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Mahafalytenus, a New Spider Genus from Madagascar (Araneae, Ctenidae)

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Among ctenid spiders, viridasines, largely restricted to Madagascar, are the most basal group of the family. A new genus of viridasine spiders, *Mahafalytenus*, is herein described. This genus is recognized by having a distinctive dorsal abdominal folium; palpal tarsus-tibia with long, prolateral bristles; and a unique male and female genitalic pattern. *Mahafalytenus tsilo* is designated as the type species. Six other species are also described: *M. fo, M. fohy, M. hafa, M. isalo, M. osy,* and *M. paosy*. A taxonomic key to the seven species currently known is herein provided. *Mahafalytenus* is found in a variety of habitat types ranging from spiny thicket vegetation to transitional forests. Most species appear to be restricted to the lowlands of southern Madagascar, only one species is known from a gallery forest at 850 m in south-central Madagascar.

KEYWORDS: Taxonomy, Viridasiinae, morphology, ctenids, spiders, southern Madagascar.

Ctenid spiders from Madagascar have never been revised. The current spider catalog (Platnick 2006) records only seven species, most of them known only from their original descriptions in the late 1800s (Griswold 2003). However, extensive field work in Madagascar in recent years is revealing a richer ctenid spider fauna at both genus and species level. Among these new taxa, viridasine spiders (Lehtinen 1967) are the most species rich and abundant group, comprising at least four genera, of which, two are new to science. Viridasiinae is the sister group to all other ctenid spiders (Silva Dávila 2003), therefore, a key group for understanding the phylogenetic relationships within this family as well as its relationships to other higher groups. In this paper, a new viridasine genus, *Mahafalytenus*, is described. The somatic and genitalic characters shown by this new taxon will greatly contribute to a refinement of a previous phylogenetic hypothesis regarding ctenids and viridasines, in particular. *Mahafalytenus* comprises medium to large spiders, males and females are easily recognized by having 1) a well marked, distinctive abdominal folium; 2) long, prolateral bristles beneath palpal tibia-tarsus; and most important 3) a very distinctive genitalic pattern. As with many other Malagasy ctenid spiders, most species of *Mahafalytenus* show very narrow distributions and in spite of their conspicuousness, exhaustive spider collecting, and examination of various museum collections, they appear to be actually rare. However, this rarity effect could also indicate they are highly seasonal and that a sampling at the right time of the year is still lacking. Further fieldwork will undoubtedly yield additional new species of this taxon, and, luckily, more data about their natural history and distribution patterns.

Materials and Methods

Specimens were examined following standard procedures for spiders. All measurements are in millimeters. Species descriptions are based upon a single individual, locality noted in parentheses. Digital images were made with a Leica M420 stereomicroscope and a JVC-KY-F75U digital camera plus the auto-montage software by Syncroscopy Ltd.

Abbreviations.— AC, aciniform gland spigots; AER, anterior ocular row at their greatest width; AME, anterior median eyes; ALE, anterior lateral eyes; ALS, anterior lateral spinnerets; AN, anelli of subtegulum; BS, base of spermatheca; C, conductor; Ca, apex of conductor; Cb, base of conductor; CD, copulatory duct; CY, cylindrical gland spigots; E, embolus; FD, fertilization duct; HS, head of spermatheca; la = lamella of conductor, LL, lateral lobes of epigynum; MA, median apophysis; MAP, major ampullate gland spigots; mAP, minor ampullate gland spigots; MaTP, *Mahafalytenus* tegular process; MS, median sector of epigynum; nu, nubbin; OQA, ocular quadrangle, width of anterior median eye row; OQL, ocular quadrangle length at the greatest distance from AME to PME in frontal view; OQP, ocular quadrangle, width of posterior median eye row; Pe, petiole; PI, piriform gland spigots; PME, posterior median eye; PLE, posterior lateral eye; PER, posterior ocular row at their greatest width; PLS, posterior lateral spinnerets; PMS, posterior median spinnerets; RDTP, retrodorsal tibial process; RTA, retrolateral tibial apophysis; ST, subtegulum; st, stalk of spermatheca; T, tegulum; ta, tartipore; VLTP, ventrolateral tibial process.

Museum collections: CAS – California Academy of Sciences, San Francisco (C. Griswold); FMNH – Field Museum of Natural History, Chicago (P.P. Parrillo, P. Sierwald).

Taxonomy

Mahafalytenus Silva-Dávila, gen. nov.

Figures 1–27; Maps 1–2 (Figure 28)

Type species: *Mahafalytenus tsilo* Silva-Dávila, sp. nov.

Etymology.— The generic name is an arbitrary combination of Mahafaly and *Ctenus*. The former honors the Mahafaly people. This tribe, well known for its wisdom and funerary art, inhabits south to southwestern Madagascar. Gender masculine.

Diagnosis.— Males and females are recognized by having a well marked, dorsal abdominal folium (Figs. 1A–B) and a palpal tarsus-tibia with long, prolateral bristles (Fig. 3C). Males differ from other ctenids by having a palpal tibia with three retrolateral processes (Figs. 10C, 11C, 13F, 14D); a conductor projecting upwards, base expanding into a lightly sclerotized lamella (Figs. 10A, 11A, 12A, 13A, 14A–B); a slender tegular process arising closer to median apophysis base (Figs. 10B, 11B, 12A, 13A, 14B); and a flagelliform embolus, arising from retrolateral side of tegulum (Figs. 10A, 11A, 12B). Females are diagnosed by having a lightly sclerotized, often translucent epigynum (Fig. 8A); median and lateral epigynal folds often well differentiated (Figs. 8A, 8C, 9A, 9C); vulva with copulatory ducts convoluted and broad; and a tripartite spermatheca, with very small head, short to medium-sized stalk, and a big base (Figs. 8B, 8D, 9B, 9D).

Description.— Medium to-large-sized spiders, total length 7.7–15.9 mm. Slight sexual dimorphism (Figs. 1 A–B). Carapace (Figs. 1A–B, 2A) longer than wide, ranging in length from 4.2–7.2 (♀♀) and 3.6–6.6 (♂♂). Fovea longitudinal and narrow. Carapace with an almost straight profile, pars thoracica as high as pars cephalica. Carapace light orange brown with two dark brown bands, covered with white, feathery hairs (Fig. 2B). Eyes arranged in a 2:4:2 pattern; PME and PLE with grate-shaped tapetum (Fig. 2C). Clypeus ranging from 0.18 to 0.52 mm. Chilum with two setose sclerotized plates (Fig. 2D). Chelicerae geniculate, with large boss (Fig. 2D); cheliceral fur-

row with three promarginal and two retromarginal teeth (Figs. 2E, 3A). Endites about two times labium length, often parallel, sometimes converging slightly (Fig. 2E). Serrula in a single row, slightly subapical (Fig. 3B). Labium wider than long, shallowly notched (Fig. 2E). Sternum wider than long, hardly extending to coxae IV (Fig. 2E).

Female palp with long prolateral bristles beneath tibia-tarsus (Fig. 3C) and pectinate claw (Fig. 3D). Legs moderately long, covered with feathery hairs (Figs. 4C–D); femur IV length 4.9–8.4 (♀♀), 5.3–8.1 (♂♂). Leg formula 4123 or 4321. Preening combs absent. Leg scopulae dense beneath tarsi-metatarsi I–II (Figs. 4A–B), sparse to absent towards metatarsi IV; tarsal- metatarsal scopula split by one or two rows of spinules (Figs. 3E–F). Two tarsal claws, with one tooth and two denticles (Fig. 4B); claw tufts dense (Figs. 4A–B). Tibiae I and II with 3 paired ventral spines, metatarsi I and II often with two paired ventral spines, sometimes only one pair; other spines vary even when comparing legs in a single specimen. Spination (based on *M. tsilo*, types), an (m) indicates the spine is missing in the opposite leg: Male: palpal femur d0-1-2, p0-0-1, r0-0-1; patella d1-0, tibia p2-1-0, r1-0-0; femur I d1-0-1-1, p0-0-0-1, r1-1-1-1; II d1-0-1-1, p1-0-1-1, r1-1-1-1; III d1-0-1-1, p1-1-1-1, r1-1-1-1; IV d1-0-1-1, p1-1-0-1, r0-1-1-1; patella with no spines; tibiae I-II d0-0-0-1-0, p0-1-0-1-0, r0-1-0-1-0, v2-0-2-0-2; tibiae III-IV d0-1-0-1-0, p0-1-0-1-0, r0-1-0-1-0, v2-0-2-0-2; metatarsi I-II p0-0-0-1; r0-0-0-1, v0-0-2-0; metatarsi III-IV p0-1-0-1-1, r0-1-0-1-1, v2-0-2-0-1. Female: palpal femur d0-1-2, p0-0-1, r0-0-1; patella d1-1-0, tibia d1-0-1, p2-1-0, r1-1-0, tarsus d1-0-0, p2-1-0, r1-1-0; femur I d0-1-0-1-1, p0-0-0-1-1, r0-1-0-1-1; II d0-1-0-1-1, p0-1-0-1-1, r0-1-0-1-1; III d0-1-0-1-1, p0-1-0-1-1, r0-1-1-1-1; IV d0-1-0-1-1, p0-1-1-1-1, r0-1-1-1-1; patella lacking spines; tibiae I-II p0-1-0-1-0, r0-0 (1 in other specimens)-0-1 (m)-0, v2-0-2-0-2; III-IV d0-1-0-1-0, p0-1-0-1-0, r0-1-0-1-0, v2-0-2-0-2; metatarsi I-II p 1-0-0-0, r1 (m)-0-0-0, v2-0-0-0; metatarsi III d0-0-1-0-0, p1-0-1-0-1, r1-0-1-0-1, v2-0-2-0-1; metatarsi IV p1-0-1-0-2, r1-0-1-0-2, v2-0-2-0-1. Tarsal trichobothria set in three to four rows, dorsal plate with three to four transverse ridges (Figs. 4C–D). Tarsal organ capsulate (Figs. 4E, 14C), aperture either oval, round, or key-shaped.

Abdomen (Figs. 1A–B, 5A) oval-shaped, longer than wide, ranging in length from 5.2–9.8 (♀♀) and 4.0–6.6 (♂♂); covered with feathery hairs (Fig. 5B); pale yellow to light brown, with two grayish bands delimiting dorsally a broad folium; venter pale yellow to light brown. Tracheal system consisting of two median and two lateral unbranched tubes. Colulus relatively large and hairy (Figs. 5A, 5C). Males with epiandrous spigots arranged in two lateral groups (Fig. 5D).

Spinnerets (Figs. 5A, 6A): anterior laterals (ALS) conical and long; posterior medians (PMS) roughly conical and short; posterior laterals (PLS) roughly cylindrical and long. Female ALS (Fig. 6B) with 2 major ampullate gland spigots and about 15 piriform gland spigots. PMS (Fig. 6C) with 1 minor ampullate gland spigot plus a tartipore sitting on an enlarged base, in addition to a second minor ampullate gland spigot, more than 15 aciniform gland spigots, and at least two cylindrical gland spigots. PLS (Figs. 6D–E) with more than 15 aciniforms and at least five cylindrical gland spigots. Male ALS (Fig. 7A) with 1 major ampullate gland spigot plus a nubbin and about 10 piriform gland spigots. PMS (Figs. 7B–C) with 1 minor ampullate gland spigot plus a tartipore sitting on an enlarged base, in addition to a second minor ampullate gland spigot, and about 8 aciniform gland spigots. PLS (Fig. 7D) with at least 15 aciniform gland spigots.

Epigynum hairy and lightly sclerotized, internal genitalia partly seen through cuticle (Fig. 5A, 8A); epigynal field often with small median sector (MS) and large lateral sectors (LS) (Figs. 8A, 17A), sometimes MS large and broad (Figs. 8C, 24A); copulatory openings often obscured by mating plugs. Spermathecae with very small head, slender stalk, and big base (Figs. 8B, 8D, 9D–E, 15B–C); fertilization ducts long, directed forward (Fig. 8B, 8D); copulatory ducts broad, and convoluted (Figs. 9B, 9D), loops sometimes asymmetrical (Figs. 8A–B); spermathecal head with primary pores occasionally scattered along the spermathecal stalk (Fig. 9F).

Male palpal tibia (Figs. 10A, 10C, 11A, 11C, 12B, 13F, 14D) with three retrolateral processes: a broad, apical RTA; a small, subapical ventrolateral process (VLTP); and a strongly sclerotized, either subapical or distal, retrodorsal process (RDTP). Cymbium lacking spines and scopula (Figs. 10–11); cymbial retrolateral edge projecting slightly (Fig. 10A), sometimes with a shallow furrow (Fig. 12B) and about five distal trichobothria (Figs. 13D–E). Tegulum with a slender process (MaTP) tapering to apex and arising at median apophysis base (Figs. 10–14). Conductor long, extending upwards, hyaline base greatly enlarged and projecting into a thin, lightly sclerotized, serrated lamella (Figs. 10A–C, 11A, 12A, 13A, 14A–C). Median apophysis sometimes with slightly bifurcated apex (Figs. 12A, 13A, 14A), often thin and long (Fig. 11B), occasionally short (Fig. 23B). Embolus flagelliform (Fig. 12A–B), arising on retrolateral side of tegulum (Figs. 10A, 11A, 13D, 14C), embolic distal lobe fits into a subtegular socket (Fig. 12C). Subtegulum with five annelli and broad lunate plate (Figs. 12B–C). Petiole elongated (Fig. 12B).

Natural history.— Both males and females of most species have been found between January and March. The habitat comprises mainly lowland dry forests ranging in elevation from 30 m to 300 m, only one species is known from 850 m. Adult specimens were found at night, while searching for spiders or attracted to light traps; or caught in pitfall and malaise traps in a variety of habitats; one specimen was found while beating vegetation during the day. Representatives of this genus are found in various types of vegetation including spiny forests, deciduous dry forests, gallery forests, and transitional forests.

Composition.— Seven species, all new to science.

Distribution.— South to southwestern Madagascar (Maps 1–2 [Fig. 28])

Key to the Species of *Mahafalytenus*

(Males of *Mahafalytenus isalo* are still unknown)

1. Males . . . 2
   Females . . . 7
2. Median apophysis with bifurcate apex (Fig. 10A) . . . 3
   Median apophysis with tapering apex (Fig. 11A) . . . 4
3. Conductor base projecting into a very broad lamella (Figs. 20A–C), median apophysis sinuous in shape (Fig. 20A) . . . *hafa*
   Conductor base projecting into narrow lamella (Figs. 27A–D); median apophysis slightly curved (Fig. 27B) . . . *tsilo*
4. Median apophysis long and curved (as in Fig. 16B) . . . 5
   Median apophysis short and nearly straight (Figs. 25 A–D) . . . *paosy*
5. Tibia retrodorsal process subapical (as in Fig 16C) . . . 6
   Tibia retrodorsal process subbasal (Fig. 18C) . . . *fohy*
6. Apex of conductor nearly straight, lamella narrowing at base (Fig. 16D); median apophysis with smooth distal twist (Figs. 16A–B) . . . *fo*
   Apex of conductor ending in a short beak, lamella not so narrow at base (Fig. 25D); median apophysis with sharp distal twist (Figs. 23A–B) . . . *osy*
7. Epigynal median sector as large as lateral fields (Fig. 8C) . . . 8
   Epigynal median sector shorter than lateral fields (Figs. 8A) . . . 10
8. Epigynal median sector lobe-like (Fig. 21A) . . . *isalo*
   Epigynal median sector not so shaped . . . 9
9. Epigynal median sector heart-shaped and slightly concave (Fig. 15A) . . . *fo*
   Epigynal median sector T-shaped and slightly swollen (Fig. 22A) . . . osy

10. Epigynal median sector concave or flat (Figs. 17A, 19A) 11
    Epigynal median sector pendulum-like (Figs. 26A) . . . . . *tsilo*
11. Epigynal median sector concave (Fig. 17A, 24A) 12
    Epigynal median sector nearly flat (Fig. 19A) . . . . . *hafa*
12. Epigynal median sector broad, extending farther than lateral fields, with pocket-like processes leading to copulatory openings (Fig. 24A) . . . . . *paosy*
    Epigynal median sector not so broad, shorter than lateral fields, without pocket-like processes (Fig. 17A) . . . . . *fohy*

***Mahafalytenus fo* Silva-Dávila, sp. nov.**
Figures 8C–D, 11, 15–16; Map 1 (Figure 28).

Types.— Holotype (female), Paratype (male) from Réserve Spéciale de Cap Sainte Marie, 12.3 km 262° W Marovato, 25°34′54″S, 45°10′6″E, 200 m, pitfall trap in spiny forest/thicket (11–15.ii.2002; Fisher, Griswold et al.), deposited in CAS (CASENT9014199).

Etymology.— The species name is from the Malagasy word for "heart" in reference to the epigynum shape.

Diagnosis.— Females have an epigynal median sector heart-shaped and slightly concave (Fig. 15A); vulva with copulatory ducts nearly vertical before turning into a lower loop (Figs. 15B–C). Males differ from *M. fohy* in having a subapical, smaller retrodorsal tibial process (Fig. 16C); and from *M. osy* in having a conductor with straight apex (Fig. 16B), a lamella extending downwards (Fig. 16D), and a thinner, smoothly curved retrodorsal tibial process (Fig. 16C).

Female (Holotype).— Total length 12.5. Carapace 5.1 long, 3.9 wide; ocular area 0.84 long; OQA 0.76; OQP 0.80; diameter of eyes AM:AL:PM:PL, 0.32:0.22:0.38:0.42; AME-AME 0.14; AME-ALE 0.08; AME-PME 0.10; ALE-ALE 0.82; PME-PME 0.04; PLE-PLE 0.88. Clypeal height 0.28. Sternum 2.05 long, 2.15 wide; labium 0.68 long, 0.85 wide; endites 1.43 long, 0.8 wide. Femur I 1.21 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v1 pair. Leg measurements:

	I	II	III	IV	Palp
Femur	4.7	4.5	4.5	5.8	2.0
Patella	2.1	2.1	1.7	2.0	0.9
Tibia	3.9	3.9	3.6	5.0	1.15
Metatarsus	3.7	3.8	4.1	6.1	–
Tarsus	1.6	1.6	1.7	2.3	1.6
Totals	**16.0**	**15.9**	**15.6**	**21.2**	**5.65**

Epigynum heart shaped, median sector slightly concave (Fig. 15A). Vulva as in Figs. 15B–C.

Male (Paratype).— Carapace 4.6 long, 3.8 wide; ocular area 0.76 long; OQA 0.66; OQP 0.74; diameter of eyes AM:AL:PM:PL, 0.32:0.18:0.34:0.36; AME-AME 0.08; AME-ALE 0.08; AME-PME 0.08; ALE-ALE 0.72; PME-PME 0.04; PLE-PLE 0.76. Clypeal height 0.2. Sternum 1.85 long, 2.03 wide; labium 0.58 long, 0.66 wide; endites 1.28 long, 0.66 wide. Femur I 1.21 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v2 pairs. Leg measurements:

	I	II	III	IV	Palp
Femur	4.6	4.7	4.5	6	1.85
Patella	1.9	1.9	1.6	1.9	0.7
Tibia	4.5	4.4	3.9	5.2	0.6
Metatarsus	4.3	4.3	4.5	6.2	–
Tarsus	2.0	2.0	2.1	2.7	2.0
Totals	**17.3**	**17.3**	**16.6**	**22.0**	**5.15**

Palpal tibia with RTA directed upwards; retrodorsal process subapical, smoothly curved and evenly thick; ventrolateral process spear-like (Figs. 11C, 16C); conductor apex nearly straight (Figs. 11A–B, 16C), conductor lamella extends downwards (Figs. 11C, 16 D).

Material examined.— Madagascar: **Toliara**: types above.

Distribution.— Known from southern Madagascar (Map 1 [Fig. 28]).

Mahafalytenus fohy Silva-Dávila, sp. nov.

Figures 17–18; Map 2 (Figure 28).

Types.— Holotype (female) from Réserve Spéciale de Cap Sainte Marie, 12.3 km 262° W Marovato, 25°34′54″S, 45°10′6″E, 200 m, at light in spiny forest thicket (11–15 Feb 2002, Fisher, Griswold et al.), deposited in CAS (CASENT9012624); Paratype (male) from Mahafaly Plateau, 10.5 km SE Itampolo (village), 24°44.2′S, 44°1.79′E, 120 m, in disturbed spiny bush (20.ii.2005; S.M. Goodman and V. Soarimalala), deposited in CAS (CASENT9021948).

Etymology.— The species name is from the Malagasy word for "short" in reference to the epigynal median sector.

Diagnosis.— Females have an epigynal median sector shorter than lateral fields (Fig. 17A); vulva with copulatory ducts virtually forming two parallel bars before turning in a lower loop (Figs. 17B–C). Males differ from *M. fo* and *M. osy* in having a retrodorsal tibial process subbasal and larger (Fig. 18C).

Female (Holotype).— Total length 10.6. Carapace 4.48 long, 3.68 wide; ocular area 0.68 long; OQA 0.72; OQP 0.66; diameter of eyes AM:AL:PM:PL, 0.18:0.2:0.32:0.36; AME-AME 0.14; AME-ALE 0.1; AME-PME 0.08; ALE-ALE 0.7; PME-PME 0.08; PLE-PLE 0.8. Clypeal height 0.28. Sternum 1.90 long, 2.09 wide; labium 0.6 long, 0.82 wide; endites 1.32 long, 0.74 wide. Femur I 1.06 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v1 pair. Leg measurements:

	I	II	III	IV	Palp
Femur	3.9	3.9	3.8	4.9	1.8
Patella	1.8	1.8	1.5	1.6	0.96
Tibia	3.1	3.1	2.8	4.0	1.04
Metatarsus	2.9	2.9	3.4	4.6	–
Tarsus	1.6	1.6	1.7	2.1	1.56
Totals	**13.3**	**13.3**	**13.2**	**17.2**	**5.36**

Epigynum with median sector shorter than lateral fields (Fig. 17A), concave and often obscured by mating plugs hard to remove. Vulva as in Figs. 17B–C.

Male (Paratype).— Total length 7.9. Carapace 3.95 long, 3.4 wide; ocular area 0.70 long; OQA 0.62; OQP 0.72; diameter of eyes AM:AL:PM:PL, 0.26:0.18:0.36:0.36; AME-AME 0.08; AME-ALE 0.08; AME-PME 0.08; ALE-ALE 0.70; PME-PME 0.02; PLE-PLE 0.70. Clypeal height 0.2. Sternum 1.8 long, 1.92 wide; labium 0.48 long, 0.66 wide; endites 1.1 long, 0.54 wide. Femur I 1.32 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v2 pairs. Leg measurements:

	I	II	III	IV	Palp
Femur	4.5	4.4	4.3	5.6	1.5
Patella	1.8	1.8	1.5	1.6	0.73
Tibia	4.4	4.2	3.7	4.9	0.83
Metatarsus	4.3	4.3	4.4	6.1	–
Tarsus	2.0	2.0	2.0	2.6	1.6
Totals	**17.0**	**16.7**	**15.9**	**20.8**	**4.66**

Palpal tibia with RTA directed upwards; retrodorsal process subbasal, large; ventrolateral process with apex strongly sclerotized and slightly excavated (Fig. 18C); conductor projecting into a large lamella and tapering to a sharp apex (Figs. 18A–B); median apophysis long, slender, strongly curved (Fig. 18B).

Material examined.— Madagascar: **Toliara**: types above; Mahafaly Plateau, 6.2 km 74° ENE Itampolo, 24°39′13″S, 43°59′48″E, pitfall trap in spiny forest/thicket, 80 m, 21–25.ii.2002 (Fisher, Griswold et al., CASENT9014290), 1 ♀; Mahafaly Plateau, 6.2 km 74° ENE Itampolo, 24°39′13″S, 43°59′48″E, general spider collecting at night in spiny forest/thicket, 80 m, 21–25.ii.2002 (B.L. Fisher, et al., CASENT 9013142), 1♀.

Notes.— One female from Mahafaly Plateau with abdomen partly damaged; second female missing legs II.

Distribution .— Known from South to southwestern Madagascar (Map 2 [Fig. 28]).

***Mahafalytenus hafa* Silva-Dávila, sp. nov.**

Figures 7, 14, 19–20; Map 1 (Figure 28).

Types.— Holotype (female) plus 1 juvenile female from Parc National d'Andohahela, Forêt de Manantalinjo 33.6 km 63° ENE Amboasary, 7.6 km 99° E Hazofotsy, 6.2 km 74° ENE Itampolo, 24°49′1″S, 46°36′36″E, 150 m, collecting ground spiders in spiny forest/thicket (12–16.i.2002; Fisher, Griswold et al.), deposited in CAS (CASENT9012164); 1 ♂ paratype as above but collected in pitfall traps (CASENT 9014507).

Etymology.— The species name is from the Malagasy word for "distinct" in reference to the epigynum shape.

Diagnosis.— Females have an epigynal median sector nearly flat and square (Fig. 19A); vulva with copulatory ducts spiraling at least three times (Figs. 19B–C). Males have a conductor base projecting into a very broad lamella, a median apophysis with a slightly bifurcated apex (Figs. 14A, 20A–C), and a small retrodorsal tibial process (Figs. 14C–D, 20C).

Female (Holotype).— Total length 10.3. Carapace 4.4 long, 3.7 wide; ocular area 0.72 long; OQA 0.76; OQP 0.68; diameter of eyes AM:AL:PM:PL, 0.32:0.22:0.30:0.30; AME-AME 0.14; AME-ALE 0.06; AME-PME 0.10; ALE-ALE 0.80; PME-PME 0.06; PLE-PLE 0.86. Clypeal height 0.28. Sternum 1.8 long, 2.0 wide; labium 0.64 long, 0.9 wide; endites 1.54 long, 0.8 wide. Femur I 1.14 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v1 pair. Leg measurements:

	I	II	III	IV	Palp
Femur	4.2	3.9	3.9	5.3	1.92
Patella	1.9	1.8	1.5	1.7	0.88
Tibia	3.5	3.2	3.4	4.5	1.05
Metatarsus	3.4	3.5	4.2	5.9	–
Tarsus	1.9	1.9	2.0	2.5	1.55
Totals	**14.9**	**14.3**	**15.0**	**19.9**	**5.40**

Epigynum with median sector nearly flat and square in shape (Fig. 19A). Vulva as in Figs. 17B–C.

Male (Paratype).— Total length 7.7 (in second male). Carapace 3.55 long, 3.25 wide; ocular area 0.62 long; OQA 0.64; OQP 0.56; diameter of eyes AM:AL:PM:PL, 0.32:0.16:0.24:0.28; AME-AME 0.08; AME-ALE 0.06; AME-PME 0.08; ALE-ALE 0.64; PME-PME 0.04; PLE-PLE 0.66. Clypeal height 0.18. Sternum 1.73 long, 1.83 wide; labium 0.48 long, 0.68 wide; endites 1.1 long, 0.56 wide. Femur I 1.35 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v2 pairs. Leg measurements:

	I	II	III	IV	Palp
Femur	4.4	4.2	4.1	5.3	1.85
Patella	1.7	1.7	1.5	1.7	0.7
Tibia	0.4	3.8	3.6	4.8	0.6
Metatarsus	4.0	4.1	4.6	6.3	–
Tarsus	2.2	2.2	2.2	2.8	2.0
Totals	**16.3**	**16.0**	**16.0**	**20.9**	**5.15**

Palpal tibia with RTA directed upwards; retrodorsal process subapical, small and slightly curved; ventrolateral process digitiform, slightly curved (Figs. 14C–D, 20C); conductor basally projecting into a very broad lamella (Figs. 14A–D, 20A–C); median apophysis slightly bifurcating near apex (Figs. 14A–C).

Material examined.— Madagascar: **Toliara**: type specimens above; Andohahela Nat'l Park, Tsimelahy, Parcelle II, 24°56.21′S, 46°37.60′E, malaise trap in transitional forest, 180 m, 3–15.v.2003 (M. Irwin, F. Parker, R. Harin'Hala, CASENT9021817), 1 ♂.

Notes.— Male paratype abdomen partly damaged.

Distribution.— Known from southern Madagascar (Map 1 [Fig. 28]).

Mahafalytenus isalo Silva-Dávila, sp. nov.

Figures 2E, 21; Map 1 (Figure 28).

Types.— Holotype (female) from Parc National d'Isalo, 22°36.952′S, 45°21.26′E, 850 m, beating vegetation in daytime, gallery forest (17.i.2006; H. Wood, J. Miller), deposited in CAS (CASENT9024097, ATOL voucher MAD145).

Etymology.— The species name is a noun in apposition taken from the type locality.

Diagnosis.— This species differs from *M. tsilo* in having a large epigynal median sector with conspicuous copulatory openings (Fig. 21A); vulva with copulatory ducts forming a very broad loop (Figs. 21B–C).

Male (unknown).

Female (Holotype).— Total length 12.5. Carapace 6.3 long, 5.0 wide; ocular area 0.94 long; OQA 0.98; OQP 0.81; diameter of eyes AM:AL:PM:PL, 0.41:0.24:0.40:0.40; AME-AME 0.16; AME-ALE 0.10; AME-PME 0.13; ALE-ALE 0.98; PME-PME 0.08; PLE-PLE 1.05. Clypeal height 0.46. Sternum 2.6 long, 2.9 wide; labium 0.93 long, 1.18 wide; endites 1.93 long, 1.08 wide. Femur I 1.16 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v1 pair. Leg measurements:

	I	II	III	IV	Palp
Femur	5.8	5.7	5.6	7.3	2.8
Patella	2.2	2.5	2.3	2.5	1.44
Tibia	4.6	4.5	4.2	5.8	1.64
Metatarsus	4.5	4.5	4.9	7.1	–
Tarsus	2.3	2.3	2.5	3.1	2.28
Totals	**19.4**	**19.5**	**19.5**	**25.8**	**8.16**

Epigynum with large, lobe-like median sector (Fig. 21A). Vulva as in Figs. 21B–C.

Material examined.— Madagascar: **Fianarantsoa**: holotype above.

Distribution.— Known from south-central Madagascar (Map 1 [Fig. 28]).

***Mahafalytenus osy* Silva-Dávila, sp. nov.**
Figures 22–23; Map 2 (Figure 28).

Types.— Holotype (female) from Reserve Naturelle Integrale d'Andohahela, parcel II, 7.5 km ENE Hazofotsy, 24°49.0′S, 46°36.6′E, 120 m, camp 6 (7–15.xii.1995; S. Goodman), deposited in FMNH (CASENT 9016455); 1 ♂ paratype from Andohahela National Park, Tsimelahy, parcelle II, 24°56.21′S, 46°37.60′E, 180 m, malaise trap in transitional forest (12-11-19.xi.2002; M. Irwin, F. Parker, R. Harin'Hala), deposited in CAS (CASENT9021811).

Etymology.— The species name is from the Malagasy word for "goat" in reference to the epigynal shape.

Diagnosis.— Females have a T-shaped epigynum, with median sector slightly swollen at mid-section (Fig. 22A); vulva with copulatory ducts oblique before turning upwards into a high loop (Fig. 22B). Males differ from *M. fo* in having a conductor ending in a short beak, a lamella wider and extending mesad (Fig. 23D); a median apophysis with a sharper, distal twist (Figs. 23A–B), and a retrodorsal tibial process thicker at base (Fig. 23C). Males differ from *M. fohy* in having a smaller, subapical retrodorsal process (Fig. 23C).

Female (Holotype).— Total length 11.6. Carapace 5.7 long, 4.8 wide; ocular area 0.88 long; OQA 0.8; OQP 0.84; diameter of eyes AM:AL:PM:PL, 0.36:0.22:0.4:0.4; AME-AME 0.1; AME-ALE 0.1; AME-PME 0.13; ALE-ALE 0.9; PME-PME 0.04; PLE-PLE 0.96. Clypeal height 0.32. Sternum 2.45 long, 2.55 wide; labium 0.75 long, 0.98 wide; endites 1.73 long, 0.9 wide. Femur I 1.17 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v1 pair. Leg measurements:

	I	II	III	IV	Palp
Femur	5.6	5.5	5.3	7.1	2.1
Patella	2.4	2.4	2.1	2.2	1.15
Tibia	4.6	4.4	4.2	5.9	1.35
Metatarsus	4.3	4.5	5.0	7.1	–
Tarsus	1.9	1.9	2.1	2.6	1.85
Totals	**18.8**	**18.7**	**18.7**	**24.9**	**6.45**

Epigynum T-shaped and slightly swollen (Fig. 22A). Vulva as in Fig. 22B.

Male (Paratype).— Total length 9.5, carapace 4.6 long, 4.15 wide; ocular area 0.78 long; OQA 0.70; OQP 0.74; diameter of eyes AM:AL:PM:PL, 0.32:0.2:0.36:0.40; AME-AME 0.10; AME-ALE 0.08; AME-PME 0.08; ALE-ALE 0.76; PME-PME 0.04; PLE-PLE 0.78. Clypeal height 0.22. Sternum 2.1 long, 2.32 wide; labium 0.64 long, 0.74 wide; endites 1.4 long, 0.78 wide. Femur I 1.35 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v2 pairs. Leg measurements:

	I	II	III	IV	Palp
Femur	5.6	5.5	5.2	6.6	1.93
Patella	2.2	2.2	1.9	2.0	0.83
Tibia	5.2	5.0	4.5	5.9	1.03
Metatarsus	5.2	5.1	5.4	7.3	–
Tarsus	2.3	2.3	2.3	2.9	2.15
Totals	**20.5**	**20.1**	**19.3**	**24.7**	**5.94**

Palp with retrodorsal tibial process subapical, small, and thicker at base (Fig. 23C); conductor lamella extends mesad (Fig. 23D).

Material examined.— Madagascar: **Toliara**: types above; Parc National d' Andohahela, Forêt d'Ambohibory, 1.7 km 61° ENE Tsimielahy, 36.3 km 308° NW Tolagnaro, 24°55′48″S, 46°38′44″E, malaise trap in transitional forest, 300 m, 16–20.i.2002 (B. Fisher et al., CASENT 9012274), 1 ♂.

Distribution.—Known from southern Madagascar (Map 2 [Fig. 28]).

***Mahafalytenus paosy* Silva-Dávila, sp. nov.**

Figures 2A–D, 3A–B, 3E–F, 4A–C, 4E, 5A–C, 6D, 9, 24–25; Map 1 (Figure 28).

Types.— Holotype (female) plus 1 ♀ paratype and 3 juveniles from Mahafaly Plateau, 6.2 km 74° ENE Itampolo, 24°39′13″S, 43°59′48″E, 80 m, general spider night collecting, spiny forest/thicket (21–25.ii.2002; Fisher, Griswold et al.), deposited in CAS (CASENT9013143); 1 ♂ paratype 1 ♀ carapace from Mahafaly Plateau, 10.5 km SE Itampolo (village), 24°44.2′S, 44°1.79′E, 120 m, disturbed spiny bush (19.ii.2005; S.M. Goodman and V. Soarimalala), deposited in CAS (CASENT9021947).

Etymology.— The species name is from the Malagasy word for "pocket" in reference to the epigynal median sector.

Diagnosis.— Females differ from *M. tsilo* in having a larger, broad median sector with pocket-like processes (Figs. 9C, 24A); vulva with long copulatory ducts, spermathecal heads clearly visible (Figs. 9D, 24B–C). Males differ from *M. tsilo* in having a short median apophysis tapering to apex (Fig. 25B).

Female (Holotype).— Total length 15.9. Carapace 6.5 long, 5.7 wide; ocular area 1.06 long; OQA 1.08; OQP 1.00; diameter of eyes AM:AL:PM:PL, 0.46:0.22:0.46:0.52; AME-AME 0.22; AME-ALE 0.14; AME-PME 0.14; ALE-ALE 1.10; PME-PME 0.12; PLE-PLE 1.28. Clypeal height 0.46. Sternum 2.75 long, 3.05 wide; labium 1.1 long, 1.3 wide; endites 2.25 long, 1.1 wide. Femur I 1.16 times carapace width. Spination: tibiae I-II v3 pairs, metatarsus I v 1 pair+1, metatarsus II v2 pairs (met I v 1 pair/met II v 1 pair+1, in other females). Leg measurements:

	I	II	III	IV	Palp
Femur	6.6	6.3	6.3	7.9	2.85
Patella	2.5	2.4	2.4	2.5	1.4
Tibia	5.2	5.1	4.9	6.6	1.8
Metatarsus	4.9	5.1	5.8	7.8	–
Tarsus	2.3	2.3	2.8	3.3	2.45
Totals	**21.5**	**21.2**	**22.2**	**28.1**	**8.50**

Epigynal median sector broad, with pocket-like processes (Figs. 9A, 24A). Vulva as in Figs. 9D, 24B–C.

Male (Paratype).— Total length 12.51. Carapace 6.6 long, 5.6 wide; ocular area 1.08 long; OQA 1.08; OQP 0.98; diameter of eyes AM:AL:PM:PL, 0.44:0.28:0.44:0.52; AME-AME 0.24; AME-ALE 0.08; AME-PME 0.10; ALE-ALE 1.04; PME-PME 0.08; PLE-PLE 1.22. Clypeal height 0.58. Sternum 2.65 long, 3.15 wide; labium 1.13 long, 1.25 wide; endites 2.08 long, 1.13 wide. Femur I 1.18 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v2 pairs. Leg measurements:

	I	II	III	IV	Palp
Femur	6.6	6.6	6.3	8.1	3.3
Patella	2.6	2.5	2.3	2.5	1.0
Tibia	5.6	5.5	5.6	7.0	1.4
Metatarsus	5.9	5.6	6.4	8.4	–
Tarsus	3.0	2.9	3.2	3.7	3.0
Totals	**23.7**	**23.1**	**23.8**	**29.7**	**8.7**

Palpal cymbium with shallow retrolateral furrow (Fig. 25C); RTA projecting upwards; retrodorsal tibial process subapical, small, thick, and curved; ventrolateral process lightly sclerotized, short and thick (Figa. 25A, C); conductor projecting into a narrow lamella; median apophysis short and slender (Figs. 25A–D).

Material examined.— Madagascar: **Toliara**: type specimens above; Mahafaly Plateau, 10.5 km SE Itampolo (village), 24°44.2′S, 44°1.79′E, 120 m, disturbed spiny bush, 20.ii.2005 (S.M. Goodman and V.

Soarimalala, CASENT 9021973), 1♀; Parc Nat. de Tsimanampetsotsa, Forêt de Bemanateza, 20.7 km 81° E Efoetse, 23.0 km 131° SE Beheloka, 23°59′32″S, 43°52′50″E, 90 m, general spider collecting at night, 22–26.ii.2002, spiny forest/thicket (B.L. Fisher, et al., CASENT9014084), 2 ♀.

Distribution.— Known from southwestern Madagascar (Map 1 [Fig. 28]).

***Mahafalytenus tsilo* Silva-Dávila, sp. nov.**

Figures 1–6, 8–10, 12–13, 26–27; Map 2 (Figure 28).

Types.— Holotype (female), Paratype (male) from Forêt de Tsinjoriaky, 6.2 km 84° E Tsifota, 22°48′8″S, 043°25′14″E, 70 m, general spider night collecting (6–10.iii.2002; B.L. Fisher et al.), deposited in CAS (CASENT9013016).

Etymology.— The species name is from the Malagasy for "thorn" in reference to the anterior edge of the epigynal median sector.

Diagnosis.— Females have a small, pendulum-like epigynal median sector (Figs. 8A, 9A, 26A); vulva with copulatory ducts nearly obscuring spermathecal heads and sometimes asymmetrical (Figs. 8B, 9B, 26B). Males have a tegular conductor projecting into a narrow lamella and a median apophysis with a bifurcated apex (Figs. 10A–C, 12A, 13A, 27A–D).

Female (Holotype).— Total length 14.13. Carapace 6.7 long, 5.9 wide; ocular area 1.02 long; OQA 0.98; OQP 0.92; diameter of eyes AM:AL:PM:PL, 0.42:0.26:0.42:0.52; AME-AME 0.20; AME-ALE 0.10; AME-PME 0.16; ALE-ALE 1.00; PME-PME 0.08; PLE-PLE 1.20. Clypeal height 0.46. Sternum 2.95 long, 3.15 wide; labium 1.08 long, 1.25 wide; endites 2.2 long, 1.13 wide. Femur I 1.10 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v1 pair. Leg measurements:

	I	II	III	IV	Palp
Femur	6.5	6.5	6.5	8.3	3.0
Patella	2.6	2.7	2.5	2.5	1.5
Tibia	5.2	5.3	5.2	6.7	1.85
Metatarsus	4.9	4.9	5.7	7.5	–
Tarsus	2.5	2.6	2.9	3.5	2.65
Totals	**21.7**	**22.0**	**22.8**	**28.5**	**9.00**

Epigynum with small, pendulum-like median sector (Figs. 8A, 9A, 26A). Vulva as in Figs. 8B, 9B, 26B–C.

Male (Paratype).— Total length 9.3. Carapace 4.7 long, 3.95 wide; ocular area 0.74 long; OQA 0.78; OQP 0.74; diameter of eyes AM:AL:PM:PL, 0.34:0.02:0.34:0.34; AME-AME 0.14; AME-ALE 0.02; AME-PME 0.08; ALE-ALE 0.74; PME-PME 0.04; PLE-PLE 0.90. Clypeal height 0.24. Sternum 2.2 long, 2.25 wide; labium 0.73 long, 0.88 wide; endites 1.48 long, 0.75 wide. Femur I 1.3 times carapace width. Spination: tibiae I-II v3 pairs, metatarsi I-II v2 pairs. Leg measurements:

	I	II	III	IV	Palp
Femur	5.2	5.1	5.3	6.6	2.3
Patella	2.0	2.0	1.9	2.1	0.65
Tibia	4.7	4.7	4.7	5.8	1.0
Metatarsus	4.4	4.6	5.2	6.6	–
Tarsus	2.5	2.6	2.9	3.3	2.2
Totals	**18.8**	**19.1**	**20.0**	**24.4**	**6.15**

Palpal cymbium with shallow retrolateral furrow; RTA directed inwards; retrodorsal process subapical, small and pointing outwards; ventrolateral process digitiform, lightly sclerotized, long and slender (Figs. 10C, 13F); conductor projecting into a narrow lamella, apex with a blade-like

edge, partly wrapping embolus (Figs. 10A–C, 13A–C); median apophysis long, with apex strongly bifurcated (Figs. 10A, 12A, 13A, 27B).

MATERIAL EXAMINED.— MADAGASCAR: **Toliara**: type specimens above plus 1 juvenile; Forêt de Tsinjoriaky, 6.2 km 84° E Tsifota, 22°48′8″S, 043°25′14″E, 70 m, general spider collecting at night, 6–10.iii.2002 (B.L. Fisher, et al., CASENT9018697), 5 ♀; Mikea Forest, NW of Manombo, 22°54.22′S, 43°28.53′E, 30 m, malaise trap in deciduous dry forest, 16–17.i.2002 (R. Harin'Hala, CASENT9020814), 1 ♂; Mikea Forest, NW of Manombo, 22°54.22′S, 43°28.53′E, 30 m, malaise trap in deciduous dry forest, 6–16.i.2002 (R. Harin'Hala, CASENT9010440), 1 ♀; Lake Ranobe, 100 m from lake edge, 23°2.941′S, 43°36.635′E, 30 m, spider collecting in spiny forest, 21–28.i.2003 (Frontier Wilderness Project, CASENT 9016470), 1 ♀.

DISTRIBUTION.— Known from southwestern Madagascar (Map 2 [Fig. 28]).

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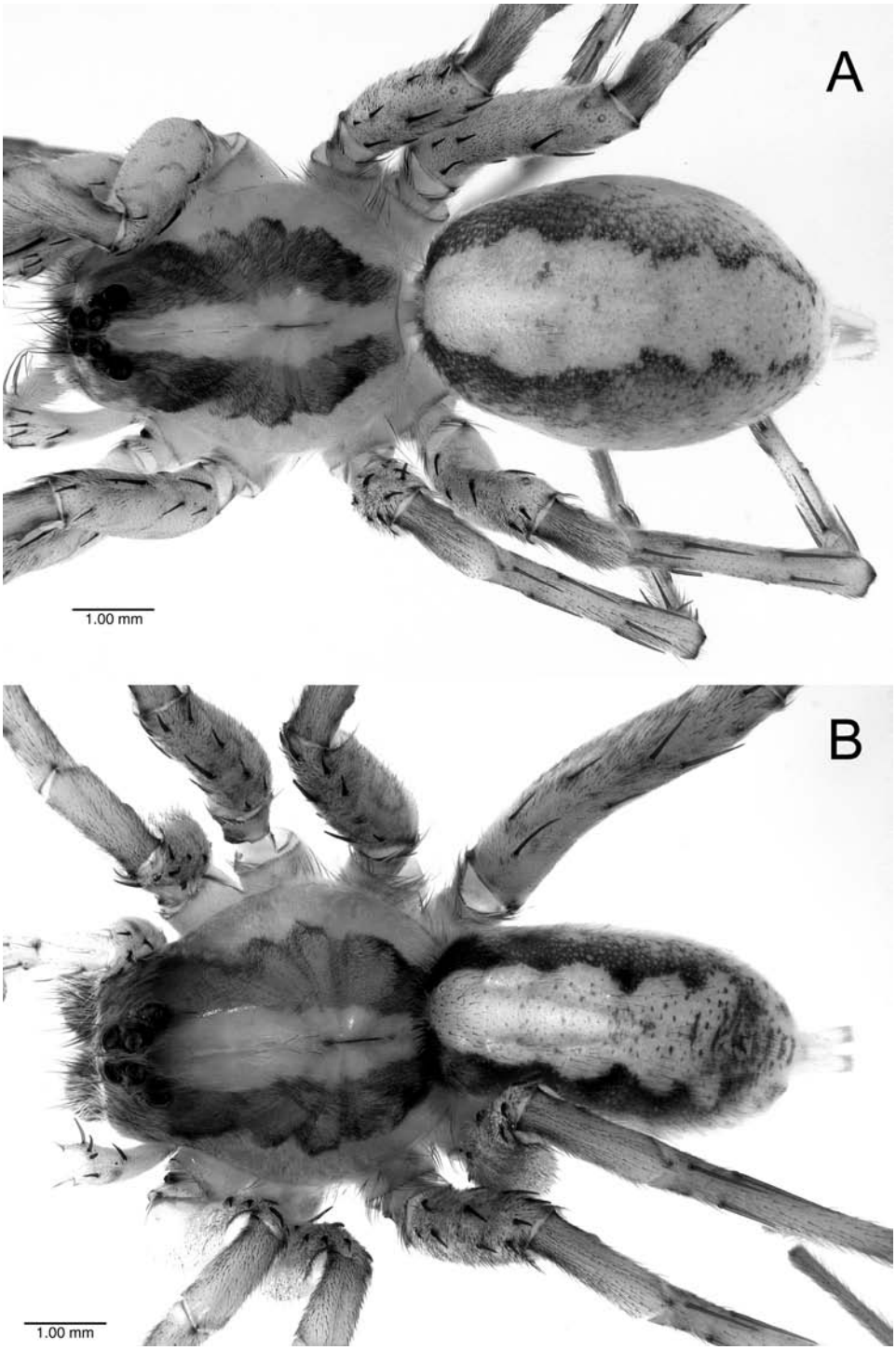


FIGURE 1. *Mahafalytenus* spp., habitus, dorsal view. A. *M. fohy*, sp. nov., female holotype, CASENT9012624. B. *M. tsilo*, sp. nov., male paratype, CASENT9013016.

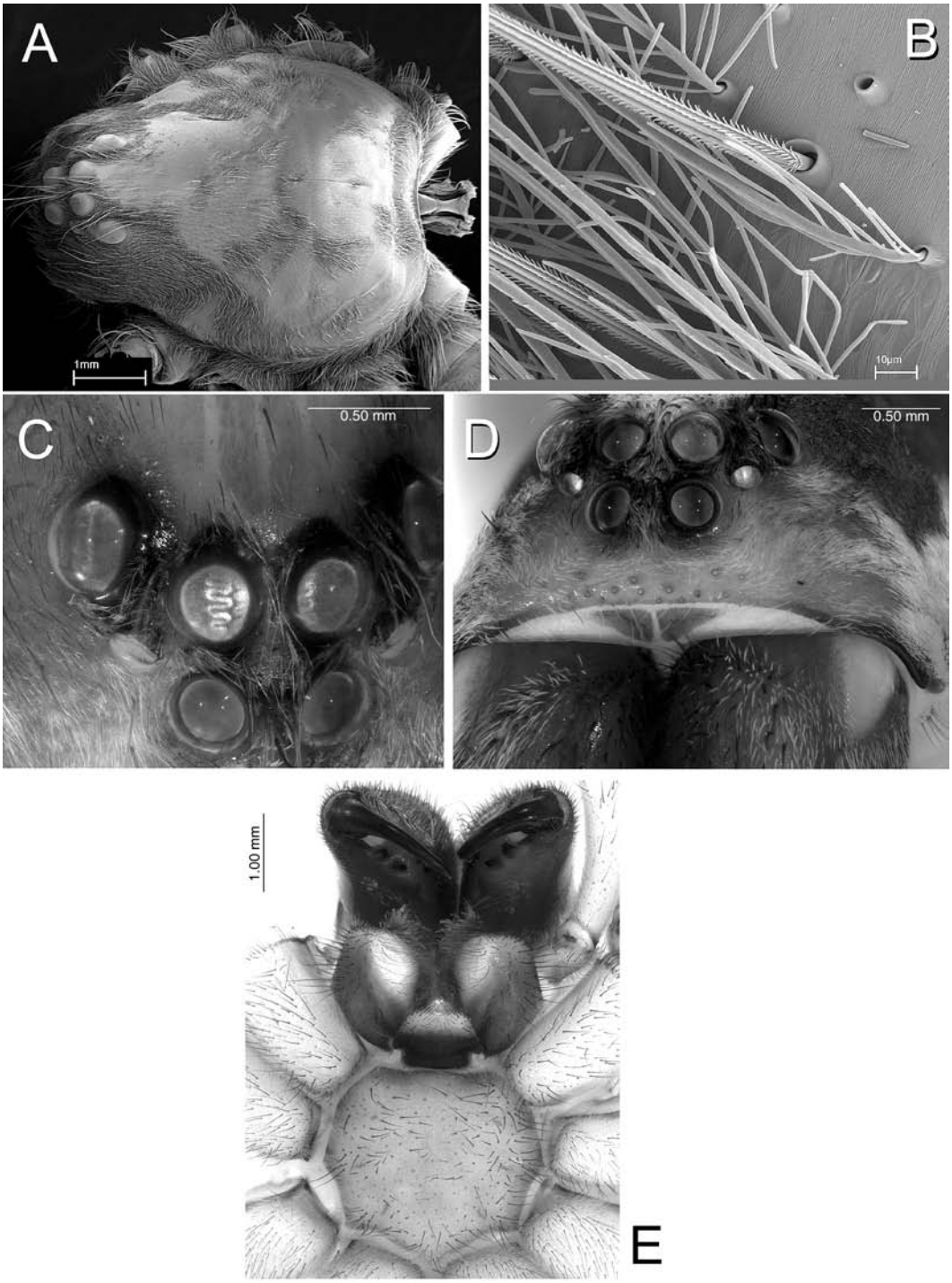


FIGURE 2. *Mahafalytenus* spp., female. A–B. *M. paosy*, sp. nov., CASENT9014084. A. Carapace, dorsal view. B. Close up of carapace hairs. C–D. *M. paosy*, sp. nov., CASENT9018697. C. Close up of PME grate-shaped tapetum. D. Carapace, frontal view. E. *M. isalo*, sp. nov., holotype, cephalothorax, ventral view.

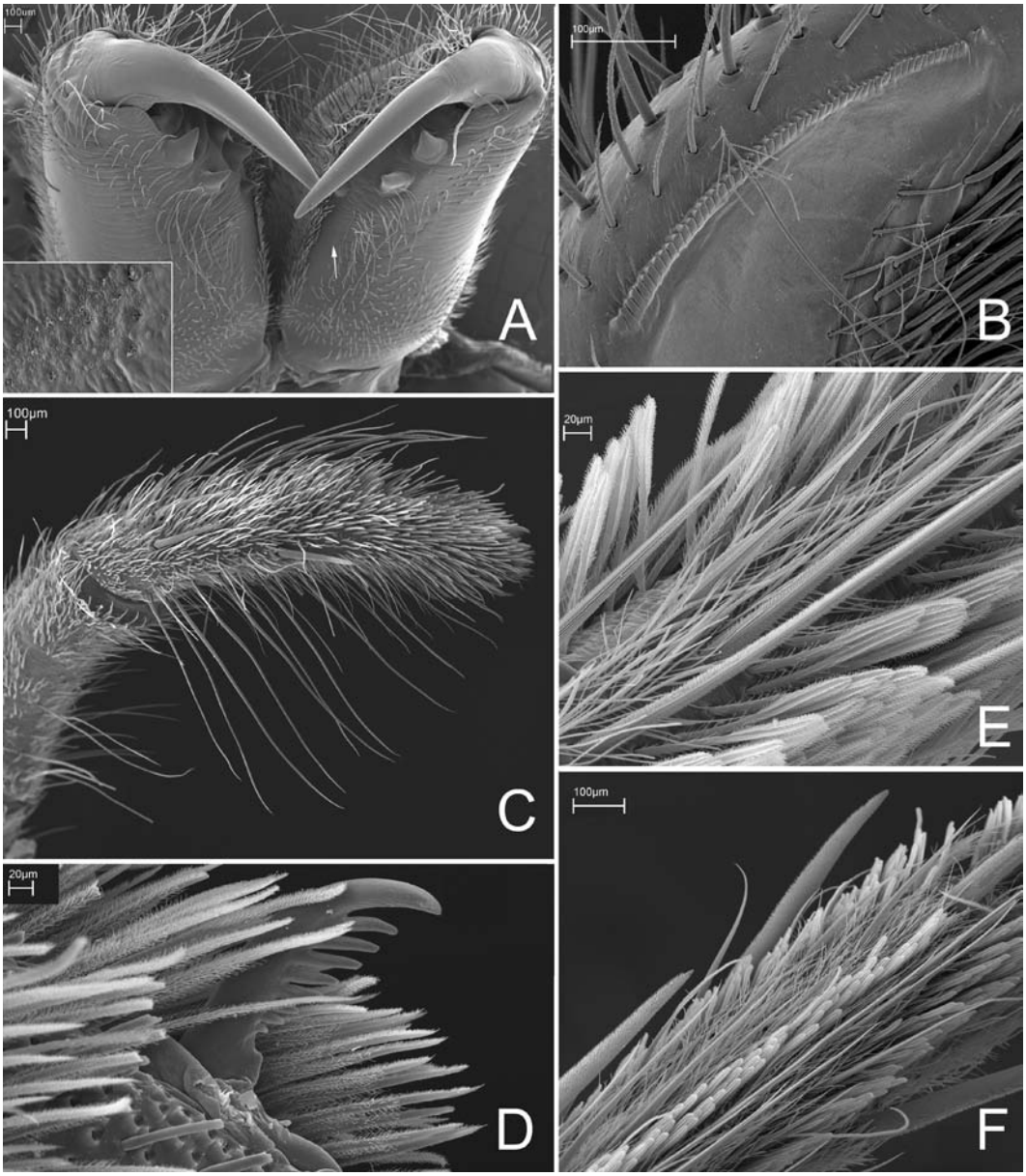


Figure 3. *Mahafalytenus* spp., female. A–B, E–F. *M. paosy*, sp. nov., CASENT9014084. A. Chelicerae; inset and arrow to cheliceral glands. B. Close up of right serrula, ventral view. C–D. *M. tsilo*, sp. nov., CASENT9018697. C. Left pedipalp, close up of tarsal setae, prolateral view. D. Left pedipalp, tarsal claw. E. Leg I, close up of tarsal scopula, ventral view. F. Leg I, close up of metatarsal scopula, ventral view.

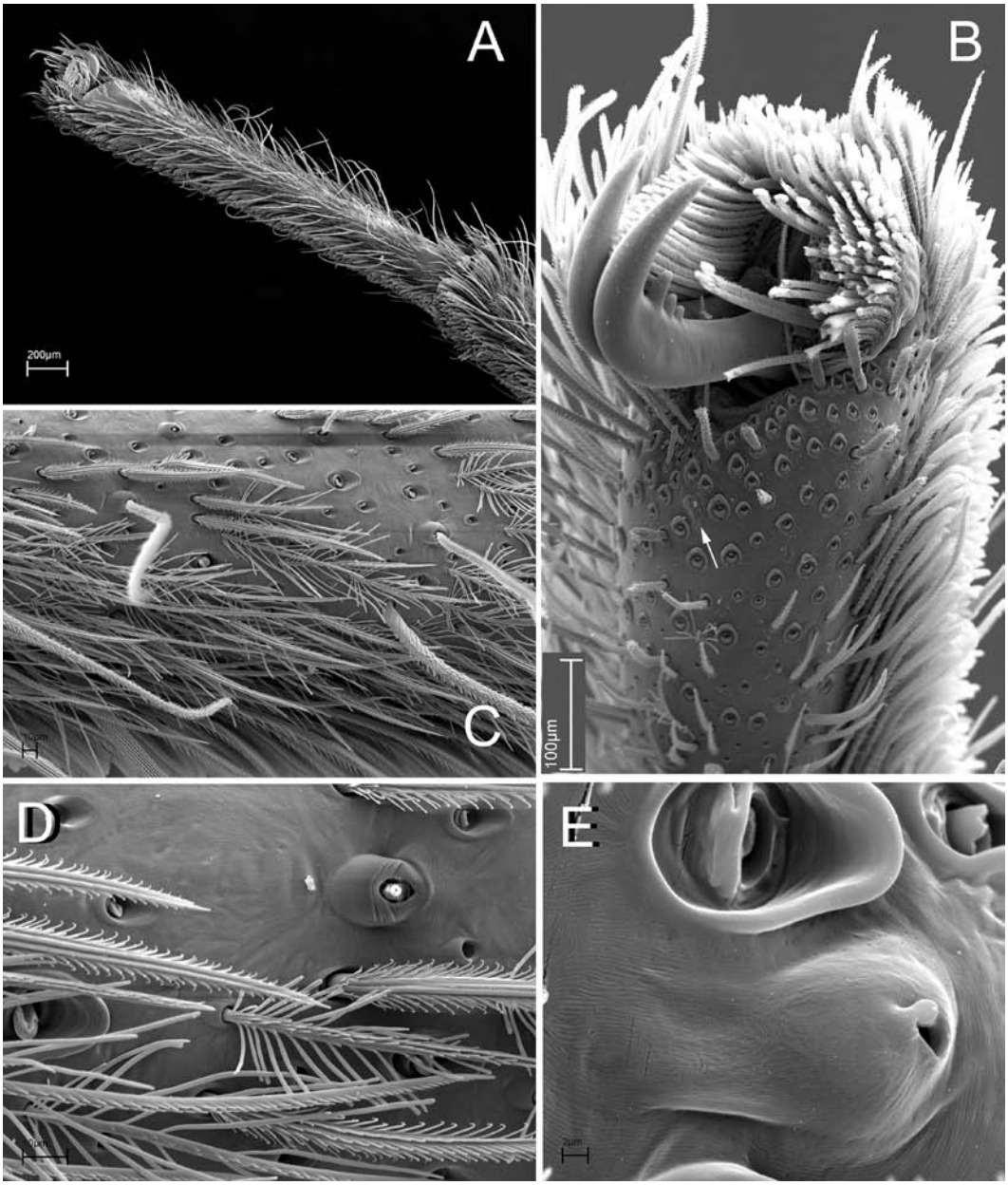


Figure 4. *Mahafalytenus* spp, female tarsi. A, C–E. *M. paosy*, CASENT9014084. A. I left tarsus, retrolateral view. B. *M. tsilo*, sp. nov., CASENT9018697; close up of I left tarsus, prolateral view, arrow to tarsal organ. C. Tarsal hairs and trichobothria. D. Close up of feathery hair and trichobothrium. E. Close up of tarsal organ.

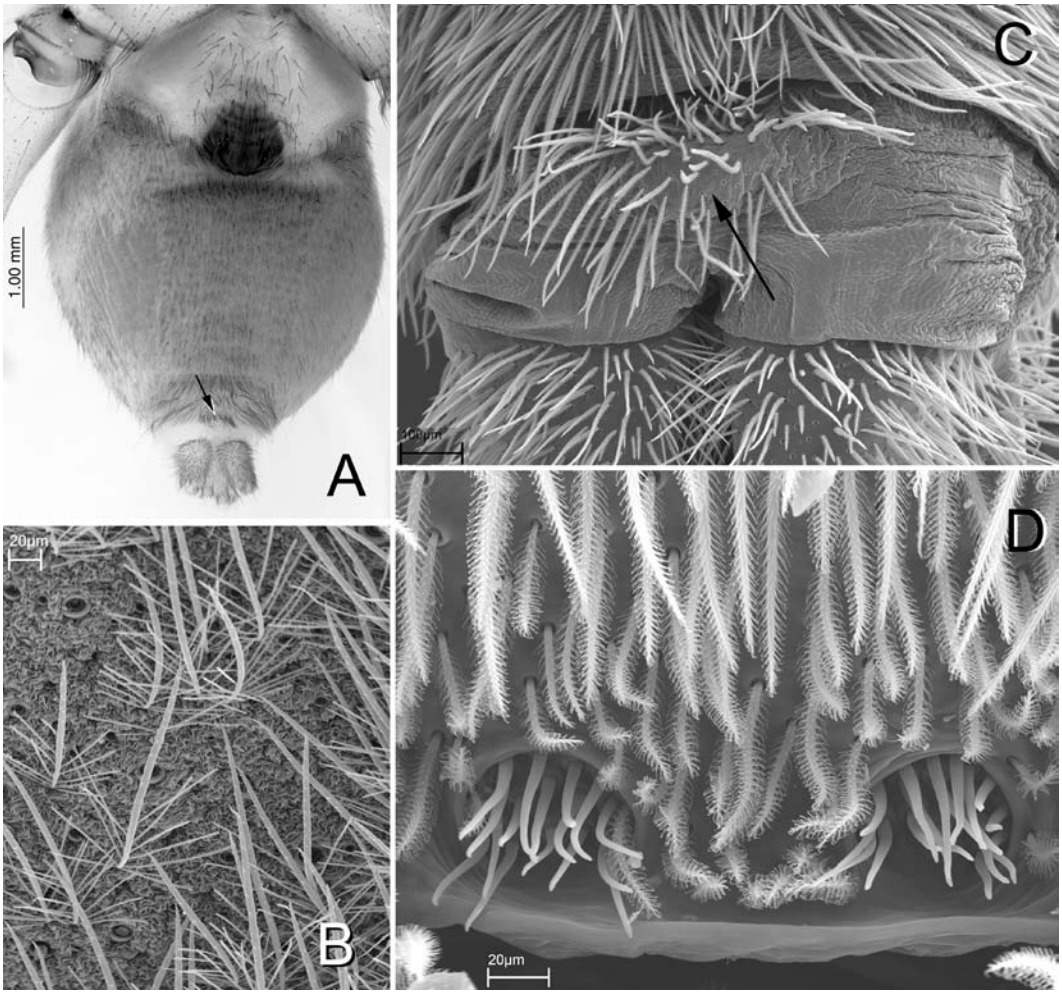


FIGURE 5. *Mahafalytenus* spp., abdomen. A–C. *M. paosy*, female CASENT9014084. A. Abdomen, ventral view, arrow to colulus. B. Close of abdominal hairs, dorsal view. C. Close up of colulus, arrow to colulus. D. *M. tsilo*, sp. nov., male CASENT9020814, close up of epiandrous gland spigots.

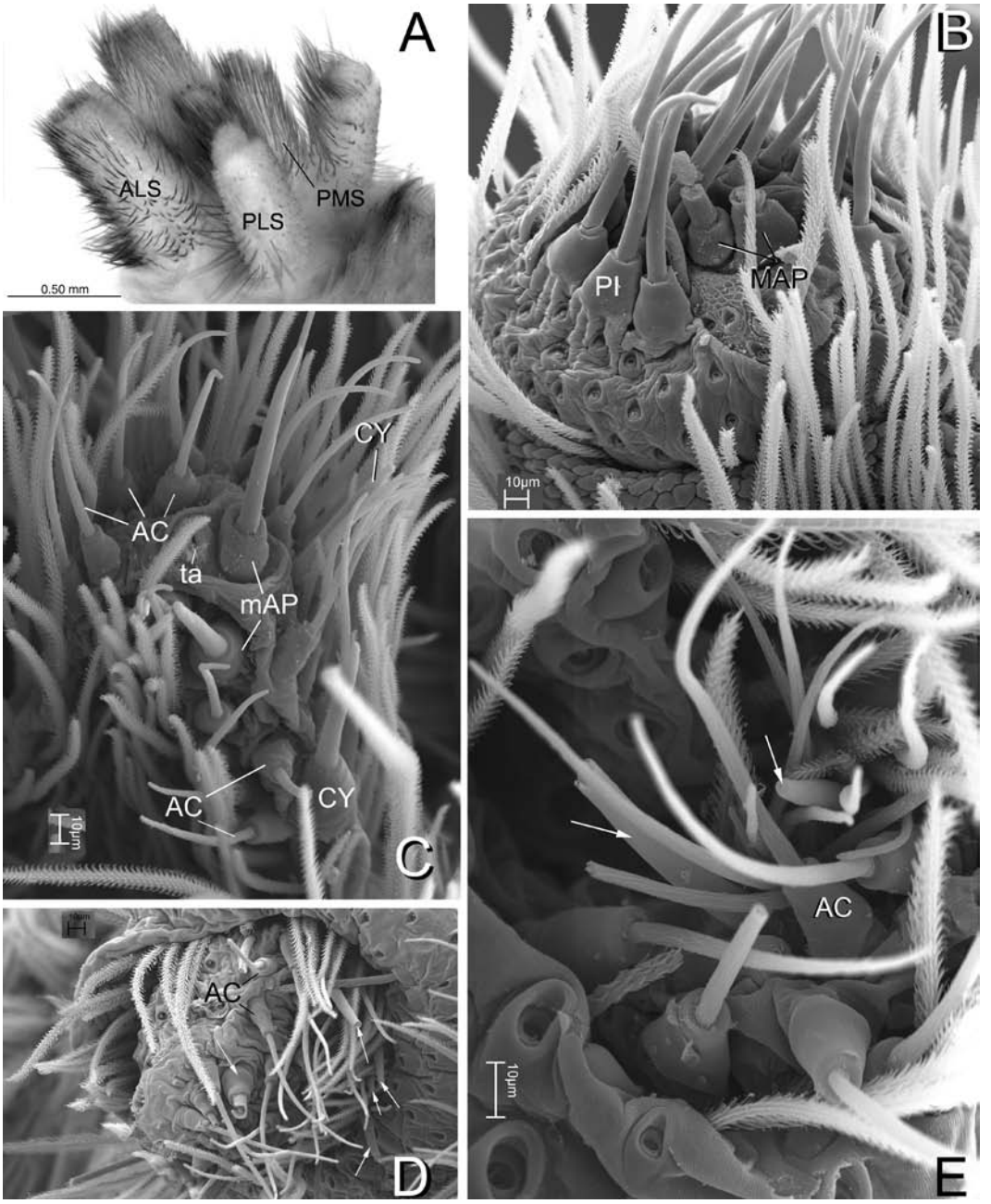


FIGURE 6. *Mahafalytenus* spp., female spinnerets. A–C, E. *M. tsilo*, sp. nov., CASENT9018697. A. Overview. B. ALS. C. PMS. D. *M. paosy*, sp. nov., CASENT9014084, PLS, arrows to CY. E. Close up of PLS, arrows to CY. AC= aciniform gland spigots, ALS= anterior lateral spinneret, CY= cylindrical gland spigots, MAP= major ampullate gland spigots, mAP= minor ampullate gland spigots, PI= piriform gland spigots, PLS= posterior lateral spinneret, PMS= posterior median spinneret, ta= tartipore.

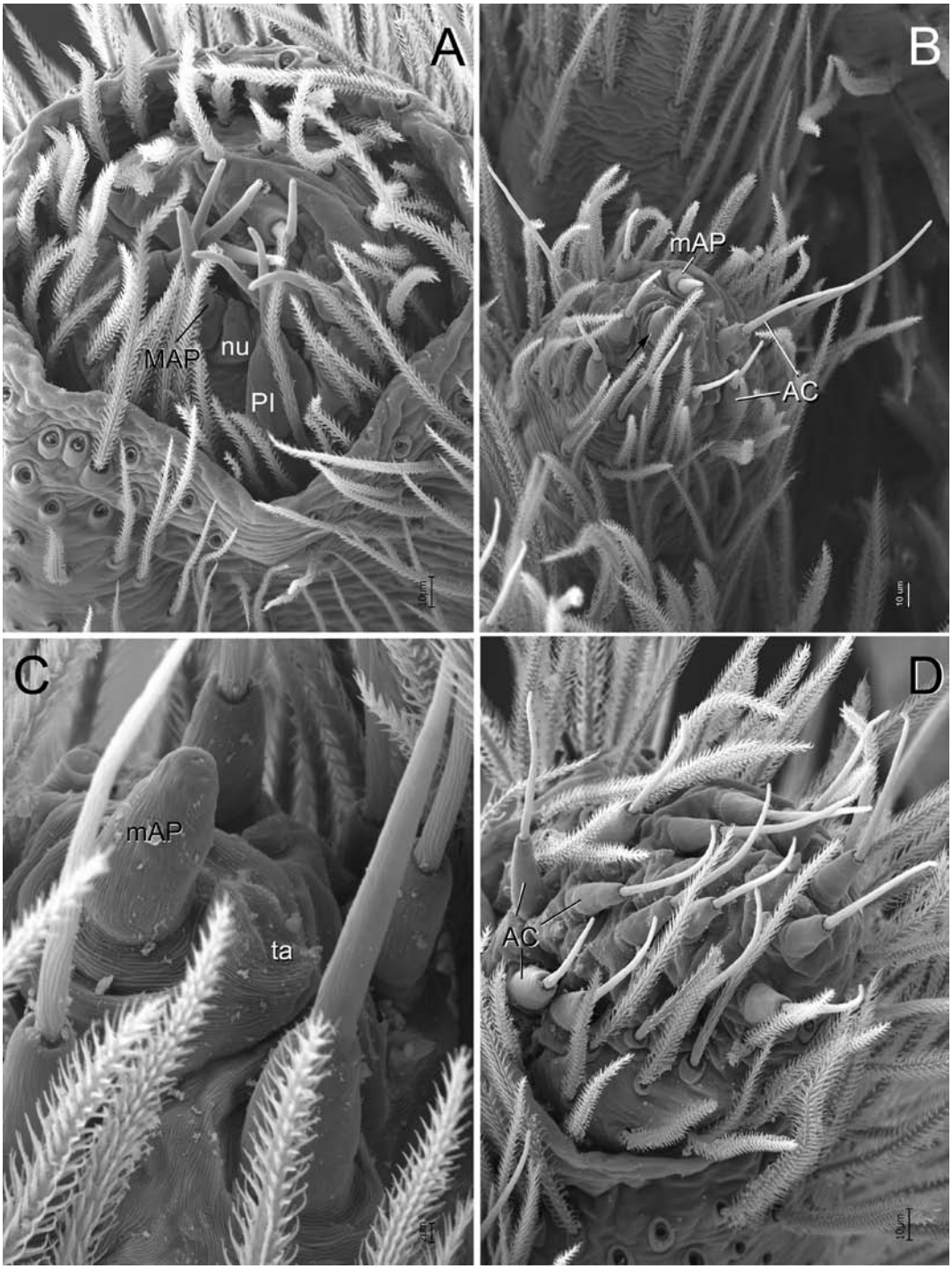


FIGURE 7. *Mahafalytenus hafa*, sp. nov., male paratype spinnerets, CASENT9014507. A. ALS. B. PMS. C. Close up of PMS. D. PLS. AC= aciniform gland spigots, MAP= major ampullate gland spigots, mAP= minor ampullate gland spigots, nu= nubbin, PI= piriform gland spigots, ta= tartipore.

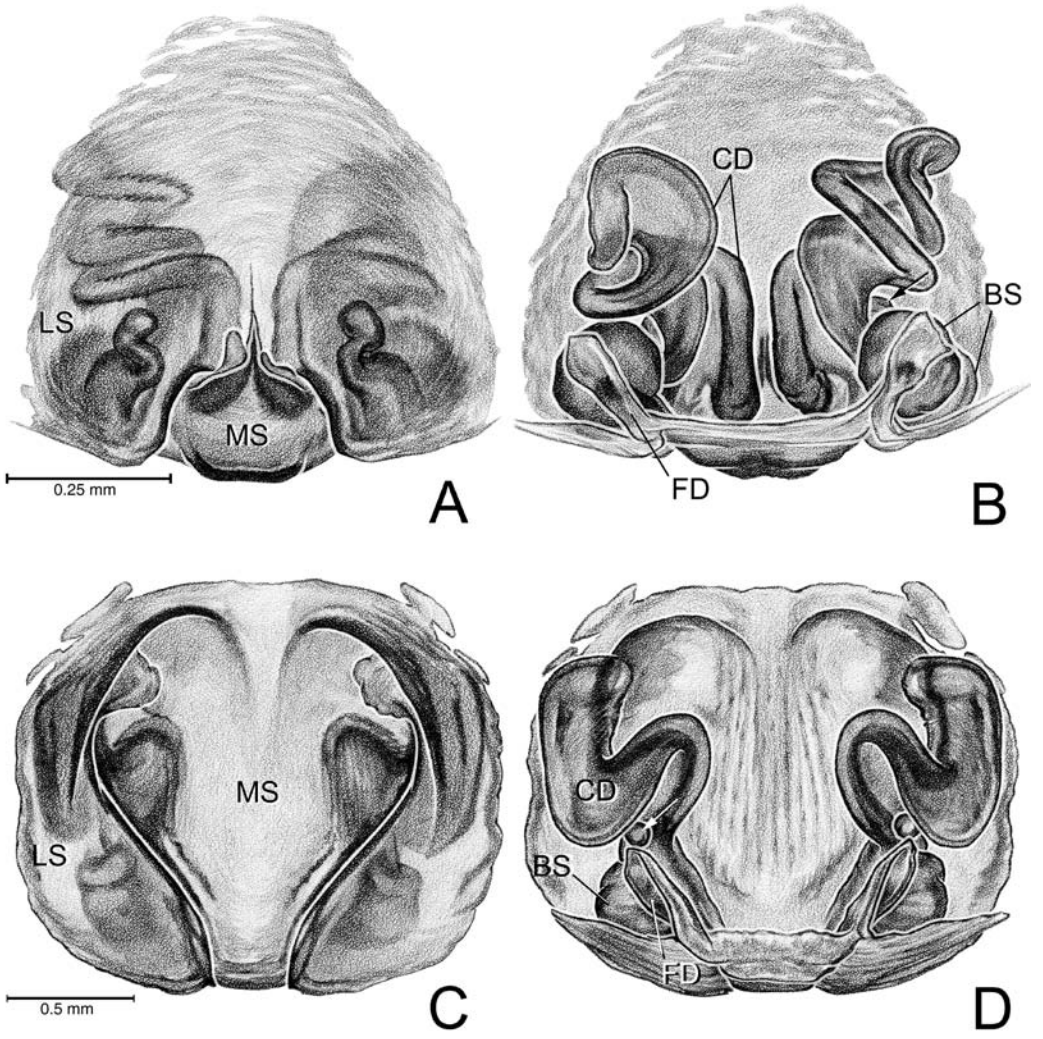


FIGURE 8. *Mahafalytenus* spp., female genitalia. A–B. *M. tsilo*, sp. nov., holotype. C–D. *M. fo*, sp. nov., holotype. A, C. Epigynum, ventral view. LS= epigynal lateral sector, MS= epigynal median sector. B, D. Vulva, dorsal view; arrow to spermathecal head. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct.

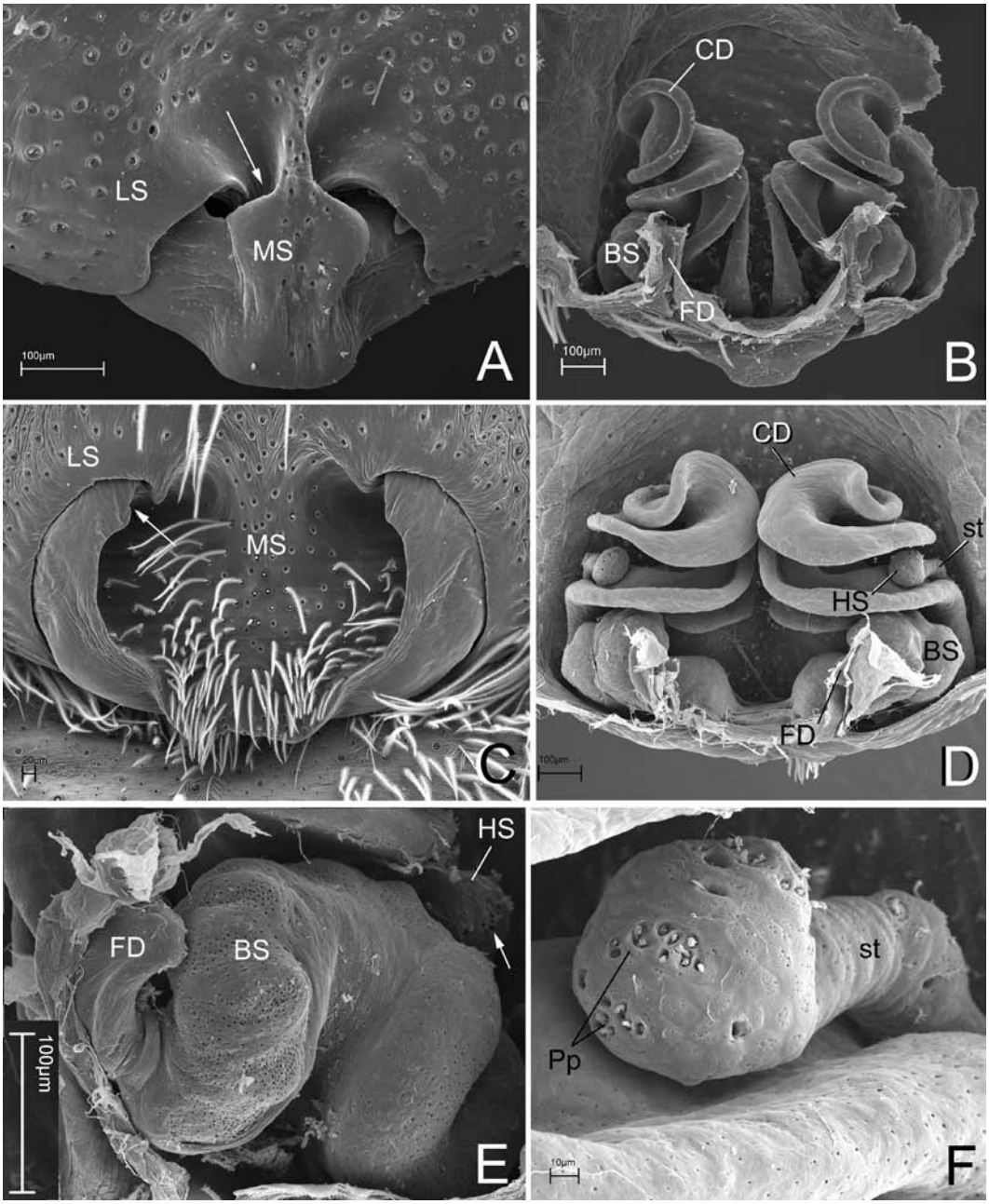


FIGURE 9. *Mahafalytenus* spp., female genitalia. A–B, E. *M. tsilo*, sp. nov., CASENT9018697. C–D, F. *M. paosy*, sp. nov., CASENT9014084. A, C. Epigynum, ventral view, arrows to copulatory opening. B, D. Vulva, dorsal view. E. Close up of left spermatheca, arrow to Pp. F. Close up of HS. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, HS= head of spermatheca, LS= epigynal lateral sector, MS= epigynal median sector, Pp= primary pores, st= stalk.

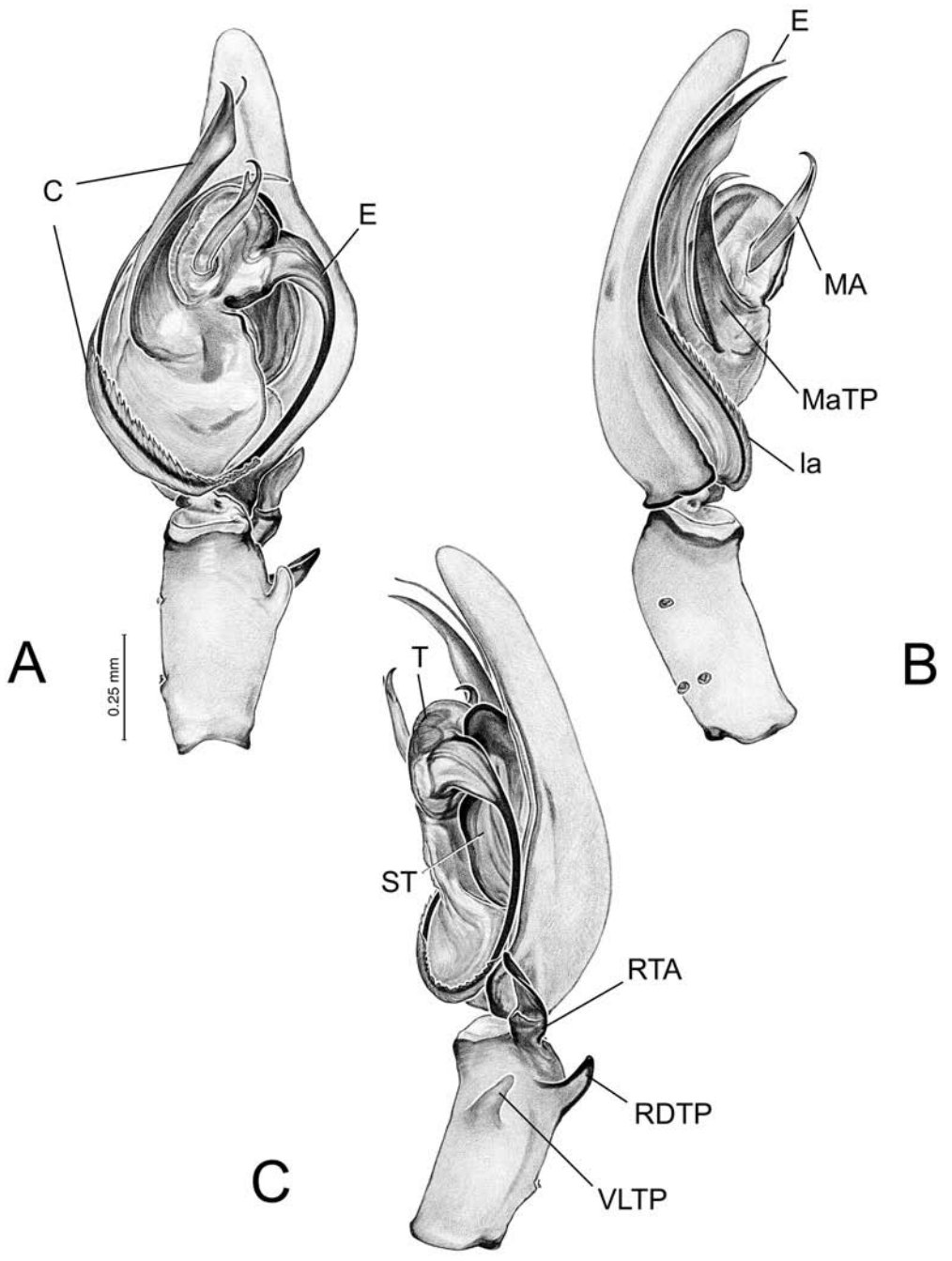


FIGURE 10. *Mahafalytenus tsilo*, sp. nov., left palp, male CASENT9013016. A. Ventral view. B. Prolateral view. C. Retrolateral view. C= conductor, E= embolus, la= lamella of conductor, MA= median apophysis, MaTP= *Mahafalytenus* tegular process, RDTP= retro-dorsal tibial process, RTA= retrolateral tibial apophysis, ST= subtegulum, T= tegulum, VLTP= ventro-lateral tibial process

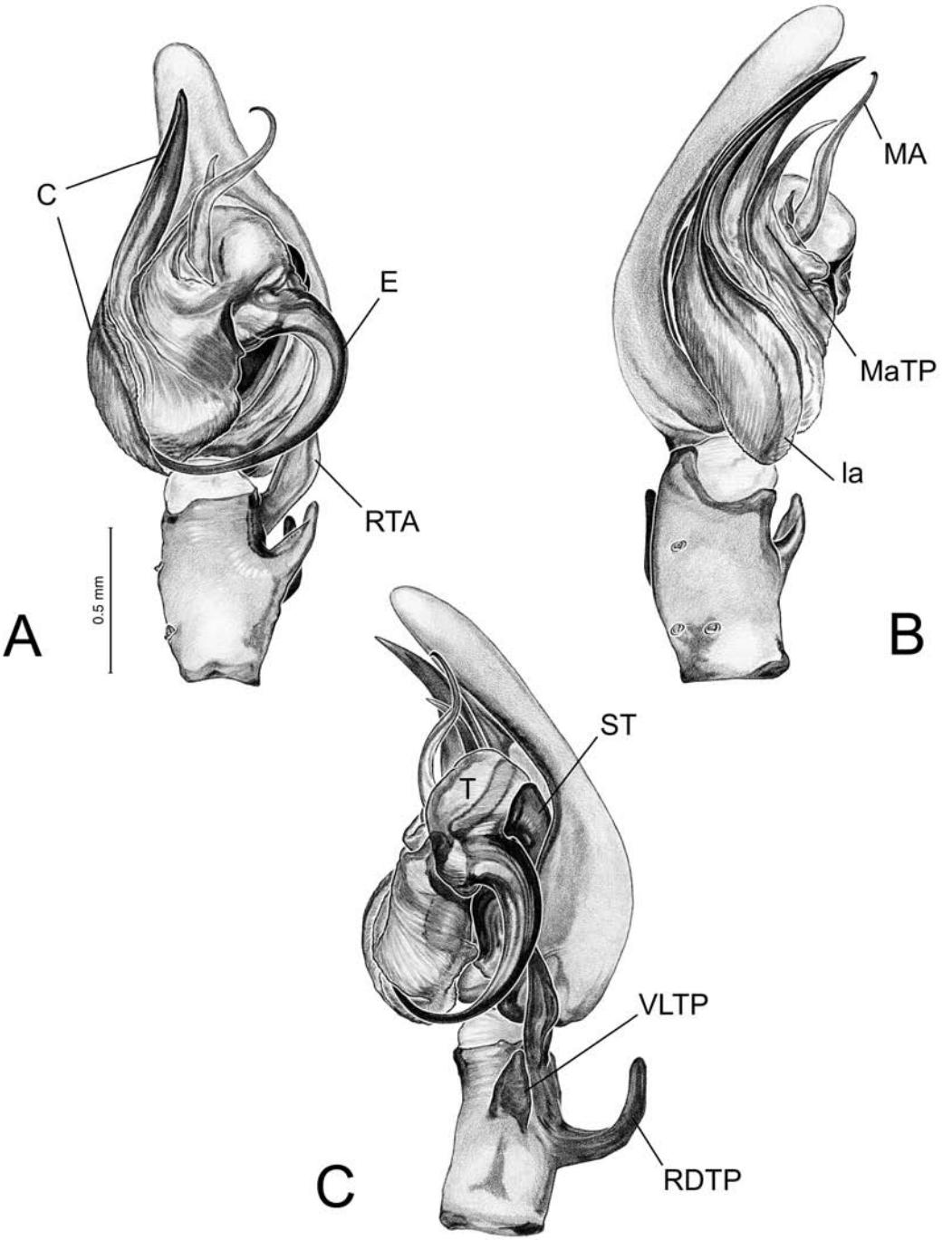


FIGURE 11. *Mahafalytenus fo*, sp. nov., left palp, male CASENT9014199. A. Ventral view. B. Prolateral view. C. Retrolateral view. C= conductor, E= embolus, la= lamella of conductor, MA= median apophysis, MaTP= *Mahafalytenus* tegular process, RDTP= retro-dorsal tibial process, RTA= retrolateral tibial apophysis, ST= subtegulum, T= tegulum, VLTP= ventro-lateral tibial process.

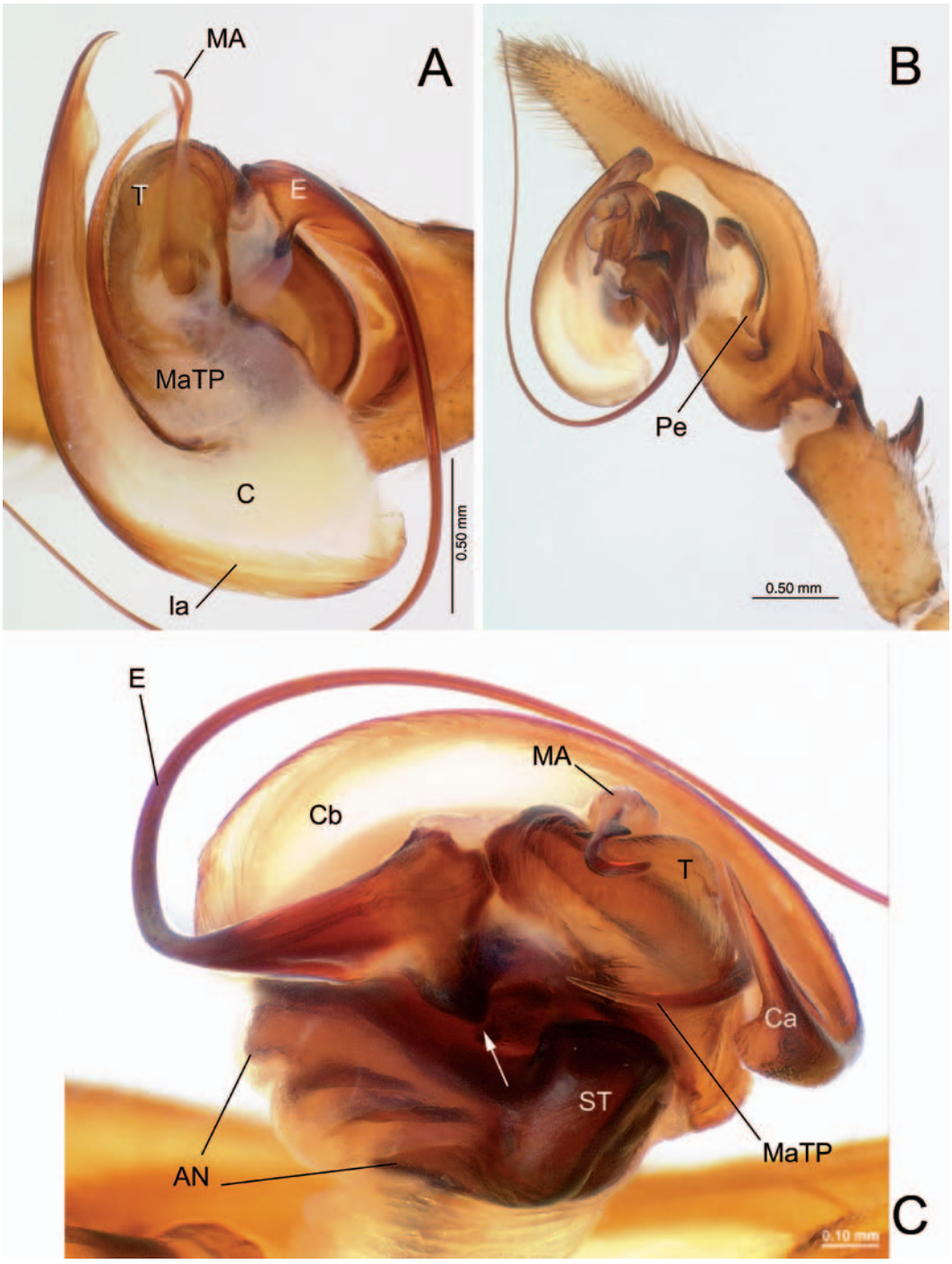


FIGURE 12. *Mahafalytenus tsilo*, sp. nov., male CASENT9020814, expanded left palp. A. Ventral view. B. Retrolateral view. C. Prolateral view, arrow to embolic lobe. AN= subtegular anelli, C= conductor, Ca= apex of conductor, Cb= base of conductor, E= embolus, Ia= lamella of conductor, MA= median apophysis, MaTP=*Mahafalytenus* tegular process, Pe= petiole, ST= subtegulum, T= tegulum.

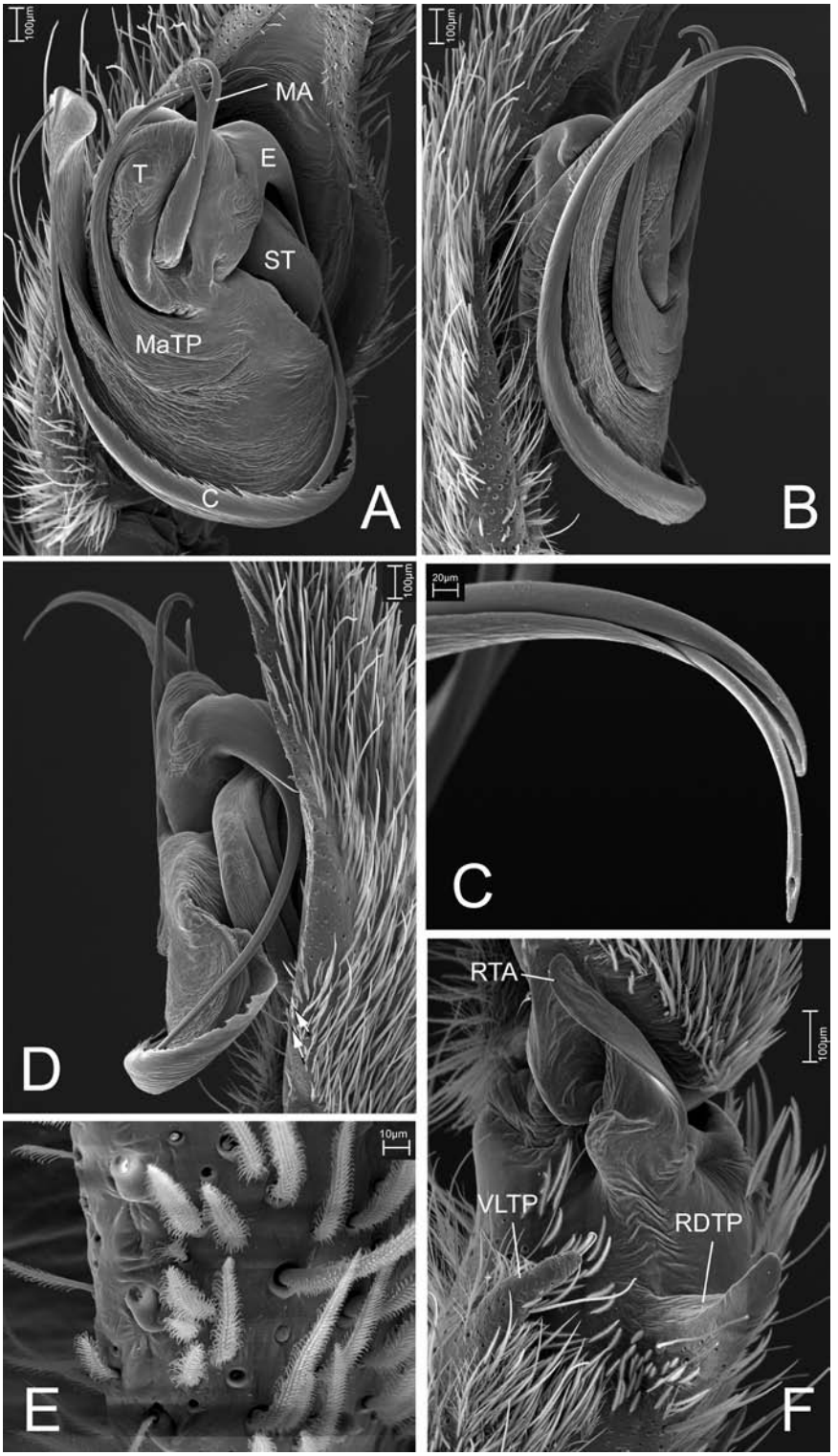


FIGURE 13. *Mahafalytenus tsilo*, sp. nov., male CASENT9020814, right palp. A.Ventral view. B. Prolateral view. C. Close up of conductor wrapping embolic tip, prolateral view. D. Retrolateral view, arrows to cymbial trichobothria. E. Cymbial base, retrolateral view. F. Tibial processes, retrolateral view. C = conductor, E = embolus, MA = median apophysis, MaTP= *Mahafalytenus* tegular process, RDTP = retrodorsal tibialprocess, RTA = retrolateral tibial apophysis, ST= subtegulum, T= tegulum, VLTP= ventrolateral tibial process.

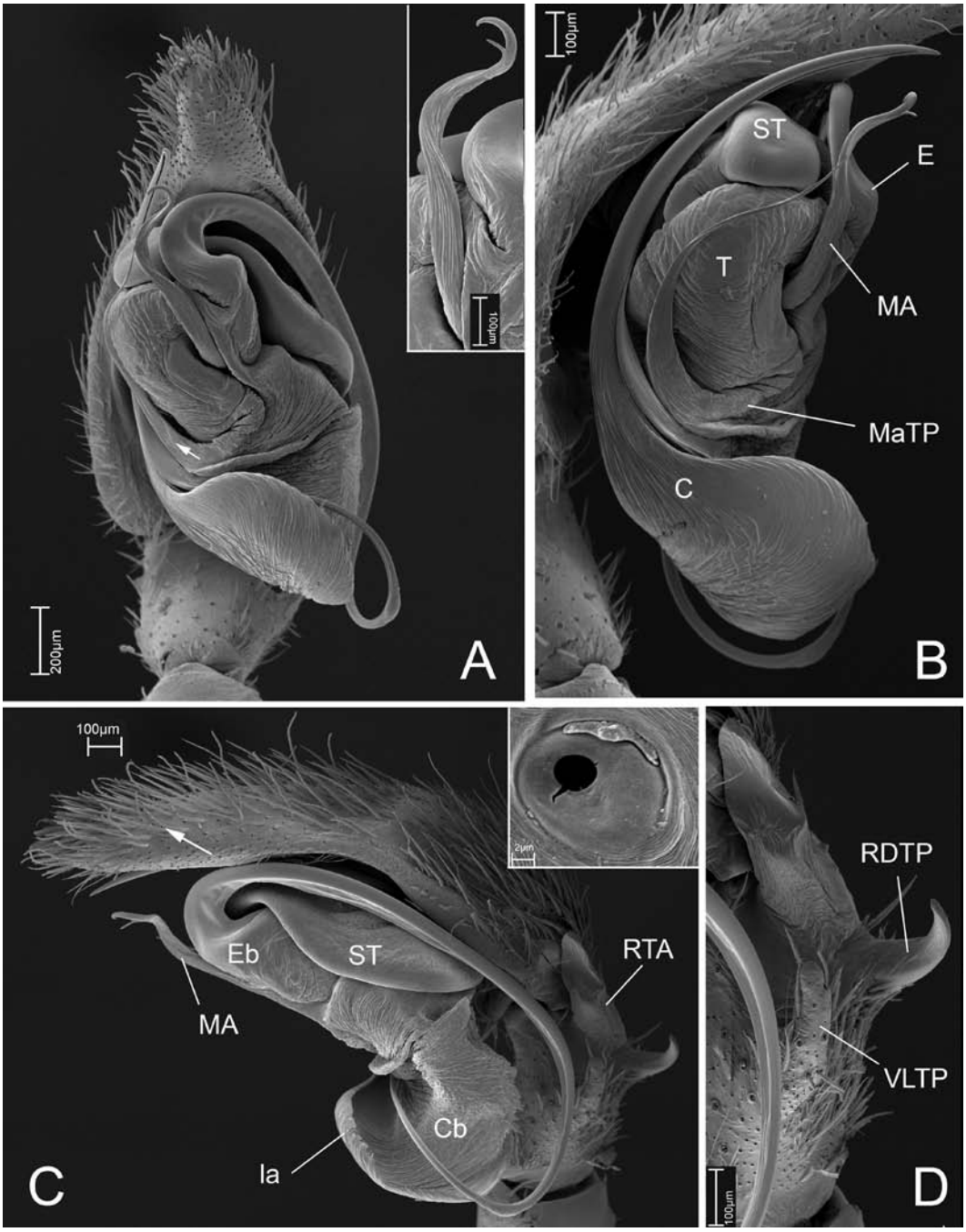


FIGURE 14. *Mahafalytenus hafa*, sp. nov., male CASENT9014507, right palp. A. Ventral view, arrow to MaTP, inset of MA. B. Prolateral view. C. Retrolateral view, inset and arrow to tarsal organ. D. Tibial processes, retrolateral view. C= conductor, Cb= base of conductor, E= embolus, Eb= embolus base, la= lamella of conductor, MA= median apophysis, MaTP=*Mahafalytenus* tegular process, RDTP= retro-dorsal tibial process, RTA= retrolateral tibial apophysis, ST= subtegulum, T= tegulum, VLTP= ventro-lateral tibial process.

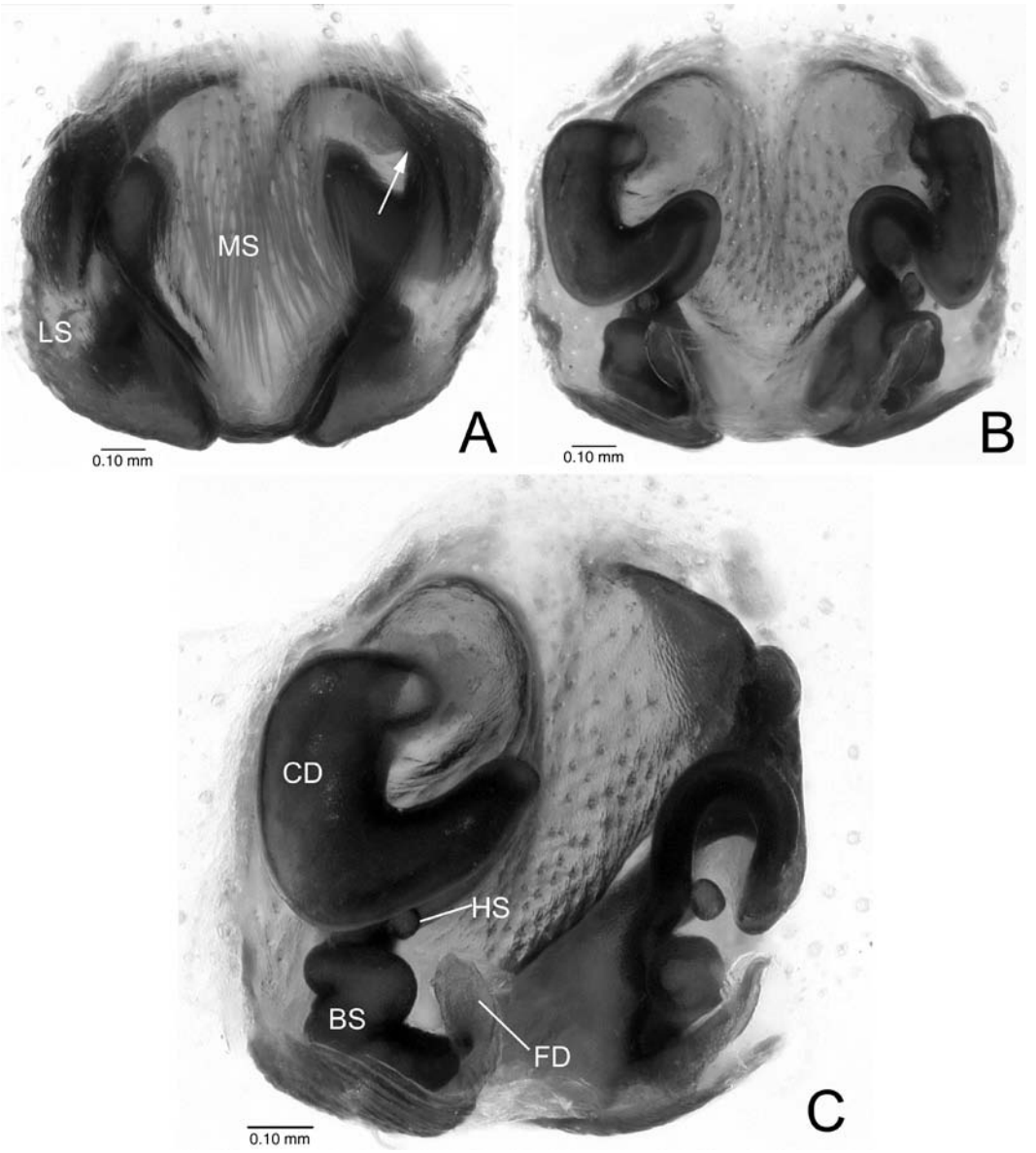


FIGURE 15. *Mahafalytenus fo*, sp. nov. Female genitalia, holotype. A. Epigynum, ventral view; arrow to copulatory opening. B. Vulva, dorsal view. C. Vulva, lateral view. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, HS= head of spermatheca, LS= epigynal lateral sector, MS= epigynal median sector.

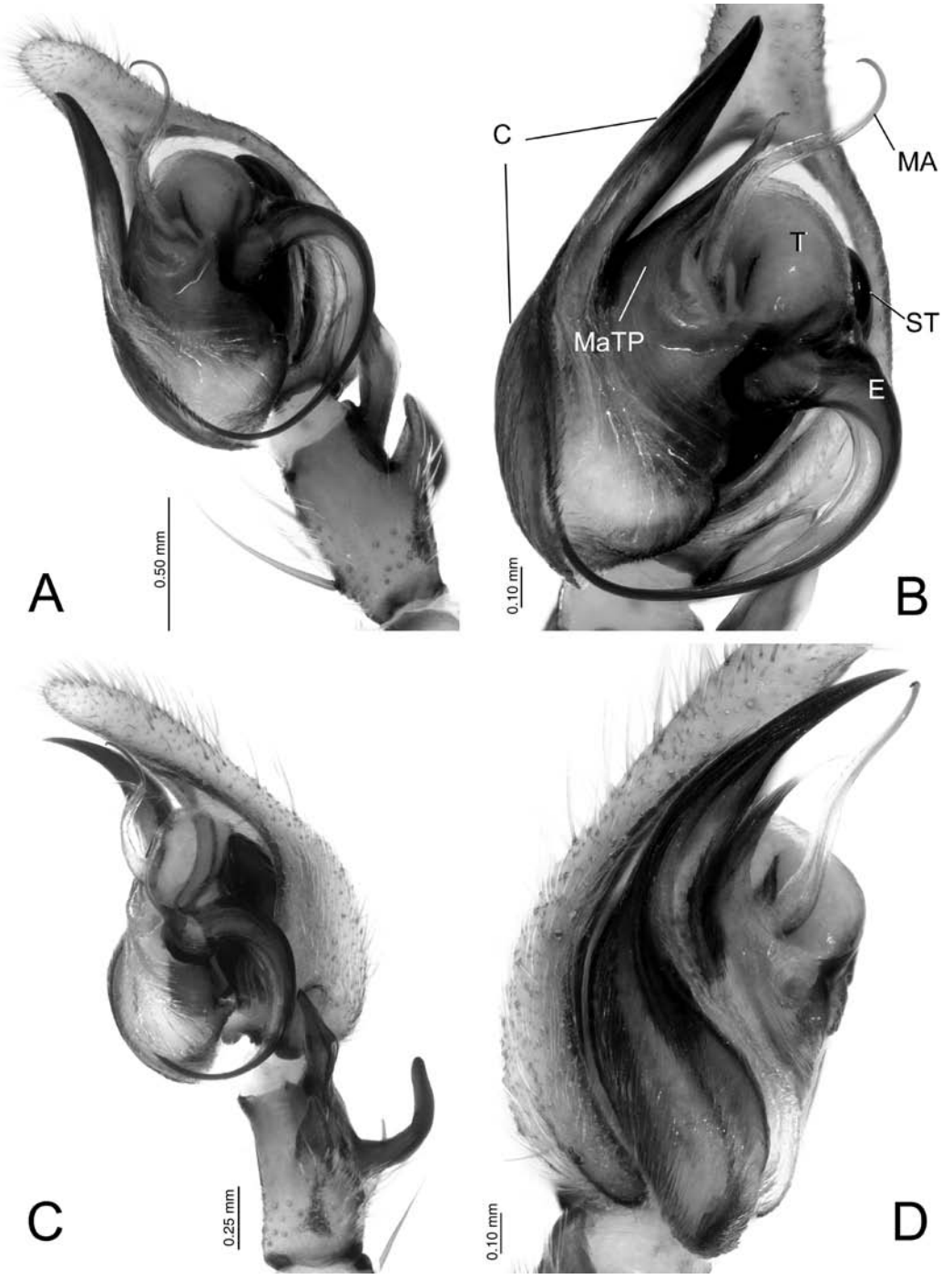


FIGURE 16. *Mahafalytenus fo*, sp. nov. Left palp, male CASENT9014199. A. Ventral view. B. Close up of ventral view. C. Retrolateral view. D. Close up of prolateral view. C= conductor, E= embolus, MA= median apophysis, MaTP= *Mahafalytenus* tegular process, ST= subtegulum, T= tegulum.

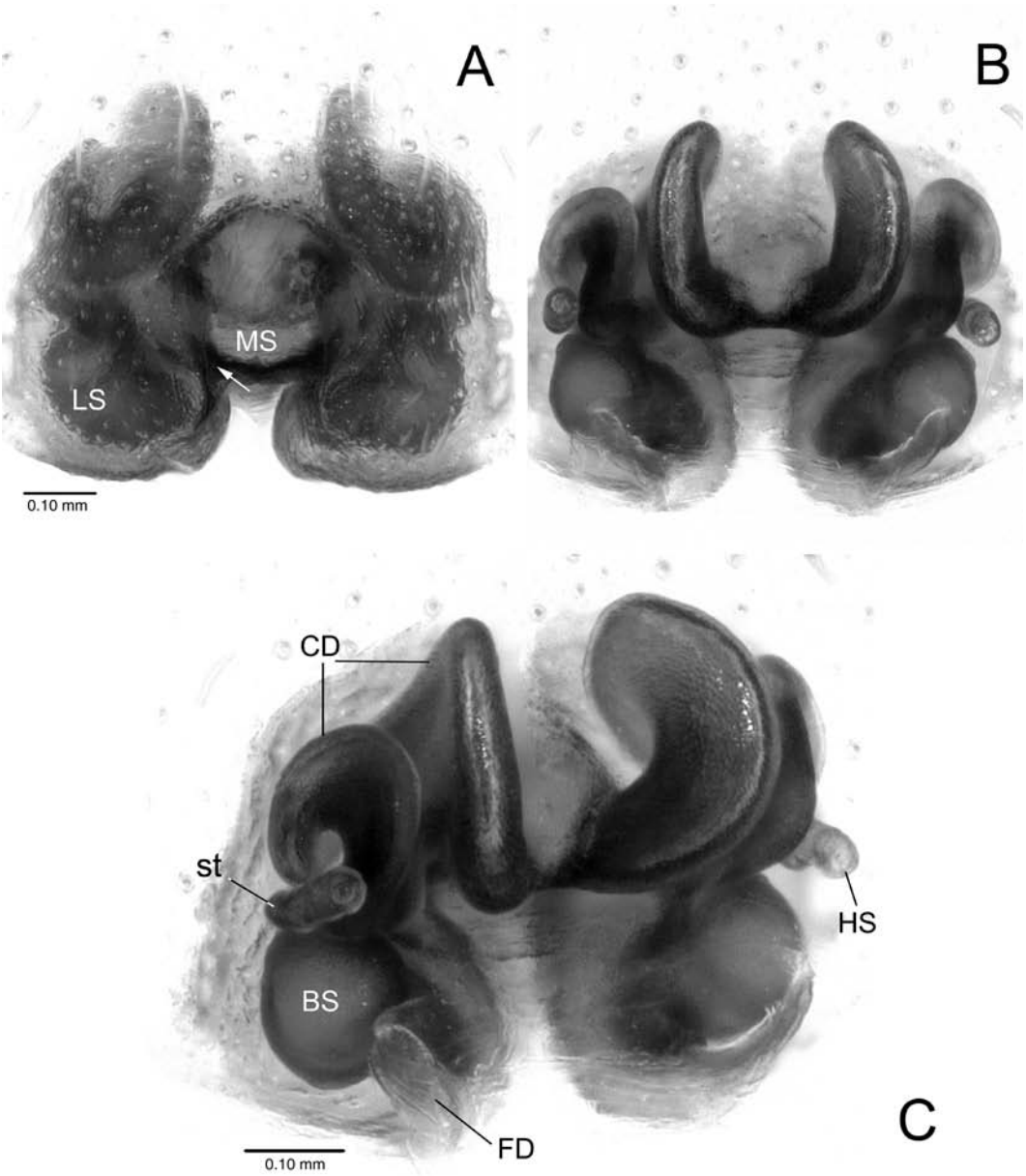


FIGURE 17. *Mahafalytenus fohy*, sp. nov. Female genitalia, holotype. A. Epigynum, ventral view; arrow to copulatory opening. B. Vulva, dorsal view. C. Vulva, lateral view. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, HS= head of spermatheca, LS= epigynal lateral sector, MS= epigynal median sector, st= stalk of spermatheca.

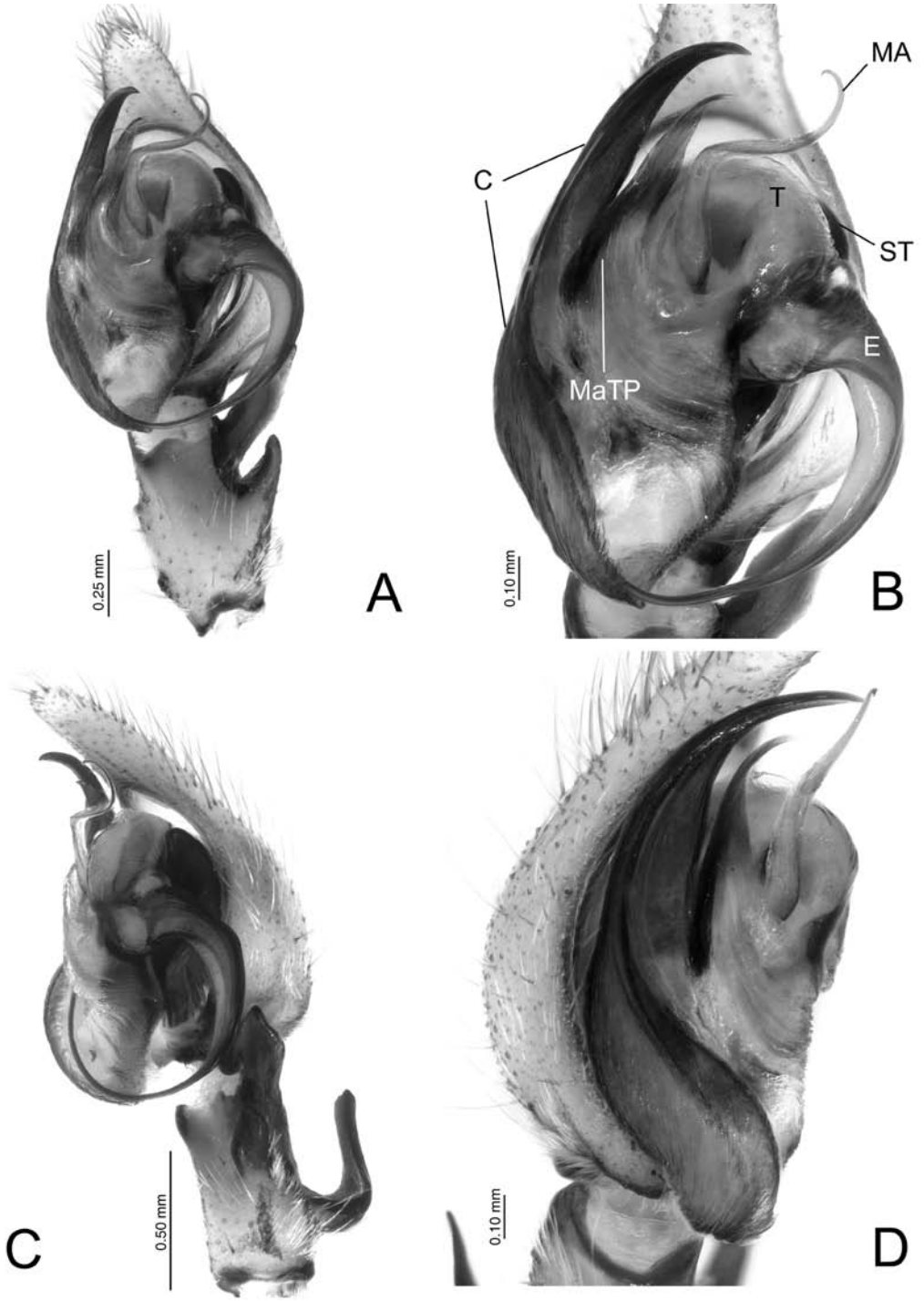


FIGURE 18. *Mahafalytenus fo*, sp. nov. Left palp, male CASENT9021948. A. Ventral view. B. Close up of ventral view. C. Retrolateral view. D. Close up of prolateral view. C= conductor, E= embolus, MA= median apophysis, MaTP= *Mahafalytenus* tegular process, ST= subtegulum, T= tegulum.

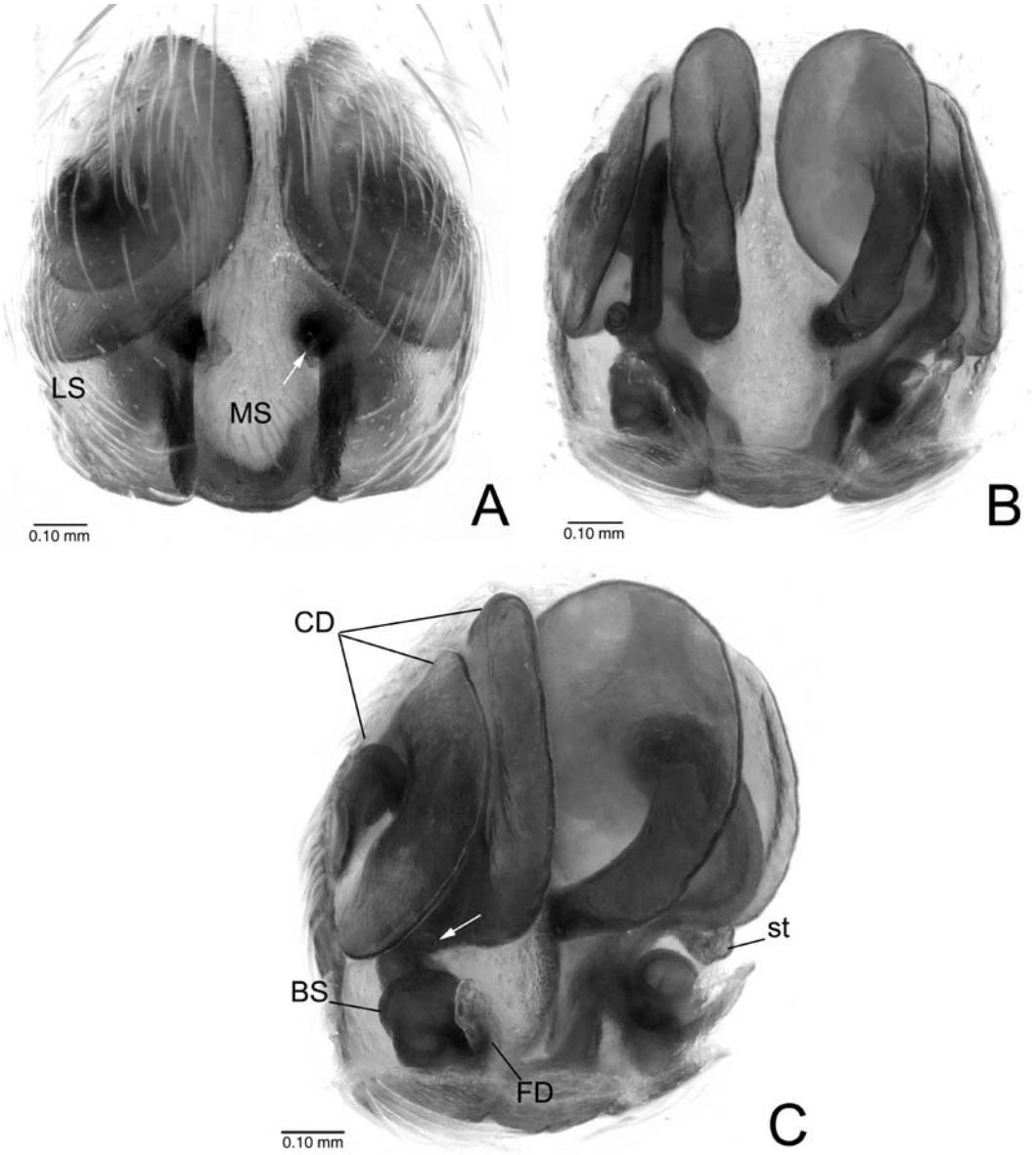


FIGURE 19. *Mahafalytenus hafa*, sp. nov. Female genitalia, holotype. A. Epigynum, ventral view; arrow to copulatory opening. B. Vulva, dorsal view. C. Vulva, lateral view, arrow to head of spermatheca. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, HS= head of spermatheca, LS= epigynal lateral sector, MS= epigynal median sector.

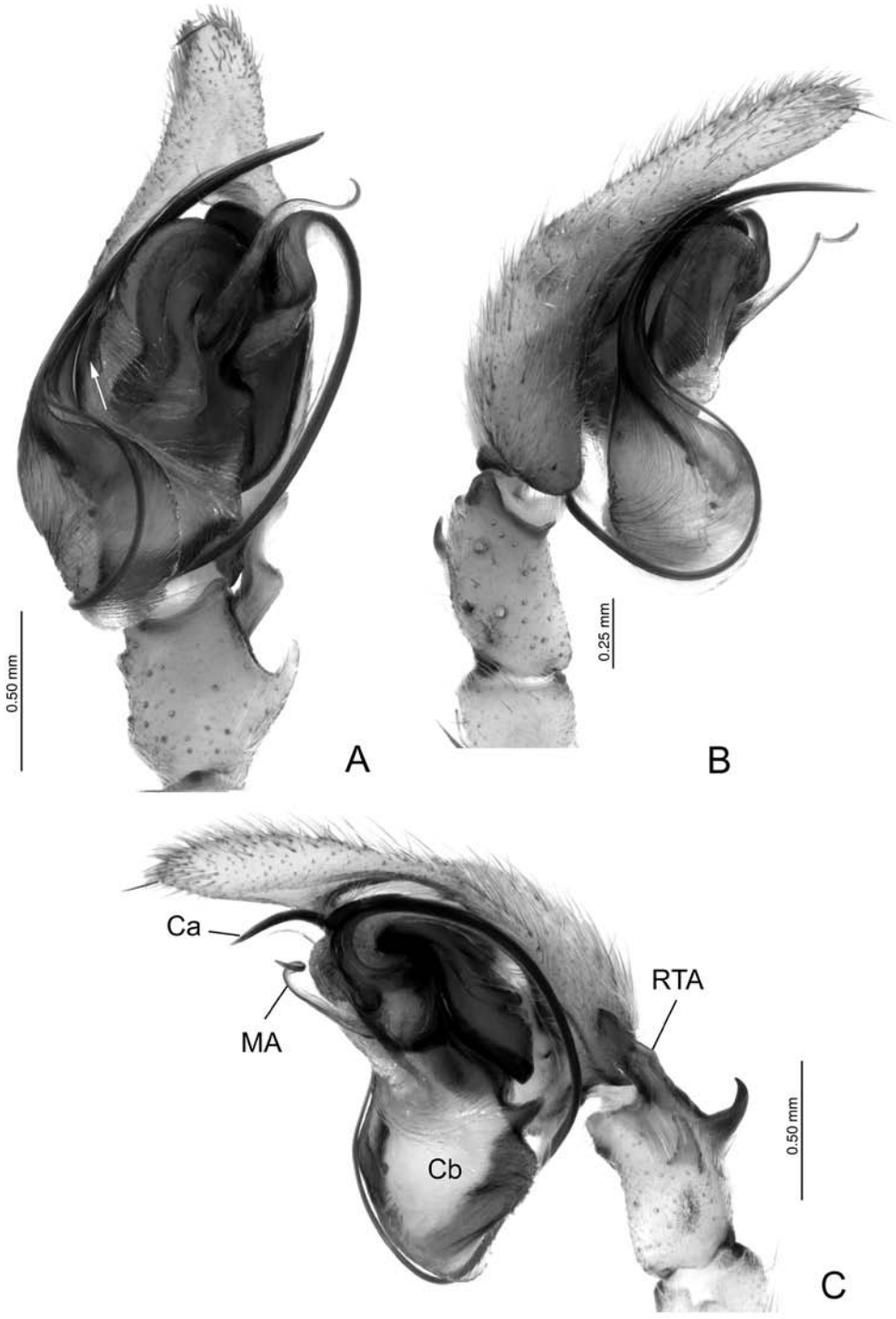


FIGURE 20. *Mahafalytenus hafa*, sp. nov. Left palp, male CASENT9014507. A. Ventral view, arrow to MaTP. B. Prolateral view. C. Retrolateral view. C= conductor, Ca= apex of conductor, Cb= base of conductor, MA= median apophysis, MaTP=*Mahafalytenus* tegular process, RTA= retrolateral tibial apophysis.

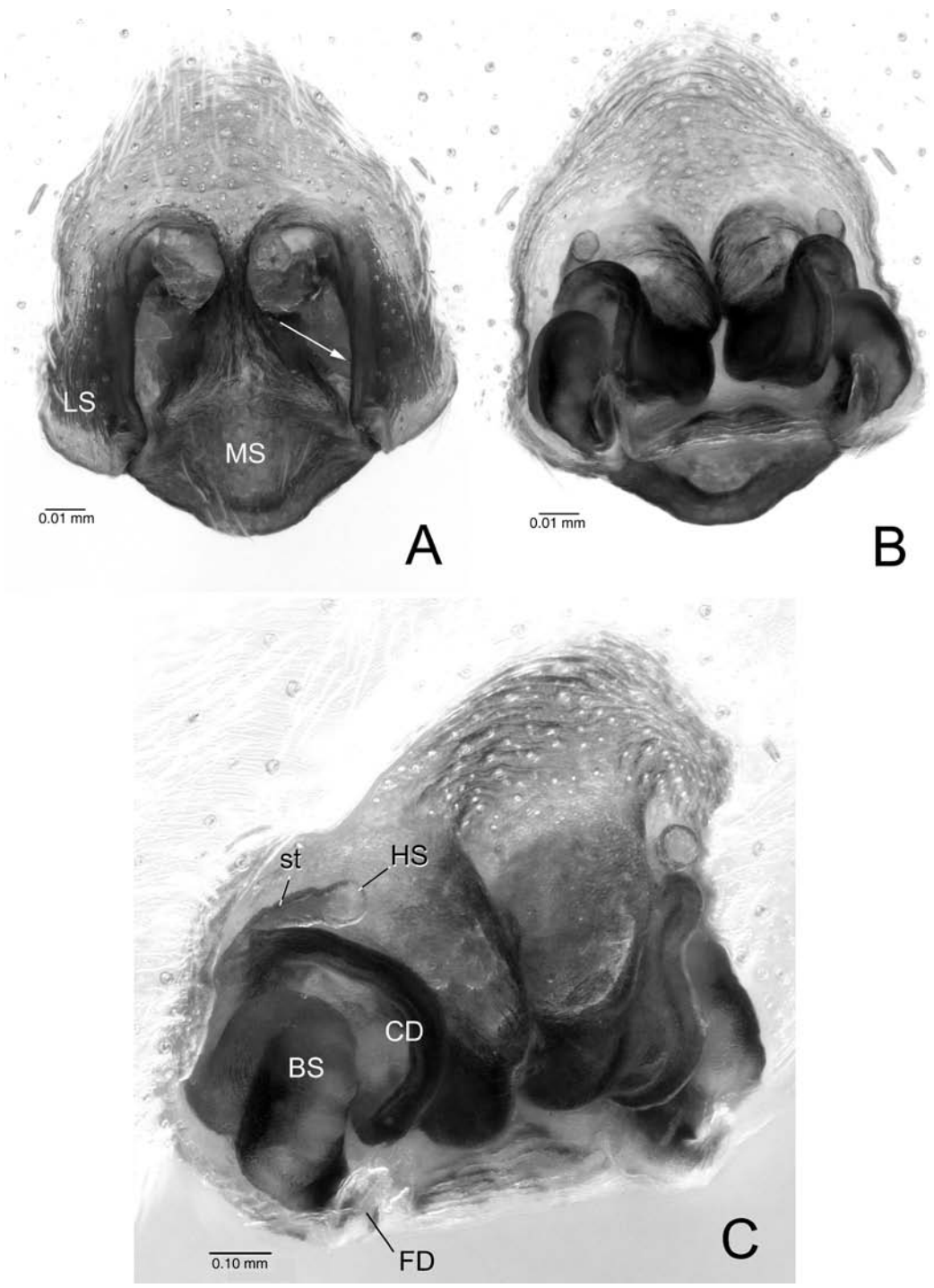


FIGURE 21. *Mahafalytenus isalo*, sp. nov. Female genitalia, holotype. A. Epigynum, ventral view; arrow to copulatory opening. B. Vulva, dorsal view. C. Vulva, lateral view. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, HS= head of spermatheca, LS= epigynal lateral sector, MS= epigynal median sector, st=stalk of spermatheca.

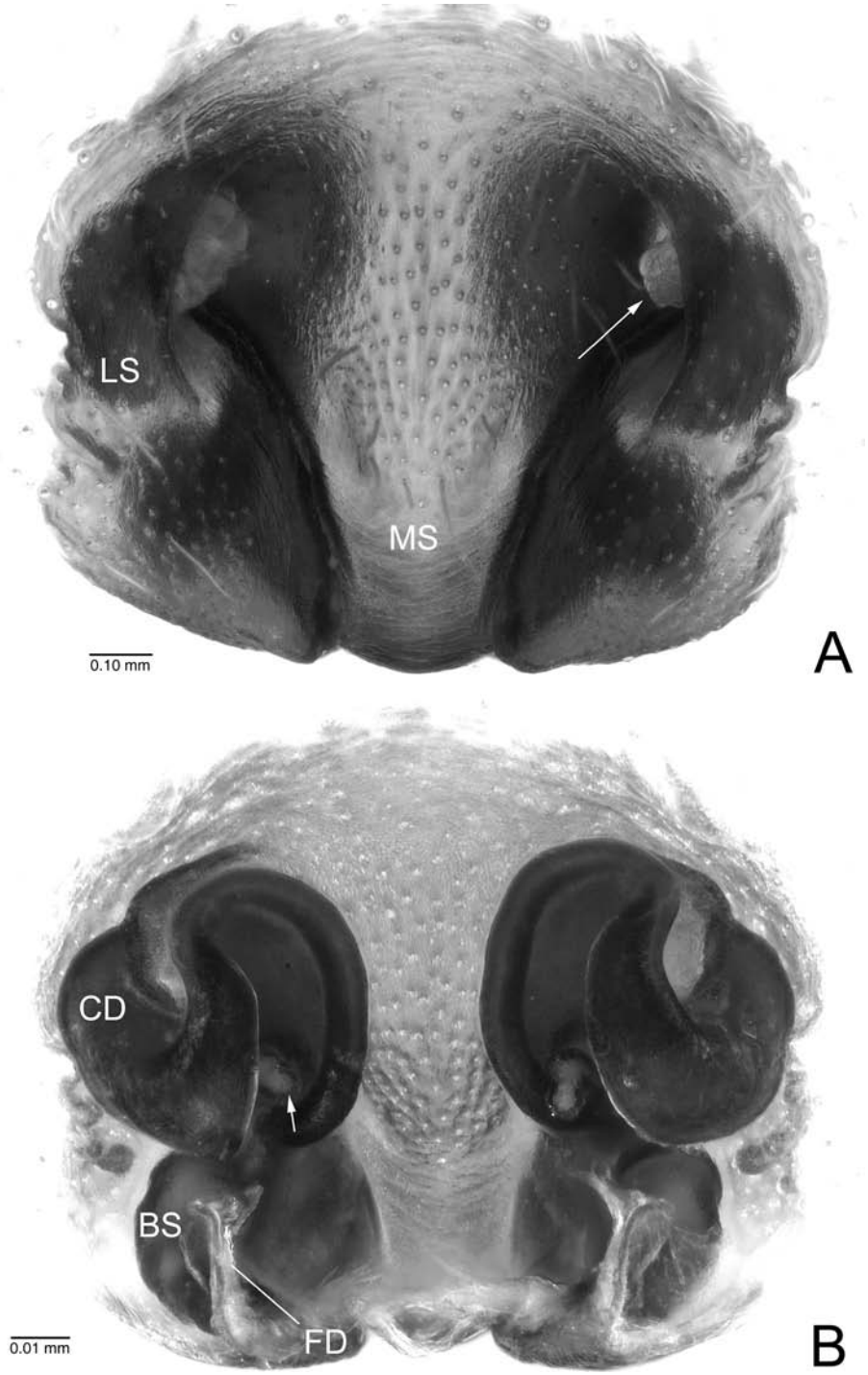


FIGURE 22. *Mahafalytenus osy*, sp. nov. Female genitalia, holotype. A. Epigynum, ventral view; arrow to copulatory opening. B. Vulva, dorsal view, arrow to head of spermatheca. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, LS= epigynal lateral sector, MS= epigynal median sector.

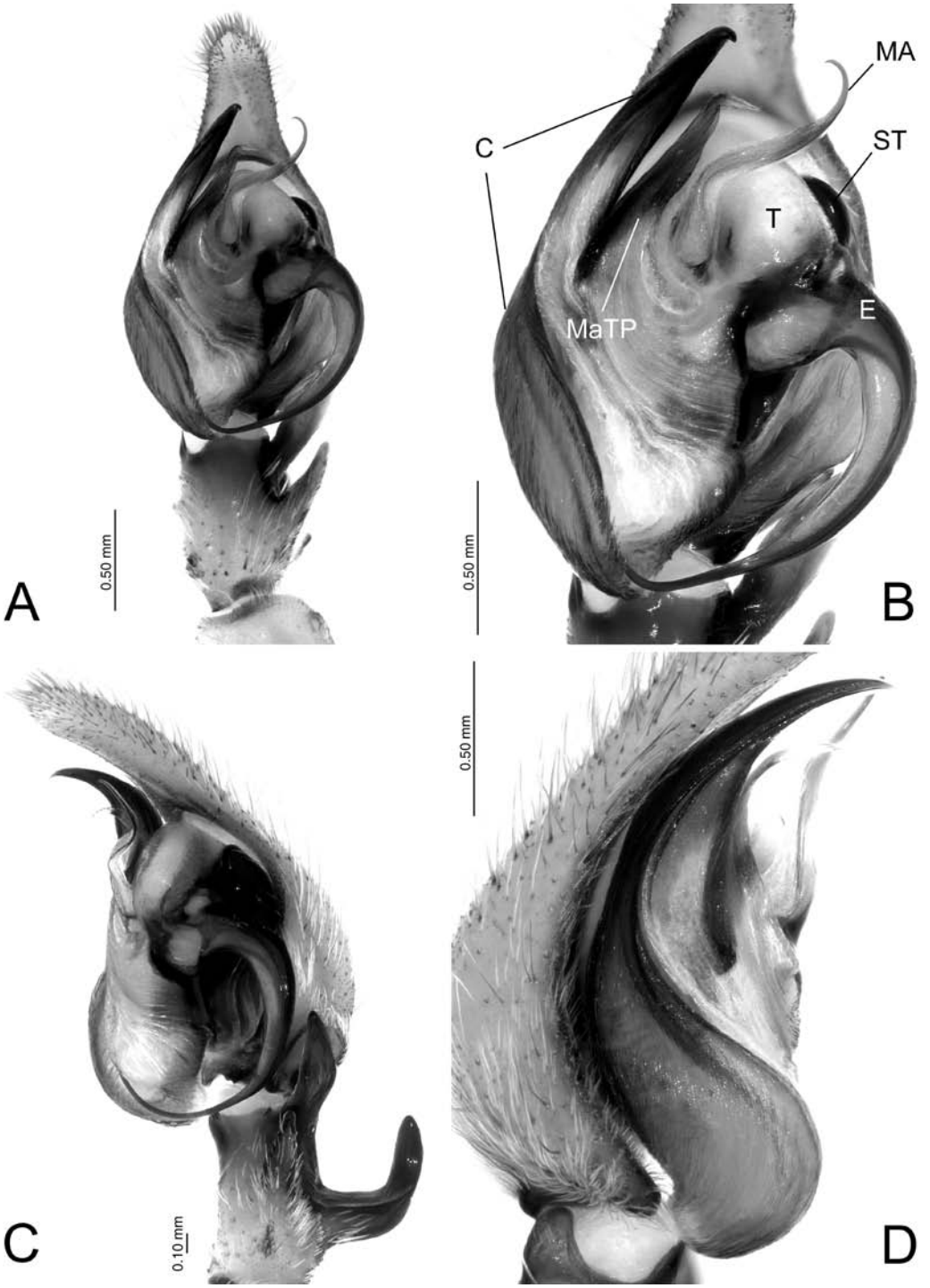


FIGURE 23. *Mahafalytenus osy*, sp. nov. Left palp, male CASENT9021811. A. Ventral view. B. Close up of ventral view. C. Retrolateral view. D. Close up of prolateral view. C= conductor, E= embolus, MA= median apophysis, MaTP= *Mahafalytenus* tegular process, ST= subtegulum, T= tegulum.

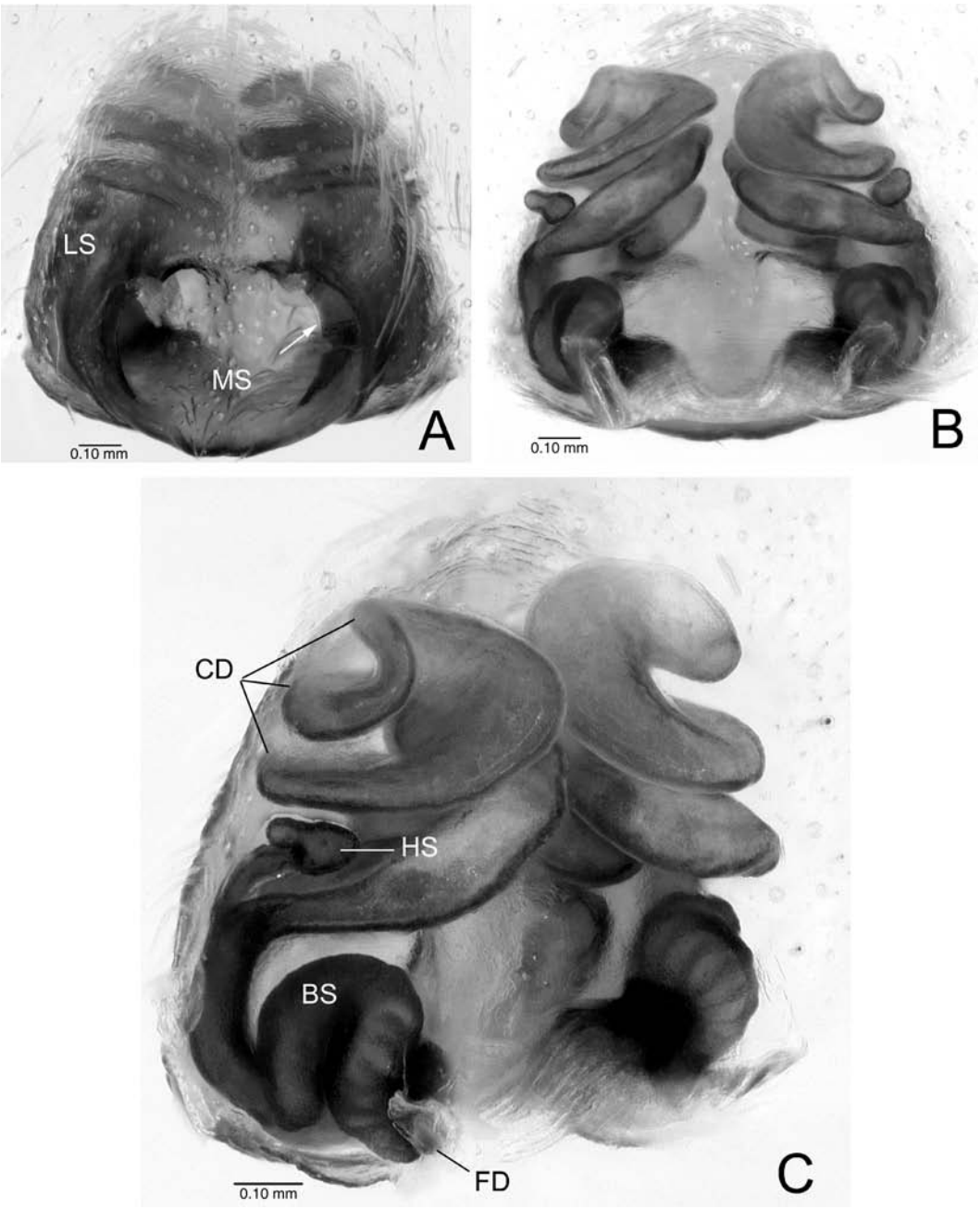


FIGURE 24. *Mahafalytenus paosy*, sp. nov. Female genitalia, holotype. A. Epigynum, ventral view; arrow to copulatory opening. B. Vulva, dorsal view. C. Vulva, lateral view. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, HS= head of spermatheca, LS= epigynal lateral sector, MS= epigynal median sector.

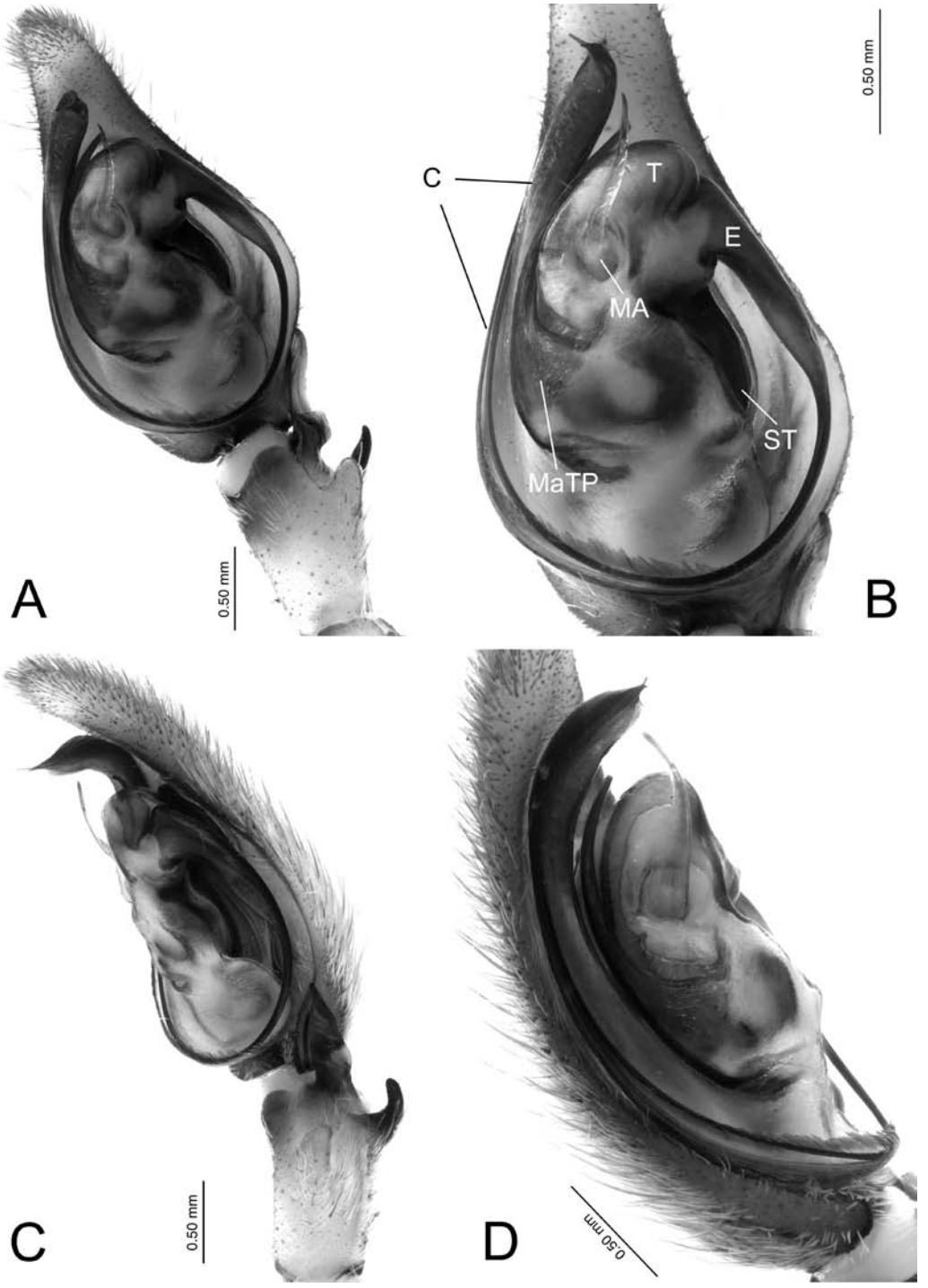


FIGURE 25. *Mahafalytenus paosy*, sp. nov. Left palp, male CASENT9021947. A. Ventral view. B. Close up of ventral view. C. Retrolateral view. D. Close up of prolateral view. C= conductor, E= embolus, MA= median apophysis, MaTP= *Mahafalytenus* tegular process, ST= subtegulum, T= tegulum.

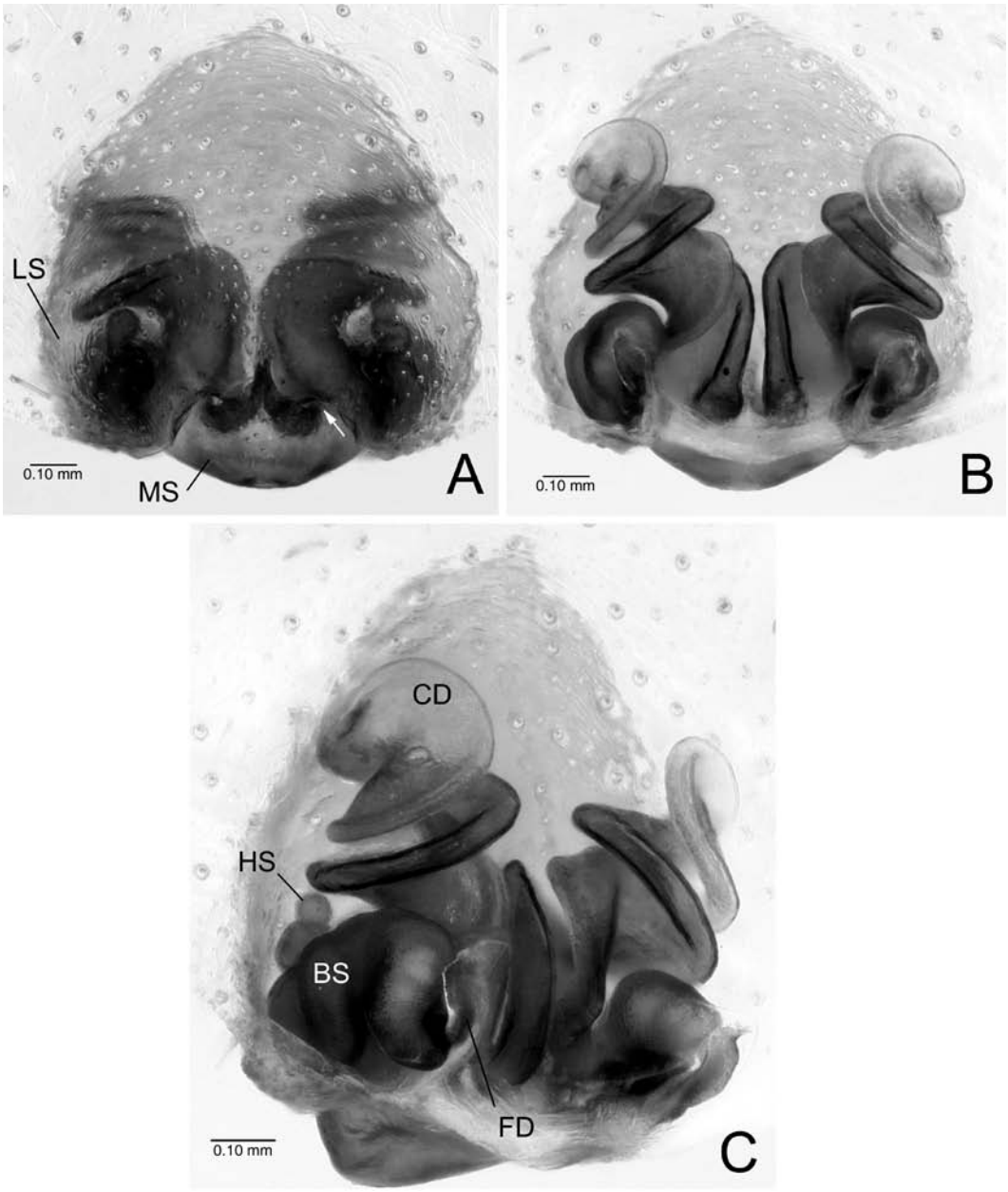


FIGURE 26. *Mahafalytenus tsilo*, sp. nov. Female CASENT9010440. A. Epigynum, ventral view; arrow to copulatory opening. B. Vulva, dorsal view. C. Vulva, lateral view. BS= base of spermatheca, CD= copulatory duct, FD= fertilization duct, HS= head of spermatheca, LS= epigynal lateral sector, MS= epigynal median sector.

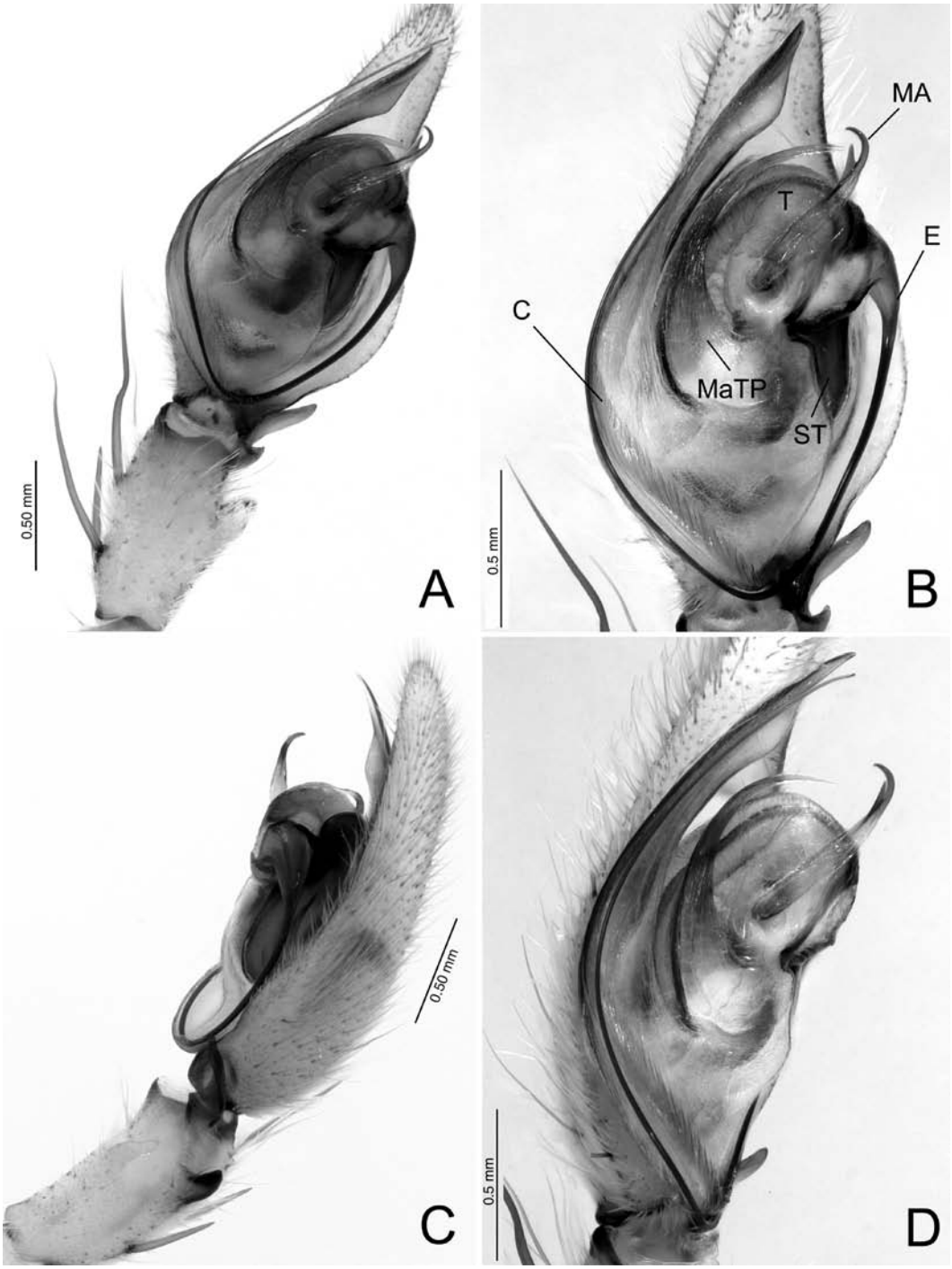
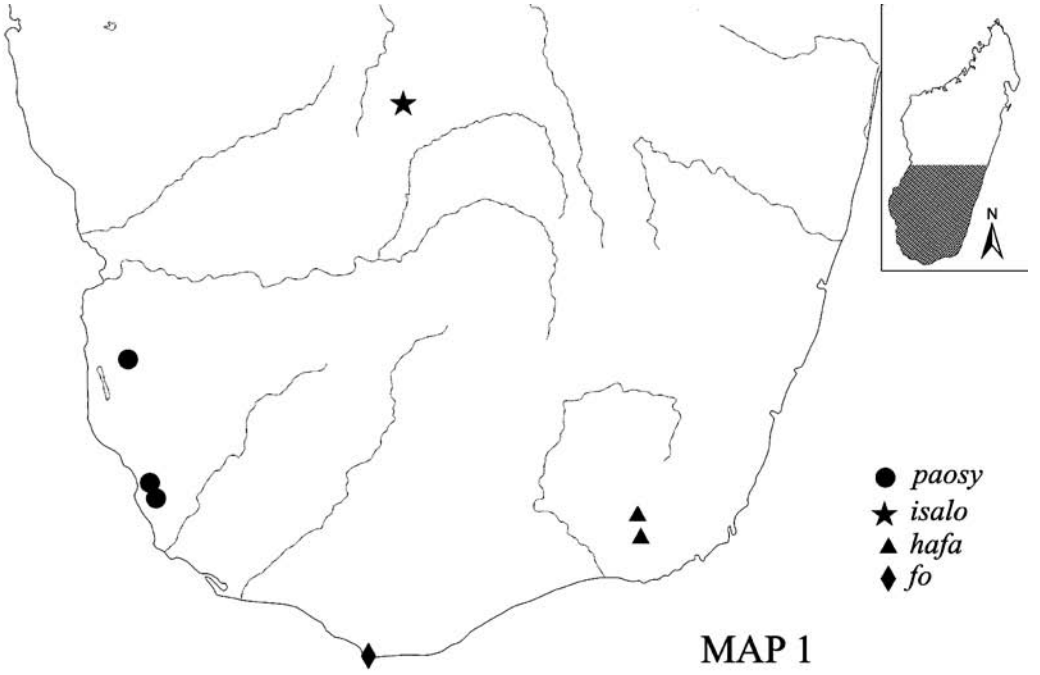


FIGURE 27. *Mahafalytenus tsilo*, sp. nov. Left palp, male CASENT9021811. A. Ventral view. B. Close up of ventral view. C. Retrolateral view. D. Close up of prolateral view. C= conductor, E= embolus, MA= median apophysis, MaTP= *Mahafalytenus* tegular process, ST= subtegulum, T= tegulum.



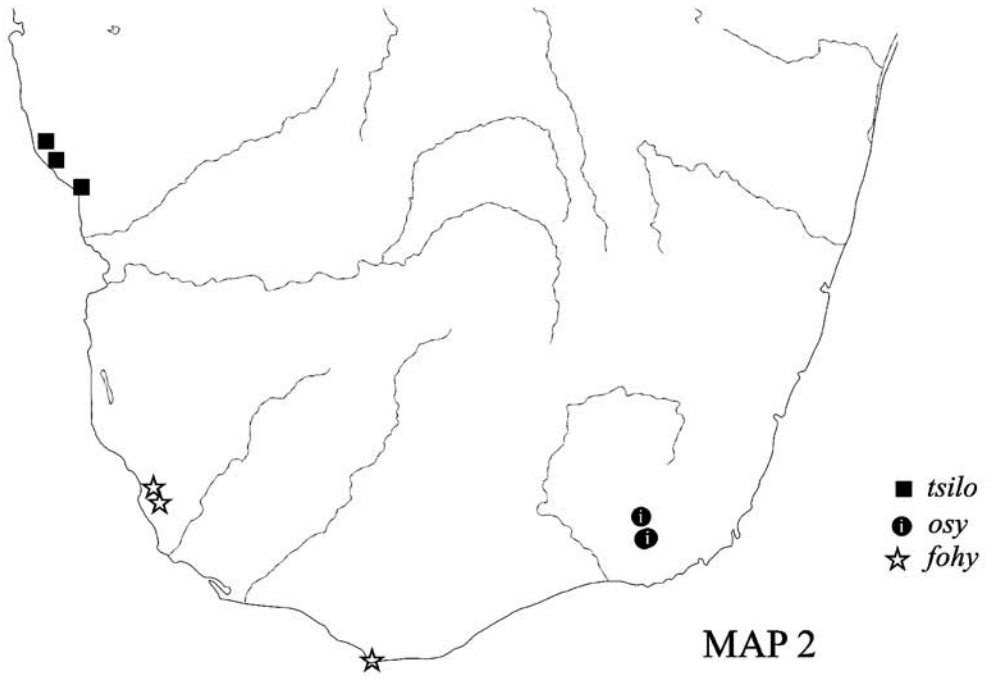


FIGURE 28. Distribution range for *Mahafalytenus* species.