SUPPLEMENTARY MATERIAL (II) Taxonomy of Phrurolithidae from Jiangxi, China

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Taxonomy

Family Phrurolithidae Banks, 1892

Introduction

Phrurolithid spiders are usually found in a wide range of habitats such as plateau regions, hilly areas, basins, and mountains, and they live in leaf litter, humus, under bark, in low shrubs, tree roots, and under rocks or rotten wood. Many of these spiders show diverse forms of ant-mimicry, such as *Alboculus*, which live near ant nests. The subfamily Phrurolithinae was placed in Corinnidae Karsch, 1880, but recently, it was elevated to family status by Ramírez (2014) from Corinnidae based on the genitalia and phylogenetic analysis. Prior to this study, Phrurolithidae Banks, 1892 includes 259 species in 17 genera (WSC 2022), seven of which are known from China (WSC 2022): *Abdosetae* Fu, Zhang & MacDermott, 2010, *Alboculus* Liu, 2020, *Bosselaerius* Zamani & Marusik, 2020, *Corealithus* Kamura, 2021, *Otacilia* Thorell, 1897, *Pennalithus* Kamura, 2021, *Phrurolithus* C. L. Koch, 1839.

An extensive field survey of phrurolithid spiders was conducted from October 2020 to May 2021 in the southern part of Jiangxi Province. These surveys have resulted in many samples of what were thought to be rare species that can now be described in detail. The goals of this paper are: 1) delimitation of *Otacilia* based on ample material, 2) transference of the aforementioned misplaced species, 3) description of three new genera with 46 new species and 26 new combinations, and the first description of the previously unknown male of *Otacilia xiaoxiicus* Liu, 2020.

Material and methods

Specimens were examined using a Zeiss Stereo Discovery V12 stereomicroscope with a Zoom Microscope System. Both male palps and female copulatory organs were dissected and examined in 80% ethanol, using a Zeiss Axio Scope A1 compound microscope with a KUY NICE CCD. The epigynes were cleared with pancreatin solution. Specimens, including dissected male palps and epigynes, were stored in 80% ethanol after examination. For SEM photographs, the specimens were kept under natural dry conditions, coated with gold with a small ion-sputtering apparatus ETD-2000, or not, and photographed with a Zeiss EVO LS15 scanning electron microscope. All new species are deposited in the Animal Specimen Museum, College of Life Science, Jinggangshan University (ASM-JGSU).

The measurements were taken with ImageView CM2000 software and are given in millimetres. The body lengths of all specimens exclude the chelicerae and spinnerets. Terminology of the male and female genitalia follows Ramírez (2014), Jäger and Dimitrov (2019), Liu *et al.* (2019, 2020a, b), and Zamani and Marusik (2020).

Leg measurements are given as total length (femur, patella, tibia, metatarsus, tarsus). Promarginal and retromarginal teeth on the chelicerae are given as the first, second, third, etc. and counted from the base of the fang to the distal groove. Leg spines are documented by dividing each leg segment into 4 aspects: dorsal (d), prolateral (p) and retrolateral (r) and indicating the ventral (v) spines as single (1) or paired (2), e.g., femur I d2, pv1111; tibia d1, I v2222. The abbreviations used in the text are as follows:

Type deposition

ASM-JGSU = Animal Specimen Museum, College of Life Science, Jinggangshan University, Ji'an, China
HNNU = Hunan Normal University, Changsha, China
MHBU = Museum of Hebei University, Baoding, China
NSM = National Science Museum (Natural History), Tokyo, Japan
OGU = Otemon Gakuin University, Ibaraki, Osaka, Japan

Eyes

ALE = anterior lateral eye
AME = anterior median eye
MOA = median ocular area
PLE = posterior lateral eye

PME = posterior median eye

Chelicerae

PES = promarginal escort seta
PRS = promarginal rake seta
RES = retromarginal escort seta
SS = slit sensillum
WS = whisker seta

Legs

CS = chemosensory seta
CTC = claw tuft clasper
LO = lyriform organ
MPB = metatarsal preening brush
MTS = metatarsal dorsal stopper
PP = proximal plate
Sc = scale
TO = tarsal organ
Tr = trichobothrium
TS = tenent setae

Male palp

CG = cymbial groove
dTA = distal tegular apophysis
DTA = dorsal tibial apophysis
Em = embolus
FA = femoral apophysis
PTA = prolateral tegular apophysis
rTA = retrolateral tegular apophysis
RTA = retrolateral tibial apophysis
SD = sperm duct
Tu = tubercle
VTA = ventral tibial apophysis

Epigyne

At = atrium
Bu = bursa
CD = copulatory duct
CO = copulatory opening
CT = connecting tube
FD = fertilization duct
GA = glandular appendage
MS = median septum
Spe = spermathecae

Taxonomy

Family Phrurolithidae Banks, 1892

Key to the phrurolithid genera from China

1 Posterior median eyes light without black pigment around eye cups……*Alboculus* Liu, 2020

– Posterior median eyes dark, with black pigment around eye cups……2

2 Femora I and II without prolateral spines……*Phrurolithus* C.L. Koch, 1839

– Femora I with prolateral spines, II without or with prolateral spines……3

3 Femora I without prolateral spines……*Corealithus* Kamura, 2021

– Femora I with prolateral spines……4

4 Femora II without prolateral spines……*Pennalithus* Kamura, 2021

– Femora II with prolateral spines or spine…… 5

5 Carapace with broad, arc-shaped dark stripes around margin, male abdomen ventrally with 2 rows of long setae on postgaster……*Abdosetae* Fu, Zhang & MacDermott, 2010

– Carapace without broad, arc-shaped dark stripes around margin, male abdomen ventrally without long setae……6

6 Carapace black or black-brown……*Acrolithus* **gen. nov.**

– Carapace yellow, yellow-brown, dark grey, or otherwise……7

7 Abdomen with a distinct, large, light mark extended from anteromedial margin to sub-posteromedial part……*Grandilithus* **gen. nov.**

– Abdomen without a large light mark from anteromedial margin to sub-posteromedial part……8

8 Black annulations present on all legs……*Aculithus* **gen. nov.**

– Black annulations absent or present on a few on legs……9

9 Palpal tibia with retroventral apophysis……*Phrurolithus* C. L. Koch, 1839

– Palpal tibia without retroventral apophysis……10

10 Palpal tibia with retrolateral apophysis……*Otacilia* Thorell, 1897

– Palpal tibia without a retrolateral apophyses……*Bosselaerius* Zamani & Marusik, 2020

***Acrolithus* Liu & S. Li gen. nov.**

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Chinese name 尖齿蛛属

Type species. *Acrolithus lingyun* **Liu & S. Li sp. nov.**

Diagnosis. The new genus differs from *Otacilia* and *Phrurolithus* by the absence of chevrons dorsally on the abdomen (Figs 2A, 6A) (vs present in *Otacilia* [see Wang *et al.* 2015: fig. 14A] and in most *Phrurolithus* [see Wang *et al.* 2015: fig. 15A, B]), the PME with indistinct black pigment around the eye cup (Figs 2A, 6A) (vs no black pigment in *Otacilia* [see Wang *et al.* 2015: fig. 14A] and *Phrurolithus* [see Wang *et al.* 2015: 460, fig. 15A, B]), and the legs with black or black-brown stripes on femora, patellae and tibiae (Figs 2A, B, 6A, B) (vs absent in most *Otacilia* [Figs 72A, B, 74A, B, 75A, B, 77A, B, 78A, B, 79A, B, 81A, B, 82A, B, 84A, B, 85A, B, 87A, B, 88A, B, 90A, B, 91A, B, 93A, B, 94A, B, 95A, B, 96A, B, 98A, B, 99A, B, 101A, B, 102A, B, 103A, B, 104A, B, 105A, B, 107A, B, 108A, B, 109A, B, 111A, B, 113A, B, 114A, B, 117A, B, 118A, B, 120A, B, 124A, B, 137A−J, L, M, 141] and *Phrurolithus* [see Wang *et al.* 2015: fig. 15A, B; Zamani and Marusik 2020: figs 5D, 6A−C, 7A−E]). Males of this genus can be easily distinguished from *Otacilia* and *Phrurolithus* by the palpal femur with a strongly protruded ventral apophysis (Figs 2C, E, 9C−E, 12C, E, 14C, E, 17C, E) (vs moderately protruded in *Otacilia* [Figs 72C, E, 75C, E, 79C, D, 82C, E, 85C, E, 88C, E, 96C, E, 99D, F, 105C, E, 109C, E, 111C, E, 118C, E, 120C, E] and *Phru-*

rolithus [Zamani and Marusik 2020: fig. 4A, E, F]), palpal tibia of most species with a ventrolateral apophysis (Fig. 2D, E) (vs absent in *Otacilia* [Figs 72C−F, 75C−F, 79C−F, 82C−F, 85C−F, 88C−F, 91C−F, 96C−F, 99C−F, 103C−F, 105C−F, 109C−F, 111C−F, 118C−F, 120C−F] and *Phrurolithus* [see Wang *et al.* 2015: fig. 15C; Zamani and Marusik 2020: figs 4A−C, 7A−E]), and a strong retrolateral apophysis with a branched tip in most species (Fig. 2D−F) (vs absent in most species of *Otacilia*, a few species with a strong RTA but tip unbranched [Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F] and *Phrurolithus* [see Wang *et al.* 2015: fig. 15C; Zamani and Marusik 2020: fig. 4A−C]), a prolateral tegular apophysis (Figs 2C, D) (vs absent in *Otacilia* [Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F] and *Phrurolithus* [see Wang *et al.* 2015: fig. 15C; Zamani and Marusik 2020: fig. 4A−C]), and a large distal tegular apophysis with margin separated from anterior tegulum in most species (Fig. 2D, E) (vs a small distal tegular apophysis in *Otacilia* [Figs 72D, 75D, 79D, 82D, 85D, 88D, 91D, 96D, 99D, 103D, 105D, 109D, 111D, 118D, 120D) or a clavate or square tegular apophysis in *Phrurolithus* [see Wang *et al.* 2015: fig. 15C; Zamani and Marusik 2020: fig. 4A−C]). The females of most species of *Acrolithus* have a large copulatory atrium covering more than ½ of the epigynal plate (Fig. 6C) (vs large atrium absent or covering less than ½ of epigynal plate in *Otacilia* [Figs 74C, 77C, 78C, 81C, 84C, 87C, 90C, 93C, 94C, 95C, 98C, 102C, 104C, 107C, 108C, 113C, 116C, 117C, 124C] and *Phrurolithus* [see Wang *et al.* 2015: fig. 15F]).

Etymology. The name is a combination of the first four letters of "*acrodontus*" (referring to a canine-like anteroprolateral tegular apophysis of the male palp) and the latter half of *Phrurolithus*. The gender is masculine.

Description. Small to medium, body length 2.5−5.0. AME clearly smaller than ALE, PME without black pigment around eye cups, slightly smaller than PLE, anterior and posterior eye rows slightly recurved. Chelicerae with 3 promarginal and 2 retromarginal teeth. Femora, patellae, tibiae, and metatarsi with black-brown annulations and stripes. Tibiae I with 6–7 pairs of ventral spines, metatarsi I with 4 pairs of ventral spines. Scutum covering more than 2/3 of abdomen in males.

Male palp: femur with a strong, protruded, large ventral extension; most species with 2 strong tibial apophyses, longer than ½ of tibia, some species with only retrolateral apophysis; tegulum with 2 apophyses, distal tegular apophysis located on anterior concave part, and can be triangular, round, or oval (distal tegular apophysis large in most species), and prolateral tegular apophysis distinct, tooth-like; embolus, long, whip-like.

Epigyne with large atrium covering more than ½ of epigynal plate; copulatory openings slit-like, covered by slightly sclerotized, arc-shaped atrial margins; with longitudinal or broad, large septum, spermathecae located at posterior part of endogyne.

Comments. A study of all illustrated descriptions of *Otacilia* species recorded from China enabled us to recognize that some of them are misplaced and appear to be morphologically more similar to *Acrolithus*. Therefore, nine species are transferred from *Otacilia* to the new genus based on the shared characteristics in the genus description; hence, the following new combinations: *Acrolithus acerosus* (Yao, Irfan & Peng, 2019) **comb. nov.**, *A. acutus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. auritus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. digitatus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. leibo* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. ovatus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. pseudostella* (Fu, Jin & Zhang, 2014) **comb. nov.**, *A. xingdoushanensis* (Yao, Irfan & Peng, 2019) **comb. nov.**, and *A. zhangi* (Fu, Jin & Zhang, 2014) **comb. nov.**

Composition. *Acrolithus acerosus* (Yao, Irfan & Peng, 2019) **comb. nov.**, *A. acutus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. auritus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. digitatus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. jiulong* **sp. nov.**, *A. leibo* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. lingyun* **sp. nov.**, *A. ovatus* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. pseudostella* (Fu, Jin & Zhang, 2014) **comb. nov.**, *A. ruyii* **sp. nov.**, *A. shijiao* **sp. nov.**, *A. xiajing* **sp. nov.**, *A. xiaojing* **sp. nov.**, *A. xingdoushanensis* (Yao, Irfan & Peng, 2019) **comb. nov.**, *A. yeniu* **sp. nov.**, and *A. zhangi* (Fu, Jin & Zhang, 2014) **comb. nov.**

Species groups. Using morphological and copulatory organ characteristics, we divided *Acrolithus* species into 5 species groups: *acerosus*-, *acutus*-, *leibo*-, *lingyun*-, and *ovatus*-groups.

The *acerosus*-group is characterized by the tibia with only one retrolateral apophysis which has a broad base and a spine-like apex; the embolus as long as prolateral tegular apophysis; the touching bursae; the arc-shaped edge of copulatory openings; the parallel glandular appendages and spermathecae.

Current composition: *A. acerosus* (Yao, Irfan & Peng, 2019) **comb. nov.**

The *acutus*-group is characterized by the tibia with 2 large apophyses, retrolateral and dorsolateral, the latter unbranched; the prolateral tegular apophysis bent retrolaterally, small in ventral view; the copulatory openings directed posteriorly, subposterolaterally located; the L-shaped spermathecae.

Current composition: *A. acutus* (Fu, Zhang & Zhang, 2016) **comb. nov.**

The *auritus*-group is characterized by the tibia with 2 large apophyses, ventrolateral and dorsolateral, the latter unbranched; the prolateral tegular apophysis directed anteriorly; the terminal apophysis touching the embolic base; the copulatory openings directed anteriorly and separated by 2 times the bursal width; the oval spermathecae.

Current composition: *A. auritus* (Fu, Zhang & Zhang, 2016) **comb. nov.**

The *leibo*-group is characterized by the tibia with 2 apophyses, ventrolateral and retrolateral, the latter with a spine-like apex and a broad base; the prolateral tegular apophysis directed prolaterally; the copulatory openings crescent shaped or semi-circular, directed posteriorly; the C-shaped spermathecae.

Current composition: *A. leibo* (Fu, Zhang & Zhang, 2016) **comb. nov.**, *A. digitatus* (Fu, Zhang & Zhang, 2016) **comb. nov.** and *A. zhangi* (Fu, Jin & Zhang, 2014) **comb. nov.** (The latter 2 species are tentatively placed here because the conspecific females are unknown).

The *lingyun*-group is characterized by the tibia with 2 large apophyses, ventrolateral and retrolateral, the latter with branched apex; the oval distal tegular apophysis separated from embolus; epigyne with 2 large oval atria separated by nose-shaped median septum; the organs of endogyne gathered together on ental of median septum.

Current composition: *A. lingyun* **sp. nov.**, *A. pseudostella* (Fu, Jin & Zhang, 2014) **comb. nov.**, *A. ruyii* **sp. nov.**, *A. shijiao* **sp. nov.,** *A. xiajing* **sp. nov.**, *A. xiaojing* **sp. nov.**, *A. yeniu* **sp. nov.**, and *A. zhangi* (Fu, Jin & Zhang, 2014) **comb. nov.**

The *ovatus*-group is characterized by the epigyne with a large atrium occupying more than half of epigynal plate; a pair of large, round bursae that are touching located medially; the C-shaped connecting tubes together with clavate spermathecae.

Current composition: *A. ovatus* (Fu, Zhang & Zhang, 2016) **comb. nov.** and *A. xingdoushanensis* (Yao, Irfan & Peng, 2019) **comb. nov.**

Distribution. China (Jiangxi, Hunan, Yunnan, Sichuan, Hubei, Gansu).

***Acrolithus acerosus* (Yao, Irfan & Peng, 2019) comb. nov.**

Chinese name 针尖齿蛛

Otacilia acerosa Yao *et al.* 2019: 291, figs 1A−H, 2A−E (♂♀, type deposition in HNNU).

Diagnosis. The male of this species is similar to that of *A. ovatus* (see Yao *et al.* 2019: 291, fig. 1E−H) in having a coniform prolateral tegular apophysis directed prolaterally and a triangular, membranous distal tegular apophysis, but it differs by the retrolateral tibial apophysis lacking a bifurcate tip. It can be differentiated from the general type species of *A. lingyun* **sp. nov.** by lacking a ventro-lateral tibial apophysis (vs present). Females can be easily distinguished from other congeners by the horn-like glandular appendages (vs clustered or tuberculate) and the parallel spermathecae (vs slanting or in a line).

Description. See Yao *et al*. (2019).

Distribution. China (Hubei).

***Acrolithus acutus* (Fu, Zhang & Zhang, 2016) comb. nov.**

Chinese name 短尖尖齿蛛

Otacilia acuta Fu *et al*. 2016: 215, figs 14A−G, 15A−E (♂♀, type deposition in MHBU).

Diagnosis. The male of this species is very similar to that of *Acrolithus auritus* (Fu, Zhang & Zhang, 2016) **comb. nov.** (see Fu *et al.* 2016: 215, figs 7E−G, 8A−C) in having a large ventro-lateral tibial apophysis and a long, thick spine-like retrolateral tibial apophysis, but it differs by the small prolateral tegular apophysis directed retrolaterally in ventral view (vs large, directed anteriorly). It is very easily separated from the type species by lacking a bifurcate or trifurcate retrolateral tibia apophysis (vs present) and by the large, round or oval distal tegular apophysis (vs relatively small). Females can be easily distinguished from other congeners by the small copulatory openings directed posteriorly (vs anteriorly or large copulatory openings) and the L-shaped spermathecae (vs clavate or oval).

Description. See Fu *et al.* (2016).

Distribution. China (Yunnan).

***Acrolithus auritus* (Fu, Zhang & Zhang, 2016) comb. nov.**

Chinese name 耳尖齿蛛

Otacilia aurita Fu *et al*. 2016: 207, figs 7A−G, 8A−E (♂♀, type deposition in MHBU).

Diagnosis. The male of this species is very similar to that of *Acrolithus acutus* (Fu, Zhang & Zhang, 2016) **comb. nov.** (see Fu *et al.* 2016: 215, figs 14E−G, 15A−C) in having two large tibial apophyses, but it differs by the prolateral tegular apophysis directed anteriorly in ventral view (vs prolaterally). Females can be easily distinguished from other congeners by the widely separated slit-like copulatory openings (vs crescent shaped, anteriorly located or slit-like, touching each other, or other shapes) and the oval spermathecae (vs clavate or L-shaped).

Description. See Fu *et al.* (2016).

Distribution. China (Hubei).

***Acrolithus digitatus* (Fu, Zhang & Zhang, 2016) comb. nov.**

Chinese name 指尖齿蛛

Otacilia digitata Fu *et al*. 2016: 209, fig. 9A−G (♂, type deposition in MHBU).

Diagnosis. The male of this species (see Fu *et al.* 2016: 209, fig. 9B−G) can be easily separated from other congeners by a short, triangular retrolateral tegular apophysis directed anteriorly (vs round or oval) and a distal tegular apophysis covering the embolic base in ventral view (vs uncovering)

Description. See Fu *et al.* (2016).

Comments. According to the original figures given by Fu *et al.* (2016), the male holotype clearly belongs to *Acrolithus* in having a thick prolateral tegular apophysis. The male palp has an indistinct ventral tibial apophysis, but it is not indicated in the figures (Fu *et al.* 2016).

Female. Unknown.

Distribution. China (Sichuan).

***Acrolithus jiulong* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:9E5DB0F8-2D82-41D4-9C8C-C0C8E3A5E630

Chinese name 九龙尖齿蛛

Figures 1, 21

Type material. Holotype: female (Phu-110, 20210206-1), 28°21’07.52”N, 114°30’27.58”E, 164 m, Zuojiashan Village, Jiulong Virgin Forest Scenic Spot, Luocheng Town, Wanzai County, Yichun City, Jiangxi Province, China, 6 February 2021, K. Liu, Y. Ying, D. Zhao, Z. Meng, Z. He & W. Li leg. **Paratypes:** 7 females, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name is derived from the type locality and is a noun in apposition.

Diagnosis. The female of the new species is similar to other congeners in having black pigment around the eye cup of the PME and by the absence of chevrons dorsally on the abdomen (Fig. 1A), but it can be easily distinguished from congeners by the touching copulatory ducts, connecting tubes, and spermathecae (Fig. 1D) (vs separated) and the tube-shaped bursae (Fig. 1D) (vs bean or eggplant shaped).

Description. Female (holotype). Habitus as in Fig. 1A, B. Total length 5.11, carapace 1.83 long, 1.61 wide. Eye sizes and interdistances: AME 0.14, ALE 0.13, PME 0.10, PLE 0.08, AME−AME 0.05, AME−ALE 0.02, PME−PME 0.13, PME−PLE 0.06, AME−PME 0.09, AME−PLE 0.17, ALE−ALE 0.32, PLE−PLE 0.44, ALE−PLE 0.08. MOA 0.28 long, frontal width 0.28, posterior width 0.33. Chelicerae (Fig. 1B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest, fourth smallest). Sternum (Fig. 1B) nearly as long as wide, laterally with precoxal triangles, posteriorly triangular, blunt. Pedicel 0.23 long. Abdomen (Fig. 1A) 2.05 long, 1.2 wide. Leg (Fig. 1A, B) measurements: I 8.28 (2.15, 0.61, 2.54, 1.93, 1.05); II 5.35 (1.73, 0.65, 1.91, 1.40, 0.84); III 5.35 (1.43, 0.51, 1.26, 1.38, 0.77); IV 7.58 (2.15, 0.60, 1.91, 2.08, 0.84). Leg spination (Fig. 1A, B): femora I d2, right d1, pv111111, II d1, pv111, III d1, IV d1; tibiae I v222222221, II v2222222, right I v22222222, II v2222221; metatarsi I v2222, II v2221, right II v22222.

Colouration (Fig. 1A, B). Carapace dark yellow-brown, medially with radial, irregular yellow-brown mottling. Chelicerae, endites, and labium yellow-brown, mottled. Sternum dark brown, with abundant yellow spots. Legs: femora with indistinct dark stripes. Abdomen dark yellow-brown, mottled; venter yellow, with 3 longitudinal brownish marks.

Epigyne (Fig. 1C, D). Epigynal plate mushroom shaped, anteriorly with large atrium, covering almost 1/3 of epigynal plate. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings sub-round, touching each other, wider than copulatory ducts. Bursae C-shaped, forming circle, basal part touching each other. Copulatory ducts short, converging, distal parts not separated. Glandular appendages thin, clavate, directed laterally. Connecting tubes very short, touching each other. Spermathecae L-shaped. Fertilization ducts short, located posteriorly on spermathecae, directed anterolaterally. Posterior plate of endogyne strongly sclerotized, triangular.

Male. Unknown.

Comments. The epigyne is entirely different from other congeners in the copulatory ducts, spermathecae.The new species is tentatively placed in the genus *Acrodontus*. Finding males of this species will clarify its generic placement.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 21).

***Acrolithus leibo* (Fu, Zhang & Zhang, 2016) comb. nov.**

Chinese name 雷波尖齿蛛

Otacilia leibo Fu *et al.* 2016: 209, figs 10A−G, 11A−E (♂♀, type deposition in MHBU).

Diagnosis. The male of this species (see Fu *et al.* 2016: 209, figs 10E−G, 11A−C) is easily distinguished from other congeners by the ridge-like terminal apophysis, the semi-circular edges of the copulatory openings and the C-shaped spermathecae.

Description. See Fu *et al.* (2016).

Distribution. China (Sichuan).

***Acrolithus lingyun* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:EFEA7456-4732-41BF-8EDD-7C7EBA5C3845

Chinese name 凌云山叉蛛

Figures 2−7, 20A, B, 21

Type material. Holotype: male (Phu-113, 20210123-2), 26°48’51.91”N, 115°47’53.23”E, 401 m, Goudaozui, Lingyun Mountain Forest Park, Xiaobuzhen Scenic Spot, Pixia Village, Xiaobu Town, Ningdu County, Ganzhou City, Jiangxi Province, China, 23 January 2021, K. Liu, Z. Meng & D. Zhao leg. **Paratypes:** 3 females, 2 juveniles, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Acrolithus xiajing* **sp. nov.** in having an oval distal tegular apophysis and a flagelliform embolus (Figs 2C−F, 5) and can be separated by the short, thick ventrolateral tibial apophysis (Figs 2D−F, 5C) (vs thin) and the retrolateral tibial apophysis with 3 conspicuous, strong, thick spines (vs 2 thin, the other weak) (Figs 2D−F, 5C, D). The epigyne resembles those of *A. yeniu* **sp. nov.** in having an oval atrium and the eggplant-shaped bursae touching each other (Figs 6C, D, 7), but it differs by the strongly extended posterior part of septum (vs slightly extended), and tube-shaped connecting tubes (vs oval).

Description. Male (holotype). Habitus as in Figs 2A, B, 20A. Total length 3.74, carapace 1.83 long, 1.51 wide. Eye sizes and interdistances (Figs 2A, 3A): AME 0.08, ALE 0.12, PME 0.08, PLE 0.09; AME−AME 0.07, AME–ALE 0.03, PME−PME 0.10, PME–PLE 0.09, AME−PME 0.10, AME−PLE 0.19, ALE−ALE 0.27, PLE−PLE 0.43, ALE−PLE 0.11; PME separated by slightly less than their diameters; AER and PER slightly recurved. MOA 0.26 long, frontal width 0.23, posterior width 0.25. Chelicerae (Figs 2B, 3B−F): with 3 promarginal (proximal largest, distal smallest) and two retromarginal teeth (distal larger); promarginal and retromarginal escort setae present, thick; promarginal cheliceral whisker setae in a line, retromarginal cheliceral whisker setae occur as two groups, one located at the proximal part of fang, the other near the mesal part of retrolateral surface; promarginal rake setae also in a line, comb-shaped; promarginal and retromarginal base of fang with two slit sensilla; long trichobothrium near promarginal rake setae. Endites (Figs 2B, 3G–I) slightly oblique, median area depressed, ventral distal macrosetae present, brush shaped, anterolateral area of endite with row of serrula, each with a blunt tip. Sternum (Figs 2B, 3G) nearly as long as wide, laterally with precoxal triangles and intercoxal extensions, posteriorly triangular, relatively blunt. Pedicel 0.05 long. Abdomen (Fig. 2A, B) 1.84 long, 1.16 wide. Legs (Figs 2A, B, 4): measurements: I 6.64 (1.79, 0.65, 1.84, 1.54, 0.82); II 5.69 (1.54, 0.59, 1.42, 1.24, 0.90); III 4.92 (1.32, 0.57, 1.05, 1.22, 0.76); IV 7.41 (1.94, 0.62, 1.74, 1.99, 1.12); spination: femora I d1, pv1111, II d1, pv11, III d1, IV d1; tibiae I v2222222, right v222221, II v2222221, right v222222; metatarsi I v2222, II v2221; metatarsi III and IV with conspicuous preening brushes, lyriform organs, and dorsal stoppers distally; tarsi with abundant scales, several long trichobothria dorsally, and several chemosensory setae on ventro-posterior tarsi and base of claws, trichobothrial bases with conspicuous proximal plate,

with 5 ridges, tarsal organ located subdistally on dorsal part, oval, near the base of trichobothrium; inferior tarsal claw with 3 teeth (2 small and 1 large), a conspicuous tuft clasper, and a ventral scopula of tenent setae.

Colouration (Fig. 2A, B). Carapace dark yellow-brown, with radial, irregular dark brown mottling. Chelicerae, endites, and labium yellow-brown, mottled. Sternum yellow-brown, with indistinct radial dark mottled stripes around margin. Legs: trochanters yellow, I and II mottled; femora I and II partly covered with dark stripes, III and IV with dark brown annulations. Abdomen dark yellow-brown, mottled; venter yellow, with pair of slanting stripes laterally and irregular spots subposteromedially.

Palp (Figs 2C−F, 5). Femoral apophysis very strong, with a strong dorsal spine. Ventrolateral tibial apophysis short, thick, shorter than tibia. Retrolateral tibial apophysis very strong, with 3 strong spines, median one longer than others, curved toward retrolateral margin of cymbium, dorsal spine stubby. Prolateral tegular apophysis conical in ventral view, with a relatively broad base. Distal tegular apophysis oval, anterolateral part with a gap, shorter than embolus. Embolus flagelliform, slightly widened at base.

Female. Habitus as in Figs 6A, B, 20B. Total length 4.87, carapace 1.98 long, 1.68 wide. As in male, except as noted. Eye sizes and interdistances (Fig. 6A): AME 0.06, ALE 0.12, PME 0.09, PLE 0.09, AME−AME 0.09, AME−ALE 0.04, PME−PME 0.10, PME−PLE 0.10, AME−PME 0.13, AME−PLE 0.23, ALE−ALE 0.27, PLE−PLE 0.42, ALE−PLE 0.11. MOA 0.26 long, frontal width 0.20, posterior width 0.24. Pedicel 0.26 long. Abdomen (Fig. 6A) 2.60 long, 1.50 wide. Leg (Fig. 6A, B) measurements: I 7.57 (2.00, 0.76, 2.04, 1.82, 0.95); II 6.52 (1.76, 0.69, 1.57, 1.52, 0.98); III 5.48 (1.38, 0.58, 1.17, 1.43, 0.92); IV 8.00 (2.17, 0.70, 1.93, 2.14, 1.06). Leg spination (Fig. 6A, B): tibiae I v22222221, right v222221, II v2222221, right v222222; metatarsi I v2222, II v2221.

Colouration (Fig. 6A, B). Darker than male. Abdomen dorsally dark, with a few light spots; venter with pair of longitudinal dark brown markings posteromedially.

Epigyne (Figs 6C, D, 7). Epigynal plate human skull shaped, with large pair of atria, covering nearly the entire epigynal plate, separated by nose-shaped median septum. Copulatory openings slit-like, anteriorly located at the mesial margin of atrium. Bursae eggplant shaped, submedially located, touching each other. Copulatory ducts V-shaped, longer than connecting tubes. Glandular appendages short, transversally located at base of bursae. Connecting tubes short, sac-shaped. Spermathecae tube-shaped, separated by nearly ½ of their length. Fertilization ducts very short, located posteriorly on spermathecae, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 21).

***Acrolithus ovatus* (Fu, Zhang & Zhang, 2016) comb. nov.**
Chinese name 卵形尖齿蛛

Otacilia ovata Fu *et al.* 2016: 212, figs 12A−H, 13A−E (♂♀, type deposition in MHBU).

Diagnosis. For males, see *A. acerosus* (Yao, Irfan & Peng, 2019) **comb. nov.** The female (see Fu *et al.* 2016: 212, figs 12C, D, 13D, E) resembles *A. acerosus* in having a large, oval atrium and a pair of ovoid bursae located posteromedially, but it can be distinguished by the posterior copulatory duct with a helix-shaped spiral (vs spiral absent).

Description. See Fu *et al.* (2016).

Distribution. China (Sichuan).

***Acrolithus pseudostella* (Fu, Jin & Zhang, 2014) comb. nov.**
Chinese name 伪星尖齿蛛

Otacilia pseudostella Fu *et al.* 2014: 487, figs 3A−G, 4A−E (♂♀, type deposition in MHBU).

Diagnosis. The male of this species (see Fu *et al.* 2014: 487, figs 3B−D, 4A−C) is similar to that of *Acrolithus yeniu* **sp. nov.** in having a thick prolateral tegular apophysis and flagelliform embolus, but it can be easily separated by the broad distal tegular apophysis with two ridge-shaped apophyses (vs absent) and a retrolateral tibial apophysis with two spines (vs spines absent). The female (see Fu *et al.* 2014: 487, figs 3F, G, 4D, E) resembles *A. yeniu* **sp. nov.** in having a pair of large, oval atria and a pair of eggplant-shaped bursae but differs by the obliquely extended connecting tubes and spermathecae (vs extended parallelly).

Description. See Fu *et al.* (2014).

Comments. According to the original figures of Fu *et al.* (2014), this species is most similar to those of *A. lingyun* **sp. nov.**, *A. xiajing* **sp. nov.**, *A. xiaojing* **sp. nov.**, and *A. yeniu* **sp. nov.**, which have similar characteristics of the male palp and the epigyne.

Distribution. China (Gansu, Anhui and Sichuan provinces).

***Acrolithus ruyii* Liu & S. Li sp. nov.**

:urn:lsid:zoobank.org:act:4F47F1BD-A7A5-4EEB-9242-76E6BF04F448

Chinese name 如意尖齿蛛

Figures 8, 21

Type material. Holotype: female (Phu-91, 20201002-1), 25°37’32.68”N, 114°18’25.06”E, 1107 m, Yangming Mountain Forest Park, Hengshui Town, Chongyi County, Ganzhou City, Jiangxi Province, China, 2 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name is taken from the first name of Mr. Ru-Yi Wang who helped with collecting in Yangming Mountain Forest Park; noun (name) in genitive case.

Diagnosis. The female resembles *A. acerosus* (Yao, Irfan & Peng, 2019) **comb. nov.** (see Yao *et al*. 2019: 291, figs 1C, D, 2D, E) in having longitudinal spermathecae (Fig. 8D) but differs (Fig. 8C, D) by the teardrop-shaped copulatory openings (vs slit-like) and the thick, short glandular appendages (vs slender).

Description. Habitus as in Fig. 8A, B. Total length 3.27, carapace 1.43 long, 1.27 wide. Eye sizes and interdistances (Fig. 8A): AME 0.06, ALE 0.09, PME 0.07, PLE 0.08, AME−AME 0.05, AME−ALE 0.01, PME−PME 0.07, PME−PLE 0.06, AME−PME 0.07, AME−PLE 0.14, ALE−ALE 0.21, PLE−PLE 0.32, ALE−PLE 0.08. MOA 0.21 long, frontal width 0.23, posterior width 0.17. Chelicerae (Fig. 8B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest, 4th smallest). Sternum (Fig. 8B) slightly longer than wide, laterally with precoxal triangles, posteriorly triangular, blunt. Pedicel 0.05 long. Abdomen (Fig. 8A) 1.81 long, 1.07 wide. Leg (Fig. 8A, B) measurements: I 5.16 (1.22, 0.56, 1.47, 1.25, 0.66); II 4.67 (1.20, 0.48, 1.13, 1.09, 0.77); III 3.98 (1.06, 0.42, 0.81, 0.99, 0.70); IV 5.47 (1.52, 0.51, 1.31, 1.42, 0.71). Leg spination (Fig. 8A, B): femora I d2, pv1111, II d1, pv11, III d1; tibiae I v2222222, II v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 8A, B). Carapace dark yellow-brown, medially with irregular yellow-brown mottling radially. Chelicerae, endites, and labium yellow-brown, mottled. Sternum dark yellow-brown, margin darker than medial part. Legs: trochanters yellow, I and II mottled; femora I and II partly covered with dark stripes, III and IV with dark annulations. Abdomen dark brown, mottled, with abundant yellow spots; venter yellow, with an H-shaped dark brown mark subposteriorly.

Epigyne (Fig. 8C, D). Epigynal plate trapezoidal, posteromedially with subtrapezoidal median septum. Copulatory openings teardrop-shaped, anterolaterally located, widely separated by width of anterior part of median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts short, slightly extended to posteromedial part. Bursae bean-shaped, covering more than ½ of epigynal plate. Glandular

appendages short and thick, located posteriorly on copulatory ducts. Connecting tubes very short, less than 1/3 of spermathecal length. Spermathecae kidney-shaped, elongated, longitudinal, located on the posterolateral margin of median septum. Fertilization ducts oval, short, located subposteriorly on spermathecae, directed anteriorly.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 21).

***Acrolithus shijiao* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:5B044830-29BB-403B-A983-4DA52D6A14F7

Chinese name 石角尖齿蛛

Figures 9−11, 20C, 21

Type material. Holotype: male (Phu-125, 20210501-1), 26°28'02.31"N, 114°13'18.35"E, 331 m, Xiaoxi Forest Farm, Shijiao Village, Huangao Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 1 May 2021, K. Liu, Y. Ying, J. Yan, & M. Fei leg. **Paratypes:** 15 females, 3 males (Phu-125, 20210501-1), same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Acrolithus yeniu* **sp. nov.** in having a long ventrolateral tibial apophysis, nearly as long as the tibia in dorsal view (Figs 9G−I, 10A, B, E, F), but it differs by the retrolateral tibial apophysis with a blade-shaped tip (Figs 9G−I, 10A, B, E, F) (vs thick, spine-like) and an oval distal tegular apophysis (Figs 9G, 10A, C) (vs fan-shaped). Females resemble *A. yeniu* **sp. nov.** in having an X-shaped median septum and a large, oval atrium (Fig. 11C), but they can be distinguished by the connecting tubes touching (vs separated) posteriorly with a longitudinally swollen part (Fig. 11D) (vs transversally swollen).

Description. Male (holotype). Habitus as in Figs 9A, B. Total length 2.95, carapace 1.47 long, 1.31 wide. Eye sizes and interdistances (Fig. 9A): AME 0.07, ALE 0.09, PME 0.07, PLE 0.07, AME−AME 0.05, AME−ALE 0.02, PME−PME 0.09, PME−PLE 0.08, AME−PME 0.07, AME−PLE 0.15, ALE−ALE 0.23, PLE−PLE 0.38, ALE−PLE 0.08. MOA 0.22 long, frontal width 0.19, posterior width 0.23. Chelicerae (Fig. 9B) with 3 promarginal (distal largest) and 3 retromarginal teeth (distal largest). Sternum (Fig. 9B), as long as wide, laterally with precoxal triangles and intercoxal extensions, posteriorly triangular, relatively blunt. Pedicel 0.14 long. Abdomen (Fig. 9A, B) 1.41 long, 1.05 wide. Leg measurements: I 5.41 (1.51, 0.51, 1.52, 1.16, 0.71); II 7.47 (2.12, 0.73, 1.86, 1.68, 1.08); III 4.13 (1.12, 0.49, 0.87, 0.95, 0.7); IV 6.14 (1.7, 0.51, 1.41, 1.62, 0.9). Leg spination (Fig. 9A, B): femora I d1, pv1111, II d1, pv11, III d1, IV d1; tibiae I v222222, II v22222; metatarsi I v2222, II v2222.

Colouration (Fig. 9A, B). Carapace dark yellow-brown, with irregular dark brown mottling radially. Chelicerae, endites, and labium yellow-brown, mottled. Sternum dark yellow-brown, mottled, with indistinct radial mottling around margin. Legs: trochanters yellow, I and II mottled; metatarsi and tarsi yellow; femora and tibiae I−IV with dark stripes. Abdomen dark yellow-brown, mottled; venter yellow, with pair of slanting dark brown stripes and indistinct irregular dark brown spots.

Palp (Figs 9C−I, 10). Femoral apophysis very strong, with 1 strong dorsal spine near distal femur. Ventrolateral tibial apophysis finger shaped, as long as tibia, with a pointed apex in retrolateral view. Retrolateral tibial apophysis very strong, with 3 spines. Prolateral tegular apophysis tooth-like, thick, slightly less than ½ of embolic length. Distal tegular apophysis oval, slightly less than embolic length. Embolus flagelliform, with slightly widened base.

Female. Habitus as in Figs 11A, B, 20C. As in male, except as noted. Total length 3.58, carapace 1.52 long, 1.35 wide. Eye sizes and interdistances: AME 0.06, ALE 0.08, PME 0.08, PLE 0.10, AME−AME 0.08, AME−ALE 0.03, PME−PME 0.06, PME−PLE 0.07, AME−PME 0.09, AME−PLE 0.16, ALE−ALE 0.26, PLE−PLE 0.36, ALE−PLE 0.07. MOA 0.22 long, frontal width 0.20, posterior width 0.23. Chelicerae (Fig. 1A, B) with 3 promarginal (proximal

largest, distal smallest) and 4 retromarginal teeth (distal largest). Pedicel 0.05 long. Abdomen (Fig. 1A, B) 2.02 long, 1.22 wide. Leg measurements: I 5.86 (1.68, 0.48, 1.55, 1.37, 0.78); II 4.93 (1.33, 0.54, 1.19, 1.08, 0.79); III 4.34 (1.13, 0.45, 0.92, 1.08, 0.76); IV 5.19 (1.7, 0.51, 0.46, 1.66, 0.86). Leg spination (Fig. 1A, B): femora I d1, pv11111, right pv1111, II d1, pv111, III d1, IV d1; tibiae I v2222222, II v2222222; metatarsi I v2222, II v2222.

Colouration (Fig. 11A, B). Lighter than male.

Epigyne (Fig. 11C, D). Epigynal plate human skull-shaped, with pair of large, broad, oval atria covering nearly all of epigynal plate, separated by a median septum. Median septum X-shaped, posteriorly nose-shaped and slightly extruded. Copulatory openings slit-like, anteriorly located at the mesial margin of atrium, covered by arc-shaped, slightly sclerotized margin. Bursae eggplant shaped, medially located, basal part slightly separated and apical part touching. Copulatory ducts V-shaped, longer than connecting tubes. Glandular appendages short, stamen shaped. Connecting tubes very short, slightly separated. Spermathecae sac shaped, anteriorly glove shaped, touching, posteriorly separated by less than ½ of its length. Fertilization ducts very short, located posteriorly on spermathecae, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 21).

***Acrolithus xiajing* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:B6FE4180-1714-4F2E-9E88-25D657F67BBC

Chinese name 下径尖齿蛛

Figures 12, 13, 20D, 21

Type material. Holotype: male (Phu-83, 20201025-2), 26°40’55.59”N, 115°23’32.27”E, 349 m, Xiajing Village, Donggushezu Town, Qingyuan District, Ji’an City, Jiangxi Province, China, 25 October 2020, K. Liu, Y. Ying, & S. Yuan leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Acrolithus lingyun* **sp. nov.** in having an oval distal tegular apophysis and flagelliform embolus (Figs 12C−E, 13B−E) but differs by the long, finger-shaped ventrolateral tibial apophysis (Figs 12C−E, 13C) (vs short and thick) and the dorsolateral tibial apophysis has 3 relatively weak spines (Figs 12D−F, 13B−D) (vs very strong).

Description. Habitus as in Fig. 12A, B. Total length 2.96, carapace 1.63 long, 1.36 wide. Eye sizes and interdistances (Fig. 12A): AME 0.08, ALE 0.11, PME 0.07, PLE 0.08; AME−AME 0.06, AME–ALE 0.02, PME−PME 0.11, PME–PLE 0.07, AME−PME 0.09, AME−PLE 0.17, ALE−ALE 0.28, PLE−PLE 0.41, ALE−PLE 0.10. MOA 0.22 long, frontal width 0.23, posterior width 0.25. Chelicerae (Fig. 12B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 12B) slightly wider than long, laterally with precoxal triangles and intercoxal extensions, posteriorly triangular, relatively blunt. Pedicel 0.07 long. Abdomen (Fig. 12A, B) 1.39 long, 0.85 wide. Leg measurements: I 6.43 (1.55, 0.58, 1.48, 1.82, 1.00); II 4.53 (1.36, 0.51, 0.88, 1.14, 0.64); III 4.92 (1.33, 0.51, 1.26, 1.09, 0.73); IV 6.09 (1.75, 0.49, 1.59, 1.38, 0.88). Leg spination (Fig. 12A, B): femora I d1, pv1111, II d1, pv11, III d1, IV d1; left tibiae I v2222222, II v222222, right tibiae I v2222222, II v2222221; left metatarsi I v22221, II v2221, right metatarsi I v2222, II v2221.

Colouration (Fig. 12A, B). Carapace dark yellow-brown, with irregular dark brown mottling radially. Chelicerae, endites yellow, mottled. Sternum dark yellow, mottled, with indistinct dark mottled marks radially around margin. Legs: trochanters yellow, I mottled; femora I and II with dark stripes, III and IV with dark annulations. Abdomen dark yellow-brown, mottled; venter, yellow, with pair of dark brown irregular marks and pair of dark brown spots subposteriorly.

Palp (Figs 12C−F, 13). Femoral apophysis very strong, dorsally with two spines. Ventrolateral tibial apophysis

finger shaped, as long as tibia in dorsal view, with a spine-like apex. Retrolateral tibial apophysis relatively weak, with two clear spines and one small dorsal apophysis, retrolateral one short, nearly as long as ½ of medial branch's length, medial one basally curved, with a sharp apex, dorsal one very small, triangular. Prolateral tegular apophysis conical, sub-basally abruptly narrowed. Distal tegular apophysis oval, more than ½ of embolic length. Embolus flagelliform, with slightly widened base.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 21).

***Acrolithus xiaojing* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:2BBBD95C-2384-4592-B6D3-A0999F1890B5

Chinese name 小井尖齿蛛

Figures 14−16, 20E, 21

Type material. Holotype: male (Phu-112, 20210104-1), 26°35'32.30"N, 114°08'16.64"E, 923 m, Longtan Scenic Spot, Xiaojing Village, Huangao Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 4 January 2021, K. Liu, D. Zhao, C. Luo, & H. Wang leg.; 1 male (Phu-112, 20210501-3), 26°30'55.45"N, 114°12'12.05"E, 383 m, Bijiashan Scenic Spot, Xiajing Village, Ciping Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 1 May 2021, K. Liu, Y. Ying, J. Yan, & M. Fei leg.; 7 females, 7 males (Phu-112, 20210501-4), 26°34'52.63"N, 114°07'48.40"E, 936 m, near Xiaojing Tea Plantation, other data as previous; 8 males, 2 females (Phu-112, 20210501-5), 26°35'33.53"N, 114°08'18.31"E, 922 m, other data as previous; 1 male, 1 female, 1 juvenile (Phu-111, 20210204-3), 26°46'88.81"N, 113°52'00.83"E, 665 m, Qilichuan, Jiangshan Village, Dongshang Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 4 February 2021, K. Liu, D. Zhao, & Z. He leg. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Acrolithus yeniu* **sp. nov.** in having a horn-like ventrolateral tibial apophysis near the base of the retrolateral tibial apophysis and a pincer-like retrolateral tibial apophysis with a triangular dorsal apophysis (Figs 14D−F, 15A, B, D−H), but it differs by the ventral abdomen lacking a pair of dark brown markings (Fig. 14A) (vs present), the long prolateral tegular apophysis is nearly as long as ½ of embolus (Figs 14D, 15A, C, F) (vs short, less than ½ of embolic length), and the oval distal tegular apophysis (Figs 14D, E, 15A, C) (vs rounded). Females resemble *A. yeniu* **sp. nov.** in having an X-shaped median septum and large, oval atrium (Fig. 16C), but they can be easily distinguished by the touching spermathecae (vs widely separated).

Description. Male (holotype). Habitus as in Figs 14A, B, 20E. Total length 2.71, carapace 1.33 long, 1.19 wide. Eye sizes and interdistances (Fig. 14A): AME 0.06, ALE 0.08, PME 0.06, PLE 0.06; AME−AME 0.03, AME–ALE 0.02, PME−PME 0.08, PME–PLE 0.06, AME−PME 0.07, AME−PLE 0.13, ALE−ALE 0.19, PLE−PLE 0.31, ALE−PLE 0.08. MOA 0.21 long, frontal width 0.16, posterior width 0.18. Chelicerae (Fig. 14B) with 3 promarginal (proximal largest) and 4 retromarginal teeth (distal largest). Sternum (Fig. 14B) longer than wide, laterally without precoxal triangles, posteriorly triangular. Pedicel 0.11 long. Abdomen (Fig. 14A, B) 1.30 long, 0.80 wide. Leg measurements: I 4.84 (1.32, 0.44, 1.32, 1.12, 0.64); II 4.24 (1.13, 0.48, 1.02, 0.90, 0.71); III 3.72 (1.00, 0.38, 0.78, 0.91, 0.65); IV 5.49 (1.41, 0.49, 1.24, 1.46, 0.89). Leg spination (Fig. 14A, B): femora I d1, pv1111, II d1, pv11, III d1, IV d1; tibiae I v222222, II v222221; metatarsi I v2221, II v2221.

Colouration (Fig. 14A, B). Carapace dark yellow-brown, with irregular dark brown mottling radially. Chelicerae, endites, and labium yellow-brown, mottled. Sternum dark yellow-brown, mottled, with indistinct radial dark markings. Legs: trochanters yellow; femora I and II partly covered with dark stripes, III and IV with dark annulations. Abdomen dark yellow-brown, mottled; venter, yellow, with pair of dark brown irregular markings laterally and pair

of indistinct longitudinal dark brown stripes subposteriorly.

Palp (Figs 14C−F, 15). Femoral apophysis very strong. Ventrolateral tibial apophysis horn-like, strong, thick, slightly shorter than tibia, with a slightly curved apex in dorsal view. Retrolateral tibial apophysis very strong, with 2 spines, retrolateral one strong, thick, nearly as long as base, dorsal one indistinct, triangular. Prolateral tegular apophysis tapered to a sharpened point, conical, as long as ½ of embolic length. Distal tegular apophysis oval, shorter than embolus, anteriorly with conspicuous, oval, transparent, membranous part. Embolus flagelliform, with slightly widened base.

Female. Habitus as in Fig. 16A, B. As in male, except as noted. Total length 3.68, carapace 1.50 long, 1.40 wide. Eye sizes and interdistances (Fig. 16A): AME 0.06, ALE 0.09, PME 0.07, PLE 0.09; AME−AME 0.05, AME−ALE 0.03, PME−PME 0.07, PME−PLE 0.07, AME−PME 0.07, AME−PLE 0.14, ALE−ALE 0.22, PLE−PLE 0.35, ALE−PLE 0.07. MOA 0.22 long, frontal width 0.18, posterior width 0.22. Pedicel 0.07 long. Abdomen (Fig. 16A, B) 2.11 long, 1.4 wide. Leg measurements: I 5.66 (1.54, 0.57, 1.5, 1.3, 0.75); II 4.47 (1.11, 0.48, 1.11, 0.96, 0.81); III 4.24 (1.1, 0.47, 0.96, 1.02, 0.69); IV 6.15 (1.69, 0.51, 1.43, 1.64, 0.88). Leg spination (Fig. 16A, B): tibiae II v222222; metatarsi I v2222, II v2222.

Colouration (Fig. 16A, B). Darker than male. Abdomen, dorsum mottled; venter with pair of conspicuous longitudinal dark brown markings.

Epigyne (Fig. 16C, D). Epigynal plate human skull shaped, with pair of large, broad, oval atria, nearly covering entire epigynal plate, separated by median septum. Median septum X-shaped anteriorly, nose-shaped posteriorly, extruded. Copulatory openings slit-like, located at mesial margin of atrium, covered by arc-shaped, slightly sclerotized margin. Bursae Y-shaped, submedially located, basal part touching. Copulatory ducts V-shaped, longer than connecting tubes. Glandular appendages short, ear shaped, as wide as connecting tubes. Connecting tubes very short, slightly separated by ½ of width. Spermathecae slightly separated, anteriorly swollen, tube-shaped, longitudinally extended along posteromedial line, posteriorly tube shaped and slightly widened. Fertilization ducts short, located posteriorly on spermathecae, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 21).

***Acrolithus xingdoushanensis* (Yao, Irfan & Peng, 2019) comb. nov.**

Chinese name 星斗山尖齿蛛

Otacilia xingdoushanensis Yao *et al.* 2019: 301, figs 9A−G, 10A−E (♂♀, type deposition in HNNU).

Diagnosis. The male of this species (see Yao *et al.* 2019: 301, figs 9E−G, 10A−C) is easily distinguished from other congeners by the large distal tegular apophysis covering most of embolus and the long and thick retrolateral tibial apophysis. The female resembles *A. ovatus* (Fu, Zhang & Zhang, 2016) **comb. nov.** in having a large, oval atrium and a pair of ovoid bursae located posteromedially, but it can be distinguished by the posterior copulatory duct without a helix spiral (vs helix spiral present).

Description. See Yao *et al.* (2019).

Comments. According to the original figures of Yao et al. (2019), the embolus appears broken.

Distribution. China (Hubei).

***Acrolithus yeniu* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:A4D84817-08EE-47E0-AD74-98B83DBDD626

Chinese name 野牛尖齿蛛

Figures 17−19, 20F, 21

Type material. Holotype: 1 female (Phu-108, 20210127-3), 27°31’43.53”N, 114°14’32.95”E, 556 m, near Buffalo Grand Valley, Yangshimu Scenic Spot, Taishan Town, Anfu County, Ji’an City, Jiangxi Province, China, 27 January 2021, K. Liu, Y. Ying, Z. Meng, & H. Wang leg. **Paratypes:** 1 male (Phu-119, 20210127-2), 27°26’57.43”N, 114°11’24.81”E, 1144 m, near Ropeway, Wugong Mountains, other data same as previous; 1 juvenile (Phu-119, 20210127-1), 27°27’24.99”N, 114°11’47.35”E, 1022 m, Taijigong Temple, other data same as previous; 4 males, 5 females (Phu-108, 20210504-1), 27°27’33.35”N, 114°11’37.74”E, 1092 m, 4 May 2021, K. Liu, Y. Ying, C. Xu, & Q. Xiao leg., other data same as holotype; 1 male (Phu-108, 20210504-2), 27°26’45.19”N, 114°11’17.53”E, 1223 m, Tupingao area, near Ropeway, other data same as previous; 1 male, 3 females, 1 juvenile (Phu-108, 20210504-3), 27°31’39.69”N, 114°14’37.18”E, 541 m, near the gate of Buffalo Grand Valley, other data same as previous; 1 female (Phu-108, 20210504-4), 27°32’13.76”N, 114°14’10.42”E, 689 m, Baguashi Scenic Spot, other data same as previous. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Acrolithus xiaojing* **sp. nov.** in having a retrolateral tibial apophysis with a bifurcate tip and a flagelliform embolus (Figs 17E, F, 18A, C−G), but it differs by the ventral abdomen with a pair of irregular dark brown spots (Fig. 17A, B) (vs longitudinal stripes), the strong, long ventrolateral tibial apophysis with a slightly curved apex (Figs 17D−F, 18A, B, D−F) (vs a straight apex), the short prolateral tegular apophysis nearly as long as 1/3 of embolic length (Figs 17C, D, 18A, C) (vs long, as long as ½ of embolic length), and the sub-round distal tegular apophysis (Figs 17C, D, 18A, C) (vs oval, elongated). The epigyne resembles that of *A. lingyun* **sp. nov.** in having an oval atrium and touching eggplant-shaped bursae (Fig. 19D), but it can be separated by the median septum slightly extruded posteriorly (Fig. 19C) (vs strongly extruded) and the oval connecting tube with a transverse axis (Fig. 19D) (vs connecting tube with a longitudinal axis).

Description. Male (holotype). Habitus as in Figs 17A, B, 20F. Total length 4.83, carapace 1.92 long, 2.20 wide. Eye sizes and interdistances (Fig. 17A): AME 0.07, ALE 0.10, PME 0.08, PLE 0.08; AME−AME 0.06, AME−ALE 0.03, PME−PME 0.09, PME−PLE 0.07, AME−PME 0.08, AME−PLE 0.16, ALE−ALE 0.23, PLE−PLE 0.37, ALE−PLE 0.08. MOA 0.22 long, frontal width 0.18, posterior width 0.24. Chelicerae (Fig. 17B) with 4 promarginal (distal largest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 17B) nearly as long as wide, laterally with precoxal triangles and intercoxal extensions, posteriorly triangular, relatively blunt. Pedicel 0.14 long. Abdomen (Fig. 17A, B) 2.46 long, 1.52 wide. Leg measurements: I 5.21 (1.35, 0.50, 1.39, 1.26, 0.71); II 4.57 (1.28, 0.47, 1.11, 1.02, 0.69); III 4.12 (1.11, 0.46, 0.85, 0.97, 0.73); IV 5.96 (1.55, 0.48, 1.40, 1.55, 0.98). Leg spination (Fig. 17A, B): femora I d1, pv111, right pv1111, II d1, pv11, III d1, IV d1; tibiae I v22222211, right v22222221, II v2222221, right v222222; metatarsi I v22221, II v2222, right I v2222, II v2221.

Colouration (Fig. 17A, B). Carapace dark yellow-brown, with irregular dark brown mottling radially. Chelicerae, endites, and labium yellow-brown, mottled. Sternum dark yellow-brown, mottled, with indistinct radial dark mottled markings. Legs: trochanters yellow, mottled; femora I−IV partly covered with dark stripes. Abdomen dark yellow-brown, mottled; venter yellow, with pair of irregular dark brown stripes laterally and pair of irregular dark brown spots posteromedially.

Palp (Figs 17C−F, 18). Femoral apophysis very strong, with two strong dorsal spines near distal part of femora. Ventrolateral tibial apophysis finger shaped, long, as long as tibia, with pointed apex in dorsal view. Retrolateral tibial apophysis very strong, with 3 spines, retrolateral one strong, thick, with a sharp apex, medial one curved toward retrolateral margin of sub-basal cymbium, slightly shorter than retrolateral one, dorsal one small, tooth-like. Prolateral tegular apophysis relatively short, thick, less than ½ of embolic length, with a blunt tip. Distal tegular apophysis round, shorter than embolus. Embolus flagelliform, with slightly widened base.

Female. Habitus as in Fig. 19A, B. As in male except as noted. Total length 3.61, carapace 1.54 long, 1.30 wide.

Eye sizes and interdistances (Fig. 19A): AME 0.07, ALE 0.10, PME 0.06, PLE 0.08; AME−AME 0.05, AME−ALE 0.03, PME−PME 0.09, PME−PLE 0.06, AME−PME 0.08, AME−PLE 0.14, ALE−ALE 0.21, PLE−PLE 0.32, ALE−PLE 0.08. MOA 0.22 long, frontal width 0.17, posterior width 0.20. Chelicerae (Fig. 19B) with 3 promarginal (proximal largest, distal smallest) and 3 retromarginal teeth (distal largest). Pedicel 0.15 long. Abdomen (Fig. 19A, B) 1.88 long, 0.94 wide. Leg measurements: I 5.50 (1.49, 0.53, 1.47, 1.31, 0.70); II 4.72 (1.25, 0.54, 1.00, 1.15, 0.78); III 5.08 (1.05, 0.52, 1.78, 1.03, 0.70); IV 6.11 (1.62, 0.54, 1.35, 1.65, 0.95). Leg spination (Fig. 19A, B): femora I pv1111, II pv11; tibiae I v2222221, II v222222; metatarsi I v2222, II v2221, right v2222.

Colouration (Fig. 19A, B). Darker than male. Abdomen, venter with a conspicuous U-shaped marking.

Epigyne (Fig. 19C, D). Epigynal plate human skull shaped, with pair of large, oval atria, covering almost all of epigynal plate, separated by median septum. Median septum conspicuous, anteriorly X-shaped, posteriorly nose shaped. Copulatory openings slit-like, anteriorly located at the mesial margin of atrium, covered by arc-shaped, slightly sclerotized margin. Bursae eggplant shaped, medially located, touching. Copulatory ducts V-shaped, longer than connecting tubes. Glandular appendages short, ear shaped, slightly separated. Connecting tubes very short. Spermathecae, anteriorly transversally twisted and swollen, posteriorly tube shaped, slightly widened. Fertilization ducts short, located posteriorly on spermathecae, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 21).

***Acrolithus zhangi* (Fu, Jin & Zhang, 2014) comb. nov.**
Chinese name 张氏尖齿蛛

Otacilia zhangi Fu *et al.* 2014: 489, fig. 5A−F (♂, type deposition in MHBU).

Diagnosis. The male of this species (see Fu *et al.* 2014: 487, fig. 5B−F) is similar to that of *Acrolithus pseudostella* (Fu, Jin & Zhang, 2014) **comb. nov.** in having a strong hook-shaped retrolateral tibial apophysis, a spine-like prolateral tegular apophysis, a flagelliform embolus, and a distal tegular apophysis with a ridge-shaped apophysis in ventral view, but it can be easily separated by the large, thick ventrolateral tibial apophysis (vs small).

Description. See Fu *et al.* (2014).

Female. Unknown.

Distribution. China (Sichuan).

***Aculithus* Liu & S. Li gen. nov.**
urn:lsid:zoobank.org:act:E791258D-471C-4BE2-ADDE-866B052D1AFA
Chinese name 短尖蛛属

Type species. *Otacilia bijiashanicus* Liu, 2020.

Diagnosis. The new genus differs from *Otacilia* Thorell, 1897 by the PME separated by less than their diameter (Fig. 131A, D) (vs separated by more than their diameter in *Otacilia* [see Wang *et al.* 2015: fig. 14A]), the carapace without radial stripes medially (Fig. 131A, D) (vs black or brown radial stripes in *Otacilia* [see Wang *et al.* 2015: fig. 14A]), and most species with dark brown stripes or annulations (Fig. 131A, D) (vs absent or indistinct in *Otacilia* [see Wang *et al.* 2015: fig. 14A]). Males of this genus can be easily distinguished from *Otacilia* by the strong dorsal tibial apophysis (Fig. 132D) (vs absent in *Otacilia* [Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F]), the short, fine, and slightly bent embolus (Fig. 132A) (vs strongly curved in *Otacilia* [Figs 72D, 75D, 79D, 82D, 85D, 88D, 96D, 99D, 105D, 109D, 111D, 118D, 120D]), and the distinct sperm outlet of the embolic apex (Fig. 31F) (vs sperm-groove in *Otacilia* [Figs 86E,

100E, 106F, 112E]). The female of this genus has small, round copulatory openings (Fig. 133A) (vs copulatory openings otherwise in *Otacilia* [Figs 74C, 77C, 78C, 81C, 84C, 87C, 90C, 93C, 94C, 95C, 98C, 102C, 104C, 107C, 108C, 113C, 116C, 117C, 124C]), and the touching bursae located anteriorly (Fig. 133B) (vs slightly or widely separated in *Otacilia* [74D, 77D, 78D, 81D, 84D, 87D, 90D, 93D, 94D, 95D, 98D, 102D, 104D, 107D, 108D, 113D, 116D, 117D, 124D]).

Etymology. The name is a combination of the first three letters of "*acutus*" (referring to the short, pointed embolus) and the latter half of *Phrurolithus*. The gender is masculine.

Description. Small, body length 2.0−2.5 mm. AME clearly smaller than ALE, PME as large as or slightly smaller than PLE, anterior eye row straight or recurved, posterior eye row recurved. Chelicerae with 3 promarginal and 2 retromarginal teeth. Femora, patellae, tibiae, and metatarsi with black-brown annulations in most species. Sometimes tibiae with black-brown stripes. Tibia I with 5−6 pairs of ventral spines, metatarsi I with four pairs of ventral spines. Scutum covering more than ½ of abdomen.

Male palp: femur with large ventral extension, covering about ½ of femur length; tibia with two strong apophyses, a retrolateral tibial apophysis and a dorsal tibial apophysis; bulb only with a distinct membranous retrolateral tegular apophysis, extruded laterally; sperm duct extended along the margin of retrolateral tegular apophysis, abruptly narrowed medially; embolus short and fine, slightly bent.

Epigyne with small copulatory openings, a subtriangular median septum, a pair of large bursae, and peanut- or C-shaped spermathecae.

Comments. Three *Otacilia* species were transferred here because of shared characteristics with the genus description; hence, the following new combinations: *Aculithus bijiashanicus* (Liu, 2020) **comb. nov.**, *A. hippocampus* (Jin, Fu, Yin & Zhang, 2016) **comb. nov.** and *A. subfabiformis* (Liu, Xu, Xiao, Yin & Peng, 2019) **comb. nov.**

Composition. *Aculithus bijiashanicus* (Liu, 2020) **comb. nov.,** *A. chongyi* **sp. nov.**, *A. fabiformis* **comb. nov.**, *A. hippocampus* (Jin, Fu, Yin & Zhang, 2016) **comb. nov.**, *A. subfabiformis* (Liu, Xu, Xiao, Yin & Peng, 2019) **comb. nov.**, *A. taishan* **sp. nov.**, and *A. xunwu* **sp. nov.**

Distribution. China (Jiangxi, Hunan).

***Aculithus bijiashanicus* (Liu, 2020) comb. nov.**

Chinese name 笔架山短尖蛛

Figures 22, 23, 32, 131A, D, 132A, D, 133A, B

Otacilia bijiashanica Liu *et al.* 2020a: 16, figs 9A−F, 10A−D, 11A-C (♂♀, type deposition in ASM-JGSU).

Type material. Holotype: male (Phu-11), 26°36'25.88"N, 114°11'43.07"E, 549 m, Hongjun Road, the 4th boundary, Bijiashan Scenic Spot, Ciping Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 3 October 2018, K. Liu, W. Sun, & H. Luo leg. **Paratypes:** 1 female, 3 males (Phu-11), 26°36'10.31"N, 114°06'34.69"E, 364 m, Fengshuping Group, Xiangzhou Village, Luofu Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 5 October 2018, K. Liu, W. Sun, & H. Luo leg.; 1 male (Phu-11), 26°37'22.8"N, 114°7'1.2"E, 1055 m, Huangyangjie Scenic Spot, Ciping Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 5 April 2014, K. Liu, Z. Chen, Z. Meng, X. Huang, & Y. Tang leg.

Description. See Liu *et al.* (2020a).

Supplemental description data. Retromarginal and promarginal escort setae long (Fig. 22) with lamellar base near the fang base. Promarginal rake setae have comb-shaped, thick barbs (Fig. 22). Retrolateral whisker setae arranged in a line and become gradually thinner basally to distally(Fig. 22). Endites oblique, slightly depressed, with row of serrula on anterior margin (Fig. 22). The embolus lacks a groove, sharply tapered and strongly bent at the tip

of the tegulum (Fig. 23).

Distribution. China (Jiangxi) (Fig. 32).

***Aculithus chongyi* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:541F820C-4F09-46C0-A304-20177345984A

Chinese name 崇义短尖蛛

Figures 24−26, 32

Type material. Holotype: female (Phu-96, 20201002-1), 25°37'32.68”N, 114°18'25.06”E, 1107 m, Yangming Mountain Forest Park, Hengshui Town, Chongyi County, Ganzhou City, Jiangxi Province, China, 2 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 1 male, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female of the new species resembles that of *Acrolithus subfabiformis* **comb. nov.** in having longitudinally extended connecting tubes (Fig. 24D), but it differs by the oval spermathecae (Fig. 24D) (vs peanut shaped). The male is similar to those of *A. fabiformis* **comb. nov.** and *A. subfabiformis* **comb. nov.** (see Liu *et al.* 2019: 444, fig. 6C−E; Liu *et al.* 2020b: 13, fig. 9C−F) in having a strong, horn-like retrolateral tibial apophysis (Figs 25D−F, 26A, C), but it can be separated by the dorsal tibial apophysis strongly curved prolaterally (Figs 25C, E, F, 26C) (vs slightly curved in *A. fabiformis* **comb. nov.**; straight in *A. subfabiformis* **comb. nov.**), and the sperm ducts reach the subposterior part of tegulum (Fig. 25D) (vs submedial part in *A. fabiformis* **comb. nov.** and *A. subfabiformis* **comb. nov.**).

Description. Female (holotype). Habitus as in Fig. 24A, B. Total length 2.74, carapace 1.39 long, 1.12 wide. Eye sizes and interdistances (Fig. 24A): AME 0.05, ALE 0.09, PME 0.07, PLE 0.06; AME−AME 0.04, AME−ALE 0.02, PME−PME 0.08, PME−PLE 0.05, AME−PME 0.07, AME−PLE 0.14, ALE−ALE 0.18, PLE−PLE 0.32, ALE−PLE 0.05. MOA 0.19 long, frontal width 0.14, posterior width 0.22. Chelicerae (Fig. 24B) with 3 promarginal (proximal largest, distal smallest) and 3 retromarginal teeth (distal larger). Sternum (Fig. 24B) conical, about two times as long as wide, posteriorly pointed. Pedicel 0.09 long. Abdomen (Fig. 8A) 1.27 long, 0.98 wide. Leg measurements: I 4.92 (1.14, 0.51, 1.31, 1.41, 0.55); II 4.01 (1.04, 0.48, 0.96, 0.95, 0.58); III 3.50 (0.91, 0.39, 0.72, 0.84, 0.64); IV 5.03 (1.35, 0.47, 1.09, 1.35, 0.78). Leg spination (Fig. 24A, B): femora I d1, pv111, II d1, pv11, III d1, IV d1; left tibiae I v2222222, II v2222221, right tibiae I v2222221, II v22222; metatarsi I v2221, right v2222, II v2221, right v2221.

Colouration (Fig. 24A, B). Carapace yellow, with radial irregular dark stripes mediolaterally and arc-shaped dark stripes around margin. Chelicerae yellow, mottled. Endites, labium, and sternum yellow. Legs yellow, annulations present. Abdomen yellowish, with pair of large, subtriangular dark brown spots anteromedially, pair of arc-shaped dark brown stripes submedially, and 5 chevrons posteriorly; venter with pair of slanting dark brown markings posterolaterally.

Epigyne (Fig. 24C, D). Epigynal plate mushroom-like, with elongated sub-rectangular median septum. Copulatory openings oval, small, separated by more than maximum width between connecting tubes. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts V-shaped, short, posteriorly touching. Bursae large, bean-shaped, touching, covering more than ½ of epigynal plate. Glandular appendages short, slanting, slightly more than ½ of copulatory duct length. Connecting tubes relatively long, nearly parallel, anteriorly thin. Spermathecae oval, transversally extended, slightly separated anteriorly, widely separated posteriorly. Fertilization ducts short, located medially on spermathecae, directed anteriorly.

Male. Habitus as in Fig. 25A, B. As in male, except as noted. Total length 2.86, carapace 1.26 long, 1.05 wide.

Eye sizes and interdistances (Fig. 25A): AME 0.05, ALE 0.07, PME 0.08, PLE 0.09; AME−AME 0.03, AME–ALE 0.01, PME−PME 0.07, PME–PLE 0.05, AME−PME 0.07, AME−PLE 0.11, ALE−ALE 0.16, PLE−PLE 0.29, ALE−PLE 0.05. MOA 0.19 long, frontal width 0.13, posterior width 0.22. Sternum (Fig. 25B) slightly longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.13 long. Abdomen (Fig. 25A, B) 1.37 long, 0.83 wide. Leg measurements: I 4.52 (1.22, 0.42, 1.25, 1.10, 0.53); II 3.66 (0.97, 0.42, 0.84, 0.93, 0.50); III 3.15 (0.82, 0.38, 0.77, 0.76, 0.42); IV 4.77 (1.26, 0.31, 1.16, 1.33, 0.71). Leg spination (Fig. 25A, B): femora I d2, pv111, II d2, III d1, IV d1; left tibiae I v222222, right v222221, II v22222, right v222222; metatarsi I v2221, right v2221, II v2221, right v2211.

Colouration (Fig. 25A, B). Lighter than female. Abdomen with weak scutum extended from anteromedial part to anterior of 2nd chevron; venter with pair of short, dark brown stripes subposteriorly and pair of irregular dark brown spots in front of anterior lateral spinnerets.

Palp (Figs 25C−F, 26). Femoral apophysis weak, with a conspicuous groove. Retrolateral tibial apophysis large, horn-shaped, longer than tibia, apex pointed, bent outward from dorsal to prolateral tegulum. Dorsal tibial apophysis curved sideways, sharp sub-apex, longer than tibia. Sperm ducts U-shaped, anterior ½ very broad, reaching subposterior part of tegulum. Retrolateral tegular apophysis membranous, subtriangular, tip near base of sperm duct. Embolus short.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 32).

***Aculithus fabiformis* (Liu, Xu, Xiao, Yin & Peng, 2019) comb. nov.**
Chinese name 豆状短尖蛛

Figures 32, 131B, E, 132B, E, 133C, D

Otacilia fabiformis Liu *et al.* 2019: 444, figs 6A−E, 7A−C, 8A−F (♂♀, type deposition in HNNU).

Type material. Holotype: male, 24°56.58’N, 112°56.9’E, 1240 m, Jiangjunzhai Scenic Spot, Mangshan National Forest Park, Yizhang County, Chenzhou City, Hunan Province, China, 6 December 2017, H. Yin, A. He, J. Liu, Y. Xie, Y. Yang, & P. Dong leg. **Paratypes:** 1 female, 1 male, same data as holotype; 1 female, 24°59.19’N, 112°54.54’E, 1240 m, Yiping Scenic Spot, 5 December 2017, other data same as holotype.

Description. See Liu *et al.* (2019).

Distribution. China (Hunan) (Fig. 32).

***Aculithus hippocampus* (Jin, Fu, Yin & Zhang, 2016) comb. nov.**
Chinese name 海马短尖蛛

Otacilia hippocampa Jin *et al.* 2016: 36, figs 1−3 (♂♀, type deposition in MHBU).

Diagnosis. The male of this species (see Jin *et al.* 2016: 36, figs 2A−D, 3A−C) is similar to those of *Aculithus chongyi* **sp. nov.** and *A. xunwu* **sp. nov.** in having a large, horn-like ventrolateral tibial apophysis and a large dorsal tibial apophysis with a sharp bend, but it can be distinguished by the circular sperm duct (vs U-shaped) and the small retrolateral tegular apophysis covering nearly 1/3 of tegulum (vs ½).

Description. See Jin *et al.* (2016).

Distribution. China (Hunan).

***Aculithus subfabiformis* (Liu, 2020) comb. nov.**
Chinese name 近豆状短尖蛛
Figures 32, 131C, F, 132C, F, 133E, F

Otacilia subfabiformis Liu *et al*. 2020b: 13, figs 9A−F, 10A−E, 11A−D (♂♀, type deposition in ASM-JGSU).

Type material. Holotype: male (Phu-34), 27°27'10.79"N, 114°11'8.24"E, near the ticket office, Wugong Mountain Natural Reserve, Taishan Town, Anfu County, Ji'an City, Jiangxi Province, China, 4 January 2020, K. Liu, Z. Meng, & H. Luo leg. **Paratypes:** 1 male, 1 female, same data as holotype.

Description. See Liu *et al.* (2020b).

Distribution. China (Jiangxi) (Fig. 32).

***Aculithus taishan* Liu & S. Li sp. nov.**
urn:lsid:zoobank.org:act:801ACFBB-C2A7-4657-8295-CD8BFB4C37C4
Chinese name 泰山短尖蛛
Figures 27−29, 32

Type material. Holotype: male (Phu-109, 20210127-2), 27°26'57.43"N, 114°11'24.81"E, 1144 m, near Ropeway, Wugong Mountains, Taishan Town, Anfu County, Ji'an City, Jiangxi Province, China, 27 January 2021, K. Liu, Y. Ying, Z. Meng, & H. Wang leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *A. fabiformis* **comb. nov.** (see Liu *et al*. 2019: 444, fig. 6C−E) in having a horn-like retrolateral tibial apophysis and a dorsal tibial apophysis with a pointed tip (Figs 27C−F, 28A, B, D) but differs by the abdomen dorsally with 2 pairs of spots near the posterior scutum (Fig. 27A) (vs transverse stripe) and the V-shaped sperm duct reaching the medial part of the tegulum (Fig. 27D, E) (vs U-shaped sperm duct not reaching medial part of the tegulum).

Description. Habitus as in Figs 27A, B, 29. Total length 2.46, carapace 1.19 long, 1.08 wide. Eye sizes and interdistances (Fig. 27A): AME 0.05, ALE 0.08, PME 0.07, PLE 0.07; ALE−AME 0.01, AME–AME 0.03, PLE−PME 0.12, PME–PME 0.07, ALE−ALE 0.15, PLE−PLE 0.28, ALE−PLE 0.07, AME−PME 0.05, AME−PLE 0.12. MOA 0.16 long, frontal width 0.12, posterior width 0.20. Chelicerae (Fig. 27B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 27B) slightly longer than wide, laterally with precoxal triangles before coxa IV, posteriorly triangular, relatively blunt. Abdomen (Fig. 27A, B) 1.28 long, 0.83 wide. Leg measurements: I 4.19 (1.11, 0.39, 1.17, 1.01, 0.51); II 3.53 (0.98, 0.40, 0.86, 0.81, 0.48); III 3.63 (0.97, 0.39, 0.92, 0.86, 0.49); IV 4.43 (1.15, 0.40, 0.97, 1.26, 0.65). Leg spination (Fig. 27A, B): femora I d2, pv111, II d1, pv11, III d1, IV d1; tibiae I v222222, II v222222; metatarsi I v2222, II v2221.

Colouration (Fig. 27A, B). Carapace yellow, with radial irregular dark brown mottled markings around submargin and arc-shaped dark brown stripes around margin. Chelicerae, endites, and labium yellow. Sternum yellow, lateral margins with dark mottled spots. Legs yellow, femora and tibiae with dark brown annulations. Abdomen light yellow, with 2 pairs of large subtriangular spots on both sides of scutum, 2 pairs of irregular dark brown spots medially, 4 chevron-shaped dark brown stripes posteriorly; weak scutum in anterior ½; venter with pair of slanting markings subposterolaterally.

Palp (Figs 27C−F, 28). Femoral apophysis weak, with shallow groove. Retrolateral tibial apophysis large, horn-shaped, longer than tibia, apex pointed, bent ventrally. Dorsal tibial apophysis curved prolaterally, tapered at subapex. Sperm duct nearly V-shaped, anterior ½ with a sharp bend, reaching median part of tegulum. Retrolateral tegular

apophysis membranous, with blunt tip near the base of sperm duct. Embolus short, spine-like.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 32).

***Aculithus xunwu* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:5EB848C6-D27A-403A-A617-0B1148C16784

Chinese name 寻乌短尖蛛

Figures 30−32

Type material. Holotype: male (Phu-75, 20201007-1), 24°55'32.51"N, 115°49'50.78"E, 899 m, Xiang Mountain, Xiangshan Town, Xunwu County, Ganzhou City, Jiangxi Province, China, 7 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *A. chongyi* **sp. nov.** in having a horn-like retrolateral tibial apophysis, a U-shaped sperm duct, and a slightly slanting, short embolus (Figs 30D–F, 31A, B, D) but differs by the anterior margin of the abdomen with a large, wing-like dark brown marking (Fig. 30A) (vs a pair of subtriangular stripes at both sides of scutum) and the sub-apex of the dorsal tibial apophysis strongly constricted (Figs 30E, F, 31D, E) (vs constriction absent) in retrolateral view.

Description. Habitus as in Fig. 30A, B. Total length 2.43, carapace 1.18 long, 1.04 wide. Eye sizes and interdistances (Fig. 30A): AME 0.05, ALE 0.05, PME 0.06, PLE 0.07; AME−AME 0.03, AME–ALE 0.02, PME−PME 0.06, PME–PLE 0.05, AME−PME 0.10, AME−PLE 0.14, ALE−ALE 0.18, PLE−PLE 0.29, ALE−PLE 0.09. MOA 0.20 long, frontal width 0.14, posterior width 0.20. Chelicerae (Fig. 30A, B) with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest, 5th smallest). Sternum (Fig. 30B) longer than wide, lateral margins without precoxal triangles, posteriorly short-tailed. Pedicel 0.07 long. Abdomen (Fig. 30A, B) 1.18 long, 0.87 wide. Leg measurements: I 4.21 (1.14, 0.44, 1.22, 1.02, 0.39); II 3.85 (0.97, 0.43, 0.99, 0.88, 0.58); III 3.11 (0.82, 0.36, 0.66, 0.82, 0.45); IV 4.40 (1.11, 0.25, 1.08, 1.25, 0.71). Leg spination (Fig. 30A, B): femora I d2, pv111, II d1, pv11, III d1, IV d1; tibiae I v222222, II v22222; metatarsi I v2222, II v2221.

Colouration (Fig. 30A, B). Carapace yellowish, with irregular dark yellowish brown mottling radially around submargin and arc-shaped dark brown stripes around margin. Chelicerae, endites, labium, and sternum yellowish. Legs yellowish, with clear annulations on femora, tibiae, and metatarsi. Abdomen pale yellow, with a large, wing-shaped, dark brown stripe anteriorly, 3 dark brown chevrons anteromedially to subposteriorly, pair of transverse dark brown spots, and 1 transverse dark brown mark posteriorly; weak scutum in anterior ½; venter with pair of slanting markings subposterolaterally.

Palp (Figs 30C−F, 31). Femoral apophysis weak, with shallow groove. Retrolateral tibial apophysis large, horn-shaped, longer than tibia, strongly bent ventrally. Dorsal tibial apophysis curved prolaterally strongly constricted at subapex, and with pointed tip in retrolateral view. Sperm duct U-shaped, reaching median part of tegulum. Retrolateral tegular apophysis membranous, with blunt tip near base of sperm duct. Embolus short, spine-like.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 32).

***Alboculus* Liu, 2020**

Chinese name 白眼蛛属

Type species. *Alboculus zhejiangensis* (Song & Kim, 1991).

Diagnosis. The new genus differs from *Otacilia* Thorell, 1897 by the legs with dark brown stripes or annulations (Fig. 134A, E) (vs absent or indistinct in *Otacilia* [Figs 72A, B, 74A, B, 75A, B, 77A, B, 78A, B, 79A, B, 81A, B, 82A, B, 84A, B, 85A, B, 87A, B, 88A, B, 90A, B, 91A, B, 93A, B, 94A, B, 95A, B, 96A, B, 98A, B, 99A, B, 101A, B, 102A, B, 103A, B, 104A, B, 105A, B, 107A, B, 108A, B, 109A, B, 111A, B, 113A, B, 114A, B, 117A, B, 118A, B, 120A, B, 124A, B, 137A−J, L, M, 141]), the PME separated by less than their diameter (Figs 130C, 134A, E) (vs more than their diameter in *Otacilia* [see Wang *et al.* 2015: fig. 14A]) and lacking distinct radial stripes on the carapace (Fig. 134A, E) (vs black or brown radial stripes present in *Otacilia* [see Wang *et al.* 2015: fig. 14A]). Males of this genus can be easily distinguished from *Otacilia* by the palpal tibia with an arched retrolateral tibial apophysis (Fig. 134B−D) (vs L-shaped or S-shaped in *Otacilia* [Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F]), only one distal tegular apophysis touching embolus (Figs 34, 134B−D) (vs 2, separated from embolus in *Otacilia* [Figs 72D, 75D, 79D, 82D, 85D, 88D, 91D, 96D, 99D, 103D, 105D, 109D, 111D, 118D, 120D]), the short, fine, slightly bent embolus (Figs 34D, H, I, 134B, C) (vs strong, long, and curved in *Otacilia* [Figs 72D, 75D, 79D, 82D, 85D, 88D, 91D, 96D, 99D, 103D, 105D, 109D, 111D, 118D, 120D]), and the distinct sperm outlet in the embolic apex (vs sperm groove in *Otacilia* [Figs 86E, 100E, 106F, 112E]). The female of this genus has small, round copulatory openings (Fig. 134F) (vs copulatory openings otherwise in *Otacilia* [Figs 74C, 77C, 78C, 81C, 84C, 87C, 90C, 93C, 94C, 95C, 98C, 102C, 104C, 107C, 108C, 113C, 116C, 117C, 124C]), and anteriorly located touching bursae (Fig. 134G) (vs separated in *Otacilia* [Figs 74D, 77D, 78D, 81D, 84D, 87D, 90D, 93D, 94D, 95D, 98D, 102D, 104D, 107D, 108D, 113D, 116D, 117D, 124D]).

Description. See Liu *et al.* (2020a).

Composition. *Alboculus zhejiangensis* (Song & Kim, 1991).

Distribution. China (Jiangxi, Zhejiang).

***Alboculus zhejiangensis* (Song & Kim, 1991)**

Chinese name 浙江白眼蛛

Figures 33−36, 134

Material examined. 1 male, 1 female (Phu-26, 20210204-3), 26°46’88.81”N, 113°52’00.83”E, 665 m, Qilichuan, Jiangshan Village, Dongshang Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 4 February 2021, K. Liu, D. Zhao, & Z. He leg.; 1 male, 1 female (Phu-26, 20210204-2), 26°44’09.81”N, 113°52’43.51”E, 474 m, Dawanli Reservoir, Dayashan Village, other data as previous; 1 male, 1 female (Phu-111, 20210204-5), 26°46’01.56”N, 113°54’53.65”E, 326 m, 951 Country Road, other data as previous; 1 male (Phu-26, 20210206-1), 28°21’07.52”N, 114°30’27.58”E, 164 m, Zuojiashan Village, Jiulong Virgin Forest Scenic Spot, Luocheng Town, Wanzai County, Yichun City, Jiangxi Province, China, 6 February 2021, K. Liu, Y. Ying, D. Zhao, Z. Meng, Z. He, & W. Li leg.; 1 female (Phu-26, 20210501-1), 26°28’02.31”N, 114°13’18.35”E, 331 m, Xiaoxi Forest Farm, Shijiao Village, Huangao Town, Ji’an City, Jiangxi Province, China, 1 May 2021, K. Liu, Y. Ying, J. Yan, & M. Fei leg.; 2 females (Phu-115, 20210501-1), other data as previous; 2 females (Phu-115, 20210501-3), 26°30’55.45”N, 114°12’12.05”E, 383 m, Bijiashan Scenic Spot, Xiajing Village, Ciping Town, other data as previous; 1 female (Phu-115, 20210504-4), 27°32’13.76”N, 114°14’10.42”E, 689 m, Baguashi Scenic Spot, Buffalo Grand Valley, Yangshimu Scenic Spot, Taishan Town, Anfu County, Ji’an City, Jiangxi Province, China, 4 May 2021, K. Liu, Y. Ying, C. Xu, & Q. Xiao leg.; 1 juvenile (Phu-94, 20201002-5), 25°27’11.73”N, 113°55’30.04”E, 965 m, near parking lot, Wanshi Mountain (Sishui Mountain), Reshui Town, Chongyi County, Ganzhou City, Jiangxi Province, China, 2 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg.; 1 juvenile (Phu-70, 20201006-2), 24°36’52.36”N, 114°32’10.90”E, 626 m, near Jiulianshan Ecological Farmstead, Jiulian Mountains, Jiulianshan Town, Longnan County, Ganzhou City, Jiangxi Province, China, 6 October 2020, other data same as previous; 2 juveniles (Phu-49, 20201007-3),

25°00’28.19”N, 115°25’59.45”E, 511 m, hiking trails, Sanbaishan National Forest Park, Anyuan County, Ganzhou City, Jiangxi Province, China, 7 October 2020, other data same as previous; 6 juveniles (Phu-26, 20201108-1), 26°57’26.38”N, 115°52’51.01”E, 620 m, Yixi Village, Zhongcun Town, Yongfeng County, Ji’an City, Jiangxi Province, China, 8 November 2020, K. Liu, Y. Ying, Z. He, & M. Fei leg.; 2 subadult males (Phu-67, 20201114-2), 26°28’22.92”N, 114°11’53.07”E, 413 m, Xiaoxi Forest Farm, Fuxi Village, Huangao Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 14 November 2020, K. Liu, Y. Ying, D. Zhao, Z. He, & M. Fei leg.; 1 subadult male (Phu-67, 20201114-3), 26°29’32.34”N, 114°10’53.02”E, 621 m, other data same as previous; 2 juveniles (Phu-26, 20201220-3), 26°53’53.76”N, 115°43’57.1”E, 271 m, Scenic Entrance, Shuijiang Nature Reserve, Shaxi Town, Yongfeng Town, Ji’an City, Jiangxi Province, China, 20 December 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg.; 1 juvenile (Phu-115, 20210122-3), 26°53’53.76”N, 115°43’57.1”E, 271 m, the road side, Lishubei Village, Baguanao Scenic Spot, Gaotian Town, Shicheng County, Ganzhou City, Jiangxi Province, China, 22 January 2021, K. Liu, D. Zhao, & Z. Meng leg.

Description. See Liu *et al.* (2020a).

Variation. Many specimens from Jiangxi Province have 2 pallid, broad bands of scales dorsally on the abdomen. One of the females from Flat Rock has an orange-brown carapace and a black caput.

Comments. Most of these juveniles were reared to maturity and recognised as *A. zhejiangensis*. Therefore, we suspect that all of them are conspecific species with this species based on their body colouration and sac-shaped nest.

Distribution. China (Jiangxi (Fig. 36) and Zhejiang).

***Grandilithus* Liu & S. Li gen. nov.**

urn:lsid:zoobank.org:act:E86C1445-8C13-4B70-A37F-34953D16482D

Chinese name 大斑蛛属

Type species. *Grandilithus anyuan* **sp. nov.**

Diagnosis. The new genus differs from *Otacilia* by the straight posterior eye row (Figs 37A, 40A) (vs recurved in *Otacilia* [see Wang *et al.* 2015: fig. 14A]) and the distinct, large, light mark extended from the anteromedial margin to the sub-posteromedial part of the abdomen (Figs 37A, 40A) (vs absent in *Otacilia* [see Wang *et al.* 2015: fig. 14A]). Males of this genus can be easily distinguished from *Otacilia* by a strong, glove-shaped ventral extension on the subdistal part of the palpal femur (Fig. 37C−E) (vs ridge shaped, on the subproximal to distal part of the palpal femur in *Otacilia* [Figs 72C, E, 75C, E, 79C, E, 82C, E, 85C, E, 88C, E, 91C, E, 96C, E, 99C, E, 105C, E, 109C, E, 111C, E, 118C, E, 120C, E]), the retrolateral tibial apophysis with a small, strongly curved or slender tip (Fig. 37D−F) (with a strongly curved medial part or subapical part in *Otacilia* [Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F]), a small ventral tubercle proximally (Fig. 37D−F) (vs absent in *Otacilia* [Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F]), the tegulum with only one apophysis (Fig. 37D−F) (vs 2 in *Otacilia* [Figs 72D, E, 75D, E, 79D, E, 82D, E, 85D, E, 88D, E, 91D, E, 96D, E, 99D, E, 103D, E, 105D, E, 109D, E, 111D, E, 114D, E, 118D, E, 120D, E]), the sperm duct extended to subposterior part of the bulb (Fig. 37D, E) (vs extended to the medial or submedial part of the bulb in *Otacilia* [Figs 72D, E, 75D, E, 79D, E, 82D, E, 85D, E, 88D, E, 91D, E, 96D, E, 99D, E, 103D, E, 105D, E, 109D, E, 111D, E, 114D, E, 118D, E, 120D, E]), and the thin embolus curved into a semicircle (Fig. 37D, E) (vs relatively thick, curved into a crescent or semicircle in *Otacilia* [Figs 72D, 75D, 79D, 82D, 85D, 88D, 91D, 96D, 99D, 103D, 105D, 109D, 111D, 114D, 118D, 120D]). The female of this genus has a broad median septum, broadening posteriorly (Fig. 40C) (vs broad or narrow median septum, narrowing posteriorly in *Otacilia* [Figs 74C, 77C, 78C, 81C, 84C, 87C, 90C, 93C, 94C, 95C, 98C, 102C, 104C, 107C, 108C, 113C, 116C, 117C, 124C, 142]) and convergent, elongated spermathecae (Fig. 40D) (vs small, oval in *Otacilia* [Figs 74D,

77D, 78D, 81D, 84D, 87D, 90D, 93D, 94D, 95D, 98D, 102D, 104D, 107D, 108D, 113D, 116D, 117D, 124D, 143]).

Etymology. The name is a combination of the first six letters of "*grandipunctatus*" (referring to the abdomen dorsally with a large, light mark) and the latter half of *Phrurolithus*. The gender is masculine.

Description. Small to medium, body length 3.0−5.0 mm. PME with black pigment around eye cup, smaller than PLE, anterior eye row slightly recurved, posterior eye row straight. Chelicerae with 3 promarginal and 2 retromarginal teeth. Legs without black-brown annulations or stripes. Tibiae I with 9 or 10 pairs of ventral spines, metatarsi I with 4 pairs of ventral spines. Scutum covering less than ½ of abdomen.

Male palp: femur long, slightly shorter than cymbium, with a strong, large, glove-like ventral extension subdistally; tibia with one thick, strong retrolateral apophysis, tip spine-like, hook-shaped, or otherwise; sperm duct circular, extended from anterior to medial part of bulb; tegulum with 1 retrolateral apophysis, near embolus base, lacking distal apophysis; embolus short, thin, curved into semicircle.

Epigyne with broad median septum (usually posteriorly wider than anterior), covering between 0.4 to 0.7 times maximum width of epigyne, with a pair of small, rounded or slit-like copulatory openings in most species and a pair of convergent, elongated spermathecae.

Comments. Twelve *Otacilia* species were transferred here based on shared characteristics with the genus description; hence, the following new combinations: *Grandilithus bawangling* (Fu, Zhang & Zhu, 2010) **comb. nov.**, *G. biarclatus* (Fu, He & Zhang, 2015) **comb. nov.**, *G. ensifer* (Mu & Zhang, 2021) **comb. nov.**, *G. florifer* (Fu, He & Zhang, 2015) **comb. nov.**, *G. fujianus* (Fu, Jin & Zhang, 2014) **comb. nov.**, *G. jianfengling* (Fu, Zhang & Zhu, 2010) **comb. nov.**, *G. limushan* (Fu, Zhang & Zhu, 2010) **comb. nov.**, *G. longtanicus* (Liu, 2020) **comb. nov.**, *G. lynx* (Kamura, 1994) **comb. nov.**, *G. nonggang* (Liu, Xu, Xiao, Yin & Peng, 2019) **comb. nov.**, *G. taiwanicus* (Hayashi & Yoshida, 1993) **comb. nov.**, *G. wanshou* (Yin, 2012) **comb. nov.**, and *G. xiaoxiicus* (Liu, 2020) **comb. nov.**

Composition. *Grandilithus anyuan* **sp. nov.**, *G. aobei* **sp. nov.**, *G. bawangling* (Fu, Zhang & Zhu, 2010) **comb. nov.**, *G. biarclatus* (Fu, He & Zhang, 2015) **comb. nov.**, *G. dingnan* **sp. nov.**, *G. dongguling* **sp. nov.**, *G. ensifer* (Mu & Zhang, 2021) **comb. nov.**, *G. fengshan* **sp. nov.**, *G. florifer* (Fu, He & Zhang, 2015) **comb. nov.**, *G. fujianus* (Fu, Jin & Zhang, 2014) **comb. nov.**, *G. jianfengling* (Fu, Zhang & Zhu, 2010) **comb. nov.**, *G. jiangshanensis* **sp. nov.**, *G. jingshi* **sp. nov.**, *G. limushan* (Fu, Zhang & Zhu, 2010) **comb. nov.**, *G. longjiatang* **sp. nov.**, *G. longtanicus* (Liu, 2020) **comb. nov.**, *G. lynx* (Kamura, 1994) **comb. nov.**, *G. nanan* **sp. nov.**, *G. ningdu* **sp. nov.**, *G. nonggang* (Liu, Xu, Xiao, Yin & Peng, 2019) **comb. nov.**, *G. taihe* **sp. nov.**, *G. taiwanicus* (Hayashi & Yoshida, 1993) **comb. nov.**, *G. tianyushan* **sp. nov.**, *G. tupingao* **sp. nov.**, *G. wanshou* (Yin, 2012) **comb. nov.**, *G. wanzili* **sp. nov.**, *G. xiaoxiicus* (Liu, 2020) **comb. nov.**, and *G. yunyin* **sp. nov.**

Distribution. China (Jiangxi, Fujian, Hunan, Hainan, Guangxi, Taiwan).

***Grandilithus anyuan* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:3F35FA25-844B-416A-BC32-7D947252E86F

Chinese name 安远大斑蛛

Figures 37−40, 70A, 71

Type material. Holotype: male (Phu-74, 20201007-3), 25°00'28.19"N, 115°25'59.45"E, 511 m, hiking trails, Sanbaishan National Forest Park, Anyuan County, Ganzhou City, Jiangxi Province, China, 7 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 2 males, 1 female (Phu-74, 20201007-3), same data as holotype; 1 female, 1 juvenile (Phu-74, 20201007-3), same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to *Grandilithus fengshan* **sp. nov.** and *G. taihe* **sp. nov.** in

having a slightly curved posterior part of the sperm duct in ventral view and the retrolateral tegular apophysis with a small triangular apex in retrolateral view (Figs 37C−F, 39A). It can be separated by the retrolateral tibial apophysis with a spine-like tip curved toward the sperm duct in retrolateral view (Fig. 37D−F) (vs a relatively blunt apex, curved toward the cymbial groove). The female of the new species resembles *G. dingnan* **sp. nov.** in having a trapezoidal epigynal plate, globular copulatory ducts, and C-shaped connecting tubes (Fig. 40C, D) but can be separated by the slit-like copulatory openings (Fig. 40C) (vs round) separated by the same width as the spermathecal interdistance (Fig. 40D) (vs separated by nearly 1/4 of spermathecal interdistance), and the relatively large, oval spermathecae separated by less than ½ of spermathecal length (Fig. 40D) (vs small, oval spermathecae separated by more than ½ of the spermathecal length).

Description. Male (holotype). Habitus as in Figs 37A, B, 70A. Total length 3.69, carapace 1.79 long, 1.48 wide. Eye sizes and interdistances (Fig. 37A): AME 0.76, ALE 0.55, PME 0.60, PLE 0.68; ALE−AME 0.21, AME–AME 0.46, PLE−PME 0.30, PME–PME 0.67, ALE−ALE 0.51, PLE−PLE 2.57, ALE−PLE 0.51, AME−PME 0.56, AME−PLE 0.97. MOA 2.04 long, frontal width 1.83, posterior width 1.87. Chelicerae (Fig. 37B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 37B) longer than wide, laterally with precoxal triangles at legs III and IV, posteriorly triangular, relatively blunt. Pedicel 0.14 long. Abdomen (Fig. 37A, B) 1.71 long, 1.15 wide. Leg measurements (Figs 37A, B, 38): I 7.53 (2.21, 0.54, 2.02, 1.52, 1.24); II 8.50 (1.82, 0.67, 2.61, 1.93, 1.47); III 10.62 (1.57, 1.14, 2.80, 3.16, 1.95); IV 9.15 (2.35, 0.60, 2.21, 2.61, 1.38); spination (Figs 37A, B, 38A, F): femora I d1, pv111111, II d1, pv111, III d1, IV d1; tibiae I v2222222221, II v22222222; metatarsi I v2222, II v2221; metatarsi III and IV with conspicuous preening brushes, lyriform organs, and dorsal stoppers distally; tarsi with abundant scales, several long trichobothria dorsally and several chemosensory setae on ventro-posterior tarsi and at base of claws, tarsal organ exposed, located subdistally on dorsal part, tarsus IV with a conspicuous slit sensillum; inferior tarsal claw with 3 teeth, 2 large and 1 small, conspicuous tuft clasper and ventral scopula of tenent setae.

Colouration (Fig. 37A, B). Carapace yellow, with irregular dark brown mottling radially around submargin and arc-shaped, dark brown stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen yellow, laterally with pair of longitudinal, serrulate dark brown markings, fused posteriorly; venter yellow.

Palp (Figs 37C−F, 39). Femoral apophysis well-developed, less than 1/3 femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, as long as tibia, with a slightly swollen base and spine-like apex in dorsolateral view, bent inwards to subposterior part of tegulum in retrolateral view. Sperm duct circular, extended to subposterior part of tegulum. Retrolateral tegular apophysis near embolic base, with subtriangular apex in retrolateral view. Embolus short, hook-shaped, relatively thin.

Female. Habitus as in Figs 40A, B, 70A. As in male, except as noted. Total length 3.86, carapace 1.76 long, 1.47 wide. Eye sizes and interdistances (Fig. 40A): AME 0.09, ALE 0.09, PME 0.09, PLE 0.09; AME−AME 0.05, AME−ALE 0.02, PME−PME 0.10, PME−PLE 0.04, AME−PME 0.10, AME−PLE 0.15, ALE−ALE 0.31, PLE−PLE 0.36, ALE−PLE 0.11. MOA 0.27 long, frontal width 0.26, posterior width 0.27. Pedicel 0.14 long. Abdomen (Fig. 40A, B) 1.94 long, 1.15 wide. Leg measurements: I 8.31 (2.03, 0.55, 2.59, 1.81, 1.33); II 9.38 (2.27, 0.72, 2.92, 2.05, 1.42); III 5.43 (1.28, 0.56, 1.29, 1.36, 0.94); IV 8.51 (2.20, 0.59, 2.00, 2.44, 1.28). Leg spination (Fig. 40A, B): femora I dorsal spine absent, pv11111, right pv111111, II d1, right dorsal spine absent, pv1111, right pv11111, III d1, IV d2, right d1; tibiae I v22222222221, II v222222221, right II v222222222; metatarsi I v2222, II v2221, right II v2222.

Colouration (Fig. 40A, B). Darker than male.

Epigyne (Fig. 40C, D). Epigynal plate trapezoidal, posteriorly with an inverted goblet-shaped median septum, broader medially. Copulatory openings slit-like, slightly separated by anteriorly part of median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts globular, short, separated by less than ½ of their length. Bursae large, balloon-shaped, basally separated, cov-

ering more than ½ of epigynal plate. Glandular appendages tubercule shaped, arising anteriorly from connecting tubes, directed anteriorly. Connecting tubes C-shaped, nearly as long as copulatory ducts. Spermathecae oval, posteriorly convergent, separated by less than ½ of their length. Fertilization ducts short, located posteriorly on spermathecae, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus aobei* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:C91717AE-ADFF-4894-88C0-E7E626C88E08

Chinese name 坳背大斑蛛

Figures 41, 42, 71

Type material. Holotype: male (Phu-121, 20210204-1), 26°43’30.36”N, 113°53’59.95”E, 373 m, Aobei Village, Dongshang Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 4 February 2021, K. Liu, D. Zhao, & Z. He leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to those of *Grandilithus lynx* (Kamura, 1994) **comb. nov.** (see Kamura 1994: 165, figs 8, 9, 12), *G. nongang* (Liu et al., 2019) **comb. nov.**, and *G. yunyin* **sp. nov.** in having a digitiform retrolateral tegular apophysis and a short, hook-shaped embolus (Figs 41D−F, 42A, B, D, E) but differs by the large, V-shaped dark brown mottling without submedial serrulate stripes dorsally on the abdomen (Fig. 41A) (vs submedial serrulate stripes present in *G. lynx*, indistinct in *G. yunyin*; dark brown mottled markings absent in *G. nongang*) and a strong retrolateral tibial apophysis with 2 bends at the tip (Figs 41D−F, 42A, B, D, E) (vs 1 strong bend in *G. lynx*, *G. nongang*, and *G. yunyin*).

Description. Habitus as in Fig. 41A, B. Total length 4.15, carapace 1.79 long, 1.49 wide. Eye sizes and interdistances (Fig. 41): AME 0.08, ALE 0.11, PME 0.07, PLE 0.09; ALE−AME 0.04, AME–AME 0.09, PLE−PME 0.08, PME–PME 0.13, ALE−ALE 0.32, PLE−PLE 0.43, ALE−PLE 0.13, AME−PME 0.15, AME−PLE 0.19. MOA 0.33 long, frontal width 0.26, posterior width 0.27. Chelicerae (Fig. 41B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 41B) slightly longer than wide, laterally with precoxal triangles and intercoxal extensions on legs II–IV, posteriorly triangular, relatively blunt. Pedicel 0.14 long. Abdomen (Fig. 41A, B) 2.23 long, 1.22 wide. Leg measurements: I 9.07 (2.14, 0.68, 2.53, 2.10, 1.62); II 6.14 (1.88, 0.61, 1.27, 1.54, 0.84); III 5.81 (1.55, 0.61, 1.27, 1.54, 0.84); IV 8.87 (2.36, 0.66, 2.07, 2.44, 1.34). Leg spination (Fig. 41A, B): femora I d1, pv11111, II d1, pv1111, right I pv111, II pv111, III d1; IV d1; tibiae I v2222222221, right v2222221, II v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 41A, B). Carapace yellow, with conspicuous irregular dark yellow-brown mottling radially around submargin and arc-shaped dark brown stripes around margin. Chelicerae, endites, labium, and legs yellow. Sternum yellowish. Abdomen yellow, with large, V-shaped dark brown mark, posteriorly with three yellowish transverse stripes; venter yellow.

Palp (Figs 41C−F, 42). Femoral apophysis well-developed, less than ½ of femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, as long as tibia, with a broad base and 2 bends at apex (one strong, the other weak), bent prolaterally toward cymbium dorsally. Sperm duct circular, reaching subposterior part of tegulum. Retrolateral tegular apophysis digitiform, extended from base of sperm duct to embolic base. Embolus short, hook shaped.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

Grandilithus bawangling **(Fu, Zhang & Zhu, 2010) comb. nov.**
Chinese name 霸王岭大斑蛛

Otacilia bawangling Fu *et al.* 2010: 645, fig. 3A−F (♂♀, type deposition in MHBU).

Diagnosis. The male of this species is very similar to that of *Grandilithus lynx* (Kamura, 1994) **comb. nov.** (see Kamura 1994: 165, figs 8, 9, 12) by the presence of a dorsal abdominal pattern and by the retrolateral tibial apophysis swollen medially, but it can be separated by the tip of retrolateral tibial apophysis strongly bent toward the distal part of the tibia (vs bent anterolaterally toward the subposterior part of the cymbium).

Description. See Fu *et al.* (2010).

Comments. The holotype clearly belongs to *Grandilithus* based on the light medial mark dorsally on the abdomen, the femoral apophysis located distally, the strong retrolateral tibial apophysis, and the lack of a distal tegular apophysis in ventral view. The female is placed here because it has a pair of slit-like copulatory openings and a pair of convergent, elongated spermathecae

Distribution. China (Hainan).

Grandilithus biarclatus **(Fu, He & Zhang, 2015) comb. nov.**
Chinese name 双弧大斑蛛

Otacilia biarclata Fu *et al.* 2015: 437, figs 1−20 (♂♀, type deposition in MHBU).

Diagnosis. This species is easily distinguished from other congeners by the very dark brown body (see Fu *et al.* 2015: 437, figs 7, 8) (vs light yellow), the crescent-shaped embolus (see Fu *et al.* 2015: 437, figs 9−12) (vs hook shaped), and by the large, C-shaped sclerotized margin of the copulatory openings that nearly covers 2/3 of the epigynal plate (see Fu *et al.* 2015: 437, figs 13, 14) (vs less than ½).

Description. See Fu *et al.* (2015).

Distribution. China (Hainan).

Grandilithus dingnan **Liu & S. Li sp. nov.**
urn:lsid:zoobank.org:act:9E15E878-06CF-4BA9-879C-DB4419F394D6
Chinese name 定南大斑蛛
Figures 43, 71

Type material. Holotype: female (Phu-72, 20201006-3), 24°42’49.17”N, 114°54’22.61”E, 506 m, Aotou Village, Laocheng Town, Dingnan County, Ganzhou City, Jiangxi Province, China, 6 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 1 juvenile (Phu-72, 20201006-4), 24°42’51.97”N, 114°54’13.90”E, 601 m, other data same as for holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female of the new species is similar to that of *Grandilithus anyuan* **sp. nov.** in having a trapezoidal epigynal plate, globular copulatory ducts, and C-shaped connecting tubes (Fig. 43C, D) but differs by the nearly touching, round copulatory openings (Fig. 43C) (vs separated, slit-like copulatory openings) and the small, oval spermathecae separated by more than ½ of the spermathecal length (Fig. 43D) (vs relatively large, oval spermathecae separated by less than ½ of spermathecal length).

Description. Habitus as in Fig. 43A, B. Total length 3.95, carapace 1.85 long, 1.53 wide. Eye sizes and inter-

distances: AME 0.10, ALE 0.10, PME 0.08, PLE 0.08; AME−AME 0.06, AME−ALE 0.03, PME−PME 0.10, PME−PLE 0.06, AME−PME 0.11, AME−PLE 0.15, ALE−ALE 0.29, PLE−PLE 0.40, ALE−PLE 0.13. MOA 0.29 long, frontal width 0.25, posterior width 0.27. Chelicerae (Fig. 43B) with 2 promarginal (proximal larger) and 3 retromarginal teeth (distal largest, median smallest). Sternum (Fig. 43B) longer than wide, laterally with precoxal triangles on all legs and intercoxal extensions between coxae I and II, II and III, and III and IV, posteriorly triangular, relatively blunt. Pedicel 0.07 long. Abdomen (Fig. 1A, B) 2.04 long, 1.27 wide. Leg measurements: I 5.09 (1.27, 0.36, 1.54, 1.16, 0.76); II 3.78 (0.95, 0.35, 1.11, 0.78, 0.59); III 3.23 (0.86, 0.26, 0.77, 0.87, 0.47); IV 5.18 (1.37, 0.34, 1.23, 1.47, 0.77). Leg spination (Fig. 43A, B): femora I d1, pv111111, right pv11111, II pv1111, right pv111, III d1, IV d1; tibiae I v2222222221, II v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 43A, B). Carapace yellow. Chelicerae, endites, labium, and legs yellow. Sternum yellowish to yellow. Abdomen yellow with longitudinal pale grey mark medially and pair of longitudinal dark brownish marks laterally, subposteriorly with conspicuous serrulate mottled marks, fused posteriorly; venter yellow with abundant brownish spots.

Epigyne (Fig. 43C, D). Epigynal plate trapezoidal, posteromedially with a median septum, broader medially. Copulatory openings oval, close to each other, slightly separated by anterior narrow part of median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts globular, short, close to each other. Bursae large, bean-shaped, basally slightly separated, covering more than ½ of epigynal plate. Glandular appendages tubercule shaped, relatively broad, arising anteriorly from connecting tubes, directed anterolaterally. Connecting tubes C-shaped, longer than copulatory ducts. Spermathecae oval, separated by more than ½ of spermathecal length, anteriorly partly covered by bursal base. Fertilization ducts short, located subposteriorly, directed anterolaterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus dongguling* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:D5655AB0-95CA-484B-BF9E-3B5F838DB72B

Chinese name 东固岭大斑蛛

Figures 44, 71

Type material. Holotype: female (Phu-81, 2020-10-25-1), 26°48’18.13”N, 115°24’50.87”E, 270 m, near Dongguling Tunnel, Donggushezu Town, Qingyuan District, Ji’an City, Jiangxi Province, China, 25 October 2020, K. Liu, Y. Ying, & S. Yuan leg. **Paratypes:** 1 juvenile, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female resembles that of *Grandilithus tupingao* **sp. nov.** in having a pentagonal median septum and slanting, elongated spermathecae (Fig. 44C, D), but it differs by the oval copulatory ducts (Fig. 44C) (vs round), the widely separated bursal bases (Fig. 44D) (vs slightly separated), and the very short, slanting connecting tubes (Fig. 44D) (vs small, C-shaped).

Description. Habitus as in Fig. 44A, B. Total length 3.40, carapace 1.67 long, 1.42 wide. Eye sizes and interdistances (Fig. 44A): AME 0.09, ALE 0.11, PME 0.08, PLE 0.08; AME−AME 0.6, AME−ALE 0.03, PME−PME 0.10, PME−PLE 0.7, AME−PME 0.08, AME−PLE 0.17, ALE−ALE 0.30, PLE−PLE 0.39, ALE−PLE 0.11. MOA 0.26 long, frontal width 0.25, posterior width 0.26. Chelicerae (Fig. 44B) with 3 promarginal (proximal largest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 44B) clearly longer than wide, laterally with indistinct precoxal triangles and intercoxal extensions, relatively pointed. Abdomen (Fig. 8A) 1.72 long, 0.86 wide. Leg measurements: I 8.11 (2.18, 0.54, 2.51, 1.95, 0.93); II 6.34 (1.66, 0.47, 1.76, 1.45, 1.00); III 3.31 (0.84, 0.31, 0.78, 0.84, 0.54); IV

5.02 (1.33, 0.35, 1.26, 1.31, 0.77). Leg spination (Fig. 44A, B): femora I d1, pv111111, II d1, pv1111, III d1, IV d1; tibiae I v2222222221, II v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 44A, B). Carapace yellow. Chelicerae, endites, labium, and legs yellow. Sternum yellowish to yellow. Abdomen yellowish, with large, V-shaped, dark brown mark extended from anterior to subposterior part; venter yellow.

Epigyne (Fig. 44C, D). Epigynal plate trapezoidal, posterior with an inverted goblet-shaped median septum, submedian part broader than other parts. Copulatory openings slit-like, separated by anterior narrow part of median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts oval, short, slanting, slightly separated. Bursae large, eggplant-shaped, slightly separated sub-basally, covering almost 2/3 of epigynal plate. Glandular appendages tubercule-shaped, relatively broad, arising anteriorly on connecting tubes, directed laterally. Connecting tubes very short, slanting, clearly shorter than length of copulatory ducts. Spermathecae oval, remarkably elongated, sloping, separated by more than ½ of spermathecal length. Fertilization duct longer than 2/3 spermathecal length, located posteriorly, directed anteriorly.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus ensifer* (Mu & Zhang, 2021) comb. nov.**

Chinese name 剑大斑蛛

Otacilia ensifera Mu & Zhang 2021: 534, fig. 1 (♂♀, type deposition in MHBU).

Diagnosis. The male of this species is similar to that of *Grandilithus taihe* **sp. nov.** (see Mu & Zhang 2021: 534, fig. 1C−F) by the U-shaped sperm duct and the small, triangular retrolateral tegular apophysis, but it can be separated by the retrolateral tibial apophysis with a spine-like tip pointing retrolateralllly (vs curved tip pointing dorsally) and lacking basal macrosetae (vs present) in dorsal view. The female can be easily distinguished from *G. taihe* **sp. nov.**by the short median septum nearly covering 2/3 of epigynal plate (vs covering all of median plate) and the short spermathecae widely separated by more than their length (vs long spermathecae touching posteriorly).

Description. See Mu & Zhang (2021).

Distribution. China (Hunan).

***Grandilithus fengshan* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:D9FF99FC-7D1D-4341-B598-2BDE5FDC6102

Chinese name 峰山大斑蛛

Figures 45, 46, 70B, 71

Type material. Holotype: male (Phu-93, 20201004-2), 25°45’17.05”N, 114°59’00.70”E, 402 m, Fengshan National Forest Park, Shashi Town, Zhanggong District, Ganzhou City, Jiangxi Province, China, 4 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Grandilithus anyuan* **sp. nov.** in having the sperm duct slightly curved posteriorly and the retrolateral tegular apophysis with a small, subtriangular apex in retrolateral view (Figs 45C−F, 46C), but it differs by the retrolateral tibial apophysis with a relatively blunt tip curved toward the cymbial groove in retrolateral view (Figs 45D−F, 46A, B, D, F) (vs with a spine-like tip curved toward the sperm duct).

Description. Habitus as in Fig. 45A, B, 70B. Total length 2.62, carapace 1.26 long, 1.06 wide. Eye sizes and interdistances (Fig. 45A): AME 0.08, ALE 0.08, PME 0.07, PLE 0.08; ALE−AME 0.02, AME–AME 0.05, PLE−PME 0.03, PME–PME 0.08, ALE−ALE 0.25, PLE−PLE 0.28, ALE−PLE 0.05, AME−PME 0.07, AME−PLE 0.10. MOA 0.21 long, frontal width 0.21, posterior width 0.21. Chelicerae (Fig. 45B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal largest). Sternum (Fig. 45B) longer than wide, laterally with precoxal triangles and intercoxal extensions between I and II, II and III, and III and IV, posteriorly triangular, relatively blunt. Pedicel 0.07 long. Abdomen (Fig. 45A, B) 1.28 long, 0.78 wide. Leg measurements: I 4.79 (1.17, 0.32, 1.28, 1.23, 0.79); II 3.82 (1.00, 0.29, 1.12, 0.93, 0.48); III 3.96 (0.94, 0.38, 0.86, 1.10, 0.68); IV 6.57 (1.76, 0.44, 1.55, 1.83, 0.99). Leg spination (Fig. 45A, B): femora I dorsal spine absent, pv111, right pv11111, II dorsal spine absent, pv111, III d1, IV d1; tibiae I v222222, right v222222221, II v22222; metatarsi I v22222, right v2222, II v2222.

Colouration (Fig. 45A, B). Carapace yellow, with conspicuous, irregular dark yellow-brown mottling radially around submargin and arc-shaped dark brown stripes around margin. Chelicerae, endites, labium, and legs yellow. Sternum yellow. Abdomen yellow, with a large, U-shaped, dark brown mottled marking, subposteriorly with 4 chevrons, yellow mottled stripes subposteriorly; venter yellow.

Palp (Figs 45C−F, 46). Femoral apophysis well-developed, less than ½ of femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, slightly shorter than tibia, with slightly constricted base in dorsal view, bent toward cymbial groove. Sperm duct circular, extended to subposterior part of tegulum. Retrolateral tegular apophysis ridge shaped, extended from base of sperm duct to embolic base. Embolus short, hook shaped.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus florifer* (Fu, He & Zhang, 2015) comb. nov.**

Chinese name 花腹大斑蛛

Otacilia florifera Fu *et al.* 2015: 444, figs 21−34 (♂♀, type deposition in MHBU).

Diagnosis. This species is easily distinguished from other congeners by both sexes with a pair of longitudinal dark brown stripes on the carapace (see Fu *et al.* 2015: 444, figs 21, 22) (vs indistinct radial stripes or absent) and the male abdomen dorsally with 2 pairs of large, dark spots (see Fu *et al.* 2015: 444, fig. 21) (vs absent). The male palp (see Fu *et al.* 2015: 444, figs 23−26) is similar to most *Grandilithus* species, such as *G. fujianus* (Fu, Jin & Zhang, 2014) **comb. nov.** and *G. jianfengling* (Fu, Zhang & Zhu, 2010) **comb. nov.**, by the strong retrolateral tibial apophysis with a bent tip, a hook-shaped embolus, and a short retrolateral tegular apophysis. The females resemble those of *G. fujianus* (see Fu *et al.* 2014: 484, fig. 1F, G) and *G. taiwanicus* (Hayashi & Yoshida, 1993) **comb. nov.** (Wang *et al.* 2012: 44, fig. 7G, H) in having slender spermathecae that are slightly bent medially, but differ by (see Fu *et al.* 2015: 444, figs 27, 28) the median septum being broader posteriorly than anteriorly (vs broader anteriorly than posteriorly), the slightly separated copulatory openings (vs widely separated), and the widely separated spermathecae (vs slightly separated).

Description. See Fu *et al.* (2015).

Distribution. China (Hainan).

***Grandilithus fujianus* (Fu, Jin & Zhang, 2014) comb. nov.**

Chinese name 福建大斑蛛

Otacilia fujiana Fu *et al.* 2014: 484, figs 1A−G, 2A−D (♂♀, type deposition in MHBU).

Diagnosis. The male of this species is similar to that of *Grandilithus lynx* (Kamura, 1994) **comb. nov.** (see Kamura 1994: 165, figs 8, 9, 12) by the U-shaped sperm duct, the hook-shaped embolus, and the retrolateral tibial apophysis slightly bent and directed anterolaterally toward the cymbial base, but it can be separated by the conspicuous triangular retrolateral tegular apophysis (see Fu *et al.* 2014: 484, fig. 1B−D) (vs indistinct or very small). The female (see Fu *et al.* 2014: 484, fig. 1F, G) resembles that of *G. taiwanicus* (Hayashi & Yoshida, 1993) **comb. nov.** (see Kamura 2001: 52, figs 16, 17) in having a C-shaped atrial margin and slender spermathecae that are slightly curved medially, but it differs by the relatively long copulatory ducts (vs short) and the bursal base is extended to the medial part of the spermathecae (vs anteriorly).

Description. See Fu *et al.* (2014).

Distribution. China (Fujian).

***Grandilithus jianfengling* (Fu, Zhang & Zhu, 2010) comb. nov.**
Chinese name 尖峰岭大斑蛛

Otacilia jianfengling Fu *et al.* 2010: 641, figs 1A−H, 2A−E (♂♀, type deposition in MHBU); Fu *et al.* 2015: 448, figs 52−58.

Diagnosis. The male of this species is similar to that of *Grandilithus florifer* (Fu, He & Zhang, 2015) **comb. nov.** (see Fu *et al.* 2015: 444, figs 21, 23−26, 29−32) in having a hook-shaped embolus, a short, clavate retrolateral tegular apophysis, and a retrolateral tibial apophysis with a hook-shaped tip, but it differs by (see Fu *et al.* 2015: 448, figs 54−56) the light-coloured body (vs dark brown) and the medial rectangular bend of the sperm duct (vs obtuse). The female (see Fu *et al.* 2015: 448, figs 57, 58) resembles that of *G. lynx* (Kamura, 1994) **comb. nov.** (see Kamura, 1994: 165, figs 10, 11) in having a broad median septum and widely separated spermathecae, but it differs by the large bursae covering more than 2/3 of the vulval plate (vs nearly ½) and the relatively short copulatory ducts (vs long).

Description. See Fu *et al.* (2010).

Distribution. China (Hainan).

***Grandilithus jiangshan* Liu & S. Li sp. nov.**
urn:lsid:zoobank.org:act:083E1A03-4A12-4AD2-93EA-0DEB3FEC5B85
Chinese name 浆山大斑蛛
Figures 47, 71

Type material. Holotype: female (Phu-120, 20210204-4), 26°47’14.35”N, 113°53’23.57”E, 496 m, Jiangshan Village, Dongshang Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 4 February 2021, K. Liu, D. Zhao, & Z. He leg. **Paratypes:** 1 juvenile, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female resembles that of *Grandilithus longtanicus* **comb. nov.** (see Liu *et al.* 2020a: 20, fig. 12A−D) in having transverse, slit-like copulatory openings, large, round, touching copulatory ducts, eggplant-shaped bursae, and C-shaped connecting tubes (Fig. 47C, D) but can be separated by the dorsal abdomen with serrulate dark brown markings (Fig. 47A) (vs. absent) and the slanting, elongated spermathecae slightly curved submedially (Fig. 47D) (vs the curve absent).

Description. Habitus as in Fig. 47A, B. Total length 4.72, carapace 1.74 long, 1.51 wide. Eye sizes and inter-

distances (Fig. 47A): AME 0.10, ALE 0.11, PME 0.08, PLE 0.09; AME−AME 0.08, AME−ALE 0.03, PME−PME 0.12, PME−PLE 0.06, AME−PME 0.12, AME−PLE 0.16, ALE−ALE 0.33, PLE−PLE 0.41, ALE−PLE 0.12. MOA 0.31 long, frontal width 0.28, posterior width 0.28. Chelicerae (Fig. 47B) with three promarginal (proximal largest, distal smallest) and two retromarginal teeth (distal larger). Sternum (Fig. 47B) longer than wide, laterally with precoxal triangles and intercoxal extensions between I and II, II and III, and III and IV, posteriorly triangular, relatively blunt. Pedicel 0.26 long. Abdomen (Fig. 47A, B), 2.67 long, 1.23 wide. Leg measurements (Fig. 47A, B): I 8.8 (2.11, 0.68, 2.64, 1.85, 1.52); II 7.28 (1.81, 0.66, 2.05, 1.51, 1.25); III 8.84 (2.41, 0.51, 2.18, 2.47, 1.27); IV 5.86 (1.57, 0.49, 1.24, 1.56, 1.00). Leg spination (Fig. 47A, B): femora I d1, pv11111, II d1, pv1111, III d1, IV d1; tibiae I v2222222221, II v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 47A, B). Carapace yellow, with conspicuous irregular dark yellow-brown mottling radially around submargin and arc-shaped dark stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen yellowish, laterally with pair of longitudinal serrulate dark brown markings, posteriorly fused; venter yellowish.

Epigyne (Fig. 47C, D). Epigynal plate subtrapezoidal, with an inverted goblet-shaped median septum, submedian part slightly broad and posteriorly extended. Copulatory openings slit-like, slightly separated by the narrow anterior part of median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts round, touching. Bursae large, eggplant-shaped, basally separated, covering more than 2/3 of epigynal plate. Glandular appendages tubercule-shaped, relatively broad, arising from anterior of connecting tubes, directed antero-laterally. Connecting tubes C-shaped, short, clearly less than the length of copulatory ducts. Spermathecae oval, sloping, remarkably elongated, medially with a slight curve, posteriorly touching. Fertilization ducts short, as long as ½ of spermathecal length, located posteriorly on spermathecae, directed antero-laterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus jingshi* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:B3B2171F-0AA6-4172-850E-5B9E0341C643

Chinese name 靖石大斑蛛

Figures 48–50, 70C, 71

Type material. Holotype: male (Phu-118, 20210121-1), 25°42’54.89”N, 115°26’21.37”E, 522 m, Pingshan Meadow, Pingshan Group, Huangsha Village, Jingshi Town, Yudu County, Ganzhou City, Jiangxi Province, China, 21 January 2021, K. Liu, Z. Meng, & D. Zhao leg. **Paratypes:** 2 males, 1 female, 1 juvenile, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Grandilithus fengshan* **sp. nov.** in having the posterior sperm duct slightly curved and the retrolateral tegular apophysis with a small subtriangular apex (Figs 48C−F, 49E, G, H), but it differs by the light marking covering nearly ¾ of dorsal abdomen (Fig. 48A) (vs about ½) and the retrolateral tibial apophysis with a thin apex, less than the length of the thick basal part (Figs 48D−F, 49E, G, H) (vs as long as the thick basal part). The female resembles those of *G. taihe* **sp. nov.** in having a pair of slightly touching copulatory openings and an inverted goblet-shaped median septum (Fig. 50C, D), but it can be separated by the light marking covering more than 3/4 of dorsal abdomen (Fig. 50A) (vs almost ½), the copulatory duct reaching the anterior margin of the spermathecae (Fig. 50D) (vs the axis of spermathecae), and the separated posterior spermathecae (Fig. 50D) (vs touching).

Description. Male (holotype). Habitus as in Fig. 48A, B. Total length 2.79, carapace 1.32 long, 1.12 wide. Eye sizes and interdistances (Fig. 48A): AME 0.10, ALE 0.11, PME 0.08, PLE 0.09; ALE−AME 0.03, AME–AME 0.07, PLE−PME 0.06, PME–PME 0.11, ALE−ALE 0.30, PLE−PLE 0.38, ALE−PLE 0.09, AME−PME 0.10, AME−PLE 0.14. MOA 0.28 long, frontal width 0.25, posterior width 0.27. Chelicerae (Fig. 48B) with three promarginal (proximal largest, distal smallest) and two retromarginal teeth (distal larger). Sternum (Fig. 48B) longer than wide, laterally with precoxal triangles III and IV, posteriorly triangular, relatively blunt. Pedicel 0.09 long. Abdomen (Fig. 48A, B) 1.37 long, 0.87 wide. Leg measurements: I 8.4 (2.09, 0.57, 2.42, 1.88, 1.44); II 6.47 (1.70, 0.48, 1.62, 1.50, 1.17); III 5.33 (1.40, 0.49, 1.06, 1.47, 0.91); IV 8.47 (2.21, 0.55, 1.99, 2.43, 1.29). Leg spination (Fig. 48A, B): femora I d1, pv11111, II d1, pv111, III d1, IV d1; tibiae I v222222222, II v22222221, right I v222222221; metatarsi I v2222, II v2211.

Colouration (Fig. 48A, B). Carapace yellow, with indistinct, irregular, dark yellow-brown mottled stripes medially around submargin and conspicuous arc-shaped dark stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen yellowish, laterally with V-shaped dark brown mark; venter yellowish.

Palp (Figs 48C−F, 49). Femoral apophysis well-developed, less than 1/3 of femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, shorter than tibia, with a broad base and beak-shaped apex, apical part shorter than basal part, bent inwards to cymbial groove. Sperm duct circular, reaching subposterior part of tegulum. Retrolateral tegular apophysis triangular, extended from base of sperm duct to embolic base. Embolus short, hook-shaped, with a membranous branch.

Female. Habitus as in Figs 50A, B, 70C. As in male, except as noted. Darker than male. Total length 4.59, carapace 1.95 long, 1.56 wide. Eye sizes and interdistances (Fig. 50A): AME 0.09, ALE 0.11, PME 0.08, PLE 0.08; AME−AME 0.08, AME−ALE 0.03, PME−PME 0.11, PME−PLE 0.07, AME−PME 0.11, AME−PLE 0.17, ALE−ALE 0.31, PLE−PLE 0.41, ALE−PLE 0.1. MOA 0.27 long, frontal width 0.25, posterior width 0.26. Pedicel 0.16 long. Abdomen (Fig. 50A, B) 2.47 long, 1.2 wide. Leg measurements: I 9.21 (2.28, 0.66, 2.89, 2.09, 1.29); II 7.49 (1.94, 0.63, 2.14, 1.54, 1.24); III 5.77 (1.62, 0.54, 1.31, 1.47, 0.83); IV 9.67 (2.58, 0.64, 2.29, 2.66, 1.50). Leg spination (Fig. 50A, B): femora I pv11111, II pv1111; tibiae I v2222222221, II v22222222; metatarsi I v2222, II v2221.

Epigyne (Fig. 50C, D). Epigynal plate subtrapezoidal. Copulatory openings oval, slightly separated by narrow anterior part of median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts C-shaped, slightly separated, posteriorly covering anterior margin of spermathecae. Bursae large, bean-shaped, basally widely separated, covering more than 2/3 of epigynal plate. Glandular appendages tubercule-shaped, very short, arising anteriorly on connecting tubes, near base of bursae. Connecting tubes C-shaped, very short, less than ½ length of copulatory ducts. Spermathecae oval, remarkably elongated, sloping, separated by nearly ½ of spermathecal width. Fertilization ducts short, located subposteriorly on spermathecae, directed laterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus limushan* (Fu, Zhang & Zhu, 2010) comb. nov.**

Chinese name 黎母山大斑蛛

Otacilia limushan Fu *et al.* 2010: 648, fig. 4A−C (♀, type deposition in MHBU); Fu *et al.* 2015: 444, figs 35−51 (♂♀).

Diagnosis. This species is similar to that of *Grandilithus biarclatus* (Fu, He & Zhang, 2015) **comb. nov.** (Fu *et al.* 2015: 444, figs 40−43, 46−49) in having a dark body, but it can be separated by the short embolus, as long as 1/3 of

tegular width (vs nearly as long as tegular width), the conspicuously clavate retrolateral tegular apophysis (vs very small or indistinct), the retrolateral tibial apophysis as long as ½ of tibia (vs less than ½ of tibia), and the widely separated, round copulatory openings with a pair of small atrial margins (vs slightly separated, slit-like copulatory openings with a pair of large C-shaped atrial margins).

Description. See Fu *et al.* (2010) and Fu *et al.* (2015).

Distribution. China (Hainan).

***Grandilithus longjiatang* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:6F5A724F-6D8F-49C9-82F7-23D27E3C531B

Chinese name 龙家塘大斑蛛

Figures 51, 52, 71

Type material. Holotype: male (Phu-132, 20210502-5), 26°41'07.69"N, 115°23'50.64"E, 403 m, near ditch, Dawu Mountain, Longjiatang Ethnic Village, Donggu Town, Qingyuan District, Ji'an City, Jiangxi Province, China, 2 May 2021, K. Liu, Y. Ying, X. Zeng, & J. Yan leg. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to those of *Grandilithus xiaoxiicus* **comb. nov.** (see Liu *et al.*, 2020a: 34, fig. 21A−D) and *G. yunyin* **sp. nov.** in having a U-shaped sperm duct and a retrolateral tibial apophysis with a curved apex pointing at the retro-dorsolateral part of the cymbium (Figs 51F−I, 52B, C, E, F), but it differs by the relatively short retrolateral tegular apophysis not reaching the embolic base (Figs 51H, 52D, E, G) (vs reaching the embolic base in *G. xiaoxiicus* and *G. yunyin*).

Description. Habitus as in Fig. 51A, B. Total length 3.97, carapace 1.79 long, 1.49 wide. Eye sizes and inter-distances (Fig. 51A): AME 0.12, ALE 0.12, PME 0.08, PLE 0.07; AME−AME 0.06, AME−ALE 0.03, PME−PME 0.11, PME−PLE 0.07, AME−PME 0.12, AME−PLE 0.16, ALE−ALE 0.33, PLE−PLE 0.41, ALE−PLE 0.09. MOA 0.28 long, frontal width 0.29, posterior width 0.32. Chelicerae (Fig. 51B) with 3 promarginal (proximal smallest, distal largest) and 3 retromarginal teeth (proximal largest). Sternum (Fig. 51B) longer than wide, laterally with strong precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.13 long. Abdomen (Fig. 51A, B) 2.03 long, 1.28 wide. Leg measurements: I 7.1 (1.83, 0.6, 1.86, 1.66, 1.15); II 8.49 (1.84, 0.61, 2.09, 2.62, 1.33); III 6 (1.58, 0.55, 1.32, 1.64, 0.91); IV 8.96 (2.41, 0.61, 2.05, 2.57, 1.32). Leg spination (Fig. 51A, B): femora I d1, pv1111, right I pv111111, II d1, pv111, III d1, IV d1; tibiae I v2222221, II v2222221, right I v222222221; metatarsi I v2222, II v2222.

Colouration (Fig. 51A, B). Carapace yellow-brown, with conspicuous, irregular dark yellow-brown mottling radially around submargin. Chelicerae, endites, and labium yellow. Sternum yellow, with radial dark yellow stripes around submargin. Legs yellow. Abdomen dark brown with a bullet-shaped scutum antero-medially and three light chevrons medially (first one broad, third one indistinct); venter yellow, with large, sub-rectangular dark brown marking posteromedially.

Palp (Figs 51C−I, 52). Femoral apophysis well-developed, less than 1/3 of femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, shorter than tibia, with basal constriction and a curved apex pointing at retro-dorsolateral part of cymbium in dorsal view. Sperm duct U-shaped, extended to sub-posterior part of tegulum. Retrolateral tegular apophysis short and thick, extended along anterior tegular margin, not reaching embolic base. Embolus short, curved into a semicircle.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus longtanicus* (Liu, 2020) comb. nov.**
Chinese name 龙潭大斑蛛
Figures 32, 136 A−C

Otacilia longtanica Liu *et al.* 2020a: 20, fig. 12A−D (♀).

Type material. Holotype: female (Phu-23), 26°35’56.40”N, 114°08’24.00”E, 838 m, Longtan Scenic Spot, Xiaojing Village, Ciping Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 31 May 2014, K. Liu, X. Huang, Z. Chen, Y. Tang, Z. Meng, & Z. Wang leg.

Other material. 1 female (Phu-28, 20210104-1), 26°35’32.30”N, 114°08’16.64”E, 923 m, Longtan Scenic Spot, Xiaojing Village, Huangao Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 4 January 2021, K. Liu, D. Zhao, C. Luo, & H. Wang leg.; 2 females (Phu-28, 20210501-4), 26°34’52.63”N, 114°07’48.40”E, 936 m, near Xiaojing Tea Plantation, 1 May 2021, K. Liu, Y. Ying, J. Yan, & M. Fei leg., other data as previous; 1 subadult male, 1 female, (Phu-28, 20210501-5), 26°35’33.53”N, 114°08’18.31”E, 922 m, other data as previous; 4 females (Phu-127, 20210501-3), 26°30’55.45”N, 114°12’12.05”E, 383 m, Bijiashan Scenic Spot, Xiajing Village, Ciping Town, other data as previous. All these specimens are deposited in ASM-JGSU.

Comments. Unfortunately, only female specimens of *G. longtanicus* were found when we surveyed spiders from the same area as the holotype. Finding the male of this species will allow comparisons with other species.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus lynx* (Kamura, 1994) comb. nov.**
Chinese name 山猫大斑蛛

Phrurolithus lynx Kamura 1994: 165, figs 8−13 (♂♀, type deposition in OGU).
Otacilia lynx Deeleman-Reinhold 2001: 409, 505; Kamura 2009: 556, f. 53−57; Komei 2020: 57, figs 1−2.

Diagnosis. The male of this species is similar to that of *Grandilithus fujianus* (Fu, Jin & Zhang, 2014) **comb. nov.** (see Fu *et al.* 2014: 484, figs 1B−D, 2A, B) by the U-shaped sperm duct, the hook-shaped embolus, and the retrolateral tibial apophysis slightly bent and directed anterolaterally toward the cymbial base, but it can be separated by the indistinct retrolateral tegular apophysis (vs conspicuous triangular). The female resembles that of *G. jianfengling* (Fu, Zhang & Zhu, 2010) **comb. nov.** (see Fu *et al.* 2014: 484, fig. 1F, G) in having a broad median septum and widely separated spermathecae, but it differs by the large bursae covering nearly ½ of the vulval plate (vs more than 2/3) and the long copulatory ducts (vs relatively short).

Description. See Kamura (1994).

Distribution. China (Taiwan); Japan.

***Grandilithus nanan* Liu & S. Li sp. nov.**
urn:lsid:zoobank.org:act:EEBECB78-3AEF-4E38-814E-22BEC413F691
Chinese name 南安大斑蛛
Figures 53, 54, 71

Type material. Holotype: male (Phu-58, 20201003-4), 25°26’40.76”N, 114°21’00.21”E, 459 m, Shirenkeng, Nan’an Town, Dayu County, Ganzhou City, Jiangxi Province, China, 3 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Grandilithus fengshan* **sp. nov.** in having a slightly curved posterior sperm duct and a retrolateral tegular apophysis with a small triangular apex (Figs 53D−F, 54F) but differs by the narrow light marking covering nearly 2/3 of dorsal abdomen (Fig. 53A) (vs relatively broad, covering nearly ½ of dorsal abdomen) and the retrolateral tibial apophysis lacking a basal constriction in dorsal view (Fig. 53F) (vs present).

Description. Habitus as in Fig. 53A, B. Total length 3.77, carapace 1.59 long, 1.26 wide. Eye sizes and inter-distances (Fig. 53A): AME 0.09, ALE 0.10, PME 0.08, PLE 0.08; AME−AME 0.09, AME−ALE 0.03, PME−PME 0.10, PME−PLE 0.05, AME−PME 0.11, AME−PLE 0.16, ALE−ALE 0.30, PLE−PLE 0.33, ALE−PLE 0.12. MOA 0.26 long, frontal width 0.26, posterior width 0.23. Chelicerae (Fig. 53B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 53B) slightly longer than wide, laterally with transparent precoxal triangles, posteriorly relatively pointed. Pedicel 0.2 long. Abdomen (Fig. 53A, B) 2.03 long, 1.01 wide. Leg measurements: I 7.09 (2.06, 0.46, 2.37, 1.84, 0.36); II 6.53 (1.67, 0.45, 1.75, 1.51, 1.15); III 5.06 (1.44, 0.42, 1.23, 1.13, 0.84); IV 8.30 (2.30, 0.50, 2.04, 2.36, 1.10). Leg spination (Fig. 53A, B): femora I d1, pv11111, II d1, pv111, right I pv111111, III d1, IV d1; tibiae I v2222222221, II v22222221, right I v222222222; metatarsi I v2222, II v2221.

Colouration (Fig. 53A, B). Carapace yellow, with conspicuous, medial, irregular dark yellow-brown mottling radially and arc-shaped dark stripes around margin. Chelicerae, endites, and labium yellow. Sternum yellowish. Legs yellow. Abdomen dark brown, medially with a narrow yellowish marking, covering 2/3 of abdomen; venter dark yellow-brown.

Palp (Figs 53C−F, 54). Femoral apophysis well-developed, less than 1/3 of femoral length. Ventral tibial apophysis small, located subproximally on tibia. Retrolateral tibial apophysis large, shorter than tibia, with a broad base in dorsal view, apical part shorter than basal part, bent inwards to cymbial groove. Sperm duct circular, reaching subposterior part of tegulum. Retrolateral tegular apophysis extended from base of sperm duct to embolic base, with a triangular apex. Embolus short, hook shaped.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus ningdu* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:CE18E532-6185-4D2D-848C-CFAC8C727D06

Chinese name 宁都大斑蛛

Figures 55, 56, 71

Type material. Holotype: male (Phu-117, 20210123-2), 26°48’51.91”N, 115°47’53.23”E, 401 m, Goudaozui, Lingyun Mountain Forest Park, Xiaobuzhen Scenic Spot, Pixia Village, Xiaobu Town, Ningdu County, Ganzhou City, Jiangxi Province, China, 23 January 2021, K. Liu, Z. Meng, & D. Zhao leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to those of *Grandilithus aobei* **sp. nov.**, and *G. yunyin* **sp. nov.** in having the retrolateral tibial apophysis with a curved apex and a strongly curved embolus (Figs 55D−F, 56A, B, D, E), but it differs from by the large, serrulate, dark brown mottling on the dorsal abdomen (Fig. 55A) (vs V-shaped in *G. aobei* **sp. nov.**, indistinct in *G. yunyin* **sp. nov.**) and a ridge-shaped retrolateral tegular apophysis (Figs 55D−F, 56A, C, D, F) (vs digitiform in *G. aobei* **sp. nov.** and *G. yunyin* **sp. nov.**).

Description. Habitus as in Fig. 55A, B. Total length 4.08, carapace 1.86 long, 1.57 wide. Eye sizes and inter-

distances (Fig. 55A): AME 0.10, ALE 0.11, PME 0.10, PLE 0.07; ALE−AME 0.04, AME–AME 0.08, PLE−PME 0.06, PME–PME 0.11, ALE−ALE 0.33, PLE−PLE 0.42, ALE−PLE 0.11, AME−PME 0.12, AME−PLE 0.16. MOA 0.31 long, frontal width 0.27, posterior width 0.20. Chelicerae (Fig. 55B) with two promarginal (proximal larger) and 5 retromarginal teeth (distal largest). Sternum (Fig. 55B) clearly longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.17 long. Abdomen (Fig. 55A, B) 2.05 long, 1.09 wide. Leg measurements: I 9.32 (2.35, 0.69, 2.50, 2.16, 1.62); II 7.36 (1.77, 0.55, 2.11, 1.61, 1.32); III 6.22 (1.61, 0.60, 1.37, 1.64, 1.00); IV 8.51 (1.86, 0.74, 2.10, 2.61, 1.20). Leg spination (Fig. 55A, B): femora I d1, pv11111, right I pv1111, II d1, pv1111, III d1, IV d1; tibiae I v222222222, II v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 55A, B). Carapace yellow, with conspicuous irregular dark yellow-brown mottling radially around submargin and arc-shaped dark brown stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow.

Palp (Figs 55C−F, 56). Femoral apophysis well-developed, less than 1/3 of femoral length. Retrolateral tibial apophysis large, shorter than tibia, with broad base and strongly curved apex, bent inwards toward cymbial groove. Sperm duct circular, extended to subposterior part of tegulum. Retrolateral tegular apophysis ridge-shaped, extended from base of sperm duct to embolic base. Embolus short, hook shaped.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus nonggang* (Liu, Xu, Xiao, Yin & Peng, 2019) comb. nov.**

Chinese name 弄岗大斑蛛

Figure 71, 135, 136D−F

Otacilia nonggang Liu *et al.* 2019: 449, figs 11A−D, 12A−C, 13A−E (♂♀, type deposition in HNNU).

Type material. Holotype: male: 22°18’50.4”N, 106°55’23.99”E, 187 m, Shangjin Station, Longgang National Nature Reserve, Longzhou County, Chongzuo City, Guangxi Zhuang Autonomous Region, China, 2 November 2017, A. He, K. Liu, Q. Cai, J. Liu, J. Liu, & Z. Huang leg. **Paratypes:** 1 male, 2 females, same data as holotype; 1 female, 22°28’22.8”N, 106°57’28.79”E, 184 m, 25 October 2017, other data as holotype; 1 female, 22°27’51”N, 106°55’56.39”E, 228 m, 26 October 2017, other data as holotype; 1 female, Longgang Station, Longheng Village, 22°28’28.82”N, 106°58’58.8”E, 270 m, 29 October 2017, other data as holotype.

Diagnosis. The male of this species is similar to that of *Grandilithus limushan* (Fu, Zhang & Zhu, 2010) **comb. nov.** (see Fu *et al.* 2015: 444, figs 38, 40−43) .The female is easily distinguished from *G. limushan* by the yellow-brown body (Fig. 136D) (vs dark brown or dark) and the short and broad spermathecae widely separated by more than ½ of the posterior width of the median septum (Fig. 136E) (vs touching).

Description. See Liu *et al.* (2019).

Distribution. China (Guangxi).

***Grandilithus taihe* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:A0BF9FB0-C4EC-4E33-A347-4669EE860CBF

Chinese name 泰和大斑蛛

Figures 57–59, 70D, 71

Type material. Holotype: male (Phu-92, 20201028-1), 26°43’05.30”N, 115°13’36.28”E, 228 m, Ziyao Mountain, Zhonglong Village, Zhonglong Town, Taihe County, Ji’an City, Jiangxi Province, China, 28 October 2020, K. Liu, Y.

Ying, S. Yuan, & K. Huang leg. **Paratypes:** 2 females, 4 juveniles, same data as holotype; 4 males, 3 females, 2 juveniles, 26°43’23.15”N, 115°13’31.70”E, 388 m, other data same as holotype; 1 male (Phu-92, 20201028-2), 26°43’15.05”N, 115°13’37.85”E, 332 m, other data same as holotype; 2 juveniles (Phu-92, 20201028-4), 26°42’58.10”N, 115°13’30.00”E, 206 m, other data same as holotype; 1 female (Phu-92, 20210502-1), 26°43’01.53”N, 115°13’47.13”E, 229 m, near scenic area gate, 2 May 2021, K. Liu, Y. Ying, X. Zeng, & J. Yan leg., other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Grandilithus fengshan* **sp. nov.** in having a short, light-yellow marking medially on the dorsal abdomen and a strong retrolateral tibial apophysis with a slightly curved, short apex in dorsal view (Fig. 57A) but differs by the columnar tubercle near the base of the retrolateral tibial apophysis (Fig. 57F) (vs absent). The females resemble those of *G. jingshi* **sp. nov.** in having an inverted goblet-shaped median septum and slanting, elongated spermathecae (Fig. 59C, D) but can be separated by the copulatory duct reaching the axis of the spermathecae (Fig. 59D) (vs covering spermathecae anteriorly) and the touching spermathecae (Fig. 59D) (vs slightly separated).

Description. Male (holotype). Habitus as in Figs 57A, B, 70D. Total length 3.07, carapace 1.50 long, 1.29 wide. Eye sizes and interdistances (Fig. 57A): AME 0.09, ALE 0.07, PME 0.08, PLE 0.08; ALE−AME 0.04, AME–AME 0.09, PLE−PME 0.04, PME–PME 0.1, ALE−ALE 0.32, PLE−PLE 0.36, ALE−PLE 0.1, AME−PME 0.09, AME−PLE 0.14. MOA 0.29 long, frontal width 0.24, posterior width 0.26. Chelicerae (Fig. 57A, B) with three promarginal (proximal largest, distal smallest) and two retromarginal teeth (distal larger). Sternum (Fig. 57B) slightly longer than wide, laterally with precoxal triangles, posteriorly pointed. Pedicel 0.07 long. Abdomen (Fig. 57A, B) 1.48 long, 0.97 wide. Leg measurements: I 6.9 (1.72, 0.49, 2.16, 1.64, 0.89); II 5.62 (1.31, 0.4, 1.6, 1.24, 1.07); III 4.93 (1.28, 0.41, 1.1, 1.28, 0.86); IV 7.45 (1.84, 0.44, 1.84, 2.2, 1.13). Leg spination (Fig. 57A, B): femora I d1, pv11111, II d1, pv111, III d1, IV d1; tibiae I v222222222, II v22222221, right I v2222222221; metatarsi I v2222, II v2221.

Colouration (Fig. 57A, B). Carapace yellow, with conspicuous irregular, dark yellow-brown mottling radially around submargin and arc-shaped dark stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen yellow, anteromedially with yellow scutum, laterally with large, U-shaped dark brown mark; venter yellowish.

Palp (Figs 57C−F, 58). Femoral apophysis well-developed, as long as 1/3 of femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, nearly as long as tibia, with a tapering apex bent inwards to cymbial groove and a columnar tubercle near base. Sperm duct circular, reaching subposterior part of tegulum. Retrolateral tegular apophysis small, triangular in retrolateral view. Embolus short, hook shaped.

Female. Habitus as in Fig. 59A, B. As in male, except as noted. Total length 3.96, carapace 1.82 long, 1.58 wide. Eye sizes and interdistances (Fig. 59A): AME 0.08, ALE 0.09, PME 0.08, PLE 0.07; AME−AME 0.12, AME−ALE 0.05, PME−PME 0.14, PME−PLE 0.09, AME−PME 0.14, AME−PLE 0.18, ALE−ALE 0.35, PLE−PLE 0.44, ALE−PLE 0.15. MOA 0.3 long, frontal width 0.27, posterior width 0.28. Sternum (Fig. 59B) as long as wide. Pedicel 0.09 long. Abdomen (Fig. 59A, B) 2.01 long, 1.26 wide. Leg (Fig. 59A, B) measurements: I 9.24 (2.32, 0.46, 2.97, 1.9, 1.59); II 7.07 (1.85, 0.48, 1.96, 1.57, 1.21); III 6.09 (1.64, 0.49, 1.37, 1.63, 0.96); IV 5.35 (2.57, 0.54, 2.24, 0, 0). Leg spination (Fig. 59A, B): femora I dorsal spine absent, pv111111, II d1, pv11111, III d1, IV d1; tibiae I v2222222221, II v222222221; metatarsi I v2222, II v2221, right II v22222.

Colouration (Fig. 59A, B). Darker than male. Endites, labium, sternum, and legs yellowish. Abdomen dark brown, mottled, anteromedially with indistinct light marking.

Epigyne (Fig. 59C, D). Epigynal plate subtrapezoidal, medially with an inverted goblet-shaped median septum, posteriorly extended. Copulatory openings slit-like, slightly separated by narrow anterior part of median septum.

Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts sub-round, separated by less ½ of their length. Bursae large, eggplant-shaped, basally separated, covering more than 2/3 of epigynal plate. Glandular appendages tubercule shaped with cluster of blind tubes arising anteriorly on connecting tubes, directed anteriorly. Connecting tubes C-shaped, short, nearly as long as ½ of spermathecal length. Spermathecae oval, sloping, remarkably elongated, posteriorly touching each other. Fertilization ducts short, located subposteriorly on spermathecae, directed antero-laterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus taiwanicus* (Hayashi & Yoshida, 1993) comb. nov.**
Chinese name 台湾大斑蛛

Phrurolithus taiwanicus Hayashi & Yoshida 1993: 49, figs 8−11 (♀, type deposition in NSM); Kamura 2001: 52, figs 14−19 (♂♀).
Otacilia taiwanica Kamura 2005: 91; Kamura 2009: 556, figs 58−62; Wang *et al.* 2012: 44, figs 6A, 7A−H.

Diagnosis. The male of this species is similar to that of *Grandilithus ningdu* **sp. nov.** in having a U-shaped sperm duct and a retrolateral tibial apophysis with an obtuse, curved apex directed at the cymbial base, but it differs by (Kamura 2001: 52, figs 14, 16, 17) the dark brown, serrulate markings on the dorsal abdomen (vs absent) and a short, clavate retrolateral tegular apophysis with a curved tip (vs straight). The female resembles *G. fujianus* (see Fu *et al.* 2014: 484, figs 1F, G, 2C, D) **comb. nov.** in having a C-shaped atrial margin and slender spermathecae that slightly curve medially, but it differs by the short copulatory ducts (vs relatively long) and the base of the bursae reaching the anterior part of the spermathecae (vs median part).

Description. See Kamura (2001).

Distribution. China (Taiwan, Chongqing, Fujian).

***Grandilithus tianyushan* Liu & S. Li sp. nov.**
urn:lsid:zoobank.org:act:C9EC8668-6E4C-4976-8C25-092A34F61EE1
Chinese name 天玉山大斑蛛
Figures 60−62, 70E, 71

Type material. Holotype: male (Phu-129, 20210505-1), 27°08’03.90”N, 115°05’37.17”E, 526 m, Tianyu Mountain, Tianyu Town, Qinggyuan District, Ji’an City, Jiangxi Province, China, 5 May 2021, K. Liu, Y. Ying, C. Xu, & Q. Xiao leg. **Paratypes:** 4 females, 4 juveniles, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Grandilithus xiaoxiicus* **comb. nov.** in having a U-shaped sperm duct and clavate retrolateral tegular apophysis (Figs 60D−F, 61A, C, D, F, G), but it differs by the retrolateral tibial apophysis with a strongly curved apex pointing toward the retrolateral tegulum (Figs 60D−F, 61A, C, D, F, G) (vs pointing toward dorsolateral cymbium) in dorsal view. The females resemble *G. xiaoxiicus* (Fig. 136H, I) in having a subhexagonal median septum and convergent spermathecae with a median constriction (Fig. 62C, D), but they can be separated by the bursal base touching the anterior part of the spermathecae (Fig. 62D) (vs slightly separated) and the thin connecting tubes (Fig. 62D) (vs relatively broad).

Description. Male (holotype). Habitus as in Figs 60A, B, 70E. Total length 3.53, carapace 1.62 long, 1.39 wide. Eye sizes and interdistances (Fig. 60A): AME 0.10, ALE 0.10, PME 0.09, PLE 0.10; ALE−AME 0.03, AME–AME 0.05, PLE−PME 0.05, PME–PME 0.9, ALE−ALE 0.30, PLE−PLE 0.38, ALE−PLE 0.1, AME−PME 0.09,

AME−PLE 0.15. MOA 0.30 long, frontal width 0.24, posterior width 0.27. Chelicerae (Fig. 60B) with three promarginal (proximal largest, distal smallest) and three retromarginal teeth (distal largest). Sternum (Fig. 60B) clearly longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.12 long. Abdomen (Fig. 60A, B) 1.78 long, 1.14 wide. Leg measurements: I 7.84 (1.89, 0.59, 2.24, 1.87, 1.25); II 6.12 (1.39, 0.55, 1.68, 1.42, 1.08); III 5.26 (1.46, 0.41, 1.18, 1.43, 0.78); IV 8.10 (2.21, 0.56, 1.93, 2.28, 1.12). Leg spination (Fig. 60A, B): femora I d1, pv11111, II d1, pv111, III d1, IV d1; tibiae I v222222221, II v22222221, right I v22222221; metatarsi I v2222, II v2221.

Colouration (Fig. 60A, B). Carapace yellow, with indistinct irregular dark yellow-brown mottling radially around submargin and arc-shaped dark stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen yellowish, anteromedially with oval yellowish mark, laterally with large, U-shaped dark brown mark; venter yellowish.

Palp (Figs 60C−F, 61). Femoral apophysis well-developed, slightly shorter than 1/3 of femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, longer than tibia, with tapered apex bent inwards to cymbial groove, apical part with a sharp turn, pointed toward retrolateral tegulum in dorsal view. Sperm duct U-shaped, reaching subposterior part of tegulum. Retrolateral tegular apophysis clavate, extended beyond base of embolic base in retrolateral view, with slightly curved apex. Embolus short, hook-shaped.

Female. Habitus as in Fig. 62A, B. As in male, except as noted. Total length 4.20, carapace 1.83 long, 1.57 wide. Eye sizes and interdistances (Fig. 62A): AME 0.09, ALE 0.12, PME 0.09, PLE 0.10, AME−AME 0.06, AME−ALE 0.03, PME−PME 0.09, PME−PLE 0.07, AME−PME 0.10, AME−PLE 0.16, ALE−ALE 0.30, PLE−PLE 0.42, ALE−PLE 0.10. MOA 0.3 long, frontal width 0.25, posterior width 0.27. Pedicel 0.08 long. Abdomen (Fig. 62A, B) 2.4 long, 1.42 wide. Leg measurements: I 7.94 (2.19, 0.66, 2.46, 1.81, 0.82); II 6.96 (1.83, 0.65, 1.88, 1.5, 1.1); III 5.83 (1.53, 0.6, 1.28, 1.58, 0.84); IV 8.66 (2.37, 0.61, 2.06, 2.4, 1.22). Leg spination (Fig. 62A, B): femora I dorsal spine absent, pv11111, right pv111111, II d1, pv1111, III d1, IV d1; tibiae I v2222222221, II v222222221; metatarsi I v2222, II v2221.

Colouration (Fig. 62A, B). Darker than male. Abdomen dark brown, mottled, anteromedially with indistinct light marking not reaching the middle; venter with indistinct grey-brown mark.

Epigyne (Fig. 62C, D). Epigynal plate S-shaped, with bottle-shaped median septum. Median septum anteriorly C-shaped, posteriorly subrectangular. Copulatory openings crescent shaped, widely separated by anterior narrow part of median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts short, anteriorly wider than posteriorly. Bursae large, eggplant shaped, basally separated, nearly covering ½ of epigynal plate. Glandular appendages tubercule-shaped, arising from anterior part of connecting tubes. Connecting tubes very short, shorter than 1/3 of copulatory duct. Spermathecae oval, remarkably elongated, sloping, medially with a slight curve, posteriorly slightly separated. Fertilization duct long, nearly more than ½ of spermathecal length, located posteriorly on spermathecae, directed antero-laterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus tupingao* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:2EB90110-6063-409D-98C6-613655A7199B

Chinese name 图坪凹大斑蛛

(Figures 63, 70F, 71)

Type material. Holotype: female (Phu-134, 20210504-2), 27°26’45.19”N, 114°11’17.53”E, 1223 m, Tupingao area, near Ropeway, Wugong Mountain National Forest Park, Taishan Town, Anfu County, Ji’an City, Jiangxi Province, China, 4 May 2021, K. Liu, Y. Ying, C. Xu, & Q. Xiao leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female resembles *Grandilithus wanzili* **sp. nov.** in having an inverted goblet-shaped median septum and widely separated spermathecae (Fig. 63C, D) but differs by the slightly separated margins of the copulatory openings (Fig. 63C) (vs touching) and the elongated spermathecae (Fig. 63D) (vs relatively short and broad).

Description. Habitus as in Figs 63A, B, 70F. Total length 3.78, carapace 1.76 long, 1.55 wide. Eye sizes and interdistances (Fig. 63A): AME 0.10, ALE 0.09, PME 0.08, PLE 0.09; AME−AME 0.07, AME−ALE 0.02, PME−PME 0.11, PME−PLE 0.06, AME−PME 0.11, AME−PLE 0.17, ALE−ALE 0.32, PLE−PLE 0.42, ALE−PLE 0.12. MOA 0.30 long, frontal width 0.27, posterior width 0.29. Chelicerae (Fig. 63B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 63B) clearly longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively pointed. Pedicel 0.04 long. Abdomen (Fig. 63A, B), 2.00 long, 1.26 wide. Leg measurements: I 8.76 (2.26, 0.65, 2.7, 2.01, 1.14); II 7.24 (1.83, 0.61, 2.07, 1.57, 1.16); III 5.91 (1.49, 0.56, 1.3, 1.64, 0.92); IV 8.93 (2.45, 0.64, 2.14, 2.58, 1.12). Leg spination (Fig. 63A, B): femora I d1, pv11111, II d1, pv1111, III d1, IV d1; tibiae I v222222221, II v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 63A, B). Carapace yellow with conspicuous, radial, irregular dark brown mottling submedially and arc-shaped dark stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen yellowish, laterally with pair of longitudinal, serrulate dark brown markings extended from anterior to posterior in dorsal view, posteriorly fused with each other; venter yellowish.

Epigyne (Fig. 63C, D). Epigynal plate subtrapezoidal, posteromedially with an inverted goblet-shaped median septum. Copulatory openings slit-like, slightly separated by anterior narrow part of median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts sub-round, slightly separated. Bursae large, glove-shaped, basally separated, covering more than 2/3 of epigynal plate. Glandular appendages tubercule-shaped, with many tubercules on the surface, relatively broad, arising from anterior part of connecting tubes, directed antero-laterally. Connecting tubes C-shaped, very short, clearly less than length of copulatory ducts. Spermathecae oval, sloping, remarkably elongated, posteriorly widely separated by more than ½ width of posterior part of median septum. Fertilization ducts relatively long, longer than ½ of spermathecal length, located subposteriorly on spermathecae, directed antero-laterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

Grandilithus wanshou **(Yin, 2012) comb. nov.**

Chinese name 万寿大斑蛛

Phrurolithus wanshou Yin *et al.* 2012: 1082, fig. 569a−f (♂♀, type deposition in OGU).
Otacilia wanshou Zamani & Marusik 2020: 312.

Diagnosis. The male of this species is similar to that of *Grandilithus fujianus* **comb. nov.** (see Fu *et al.* 2014: 484, figs 1B−D, 2A, B) in having a hook-shaped embolus, a U-shaped sperm duct, and a retrolateral tibial apophysis with an S-shaped apex, but it can be separated by the retromarginal teeth with 2 clustered denticles (vs 5), tibiae I with 9 pairs of spines (vs 7 pairs), and the indistinct retrolateral tegular apophysis (vs distinct, triangular). The female (see Fu *et al.* 2014: 484, fig. 1F, G) resembles *G. bawangling* (Fu, Zhang & Zhu, 2010) **comb. nov.** (see Fu *et al.* 2010: 645, fig 3E, F) in having a large, C-shaped, sclerotized atrial margin, but it differs by the broad median septum (vs narrow) and the strongly slanted spermathecae (vs slightly).

Description. See Yin *et al.* (2012).

Distribution. China (Hunan).

***Grandilithus wanzili* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:62CFB297-E10A-4AC4-910B-03DF6C3ED822

Chinese name 湾子里大斑蛛

Figures 64, 71

Type material. Holotype: female (Phu-137, 20210503-4), 26°54'05.72"N, 115°48'19.29"E, 717 m, Wanzili Village, Zhongcun Town, Yongfeng County, Ji'an City, Jiangxi Province, China, 3 May 2021, K. Liu, Y. Ying, J. Yan, & C. Xu leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female resembles that of *Grandilithus tupingao* **sp. nov.** in having an inverted goblet-shaped median septum and widely separated spermathecae (Fig. 64C, D) but differs by the copulatory openings touching one another (Fig. 64C) (vs slightly separated) and the relatively short and broad spermathecae (Fig. 64C, D) (vs elongated).

Description. Habitus as in Fig. 64A, B. Total length 4.03, carapace 1.88 long, 1.58 wide. Eye sizes and interdistances: AME 0.09, ALE 0.10, PME 0.08, PLE 0.07; AME−AME 0.09, AME−ALE 0.03, PME−PME 0.11, PME−PLE 0.08, AME−PME 0.11, AME−PLE 0.17, ALE−ALE 0.36, PLE−PLE 0.44, ALE−PLE 0.13. MOA 0.30 long, frontal width 0.28, posterior width 0.30. Chelicerae (Fig. 64B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 64B) longer than wide, laterally with precoxal triangles, posteriorly relatively pointed. Pedicel 0.07 long. Abdomen (Fig. 4A, B), 2.17 long, 1.34 wide. Leg measurements: I 8.97 (2.15, 0.64, 2.72, 1.98, 1.48); II 7.28 (1.84, 0.64, 2.02, 1.57, 1.21); III 5.88 (1.52, 0.56, 1.28, 1.6, 0.92); IV 9.04 (2.35, 0.63, 2.2, 2.6, 1.26). Leg spination (Fig. 64A, B): femora I dorsal spine absent, pv111111, II d1, pv1111, III d1, IV d1; tibiae I v2222222221, II v222222221; metatarsi I v2222, II v2221.

Colouration (Fig. 64A, B). Carapace yellow, with radial irregular dark yellow-brown mottling submedially and arc-shaped dark stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen dark brown, anteromedially with a conspicuous light stripe reaching dorsum medially, laterally with pair of indistinct, longitudinal, serrulate dark brown markings, posteriorly fused; venter yellowish.

Epigyne (Fig. 64C, D). Epigynal plate subtrapezoidal, postero-medially with an inverted goblet-shaped median septum. Copulatory openings slit-like, touching each other. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts round, touching each other. Bursae large, bean-shaped, basally slightly separated, covering less than 2/3 of epigynal plate. Glandular appendages tubercule-shaped, short and broad, with many tubercules on the surface, arising from anterior part of connecting tubes, directed antero-laterally. Connecting tubes C-shaped, very short, shorter than copulatory ducts. Spermathecae oval, relatively short and broad, sloping, posteriorly widely separated by more than ½ width of posterior part of median septum. Fertilization ducts relatively long, clearly longer than ½ of spermathecal length, located subposteriorly on spermathecae, directed antero-laterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus xiaoxiicus* (Liu, 2020) comb. nov.**

Chinese name 小溪大斑蛛

Figures 65, 66, 70G, 71, 136G−I

Otacilia xiaoxiica Liu *et al.*, 2020a: 34, fig. 21A−D (♀, type deposition in ASM-JGU).

Type material. Holotype: female (Phu-23), 26°28’08.40”N, 114°12’36.00”E, 365 m, Xiaoxi Forest Farm, Huangao Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, China, 30 May 2017, K. Liu, Z. Chen, Z. Meng, & W. Xie leg.

Other material. 2 females (Phu-90, 20201114-2), 26°28’22.92”N, 114°11’53.07”E, 413 m, Xiaoxi Forest Farm, Fuxi Village, Huangao Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 14 November 2020, K. Liu, Y. Ying, D. Zhao, Z. He, & M. Fei leg.; 1 female (Phu-90, 20201114-1), same data as previous; 1 male, 9 females (Phu-23, 20210501-1), 26°28’02.31”N, 114°13’18.35”E, 331 m, Shijiao Village, 1 May 2021, K. Liu, Y. Ying, J. Yan, & M. Fei leg., other data as previous. All these specimens are deposited in ASM-JGSU.

Diagnosis. The male of this species is similar to that of *Grandilithus yunyin* **sp. nov.** in having a semi-circular embolus and a clavate retrolateral tegular apophysis (Figs 65D, E, 66A, D−F), but it differs by the retrolateral tibial apophysis with the tip bent at a right-angle in dorsal view (Figs 65D, E, 66A−C, E) (vs obtuse-angle). The females resemble *G. yunyin* **sp. nov.** (Fig. 67C, D) in having C-shaped copulatory plugs and slit-like copulatory openings (Fig. 136H, I), but they can be separated by the rectangular median septum (vs trapezoidal) and the touching spermathecae (vs separated).

Description. Habitus as in Fig. 65A, B. Total length 3.75, carapace 1.68 long, 1.41 wide. Eye sizes and interdistances: AME 0.10, ALE 0.10, PME 0.08, PLE 0.10; ALE−AME 0.03, AME–AME 0.06, PLE−PME 0.06, PME–PME 0.09, ALE−ALE 0.30, PLE−PLE 0.38, ALE−PLE 0.08, AME−PME 0.10, AME−PLE 0.14. MOA 0.29 long, frontal width 0.25, posterior width 0.27. Chelicerae (Fig. 65A, B) with 3 promarginal (proximal largest, distal smallest) and 2 retromarginal teeth (distal larger). Sternum (Fig. 65B) clearly longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Abdomen (Fig. 1A, B) 1.43 long, 0.86 wide. Leg measurements: I 8.86 (2.21, 0.58, 2.52, 2.07, 1.48); II 6.96 (1.86, 0.58, 1.81, 1.58, 1.13); III 5.87 (1.58, 0.53, 1.27, 1.6, 0.89); IV 9.03 (2.51, 0.64, 2.06, 2.62, 1.2). Leg spination (Fig. 65A, B): femora I d1, pv11111, II d1, pv111, III d1, IV d1; tibiae I v222222222, II v22222221; metatarsi I v22222, II v2221, right I v222211.

Colouration (Fig. 65A, B). Carapace yellow-brown, with irregular yellow-brown mottling radially. Chelicerae and endites yellow. Labium yellow, mottled. Sternum yellowish, laterally with yellow mottled stripes around margin. Legs yellow. Abdomen yellow-brown, laterally with U-shaped, dark yellow-brown mottled mark around scutum, 2 light chevrons, and 1 indistinct yellowish arc on posterior scutum; scutum weak in anterior ½; venter with indistinct conical brown marking posteromedially.

Palp (Figs 65C−F, 66). Femoral apophysis well-developed, as long as 1/3 of femoral length. Ventral tibial apophysis small, located subproximally. Retrolateral tibial apophysis large, nearly as long as tibia in ventral view, with blunt apex bent inwards toward cymbial groove in ventral view and pointed toward the base of the dorsal part of cymbium. Sperm duct U-shaped, reaching subposterior part of tegulum. Retrolateral tegular apophysis clavate, medially slightly curved in retrolateral view, as long as embolus. Embolus short, semi-circular.

Female (Figs 70G, 136G−I): see Liu *et al*. (2020a).

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Grandilithus yunyin* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:BA594D13-A3FF-408F-9808-55778C107513

Chinese name 云隐大斑蛛

Figures 67−69, 70H, 71

Type material. Holotype: female (Phu-100, 20201109-2), 27°15’20.44”N, 115°10’45.58”E, 623 m, near Yunyin Temple, Dadong Mountain, Jishui County, Ji’an City, Jiangxi Province, China, 9 November 2020, K. Liu, Y. Ying, Z.

He, & M. Fei leg. **Paratypes:** 1 male, 2 females (Phu-100, 20210505-2), 27°15'15.74"N, 115°10'48.93"E, 621 m, near a water column, Ji'an City, Jiangxi Province, China, 5 May 2021, K. Liu, Y. Ying, C. Xu, & Q. Xiao leg., other data same as holotype; 3 juveniles, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name is derived from the type locality, Yunyin Temple in Dadong Mountain; noun in apposition.

Diagnosis. The female of the new species is similar to that of *Grandilithus taiwanicus* (Hayashi & Yoshida, 1993) **comb. nov.** (see Kamura 2001: 52, figs 18, 19) in having an S-shaped epigynal plate, C-shaped copulatory plugs, and slit-like copulatory openings (Fig. 67C, D), but it differs by the relatively broad spermathecae with a slight turn medially (Fig. 67D) (vs thin spermathecae with a sharp turn) and the wide posterior interdistance of spermathecae (Fig. 67D) (vs relatively narrow). The male can be easily recognised by the retrolateral tibial apophysis with a curved apex (Figs 68D–F, 69A, C–E) (vs S-shaped apex in *G. taiwanicus* [Kamura 2001: 52, figs 16, 17]) in retrolateral view and the clavate retrolateral tegular apophysis (Figs 68D, E, 69A, B, D, F) (vs digitiform and pointed toward retrolateral part of cymbium in *G. taiwanicus*).

Description. Female (holotype). Habitus as in Figs 67A, B, 70H. Total length 4.04, carapace 1.68 long, 1.45 wide. Eye sizes and interdistances (Fig. 67A): AME 0.09, ALE 0.12, PME 0.08, PLE 0.09, AME–AME 0.10, AME–ALE 0.04, PME–PME 0.12, PME–PLE 0.07, AME–PME 0.11, AME–PLE 0.17, ALE–ALE 0.32, PLE–PLE 0.44, ALE–PLE 0.12. MOA 0.28 long, frontal width 0.25, posterior width 0.28. Chelicerae (Fig. 67B) with 3 promarginal (proximal largest, distal smallest) and 3 retromarginal teeth (distal largest, proximal smallest). Sternum (Fig. 67B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Abdomen (Fig. 67A, B) 2.05 long, 1.2 wide. Leg measurements: I 9.08 (2.19, 0.68, 2.73, 1.99, 1.49); II 7.39 (1.84, 0.63, 2.09, 1.56, 1.27); III 5.85 (1.60, 0.47, 1.29, 1.59, 0.90); IV 9.32 (2.39, 0.76, 2.20, 2.61, 1.36). Leg spination (Fig. 67A, B): femora I dorsal spine absent, pv1111111, right I pv111111, II d1, pv1111, III d1, IV d1; tibiae I v222222222221, II v222222222, right I v22222222221; metatarsi I v2222, II v2222.

Colouration (Fig. 67A, B). Carapace yellow, with irregular dark yellow-brown mottling radially around submargin and arc-shaped dark brown stripes around margin. Chelicerae, endites, labium, and legs yellow. Sternum yellowish. Abdomen yellow, with a conspicuous U-shaped dark brown marking; venter yellow, posteromedially with an indistinct subquadrangular brown spot.

Epigyne (Fig. 67C, D). Epigynal plate S-shaped, with an inverted goblet-shaped median septum. Copulatory openings slit-like, widely separated by anteriorly broad median septum. Connecting tubes and spermathecae distinctly visible through integument. Copulatory ducts C-shaped, widely separated, longer than connecting tubes. Bursae large, eggplant-shaped, covering nearly 2/3 of epigynal plate. Glandular appendages tubercule-shaped, arising from anterior part of connecting tubes, directed anteromedially. Connecting tubes very short, less than 1/3 of spermathecal length. Spermathecae oval, sloping, remarkably elongated, medially with a slight curve, posteriorly separated by more than ½ of spermathecal length. Fertilization ducts long, located posteriorly on spermathecae, directed antero-laterally.

Male. Habitus as in Fig. 68A, B. Darker than female. As in female, except as noted. Total length 2.83, carapace 1.41 long, 1.25 wide. Eye sizes and interdistances (Fig. 68A): AME 0.08, ALE 0.09, PME 0.07, PLE 0.09; ALE–AME 0.03, AME–AME 0.06, PLE–PME 0.05, PME–PME 0.09, ALE–ALE 0.25, PLE–PLE 0.32, ALE–PLE 0.08, AME–PME 0.08, AME–PLE 0.13. MOA 0.25 long, frontal width 0.22, posterior width 0.22. Chelicerae (Fig. 68B) with 3 promarginal (proximal largest, distal smallest) and 4 retromarginal teeth (distal largest). Abdomen (Fig. 1A, B) 1.43 long, 0.86 wide. Leg measurements: I 7.03 (1.67, 0.52, 2.05, 1.66, 1.13); II 5.79 (1.42, 0.51, 1.58, 1.33, 0.95); III 4.86 (1.23, 0.43, 1.10, 1.30, 0.80); IV 7.34 (1.94, 0.50, 1.77, 2.04, 1.09). Leg spination (Fig. 68A, B): femora I pv11111, II pv1111; tibiae I v222222221, II v22222222, right v22222221; metatarsi I v2222, II v2221.

Palp (Figs 68C–F, 69). Femoral apophysis well-developed, more than 1/3 of femoral length. Ventral tibial apoph-

ysis small, located subproximally. Retrolateral tibial apophysis large, slightly shorter than tibia, with a blunt apex bent inwards toward cymbial groove, forming an angle of ca. 110° with its axis, with a basal constriction. Sperm duct circular, reaching subposterior part of tegulum. Retrolateral tegular apophysis clavate, medially slightly curved, extended from base of sperm duct to embolic base. Embolus short, crescent shaped.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 71).

***Otacilia* Thorell, 1897**

Chinese name 奥塔蛛属

Otacilia Thorell 1897a: 243.

Type species. *Otacilia armatissima* Thorell, 1897.

Diagnosis. The genus *Otacilia* differs from *Phrurolithus* and *Abdosetae* by the conspicuous chevrons on the abdomen dorsally (Figs 72A, 74A, 75A, 77A, 78A, 79A, 81A, 82A, 84A, 85A, 87A, 88A, 90A, 91A, 93A, 94A, 95A, 96A, 98A, 99A, 101A, 102A, 103A, 104A, 105A, 107A, 108A, 109A, 111A, 113A, 114A, 116A, 117A, 118A, 120A, 124A, 137A−J, L, M, 141) (absent in most *Phrurolithus* [see Wang *et al.* 2015: 460, fig. 15A, B] and *Abdosetae* [Figs 2A, 6A, 8A, 9A, 11A, 12A, 14A, 16A, 17A, 19A]). Males of *Otacilia* differ from those of *Phrurolithus* by having a strong ridge-like extension anteriorly with a depression on the palpal femur (Figs 72C−F, 75C−F, 79C−F, 82C−F, 85C−F, 88C−F, 91C−F, 96C−F, 99C−F, 103C−F, 105C−F, 109C−F, 111C−F, 118C−F, 120C−F, 139) (vs digitiform, without hole in *Phrurolithus* [see Wang *et al.* 2015: fig. 15D, E; Zamani and Marusik 2020: fig. 4A−C]), a retrolateral tibial apophysis (Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F, 139, 140) (vs retroventral tibial apophysis present, retrolateral tibial apophysis absent in *Phrurolithus* [see Wang *et al.* 2015: fig. 15D, E; Zamani and Marusik 2020: fig. 4A−C]) and the embolus as long as ½ of tegular width (Figs 72D, E, 75D, E, 79D, E, 82D, E, 85D, E, 88D, E, 91D, E, 96D, E, 99D, E, 103D, E, 105D, E, 109D, E, 111D, E, 114D, E, 118D, E, 120D, E, 138) (vs 1/3 or less of tegular width in *Phrurolithus* [see Wang *et al.* 2015: fig. 15D, E; Zamani and Marusik 2020: fig. 4A−C]). They can be separated from *Aculithus* by lacking a dorsal tibial apophysis (Figs 72D−F, 75D−F, 79D−F, 82D−F, 85D−F, 88D−F, 91D−F, 96D−F, 99D−F, 103D−F, 105D−F, 109D−F, 111D−F, 118D−F, 120D−F, 139) (vs present in *Aculithus* [Fig. 131A, D]). Females of this genus differ from *Phrurolithus* by having a median septum of the epigyne (Figs 74C, 77C, 78C, 81C, 84C, 87C, 90C, 93C, 94C, 95C, 98C, 102C, 104C, 107C, 108C, 113C, 116C, 117C, 124C) (vs absent in *Phrurolithus*) and the small, oval spermathecae (Figs 72D, 75D, 79D, 82D, 85D, 88D, 96D, 99D, 105D, 109D, 111D, 118D, 120D, 143) (vs large, globular in *Phrurolithus* [see Wang *et al.* 2015: fig. 15F]).

Species included from Jiangxi. *Otacilia acutangula* Liu, 2020, *O. aotou* **sp. nov.**, *O. bizhouica* Liu, 2020, *O. dadongshanica* Liu, 2021, *O. dawushan* **sp. nov.**, *O. dongshang* **sp. nov.**, *O. fuxi* **sp. nov.**, *O. gougunao* Liu, 2020, *O. guizhumao* **sp. nov.**, *O. hushandong* **sp. nov.**, *O. jiulianshan* **sp. nov.**, *O. linghua* **sp. nov.**, *O. longbu* **sp. nov.**, *O. nanhuashanica* Liu, 2020, *O. ovoidea* Liu, 2020, *O. ping* **sp. nov.**, *O. qingyuan* **sp. nov.**, *O. sanbai* **sp. nov.**, *O. shenshanica* Liu, 2020, *O. subovoidea* Liu, 2020, *O. tianhua* **sp. nov.**, *O. wanshi* **sp. nov.**, *O. wugongshanica* Liu, 2020, *O. wuzhifeng* **sp. nov.**, *O. xiangshan* **sp. nov.**, *O. xiaobu* **sp. nov.**, *O. xingguo* **sp. nov.**, *O. yangming* **sp. nov.**, *O. yusishanica* Liu, 2020, *O. zaoshiica* Liu, 2020, *O. zhonglong* **sp. nov.,** and *O. ziyaoshanica* Liu, 2020.

Distribution. China (Jiangxi, Hunan, Hubei, Yunnan, Chongqing, Ningxia, Guangxi, Sichuan, Shanxi, Guizhou, Zhejiang, Liaoning).

***Otacili*a *acutangula* Liu, 2020**

Chinese name 锐角奥塔蛛
Figures 129, 137A, 138A, 139A, 140A, 141A, 142A, 143A

Otacilia acutangula Liu *et al.* 2020a: 13, figs 7A−F, 8A−D (♂♀, type deposition in ASM-JGU).

Type material. Holotype: male (Phu-09), 26°31’33.37”N, 114°06’30.34”E, 786 m, Jingzhushan Scenic Spot, Dajing Village, Ciping Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 1 October 2018, K. Liu, W. Sun, & H. Luo leg. **Paratypes:** 2 females (Phu-07), same data as holotype; 1 male (Phu-09), 1 female (Phu-07), 26°34’16.72”N, 114°07’00.56”E, 971 m, Lingxiufeng Scenic Spot, other data as same as holotype; 1 male (Phu-09), 26°35’33.08”N, 114°08’18.50”E, 909 m, Longtan Scenic Spot, other data same as holotype; 1 male (Phu-09), 26°36’25.88”N, 114°11’43.07”E, 549 m, Hongjun Road, Bijiashan Scenic Spot, 3 October 2018, other data same as holotype.

Other material. 26 females, 1 juvenile (Phu-98, 20210104-1), 26°35’32.30”N, 114°08’16.64”E, 923 m, Longtan Scenic Spot, Xiaojing Village, Huangao Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 4 January 2021, K. Liu, D. Zhao, C. Luo, & H. Wang leg. All these specimens are deposited in ASM-JGSU.

Description. See Liu *et al.* (2020a).

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 22).

***Otacilia aotou* Liu & S. Li sp. nov.**
urn:lsid:zoobank.org:act:DDB54867-36D2-4A10-9780-BCE53AF214F1
Chinese name 坳头奥塔蛛
Figures 72–74, 125A, B, 129

Type material. Holotype: male (Phu-71, 20201006-3), 24°42’49.17”N, 114°54’22.61”E, 506 m, Aotou Village, Laocheng Town, Dingnan County, Ganzhou City, Jiangxi Province, China, 6 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 3 males, 5 females, 4 juveniles (Phu-71, 20201006-4), same data as holotype; (Phu-71, 20201006-4), 24°42’51.97”N, 114°54’13.90”E, 601 m, other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The males resemble those of *Otacilia jiulianshan* **sp. nov.** in having a clavate retrolateral tegular apophysis and an S-shaped retrolateral tibial apophysis (Figs 72D–F, 73) but differ by a pair of slanting dark brown marks medially on the abdomen (Fig. 72B) (vs sub-quadrangular dark brown marks), 2 promarginal and 6 retromarginal teeth (Fig. 72B) (vs 3 and 5) and the round distal tegular apophysis (Figs 72D, E, 73A, C, F) (vs oval). The female of the new species is similar to that of *O. sanbai* **sp. nov.** in having a pair of oval copulatory openings, an anteriorly broad trapezoidal median septum, but it can be separated by the 6 retromarginal teeth (Fig. 74B) (vs 5) and the globular spermathecae that are nearly as long as 2/3 the width of the median septum (Fig. 74D) (vs 3/4).

Description. Male (holotype). Habitus as in Fig. 72A, B. Total length 3.2, carapace 1.50 long, 1.31 wide. Eye sizes and interdistances (Fig. 72A): AME 0.08, ALE 0.09, PME 0.08, PLE 0.10; ALE−AME 0.01, AME–AME 0.05, PLE−PME 0.06, PME–PME 0.13, ALE−ALE 0.26, PLE−PLE 0.40, ALE−PLE 0.11, AME−PME 0.11, AME−PLE 0.18. MOA 0.25 long, frontal width 0.21, posterior width 0.27. Chelicerae (Fig. 72A, B) with two promarginal (proximal larger) and 6 retromarginal teeth (distal largest, 4th smallest). Sternum (Fig. 72B) slightly longer than wide, posteriorly triangular, relatively blunt. Pedicel 0.10 long. Abdomen (Fig. 1A, B) 1.58 long, 0.94 wide. Leg measurements: I 6.70 (1.69, 0.55, 2.05, 1.62, 0.79); II 5.45 (1.37, 0.54, 1.53, 1.25, 0.76); III 4.60 (1.15, 0.44, 1.07, 1.20, 0.74); IV broken. Leg spination (Fig. 72A, B): IV broken; femora I d1, pv1111, II d1, pv111, III d1; tibiae I v22222221, II

v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 72A, B). Carapace yellow-brown, with irregular dark yellow-brown mottling radially and arc-shaped, dark stripes around margin. Chelicerae yellow-brown. Endites and labium yellow, mottled. Sternum yellow, with dark brown mottled spots. Legs yellow, without dark brown annulations. Abdomen yellow-brown, with pair of large, triangular yellowish spots and pair of Y-shaped yellowish stripes on posterior scutum, 4 light chevrons posteriorly; venter with 2 pairs of slanting, dark brown stripes and a transverse dark brown stripe posteriorly.

Palp (Figs 72C–F, 73). Femoral apophysis well-developed, longer than ½ of femur. Retrolateral tibial apophysis large, S-shaped in retrolateral view, nearly as long as tibia, with a broad base, a broadened sub-apex, and a blunt apex bent inwards toward cymbial groove. Sperm duct U-shaped, anteriorly forming a right-angle in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching the middle part of the tegulum. Retrolateral tegular apophysis clavate, thick, with slightly curved apex, directed anterolaterally, nearly 2/3 of basal part covered by distal tegular apophysis in ventral view. Distal tegular apophysis round, arising from base of embolus and retrolateral sperm duct. Embolus hook-like, thick, with broad triangular base.

Female. Habitus as in Figs 74A, B, 125A, B. As in male, except as noted. Total length 4.23, carapace 1.80 long, 1.53 wide. Eye sizes and interdistances: AME 0.11, ALE 0.11, PME 0.08, PLE 0.09; AME–AME 0.06, AME–ALE 0.02, PME–PME 0.15, PME–PLE 0.08, AME–PME 0.10, AME–PLE 0.21, ALE–ALE 0.28, PLE–PLE 0.46, ALE–PLE 0.12. MOA 0.24 long, frontal width 0.27, posterior width 0.30. Chelicerae (Fig. 74A, B) with 3 promarginal (proximal largest, distal smallest). Sternum (Fig. 74B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively pointed. Pedicel 0.11 long. Abdomen (Fig. 8A) 2.31 long, 1.3 wide. Leg measurements: I 7.51 (1.94, 0.63, 2.29, 1.77, 0.88); II 6.06 (1.60, 0.56, 1.77, 1.32, 0.81); III 5.03 (1.38, 0.47, 1.06, 1.33, 0.79); IV 8.04 (2.16, 0.66, 2.01, 2.17, 1.04). Leg spination (Fig. 74A, B): femora I d2; tibiae II v2222222; metatarsi II v1222.

Colouration (Fig. 1A, B). Darker than male. Sternum yellow-brown, with dark brown mottled spots around margin and a longitudinal yellow stripe medially.

Epigyne (Fig. 74C, D). Epigynal plate human skull-shaped, with subtrapezoidal median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, widely separated by ½ width of anterior median septum. Copulatory ducts short, widely separated by anterior width of median septum, shorter than connecting tubes. Bursae large, bean-shaped, nearly covering 2/3 of epigynal plate. Glandular appendages small, arising from anterior of connecting tubes. Connecting tubes thin, curved inwards anteriorly. Spermathecae globular, separated by more than 1/3 width of posterior median septum. Fertilization ducts short, located submedially on spermathecae, directed laterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

Otacilia bizhouica **Liu, 2020**

Chinese name 碧洲奥塔蛛

Figures 129, 137B, 138B, 139B, 140B, 141C, 142C, 143C

Otacilia bizhouica Liu *et al.* 2020b: 3, figs 1A–F, 2A–C, 3A–D (♂♀, type deposition in ASM-JGU).

Type material. Holotype: male (Phu-41), 26°19’55.98”N, 114°44’08.72”E, 362 m, Dakeng Group, Baishuixian Village, Bizhou Town, Suichuan County, Ji’an City, Jiangxi Province, China, 4 October 2019, K. Liu, H. Luo, & Y. Ying leg. **Paratypes:** 2 females (Phu-41), same data as holotype.

Other material. 2 males, 1 female (abdomen missing) (Phu-46, 20201004-1), 26°11’47.97”N, 114°31’21.05”E, 719 m, Baiheling, Futian Village, Longmu Town, Nankang District, Ganzhou City, Jiangxi Province, China, 4 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. All these specimens are deposited in ASM-JGSU.

Description. See Liu *et al.* (2020b).

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 125).

***Otacilia dadongshanica* Liu 2021**

Chinese name 大东山奥塔蛛

Figures 125C, D, 129, 137C, 138C, 139C, 140C, 141D, 142D, 143D

Otacilia dadongshanica Liu *et al.* 2021: 803, figs 1A−F, 2A−D, 3A−G, 4A−E (♂♀, type deposition in ASM-JGU).

Type material. Holotype: male (Phu-13, 20181201), 27°15’07.63”N, 115°10’41.08”E, 569 m, near Yunyin Temple, Dadong Mountain, Jishui County, Ji’an City, Jiangxi Province, China, 1 December 2018, K. Liu, Y. Ying, J. Yan, M. Zhang, & Y. Xiao leg. **Paratypes:** 13 females, same data as holotype.

Other material. 4 females, 1 male (Phu-101, 20201109-2), 27°15’20.44”N, 115°10’45.58”E, 623 m, near Yunyin Temple, Dadong Mountain, Jishui County, Ji’an City, Jiangxi Province, China, 9 November 2020, K. Liu, Y. Ying, Z. He, & M. Fei leg; 2 females (Phu-101, 20201109-1), 27°15’52.94”N, 115°11’18.96”E, 816 m, near Radio and Television Center, other data as same as previous. All these specimens are deposited in ASM-JGSU.

Description. See Liu *et al.* (2021).

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia dawushan* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:698815B9-B3E8-4BF6-BBD9-A3AA6A4EE448

Chinese name 大乌山奥塔蛛

Figures 75−77, 125E, F, 129

Type material. Holotype: male (Phu-84, 20201025-3), 26°41'54.62”N, 115°26’10.11”E, 787 m, Dawu Mountain, Longjiatang Village, Donggu Town, Qingyuan District, Ji’an City, Jiangxi Province, China, 25 October 2020, K. Liu, Y. Ying, & S. Yuan leg. **Paratypes:** 6 males, 10 females (Phu-84, 20201025-3), same data as holotype; 1 male, 2 females (Phu-84, 20201025-4), 26°40’48.69”N, 115°25’07.79”E, 1031 m, Dawu Mountain, near Xilin Village, other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male is similar to that of *Otacilia wugongshanica* Liu, 2020 in having a clavate retrolateral tegular apophysis, a kidney-shaped distal tegular apophysis, and a small ventral tibial apophysis (Figs 75D−F, 76), but it differs by the H-shaped, dark brown stripe posteriorly on the ventral abdomen (Fig. 75B) (vs subtrapezoidal) and the retrolateral tibial apophysis is bent inwards toward the cymbial groove, forming an acute angle of ca. 60° with its transverse base (Figs 75E, 76A, B) (vs 75°) and with the distal part as long as the transverse basal part (Figs 75C, E, F 76A, B) (vs shorter than the transverse basal part) in retrolateral view. The female resembles *O. wugongshanica* Liu, 2020 in having a transverse sclerotized ridge, the oval copulatory openings touching each other, slanting, relatively broad connecting tubes, and a pair of touching oval spermathecae (Fig. 77C, D) but can be separated by the abdomen dorsally with a pair of subtriangular yellowish markings medially (Fig. 77A) (vs X-shaped), a strongly sclerotized fovea covering nearly 1/4 of epigynal plate (Fig. 77C) (vs 1/5), and the elongated rectangular median septum (Fig. 77C) (vs subposteriorly slightly widened).

Description. Male (holotype). Habitus as in Figs 75A, B, 125E. Total length 3.75, carapace 1.74 long, 1.5 wide. Eye sizes and interdistances (Fig. 75A): AME 0.10, ALE 0.09, PME 0.08, PLE 0.10; ALE−AME 0.03, AME–AME 0.07, PLE−PME 0.08, PME–PME 0.17, ALE−ALE 0.30, PLE−PLE 0.51, ALE−PLE 0.17, AME−PME 0.12,

AME−PLE 0.24. MOA 0.28 long, frontal width 0.24, posterior width 0.33. Chelicerae (Fig. 75A, B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest). Sternum (Fig. 75B) slightly longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.08 long. Abdomen (Fig. 75A, B) 1.85 long, 1.12 wide. Leg measurements: I 6.81 (1.71, 0.66, 2.12, 1.55, 0.77); II 5.43 (1.44, 0.55, 1.48, 1.26, 0.70); III 4.57 (1.16, 0.52, 1.09, 1.15, 0.65); IV 7.36 (1.97, 0.62, 1.78, 2.03, 0.96). Leg spination (Fig. 75A, B): femora I d2, pv1111, II d1, pv11, right pv111, III d1, IV d1; tibiae I v22222221, II v2222222, right II v22222221; metatarsi I v2222, II v2221.

Colouration (Fig. 75A, B). Carapace yellow, with radial irregular dark stripes medially, arc-shaped dark stripes around margin. Chelicerae, endites, and labium yellow, mottled. Sternum yellow. Legs yellow, with an annulation on distal femora. Abdomen dark brown, with pair of oval and pair of clavate, yellowish spots dorsally on posterior part of scutum, 3 light chevrons submedially, and a yellowish arc-shaped stripe posteriorly; venter with H-shaped mark and pair of slanting marks posteriorly.

Palp (Figs 75C−F, 76). Femoral apophysis well-developed, longer than 2/3 of femur. Retrolateral tibial apophysis very large, longer than tibia, tapering from broad base to hook-like apex in dorsal view, bent inwards toward cymbial groove. Sperm duct V-shaped in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching submedial part of tegulum. Retrolateral tegular apophysis L-shaped, thick, with slightly curved apex, directed anterolaterally, shorter than embolus and distal tegular apophysis in ventral view. Distal tegular apophysis kidney-shaped, arising from base of embolus and retrolateral part of sperm duct. Embolus crescent shaped, thick, with a broad base.

Female. Habitus as in Figs 77A, B, 125F. As in male, except as noted. Total length 4.18, carapace 1.72 long, 1.57 wide. Eye sizes and interdistances (Fig. 77A): AME 0.7, ALE 0.10, PME 0.08, PLE 0.09, AME−AME 0.07, AME−ALE 0.02, PME−PME 0.15, PME−PLE 0.05, AME−PME 0.12, AME−PLE 0.19, ALE−ALE 0.26, PLE−PLE 0.39, ALE−PLE 0.13. MOA 0.28 long, frontal width 0.22, posterior width 0.31. Chelicerae (Fig. 77A, B) with 3 promarginal and 6 retromarginal teeth (distal largest). Pedicel 0.09 long. Abdomen (Fig. 77A, B) 2.46 long, 1.43 wide. Leg (Fig. 77A, B) measurements: I 6.72 (1.62, 0.62, 2.09, 1.61, 0.78); II 5.84 (1.53, 0.59, 1.60, 1.33, 0.79); III 5.04 (1.29, 0.56, 1.13, 1.21, 0.85); IV 7.31 (1.85, 0.65, 1.98, 1.86, 0.97). Leg spination (Fig. 77A, B): femora I pv1111, right pv11111, II pv111; tibiae I v22222222, II v22222221; metatarsi I v2222, II v2221.

Colouration (Fig. 77A, B). Darker than male. Abdomen, with pair of triangular yellowish spots submedially; venter with pair of slanting, dark brown stripes postero-laterally, pair of triangular dark brown stripes posteromedially, and pair of dark brown spots near anterior spinnerets.

Epigyne (Fig. 77C, D). Epigynal plate bow and arrow-shaped, posteriorly with elongated rectangular median septum. Anterior fovea separated by weakly sclerotized transverse margin. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, touching each other, arising from anterior part of median septum. Copulatory ducts slanting, longer than connecting tubes. Bursae large, bean-shaped, widely separated, nearly covering more than ½ of epigynal plate. Glandular appendages small, arising from anterior part of connecting tubes. Connecting tubes relatively broad, nearly as long as ½ of copulatory ducts. Spermathecae globular, touching each other, located on subposterior part of endogyne. Fertilization ducts short, located submedially on spermathecae, directed antero-laterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia dongshang* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:2FF3CC04-4D47-4A39-9D0A-0A306083912D

Chinese name 东上奥塔蛛

Figures 78, 129

Type material. Holotype: female (Phu-111, 20210204-4), 26°47’14.35”N, 113°54’23.57”E, 496 m, Jiangshan Village, Dongshang Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 4 February 2021, K. Liu, D. Zhao, & Z. He leg. **Paratypes:** 22 females, same data as holotype; 2 females (Phu-111, 20210204-1), 26°43’30.36”N, 113°53’59.95”E, 373 m, Aobei Village, other data same as holotype; 5 females (Phu-111, 20210204-2), 26°44’09.81”N, 113°52’43.51”E, 474 m, Dawanli Reservoir, Dayashan Village, other data same as holotype; 2 females (Phu-111, 20210204-5), 26°46’01.56”N, 113°54’53.65”E, 326 m, 951 Country Road, other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female of the new species is similar to that of *Otacilia dadongshanica* Liu, 2021 (Figs 141D, 142D, 143D) in having a pair of triangular dark brown markings ventrally on the abdomen and the wing-like epigynal plug (Fig. 78B, C), but it differs by lacking a sclerotized M-shaped margin (vs present) and the spermathecae are slightly separated (vs widely separated).

Description. Habitus as in Fig. 78A, B. Total length 4.78, carapace 1.65 long, 1.48 wide. Eye sizes and interdistances: AME 0.08, ALE 0.08, PME 0.08, PLE 0.07; AME−AME 0.05, AME−ALE 0.03, PME−PME 0.11, PME−PLE 0.08, AME−PME 0.09, AME−PLE 0.18, ALE−ALE 0.25, PLE−PLE 0.41, ALE−PLE 0.08. MOA 0.24 long, frontal width 0.21, posterior width 0.27. Chelicerae (Fig. 78A, B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest, fourth smallest). Sternum (Fig. 78B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.14 long. Abdomen (Fig. 78A, B) 2.96 long, 1.96 wide. Leg measurements: I 6.57 (1.60, 0.62, 1.98, 1.56, 0.81); II 5.47 (1.47, 0.47, 1.54, 1.27, 0.72); III 4.68 (1.25, 0.47, 1.00, 1.22, 0.74); IV 6.98 (1.70, 0.65, 1.71, 1.93, 0.99). Leg spination (Fig. 78A, B): femora I d2, pv11111, right I pv1111, II d1, pv111, III d1, IV d1; tibiae I v2222222, II v2222222, right II v22222221; metatarsi I v2222, II v2222, right II v2221.

Colouration (Fig. 78A, B). Carapace yellow, with radial, irregular dark stripes medially and arc-shaped dark stripes around margin. Chelicerae yellow-brown, mottled. Endites, labium, and sternum yellow, mottled. Sternum yellow, laterally with radial dark brown mottled stripes. Legs yellow, with an annulation on distal femora. Abdomen dark yellow-brown with pair of oval and pair of clavate yellowish spots submedially, 3 light chevrons subposteriorly, and one arc-shaped yellowish stripe in front of anal tubercle; venter with H-shaped dark brown mark, pair of slanting marks laterally, and pair of dark brown irregular spots in front of anterior spinnerets.

Epigyne (Fig. 78C, D). Epigynal plate with wing-like epigynal plug, medially with subtriangular median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, located anterolaterally to median septum. Copulatory ducts swollen, slanting. Bursae broad, oval, widely separated, nearly covering more than 1/3 of epigynal plate. Glandular appendages thin, located anteriorly on copulatory ducts, directed anteriorly. Connecting tubes thin, shorter than copulatory ducts, located between glandular appendages and spermathecae. Spermathecae oval, slightly separated posteriorly. Fertilization ducts short, located posteriorly on spermathecae, directed anterolaterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia fuxi* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:A9351E35-67B1-4DA0-B29F-179833767D9A

Chinese name 福溪奥塔蛛

Figures 79−81, 125G, H, 129

Type material. Holotype: male (Phu-89, 20201114-02), 26°28'22.92"N, 114°11'53.07"E, 413 m, Xiaoxi Forest Farm, Fuxi Village, Huangao Town, Jinggangshan County Level City, Ji'an City, Jiangxi Province, China, 14 November 2020, K. Liu, Y. Ying, D. Zhao, Z. He, & M. Fei leg. **Paratypes:** 3 females (Phu-89, 20201114-03), same data as holotype; 2 females (Phu-89, 20201114-03), 26°29'32.24"N, 114°10'53.02"E, 621 m, other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Otacilia gougunao* **sp. nov.** (Figs 138E, 139E, 140E) in having a circular sperm duct in ventral view, and the retrolateral tibial apophysis located submedially with a triangular apophysis in retrolateral view (Figs 79D–F, 80A, C, D, E), but it differs by the ventral abdomen with an H-shaped dark brown mark submedially (Fig. 79B) (vs N-shaped), an oval, membranous distal tegular apophysis with a narrow base (Figs 79D, E, 80A–D, F) (vs relatively broad base), and a short, curved embolic apex covering nearly ½ the width of the anterior part of the cymbium in ventral view (Figs 79D, E, 80A–D, F) (vs full width). The females resemble those of *O. ziyaoshanica* Liu, 2020 in having a large fovea at the anterior part of epigyne (Fig. 81C), but they can be distinguished by the M-shaped sclerotized margin (Fig. 81C) (vs slightly wavy) and the triangular median septum (Fig. 81C) (vs subtrapezoidal).

Description. Male (holotype). Habitus as in Figs 79A, B, 125G. Total length 3.76, carapace 1.81 long, 1.51 wide. Eye sizes and interdistances (Fig. 79A): AME 0.08, ALE 0.09, PME 0.08, PLE 0.09; AME–AME 0.06, ALE−AME 0.02, PME–PME 0.15, PLE−PME 0.08, AME−PME 0.10, AME−PLE 0.18, ALE−ALE 0.27, PLE−PLE 0.43, ALE−PLE 0.10. MOA 0.26 long, frontal width 0.22, posterior width 0.29. Chelicerae (Fig. 79B) with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest, 4th smallest). Sternum (Fig. 79B) longer than wide, laterally with precoxal triangles and intercoxal extensions between coxae I and II, II and III, and III and IV, posteriorly triangular, relatively blunt. Pedicel 0.07 long. Abdomen 1.80 long, 1.06 wide. Leg measurements: I 6.98 (1.75, 0.64, 2.21, 1.70, 0.68); II 6.27 (1.61, 0.58, 1.76, 1.45, 0.87); III 5.46 (1.41, 0.58, 1.22, 1.41, 0.84); IV 8.2 (2.20, 0.60, 2.02, 2.17, 1.21). Leg spination (Fig. 79A, B): femora I d2, pv1111, II d1, pv11, right II pv111, III d1, IV d1; tibiae I v2222222, II v2222222, right II v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 79A, B). Carapace yellow-brown, with irregular dark stripes radially on surface and arc-shaped dark stripes around margin. Chelicerae yellow-brown, mottled. Endites and labium yellow, mottled. Sternum yellow, mottled, with radial mottled dark brown stripes around lateral margin. Legs yellow, without annulations. Abdomen dark yellow-brown, with pair of large L-shaped yellowish stripes near posterior part of scutum, and 3 light chevrons submedially; venter with pair of slanting marks and H-shaped dark brown marks posteriorly.

Palp (Figs 79C−F, 80). Femoral apophysis well-developed, longer than 2/3 of femur. Retrolateral tibial apophysis very large, nearly as long as tibia, bent inwards toward cymbial groove, basally with an extended apophysis directed dorsally, submedially with a triangular apophysis. Sperm duct circular in ventral view, extended from base of retrolateral tegular apophysis to embolic base, not reaching submedial tegulum. Retrolateral tegular apophysis clavate, thick, straight, longer than embolus and distal tegular apophysis in ventral view. Distal tegular apophysis oval, membranous, arising from base of retrolateral part of sperm duct, with a relatively narrow base. Embolus thick, slightly curved retrolaterally, apex covering nearly ½ width of anterior cymbium in ventral view.

Female. Habitus as in Figs 81A, B, 125H. As in male, except as noted. Total length 3.92, carapace 1.70 long, 1.47 wide. Eye sizes and interdistances (Fig. 81A): AME 0.09, ALE 0.10, PME 0.08, PLE 0.10, AME−AME 0.05, AME−ALE 0.02, PME−PME 0.13, PME−PLE 0.08, AME−PME 0.12, AME−PLE 0.18, ALE−ALE 0.25, PLE−PLE 0.42, ALE−PLE 0.11. MOA 0.27 long, frontal width 0.22, posterior width 0.28. Chelicerae (Fig. 81B) with two promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest, 5th smallest). Sternum elongated, posteriorly triangular, relatively pointed. Pedicel 0.05 long. Abdomen (Fig. 81A, B) 2.10 long, 1.43 wide. Leg measurements: I 7.34 (1.83, 0.63, 2.34, 1.74, 0.80); II 5.86 (1.38, 0.57, 1.67, 1.38, 0.86); III 4.64 (1.17, 0.45, 0.95,

1.28, 0.79); IV 5.79 (1.38, 0.45, 1.40, 1.64, 0.92). Leg spination (Fig. 81A, B): femur II pv111; tibiae I v22222222, II v22222221; metatarsi I v2222, II v2221.

Colouration (Fig. 81A, B). Darker than male. Abdomen with pair of round yellowish spots submedially, pair of irregular, large yellowish spots medially, and 3 light chevrons posteriorly; venter with subtriangular dark brown stripe anterior to anterior spinnerets.

Epigyne (Fig. 81C, D). Epigynal plate bow and arrow-shaped, anteriorly with M-shaped sclerotized margin, anterior part of fovea separated by central sclerotized line, medially with pair of slit-like copulatory openings covered by epigynal plug, postero-medially with triangular median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts short and broad, slanting. Bursae bean shaped, widely separated by more than maximum width of median septum, nearly covering more than 1/3 of epigynal plate. Glandular appendages short, located anteriorly on connecting tubes near base of bursae. Connecting tubes thin, slightly slanting, shorter than copulatory ducts. Spermathecae globular, posteriorly slightly expanded, separated by less than ½ width of posterior median septum. Fertilization ducts short, directed anteriorly.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

Otacilia guizhumao **Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:B58AD573-1BFD-48E7-A542-D1D680D03F9A

Chinese name 桂竹帽奥塔蛛

Figures 82−84, 126A, B, 129

Type material. Holotype: male (Phu-78, 20201007-2), 24°55’35.36”N, 115°27’25.09”E, 716 m, Guizhumao parking lot, near the county boundary between Xunwu and Anyuan Counties, Ganzhou City, Jiangxi Province, China, 7 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 1 male, 1 female, 2 juveniles, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Otacilia xiangshan* **sp. nov.** in having a hook-shaped embolus, a U-shaped sperm duct, and a clavate retrolateral tegular apophysis (Figs 82D, E, 83A−C, E), but it differs by the ventral abdomen posteromedially with a pair of longitudinal dark brown marks (Fig. 82B) (vs conspicuous large H-shaped mark), and the S-shaped retrolateral tibial apophysis submedially with an obtusely angled apophysis (Figs 82D, E, 83A−C, E) (vs acutely angled). The female resembles *O. xiangshan* in having a pair of oval copulatory openings and slightly separated spermathecae (Fig. 84D), but it can be distinguished by the subrectangular median septum (Fig. 84C) (vs subtrapezoidal) and the connecting tubes slightly bent anteriorly (Fig. 84D) (vs strongly).

Description. Male (holotype). Habitus as in Figs 82A, B, 126A. Total length 3.14, carapace 1.54 long, 1.31 wide. Eye sizes and interdistances (Fig. 82A): AME 0.09, ALE 0.10, PME 0.07, PLE 0.09; ALE−AME 0.02, AME–AME 0.04, PLE−PME 0.06, PME–PME 0.12, ALE−ALE 0.26, PLE−PLE 0.38, ALE−PLE 0.11, AME−PME 0.10, AME−PLE 0.19. MOA 0.25 long, frontal width 0.22, posterior width 0.26. Chelicerae (Fig. 82A, B) with 3 promarginal (medial largest, distal smallest) and 6 retromarginal teeth (distal largest). Sternum (Fig. 82B) slightly longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Abdomen (Fig. 82A, B) 1.53 long, 0.91 wide. Leg measurements: I 6.09 (1.48, 0.46, 1.81, 1.59, 0.75); II 5.08 (1.34, 0.37, 1.39, 1.23, 0.75); III 3.99 (1.03, 0.38, 0.87, 1.06, 0.65); IV broken. Leg spination (Fig. 82A, B): femora I d1, pv11111, II d1, pv11, III d1; tibiae I v22222221, II v2222221, right I v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 82A, B). Carapace dark yellow-brown, with radial irregular dark yellow-brown stripes and arc-shaped dark stripes around margin. Chelicerae yellow-brown, mottled. Endites and labium yellow, mottled. Sternum yellow, with indistinct radial dark stripes around lateral margin. Legs yellow, without annulations. Abdomen

dark yellow-brown, with pair of oval yellowish spots posteriorly on scutum, pair of clavate stripes medially, 3 light chevrons submedially, and a yellowish arc-shaped stripe anterior to anal tubercle; venter with pair of longitudinal marks and pair of slanting, dark brown marks posteriorly.

Palp (Figs 82C–F, 83). Femoral apophysis well-developed, slightly less than ½ of femoral length. Retrolateral tibial apophysis S-shaped, nearly as long as tibia, bent inwards toward cymbial groove, subapex with an extended triangular apophysis. Sperm duct U-shaped in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching the middle of tegulum. Retrolateral tegular apophysis clavate, thick, longer than distal tegular apophysis in ventral view.

Female. Habitus as in Figs 84A, B, 126B. As in male, except as noted. Total length 3.96, carapace 1.86 long, 1.51 wide. Eye sizes and interdistances (Fig. 84A): AME 0.10, ALE 0.12, PME 0.08, PLE 0.86; AME–AME 0.07, AME–ALE 0.01, PME–PME 0.17, PME–PLE 0.08, AME–PME 0.13, AME–PLE 0.21, ALE–ALE 0.30, PLE–PLE 0.47, ALE–PLE 0.13. MOA 0.28 long, frontal width 0.28, posterior width 0.32. Chelicerae (Fig. 84A, B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest). Abdomen (Fig. 84A, B) 1.97 long, 1.03 wide. Leg measurements: I 4.37 (1.05, 0.36, 1.37, 1.04, 0.55); II 3.52 (0.94, 0.34, 0.93, 0.81, 0.50); III 3.14 (0.79, 0.29, 0.77, 0.76, 0.53); IV 4.41 (1.12, 0.38, 1.17, 1.09, 0.65). Leg spination (Fig. 84A, B): femora I d2, pv1111, II d1, pv111, right pv11, III d1, IV d1; tibiae I v222222221, II v2222222, right I v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 84A, B). Lighter than male. Legs yellow, with conspicuous annulation on femora.

Epigyne (Fig. 84C, D). Epigynal plate bow and arrow-shaped, posteromedially with subrectangular median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, separated by less than ½ width of anterior median septum. Copulatory ducts short, anteriorly relatively broad, slanting. Bursae bean-shaped, slightly separated, nearly covering more than ½ of epigynal plate. Glandular appendages short, located anteriorly on connecting tubes near base of bursae. Connecting tubes thin, convergent, longer than copulatory ducts, anteriorly slightly bent, posteriorly arc-shaped. Spermathecae globular, slightly separated. Fertilization ducts short, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia hushandong* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:C7579EDC-5D08-4FD8-B3B4-BB6560E7E738

Chinese name 虎山岩奥塔蛛

Figures 85–87, 126C, D, 129

Type material. Holotype: male (Phu-63, 20201005-2), 25°02’54.98”N, 115°12’08.42”E, 539 m, Hushandong, Hu Mountain, Hushan Town, Xinfeng County, Ganzhou City, Jiangxi Province, China, 5 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 1 female, 1 juvenile, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Otacilia xiangshan* **sp. nov.** in having an H-shaped dark brown marking ventrally on the abdomen, a U-shaped sperm duct in ventral view, a clavate retrolateral tegular apophysis, and an oval distal tegular apophysis (Figs 85B, D, E, 86A, B, D, E). The female resembles this species in having a bow-and arrow-shaped epigynal plate (Fig. 87C) but can be distinguished by the subtrapezoidal median septum slightly broadened anteriorly (Fig. 87C) (vs strongly) and the spermathecae separated by more than ½ width of posterior median septum (Fig. 87D) (vs slightly separated by ca. 1/6 width).

Description. Male (holotype). Habitus as in Figs 85A, B, 126A. Total length 3.49, carapace 1.62 long, 1.38

wide. Eye sizes and interdistances (Fig. 85A): AME 0.07, ALE 0.09, PME 0.06, PLE 0.06; ALE−AME 0.03, AME–AME 0.07; PLE−PME 0.07, PME–PME 0.15, ALE−ALE 0.26, PLE−PLE 0.42, ALE−PLE 0.14, AME−PME 0.12, AME−PLE 0.23. MOA 0.23 long, frontal width 0.20, posterior width 0.28. Chelicerae (Fig. 85B) with 3 promarginal (proximal largest, distal smallest) and 7 retromarginal teeth (distal largest). Sternum (Fig. 85B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.17 long. Abdomen (Fig. 85A, B) 1.68 long, 0.99 wide. Leg measurements: I broken; II 5.72 (1.47, 0.54, 1.58, 1.33, 0.80); III 4.56 (1.12, 0.48, 0.99, 1.23, 0.74); IV 7.12 (1.76, 0.48, 1.76, 2.08, 1.04). Leg spination (Fig. 85A, B): femora I d2, pv1111, II d1, pv11, III d1, IV d1; tibia II v2222222; metatarsus II v2221.

Colouration (Fig. 85A, B). Carapace dark yellow-brown, with radial, irregular dark yellow-brown stripes and arc-shaped dark stripes around margin. Chelicerae, endites, and labium yellow-brown, mottled. Sternum yellowish, with indistinct radial yellow stripes around lateral margin. Legs yellow, without annulations. Abdomen dark brown, with pair of oval yellowish spots in posterior part scutum, pair of slanting clavate stripes medially, 3 light chevrons submedially, and a yellowish arc-shaped stripe posteriorly; venter with indistinct H-shaped dark brown mark medially, pair of slanting dark brown marks laterally, and pair of irregular dark brown marks anterior to anterior spinnerets.

Palp (Figs 85C−F, 86). Femoral apophysis well-developed, slightly less than ½ of femoral length. Retrolateral tibial apophysis S-shaped in retrolateral view, slightly shorter than tibia, bent inwards toward cymbial groove, medial part strongly bent dorsally in dorsal view. Retrolateral tegular apophysis clavate, thick, longer than distal tegular apophysis in ventral view. Distal tegular apophysis oval, membranous, arising from base of retrolateral sperm duct, with a relatively narrow base, longer than ½ length of retrolateral tegular apophysis. Embolus thick, hook-shaped, curved retrolaterally.

Female. Habitus as in Figs 87A, B, 126B. As in male, except as noted. Total length 2.45, carapace 1.08 long, 1.32 wide. Eye sizes and interdistances (Fig. 87A): AME 0.11, ALE 0.11, PME 0.09, PLE 0.09, AME−AME 0.06, AME−ALE 0.03, PME−PME 0.13, PME−PLE 0.09, AME−PME 0.10, AME−PLE 0.21, ALE−ALE 0.30, PLE−PLE 0.44, ALE−PLE 0.12. MOA 0.27 long, frontal width 0.26, posterior width 0.29. Chelicerae (Fig. 3A, B) with 3 promarginal (proximal largest) and 6 retromarginal teeth (distal largest). Pedicel 0.3 long. Abdomen (Fig. 8A) 1.32 long, 0.76 wide. Leg (Fig. 3A, B) measurements: I 7.01 (1.91, 0.52, 2.29, 1.55, 0.74); II 5.77 (1.44, 0.53, 1.70, 1.36, 0.74); III 4.55 (1.22, 0.54, 1.08, 1.10, 0.61); IV 7.59 (1.98, 0.64, 1.86, 2.15, 0.96). Leg spination (Fig. 3A, B): femora I d2, pv1111, II d1, pv111, III d1, IV d1; tibiae I v22222221, II v2222222; metatarsi I v2222, II v2221.

Colouration (Fig. 87A, B). Sternum yellow. Legs yellow, with indistinct annulation on femora. Abdomen with pair of trifurcate yellowish spots medially.

Epigyne (Fig. 87C, D). Epigynal plate bow-and-arrow-shaped, medially with subtrapezoidal median septum. Copulatory openings oval, separated by anterior width of median septum. Copulatory ducts, connecting tubes and spermathecae distinctly visible through integument. Copulatory ducts short, slightly curved. Bursae bean-shaped, slightly separated, covering nearly more than ½ of epigynal plate. Glandular appendages small, located anteriorly on connecting tubes, near base of bursae. Connecting tubes thin, convergent, nearly as long as copulatory ducts, anteriorly strongly bent posteromedially. Spermathecae globular, separated by ½ width of posterior median septum. Fertilization ducts short, directed anteriorly.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia jiulianshan* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:F858B48D-991B-461A-81E9-C7D6563861B0

Chinese name 九连山奥塔蛛

Figures 88−90, 126E, F, 129

Type material. Holotype: male (Phu-66, 20201006-1), 24°37’12.53”N, 114°33’01.49”E, 417 m, Gaofeng, Jiulianshan Forest Farm, Jiulian Mountains, Jiulianshan Town, Longnan County, Ganzhou City, Jiangxi Province, China, 6 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 1 male, 1 female, 10 juveniles, same data as holotype; 6 males, 7 females, 6 juveniles (Phu-66, 20201006-2), 24°36’52.36”N, 114°32’10.90”E, 626 m, near Jiulianshan Ecological Farmstead, other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to those of *Otacilia guizhumao* **sp. nov.**, *O. hushandong* **sp. nov.**, and *O. xiangshan* **sp. nov.** in having a U-shaped sperm duct, a clavate retrolateral tegular apophysis, and an oval distal tegular apophysis (Figs 88D−F, 89), but it differs by the S-shaped retrolateral tibial apophysis subapically with an obtuse-angled (100°) apophysis in retrolateral view (Figs 88E, F, 89A, B) (vs 115° in *O. guizhumao*; 130° in *O. hushandong*; acute in *O. xiangshan*). The females resemble those of *O. guizhumao* **sp. nov.** in having a bow- and-arrow-shaped epigynal plate, oval copulatory openings, and globular spermathecae (Fig. 90C, D), but they can be distinguished by a rectangular median septum (Fig. 90C) (vs subrectangular, slightly widened anteriorly) and the spermathecae widely separated by more than 2/3 width of the median septum (Fig. 90D) (vs slightly touching).

Description. Male (holotype). Habitus as in Figs 88A, B, 126E. Total length 3.23, carapace 1.58 long, 0.72 wide. Eye sizes and interdistances (Fig. 88A): AME 0.08, ALE 0.09, PME 0.06, PLE 0.08; ALE−AME 0.03, AME–AME 0.06, PLE−PME 0.06, PME–PME 0.14, ALE−ALE 0.26, PLE−PLE 0.41, ALE−PLE 0.11, AME−PME 0.10, AME−PLE 0.17. MOA 0.24 long, frontal width 0.22, posterior width 0.26. Chelicerae (Fig. 88B) with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest, 5th smallest). Sternum (Fig. 88B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Sternum (Fig. 88B), posteriorly triangular, relatively blunt. Pedicel 0.11 long. Abdomen (Fig. 88A, B) 1.54 long, 1.08 wide. Leg measurements: I 6.62 (1.27, 0.51, 2.15, 1.77, 0.92); II 5.61 (1.34, 0.55, 1.57, 1.37, 0.78); III 2.80 (0.79, 0.27, 0.63, 0.69, 0.42); IV 4.30 (1.26, 0.34, 1.14, 1.04, 0.52). Leg spination (Fig. 88A, B): femora I d2, pv1111, II d1, pv111, III d1, IV d1; tibiae I v2222222, II v2222221, right I v22222221; metatarsi I v2222, II v1222.

Colouration (Fig. 88A, B). Carapace dark yellow-brown, with irregular dark yellow-brown mottled markings radially and arc-shaped dark stripes around margin. Chelicerae, endites, and labium yellow-brown, mottled. Sternum yellow, lateral margins with dark brown mottling. Legs yellow. Abdomen dark yellow-brown, with pair of oval spots and pair of irregular yellowish spots posteriorly on scutum, 3 light chevrons submedially, and 1 yellowish arc-shaped stripe posteriorly; weak scutum in anterior ½; venter with a U-shaped, pair of slanting arc-shaped marks posteriorly.

Palp (Figs 88C−F, 89). Femoral apophysis well-developed, nearly as long as ½ of femoral length. Retrolateral tibial apophysis S-shaped, shorter than tibia, bent inwards toward cymbial groove, subapex extended and forming an obtuse angle of about 100° in retrolateral view. Sperm duct U-shaped in ventral view, extended from base of retrolateral tegular apophysis to embolic base, extended beyond the middle part of the tegulum. Retrolateral tegular apophysis clavate, thick, longer than the length of distal tegular apophysis in ventral view. Distal tegular apophysis oval, membranous, arising from base of retrolateral sperm duct, with a relatively broad base, less than the length of retrolateral tegular apophysis. Embolus thick, hook-shaped, curved retrolaterally.

Female. Habitus as in Figs 90A, B, 126F. As in male, except as noted. Total length 3.41, carapace 1.64 long, 1.38 wide. Eye sizes and interdistances (Fig. 90A): AME 0.09, ALE 0.10, PME 0.07, PLE 0.10; AME−AME 0.06, AME−ALE 0.05, PME−PME 0.15, PME−PLE 0.07, AME−PME 0.08, AME−PLE 0.18, ALE−ALE 0.29, PLE−PLE 0.42, ALE−PLE 0.09. MOA 0.20 long, frontal width 0.23, posterior width 0.28. Chelicerae (Fig. 90B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest, fourth smallest). Pedicel 0.3 long. Abdomen (Fig. 90A, B) 1.73 long, 1.04 wide. Leg measurements: I 7.23 (1.82, 0.67, 2.21, 1.70, 0.83); II 5.58 (1.37, 0.49, 1.68, 1.31, 0.73); III 2.60 (0.54, 0.32, 0.63, 0.69, 0.42); IV 4.30 (1.00, 0.35, 1.08, 1.27, 0.60). Leg spination (Fig. 90A, B): femora I d2, pv11111, II d1, pv111, right I pv1111, III d1, IV d1; tibiae I v22222221, II v2222222,

right I v222222211, II v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 90A, B). Lighter than male. Ventral abdomen with H-shaped marks and pair of oval marks posteriorly.

Epigyne (Fig. 90C, D). Epigynal plate bow-and-arrow-shaped, medially with rectangular median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, separated by anterior width of median septum. Copulatory ducts short, slanting. Bursae bean-shaped, basal part widely separated, nearly covering more than ½ of epigynal plate. Glandular appendages short, thick, located anteriorly on connecting tubes, near base of bursae. Connecting tubes thin, nearly as long as copulatory ducts, strongly bent postero-medially. Spermathecae globular, separated by 2/3 width of posterior median septum. Fertilization ducts short, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia linghua* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:BB9E76DB-903E-47EE-9E22-37BDAF49E20A

Chinese name 灵华山奥塔蛛

Figures 91−93, 126G, H, 129)

Type material. Holotype: male (Phu-102, 20201108-2), 26°58’02.66”N, 115°52’44.78”E, 817 m, Linghua Mountain, Zhongcun Town, Yongfeng County, Ji’an City, Jiangxi Province, China, 8 November 2020, K. Liu, Y. Ying, Z. He, & M. Fei leg. **Paratypes:** 1 female, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species resembles *Otacilia dawushan* **sp. nov.** and *O. zhonglong* **sp. nov.** in having a relatively short and broad retrolateral tegular apophysis in retrolateral view and a crescent-shaped embolus (Figs 91C, D, E, 92), but it differs by the circular sperm duct not reaching the middle part of the tegulum (Fig. 91C, D) (vs V-shaped sperm duct extended beyond middle part of the tegulum) and the retrolateral tibial apophysis bent inwards toward the base of the cymbium, forming an acute angle of ca. 50° with its transverse base (Figs 91C, D, E, 92C) (vs ca. 35° in *O. dawushan* **sp. nov.**; ca. 40° in *O. zhonglong* **sp. nov.**). The female of the new species is similar to those of *O. dawushan* **sp. nov.**, *O. xingguo* **sp. nov.**, and *O. zhonglong* **sp. nov.** but can be easily separated by the large, fan-shaped fovea covering nearly ½ of the epigynal plate (Fig. 93C, D) (vs small subtrapezoidal fovea nearly covering less than 1/3 of the epigynal plate).

Description. Male (holotype). Habitus as in Figs 91A, B, 126G. Total length 3.46, carapace 1.80 long, 1.49 wide. Eye sizes and interdistances (Fig. 91A): AME 0.08, ALE 0.10, PME 0.10, PLE 0.11; AME–AME 0.07, ALE−AME 0.02, PME–PME 0.13, PLE−PME 0.07, AME−PME 0.11, AME−PLE 0.20, ALE−ALE 0.28, PLE−PLE 0.45, ALE−PLE 0.10. MOA 0.32 long, frontal width 0.23, posterior width 0.26. Chelicerae (Fig. 91B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest). Sternum (Fig. 91B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Abdomen (Fig. 91A, B) 1.66 long, 1.01 wide. Leg measurements: I 6.83 (1.83, 0.57, 2.15, 1.52, 0.76); II 5.73 (1.50, 0.61, 1.57, 1.30, 0.75); III 4.85 (1.27, 0.54, 1.06, 1.28, 0.70); IV 7.86 (2.13, 0.64, 1.89, 2.17, 1.03). Leg spination (Fig. 91A, B): femora I d1, pv1111, II d1, pv11, III d1, IV d1; tibiae I v22222221, II v22222221, right II v2222222; metatarsi I v221, II v2221, right I v2222.

Colouration (Fig. 91A, B). Carapace yellow with radial irregular dark stripes medially and arc-shaped dark stripes around margin. Chelicerae yellow, mottled. Endites, labium, and sternum yellow. Legs yellow, with an indistinct annulation on distal femora. Abdomen dark yellow-brown, with pair of round spots and pair of irregular yellowish spots posteriorly on scutum, 3 light chevrons submedially, and a yellowish arc-shaped stripe posteriorly; venter with pair of oval marks and pair of slanting, dark brown marks posteriorly.

Palp (Figs 91C−F, 92). Femoral apophysis well-developed, slightly longer than ½ of femur. Retrolateral tibial apophysis hook-shaped, longer than tibia, bent inwards toward cymbial groove in retrolateral view, anteriorly spine-like, subapex slightly curved in dorsolateral view. Sperm duct circular in ventral view extended from base of retrolateral tegular apophysis to embolic base not reaching middle part of tegulum. Retrolateral tegular apophysis L-shaped, less than length of distal part of tegular apophysis in ventral view. Distal tegular apophysis oval, membranous. Embolus crescent shaped, thick, with broad base.

Female. Habitus as in Figs 93A, B, 126H. As in male, except as noted. Total length 3.46, carapace 1.80 long, 1.49 wide. Eye sizes and interdistances (Fig. 93A): AME 0.07, ALE 0.08, PME 0.09, PLE 0.09; AME−AME 0.06, AME−ALE 0.01, PME−PME 0.12, PME−PLE 0.07, AME−PME 0.13, AME−PLE 0.18, ALE−ALE 0.27, PLE−PLE 0.42, ALE−PLE 0.10. MOA 0.29 long, frontal width 0.23, posterior width 0.30. Chelicerae (Fig. 93B) with 3 promarginal (proximal largest, distal smallest) and 4 retromarginal teeth (distal largest). Sternum (Fig. 93B) elongated, much longer than wide. Abdomen (Fig. 93A, B) 1.66 long, 1.01 wide. Leg measurements: I 7.19 (1.83, 0.71, 2.24, 1.68, 0.73); II 5.87 (1.47, 0.61, 1.71, 1.35, 0.73); III 4.89 (1.28, 0.56, 1.06, 1.28, 0.71); IV 7.62 (1.97, 0.65, 1.87, 2.11, 1.02). Leg spination (Fig. 93A, B): femora I d1, pv1111, right d2, II d1, pv111, right I pv11111, III d1, IV d1; tibiae I v222222221, II v22222222; metatarsi I v2222, II v2221.

Colouration (Fig. 93A, B). Lighter than male. Ventral abdomen with H-shaped dark brown marks posteriorly.

Epigyne (Fig. 93C, D). Epigynal plate mushroom shaped, posteromedially with a narrow median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings slit-like, slightly separated, covered by epigynal plug. Median septum clavate, anterior wider than posterior. Copulatory ducts short, slanting, shorter than connecting tubes, anteriorly tapering, bent posteromedially. Bursae bean-shaped, widely separated, covering nearly 1/3 of epigynal plate. Glandular appendages short, thin, located anteriorly on connecting tubes near base of bursae. Connecting tubes convergent, slightly longer than spermathecae. Spermathecae globular, slightly separated by ½ width of posterior median septum. Fertilization ducts short, directed anteriorly.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia longbu* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:547645BE-2DE7-4927-8153-A4F2DE6F5D5C:

Chinese name 龙布奥塔蛛

Figures 94, 127A, 129

Type material. Holotype: female (Phu-79, 20201008-1), 25°27’19.87”N, 115°22’10.41”E, 331 m, near Longbu Swimming Pool, Xiashan, Longbu Town, Anyuan County, Ganzhou City, Jiangxi Province, China, 8 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female of the new species is similar to those of *Otacilia guizhumao* **sp. nov.** and *O. hushandong* **sp. nov.** in having a bow-and -arrow-shaped epigynal plate and oval copulatory openings (Fig. 94C) but differs by a ratio of ca. 1:2 between the posterior and anterior width of the median septum (Fig. 94C) (vs about 1 in *O. guizhumao* **sp. nov.**; nearly 2:3 in *O. hushandong* **sp. nov.**) and the spermathecae slightly separated by nearly 1/3 width of the posterior median septum (Fig. 94D) (vs touching each other in *O. guizhumao* **sp. nov.**; separated by ½ the width in *O. hushandong* **sp. nov.**).

Description. Habitus as in Figs 94A, B, 127A. Total length 3.58, carapace 1.70 long, 1.37 wide. Eye sizes and interdistances (Fig. 94A): AME 0.08, ALE 0.08, PME 0.07, PLE 0.08; AME−AME 0.07, AME−ALE 0.03,

PME−PME 0.14, PME−PLE 0.08, AME−PME 0.13, AME−PLE 0.14, ALE−ALE 0.29, PLE−PLE 0.45, ALE−PLE 0.21. MOA 0.24 long, frontal width 0.21, posterior width 0.28. Chelicerae (Fig. 94B) with 3 promarginal (proximal largest, distal smallest) and 3 retromarginal teeth (distal largest, proximal smallest). Sternum (Fig. 94B) slightly longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.06 long. Abdomen (Fig. 94A) 1.98 long, 1.11 wide. Leg measurements: I 4.30 (1.06, 0.34, 1.32, 1.02, 0.56); II 2.92 (0.80, 0.23, 0.71, 0.71, 0.47); III 2.77 (0.60, 0.31, 0.67, 0.72, 0.41); IV 4.47 (1.13, 0.38, 1.11, 1.25, 0.60). Leg spination (Fig. 94A, B): femora I d2, pv1111, II d1, pv1111, right II pv111, III d1, IV d1; tibiae I v22222211, II v222222, right I v22222221, II v2222222; metatarsi I v2222, II v22211, right II v2221.

Colouration (Fig. 94A, B). Carapace dark yellow-brown, with radial irregular dark yellow-brown stripes. Chelicerae yellow-brown, mottled. Endites and labium yellow, mottled. Sternum yellow, mottled, with distinct yellowish stripes medially and conspicuous dark brown mottled stripes around margin. Legs yellow, without annulations. Abdomen dark yellow-brown with pair of oval spots and pair of irregular yellowish spots medially, 3 light chevrons submedially, a yellowish, thin, arc-shaped stripe and a broad, yellowish arc-shaped stripe anterior to anal tubercle; venter with indistinct H-shaped mark, pair of slanting marks, and one fan-shaped dark brown mark posteriorly.

Epigyne (Fig. 94C, D). Epigynal plate bow-and-arrow-shaped, posteromedially with subtrapezoidal median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, widely separated by more than ½ width of anterior median septum. Copulatory ducts short, slanting. Bursae bean-shaped, slightly separated, covering nearly more than ½ of epigynal plate. Glandular appendages short, thin, located anteriorly on connecting tubes near base of bursae. Connecting tubes slender, longer than copulatory ducts, anteriorly slightly bent posteromedially. Spermathecae globular, slightly separated by 1/3 width of posterior median septum. Fertilization ducts short, directed anterolaterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia ping* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:24A98906-BB03-4D5C-B0E9-322A74F2D90D

Chinese name 屏山奥塔蛛

Figures 95, 127B, 129

Type material. Holotype: female (Phu-106, 20210121-1), 25°42’54.89”N, 115°26’21.37”E, 522 m, Pingshan Meadow, Ping Mountain, Pingshan Group, Huangsha Village, Jingshi Town, Yudu County, Ganzhou City, Jiangxi Province, China, 21 January 2021, K. Liu, Z. Meng, & D. Zhao leg. **Paratypes:** 2 females, same data as holotype; 4 females (Phu-106, 20210121-2), 25°42’52.28”N, 115°26’10.47”E, 474 m, other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female of the new species is similar to that of *Otacilia hushandong* **sp. nov.** in having a bow and arrow-shaped epigynal plate, oval copulatory openings, and a trapezoidal median septum (Fig. 95C, D), but it can be distinguished by the ventral abdomen with a long, H-shaped dark brown mark (Fig. 95B) (vs short) and connecting tubes slightly curved subposteriorly (Fig. 95D) (vs straight).

Description. Habitus as in Figs 95A, B, 127B. Total length 4.44, carapace 1.76 long, 1.49 wide. Eye sizes and interdistances (Fig. 95A): AME 0.10, ALE 0.10, PME 0.07, PLE 0.08; AME–AME 0.05, ALE−AME 0.01, PME–PME 0.14, PLE−PME 0.08, AME−PME 0.09, AME−PLE 0.19, ALE−ALE 0.25, PLE−PLE 0.41, ALE−PLE 0.13. MOA 0.24 long, frontal width 0.22, posterior width 0.26. Chelicerae (Fig. 95B) with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest). Sternum (Fig. 95B) slightly longer than wide, laterally with

conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.10 long. Abdomen (Fig. 95A, B) 2.60 long, 1.88 wide. Leg measurements: I 7.1 (1.84, 0.69, 2.14, 1.57, 0.86); II 5.81 (1.49, 0.61, 1.60, 1.34, 0.77); III 4.82 (1.25, 0.55, 1.01, 1.23, 0.78); IV 7.5 (2.04, 0.59, 1.82, 2.04, 1.01). Leg spination (Fig. 95A, B): femora I d2, pv1111, II d1, pv11, right II pv111, III d1, IV d1; tibiae I v22222221, II v2222222; metatarsi I v2222, II v2221.

Colouration (Fig. 95A, B). Carapace dark yellow-brown with radial irregular dark yellow-brown stripes and arc-shaped yellowish stripes around submargin. Chelicerae yellow-brown, mottled. Endites and labium yellow, mottled. Sternum yellow, mottled, with radial mottled stripes around margin. Legs yellow, without annulations. Abdomen dark yellow-brown, with pair of oval spots and pair of irregular yellowish spots anteromedially, 3 light chevrons submedially, and a broad, arc-shaped yellowish stripe anterior to anal tubercle; venter with long, H-shaped pair of slanting marks and pair of longitudinal dark brown marks posteriorly.

Epigyne (Fig. 95C, D). Epigynal plate bow-and-arrow-shaped, medially with subtrapezoidal median septum. Copulatory openings oval, widely separated by anterior width of median septum, covered by sclerotized plug. Bursae, copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory ducts short. Bursae bean-shaped, separated by more than ½ width of median septum, nearly covering more than ½ of epigynal plate. Glandular appendages very short, located anteriorly on connecting tubes near base of bursae. Connecting tubes short, anteriorly strongly bent posteromedially, subposteriorly slightly curved. Spermathecae globular, separated by nearly ½ width of posterior median septum. Fertilization ducts short, directed anterolaterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia qingyuan* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:50F996CE-26AE-4C4C-8209-4384BE350EFC

Chinese name 青原奥塔蛛

Figures 96–98, 127C, 129

Type material. Holotype: male (Phu-82, 20201025-1), 26°48’18.13”N, 115°24’50.87”E, 361 m, near Dongguling Tunnel, Qingyuan District, Ji’an City, Jiangxi Province, China, 25 October 2020, K. Liu, Y. Ying, & S. Yuan leg. **Paratypes:** 10 females, 1 juvenile, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to those of *Otacilia dadongshanica* Liu, 2021 (Figs 138C, 139C, 140C) and *O. daweishan* Liu, Xu, Xiao, Yin & Peng, 2019 (Figs 138D, 139D, 140D) in having a short and thick retrolateral tegular apophysis, a slanting, elongated, oval distal tegular apophysis directed retrolaterally, and a crescent-shaped embolus (Figs 96C–F, 97C, D), but it differs by the circular sperm duct with a sharp turn submedially (Fig. 96C–E) (vs absent in *O. dadongshanica*; relatively gradual in *O. daweishan*) and the retrolateral tibial apophysis bent inwards toward cymbial groove, forming an angle of ca. 60° with its transverse base (Figs 96D–F, 97A, B) (vs. 90° in *O. dadongshanica*; 50° in *O. daweishan*). The females resemble those of *O. acutusngula* Liu, 2020 (Figs 142A, 143A) and *O. daweishan* (Figs 142E, 143E) in having a pair of fan-shaped atria and a pair of slightly separated slit-like copulatory openings (Fig. 98C), but they can be separated by very short connecting tubes that are shorter than the spermathecae (Fig. 98C) (vs longer than 1.5 times spermathecae in *O. acutusngula*; very short connecting tubes, nearly as long as spermathecae in *O. daweishan*), and the spermathecae are separated by nearly ½ width of posterior part of median septum (Fig. 98D) (vs nearly less than 1/3 width of posterior part of median septum in *O. acutusngula*; nearly as long as posterior width of median septum in *O. daweishan*).

Description. Male (holotype). Habitus as in Fig. 96A, B. Total length 2.80, carapace 1.39 long, 1.24 wide. Eye

sizes and interdistances (Fig. 96A): AME 0.07, ALE 0.07, PME 0.06, PLE 0.06; ALE−AME 0.03, AME–AME 0.06, PLE−PME 0.08, PME–PME 0.12, ALE−ALE 0.23, PLE−PLE 0.36, ALE−PLE 0.22, AME−PME 0.10, AME−PLE 0.18. MOA 0.23 long, frontal width 0.20, posterior width 0.24. Chelicerae (Fig. 96B) with 3 promarginal (proximal largest, distal smallest) and 4 retromarginal teeth (distal largest, 3rd smallest). Sternum (Fig. 96B) longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.10 long. Abdomen (Fig. 96A, B) 1.26 long, 0.88 wide. Leg measurements: I 6.07 (1.59, 0.45, 1.82, 1.43, 0.78); II 4.85 (1.17, 0.45, 1.32, 1.16, 0.75); III 4.17 (1.09, 0.45, 0.90, 1.09, 0.64); IV 6.73 (1.82, 0.54, 1.61, 1.87, 0.89). Leg spination (Fig. 96A, B): femora I d2, pv11111, II d1, pv111, III d1, IV d1; tibiae I v22222221, II v2222222; metatarsi I v2222, II v2221.

Colouration (Fig. 96A, B). Carapace dark brown, medially with radial irregular dark yellow-brown stripes. Chelicerae dark yellow-brown, mottled. Endites and labium yellow, mottled. Sternum dark yellow-brown, mottled. Legs yellow, without annulations. Abdomen dark brown, with pair of slanting, clavate yellowish spots on posterior of scutum, 3 light chevrons submedially, and an arc-shaped yellowish stripe anterior to anal tubercle; venter with long, broad H-shaped dark brown mark posteromedially, pair of slanting dark brown marks posterolaterally, and a semi-oval dark brown mark anterior to spinnerets.

Palp (Figs 96C−F, 97). Femoral apophysis well-developed, longer than ½ of femur. Retrolateral tibial apophysis relatively strong, apical part nearly as long as ½ of tibia, tapered, pointed, bent inwards to cymbial base, forming an acute angle of ca. 60° with transverse base in retrolateral view. Sperm duct circular in ventral view, extended from base of retrolateral tegular apophysis to embolic base, submedially with sharp turn, reaching middle part of tegulum. Retrolateral tegular apophysis L-shaped, short, broad, slightly shorter than length of distal tegular apophysis in ventral view. Distal tegular apophysis oval, membranous, slanting, directed retrolaterally. Embolus crescent shaped, with broad base.

Female. Habitus as in Figs 98A, B, 127C. As in male, except as noted. Total length 3.48, carapace 1.58 long, 1.38 wide. Eye sizes and interdistances (Fig. 98A): AME 0.07, ALE 0.09, PME 0.07, PLE 0.09; AME−AME 0.05, AME−ALE 0.03, PME−PME 0.12, PME−PLE 0.07, AME−PME 0.10, AME−PLE 0.18, ALE−ALE 0.11, PLE−PLE 0.41, ALE−PLE 0.11. MOA 0.26 long, frontal width 0.20, posterior width 0.27. Pedicel 0.05 long. Abdomen (Fig. 98A) 1.84 long, 1.13 wide. Leg (Fig. 3A, B) measurements: I 7.45 (1.96, 0.62, 1.78, 2.05, 1.04); II 4.50 (1.21, 0.41, 0.95, 1.20, 0.73); III 6.57 (1.55, 0.55, 2.08, 1.63, 0.76); IV 5.51 (1.38, 0.51, 1.53, 1.30, 0.79). Leg spination (Fig. 98A, B): femora I d2, pv1111, II d2, pv111, III d1, IV d1; tibiae I v22222221, II v2222222; metatarsi I v2222, II v2221.

Colouration (Fig. 98A, B). Darker than male. Legs with indistinct annulation distally on femora.

Epigyne (Fig. 98C, D). Epigynal plate bow-and-arrow-shaped, posteriorly with subtrapezoidal median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Anterior fovea fan-shaped, anteriorly with an M-shaped sclerotized margin, medially separated by weakly sclerotized longitudinal margin, covering more than ½ of epigynal plate. Copulatory openings slit-like, slightly separated, located at posterior part of atrium. Copulatory ducts relatively broad, slanting, relatively short, longer than connecting tubes. Bursae oval, transparent, small, covering less than 1/3 of epigynal plate. Glandular appendages relatively short, thin, mostly covered by base of bursae. Connecting tubes short, located between glandular appendages and spermathecae, shorter than spermathecae. Spermathecae oval, separated by nearly ½ width of posterior median septum. Fertilization ducts short, located posteriorly on spermathecae, directed laterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia sanbai* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:688B93D9-8D33-4E70-AE01-F43B89D898F2

Chinese name 三百山奥塔蛛

Figures 99–101, 127D, E, 129

Type material. Holotype: male (Phu-45, 20201007-3), 25°00’28.19”N, 115°25’59.45”E, 511 m, hiking trails, Sanbai Mountains National Forest Park, Anyuan County, Ganzhou City, Jiangxi Province, China, 7 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 2 males, 4 females, 3 juveniles (Phu-45, 20201007-3), same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Otacilia guizhumao* **sp. nov.** in having a U-shaped sperm duct, a clavate retrolateral tegular apophysis, and a hook-shaped embolus (Figs 99D–F, 100A–C, E) but differs by the ventral abdomen posteromedially with an indistinct, large, human skull-shaped dark brown mark (Fig. 99B) (vs pair of longitudinal dark brown stripes), an oval distal tegular apophysis (Figs 99E, F, 100A, B, E) (vs subround), and an S-shaped retrolateral tibial apophysis subapically with an obtusely angled (100°) apophysis (Figs 99F, 100C, D) (vs 125°). The female resembles *O. guizhumao* **sp. nov.** in having a bow and arrow-shaped epigynal plate and oval copulatory openings (Fig. 101C), but it can be distinguished by the anterior part of the connecting tubes strongly curved in dorsal view (Fig. 101D) (vs weakly) and the spermathecae separated by nearly ½ posterior width of median septum (Fig. 101D) (vs nearly touching each other).

Description. Male (holotype). Habitus as in Figs 99A, B, D, 127D. Total length 3.42, carapace 1.45 long, 1.29 wide. Eye sizes and interdistances (Fig. 99A): AME 0.08, ALE 0.12, PME 0.06, PLE 0.08; AME–AME 0.06, ALE−AME 0.02, PME–PME 0.14, PLE−PME 0.06, AME−PME 0.10, AME−PLE 0.20. ALE−ALE 0.25, PLE−PLE 0.41, ALE−PLE 0.12, MOA 0.25 long, frontal width 0.23, posterior width 0.27. Chelicerae (Fig. 99B) with 3 promarginal (proximal largest, medial smallest) and 5 retromarginal teeth (distal largest, proximal smallest). Sternum (Fig. 99B) longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.06 long. Abdomen (Fig. 99A, B) 1.66 long, 0.97 wide. Leg measurements: I 6.93 (1.75, 0.54, 2.16, 1.59, 0.89); II 5.9 (1.63, 0.49, 1.64, 1.32, 0.82); III 4.78 (1.27, 0.49, 1.04, 1.21, 0.77); IV 7.66 (2.08, 0.54, 1.88, 2.10, 1.06). Leg spination (Fig. 99A, B): femora I d2, pv1111111, II d1, pv11, right II pv111, III d1, IV d1; tibiae I v2222222, II v2222222; metatarsi I v2222, II v2222.

Colouration (Fig. 99A, B). Carapace dark yellow-brown, with irregular dark yellow-brown mottled markings radially and arc-shaped dark stripes around margin. Chelicerae dark yellow-brown. Endites and labium yellow, mottled. Sternum yellow, lateral margins with radial dark yellow markings. Legs yellow. Abdomen dark brown with pair of indistinct oval spots and pair of clavate yellowish spots on posterior of scutum, 3 light chevrons submedially, and one yellowish arc-shaped stripe posteriorly; weak scutum in anterior ½; venter with skull-shaped dark brown mark posteriorly.

Palp (Figs 99C−F, 100). Femoral apophysis well-developed, nearly as long as ½ of femur. Retrolateral tibial apophysis S-shaped, nearly as long as tibia, bent inwards toward cymbial groove, subapically with an obtusely-angled (100°) apophysis. Sperm duct U-shaped in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching middle part of tegulum. Retrolateral tegular apophysis clavate, longer than distal tegular apophysis in ventral view. Distal tegular apophysis oval, membranous, arising from base of retrolateral sperm duct, longer than embolus, reaching embolic subapex. Embolus thick, hook-shaped, curved retrolaterally.

Female. Habitus as in Figs 101A, B, 127E. As in male, except as noted. Total length 3.63, carapace 1.67 long, 1.41 wide. Eye sizes and interdistances (Fig. 101A): AME 0.08, ALE 0.09, PME 0.07, PLE 0.08; AME−AME 0.05, AME−ALE 0.02, PME−PME 0.13, PME−PLE 0.07, AME−PME 0.10, AME−PLE 0.18, ALE−ALE 0.25, PLE−PLE 0.39, ALE−PLE 0.11. MOA 0.24 long, frontal width 0.22, posterior width 0.26. Pedicel 0.05 long. Abdomen (Fig. 101A) 1.95 long, 1.07 wide. Leg measurements: I 6.83 (1.46, 0.63, 2.20, 1.74, 0.80); II 5.57 (1.25, 0.5, 1.66, 1.36, 0.80); III 4.71 (1.09, 0.54, 1.07, 1.26, 0.75); IV 5.5 (1.28, 0.45, 1.35, 1.58, 0.84). Leg spination (Fig. 101A, B): femora

I pv1111, II pv111; metatarsi I v2222, II v2221.

Colouration (Fig. 101A, B). Lighter than male. Sternum yellowish. Ventral abdomen with indistinct H-shaped dark brown mark posteriorly.

Epigyne (Fig. 101C, D). Epigynal plate bow-and-arrow-shaped, posteromedially with subtrapezoidal median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval with weakly sclerotized margin. Copulatory ducts short, anteriorly relatively broad, slanting. Bursae bean-shaped, slightly separated, covering nearly more than ½ of epigynal plate. Glandular appendages short, located anteriorly on connecting tubes, near base of bursae. Connecting tubes thin, convergent, slightly longer than copulatory ducts, anteriorly strongly bending toward posteromedian part of endogyne, posteriorly with a slight curve in ventral view. Spermathecae globular, separated by nearly ½ width of posterior part of median septum. Fertilization ducts short, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia shuijiang* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:EEBED5E6-4D33-48F4-B4FF-CD4EAD65D653

Chinese name 水浆奥塔蛛

Figures 102, 127F, 129

Type material. Holotype: female (Phu-138, 20210503-3), 26°53’12.65”N, 115°47’17.00”E, 771 m, Zhaichacheng, Shuijiang Nature Reserve, Shaxi Town, Yongfeng Town, Ji’an City, Jiangxi Province, China, 3 May 2021, K. Liu, Y. Ying, J. Yan, & C. Xu leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The females resemble those of *Otacilia daweishan* in having an M-shaped epigynal sclerotized ridge and a bow-and-arrow-shaped epigynal plate (Fig. 102C) but differ by the carapace with a broad dark brown mark medially (Fig. 102A) (vs radial irregular dark yellow-brown mottling), a median septum covering nearly 2/3 of epigynal length (Fig. 102C) (vs ½), and short connecting tubes bent at an acute angle of ca. 100° (Fig. 102D) (vs long connecting tubes bent at an obtuse angle of ca. 70°). The female is also similar to that of *O. xingguo* **sp. nov.** in having a broad, dark grey mark medially on the carapace, a bow-and-arrow-shaped epigynal plate, and a long median septum covering nearly 2/3 of the epigynal length (Fig. 102A, C), but it can be separated by the M-shaped epigynal sclerotized ridge (Fig. 102C) (vs transverse), the separated copulatory openings (Fig. 102C) (vs touching), and slightly separated spermathecae (Fig. 102D) (vs touching).

Description. Habitus as in Figs 102A, B, 127F. Total length 4.75, carapace 1.70 long, 1.49 wide. Eye sizes and interdistances (Fig. 102A): AME 0.09, ALE 0.11, PME 0.08, PLE 0.09; AME−AME 0.05, AME−ALE 0.02, PME−PME 0.12, PME−PLE 0.07, AME−PME 0.09, AME−PLE 0.02, ALE−ALE 0.25, PLE−PLE 0.42, ALE−PLE 0.10. MOA 0.22 long, frontal width 0.29, posterior width 0.25. Chelicerae (Fig. 102B) with 3 promarginal (proximal largest, distal smallest) and 3 retromarginal teeth (distal larger). Sternum (Fig. 102B) slightly longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.09 long. Abdomen (Fig. 102A, B), 2.92 long, 1.82 wide. Leg measurements: I 6.63 (1.66, 0.64, 2.04, 1.59, 0.7); II 5.55 (1.44, 0.59, 1.46, 1.3, 0.76); III 4.63 (1.23, 0.54, 0.98, 1.18, 0.7); IV 6.98 (1.9, 0.6, 1.69, 1.99, 0.8). Leg spination (Fig. 102A, B): femora I d2, pv1111, II d1, pv1111, III d1, IV d1; tibiae I v22222222, II v22222221; metatarsi I v2222, II v2221.

Colouration (Fig. 102A, B). Carapace yellow with conspicuous irregular dark yellow-brown mottled markings radially along midline and arc-shaped dark stripes around margin. Chelicerae, endites, labium, sternum, and legs yellow. Abdomen dark yellow-brown with pair of oval spots and pair of irregular yellowish spots on dorsum medially, 3 light chevrons subposteriorly, and one arc-shaped yellowish stripe anterior to anal tubercle; venter with pair of

slanting marks, pair of longitudinal marks, and pair of dark brown spots posteriorly.

Epigyne (Fig. 102C, D). Epigynal plate-bow-and arrow shaped, anteriorly with an M-shaped epigynal sclerotized ridge, posteromedially with a long median septum. Fovea large, covering more than 1/3 of epigynal plate. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, covered by strongly sclerotized margin, separated by anterior width of median septum. Copulatory ducts relatively short, anteriorly relatively broad, slanting. Bursae bean-shaped, widely separated, covering nearly 1/3 of epigynal plate. Glandular appendages small, located anteriorly on copulatory ducts. Connecting tubes long, bent at an obtuse angle of ca. 100°, clearly longer than copulatory ducts, located between glandular appendages and spermathecae, strongly curved medially. Spermathecae globular, slightly separated. Fertilization ducts short, located posteriorly on spermathecae, directed anterolaterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia tianhua* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:11A8B3A3-8FA4-4EA1-9597-A0404167FA8C

Chinese name 天华山奥塔蛛

Figures 103, 104, 127G, H, 129)

Type material. Holotype: male (Phu-47, 20201003-2), 25°25’38.09”N, 114°01’43.95”E, 1019 m, Tianhua Mountain, Neiliang Town, Dayu County, Ganzhou City, Jiangxi Province, China, 3 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 9 females, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Otacilia dadongshanica* (Figs 138C, 139C, 140C) in having a circular sperm duct and a crescent-shaped embolus (Fig. 103D, E), but it differs by the retrolateral tibial apophysis bent inwards toward the cymbial groove, forming an angle of ca. 60° with its transverse base (Fig. 103D−F) (vs 90°), a long, thick retrolateral tegular apophysis (Fig. 103E, F) (vs short), and a subrounded distal tegular apophysis (Fig. 103D, E) (vs elongated oval). The females resemble *O. dadongshanica* in having a sclerotized wing-like epigynal plug (Fig. 104C), but they can be separated by the hexagonal median septum (Fig. 104C) (vs subtrapezoidal) and the globular spermathecae (Fig. 104D) (vs oval).

Description. Male (holotype). Habitus as in Figs 103A, B, 127G. Total length 3.60, carapace 1.65 long, 1.51 wide. Eye sizes and interdistances (Fig. 103A): AME 0.09, ALE 0.10, PME 0.08, PLE 0.09; ALE−AME 0.02, AME–AME 0.06, PLE−PME 0.07, PME–PME 0.12, ALE−ALE 0.26, PLE−PLE 0.43, ALE−PLE 0.10, AME−PME 0.10, AME−PLE 0.10. MOA 0.27 long, frontal width 0.24, posterior width 0.29. Chelicerae (Fig. 103B) with 3 promarginal (proximal largest) and 5 retromarginal teeth. Sternum (Fig. 103B) longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.11 long. Abdomen (Fig. 103A, B) 1.91 long, 1.03 wide. Leg measurements: I 7.07 (1.64, 0.68, 2.19, 1.69, 0.87); II 5.52 (1.37, 0.51, 1.57, 1.35, 0.72); III 4.32 (1.09, 0.38, 0.93, 1.18, 0.74); IV 7.6 (2.02, 0.60, 1.74, 2.14, 1.10). Leg spination (Fig. 103A, B): femora I d2, pv1111, II d1, pv11, III d1, IV d1; tibiae I v22222221, II v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 103A, B). Carapace dark yellow-brown, with irregular dark yellow-brown mottled markings radially and arc-shaped yellow stripes around margin. Chelicerae, endites, and labium yellow-brown, mottled. Sternum yellow, anteriorly dark yellow-brown. Legs yellow, with indistinct dark annulation distally on femora. Abdomen dark brown with pair of oval spots and pair of slanting, clavate yellowish spots on posterior scutum, 3 light chevrons submedially, and an arc-shaped yellowish stripe posteriorly; scutum weak in anterior half; venter with indistinct H-shaped marks, pair of slanting marks, and pair of indistinct oval, dark brown marks posteriorly.

Palp (Fig. 103C−F). Femoral apophysis well-developed, as long as nearly ½ of femur. Retrolateral tibial apophysis short, nearly as long as tibia, bent inwards toward cymbial groove, forming an angle of ca. 60° with its transverse base. Sperm duct circular in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching middle part of tegulum. Retrolateral tegular apophysis relatively long, thick, longer than length of distal tegular apophysis and embolus in ventral view. Distal tegular apophysis subround, membranous, arising from base of sperm duct retrolaterally, shorter than embolic length, reaching embolic base. Embolus crescent-shaped, curved retrolaterally.

Female. Habitus as in Figs 104A, B, 127H. As in male, except as noted. Total length 4.33, carapace 1.91 long, 1.72 wide. Eye sizes and interdistances (Fig. 104A): AME 0.09, ALE 0.09, PME 0.08, PLE 0.08, AME−AME 0.07, AME−ALE 0.03, PME−PME 0.15, PME−PLE 0.08, AME−PME 0.11, AME−PLE 0.22, ALE−ALE 0.34, PLE−PLE 0.48, ALE−PLE 0.14. MOA 0.29 long, frontal width 0.25, posterior width 0.33. Chelicerae (Fig. 104B) with 2 promarginal (proximal larger) and 7 retromarginal teeth (distal largest). Pedicel 0.09 long. Abdomen (Fig. 8A) 2.30 long, 1.58 wide. Leg measurements: I 7.67 (1.89, 0.68, 2.37, 1.78, 0.95); II 6.09 (1.82, 0.67, 1.74, 1.19, 0.67); III 5.54 (1.54, 0.54, 1.18, 1.40, 0.88); IV 7.69 (2.06, 0.64, 1.83, 2.14, 1.02). Leg spination (Fig. 104A, B): femora I d2, pv111, II d2, pv111, right I pv1111, II pv1111, III d2, right d1, IV d2, right d1; tibiae I v22222222, II v22212222; metatarsi I v2212, II v1222, right I v2222.

Colouration (Fig. 104A, B). Lighter than male. Ventral abdomen with distinct H-shaped dark brown markings posteriorly.

Epigyne (Fig. 104C, D). Epigynal plate wing shaped, anteriorly with slightly separated fovea, posteriorly with hexagonal median septum. Fovea large, covering more than ½ of epigynal plate. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings slit-like, covered by strongly sclerotized epigynal plug. Copulatory ducts short, posteriorly with pair of bean-shaped, transparent bursae. Glandular appendages very small, located anteriorly on copulatory ducts. Connecting tubes short, relatively broad, shorter than copulatory ducts, located between glandular appendages and spermathecae, submedially curved. Spermathecae globular, separated by more than ½ width of posterior median septum. Fertilization ducts short, located posteriorly on spermathecae, directed anteriorly.

Notes. The left palp of the male specimen was lost when it was prepared for SEM.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia wanshi* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:D9634EA4-3DAF-43F1-9003-B0466DE9888B

Chinese name 万时山奥塔蛛

Figures 105–107, 128A, B, 129

Type material. Holotype: male (Phu-55, 20201002-4), 25°27’28.63”N, 113°55’22.42”E, 833 m, near parking lot, Wanshi Mountain (Sishui Mountain), Reshui Town, Chongyi County, Ganzhou City, Jiangxi Province, China, 2 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 3 males, 4 females, same data as holotype; 1 female (Phu-57, 20201002-5), 25°27’11.73”N, 113°55’30.04”E, 965 m, other data as holotype; 4 males, 2 females (Phu-58, 20201002-5), same data as previous. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *O. tianhua* **sp. nov.** in having a circular sperm duct, a relatively long and thick retrolateral tegular apophysis, a subrounded distal tegular apophysis, and a crescent-shaped embolus (Figs 105D–F, 106), but it differs by the retrolateral tibial apophysis bent inwards toward the cymbial groove, forming an angle of ca. 75° with its transverse base (Figs 105E, F, 106A, B, D, E) (vs 60°) and with a relatively long,

broad base in dorsal view (Figs 105F, 106D, E) (vs short). The females resemble *O. tianhua* **sp. nov.** in having a wing-shaped epigynal plate, a slightly separated sclerotized fovea, and a hexagonal median septum (Fig. 107C), but they can be separated by the anterior connecting tubes with sharp bends (Fig. 107C, D) (vs moderate bend) and the spermathecae separated by nearly 1/3 width of subposterior part of median septum (Fig. 107D) (vs more than ½ width).

Description. Male (holotype). Habitus as in Figs 105A, B, 128A. Total length 3.28, carapace 1.85 long, 1.55 wide. Eye sizes and interdistances (Fig. 105A): AME 0.11, ALE 0.11, PME 0.08, PLE 0.11; ALE−AME 0.06, AME–AME 0.02, PLE−PME 0.10, PME–PME 0.15, ALE−ALE 0.33, PLE−PLE 0.46, ALE−PLE 0.11, AME−PME 0.10, AME−PLE 0.21. MOA 0.26 long, frontal width 0.26, posterior width 0.30. Chelicerae (Fig. 105B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth. Sternum (Fig. 105B) clearly longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Abdomen (Fig. 105A, B) 1.97 long, 1.03 wide. Leg measurements: I 6.99 (1.90, 0.56, 2.24, 1.64, 0.65); II 5.19 (1.34, 0.41, 1.61, 1.10, 0.73); III 4.52 (1.18, 0.36, 1.27, 1.20, 0.51); IV 7.55 (2.00, 0.58, 1.88, 1.92, 1.17). Leg spination (Fig. 105A, B): femora I d2, pv1111, II d1, pv1111, III d1, IV d1; tibiae I v22222221, II v22222221; metatarsi I v2222, II v2222.

Colouration (Fig. 105A, B). Carapace dark yellow-brown, with a longitudinal yellow stripe along midline, irregular dark brown mottling radially, and arc-shaped yellow stripes around margin. Chelicerae dark yellow-brown, mottled. Endites and labium yellow, mottled. Sternum yellow. Legs yellow, with dark annulation distally on femora. Abdomen dark yellow-brown with pair of oval spots and pair of transverse yellowish marks on posterior part of scutum, 3 light chevrons submedially, and one arc-shaped yellowish stripe posteriorly; weak scutum on anterior ½; venter with one H-shaped mark, a pair of slanting marks, and a pair of irregular dark brown marks posteriorly.

Palp (Figs 105C−F, 106). Femoral apophysis well-developed, slightly longer than ½ of femur. Retrolateral tibial apophysis shorter than tibia, bent inwards toward cymbial groove, forming an angle of ca. 75° with its transverse base. Sperm duct circular in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching middle part of tegulum. Retrolateral tegular apophysis relatively long and thick, longer than the length of distal tegular apophysis and embolus in ventral view, its apex near the embolic tip. Distal tegular apophysis subround, membranous, arising from base of retrolateral sperm duct, shorter than embolus, reaching embolic base. Embolus crescent shaped, curved retrolaterally.

Female. Habitus as in Figs 107A, B, 128B. As in male, except as noted. Total length 3.89, carapace 1.63 long, 1.47 wide. Eye sizes and interdistances (Fig. 107A): AME 0.11, ALE 0.11, PME 0.08, PLE 0.09, AME−AME 0.06, AME−ALE 0.02, PME−PME 0.14, PME−PLE 0.08, AME−PME 0.07, AME−PLE 0.18, ALE−ALE 0.14, PLE−PLE 0.40, ALE−PLE 0.08. MOA 0.22 long, frontal width 0.23, posterior width 0.29. Chelicerae (Fig. 107A) with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest). Pedicel 0.3 long. Abdomen (Fig. 107A, B) 2.05 long, 1.18 wide. Leg measurements: I 3.29 (0.95, 0.34, 1.08, 0.67, 0.25); II 3.00 (0.86, 0.28, 0.69, 0.74, 0.43); III 2.48 (0.68, 0.29, 0.45, 0.64, 0.42); IV 3.51 (1.25, 0.22, 0.74, 0.90, 0.40). Leg spination (Fig. 107A, B): femora I d2, pv111111, II d1, pv111, right I pv1111, III d1, IV d1; tibiae I v222222221, II v2222222, right I v22222221; metatarsi I v222211, II v2221, right I v2222.

Colouration (Fig. 107A, B). Lighter than male. Ventral abdomen with H-shaped dark brown marking connected to pair of irregular spots posteriorly.

Epigyne (Fig. 107C, D). Epigynal plate wing-shaped, anteriorly with slightly separated fovea, posteromedially with subhexagonal median septum. Fovea large, covering more than ½ of epigynal plate. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings slit-like, covered by strongly sclerotized epigynal plug. Copulatory ducts relatively broad, nearly as long as ½ length of median septum, posteriorly with pair of bean-shaped transparent bursae. Glandular appendages very small, located anteriorly on copulatory ducts. Connecting tubes short, relatively broad, shorter than copulatory ducts, located between glandular appendages and

spermathecae, anteriorly strongly curved. Spermathecae globular, separated by nearly 1/3 width of subposterior part of median septum. Fertilization ducts short, located posteriorly on spermathecae, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia wugongshanica* Liu, 2020**

Chinese name 武功山奥塔蛛

Figures 128C, 129, 141K, 142K, 143K

Otacilia wugongshanica Liu *et al.* 2020b: 17, figs 12A−F, 13A−D, 14A−D (♂♀, type deposition in ASM-JGU).

Type material. Holotype: male (Phu-35), 27°27’10.79”N, 114°11’08.24”E, near the ticket office, Wugong Mountain, Taishan Town, Anfu County, Ji’an City, Jiangxi Province, China, 4 January 2020, K. Liu, Z. Meng, & H. Luo leg. **Paratypes:** 2 males, 4 females, same data as holotype; 3 females, 27°28’25.57”N, 114°12’39.24”E, 633 m, other data same as holotype; 3 females, 27°28’07.98”N, 114°12’09.55”E, 800 m, other data same as holotype; 2 males, 1 female, 27°31’43.36”N, 114°14’32.97”E, 552 m, near Buffalo Grand Valley, Yangshimu Scenic Spot, other data same as holotype.

Other material. 1 female, 1 male (Phu-35, 20210127-3), 27°31’43.53”N, 114°14’32.95”E, 556 m, near Buffalo Grand Valley, Yangshimu Scenic Spot, Anfu County, Ji’an City, Jiangxi Province, China, 27 January 2021, K. Liu, Y. Ying, Z. Meng, & H. Wang leg; 2 males, 10 females (Phu-101, 20210127-2), 27°26’57.43”N, 114°11’24.81”E, 1144 m, near Ropeway, Wugong Mountains, Taishan Town, other data same as previous. All these specimens are deposited in ASM-JGSU.

Description. See Liu *et al.* (2020b).

Comments. The specimens were easily found in the leaf litter of a coniferous forest, mixed broadleaf-conifer forest, mixed bamboo and broad-leaved forest. At Wugong Mountain National Natural reserved, they were found in broad-leaved forest from low to high altitude.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia wuzhifeng* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:AA1BCEB4-5C00-432E-83E8-287AB14CCE89

Chinese name 五指峰奥塔蛛

Figures 108–110, 128D, E, 129

Type material. Holotype: female (Phu-53, 20201001-3), 26°00’28.25”N, 114°08’47.43"E, 1046 m, near Viewing Platform, Wuzhifeng Scenic Spot, Wuzhifeng Town, Shangyou County, Ganzhou City, Jiangxi Province, China, 1 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 4 males, 3 females, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The females of the new species are similar to that of *Otacilia yangming* **sp. nov.** in having an S-shaped epigynal plate, a pair of C-shaped epigynal foveae, and a pair of slit-like copulatory openings (Fig. 108C, D) but can be easily separated by the triangular median septum (Fig. 108C) (vs T-shaped) and the transparent bursae covering more than ½ of epigynal plate (Fig. 108D) (vs 1/3). The males resemble *O. yangming* **sp. nov.** in having an oval distal tegular apophysis, a clavate retrolateral tegular apophysis, and a thick embolus (Figs 109D–F, 110A–F), but they differ by the ventral abdomen with a large, H-shaped dark brown mark (Fig. 109B) (vs small) and a triangular retrolateral tibial apophysis in dorsal view (Figs 109E, F, 110C, D) (vs syringe-like).

Description. Female (holotype). Habitus as in Figs 108A, B, 128E. Total length 3.43, carapace 1.53 long, 1.38 wide. Eye sizes and interdistances (Fig. 108A): AME 0.09, ALE 0.10, PME 0.10, PLE 0.08, AME−AME 0.06, AME−ALE 0.03, PME−PME 0.15, PME−PLE 0.08, AME−PME 0.11, AME−PLE 0.22, ALE−ALE 0.28, PLE−PLE 0.46, ALE−PLE 0.13. MOA 0.25 long, frontal width 0.23, posterior width 0.33. Chelicerae (Fig. 108B) with 3 promarginal (middle largest, distal smallest) and 5 retromarginal teeth (distal largest). Sternum (Fig. 108B) longer than wide, laterally with conspicuous precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.03 long. Abdomen (Fig. 108A, B) 1.84 long, 1.12 wide. Leg measurements: I 7.16 (1.90, 0.67, 2.13, 1.69, 0.77); II 5.87 (1.61, 0.57, 1.63, 1.23, 0.83); III 6.23 (1.70, 0.64, 1.31, 1.64, 0.94); IV 7.97 (2.12, 0.63, 1.93, 2.16, 1.13). Leg spination (Fig. 108A, B): femora I d2, pv1111, II d1, pv111, III d1, IV d1; tibiae I v22222221, right v2222222, II v2222222; metatarsi I v2222, II v2221.

Colouration (Fig. 108A, B). Carapace dark yellow-brown, with irregular dark yellow-brown mottled markings radially and arc-shaped dark brown stripes around submargin. Chelicerae, endites, and labium yellow, mottled. Sternum yellow, with radial dark mottled marks on surface. Legs yellow, with dark annulation distally on femora. Abdomen dark yellow-brown with pair of round spots and pair of irregular yellowish spots on posterior scutum, 3 light chevrons subposteriorly, and 2 arc-shaped yellowish stripes posteriorly; venter with large H-shaped mark and pair of slanting dark brown marks posteriorly.

Epigyne (Fig. 108C, D). Epigynal plate S-shaped, posteriorly with triangular median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Foveae separated by anterior narrow part of median septum, directed laterally. Copulatory openings slit-like, located at posterior fovea. Copulatory ducts very short, posteriorly with pair of bean-shaped transparent bursae. Glandular appendages short, located anteriorly on copulatory ducts. Connecting tubes long, anteriorly strongly bent posteromedially, posteriorly slightly curved, nearly as long as 1/3 length of median septum, located between glandular appendages and spermathecae. Spermathecae globular, slightly touching. Fertilization duct as long as spermathecae, located submedially on spermathecae, directed anterolaterally.

Male. Habitus as in Figs 109A, B, 128D. As in male, except as noted. Total length 3.34, carapace 1.67 long, 1.43 wide. Eye sizes and interdistances (Fig. 109A): AME 0.07, ALE 0.08, PME 0.07, PLE 0.09; ALE−AME 0.03, AME–AME 0.08, PLE−PME 0.07, PME–PME 0.14, ALE−ALE 0.28, PLE−PLE 0.44, ALE−PLE 0.12, AME−PME 0.13, AME−PLE 0.19. MOA 0.26 long, frontal width 0.22, posterior width 0.30. Chelicerae (Fig. 109B) with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (proximal largest). Sternum (Fig. 109B) posteriorly with several long setae. Pedicel 0.03 long. Abdomen (Fig. 109A, B) 1.62 long, 1.05 wide. Leg measurements: I 3.89 (1.05, 0.28, 1.19, 0.96, 0.41); II 3.2 (0.87, 0.34, 0.80, 0.75, 0.44); III 2.85 (0.70, 0.31, 0.65, 0.74, 0.45); IV 4.51 (1.19, 0.38, 1.07, 1.25, 0.62). Leg spination (Fig. 1A, B): femora I pv11111, II pv111; tibiae I v22222221, II v2222222; metatarsi I v2222, II v2221.

Palp (Figs 109C−F, 110). Femoral apophysis well-developed, longer than ½ of femur. Retrolateral tibial apophysis longer than tibia, bent inwards to cymbial groove, forming an angle of ca. 70° with its transverse base, with short subtriangular apex, and stubby basal apophysis. Sperm duct circular in ventral view, extended from base of retrolateral tegular apophysis to embolic base, almost reaching middle part of tegulum. Retrolateral tegular apophysis clavate, relatively long, longer than length of distal tegular apophysis in ventral view, apex not reaching embolic tip. Distal tegular apophysis oval, membranous, arising from base of retrolateral sperm duct reaching more than ½ of retrolateral tegular apophysis, directed anteriorly. Embolus hook-shaped, thick, strong, with broad base, curved retrolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia xiangshan* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:2058E95E-BA8F-4F84-AAC4-492669E22D60
Chinese name 项山奥塔蛛
Figures 111–113, 128F, G, 129

Type material. Holotype: male (Phu-77, 20201007-1), 24°55’32.51”N, 115°49’50.78”E, 899 m, Xiang Mountain, Xiangshan Town, Xunwu County, Ganzhou City, Jiangxi Province, China, 7 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 2 males, 6 females, 3 juveniles, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is similar to that of *Otacilia guizhumao* **sp. nov.** in having a U-shaped sperm duct, a clavate retrolateral tegular apophysis, a subrounded distal tegular apophysis, and a hook-shaped embolus (Figs 111D–F, 112A, B, E), but it differs by the ventral abdomen submedially with a conspicuous H-shaped dark brown mark (Fig. 111B) (vs pair of indistinct longitudinal marks) and an S-shaped retrolateral tibial apophysis submedially with an acutely-angled apophysis (Figs 111E, F, 112C, D) (vs obtusely angled). The females resemble *O. guizhumao* **sp. nov.** in having a pair of oval copulatory openings, bean-shaped bursae, and slightly separated spermathecae (Fig. 113C, D), but they can be distinguished by a subtrapezoidal median septum (Fig. 113C) (vs subrectangular) and connecting tubes with a slight curve posteriorly (Fig. 113D) (vs absent).

Description. Male (holotype). Habitus as in Figs 111A, B, 128F. Total length 3.43, carapace 1.57 long, 1.57 wide. Eye sizes and interdistances (Fig. 111A): AME 0.90, ALE 0.10, PME 0.07, PLE 0.10; ALE−AME 0.02, AME–AME 0.06, PLE−PME 0.09, PME–PME 0.13, ALE−ALE 0.25, PLE−PLE 0.40, ALE−PLE 0.11, AME−PME 0.08, AME−PLE 0.17. MOA 0.24 long, frontal width 0.22, posterior width 0.27. Chelicerae (Fig. 111B) with 3 promarginal (proximal largest, distal smallest) and 5 retromarginal teeth (distal largest). Sternum (Fig. 111B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.2 long. Abdomen (Fig. 111A, B) 1.77 long, 1.02 wide. Leg measurements: I 3.58 (0.99, 0.31, 0.93, 0.88, 0.47); II 2.99 (0.73, 0.34, 0.80, 0.71, 0.41); III 2.52 (0.65, 0.26, 0.53, 0.67, 0.41); IV 3.87 (1.09, 0.34, 1.03, 0.84, 0.57). Leg spination (Fig. 111A, B): femora I d1, pv1111, right d2, II d1, pv11, right II pv111, III d1, IV d1; tibiae I v2222222, II v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 111A, B). Carapace dark yellow-brown, with irregular dark yellow-brown mottled markings radially and arc-shaped yellow stripes around submargin. Chelicerae dark yellow-brown, mottled. Endites and labium yellow, mottled. Sternum yellow, with indistinct dark stripes around lateral margin. Legs yellow, without dark annulation distally on femora. Abdomen dark yellow-brown with pair of oval and pair of clavate yellowish spots on posterior scutum, 3 light chevrons submedially, and an arc-shaped yellowish stripe posteriorly; weak scutum in anterior ½; venter with an H-shaped mark, a pair of slanting marks, and a pair of irregular dark brown markings posteriorly.

Palp (Figs 111C−F, 112). Femoral apophysis well-developed, nearly as long as ½ of femora. Retrolateral tibial apophysis S-shaped, nearly as long as tibia, bent inwards toward cymbial groove, submedially with acutely-angled apophysis. Sperm duct U-shaped in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching middle part of tegulum. Retrolateral tegular apophysis clavate, thick, longer than distal tegular apophysis in ventral view. Distal tegular apophysis subrounded, membranous, arising from base of retrolateral sperm duct, nearly as long as embolus. Embolus thick, hook-shaped, curved retrolaterally.

Female. Habitus as in Figs 113A, B, 128G. As in male, except as noted. Total length 3.97, carapace 1.74 long, 1.43 wide. Eye sizes and interdistances (Fig. 113A): AME 0.10, ALE 0.10, PME 0.80, PLE 0.11; AME−AME 0.04, AME−ALE 0.02, PME−PME 0.14, PME−PLE 0.09, AME−PME 0.12, AME−PLE 0.21, ALE−ALE 0.27, PLE−PLE 0.45, ALE−PLE 0.13. MOA 0.29 long, frontal width 0.24, posterior width 0.29. Pedicel 0.3 long. Abdomen (Fig. 113A, B) 2.20 long, 1.27 wide. Leg measurements: I 4.01 (1.00, 0.42, 1.19, 0.95, 0.45); II 3.37 (0.87, 0.32, 1.00, 0.75,

0.43); III 2.95 (0.81, 0.32, 0.64, 0.78, 0.40); IV 4.36 (1.15, 0.34, 1.02, 1.27, 0.58). Leg spination (Fig. 113A, B): femora I d2, pv1111, II d1, pv111, III d1, IV d1; tibiae I v22222221, II v2222222, right I v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 113A, B). Lighter than males. Abdomen, with pair of irregular yellowish spots medially.

Epigyne (Fig. 113C, D). Epigynal plate bow-and-arrow-shaped, posteromedially with subtrapezoidal median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Bursae bean-shaped, slightly separated, nearly covering more than ½ of epigynal plate. Glandular appendages short, located anteriorly on connecting tubes, near base of bursae. Connecting tubes thin, convergent, longer than copulatory ducts, posteriorly with slight curve. Spermathecae oval, slightly separated. Fertilization ducts short, directed anterolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia xiaobu* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:61FCAF83-4856-4B2A-ACE1-4A8BBD27DB16

Chinese name 小布奥塔蛛

Figures 114, 115, 128H, 129

Type material. Holotype: male (Phu-104, 20210123-2), 26°48’51.91”N, 115°47’53.23”E, 401 m, Goudaozui, Lingyun Mountain Forest Park, Xiaobuzhen Scenic Spot, Pixia Village, Xiaobu Town, Ningdu County, Ganzhou City, Jiangxi Province, China, 23 January 2021, K. Liu, Z. Meng, & D. Zhao leg. Type specimen is deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species resembles *Otacilia linghua* **sp. nov.** in having a strong, L-shaped retrolateral tegular apophysis and a crescent-shaped embolus (Figs 114C, D, 115A, C, E) but differs by the retrolateral tibial apophysis with a slightly curved apex (Figs 114E, 115B, D) (vs straight) in retrolateral view and the V-shaped sperm duct (Figs 114D, E, 115A, C, E) (vs circular).

Description. Habitus as in Figs 114A, B, 128H. Total length 3.83, carapace 1.76 long, 1.54 wide. Eye sizes and interdistances (Fig. 114A): AME 0.08, ALE 0.10, PME 0.09, PLE 0.09; AME–AME 0.06, ALE−AME 0.03, PME–PME 0.13, PLE−PME 0.07, AME−PME 0.10, AME−PLE 0.16, ALE−ALE 0.26, PLE−PLE 0.44, ALE−PLE 0.09. MOA 0.27 long, frontal width 0.22, posterior width 0.30. Chelicerae (Fig. 114B) with 3 promarginal (middle largest, distal smallest) and 7 retromarginal teeth (distal largest, 6th smallest). Sternum (Fig. 114B) longer than wide, laterally with precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.17 long. Abdomen (Fig. 114A, B) 1.80 long, 1.06 wide. Leg measurements: I 6.76 (1.79, 0.52, 2.12, 1.50, 0.83); II 5.76 (1.51, 0.58, 1.59, 1.28, 0.08); III 4.73 (1.29, 0.54, 1.05, 1.14, 0.71); IV 7.46 (1.98, 0.63, 1.87, 2.09, 1.08). Leg spination (Fig. 114A, B): femora I d1, pv1111, II d1, pv111, right I pv111111, III d1, IV d1; tibiae I v22222222, II v22222221, right I v2222222211; metatarsi I v2222, right v22221, II v2221.

Colouration (Fig. 114A, B). Carapace dark yellow-brown, with radial irregular dark yellow-brown stripes medially and arc-shaped dark stripes around margin. Chelicerae, endites, and labium yellow, mottled. Sternum yellow, with indistinct radial dark stripes around lateral margin. Legs yellow, without annulations. Abdomen yellow, with pair of oval spots and pair of irregular yellowish spots on posterior part of scutum, 3 light chevrons submedially, and arc-shaped yellowish stripe anterior of anal tubercle; weak scutum in anterior ½; venter with large H-shaped mark and pair of slanting dark brown marks posteriorly.

Palp (Figs 114C−F, 115). Femoral apophysis well-developed, slightly longer than ½ of femur. Retrolateral tibial apophysis U-shaped in retrolateral view, longer than tibia, bent inwards toward cymbial groove, anteriorly spine-like, subapex slightly curved in retrolateral view. Sperm duct V-shaped in ventral view, extended from base of retrolateral

tegular apophysis to embolic base, reaching middle part of tegulum. Retrolateral tegular apophysis L-shaped, stubby, nearly reaching embolic tip, longer than distal tegular apophysis in ventral view. Distal tegular apophysis oval, membranous. Embolus crescent shaped, thick, with broad base.

Female. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia xingguo* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:C6FEE5F8-FBBC-48FD-8C64-CBDC2A0ABD97

Chinese name 兴国奥塔蛛

Figures 116, 129

Type material. Holotype: female (Phu-107, 20210120-3), 26°36'48.49"N, 115°18'55.71"E, 710 m, Xiajunzhu, Chongxian Town, Xingguo County, Ganzhou City, Jiangxi Province, China, 20 January 2021, K. Liu, Z. Meng, & D. Zhao leg. **Paratypes:** 2 females, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The female of the new species is similar to that of *Otacilia zhonglong* **sp. nov.** in having a subtrapezoidal fovea anteriorly with a weakly sclerotized transverse margin, copulatory openings touching each other, a spindle-shaped median septum, and spermathecae touching each other (Fig. 116C, D), but it differs by the ventral abdomen lacking an H-shaped dark brown mark (Fig. 116C) (vs present) and the connecting tubes are transverse posteriorly (Fig. 116D) (vs obliquely), connecting to globular spermathecae.

Description. Female (holotype). Habitus as in Fig. 116A, B. Total length 4.42, carapace 1.16 long, 1.48 wide. Eye sizes and interdistances (Fig. 116A): AME 0.09, ALE 0.10, PME 0.08, PLE 0.10; AME–AME 0.05, ALE−AME 0.03, PME–PME 0.12, PLE−PME 0.08, AME−PME 0.10, AME−PLE 0.18, ALE−ALE 0.25, PLE−PLE 0.42, ALE−PLE 0.10. MOA 0.27 long, frontal width 0.21, posterior width 0.29. Chelicerae (Fig. 116B) with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest). Sternum (Fig. 116B) longer than wide, laterally with strong precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.16 long. Abdomen (Fig. 116A, B) 2.52 long, 1.68 wide. Leg measurements: I 6.8 (1.78, 0.62, 2.03, 1.58, 0.79); II 4.83 (1.47, 0.49, 1.12, 1.24, 0.51); III 4.42 (1.19, 0.43, 0.97, 1.05, 0.78); IV 6.68 (1.36, 0.59, 1.77, 1.93, 1.03). Leg spination (Fig. 116A, B): femora I d2, pv1111, II d1, pv111, III d1, IV d1; tibiae I v22222222, II v2222221; metatarsi I v2222, II v2221.

Colouration (Fig. 116A, B). Carapace dark yellow-brown, with radial irregular dark yellow-brown stripes medially and arc-shaped dark stripes around margin. Chelicerae yellow-brown, mottled. Endites and labium yellow, slightly mottled. Sternum yellow, with indistinct dark stripes around lateral margin. Legs yellow, with clear annulation distally on femora. Abdomen dark yellow-brown, with pair of oval spots and pair of irregular yellowish spots medially, 3 light chevrons submedially, and an arc-shaped yellowish stripe anterior to anal tubercle; venter with large H-shaped mark and pair of slanting dark brown marks posteriorly.

Epigyne (Fig. 116C, D). Epigynal plate bow-and-arrow-shaped, postero-medially with conspicuous spindle-shaped median septum. Copulatory ducts, glandular appendages, connecting tubes, and spermathecae distinctly visible through integument. Fovea subtrapezoidal, anteriorly separated by weakly sclerotized transverse margin. Copulatory openings oval, touching each other, located at posterior part of fovea, covered by sclerotized plug. Copulatory ducts broad, posteriorly with pair of kidney-shaped transparent bursae. Glandular appendages short, located anteriorly on copulatory ducts. Connecting tubes located between glandular appendages and spermathecae, short, broad, slightly shorter than copulatory ducts, transversely connected to globular spermathecae posteriorly. Spermathecae ellipsoidal, touching each other, located at subposteromedial part of vulva. Fertilization ducts relatively long, located submedially on spermathecae, directed anterolaterally.

Male. Unknown.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia yangming* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:5C558155-19B1-4A05-B7FD-68CEDCCB14DE

Chinese name 阳明山奥塔蛛

Figures 117–119, 129

Type material. Holotype: female (Phu-54, 20201002-2), 25°38’05.58”N, 114°19’12.41”E, 629 m, Yangming Mountain National Forest Park, Hengshui Town, Chongyi County, Ganzhou City, Jiangxi Province, China, 2 October 2020, K. Liu, Y. Ying, M. Zhang, & J. Yan leg. **Paratypes:** 2 males, 4 juveniles, same data as holotype; 6 females, 4 males (Phu-54, 20201002-1), 25°37’32.68”N, 114°18’25.06”E, 1107 m, other data same as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The females of the new species are similar to that of *Otacilia wuzhifeng* **sp. nov.** in having an S-shaped epigynal plate, a pair of C-shaped epigynal foveae, and a pair of slit-like copulatory openings (Fig. 117C, D), but they differ by the T-shaped median septum (Fig. 117C) (vs triangular), the short connecting tubes, less than ½ of maximum width of median septum (Fig. 117D) (vs relatively long connecting tubes, more than ½ of maximum width of median septum), and the transparent bursae covering nearly 1/3 of epigynal plate (Fig. 117D) (vs more than ½). The males resemble *O. wuzhifeng* **sp. nov.** in having an oval distal tegular apophysis, a clavate retrolateral tegular apophysis, and a thick embolus (Figs 118D, E, 119B–D, F), but they can be separated by the ventral abdomen with a small H-shaped dark brown mark (Fig. 118B) (vs large) and a retrolateral tibial apophysis with a relatively long spine-like apex (Figs 118E, F, 119A, D, E) (vs short).

Description. Female (holotype). Habitus as in Fig. 117A, B. Total length 4.04, carapace 1.68 long, 1.45 wide. Eye sizes and interdistances (Fig. 117A): AME 0.08, ALE 0.10, PME 0.09, PLE 0.09, AME−AME 0.14, AME−ALE 0.08, PME−PME 0.06, PME−PLE 0.10, AME−PME 0.11, AME−PLE 0.22, ALE−ALE 0.30, PLE−PLE 0.45, ALE−PLE 0.13. MOA 0.29 long, frontal width 0.23, posterior width 0.31. Chelicerae (Fig. 117B) with 3 promarginal (distal smallest, proximal largest) and 7 retromarginal teeth (proximal smallest, distal largest). Sternum (Fig. 117B) slightly longer than wide, laterally with strong precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.06 long. Abdomen (Fig. 8A) 2.05 long, 1.2 wide. Leg measurements: I 7.48 (1.89, 0.68, 2.34, 1.72, 0.85); II 6.05 (1.58, 0.63 1.74, 1.33, 0.77); III 5.13 (1.36, 0.55, 1.12, 1.27, 0.83); IV 7.77 (1.98, 0.70, 1.92, 2.12, 1.05). Leg spination (Fig. 117A, B): femora I d1, pv111, right pv1111, II d1, pv111, III d1, IV d1; tibiae I v22222211, II v2222222, right I v22222221; metatarsi I v22221, II v2221, right I v2222.

Colouration (Fig. 117A, B). Carapace dark yellow-brown, with irregular dark yellow-brown mottled markings radially. Chelicerae, endites, and labium yellow-brown, mottled. Sternum yellow-brown, mottled, lateral margins with indistinct radial dark mottled stripes. Legs yellow. Abdomen dark yellow-brown, with pair of round spots and pair of irregular yellowish spots submedially, 3 light chevrons subposteriorly, and 2 yellowish arc-shaped stripes posteriorly; venter with large H-shaped mark and pair of slanting dark brown marks posteriorly.

Epigyne (Fig. 117C, D). Epigynal plate S-shaped, posteromedially with T-shaped median septum. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Foveae separated by a relatively broad anterior median septum, directed laterally. Copulatory openings slit-like, located at posterior part of fovea. Copulatory ducts very short, posteriorly with pair of bean-shaped transparent bursae. Glandular appendages short, located anteriorly on copulatory ducts, partly covered by bursae. Connecting tubes short, slightly longer than spermathecae, located between glandular appendages and spermathecae. Spermathecae oval, slightly touching each other.

Fertilization ducts as long as spermathecae, located posteriorly on spermathecae, directed laterally.

Male. Habitus as in Fig. 118A, B. As in female, except as noted. Total length 3.02, carapace 1.44 long, 1.29 wide. Eye sizes and interdistances (Fig. 118A): AME 0.05, ALE 0.07, PME 0.07, PLE 0.09; ALE−AME 0.04, AME–AME 0.07, PLE−PME 0.07, PME–PME 0.15, ALE−ALE 0.25, PLE−PLE 0.40, ALE−PLE 0.10, AME−PME 0.10, AME−PLE 0.18. MOA 0.24 long, frontal width 0.19, posterior width 0.27. Chelicerae (Fig. 118B) with 2 promarginal (proximal larger) and 5 retromarginal teeth. Pedicel 0.2 long. Abdomen (Fig. 118A, B) 1.56 long, 0.9 wide. Leg measurements: I 3.73 (0.94, 0.26, 1.12, 0.94, 0.47); II 3.19 (0.78, 0.24, 1.01, 0.72, 0.44); III 2.40 (0.61, 0.22, 0.56, 0.63, 0.38); IV 3.01 (0.76, 0.20, 0.73, 0.85, 0.47). Leg spination (Fig. 118A, B): femora I d2, pv1111, II d1, pv111, III d1, IV d1; tibiae I v22222221, II v2222221, right II v2222222; metatarsi I v2222, II v2221.

Colouration (Fig. 118A, B). Darker than females. Abdomen with weak scutum in anterior ½; with pair of oval spots and pair of irregular yellowish spots near the posterior part of scutum, 3 narrow, light chevrons subposteriorly, and a broad, yellowish arc-shaped stripe posteriorly; venter with small H-shaped mark and transverse marks posteriorly.

Palp (Figs 118C−F, 119). Femoral apophysis well-developed, longer than ½ of femur. Retrolateral tibial apophysis longer than tibia, bent inwards toward cymbial groove, forming an angle of ca. 50° with its transverse base in retrolateral view, with a relatively long spine-like apex and a stubby basal apophysis in dorsal view. Sperm duct circular in ventral view, extended from base of retrolateral tegular apophysis to embolic base, not reaching middle part of tegulum. Retrolateral tegular apophysis blade-shaped in retrolateral view, relatively long, longer than distal tegular apophysis in ventral view, not reaching embolic tip. Distal tegular apophysis oval, elongated, membranous, arising from base of retrolateral sperm duct, nearly reaching ½ of retrolateral tegular apophysis, directed anteriorly. Embolus hook-shaped, thick, strong, with a broad base, curved retrolaterally.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia zhonglong* Liu & S. Li sp. nov.**

urn:lsid:zoobank.org:act:7B0EB34B-68E6-43FC-A05D-5B2EA4FDEA54

Chinese name 中龙奥塔蛛

Figures 120–124, 129

Type material. Holotype: male (Phu-88, 20201028-3), 26°43’23.15”N, 115°13’31.70”E, 388 m, Ziyao Mountain, Zhonglong Village, Zhonglong Town, Taihe County, Ji’an City, Jiangxi Province, China, 28 October 2020, K. Liu, Y. Ying, S. Yuan, & K. Huang leg. **Paratypes:** 5 males, 5 females, same data as holotype. All types are deposited in ASM-JGSU.

Etymology. The specific name refers to the type locality and is a noun in apposition.

Diagnosis. The male of the new species is very similar to that of *Otacilia dawushan* **sp. nov.** in having a relatively short and broad retrolateral tegular apophysis in retrolateral view, a kidney-shaped distal tegular apophysis, and a crescent-shaped embolus (Figs 120D, E, 123A, D–F), but it differs by the retrolateral tibial apophysis bent inwards toward the base of the cymbium, forming an acute angle of ca. 40° with its transverse base (Figs 120C, E, F, 123A, C, G) (vs ca. 35°) and lacking a curved apex (Figs 120E, 123C) (vs present). The females resemble *O. dawushan* **sp. nov.** in having a subtrapezoidal fovea anteriorly with a sclerotized transverse margin, copulatory openings touching each other, and the spermathecae touching each other (Fig. 124C, D), but it differs by the ventral abdomen lacking an H-shaped dark brown mark (Fig. 124B) (vs present) and the epigyne with a spindle-shaped median septum posteriorly (Fig. 124C) (vs subrectangular).

Description. Male (holotype). Habitus as in Fig. 120A, B. Total length 3.64, carapace 1.77 long, 1.52 wide. Eye sizes and interdistances (Figs 120A, 121A): AME 0.08, ALE 0.09, PME 0.08, PLE 0.11; ALE−AME 0.02, AME–

AME 0.06, PLE−PME 0.06, PME–PME 0.15, ALE−ALE 0.27, PLE−PLE 0.44, ALE−PLE 0.11, AME−PME 0.12, AME−PLE 0.21; anterior eye row slightly recurved, posterior eye row recurved. MOA 0.27 long, frontal width 0.22, posterior width 0.31. Chelicerae (Figs 120B, 121B–E): with 3 promarginal (proximal largest, distal smallest) and 6 retromarginal teeth (distal largest, 3th smallest); promarginal and retromarginal escort setae present, thick, with lamellar base; promarginal cheliceral whisker setae in line, retromarginal cheliceral whisker setae in two groups, one at the proximal end of the fang and the other near the cheliceral sub-base; promarginal rake setae occur in two lines, comb-shaped; promarginal and retromarginal base of fang with two slit sensilla. Endites (Figs 120B, 121F, G) slightly oblique, median area depressed, ventral distal macrosetae sparse, anterolateral area of endite with row of serrula, each with a blunt tip. Sternum (Figs 120B, 121G) longer than wide, laterally with strong precoxal triangles, posteriorly triangular, relatively blunt. Pedicel 0.06 long. Abdomen (Figs 120A, B, 121H) 1.82 long, 1.15 wide. Leg measurements: I 6.79 (1.61, 0.61, 2.12, 1.62, 0.83); II 5.76 (1.61, 0.54, 1.54, 1.31, 0.76); III 4.54 (1.24, 0.57, 1.08, 1.05, 0.60); IV 7.41 (2.07, 0.64, 1.84, 1.95, 0.91). Leg spination (Figs 120A, B, 121): femora I d1, pv1111, II d1, pv111, right pv11111, III d1, IV d1; tibiae I v222222221, II v22222221, right I v22222222; metatarsi I v2222, II v2222, right II v2221; metatarsi III and IV with conspicuous preening brushes, lyriform organs, and dorsal stoppers distally; tarsi with abundant scales, several long trichobothria dorsally and several chemosensory setae ventro-posteriorly on tarsi and the base of claws, trichobothria base with conspicuous proximal plate with 7 ridges, tarsal organ located subdistally on dorsal part, teardrop shaped, close to the base of a trichobothrium; inferior tarsal claw with 4 teeth, and a ventral scopula of tenent setae.

Colouration (Fig. 120A, B). Carapace yellow-brown, with irregular dark yellow-brown mottled markings radially and arc-shaped dark brown stripes around margin. Chelicerae, endites, and labium yellow-brown, mottled. Sternum yellow, lateral margins with radial dark yellow markings. Legs yellow. Abdomen yellow-brown, with pair of oval spots and pair of large, triangular yellowish spots on posterior scutum, 3 light chevrons submedially, and arc-shaped yellowish stripe posteriorly; weak scutum in anterior ½; venter with indistinct H-shaped mark, pair of slanting marks, and pair of transverse marks posteriorly.

Palp (Figs 120C−F, 123). Femoral apophysis well-developed, longer than 2/3 of femoral length. Retrolateral tibial apophysis very large, longer than tibia, tapered from broad base to spine-like apex in dorsal view, bent inwards toward cymbial groove, directed dorsally in dorsal view. Sperm duct V-shaped in ventral view, extended from base of retrolateral tegular apophysis to embolic base, reaching middle part of tegulum. Retrolateral tegular apophysis L-shaped, thick, with slightly curved apex, directed anterolaterally, shorter than embolus and distal tegular apophysis in ventral view. Distal tegular apophysis kidney-shaped, arising from base of embolus and sperm duct retrolaterally. Embolus crescent shaped, thick, with broad base.

Female. Habitus as in Fig. 124A, B. As in male, except as noted. Total length 3.92, carapace 1.79 long, 1.79 wide. Eye sizes and interdistances (Fig. 124A): AME 0.08, ALE 0.09, PME 0.07, PLE 0.08, AME−AME 0.05, AME−ALE 0.04, PME−PME 0.12, PME−PLE 0.04, AME−PME 0.08, AME−PLE 0.15, ALE−ALE 0.28, PLE−PLE 0.37, ALE−PLE 0.11. MOA 0.23 long, frontal width 0.23, posterior width 0.28. Pedicel 0.06 long. Abdomen (Fig. 124A, B) 2.17 long, 1.32 wide. Leg measurements: I 6.54 (1.84, 0.58, 2.14, 1.34, 0.64); II 5.42 (1.29, 0.49, 1.67, 1.18, 0.79); III 4.8 (1.31, 0.5, 1.01, 1.28, 0.7); IV 7.48 (1.94, 0.57, 1.83, 2.07, 1.07). Leg spination (Fig. 124A, B): femora I dorsal spine absent, right d2, pv11111, II d1, right d2, pv111, right I pv1111, III d1, IV d1; tibiae I v22222222, II v22222221, right I v2222221; metatarsi I v2222, right v22221, II v2221.

Colouration (Fig. 124A, B). Lighter than males. Ventral abdomen with pair of irregular marks, pair of indistinct slanting marks, and pair of small, dark brown marks posteriorly.

Epigyne (Fig. 124C, D). Epigynal plate bow-and-arrow-shaped, posteriorly with a spindle-like median septum. Anterior fovea separated by sclerotized transverse margin. Copulatory ducts, connecting tubes, and spermathecae distinctly visible through integument. Copulatory openings oval, touching each other, arising from anterior part of

median septum. Copulatory ducts slanting, longer than connecting tubes. Bursae large, bean-shaped, widely separated, nearly covering more than ½ of epigynal plate. Glandular appendages small, arising from connecting tubes anteriorly. Connecting tubes relatively broad, nearly as long as 2/3 of copulatory ducts. Spermathecae globular, touching each other, located subposteriorly on epigyne. Fertilization ducts short, located submedially on spermathecae, directed antero-laterally.

Variation. Male and female specimens bore 7 or 8 pairs of ventral spines on tibiae I.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

***Otacilia ziyaoshanica* Liu, 2020**

Figures 141N, 142N, 143N

Chinese name 紫瑶山奥塔蛛

Otacilia ziyaoshanica Liu *et al*. 2020b: 29, fig. 21A−D (♀, type deposition in ASM-JGU).

Type material. Holotype: female (Phu-46), 26°42’49.38”N, 115°13’32.82”E, 198 m, Ziyao Mountain, Zhonglong Village, Zhonglong Town, Taihe County, Ji’an City, Jiangxi Province, China, 6 October 2019, K. Liu, H. Luo, & Y. Ying leg.

Other material. 3 females (Phu-46, 2020-10-28-1), 26°43’05.30N, 115°13’36.28”E, 228 m, Ziyao Mountain, Zhonglong Village, Zhonglong Town, Taihe County, Ji’an City, Jiangxi Province, China, 28 October 2020, K. Liu, Y. Ying, S. Yuan, & K. Huang leg. All these specimens are deposited in ASM-JGSU.

Description. See Liu *et al*. (2020b).

Comments. Unfortunately, the male of this species is difficult to collect and has not been found.

Distribution. Known only from the type locality in Jiangxi Province, China (Fig. 129).

Discussion

For the purpose of comparison of related species, we also studied the followed species. Figures and material studied are followed.

***Otacilia ailan* Liu, Xu, Xiao, Yin & Peng, 2019**

Figures 141B, 142B, 143B

Otacilia ailan Liu *et al.* 2019: 439, figs 1A−C, 2A−B. D (♀, type deposition in HNNU).

Type material examined. Holotype: female, 24°56’34.8”N, 112°56’54”E, 1240 m, Jiangjunzhai Scenic Spot, Mangshan National Forest Park, Yizhang County, Chenzhou City, Hunan Province, China, 6 December 2017, H. Yin, A. He, J. Liu, Y. Xie, Y. Yang, & P. Dong leg.

Description. See Liu *et al.* (2019).

Distribution. China (Hunan).

***Otacilia daweishan* Liu, Xu, Xiao, Yin & Peng, 2019**

Figures 137D, 138D, 139D, 140D, 141E, 142E, 143E

Otacilia daweishan Liu *et al.* 2019: 441, figs 3A−D, 4A−C, 5A−E (♂♀, type deposition in HNNU).

Type material examined. Holotype: male, 28°26’N, 114°02’E, 379 m, Niwu village, Daweishan National Forest Park, Liuyang City, Hunan Province, China, 14 January 2018, G. Zhou, L. Wang, & K. Liu leg. **Paratypes:** 1 male, 25 females, same data as holotype.

Description. See Liu *et al.* (2019).

Distribution. China (Hunan).

***Otacilia gougunao* Liu, 2020**

Figures 137E, 138E, 139E, 140E

Otacilia gougunao Liu, in Liu *et al.* 2020b: 7, figs 4A−F, 5A−D (♂♀, type deposition in ASM-JGSU).

Type material examined. Holotype: male, 26°00’39.41”N, 114°01’03.91”E, 979 m, Xiajiaoling Village, Nanjiang Town, Suichuan county, Ji’an City, Jiangxi Province, China, 5 October 2019, H. Luo, Y. Ying, & K. Liu leg.

Description. See Liu *et al.* (2020b).

Distribution. China (Jiangxi).

***Otacilia jiandao* Liu, Xu, Xiao, Yin & Peng, 2019**

Figures 141F, 142F, 143F

Otacilia jiandao Liu *et al.* 2019: 448, figs 9A−C, 10A−B (♂, type deposition in HNNU).

Type material examined. Holotype: male, 24°57’18”N, 112°56’6.6”E, 1040 m, Linziping Reservoir, Mangshan National Forest Park, Yizhang County, Chenzhou City, Hunan Province, China, 6 December 2017, H. Yin, A. He, J. Liu, Y. Xie, Y. Yang, & P. Dong leg.

Description. See Liu *et al.* (2019).

Distribution. China (Hunan).

***Otacilia nanhuashanica* Liu, 2020**

Figures 137F, 138F, 139F, 140F, 141G, 142G, 143G

Otacilia nanhuashanica Liu, in Liu *et al.* 2020b: 9, figs 6A−G, 7A−C, 8A−D (♂♀, type deposition in ASM-JGSU).

Type material examined. Holotype: male, 26°50’22.02”N, 114°15’47.05”E, 1130 m, Nanhua Mountain, Yongxin County, Ji’an City, Jiangxi Province, China, 3 October 2019, H. Luo, Y. Ying, & K. Liu leg. **Paratype:** 1 male, 2 females, same data as holotype.

Description. See Liu *et al.* (2020b).

Distribution. China (Jiangxi).

***Otacilia ovoidea* Liu, 2020**

Figures 137G, 138G, 138G, 140G, 141H, 142H, 143H

Otacilia ovoidea Liu, in Liu *et al.* 2020a: 22, figs 13A−F, 14A−D (♂♀, type deposition in ASM-JGSU).

Type material examined. Holotype: male, 26°32’39.69”N, 114°6’34.69”E, 1130 m, Jingzhushan Scenic Spot, Dajing Village, Ciping Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 1 October 2018, W. Sun, H. Luo, & K. Liu leg. **Paratype:** 7 males, 1 female, same data as holotype.

Description. See Liu *et al.* (2020a).

Distribution. China (Jiangxi).

***Otacilia shenshanica* Liu, 2020**

Figures 137H, 138H, 139H, 140H, 141I, 142I, 143I,

Otacilia shenshanica Liu, in Liu *et al.* 2020a: 26, figs 15A−F, 16A−D, 17A−D (♂♀, type deposition in ASM-JGSU).

Type material examined. Holotype: male, 26°37’55.2”N, 114°6’21.6”E, 1029 m, Yuantou Village, Dalong Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 5 April 2014, Z. Chen, Z. Meng, Y. Tang, X. Huang, & K. Liu leg. **Paratype:** 1 female, same data as holotype.

Description. See Liu *et al.* (2020a).

Distribution. China (Jiangxi).

***Otacilia subovoidea* Liu, 2020**

Figures 137I, 138I, 140I, 141J, 142J, 143J

Otacilia subovoidea Liu, in Liu *et al.* 2020a: 30, figs 18A−E, 19A−D, 20A−E (♂♀, type deposition in ASM-JGSU).

Type material examined. Holotype: male, 26°35’28.93”N, 114°12’46.82”E, 810 m, Citic Sewage Treatment Plant, Liping Village, Ciping Town, Jinggangshan County Level City, Ji’an City, Jiangxi Province, China, 6 October 2018, H. Luo & K. Liu leg. **Paratype:** 6 males, 3 females, same data as holotype.

Description. See Liu *et al.* (2020a).

Distribution. China (Jiangxi).

***Otacilia yinae* Liu, Xu, Xiao, Yin & Peng, 2019**

Figures 137K, 138K, 139J, 140K

Otacilia yinae Liu *et al.* 2019: 453, figs 14A−E, 15A−C (♂, type deposition in HNNU).

Type material examined. Holotype: male, 22°26’0.6”N, 107°1’26.4”E, 262 m, 18th boundary tablet, Xiangshui Station, Nonggang National Nature Reserve, Longzhou County, Chongzuo City, Guangxi Zhuang Autonomous Region, China, 1 November 2017, A. He, K. Liu, Q. Cai, J. Liu, J. Liu, & Z. Huang leg.

Description. See Liu *et al.* (2019).

Distribution. China (Guangxi).

***Otacilia yusishanica* Liu, 2020**

Figures 137L, 138L, 139K, 140L, 141L, 142L, 143L

Otacilia yusishanica Liu, in Liu *et al.* 2020b: 21, figs 15A−F, 16A−D, 17A−D (♂♀, type deposition in ASM-JGSU).

Type material examined. Holotype: male, 27°33’5.52”N, 115°16’16.88”E, 202 m, Yusi Mountain, Xiajiang County, Ji’an City, Jiangxi Province, China, 7 October 2019, H. Luo, Y. Ying, & K. Liu leg. **Paratype:** 5 males, 4 females, same data as holotype.

Description. See Liu *et al.* (2020b).

Distribution. China (Jiangxi).

***Otacilia zaoshiica* Liu, 2020**

Figures 137M, 138M, 139L, 140M, 141M, 142M, 143M

Otacilia zaoshiica Liu, in Liu *et al.* 2020b: 26, figs 18A−F, 19A−D, 20A−D (♂♀, type deposition in ASM-JGSU).

Type material examined. Holotype: male, 27°46’15.63”N, 115°39’38.1”E, 589 m, Zaoshi Village, Xingan County, Ji’an City, Jiangxi Province, China, 7 October 2019, H. Luo, Y. Ying, & K. Liu leg. **Paratype:** 4 males, 1 female, same data as holotype.

Description. See Liu *et al.* (2020b).

Distribution. China (Jiangxi).

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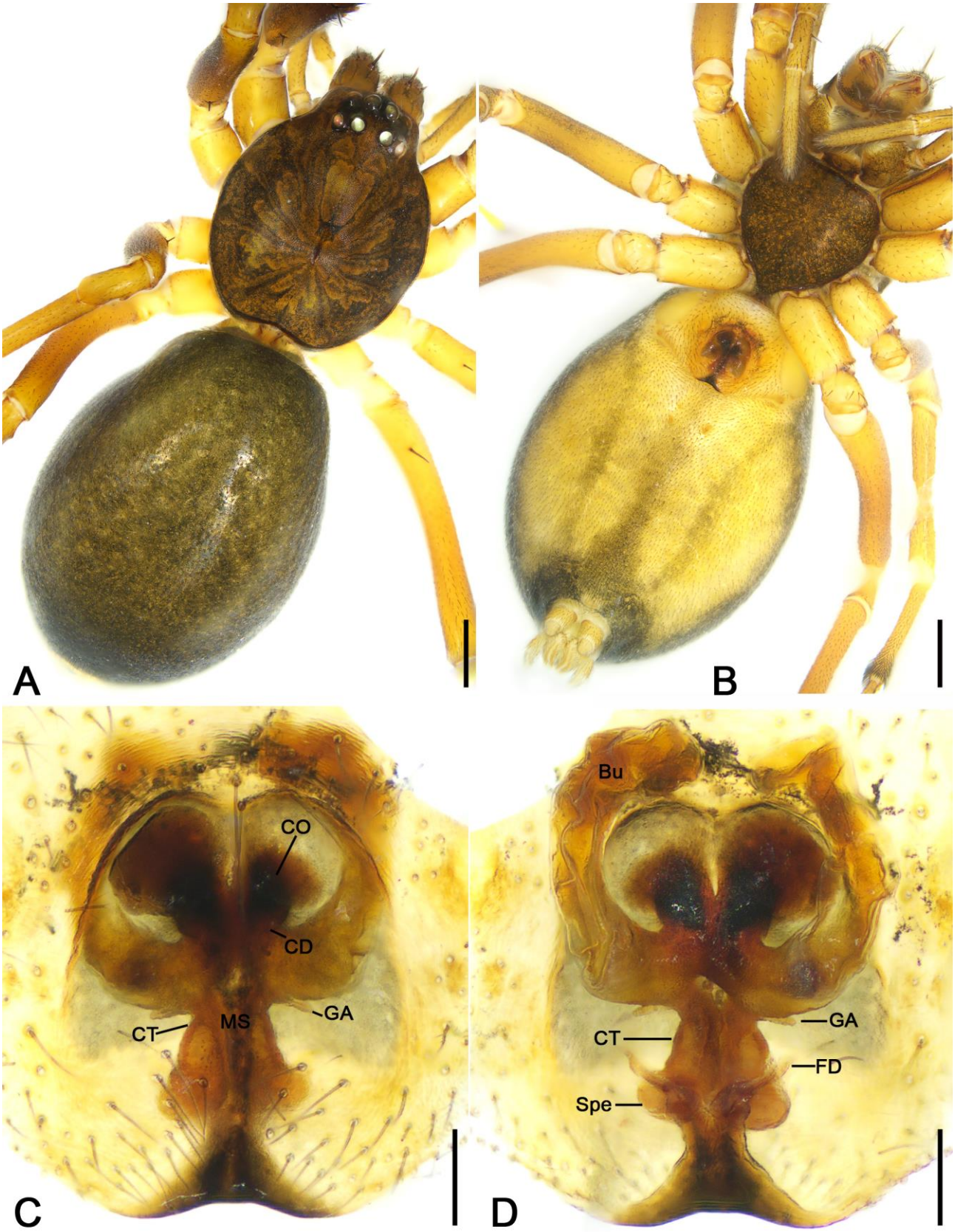

Figure 1. *Acrolithus jiulong* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermatheca.

Figure 2. *Acrolithus lingyun* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, SD – sperm duct, VTA – ventral tibial apophysis.

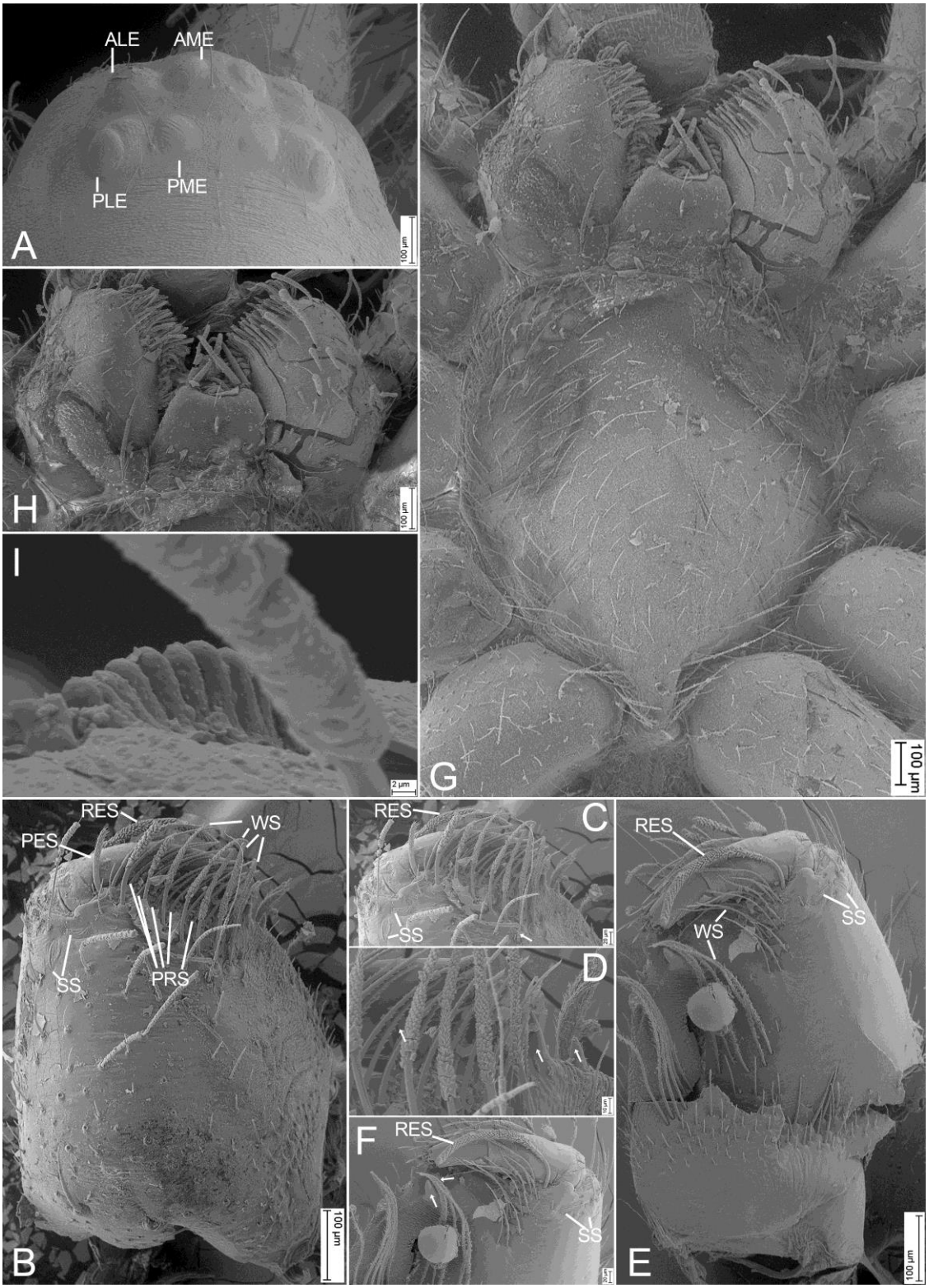

Figure 3. SEM micrographs of *Acrolithus lingyun* sp. nov., male paratype, eyes, chelicera, endites, labium, and sternum. **A** Eyes, dorsal view **B** Chelicera, frontal view **C** Same, detail of promargin, white arrow shows a trichobothrium **D** Same, white arrows show the detail of promarginal teeth **E** Same, posterior view **F** Same, white arrows show the detail of retromarginal teeth **G** Endites, labium, and sternum, ventral view **H** Endites and labium, ventral view **I** Endites, detail of serrula, ventral view. Abbreviations: ALE – anterior lateral eye, AME – anterior median eye, PES – promarginal escort seta, PLE – posterior lateral eye, PME – posterior median eye, PRS – promarginal rake setae, RES – retromarginal escort seta, SS – slit sensillum, WS – whisker setae.

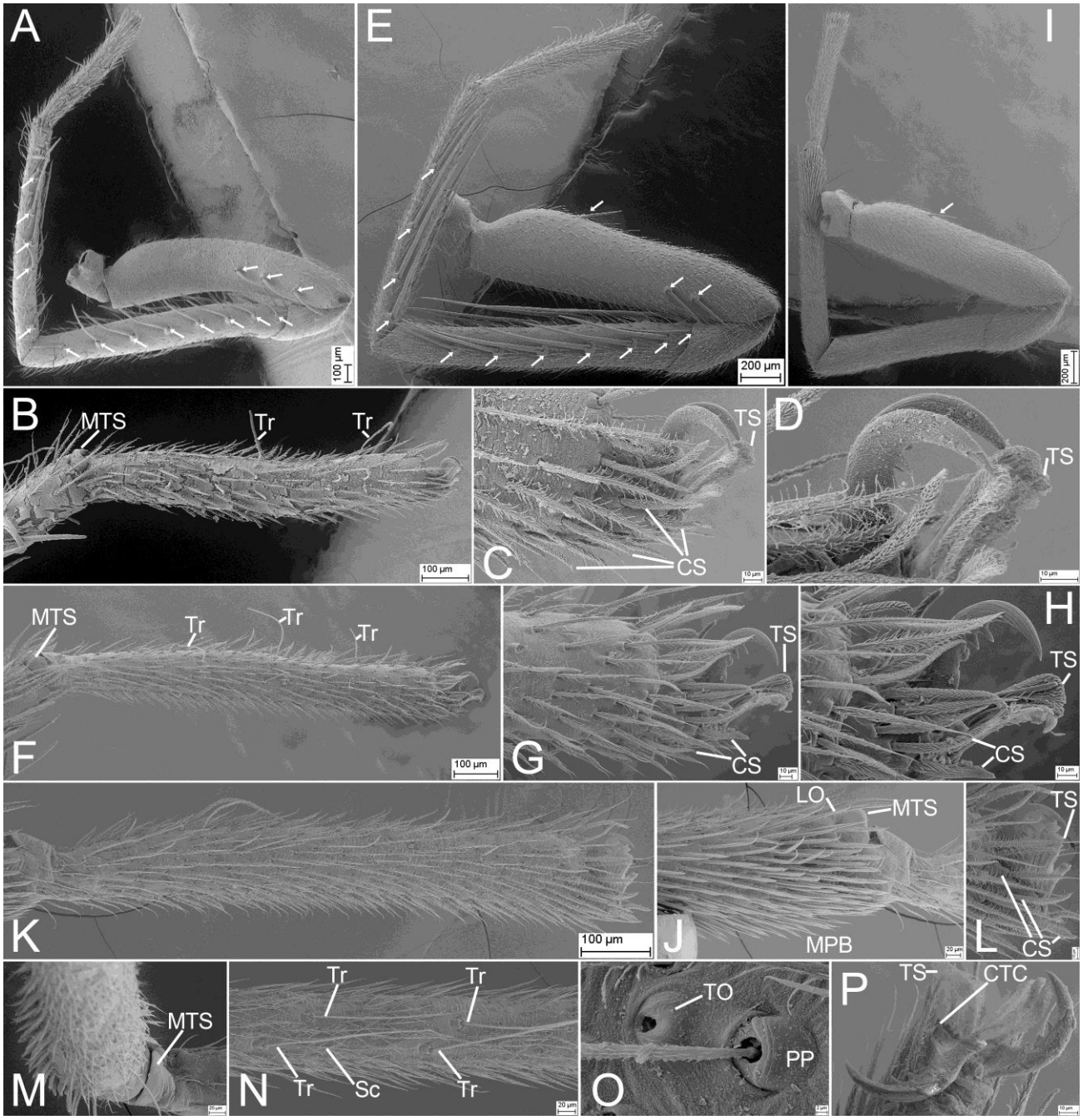

Figure 4. SEM micrographs of *Acrolithus lingyun* sp. nov., male paratype, legs. **A** Leg I, white arrows show the detail of macrospines, prolateral view **B** Same, tarsus **C** Same, tarsal claw and claw tuft setae, prolateral view **D** Same, detail of claw tuft setae, prolateral view **E** Leg II, white arrows show the detail of macrospines, prolateral view **F** Same, tarsus, prolateral view **G** Same, tarsal claw and claw tuft setae, prolateral view **H** Same, detail of claws and claw tuft setae, prolateral view, slightly ventral **I** Leg III, white arrow shows the dorsal spine on femur, prolateral view, slightly ventral **J** Same, metatarsus-tarsus joint, dorsolateral view **K** Same, tarsus, prolateral view, slightly ventral **L** Same, tarsal claw and claw tuft setae, prolateral view, slightly ventral **M** Leg IV, metatarsus-tarsus joint, retrolateral view, slightly dorsal **N** Same, tarsus, detail of scales and trichobothria, dorsal view **O** Same, tarsus, detail of the base of trichobothrium and tarsal organ, dorsal view **P** Same, tarsal claw and claw tuft setae, retrolateral view, slightly dorsal. Abbreviations: CS – chemosensory seta, CTC – claw tuft clasper, LO – lyriform organ, MPB – metatarsal preening brush, MTS – metatarsal dorsal stopper, PP – proximal plate, Sc – scale, TO – tarsal organ, Tr – trichobothrium, TS – tenent setae.

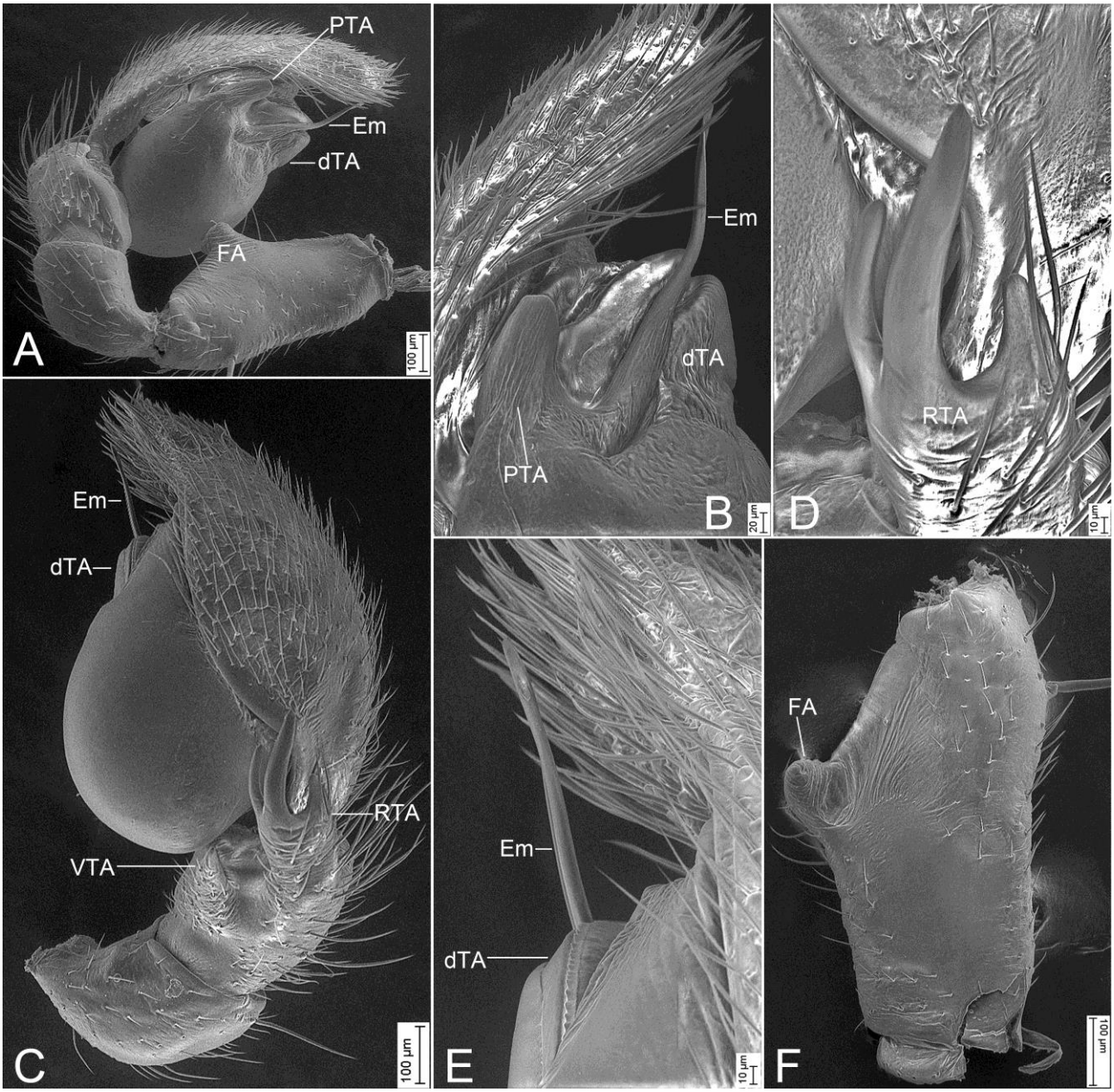

Figure 5. SEM micrographs of *Acrolithus lingyun* sp. nov., palp of male paratype. **A** Prolateral view **B** Same, detail of embolus, prolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view **D** Same, detail of retrolateral tibial apophysis **E** Same, detail of embolus and distal tegular apophysis **F** Palpal femur, retrolateral view. Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, VTA – ventrolateral tibial apophysis.

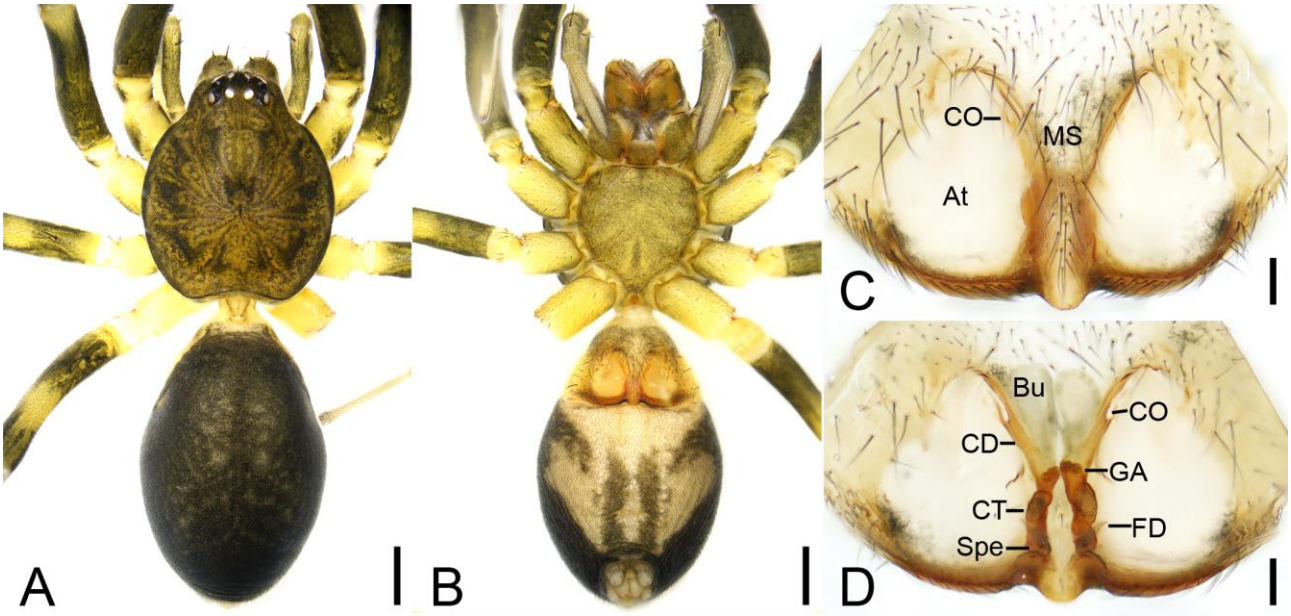

Figure 6. *Acrolithus lingyun* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: At – atrium, Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization duct, GA – glandular appendage, MS –septum, Spe – spermatheca.

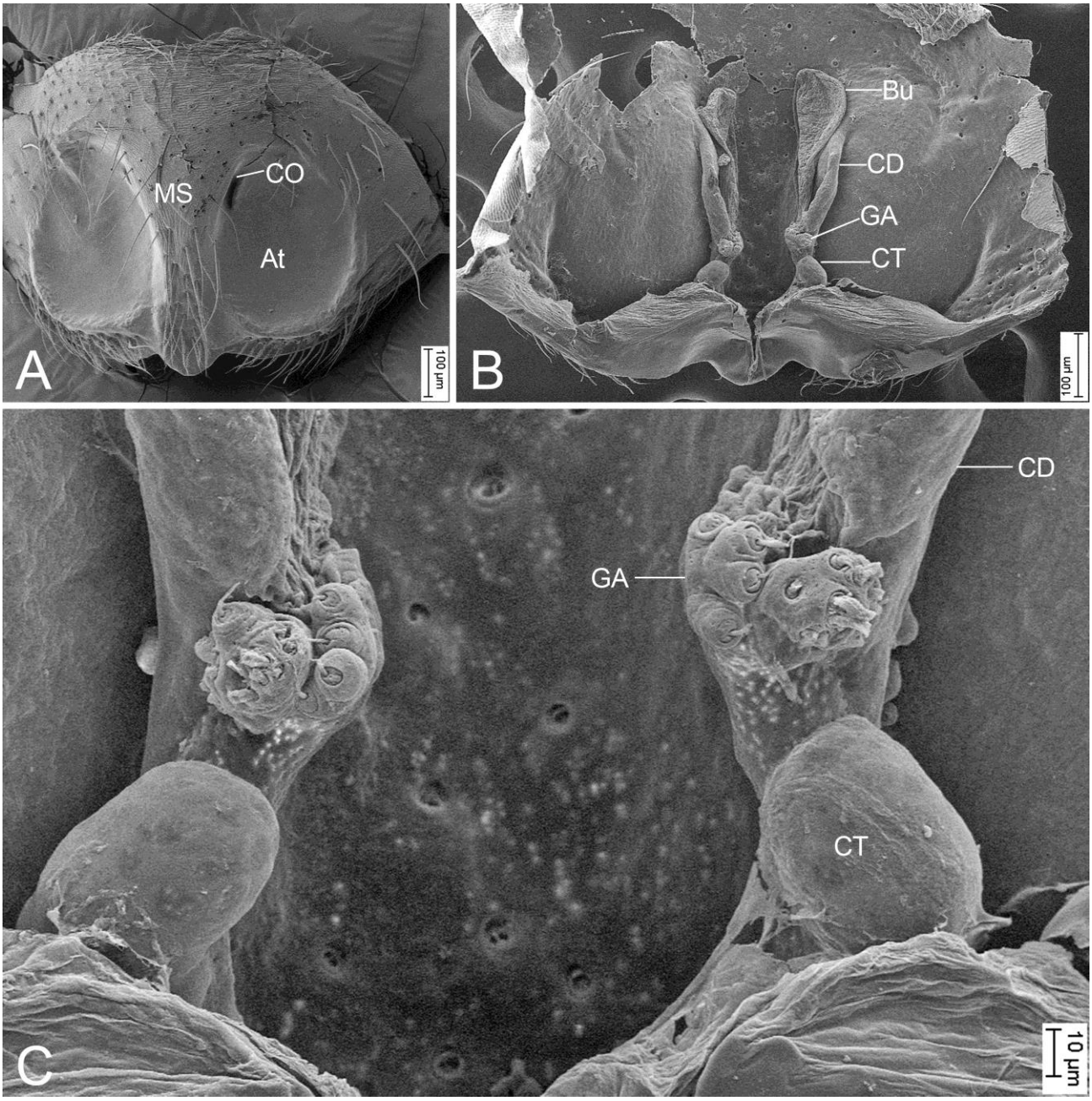

Figure 7. SEM micrographs of *Acrolithus lingyun* sp. nov., epigyne of female paratype. **A** Ventral view **B** Dorsal view **C** Same, detail of copulatory duct, glandular appendage and connecting tube. Abbreviations: At – atrium, Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – septum.

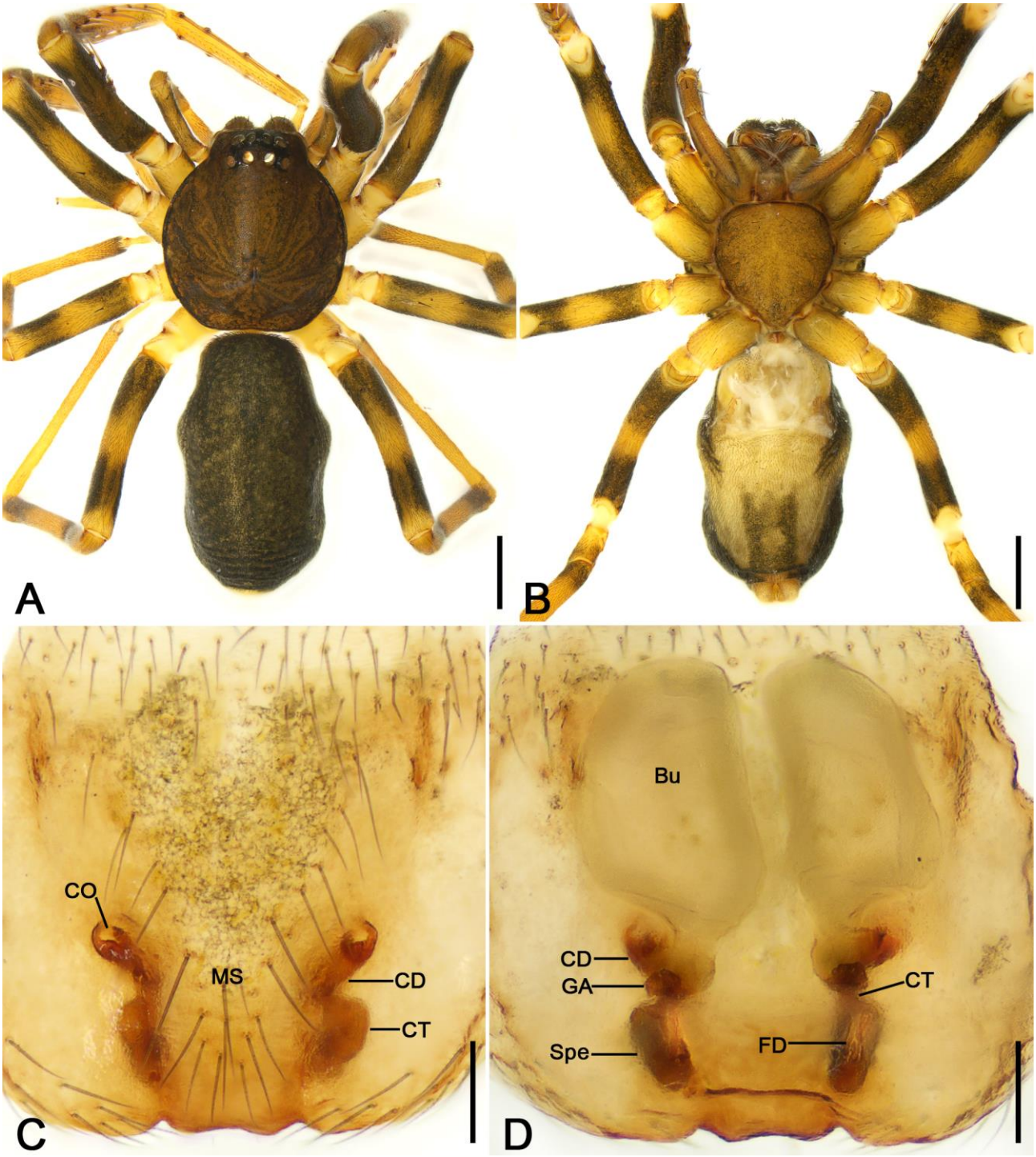

Figure 8. *Acrolithus ruyii* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

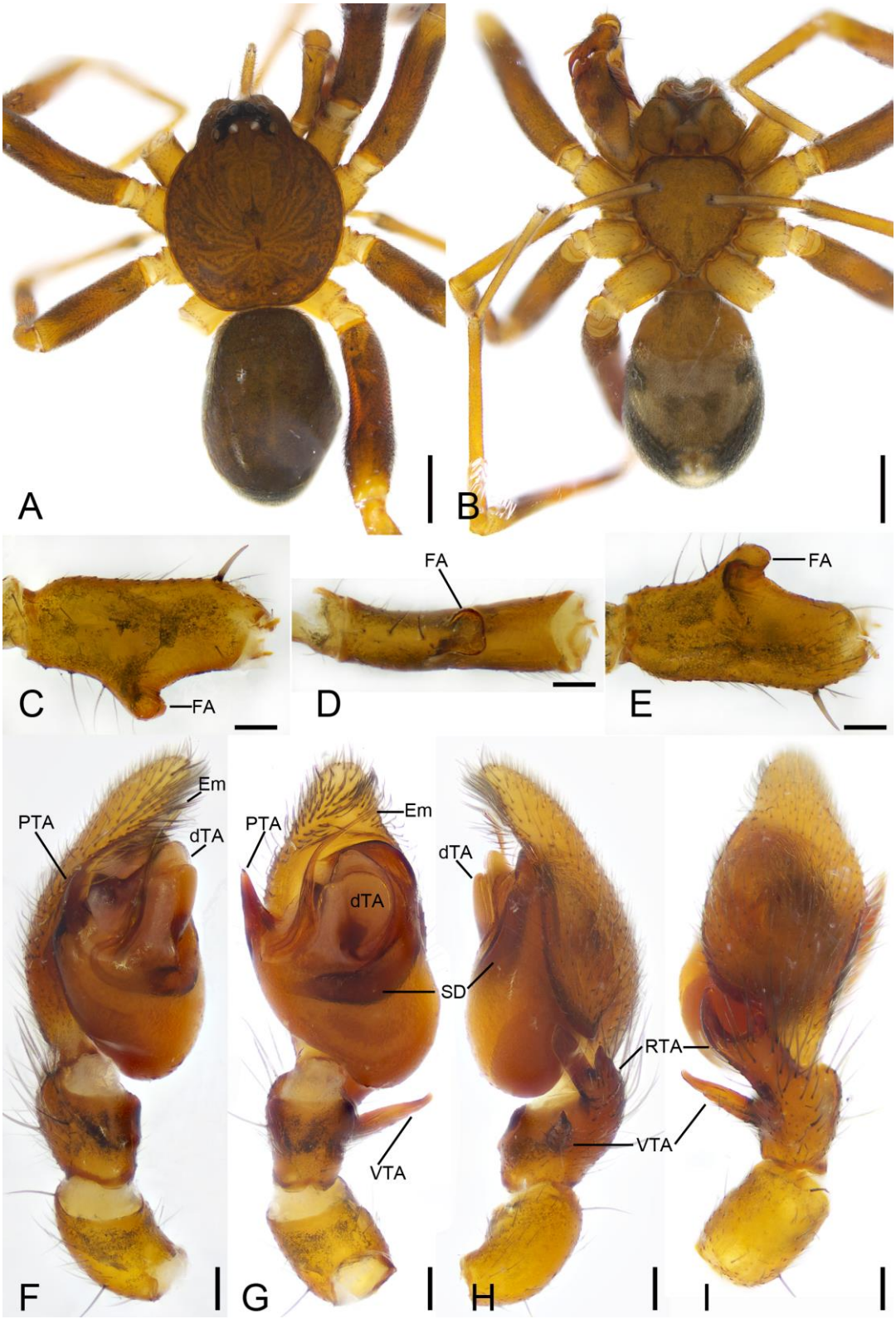

Figure 9. *Acrolithus shijiao* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Femur, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Palp, prolateral view **G** Same, ventral view **H** Same, retrolateral view **I** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–I**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, VTA – ventral tibial apophysis.

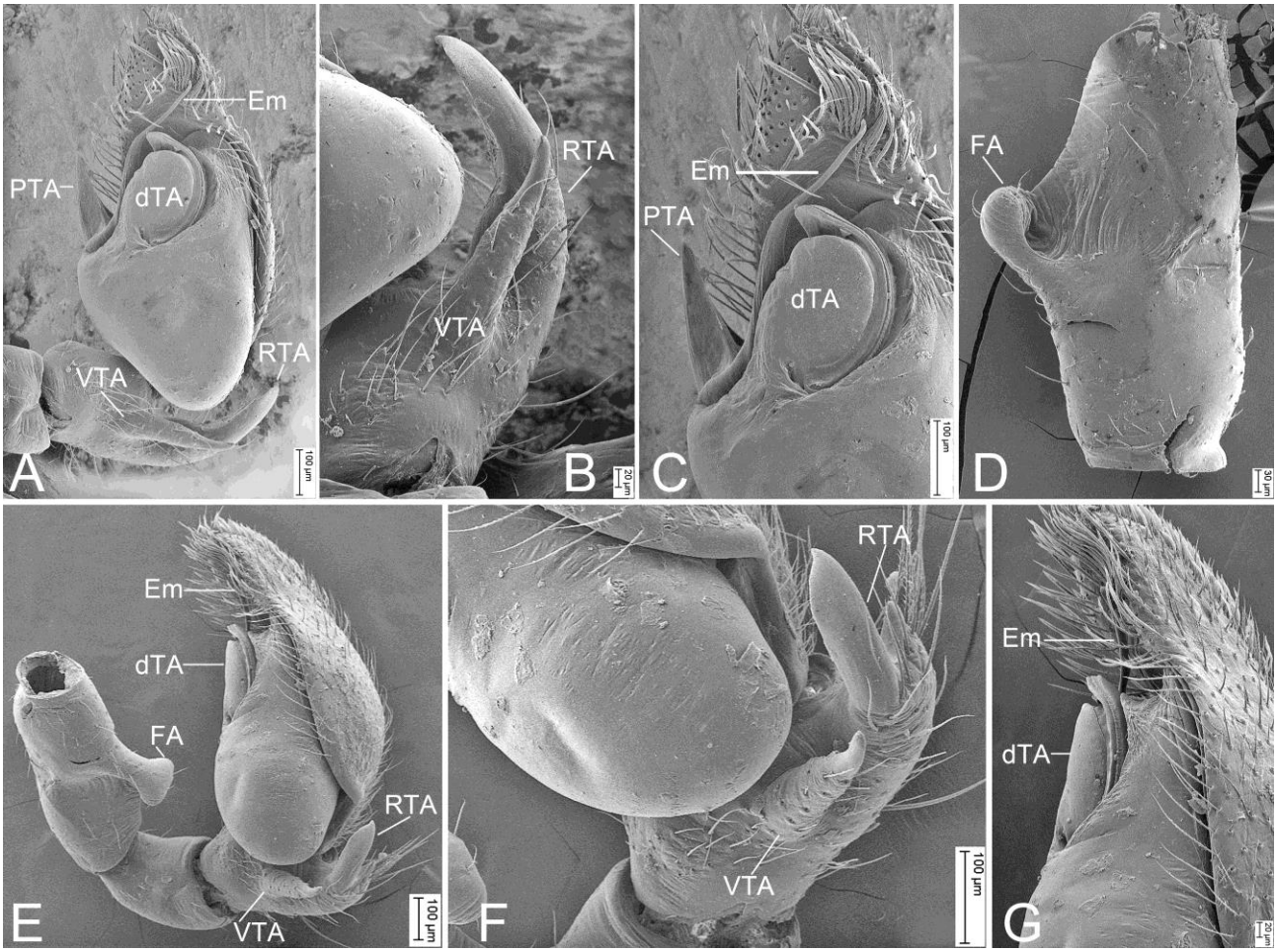

Figure 10. SEM micrographs of *Acrolithus shijiao* sp. nov., male paratype. **A** Palp, ventral view **B** Same, detail of tibial apophyses, ventral view **C** Same, detail of tegulum, ventral view **D** Femur, retrolateral view **E** Palp, retrolateral view **F** Same, retrolateral view **G** Same, detail of embolus and distal tegular apophysis, retrolateral view Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, VTA – ventral tibial apophysis.

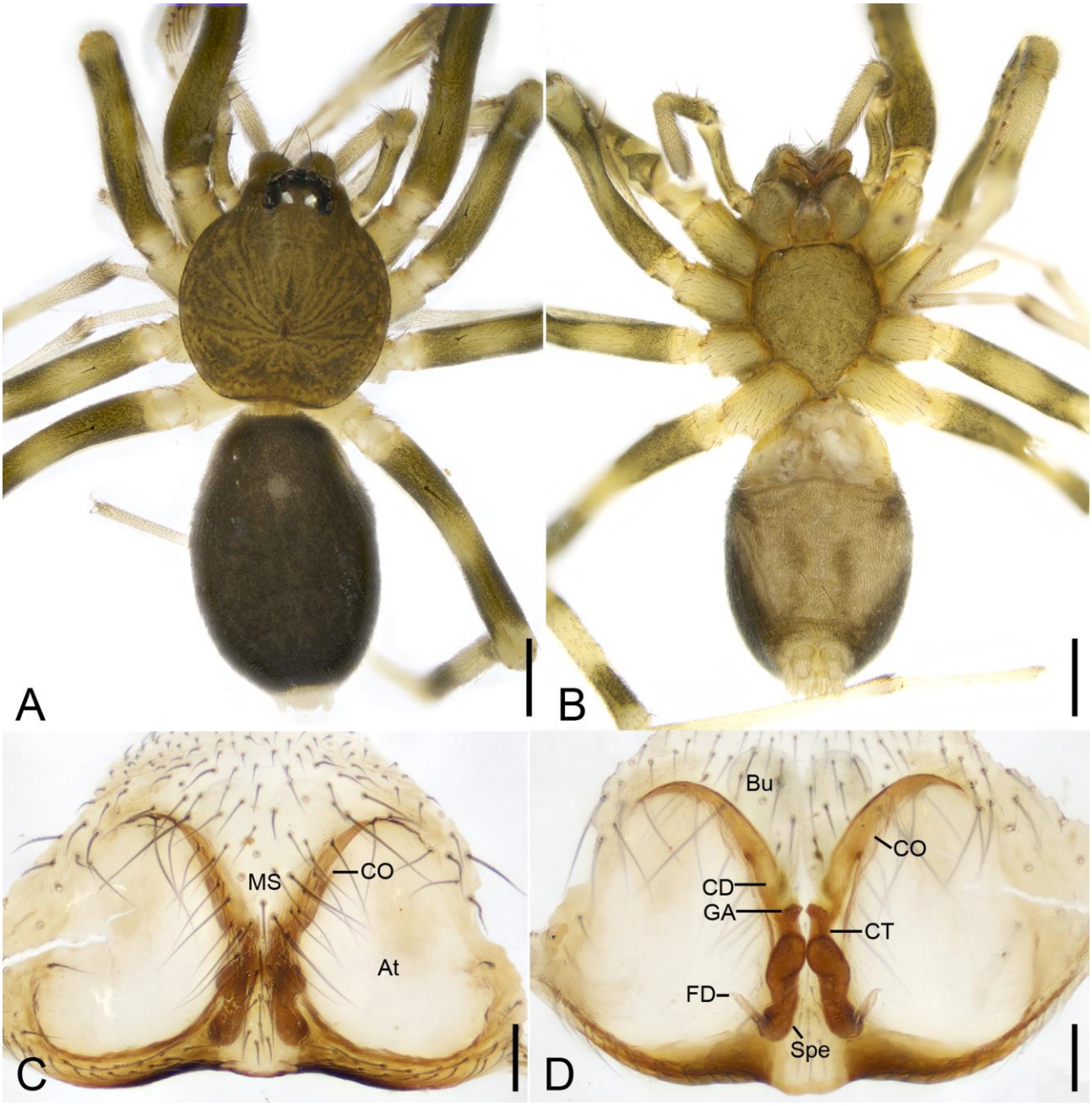

Figure 11. *Acrolithus shijiao* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

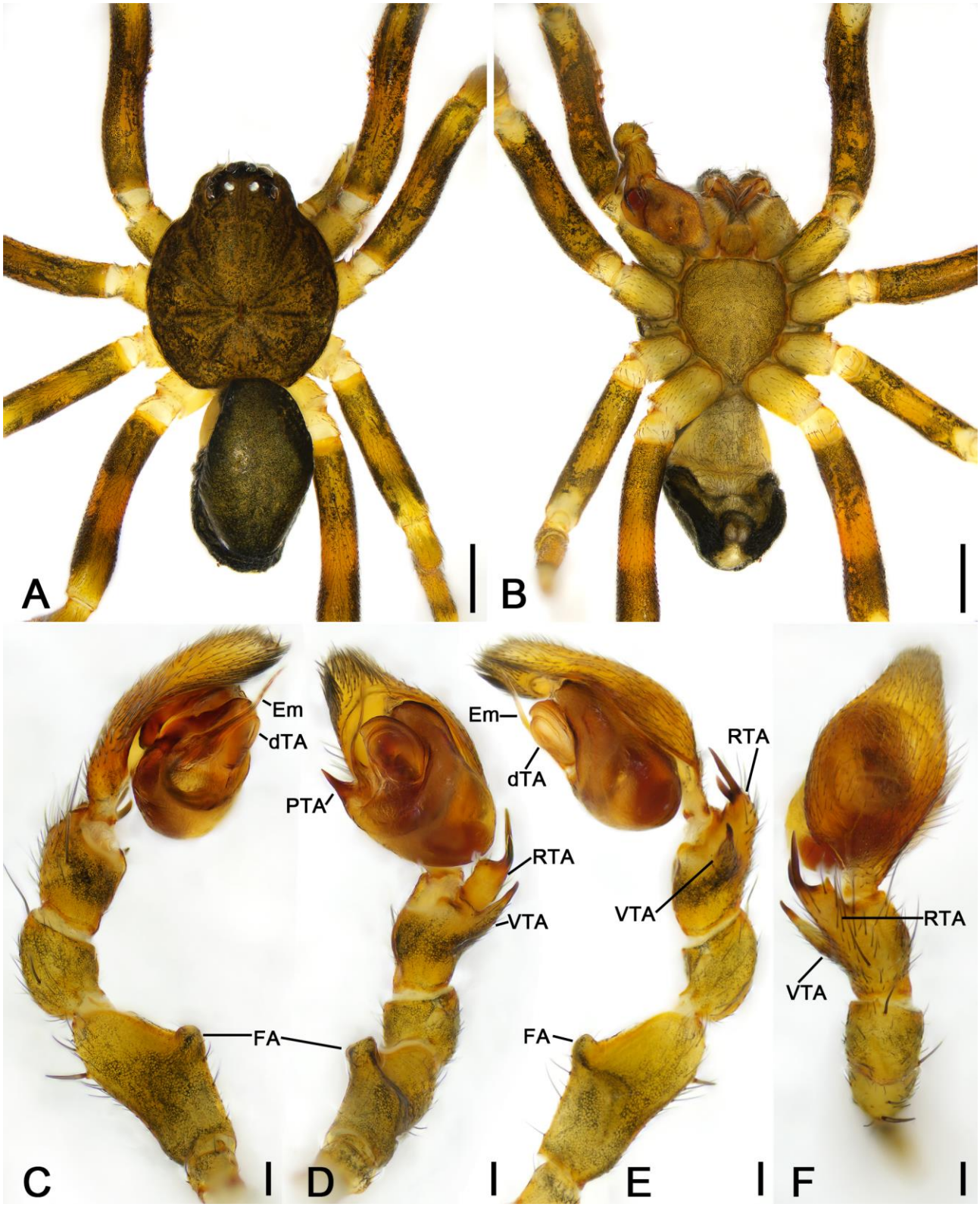

Figure 12. *Acrolithus xiajing* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, VTA – ventral tibial apophysis.

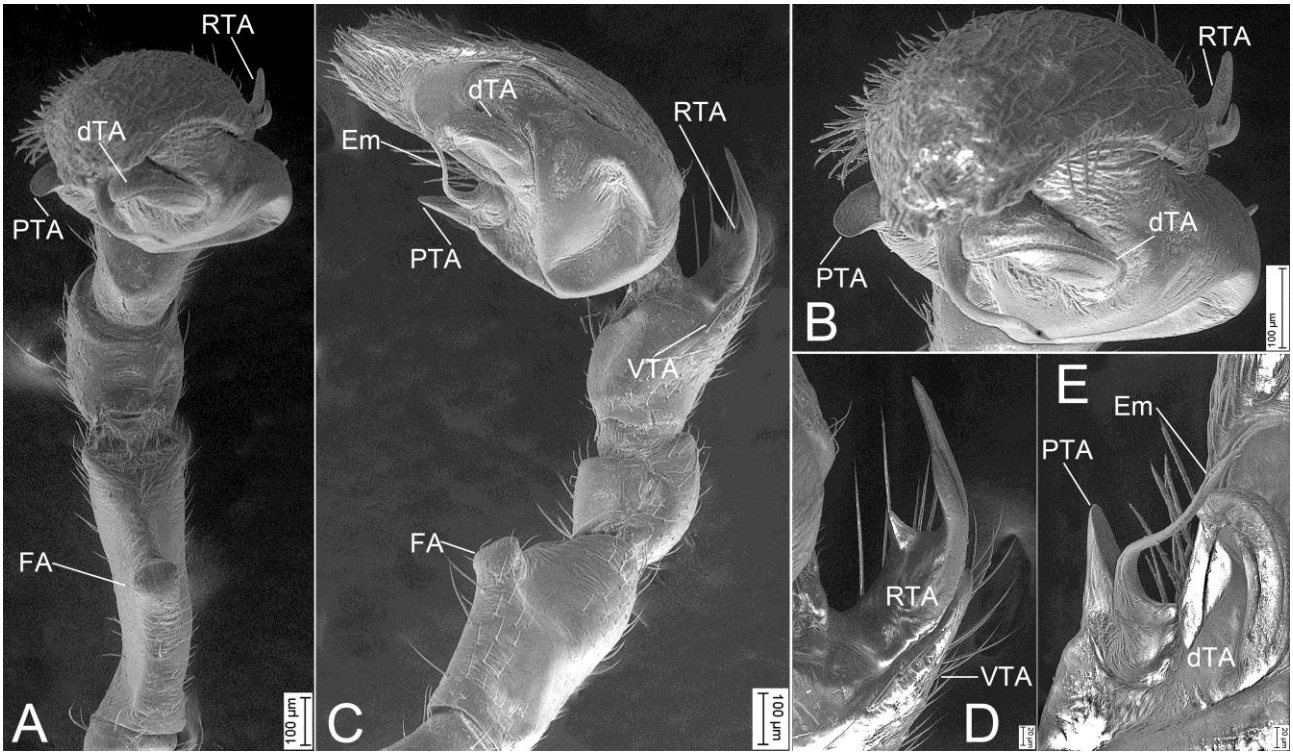

Figure 13. SEM micrographs of *Acrolithus xiajing* sp. nov., male paratype. **A** Palp, ventral view, slightly dorsal **B** Same, detail of tegulum and tibial apophyses **C** Same, retrolateral view, slightly ventral **D** Same, detail of tibial apophyses **E** Same, detail of tegular**.** Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, VTA – ventral tibial apophysis.

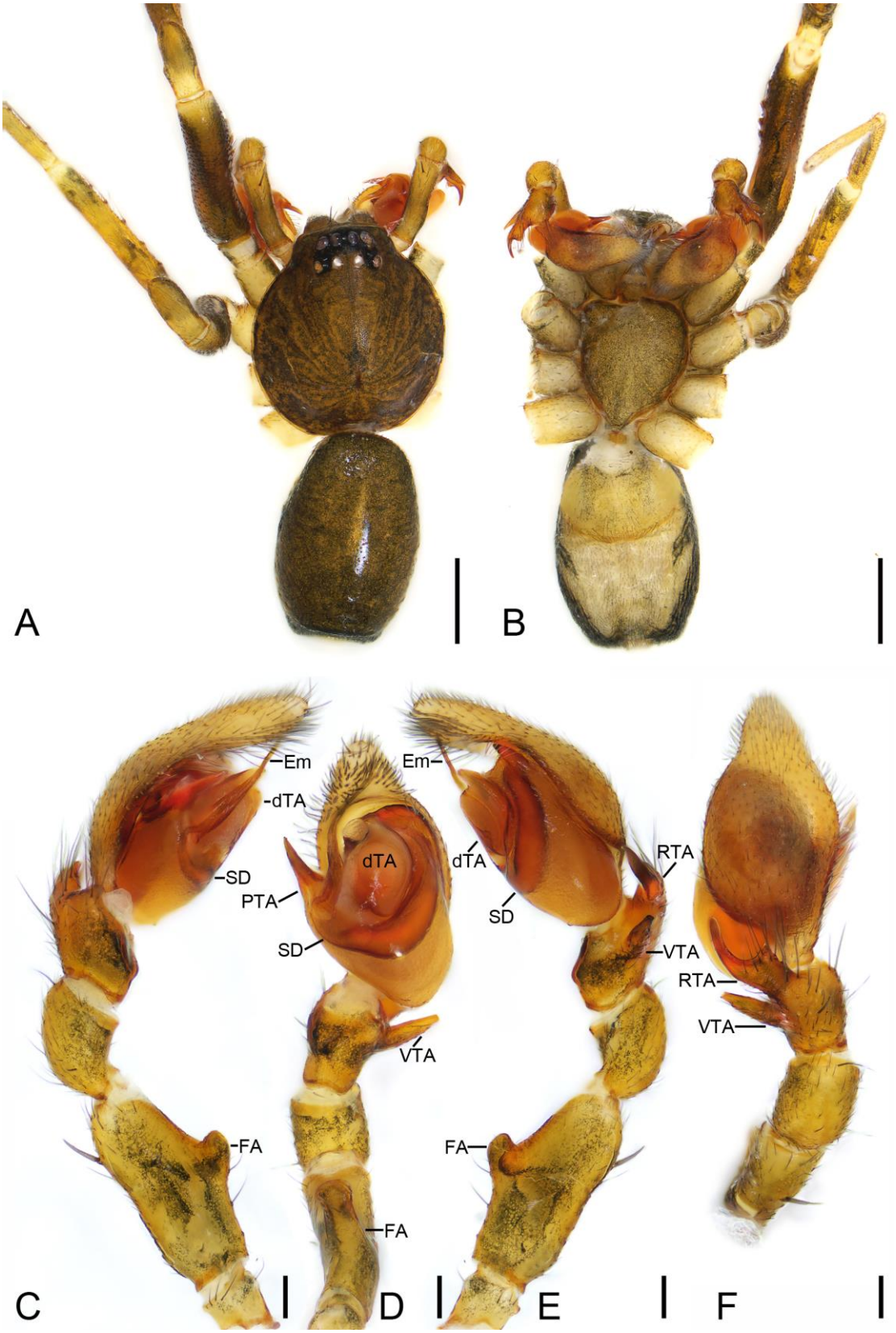

Figure 14. *Acrolithus xiaojing* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C**–**F**). Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, VTA – ventral tibial apophysis.

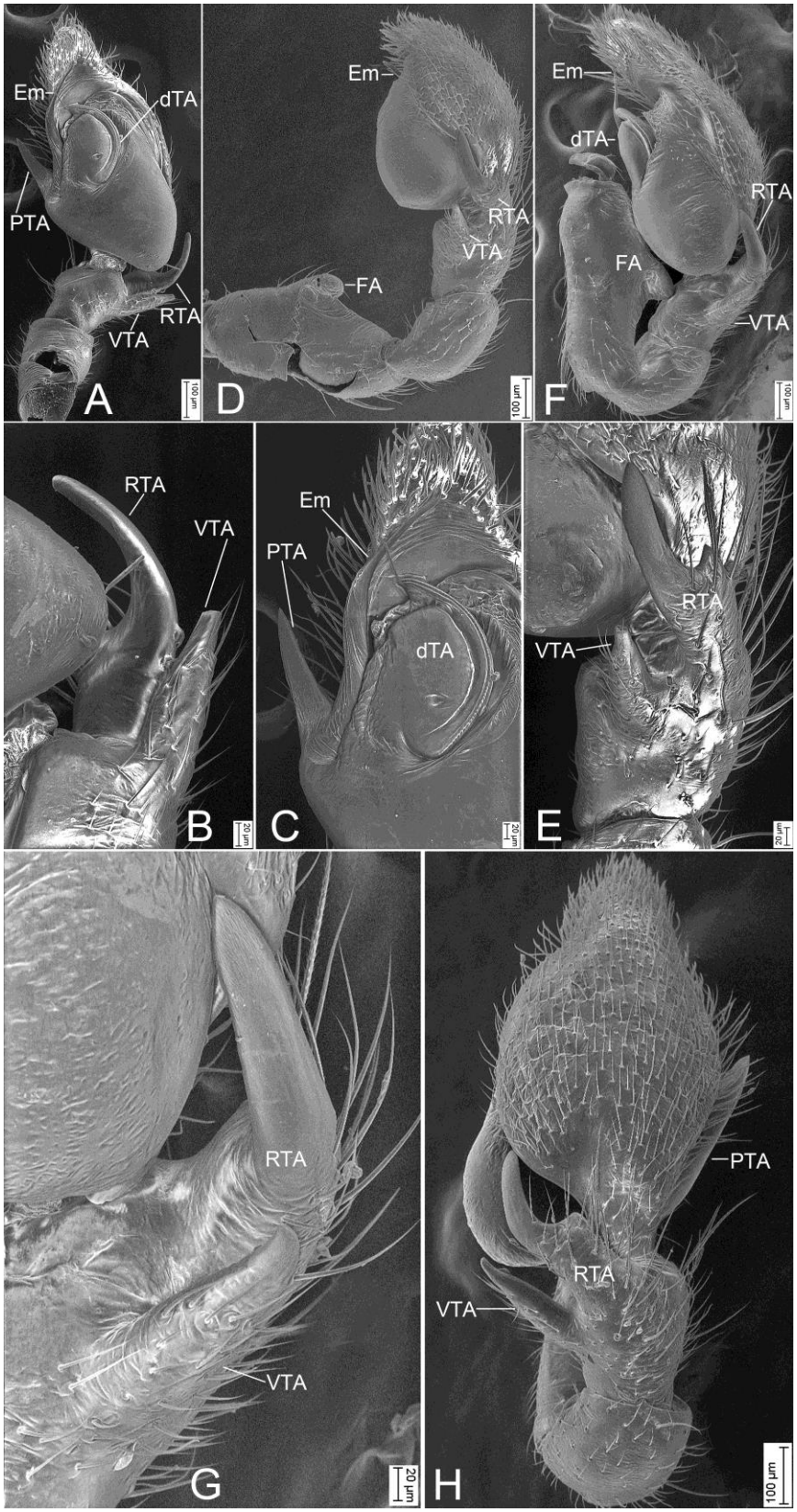

Figure 15. SEM micrographs of *Acrolithus xiaojing* sp. nov., male paratypes. **A** Palp, ventral view **B** Same, detail of tibial apophyses **C** Same, detail of tegulum **D** Same, retrolateral view **E** Same, detail of tibial apophyses **F** Palp, retrolateral view **G** Same, detail of tibial apophyses **H** Same, detail of tegular**.** Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, VTA – ventral tibial apophysis.

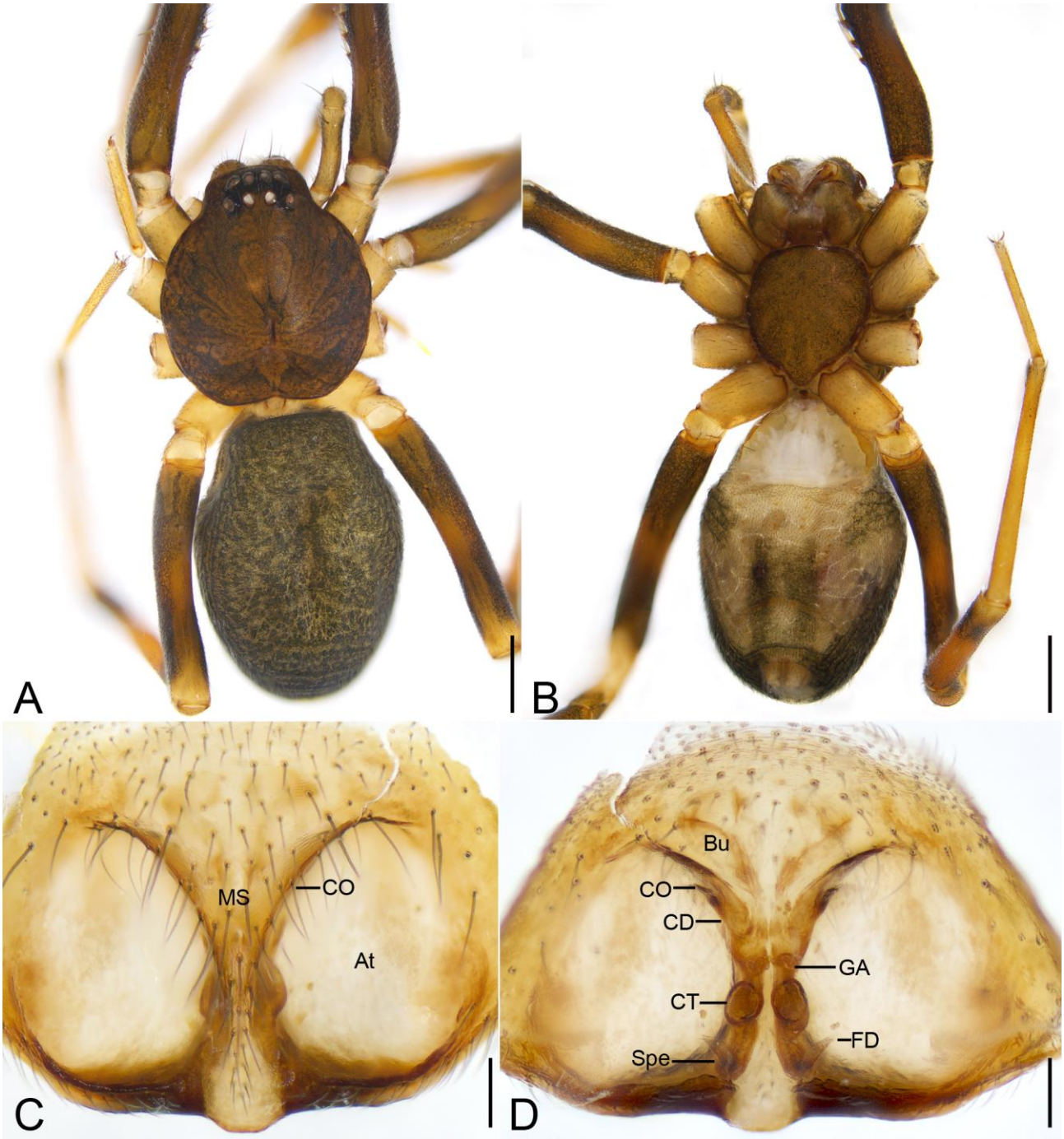

Figure 16. *Acrolithus xiaojing* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

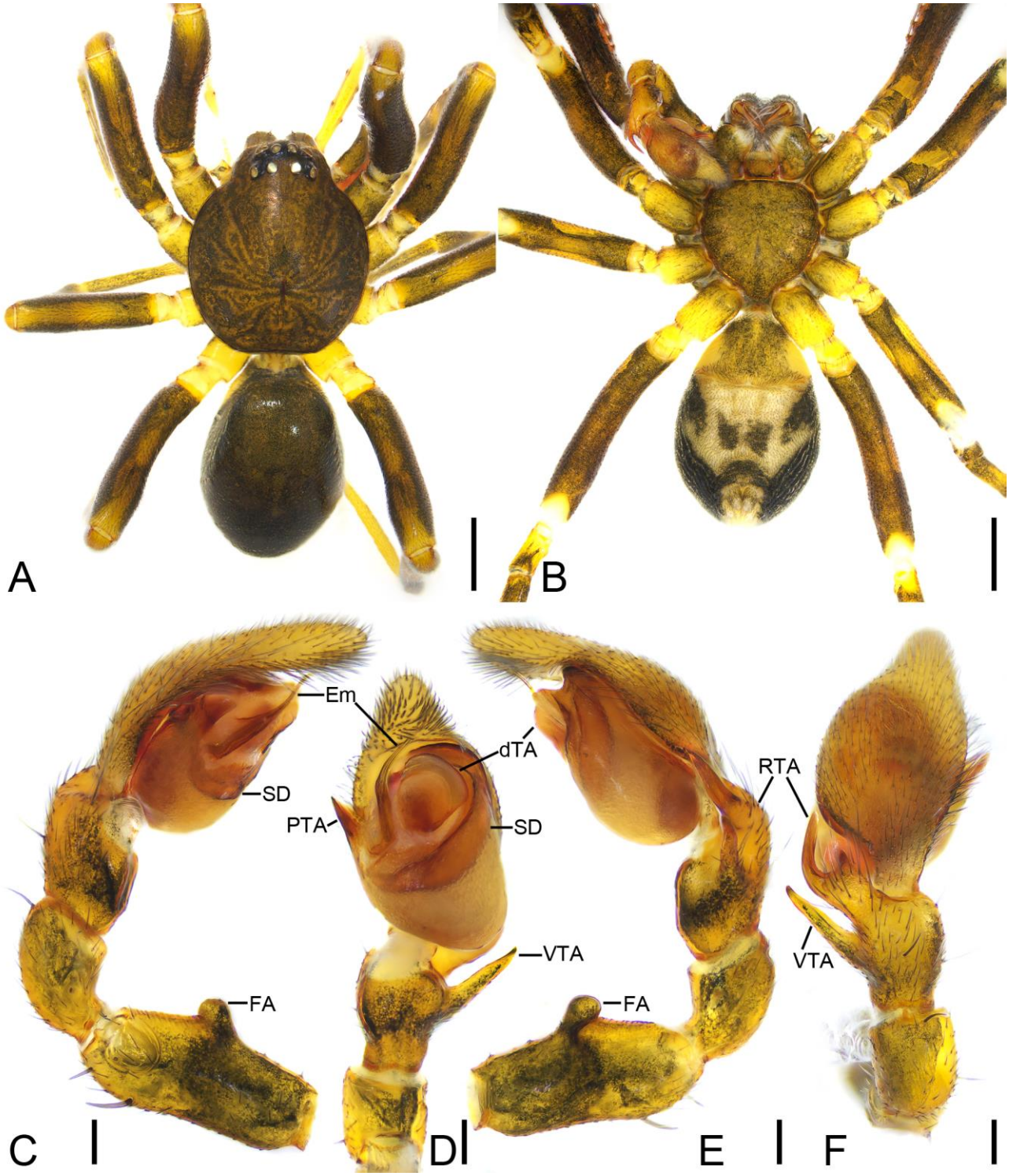

Figure 17. *Acrolithus yeniu* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, VTA – ventral tibial apophysis.

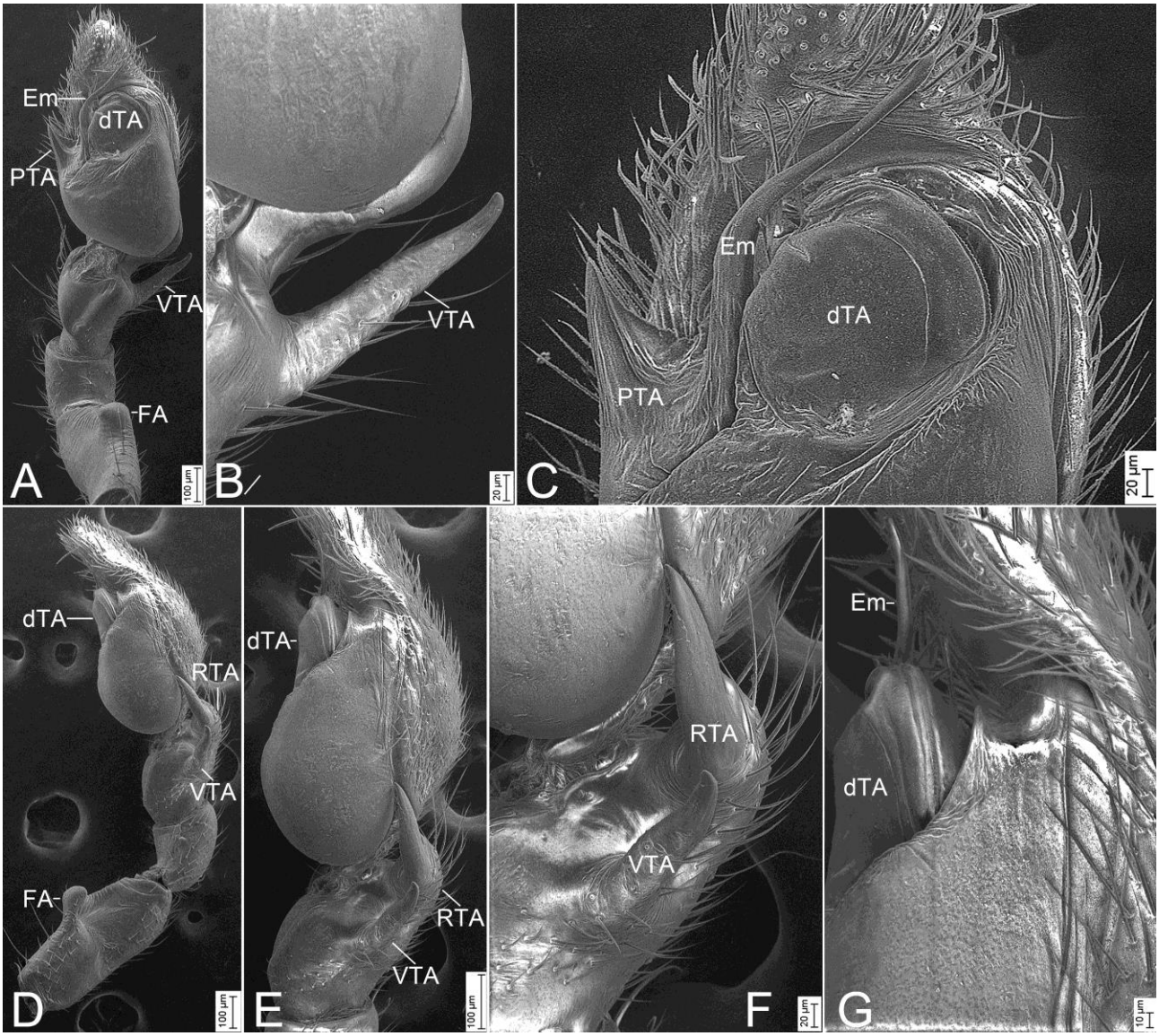

Figure 18. SEM micrographs of *Acrolithus yeniu* sp. nov., male paratype. **A** Palp, ventral view **B** Same, detail of ventral tibial apophysis **C** Same, detail of tegulum **D** Same, retrolateral view **E** Same, detail of tibial apophyses and tegulum **F** Same, detail of tibia apophyses **G** Same, detail of embolus and distal tegular apophysis. Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, PTA – prolateral tegular apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, VTA – ventral tibial apophysis.

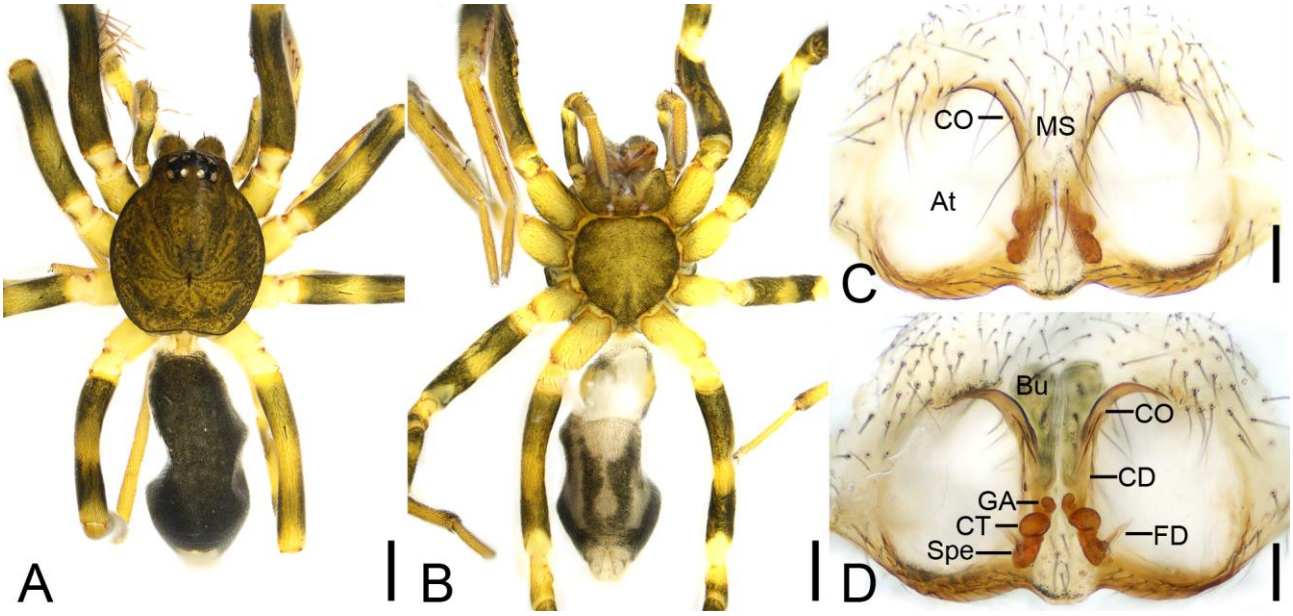

Figure 19. *Acrolithus yeniu* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

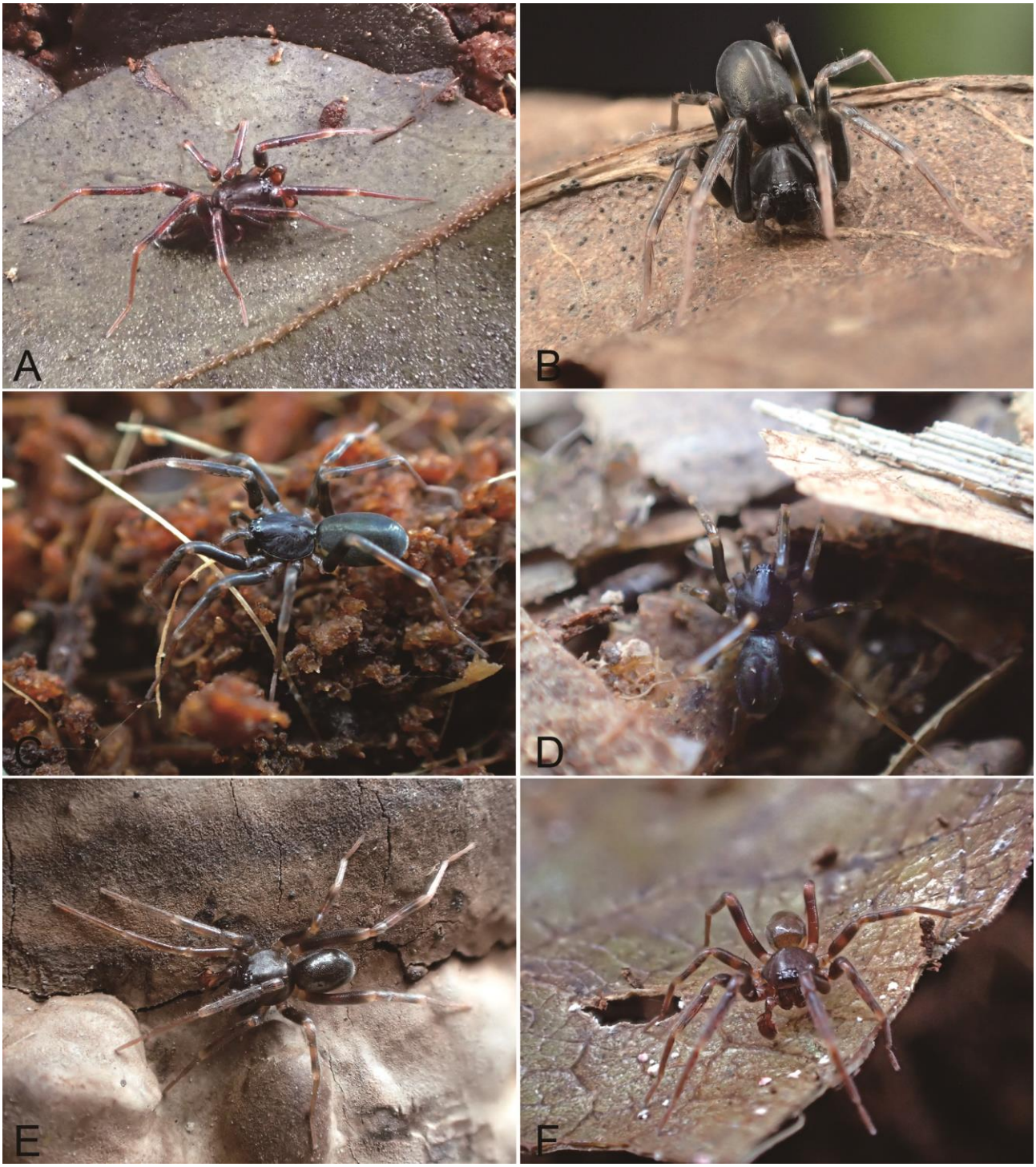

Figure 20. Photographs of living specimens of *Acrolithus* from Jiangxi Province. **A** *Acrolithus lingyun* sp. nov., male **B** *Acrolithus lingyun* sp. nov., female **C** *Acrolithus shijiao* sp. nov., female **D** *Acrolithus xiajing* sp. nov., male **E** *Acrolithus xiaojing* sp. nov., male **F** *Acrolithus yeniu* sp. nov., male.

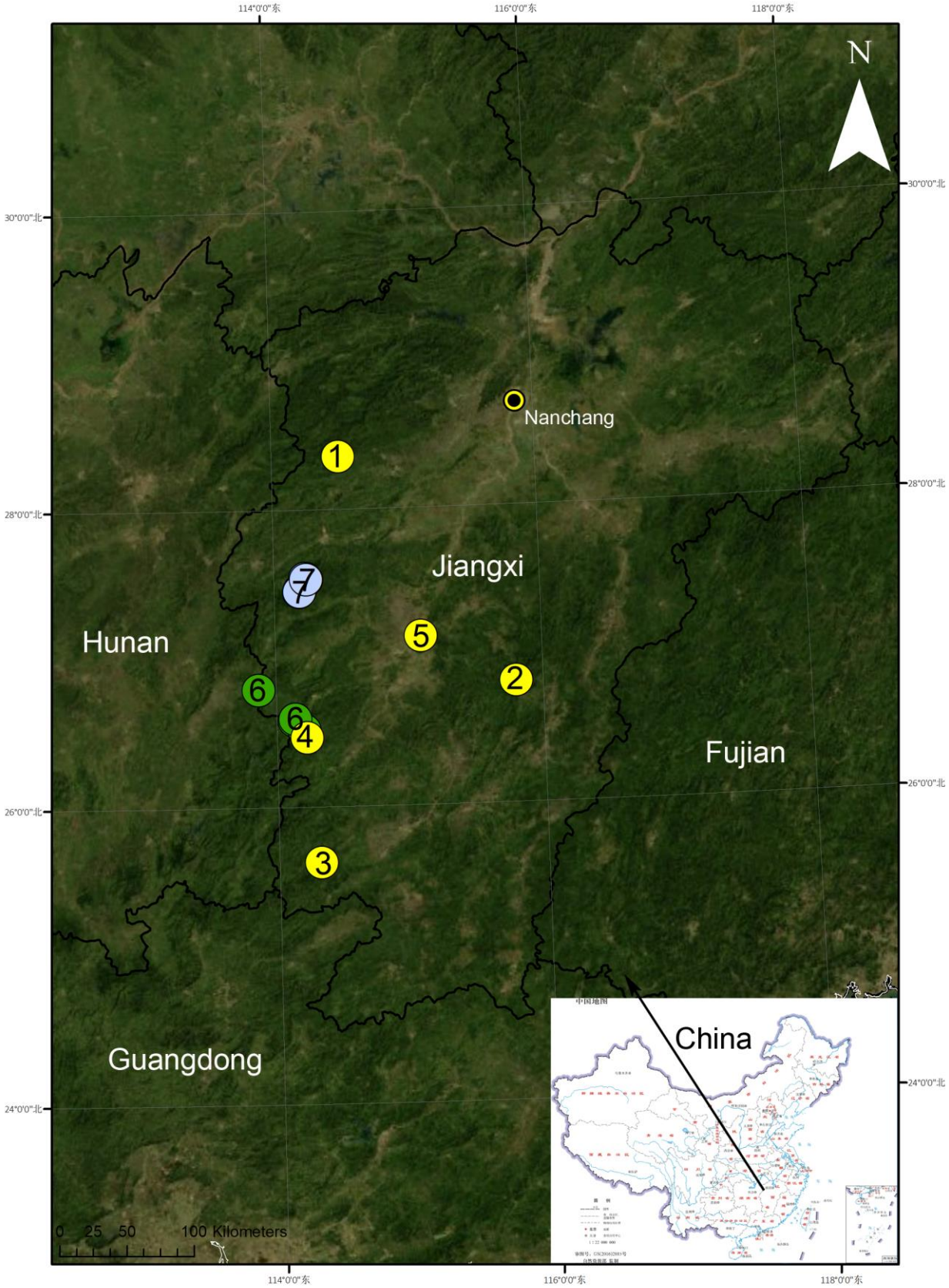

Figure 21. Records of *Acrolithus jiulong* sp. nov. (1), *A. lingyun* sp. nov. (2), *A. ruyii* sp. nov. (3), *A. shijiao* sp. nov. (4), *A. xiajing* sp. nov. (5), *A. xiaojing* sp. nov. (6), and *A. yeniu* sp. nov. (7) from Jiangxi Province in China.

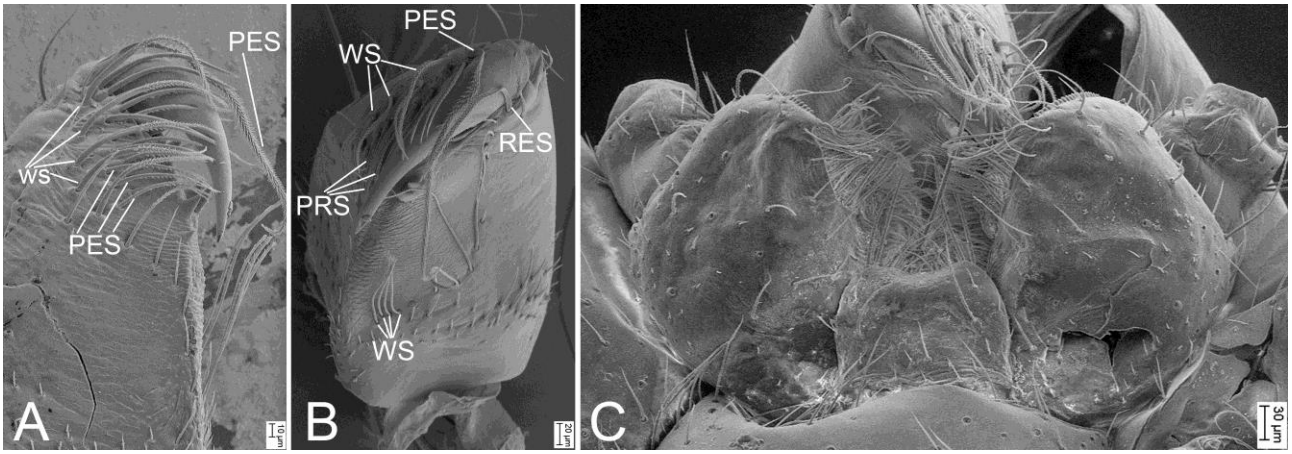

Figure 22. SEM micrographs of *Aculithus bijiashanicus* comb. nov., chelicera, endites and labium of male paratype. **A** Chelicera, frontal view, slightly prolateral **B** Same, posterior view, slightly ventral **C** Endites and labium, ventral view. Abbreviations: PES – promarginal escort seta, PRS – promarginal rake setae, RES – retromarginal escort seta, WS – whisker setae.

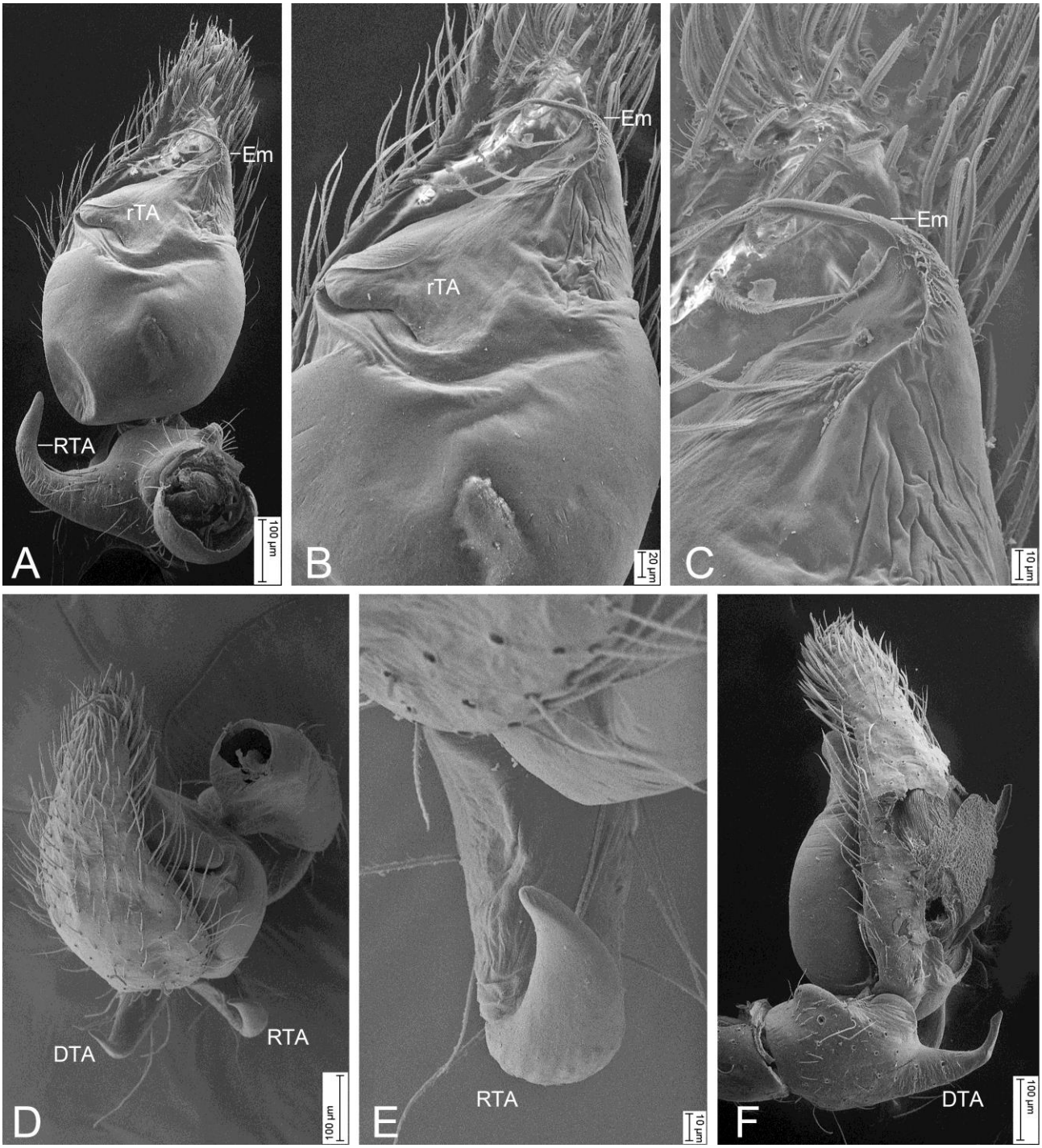

Figure 23. SEM micrographs of *Aculithus bijiashanicus* comb. nov., left palp of male paratype. **A** Ventral view **B** Same, detail of tegulum **C** Same, detail of embolus **D** Prolateral view, slightly dorsal **E** Same, detail of retrolateral tibial apophysis **F** Detail of dorsal tibial apophysis, retrolateral view, slightly dorsal. Abbreviations: Em – embolus, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

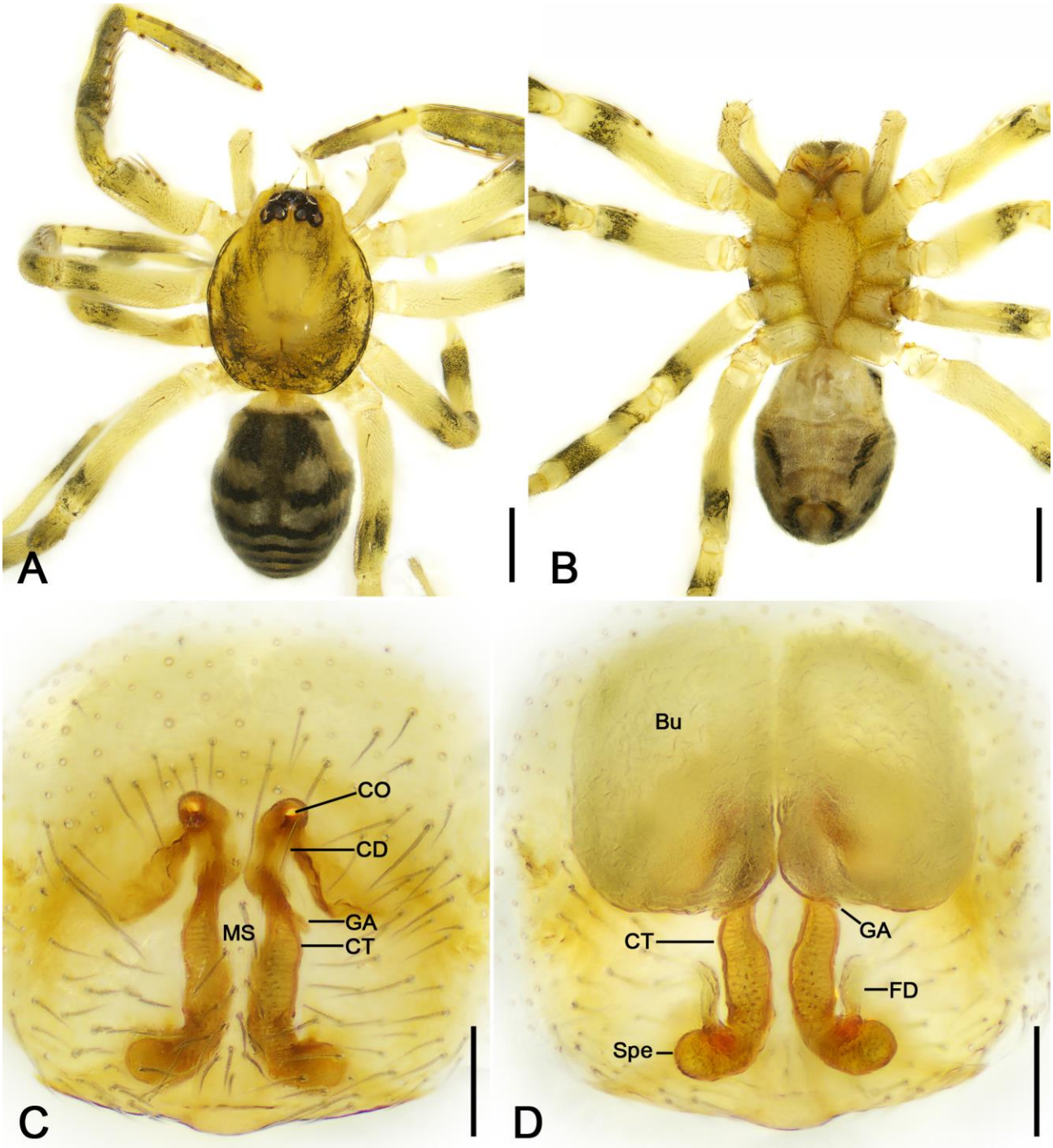

Figure 24. *Aculithus chongyi* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

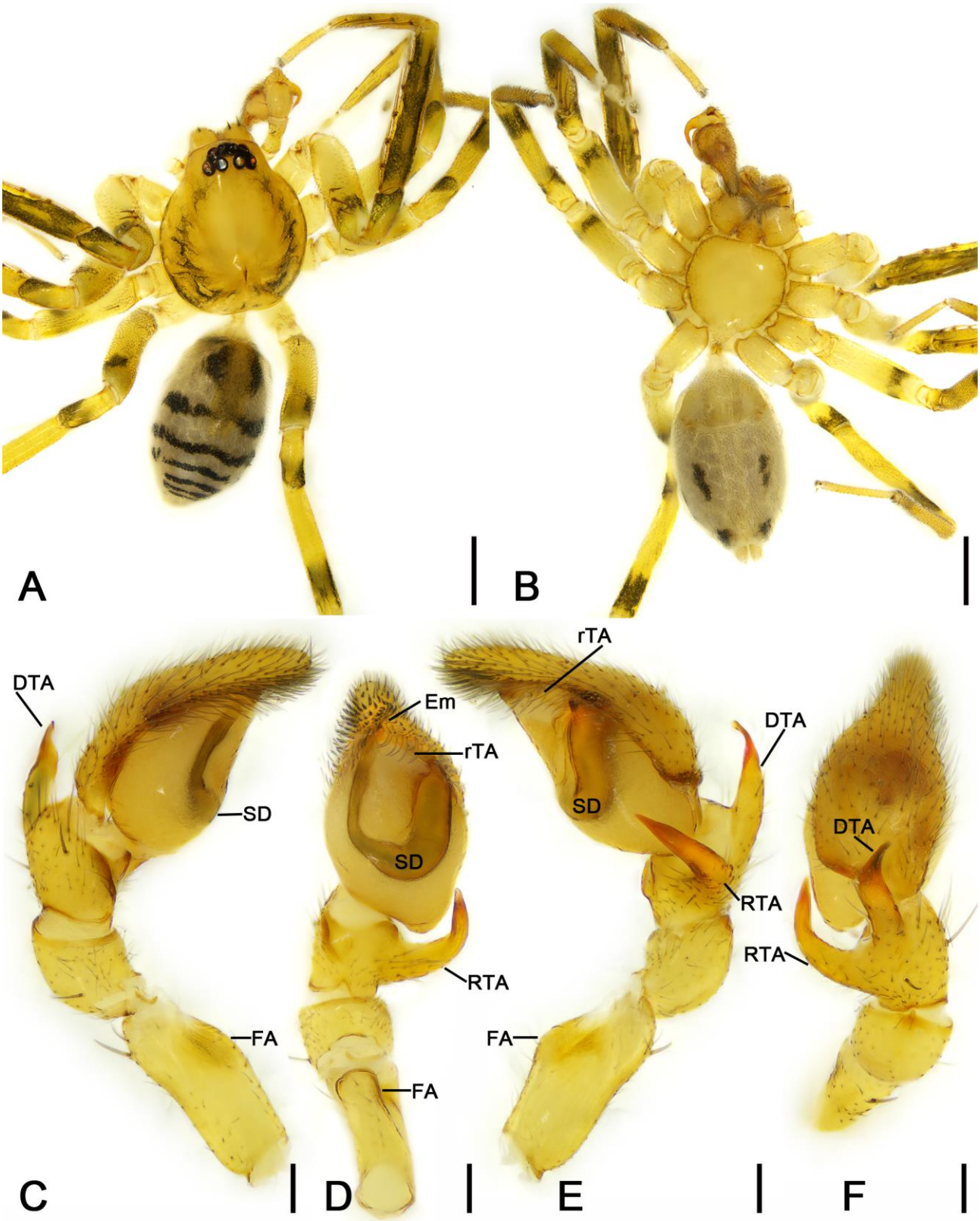

Figure 25. *Aculithus chongyi* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: DTA – dorsal tibial apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

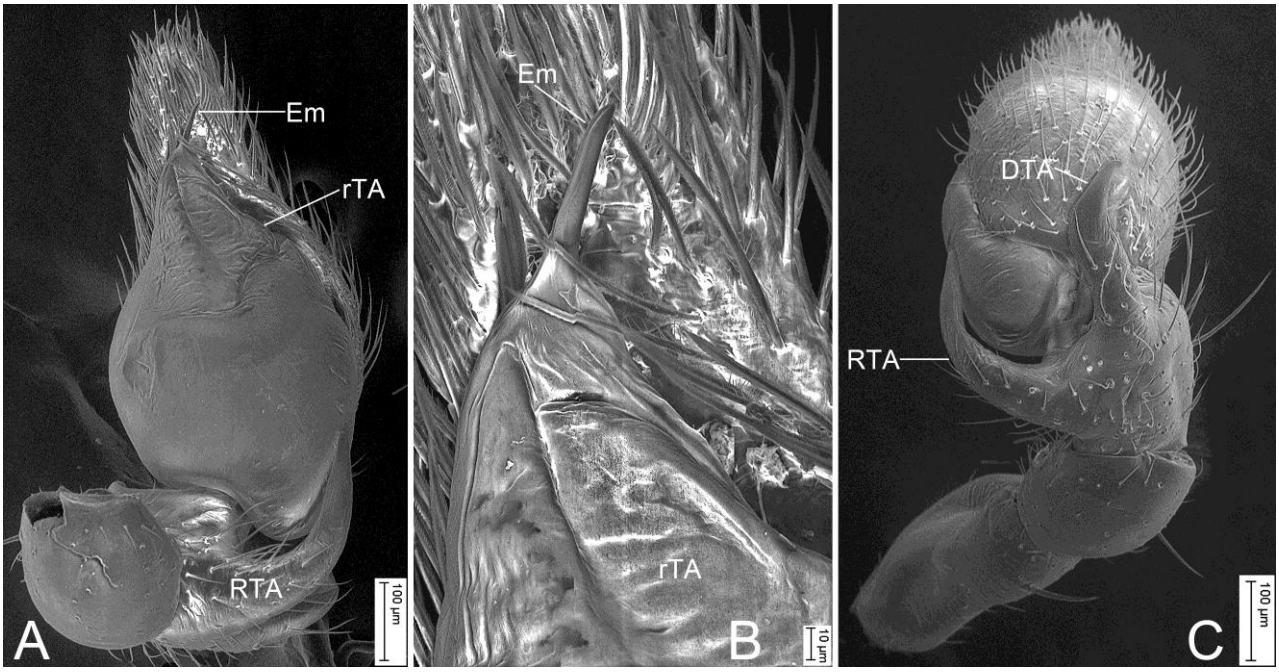

Figure 26. SEM micrographs of *Aculithus chongyi* sp. nov., male palp of paratype. **A** Ventral view **B** Same, detail of embolus and retrolateral tegular apophysis **C** Dorsal view. Abbreviations: DTA – dorsal tibial apophysis, Em – embolus, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

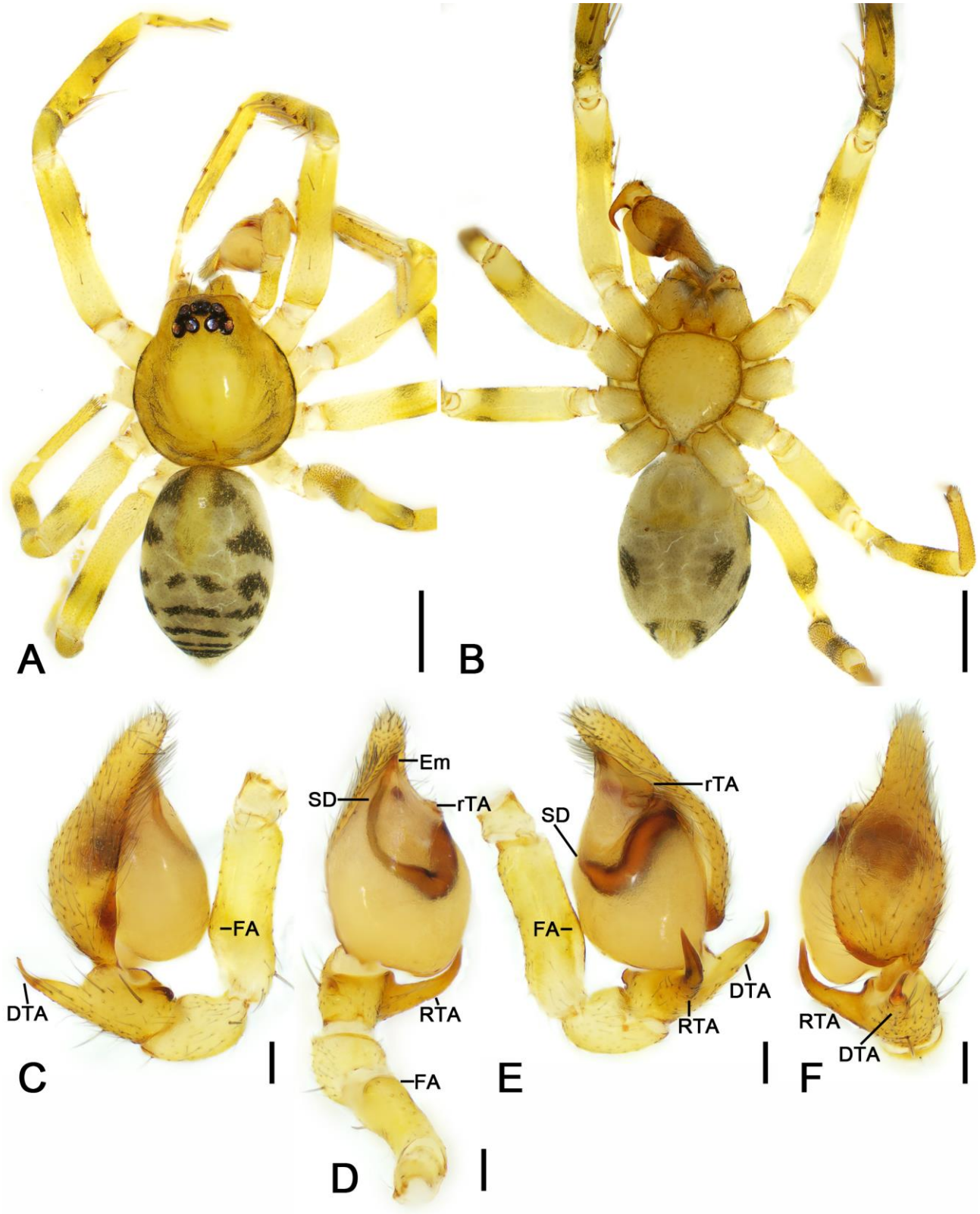

Figure 27. *Aculithus taishan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: DTA – dorsal tibial apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

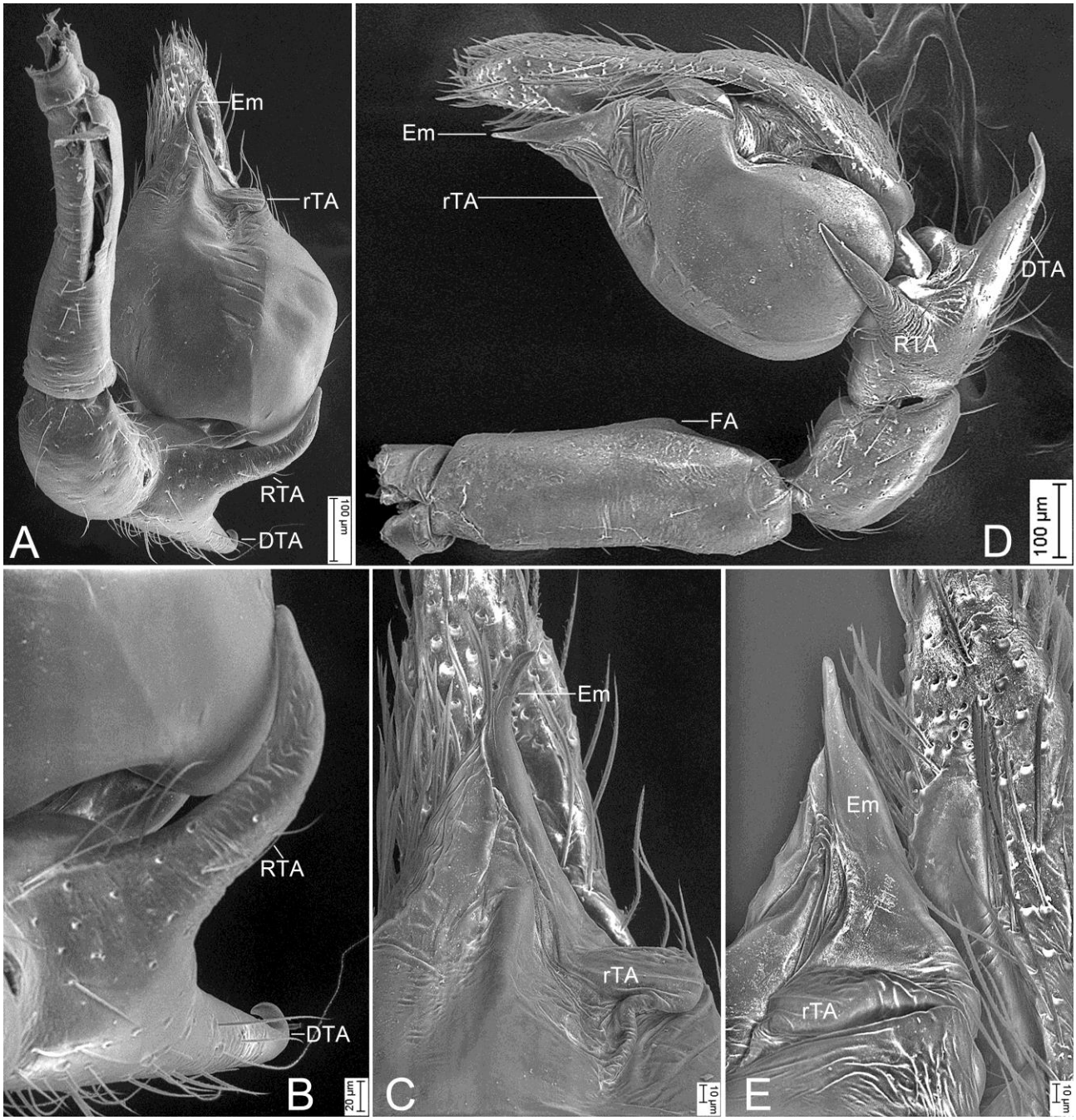

Figure 28. SEM micrographs of *Aculithus taishan* sp. nov., male palp of holotype. **A** Ventral view **B** Same, detail of tibial apophyses **C** Same, detail of embolus and retrolateral tegular apophysis **D** Retrolateral view **E** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: DTA – dorsal tibial apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

Figure 29. Photographs of living male specimen of *Aculithus taishan* sp. nov. from Wugong Mountain in Jiangxi Province, China.

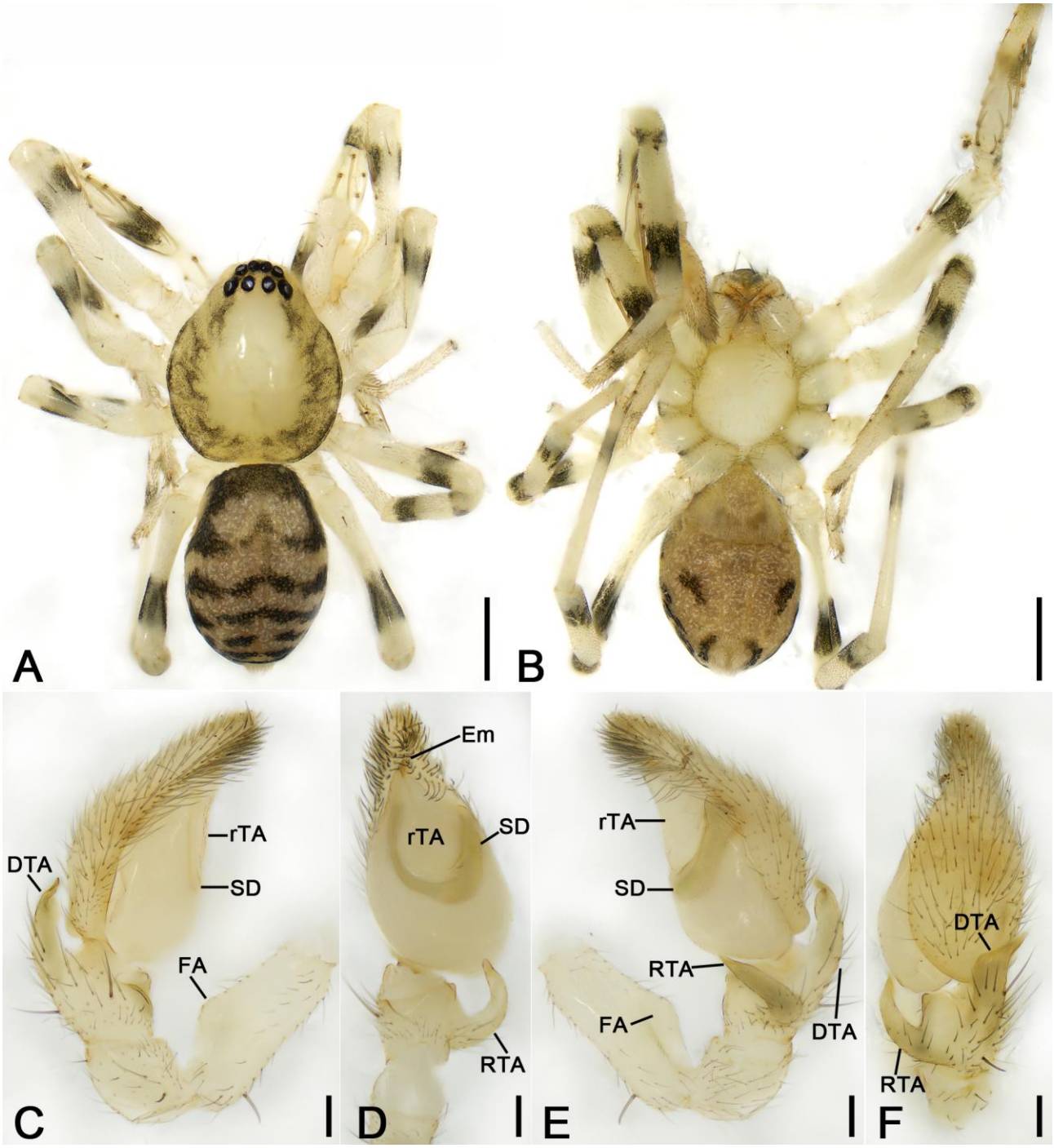

Figure 30. *Aculithus xunwu* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view, slightly retrolateral. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: DTA – dorsal tibial apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

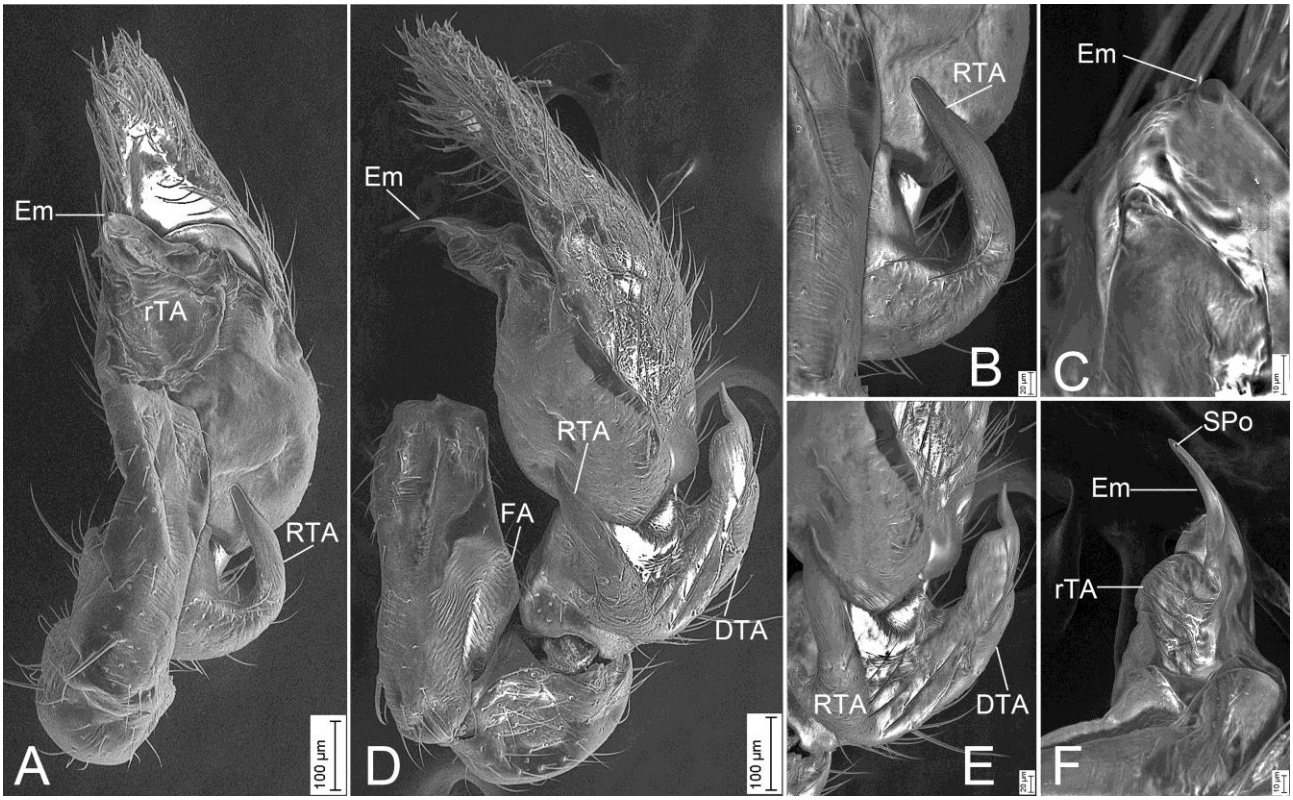

Figure 31. SEM micrographs of *Aculithus xunwu* sp. nov., male palp of holotype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus **D** Retrolateral view **E** Same, detail of tibial apophyses **F** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: DTA – dorsal tibial apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

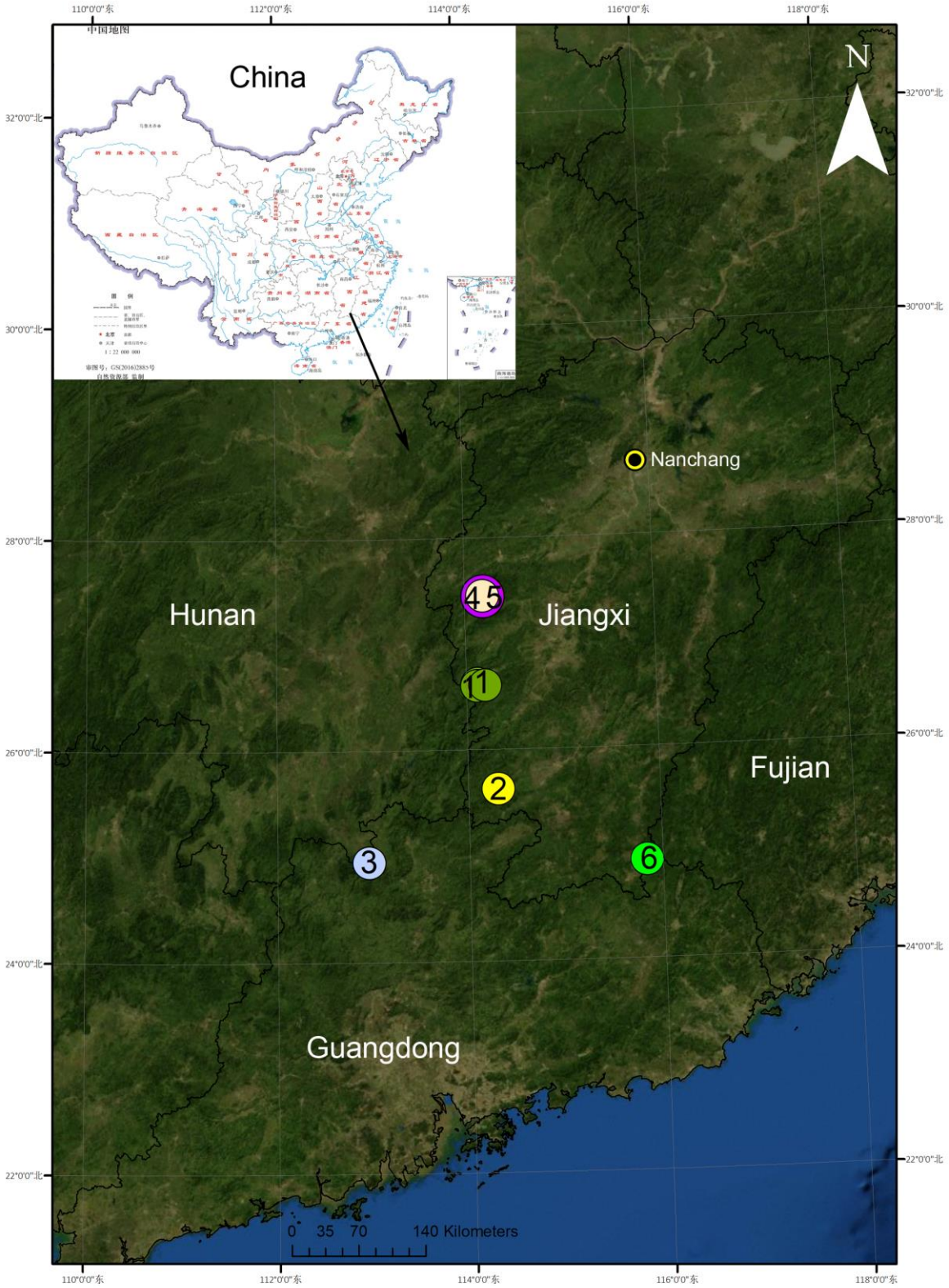

Figure 32. Records of *Aculithus bijiashanicus* **comb. nov.** (1), *Aculithus chongyi* **sp. nov.** (2), *A. subfabiformis* **comb. nov.** (4), *A. taishan* **sp. nov.** (5) and *A. xunwu* **sp. nov.** (6) from Jiangxi Province, and *A. fabiformis* **comb. nov.** (3) from Hunan Province in China.

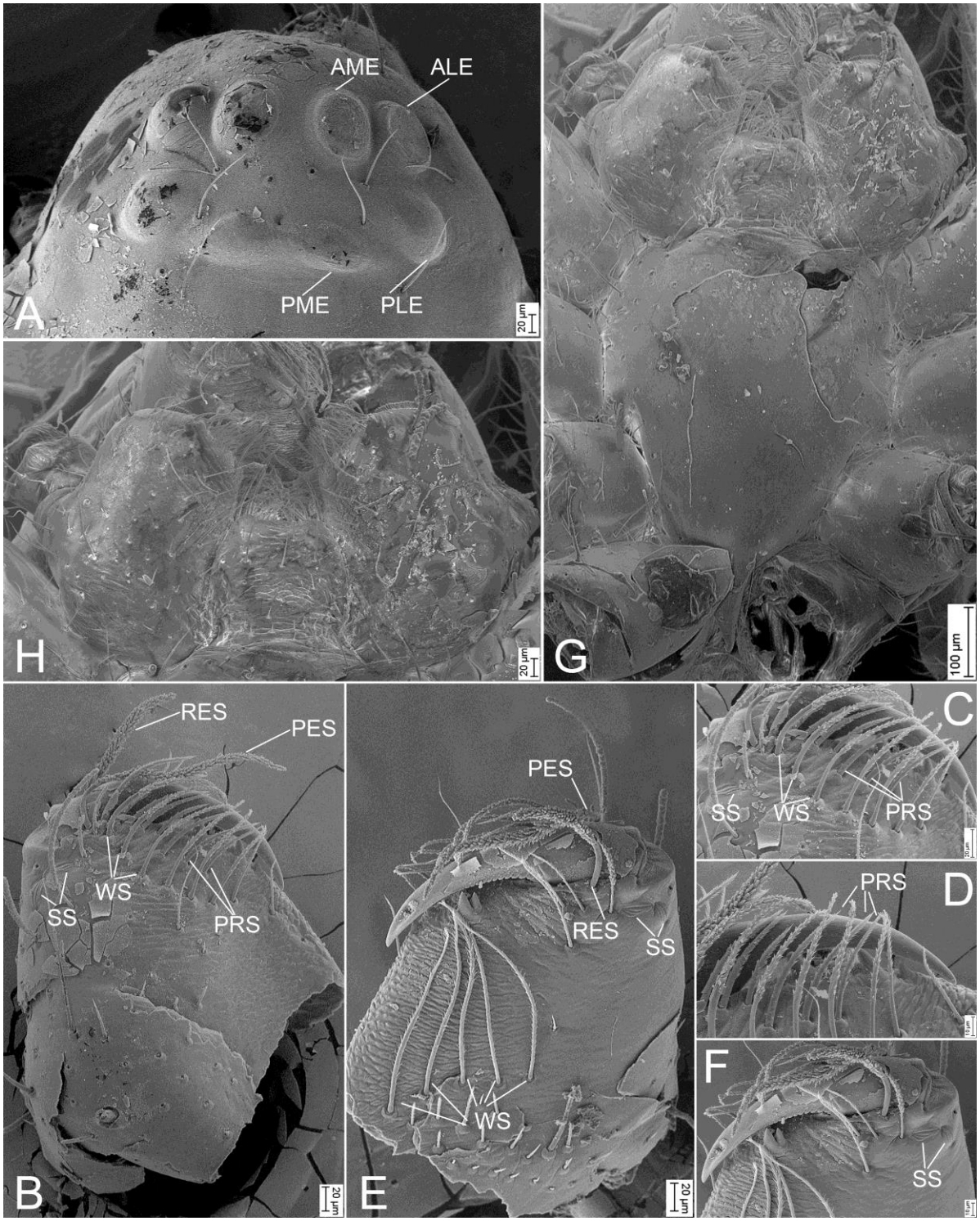

Figure 33. SEM micrographs of *Alboculus zhejiangensis*, chelicera, endites and labium of male paratype. **A** Eyes, dorsal view **B** Chelicera, frontal view **C** Same, detail of promargin **D** Same, detail of promarginal teeth **E** Same, posterior view **F** Same, detail of retromarginal teeth **G** Endites, labium and sternum, ventral view **H** Endites and labium, ventral view. Abbreviations: ALE – anterior lateral eye, AME – anterior median eye, PES – promarginal escort seta, PLE – posterior lateral eye, PME – posterior median eye, PRS – promarginal rake setae, RES – retromarginal escort seta, SS – slit sensillum, WS – whisker setae.

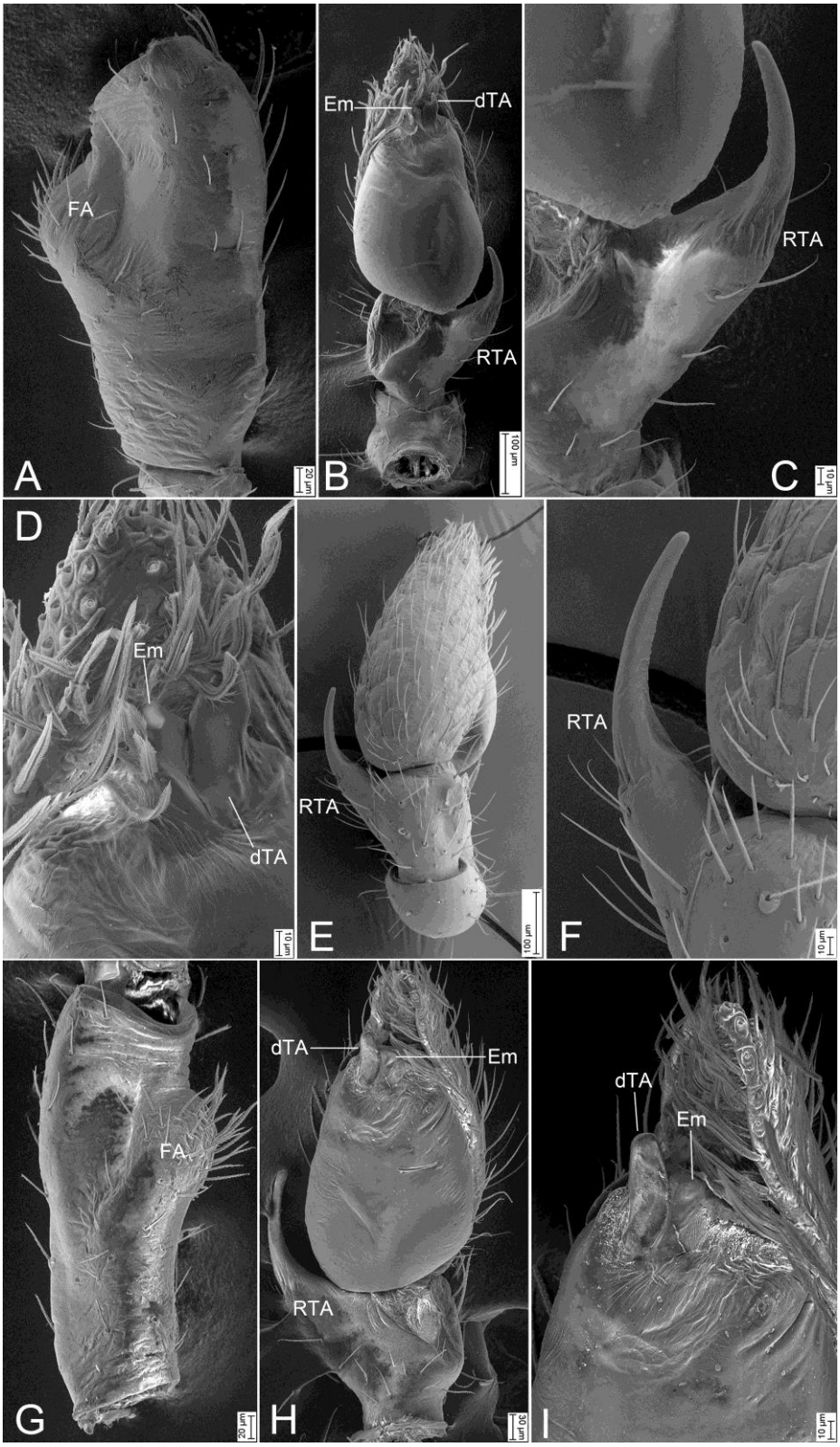

Figure 34. SEM micrographs of *Alboculus zhejiangensis*, palp. **A** Left femur, retrolateral view **B** Left palp, ventral view **C** Same, detail of retrolateral tibial apophysis **D** Same, detail of embolus and distal tegular apophysis **E** Dorsal view **F** Same, detail of retrolateral tibial apophysis **G** Right femur, prolateral view **H** Right palp, ventral view, slightly retrolateral **I** Same, detail of embolus and distal tegular apophysis. Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

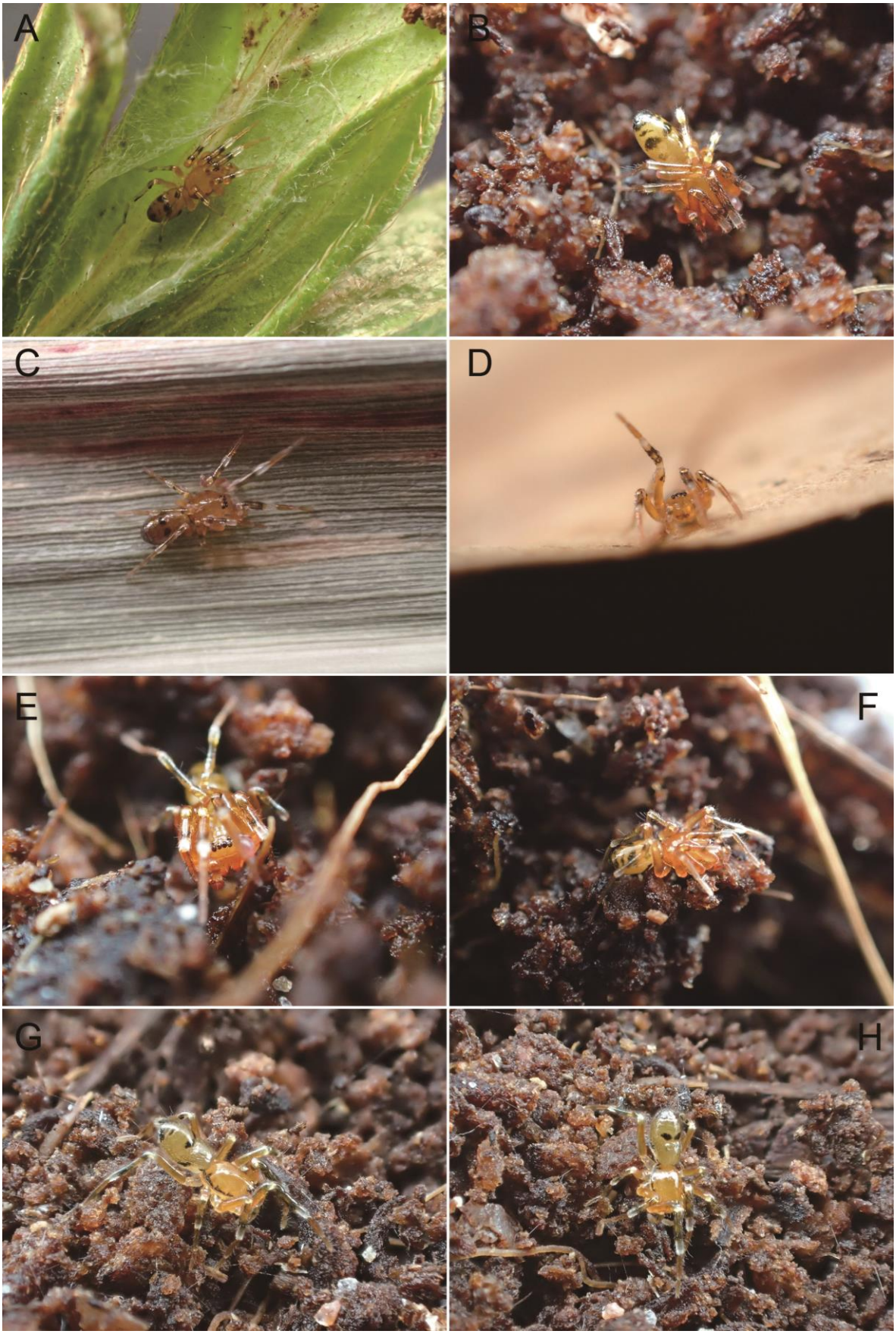

Figure 35. Photographs of living specimens of *Alboculus zhejiangensis* from Jiangxi Province, China. **A–F** Male **G, H** Female.

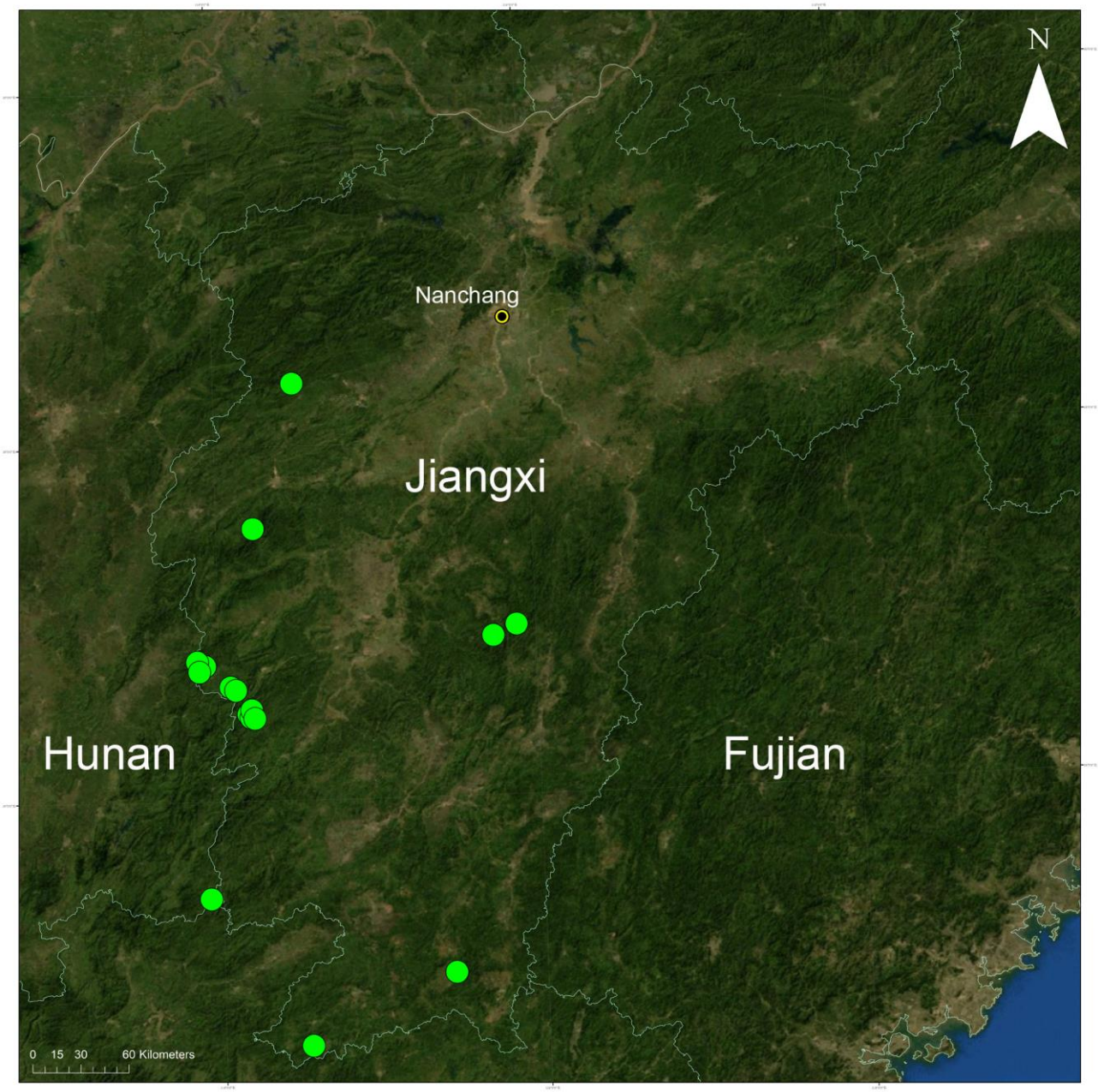

Figure 36. Records of *Alboculus zhejiangensis* from Jiangxi Province in China.

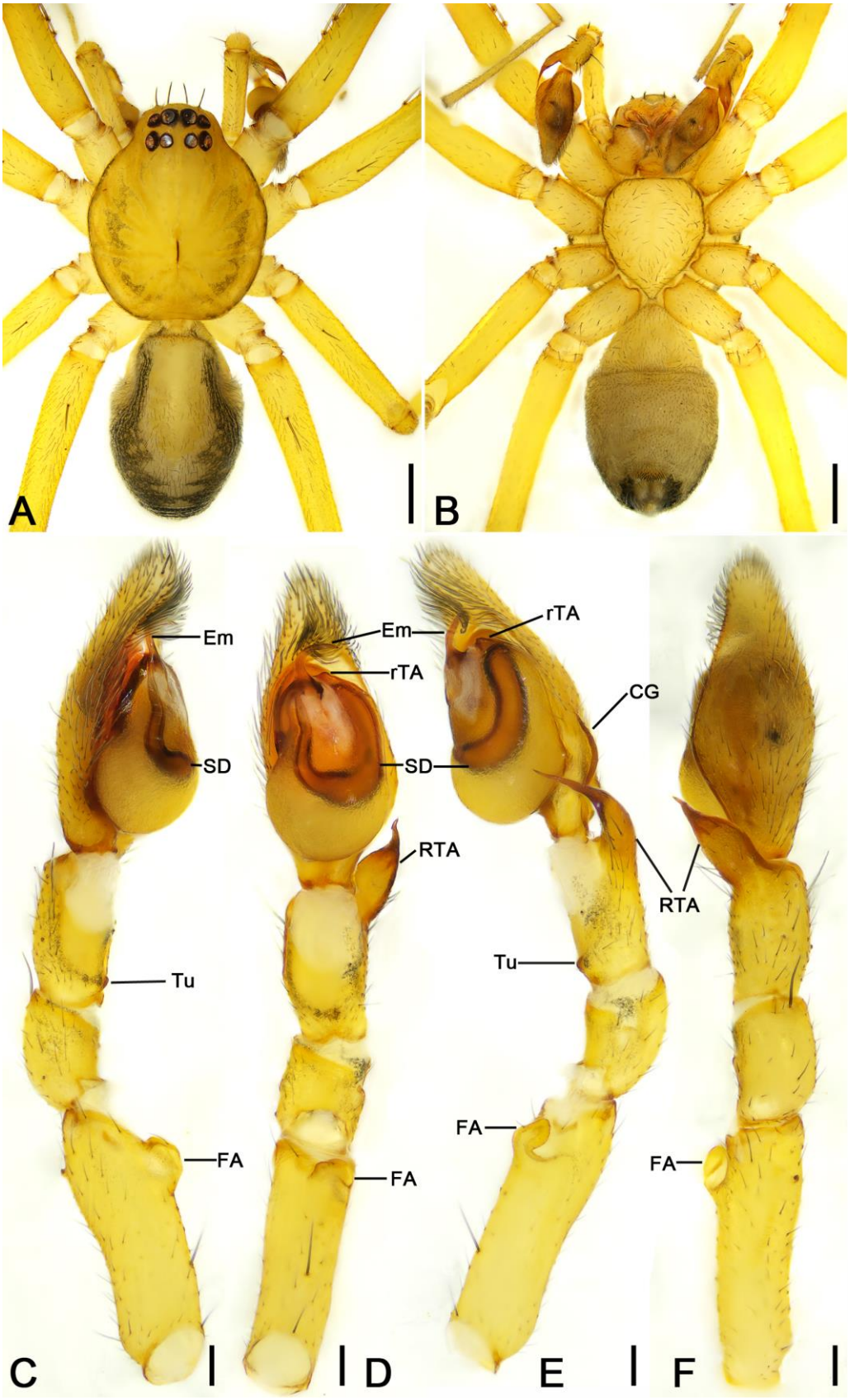

Figure 37. *Grandilithus anyuan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

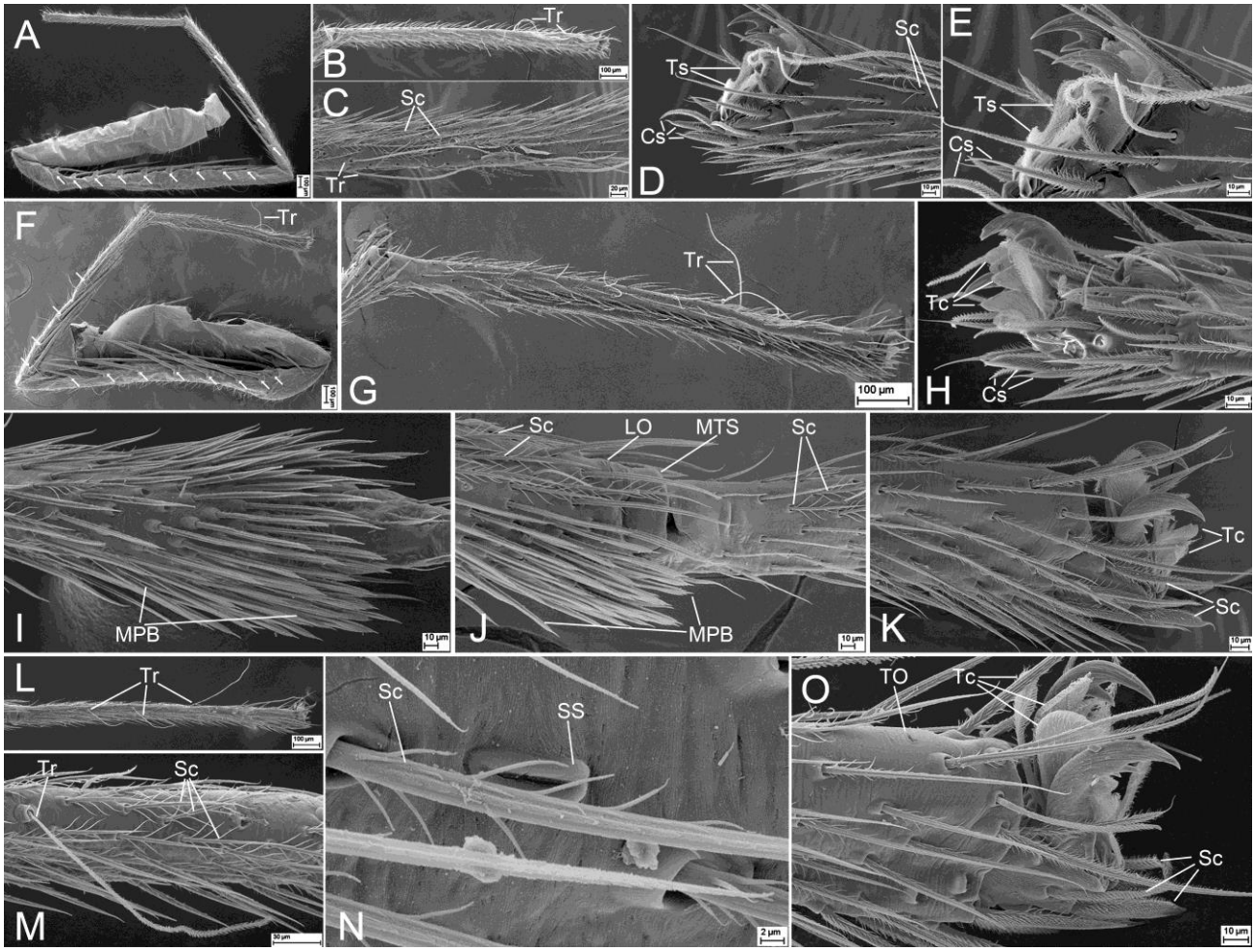

Figure 38. SEM micrographs of *Grandilithus anyuan* sp. nov., legs of male paratype. **A** Leg I, white arrows show the detail of macrospines, retrolateral view **B** Same, tarsus, prolateral view **C** Same, detail of scales and trichobothria **D** Same, detail of scales, tarsal claw, claw tuft setae, retrolateral view **E** Same, detail of tarsal claw and claw tuft setae **F** Leg II, white arrows show the detail of macrospines, prolateral view **G** Same, tarsus, prolateral view **H** Same, tarsal claw and claw tuft setae, retrolateral view **I** Metatarsus III, detail of preening brush, prolateral view **J** Same, metatarsus-tarsus joint, dorsolateral view **K** Same, detail of claws and claw tuft setae, prolateral view, slightly dorsal **L** Tarsus IV, prolateral view, slightly dorsal **M** Same, detail of scales and trichobothrium **N** Same, detail of scales and slit sensillum **O** Same, tarsal organ, tarsal claw and claw tuft setae, prolateral view, slightly dorsal. Abbreviations: CS – chemosensory seta, CTC – claw tuft clasper, LO – lyriform organ, MPB – metatarsal preening brush, MTS – metatarsal dorsal stopper, PP – proximal plate, Sc – scale, SS – slit sensillum, TO – tarsal organ, Tr – trichobothrium, TS – tenent setae.

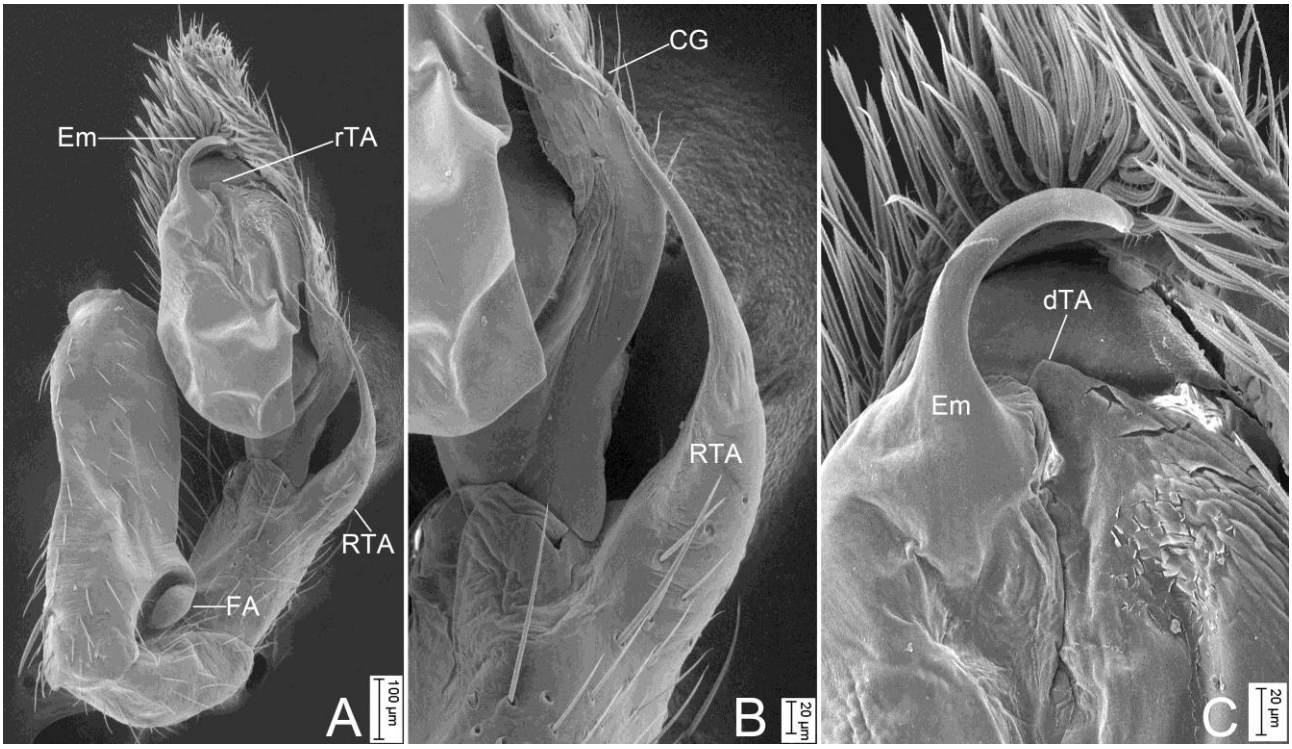

Figure 39. SEM micrographs of *Grandilithus anyuan* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus and distal tegular apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

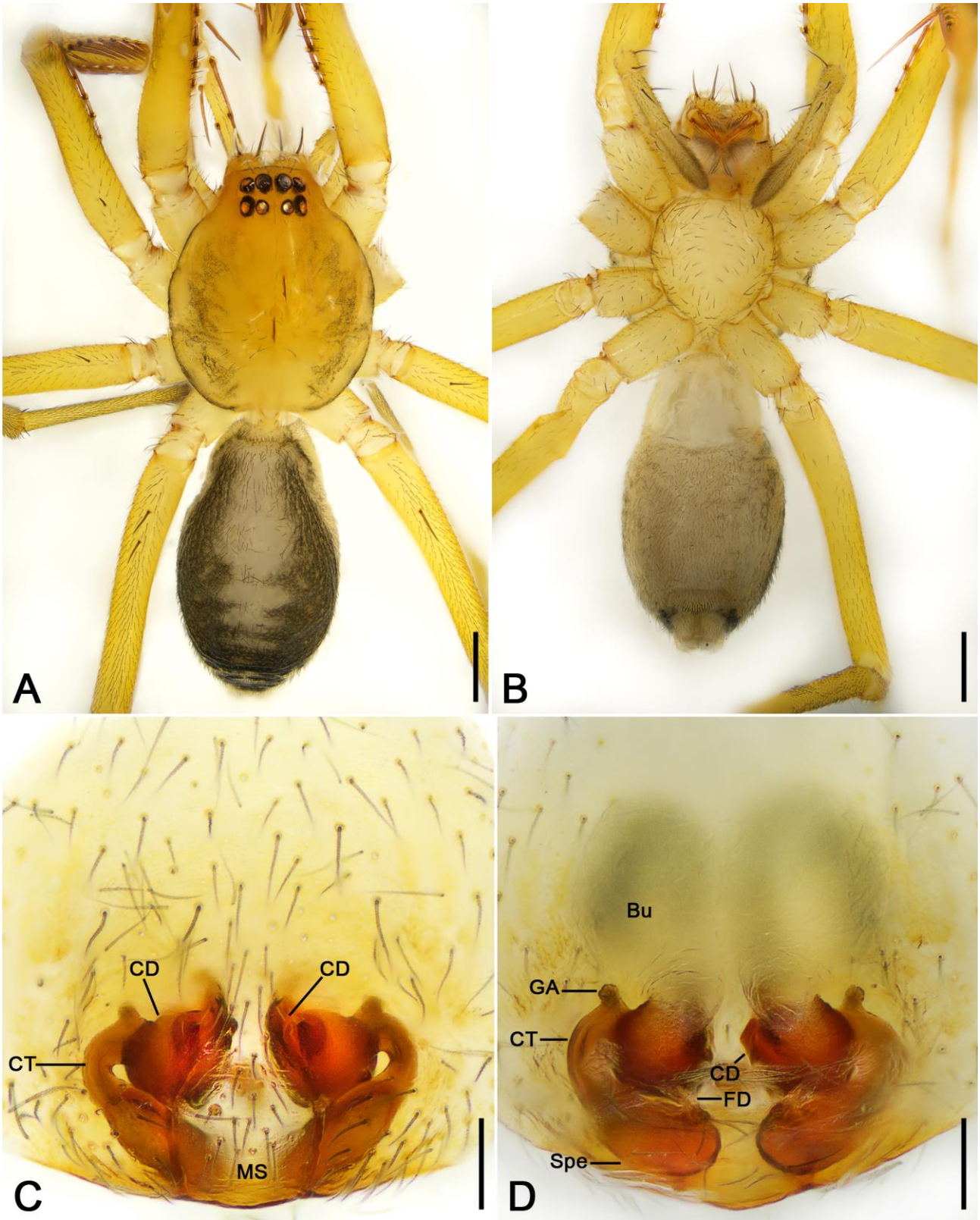

Figure 40. *Grandilithus anyuan* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

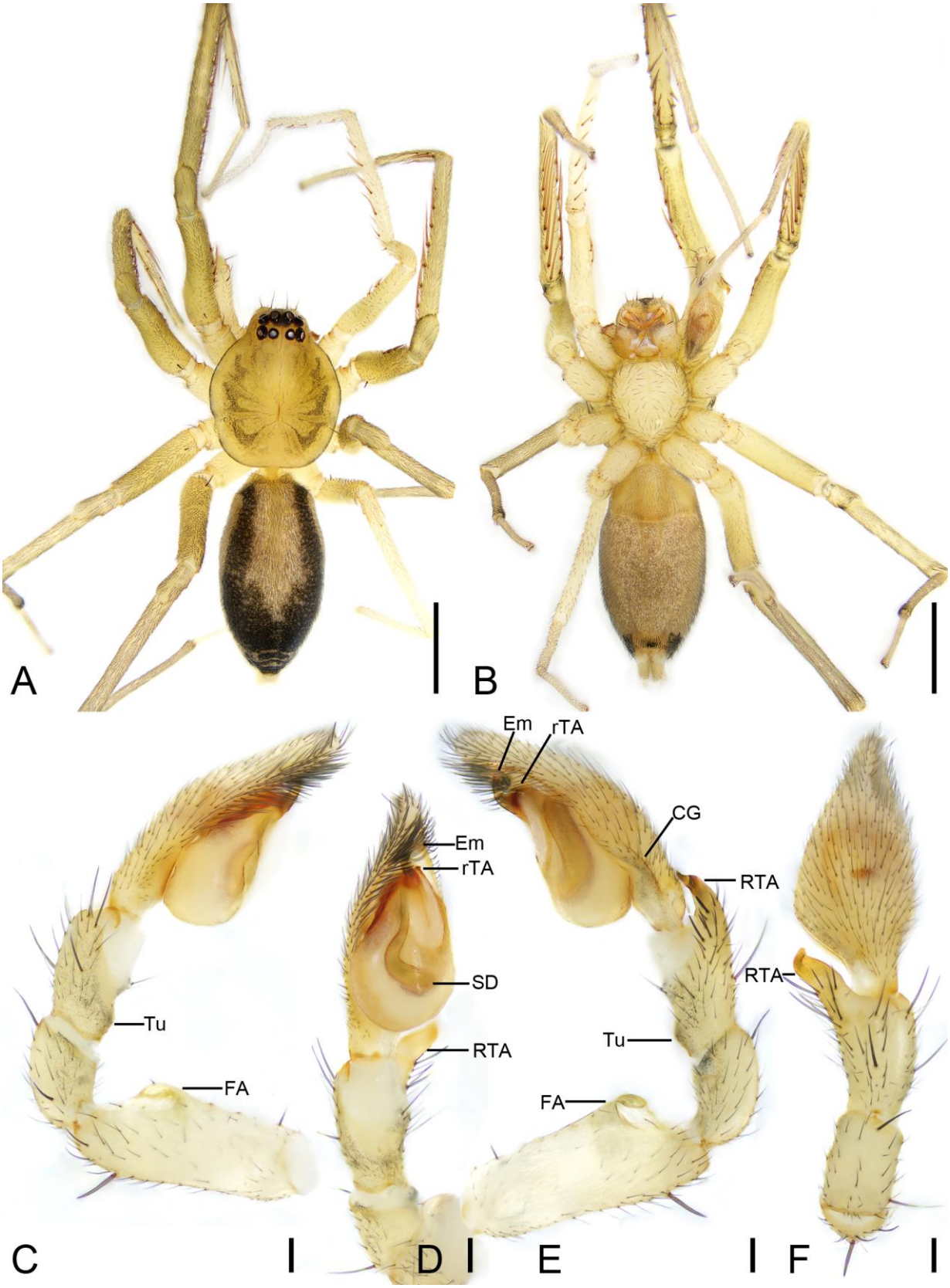

Figure 41. *Grandilithus aobei* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 1 mm (**A, B**), 0.1 mm (**C**–**F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

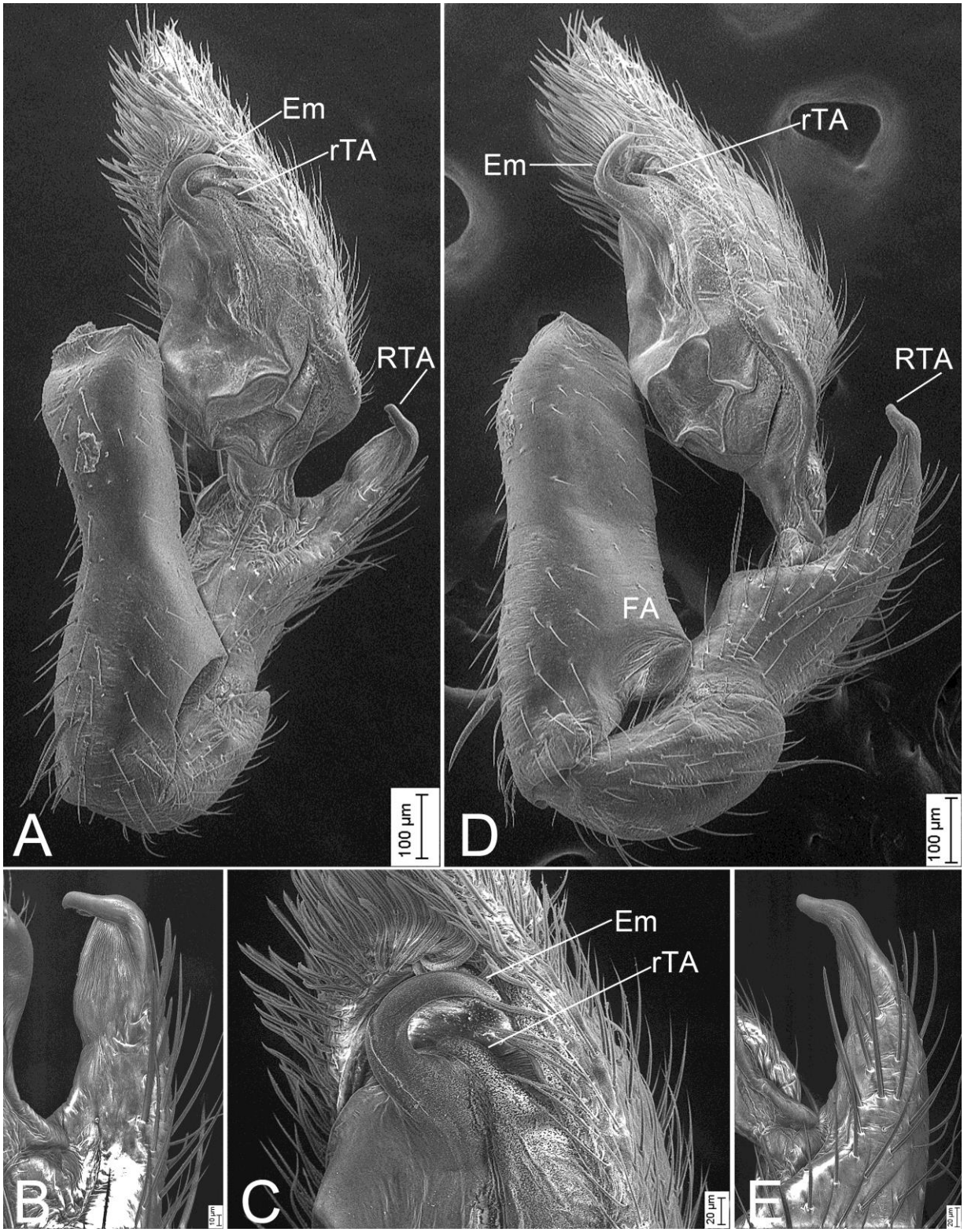

Figure 42. SEM micrographs of *Grandilithus aobei* sp. nov., palp of male holotype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus and distal tegular apophysis **D** Retrolateral view **B** Same, detail of retrolateral tibial apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

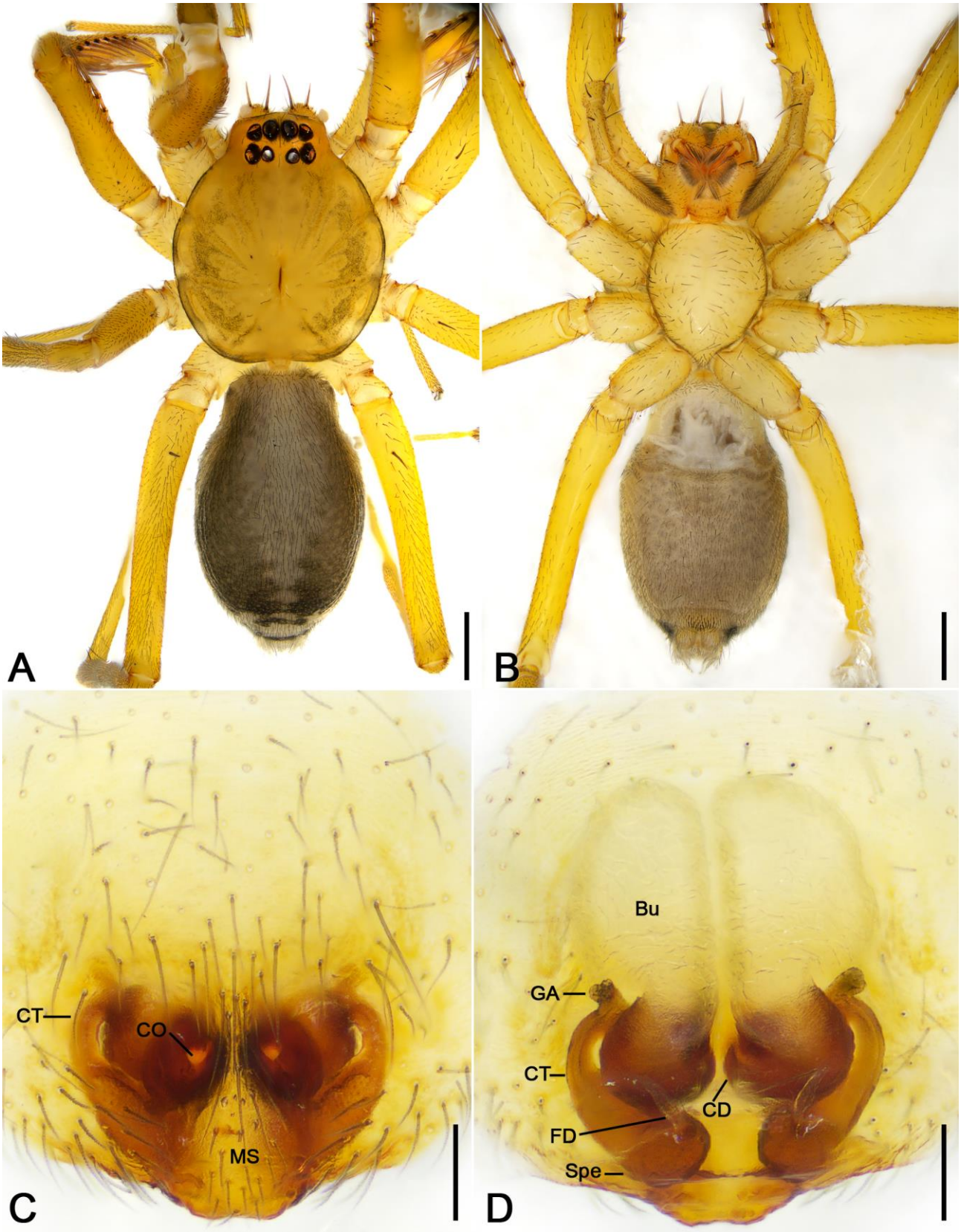

Figure 43. *Grandilithus dingnan* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

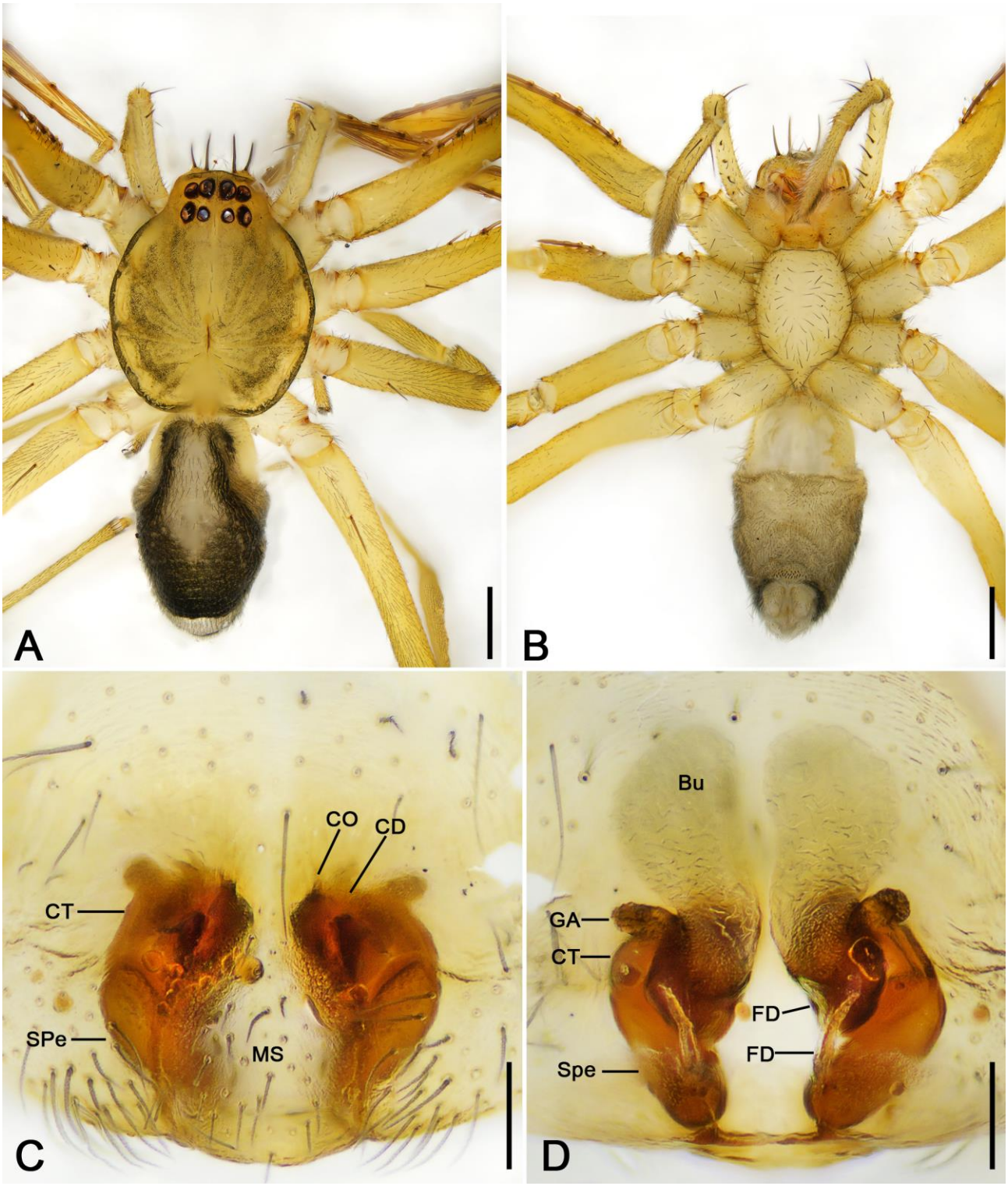

Figure 44. *Grandilithus dongguling* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

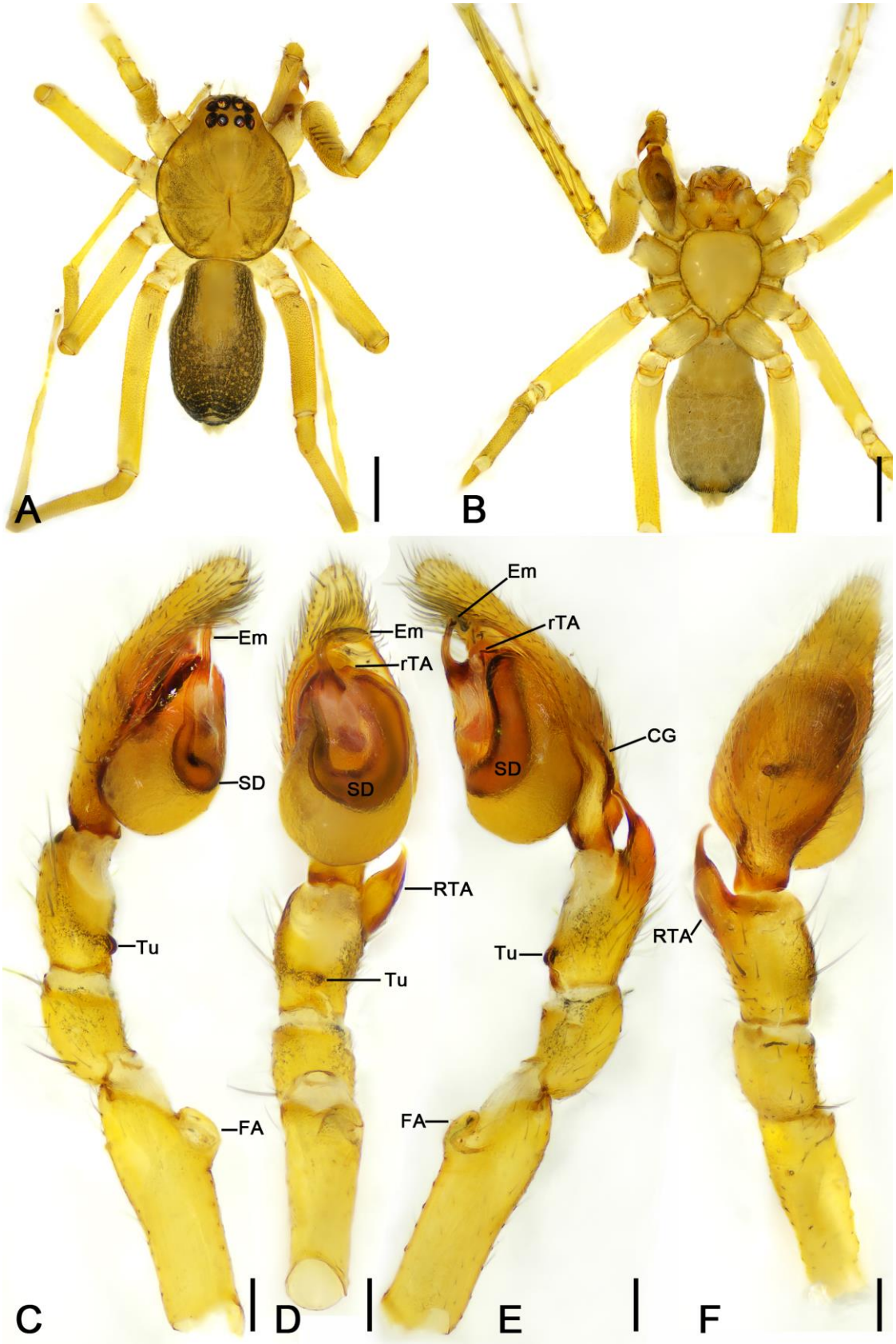

Figure 45. *Grandilithus fengshan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

Figure 46. SEM micrographs of *Grandilithus fengshan* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis, embolus, and retrolateral tegular apophysis **C** Same, detail of embolus and retrolateral tegular apophysis **D** Retrolateral view **E** Same, detail of retrolateral tibial apophysis **F** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, Tu – tubercle.

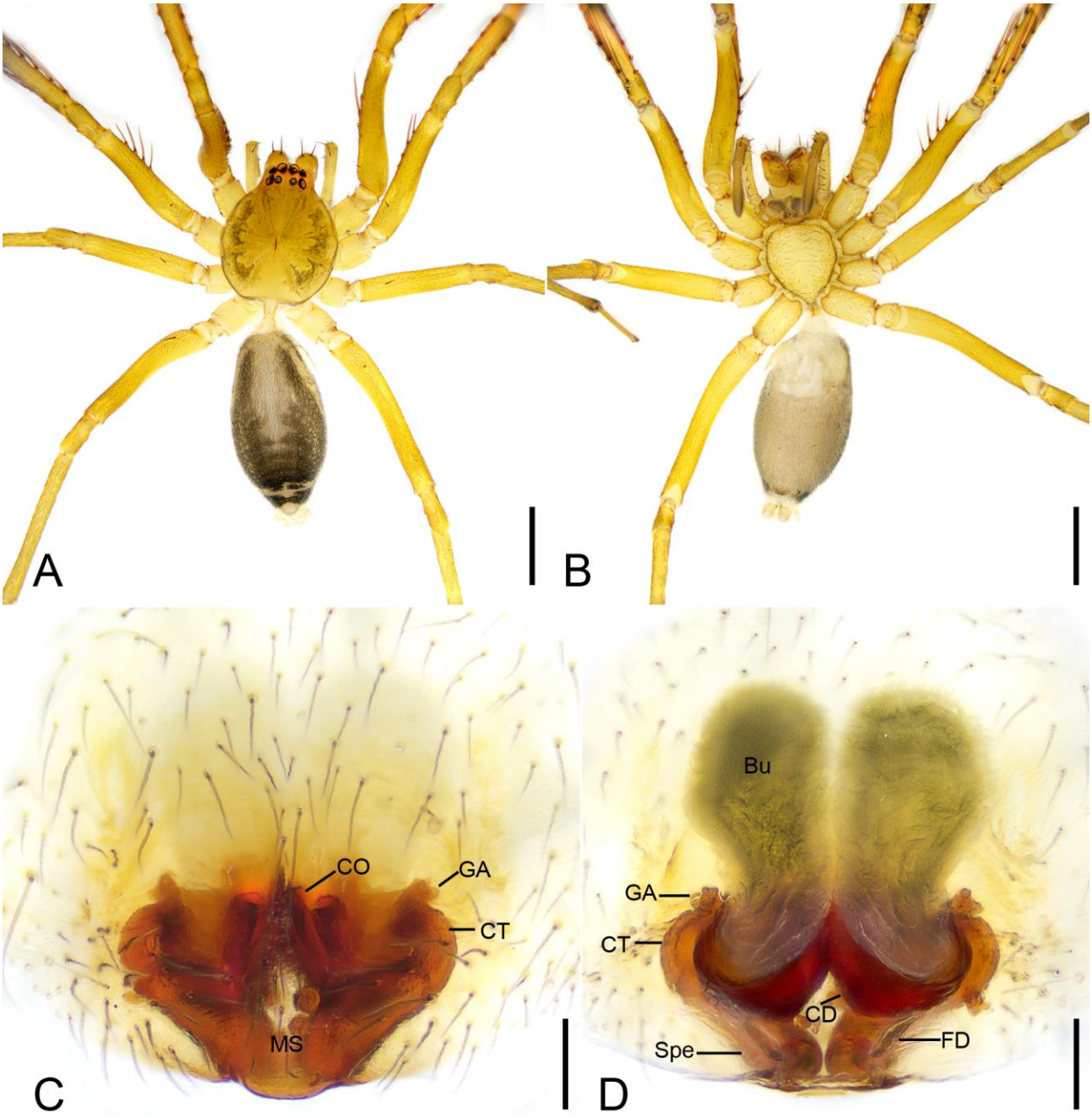

Figure 47. *Grandilithus jiangshan* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 1 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

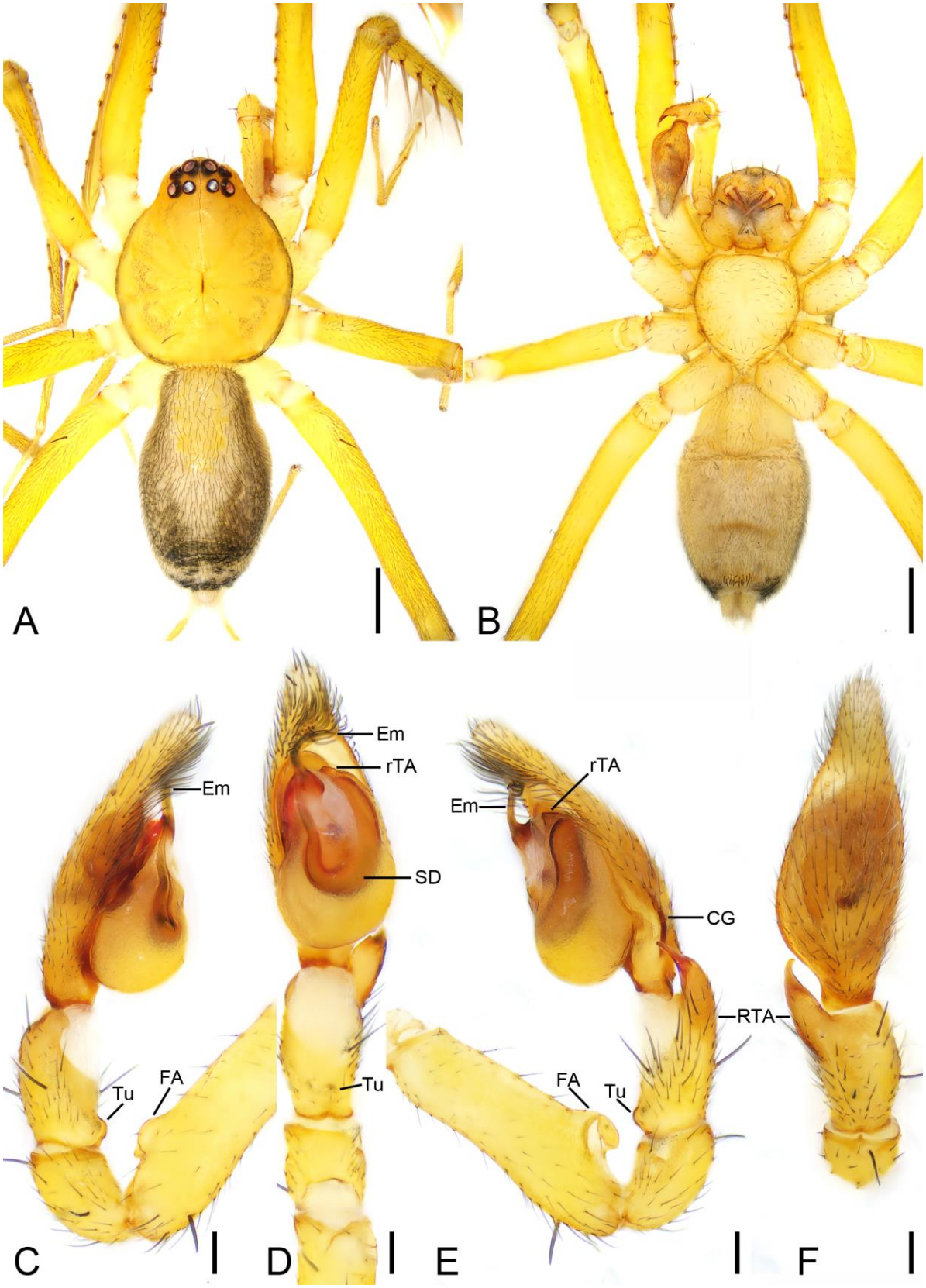

Figure 48. *Grandilithus jingshi* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

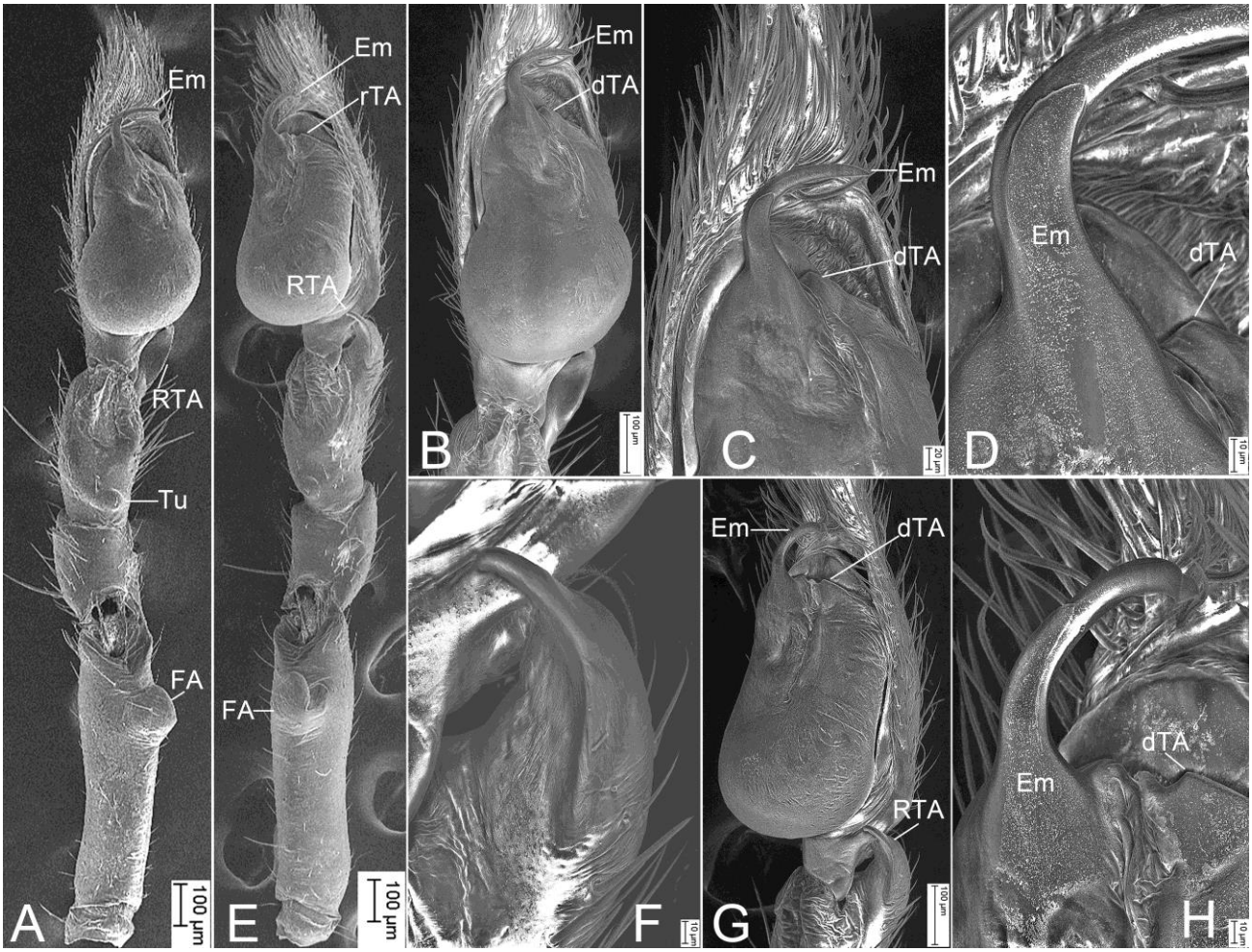

Figure 49. SEM micrographs of *Grandilithus jingshi* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis, embolus, and retrolateral tegular apophysis **C** Same, detail of embolus and retrolateral tegular apophysis **D** Same, detail of embolic base and retrolateral tegular apophysis **E** Retrolateral view, slightly ventral **F** Same, detail of retrolateral tibial apophysis **G** Same, detail of retrolateral tibial apophysis, embolus and retrolateral. tegular apophysis **H** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, Tu – tubercle.

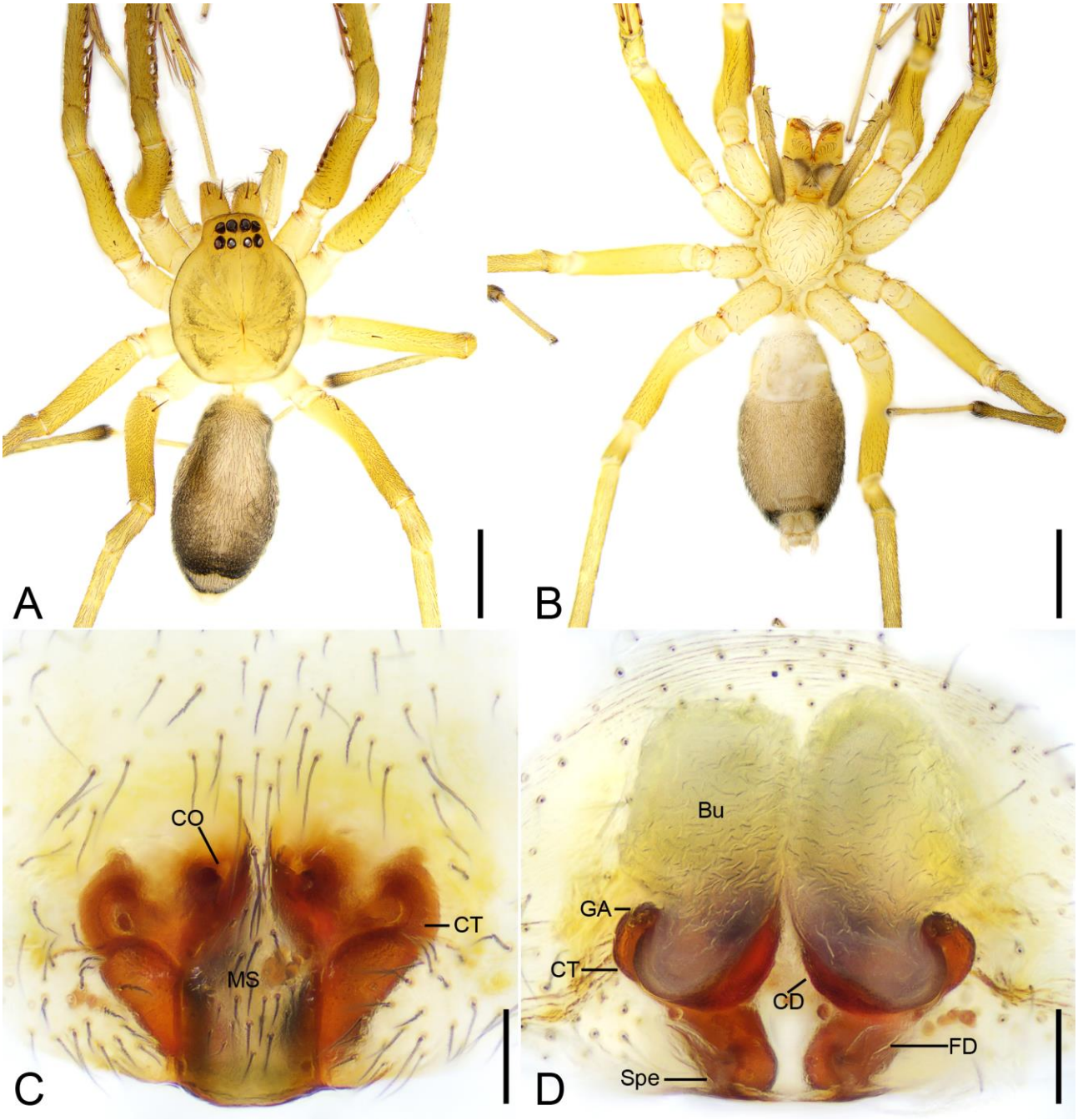

Figure 50. *Grandilithus jingshi* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 1 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

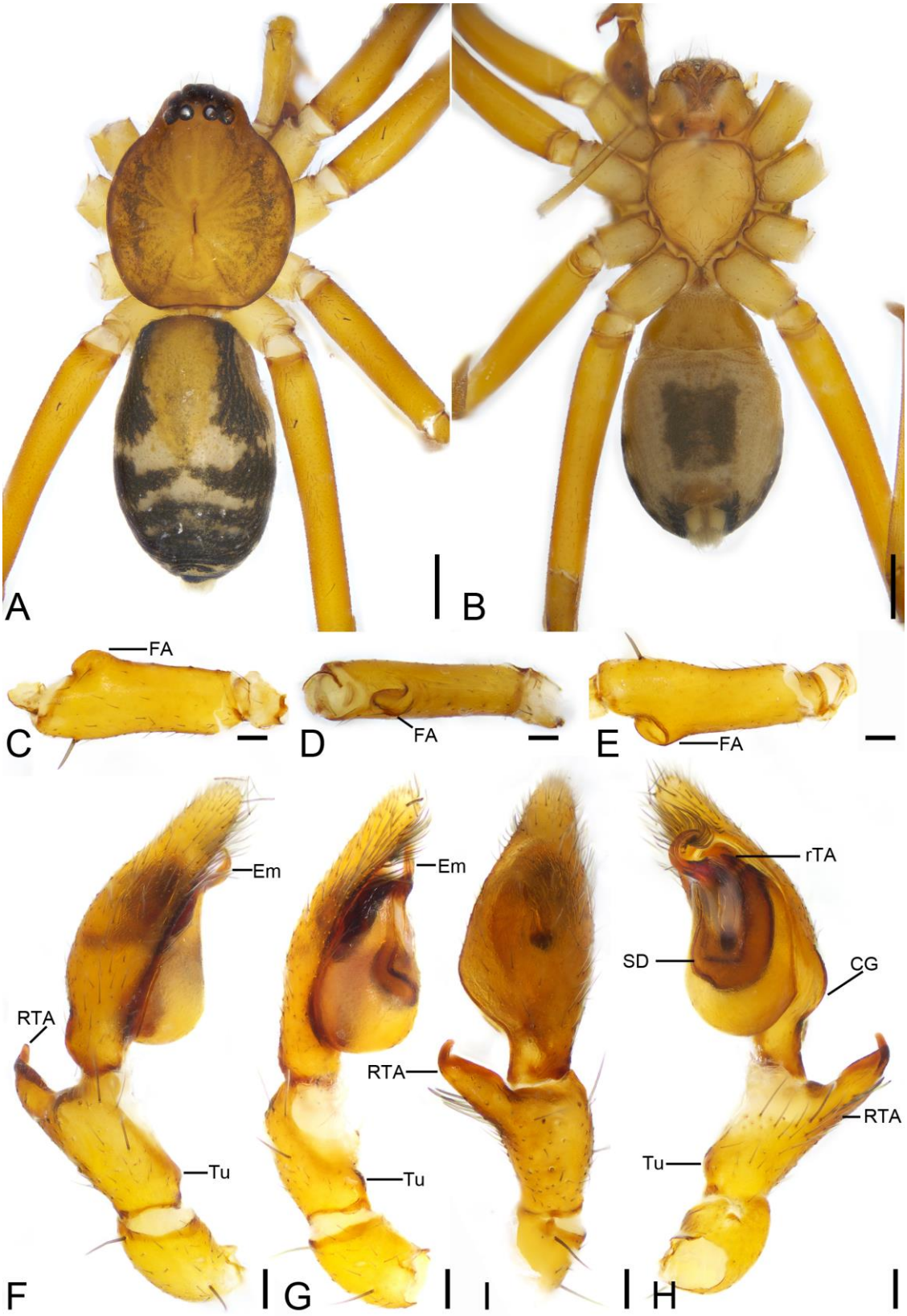

Figure 51. *Grandilithus longjiatang* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Femur, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Palp, prolateral view **G** Same, ventral view **H** Same, retrolateral view **I** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–I**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

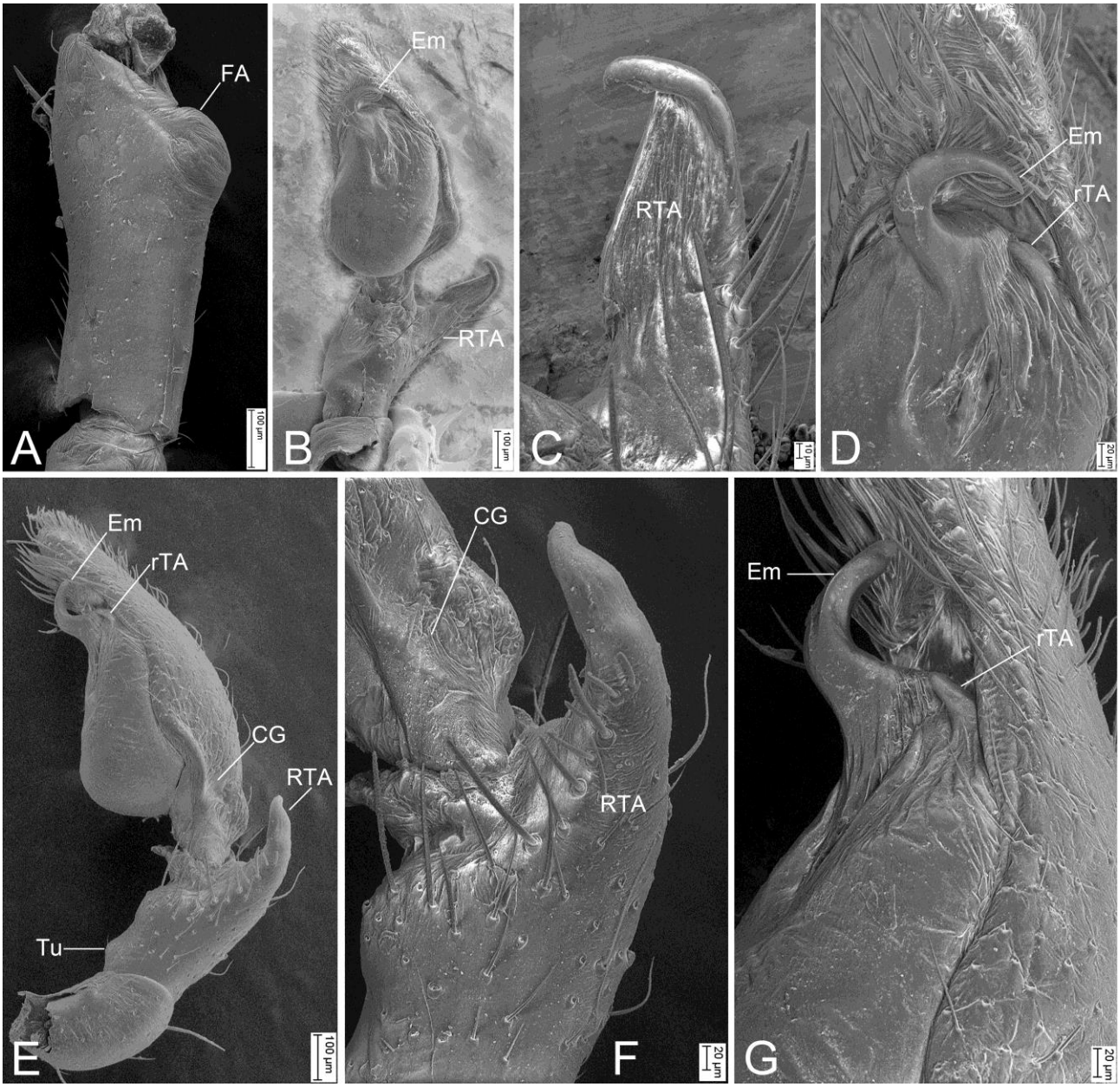

Figure 52. SEM micrographs of *Grandilithus longjiatang* sp. nov., palp of male holotype. **A** Palpal femur, prolateral view **B** Ventral view **C** Same, detail of retrolateral tibial apophysis **D** Same, detail of embolus and retrolateral tegular apophysis **E** Retrolateral view **F** Same, detail of retrolateral tibial apophysis **G** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, Tu – tubercle.

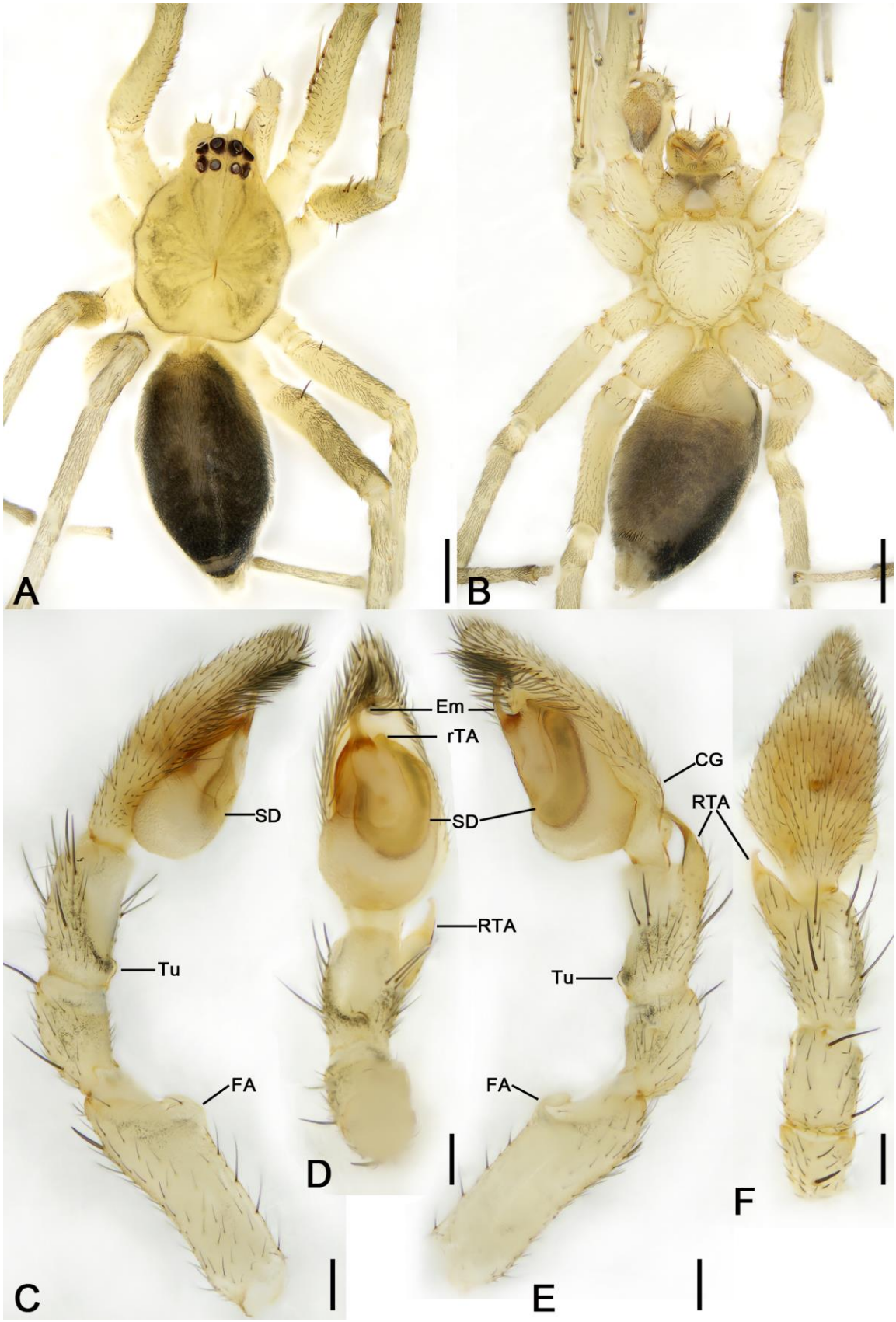

Figure 53. *Grandilithus nanan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

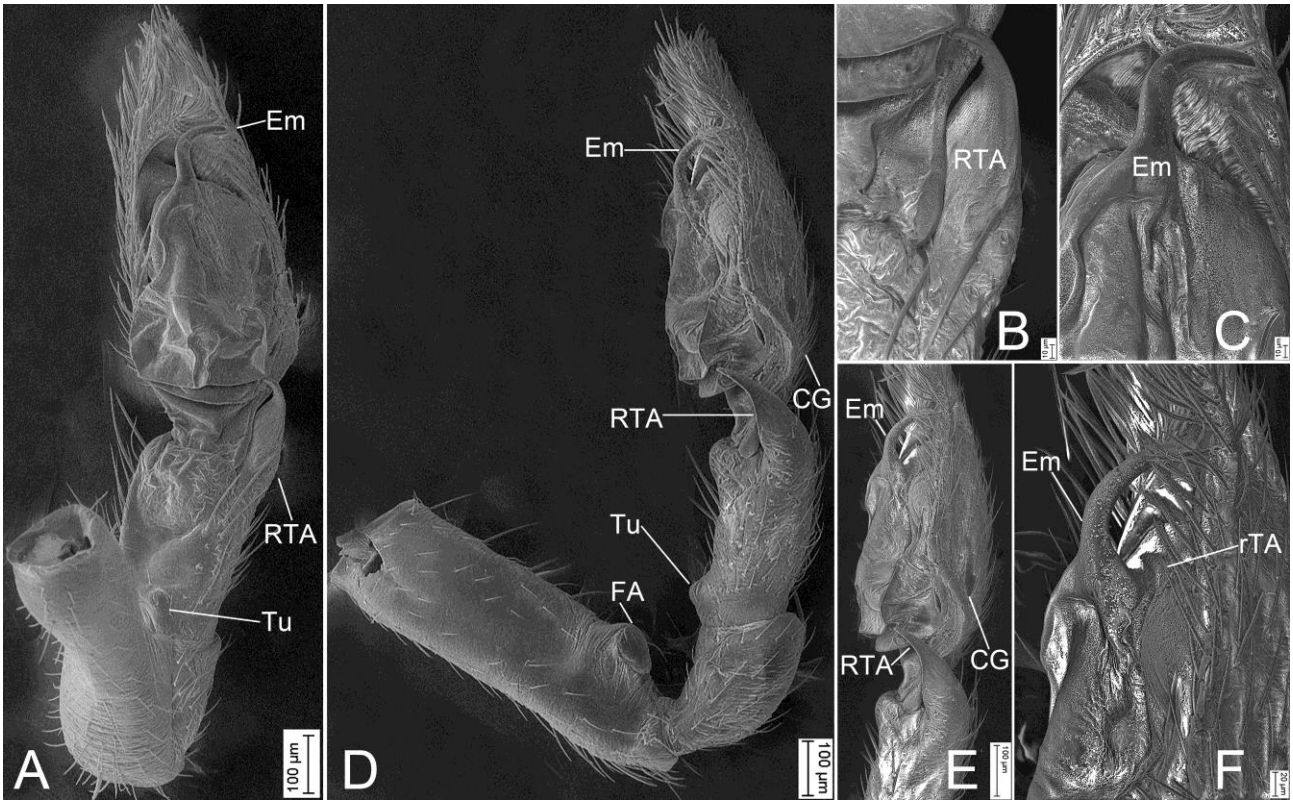

Figure 54. SEM micrographs of *Grandilithus nanan* sp. nov., palp of male holotype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus and retrolateral tegular apophysis **D** Retrolateral view **E** Same, detail of retrolateral tibial apophysis and embolus **F** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, Tu – tubercle.

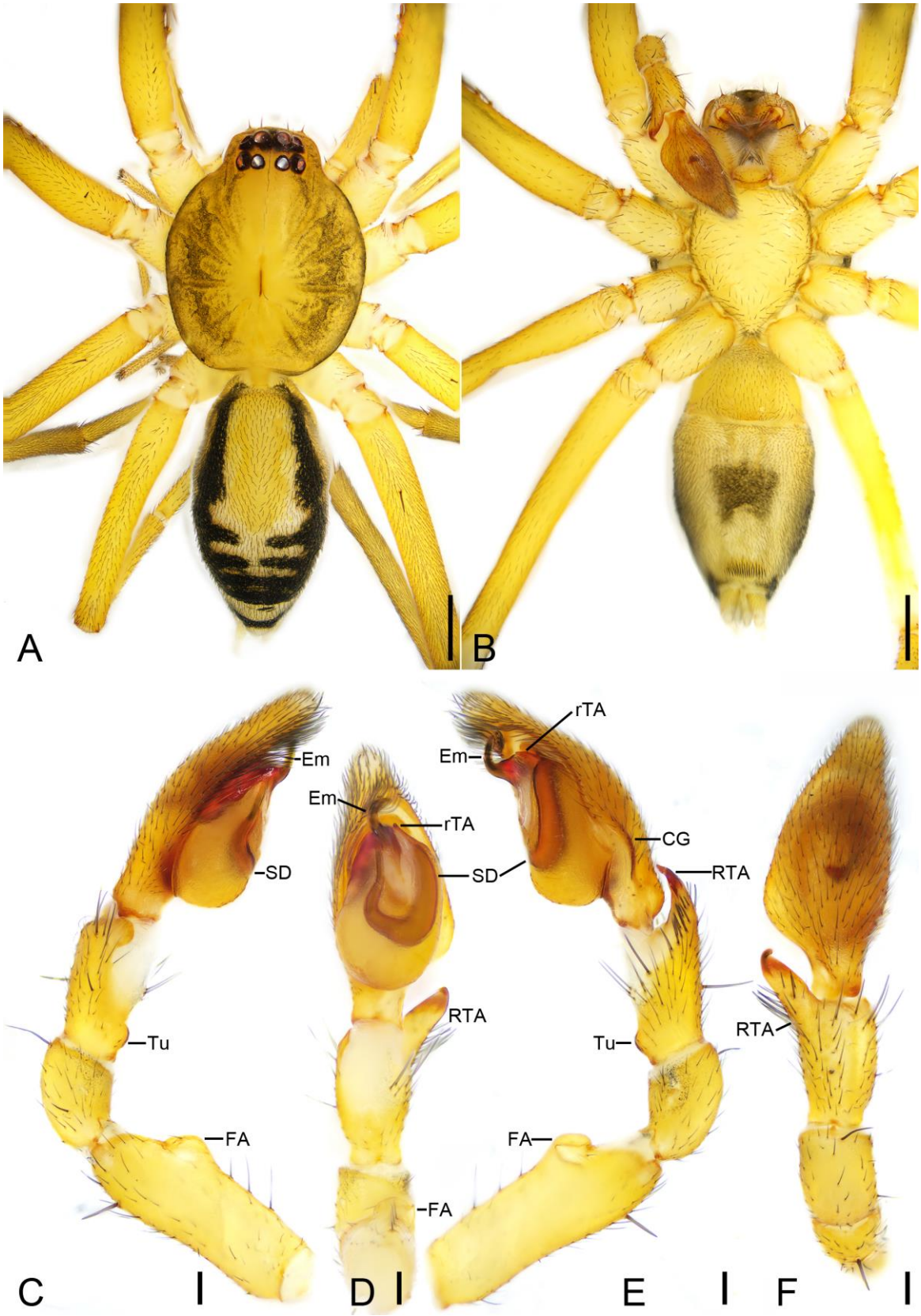

Figure 55. *Grandilithus ningdu* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

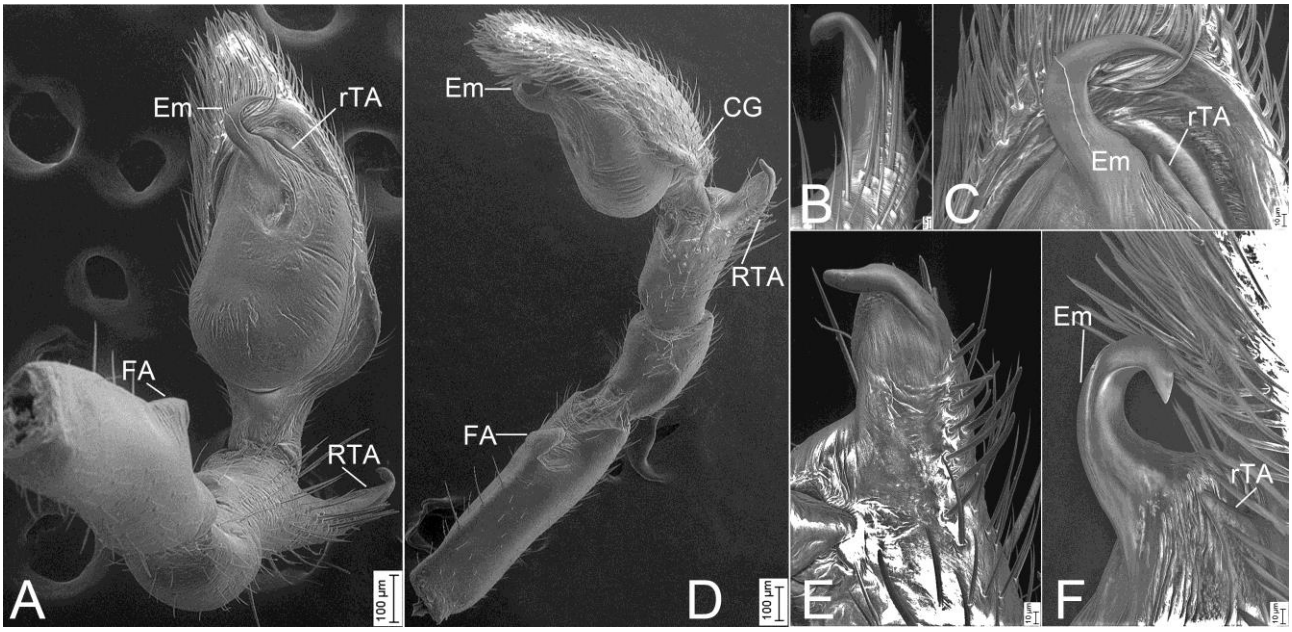

Figure 56. SEM micrographs of *Grandilithus ningdu* sp. nov., palp of male holotype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus and retrolateral tegular apophysis **D** Retrolateral view **E** Same, detail of retrolateral tibial apophysis **F** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, Tu – tubercle.

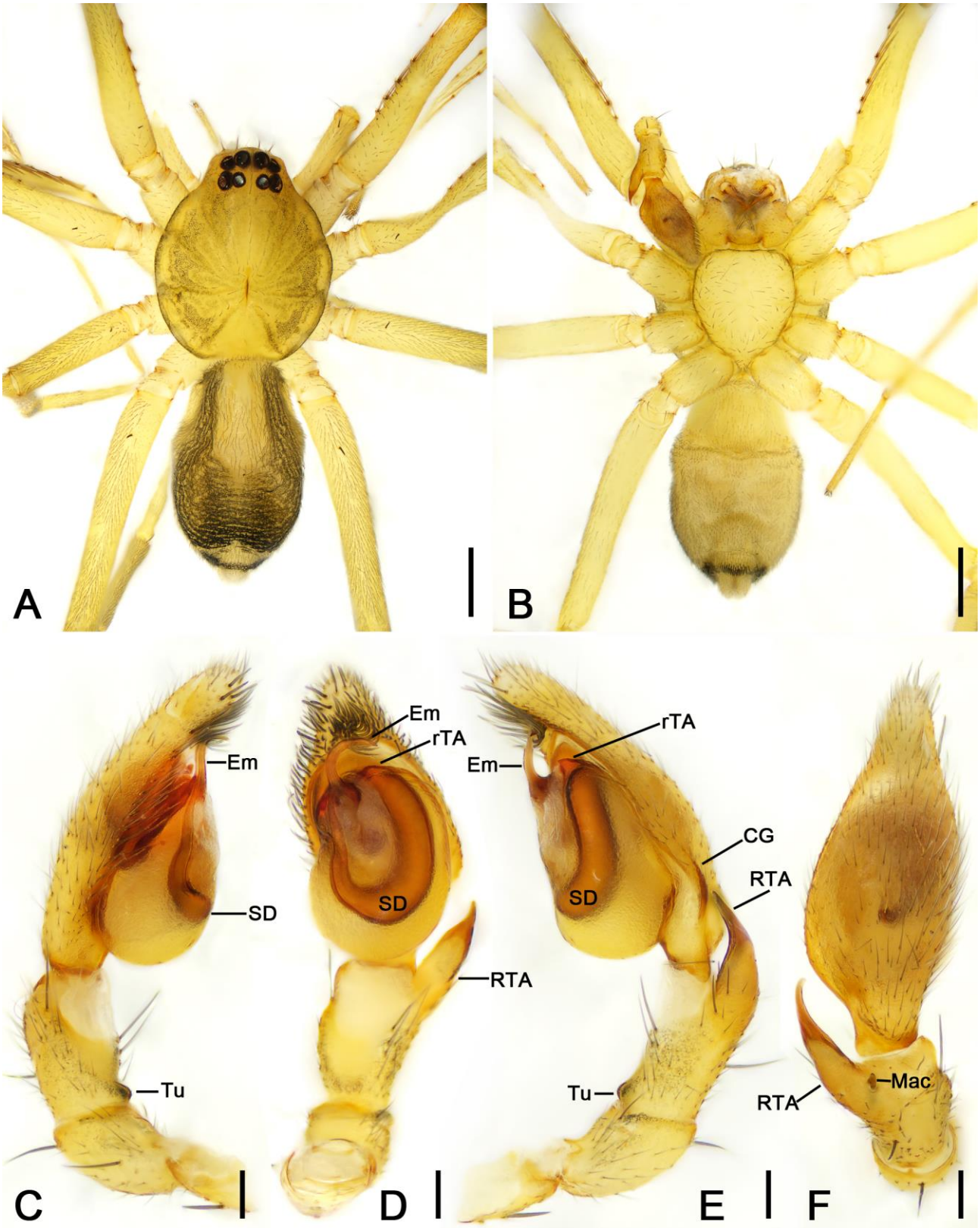

Figure 57. *Grandilithus taihe* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

Figure 58. SEM micrographs of *Grandilithus taihe* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus and distal tegular apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

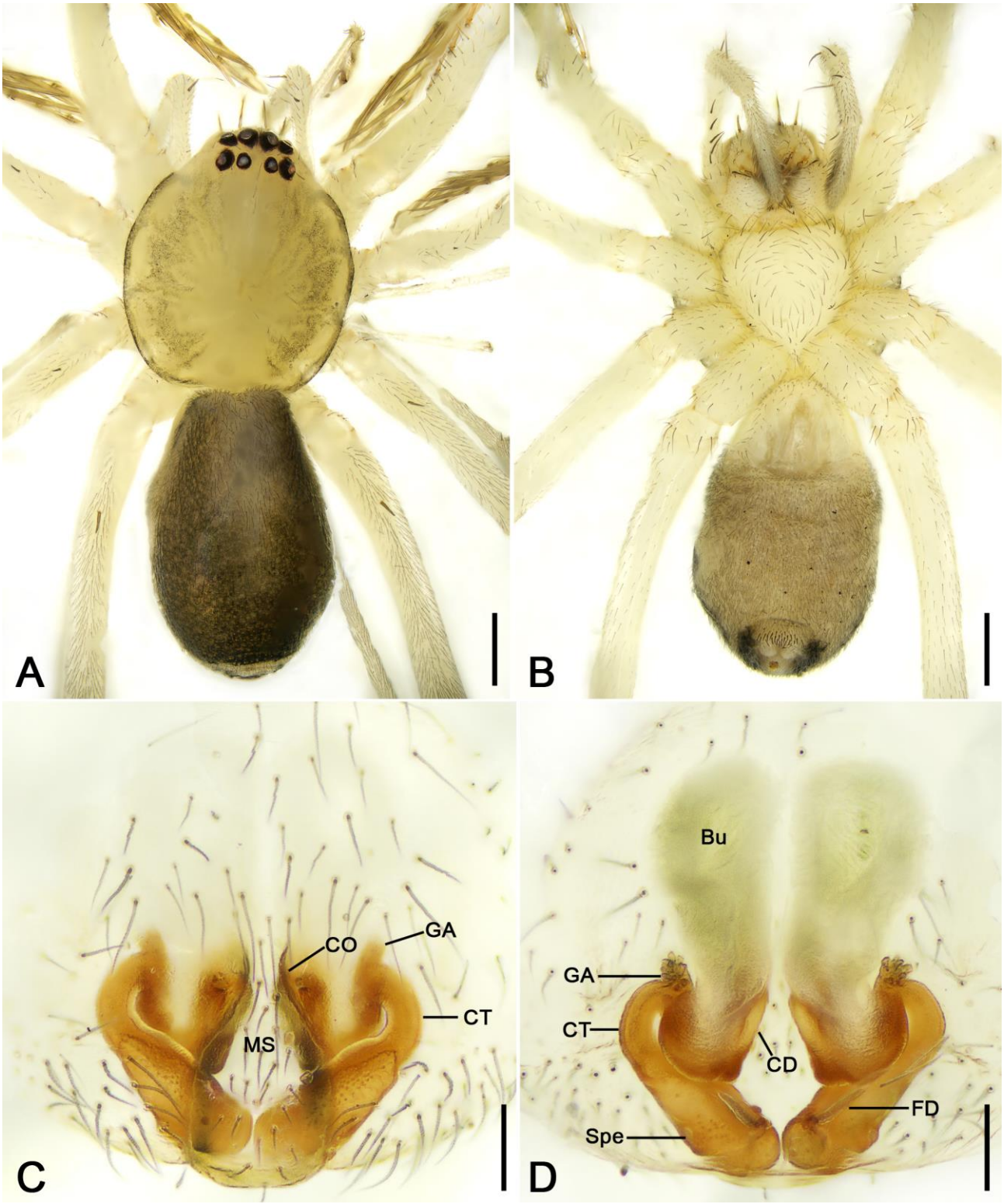

Figure 59. *Grandilithus taihe* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

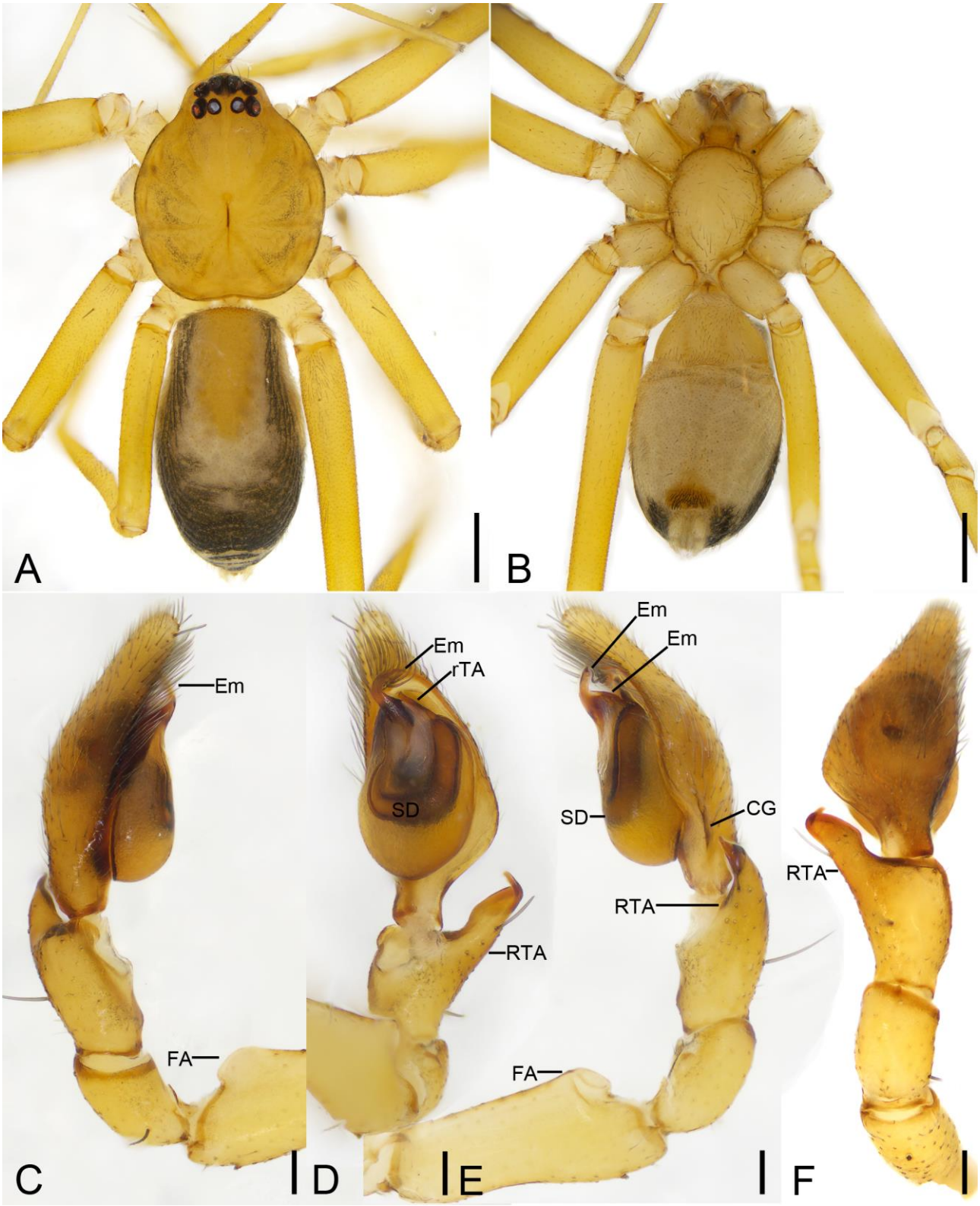

Figure 60. *Grandilithus tianyushan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

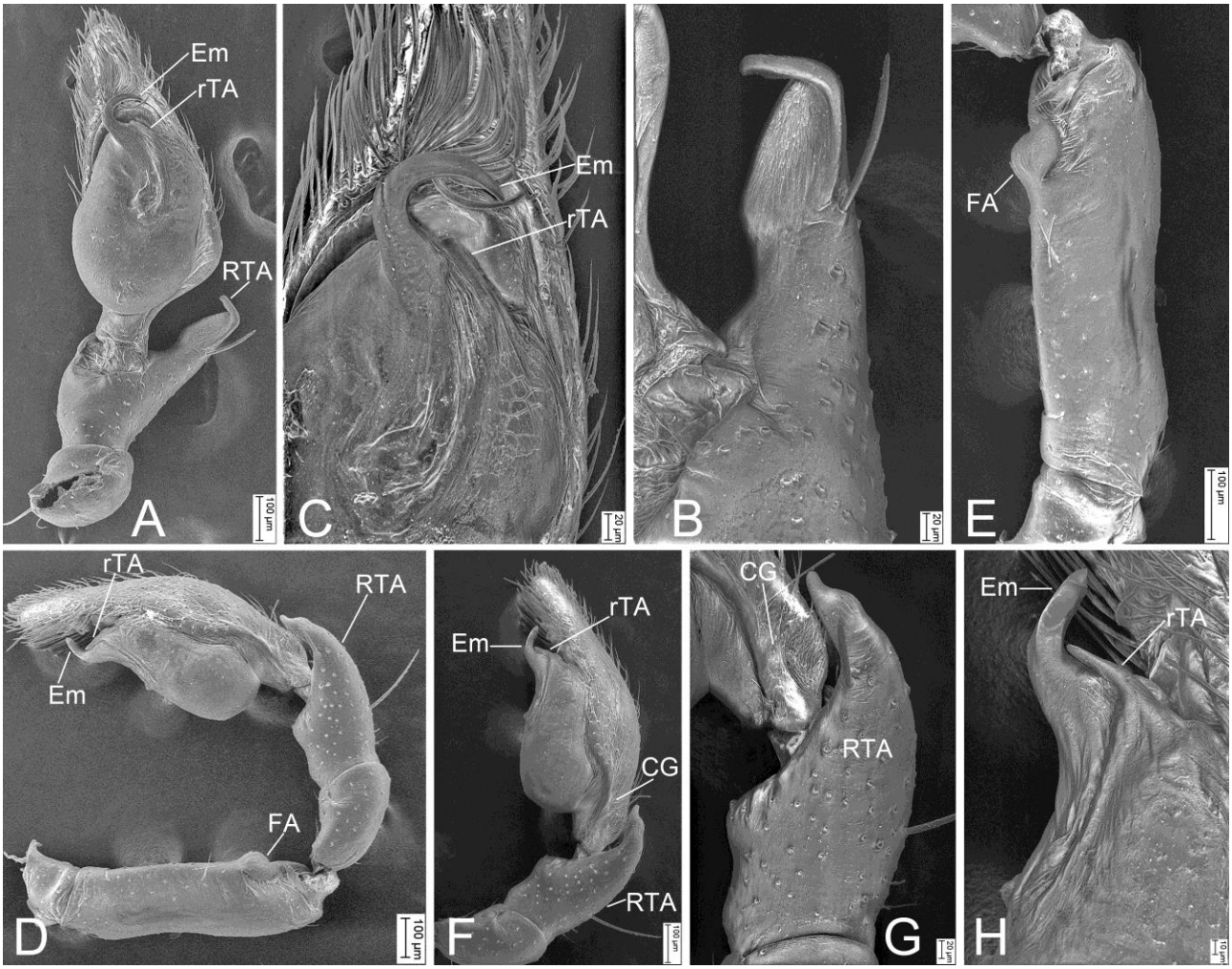

Figure 61. SEM micrographs of *Grandilithus tianyushan* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus and retrolateral tegular apophysis **D** Retrolateral view **E** Same, detail of femoral apophysis **F** Same, detail of retrolateral tibial apophysis, embolus and retrolateral tegular apophysis **G** Same, detail of retrolateral tibial apophysis **H** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

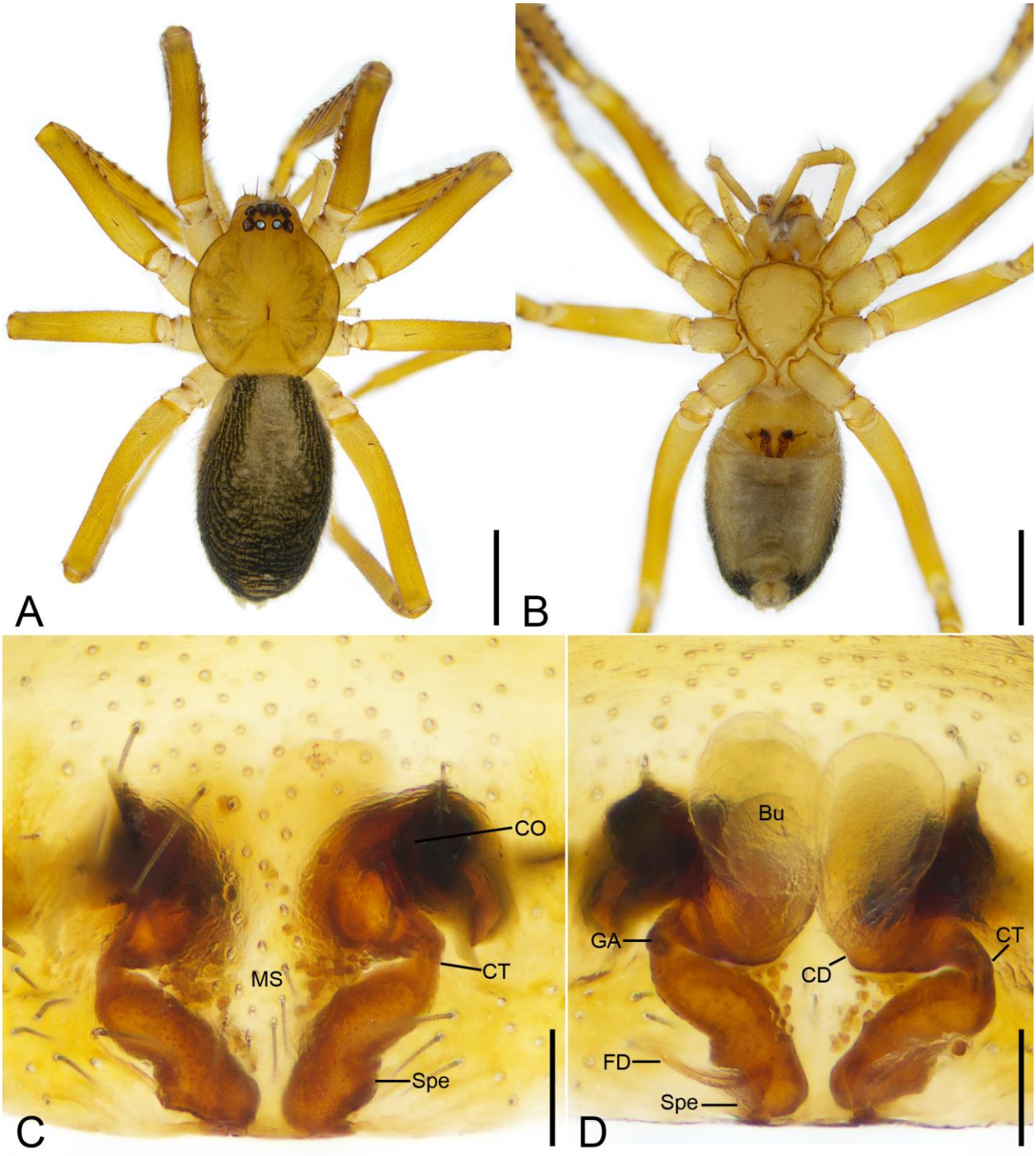

Figure 62. *Grandilithus tianyushan* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

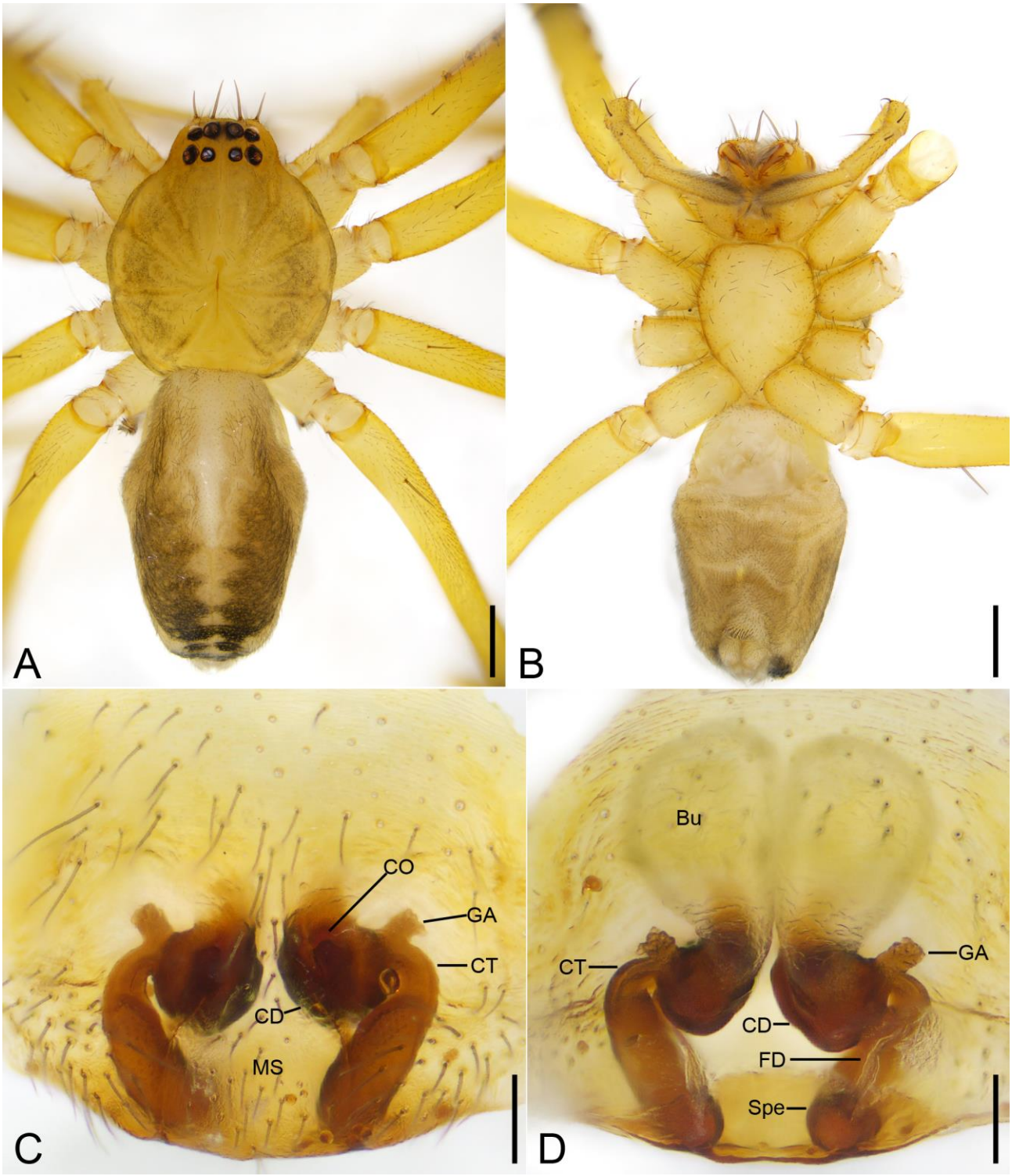

Figure 63. *Grandilithus tupingao* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

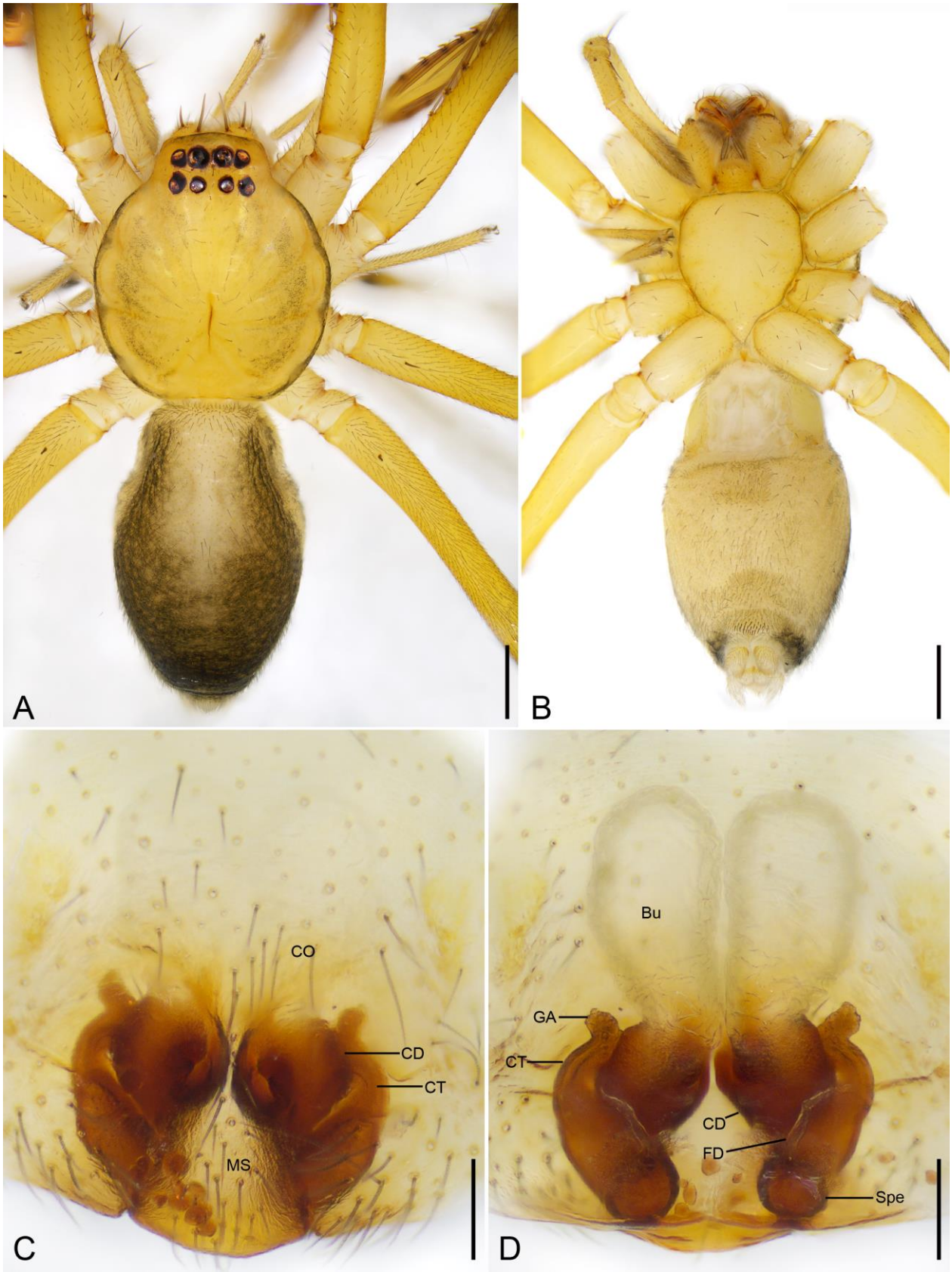

Figure 64. *Grandilithus wanzili* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

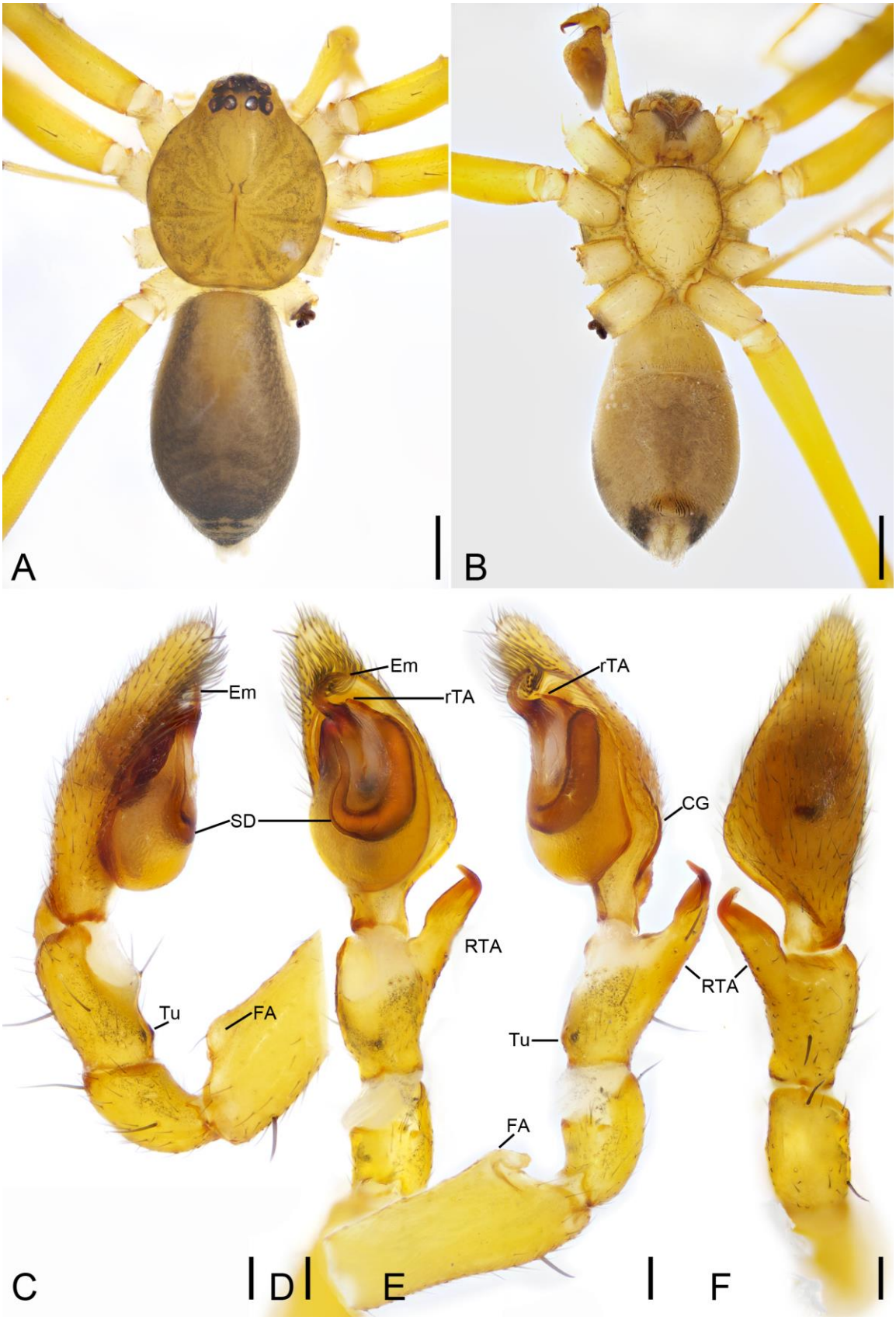

Figure 65. *Grandilithus xiaoxiicus* comb. nov., male. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

Figure 66. SEM micrographs of *Grandilithus xiaoxiicus* comb. nov., male palp. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of retrolateral tibial apophysis **D** Same, detail of embolus and retrolateral tegular apophysis **E** Ventral view, slightly prolateral **F** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

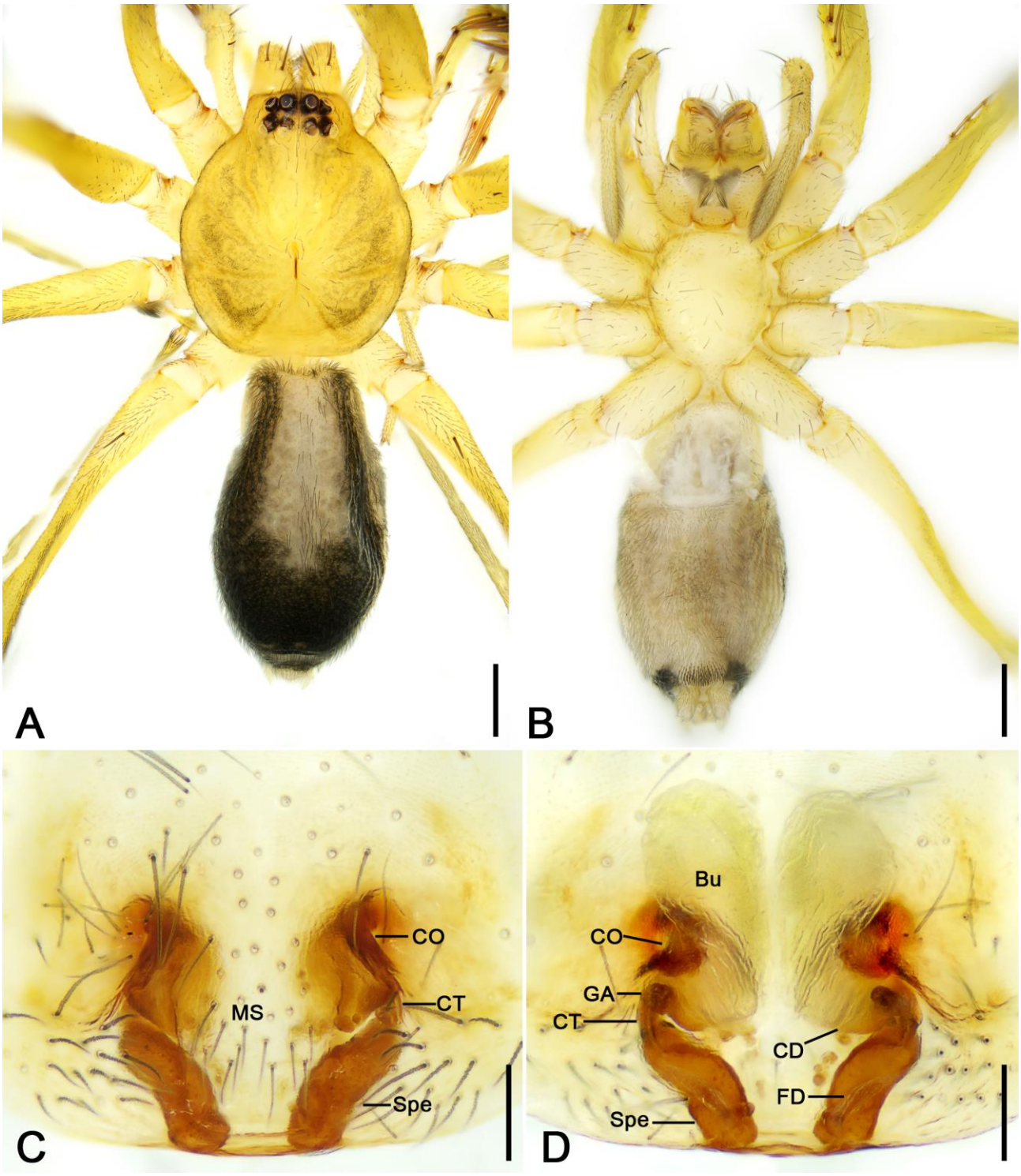

Figure 67. *Grandilithus yunyin* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

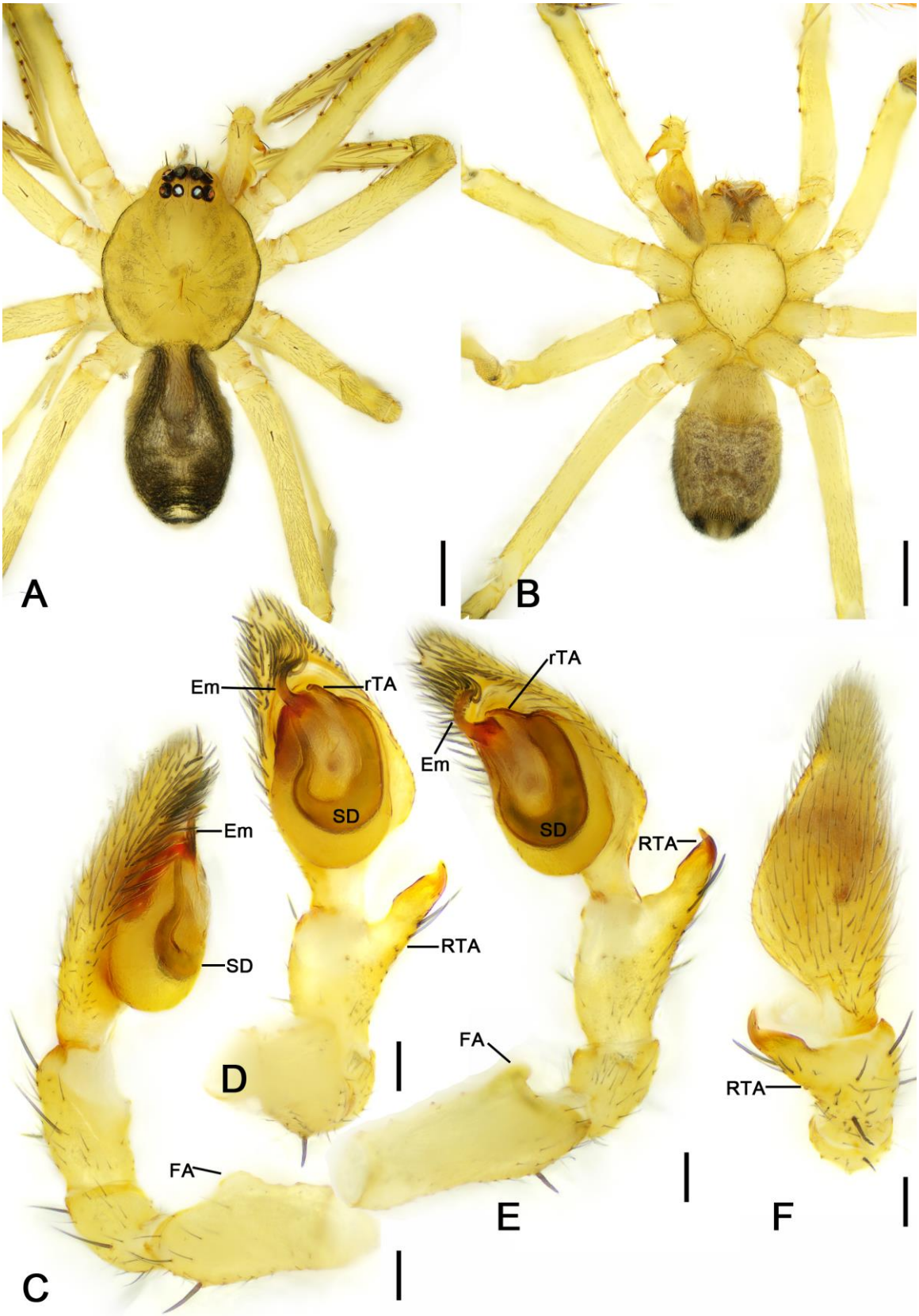

Figure 68. *Grandilithus yunyin* sp. nov., male paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C**–**F**). Abbreviations: CG – cymbial groove, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct, Tu – tubercle.

Figure 69. SEM micrographs of *Grandilithus yunyin* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus and retrolateral tegular apophysis **D** Ventral view, slightly retrolateral **E** Same, detail of retrolateral tibial apophysis **F** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

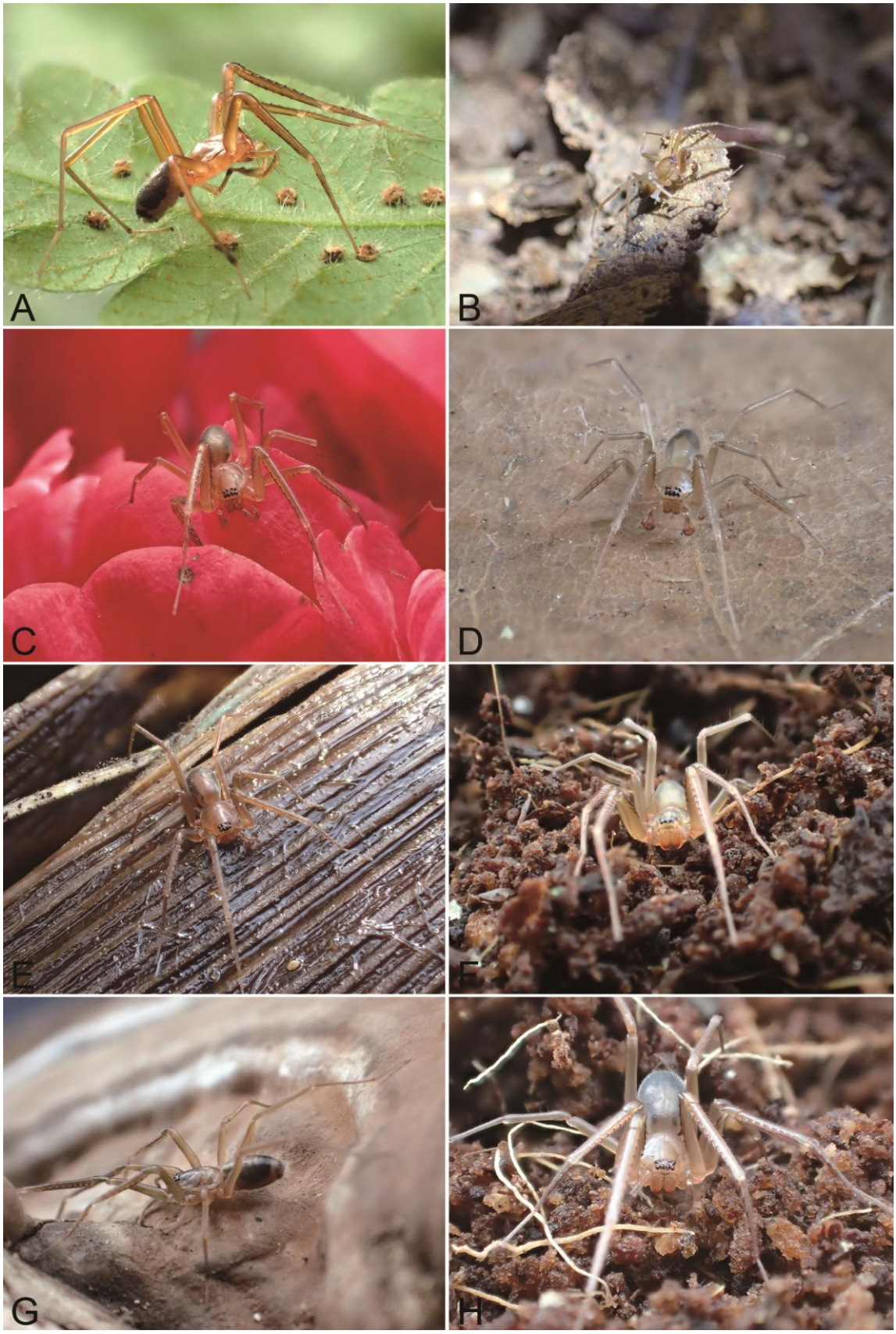

Figure 70. Photographs of living specimens of *Grandilithus* from Jiangxi Province. **A** *Grandilithus anyuan* sp. nov., female **B** *Grandilithus fengshan* sp. nov., male **C** *Grandilithus jingshi* sp. nov., female **D** *Grandilithus tianyushan* sp. nov., male **E** *Grandilithus taihe* sp. nov., male **F** *Grandilithus tupingao* sp. nov., female **G** *Grandilithus xiaoxiicus* comb. nov., female **H** *Grandilithus yunyin* sp. nov., female.

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Figure 71. Records of *Grandilithus anyuan* **sp. nov.** (1), *G. aobei* **sp. nov.** (2), *G. dingnan* **sp. nov.** (3), *G. dongguling* **sp. nov.** (4), *G. fengshan* **sp. nov.** (5), *G. jiangshanensis* **sp. nov.** (6), *G. jingshi* **sp. nov.** (7), *G. longjiatang* **sp. nov.** (8), *G. longtanicus* **comb. nov.** (9), *G. nanan* **sp. nov.** (10), *G. ningdu* **sp. nov.** (11), *G. nonggang* **comb. nov.** (12), *G. taihe* **sp. nov.** (13), *G. tianyushan* **sp. nov.** (14), *G. tupingao* **sp. nov.** (15), *G. wanzili* **sp. nov.** (16), *G. xiaoxiicus* **comb. nov.** (17) and *G. yunyin* **sp. nov.** (18) from southern China.

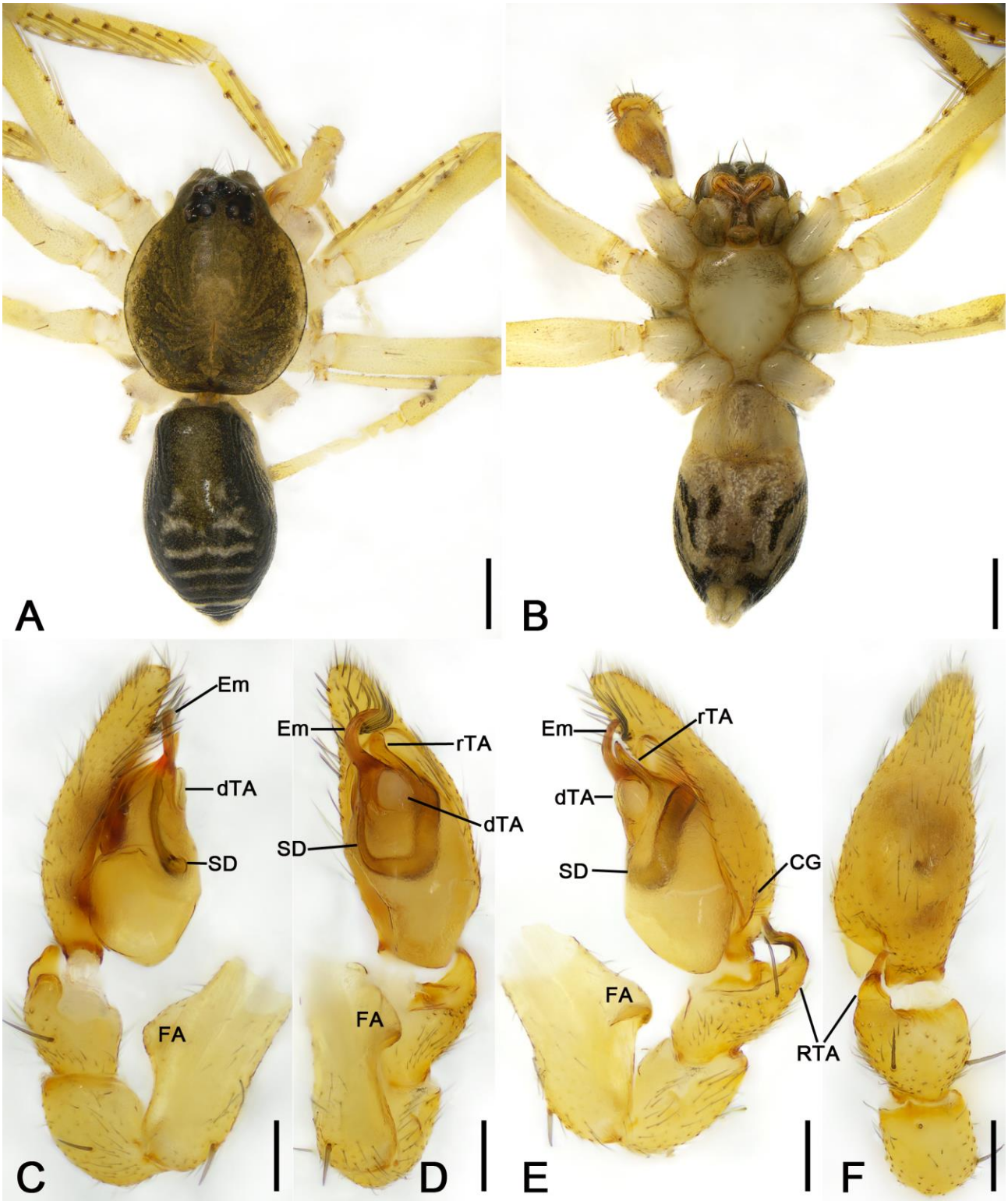

Figure 72. *Otacilia aotou* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

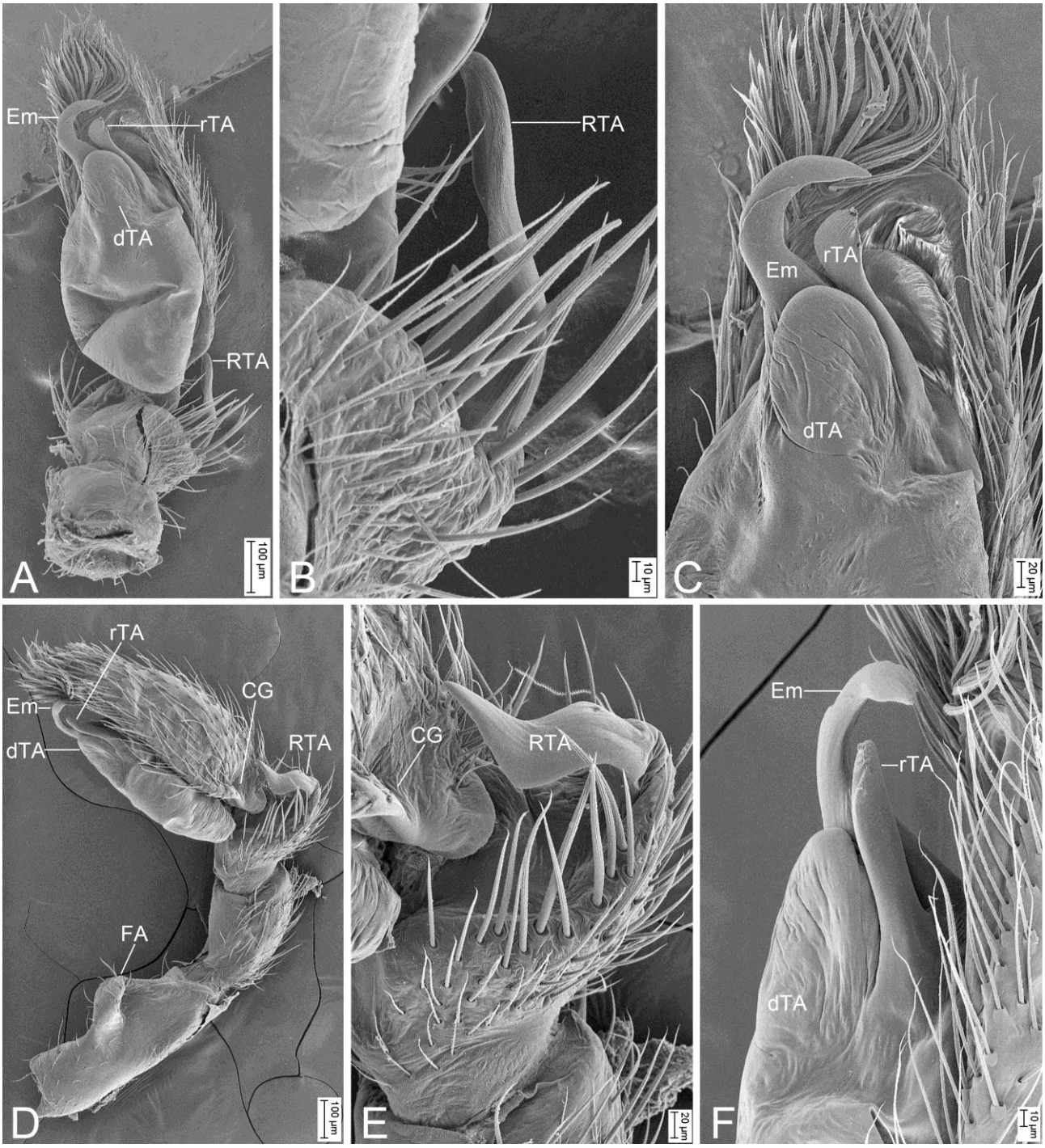

Figure 73. SEM micrographs of *Otacilia aotou* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **D** Retrolateral view **E** Same, detail of retrolateral tibial apophysis **F** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

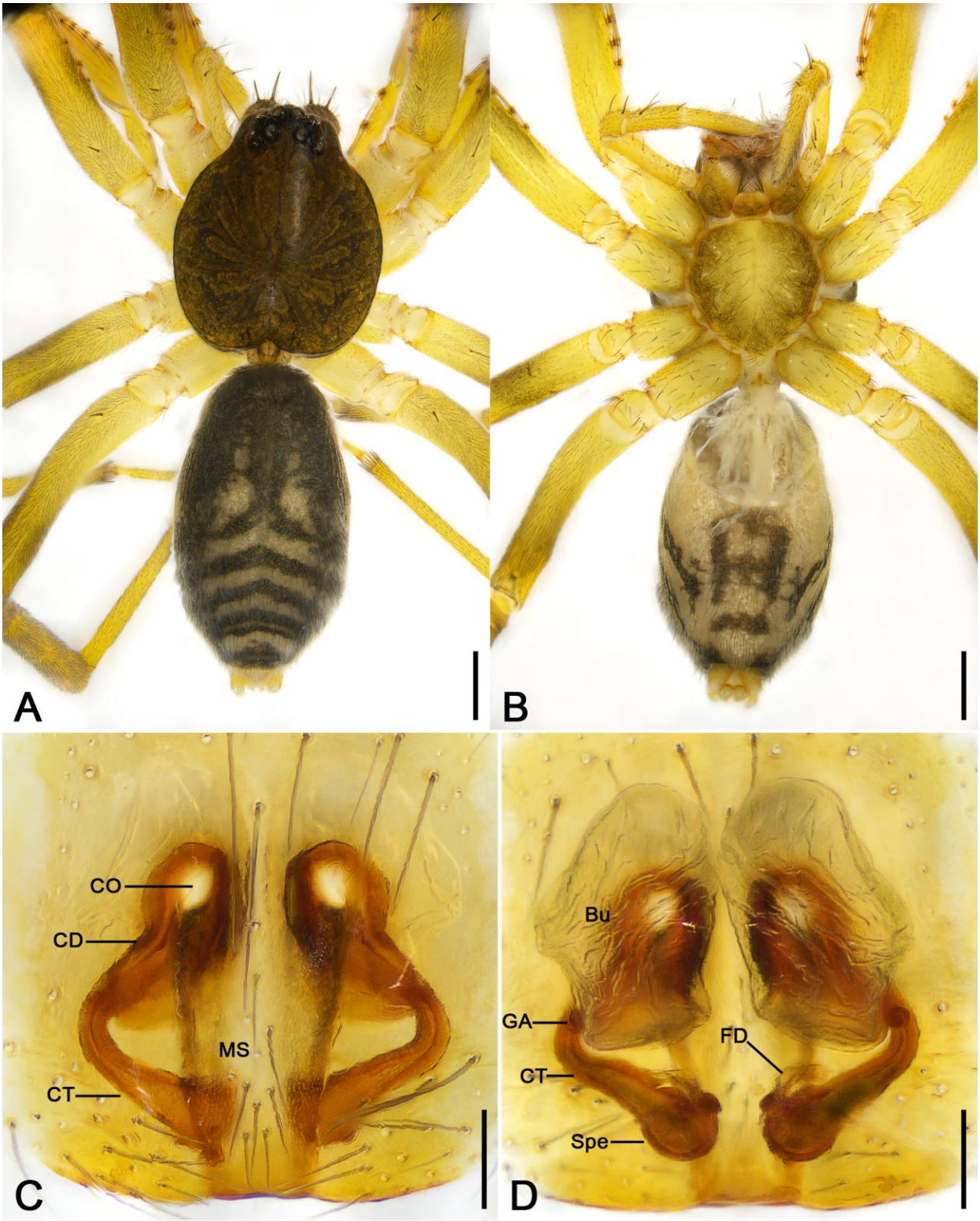

Figure 74. *Otacilia aotou* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

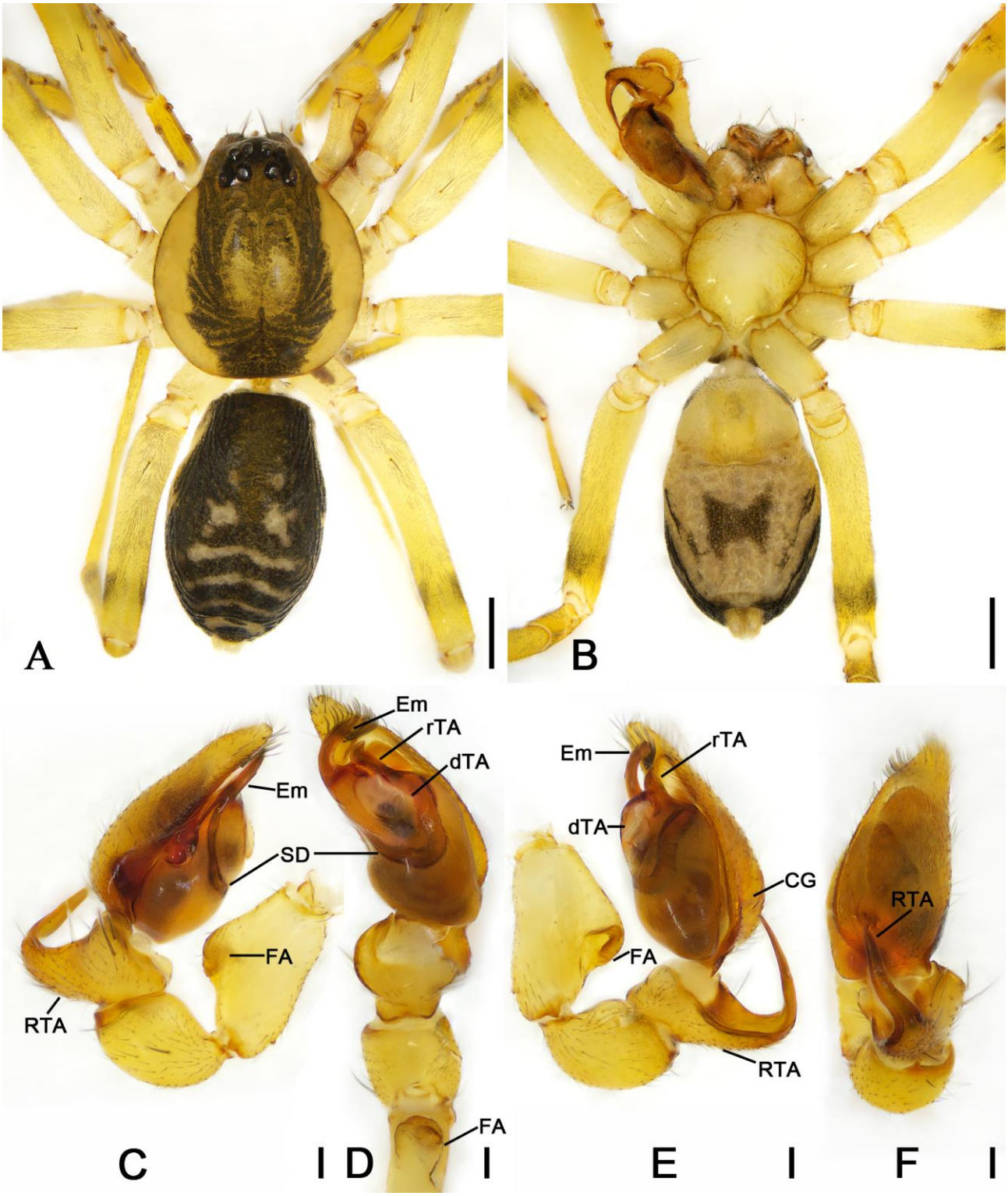

Figure 75. *Otacilia dawushan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

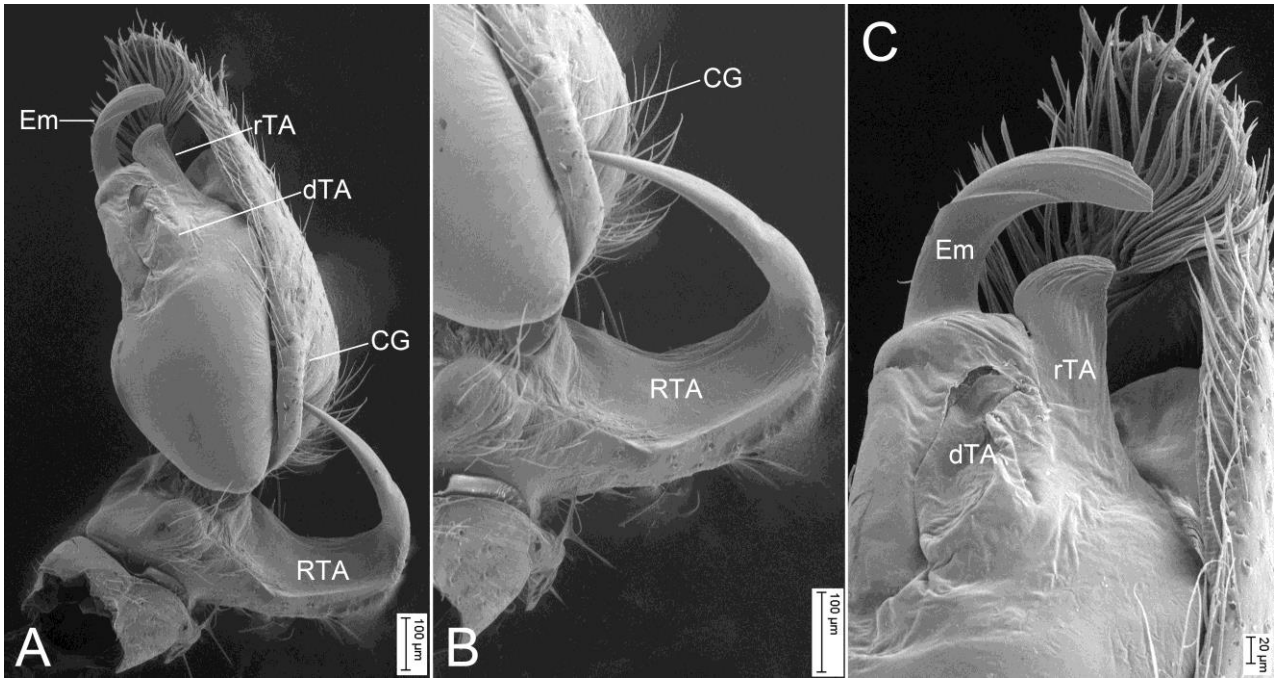

Figure 76. SEM micrographs of *Otacilia dawushan* sp. nov., palp of male paratype. **A** Retrolateral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

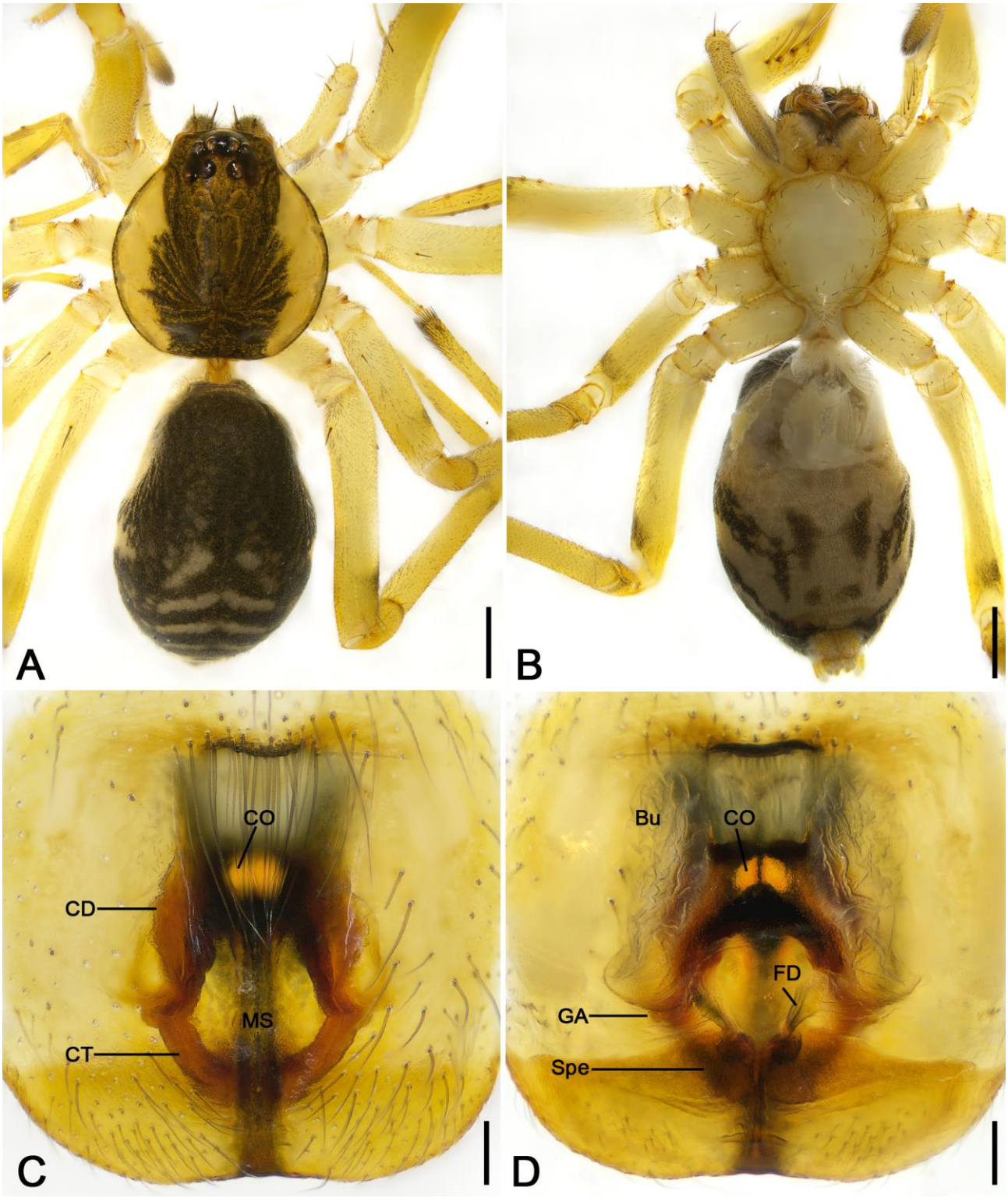

Figure 77. *Otacilia dawushan* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

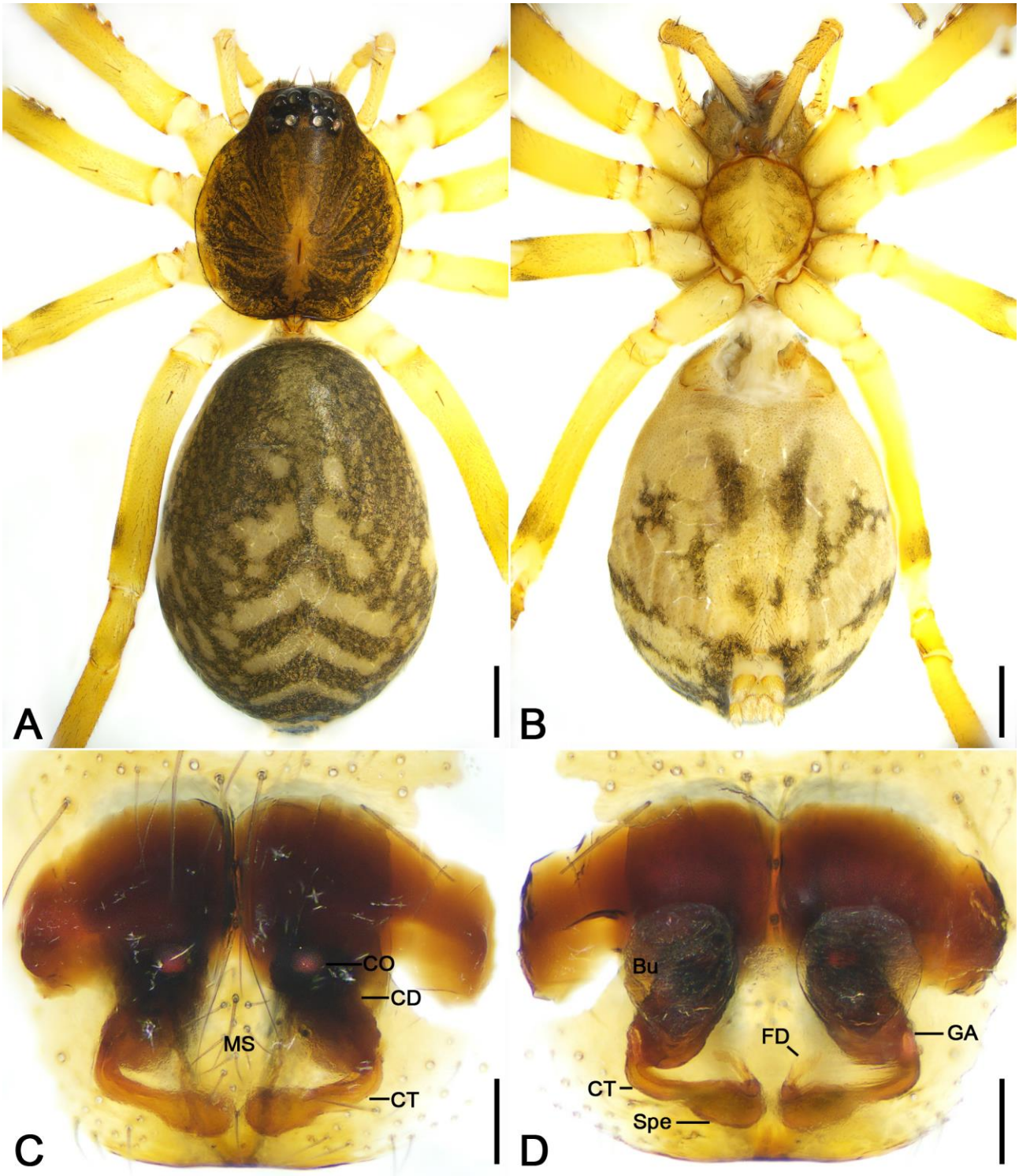

Figure 78. *Otacilia dongshang* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

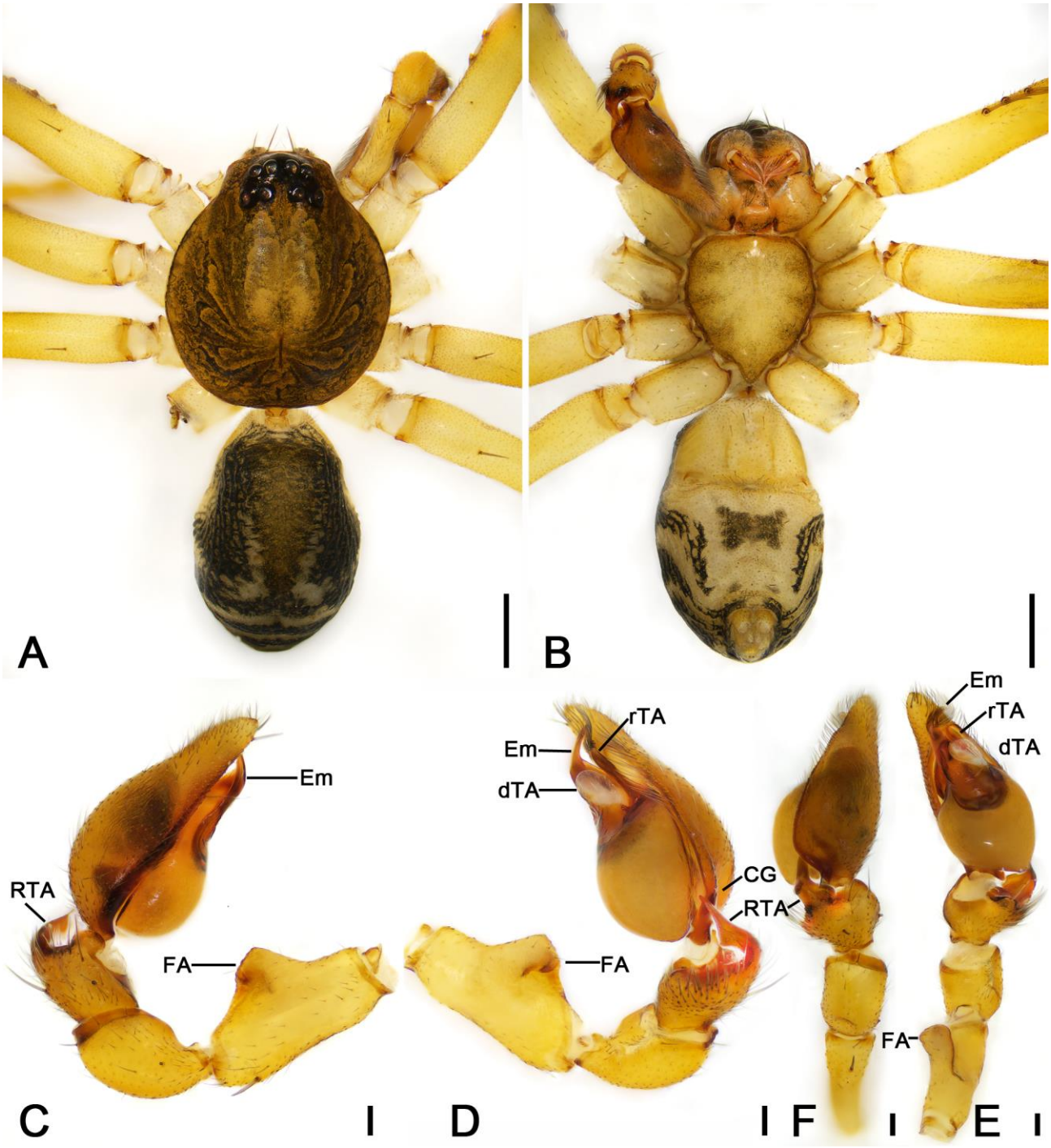

Figure 79. *Otacilia fuxi* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

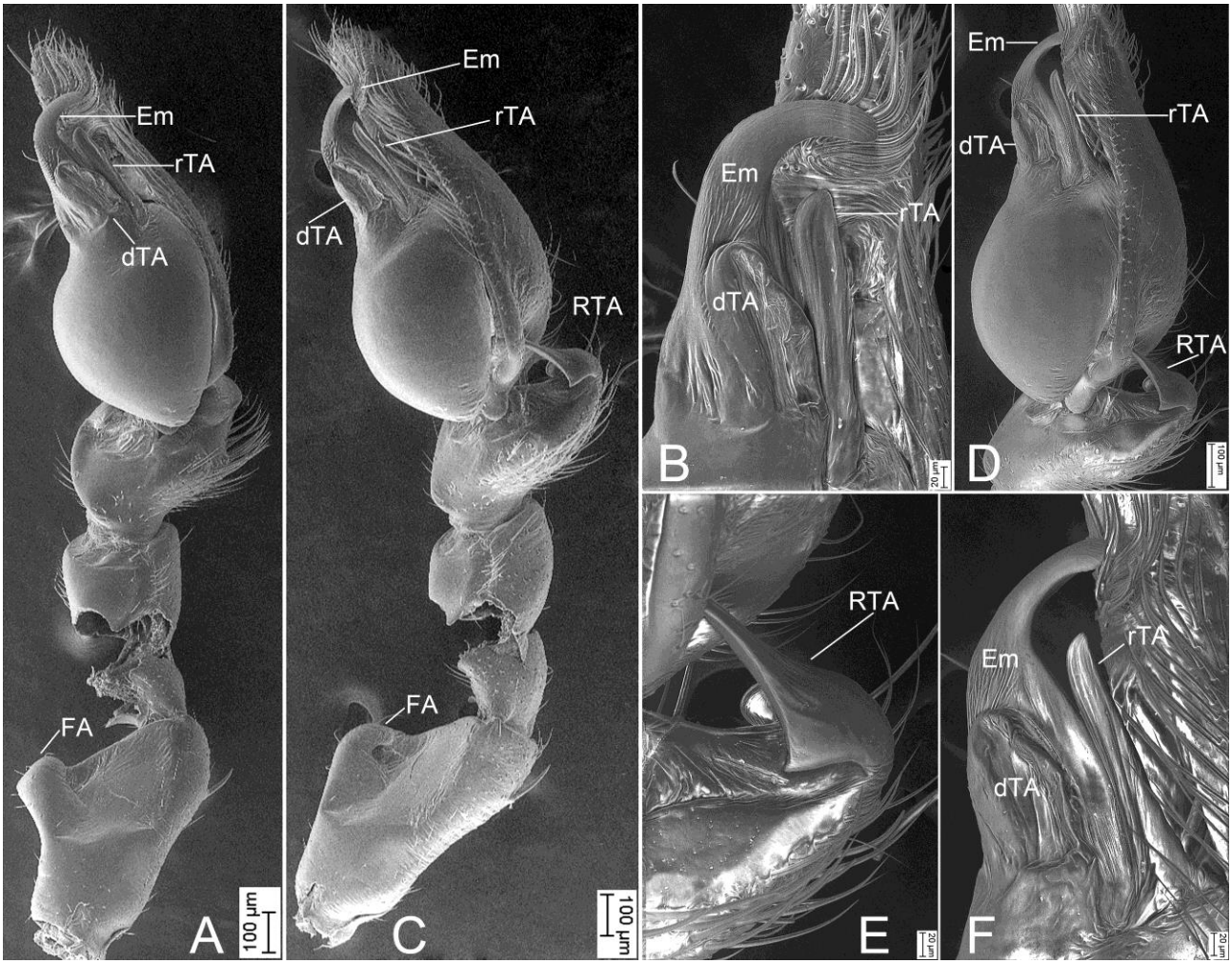

Figure 80. SEM micrographs of *Otacilia fuxi* sp. nov., palp of male holotype. **A** Ventral view **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view, slightly ventral **D** Same, detail of retrolateral tibial apophysis, embolus, retrolateral tegular apophysis and distal tegular apophysis **E** Same, detail of retrolateral tibial apophysis **F** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

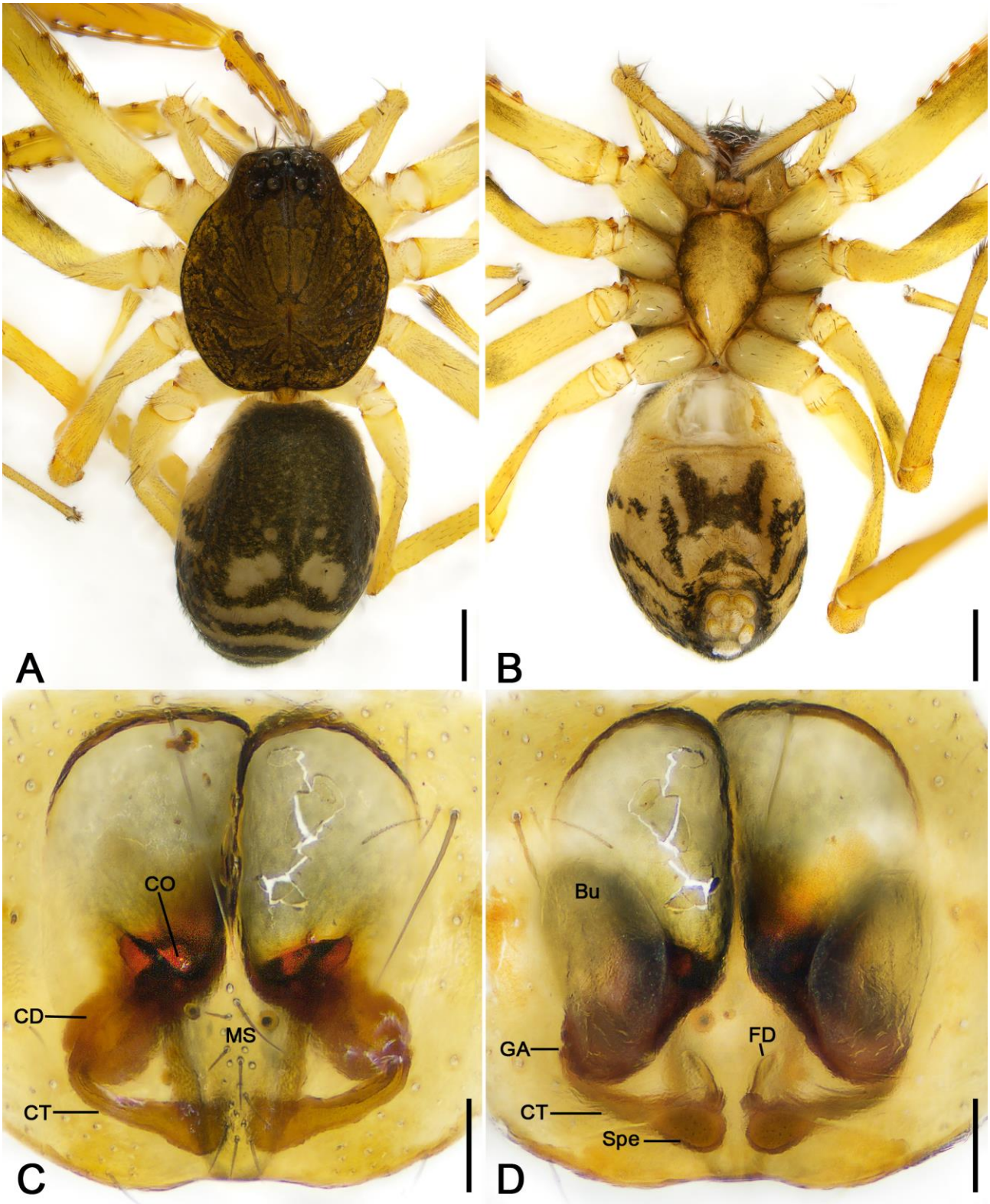

Figure 81. *Otacilia fuxi* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

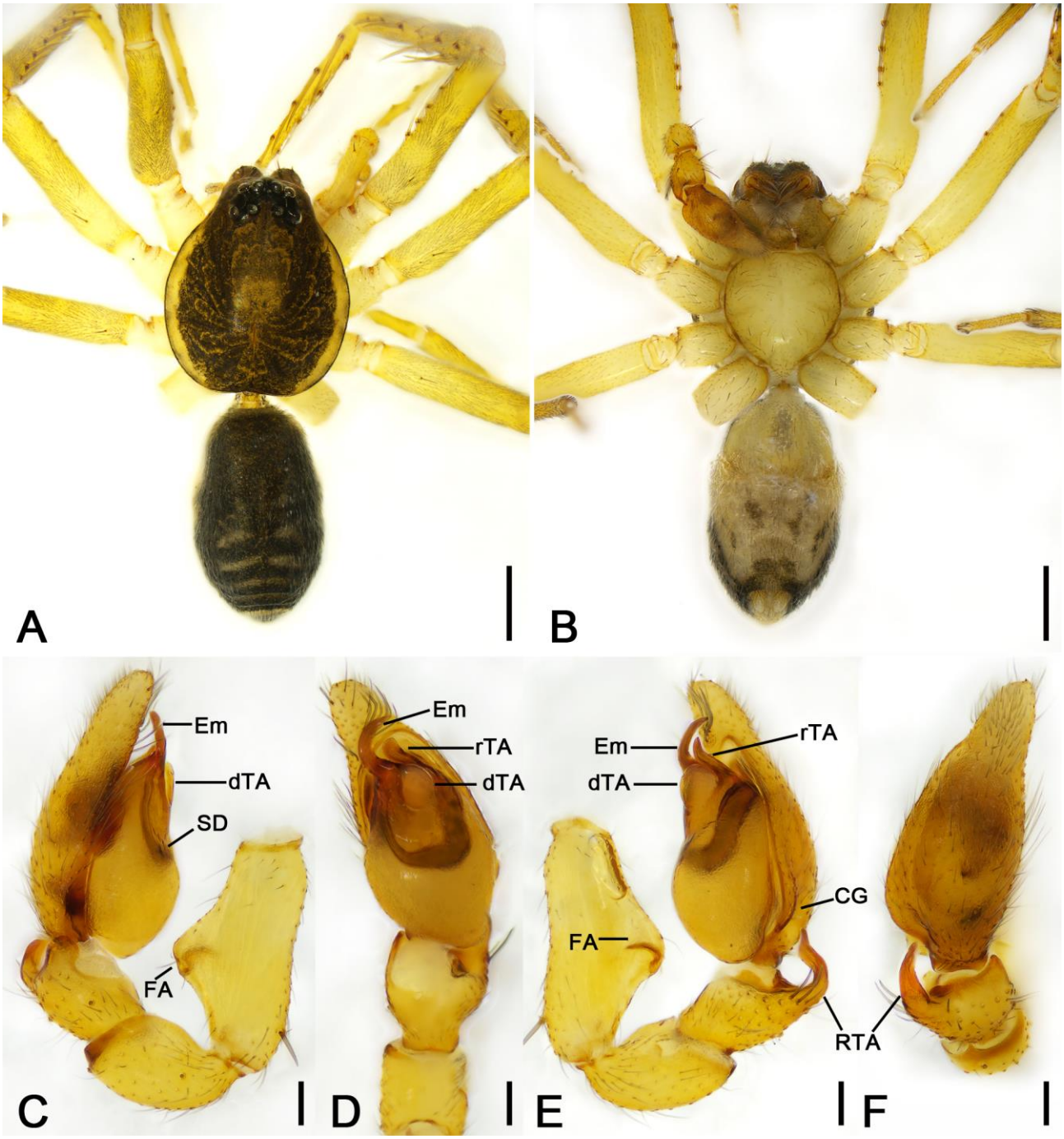

Figure 82. *Otacilia guizhumao* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

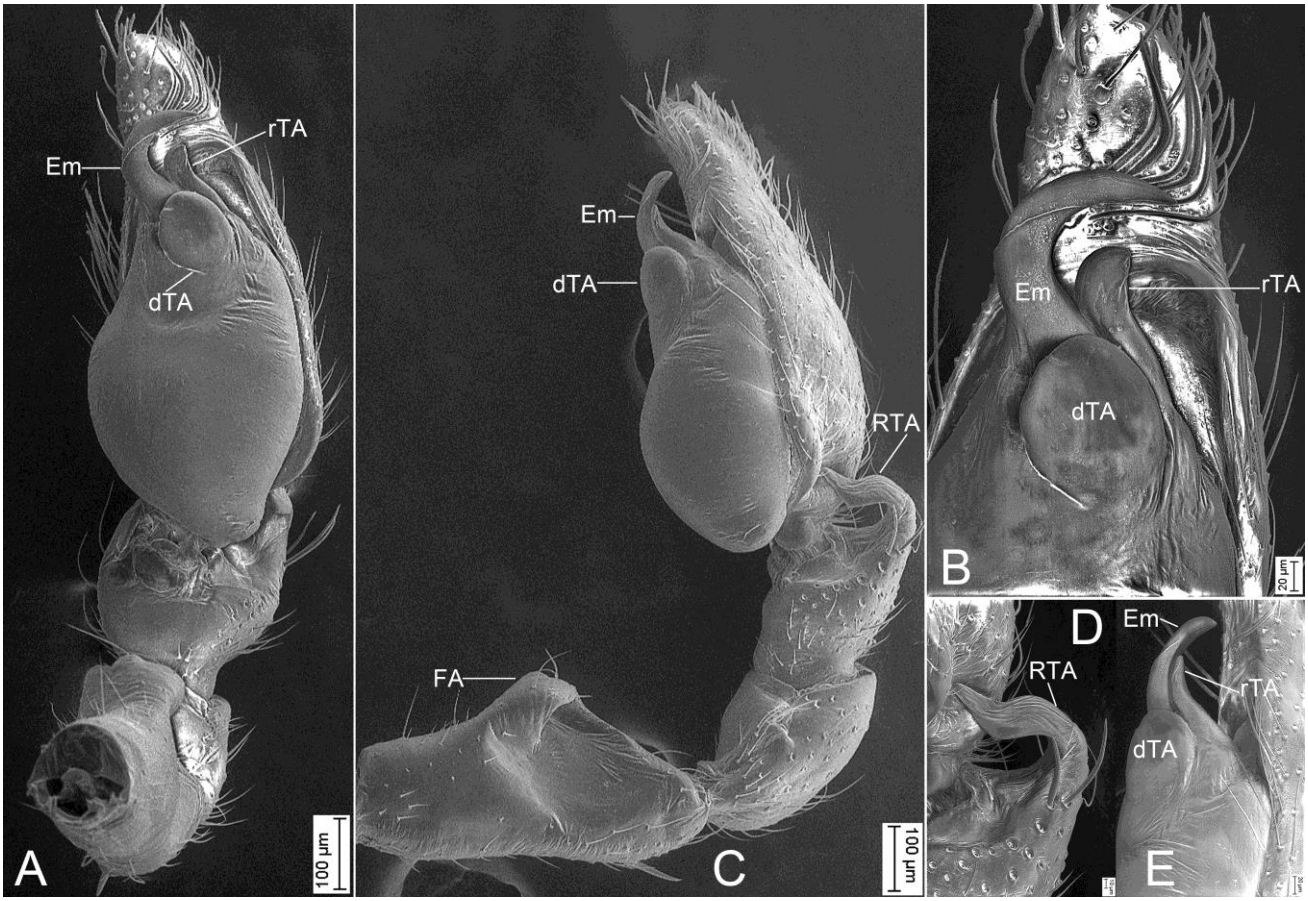

Figure 83. SEM micrographs of *Otacilia guizhumao* sp. nov., palp of male holotype. **A** Ventral view **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view **D** Same, detail of retrolateral tibial apophysis **E** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

Figure 84. *Otacilia guizhumao* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

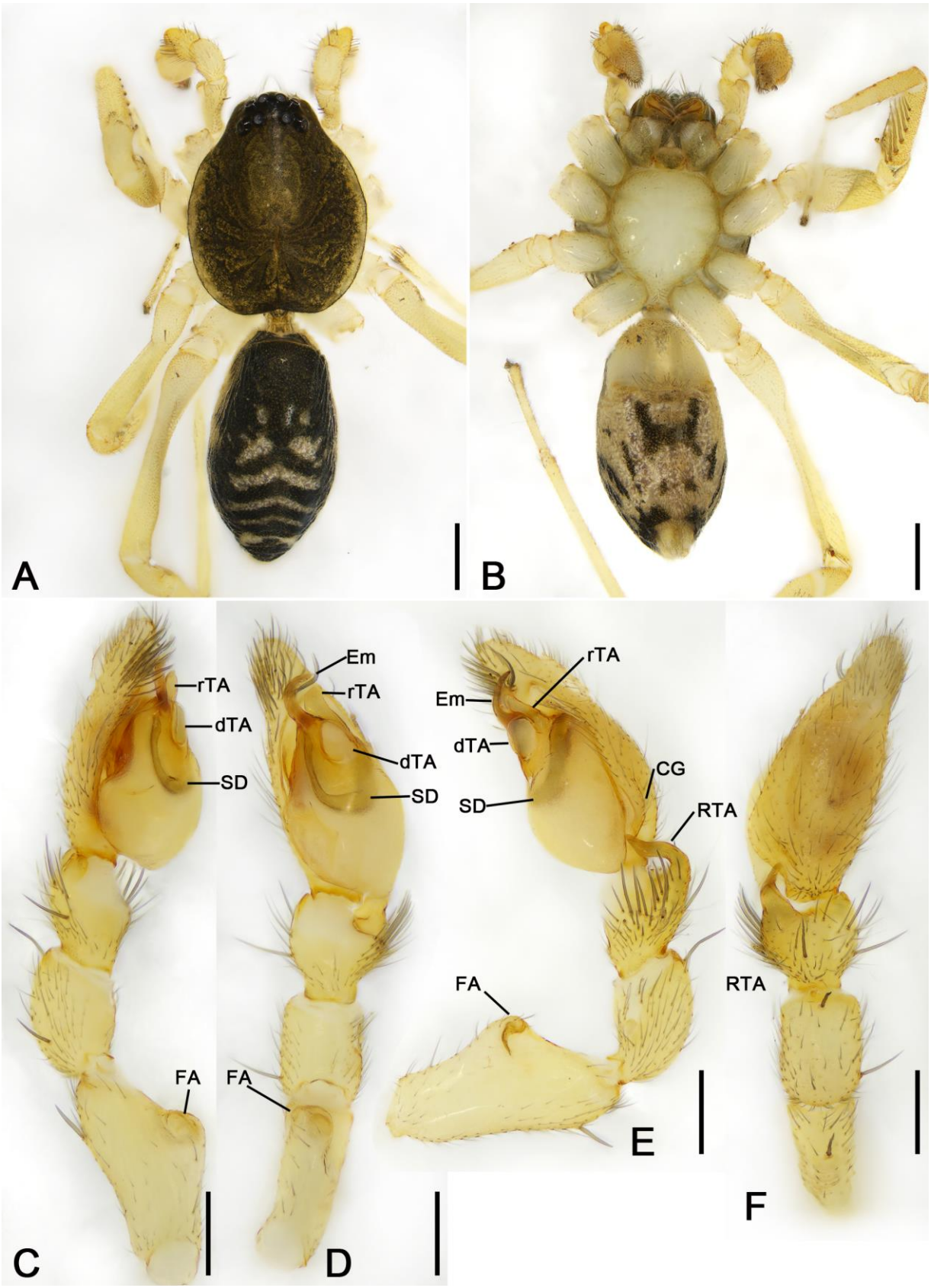

Figure 85. *Otacilia hushandong* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

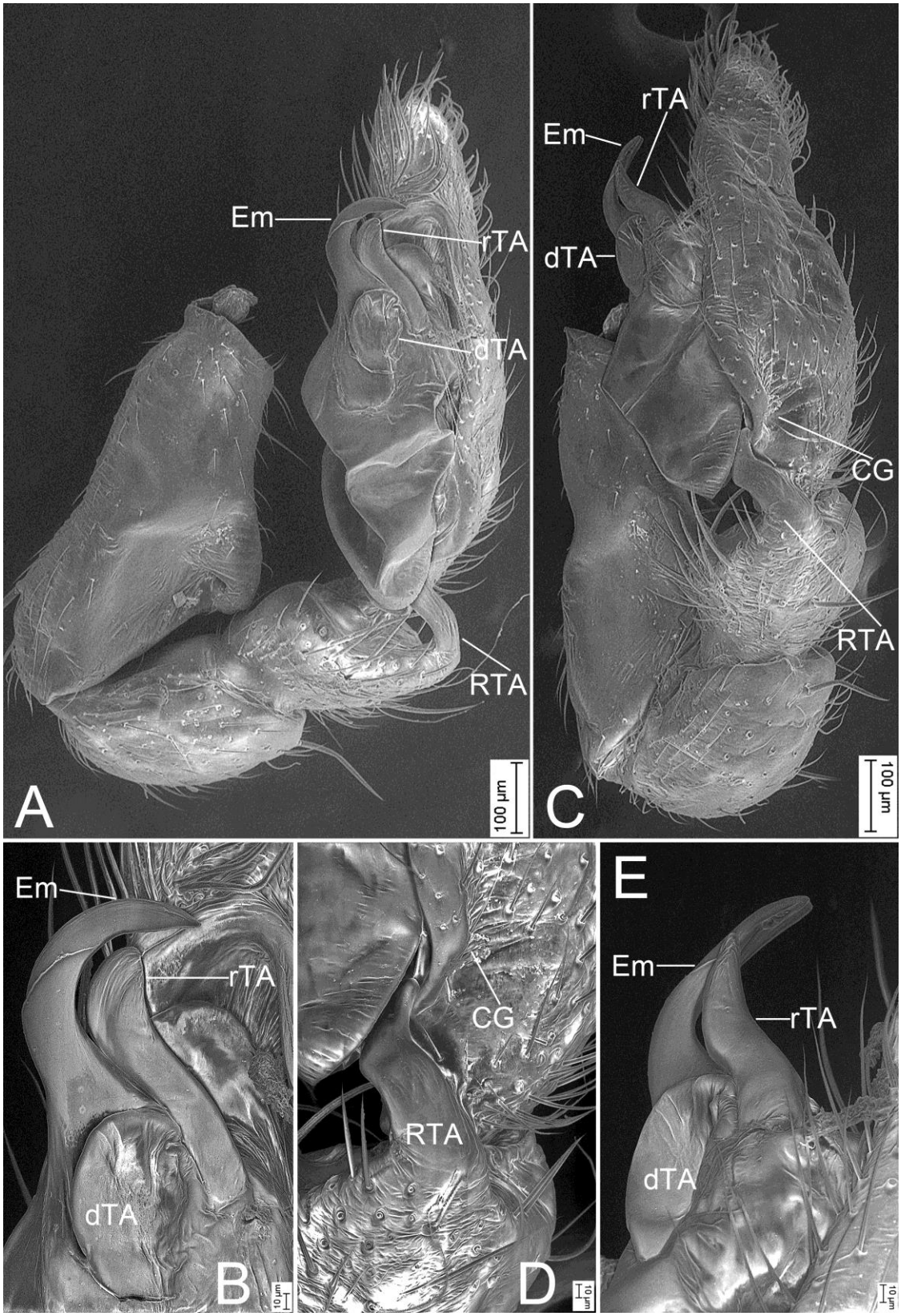

Figure 86. SEM micrographs of *Otacilia hushandong* sp. nov., palp of male holotype. **A** Retrolateral view **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Dorsolateral view, slightly retrolateral **D** Same, detail of retrolateral tibial apophysis **E** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

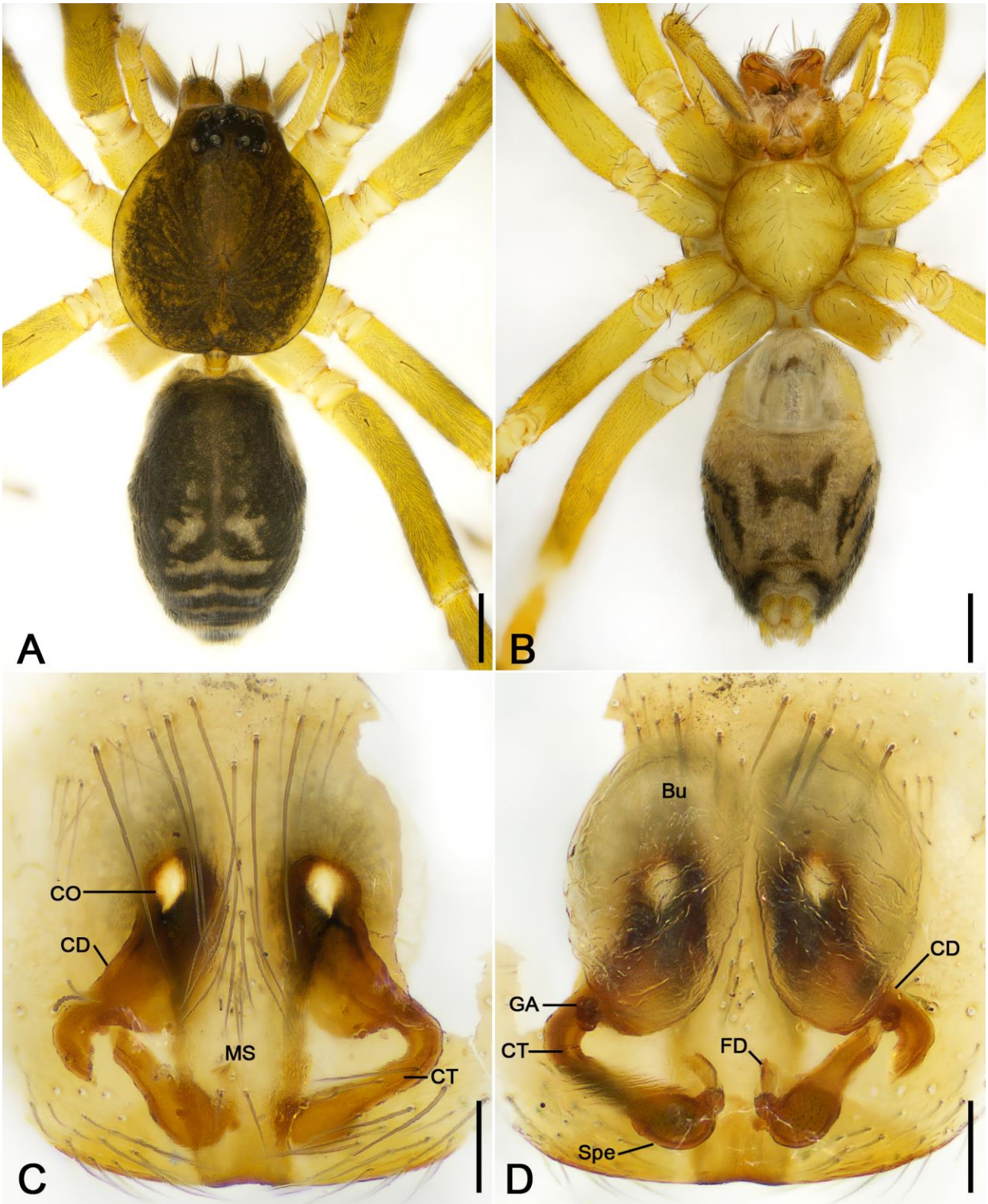

Figure 87. *Otacilia hushandong* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

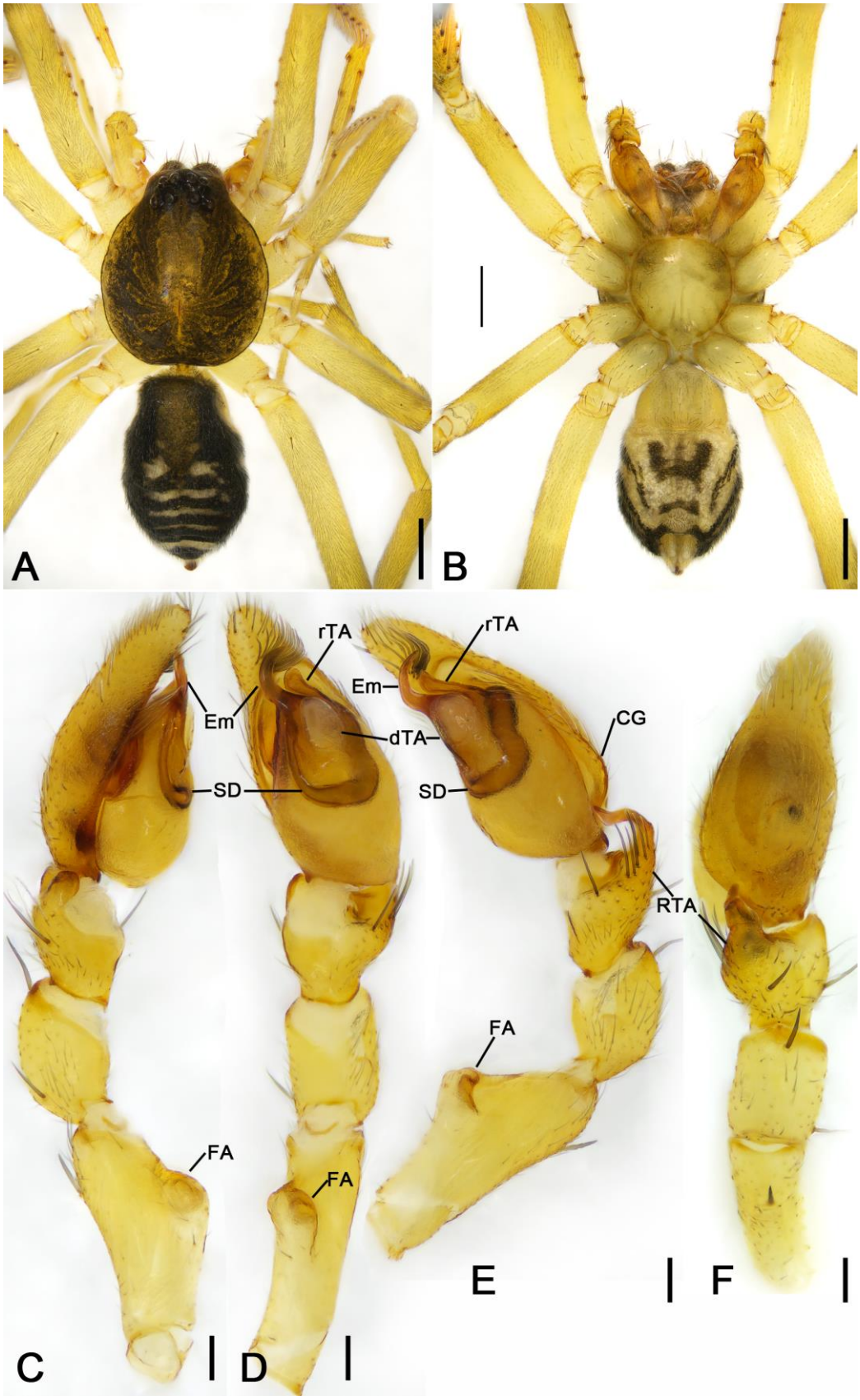

Figure 88. *Otacilia jiulianshan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

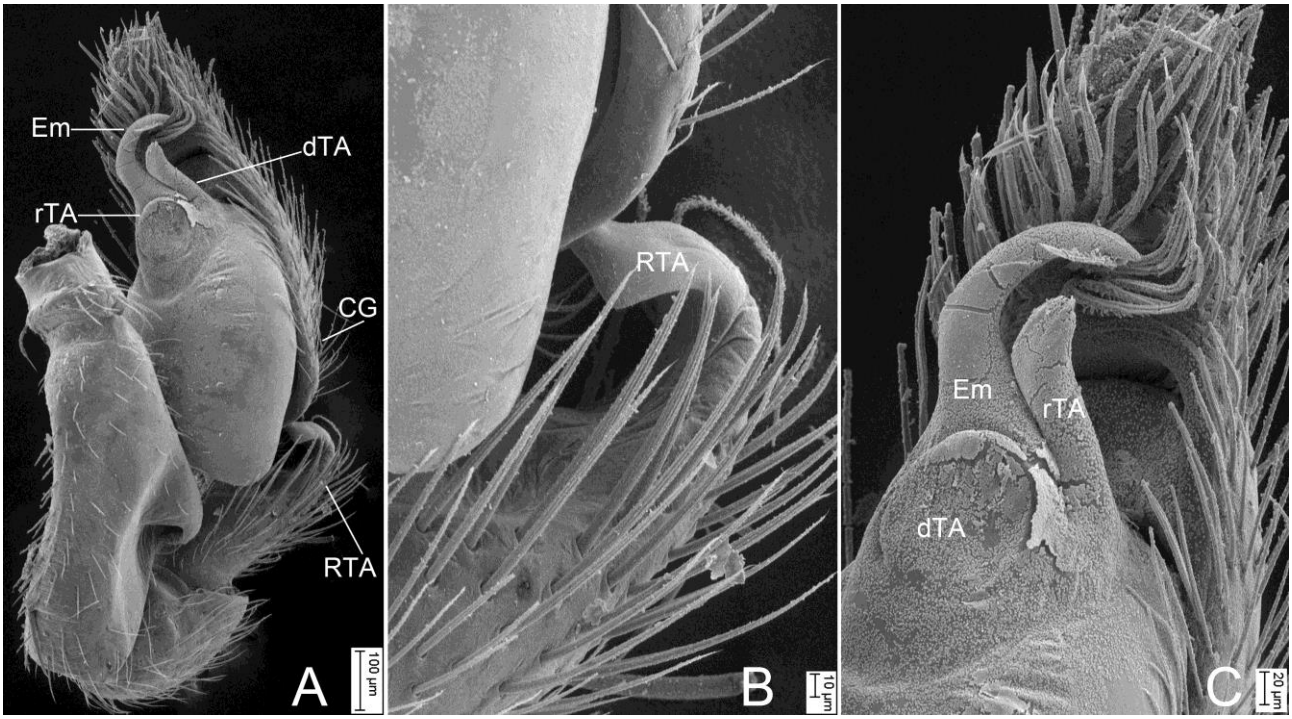

Figure 89. SEM micrographs of *Otacilia jiulianshan* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

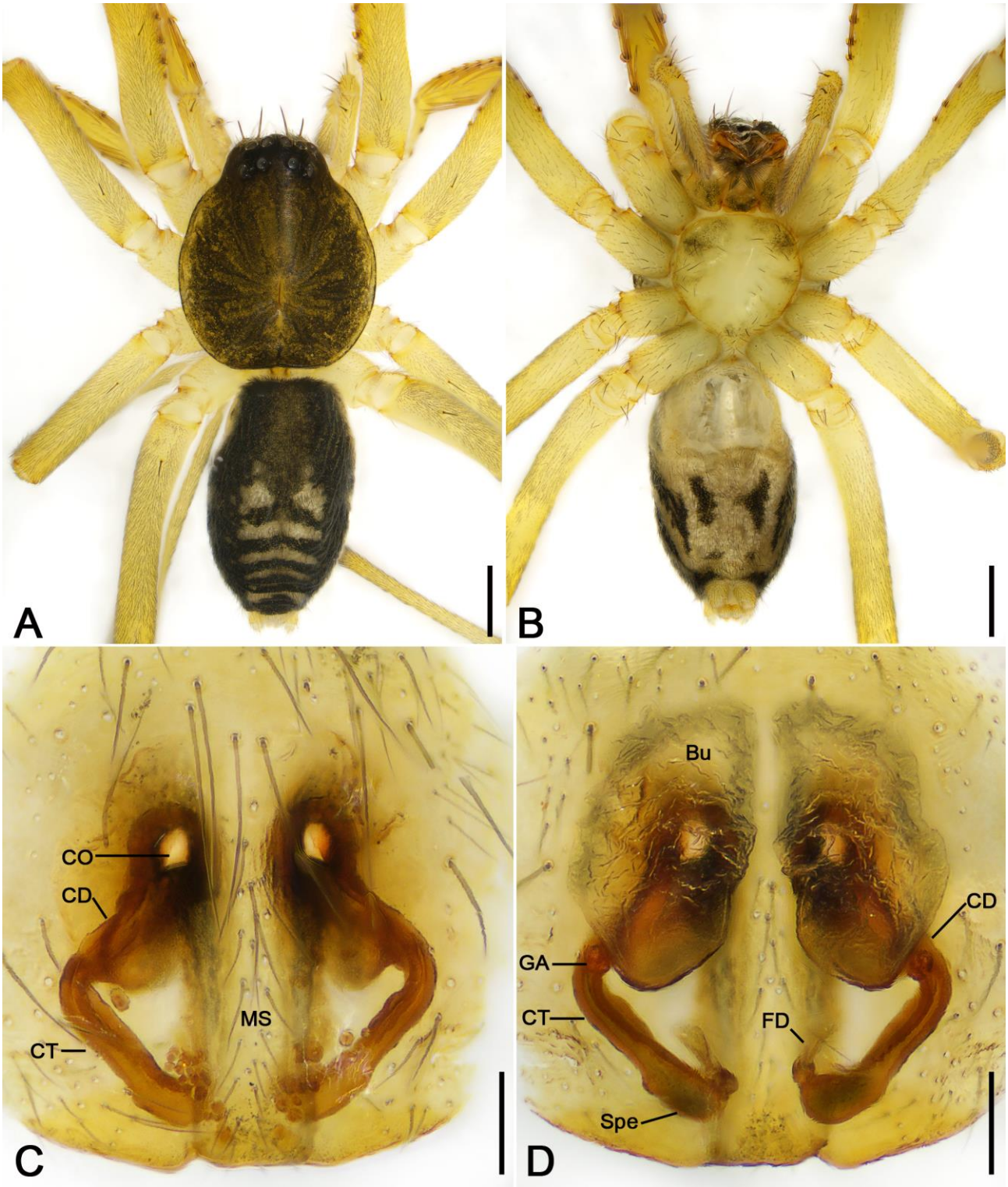

Figure 90. *Otacilia jiulianshan* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

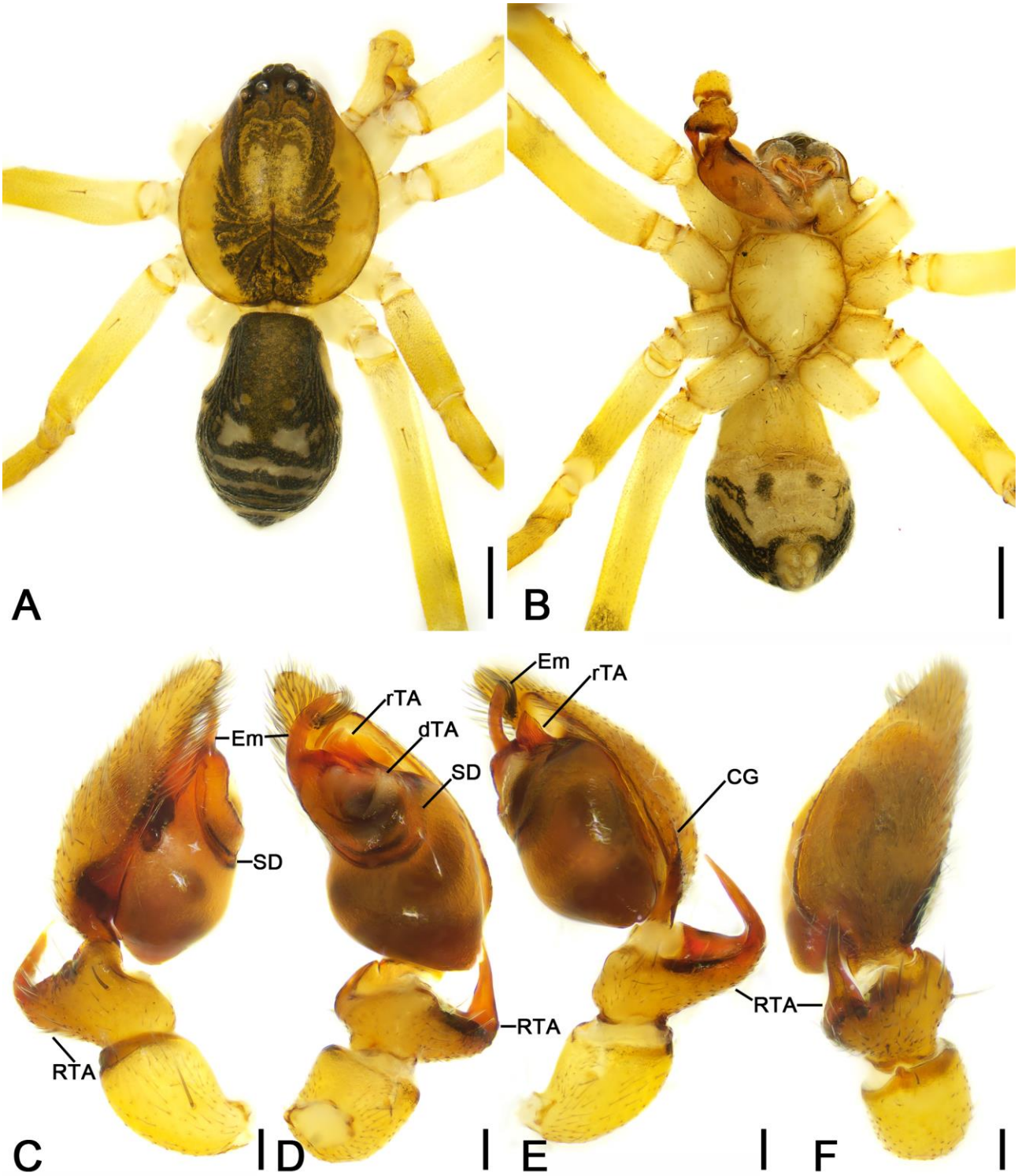

Figure 91. *Otacilia linghua* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

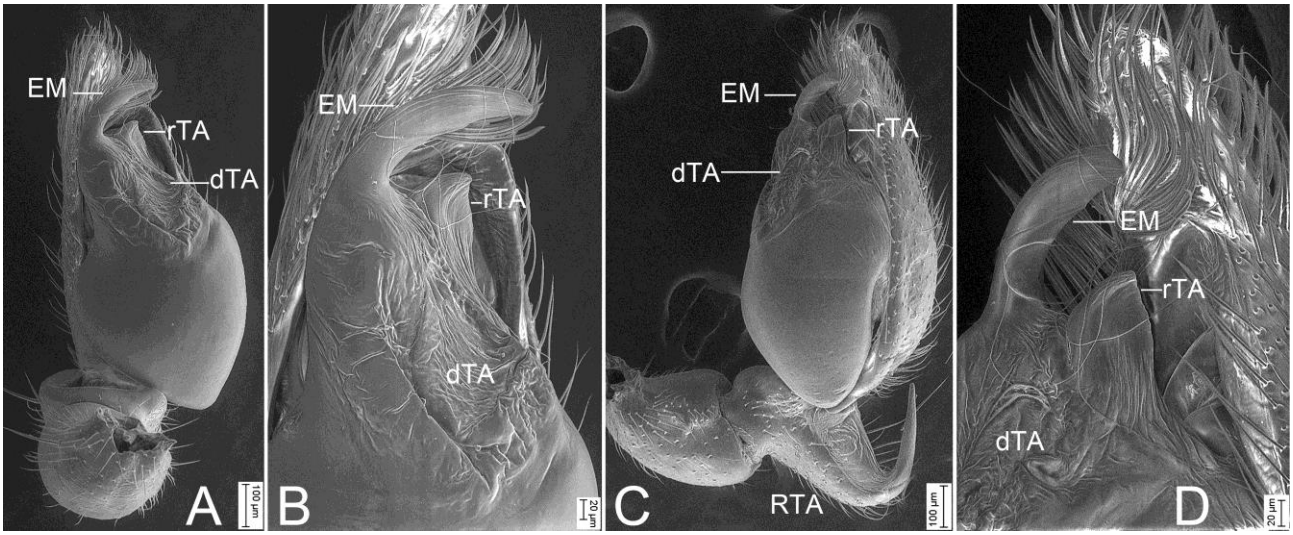

Figure 92. SEM micrographs of *Otacilia linghua* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view, slightly ventral **D** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

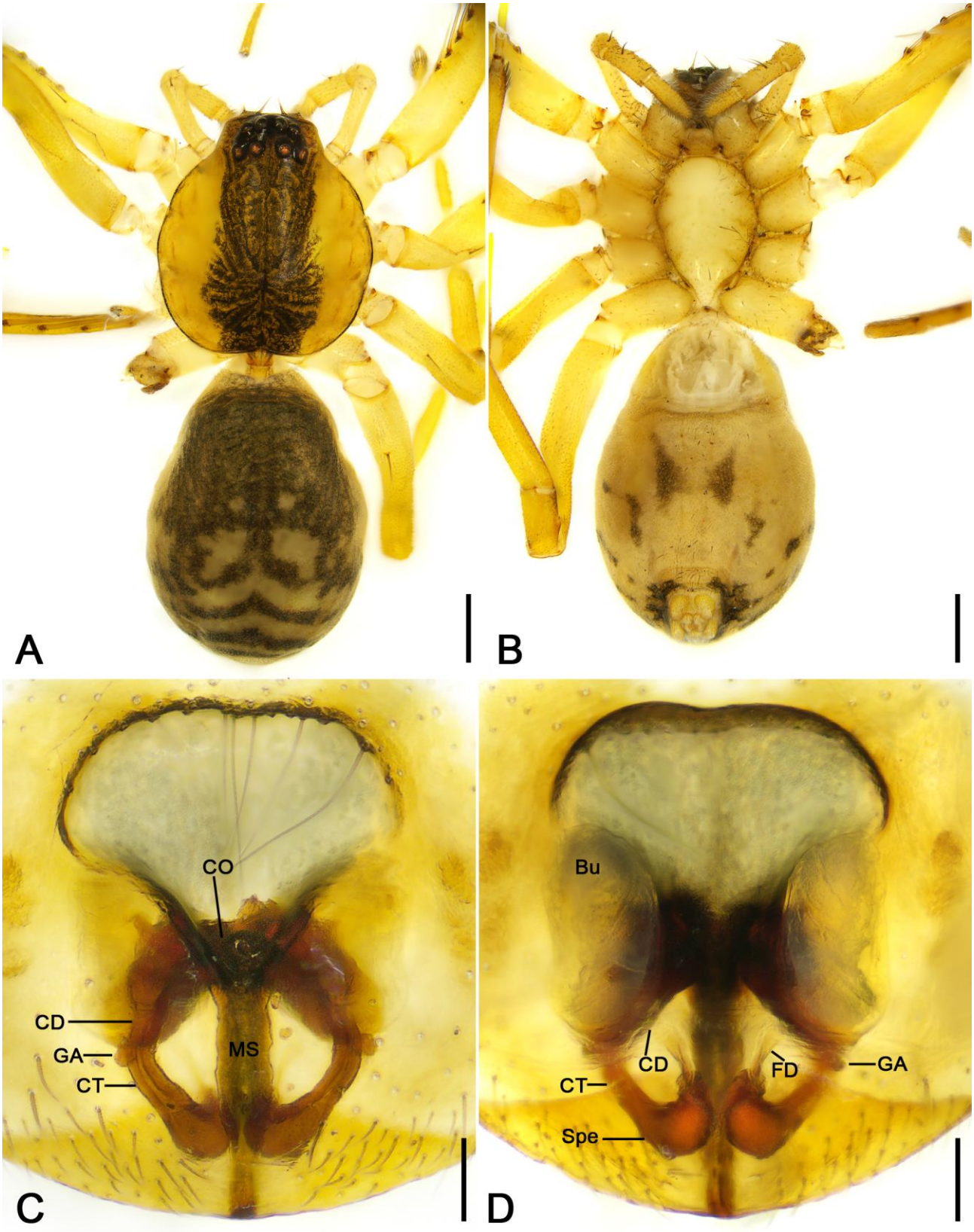

Figure 93. *Otacilia linghua* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

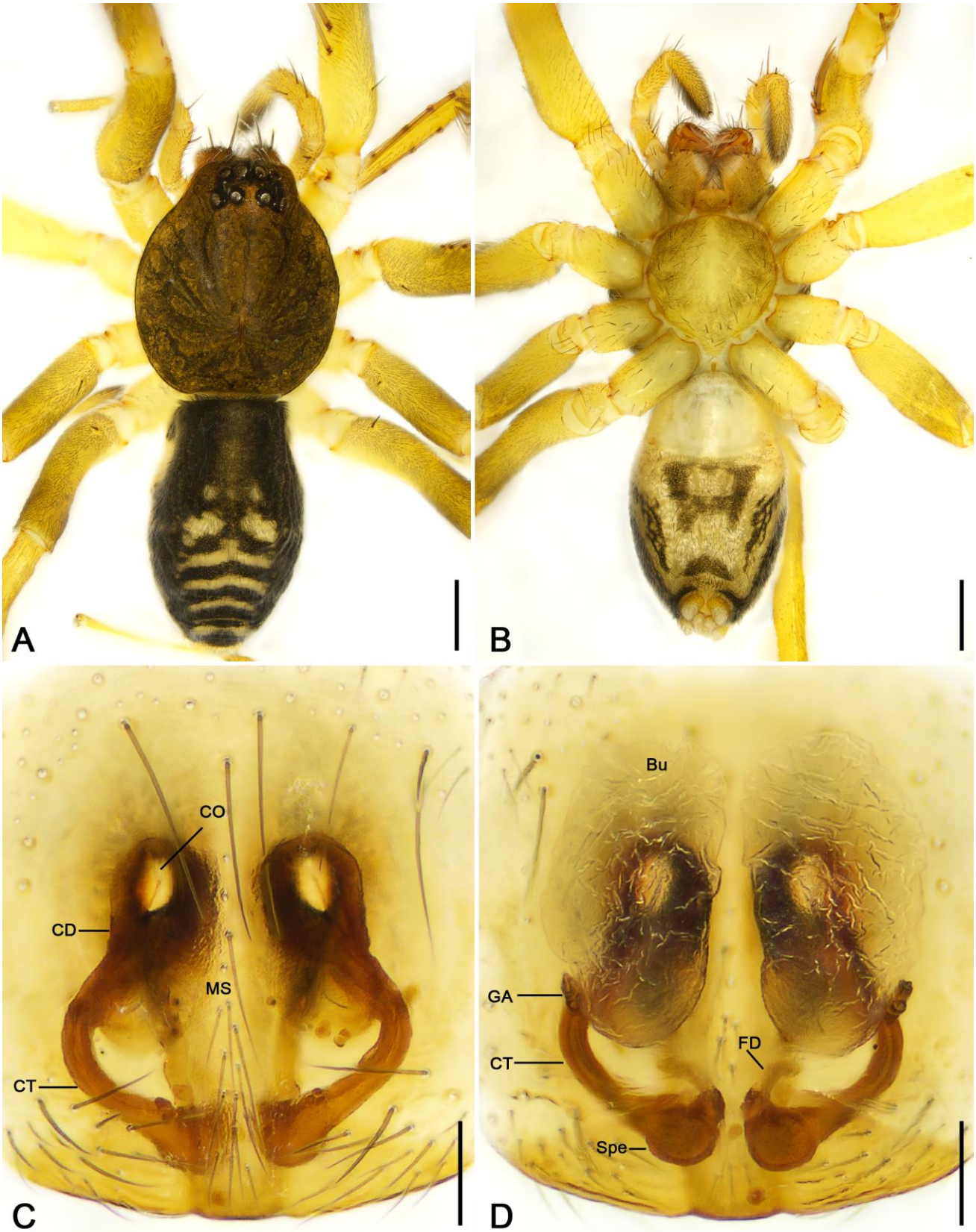

Figure 94. *Otacilia longbu* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

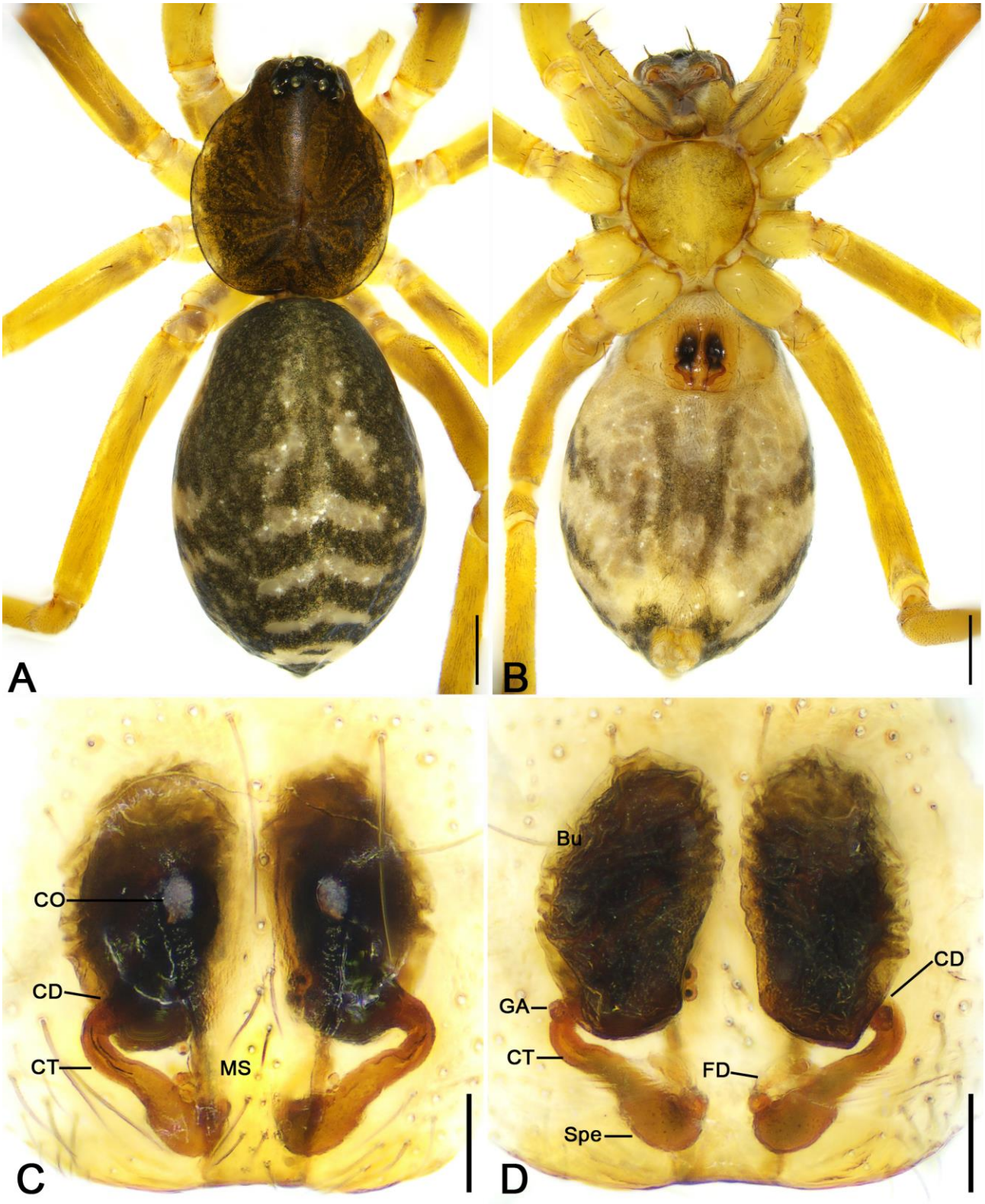

Figure 95. *Otacilia ping* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

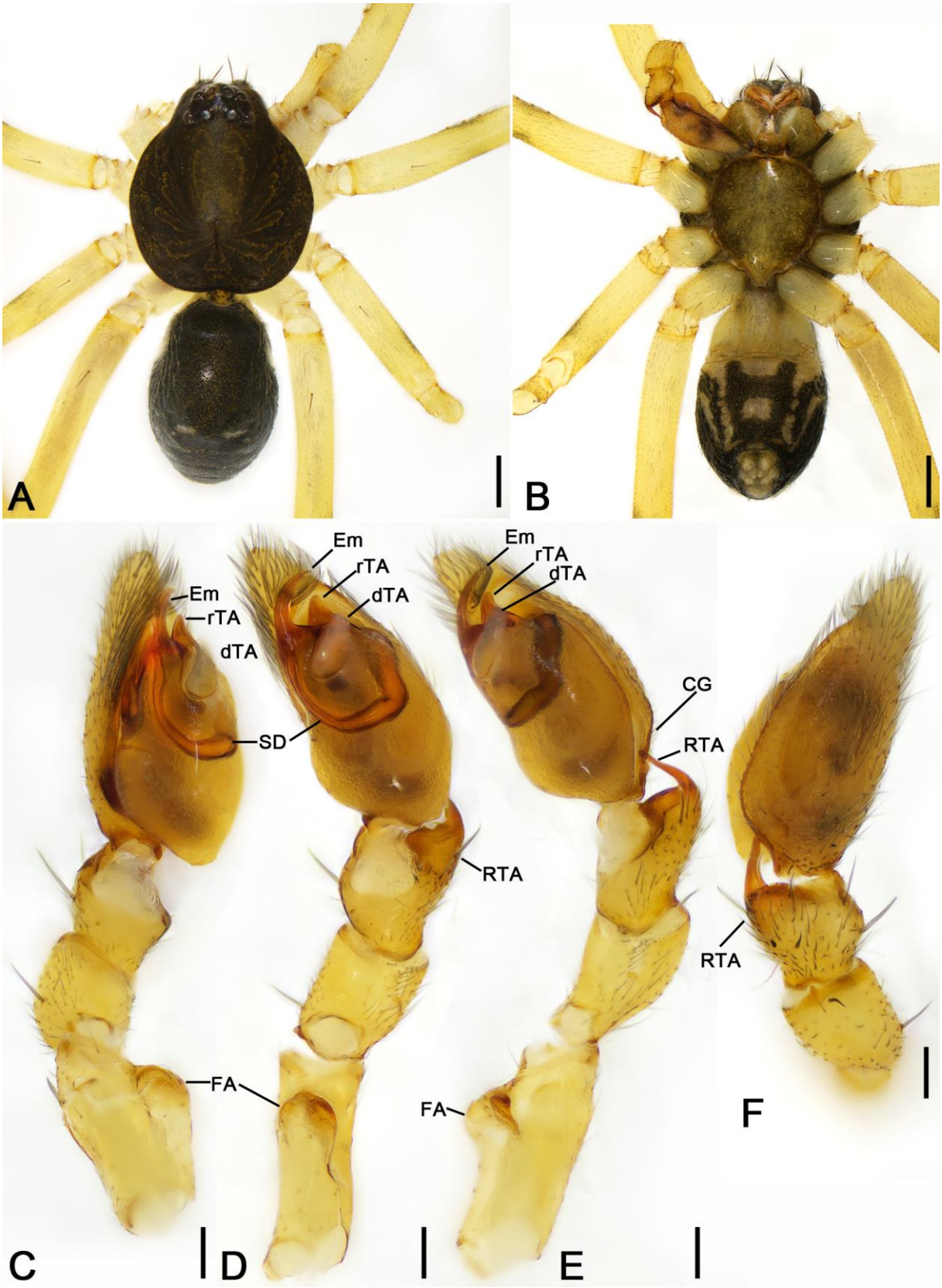

Figure 96. *Otacilia qingyuan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

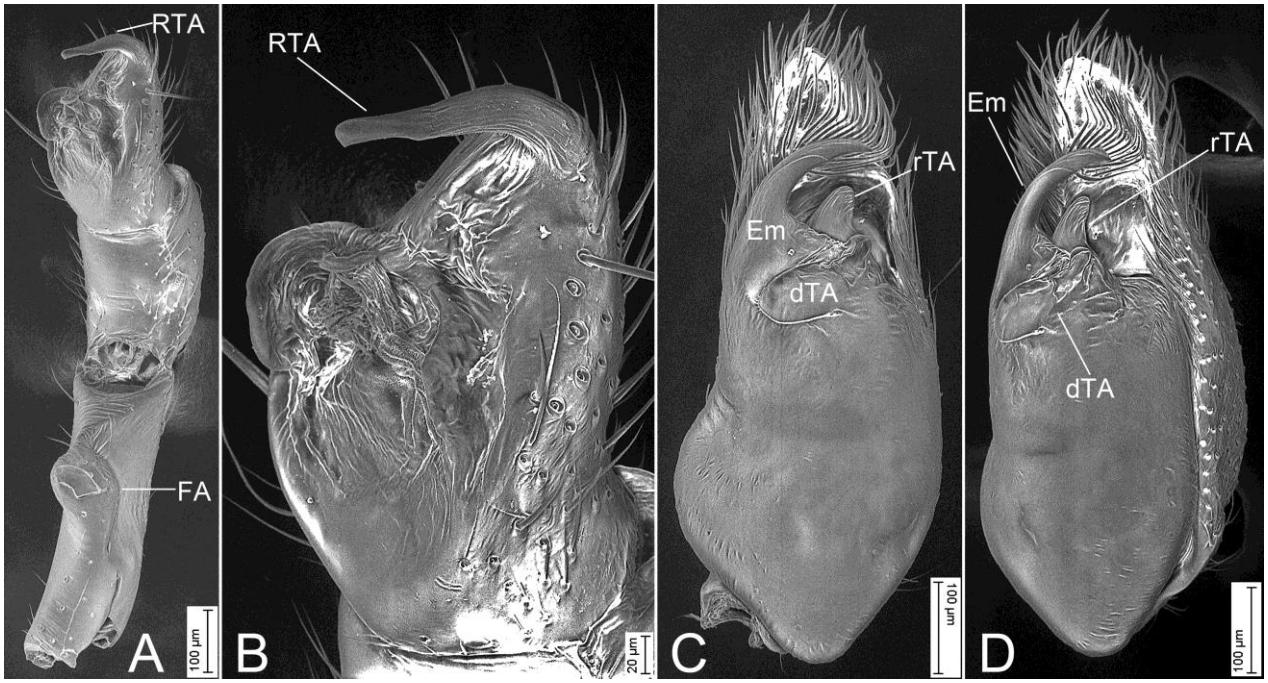

Figure 97. SEM micrographs of *Otacilia qingyuan* sp. nov., palp of male paratype. **A** Ventral view, detail of femoral apophysis and retrolateral tibial apophysis **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **D** Retrolateral view, slightly ventral. Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

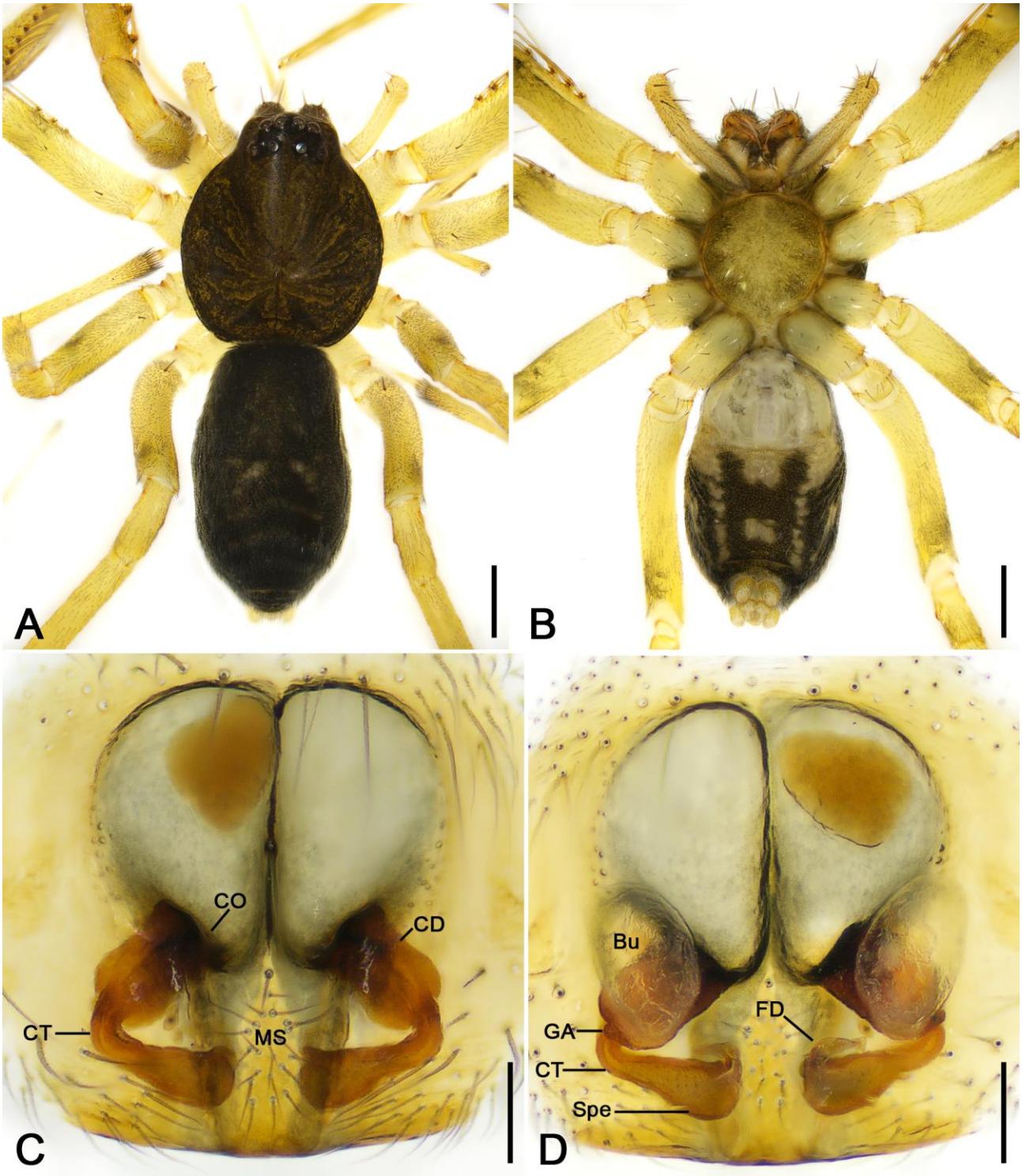

Figure 98. *Otacilia qingyuan* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

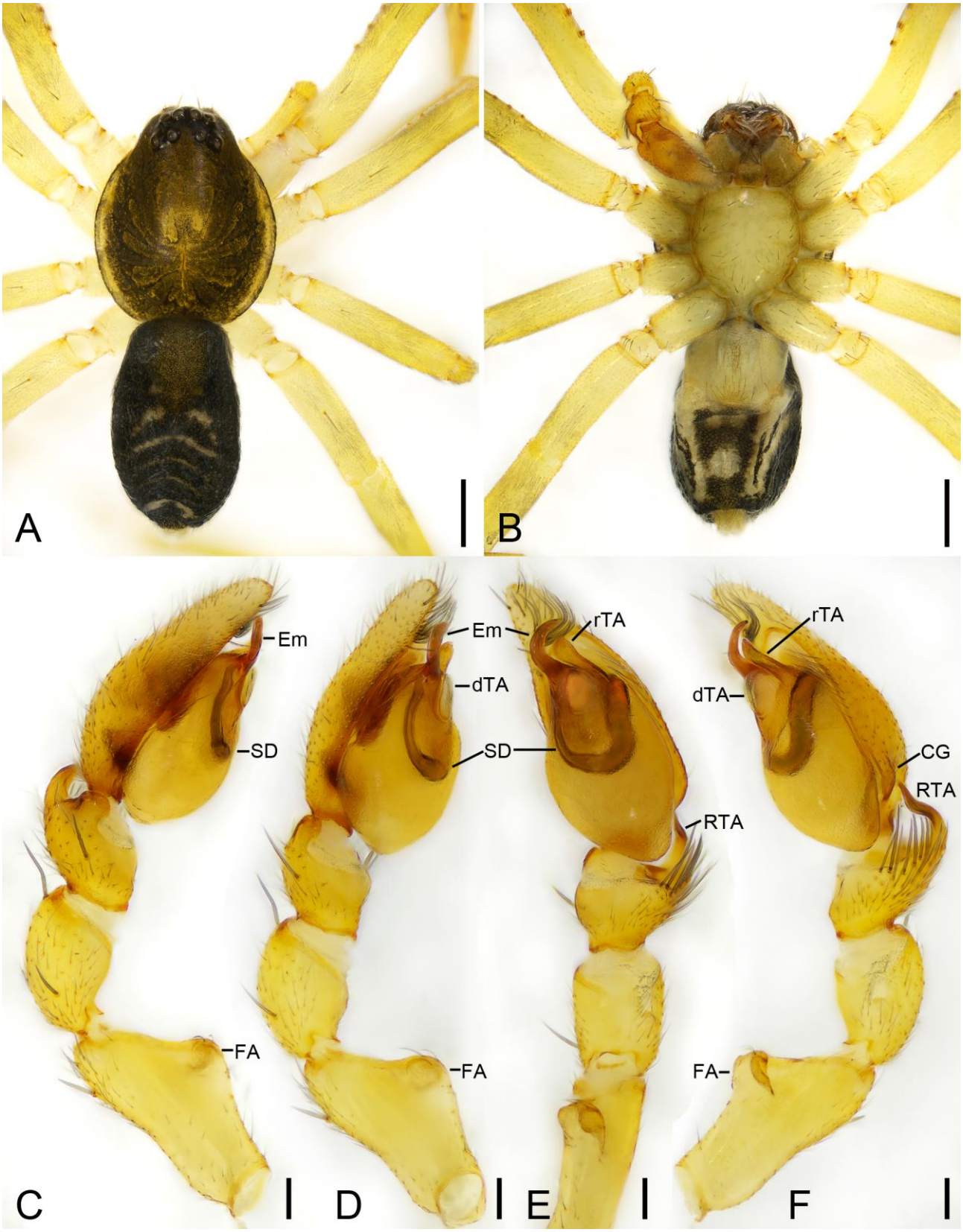

Figure 99. *Otacilia sanbai* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

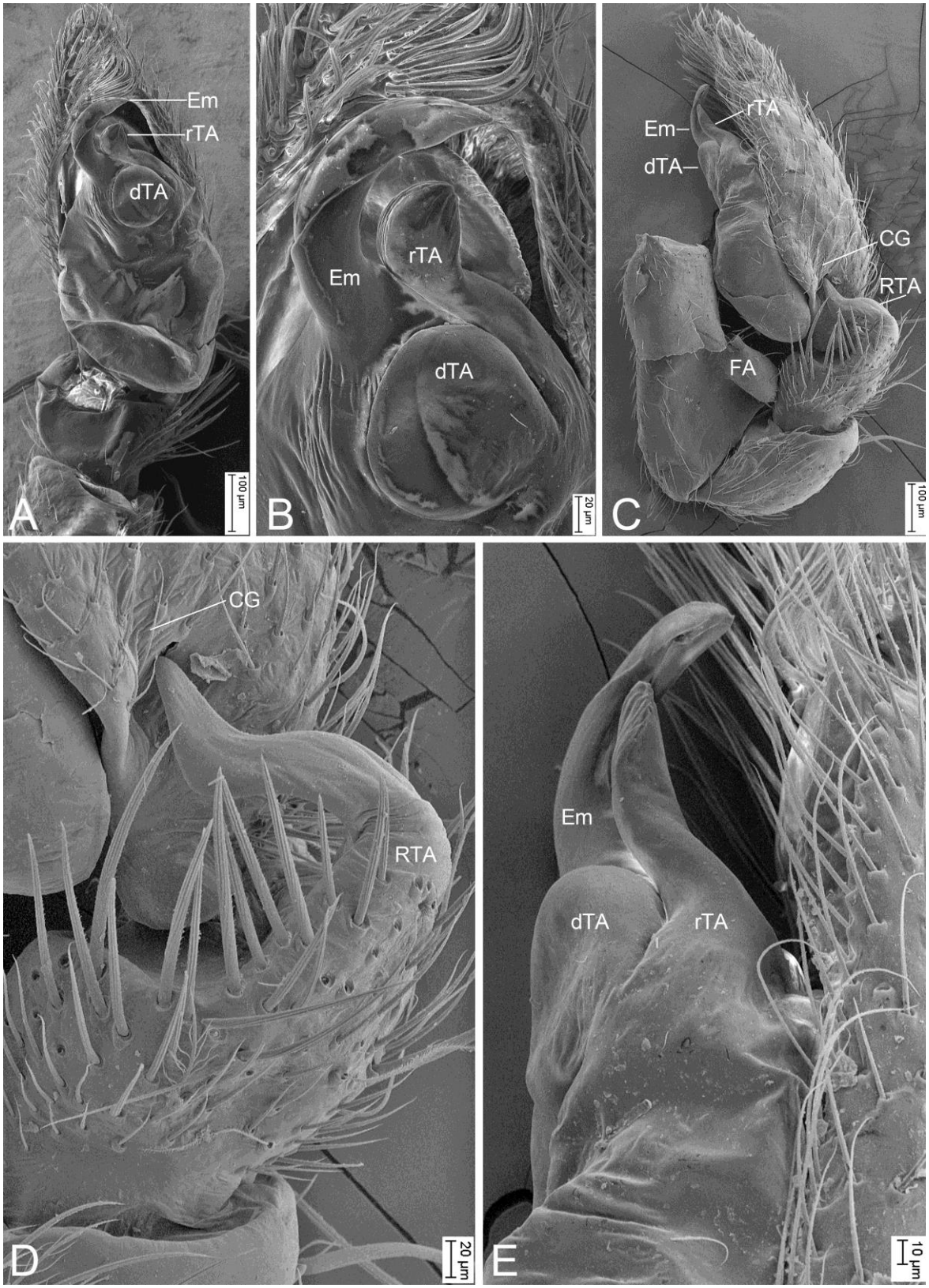

Figure 100. SEM micrographs of *Otacilia sanbai* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view **D** Same, detail of retrolateral tibial apophysis **E** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

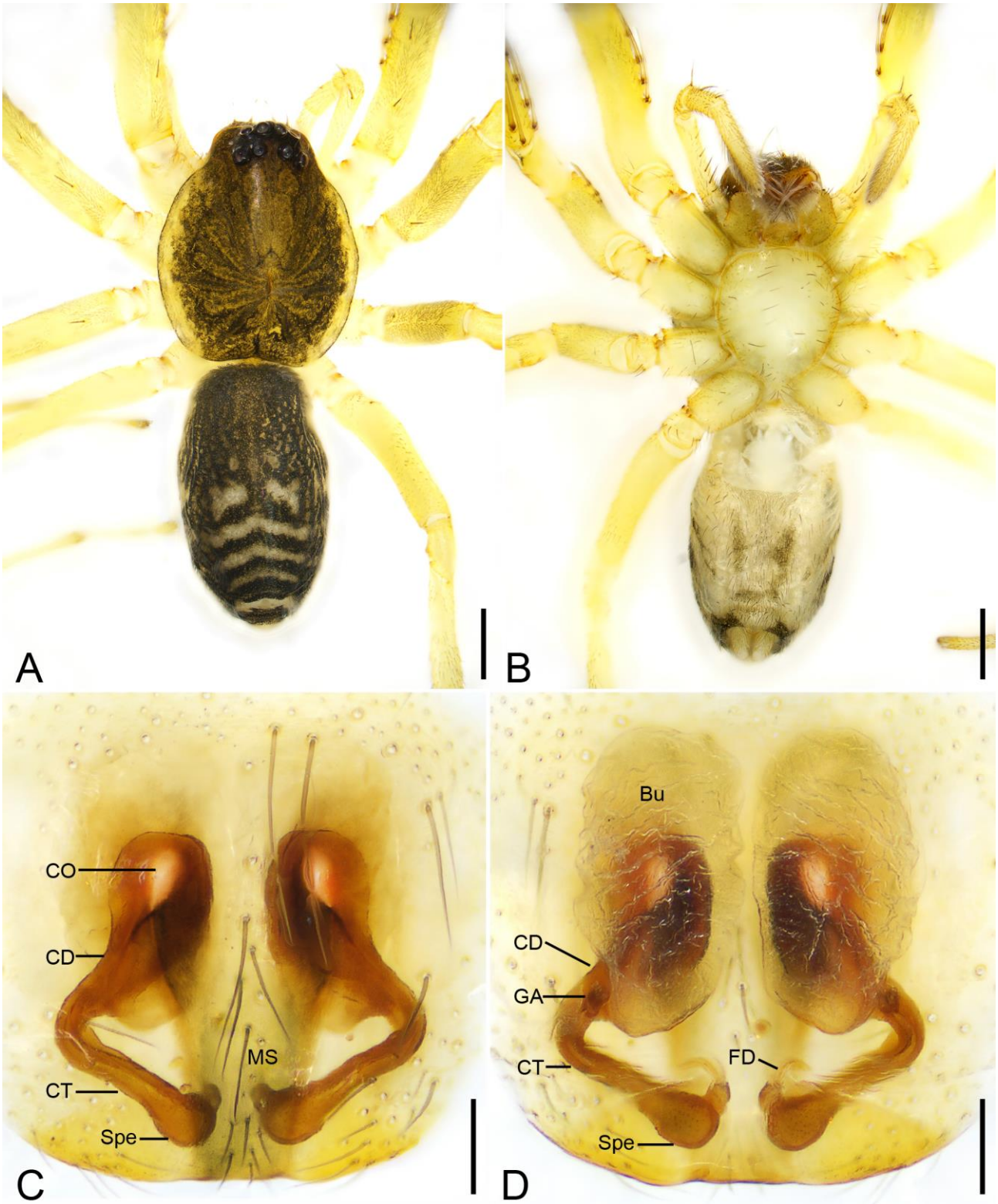

Figure 101. *Otacilia sanbai* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

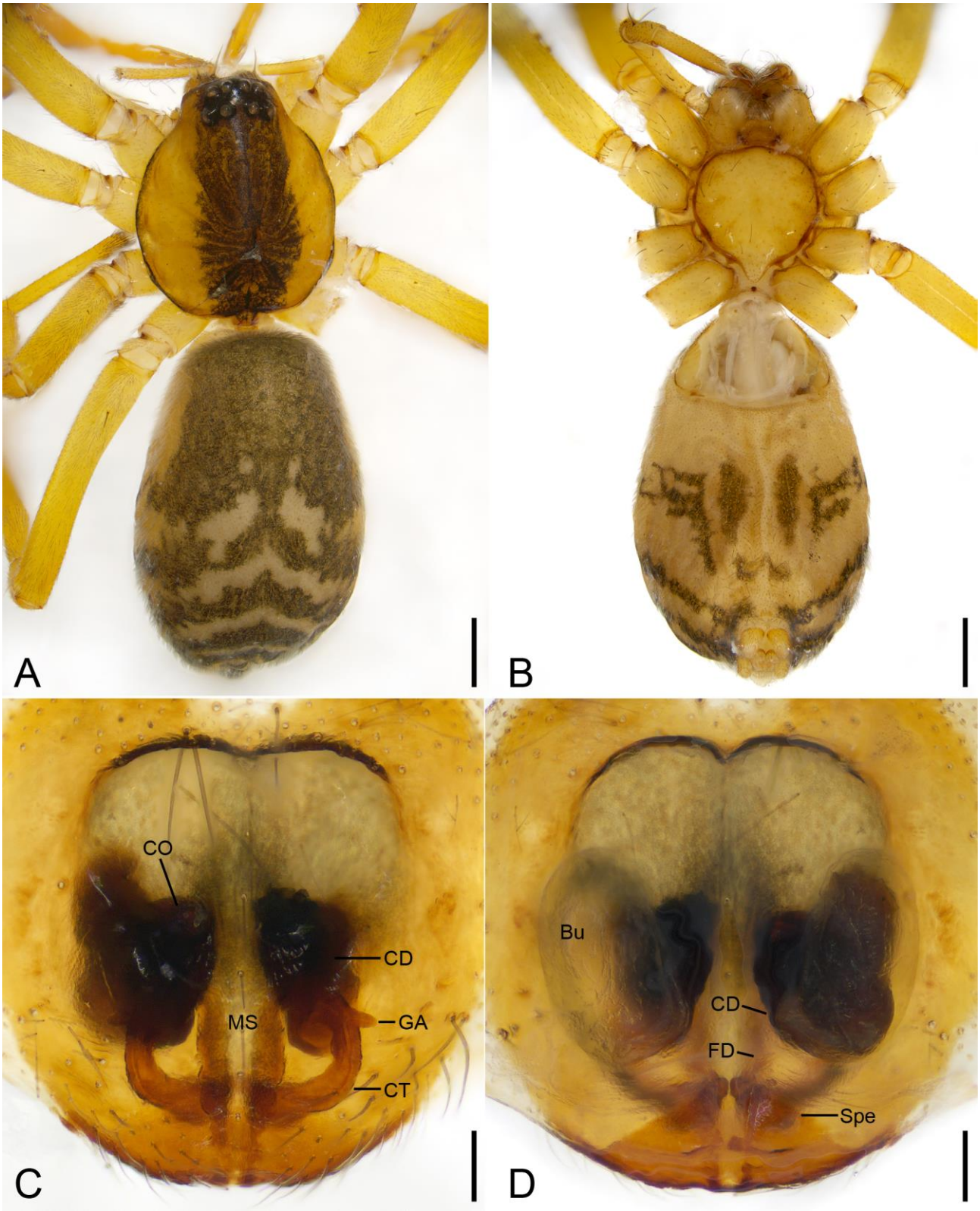

Figure 102. *Otacilia shuijiang* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

Figure 103. *Otacilia tianhua* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

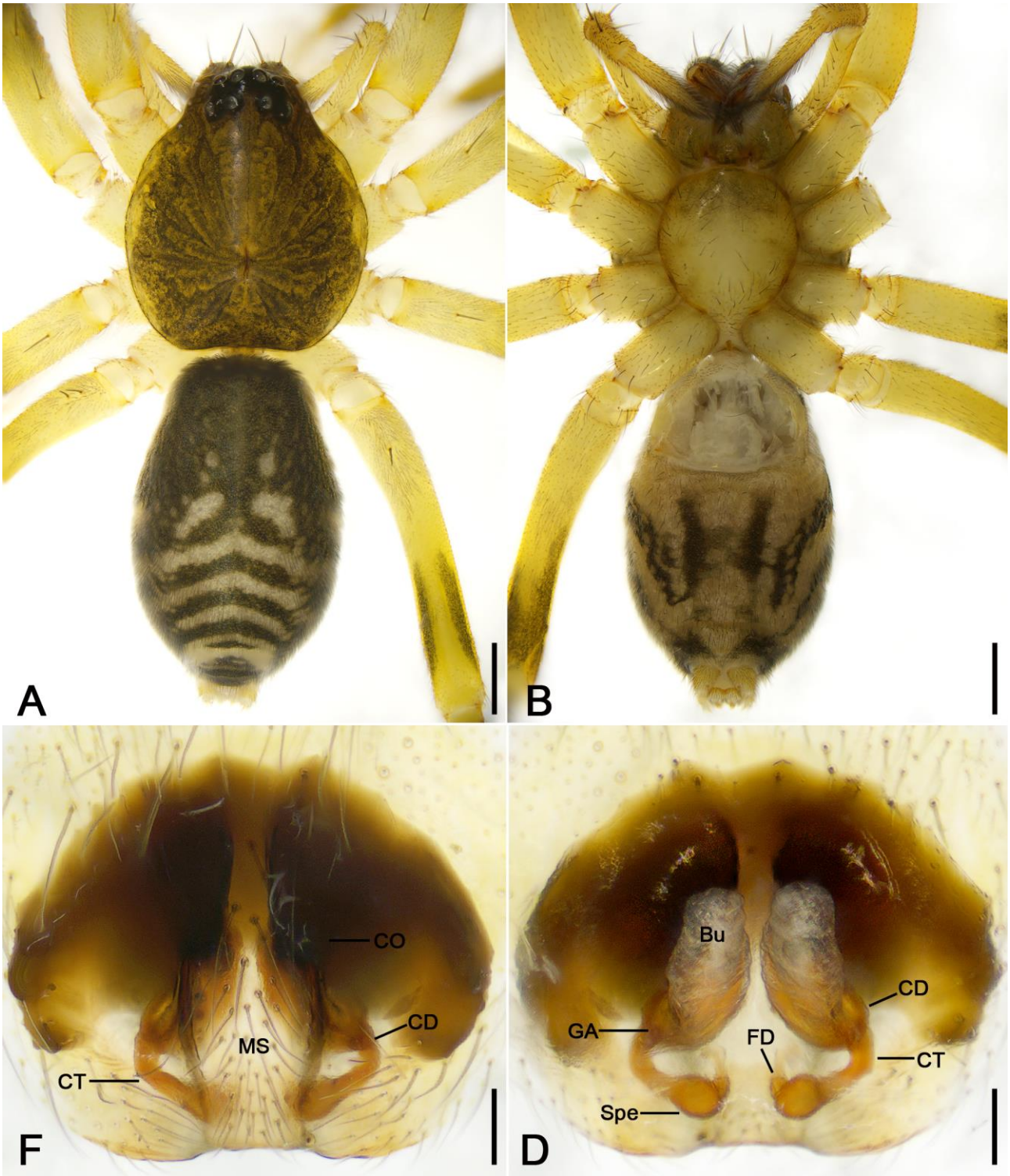

Figure 104. *Otacilia tianhua* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

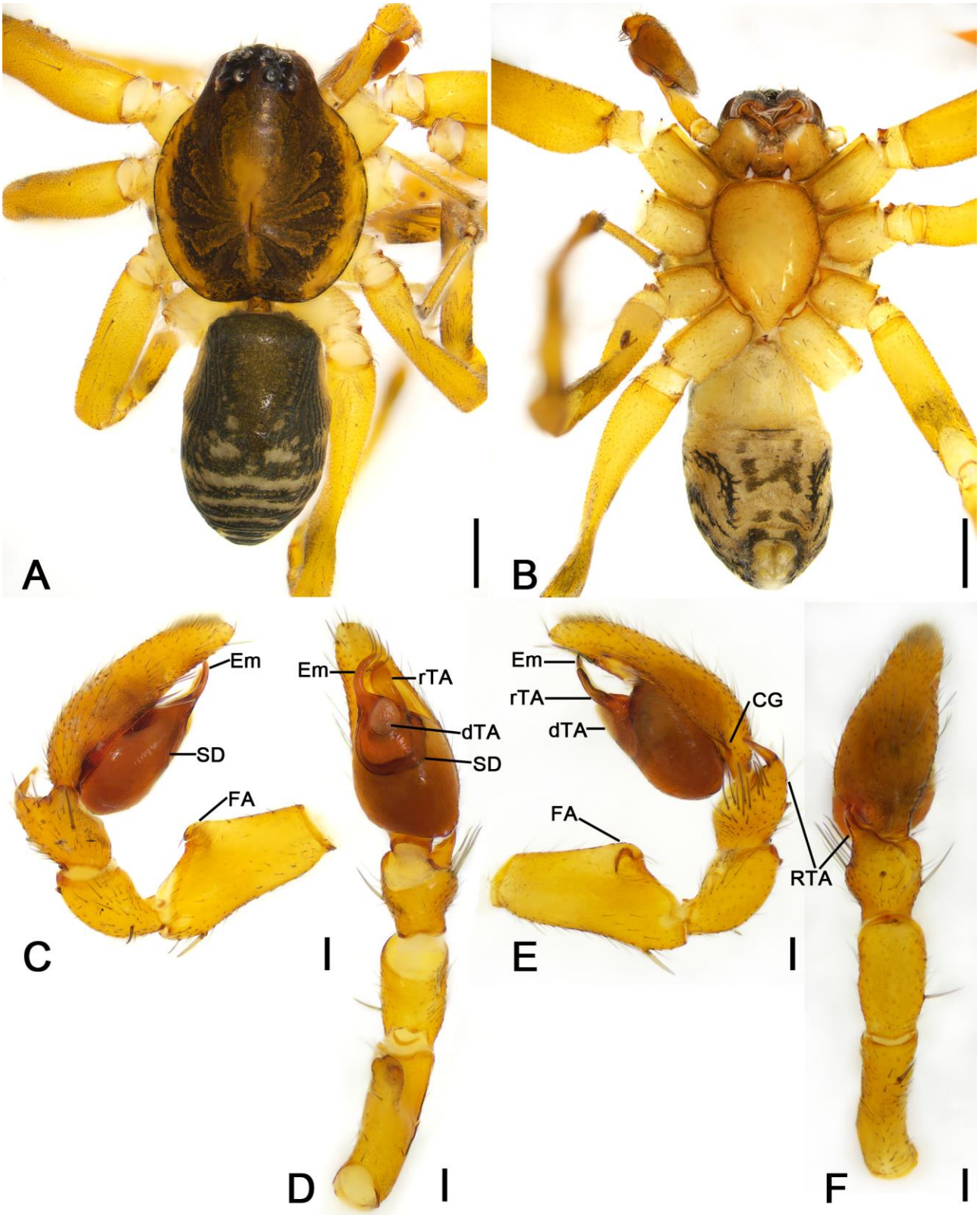

Figure 105. *Otacilia wanshi* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

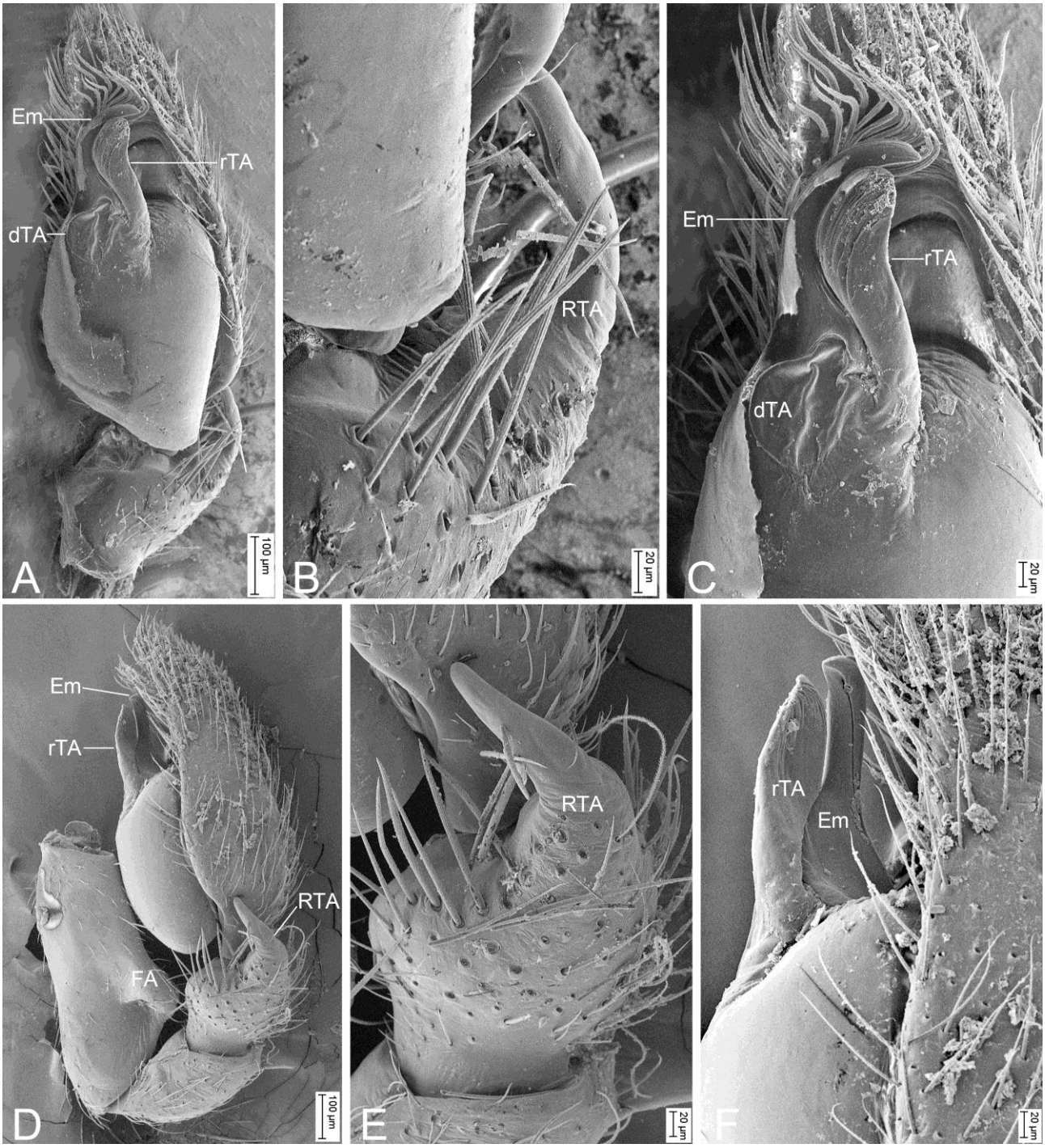

Figure 106. SEM micrographs of *Otacilia wanshi* sp. nov., palp of male paratype. **A** Right palp, ventral view **B** Same, detail of retrolateral tibial apophysis **C** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **D** Left palp, retrolateral view **E** Same, detail of retrolateral tibial apophysis **F** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

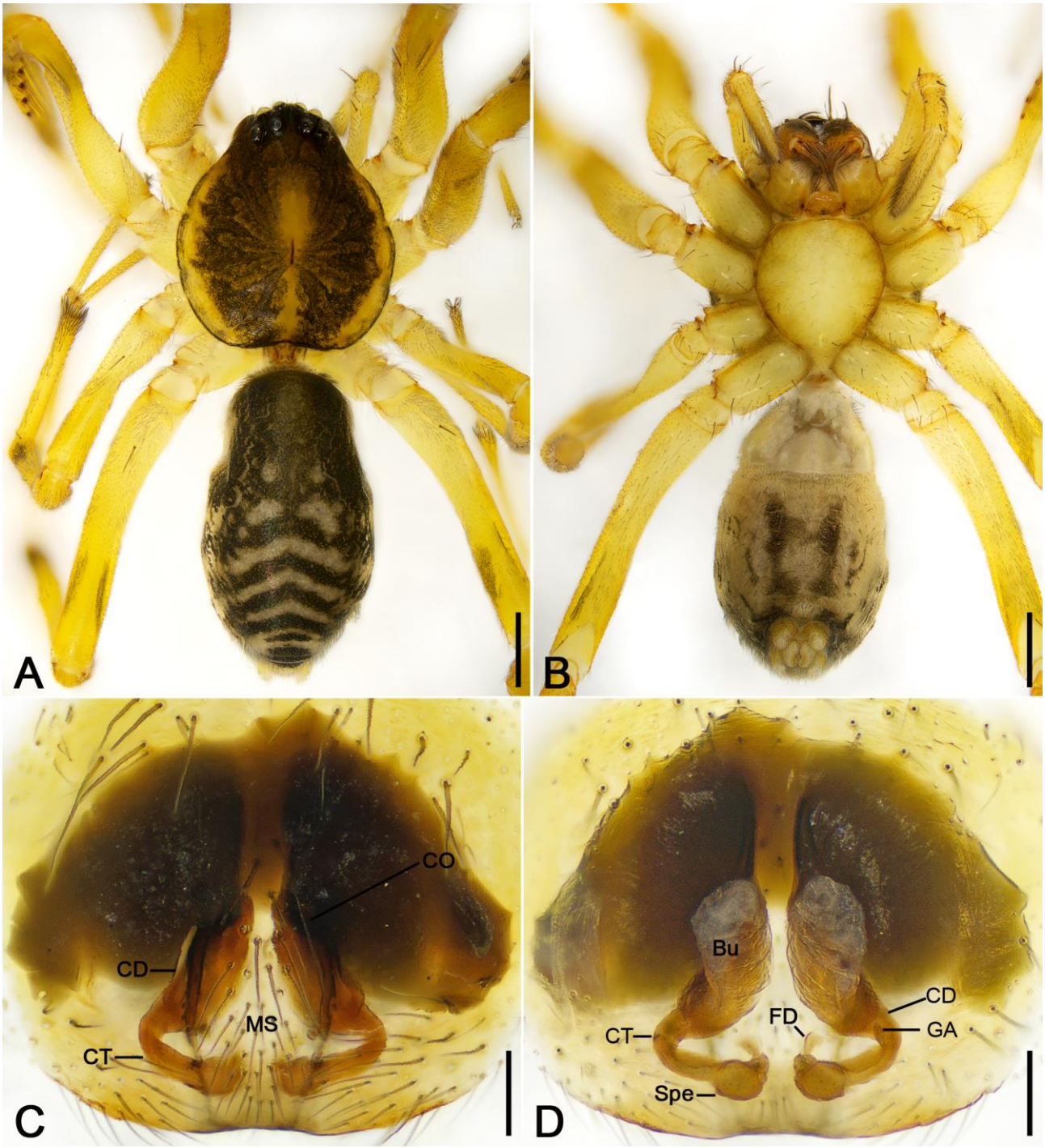

Figure 107. *Otacilia wanshi* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

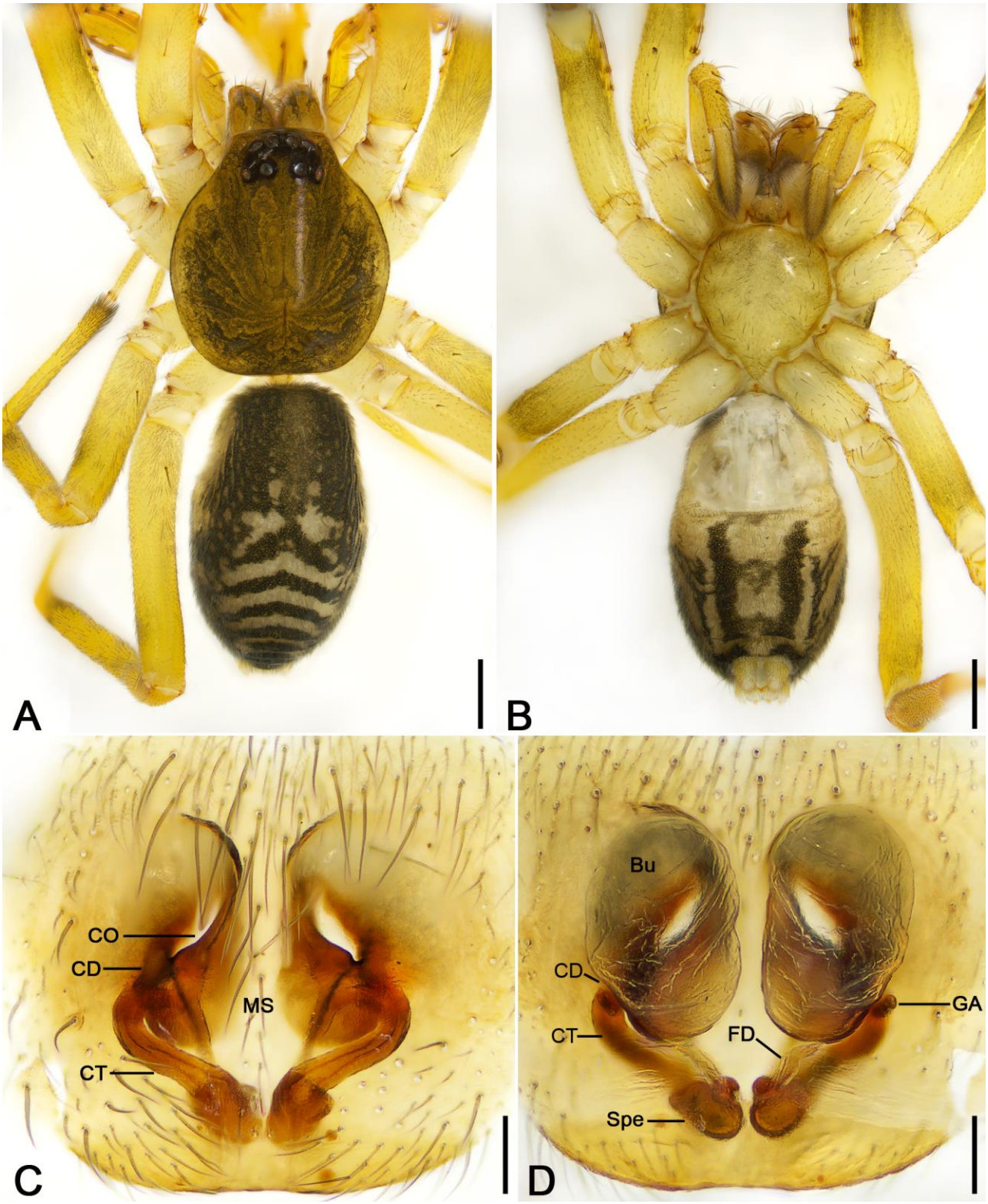

Figure 108. *Otacilia wuzhifeng* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

Figure 109. *Otacilia wuzhifeng* sp. nov., male paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

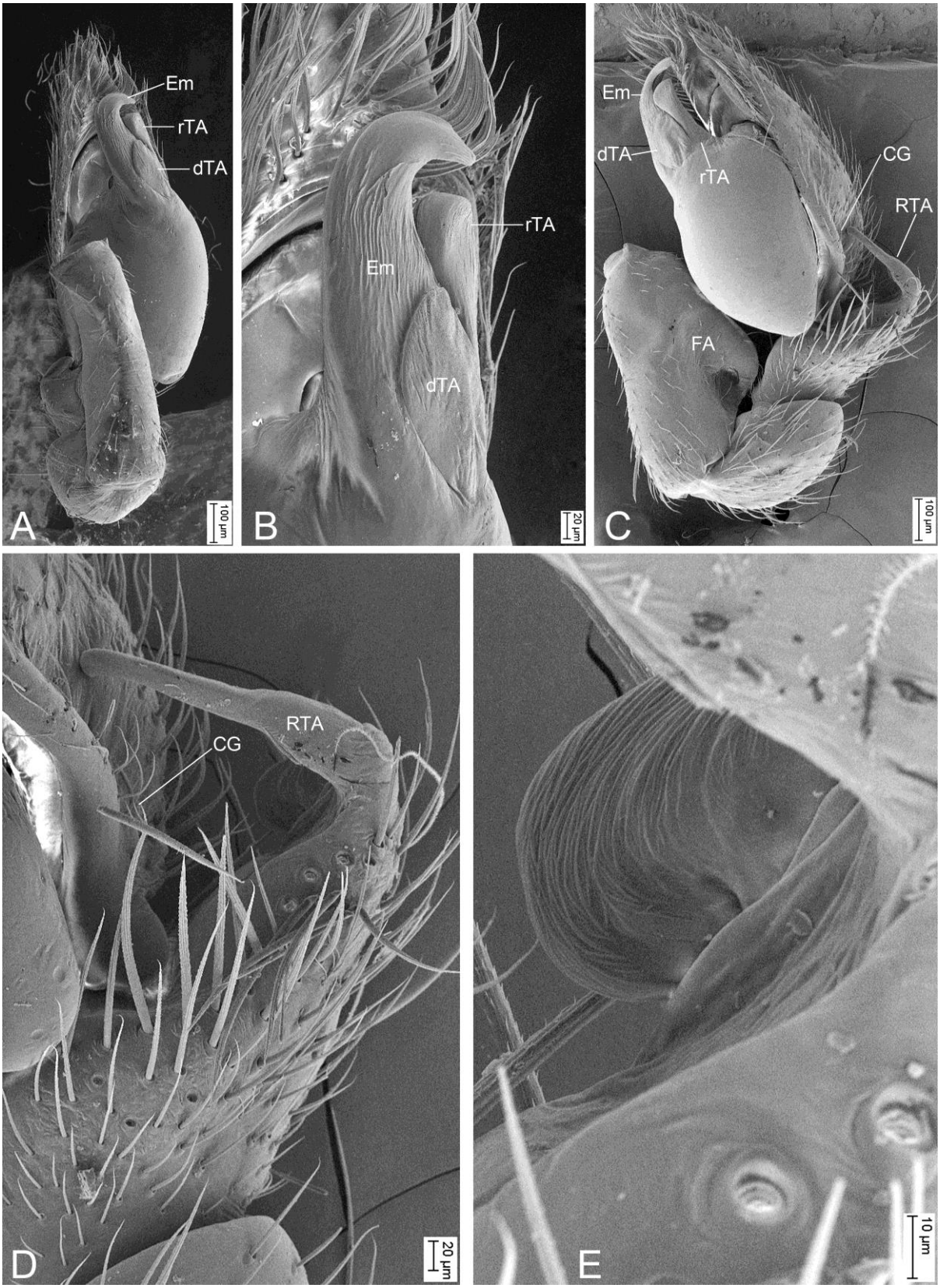

Figure 110. SEM micrographs of *Otacilia wuzhifeng* sp. nov., palp of male paratype. **A** Ventral view, slightly prolateral **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view **D** Same, detail of retrolateral tibial apophysis **E** Same, detail of base on retrolateral tibial apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

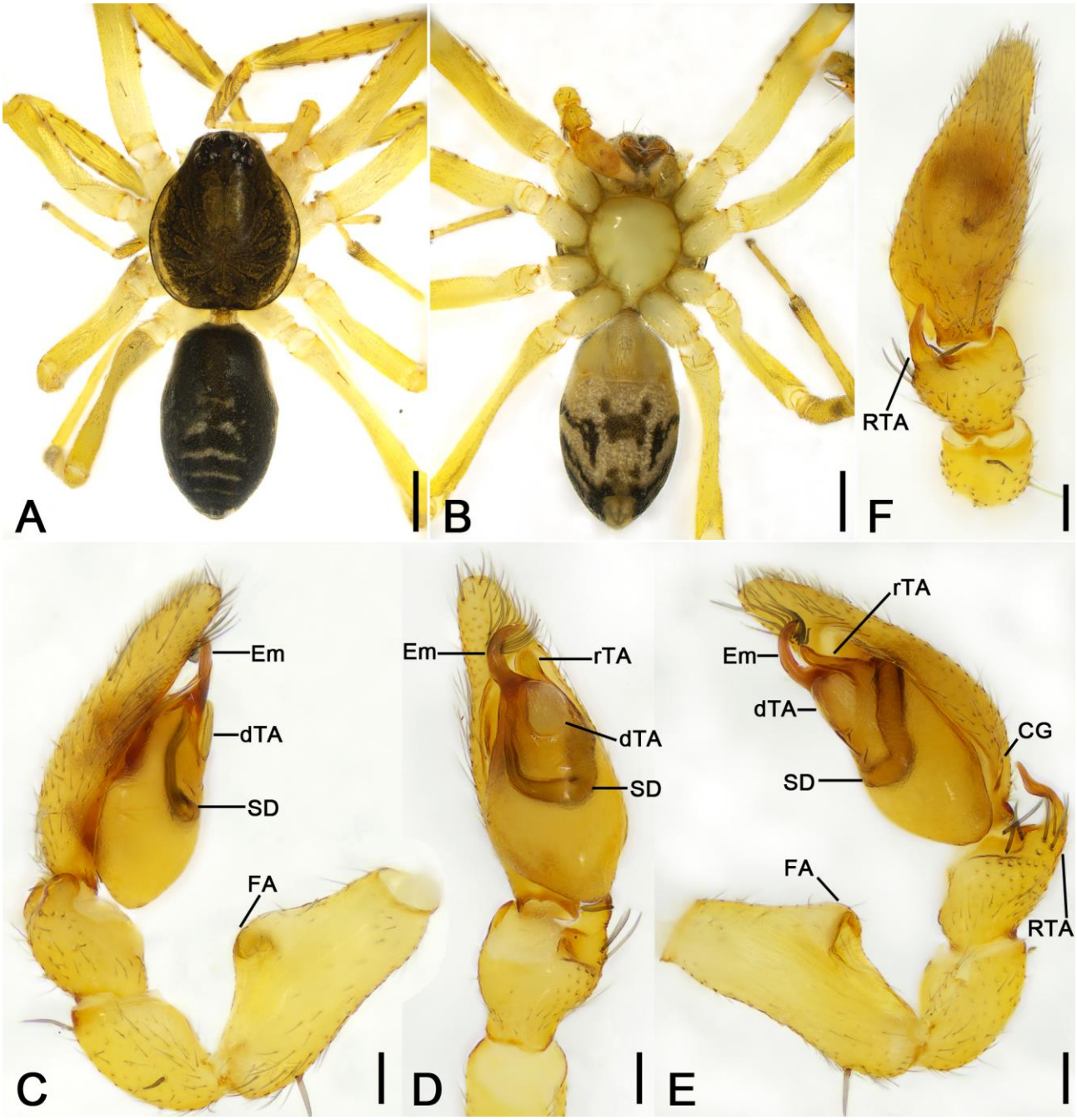

Figure 111. *Otacilia xiangshan* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

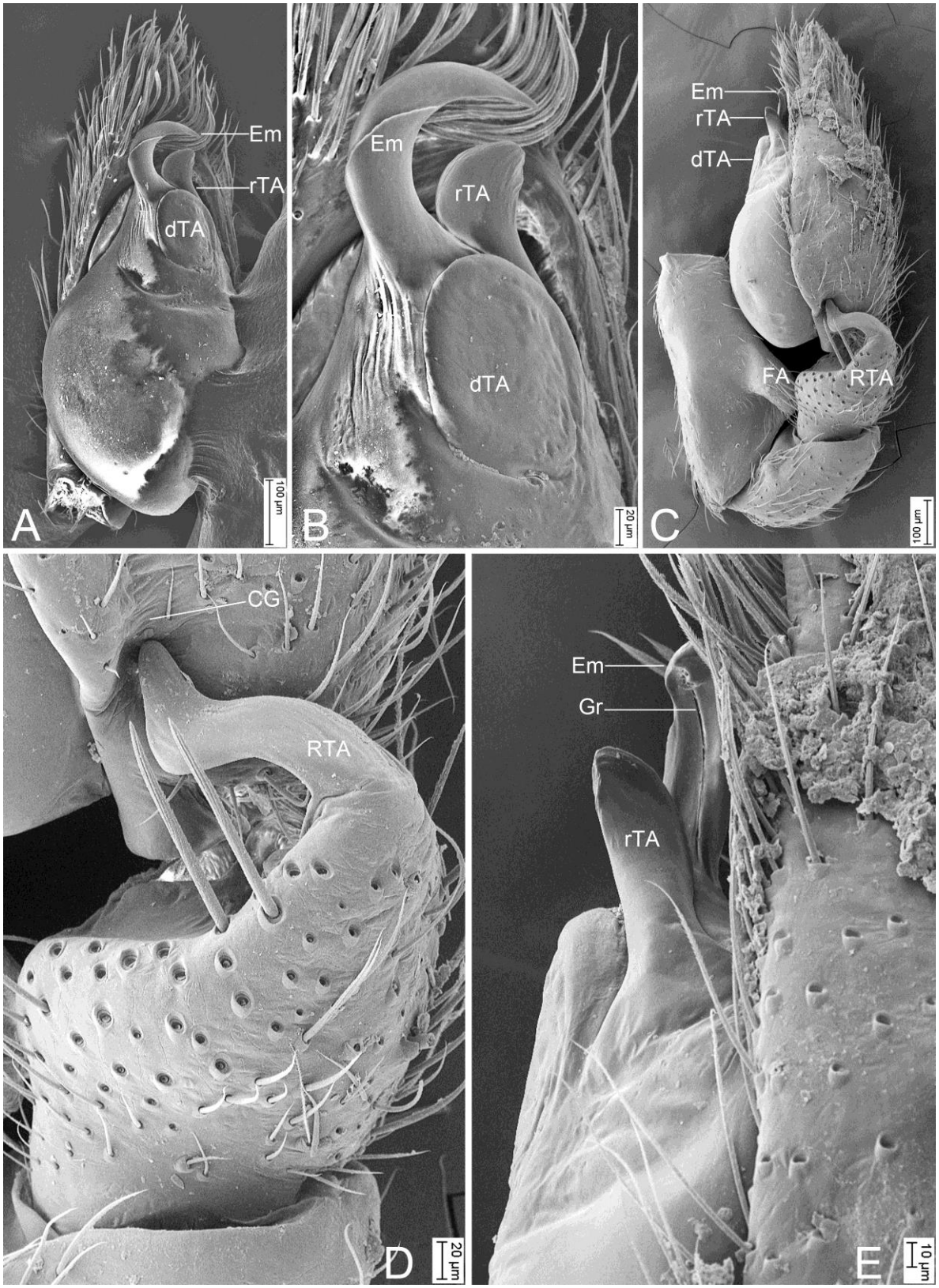

Figure 112. SEM micrographs of *Otacilia xiangshan* sp. nov., palp of male paratype. **A** Ventral view **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view **D** Same, detail of retrolateral tibial apophysis **E** Same, detail of embolus and retrolateral tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, Gr – groove, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

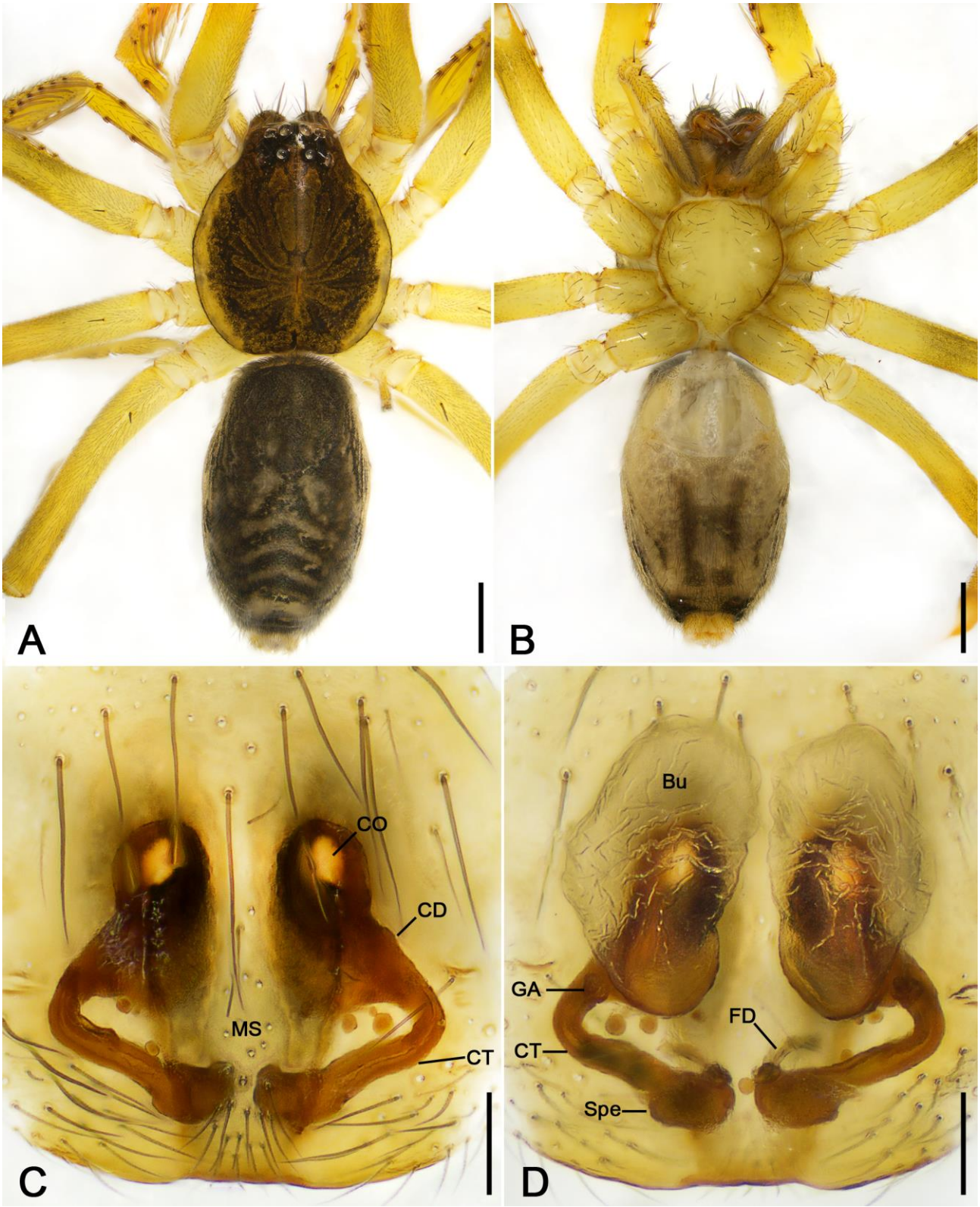

Figure 113. *Otacilia xiangshan* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

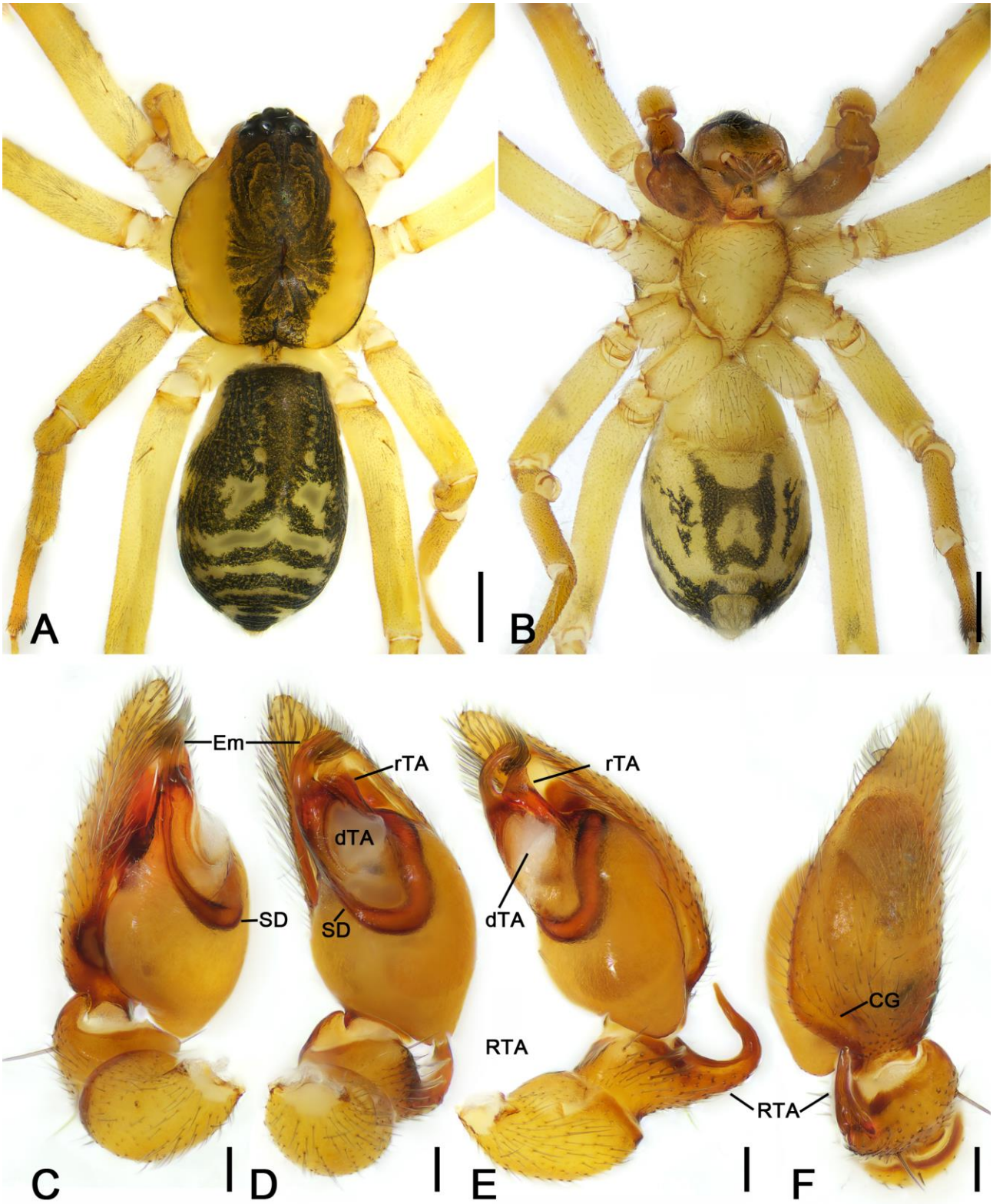

Figure 114. *Otacilia xiaobu* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

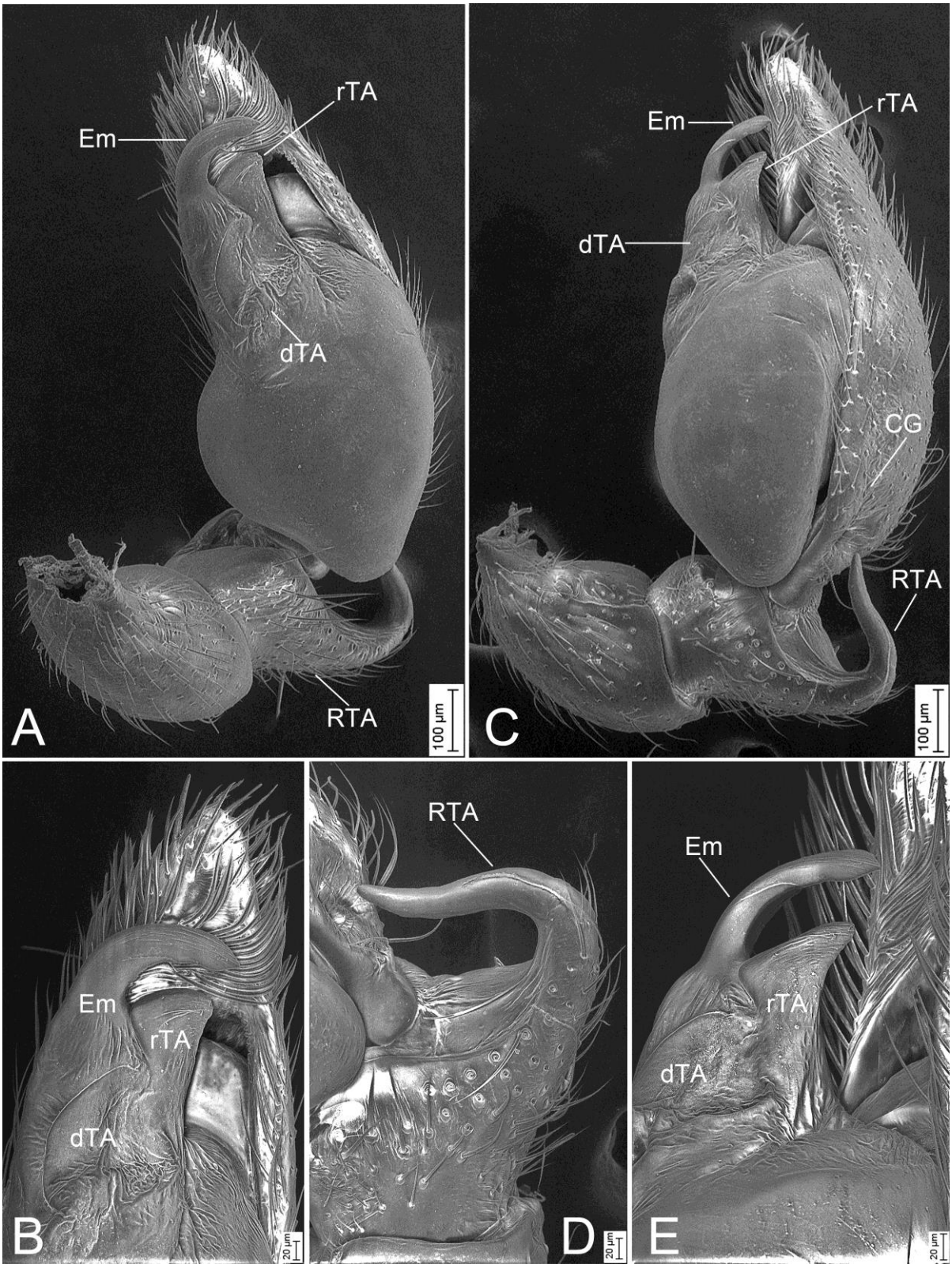

Figure 115. SEM micrographs of *Otacilia xiaobu* sp. nov., palp of male holotype. **A** Ventral view **B** Same, detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **C** Retrolateral view **D** Same, detail of retrolateral tibial apophysis **E** Same, detail of embolus, distal tegular apophysis and retrolateral tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

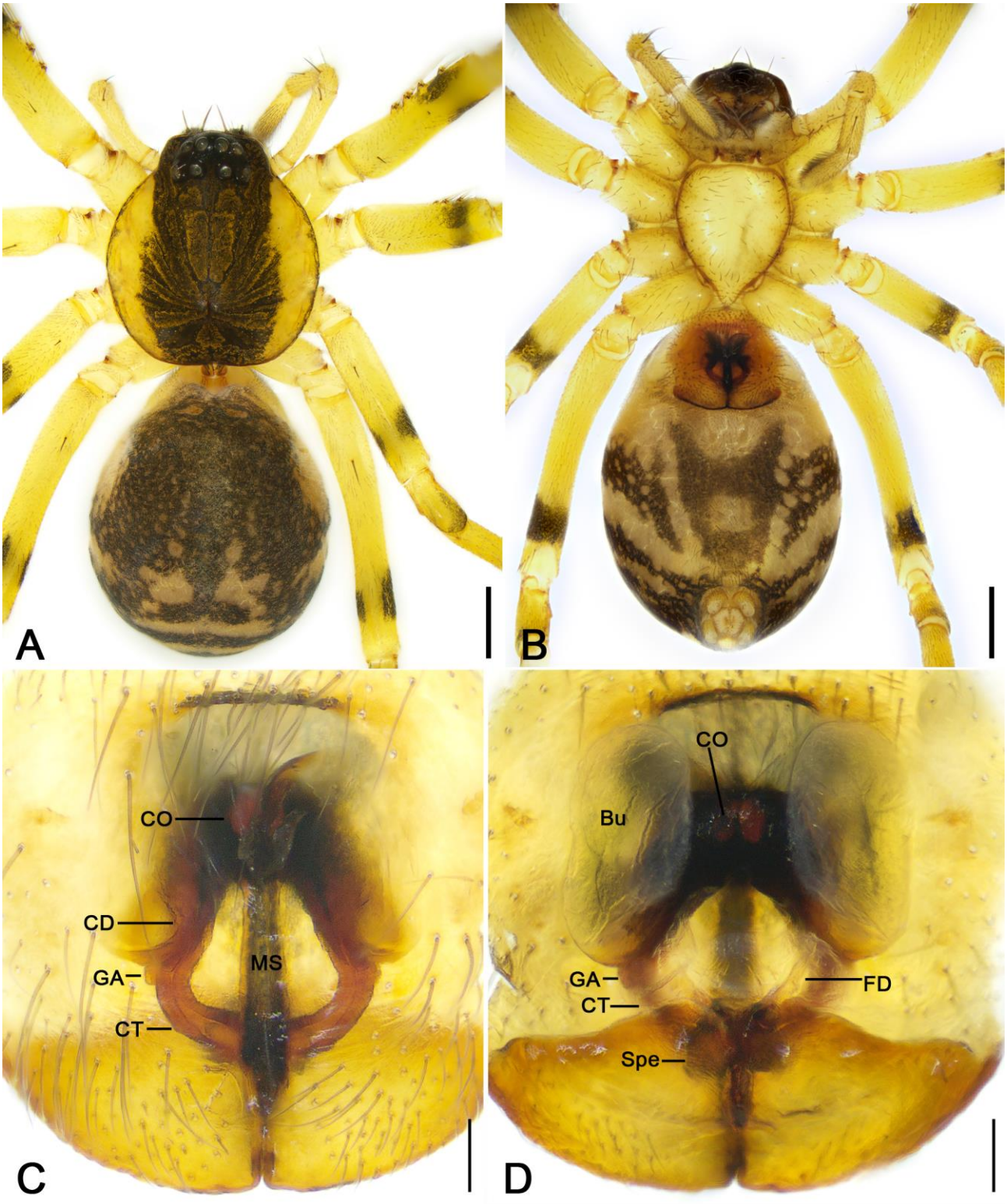

Figure 116. *Otacilia xingguo* sp. nov., female paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

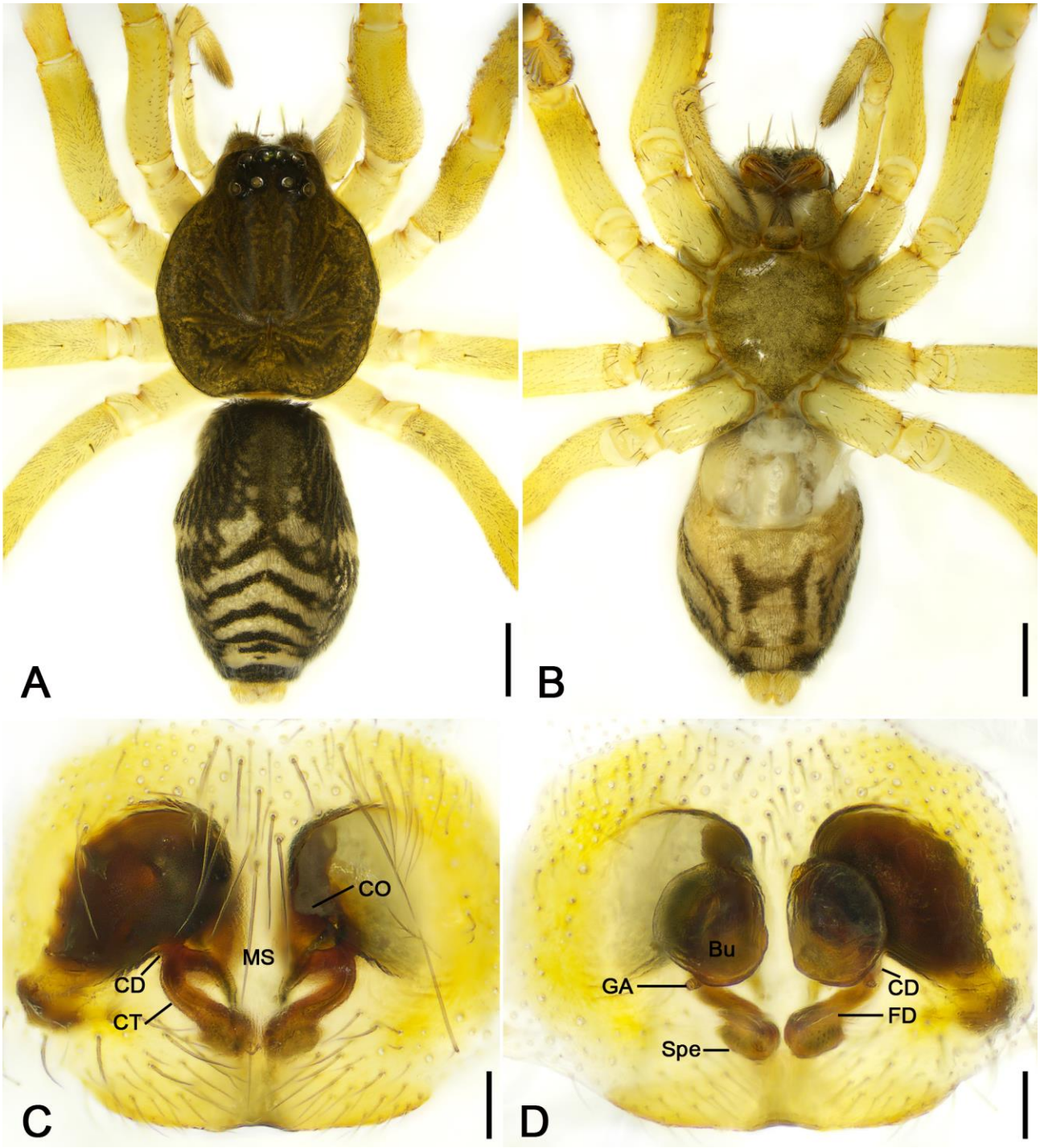

Figure 117. *Otacilia yangming* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

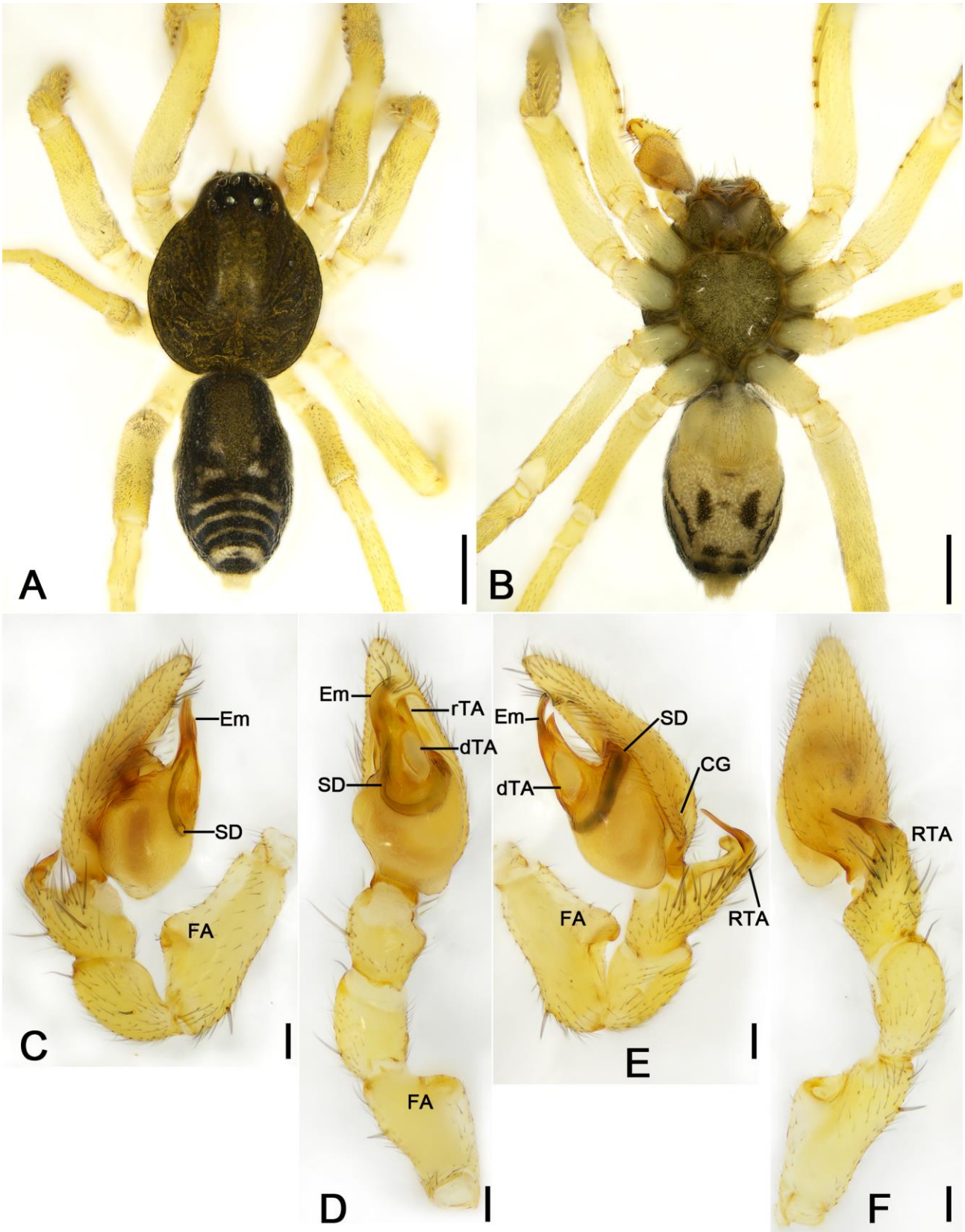

Figure 118. *Otacilia yangming* sp. nov., male paratype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

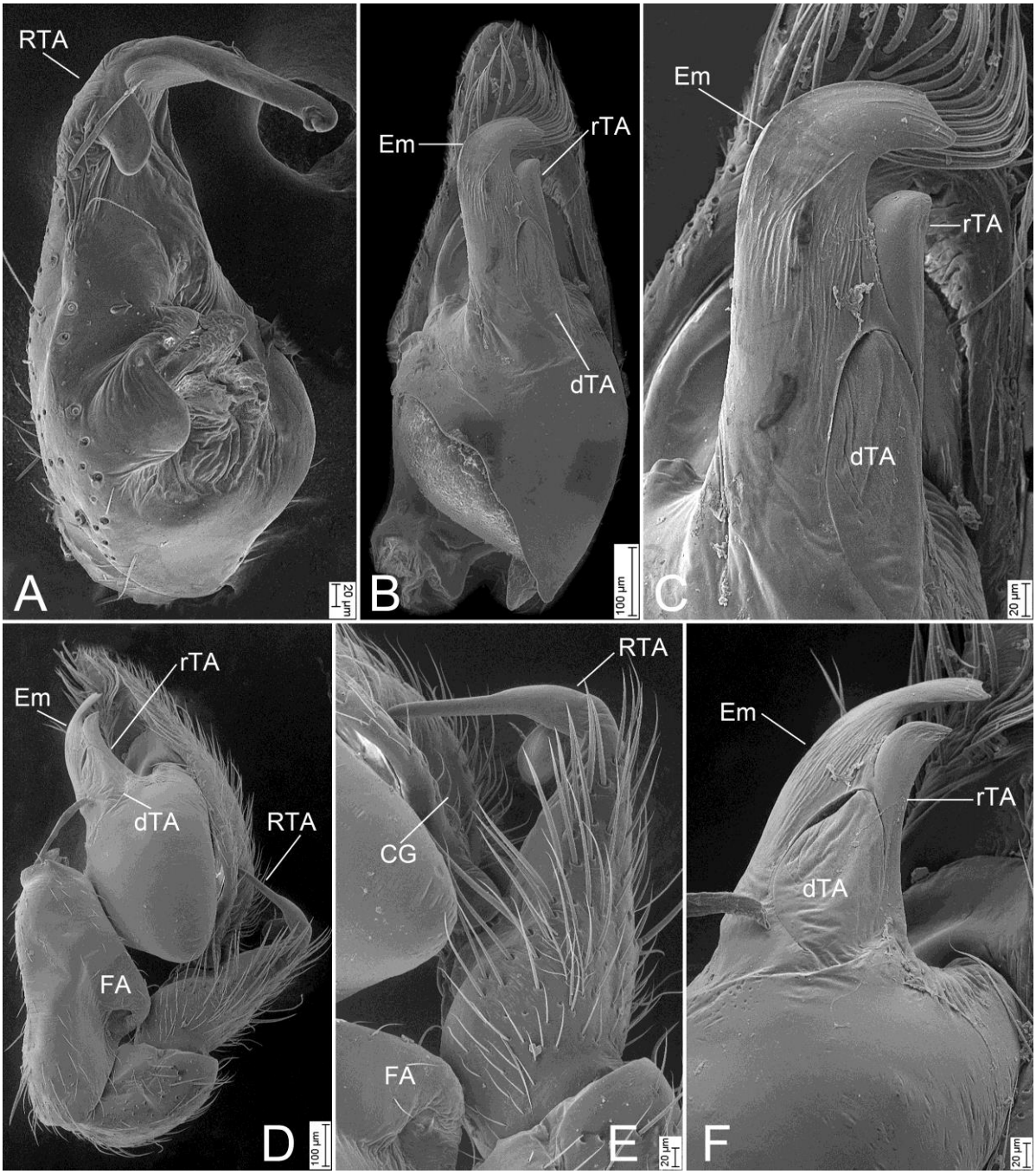

Figure 119. SEM micrographs of *Otacilia yangming* sp. nov., palp of male paratype. **A** Palpal tibia, prolateral view **B** Palp, detail of tegulum **C** detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **D** Retrolateral view **E** Same, detail of retrolateral tibial apophysis **F** Same, detail of embolus, distal tegular apophysis and retrolateral tegular apophysis. Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

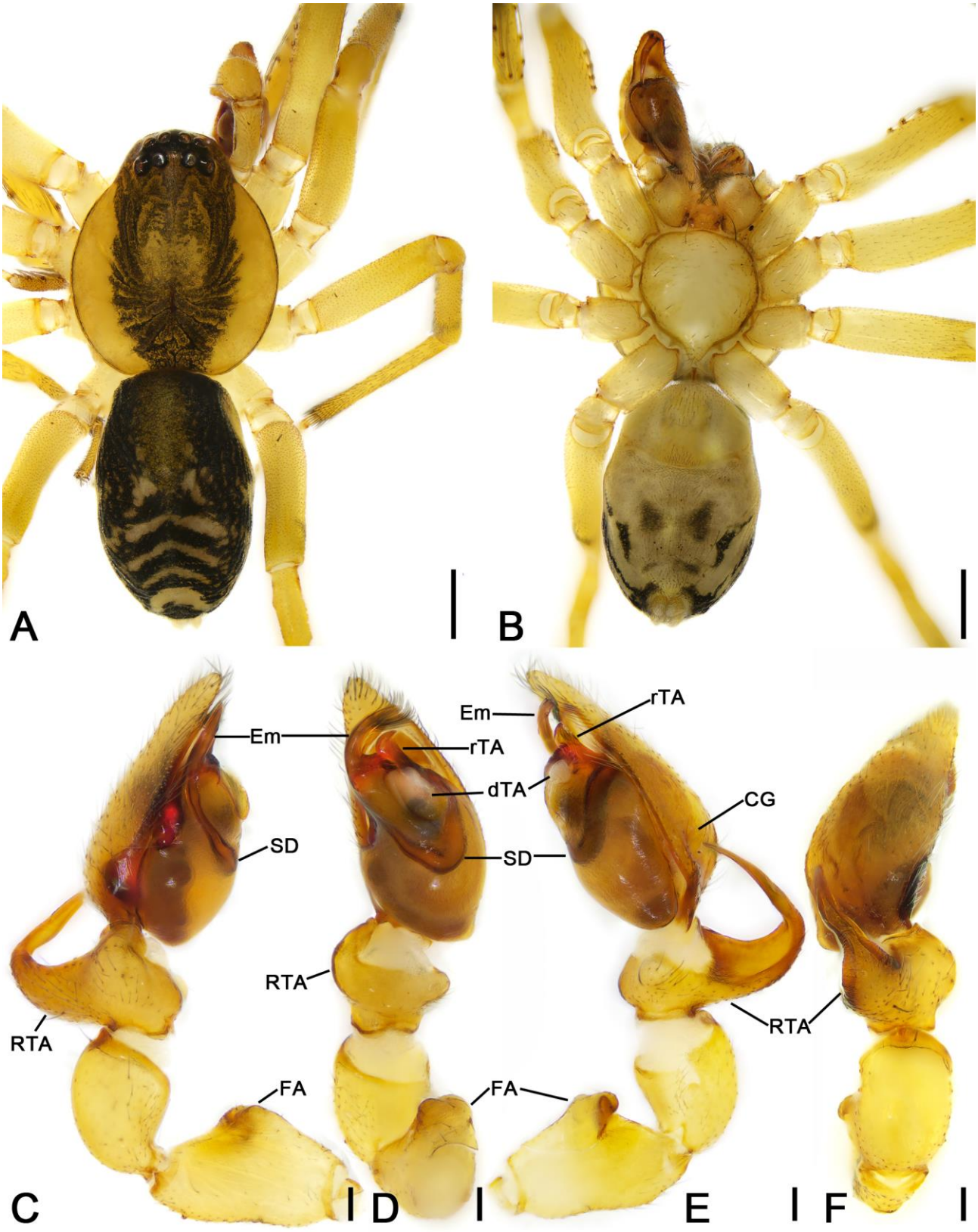

Figure 120. *Otacilia zhonglong* sp. nov., male holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Palp, prolateral view **D** Same, ventral view **E** Same, retrolateral view **F** Same, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C–F**). Abbreviations: CG – cymbial groove, dTA – distal tegular apophysis, Em – embolus, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis, SD – sperm duct.

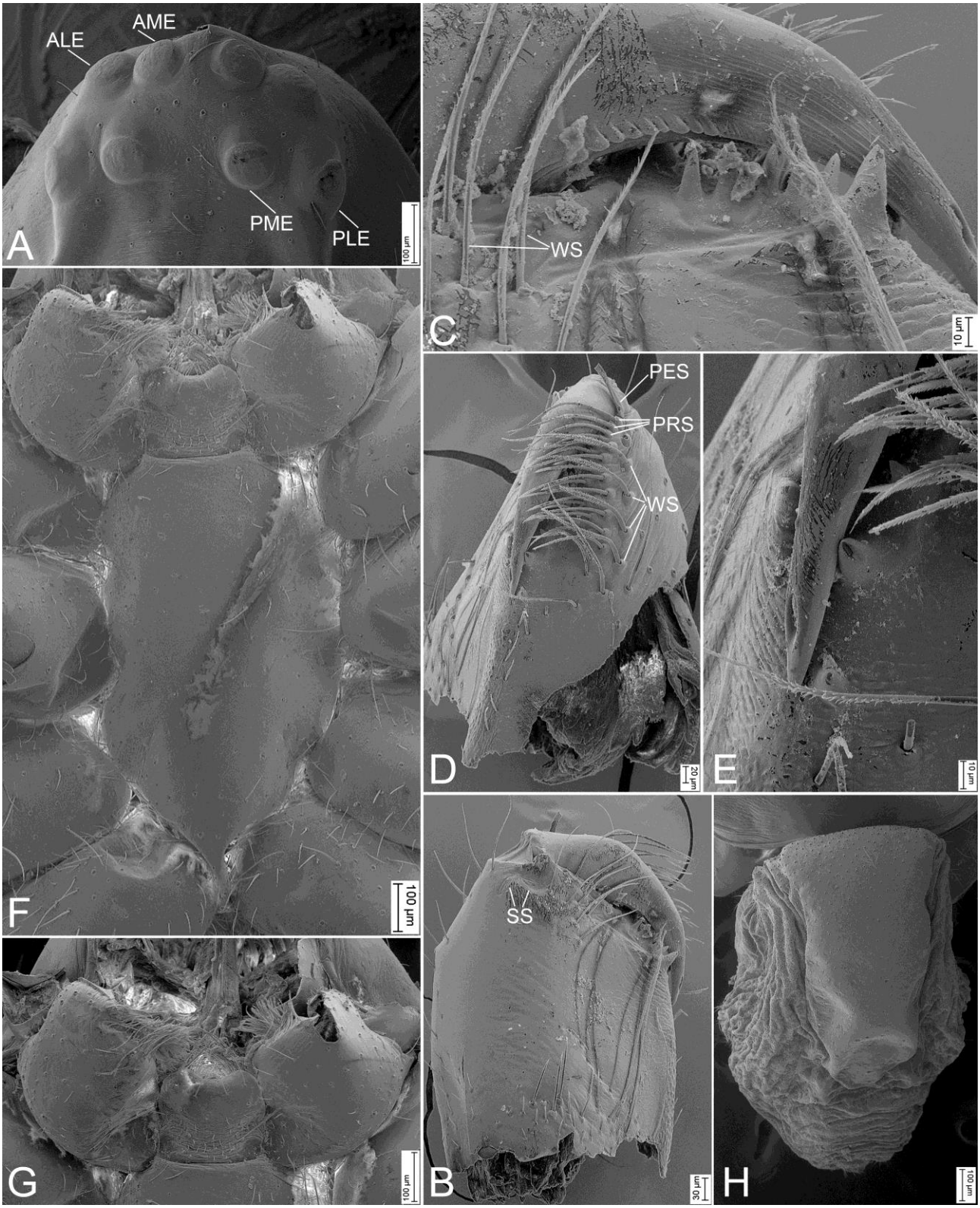

Figure 121. SEM micrographs of *Otacilia zhonglong* sp. nov., male body of paratype. **A** Eyes, dorsal view **B** Right chelicera, frontal view **C** Same, detail of retromargin **D** Same, ventral view **E** Same, detail of promarginal teeth **F** Endites and labium, ventral view **G** Endites, labium and sternum, ventral view **H** Abdomen, dorsal view. Abbreviations: ALE – anterior lateral eye, AME – anterior median eye, PES – promarginal escort seta, PLE – posterior lateral eye, PME – posterior median eye, PRS – promarginal rake setae, RES – retromarginal escort seta, SS – slit sensillum, WS – whisker setae.

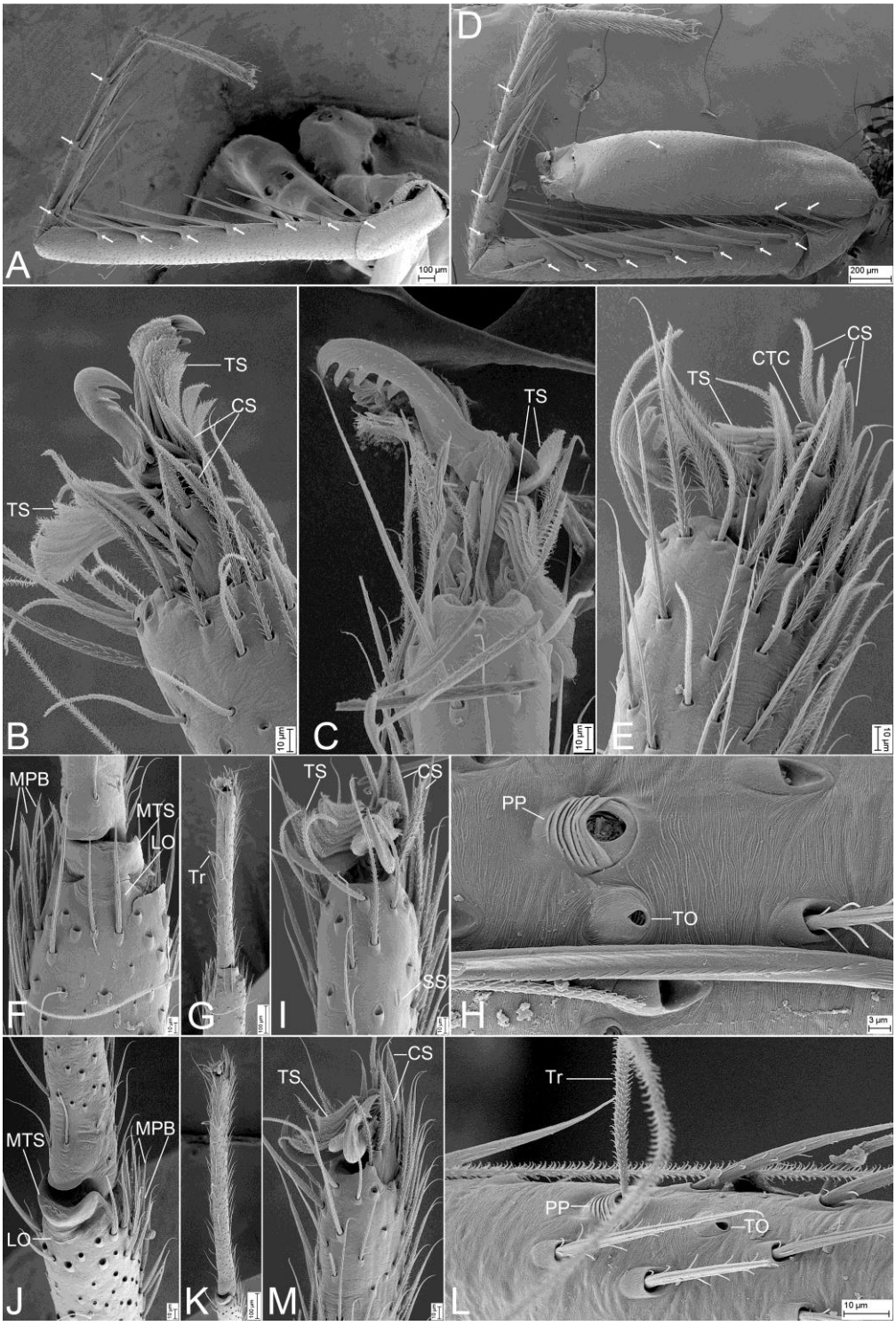

Figure 122. SEM micrographs of *Otacilia zhonglong* sp. nov., male paratype, legs. **A** Leg I, white arrows show the detail of macrospines, prolateral view **B** Same, tarsal claw and claw tuft setae, ventral view **C** Right tarsus I, tarsal claw and claw tuft setae, dorsal view **D** Leg II, white arrows show the detail of macrospines, prolateral view **E** Same, tarsus, prolateral view **F** Leg III, metatarsus-tarsus joint, dorsolateral view **G** Same, tarsus **H** Same, detail of the base of trichobothrium and tarsal organ **I** Same, tarsal claw and claw tuft setae **J** Leg IV, metatarsus-tarsus joint, prolateral view, slightly dorsal **K** Same, tarsus **L** Same, detail of the base of trichobothrium and tarsal organ **M** Same, tarsal claw and claw tuft setae. Abbreviations: CS – chemosensory seta, CTC – claw tuft clasper, LO – lyriform organ, MPB – metatarsal preening brush, MTS – metatarsal dorsal stopper, PP – proximal plate, Sc – scale, TO – tarsal organ, Tr – trichobothrium, TS – tenent setae.

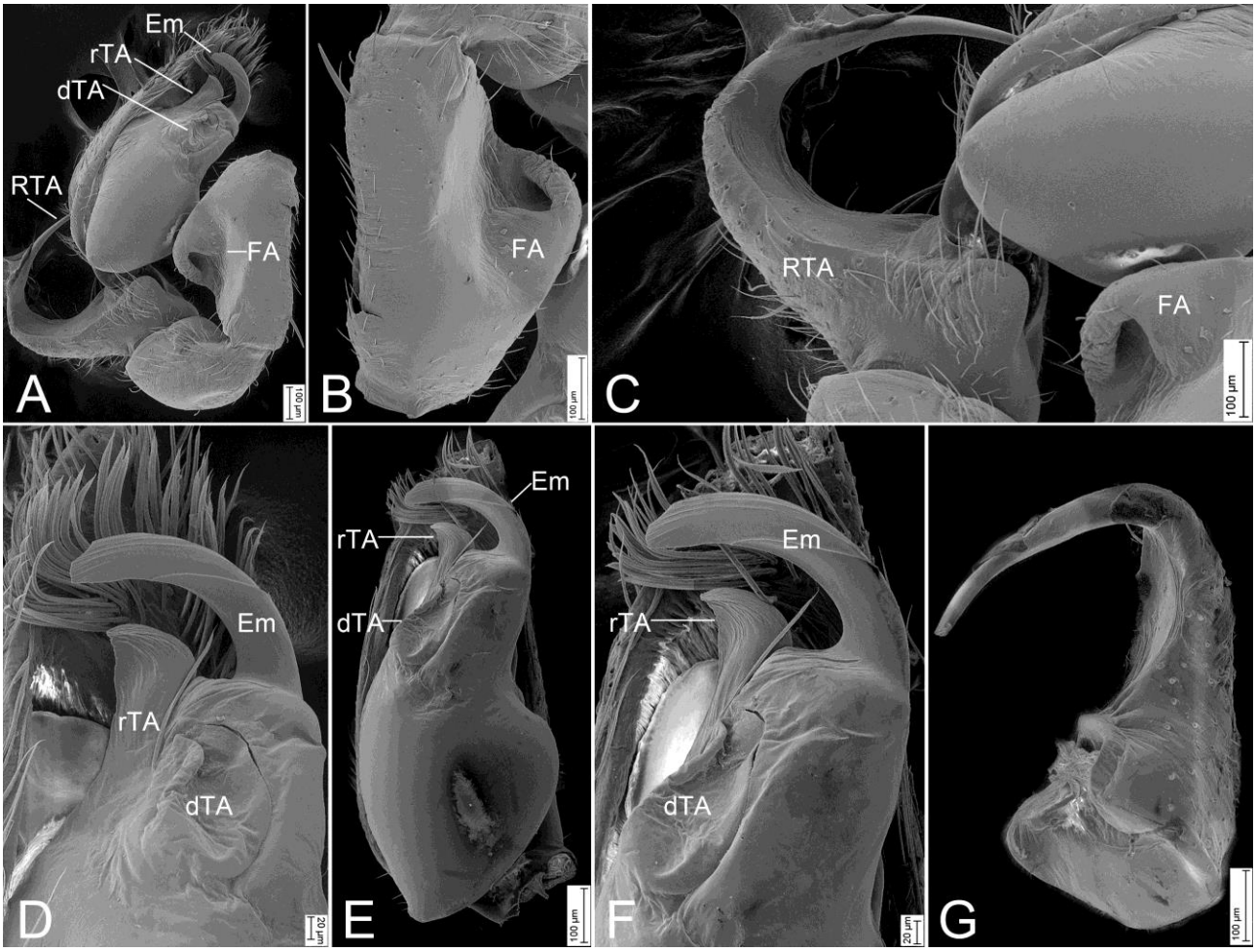

Figure 123. SEM micrographs of *Otacilia zhonglong* sp. nov., right palp of male paratype. **A** Retrolateral view **B** Same, palpal femur, detail of femoral apophysis **C** Same, detail of retrolateral tibial apophysis **D** detail of embolus, retrolateral tegular apophysis and distal tegular apophysis **E** Ventral view **F** Same, detail of embolus, distal tegular apophysis and retrolateral tegular apophysis **G** Retrolateral tibial apophysis, prolateral view. Abbreviations: dTA – distal tegular apophysis, Em – embolus, FA – femoral apophysis, RTA – retrolateral tibial apophysis, rTA – retrolateral tegular apophysis.

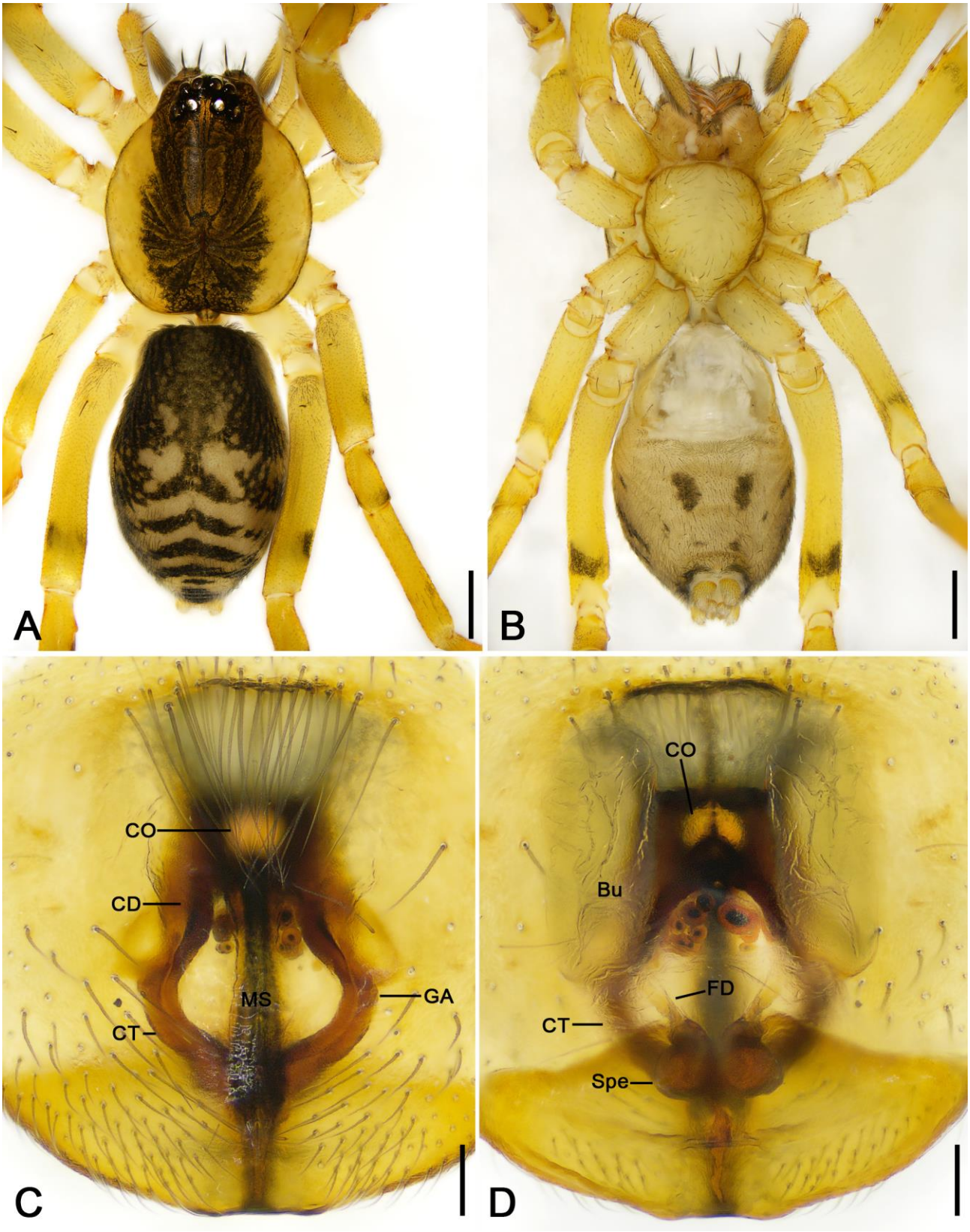

Figure 124. *Otacilia zhonglong* sp. nov., female holotype. **A** Habitus, dorsal view **B** Same, ventral view **C** Epigyne, ventral view **D** Epigyne, dorsal view. Scale bars: 0.5 mm (**A, B**), 0.1 mm (**C, D**). Abbreviations: Bu – bursa, CD – copulatory duct, CO – copulatory opening, CT – connecting tube, FD – fertilization ducts, GA – glandular appendage, MS – median septum, Spe – spermathecae.

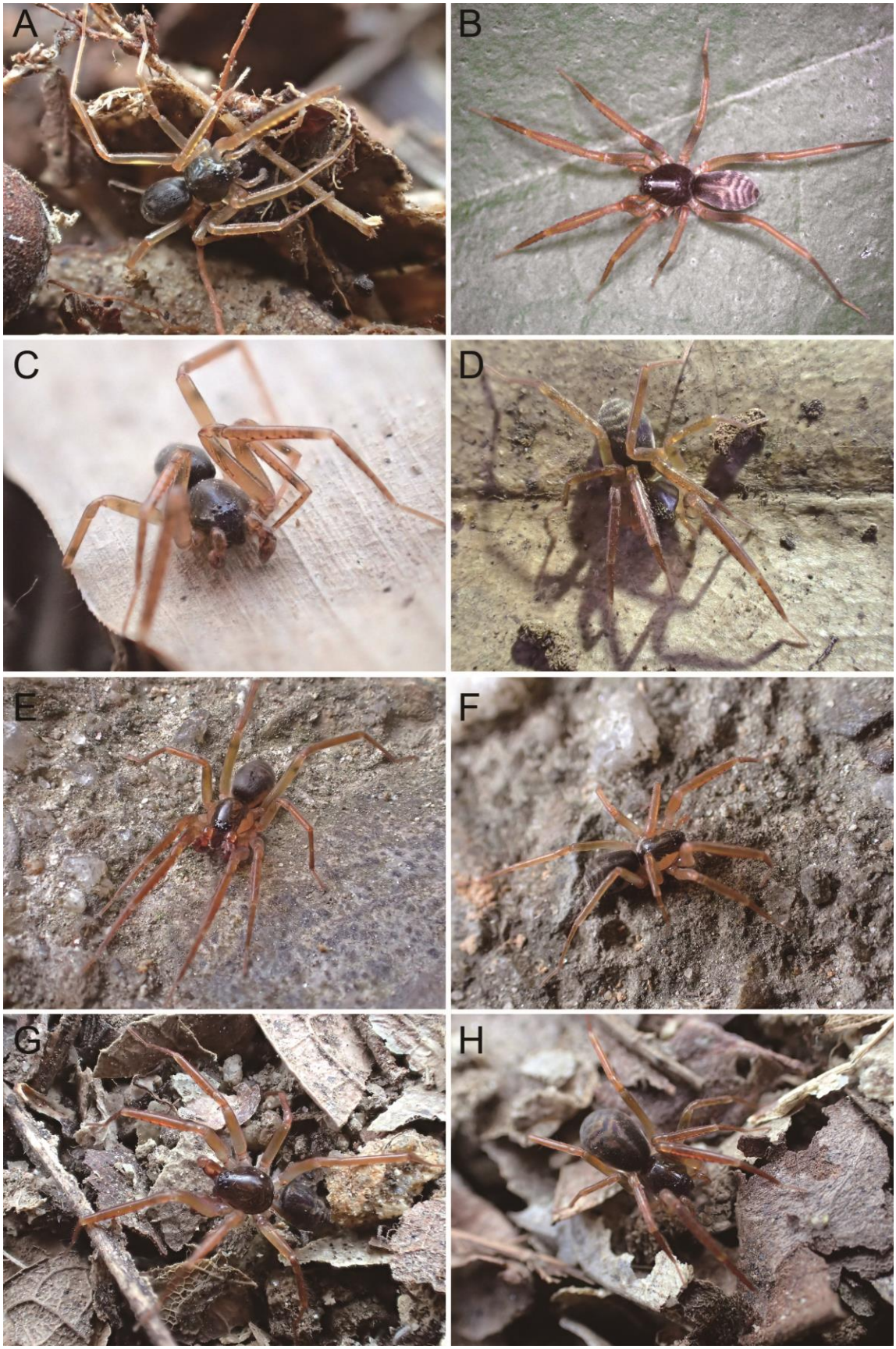

Figure 125. Photographs of living specimens of *Otacilia* from Jiangxi Province. **A–B** *Otacilia aotou* sp. nov., female **C** *Otacilia dadongshanica*, male **D** *Otacilia dadongshanica*, female **E** *Otacilia dawushan* sp. nov., male **F** *Otacilia dawushan* sp. nov., female **G** *Otacilia fuxi* sp. nov., male **H** *Otacilia fuxi* sp. nov., female.

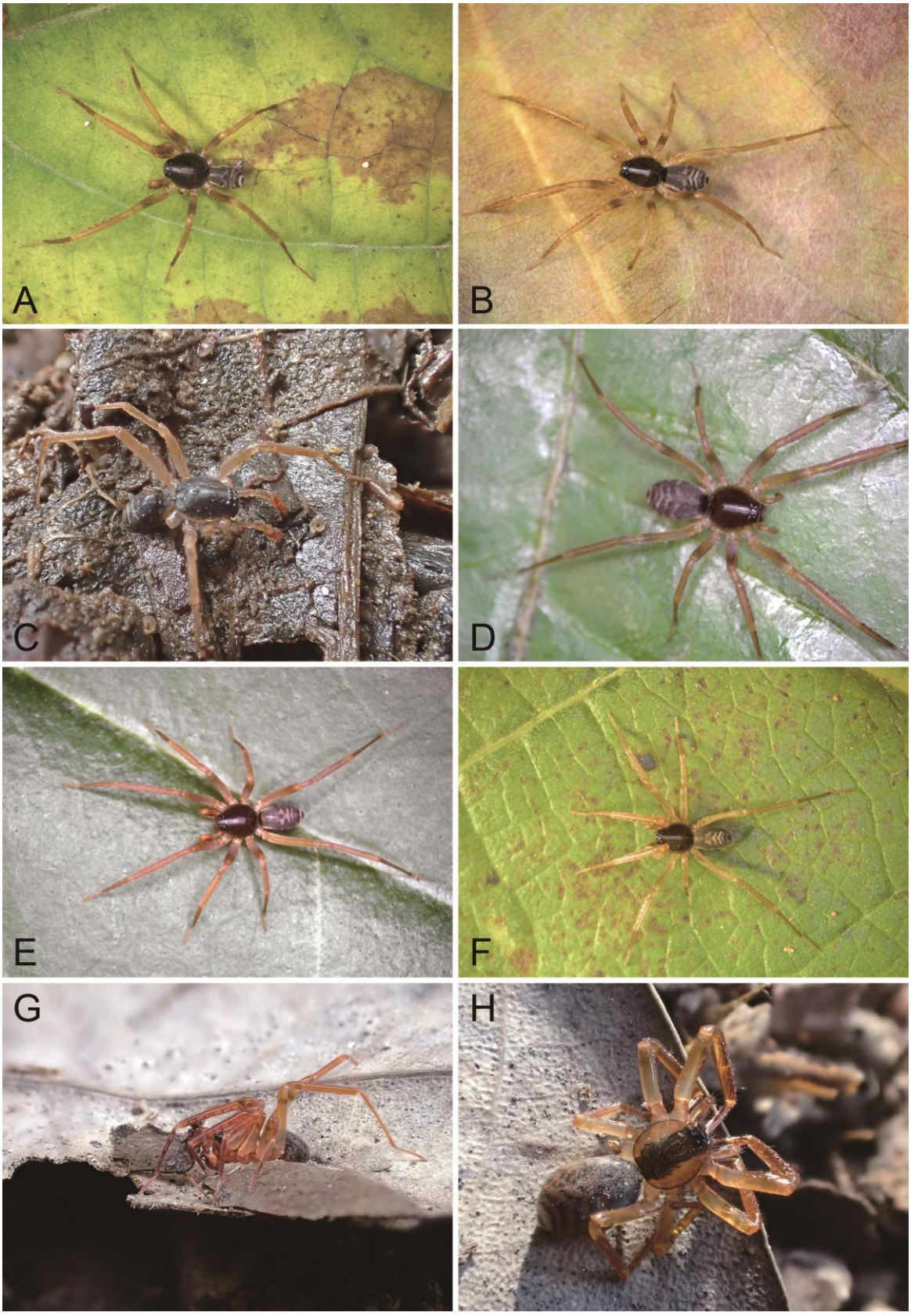

Figure 126. Photographs of living specimens of *Otacilia* from Jiangxi Province. **A** *Otacilia guizhumao* sp. nov., male **B** *Otacilia guizhumao* sp. nov., female **C** *Otacilia hushandong* sp. nov., male **D** *Otacilia hushandong* sp. nov., female **E** *Otacilia jiulianshan* sp. nov., male **F** *Otacilia jiulianshan* sp. nov., female **G** *Otacilia linghua* sp. nov., male **H** *Otacilia linghua* sp. nov., female.

Figure 127. Photographs of living specimens of *Otacilia* from Jiangxi Province. **A** *Otacilia longbu* sp. nov., female **B** *Otacilia ping* sp. nov., female **C** *Otacilia qingyuan* sp. nov., female **D** *Otacilia sanbai* sp. nov., male **E** *Otacilia sanbai* sp. nov., female **F** *Otacilia shuijiang*sp. nov., female **G** *Otacilia tianhua* sp. nov., male **H** *Otacilia tianhua* sp. nov., female.

Figure 128. Photographs of living specimens of *Otacilia* from Jiangxi Province. **A** *Otacilia wanshi* sp. nov., female **B** *Otacilia wanshi* sp. nov., female **C** *Otacilia wugongshanica*, male **D** *Otacilia wuzhifeng* sp. nov., male **E** *Otacilia wuzhifeng* sp. nov., female **F** *Otacilia xiangshan* sp. nov., male **G** *Otacilia xiangshan* sp. nov., female **H** *Otacilia xiaobu* sp. nov., female.

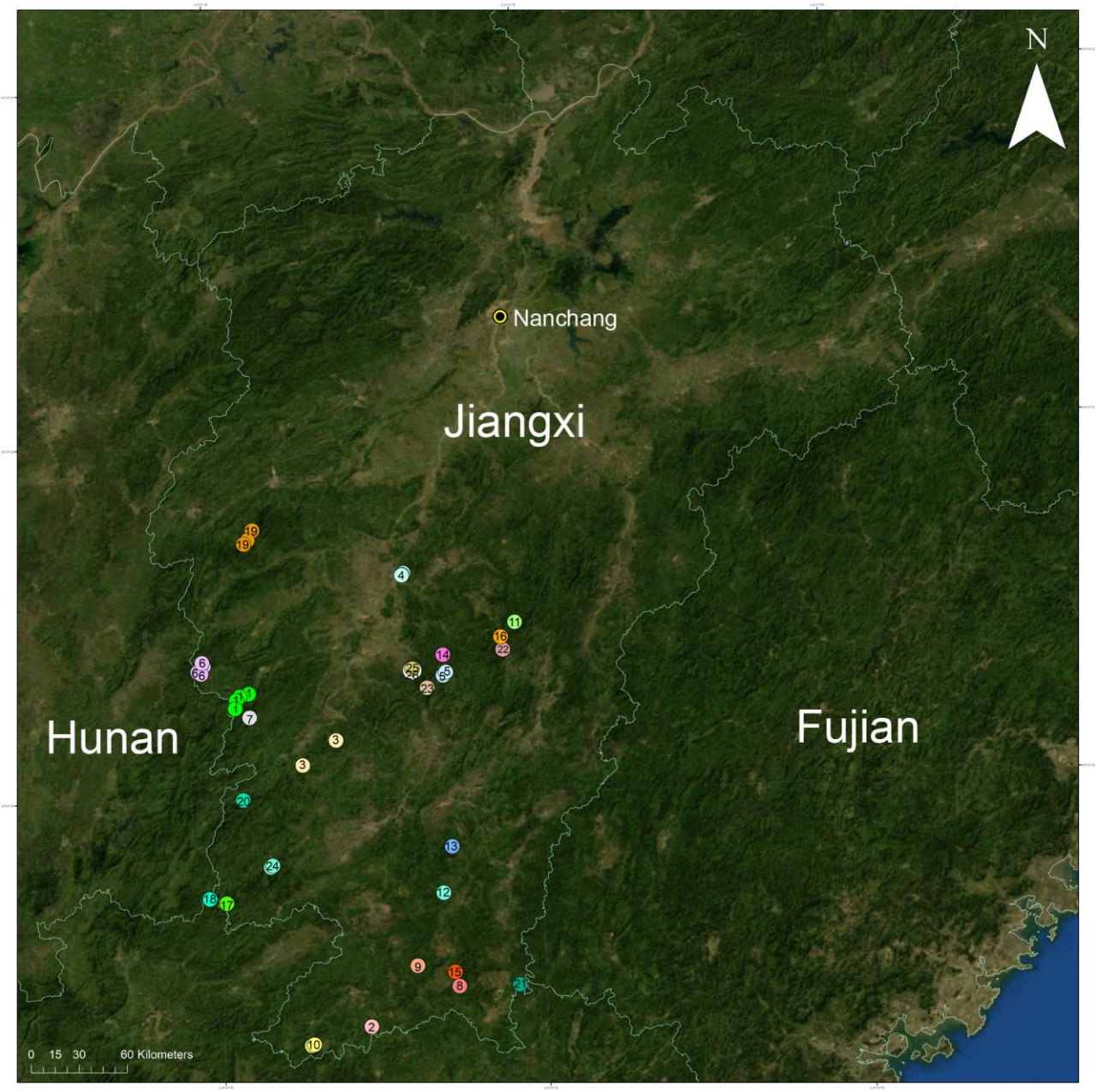

Figure 129. Records of *Otacilia acutangula* (1), *O. aotou* sp. nov. (2), *O. bizhouica* (3), *O. dadongshanica* (4), *O. dawushan* sp. nov. (5), *O. dongshang* sp. nov. (6), *O. fuxi* sp. nov. (7), *O. guizhumao* sp. nov. (8), *O. hushandong* sp. nov. (9), *O. jiulianshan* sp. nov. (10), *O. linghua* sp. nov. (11), *O. longbu* sp. nov. (12), *O. ping* sp. nov. (13), *O. qingyuan* sp. nov. (14), *O. sanbai* sp. nov. (15), *O. shuijiang*sp. nov. (16), *O. tianhua* sp. nov. (17), *O. wanshi* sp. nov. (18), *O. wugongshanica* (19), *O. wuzhifeng* sp. nov. (20), *O. xiangshan* sp. nov. (21), *O. xiaobu* sp. nov. (22), *O. xingguo* sp. nov., (23) *O. yangming* sp. nov. (24), *O. zhonglong* sp. nov. (25), and *O. ziyaoshanica* (26) from Jiangxi Province in China.

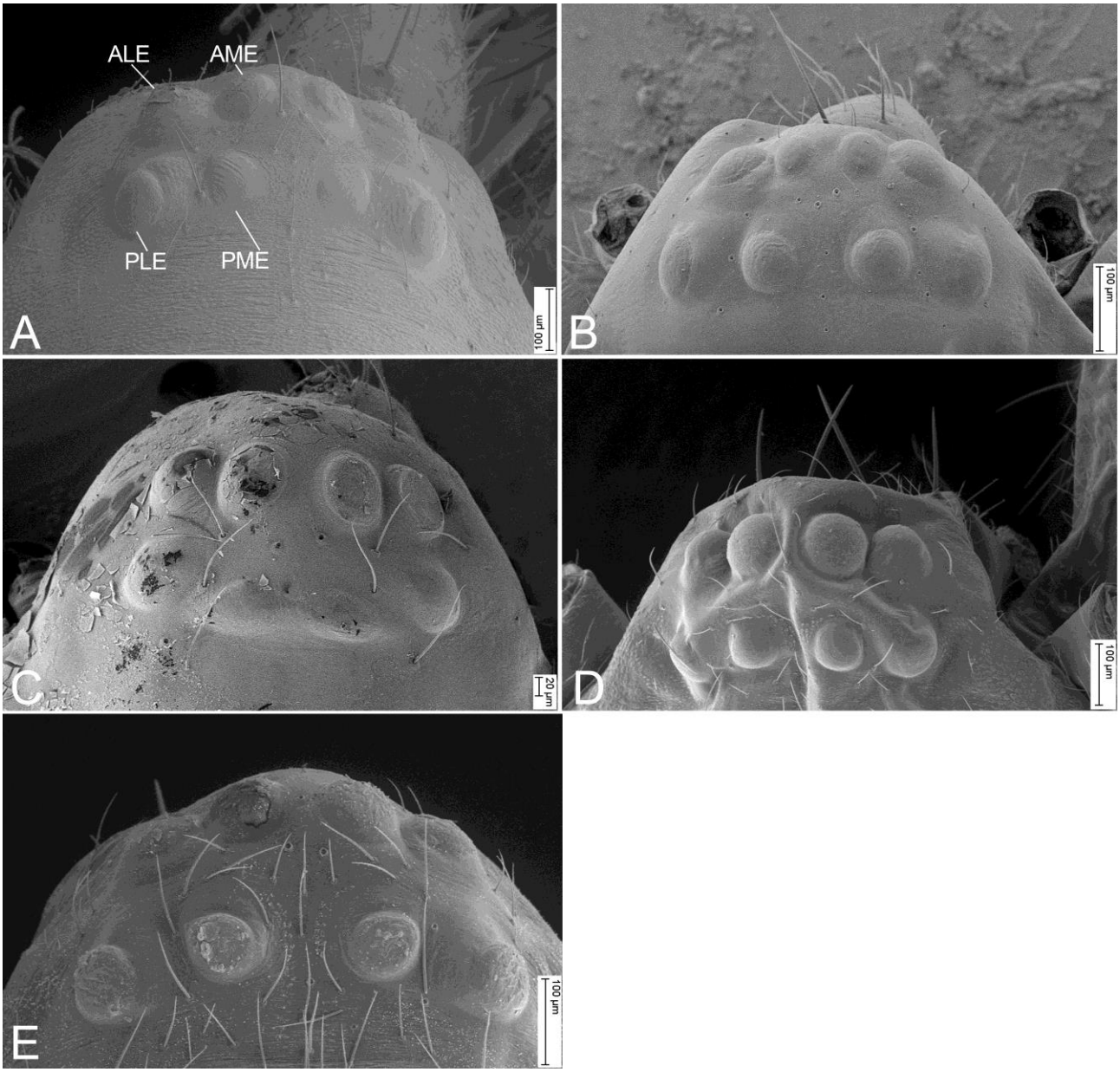

Figure 130. SEM micrographs of male eyes, dorsal view. **A** *Acrolithus* spp. **B** *Aculithus* spp. **C** *Alboculus* spp. **D** *Grandilithus* spp. **E** *Otacilia* spp.

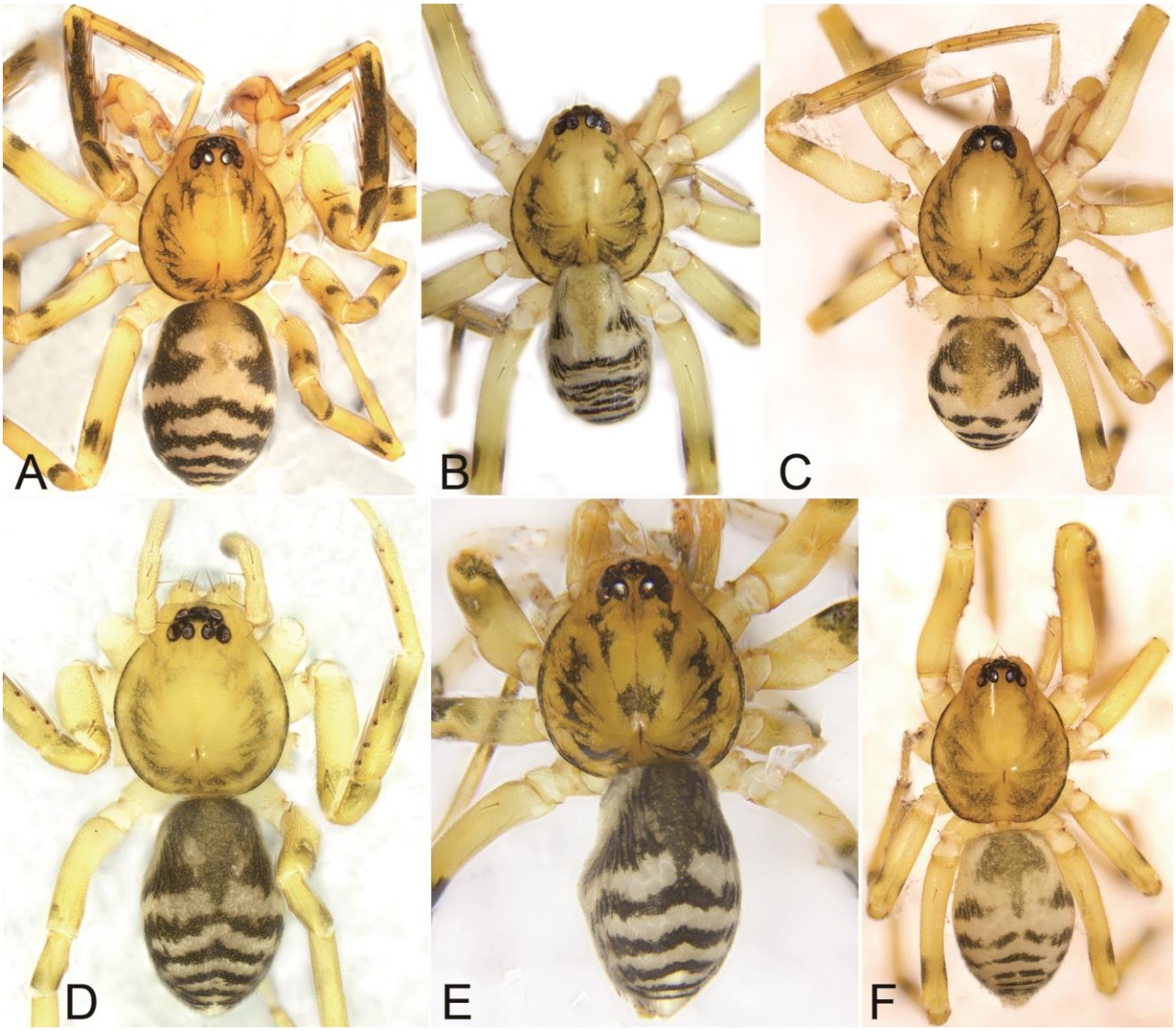

Figure 131. *Aculithus* spp., habitus, dorsal view. **A** *A. bijiashanicus* comb. nov., male **B** *A. fabiformis* comb., male **C** *A. subfabiformis* comb. nov., male **D** *A. bijiashanicus* comb. nov., female **E** *A. fabiformis* comb., female **F** *A. subfabiformis* comb. nov., female.

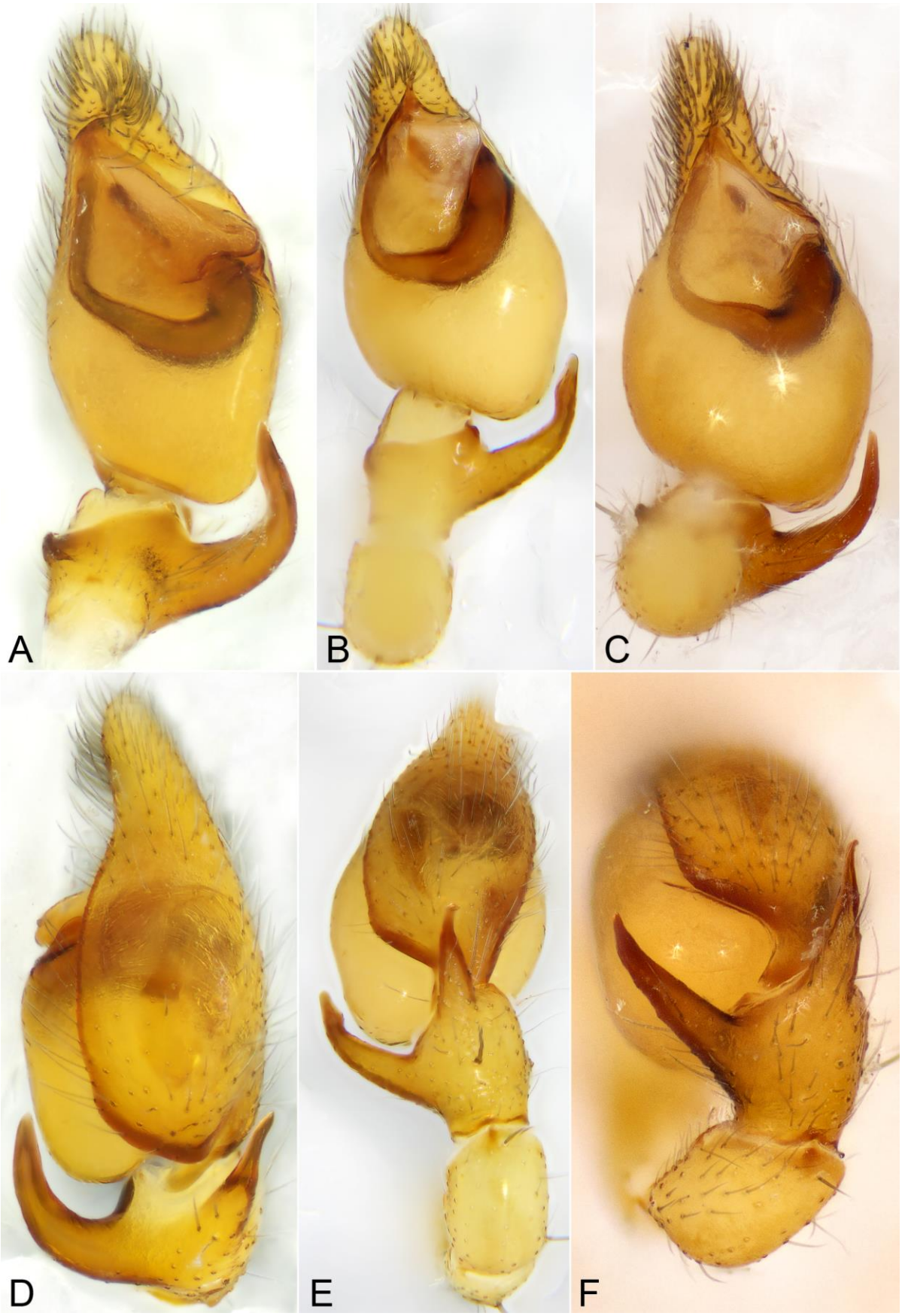

Figure 132. Male palps of *Aculithus* spp. **A** *A. bijiashanicus* comb. nov., ventral view **B** *A. fabiformis* comb., ventral view **C** *A. subfabiformis* comb. nov., ventral view **D** *A. bijiashanicus* comb. nov., dorsal view, slightly retrolateral **E** *A. fabiformis* comb., dorsal view **F** *A. subfabiformis* comb. nov., retrolateral view, slightly dorsal.

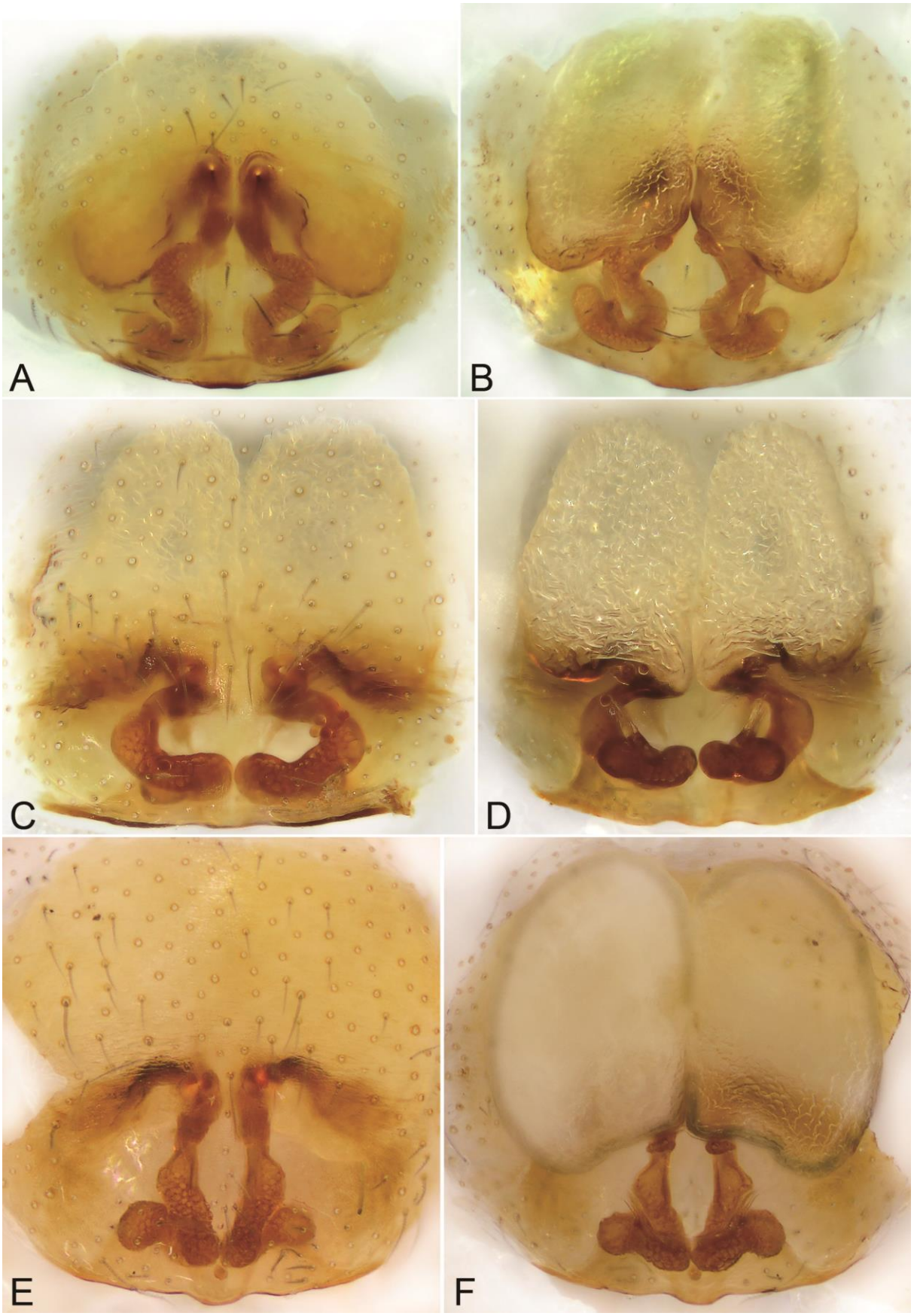

Figure 133. Epigyne of *Aculithus* spp. **A** *A. bijiashanicus* comb. nov., ventral view **B** Same, dorsal view **C** *A. fabiformis* comb., ventral view **D** Same, dorsal view **E** *A. subfabiformis* comb. nov., ventral view **F** Same, dorsal view.

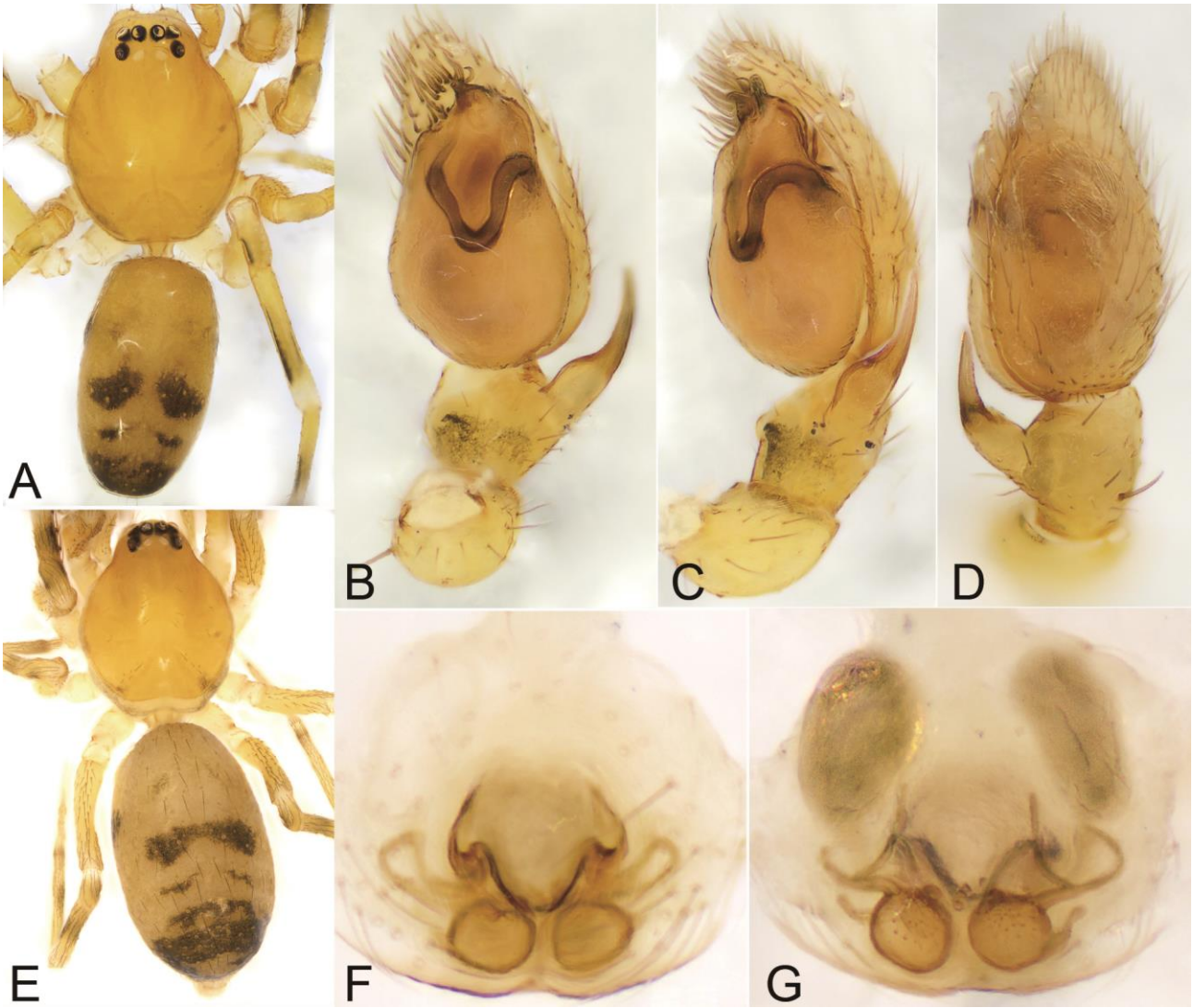

Figure 134. *Alboculus zhejiangensis* **A** Male habitus, dorsal view **B** Palp, ventral view **C** Same, retrolateral view **D** Same, dorsal view **E** Female habitus, dorsal view **F** Epigyne, ventral view **G** Same, dorsal view.

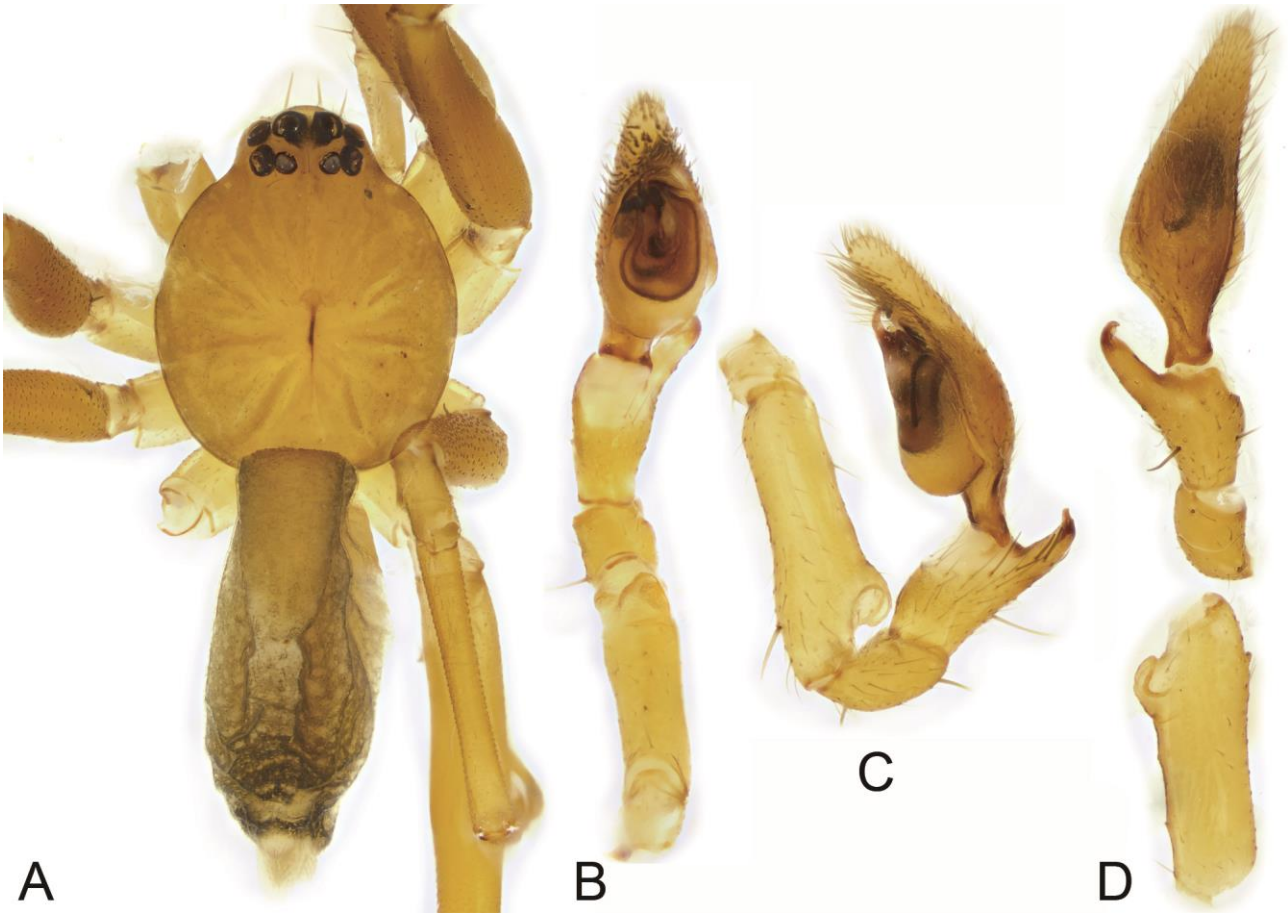

Figure 135. *Grandilithus nonggang* comb. nov., male holotype. **A** Male habitus, dorsal view **B** Palp, ventral view **C** Same, retrolateral view **D** Same, dorsal view.

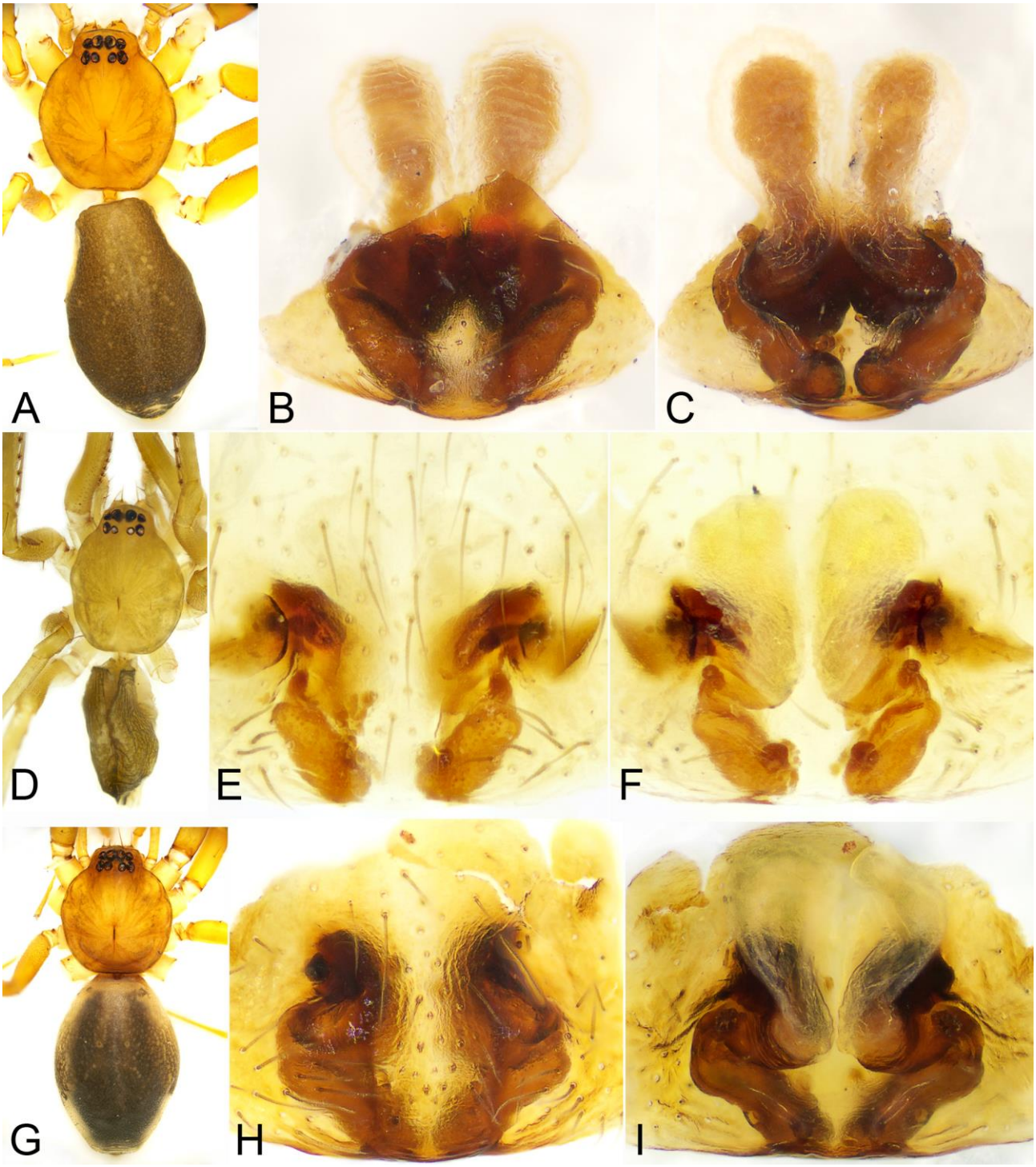

Figure 136. Female of *Grandilithus* spp. **A** *G. longtanicus* comb. nov., habitus, dorsal view **B** Same, epigyne, ventral view **C** Same, dorsal view **D** *G. nonggang* comb. nov., habitus, dorsal view **E** Same, epigyne, ventral view **F** Same, dorsal view **G** *G. xiaoxiicus* comb. nov., habitus, dorsal view **H** Same, epigyne, ventral view **I** Same, dorsal view.

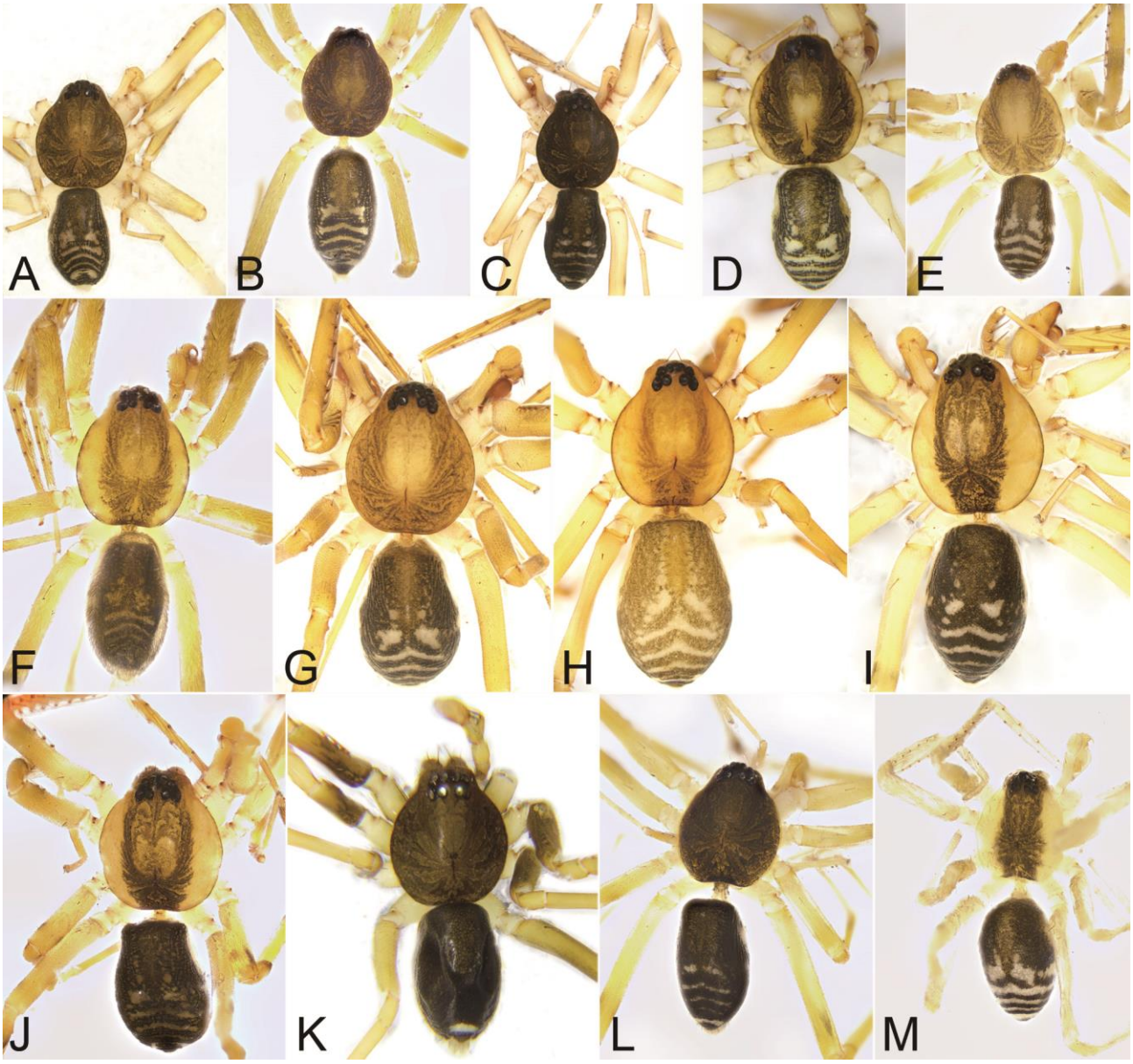

Figure 137. *Otacilia* spp., male habitus, dorsal view **A** *O. acutangula* **B** *O. bizhouica* **C** *O. dadongshanica* **D** *O. daweishan* **E** *O. gougunao* **F** *O. nanhuashanica* **G** *O. ovoidea* **H** *O. shenshanica* **I** *O. subovoidea* **J** *O. wugongshanica* **K** *O. yinae* **L** *O. yusishanica* **M** *O. zaoshiica.*

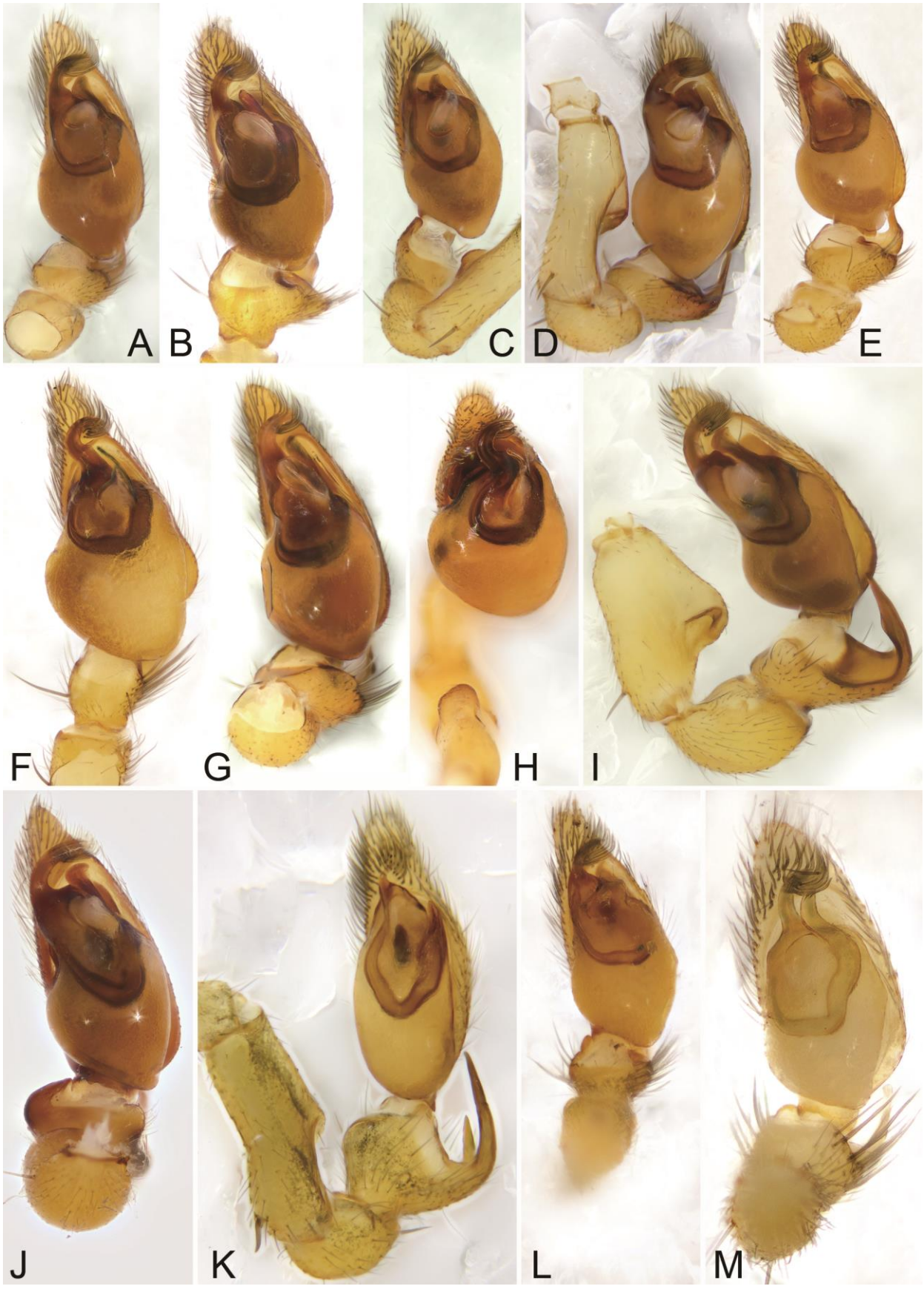

Figure 138. *Otacilia* spp., male palps, ventral view **A** *O. acutangula* **B** *O. bizhouica* **C** *O. dadongshanica* **D** *O. daweishan* **E** *O. gougunao* **F** *O. nanhuashanica* **G** *O. ovoidea* **H** *O. shenshanica* **I** *O. subovoidea* **J** *O. wugongshanica* **K** *O. yinae* **L** *O. yusishanica* **M** *O. zaoshiica.*

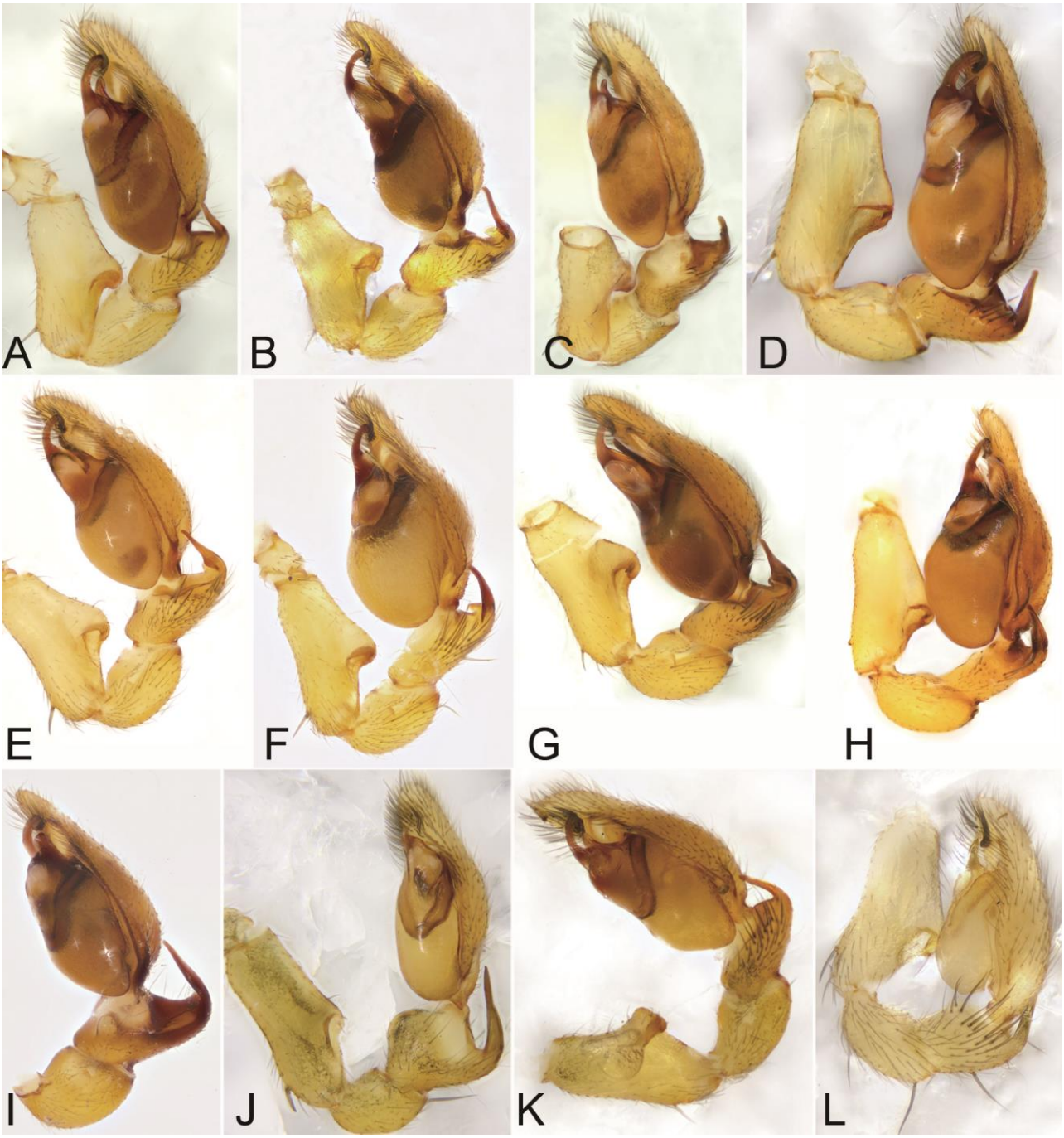

Figure 139. *Otacilia* spp., male palps, retrolateral view **A** *O. acutangula* **B** *O. bizhouica* **C** *O. dadongshanica* **D** *O. daweishan* **E** *O. gougunao* **F** *O. nanhuashanica* **G** *O. ovoidea* **H** *O. shenshanica* **I** *O. wugongshanica* **J** *O. yinae* **K** *O. yusishanica* **L** *O. zaoshiica.*

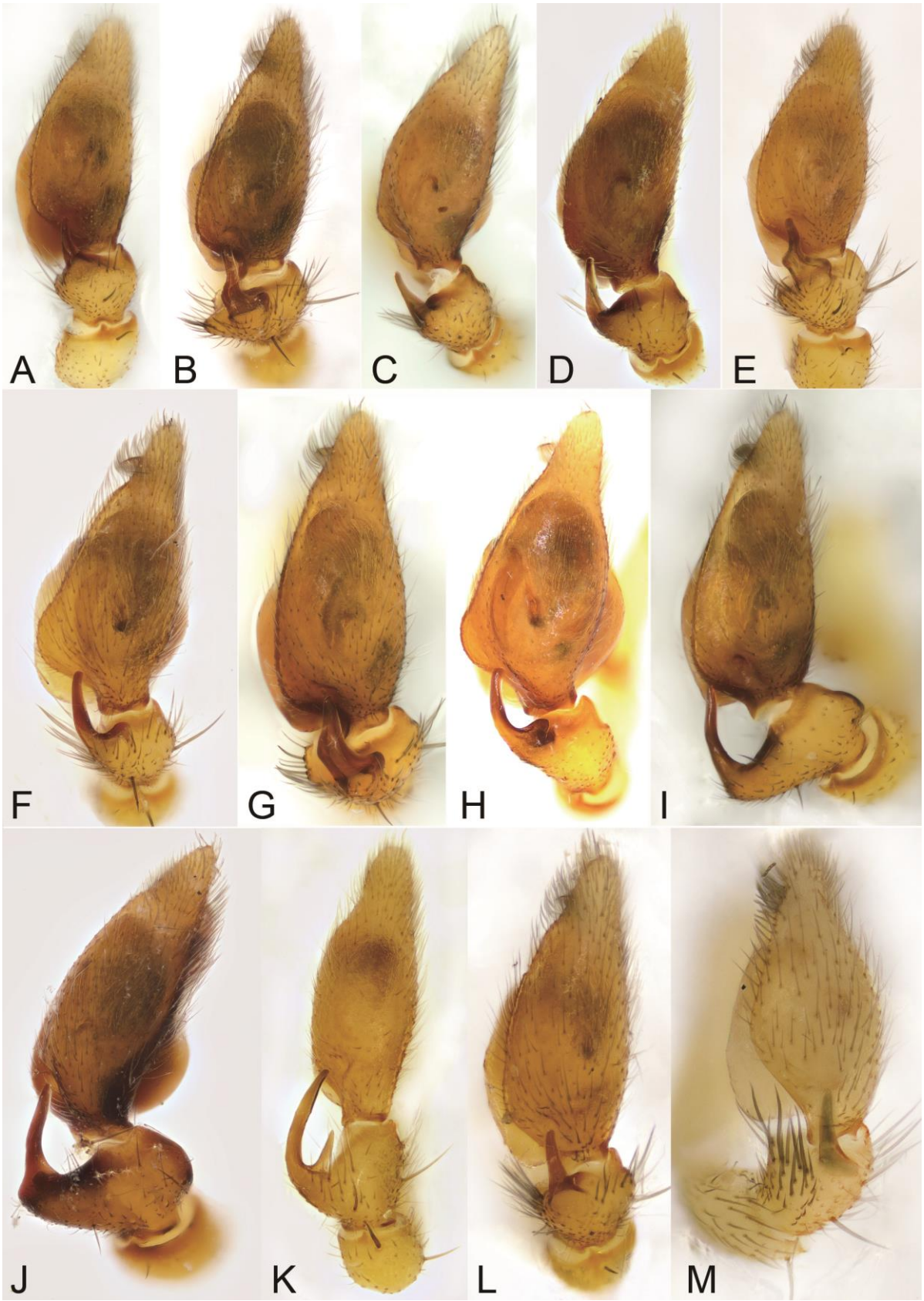

Figure 140. *Otacilia* spp., male palps, dorsal view **A** *O. acutangula* **B** *O. bizhouica* **C** *O. dadongshanica* **D** *O. daweishan* **E** *O. gougunao* **F** *O. nanhuashanica* **G** *O. ovoidea* **H** *O. shenshanica* **I** *O. subovoidea* **J** *O. wugongshanica* **K** *O. yinae* **L** *O. yusishanica* **M** *O. zaoshiica.*

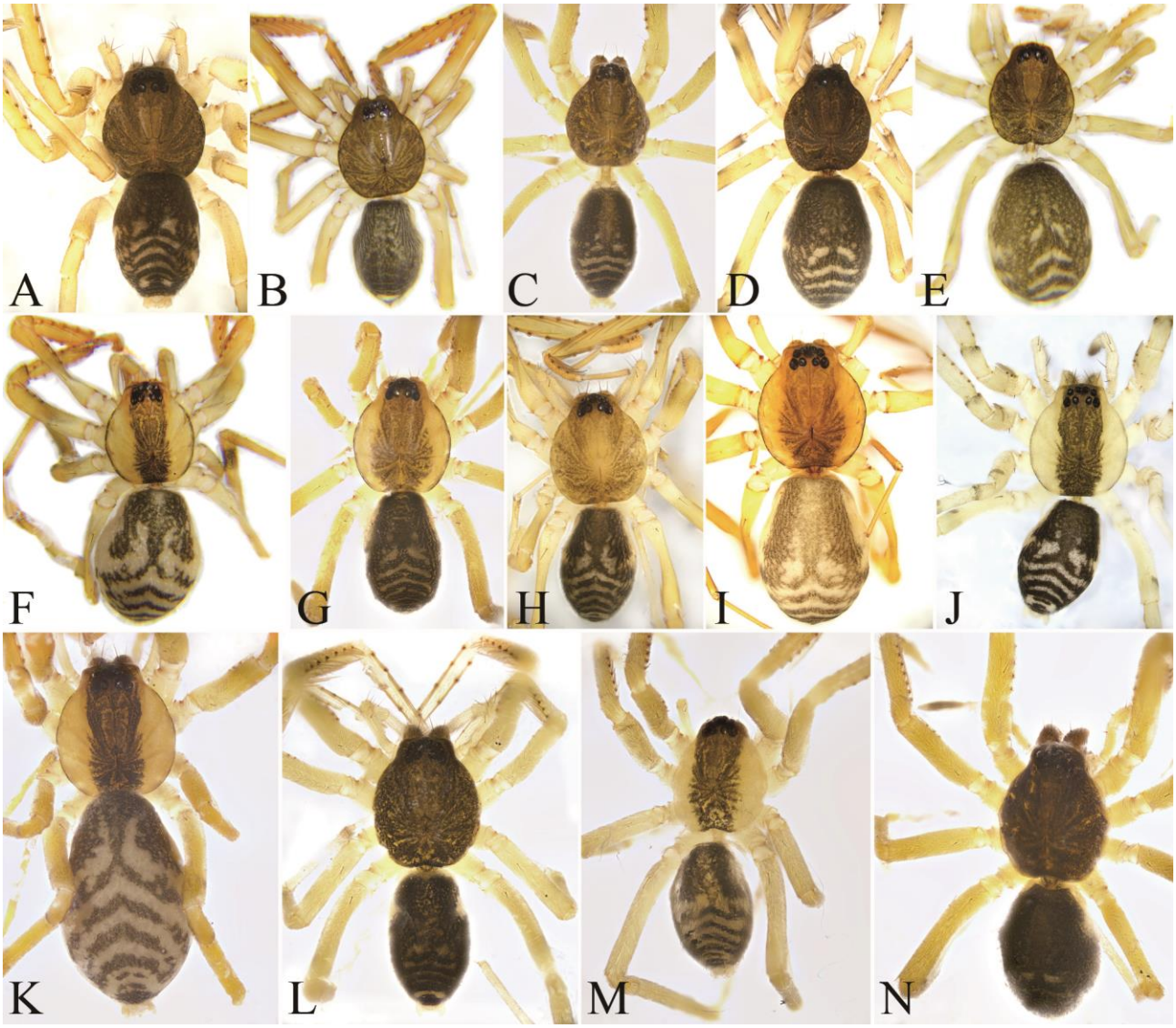

Figure 141. *Otacilia* spp., female habitus, dorsal view **A** *O. acutangula* **B** *O. ailan* **C** *O. bizhouica* **D** *O. dadongshanica* **E** *O. daweishan* **F** *O. jiandao* **G** *O. nanhuashanica* **H** *O. ovoidea* **I** *O. shenshanica* **J** *O. subovoidea* **K** *O. wugongshanica* **L** *O. yusishanica* **M** *O. zaoshiica* **N** *O. ziyaoshanica.*

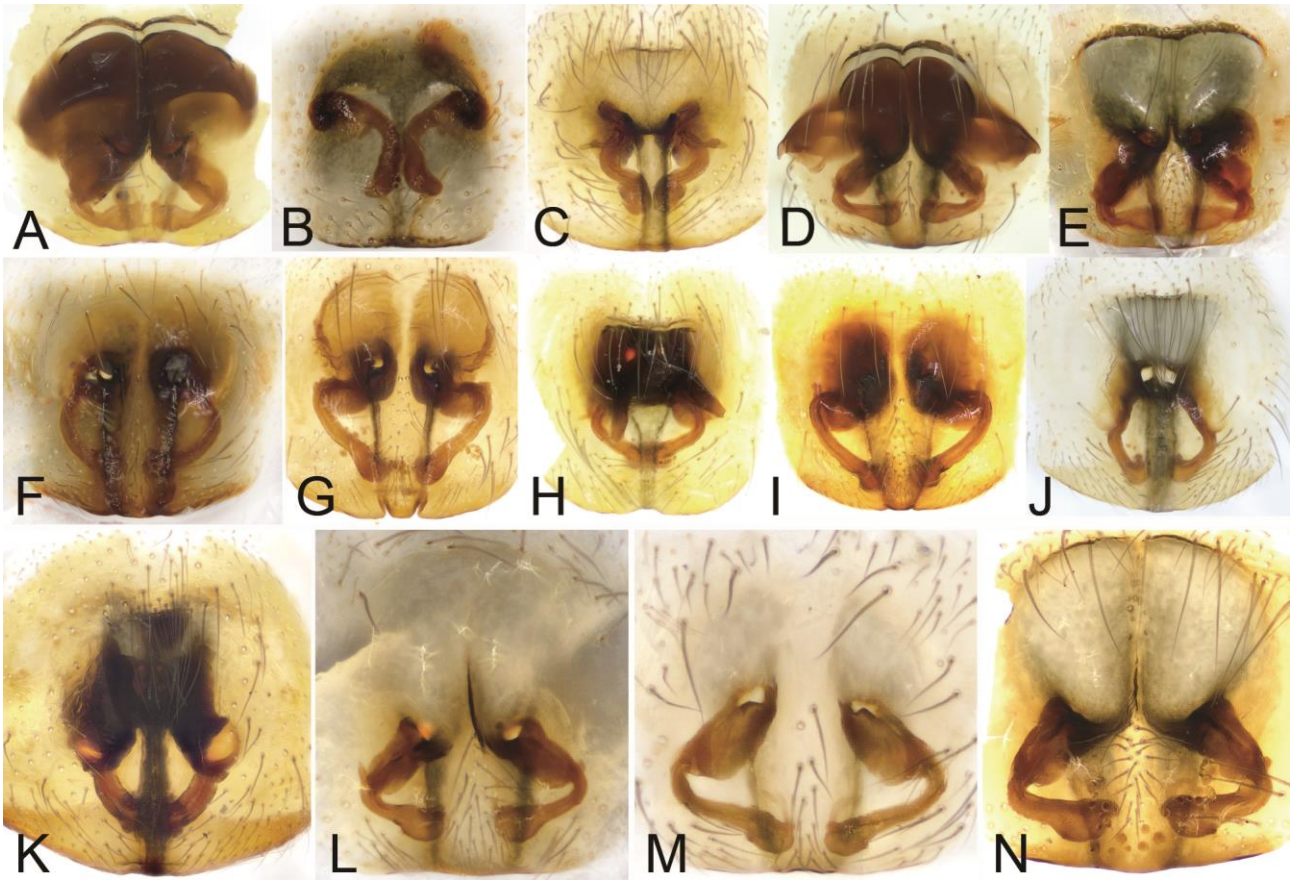

Figure 142. Epigyne of *Otacilia* spp., ventral view **A** *O. acutangula* **B** *O. ailan* **C** *O. bizhouica* **D** *O. dadongshanica* **E** *O. daweishan* **F** *O. jiandao* **G** *O. nanhuashanica* **H** *O. ovoidea* **I** *O. shenshanica* **J** *O. subovoidea* **K** *O. wugongshanica* **L** *O. yusishanica* **M** *O. zaoshiica* **N** *O. ziyaoshanica.*

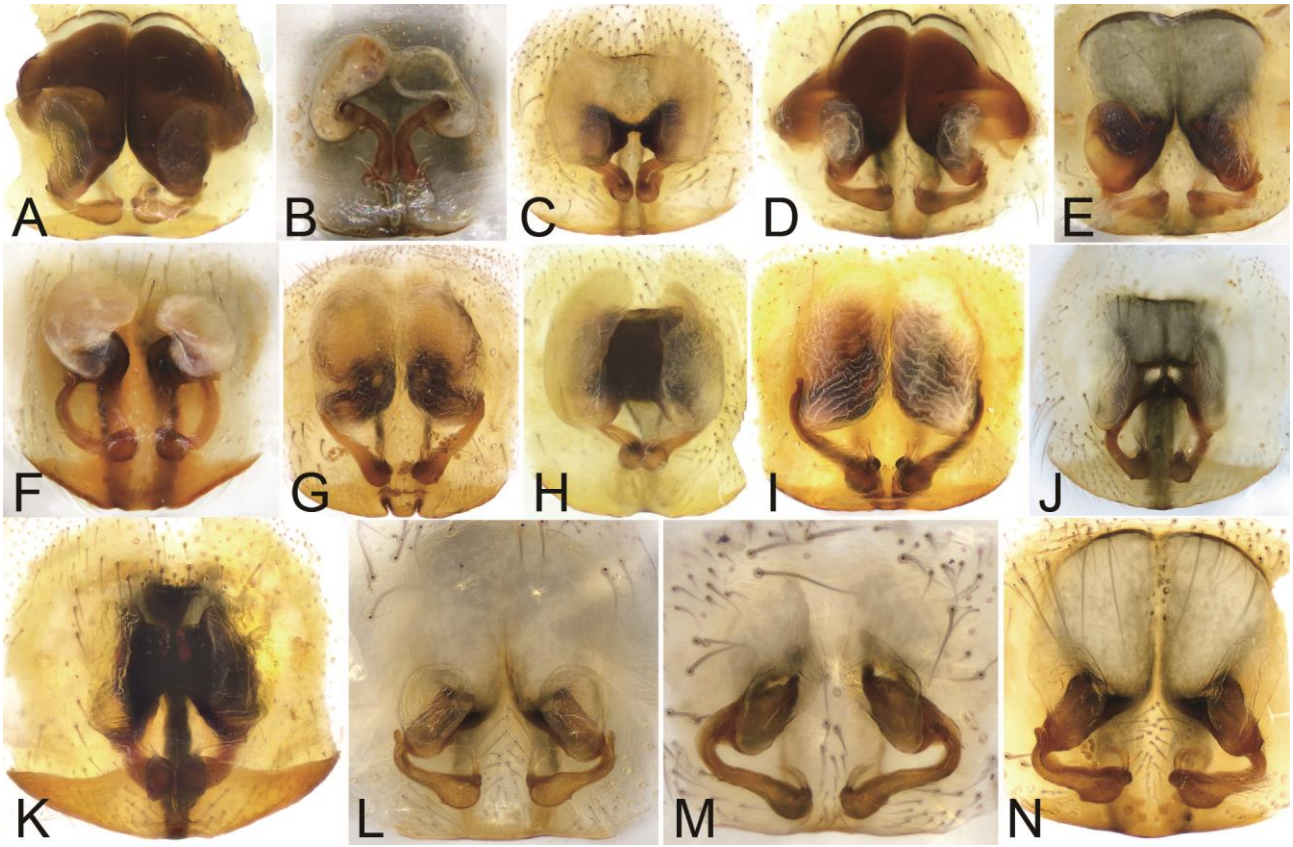

Figure 143. Epigyne of *Otacilia* spp., dorsal view **A** *O. acutangula* **B** *O. ailan* **C** *O. bizhouica* **D** *O. dadongshanica* **E** *O. daweishan* **F** *O. jiandao* **G** *O. nanhuashanica* **H** *O. ovoidea* **I** *O. shenshanica* **J** *O. subovoidea* **K** *O. wugongshanica* **L** *O. yusishanica* **M** *O. zaoshiica* **N** *O. ziyaoshanica.*