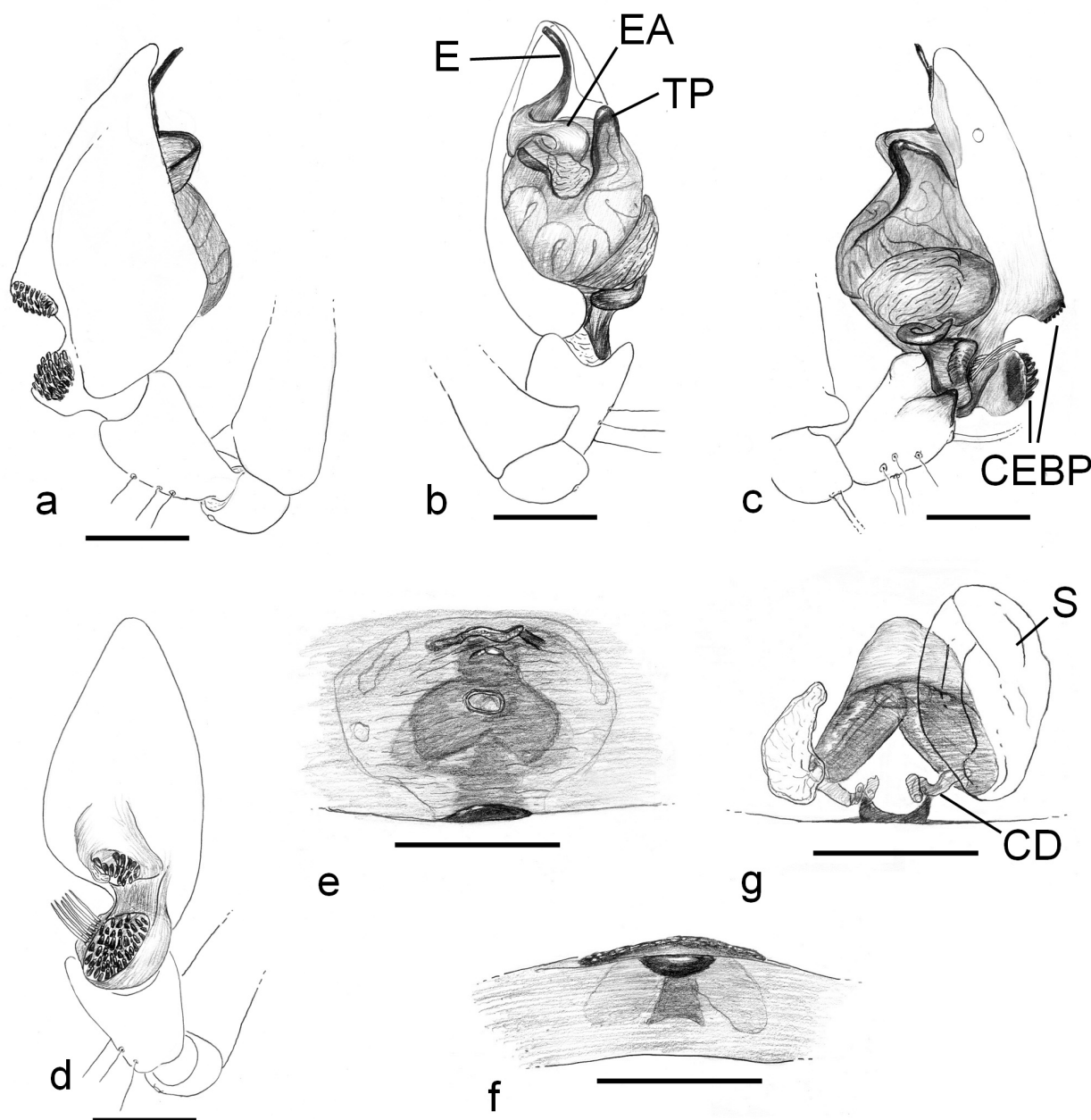


FIGURE 39. *Azilia esplendida* sp. nov. Male (CNAN-T01631, AZILM001) a–d palp, a prolateral view; b ventral view, c retrolateral view; d dorsal view; Female (CNAN-AZILM008), e–g epigynum, e ventral view; f posterior view; g dorsal view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; TP, tegular projection; CD, copulatory ducts; S, spermathecae. Scales: 0,25.

1.4. Eye diameters and interdistances: AME 0.08; ALE 0.05; PME 0.07; PLE 0.07; AME–AME 0.02; AME–ALE 0.11; PME–PME 0.10 Femur I 2.8; Patella+Tibia I 5.0; Metatarsus I 3.8; Tarsus I 1.8; Patella+Tibia II 2.2; Patella+Tibia III 2.2; Patella+Tibia IV 3.1. Chelicerae with one promarginal teeth and three retromarginal teeth (Fig. 41e). Palpus: conical distal projection of palpal femur (Fig. 41f); tibia (0.26) shorter than the cymbium length (0.63) (Fig. 39a–c); cymbium with conspicuous tarsal organ (Fig. 40b–d); paracymbium roughly rectangular, apical border with a curved spur, and with several strong macrosetae at its base (Figs 37h, 39c, 40f); tegular projection rounded

apically and embolus with very large oval base (Figs 37e, 39b; 40a–d).

Female (Holotype, CNAN-T01626, AZILM008). Coloration as in male (Figs 38a–d). Palpus with unpaired claw with four teeth (Fig. 42c). Measurements: total length 3.76; Carapace 1.83 long, 1.45 wide. Eye diameters and interdistances: AME 0.11; ALE 0.09; PME 0.11; PLE 0.1; AME–AME 0.1; AME–ALE 0.05; PME–PME 0.17; Chelicerae with one tooth on the promargin and three teeth on the retromargin (Fig. 42a–b). Femur I 2.68; Patella+Tibia I 3.55; Metatarsus I 2.66; Tarsus I 1.0; Patella+Tibia II 2.31; Patella+Tibia III 1.22; Patella+Tibia

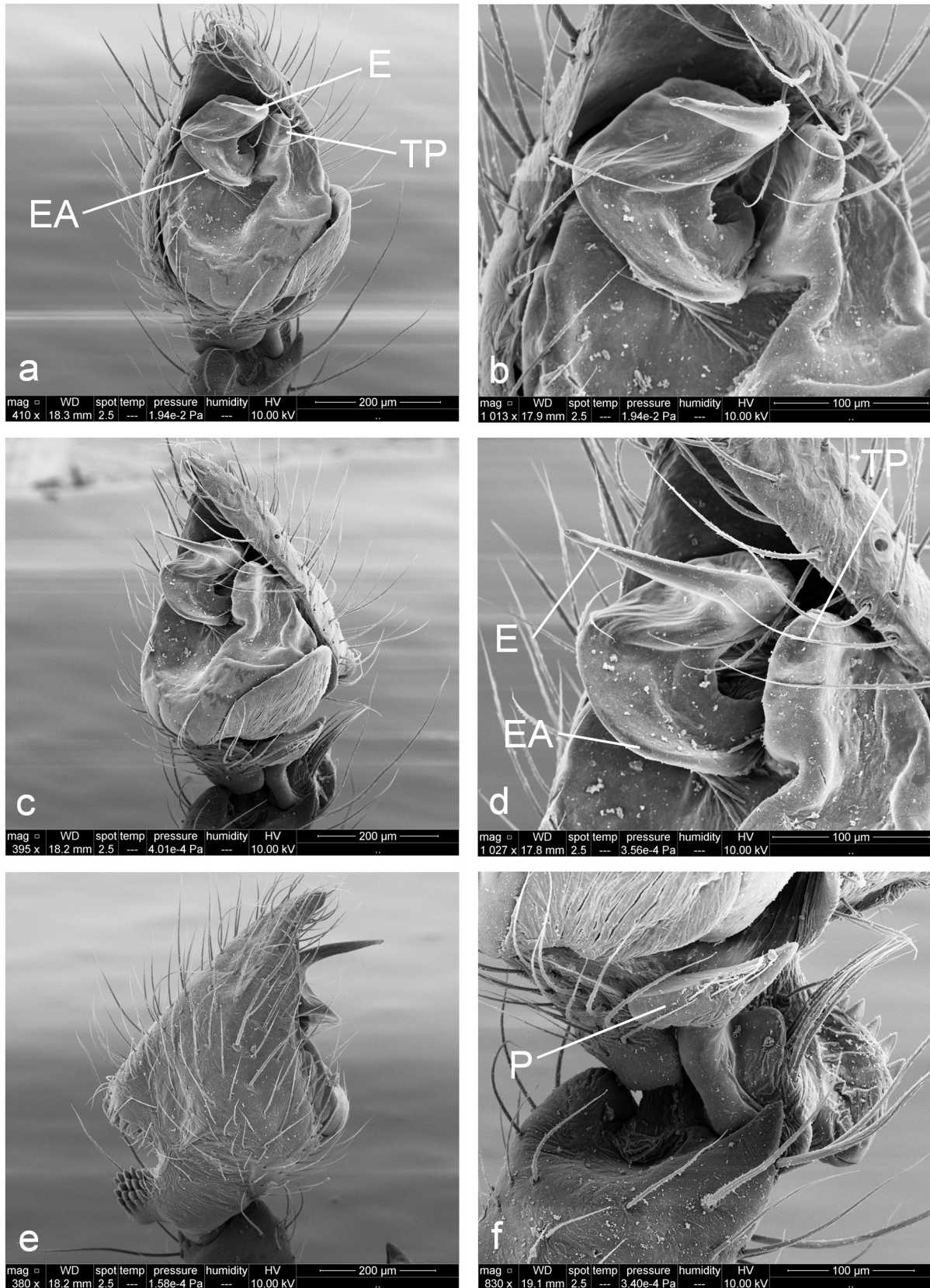


FIGURE 40. *Azilia esplendida* sp. nov. Male (IBSP 344622) a-f palp, SEM, a ventral view; b same, detail, c retro-ventral view; d retrolateral distal view; e dorsal view; f paracymbium, retrolateral view. Abbreviations: E, embolus; EA, embolar apophysis; TP, tegular projection; P, paracymbium.

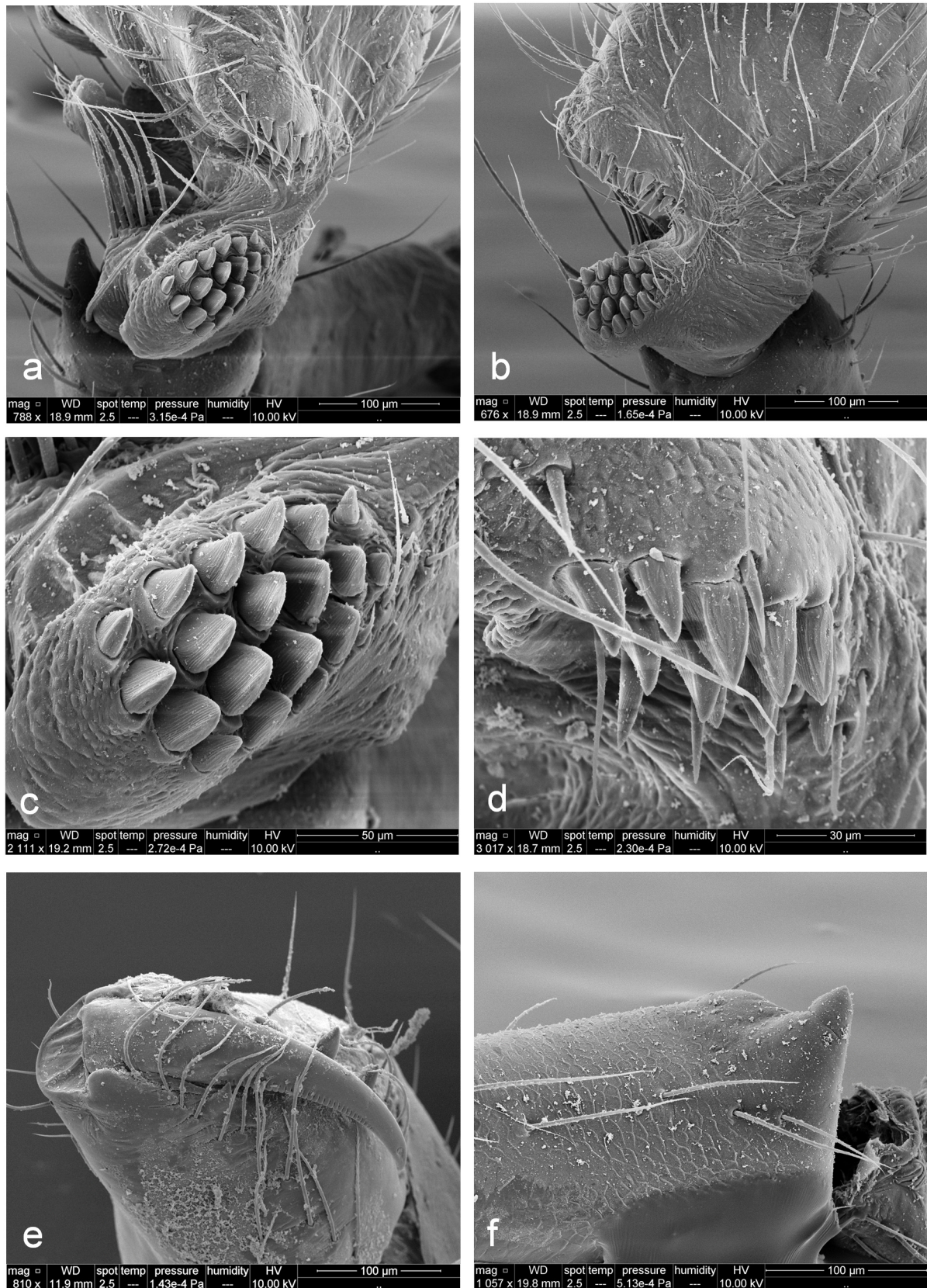


FIGURE 41. *Azilia splendida* sp. nov. Male (IBSP 344622) SEM, a–d palp, cymbium, a retrolateral basal view; b dorsal basal view, c–d modified spines, c basal view; d same, medial view; e chelicerae, distal view; f distal projection of palpal femur, lateral view.

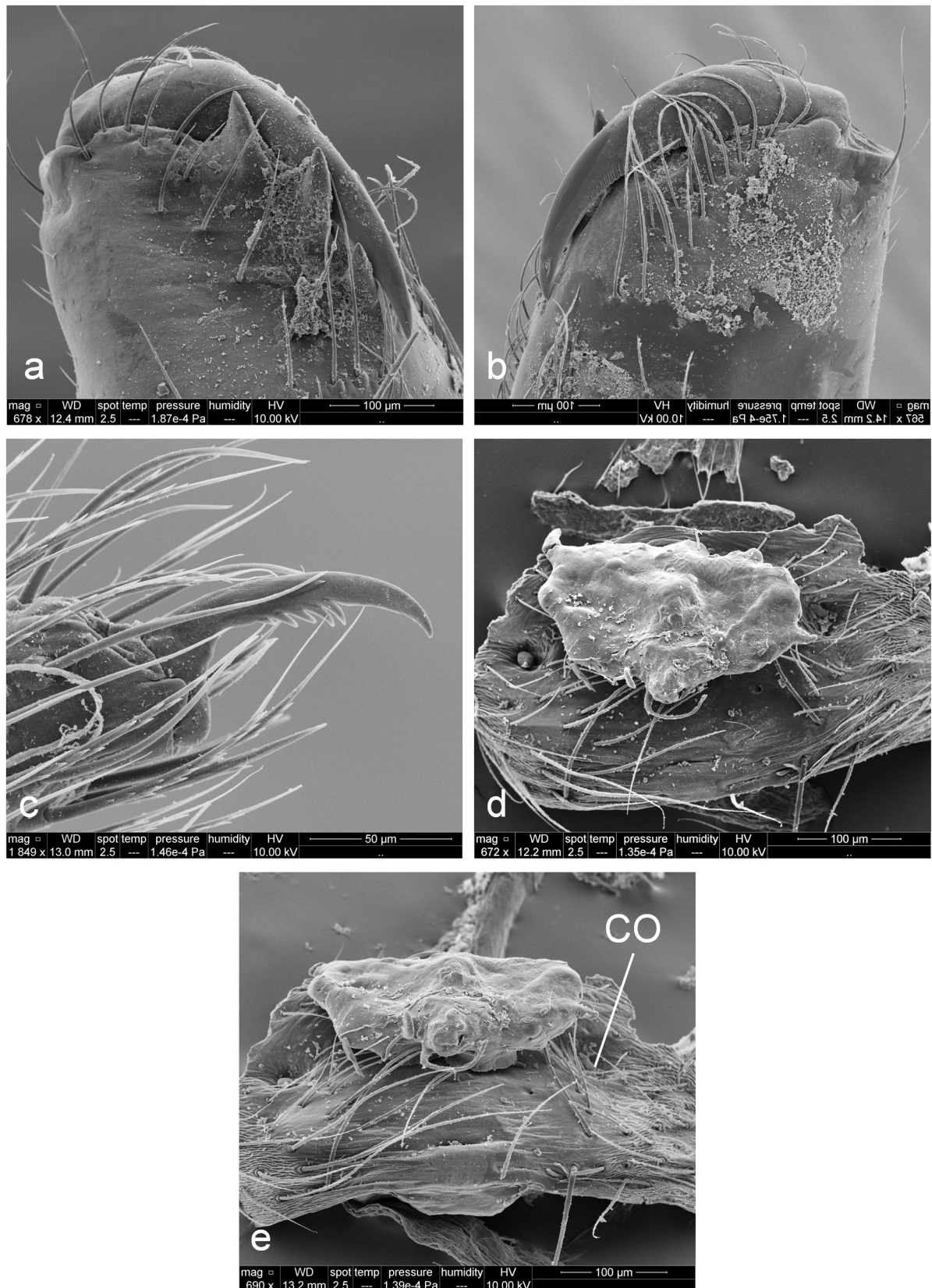


FIGURE 42. *Azilia esplendida* sp. nov. Female (IBSP 344622), SEM, a–b chelicerae, a ventral view, b dorsal view, c palpus claw, distal view; d–e epigynal plate, d ventral view, e posterior view. Abbreviation: CO, copulatory openings.

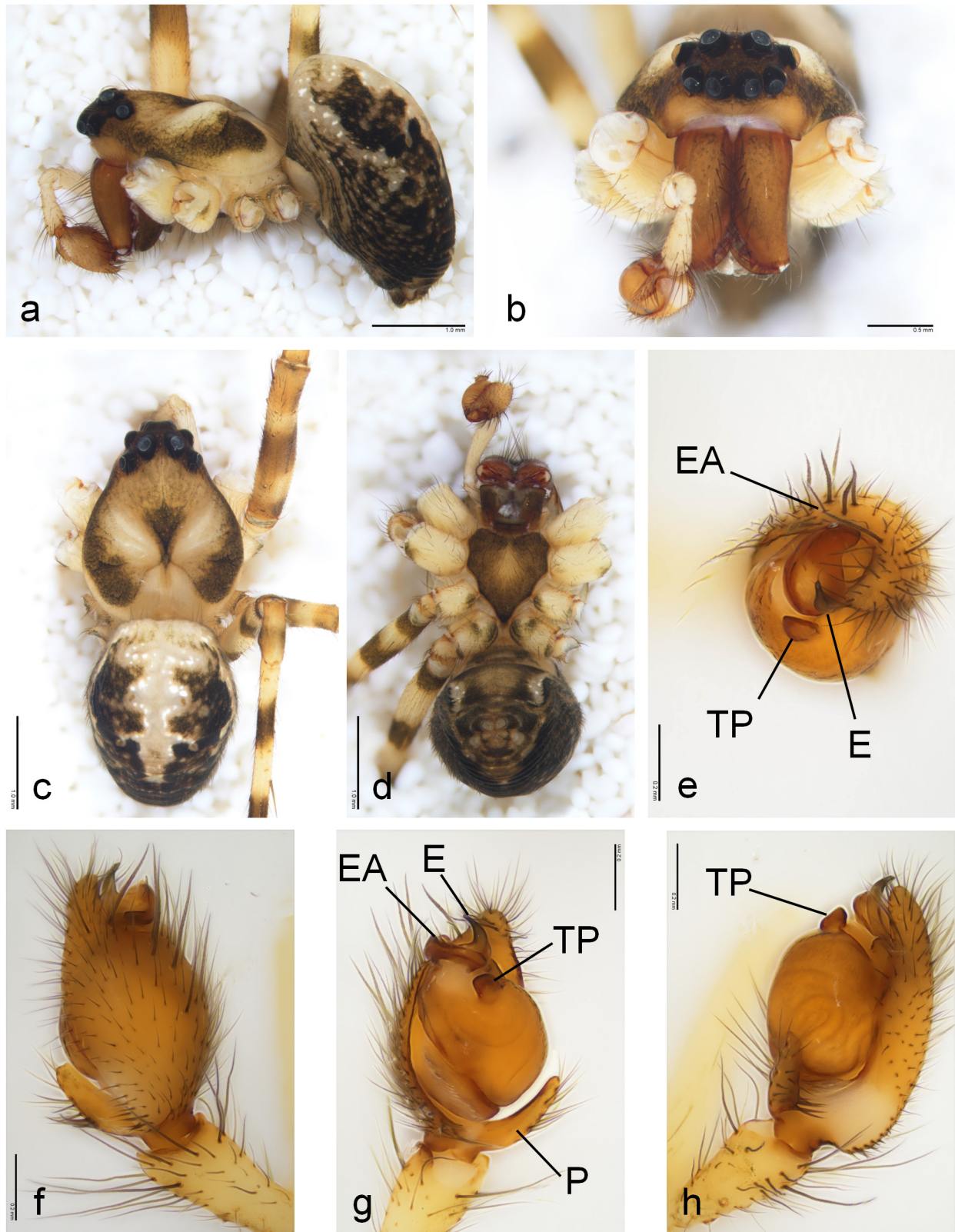


FIGURE 43. *Azilia hermosa* sp. nov. Male (CNAN-T01631, AZILM011) a–d habitus, a lateral view; b, frontal view; c, dorsal view; d ventral view; e–h palp, bulb, e anterior view; f dorsal view, g ventral view; h retrolateral view; Abbreviations: E, embolus; EA, embolar apophysis; P, paracymbium; TP, tegular projection.

IV 1.75. Epigynal plate with genital openings inside an oval common atrium, median plate semicircular, measuring less than one-third of the epigynum plate (Figs 38e–f, 42d–e); copulatory ducts straight and coalescing in the base of spermathecae, spermathecae oval and fertilizations ducts curved and well sclerotized (Figs 38f, 39g).

Variation. Males (n=10): total length 3.0–4.6;

carapace length 1.6–1.9; femur I length 3.3–4.0. Females (n=10): total length 3.7–5.5; carapace length 1.8–2.1; femur I length 2.7–3.4.

Natural History. Specimens collected in Oak Forest fragments, lower vegetation and tree trunks.

Distribution. Known to oak and pine forests around Pico de Orizaba Volcano, Mexico (Fig. 58).

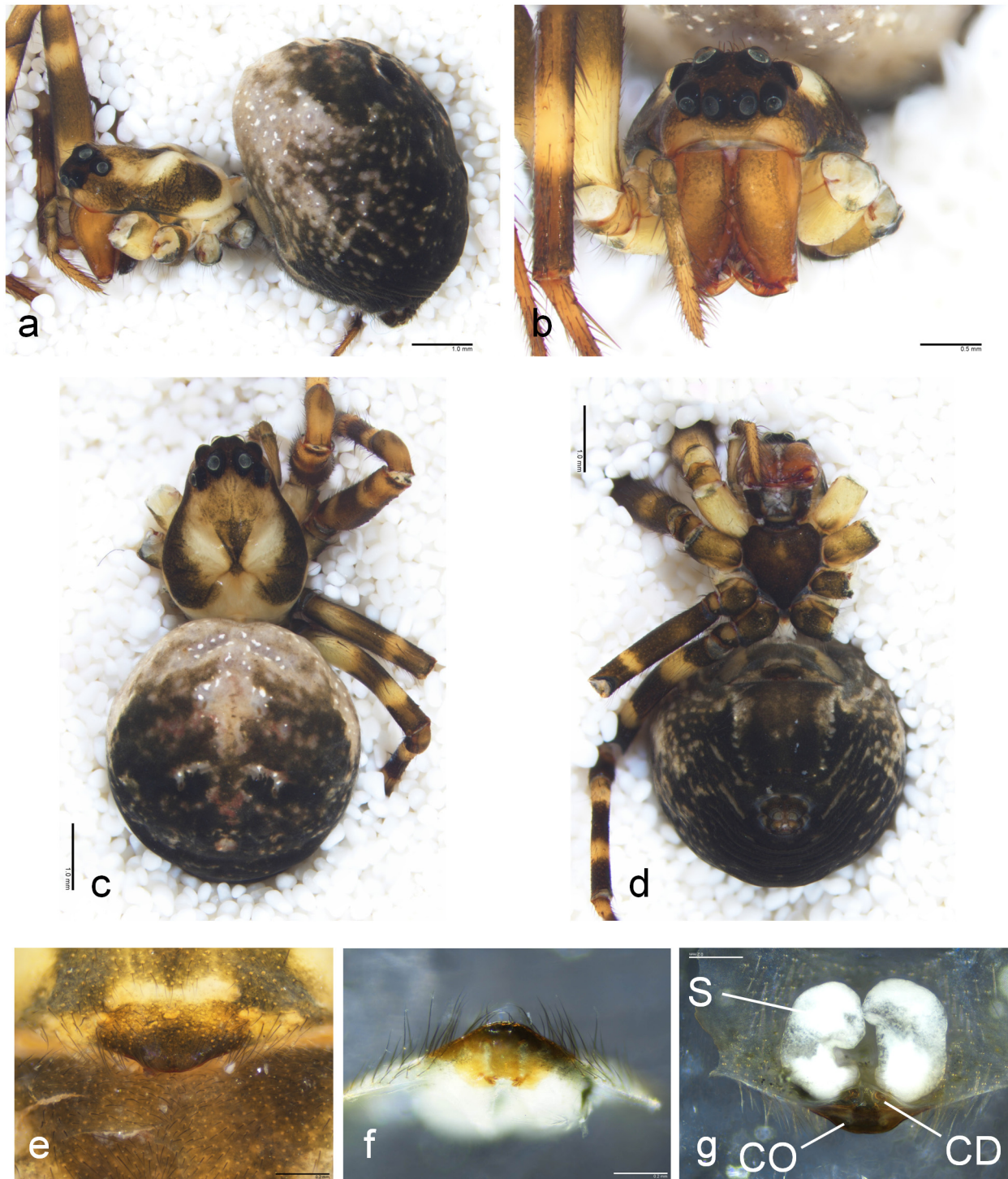


FIGURE 44. *Azilia hermosa* sp. nov. Female (CNAN-T01636, AZILM009) a–d habitus, a lateral view; b, frontal view; c dorsal view; d ventral view; e–g epigynum, e ventral view; f posterior view, g dorsal view. Abbreviations: CD, copulatory ducts; FD, fertilization ducts; S, spermathecae.

***Azilia hermosa* sp. nov.**

Figures 43a–h, 44a–g, 45a–g, 58

Type material. Holotype ♂, Atotonilco, Plot I, 1 ha (19°07'32.5"N, 97°04'03.2"W), 2,300m a.s.l., Oak Forest fragment, cryptic searching in lower vegetation, Atotonilco de Calchualco, Veracruz, Mexico, 15–24.II.2013, Aracnolab Team coll. (CNAN-T01631, AZILM011). Paratypes: 1 ♂, 1 ♀, Atotonilco, Plot II, 1 ha (19°17'41.4"N, 97°12'16.2"W), 2,388m a.s.l., Oak Forest fragment, beating lower vegetation, 04–14.X.2012 (CNAN-T01636, AZILM009); 1 ♀, same data as previous (CNAN-T01635, PXF013); 1 ♂, same data as previous

(CNAN-T01634, AZILM010); 1 ♂, 1 ♀, same data as previous (CNAN-PXF012).

Other material examined. None.

Etymology. The specific epithet is an adjective in Spanish that refers to this spider's beauty.

Diagnosis. Males of *Azilia hermosa* sp. nov. resemble those of *A. formosa*, *A. affinis* and *A. guatemalensis* by lacking the thick and stout macrosetae at the base of the cymbium, and by the paracymbium without apophyses or process (Fig. 43g, h), but differ by the embolus base shaped as a disk with a small marginal spine, and the tegular process square in ventral view, well sclerotized and separated from the tegulum (Figs 43e, f, g, 45a, c).

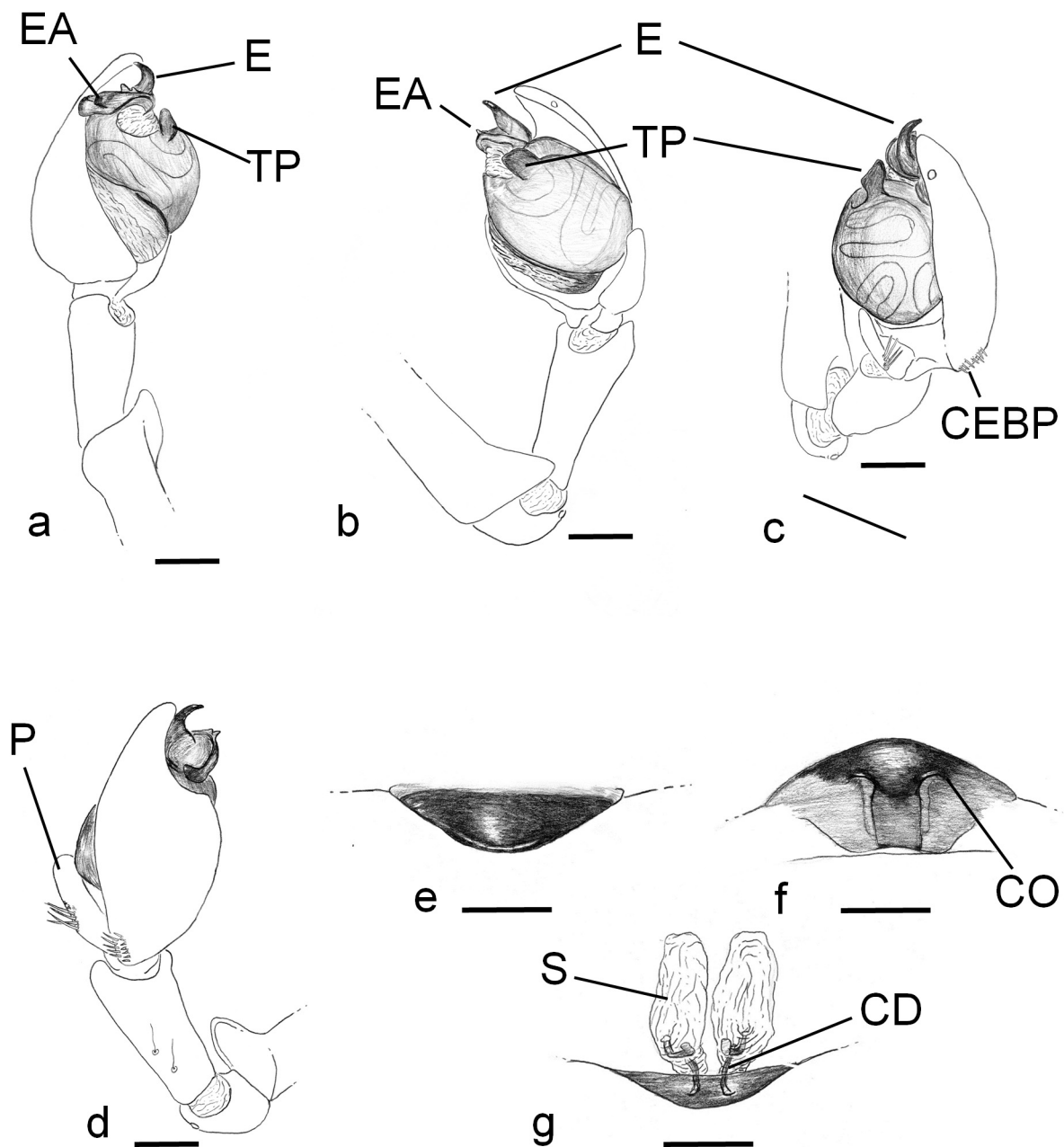


FIGURE 45. *Azilia hermosa* sp. nov. Male (CNAN-T01631, AZILM011) a–d palp, a prolateral view; b ventral view, c retrolateral view; d dorsal view; Female (CNAN-AZILM009), e–g epigynum, e ventral view; f posterior view; g dorsal view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; CD, copulatory ducts; P, paracymbium, S, spermathecae, TP, tegular projection. Scales: 0,25.

(vs embolus base not enlarged and oval tegular process in *A. formosa*, *A. affinis* and *A. guatemalensis*) (Figs 4a–b, 8a, 13b). Females of *A. hermosa* **sp. nov.** have epigynum wider than long, posterior border convex, and well sclerotized (Fig. 31h–i); similar epigynum are found in *A. supimba* **sp. nov.** and *A. catita* **sp. nov.**, but they differ by the more protruded posterior margin in *A. supimba* **sp. nov.** and the roughly triangular median plate in *A. catita* **sp. nov.** respectively (Figs 44e, 45e).

Description. Male (Holotype, CNAN-T01631, AZILM011). Cephalothorax beige, with lateral edges black, and darkness fovea area (Fig. 43c). Legs yellow, femora to metatarsi with intercalated brown bands, tarsi surface dark except at the base. Abdomen without tubercles, dorsal surface black, middle section with a longitudinal clear band delimited by scatted white guanine patches (Fig. 43a, c–d). Measurements: total length 4.39; Carapace 2.15 long, 1.9 wide. Eye diameters and interdistances: AME 0.15; ALE 0.11; PME 0.17; PLE 0.15; AME–AME 0.16; AME–ALE 0.05; PME–PME 0.23. Chelicerae with one promargin and three retromargin teeth. Femur I 4.2; Patella+Tibia I 5.5; Metatarsus I 4.68; Tarsus I 1.85; Patella+Tibia II 3.85; Patella+Tibia III 2.1; Patella+Tibia IV 2.83. Palpus: with conical and large distal projection of palpal femur (Fig. 45b, d); tibia (0.41) shorter than the cymbium length (0.72) (Figs 43h, 45a–b); cymbium with conspicuous tarsal organ (Fig. 45c); paracymbium roughly half of the cymbium length, slightly rectangular, apical border with a curved spur, and with several strong macrosetae (Figs 43f–h; 45d); embolus curved, well sclerotized and short embolar apophysis (Figs 43e, g, 45a).

Female (Paratype, CNAN-T01636, AZILM009). Cephalothorax, legs and abdominal pattern as in male, but darker (Fig. 44a–d). Total length 5.9; Carapace 2.34 long, wide 1.9. Eye diameters and interdistances: AME 0.16; ALE 0.13; PME 0.2; PLE 0.16; AME–AME 0.16; AME–ALE 0.05; PME–PME 0.23. Chelicerae as in male. Femur I 3.37; Patella+Tibia I 4.15; Metatarsus I 3.37; Tarsus I 1.51; Patella+Tibia II 3.17; Patella+Tibia III 1.9; Patella+Tibia IV 2.63. Epigynal plate flat, wider than long (Figs 44e, 45e), median plate rectangular and genital openings not delimited by sclerotized edges, median plate rectangular, longer than wide (Figs 44f, 45f); copulatory ducts slightly sclerotized, relatively straight, spermathecae oval and fertilizations ducts curved and well sclerotized (Figs 44g, 45g).

Variation. Males (n=10): total length 4.4–4.7; carapace length 2.15–2.44; femur I length 4.2–4.4. Females (n=10): total length 5.9–6.2; carapace length 2.3–2.9; femur I length 3.4–4.0.

Distribution. Known to oak and pine forests around Pico de Orizaba Volcano, Mexico (Fig. 58).

Azilia histrio Simon, 1895

Figures 46a–j, 47a–h, 48a–f, 49a–e, 50a–f, 51a–f, 57

Azilia histrio Simon 1894: 740, fig. 821 (*nomen nudum*); Simon 1895: 152–153.

Azilia boudeti Simon 1895: 153. **New synonymy.**

Arochoides integrans Mello-Leitão 1935: 324–326, figs 1–2. **New synonymy.**

Azilia marmorata Mello-Leitão 1948: 161–162, fig. 7. **New synonymy.**

Cyrtophora vachoni Caporiacco 1954: 82–83. **New synonymy.**

Azilia vachoni: Levi 1997: 252 (Transferred from *Cyrtophora* Simon, 1864).

Azilia integrans: Benavides & Hormiga 2020: 178 (Transferred from *Arochoides* Mello-Leitão, 1935, and suggested synonymy with *Azilia histrio*).

Type-material. *Azilia histrio*: 5 ♀ and 3 imm. syntypes, Belém, Pará, Brazil (MNHN 6010), **examined**.

Azilia boudeti: holotype ♀, Rio (= Rio de Janeiro), Rio de Janeiro, Brazil (MNHN 6010), **examined**.

Arochoides integrans: holotype ♂, Ribeira do Iguape, Iguape, São Paulo, Brazil, O. Leonardos coll. (MNRJ 41894), lost, **examined** before the fire in 2018.

Azilia marmorata: 2 ♂, 1 ♀ syntypes, Moraballi River, Guyana, W. R. Hingston coll. (NHMUK 1923.VII.23.129 (1 ♂), NHMUK 1930.7.15.98 (1 ♂) and NHMUK 1923.III.23.12–13 (1 ♀), **examined**.

Cyrtophora vachoni: 2 imm. syntypes, Charvein, French Guyana, XII.1913, Benoist coll. (MNHN 035), examined by Levi (1997).

Remarks. We here synonymize *Cyrtophora vachoni* Caporiacco, 1954 with *Azilia histrio*. Although the females of *C. vachoni* are immature, they present a dorsal posterior projection on the abdomen similar to that of *A. histrio*, feature previously noted in the original description by Caporiacco (1954). The remaining species herein synonymized with *A. histrio*, namely *Azilia boudeti* Simon, 1895, *Arochoides integrans* Mello-Leitão, 1935 and *Azilia marmorata* Mello-Leitão, 1948 had their types analyzed, which showed no morphological differences to *A. histrio*.

Other material examined. PERU, **Madre de Dios**, 15 km E Puerto Maldonado (12°33'S 69°03'W, 200m a. s.l.), 8.III.1990, D. Silva coll., 1 ♀ (MUSM 0519496); **Puno**: Sandia (14°14'0"S, 69°26'0"W), collected in 2001, A. Zegaria coll., 1 ♀ (IBSP 57960); **Loreto**: *Iquitos*, San Juan Bautista, Zungarococha, Arboretum del UNAP (03°49'47.1"S, 73°22'31.2"W), 12.IV.2013, C. A. Rheims & R. P. Indicatti coll., 1 ♂ (IBSP 233601); same data as previous, 2 ♀ (IBSP 233543); same locality as previous, 08–09.IV.2013, C. A. Rheims & R. P. Indicatti coll., 1 ♀ (IBSP 233437); **Requena**: Centro de Investigaciones Jenaro Herrera (04°53'56.5"S, 73°39'00.4"W), 03.III.2013, C. Rheims & R. Indicatti coll., 1 ♀ (IBSP 233600); same locality as previous, 08–09.IV.2013, 1 ♀ (IBSP 233437); same data as previous, 2 ♀ (IBSP 233543); same locality as previous, 03.IV.2013, 1 ♀ (IBSP 233600).. FRENCH GUIANA, Oyapock River (04°03'00'1"N 51°39'59'6"W), in mangrove, 30.III.2015, D. Chirivi & J. Murienne coll. (IBSP 349020). BRAZIL, **Acre**: *Senador Guimard*, Estação Experimental Catuaba (10°4'24"S, 67°37'26"W, 231m a.s.l.), XI.2010, G. H. F. Azevedo & A. J. Santos coll., 3 ♀ (UFMG 10585); *Marechal Thaumaturgo*, Parque Nacional da Serra do Divisor,

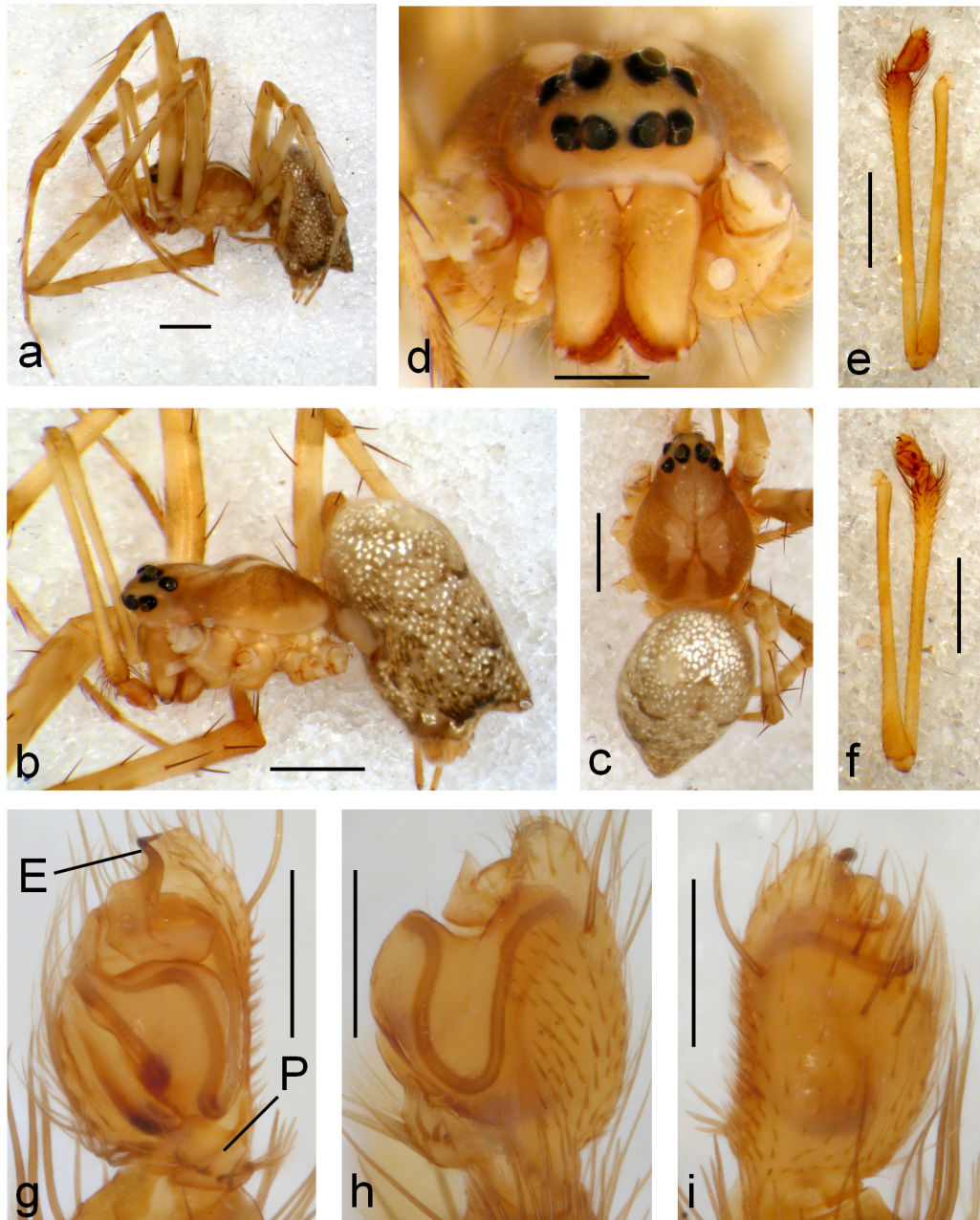


FIGURE 46. *Azilia histrio* Simon, 1895. Male (MPEG 0917) a–d habitus, a lateral view; b, same, detail; c, same, dorsal view; d same, frontal view; e–i palp, e prolateral view; f retrolateral view; g ventral view; h retrolateral view; i prolateral view. Abbreviations: E, embolus; P, paracymbium. Scales: 0.25.

Juazeiro (8°2'39"S, 73°33'55"W), 23.XI.1996, R. S. Vieira coll., 1♂ (IBSP 9324); *Cruzeiro do Sul/Mâncio Lima*, Parque Nacional da Serra do Divisor (8°2'39"S, 73°33'55"W), 23.III.1997, L. Resende & R. S. Vieira coll., 1♀ (IBSP 12423); *Rio Branco*, Reserva Extrativista Humaitá (10°06'11"–10°58'39"S, 67°56'13"–69°48'00"W), 18.VII.1995, R.S. Vieira coll., 1♀ (IBSP 7942); same locality as previous, 12.IV.1996, Equipe IBSP/SMNK coll., 1♀ (IBSP 8735); **Amapá:** *Laranjal do Jari*, Cachoeira de Santo Antônio (0°50'31"S, 52°30'57"W), 23.II.2003, D. D. Guimarães coll., 1♀ (MPEG 000351); same locality as previous, 21.II.2003, J. A. P. Barreiros coll., 1♀ (MPEG 0352); same data as previous, 1♀

(MPEG 000353); same data as previous, 1♀ (MPEG 000354); *Mazagão*, Comunidade Maranata, Nazaré (0°32'13.2"S, 51°33'25.2"W), 16.X.2003, 1♂ (IBSP 97591); **Roraima:** *Alto Alegre*, Aldeia Hale Kato-U (03°13.256'N, 63°12.134'W), 13.III–14.IV.2009, C. Kirsch coll., 1♀ (IBSP 149637); same data as previous, 1♂, 1♀ (IBSP 149630a); **Amazonas:** *São Gabriel da Cachoeira*, Pico da Neblina, Bebedouro Velho, 25.IX.2007, A. Nogueira coll., 1♀ (IBSP 279023); Pico da Neblina, Bebedouro Novo, 30.IX.2007, D. Candiani coll., 1♀ (IBSP 279005); *Coari*, Porto Urucu, Rio Urucu (4°51'17.7"S, 65°4'14.4"W), 16.VII.2003, A.B. Bonaldo coll., 1♀ (MPEG 000544); same data as previous, 1♀

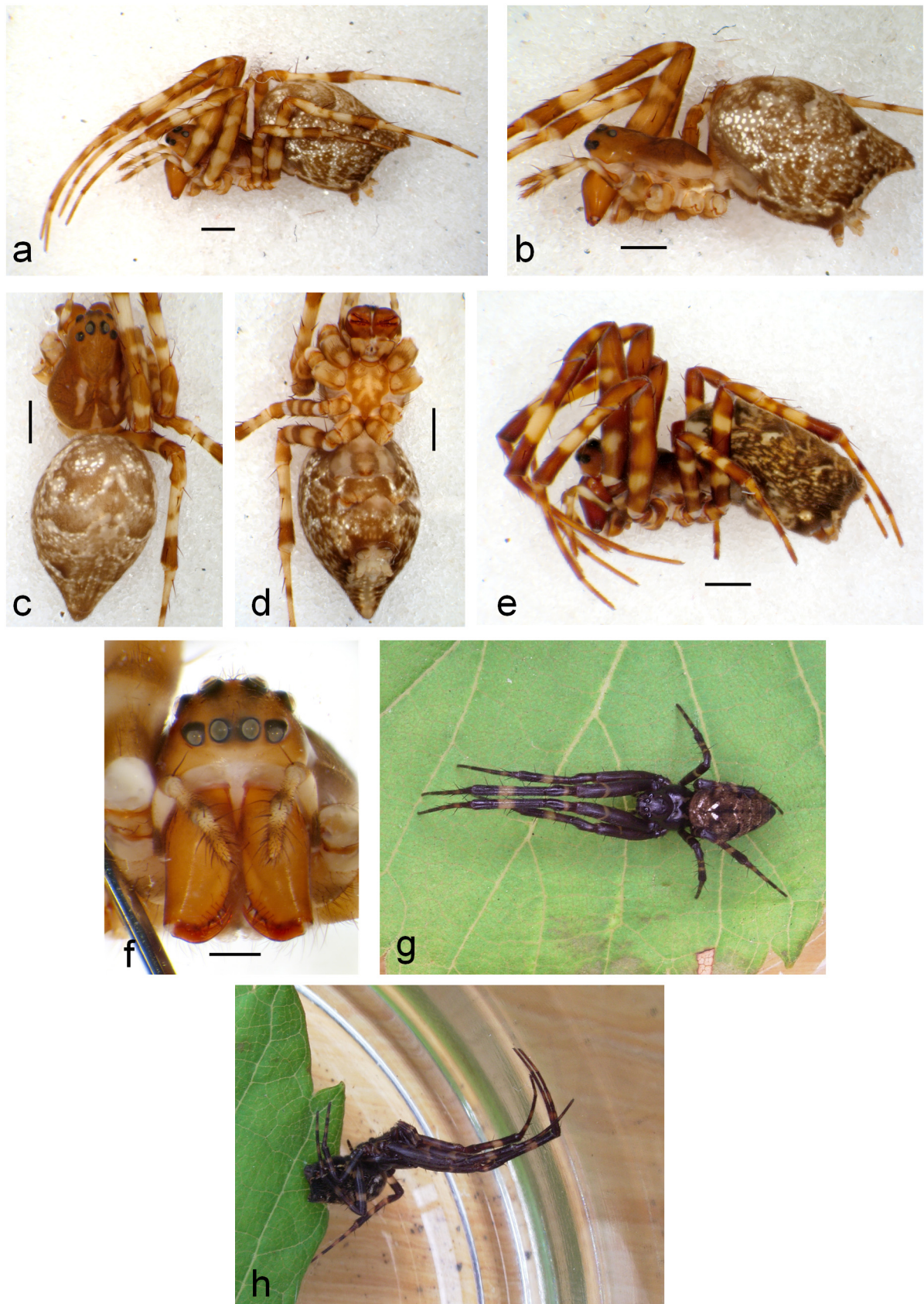


FIGURE 47. *Azilia histrio* Simon, 1895. Female (MPEG 0917) a–g habitus, a lateral view; b, same, detail; c same, dorsal view; d same, ventral view; e same (IBSP 40168), lateral view; f frontal; specimen from state of Rio Grande do Sul, Brazil: g body in vivo, dorsal view; h same, lateral view. Scales: 0.25.

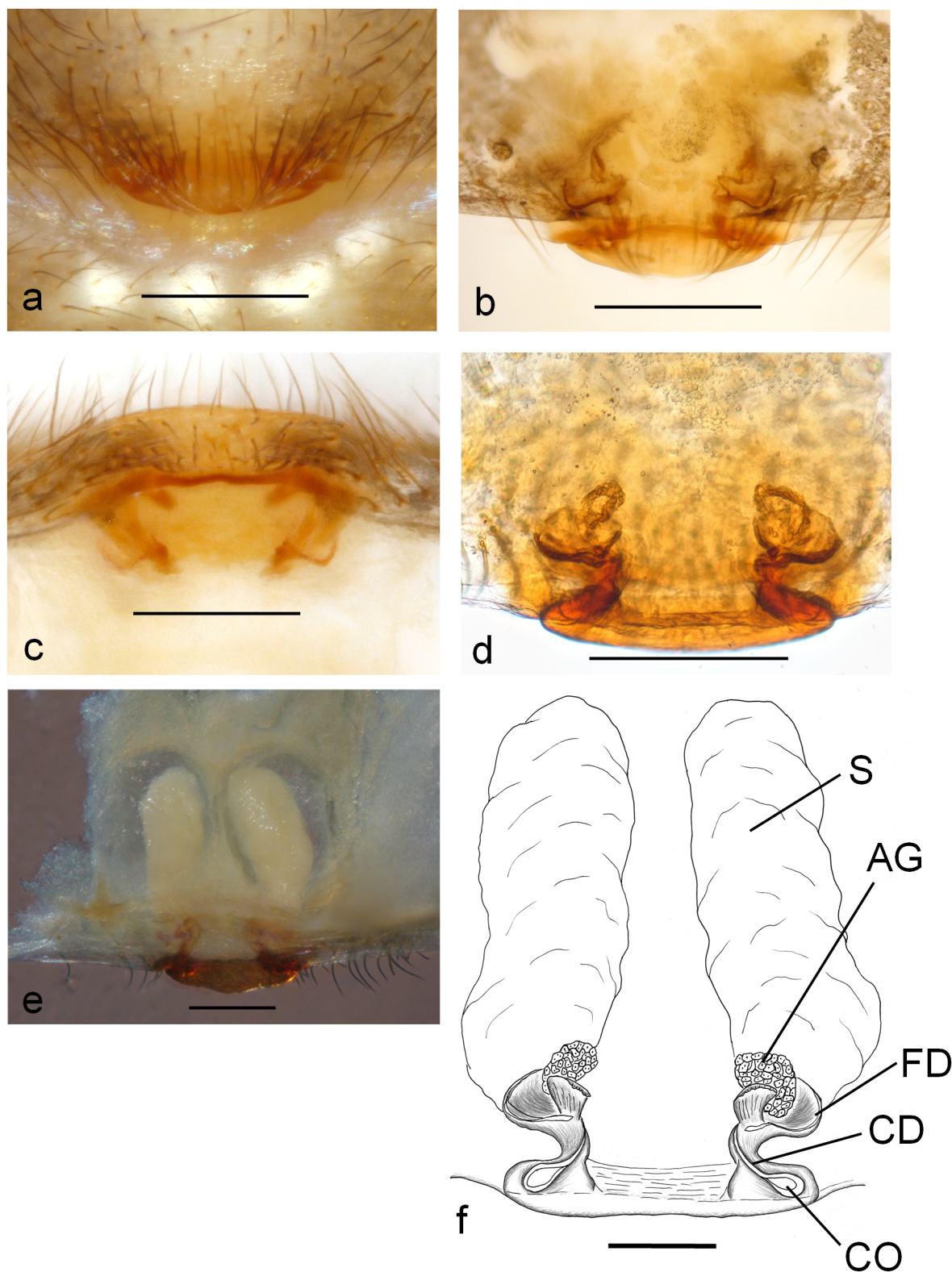


FIGURE 48. *Azilia histrio* Simon, 1895. Female epigynum (MPEG 0917) a ventral view; b same, cleared; c posterior view; d dorsal view, cleared; e, same, detail spermathecae; f dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

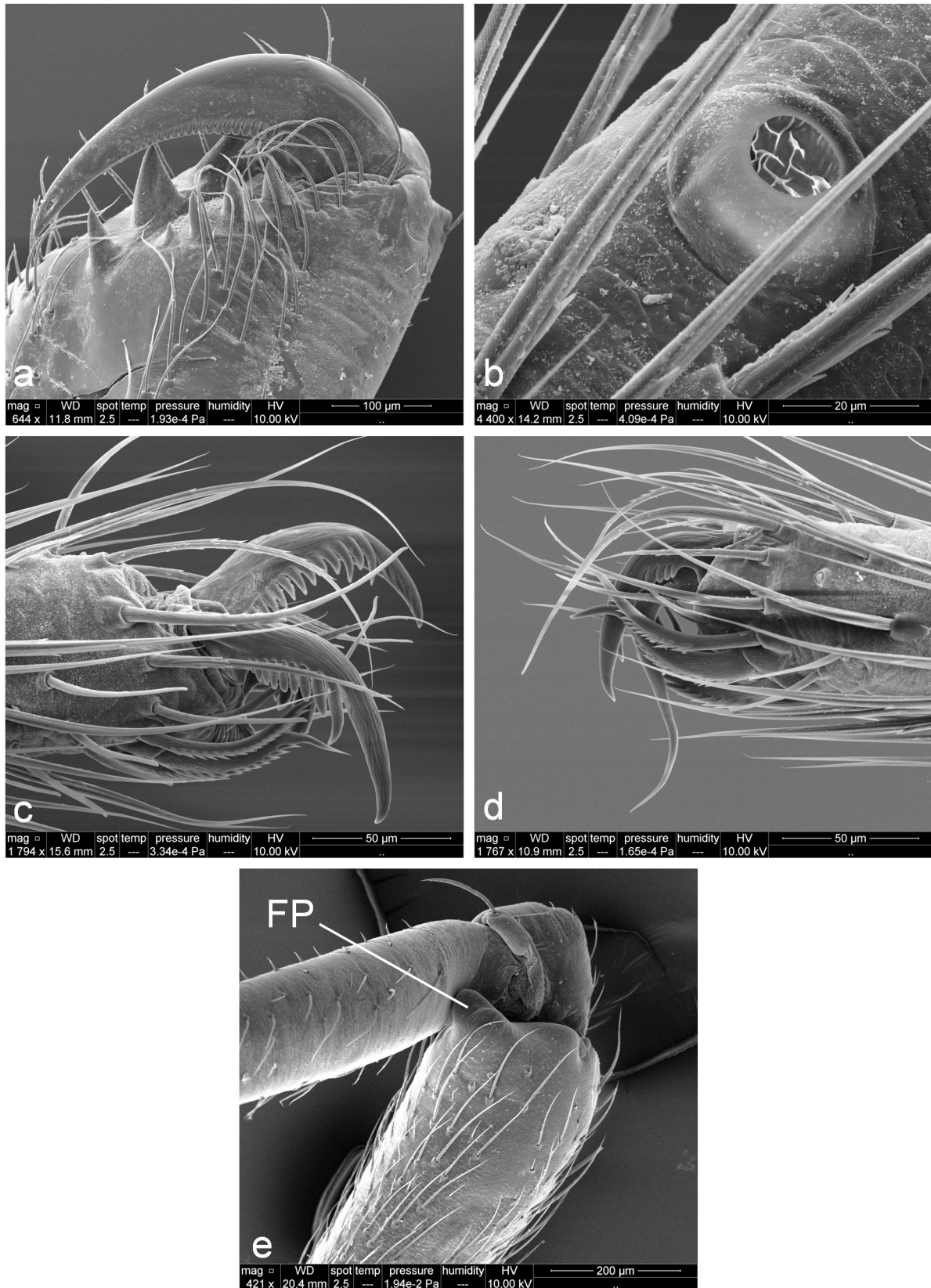


FIGURE 49. *Azilia histrio* Simon, 1895. Male (IBSP 19197), a chelicera, ventral view; b leg I, tarsal organ, dorsal view c leg I, claws, lateral view; d leg IV, claws, lateral view; e distal projection of palpal femur, retrolateral view. Abbreviation: FP, distal projection of palpal femur.

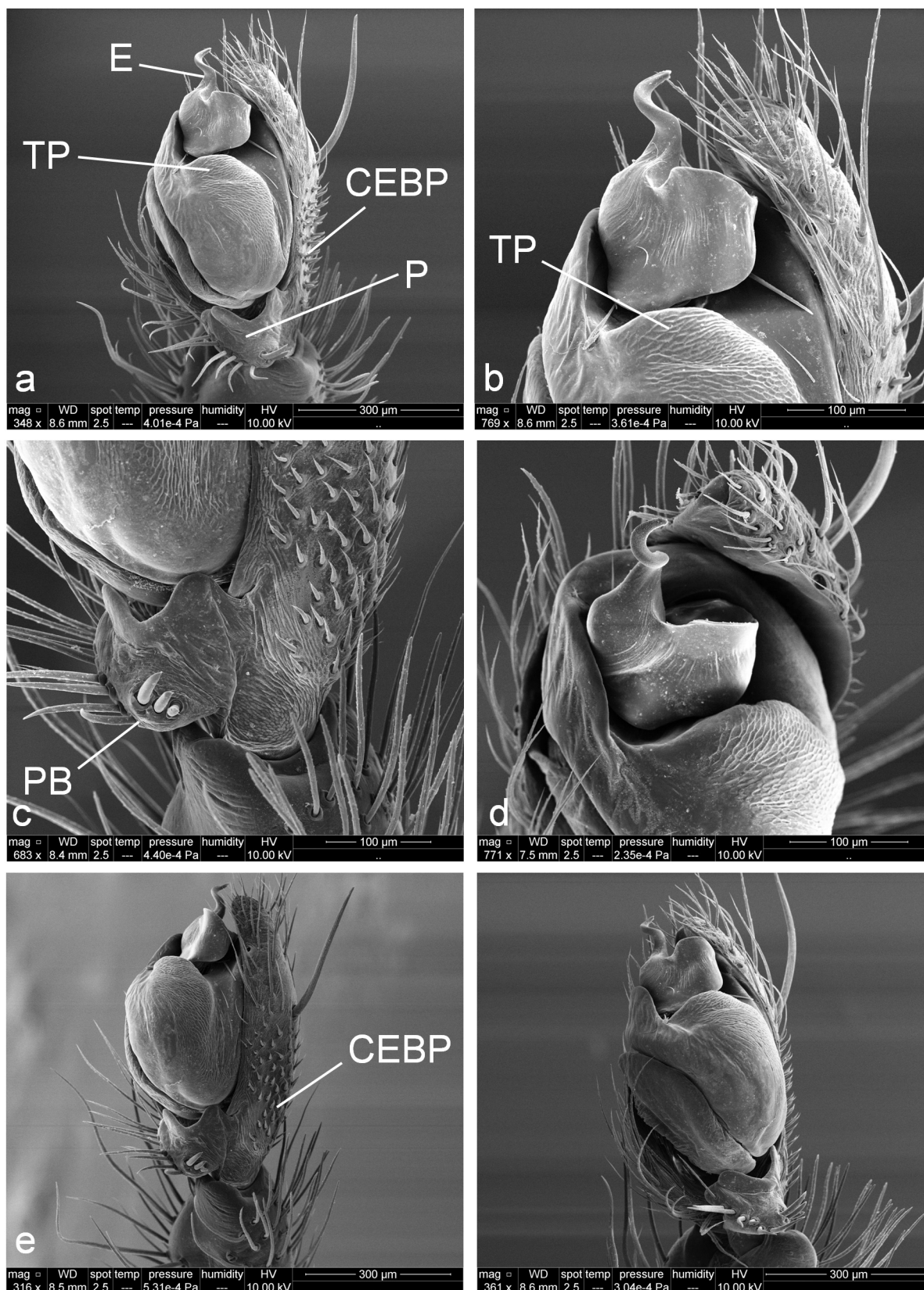


FIGURE 50. *Azilia histrio* Simon, 1895. Male left palp (IBSP 19197) a bulb, ventral view; b same, apical detail; c cymbium, basal area, retrolateral view; d bulb, distal area, ventral view; retrolateral view; f ventral view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; P, paracymbium; PB, paracymbium basal projection; TP, tegular projection.

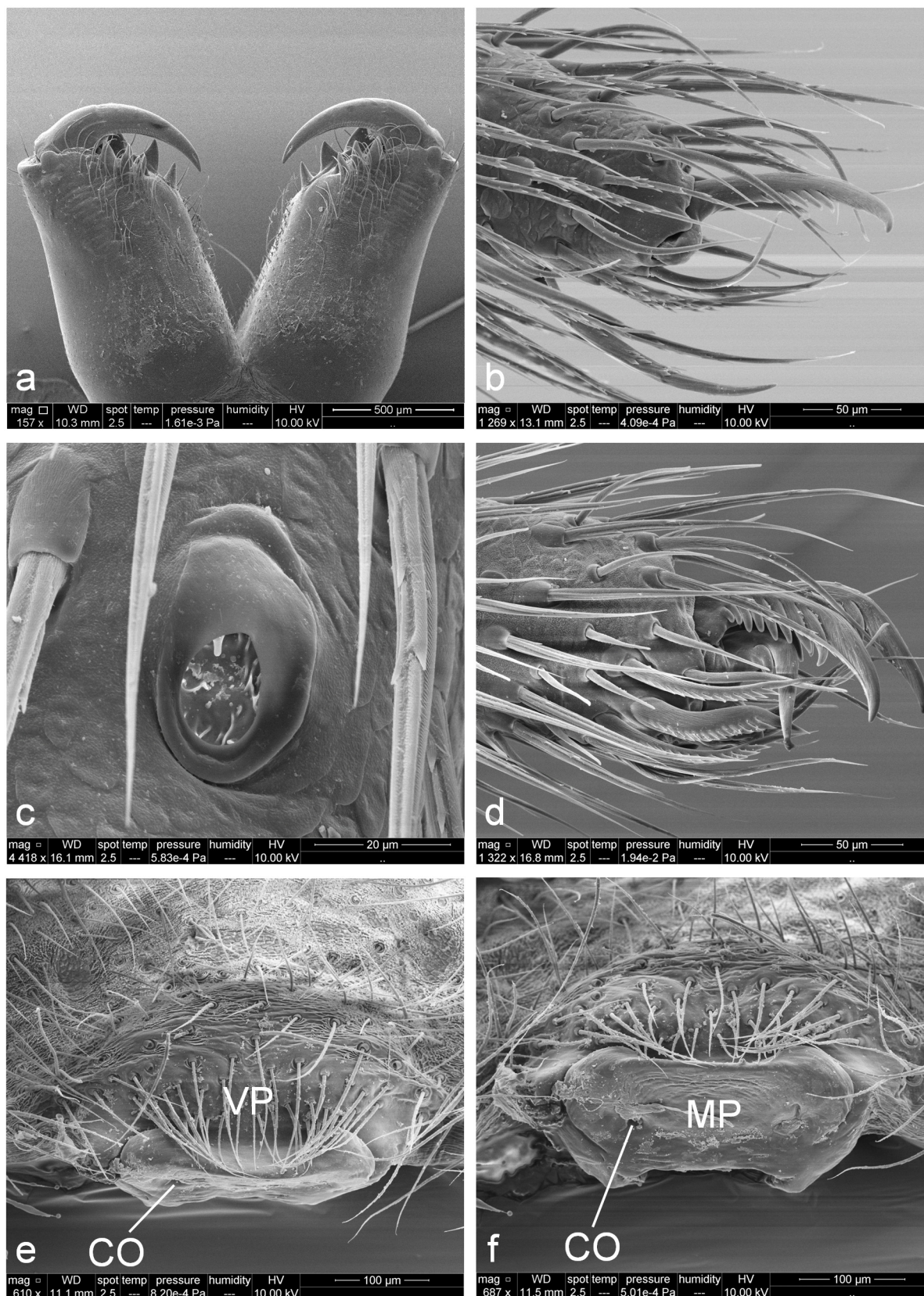


FIGURE 51. *Azilia histrio* Simon, 1895. Female (IBSP 84522): a chelicera, ventral view; b palpus, claw, distal area; c tarsal organ, dorsal view; d leg I, claw, lateral view; e–f epigynal plate, e ventral view; f posterior view. Abbreviations: CO, copulatory opening; MP, median plate; VP, ventral plate.

(MPEG 0544); *Manaus*, Fazenda Dimona (2°20'28"S, 60°5'51"W), 04–10.VIII.2009, A. J. Santos coll., 1♀ (UFMG 3488); Estação Experimental de Silvicultura Tropical, BR-174, Km 45 (2°35'54"S, 60°2'15"W, 131m a.s.l.), 17–19.XI.2013, B. T. Faleiro *et al.* coll., 2♀ (UFMG 14472); *Manicoré*, Rio Atininga (5°48'32"S, 61°18'0"W), 19.IV.1996, Equipe IBSP/SMNK coll., 1♂ (IBSP 41803); Presidente Figueiredo, Usina Hidrelétrica de Balbina (1°54'56.7"S, 59°28'25"W), collected between 1987–1988, Equipe IBSP coll., 1♀ (IBSP 10822); Campus da Universidade Federal do Amazonas (3°4'25"S, 60°0'20"W), 21.V.2003, T. Gasnier coll., 1♀ (IBSP 58817); Reserva Florestal Adolpho Ducke (2°57'42"S, 59°55'40"W), 05–08.XI.2010, A. D. Brescovit coll., 1♂, 1♀ (IBSP 167789); *Pará*: no exact locality, 13.X.1975, A. Gorgonio coll., 1♀ (IBSP 5933); *Santarém*, Cipoal, Km10, 8° BEC, Serra de Piquatuba (02°30'17.04"S, 54°43'19.09"W), 29.XI.2011–27/I.2012, I. C. da Fonseca coll., 1♀ (IBSP 218998); same data as previous, 1♀ (IBSP 219004); same data as previous, 1♀ (IBSP 219024); same data as previous, 2♀ (IBSP 219056); same data as previous, 3♀ (IBSP 219069); same data as previous, 1♀ (IBSP 219077); same locality as previous, III–IV.2011, Alunos FIT coll., 1♀ (IBSP 244137); *Belterra*, FLONA do Tapajós (2°35'46.2"S, 54°55'50.7"W), IX.2006, A. D. Brescovit & A. B. Bonaldo coll., 2♀, 1 imm. (IBSP 68547); *Altamira* (3°12'10"S, 52°12'21"W), collected in 2009, M. E. Bichuette *et al.* coll., 1♂ (IBSP 182191); Cave Kararaô, Road PA-022 (4°07'19.3"S, 53°18'21.8"W), 10.IV.2009, M. E. Bichuette coll., 1♂ (IBSP 151425); *Tucuruí* (3°46'4"S, 49°40'22"W), VII.1984, Equipe IBSP coll., 1♀ (IBSP 5442); same data as previous, 1♀ (IBSP 5443); same data as previous, 1♀ (IBSP 5444); *São Félix do Xingu*, Cave SFX_0037 (3°08'27.3"S, 51°49'06.2"W), 12.VII.2018, Ativo Ambiental coll., 1♂ (IBSP 264385); *Canaã dos Carajás*, Floresta Nacional de Carajás, Gruta S11_A26 (6°24'49"S, 50°21'17"W), 23.VIII–02.IX.2007, 1♂ (IBSP 97824); Serra dos Carajás, Cave ST_0034 (6°19'12"S, 50°06'46"W), 04.II.2016, BioEspeleo Consultoria Ambiental coll., 1♀ (IBSP 191817); *Curionópolis*, Serra dos Carajás, Cave CRIS_013 (6°26'50"S, 49°40'56"W), 29.VII–06.VIII.2008, R. Andrade *et al.* coll., 1♂ (IBSP 174579); Cave CRIS_013 (6°26'50"S, 49°40'56"W), 29.VII–06.VIII.2008, R. Andrade *et al.* coll., 2♀ (IBSP 174580); Cave SL_0060 (05°58'46"S, 49°37'22"W), 10.VI.2010, R. Zampaulo coll., 3♀ (IBSP 190047); *Parauapebas*, FLONA de Carajás, Cave N5S_0002 (GEM-1028) (6°05'33"S, 50°07'33"W), 14–23.X.2009, R. Andrade & I. Cizauskas *et al.* coll., 2♀ (IBSP 174253); 14–23.X.2009, R. Andrade & I. Cizauskas *et al.* coll., 1♀ (IBSP 174254); Cave N4E_0002 (GEM-1004) (6°02'25"S, 50°09'39"W), 20.X–01.XI.2006, R. Andrade & I. Cizauskas *et al.* coll., 1♂, 1 imm. (IBSP 174941); Cave N5S_0063 (GEM-1078)/N5S_0064/N5S_0065 (6°06'12"S, 50°08'07"W), 14.III–04.IV.2010, R. Andrade & I. Cizauskas *et al.* coll., 1♀ (IBSP 177547); Cave N5S_0085 (GEM-1107) (6°05'12"S, 50°07'35"W), 25.VIII–03.IX.2009, R. Andrade & I. Cizauskas *et al.* coll., 1♀ (IBSP 177552); Cave N5SM1_0018 (GEM-1191) (6°06'19"S, 50°08'15"W), 08.II.2011, R. Zampaulo *et al.* coll., 3♀ (IBSP 176967); Cave N5SM1_0031 (GEM-1785) (6°06'18"S, 50°08'17"W), 27.VIII.2010, R. Zampaulo *et al.* coll., 1♀ (IBSP 176995); Cave N4WS_0063 (GEM-1842) (6°04'22"S, 50°11'45"W), 18.XI–01.XII.2010, F.P. Franco & C.A.R. Souza *et al.* coll., 1♀ (IBSP 177876); Cave N4WS_0009 (GEM-1172) (6°05'22"S, 50°11'41"W), 10–19.V.2011, F.P. Franco & C.A.R. Souza *et al.* coll., 1♂ (IBSP 177877); Cave N1_0002 (GEM-1198) (6°02'24"S, 50°16'12"W), 11.VI–02.VII.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 208589); Cave N1_0024 (GEM-1220) (6°01'53"S, 50°16'20"W), 11.VI–02.VII.2014, Equipe Carste *et al.* coll., 1♂ (IBSP 208590); Cave N1_0153 (GEM-1353) (6°02'43"S, 50°16'19"W), 11.VI–02.VII.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 208591); Cave N8_0025 (GEM-1826) (6°10'29"S, 50°09'04"W), 16.VII–06.VIII.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 208592); Serra Norte, Cave N5W-06 (06°04'51"S, 50°08'02"W), 04–07/XII.2013, D.D. Guarda *et al.* coll., 1♂ (IBSP 286764); *Vitória do Xingu*, Cave Leonardo da Vinci (3°09'08"S, 52°04'31"W), 17.XII.2010, M.E. Bichuette & J.E. Gallão coll., 1♀ (IBSP 189086); *Juruti* (2°36'45.2"S, 56°11'27.5"W), Acampamento Mutum, 09.IX.2002, A.B. Bonaldo coll., 1♀ (MPEG 000434); 25.V.2009, N. F. Lo-Man-Hung coll., 1♂ (MPEG 033201); 09.VIII.2004, D.F. Candiani coll., 1♀ (MPEG 033202); N.C. Bastos coll. 1♀ (MPEG 033203); 08.VIII.2004, D.F. Candiani coll., 1♂ (MPEG 033205); 05.VIII.2004, D. Santos-Souza coll., 1♀ (MPEG 033206); 06.V.2010, B.V.B. Rodrigues coll., 1♂ (MPEG 033209); Mutum (2°36'44.7"S, 56°11'39.2"W), 15.XI.2007, D.F. Candiani & N.F. Lo-Man-Hung coll., 1♂ (MPEG 033207); Sítio Barroso (02°27'41.7"S, 56°0'11.6"W), 11.VIII.2006, D.F. Candiani coll., 1♀ (MPEG 008173); 08.II.2007, J.A.P. Barreiros coll., 1♂ (MPEG 033204); 10.VIII.2004, D. Santos-Souza coll., 1♀ (MPEG 033208); *Melgaço*, Estação Científica Ferreira Penna, FLONA Caxiuanã (01°42'24"S, 51°27'34.3"W), 14.IV.2006, R.B. Lopes coll., 2♀ (MPEG 029701); same locality as previous, 19.IV.2006, 1♂ (MPEG 029704); same locality as previous, 19.IV.2006, J.A.P. Barreiros coll., 1♂, 2♀ (MPEG 029705); same locality as previous (except 01°43'21.6"S 51°25'51.2"W), 29.IV.2006, N.S. Abraham coll., 1♀ (MPEG 029708); same data as previous, 1♂ (MPEG 029718), same locality as previous, 08.X.2005, J.A.P. Barreiros coll., 1♀ (MPEG 029715); same locality as previous, 24.IV.2006, 1♀ (MPEG 029719); same locality as previous (except 1°43'43.2"S, 51°29'0.7"W), 21.IV.2006, J.M.C. Cordeiro coll., 1♀ (MPEG 029702); same locality as previous, 26.IV.2006, E.J. Sales coll., 1♀ (MPEG 029703); same locality as previous, 21.IV.2006, 1♂ 2♀ (MPEG 029706); same locality as previous, 21.IV.2006, B.C. Araújo coll., 1♂ (MPEG 029707); same locality as previous (except 1°43'59.2"S 51°30'38.6"W), 29.IX.2005, N.S. Abraham coll., 1♂ (MPEG 029711); same locality as previous (except 1°44'15.5"S, 51°26'42.0"W), 25.III.2002, A.B. Bonaldo coll., 1♂ 4♀ (MPEG 009600); same locality as previous, 05.VI.2004, A.B. Bonaldo coll., 2♀ (MPEG 009648); same locality as previous, 2002, A.B. Bonaldo coll., 1♀ (MPEG 026140); same locality as previous,

collected in 2002, A.B. Bonaldo coll., 1♀ (MPEG 026141); same locality as previous, 01.I.2002, A.B. Bonaldo coll., 1♂ (MPEG 026142); same locality as previous, 01.IV.2002, A.B. Bonaldo coll., 1♂ (MPEG 026143); same locality as previous, 10.VII.2002, A.B. Bonaldo coll., 1♂ 1♀ (MPEG 0917); same locality as previous, 11.VI.2002, A.B. Bonaldo coll., 1♀ (MPEG 486); same locality as previous, 07–13.XI.2002, A.B. Bonaldo coll., 1♀ (MPEG 0485); same locality as previous, 13.VII.2002, A.B. Bonaldo coll., 1♂ (MPEG 0918); same locality as previous, 08.VII.2001, A.B. Bonaldo coll., 1♀ (MPEG 0499); same locality as previous, 09.VI.2004, A.B. Bonaldo & D.F. Candiani coll., 1♀ (MPEG 009651); same locality as previous, 01–03.XI.2002, M.C. Santos-Costa coll., 1♀ (MPEG 0792); same locality as previous, 14.VII.2002, R. Santos coll., 1♀ (MPEG 0916); same locality as previous, (except 1°44'18"S, 51°27'48"W), 07.II.2002, A.B. Bonaldo coll., 1♀ (MPEG 00485); same locality as previous, 08.VII.2001, A.B. Bonaldo coll., 1♀ (MPEG 000499); same locality as previous, 01.XI.2002, M.C. Santos-Costa coll., 1♀ (MPEG 000792); same locality as previous, 14.07.2002, R. Santos coll., 1♀ (MPEG 000916); same locality as previous, (1°45'12.8"S, 51°31'14.7"W), 23.IV.2006, J.A.P. Barreiros coll., 1♀ (MPEG 029712); same locality as previous, 28.IV.2006, J.A.P. Barreiros coll., 1♀ (MPEG 029717); same locality as previous, 23.IV.2006, 1♂ (MPEG 029716); same locality as previous, (except 1°47'32.7"S, 51°25'59.2"W), 28.V.2006, J.A.P. Barreiros coll., 1♂ (MPEG 029709); same locality as previous, 23.XI.2005, J.A.P. Barreiros coll., 3♀ (MPEG 029710); same locality as previous, 23.XI.2005, J.A.P. Barreiros coll., 2♀ (MPEG 029713); same locality as previous, 02.VI.2006, B.C. Araújo coll., 1♂ (MPEG 029720); *Portel*, Estação Científica Ferreira Penna, FLONA Caxiuanã (1°51'19.3"S, 51°25'57.5"W), 17.XI.2005, J.H.C. Cordeiro coll., 1♀ (MPEG 029714); *Moju/Acará*, Km 38, 30.III.2002, D.D. Guimarães coll., 1♀ (MPEG 000537); 1♀ (MPEG 0537); *Tenoné-Belém*, 18.III.2001, J.A.P. Barreiros coll., 1♀ (MPEG 033353); *Belém*, Reserva Mocambo (1°26'48"S, 48°25'1"W), 11.XII.2007, S.C.B. Silva coll., 1♀ (MPEG 033355); *Ilha do Mosqueiro* (1°8'27"S, 48°23'30"W), 30.VII.1996, Domingos coll., 2♀ (MPEG 004866), 30.VII.1996, Domingos coll., 1♀ (MPEG 004867); same locality as previous, 30.VII.1996, Domingos coll., 2♀ (MPEG 004868); Museu Paraense Emílio Goeldi, Campus de Pesquisa (1°27'4.44"S, 48°26'39.32"W), 01.VIII.2015, P. Pantoja coll., 1♀ (MPEG 034056); same locality as previous 01.IX.2015, P. Pantoja, L.F. Serrão, S. Bendelak & C. Xavier coll., 1♀ (MPEG 034057); 2° Batalhão de Operações Ribeirinhas, Mata da Marinha (1°23'25.5"S, 48°26'53.8"W), C. Alves, 1♀ (MPEG 03585); same locality as previous, P. Pantoja & S. Landes coll. 1♀ (MPEG 035852); same locality as previous, C. Xavier & C. Alves coll., 1♀ (MPEG 035853); same locality as previous, P. Pantoja coll., 1♀ (MPEG 035854); *Cametá*, Vila de Curuçambaba, Várzea (2°6'31.4"S, 49°18'55.8"W), 27.VI.2014, R.F. Saturnino coll., 1♂ (MPEG 033743); *Barcarena*, Reserva Sumaúma (1°29'43"S, 48°42'35"W), 19.XI.2001, D.D. Guimarães coll., 1♂ (MPEG 0311);

same locality as previous, 17.XI.2001, A.B. Bonaldo coll., 1♂, 1♀ (MPEG 0310); *Novo Progresso*, Campo de Provas Brigadeiro Velloso, Serra do Cachimbo (9°16'49"S, 54°56'32"W), 15.IX.2003, A.B. Bonaldo coll., 1♂ (MPEG 001736); same locality as previous, 15.IX.2003, D. Santos-Souza coll., 1♂ (MPEG 001737); same locality as previous (except 9°22'0"S, 54°55'21"W), 15.IX.2003, A. B. Bonaldo coll., 1♂ (MPEG 01736); same locality as previous, 15.IX.2003, D.R.S. de Souza coll., 1♂ (MPEG 01737); same locality as previous, 6.IV.2004, J. Ricetti coll., 1♀ (MPEG 01738); same locality as previous, 7.IV.2004, J. Ricetti coll., 1♀ (MPEG 01739); same locality as previous (except 9°22'2.9"S, 55°1'11.9"W), 06.IV.2004, J. Ricetti coll., 1♀ (MPEG 001738); same locality as previous, 07.IV.2004, J. Ricetti coll., 1♀ (MPEG 001739); same locality as previous, 06.IV.2004, J. Ricetti coll., 1♂ (MPEG 005978); same locality as previous, 07.IV.2004, J. Ricetti coll., 1♀ (MPEG 005983); same locality as previous, 06.IV.2004, J.A.P. Barreiros coll., 1♂, 2♀ (MPEG 005973); **Rondônia**: *Jamari*, Floresta Nacional do Jamari (9°11'32.7"S, 63°6'32.3"W, 143 m), 25.X.2016, L.S. Carvalho coll., 1♀ (UFMG 20299); *Porto Velho*, Campus Universidade Federal de Rondônia (8°45'S, 63°54'W), 2006–2007, 1♀ (IBSP 144728); same data as previous, 1♀ (IBSP 144729); same data as previous, 1♀ (IBSP 144730); same data as previous, 1♀ (IBSP 144731); *Cacoal*, Cacoal Selva Park (11°29'14"S, 61°26'13"W), 24–26.III.2010, T.L. Fernandes coll., 2♀ (IBSP 239200); *Sítio São Jorge* (11°26'19"S 61°26'50"W), 25.III.2010, T.A. Menicucci coll., 1♀ (IBSP 239279); **Ceará**: *Ubajara*, Parque Nacional de Ubajara (03°51'S, 40°55'W), VII–XII.2007, D. Loebmann coll., 1♂ (IBSP 89327); same data as previous, 1♂ (IBSP 89328); same data as previous, 1♂ (IBSP 89329); same data as previous, 2♀ (IBSP 89330); same data as previous, 1♂ (IBSP 89331); same data as previous, 2♀ (IBSP 89332); same data as previous, 1♀ (IBSP 312841); *Pacoti*, Campus da UECE, Estação Ecológica de Pacoti (4°13'32"S, 38°55'09"W), 08.VIII.2011, R. Azevedo, A.G. Coutinho & L.G. Sales Júnior coll., 1♂ (IBSP 167908); *Crato*, Floresta Nacional do Araripe-Apodi (07°11'42"–07°28'38"S, 39°13'28"–39°36'33"W), collected in 2018, R. Azevedo coll., 1♂ (IBSP 227543); **Paraíba**: *Areia*, Reserva da Mata do Pau Ferro (06°57'S, 35°49'W), 23–19.IX.1999, A.D. Brescovit *et al.* coll., 1♂ 1♀ (IBSP 40241); same data as previous, 1♀ (IBSP 40242); same data as previous, 1♀ (IBSP 40243); same data as previous, 1♂, 1♀ (IBSP 40244); same data as previous, 1♀ (IBSP 40245); *João Pessoa*, Mata do Buraquinho (07°06'S, 34°54'W), V–VI.2004, S. C. Dias coll., 1♂ (IBSP 49153), same locality as previous, X–XI.2003–VIII–IX.2004, 1♀ (IBSP 88965); same data as previous, 1♂ (IBSP 88967); 10 km north Sapé (7°5'42"S, 35°13'58"W), Morro Sapé, Fazenda Pacatuba, 30.III.1983, G.A. Languth coll. (MCN 24978); **Pernambuco**: *Caruaru* (8°16'58"S, 35°58'33"W), 2008–2009, H. Amorim coll., 1♀ (IBSP 272527); *São Lourenço da Mata*, Mata do Toró (8°4'S, 35°12'W), 01.III.1972, P. F.L. Duarte coll., 1♀ (IBSP 28025); *Jaqueira* (8°43'37"S, 35°47'34"W), VII/2012, A. Costa col., 1♂ (IBSP 311339); same data as previous, 1♂ (IBSP 311340); same locality

as previous, VII.2012, A. Costa coll., 1♂ 1♀ (IBSP 311341); same data as previous, 2♂ (IBSP 311342); same data as previous, 1♀ (IBSP 311343); same data as previous, 1♂ (IBSP 311344); same data as previous, 1♂ (IBSP 311345); same data as previous, 1♀ (IBSP 311346); same data as previous, 1♂ (IBSP 311347); same data as previous, 2♂ (IBSP 311348); same data as previous, 1♀ (IBSP 311349); same data as previous, 1♂, 1♀ (IBSP 311489); Recife, Horto Dois Irmãos (8°7'30"S, 34°52'30"W), VI–XII.2000, M.L. Peres coll., 1♀ (IBSP 27254); 30.V–02.VI.2001, Equipe Biota coll., 1♂ (IBSP 236599); same data as previous, 1♂ (IBSP 236601); same data as previous, 1♀ (IBSP 236605); data locality as previous, 2♀ (IBSP 236607); same data as previous, 1♀ (IBSP 236608); same data as previous, 2♂ (IBSP 236609); same data as previous, 1♂ (IBSP 236615); same data as previous, 1♀ (IBSP 236616); same data as previous, 1♀ (IBSP 236617); same data as previous, 1♀, 2 imm. (IBSP 236619); same data as previous, 1♂ (IBSP 236621); same data as previous, 1♀ (IBSP 236623); same data as previous, 2♀ (IBSP 236625); same data as previous, 1♀ (IBSP 236628); same data as previous, 2♀ (IBSP 236630); same data as previous, 1♂, 2 imm. (IBSP 236633); same data as previous, 2♀ (IBSP 236635); same data as previous, 1♂, 1♀, 1 imm. (IBSP 236636); same data as previous, 1♀ (IBSP 236638); same data as previous, 1♂ (IBSP 236640); same data as previous, 1♀ (IBSP 236641); same data as previous, 1♀ (IBSP 236643); same data as previous, 1♀ (IBSP 236646); same data as previous, 1♀ (IBSP 236653); same data as previous, 1♀ (IBSP 236655); same locality as previous, 1♀ (IBSP 236657); same data as previous, 1♀ (IBSP 236616); **Alagoas:** *Quebrangulo*, Reserva Biológica de Pedra Talhada (9°15'7.3"S, 36°25'44"W), 25.V.2012, I.F.L. Magalhães coll., 1♂, 2♀ (IBSP 274621); *Ibateguara*, São José da Laje, Usina Serra Grande (9°0'36"S, 36°03'28"W), X.2003, F.R. Delfim coll., 1♂ (IBSP 48380); *Maceió*, Ipióca, Serra da Saudinha (09°22'S, 35°43'W), XI.2004, G.Q.C. Correia coll., 1♀ (IBSP 63840); Murici, Estação Ecológica de Murici (09°15'S, 35°51'W), 13–22.IX.2003, Equipe Biota coll., 2♀ (IBSP 84510); same data as previous, 1♂ (IBSP 84511); same data as previous, 1♀ (IBSP 84512); same data as previous, 1♀ (IBSP 84520); same data as previous, 1♂ (IBSP 84521); same data as previous, 1♂ (IBSP 84522; SEM); same data as previous, 1♀ (IBSP 84523); same data as previous, 1♀ (IBSP 84524); same data as previous, 1♀ (IBSP 84525); same data as previous, 1♀ (IBSP 84528); same data as previous, 1♂ (IBSP 85946); same data as previous, 1♂ (IBSP 85947); same data as previous, 1♀ (IBSP 85948); same data as previous, 1♀ (IBSP 85949); same data as previous, 1♂ (IBSP 85950); same data as previous, 1♀ (IBSP 85951); same data as previous, 2♂, 5♀ (IBSP 85952); **Mato Grosso:** *Chapada dos Guimarães*, Fazenda Buriti (13°38'46.6"S, 58°40'06.2"W), VII–XI.2006, P. Zanoli coll., 1♀ (IBSP 75391); *Jauru*, Usina Hidrelétrica de Jauru, Rio Sepotuba (15°20'31"S, 58°51'57"W), 02.III.2002, H.F. Japyassú coll., 2♀ (IBSP 48612); same locality as previous, 06. III.2002, H.A. Bristski *et al.* coll., 3♀ (IBSP 48641); Reserva do Cabaçal, Cachoeira Chuva da Prata (15°4'48"S,

58°27'57"W), 7.III.2002, R.P. Indicatti coll., 1♂ (IBSP 58265); **Bahia:** *Salvador*, collected in 2012, M.L. Peres coll., 1♀ (IBSP 275081); *Miguel Calmon*, Parque Estadual das Sete Passagens (11°23'40"S, 40°31'27"W), 28.V–04. VI.2010, P. Recoder coll., 2♀ (IBSP 167986); same locality as previous, 23.I.2012, I.F.L. Magalhães, 2♂, 1♀ (IBSP 274622); *Jaguaripe* (13°6'46"S, 38°53'45"W), 23. II.2011, A.A. Mendonça *et al.* coll., 4♀ (IBSP 270759); same data as previous, 2♀ (IBSP 270760); same data as previous, 2♀ (IBSP 270761); same data as previous, 2♀ (IBSP 270763); *Iguaí* (14°45'21"S, 40°5'20"W), 08. IV.2012, 1♀ (IBSP 270203); *Ituberá*, Mata do Pacangê, Área da Empresa Michelin (13°48'23"S, 39°11'31"W), X–XI/2009, C.M.P. Leite coll., 2♀ (IBSP 320524); same data as previous, 2♀ (IBSP 320529); same data as previous, 1♂ 2♀ (IBSP 320548); same data as previous, 1♀ (IBSP 320563); same data as previous, 1♂, 2♀ (IBSP 320581); same data as previous, 1♀ (IBSP 320839); same data as previous, 1♀ (IBSP 320843); same data as previous, 1♀ (IBSP 320846); same data as previous, 1♂, 2♀ (IBSP 320847); same data as previous, 1♀ (IBSP 320850); same data as previous, 1♀ (IBSP 320854); *Camamu* (13°56'42"S, 39°6'14"W), 02.X.2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270805); same data as previous, 1♀ (IBSP 270806); same data as previous, 03.X.2011, 1♀ (IBSP 270808); same data as previous, 04.X.2011, 1♀ (IBSP 270810); same data as previous, 05.X.2011 1♀ (IBSP 270811); *Ubaira* (13°16'4"S, 39°39'46"W), 17–22.XI.2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270468); same data as previous, 1♀ (IBSP 270834); same data as previous, 1♀ (IBSP 270836); same data as previous, 1♀ (IBSP 270837); same data as previous, 1♀ (IBSP 270838); same data as previous, 1♀ (IBSP 270839); same data as previous, 1♀ (IBSP 270840); *Wenceslau Guimarães* (13°41'13"S, 39°28'44"W), 17. I.2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270791); 18.I.2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270792); *Nilo Peçanha* (13°35'56"S, 39°6'25"W), 11–18.IX.2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270793); same data as previous, 1♀ (IBSP 270794); same data as previous, 1♀ (IBSP 270795); same data as previous, 1♀ (IBSP 270796); same data as previous, 1♀ (IBSP 270797); same data as previous, 1♀ (IBSP 270798); same data as previous, 1♀ (IBSP 270799); same data as previous, 1♀ (IBSP 270800); same data as previous, 1♀ (IBSP 270801); same data as previous, 1♀ (IBSP 270802); same data as previous, 1♀ (IBSP 270803); *Santa Teresinha*: Estrada Pioneira, Serra da Jibóia (12°51'S, 39°28'W), 2010–2011, L.S. Carvalho coll., 1♂ (IBSP 272163); same data as previous, 1♀ (IBSP 272172); *Ilhéus* (14°47'20"S, 39°2'56"W), 28/X/2011–04/XI/2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270812); same data as previous, 1♀ (IBSP 270814); same data as previous, 1♀ (IBSP 270815); same data as previous, 1♀ (IBSP 270816); same data as previous, 1♀ (IBSP 270817); same data as previous, 1♀ (IBSP 270818); same data as previous, 1♀ (IBSP 270819); same data as previous, 1♀ (IBSP 270820); same data as previous, 1♀ (IBSP 270821); same data as previous, 1♀ (IBSP 270822); same data as previous, 1♀ (IBSP 270823); same data as previous, 1♀ (IBSP 270824); same data as

previous, 1♀ (IBSP 270827); same data as previous, 1♀ (IBSP 270828); same data as previous, 1♀ (IBSP 270829); same data as previous, 1♀ (IBSP 270830); same data as previous, 1♀ (IBSP 270831); Mata do CEPLAC (14°45'11,69"S, 39°12'53,26"W), 07–17.IV.1998, A.D. Brescovit *et al.* coll., 1♀ (IBSP 19037); same data as previous, 3♀ (IBSP 19044); same data as previous, 1♀ (IBSP 19070); same data as previous, 1♀ (IBSP 19145); same data as previous, 3♀ (IBSP 19154); same data as previous, 1♂, 2♀ (IBSP 19179); same data as previous, 3♂, 3♀ (IBSP 19197; SEM); same data as previous, 1♀ (IBSP 19271); same data as previous, 2♀ (IBSP 19275); same data as previous, 1♀ (IBSP 19279); CEPLAC, Reserva Zoobotânica (14°46'22,7"S, 39°13'13,8"W, 40m a.s.l.), 08–09.XII.2010, G.H.F. Azevedo & A.J. Santos coll., 5♂, 8♀, 4 imm. (UFMG 9469); Jussari, Reserva Natural da Serra do Teimoso (15°08'S, 39°31'W), 08–09.IV.1998, A.D. Brescovit *et al.* coll., 1♀ (IBSP 18620); same data as previous, 1♀ (IBSP 18700); Fazenda Teimoso (15°07'S, 39°30'W), 21.XI.1998, F. Dias coll., 1♀ (IBSP 238197); Una, Reserva Biológica do Una (15°10'S, 39°03'W), 13–20.XI.2000, A.D. Brescovit *et al.* coll., 2♀ (IBSP 18227); same data as previous, 2♀ (IBSP 18270), same data as previous, 1♀ (IBSP 18278); same data as previous, 1♂, 2♀ (IBSP 18296); same data as previous, 2♀ (IBSP 18323); same data as previous, 1♂, 1♀ (IBSP 41895); same data as previous, 1♂ (IBSP 41896); same data as previous, 1♂ (IBSP 41897); same data as previous, 2♀ (IBSP 41898); same data as previous, 2♀ (IBSP 41908); same data as previous, 1♂ 2♀ (IBSP 41911); same data as previous, 1♀ (IBSP 41912); same data as previous, 1♀ (IBSP 41913); same data as previous, 1♂ (IBSP 41914); same data as previous, 1♂, 4♀ (IBSP 41915); same data as previous, 1♀ (IBSP 41916); Mata Brauma, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 2♀ (IBSP 41890); same data as previous, 1♂ (IBSP 41891); Casa da Farinha, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 1♂, 1 imm. (IBSP 41892); Cachoeira Lisa, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 1♀ (IBSP 41893); same data as previous, 1♀ (IBSP 41894); Mata do Coco, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 1♀ (IBSP 41899); same data as previous, 1♀ (IBSP 41900); Mata Hamilton, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 1♂ (IBSP 41901); same data as previous, 1♀ (IBSP 41902); Mata Casa de Taípa, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 1♂ (IBSP 41903); Cabrunca Zé Raimundo, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 2♂, 3♀ (IBSP 41904); same data as previous, 1♀ (IBSP 41905); same data as previous, 1♂ (IBSP 41906); same data as previous, 2♂, 1♀ (IBSP 41907); Mata Jupará, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 1♀ (IBSP 41909); Cabrunca Renato Leite, 17–22.XI.2000, A.D. Brescovit *et al.* coll., 1♂ (IBSP 41910); Estação Experimental Lemos Maia (CEPLAC) (15°16'22,5"S, 39°5'31,9"W, 80 m), 07–12. XII.2010, G.H.F. Azevedo & A.J. Santos coll., 1♂ (UFMG 11285); Povoado do Quati (15°6'21,6"S, 39°20'40,6"W, 232m a.s.l.), 31.XII.2014, A. Anker, E.A. Araujo & P.H. Martins coll., 1♀ (UFMG 17762); Porto Seguro, Estação Ecológica Universitária Pau Brasil (6°36'37"S, 35°8'4"W), 19.IV.1998, A.D. Brescovit *et al.* coll., 1♀ (IBSP 17881);

Estação Veracel Celulose (16°21'39"S, 39°9'13"W), VI–VII.2003, M.L. Peres coll., 1♂ (IBSP 52206); Itamaraju (17°2'20"S, 39°31'51"W), 05.IV.2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270766); same locality as previous, 06.IV.2011, A.A. Mendonça *et al.* coll., 1♀ (IBSP 270769); Macarari, Reserva Mata do Passarinho (15°47'34"S, 40°31'30,1"W), 16–21.IV.2019, F.V. Oliveira *et al.* coll., 1♀ (UFMG 23489); Uruçuca, around Parque Estadual da Serra do Conduru (14°29'30,9"S, 39°8'15,6"W, 202m a.s.l.), 28.XII.2014, A. Anker, E.A. Araujo & P.H. Martins coll., 1♂ (UFMG 17674); **Mato Grosso do Sul:** Dourados, Fazenda do Joel (22°13'15"S, 54°48'21"W), 01.VI.2017, L.L. Vieira & M.E. Rocha coll., 1♂ (IBSP 268977); **Espírito Santo:** Santa Teresa (19°56'08"S, 40°36'01"W), IX.1988, 1♀ (IBSP 40165); IX.1988, 2♀ (IBSP 226762); Estação Biológica de Santa Lúcia (19°57'43"S, 40°31'56"W, 935m a.s.l.), 7.VII.2013, P.H. Martins & M.T.T. Santos coll., 1♂ (UFMG 14052); Trilha Indaia-Açu (19°58'16"S, 40°32'6,7"W), 31.I.2015, T.G. Kloss coll., 1♀ (UFMG 18492); Reserva Biológica Augusto Ruschi, Trilha da Cachoeira (19°54'45,2"S, 40°33'9,4"W), 30.I.2015, T.G. Kloss coll., 1♂ (UFMG 18416); Trilha Roda d'Água (19°53'35"S, 40°32'34"W), 30.I.2015, T.G. Kloss coll., 1♀ (UFMG 18538); **Domingos Martins**, São Paulo do Aracê, private area near the Parque Estadual de Pedra Azul (20°25'57"S, 41°1'12"W, 1148m a.s.l.), 12.VII.2013, P.H. Martins & M.T.T. Santos coll., 1♀ (UFMG 16293), P.H. Martins & M.T.T. Santos coll., 1♀ (UFMG 16342); **Apiacá** (21°09'13"S, 41°34'03"W), 23.XI.1996, R. Baptista coll., 1♂, 1♀ (IBSP 40169); same locality as previous, 26.VIII.1986, R. Baptista coll., 3♀ (IBSP 226760); same locality as previous, 21.IX.1985, R. Baptista coll., 1♀ (IBSP 226764); same data as previous, 1♀ (IBSP 226769); **Cariacica**, Reserva Duas Bocas (20°18'05"S, 40°28'06"W), R. Baptista & A.P. Chaves coll., 2♀ (IBSP 40167); same locality as previous, R. Baptista & A. Baptista coll., 1♀ (IBSP 226761); same locality as previous, 13.X.2005, T. Souza *et al.* coll., 2♀ (IBSP 133147); same locality as previous, 596m a.s.l., 13.X.2005, T. Souza coll., 1♀ (IBSP 134809); same locality as previous, 13.X.2005, T. Souza *et al.* coll., 1♀ (IBSP 135029); **Linhares**, Reserva Natural da Vale (19°6'54"S 39°56'20"W), 19–25.VII.1995, A.D. Brescovit *et al.* coll., 1♀ (IBSP 12671); same locality as previous, 05–12.I.1998, A.D. Brescovit *et al.* coll., 1♀, 1 imm. (IBSP 12714); same data as previous, 1♀ (IBSP 16761); same data as previous, 1♀, 1 imm. (IBSP 16861); 1♀ (IBSP 16943) same data as previous, 09–15.I.2012, J.P.P. Pena-Babosa *et al.* coll., 1♀ (IBSP 248851); same data as previous, 2♂, 3♀ (IBSP 248852); same data as previous, 1♂ (IBSP 248853); same data as previous, 2♂, 2♀ (IBSP 248854); same data as previous, 7♂, 5♀ (IBSP 248855); same data as previous, 1♂ (IBSP 248856); same data as previous, 1♂ (IBSP 248857); same data as previous, 2♂ 1♀ (IBSP 248858); same locality as previous, abosa *et al.* coll., 1♀ (IBSP 248859); same locality as previous, 4♀ (IBSP 248860); **Aracruz**, REFMU do Morro do Aricanga (19°48'22"S, 40°20'10"W), 14–16.X.2005, T. Souza *et al.* coll., 1♂, 1 imm. (IBSP 133356); same data as previous, 3♀ (IBSP 133380); same locality as previous (except

Main trail to lake from the watchman's house, 395m a.s.l.), 14–16.X.2005, T. Souza *et al.* coll., 3♀ (IBSP 135091); **Minas Gerais:** *Juiz de Fora*, Reserva Biológica Municipal Poço D'Anta (21°45'37,84"S, 43°19'10,24"W), 02–03.IV.2011, G.H.F. Azevedo & A.J. Santos coll., 1♀ (UFMG 5287); *Belo Horizonte*, Campus da UFMG (19°51'41"S, 43°57'48"W), 24.XI.1999, E.O. Machado coll., 1♀ (UFMG 151); *Miradouro* (20°53'27"S, 42°20'34"W), Fazenda Boa Sorte, 16.III.2017, C.A.R. Souza coll., 1♀ (IBSP 282774); Nova Lima, RPPN Mata Samuel de Paula (20°0'0"S, 43°52'0"W, 967m a.s.l.), 12–14.X.2006, J.P.P. Pena-Barbosa *et al.* coll., 1♀ (UFMG 2636); Parque Estadual da Serra do Rola Moça, Estação Mutucy (20°0'46,6"S, 43°48'11,2"W), 02.VI.2013, A.R. Pepato *et al.* coll., 1♀ (UFMG 23911); *Sabará*, Fazenda Izabela Hendrix (19°53'25"S, 43°48'24"W, 713 m), 06.XI.2008, J.P.P. Pena-Barbosa coll., 1♀ (UFMG 6298); *São Gonçalo do Rio Abaixo*, Cave MDIR_027 (19°49'33"S, 43°21'43"W), 13.I.2021, Equipe Spelayon *et al.* coll., 1♂ (IBSP 263186); Estação de Preservação e Desenvolvimento Ambiental de Peti (19°53'0"S, 43°22'0"W), 08–09.XII.2012, G.H.F. Azevedo *et al.* coll., 1♂, 1♀, 1 imm. (UFMG 12912); *Turmalina*, Nascente Córrego Comprido (17°11'39,36"S, 42°47'75,8"W, 796m a.s.l.), 18–28.II.2013, P.H. Martins coll., 1♂, 5♀, 1 imm. (UFMG 13731); *Inconfidentes*, Bairro Monjolinho, Fazenda Santa Luzia (22°20'1"S, 46°17'50,5"W), I–III.2015, M.M. Souza coll., 1♀ (UFMG 19737); *Leme do Prado*, Estação Ecológica de Acauã, Poção (17°7'56,22"S, 42°46'7,98"W, 795m a.s.l.), 18–28.II.2013, P.H. Martins coll., 1♂ (UFMG 19993); *Ouro Preto*, Floresta Estadual de Uaimii (20°15'38,5"S, 43°34'45,9"W, 1040m a.s.l.), 19.IX.2017, P.H. Martins coll., 1♂, 2♀ (UFMG 23630); *Alto Caparaó*, Parque Nacional do Caparaó (20°5'S 41°9'W), 01–07.V.2002, Equipe Biota coll., 1♂ (IBSP 85933); *Sete Lagoas* (19°27'57"S, 44°14'49"W), 1♀ (IBSP 226771); 07.I.2015, F. Bondezan coll., 1♂ (IBSP 188219); *Catas Altas*, Reserva Particular do Patrimônio Natural da Serra do Caraça (20°05'S, 43° 29'W), 24.IV–01.V.2002, Equipe Biota coll., 1♂ (IBSP 41725); same data as previous, 1♂ (IBSP 81379); same data as previous, 2♀ (IBSP 81380); same data as previous, 1♀ (IBSP 81381); same locality as previous, except Cave BR_030 (20°20'36"S, 43°24'33"W), 08.IV.2011, R. F. Ferreira & L. M. Rabelo coll., 2♀ (IBSP 190277); same locality as previous, except Cave BR_082 (20°14'57"S, 43°30'38"W), 26.IV.2011, C.H. Sena & L. Silva coll., 1♀ (IBSP 190278); same locality as previous, except Cave FZ29 (20°07'50"S, 43°23'43"W), 17.III.2011, L.G.S. Soares & A.F.V. Koken coll., 1♀ (IBSP 190424); same locality as previous, except Cave BR_019 (20°07'58"S, 43°24'15"W), 05.VIII.2011, L.G.S. Soares & A.F.V. Koken coll., 1♀ (IBSP 190718); same locality as previous, except Cave CPC-12 (20°08'46"S, 43°20'43"W), 19.II.2016, BioEspeleo Consultoria Ambiental coll., 1♀ (IBSP 194841); *Arcos*, Cave S1-CRH-090 (20°19'34"S 45°34'41"W), 15.V–09.VIII.2018, Equipe Spelayon *et al.* coll., 1♀ (IBSP 201652); *Caeté*, XI.2011, L.S.V.B. Ribeiro *et al.* coll., 1♂ (IBSP 293257); same data as previous, 1♀ (IBSP 293310); same data as previous, 2♀ (IBSP 293316); same locality as previous, except Cave Mina dos Matarelli (19°56'49.9"S, 43°44'24.6"W), 18.VII.2009, L.F.O. Bernardi coll., 1♀ (IBSP 190160); *Nova Lima*, Cave TAQR_26 (19°56'57"S, 43°47'45"W), 26.V.2014, M.P.A. Oliveira coll., 2♀ (IBSP 189752); *Marliéria*, Parque Estadual do Rio Doce (19°48'–19°29'S, 42°38'–42°28'W), 01–10.IX.2003, Equipe Biota coll., 2♀ (IBSP 85969); same data as previous, 1♀ (IBSP 85970); *Igarapé*, Cave MMX-CAV53, 07.II.2014, F. Bondezan coll., 1♂ (IBSP 189520); *Murié*, Pirapanema, Rampa de Vôo Livre Jacy Caetano (21°07'51"S, 42°21'57"W), 07.III.2017, C.A.R. Souza coll., 1♀ (IBSP 294943); *Conceição do Mato Dentro*, Serra do Sapo, Cave ASS_02A (Abrigo Dolina) (18°55'00"S, 43°25'41"W), 27.II–09.III.2012, G.P. Perroni *et al.* coll., 2♀ (IBSP 177532); same locality as previous, 15.XII.2010–14.I.2011, Equipe Carste coll., 1♀ (IBSP 196535); Serra da Serpentina, Cave SPT_0292 (19°05'44.0"S 43°21'23.0"W), 26.VII–13.X.2016, Equipe Carste *et al.* coll., 1♀ (IBSP 261794); same locality as previous, Monumento Natural, Cave CMN_164 (18°59'55.0"S 43°23'36.0"W), 25–28.VII.2017, Equipe Carste *et al.* coll., 1♂ (IBSP 262002); same data as previous, 1♂ (IBSP 262002); same locality as previous, Cave CMN_0072 (19°00'23.0"S, 43°24'15.0"W), 18–20.XII.2017, Equipe Carste *et al.* coll., 1♀ (IBSP 262075); *Mariana*, Cave CMR_0261 (20°15'12"S, 43°24'01"W), 24.X.2018, BioEspeleo Consultoria Ambiental coll., 1♂ (IBSP 203359); same locality as previous, Cave CMR_0172 (20°16'33"S, 43°23'04"W), 28.XI.2018, BioEspeleo Consultoria Ambiental coll., 2♀ (IBSP 203372); same locality as previous, Cave CH_24, 23–30.IX.2008, F. Pellegatti-Franco *et al.* coll., 1♀ (IBSP 145872); *Pains* (20°22'15"S, 45°39'39"W), XII.2015, F. Bondezan coll., 1♂ (IBSP 186823); same data as previous, 1♂ (IBSP 186861); Abrigo do Gavião, 01.XI.2005, M.E. Bichuette coll., 1♀ (IBSP 71884); Cave Ponte Velha 2 (20°24'47"S, 45°41'18"W), 16.VI.2009, R. Zampaulo coll., 1♀ (IBSP 181664); Cave A366SF, 06.I.2015, F. Bondezan *et al.* coll., 1♂ 2♀ (IBSP 187570); Cave A386SF, 08.XI.2015, F. Bondezan *et al.* coll., 2♀ (IBSP 187699); Fazenda Bocaina, Cave AGR_069 (20°18'02"S, 45°36'56"W), 13.XI–14.XII.2015, Equipe Spelayon coll., 1♀ (IBSP 188257); Cave Retiro, Equipe UFLA coll., 1♀ (IBSP 189040); Cave A13_B14A, 2014, F. Bondezan coll., 1♂, 1 imm. (IBSP 189960); Cave Liveirinho (20°17'53"S, 45°47'30"W), 30.V.2009, R. Zampaulo coll., 1♀ (IBSP 190992); 1♂ (IBSP 190998); Cave Loca D'Água, Sumidouro (20°25'25"S, 45°41'34"W), 09.VI.2009, R.A. Zampaulo coll., 1♀ (IBSP 19505); Cave ICPA_567 (20°22'35"S, 45°37'17"W), 17–29.VI.2013, Bueno *et al.* coll., 1♀ (IBSP 204276); Cave ICPA_12 (20°21'47"S, 45°36'43"W), 26.VIII–07.IX.2013, Bueno *et al.* coll., 1♀ (IBSP 207168); Cave M505_068 (20°17'11.0"S, 45°47'25.0"W), 02–06.VII.2019, Equipe Spelayon *et al.* coll., 1♀ (IBSP 259841); Cave M505_003 (20°17'11.0"S, 45°47'26.0"W), 05–11.XI.2019, Equipe Spelayon *et al.* coll., 1♀ (IBSP 259932); Cave CA-11 (20°13'23.0"S, 43°27'31.0"W), 18.VI–10.VII.2019, 1♂ (IBSP 288258); Cave SM-067 (20°13'56.0"S, 43°27'41.0"W), 18.VI–10.VII.2019, 1♂, 1♀ (IBSP 288260); Cave GS-46B (20°14'12.0"S, 43°27'49.0"W), 14–22/XI/2019, 1♀ (IBSP

288256); Cave SM-73 (20°13'42.0"S, 43°27'43.0"W), 31.III–11.IV.2014, 1♀ (IBSP 287101); Cave LOC-0241 (20°14'12.0"S, 43°27'49.0"W), 22–27.XI.2019, Equipe Carste coll., 1♀ (IBSP 288257); Cave GS_41 (20°13'38.0"S, 43°27'43.0"W), 06–16.VI.2011, R. Bessi *et al.* coll., 1♀ (IBSP 287231); *Morro do Pilar*, Cave RS 64 (19°10'50.0"S, 43°23'59.0"W), 18–21.III.2015, Equipe Carste coll., 1♂ (IBSP 266821); *Itabirito*, Mina do Pico, Cave MP_0051 (20°13'17.0"S, 43°50'54.0"W), 06.XI.2020, Ativo Ambiental coll., 1♀ (IBSP 266444); *Pimenta*, Cave do Marinheiro (Cave U_272) (20°24'01"S, 45°48'46"W), 01.VII.2009, R.A. Zampaulo coll., 2♀ (IBSP 195073); *Piumhi*, Córrego do Cavalo, Cave ICCA-014 (20°20'44"S, 45°50'53"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♂, 1♀ (IBSP 199215); Cave ICCA-028 (20°20'45"S, 45°50'57"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199216); Cave ICCA-028 (20°20'45"S, 45°50'57"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♂ (IBSP 199217); Cave ICCA-035 (20°20'45"S, 45°50'55"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♂ (IBSP 199218); Cave ICCA-093 (20°20'52"S, 45°50'48"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♂, 1♀ (IBSP 199219); Cave ICCA-154 (20°20'59"S, 45°50'42"W), 04–22.V.2014, Equipe Carste *et al.* coll., 2♀ (IBSP 199220); Cave ICCA-187 (20°21'03"S, 45°50'34"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199221); Cave ICCA-187 (20°21'03"S, 45°50'34"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199222); Cave ICCA-355 (20°21'06"S, 45°50'21"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199223); Cave ICCA-356 (20°21'05"S, 45°50'19"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199224); Cave ICCA-356 (20°21'05"S, 45°50'19"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199225); Cave ICCA-574 (20°21'06"S, 45°50'20"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199226); Cave ICCA-574 (20°21'06"S, 45°50'20"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199227); Cave ICCA-019 (20°20'43"S, 45°50'59"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199228); Cave ICCA-195 (20°21'01"S, 45°50'31"W), 04–22.V.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 199229); Cave 02 (20°20'41"S, 45°51'07"W), 12.VII.2018, R. Andrade *et al.* coll., 1♂ (IBSP 201929); *Santa Bárbara*, Serra do Baú (19°58'3,49"S, 43°25'43,93"W, 84m a.s.l.), 25.X–4.XI.2008, B.V.S. Pimenta & M.W.E. Faria coll., 1♀ (UFMG 8426); Cave APOL_0007 (20°00'59"S, 43°39'58"W), 12–15.XII.2011, Equipe Carste coll., 3♀ (IBSP 179198); *São Roque de Minas*, Serra da Canastra, Cave do Zeferino 1 (Gruta da Capivara) (20°06'51"S, 46°25'24"W), 07.IX.2010, M.E. Bichuette coll., 1♀ (IBSP 189067); *Rio Acima*, Serra do Gandarela, Cave GAND_40 (20°02'34"S, 43°39'12"), 10.II–20.III.2014, Equipe Carste *et al.* coll., 1♀ (IBSP 202960); *Santa Bárbara do Monte Verde*, Cave S1 MLT_025 (21°56'55.0"S, 43°44'07.0"W), 29.II.2020, Equipe Spelayon *et al.* coll., 1♀ (IBSP 258997); **Rio de Janeiro**: *Paracambi*, Parque Natural Municipal Curió (22°35'56,9"S, 43°42'10,1"W, 136m a.s.l.), 15.VI.2013, A.J. Santos coll., 1♂, 1 imm. (UFMG 12729); same locality as previous, 14.VI.2013, A.J. Santos coll., 1♀, 1 imm. (UFMG 12748); *Petrópolis*, Fazenda Rancho Porto da Roça, km 78.5, BR 40 (22°30'S, 43°06'W), 16–20.II.2000, F.S. Cunha coll., 1♂ (IBSP 41715); same locality as previous, 11–12.XI.1999, F.S. Cunha coll., 1♀ (IBSP 40251); *Paraíba do Sul*, Fazenda Maravilha (22°12'S, 43°16'W), 16–18.VIII.2001, Equipe Biota coll., 1♀ (IBSP 40246); same data as previous, 1♂, 1♀ (IBSP 40247); same data as previous, 3♀ (IBSP 40248); same data as previous, 1♀ (IBSP 40249) *Angra dos Reis*, Ilha Grande (23°8'26"S, 44°14'50"W), 10.X.1987, 2♀ (IBSP 226774); RPPN Fazenda do Tanguá (23°00'40,9"S, 44°20'48,2"W), VIII–IX.2009, C.A. Souza *et al.*, 2♀ (IBSP 315891); same data as previous, 1♀ (IBSP 315897); same data as previous, 1♀ (IBSP 316057); same data as previous, 1♀ (IBSP 316107); Rio de Janeiro (22°54'S, 43°12'W), X.1986, 1♀ (IBSP 40166); same locality as previous, 17.X.1986, 1♀ (IBSP 226770); Ilha de Marambaia (23°01'–23°06'S, 43°32'–44°01'W), 1♂, 1♀ (IBSP 226767); *Nova Friburgo*, Furnas Cão Sentado (22°12'54.1"S, 42°29'17.9"W), 27.II.1996, R.L.C. Baptista coll., 1♀ (IBSP 40164); Parque Ecológico Cão Sentado, Furnas do Catete (22°12'54.1"S, 42°29'17.9"W), 27.XI.1996, R.L.C. Baptista coll., 2♀ (IBSP 226758); *Cachoeiras de Macacu*, Reserva Ecológica de Guapiaçu (REGUA) (22°27'10.309"S, 42°46'13.011"W), 1♀ (IBSP 81432); same data as previous, 1♀ (IBSP 81433); same data as previous, 1♂, 1♀ (IBSP 81434); same data as previous, 1♀ (IBSP 81435); same data as previous, 1♀ (IBSP 81436); *Pinheiral*, Fazenda Santa Helena (22°34'S, 44°21'W), 05–11.XI.1999, A.D. Brescovit *et al.* coll., 1♀ (IBSP 40250); *Volta Redonda*, Mata da Cicuta (22°24'–22°38'S, 44°09'–44°20'W), 18.III.2000, F.S. Cunha coll., 2♀, 2 imm. (IBSP 26327); same locality as previous, 07.IX.1998, A.J. Santos coll., 1♀ (IBSP 40171); same locality as previous, 11–18.VI.2001, Equipe Biota coll., 1♂ (IBSP 85971); same data as previous, 2♀ (IBSP 85972); same data as previous, 1♂, 1 imm. (IBSP 85973); same data as previous, 3♀ (IBSP 85974); same data as previous, 1♀ (IBSP 85976); same data as previous, 1♀ (IBSP 85977); same data as previous, 2♀ (IBSP 85978); *Resende*, Parque Nacional de Itatiaia (22°22'31"S, 44°39'44"W), 08–15.VI.2001, Equipe Biota coll., 1♂ (IBSP 85945); *Ilha Grande* (23°8'26"S, 44°14'50"W), Trilha Farol de Castelhanas, 09–12.X.2007, I. Cizauskas coll., 1♀, 1 imm. (IBSP 87072); *Itatiaia*, Parque Nacional do Itatiaia, 20–30.V.2013, R.P. Indicatti *et al.* coll., 1♂, 1♀ (IBSP 314542); *Maricá* (22°55'10"S, 42°49'07"W), 02.I.1988, R. Baptista coll., 1♀ (IBSP 40168); *Mangaratiba*, Ilha de Marambaia (23°01'–23°06'S, 43°32'–44°01'W), 23–25.XI.2007, Thiago & M. Silveira coll., 1♀ (IBSP 88607); same locality as previous, 18.VIII.2007, C. Esberard *et al.* coll., 1♂ (IBSP 115632); *Paraty* (23°13'21"S, 44°42'50"W), 01.VI.1985, 1♀ (IBSP 226766); Estrada Paraty-Cunha (23°12'65"S, 44°49'19"W), 20.IV.2012, C. Bragagnolo *et al.* coll., 2♀ (IBSP 213098); *Nova Iguaçu*, Reserva Biológica do Tinguá (22°32'43"S, 43°23'5"W), II.2002, E.F. Ramos coll., 2♀ (IBSP 118233); RPPN dos Petroleiros (22°35'29.3"S, 43°26'25.7"W), 04–06.IV.2012, C. Sampaio; F. Uemori & C.T. Olivares coll., 1♀

(IBSP 215352); *Pirai* (22°37'44"S, 43°53'52"W), R.L.C. & A. Baptista coll., 1♀ (IBSP 226765); **São Paulo**: *Capão Bonito*, Parque Estadual Intervales, Gruta dos Meninos (24°16'6.3"S, 48°24'49.7"W), 08–10.X.2011, A.D. Brescovit coll., 2♀ (IBSP 168278); *Ribeirão Grande*, Parque Estadual Intervales, Fazenda Intervales (24°16'6.3"S, 48°24'49.7"W), 15–16.IV.1989, R.L.C. Baptista coll., 1♀ (IBSP 226777); *Itu*, Fazenda Pau D'Alho (22°38'01"S, 44°38'19"W), 1♀ (IBSP 40170); *Cave Riacho Subterrâneo* (23°16'10"S, 47°13'51"W), 24–27.IX.2010, M.E. Bichuette *et al.* coll., 2♀ (IBSP 189113); same locality as previous, 27.IX.2010, M.E. Bichuette *et al.* coll., 1♀ (IBSP 189114); *Jundiá*, Reserva Municipal da Serra do Japi (23°14'S, 46°58'W), collected in 2018, G.A. Villanueva-Bonilla coll., 1♀ (IBSP 247606); same locality as previous, V.2016–V.2017, G.A. Villanueva-Bonilla coll., 1♂ (IBSP 306038); *São Paulo*, Parque Estadual do Jaraguá (23°27'34.3"S, 46°46'2.8"W), 27–28.X.2005, Curso UFRRJ coll., 1♂ (IBSP 71165); same locality as previous, 14–23.X.2002, Equipe Biota coll., 1♂ (IBSP 85953); same data as previous, 1♀ (IBSP 85954); same data as previous, 1♀ (IBSP 85955); same data as previous, 1♂ (IBSP 85956); same data as previous, 1♂ (IBSP 85957); same data as previous, 1♀ (IBSP 85958); *Campus USP* (23°33'S, 46°43'W), 30.VII.1998, F.S. Cunha coll., 1♀ (IBSP 19666); same locality as previous, 07.VIII.1998, F.S. Cunha coll., 1♀ (IBSP 19667); same locality as previous, 17.VIII.1998, F.S. Cunha coll., 1♀ (IBSP 19668); *Campus do Instituto Butantan* (23°33'S, 46°43'W), 05.X.1992, 2♀ (IBSP 7424); same data as previous, 1♀ (IBSP 20125); same data as previous, 1♂ (IBSP 20126); same data as previous, 1♀ (IBSP 20127); same data as previous, 1♀ (IBSP 20128); same data as previous, 1♀ (IBSP 20349); same data as previous, 1♂ (IBSP 20350); same data as previous, 1♀ (IBSP 20855); same data as previous, 1♂ (IBSP 20862); same data as previous, 1♂ (IBSP 20852); same locality as previous, I.1992, R.L.C. & A. Baptista coll., 1♀ (IBSP 226776); *Parque Estadual Serra da Cantareira*, *Pedra Grande* (23°24'5"S, 46°35'24"W), 24.VI.2001, 1♀ (IBSP 81517); *Mairiporã*, Parque Estadual da Cantareira, *Pinheirinho* (23°24'S, 46°35'W), 28.II.2001, R. Pinto da Rocha coll., 1♂ (IBSP 224542); *Araçariguama*, Fazenda do Instituto Butantan (23°26'20"S, 47°3'39"W), 24.V.1991, R.L.C. & A. Baptista coll., 1♀ (IBSP 226763); *Cotia*, *Caucaia do Alto* (23°41'19"S, 47°01'15"W), 18–28.VI.2002, Equipe Biota coll., 1♂ (IBSP 85934); same data as previous, 2♀ (IBSP 85938); same data as previous, 1♂ (IBSP 85940); same data as previous, 1♀ (IBSP 81468); *Caucaia do Alto*, Reserva Florestal do Morro Grande (23°36'14"S, 46°55'8"W), II.2002–III.2003, A.A. Nogueira coll., 1♀ (IBSP 81469); same data as previous, 1♀ (IBSP 81470); same data as previous, 1♂ (IBSP 81471); same data as previous, 1♀ (IBSP 81472); same data as previous, 1♂ (IBSP 81473); same data as previous, 1♀ (IBSP 81474); same data as previous, 1♀ (IBSP 81475); same data as previous, 1♂ (IBSP 81476); same data as previous, 1♂ (IBSP 81477); same data as previous, 1♀ (IBSP 40157); same data as previous, 2♀ (IBSP 40158); same data as previous, 1♀ (IBSP 40159); same

data as previous, 1♂ (IBSP 40160); same data as previous, 1♂, 1♀ (IBSP 40161); same data as previous, 1♂ (IBSP 81463); same data as previous, 1♀ (IBSP 81464); same data as previous, 1♀ (IBSP 81465); same data as previous, 4♀ (IBSP 81466); same data as previous, 1♀ (IBSP 81467), same data as previous, 1♀ (IBSP 97332); same data as previous, 1♀ (IBSP 97333); same data as previous, 1♂ (IBSP 97334); same locality as previous, II.2002–III.2003, A.A. Nogueira coll., 1♀ (IBSP 37160); *Quilombo*, 28.III.2003, A.A. Nogueira coll., 1♂ (IBSP 40147); same locality as previous, 24.III.2003, A.A. Nogueira coll., 1♀ (IBSP 40153); 24.III.2003, A.A. Nogueira coll., 3♀ (IBSP 40154); *Grilos*, 11.III.2003, A.A. Nogueira coll., 1♂ (IBSP 40148); 11.III.2003, 1♂ (IBSP 40149); *Torres*, 09.III.2003, 2♂, 1♀ (IBSP 40156); same locality as previous, *Fragmento Dito André*, 19.III.2003, A.A. Nogueira coll., 1♀ (IBSP 40150); same data as previous, 1♂ (IBSP 81520); same locality as previous, *Fragmento Lacerda*, 16.III.2003, A.A. Nogueira coll., 1♀ (IBSP 40151); same locality as previous, *Fragmento Pedroso*, 20.III.2003, 2♀ (IBSP 40152); same locality as previous, *Fragmento Beto/Jamil*, 14.III.2003, A.A. Nogueira coll., 1♀ (IBSP 40155); *Santo André*, Estação Ecológica do Alto da Serra (23°46'00"–23°47'10"S, 46°18'20"–46°20'40"W), II.1991, R.L.C. Baptista & A. Baptista coll., 1♀ (IBSP 40162); same locality as previous, 28.XI.1991, R.L.C. Baptista & A. Baptista coll., 1♂, 1 imm. (IBSP 226759); *Vila de Santo André*, 27.VII.1999, F.S. Cunha coll., 2♀, 1 imm. (IBSP 23968); same data as previous, 1♀ (IBSP 24190); *Salesópolis*, Estação Biológica de Boracéia (23°38'S, 45°52'W), 09.V.2003, G.R.S. Ruiz coll., 1♀ (IBSP 38313); collected in 2003, Alunos Graduação USP coll., 1♀ (IBSP 81442); *Ilhabela*, *Praia de Castelhanos* (23°48'54"S, 45°22'14"W), 29.III.2002, I. Cizauskas coll., 1♂ (IBSP 35972); *Ubatuba*, Parque Estadual da Ilha Anchieta (23°32'S, 45°30'W), 23–30.VII.2001, Equipe Biota coll., 1♂ (IBSP 40252); same data as previous, 1♂ (IBSP 40253); same locality as previous, 17–19.XII.2003, C.A. Rheims & R.P. Indicatti coll., 3♂, 5♀ (IBSP 52248); same locality as previous, III.2010, C.A. Rheims & R.P. Indicatti coll., 1♀ (IBSP 312454); *Caraguatatuba* (23°37'12"S, 45°24'46"W), XII.2010, E.O. Machado coll., 1♂ (IBSP 170074); *São Sebastião* (23°45'36"S, 45°24'36"W), 03.VII.1988, 1♀ (IBSP 226773); *Guarulhos*, Parque Estadual da Cantareira, *Cabuçu* (23°24'S, 46°35'W), 16–22.VII.2001, Equipe Biota coll., 1♀ (IBSP 81523); *Biritiba-Mirim*, Barragem do Rio Biritiba (23°36'12.144"S, 46°5'13.653"W), collected in 2003, Equipe IBSP coll., 1♀ (IBSP 87904); *Cubatão*, Mata de encosta da Copebrás (23°50'06"S, 46°23'52"W), VI–XII.2008, A. Nogueira *et al.*; 1♀ (IBSP 123232), same data as previous, 1♂ (IBSP 123233); *Santos*, Vale do Rio Jurubatuba (23°51'53.1"S, 46°18'15.7"W), III–XII.2007, A. Nogueira *et al.* coll., 1♂ (IBSP 123213); same data as previous, 2♀ (IBSP 123214); *Miracatu*, Fazenda Itereí (24°03'47.2"S, 47°13' 65.8"W), 20–26.IX.2001, Equipe Biota coll., 2♂ (IBSP 40254); same data as previous, 1♂ (IBSP 40255); same data as previous; 1♂ (IBSP 41723); *Peruíbe*, Estação Ecológica Juréia-Itatins (24°33'015"S, 47°13'292"W), 15–16.XII.1998, A.D. Brescovit *et al.* coll., 1♂ (IBSP 9614);

same data as previous, 1♀ (IBSP 9639); same data as previous, 2♂, 7♀, 1 imm. (IBSP 9727); same data as previous, 3♂, 6♀, 1 imm. (IBSP 9863); same data as previous, 5♀ (IBSP 9934), same data as previous, 2♀ (IBSP 22286); same data as previous, 2♀ (IBSP 22419); same data as previous, 1♂ (IBSP 22729); same data as previous, 1♂, 3♀, 1 imm. (IBSP 23008); same locality as previous, 14–18.XII.1998, A.D. Brescovit *et al.* coll., 1♀ (IBSP 22506); same data as previous, 2♀, 1 imm. (IBSP 22540); same data as previous, 1♂ (IBSP 22711), same data as previous, 1♂, 1 imm. (IBSP 23020); same data as previous, 1♂, 3♀ (IBSP 23031); same data as previous, 2♀, 1 imm. (IBSP 23035); same data as previous, 1♂ (IBSP 23637), same locality as previous, 26.IV–03.V.1999, A.D. Brescovit *et al.* coll., 2♀, 1 imm. (IBSP 24823); same data as previous, 1♀, 1 imm. (IBSP 24838); same data as previous, 2♀ (IBSP 25201); same data as previous, 1♂, 1 imm. (IBSP 24189); same locality as previous, XI.1998, F.S. Cunha coll., 1♀ (IBSP 24187); same data as previous, 1♀ (IBSP 24188); same locality as previous, VIII.1989, R.L.C. Baptista & A.P. Chaves coll., 3♀ (IBSP 226772); Núcleo Arpoador (24°23'13.6"S, 47°0'1'3.3"W, 13m a.s.l.), 21–26.IV.2012, G.H.F. Azevedo & J.P.P. Pena-Barbosa coll., 4♀ (UFMG 13035); **Paraná:** *Rio Branco do Sul*, Gruta do Caximbo (25°05'S, 49°28'W), 24.V.1996, A.K. Miura, F.F.G.I. Lima & D. Drago coll., 1♂ (MHCI 13); same locality as previous, 20.II.1996, 1♂ (IBSP 81506); same locality as previous, 24.V.1996, 1♂ (IBSP 81507); Cave Ponto 16 (25°05'09"S 49°28'15"W), 03.VIII.2011, L.M. Cordeiro *et al.* coll., 1♀ (IBSP 181071); *Guaraqueçaba*, Reserva Natural Serra do Itaquí (25°17'19"S, 48°28'29"W), 20.IX.2007, E. Álvarez col., 1♂ (IBSP 314635); *Cornélio Procópio*, Parque Estadual Mata São Francisco (23°10'51"S, 50°38'49"W), 08.V.2009–15.I.2010, N.C. Cipola coll., 1♂ (IBSP 273624); *Foz do Iguaçu*, Parque Nacional de Foz de Iguaçu (25°36'S, 54°25'W), 03–12.III.2002, Equipe Biota coll., 1♀ (IBSP 239891); same data as previous, 1♀ (IBSP 239902); *Morretes* (25°28'37"S, 48°50'2"W), 07–10.II.1988, 1♀ (IBSP 226775); Parque Estadual Pico do Marumbi (25°27'13"S, 48°55'11"W), VII.1996, E.M. Silva coll., 1♀ (IBSP 7267); **Santa Catarina:** *São Francisco do Sul*, Centro de Estudos e Pesquisas Ambientais Vila da Glória (26°13'13.7"S, 48°41'19.1"W, 89 m a.s.l.), 15–12.XII.2011, I.L.F. Magalhães *et al.* coll., 4♀ (UFMG 10356); *Blumenau*, Parque Natural Municipal Nascentes do Garcia (27°01'S, 49°09'W), 21–28.I.2003, Equipe Biota coll., 1♂, 2♀ (IBSP 81439);); same data as previous, 2♀ (IBSP 81440);); same data as previous, 2♀ (IBSP 81441); same data as previous, 1♂ (IBSP 334234); *Botuverá*, Riacho dos Sete (27°11'56"S, 49°4'30"W), 23–24.I.1991, R.L.C. Baptista & A. Baptista coll., 1♀ (IBSP 40163), same data as previous, 1♂, 2♀ (IBSP 226768); *Criciúma* (28°40'40"S, 49°22'12"W), 25.III.2006, R.A. Teixeira coll., 1♂ (IBSP 79753); *Paulo Lopes*, Parque Estadual da Serra do Tabuleiro (27°55'S, 48°42'W), 10–20.I.2002, Equipe Biota coll., 1♀ (IBSP 81448); same data as previous, 1♀ (IBSP 81449); same data as previous, 1♀ (IBSP 81450); same data as previous, 1♀ (IBSP 81451); same data as previous, 1♀ (IBSP 81452); same

data as previous, 1♂, 2♀ (IBSP 81453); same data as previous, 1♂, 2♀ (IBSP 81454); same data as previous, 2♀ (IBSP 81455); same data as previous, 3♀ (IBSP 81456); same data as previous, 1♀ (IBSP 81457); same data as previous, 1♀ (IBSP 81458); same data as previous, 1♀ (IBSP 81459); same data as previous, 1♀ (IBSP 81460); same data as previous, 2♀ (IBSP 81461); same data as previous, 2♀ (IBSP 81462); same data as previous, 1♂ (IBSP 334341); **Rio Grande do Sul:** *Derrubadas*, Parque Estadual do Turvo (27°00'–27°20'S, 53°40'–54°10'W), 11–18.I.2002, Equipe Biota coll., 1♂ (IBSP 81489); *Maquiné*, FEPAGRO (29°39'S, 50°12'W), 1♀ (IBSP 81493), same data as previous, 1♂ (IBSP 81494); same data as previous, 1♂ (IBSP 81495); same data as previous, 1♂ (IBSP 81496); same data as previous, 1♂ (IBSP 81497); same data as previous, 2♀ (IBSP 81498); same data as previous, 1♂ (IBSP 81499); same data as previous, 2♀ (IBSP 81500); same data as previous, 1♂ (IBSP 81501); same data as previous, 1♀ (IBSP 81502); same data as previous, 1♀ (IBSP 81503); same data as previous, 1♀ (IBSP 81504); same data as previous, 1♂ (IBSP 81505).

Diagnosis. Males and females of *Azilia histrio* resemble to those of *A. arrebitada* **sp. nov.** by the shape of the abdomen with accentuated posterior projection (Figs 46b, 47b, 52b, 53a). Males of both species have palpi with extremely elongated femur and tibia (Figs 46b, e, f, 47a, b, 52e, f), but they differ as in *A. histrio*, the palpus present a coiled embolus and the embolar apophysis is absent (Figs 46g, 50a, b) (vs in embolus straight and striated, with an embolar apophysis in *A. arrebitada* **sp. nov.**) (Fig. 54c, d). Females of *A. histrio* differ from *A. arrebitada* **sp. nov.** by the rectangular median epigynal plate (Figs 48c, 51f).

Description. **Male** (MPEG 0917). Carapace (Fig. 46a–d) cream-colored with brown lateral edges. Eye region cream-colored, with black eye borders. Clypeus (Fig. 46d) yellow. Chelicerae light brown. Maxillae and labium yellow. Legs orange with brown bands near joints, yellow coxae and brown metatarsus. Abdomen (Fig. 46c) piriform, cream-colored, with dorsal gray striations and sparse white spots. Ventrally cream-colored, with gray posterior area. Spinnerets yellow (Fig. 46a–d). Measurements: total length 4.4; Carapace 2.4 long, 2.0 wide. Eye diameters and interdistances: AME 0.11; ALE 0.08; PME 0.08; PLE 0.12; AME–AME 0.04; AME–ALE 0.15; PME–PME 0.07. Chelicerae with three promarginal teeth and four retromarginal teeth, the basal tooth, smaller in size (Fig. 49a). Femur I 4.3; Patella+Tibia I 4.6; Metatarsus I 4.0; Tarsus I 1.6; Patella+Tibia II 3.2; Patella+Tibia III 1.9; Patella+Tibia IV 2.9. Legs orange with brown bands near joints, yellow coxae and brown metatarsus. Leg I with large, rounded and straight tarsal organ (Fig. 49b), paired claws with nine teeth and unpaired claw with two short teeth (Fig. 49c). Leg IV with paired claws with four teeth each, and long and toothless unpaired claw (Fig. 49d). Short femoral projection (Fig. 49e). Palpus: tibia (3.4) more than four times longer than the cymbium (0.5) (Fig. 46e–f); cymbial ectobasal process large and not projected, with many strong setae (Figs 46i, 50c, e); paracymbium shorter than the cymbium length, sinuous, with 7–8 strong

macrosetae (Fig. 50c, e); tegular projection enlarged and rounded (Fig. 50a, e); embolus cylindrical with very large base (Figs 46g, 50a–b).

Female (MPEG 0917, SEM based on IBSP 84522). Coloration as in male, except carapace cream-colored, with two white paramedian bands and a triangular posterior white spot, yellowish maxillae and labium, and abdomen dorsally light gray, laterally with gray striations and ventrally brown, with two white bands (Fig. 47a–e). Measurements: total length 7.4; Carapace 2.9 long, wide 2.2. Eye diameters and interdistances: AME 0.11; ALE 0.12; PME 0.11; PLE 0.09; AME–AME 0.07; AME–ALE

0.13; PME–PME 0.10. Chelicerae with teeth as in male (Fig. 51a). Femur I 3.7; Patella+Tibia I 4.4; Metatarsus I 3.4; Tarsus I 1.2; Patella+Tibia II 3.4; Patella+Tibia III 1.8; Patella+Tibia IV 2.8. Leg I with tarsal organ as in male (Fig. 51c), paired claws with nine eight teeth and shorter unpaired claw with one tooth (Fig. 51d). Palpus claw elongated, with six teeth (Fig. 51b). Posterior hump in abdomen triangular and projected (Fig. 47b, e). Epigynal plate with posterior border sclerotized, without lobes (Figs 48a–c, 51e); median plate large, rounded laterally (Figs 48c, 51f); spermathecae with long accessory glands forming a basal plate (Fig. 48f); short and not coiled

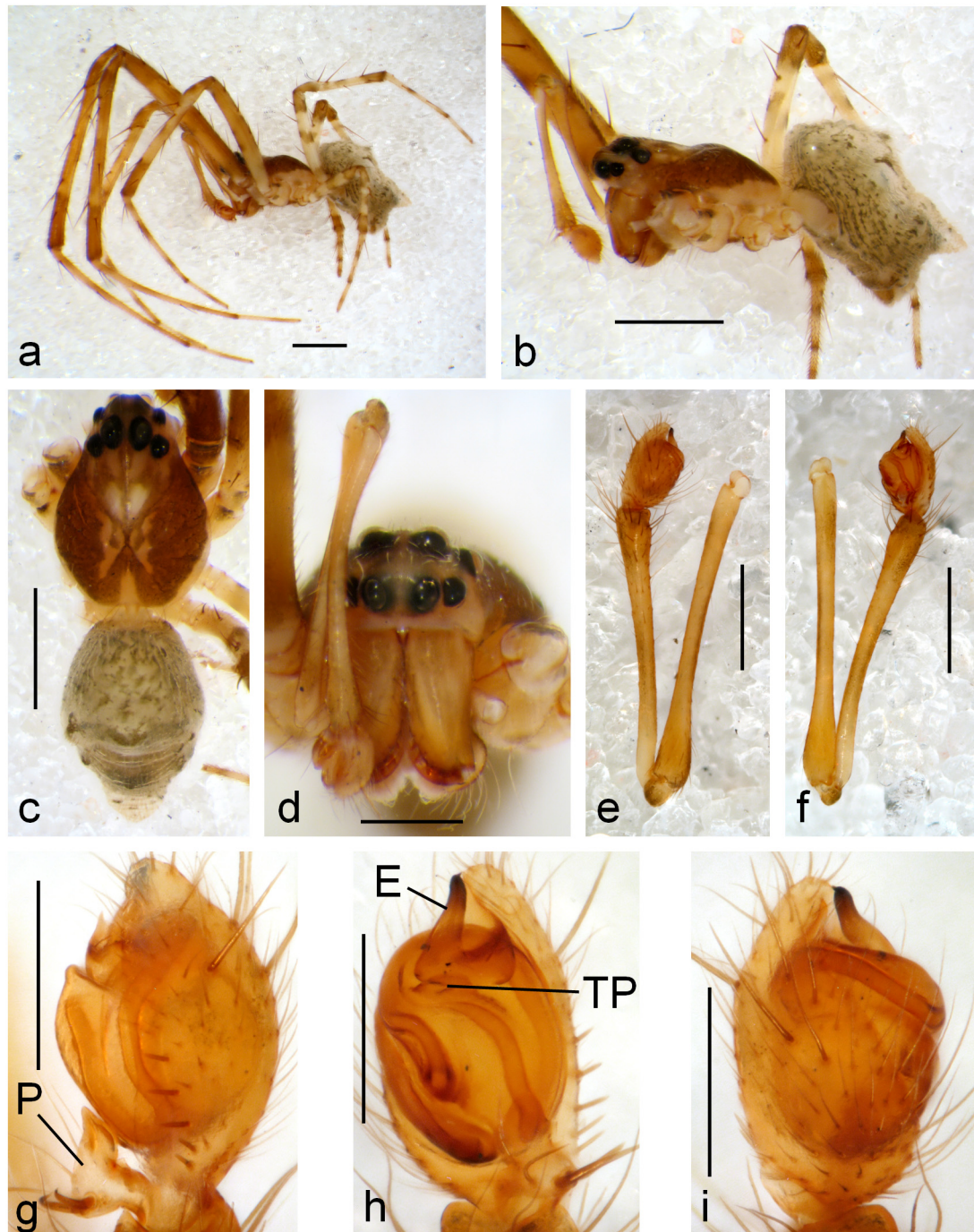


FIGURE 52. *Azilia arrebitada* sp. nov. Male (IBSP 81479) a–d habitus, a lateral view; b, same, detail; c, same, dorsal view; d same, frontal view; e–i palp: e prolateral view; f retrolateral view, g retrolateral view; h ventral view; i prolateral view. Abbreviations: E, embolus; P, paracymbium, TP, tegular projection. Scales: 0.25.

copulatory ducts (Fig. 48e–f); fertilization ducts short and slightly curved (Fig. 48d–f).

Variation. Males (n=10): total length 4.4–6.0; carapace length 2.2–2.6; femur I length 3.8–4.6. Females

(n=10): total length 6.1–8.0; carapace length 2.7–3.3; femur I length 3.3–4.1.

Distribution. Known from French Guyana, Guyana, Peru and North to South of Brazil (Fig. 57).

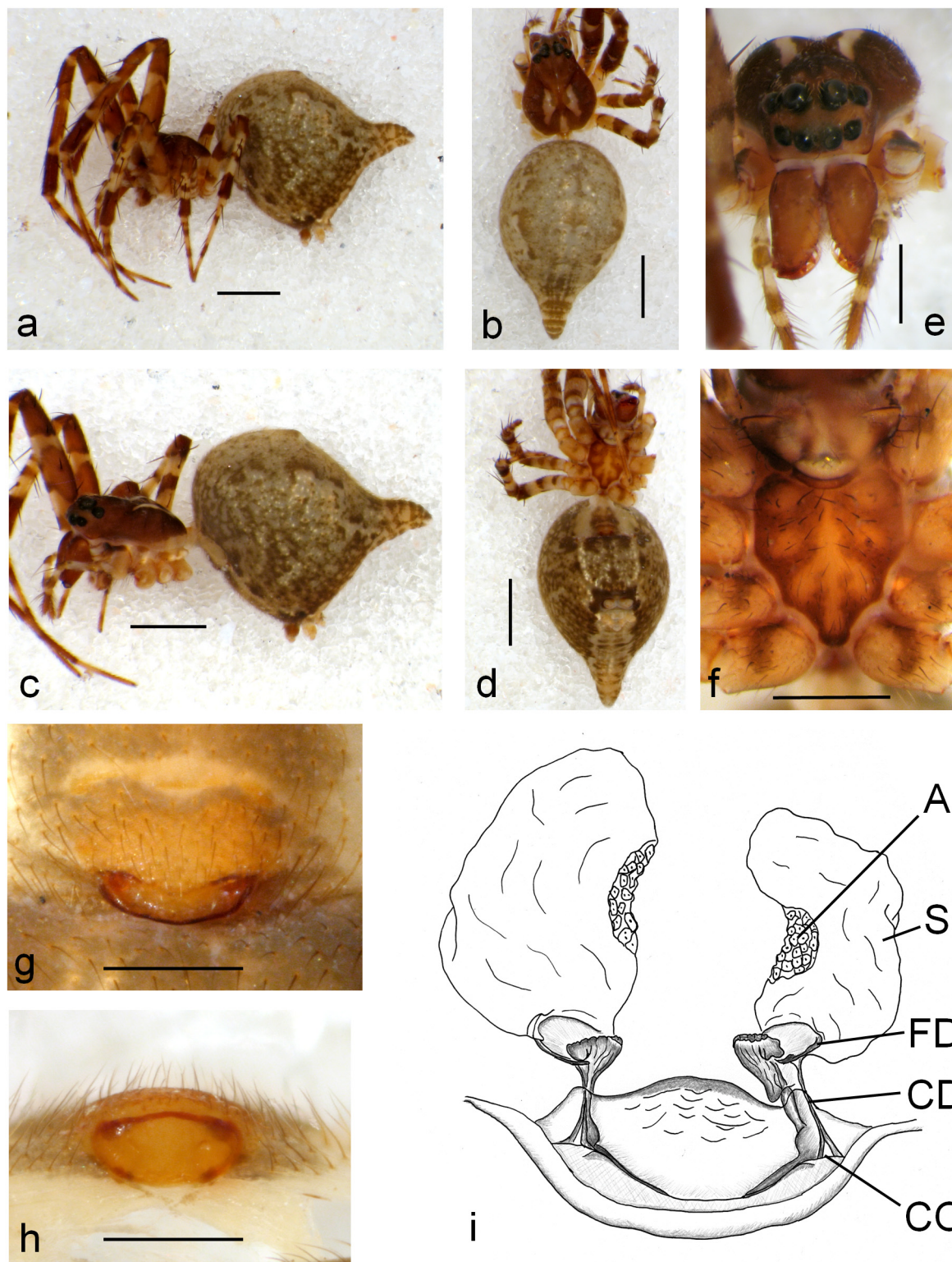


FIGURE 53. *Azilia arrebitata* sp. nov. Female epigynum (IBSP 81479), a–f habitus, a lateral view; b, same, detail; c same, dorsal view; d same, ventral view; e frontal view; f sternum, ventral view; g–i epigynum: g ventral view; h posterior view; i dorsal view. Abbreviations: AG, accessory glands; CD, copulatory ducts; CO, copulatory opening; FD, fertilization ducts; S, spermathecae. Scales: 0.25.

***Azilia arrebitada* sp. nov.**

Figures 52a–i, 53a–i, 54a–d, 55a–d, 56

Type material. Holotype ♂ and paratype ♀, Reserva Florestal do Morro Grande (23°36'14"S 46°55'8"W), Caucaia do Alto, Cotia, São Paulo, Brazil, III.2003, A. Nogueira coll. (IBSP 81479). Paratypes: 1♂, 1♀, same locality and collector as the holotype, 13–30.VI.2002 (IBSP 81513).

Other material examined. BRAZIL, **Rio de Janeiro:** *Teresópolis* (22°24'43"S, 42°57'57"W), 20–22.IV.1995, R.L.C. Batista & M.I. Landim coll., 1♀ (IBSP 220657); Parque Nacional da Serra dos Órgãos (22°27'S, 42°59'W), 18–23.VIII.2001, Equipe Biota coll., 1♀ (IBSP 41718); same data as previous, 1♂ (IBSP 81431; SEM); **São Paulo:** *São José do Barreiro*, Parque Nacional da Serra da Bocaina (23°2'30"S, 44°39'42"W), 18–23.VIII.2001, Equipe Biota coll., 1♀ (IBSP 41712); *Iporanga*, Parque Estadual Intervales, Fazenda Intervales (24°16'6.3"S, 48°24'49.7"W), VII.1996, A. Leme coll., 1♀ (IBSP 7841); *Ubatuba*, Fazenda Angelim (23°23'6"S, 45°03'8"W),

17–19.XII.2003, C.A. Rheims & R.P. Indicatti coll., 1♂ (IBSP 233600); *Salesópolis*, Estação Biológica de Boracéia (23°38'S, 45°52'W), 18–24.V.2003, Equipe Biota coll., 1♂ (IBSP 41727); same data as previous, 1♂ (IBSP 41728); *Mogi das Cruzes*, Parque Natural Municipal da Serra de Itapety (23°29'S, 46°12'W), 13–19.X.2003, Equipe Biota coll., 1♂ (IBSP 236739); *São Paulo*, Reservatório Guarapiranga, Ilha dos Eucaliptos (23°40'17"S, 46°43'39"W), 07–13.X.2004, I. Cizauskas & C.R.M. Garcia, 1♂ (IBSP 61801); same data as previous, 1♂ (IBSP 61802); *Cotia*, Caucaia do Alto (23°41'19"S 47°01'15"W), 18–28.VI.2002, Equipe Biota coll., 1♂ (IBSP 85935); same data as previous, 1♀ (IBSP 85942); *Cotia*, Reserva Florestal do Morro Grande (23°36'14"S, 46°55'8"W), 10–26.III.2003, A. Nogueira coll., 1♀ (IBSP 81478); same data as previous, 1♂ (IBSP 81481); same data as previous, 1♀ (IBSP 81483); same data as previous, 2♀ (IBSP 81484); same data as previous, 1♂ (IBSP 81485); same data as previous, 1♀ (IBSP 81486); same data as previous, 1♀ (IBSP 81487); same data as previous, 1♂ (IBSP 81482); same data as previous, 1♂ (IBSP 81480);

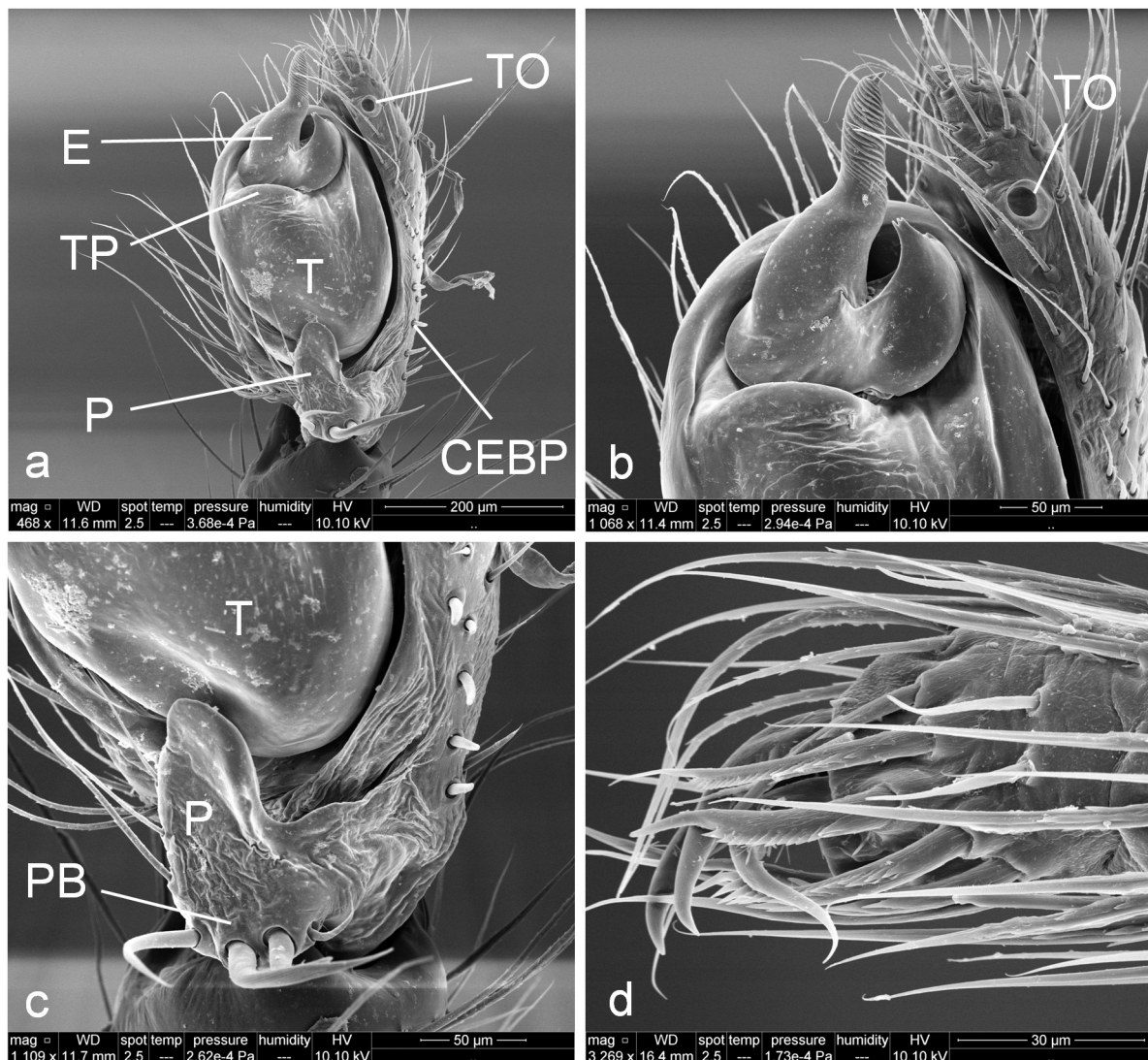


FIGURE 54. *Azilia arrebitada* sp. nov. Male (IBSP 81431), a chelicera, ventral view; b same, left, detail; c male palp, ventral view; d same, distal area. Abbreviations: E, embolus; EA, embolar apophysis; P, paracymbium; PB, paracymbium basal projection; TP, tegular projection, TO, tarsal organ.

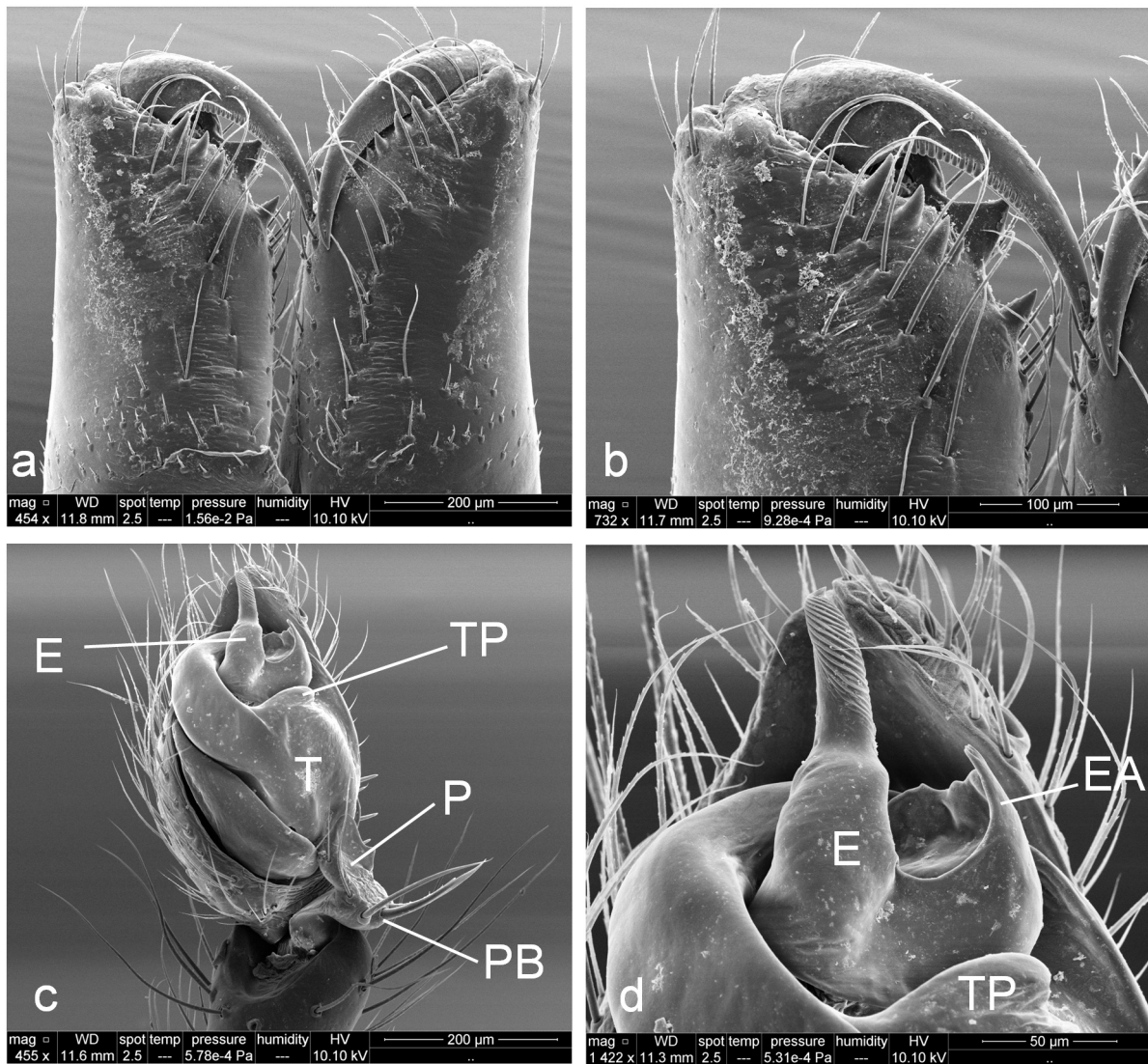


FIGURE 55. *Azilia arrebitada* sp. nov. Male left palp (IBSP 81431), a retro-ventral view; b same, distal area; c cymbium, basal area; d leg IV, claws, lateral view. Abbreviations: CEBP, cymbial ectobasal projection; E, embolus; EA, embolar apophysis; P, paracymbium; PB, paracymbium basal projection; TO, tarsal organ; TP, tegular projection.

same data as previous, 1♂ (IBSP 81488); same data as previous, 1♀ (IBSP 81509); same data as previous, 1♀ (IBSP 81510); same data as previous, 1♀ (IBSP 81511); same data as previous, 1♀ (IBSP 81512); same data as previous, ♀ (IBSP 97323); same data as previous, 1♂ (IBSP 97324); same data as previous, 1♂ (IBSP 97326); same data as previous, 1♀ (IBSP 97328); same data as previous, 2♀ (IBSP 97329); same data as previous, 1♀ (IBSP 97330); *Tapirai* (23°57'49"S, 47°30'26"W), 11–13.IX.1997, C.A. Rheims & V.C. Onófrio coll., 1♀ (IBSP 13242); *Miracatu*, Fazenda Iterei (24°03'47.2"S, 47°13'65.8"W), 20–26.IX.2001, Equipe Biota coll., 1♂ (IBSP 41719); same data as previous, 1♂ (IBSP 41720); same data as previous, 1♂ (IBSP 41721); same data as previous, 1♂ (IBSP 41722); same data as previous, 1♀ (IBSP 81490); same data as previous, 1♀ (IBSP 81491); same data as previous, 1♀ (IBSP 81492); same data as previous, 1♀ (IBSP 85960); same data as previous, 1♀

(IBSP 85961); **Paraná:** *Morretes*, Parque Estadual Pico do Marumbi (25°27'13"S, 48°55'11"W), VII.1996, E. M. Silva coll., 1♀ (IBSP 41802).

Etymology. The specific epithet is an adjective in Portuguese language that means “elevated”, in relation to the posterior region of the projected abdomen.

Diagnosis. Males and females of *A. arrebitada* sp. nov. resemble those of *A. histrio* in relation to the abdomen with accentuated posterior projection (Figs 46b, 47b, 52b, 53a) Males of both species have palpus with femur and tibia extremely elongated (Figs 46b, e, f, 47a, b, 52b, e, f; 53a), but differ by the palpus with a straight and striated embolus, and presence of embolar apophysis (Figs 54c–d, 55 a–b (vs embolus coiled and without embolar apophysis in *A. histrio*) (Fig. 50a, b, d). Females of *A. arrebitada* sp. nov. and *A. histrio* have a rectangular epigynum plate, but *A. arrebitada* sp. nov. is identified by the oval median plate (Fig. 53g–h).



FIGURE 56. Distribution map (detail of distribution in the state of São Paulo) for *Azilia fabulosa* **sp. nov.** (yellow circle); *A. supimpa* **sp. nov.** (light pink square); *A. formosa* (blue diamond), and *A. arrebitada* **sp. nov.** (pink triangle).

Description. Male (Holotype, IBSP 81479). Carapace (Fig. 52c) brown, with cream-colored central mancha. Eye region grey, with black eye borders (Fig. 52 b–d). Clypeus yellow and chelicerae yellowish (Fig. 46d). Maxillae and labium yellow. Legs orange with brown bands near joints, yellow coxae and brown metatarsus. Abdomen (Fig. 52c) piriform, grey-colored and sparse white spots. Ventrally cream-colored, with gray posterior area. Spinnerets yellow (Figs 52a–b). Measurements: total length 3.6; Carapace 1.7 long, 1.2 wide. Eye diameters and interdistances: AME 0.08; ALE 0.05; PME 0.09; PLE 0.07; AME–AME 0.04; AME–ALE 0.11; PME–PME 0.12. Chelicerae with three promarginal teeth and four retromarginal teeth, basal

smaller in size (Fig. 54a–b). Femur I 2.8; Patella+Tibia I 3.2; Metatarsus I 2.4; Tarsus I 0.9; Patella+Tibia II 2.3; Patella+Tibia III 1.1; Patella+Tibia IV 1.6. Leg IV with paired claws with four teeth and long and teethless unpaired claw (Fig. 55d). Palpus: Tibia more than four times longer than the cymbium (Fig. 52e, f); cymbium 0.4, tibia 1.3, with conspicuous tarsal organ (Fig. 55b); cymbial ectobasal process present, wide and not projected, with few strong setae (Figs 52g, 55c); paracymbium shorter than the cymbium length, sinuous, with three strong macrosetae (Fig. 55c); tegular projection little protruding and rounded (Figs 52h, 54c, 55a); embolus with very large base (Figs 54c, d, 55b).



FIGURE 57. Distribution map for *Azilia*: *A. affinis* (yellow square) and *A. histrio* (white circle).

Female (Paratype, IBSP 81479). Coloration as in male, except darker sternum (Fig. 53a–f). Measurements: total length 4.9; Carapace 2.0 long, wide 1.4. Eye diameters and interdistances: AME 0.08; ALE 0.05; PME 0.07; PLE 0.07; AME–AME 0.02; AME–ALE 0.11; PME–PME 0.10. Chelicerae with teeth as in male. Femur I 2.8; Patella+Tibia I 5.0; Metatarsus I 3.8; Tarsus I 1.8; Patella+Tibia II 2.2; Patella+Tibia III 2.2; Patella+Tibia IV 3.1. Epigynal plate with posterior border heavily sclerotized, without lobe (Fig. 53g); median plate very

large (Fig. 53h); spermathecae with slightly sclerotized walls, with accessory glands forming a median plate; short and not coiled copulatory ducts; fertilization ducts thick and curved (Fig. 53j).

Variation. Males (n=10): total length 3.6–4.2; carapace length 1.5–2.0; femur I length 2.8–3.4. Females (n=10): total length 4.4–6.0; carapace length 1.8–2.2; femur I length 2.3–2.8.

Distribution. Known from Southeast and South Brazil (Fig. 56).



FIGURE 58. Distribution map for *Azilia*: *A. joinha* **sp. nov.** (pink square); *A. catita* **sp. nov.** (beige circle), *A. guapa* **sp. nov.** (red triangle), *A. guatemalensis* (white pentagon), *A. rojasi* (red diamond), *A. montana* (white cross), *A. esplendida* (blue circle) and *A. hermosa* (red star).

Discussion

Among the genera of Tetragnathidae, *Azilia* has never been phylogenetically tested with a broad sampling of taxa, perhaps because the type species was not clearly determined, and its holotype is lost, which made it difficult to include this species in past analyses (e.g., Álvarez-Padilla 2007; Álvarez-Padilla & Hormiga 2011). The morphological characteristics that relate *Azilia* to other leucaugines are the flaccid and very thin walls of the

spermathecae, as well as the coils of the spermatic duct (Álvarez-Padilla 2007). The lack of a reflective tapetum in the eyes and PLE in the separate tubercles also relate this genus to *Diphya*, as suggested by some molecular results (Álvarez-Padilla *et al.* 2009), giving a supposed synapomorphy for this clade. However, ocular similarities to the Australian genus *Iamarra* (see Álvarez-Padilla *et al.* 2020) combined with its phylogenetic position, make this character optimization ambiguous. Observing the list of species included here, we note that the females present

the pattern referenced above in Álvarez-Padilla *et al.* (2020) and males have a palpus with a distal projection on the femur (Figs 3d, 8d), absence of a conductor in the bulb (Fig. 4a–f) and presence of a tegular projection close to the base of the embolus (Figs 4a, b, 8a, 13c), characters that unite all males. Some species of *Azilia* can be easily differentiated by the morphology of the male palpi and the shape of the abdomen, such as *Azilia histrio* and *A. arrebitada* **sp. nov.**, since both have palpi with long femora and tibiae, as well as abdomen with elongated and conical posterior projection (Figs 46b, e–f; 52b, e–f). These autapomorphic characters led Mello-Leitão (1935) to consider *A. histrio* as belonging to the genus *Arochoides*, proposed in Mimetidae (Mello-Leitão 1935), but synonymized with *Azilia* by Benavides & Hormiga (2020: 178).

The other species appear to be related to the general morphology of the type species, where the palpus have short femurs and tibiae, generally proportional to the length of the cymbium, and an oval abdomen not projected posteriorly (Fig. 1b–c, f, h). Regarding the abdomens, there are some exceptions, such as in *Azilia guapa* **sp. nov.** and *A. esplendida* **sp. nov.**, which, despite being oval, are dorsally tuberculated (Figs 35a, 36a, 37a, c, 38a–c), but the palpus structures follow the pattern of the type species. Certainly, future studies with molecular bases will expand the knowledge of the relationships between these species.

Finally, the distribution of the genus remains broad, with species being found from the southern region of the United States to southern region of Brazil. Despite the abundance of material included in the collections, we did not detect specimens from Chile, Argentina and Uruguay (Figs 56–58). Most likely, it is a lack of sampling, since some species have a very broad distribution, such as *Azilia histrio*.

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