

ORIGINAL ARTICLE

Thirty-two new species of the genus *Speocera* Berland, 1914 (Araneae: Ochyroceratidae) from China, Madagascar and Southeast Asia

Yanfeng Tong¹, Fengyuan Li^{2,3}, Yang Song³, Haifeng Chen⁴, Shuqiang Li^{3*}

¹Life Science College, Shenyang Normal University, Shenyang 110034, China

²Southeast Asia Biological Diversity Research Institute, Chinese Academy of Sciences, Yezin, Nay Pyi Taw 05282, Myanmar

³Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China

⁴College of Life Science, Langfang Normal University, Langfang 065000, China

*Corresponding author, E-mail: lisq@ioz.ac.cn

Abstract Thirty-two new species of the spider genus *Speocera* Berland, 1914 from the spider family Ochyroceratidae Fage, 1912 are described from China, Madagascar, and Southeast Asia, namely *S. amber* Li & Li **sp. nov.** (♂♀), *S. ankalana* Li & Li **sp. nov.** (♂♀), *S. bachma* Li & Li **sp. nov.** (♂♀), *S. balikpapan* Li & Li **sp. nov.** (♀), *S. ballarini* Li & Li **sp. nov.** (♂), *S. batang* Li & Li **sp. nov.** (♀), *S. bawangling* Li & Li **sp. nov.** (♂♀), *S. bontoc* Li & Li **sp. nov.** (♀), *S. bukittinggi* Li & Li **sp. nov.** (♂♀), *S. cattien* Li & Li **sp. nov.** (♂♀), *S. cucphuong* Li & Li **sp. nov.** (♂♀), *S. cuyapo* Li & Li **sp. nov.** (♀), *S. dongjing* Li & Li **sp. nov.** (♀), *S. gexuejuni* Li & Li **sp. nov.** (♂♀), *S. griswoldi* Li & Li **sp. nov.** (♀), *S. heilan* Li & Li **sp. nov.** (♂♀), *S. huihengi* Li & Li **sp. nov.** (♀), *S. huisun* Li & Li **sp. nov.** (♀), *S. lahrak* Li & Li **sp. nov.** (♂♀), *S. longyan* Li & Li **sp. nov.** (♂♀), *S. manhao* Li & Li **sp. nov.** (♂♀), *S. melinh* Li & Li **sp. nov.** (♀), *S. nuichua* Li & Li **sp. nov.** (♂♀), *S. payakumbuh* Li & Li **sp. nov.** (♂♀), *S. suea* Li & Li **sp. nov.** (♂♀), *S. tabuk* Li & Li **sp. nov.** (♀), *S. trapezialis* Li & Li **sp. nov.** (♂♀), *S. trusmadi* Li & Li **sp. nov.** (♂♀), *S. tubularis* Li & Li **sp. nov.** (♂♀), *S. xiaoxiaoe* Li & Li **sp. nov.** (♂♀), *S. xuanson* Li & Li **sp. nov.** (♂♀), *S. zhigangi* Li & Li **sp. nov.** (♂♀). Types of all new species are deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS) in Beijing, China and the California Academy of Sciences (CAS) in San Francisco, USA.

Key words Spider, taxonomy, morphology, diagnosis.

1 Introduction

The spider family Ochyroceratidae Fage, 1912 includes 131 extant species in 10 genera (WSC, 2018) which are restricted to tropical regions around the world, including Asia, Africa and the Neotropics (Jocqué & Dippenaar-Schoeman, 2006; Dupérré, 2015; Li & Quan, 2017).

Speocera Berland, 1914 are very small spiders, up to just over 1 mm long. This genus is characterized by having a series of six to seven teeth on the promargin of the chelicerae, the absence of an apophysis on the male palpal tibia, and the long afferent spermathecae running on the surface of female abdomen.

This genus currently comprises 52 species: 11 in America, 7 in Africa, 5 in China, 28 in Southeast Asia and vicinity, and 1 in Sri Lanka (WSC, 2018). Most species are found in leaf litter, frequently in bamboo litter, or on the forest floor,

urn:lsid:zoobank.org:pub:044F94BB-26D6-486A-95B6-F137F5C9AACB

Received 30 November 2018, accepted 10 January 2019

Executive editor: Fuqiang Chen

including in humus where species “construct tiny irregular webs inside a dead curved leaf, a bamboo stem or among debris” (Deeleman-Reinhold, 1995).

2 Materials and methods

All spiders were preserved in 95% ethanol and examined with a LEICA M205C stereomicroscope. Images were captured with an Olympus C7070 wide zoom digital camera (7.1 megapixels) mounted on an Olympus SZX12 dissecting microscope, and Helicon Focus image stacking software was used to compile the images. All images were edited with Adobe Photoshop CS8.1®. Methods followed those of Wang and Li (2011); terminology follows Tong and Li (2007), Deeleman-Reinhold (1995) and Dupérré (2015). All measurements are given in millimeters (mm). Leg measurements are displayed as total length (femur, patella, tibia, metatarsus, tarsus). Leg segments were measured on the dorsal side. Types of all new species are deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS) in Beijing, China and the California Academy of Sciences (CAS) in San Francisco, USA.

Abbreviations of morphological structures as follows:

ALE—anterior lateral eyes;

AS—afferent spermathecae;

E—embolus;

PME—posterior median eyes;

PLE—posterior lateral eyes;

S—spermathecae;

SC—associated sclerite;

SD—sperm duct.

3 Taxonomy

Ochyroceratidae Fage, 1912

Speocera Berland, 1914

Speocera Berland, 1914: 89. Type species: *Speocera pallida* Berland, 1914.

Diagnosis. Promargin of chelicerae with a series of six to seven teeth reaching the lamina. Tracheal spiracle between the epigastric fold and spinnerets. Carapace slightly longer than wide. Clypeus almost vertical, short (1 to 3x PME); tip of labium notched. Legs short. Male palpal tibia without apophysis; male palpal bulb usually spherical or oval, embolus usually with associated sclerites (Dupérré, 2015).

Speocera amber Li & Li sp. nov. (Figs 1–2, 55A)

Material examined. Holotype ♂ (IZCAS), Madagascar, Antsiranana Province, Antsiranana District, Amber Mountain (12°31.796'S, 49°10.460'E), elev. 1084m, 14.XII.2016, leg. H. Zhao. Paratype 1♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species can be distinguished from all other congeners by the very long, ribbon-like embolus of the males (Figs 1A–B) and the spiral spermathecae of the females (Fig. 2A).

Description. Male. Total length 0.95; carapace length 0.45; carapace width 0.43; abdomen length 0.47; abdomen width 0.34. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 2C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, longer than wide. Endites light yellow, suffused with purplish tinge; with serrula; labium light yellow, suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; anterolateral margin with a cluster of short setae; promargin with a series of six teeth reaching the lamina; retromargin with two small denticles (Fig. 55A). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 2C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I 2.45 (1.06, 0.16, 0.58, 0.39, 0.27); II 1.67 (0.46, 0.11, 0.50, 0.34, 0.26); III 1.47 (0.41, 0.13, 0.38, 0.33, 0.23); IV missing. Genitalia (Fig. 1). Palpal femur long; palpal tibia about 1.3 times as long as cymbium (Figs 1A–B). Cymbium conical, without prolateral extension

(Fig. 1A). Bulb spherical. Embolus very long, ribbon-like, nearly transparent, associated sclerite absent; sperm duct initially medium size, gradually tapering distally (Fig. 1D).

Female. Total length 1.20; carapace length 0.51; carapace width 0.43; abdomen length 0.64; abdomen width 0.50. Similar to male in color and general features (Figs 2D–E) but larger. Chelicerae unmodified. Leg lengths I missing; II 1.92 (0.53, 0.15, 0.57, 0.39, 0.28); III 1.50 (0.41, 0.14, 0.38, 0.33, 0.25); IV 1.98 (0.55, 0.14, 0.56, 0.43, 0.30). Genitalia. Internal genitalia with afferent spermathecae short, straight, not extending past the sides of the abdomen (Fig. 2B); spermathecae spiral (Fig. 2A).

Distribution. Known only from the type locality.

***Speocera ankalana* Li & Li sp. nov.** (Figs 3–4, 55B)

Material examined. Holotype ♂ (IZCAS), Madagascar, Antsiranana Province, Ambilobe District, Ankalana National Park (12°57.010'S, 49°07.021'E), elev. 140 m, 16.XII.2016, leg. H. Zhao. Paratype 1 ♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. transleuser* Deeleman-Reinhold, 1995, but males can be distinguished by the laterally strongly excavated chelicerae (Fig. 55B) and the elliptical palpal bulb (Figs 3A–B), and the females by the very short, straight afferent spermathecae (Fig. 4A). *S. transleuser* males have antero-posteriorly compressed chelicerae and a nearly flattened palpal bulb, and females have long, curved afferent spermathecae (Deeleman-Reinhold, 1995: figs 257–260).

Description. Male. Total length 0.96; carapace length 0.47; carapace width 0.41; abdomen length 0.45; abdomen width 0.28. Prosoma: carapace pyriform, narrowing gradually anteriorly, anterior margin smoothly curved in dorsal view; light yellow, suffused with purplish pattern (Fig. 4C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; external margin strongly excavated; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 55B). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 4C). Opisthosoma oval; purplish. Legs missing. Genitalia (Fig. 3). Palpal femur long; palpal tibia elongated, about 1.6 times as long as cymbium (Figs 3A–B). Cymbium conical, without prolateral extension. Bulb elliptical, much longer than wide. Embolus short, black, associated sclerites belt-like; sperm duct initially medium sized, becoming very narrow distally (Fig. 3D).

Female. Total length 1.23; carapace length 0.48; carapace width 0.40; abdomen length 0.70; abdomen width 0.56. Similar to male in color and general features (Figs 4C–D) but larger. Chelicerae unmodified. Legs light yellow; I, II, IV missing; III 1.46 (0.41, 0.14, 0.38, 0.29, 0.23). Genitalia. Internal genitalia with afferent spermathecae short, straight, not extending past the sides of the abdomen; tip of the afferent spermathecae question mark shaped (Fig. 4B); spermathecae oval (Fig. 4A).

Distribution. Known only from the type locality.

***Speocera bachma* Li & Li sp. nov.** (Figs 5–6, 55C)

Material examined. Holotype ♂ (IZCAS), Vietnam, Thua Thien Hue Province, Bach Ma National Park, Da Dung Village (16°13.203'N, 107°52.944'E), elev. 69 m, 26.VIII.2015, leg. Q. Zhao, Y. Li & Z. Chen. Paratypes 2 ♂ 3 ♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. capra* Deeleman-Reinhold, 1995, but males can be distinguished by the unmodified chelicerae (Fig. 55C) and the females by the posteriorly directed, coiled afferent spermathecae (Fig. 6B). *S. capra* males have laterally excavated chelicerae, with a lateral horn, and females have anteriorly directed, straight afferent spermathecae (Deeleman-Reinhold, 1995: figs 273–279).

Description. Male. Total length 0.92; carapace length 0.49; carapace width 0.41; abdomen length 0.46; abdomen width 0.33. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 6C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 55C). Eyes: six contiguous eyes surrounded by black pigmentation; PME smallest, ALE largest (Fig. 6C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I 1.86 (0.53, 0.14, 0.55, 0.36, 0.28); II 1.71 (0.50, 0.14, 0.47, 0.33, 0.27); III missing; IV 1.93 (0.56, 0.15, 0.54, 0.42, 0.26). Genitalia (Fig. 5). Palpal femur long; palpal tibia as long as

cymbium (Figs 5A–B). Cymbium conical, without prolateral extension. Bulb spherical. Embolus very short, dark and without distinct associated sclerites; sperm duct initially wide, gradually narrowing distally (Fig. 5D).

Female. Total length 1.06; carapace length 0.51; carapace width 0.42; abdomen length 0.54; abdomen width 0.46. Similar to male in color and general features (Figs 6D–E) but larger. Leg lengths I 1.81 (0.50, 0.14, 0.51, 0.38, 0.27); II 1.67 (0.48, 0.16, 0.46, 0.33, 0.25); III missing; IV 1.94 (0.55, 0.13, 0.56, 0.42, 0.28). Genitalia. Internal genitalia with afferent spermathecae short, strongly curved away from the epigastric furrow, not extending past the sides of the abdomen; tip of the afferent spermathecae question mark shaped (Fig. 6B); spermathecae oval (Fig. 6A).

Distribution. Known only from the type locality.

***Speocera balikpapan* Li & Li sp. nov.** (Figs 7, 58A)

Material examined. Holotype ♀ (IZCAS), Indonesia, Borneo, Balikpapan, Wanarist (1°01.523'S, 116°51.917'E), elev. 60 m, 18.VIII.2017, leg. H. Liu & Z. Chen.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. phangngaensis* Deeleman-Reinhold, 1995 but can be distinguished by the long, tubular spermathecae (Fig. 7A). *S. phangngaensis* females have oval spermathecae (Deeleman-Reinhold, 1995: fig. 290).

Description. Female. Total length 1.08; carapace length 0.50; carapace width 0.43; abdomen length 0.55; abdomen width 0.41. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 7A); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow with purplish tinge; with serrula; labium light yellow with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58A). Eyes: six contiguous eyes surrounded by black pigmentation, nearly subequal (Fig. 7C). Opisthosoma oval; purplish (Fig. 7D). Legs missing. Genitalia. Internal genitalia with afferent spermathecae short, straight, not extending past the sides of the abdomen (Fig. 7B); spermathecae long, tubular (Fig. 7A).

Male. Unknown.

Distribution. Known only from the type locality.

***Speocera ballarini* Li & Li sp. nov.** (Figs 8–9, 55D)

Material examined. Holotype ♂ (IZCAS), Philippines, Luzon Island, Tarlac Province, Tarlac City, near Monasterio de Tarlac. (15°26.900'N, 120°25.671'E), elev. 131 m, 20.V.2015, leg. F. Ballarin & Y. Li.

Etymology. The specific name is taken after one of the collectors, Dr. Francesco Ballarin; name in genitive case.

Diagnosis. The new species is similar to *S. suratthaniensis* Deeleman-Reinhold, 1995 but can be distinguished by the greatly enlarged palpal tibia, the spherical palp and the wide embolus (Figs 8A–B). *S. suratthaniensis* males have a slightly enlarged palpal tibia, a flattened palp and narrow embolus (Deeleman-Reinhold, 1995: fig. 292).

Description. Male. Total length 0.90; carapace length 0.45; carapace width 0.38; abdomen length 0.43; abdomen width 0.30. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 9A); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 9B). Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow, long, laterally slightly excavated; promargin with a series of six teeth reaching the lamina; retromargin with two small denticles (Fig. 55D). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, ALE and PLE nearly subequal (Fig. 9A). Opisthosoma oval; purplish (Fig. 9B). Legs light yellow; leg lengths I 1.37 (0.37, 0.13, 0.33, 0.31, 0.23); II 1.82 (0.48, 0.17, 0.55, 0.36, 0.26); III, IV missing. Genitalia (Fig. 8). Palpal femur long; palpal tibia greatly enlarged basally, as long as cymbium (Figs 8A–B). Cymbium conical, with long prolateral extension basally (Fig. 8A). Bulb spherical, as long as wide. Embolus long, wide, dark and basally with a short associated sclerite; sperm duct initially wide, gradually narrowing distally (Fig. 8D).

Female. Unknown.

Distribution. Known only from the type locality.

***Speocera batang* Li & Li sp. nov.** (Figs 10, 58B)

Material examined. Holotype ♀ (IZCAS), Indonesia, Sumatra, West Sumatra Province, Kab Agam Kecamatan Matur, Kanagarian Matuailia, Batang Lawang Cave (0°15.739'S, 100°18.491'E), elev. 761 m, 12.I.2014, leg. H. Zhao.

Etymology. The specific name is derived from the type locality; noun.

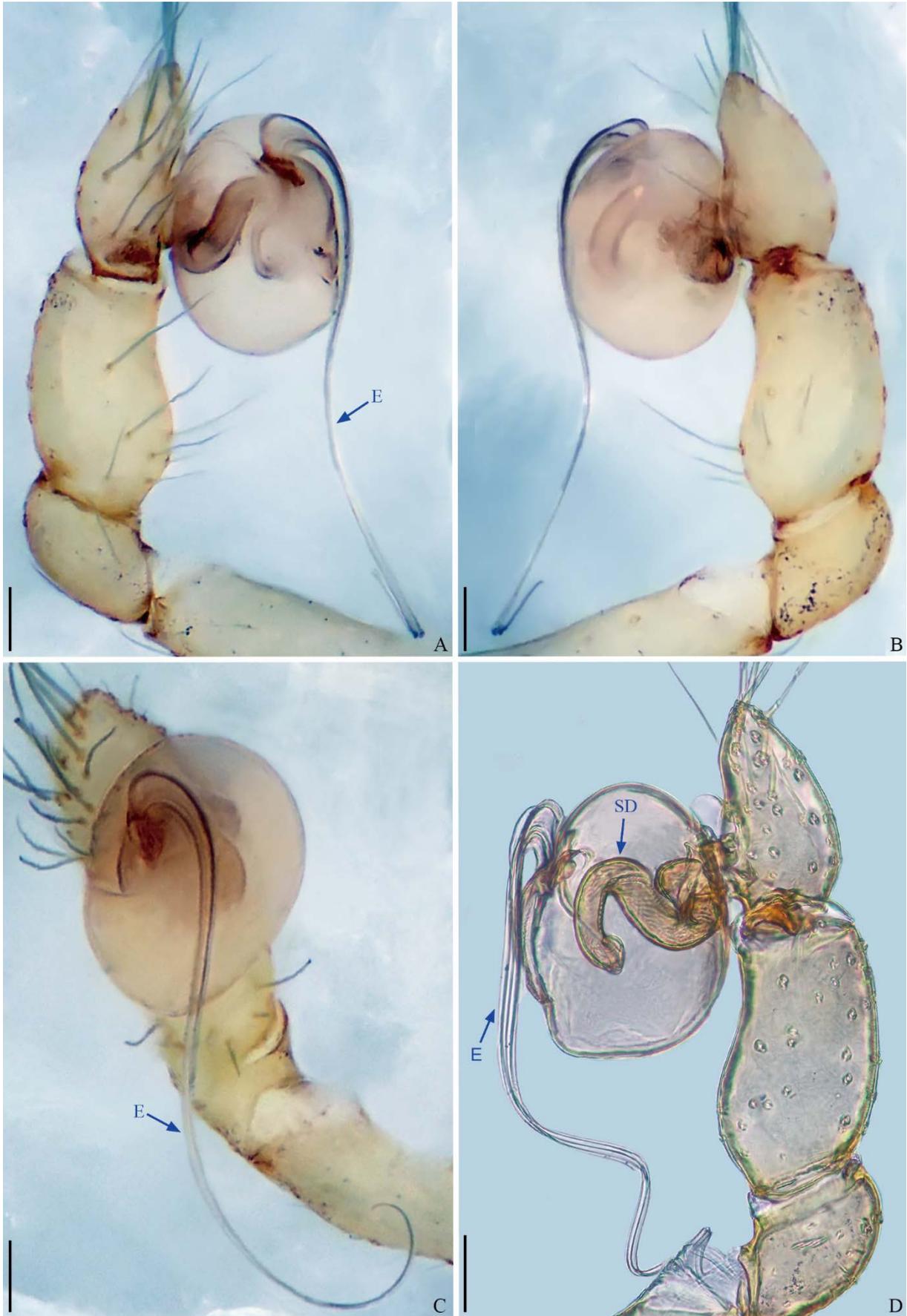


Figure 1. *Speocera amber* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

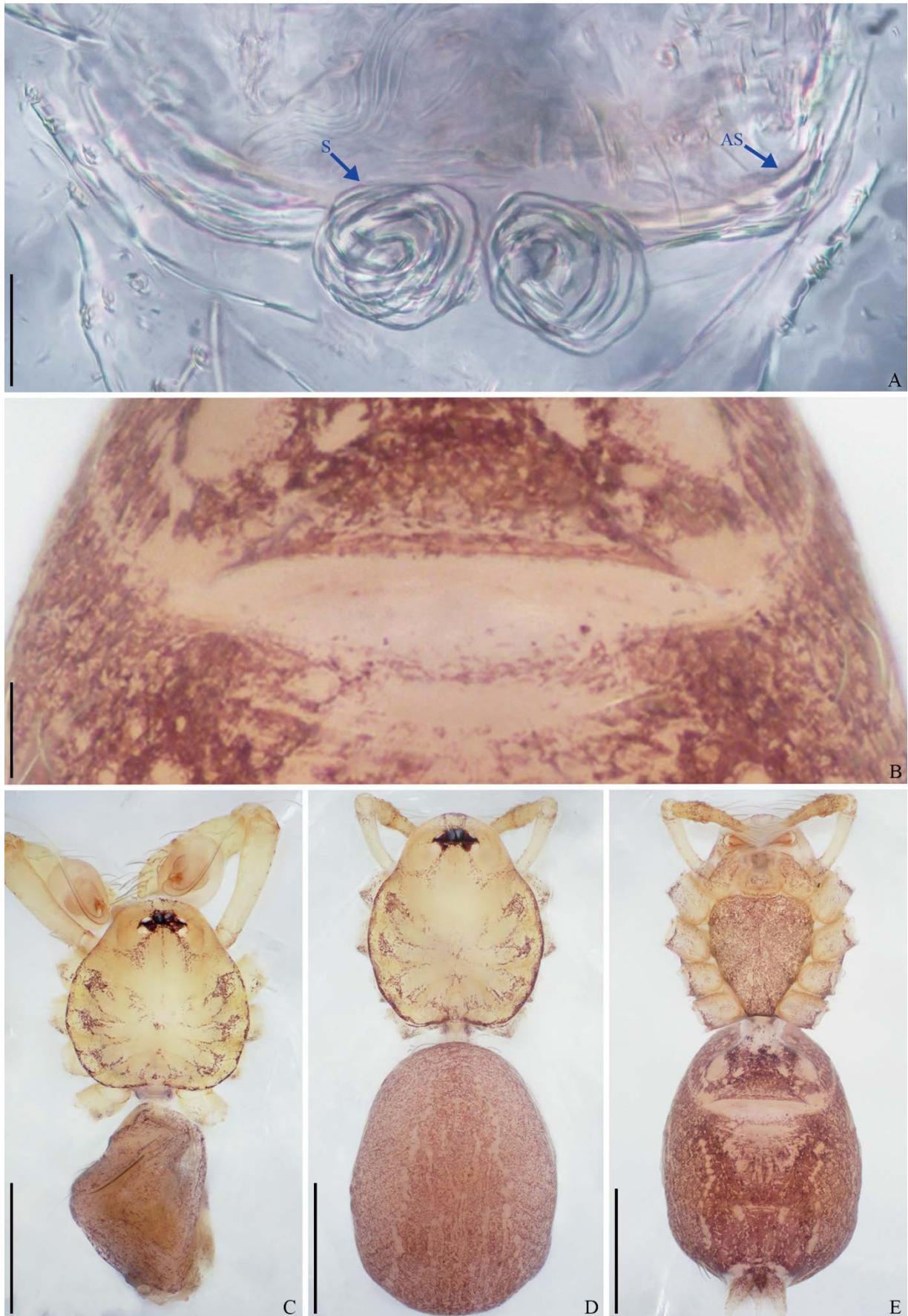


Figure 2. *Speocera amber* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

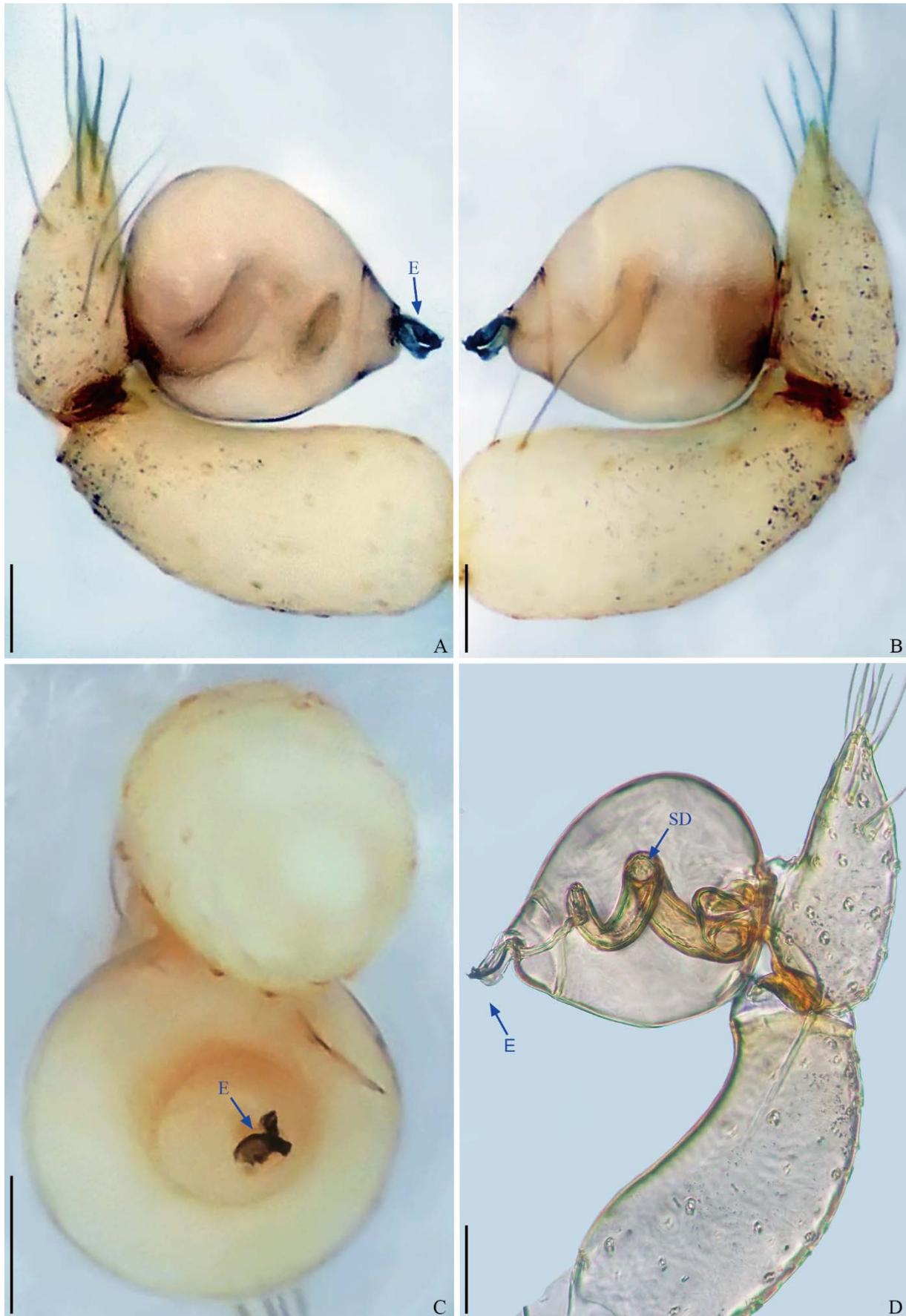


Figure 3. *Speocera ankilana* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

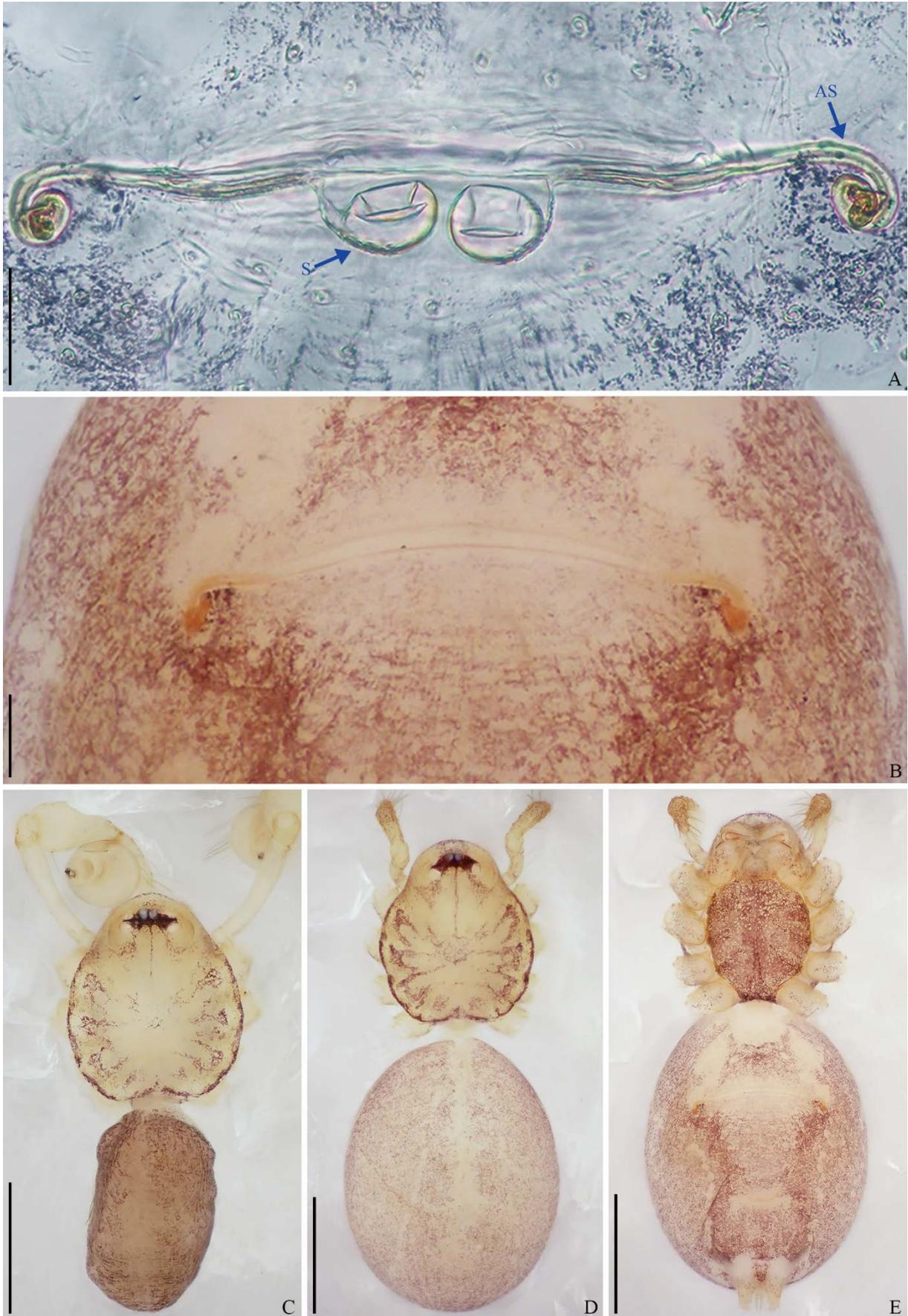


Figure 4. *Speocera ankalana* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

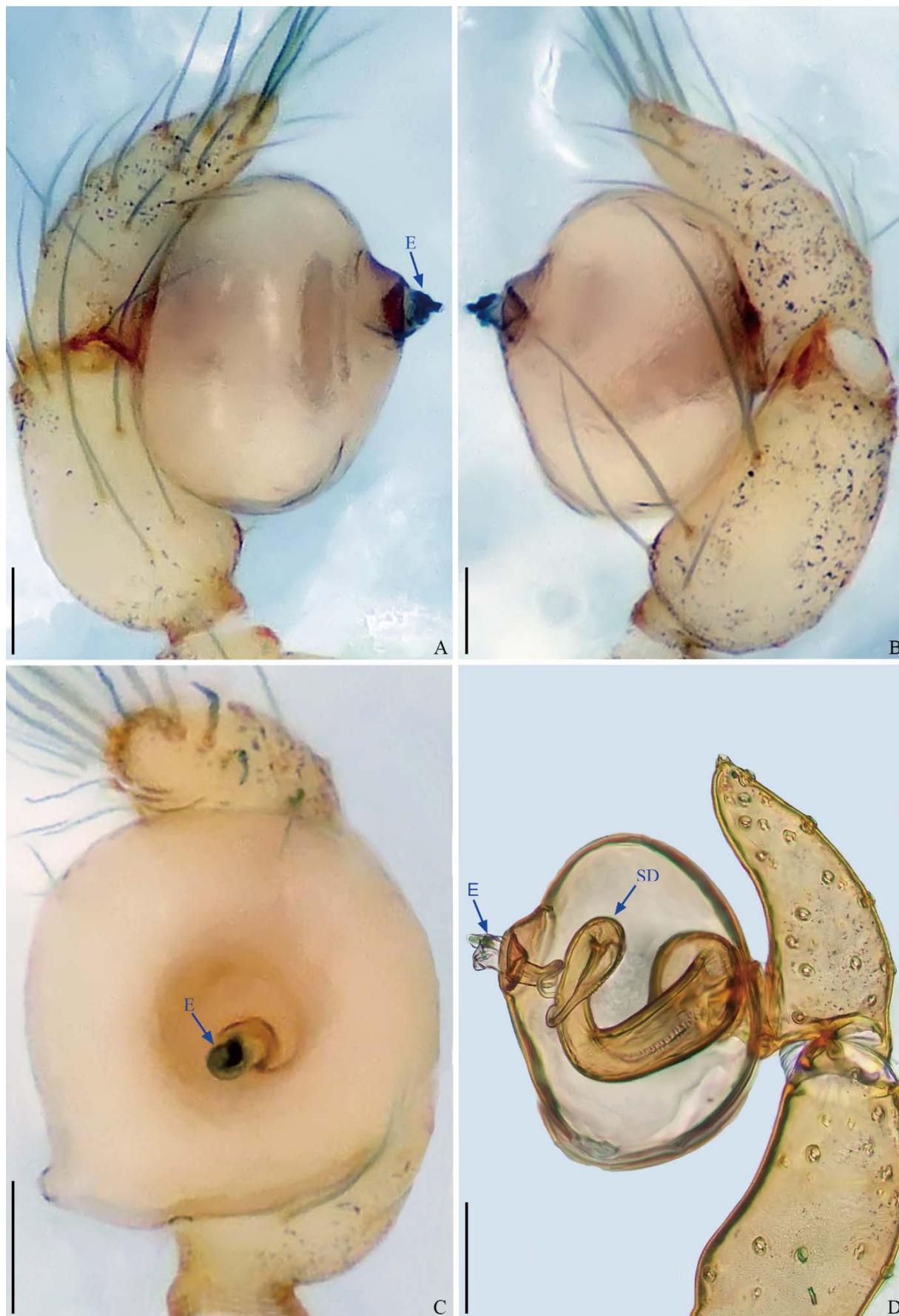


Figure 5. *Speocera bachma* Li & Li sp. nov., holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

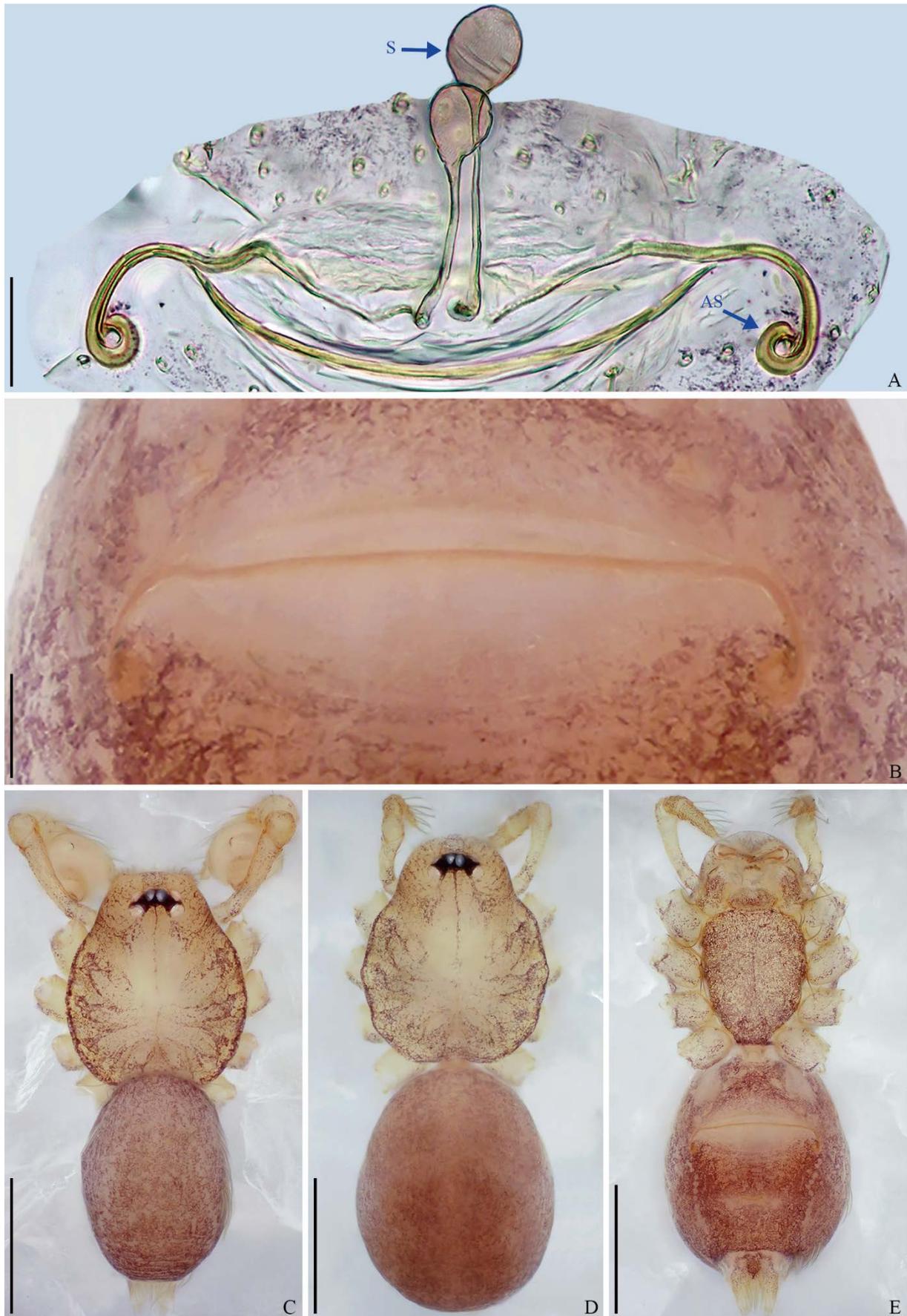


Figure 6. *Speocera bachma* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

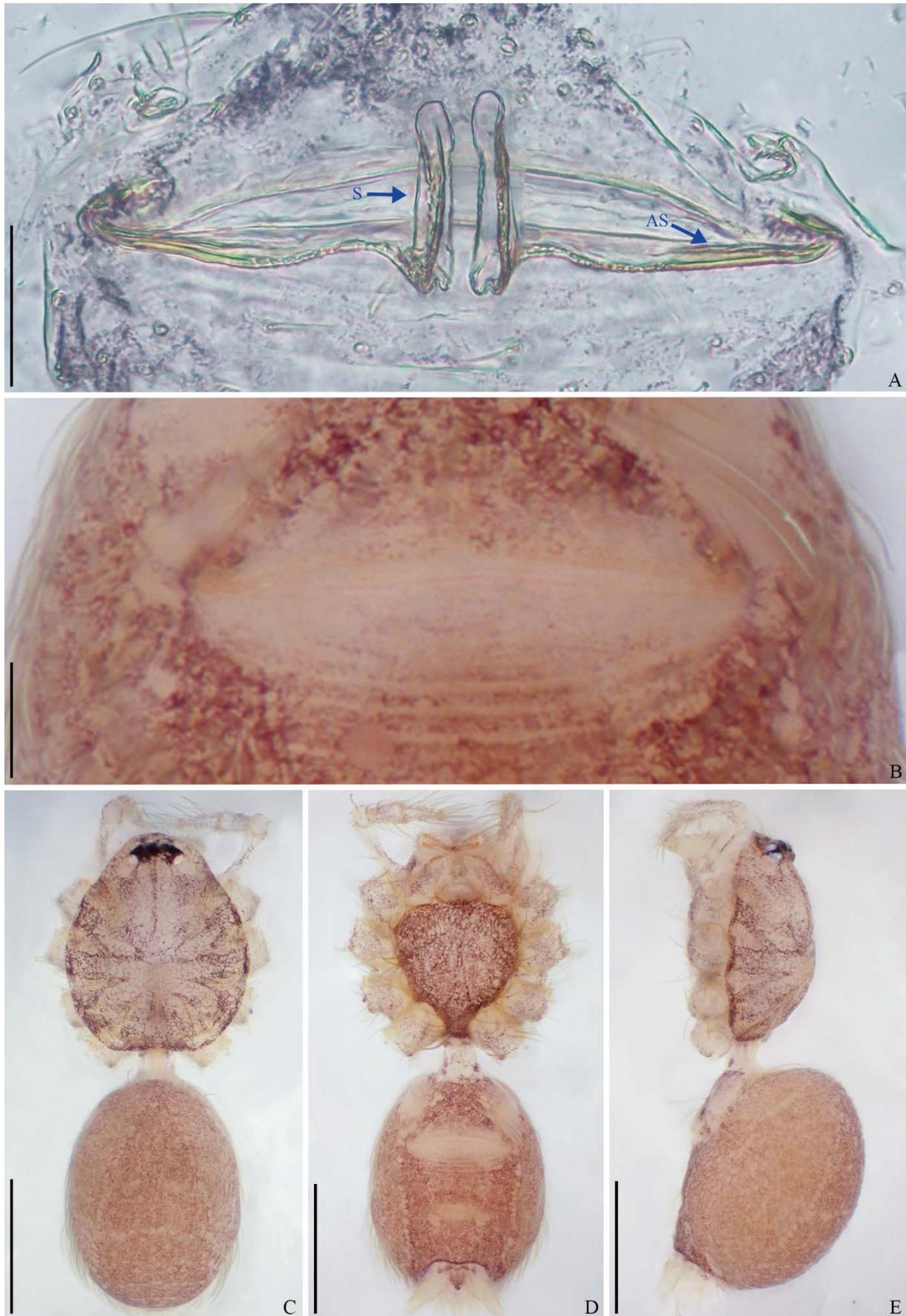


Figure 7. *Speocera balikpapan* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

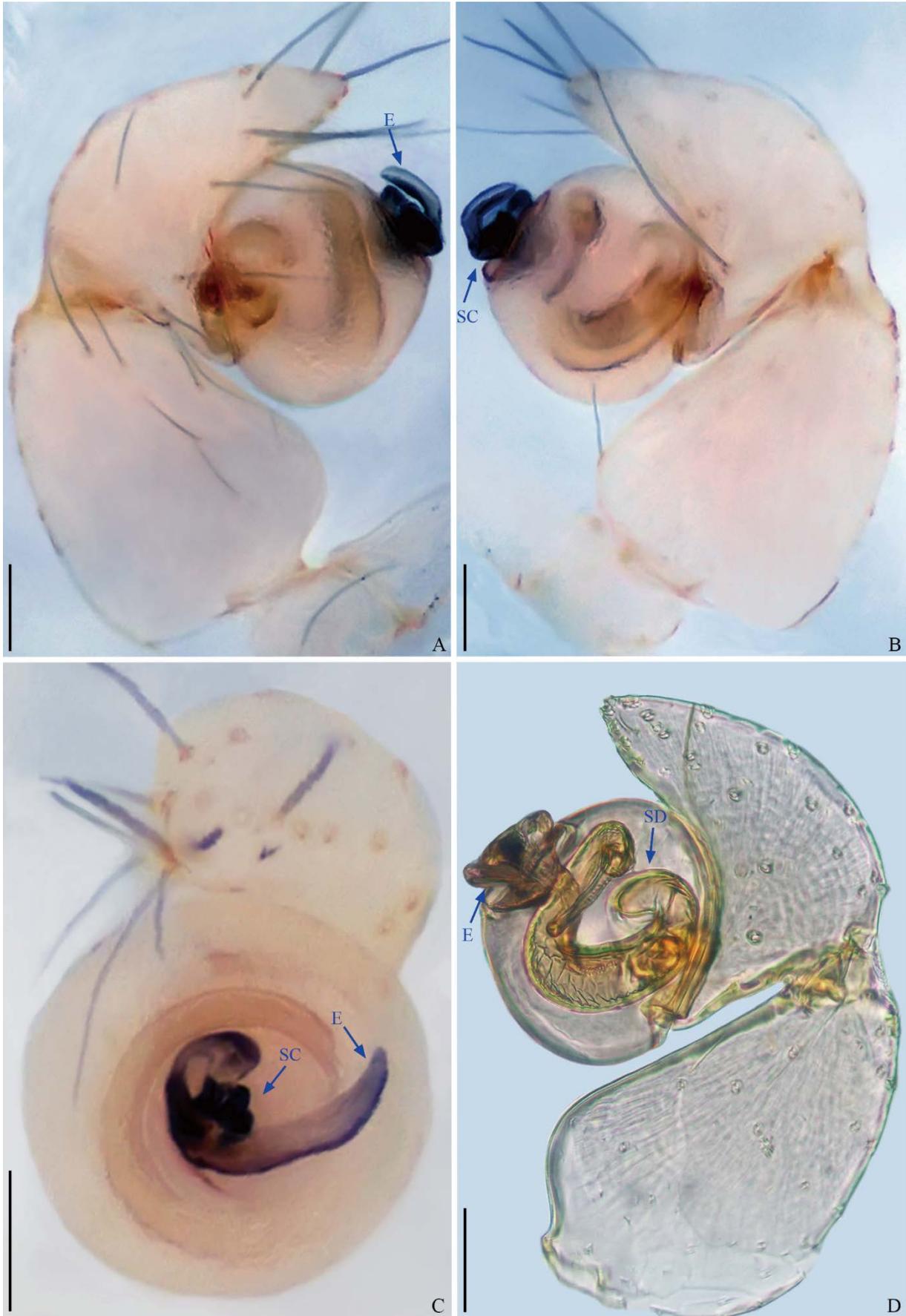


Figure 8. *Speocera ballarini* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

Diagnosis. The new species is similar to *S. lahrak* Li & Li **sp. nov.**, but females can be distinguished by the small, oval spermathecae (Fig. 10A). *S. lahrak* Li & Li **sp. nov.** has very large, elongated, oval spermathecae (Fig. 30A).

Description. Female. Total length 1.18; carapace length 0.52; carapace width 0.43; abdomen length 0.67; abdomen width 0.45. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 10C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 10D). Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58B). Eyes: six contiguous eyes surrounded by black pigmentation; PME smallest, PLE largest (Fig. 10C). Opisthosoma oval; purplish (Fig. 10D). Legs light yellow; leg lengths I 1.89 (0.51, 0.17, 0.54, 0.39, 0.28); II 1.73 (0.50, 0.16, 0.46, 0.36, 0.26); III, IV missing. Genitalia. Internal genitalia with short, curved afferent spermathecae, not extending past the sides of the abdomen (Fig. 10B); spermathecae oval (Fig. 10A).

Male. Unknown.

Distribution. Known only from the type locality.



Figure 9. *Speocera ballarini* Li & Li **sp. nov.**, holotype, male. A. Habitus, dorsal view. B. Habitus, ventral view. Scale bars=0.30mm.

***Speocera bawangling* Li & Li **sp. nov.** (Figs 11–12, 55E–F)**

Material examined. Holotype ♂ (IZCAS), China, Hainan Province, Changjiang County, Bawangling Natural Reserve, Dong'er protection station (19°5.825'N, 109°10.513'E), elev. 1007m, 11.IV.2012, leg. Z. Chen. Paratypes 3♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. amber* Li & Li **sp. nov.**, but males can be distinguished by the long, dark, curved hook like embolus (Figs 11A–B) and a palpal tibia that is shorter than the cymbium, and the females by the large oval spermathecae (Fig. 12A). *S. amber* Li & Li **sp. nov.** males have a very long, ribbon-like, nearly transparent embolus and a palpal tibia that is longer than the cymbium, and females have spiral spermathecae (Fig. 1).

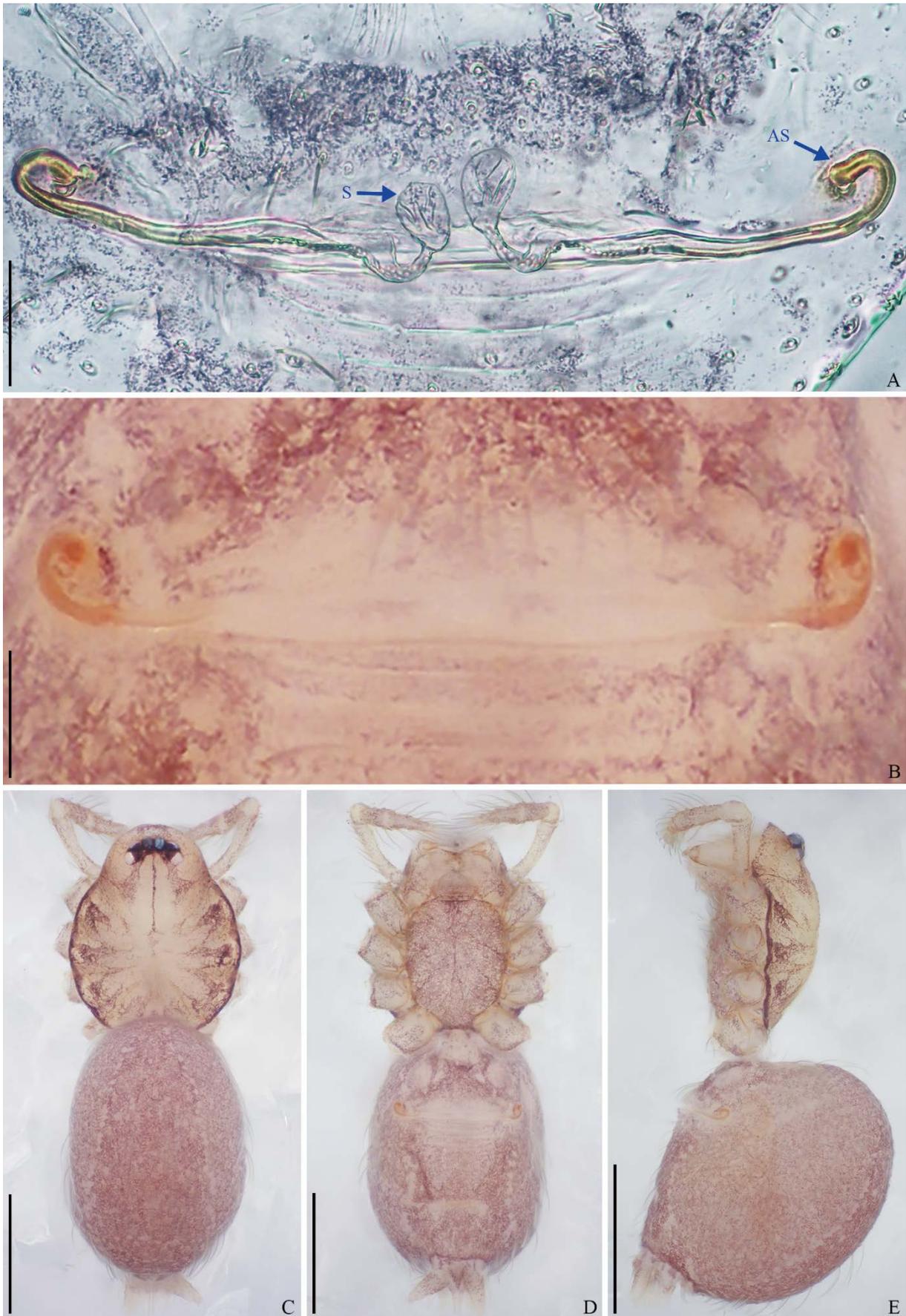


Figure 10. *Speocera batang* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

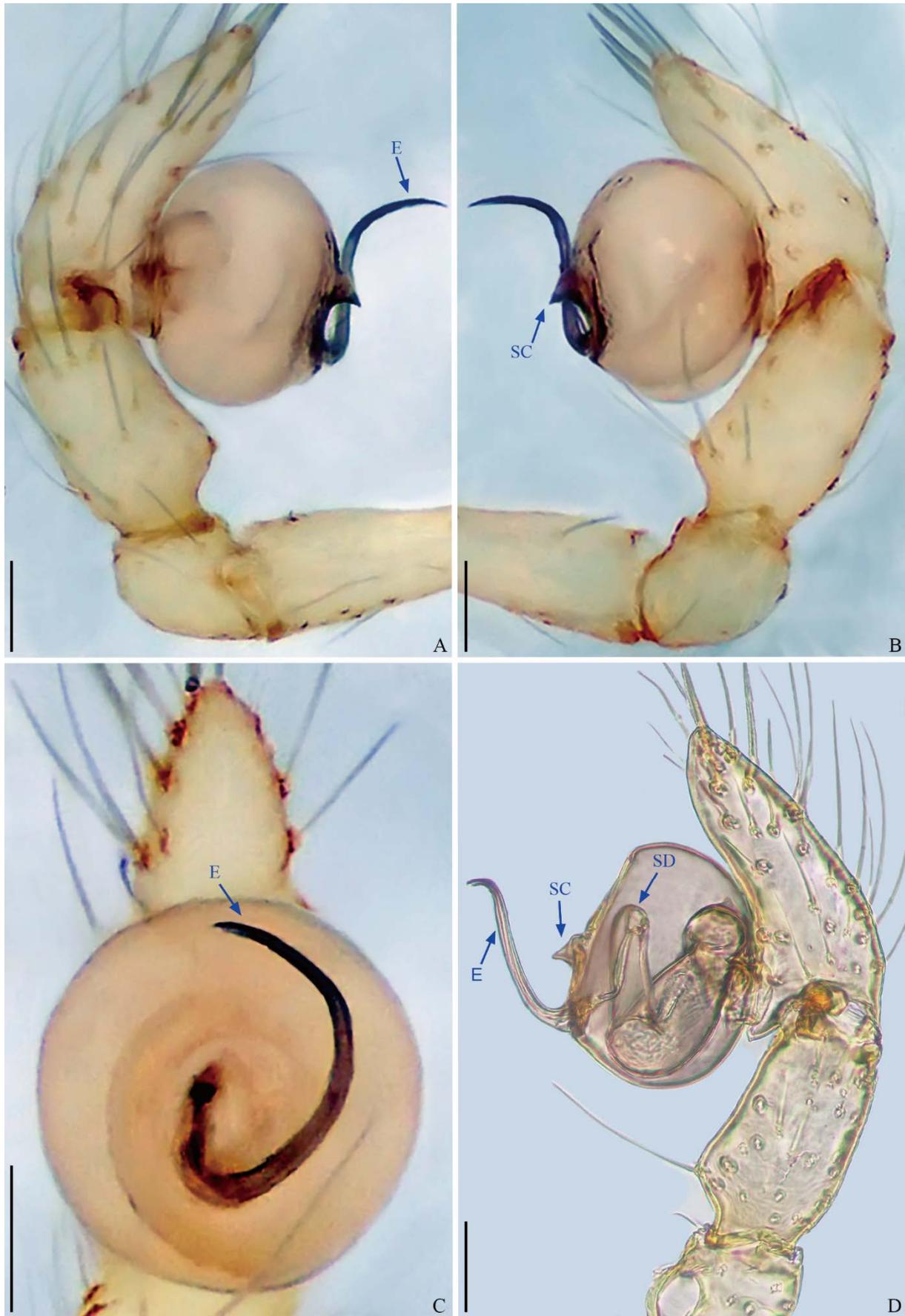


Figure 11. *Speocera bawangling* Li & Li sp. nov., holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

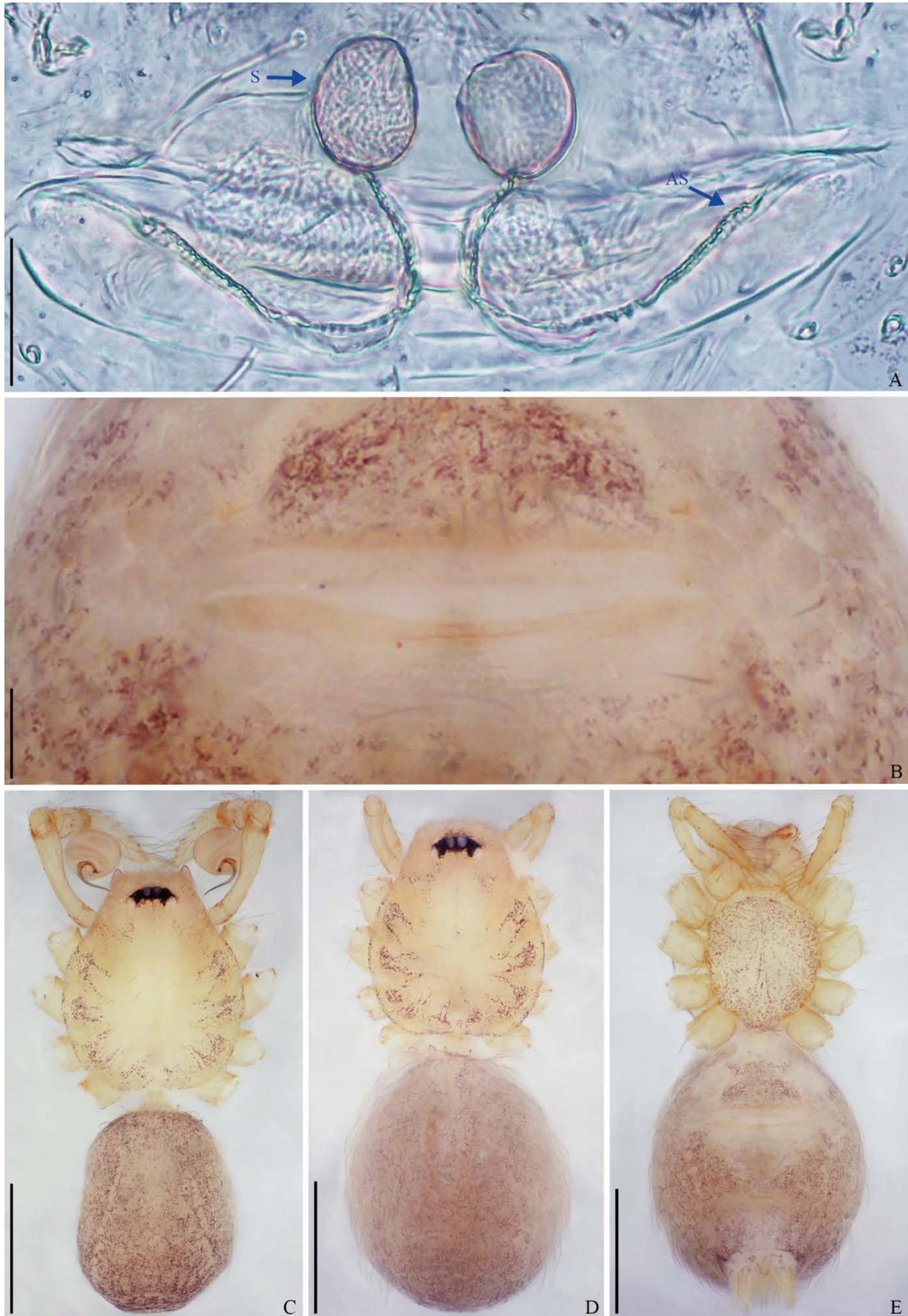


Figure 12. *Speocera bawangling* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

Description. Male. Total length 1.03; carapace length 0.50; carapace width 0.44; abdomen length 0.47; abdomen width 0.39. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 12C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow, laterally strongly excavated, with a small horn-shaped apophysis; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Figs 55E–F). Eyes: six contiguous eyes nearly equal sized, surrounded by black pigmentation (Fig. 12C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I 2.03 (0.58, 0.16, 0.61, 0.38, 0.30); II 1.85 (0.54, 0.16, 0.51, 0.35, 0.28); III, IV missing. Genitalia (Fig. 11). Palpal femur long; palpal tibia about 0.8 times as long as cymbium (Fig. 11A). Cymbium conical, without prolateral extension. Bulb spherical. Embolus long, dark, curved, hook like and basally with an associated coniform sclerite; sperm duct initially wide, gradually narrowing distally (Fig. 11D).

Female. Total length 1.13; carapace length 0.50; carapace width 0.42; abdomen length 0.63; abdomen width 0.56. Similar to male in color and general features (Figs 12D–E) but larger. Chelicerae unmodified. Leg lengths I, II missing; III 1.45 (0.39, 0.15, 0.38, 0.29, 0.24); IV 1.92 (0.53, 0.18, 0.53, 0.39, 0.29). Genitalia. Internal genitalia with afferent spermathecae very short, straight, not extending past the sides of the abdomen (Fig. 12B); spermathecae large, oval (Fig. 12A).

Distribution. Known only from the type locality.

Speocera bontoc Li & Li sp. nov. (Figs 13, 58C)

Material examined. Holotype ♀ (IZCAS), Philippines, Luzon Island, Mountain Province, Bontoc Town, road to Banawe Town. Rainforest along the road, in the litter. (16°58.242'N, 121°1.505'E), elev. 1873 m, 22.V.2015, leg. F. Ballarin & Y. Li.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. suratthaniensis* Deeleman-Reinhold, 1995 but can be distinguished by the large, oval spermathecae and the distinct bending of the tip of the afferent spermathecae (Figs 13A–B). *S. suratthaniensis* females have small, oval spermathecae and a straight tip of the afferent spermathecae (Deeleman-Reinhold, 1995: figs 293–294).

Description. Female. Total length 1.06; carapace length 0.51; carapace width 0.42; abdomen length 0.56; abdomen width 0.43. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 13C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 13D). Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58C). Eyes: six contiguous eyes surrounded by black pigmentation; PME and ALE subequal, PLE largest (Fig. 13C). Opisthosoma oval; purplish (Fig. 13D). Legs missing. Genitalia. Internal genitalia with afferent spermathecae long, straight, not extending past the sides of the abdomen, distally with a distinct bend (Fig. 13B); spermathecae large, oval (Fig. 13A).

Male. Unknown.

Distribution. Known only from the type locality.

Speocera bukittinggi Li & Li sp. nov. (Figs 14–15, 55G)

Material examined. Holotype ♂ (IZCAS), Indonesia, Sumatra, West Sumatra Province, Bukittinggi, near entrance of Tarang Cave (0°12.653'S, 100°24.977'E), elev. 877 m, 13.V.2014, leg. Z. Yao. Paratype 1 ♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. transleuser* Deeleman-Reinhold, 1995, but males can be distinguished by the pyriform shaped palpal bulb (Figs 14A–B), the long, dark embolus and plate-like associated sclerites (Fig. 14D) and the female by the strongly curved, long afferent spermathecae (Fig. 15B). *S. transleuser* males have a nearly flattened palpal bulb and a very small embolus, and females have slightly curved afferent spermathecae (Deeleman-Reinhold, 1995: figs 257–260).

Description. Male. Total length 0.89; carapace length 0.44; carapace width 0.37; abdomen length 0.45; abdomen width 0.38. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, strongly suffused with purplish pattern (Fig. 15C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, longer than wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two small denticles (Fig. 55G). Eyes: six contiguous eyes surrounded by black pigmentation; PME smallest, PLE largest (Fig. 15C).

Opisthosoma oval; purplish. Legs light yellow; leg formula 4123; leg lengths I 1.56 (0.45, 0.11, 0.45, 0.31, 0.24); II 1.44 (0.42, 0.11, 0.40, 0.30, 0.22); III 1.27 (0.36, 0.13, 0.31, 0.28, 0.20); IV 1.67 (0.49, 0.12, 0.47, 0.38, 0.23). Genitalia (Fig. 14). Palpal femur long; palpal tibia strongly elongated, about 2.5 times as long as cymbium (Figs 14A–B). Cymbium conical, without prolateral extension. Bulb pyriform, much longer than wide. Embolus long, dark and basally with associated plate-like sclerites; sperm duct wide initially, gradually narrowing distally (Fig. 14D).

Female. Total length 0.92; carapace length 0.43; carapace width 0.38; abdomen length 0.47; abdomen width 0.42. Similar to male in color and general features (Figs 15D–E). Leg lengths I, II, IV missing; III 1.18 (0.31, 0.13, 0.30, 0.25, 0.20). Genitalia. Internal genitalia with afferent spermathecae long, curved, not extending past the sides of the abdomen (Fig. 15B); spermathecae large, amorphous (Fig. 15A).

Distribution. Known only from the type locality.

***Speocera cattien* Li & Li sp. nov.** (Figs 16–17, 56A)

Material examined. Holotype ♂ (IZCAS), Vietnam, Dong Nai Province, Cat Tien National Park, Natural Forest (11°27.005'N, 107°21.863'E), elev. 173 m, 5.IX.2015, leg. Q. Zhao, Y. Li & Z. Chen. Paratype 1♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. xuanson* Li & Li sp. nov., but males can be distinguished by the unmodified chelicerae (Fig. 56A), the incrassate palpal tibia and cymbium (Figs 16A–B) and the sickle-shaped embolus (Fig. 16D), and females by the short afferent spermathecae and the large oval spermathecae (Fig. 17A). *S. xuanson* males have the chelicerae laterally excavated, with a small horn-like apophysis (Figs 57I–J), the palpal tibia and cymbium not incrassate (Figs 51A–B), and a nearly straight embolus (Fig. 51D), and females have very small spermathecae with long, curved afferent spermathecae (Fig. 52A).

Description. Male. Total length 1.01; carapace length 0.46; carapace width 0.43; abdomen length 0.63; abdomen width 0.38. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 17C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow, suffused with purplish tinge; with serrula; labium light yellow, suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two small denticles (Fig. 56A). Eyes: six contiguous eyes surrounded by black pigmentation, ALE, PME nearly subequal, PLE largest (Fig. 17C). Opisthosoma oval; purplish. Legs light yellow; leg formula 4123; leg lengths I 2.20 (0.63, 0.16, 0.64, 0.48, 0.29); II 1.99 (0.58, 0.16, 0.55, 0.42, 0.28); III 1.74 (0.49, 0.14, 0.46, 0.39, 0.27); IV 2.45 (0.67, 0.17, 0.70, 0.54, 0.36). Genitalia (Fig. 16). Palpal femur long; palpal tibia and cymbium incrassate, tibia about 1.2 times as long as cymbium (Figs 16A–B). Cymbium conical, without prolateral extension. Bulb spherical. Embolus long, sickle-shaped, dark and basally with a short associated sclerite; sperm duct initially wide, gradually narrowing distally (Fig. 16D).

Female. Total length 1.10; carapace length 0.51; carapace width 0.44; abdomen length 0.58; abdomen width 0.52. Similar to male in color and general features (Figs 17D–E) but larger. Leg lengths I 2.08 (0.59, 0.18, 0.59, 0.44, 0.28); II 1.81 (0.50, 0.14, 0.51, 0.39, 0.27); III 1.60 (0.45, 0.13, 0.41, 0.37, 0.25); IV 2.18 (0.63, 0.15, 0.60, 0.51, 0.30). Genitalia. Internal genitalia with afferent spermathecae short, curved, not extending past the sides of the abdomen; tip of the afferent spermathecae question mark shaped (Fig. 17B); spermathecae large, oval (Fig. 17A).

Distribution. Known only from the type locality.

***Speocera cucphuong* Li & Li sp. nov.** (Figs 18–19, 55H, I)

Material examined. Holotype ♂ (IZCAS), Vietnam, Ninh Binh Province, Cuc Phuong National Park, on the path to the Old Tree, 20.VIII.2015 (20°20.972'N, 105°35.600'E), elev. 437 m, leg. Q. Zhao, Y. Li & Z. Chen. Paratype 1♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. bulbiformis* Lin, Pham & Li, 2009, but males can be distinguished by the laterally excavated chelicerae with a horn-like apophysis (Figs 55H–I) and by the nearly spherical male palpal bulb (Figs 18A–B), and females by the very long, curved afferent spermathecae (Fig. 19B). *S. bulbiformis* males have unmodified chelicerae, a more flattened palpal bulb, and females have very short, nearly straight afferent spermathecae (Lin *et al.*, 2009: figs 3–4).

Description. Male. Total length 1.13; carapace length 0.51; carapace width 0.44; abdomen length 0.57; abdomen width 0.40. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 18C);

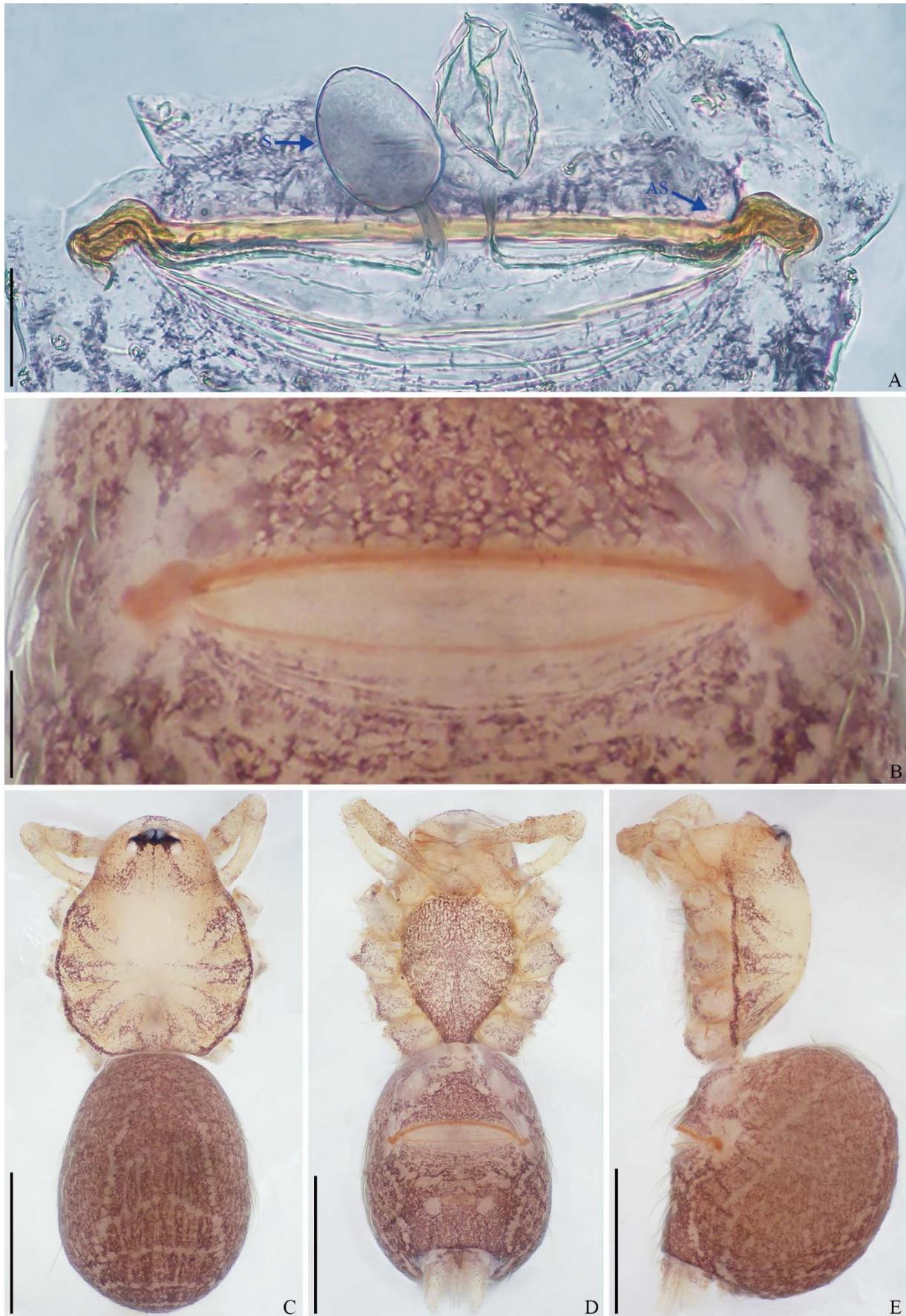


Figure 13. *Speocera bontoc* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

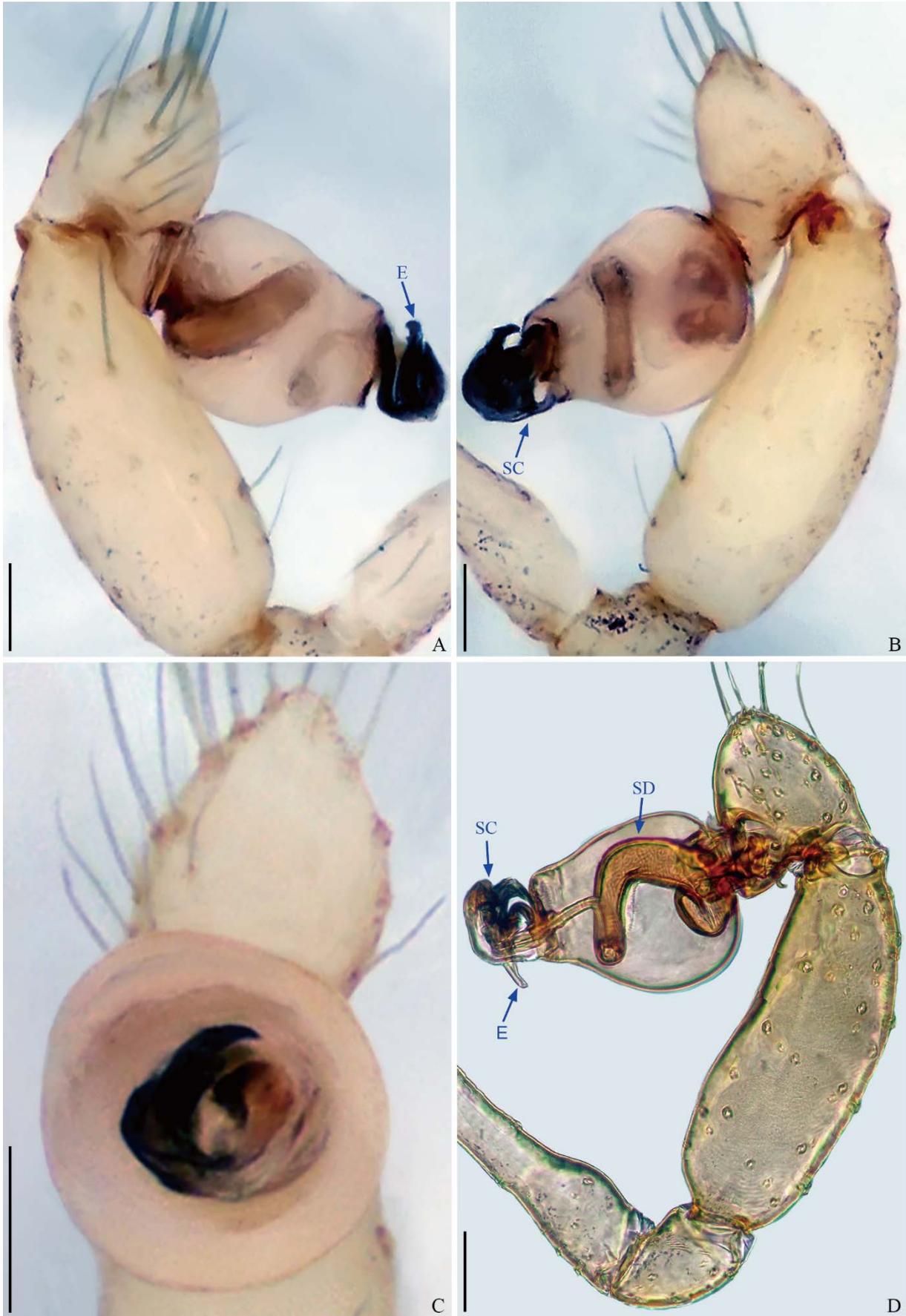


Figure 14. *Speocera bukittinggi* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

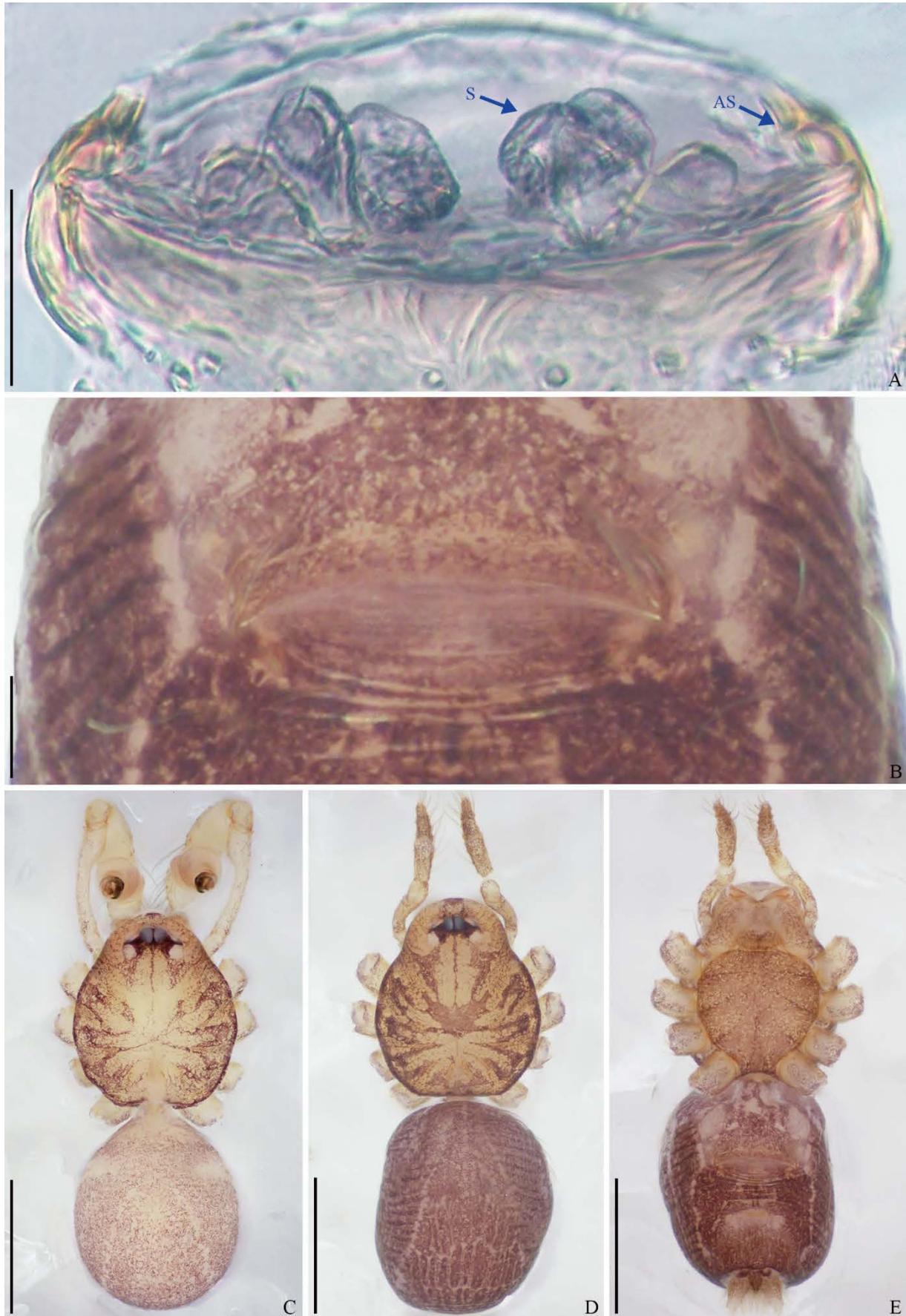


Figure 15. *Speocera bukittinggi* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

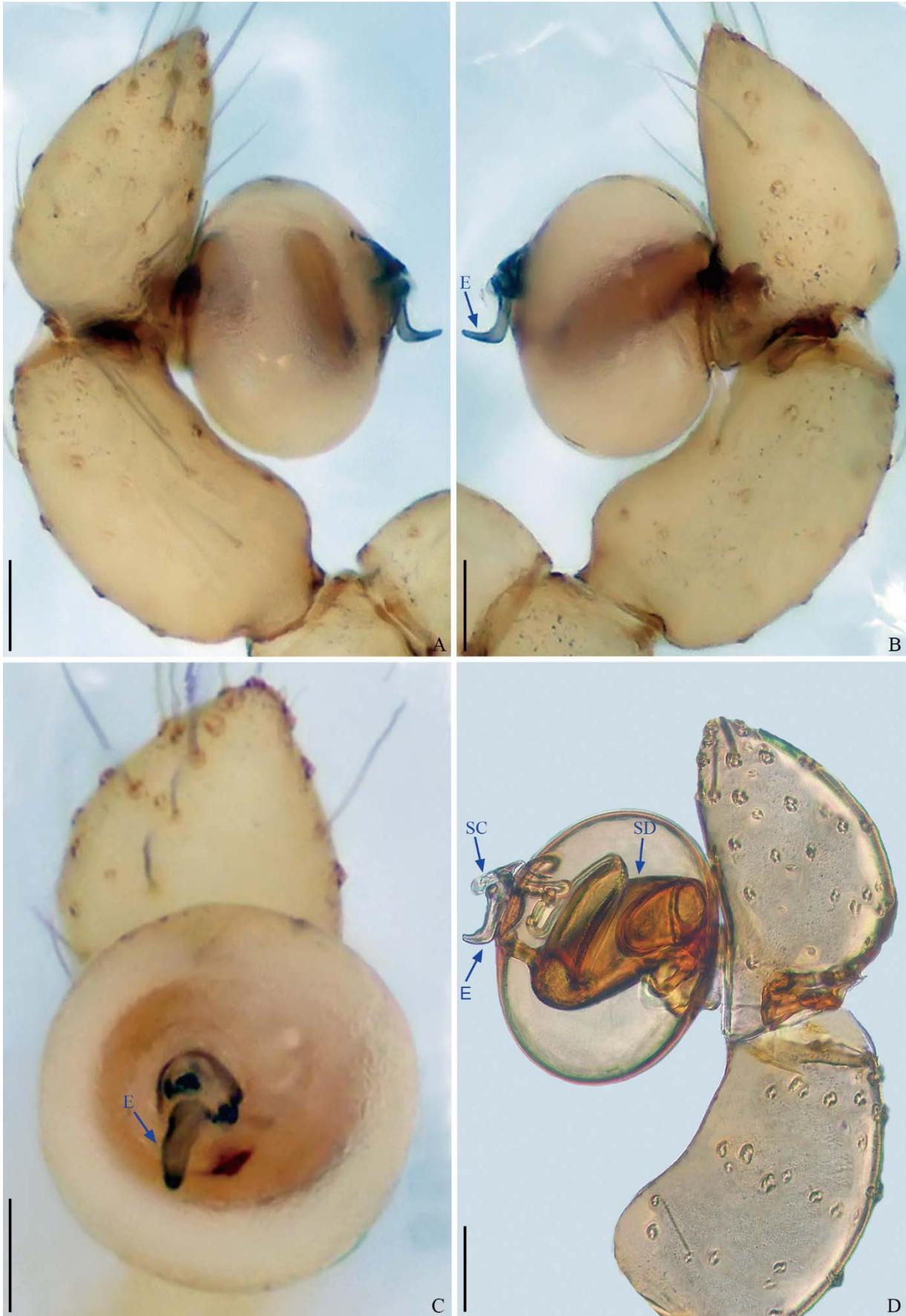


Figure 16. *Speocera cattien* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

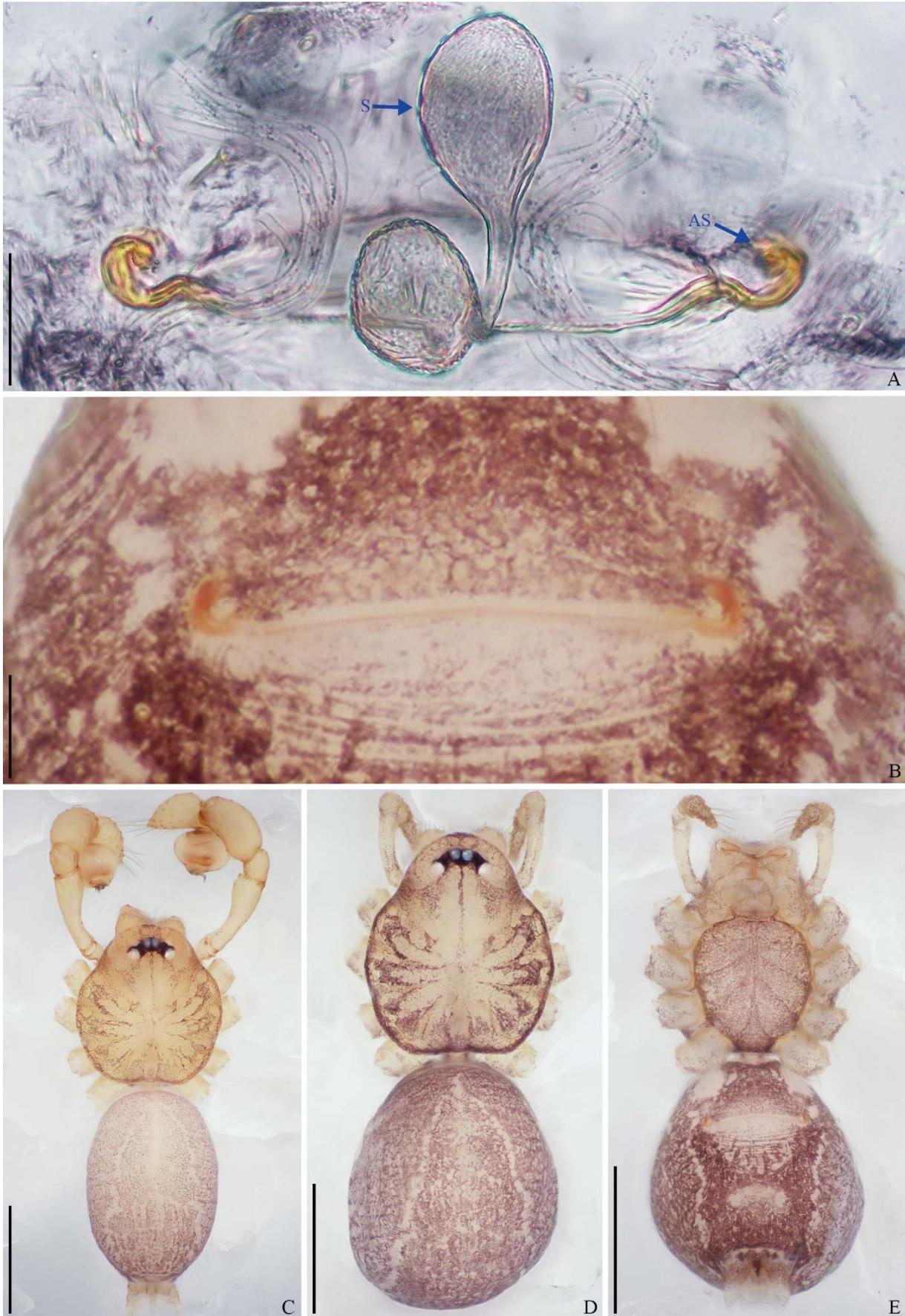


Figure 17. *Speocera cattien* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

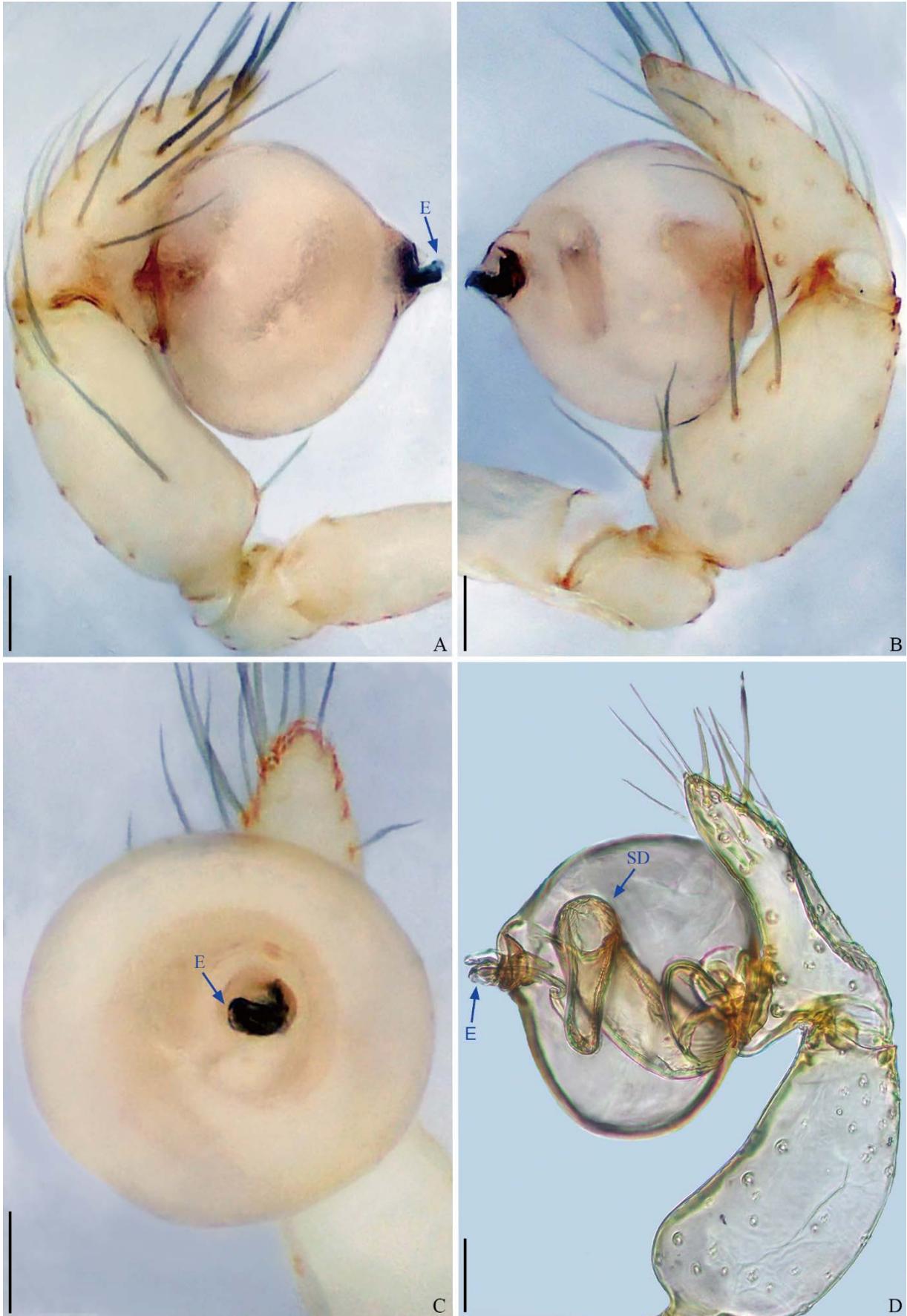


Figure 18. *Speocera cucphuong* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

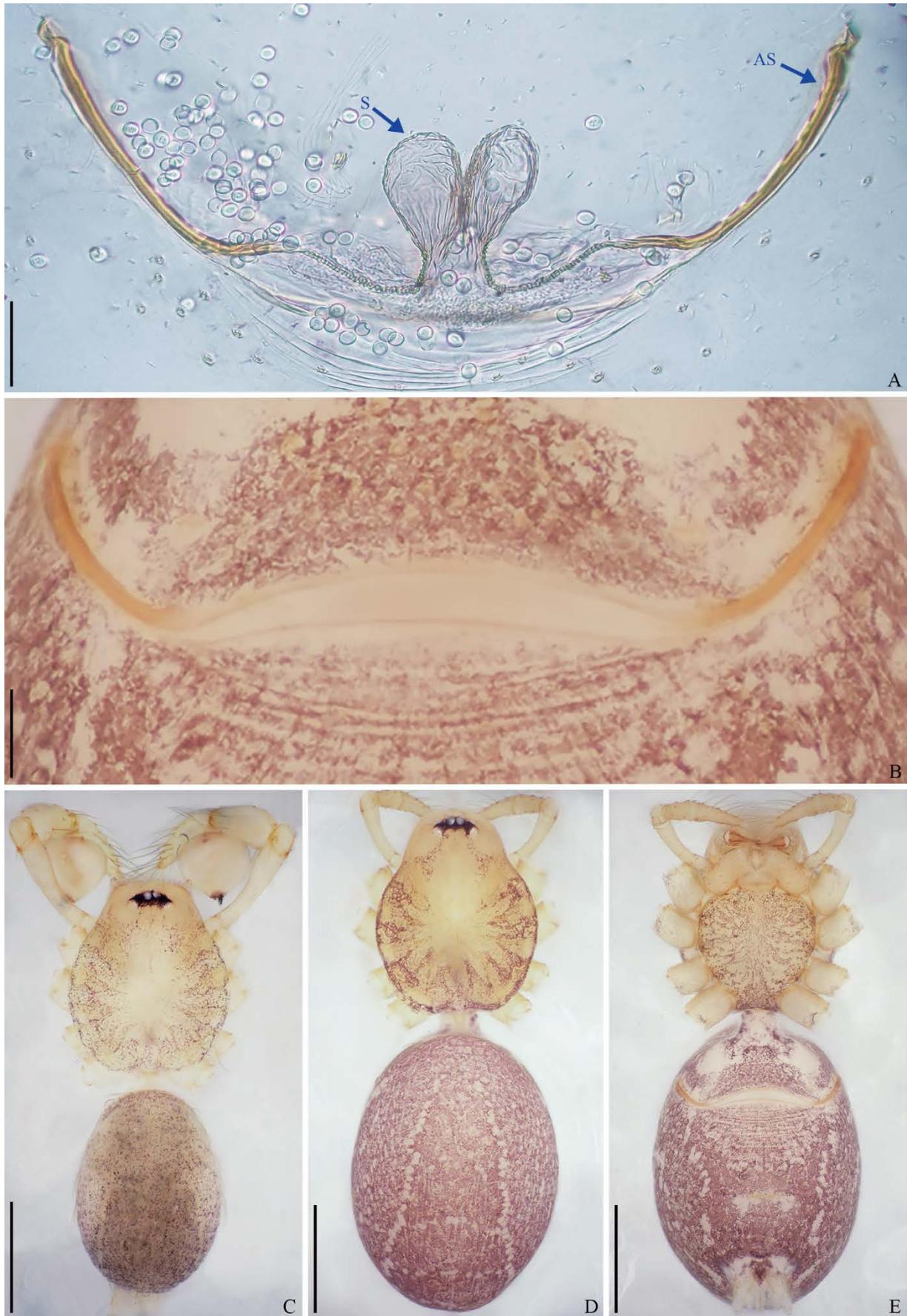


Figure 19. *Speocera cucphuong* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow; external margin strongly excavated, anterior face with one horn-like apophysis; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Figs 55H–I). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 18C). Opisthosoma oval; light gray. Legs light yellow; leg lengths I, II missing; III 1.56 (0.42, 0.14, 0.43, 0.32, 0.25); IV 2.16 (0.60, 0.16, 0.63, 0.45, 0.32). Genitalia (Fig. 18). Palpal femur long; palpal tibia as long as cymbium (Figs 18A–B). Cymbium conical, with a prolateral extension basally. Bulb spherical, as long as wide. Embolus short, black, associated sclerites absent; sperm duct initially wide, gradually narrowing distally (Fig. 18D).

Female. Total length 1.41; carapace length 0.57; carapace width 0.46; abdomen length 0.80; abdomen width 0.58. Similar to male in color and general features (Figs 19D–E) but larger. Chelicerae unmodified. Legs light yellow; leg lengths I 1.85 (0.50, 0.16, 0.52, 0.37, 0.29); II missing; III 1.64 (0.45, 0.15, 0.43, 0.47, 0.34); IV 2.22 (0.40, 0.13, 0.30, 0.29, 0.23). Genitalia. Internal genitalia with afferent spermathecae elongated, curved, extending past the sides of the abdomen (Fig. 19B); spermathecae oval (Fig. 19A).

Distribution. Known only from the type locality.

Speocera cuyapo Li & Li **sp. nov.** (Figs 20, 58D)

Material examined. Holotype ♀ (IZCAS), Philippines, Luzon Island, Nueva Ecija Province, Cuyapo City, Forest, on a steep slope, in the litter. (15°47.809'N, 120°39.329'E), elev. 60m, 22.V.2015, leg. F. Ballarin & Y. Li.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. apo* Deeleman-Reinhold, 1995 but can be distinguished by the posteriorly curved tip of the afferent spermathecae (Fig. 20B). The tip of the afferent spermathecae is curved anteriorly in *S. apo* (Deeleman-Reinhold, 1995: figs 223–224).

Description. Female. Total length 1.19; carapace length 0.49; carapace width 0.41; abdomen length 0.66; abdomen width 0.49. Prosoma: carapace pyriform, narrowing gradually anteriorly; yellow, strongly suffused with purplish pattern (Fig. 20C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 20D). Endites light yellow, suffused with purplish tinge; with serrula; labium light yellow, suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58D). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 20C). Opisthosoma oval; purplish (Fig. 20D). Legs light yellow; leg lengths I, II, IV missing; III 1.35 (0.40, 0.13, 0.30, 0.29, 0.23). Genitalia. Internal genitalia with afferent spermathecae short, not extending past the sides of the abdomen; tip of the afferent spermathecae curved posteriorly from epigastric furrow (Fig. 20B); spermathecae small, round (Fig. 20A).

Male. Unknown.

Distribution. Known only from the type locality.

Speocera dongjing Li & Li **sp. nov.** (Figs 21, 58E)

Material examined. Holotype ♀ (IZCAS), China, Guangxi Zhuang Autonomous Region, Baise City, Tianyang County, Dongjing Town, behind the small gas station, Liangdong Yan (23°40.125'N, 106°33.957'E), elev. 464m, 4.III.2016, leg. X. Zhang & Z. Chen.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. cuyapo* Li & Li **sp. nov.** but can be distinguished by the very short copulatory duct that connects the spermathecae to the afferent spermathecae and the size of the spermathecae (Fig. 21A). *S. cuyapo* Li & Li **sp. nov.** has a long, curved copulatory duct and small spermathecae (Fig. 20A).

Description. Female. Total length 1.08; carapace length 0.50; carapace width 0.41; abdomen length 0.53; abdomen width 0.42. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, slightly suffused with purplish pattern (Fig. 21C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 21D). Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58E). Eyes: six contiguous eyes, nearly equal sized, surrounded by black pigmentation (Fig. 21C). Opisthosoma oval; purplish (Fig. 21D). Legs light yellow; leg formula 4123; leg lengths I 1.72 (0.49, 0.15, 0.50, 0.31, 0.27); II 1.57 (0.45, 0.15, 0.43, 0.29, 0.25); III 1.34 (0.38, 0.13, 0.33, 0.28, 0.23); IV 1.82 (0.50, 0.16, 0.51, 0.38, 0.28). Genitalia. Internal genitalia with afferent spermathecae short, straight, tip slightly curved posteriorly, not extending past the sides of the abdomen (Fig. 21B);

spermathecae large, spherical (Fig. 21A).

Male. Unknown.

Distribution. Known only from the type locality.

***Speocera gexuejuni* Li & Li sp. nov.** (Figs 22–23, 56B)

Material examined. Holotype ♂ (IZCAS), China, Hainan Province, Lingshui County, Benhao Town, Diaoluoshan Mountain Natural Reserve, riverside, near ticket lobby (18°40.132'N, 109°53.911'E), elev. 280 m, 24.VI.2014, leg. F. Li & X. Wang. Paratype 1 ♀ (IZCAS), 11.XII.2018, leg. Z. Chen, other data same as holotype.

Etymology. The specific name is named in honor of Prof. Dr. Ge Xuejun from South China Botanical Garden, Chinese Academy of Sciences, for his contribution in plant systematics and evolution; name in genitive case.

Diagnosis. The new species is very similar to *S. heilan* Li & Li **sp. nov.** but can be distinguished by the spherical male palpal bulb and the belt-like embolus (Fig. 22). *S. heilan* has a more flattened palpal bulb and a very small embolus (Fig. 25).

Description. Male. Total length 1.08; carapace length 0.53; carapace width 0.45; abdomen length 0.49; abdomen width 0.34. Prosoma: carapace pyriform, narrowing gradually anteriorly, anterior margin straight in dorsal view; light yellow, suffused with purplish pattern (Fig. 23C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; external margin strongly excavated; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 56B). Eyes: six contiguous eyes surrounded by black pigmentation, ALE and PME subequal, PLE largest (Fig. 23C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I, II missing; III 2.12 (0.94, 0.14, 0.45, 0.34, 0.25); IV 2.20 (0.61, 0.16, 0.64, 0.45, 0.34). Genitalia (Fig. 22). Palpal femur long; palpal tibia and cymbium incrassate, palpal tibia strongly enlarged basally, 1.1 times as long as cymbium (Figs 22A–B). Cymbium conical, with prolateral extension basally. Bulb spherical, as long as wide. Embolus belt-like, dark, associated sclerites short; sperm duct initially wide, gradually narrowing distally (Fig. 22D).

Female. Total length 1.02; carapace length 0.55; carapace width 0.43; abdomen length 0.59; abdomen width 0.42. Similar to male in color and general features (Figs 23D–E). Chelicerae unmodified. Leg lengths I 1.96 (0.55, 0.19, 0.56, 0.38, 0.28); II 1.73 (0.50, 0.16, 0.48, 0.34, 0.27); III 1.54 (0.45, 0.14, 0.38, 0.33, 0.24); IV 2.02 (0.58, 0.16, 0.56, 0.45, 0.28). Genitalia. Internal genitalia with afferent spermathecae short, tip slightly curved posteriorly, not extending past the sides of the abdomen (Fig. 23B); spermathecae oval (Fig. 23A).

Distribution. Known only from the type locality.

***Speocera griswoldi* Li & Li sp. nov.** (Figs 24, 58F)

Material examined. Holotype ♀ (CAS), Madagascar, Fianarantsoa Province, Ranomafana National Park, Vohiparara, 3.6 km W Ranomafana, sifting leaf litter, primary montane rainforest, 13–14.I.2009 (21°14.243'S, 47°23.842'E), elev. 1150 m, leg. C. Griswold, A. Saucedo & H. Wood.

Etymology. The specific name is named in honor of one of the collectors, Dr. Charles Griswold; name in genitive case.

Diagnosis. The new species is similar to *S. tubularis* Li & Li **sp. nov.** but can be distinguished by the tip of afferent spermathecae which is shaped like a question mark and the bag shaped spermathecae (Figs 24A–B). The tip of the afferent spermathecae of *S. tubularis* are like large question marks, and they have tubular spermathecae (Figs 48A–B).

Description. Female. Total length 0.91; carapace length 0.44; carapace width 0.37; abdomen length 0.48; abdomen width 0.36. Prosoma: carapace pyriform, narrowing gradually anteriorly; yellow, suffused with a purplish pattern (Fig. 24C); pars cephalica flat; fovea not visible. Sternum yellow, suffused with purplish color, as long as wide (Fig. 24D). Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58F). Eyes: six contiguous eyes, PME smallest, PLE largest, surrounded by black pigmentation (Fig. 24C). Opisthosoma oval; purplish (Fig. 24D). Legs missing. Genitalia. Internal genitalia with afferent spermathecae short, curved, not extending past the sides of the abdomen; tip of the afferent spermathecae shaped like a question mark (Fig. 24B); spermathecae large, bag shaped (Fig. 24A).

Male. Unknown.

Distribution. Known only from the type locality.

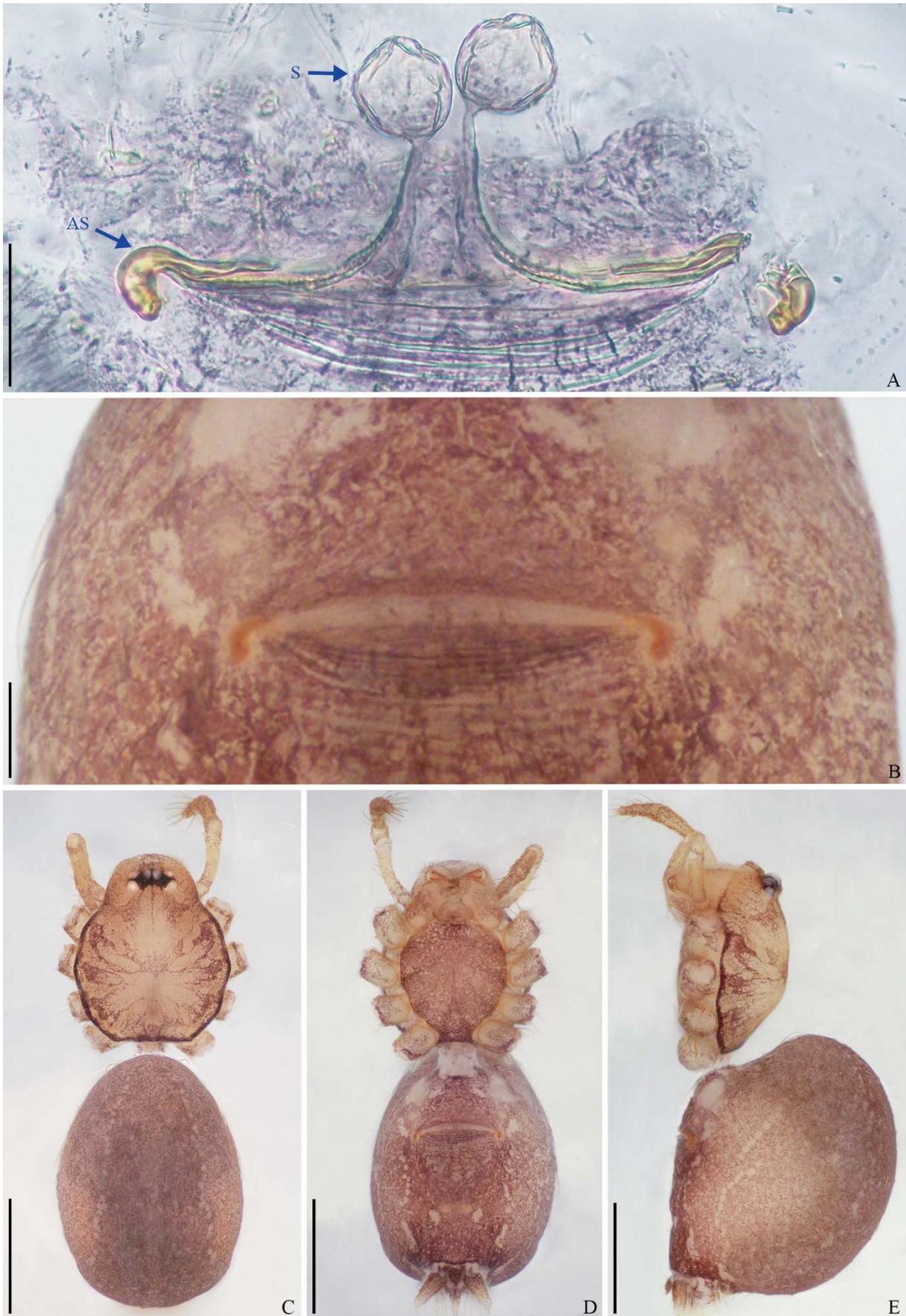


Figure 20. *Speocera cuyapo* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

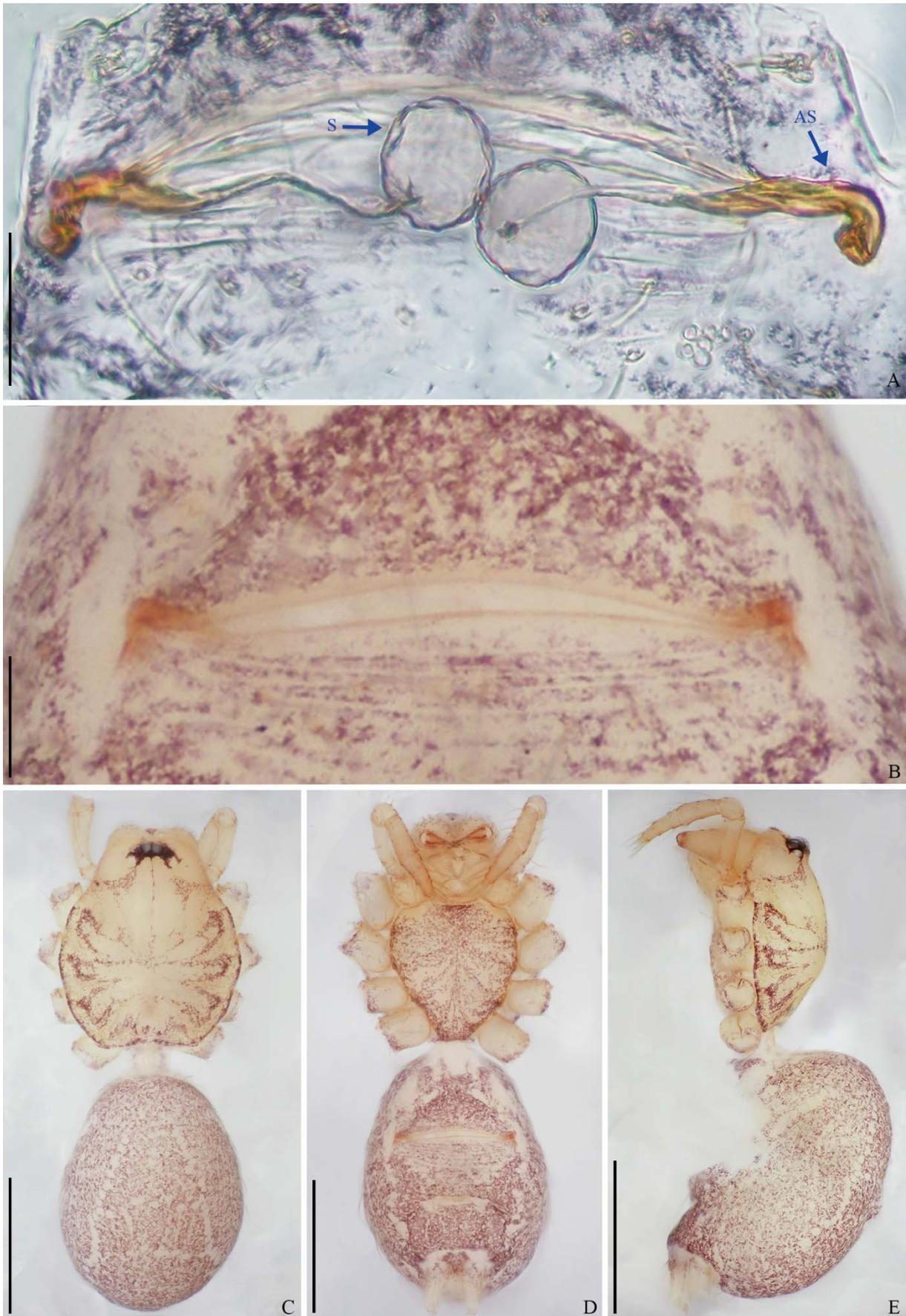


Figure 21. *Speocera dongjing* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

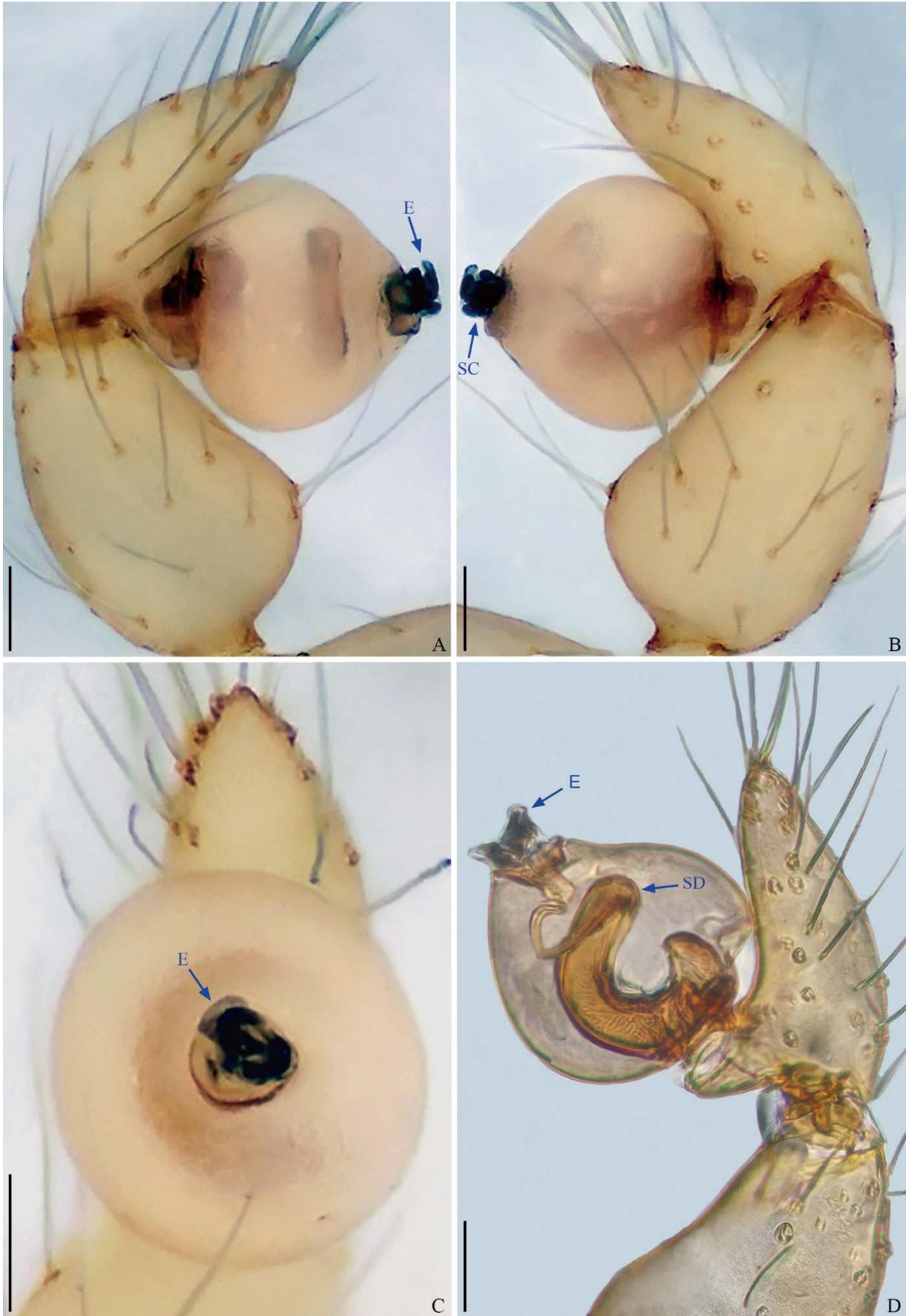


Figure 22. *Speocera gexuejuni* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

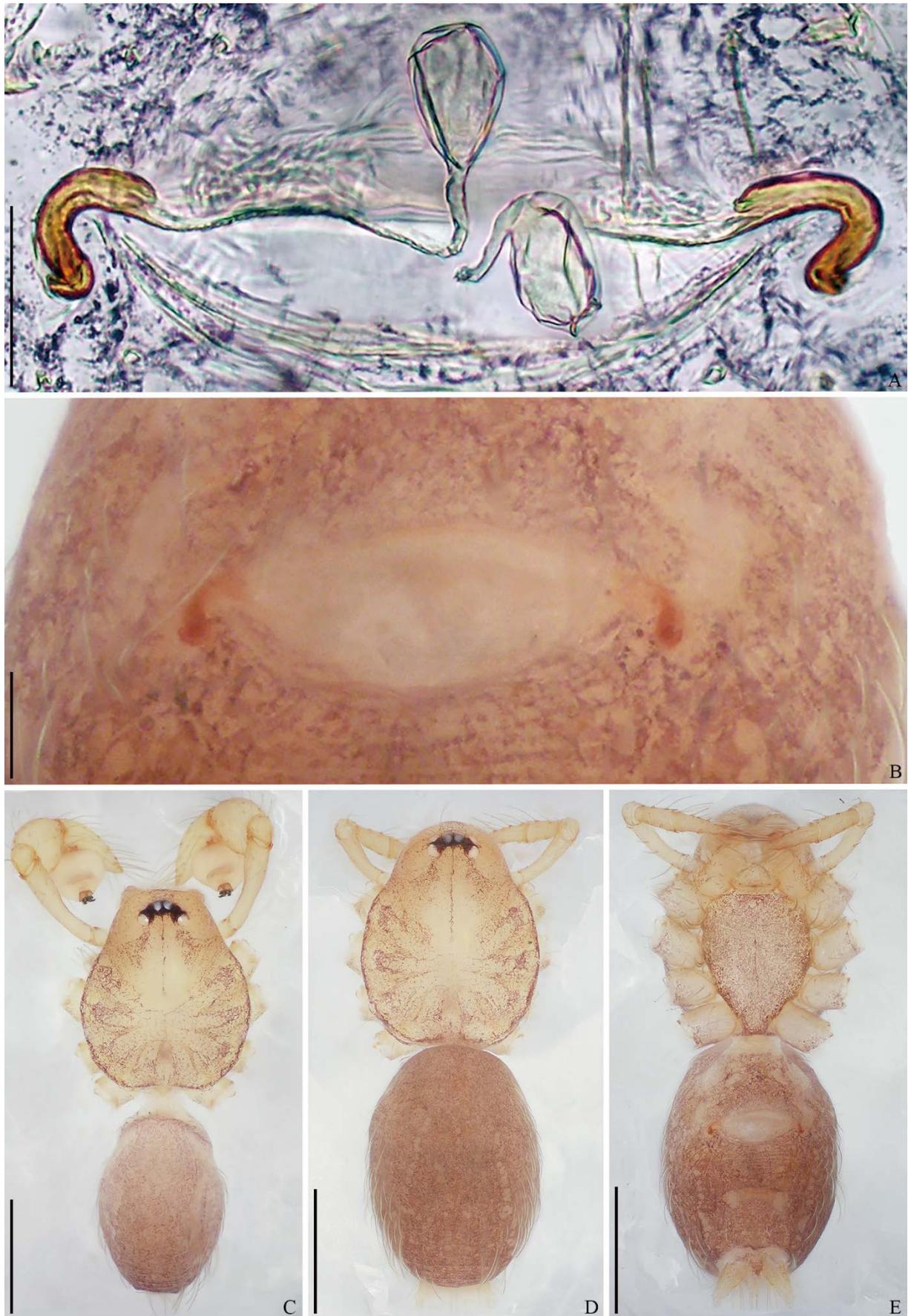


Figure 23. *Speocera gexuejuni* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

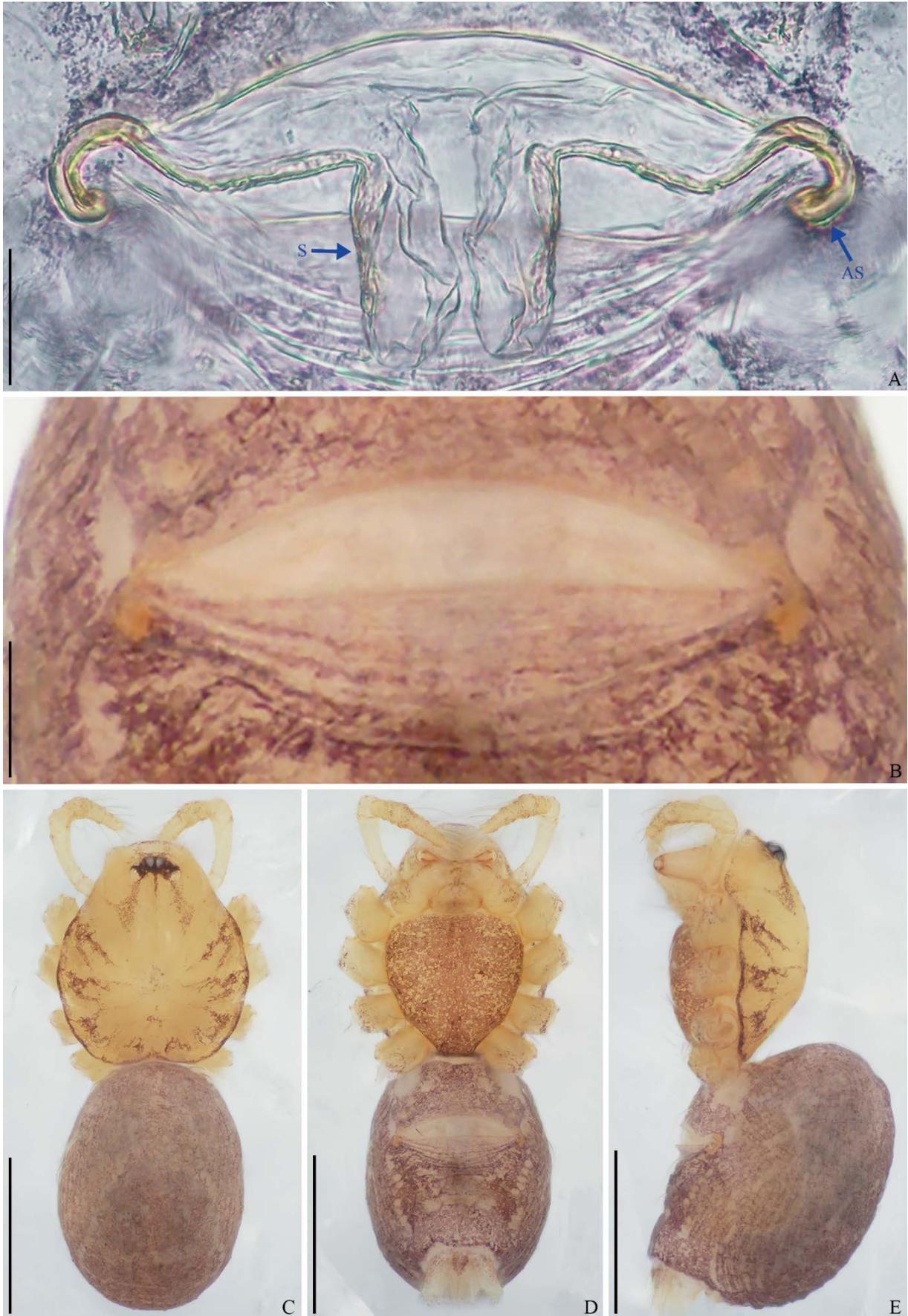


Figure 24. *Specocera griswoldi* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

***Speocera heilan* Li & Li sp. nov.** (Figs 25–26, 56C)

Material examined. Holotype ♂ (IZCAS), China, Hainan Province, Baisha County, Laoyuanmen Town, Heilan Village, sifting leaf litter in bamboo forest, 1.VII.2014 (19°6.672'N, 109°32.889'E), elev. 291 m, leg. F. Li & X. Wang. Paratypes 1♂3♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. Males of the new species are similar to *S. ballarini* Li & Li sp. nov. but can be distinguished by the laterally strongly excavated chelicerae (Fig. 56C) and the very small embolus (Fig. 25A). *S. ballarini* males have unmodified chelicerae (Fig. 55D) and a long, ribbon-like embolus (Fig. 8A). Females of the new species are similar to *S. huifengi* Li & Li sp. nov. but can be distinguished by the very small oval spermathecae (Fig. 26A).

Description. Male. Total length 1.08; carapace length 0.51; carapace width 0.45; abdomen length 0.51; abdomen width 0.36. Prosoma: carapace pyriform, narrowing gradually anteriorly; yellow, suffused with purplish pattern (Fig. 26C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow, suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow, strongly excavated laterally; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 56C). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 26C). Opisthosoma oval; purplish. Legs light yellow; leg formula 4123; leg lengths I 2.00 (0.59, 0.16, 0.56, 0.40, 0.28); II 1.83 (0.53, 0.14, 0.53, 0.35, 0.28); III 1.64 (0.46, 0.15, 0.43, 0.34, 0.27); IV 2.13 (0.61, 0.15, 0.61, 0.46, 0.30). Genitalia (Fig. 25). Palpal femur long; palpal tibia and cymbium incrassate, palpal tibia strongly enlarged basally, about 1.1 times as long as cymbium (Figs 25A–B). Cymbium conical, with a large prolateral extension basally. Bulb spherical, wider than high. Embolus small, dark, associated sclerites absent; sperm duct initially wide, gradually narrowing distally (Fig. 25D).

Female. Total length 0.98; carapace length 0.51; carapace width 0.44; abdomen length 0.45; abdomen width 0.36. Similar to male in color and general features (Figs 26D–E). Chelicerae unmodified. Leg lengths I 1.76 (0.38, 0.16, 0.56, 0.38, 0.27); II missing; III 1.52 (0.42, 0.14, 0.38, 0.32, 0.25); IV 2.08 (0.59, 0.16, 0.58, 0.43, 0.33). Genitalia. Internal genitalia with afferent spermathecae short, curved, not extending past the sides of the abdomen (Fig. 26B); spermathecae oval (Fig. 26A).

Distribution. Known only from the type locality.

***Speocera huifengi* Li & Li sp. nov.** (Figs 27, 58G)

Material examined. Holotype ♀ (IZCAS), Thailand, Loei Province, Phu Kradueng District, Pha Nok Khao, Tham Wat Phu Sang (16°49.062'N, 101°56.433'E), elev. 385 m, 29.XI.2016, leg. H. Zhao.

Etymology. The specific name is taken after the collector, Dr. Huifeng Zhao; name in genitive case.

Diagnosis. The new species is similar to *S. phangngaensis* Deeleman-Reinhold, 1995 but can be distinguished by the very short copulatory duct and the large spherical spermathecae (Figs 27A–B). *S. phangngaensis* has a long copulatory duct and small oval spermathecae (Deeleman-Reinhold, 1995: fig. 290).

Description. Female. Total length 1.08; carapace length 0.59; carapace width 0.41; abdomen length 0.60; abdomen width 0.35. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 27C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 27D). Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58G). Eyes: six contiguous eyes surrounded by black pigmentation, ALE, PME subequal, PLE largest (Fig. 27C). Opisthosoma oval; purplish (Fig. 27D). Legs light yellow; leg lengths I, II, IV missing; III 1.87 (0.51, 0.16, 0.50, 0.41, 0.29). Genitalia. Internal genitalia with afferent spermathecae short, curved posteriorly from epigastric furrow, not extending past the sides of the abdomen (Fig. 27B); spermathecae spherical (Fig. 27A).

Male. Unknown.

Distribution. Known only from the type locality.

***Speocera huisun* Li & Li sp. nov.** (Figs 28, 58H)

Material examined. Holotype ♀ (IZCAS), China, Taiwan Province, Nantou County, Huisun Forest Farm (24°5.279'N, 121°2.078'E), elev. 788 m, 30.VI.2013, leg. S. Li.

Etymology. The specific name is derived from the type locality; noun.

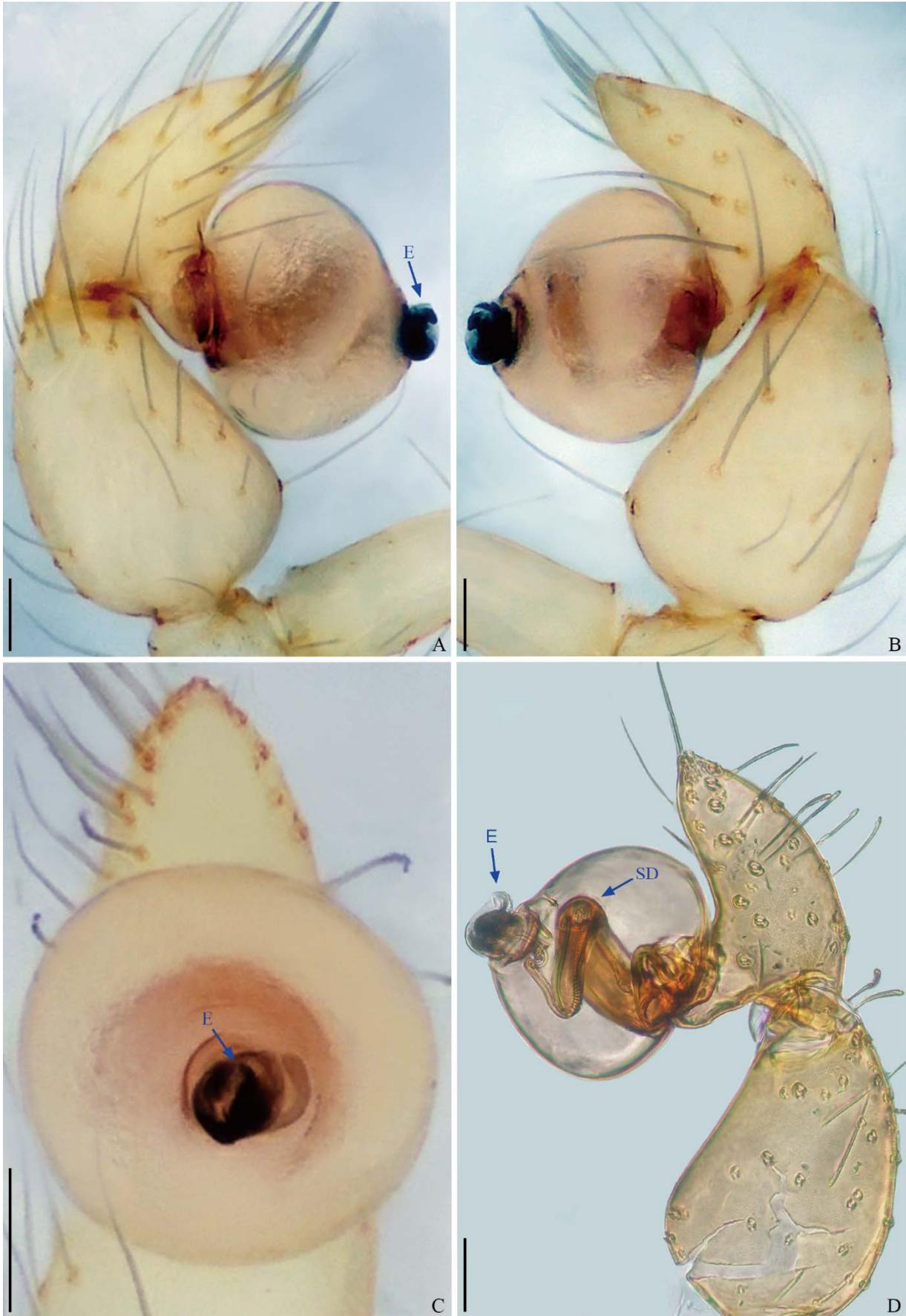


Figure 25. *Speocera heilan* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

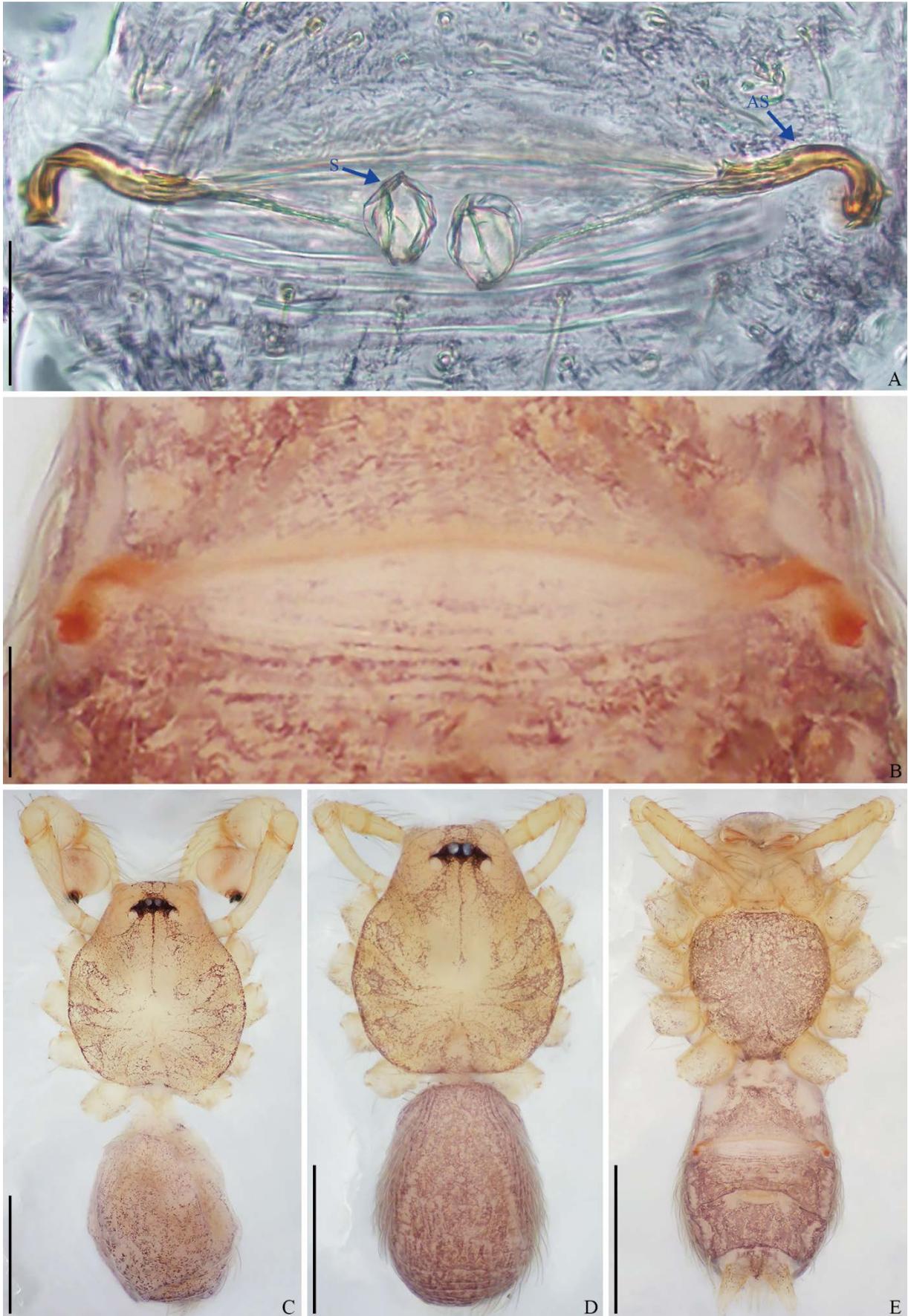


Figure 26. *Speocera heilan* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

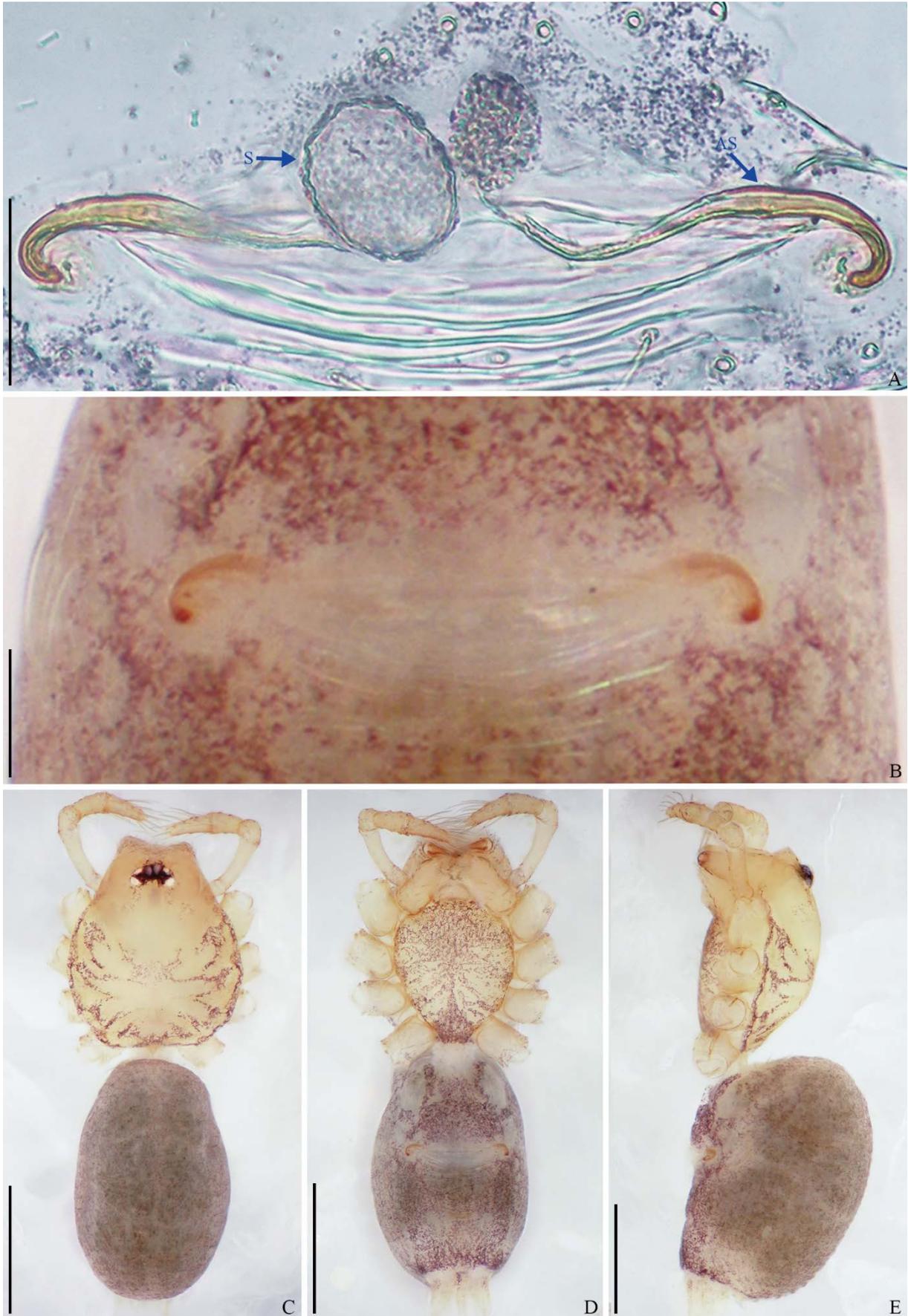


Figure 27. *Speocera huihengi* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

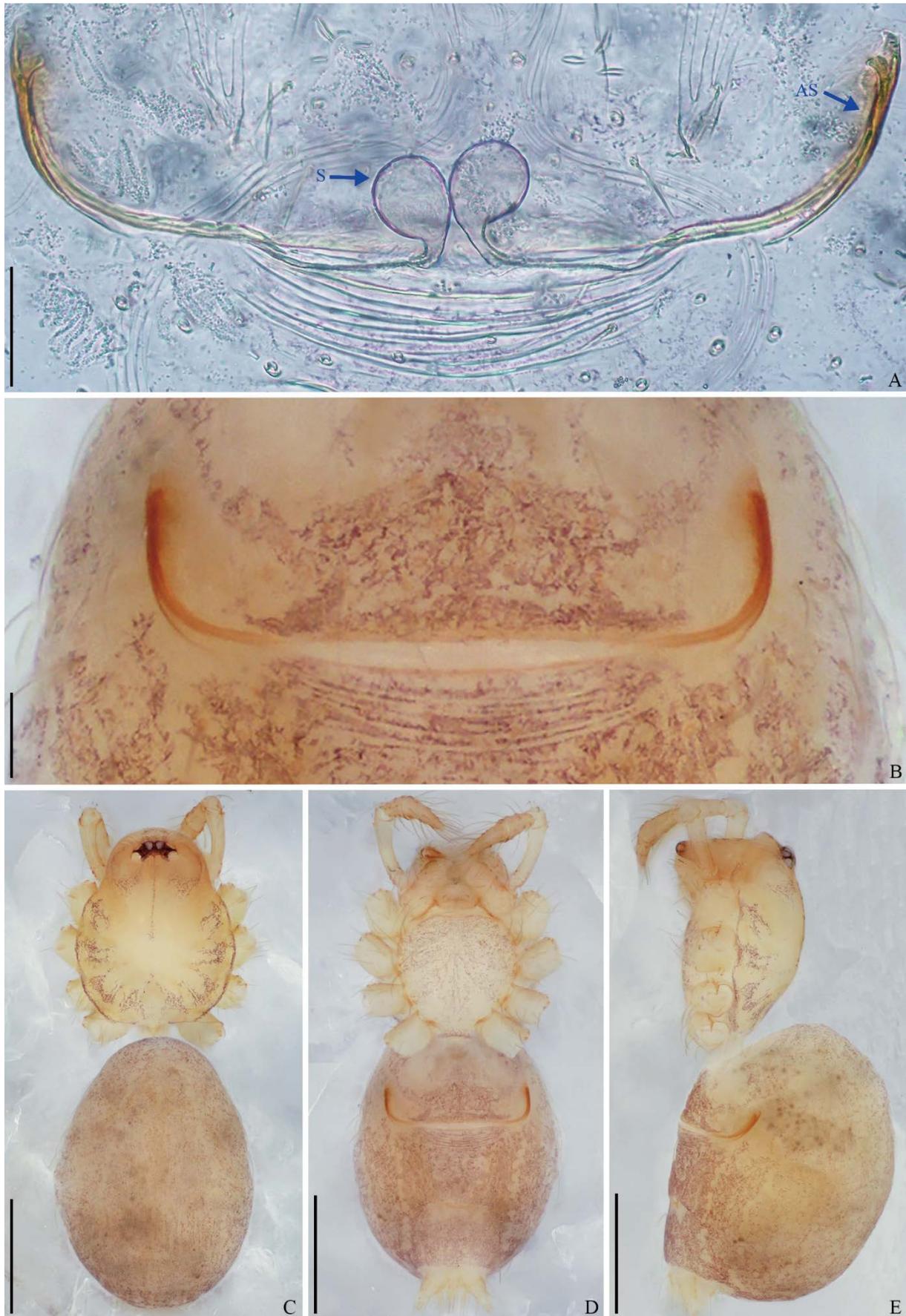


Figure 28. *Speocera huisun* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

Diagnosis. The new species is similar to *S. suea* Li & Li **sp. nov.** but can be distinguished by the oval spermathecae and long afferent spermathecae (cf. Figs 28A–B and Figs 41A–B).

Description. Female. Total length 1.27; carapace length 0.52; carapace width 0.42; abdomen length 0.71; abdomen width 0.53. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 28C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 28D). Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58H). Eyes: six contiguous eyes surrounded by black pigmentation; PME and ALE subequal, PLE largest (Fig. 28C). Opisthosoma oval; purplish (Fig. 28D). Legs missing. Genitalia. Internal genitalia with afferent spermathecae long, extending past the sides of the abdomen (Fig. 28B); spermathecae oval (Fig. 28A).

Male. Unknown.

Distribution. Known only from the type locality.

Speocera lahrak Li & Li **sp. nov.** (Figs 29–30, 56D)

Material examined. Holotype ♂ (IZCAS), Thailand, Nakhon Nayok Province, Mueang Nakhon Nayok District, forest near Lah Rak waterfall (14°17.472'N, 101°14.888'E), elev. 82 m, 3.XI.2014, leg. H. Zhao, Y. Li & Z. Chen. Paratype 1 ♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. stellafera* Deeleman-Reinhold, 1995, but males can be distinguished by the unmodified chelicerae (Fig. 56D) and having the palpal tibia distinctly shorter than cymbium (Figs 29A–B), and the females by the short, straight afferent spermathecae. *S. stellafera* males have laterally excavated chelicerae, the palpal tibia longer than the cymbium, and the females have very long, curved afferent spermathecae (Deeleman-Reinhold, 1995: figs 264–269).

Description. Male. Total length 0.93; carapace length 0.46; carapace width 0.38; abdomen length 0.48; abdomen width 0.34. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 30C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, longer than wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two small denticles (Fig. 56D). Eyes: six contiguous eyes surrounded by black pigmentation, nearly subequal (Fig. 30C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I missing; II missing; III 1.38 (0.39, 0.13, 0.36, 0.28, 0.22); IV 1.91 (0.53, 0.13, 0.55, 0.42, 0.28). Genitalia (Fig. 29). Palpal femur long; palpal tibia about 0.8 times as long as cymbium (Figs 29A–B). Cymbium conical, without prolateral extension. Bulb spherical. Embolus ribbon-like, dark and basally with an associated plate-like sclerite; sperm duct initially wide, gradually narrowing distally (Fig. 29D).

Female. Total length 0.90; carapace length 0.47; carapace width 0.38; abdomen length 0.42; abdomen width 0.31. Similar to male in color and general features (Figs 30D–E). Leg lengths I missing; II missing; III 1.34 (0.37, 0.13, 0.34, 0.28, 0.22); IV 1.80 (0.50, 0.14, 0.51, 0.39, 0.27). Genitalia. Internal genitalia with afferent spermathecae short, straight, not extending past the sides of the abdomen (Fig. 30B); spermathecae large, elongated oval (Fig. 30A).

Distribution. Known only from the type locality.

Speocera longyan Li & Li **sp. nov.** (Figs 31–32, 56G)

Material examined. Holotype ♂ (IZCAS), China, Guangxi Zhuang Autonomous Region, Hechi City, Du'an County, Xia'ao Town, Longyan Cave, 15.III.2015 (24°4.402'N, 108°3.257'E), elev. 173 m, leg. Z. Chen & Y. Li. Paratypes 2 ♂ 3 ♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. bachma* Li & Li **sp. nov.**, but males can be distinguished by the laterally strongly curved chelicerae (Fig. 56G) and the asymmetrical male palpal bulb (Figs 31A–B), and females by the tubular spermathecae (Fig. 32A). *S. bachma* males have unmodified chelicerae (Fig. 55C), a symmetrical male palpal bulb (Figs 5A–B), and females have oval spermathecae (Fig. 6A).

Description. Male. Total length 1.05; carapace length 0.51; carapace width 0.41; abdomen length 0.62; abdomen width 0.42. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 32A); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, longer than wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow, lateral margin strongly curved; promargin with a series of six teeth reaching the

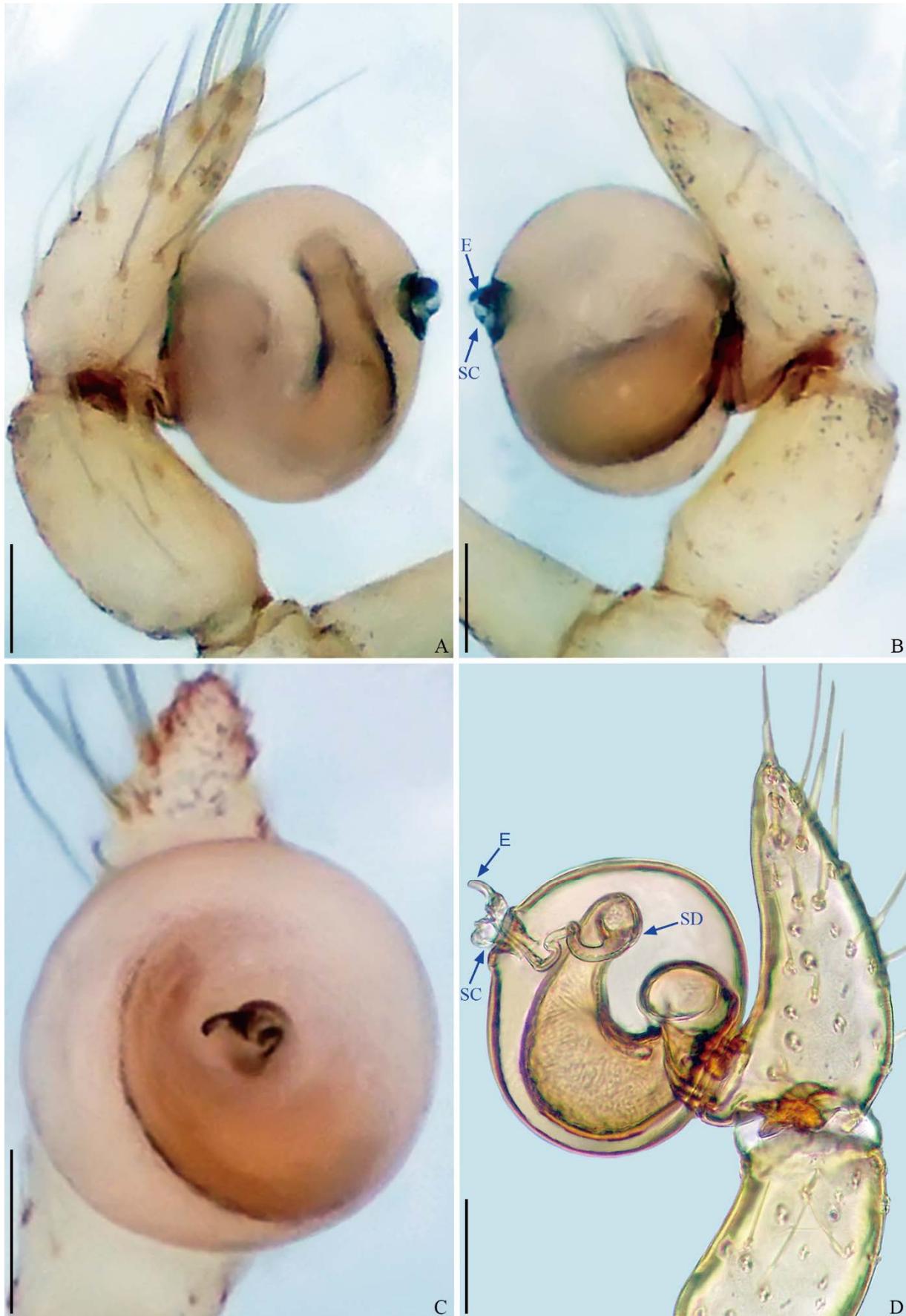


Figure 29. *Speocera lahrak* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

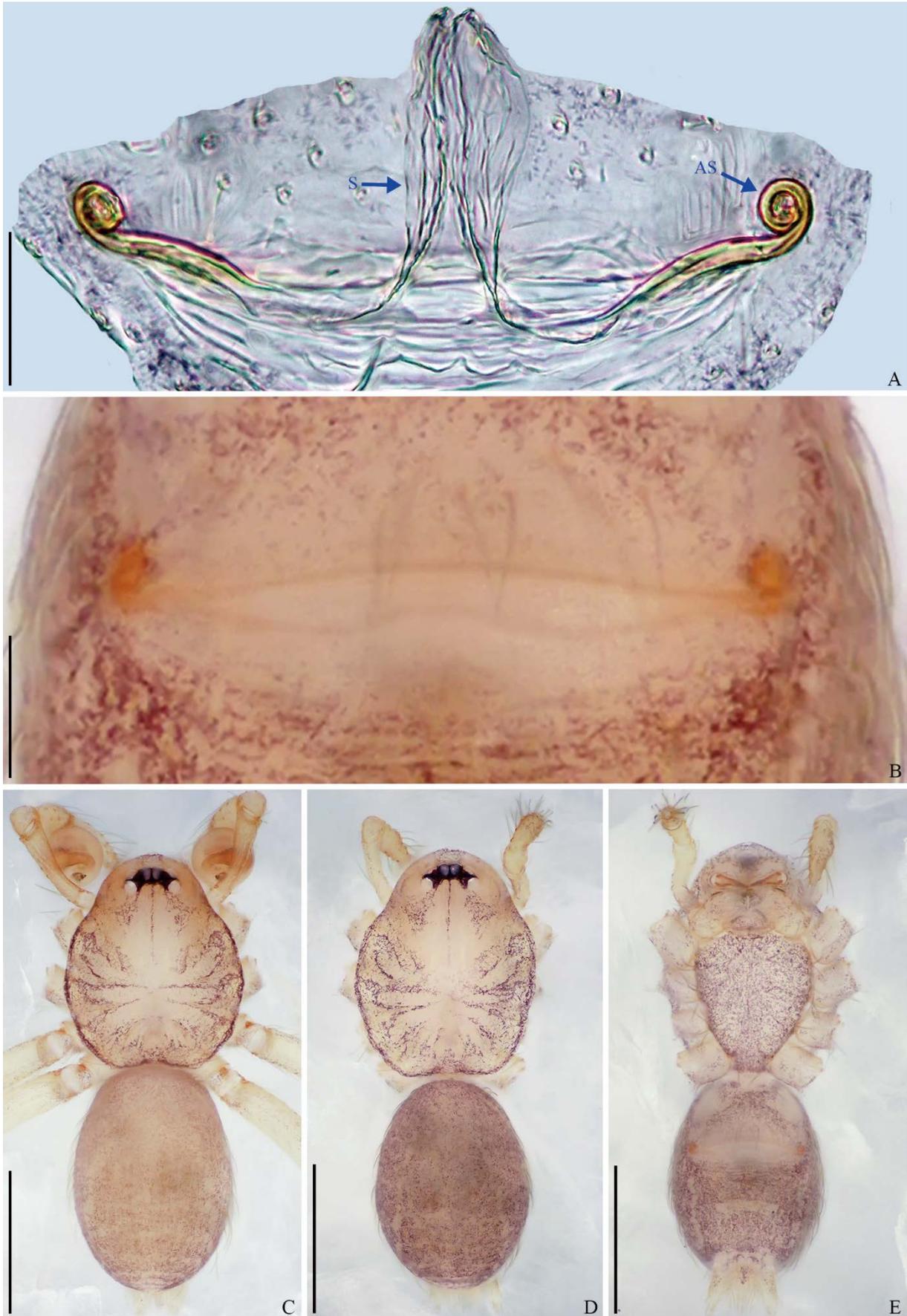


Figure 30. *Speocera lahrak* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

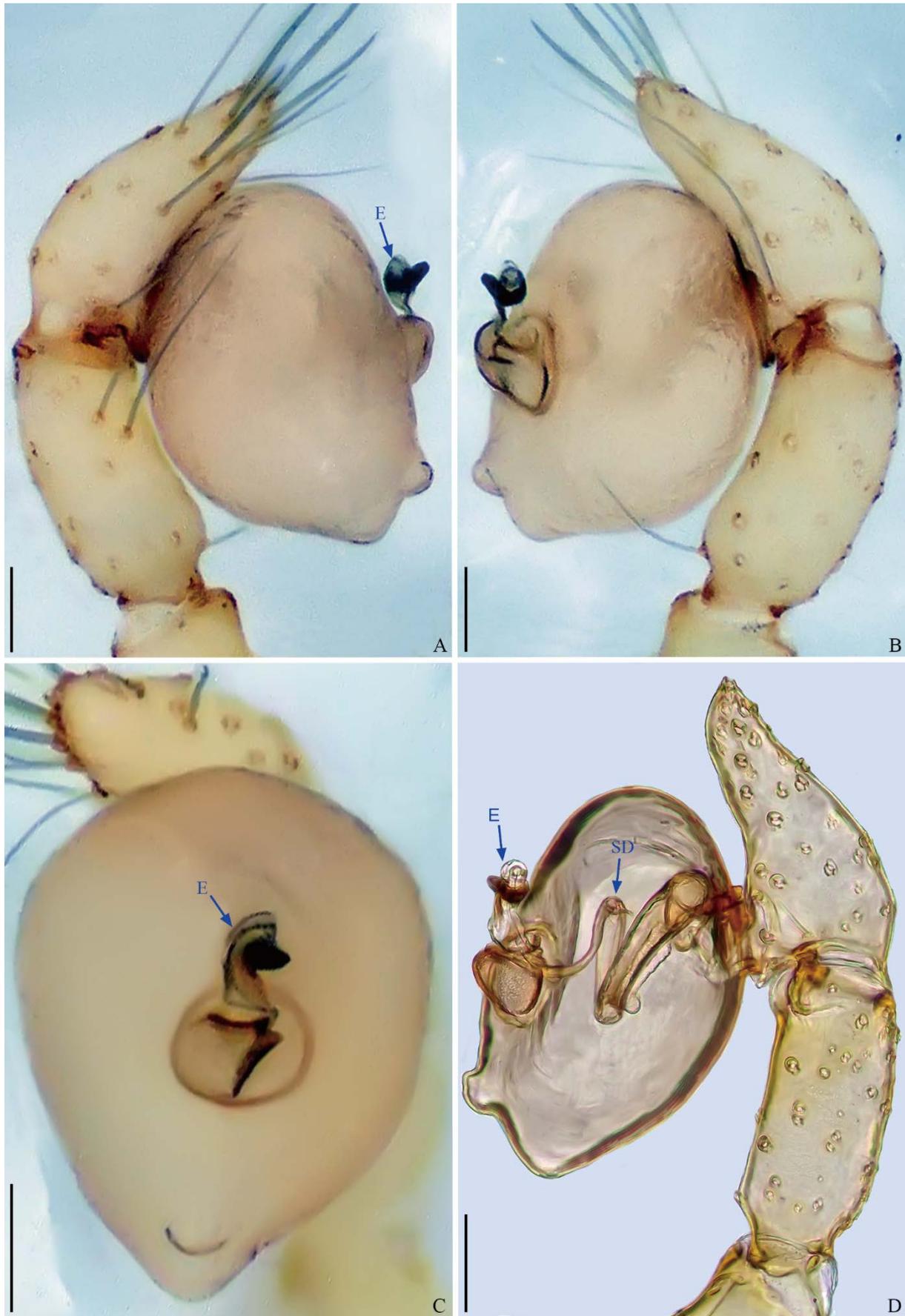


Figure 31. *Speocera longyan* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

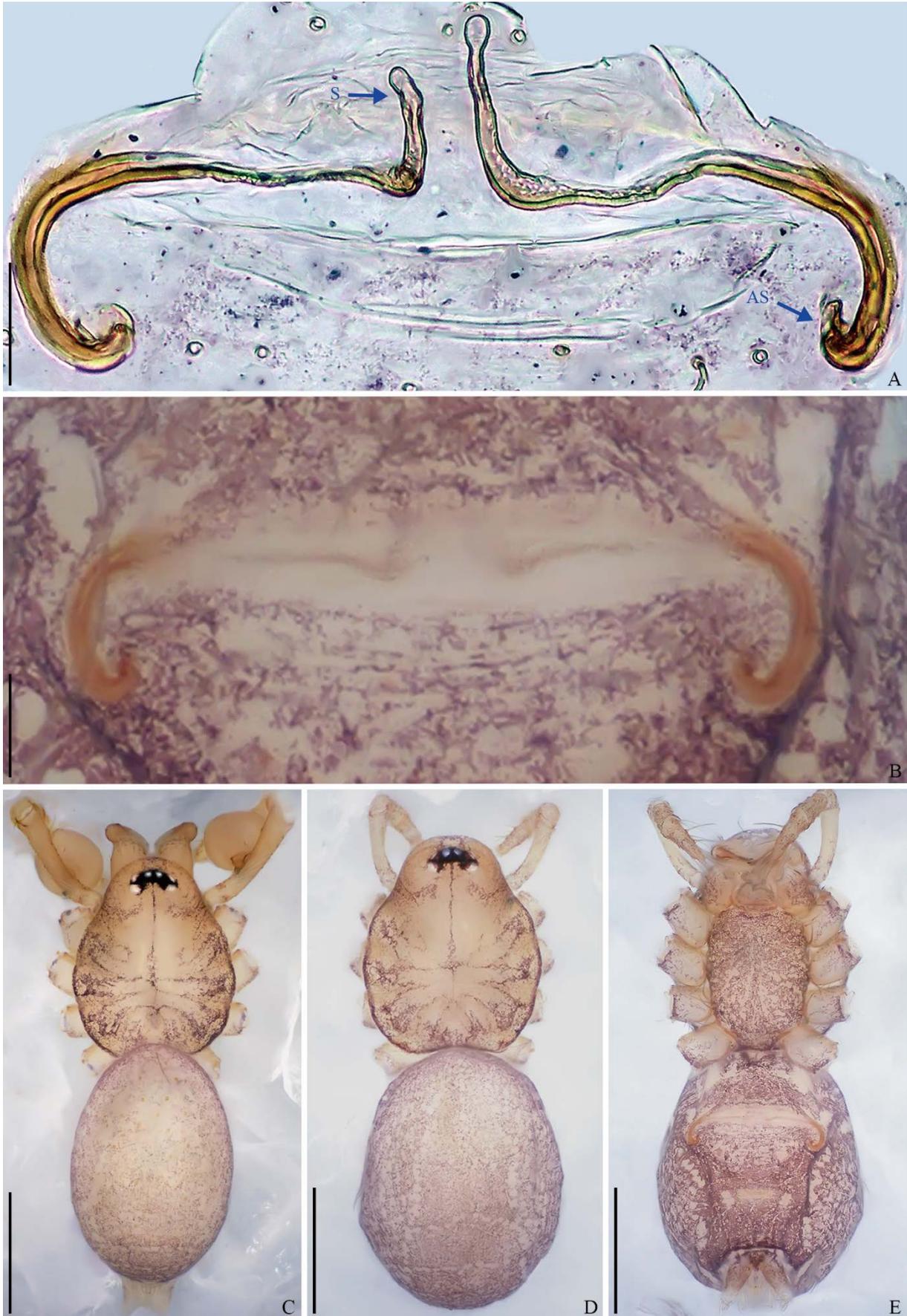


Figure 32. *Speocera longyan* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

lamina; retromargin with two small denticles (Fig. 56G). Eyes: six contiguous eyes surrounded by black pigmentation; PME smallest, ALE largest (Fig. 32C). Opisthosoma oval; purplish. Legs light yellow; leg formula 4123; leg lengths I 1.97 (0.56, 0.18, 0.56, 0.38, 0.29); II 1.80 (0.51, 0.16, 0.51, 0.35, 0.28); III 1.60 (0.45, 0.14, 0.41, 0.34, 0.26); IV 2.18 (0.63, 0.16, 0.61, 0.45, 0.33). Genitalia (Fig. 31). Palpal femur long; palpal tibia as long as cymbium (Figs 31A–B). Cymbium conical, without prolateral extension. Bulb asymmetrical, elliptical, with a small apophysis distally. Embolus short, butterfly-like and without distinct associated sclerites; sperm duct initially wide, gradually narrowing distally (Fig. 31D).

Female. Total length 1.14; carapace length 0.52; carapace width 0.43; abdomen length 0.62; abdomen width 0.49. Similar to male in color and general features (Figs 32D–E) but larger. Chelicerae unmodified. Leg formula 4123; leg lengths I 1.99 (0.58, 0.16, 0.58, 0.38, 0.29); II 1.82 (0.52, 0.16, 0.50, 0.34, 0.29); III 1.70 (0.47, 0.16, 0.45, 0.36, 0.27); IV 2.18 (0.61, 0.16, 0.64, 0.46, 0.33). Genitalia. Internal genitalia with afferent spermathecae short, strongly curved posteriorly from the epigastric furrow, not extending past the sides of the abdomen (Fig. 32B); spermathecae tubular shaped (Fig. 32A).

Distribution. Known only from the type locality.

***Speocera manhao* Li & Li sp. nov.** (Figs 33–34, 56E, F)

Material examined. Holotype ♂ (IZCAS), China, Yunnan Province, Wenshan Zhuang and Miao Autonomous Prefecture, Gejiu City, Manhao Town, Lvshuihe Tropical Forest Reserve (23°1.535'N, 103°24.063'E), elev. 477 m, 19.V.2015, leg. Z. Chen & Y. Li. Paratypes 2♂3♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. bicornea* Tong & Li, 2007, but males can be distinguished by the irregular spherical palpal bulb (Figs 33A–B) and females by the long afferent spermathecae (Figs 34B, D). *S. bicornea* has a spherical palpal bulb and short afferent spermathecae that do not extend to the upper sides of the abdomen (Tong & Li, 2007: fig. 7).

Description. Male. Total length 1.08; carapace length 0.50; carapace width 0.43; abdomen length 0.54; abdomen width 0.38. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 34C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, longer than wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow, lateral margin strongly excavated, with a very small horn-like apophysis; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Figs 56E–F). Eyes: six contiguous eyes surrounded by black pigmentation; PME smallest, PLE largest (Fig. 34C). Opisthosoma oval; purplish. Legs light yellow; leg formula 4123; leg lengths I 1.95 (0.55, 0.16, 0.61, 0.36, 0.27); II 1.77 (0.51, 0.16, 0.50, 0.33, 0.27); III 1.59 (0.45, 0.14, 0.42, 0.33, 0.25); IV 2.15 (0.62, 0.15, 0.62, 0.45, 0.31). Genitalia (Fig. 33). Palpal femur long; palpal tibia about 1.3 times as long as cymbium (Figs 33A–B). Cymbium conical, with large prolateral extension basally. Bulb shaped like an irregular sphere. Embolus short, dark and basally with belt-like associated sclerites; sperm duct initially wide, abruptly narrowing distally (Fig. 33D).

Female. Total length 1.06; carapace length 0.53; carapace width 0.42; abdomen length 0.59; abdomen width 0.40. Similar to male in color and general features (Figs 34D–E). Chelicerae unmodified. Leg lengths I 1.69 (0.49, 0.15, 0.48, 0.32, 0.26); II 1.57 (0.45, 0.15, 0.44, 0.29, 0.24); III 1.44 (0.42, 0.15, 0.36, 0.28, 0.23); IV 1.92 (0.54, 0.15, 0.54, 0.40, 0.29). Genitalia. Internal genitalia with afferent spermathecae very long, extending past the sides of the abdomen (Fig. 34B); spermathecae oval (Fig. 34A).

Distribution. Known only from the type locality.

***Speocera melinh* Li & Li sp. nov.** (Figs 35, 58I)

Material examined. Holotype ♀ (IZCAS), Vietnam, Ninh Binh Province, Cuc Phuong National Park, MeLinh Station for Biodiversity (21°23.233'N, 105°42.617'E), elev. 81 m, 31.V.2016, leg. Q. Zhao & Z. Chen.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. bulbiformis* Lin, Pham & Li, 2009 but can be distinguished by the very long afferent spermathecae (Fig. 35B). *S. bulbiformis* has short afferent spermathecae (Lin *et al.*, 2009: figs 4B, E).

Description. Female. Total length 1.21; carapace length 0.54; carapace width 0.44; abdomen length 0.60; abdomen width 0.48. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 35C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, longer than wide (Fig. 35D). Endites light yellow, suffused with purplish tinge; with serrula; labium light yellow, suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58I). Eyes: six contiguous eyes surrounded by black pigmentation; PME and ALE

subequal, PLE largest (Fig. 35C). Opisthosoma oval; purplish (Fig. 35D). Legs light yellow; leg lengths I 1.98 (0.56, 0.16, 0.59, 0.38, 0.29); II 1.79 (0.52, 0.16, 0.50, 0.35, 0.27); III, IV missing. Genitalia. Internal genitalia with afferent spermathecae long, extending past the sides of the abdomen (Fig. 35B); spermathecae long, oval (Fig. 35A).

Male. Unknown.

Distribution. Known only from the type locality.

***Speocera nuichua* Li & Li sp. nov.** (Figs 36–37, 56H)

Material examined. Holotype ♂ (IZCAS), Vietnam, Ninh Thuan Province, Nui Chua National Park (11°43.565'N, 109°11.135'E), elev. 70m, 30.VIII.2015, Leg. Q. Zhao, Y. Li & Z. Chen. Paratypes 1♂3♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. apo* Deeleman-Reinhold, 1995, but males can be distinguished by the palpal tibia which is shorter than the cymbium (Figs 36A–B) and the chelicerae which are laterally excavated, with several short, strong setae (Fig. 56H) and females by the very large, balloon-shaped spermathecae (Fig. 37A). *S. apo* males have the palpal tibia longer than the cymbium, the chelicerae laterally straight, without special setae, and the females have oval spermathecae (Deeleman-Reinhold, 1995: figs 220–224).

Description. Male. Total length 0.93; carapace length 0.47; carapace width 0.38; abdomen length 0.44; abdomen width 0.37. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with a purplish pattern (Fig. 37C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow, suffused with purplish tinge; with serrula; labium light yellow, suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow, laterally excavated, with several short, strong setae; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 56H). Eyes: six contiguous eyes surrounded by black pigmentation; PME and ALE subequal, PLE largest (Fig. 37C). Opisthosoma oval; purplish. Legs missing. Genitalia (Fig. 36). Palpal femur long; palpal tibia about 0.7 times as long as cymbium (Figs 36A–B). Cymbium conical, without prolateral extensions. Bulb spherical. Embolus short, dark and basally without distinct associated sclerites; sperm duct very wide, narrowing distally (Fig. 36D).

Female. Total length 1.03; carapace length 0.46; carapace width 0.41; abdomen length 0.55; abdomen width 0.48. Similar to male in color and general features (Figs 37D–E) but larger. Chelicerae unmodified. Legs light yellow; leg formula 4123; leg lengths I 1.78 (0.48, 0.15, 0.53, 0.36, 0.26); II 1.58 (0.45, 0.14, 0.44, 0.32, 0.23); III 1.39 (0.38, 0.11, 0.36, 0.31, 0.23); IV 1.93 (0.54, 0.14, 0.56, 0.42, 0.28). Genitalia. Internal genitalia with afferent spermathecae very short, not extending past the sides of the abdomen (Fig. 37B); spermathecae very large, balloon shaped (Fig. 37A).

Distribution. Known only from the type locality.

***Speocera payakumbuh* Li & Li sp. nov.** (Figs 38–39, 57A)

Material examined. Holotype ♂ (IZCAS), Indonesia, Sumatra, West Sumatra Province, Payakumbuh, near exit of Ngalau Indah Cave (0°15.296'S, 100°36.256'E), elev. 626m, 14.V.2014, leg. Z. Yao. Paratypes 2♂3♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. xuanson* Li & Li **sp. nov.**, but males can be distinguished by the unmodified chelicerae (Fig. 57A) and the very long, curved associated sclerites of the male embolus (Figs 38A–B), and females by the small spermathecae (Fig. 39A). *S. xuanson* males have the chelicerae laterally strongly excavated, with a horn-like apophysis (Figs 57I–J), and long, straight associated sclerites of the embolus (Figs 51A–B), and the females have relatively larger spermathecae (Fig. 52A).

Description. Male. Total length 0.79; carapace length 0.40; carapace width 0.34; abdomen length 0.38; abdomen width 0.30. Prosoma: carapace broadly oval, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 39C); pars cephalica flat; fovea not visible. Sternum brown, as long as wide. Endites light yellow, suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 57A). Eyes: six contiguous eyes surrounded by black pigmentation; PME, ALE and PLE nearly subequal (Fig. 39C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I, II, III missing; IV 1.65 (0.45, 0.14, 0.45, 0.37, 0.24). Genitalia (Fig. 38). Palpal femur long; palpal tibia twice as long as cymbium. Cymbium conical, with a large prolateral extension basally. Bulb spherical. Embolus triangular, dark and basally with one long, curved associated sclerite; sperm duct initially wide narrowing distally (Fig. 38D).

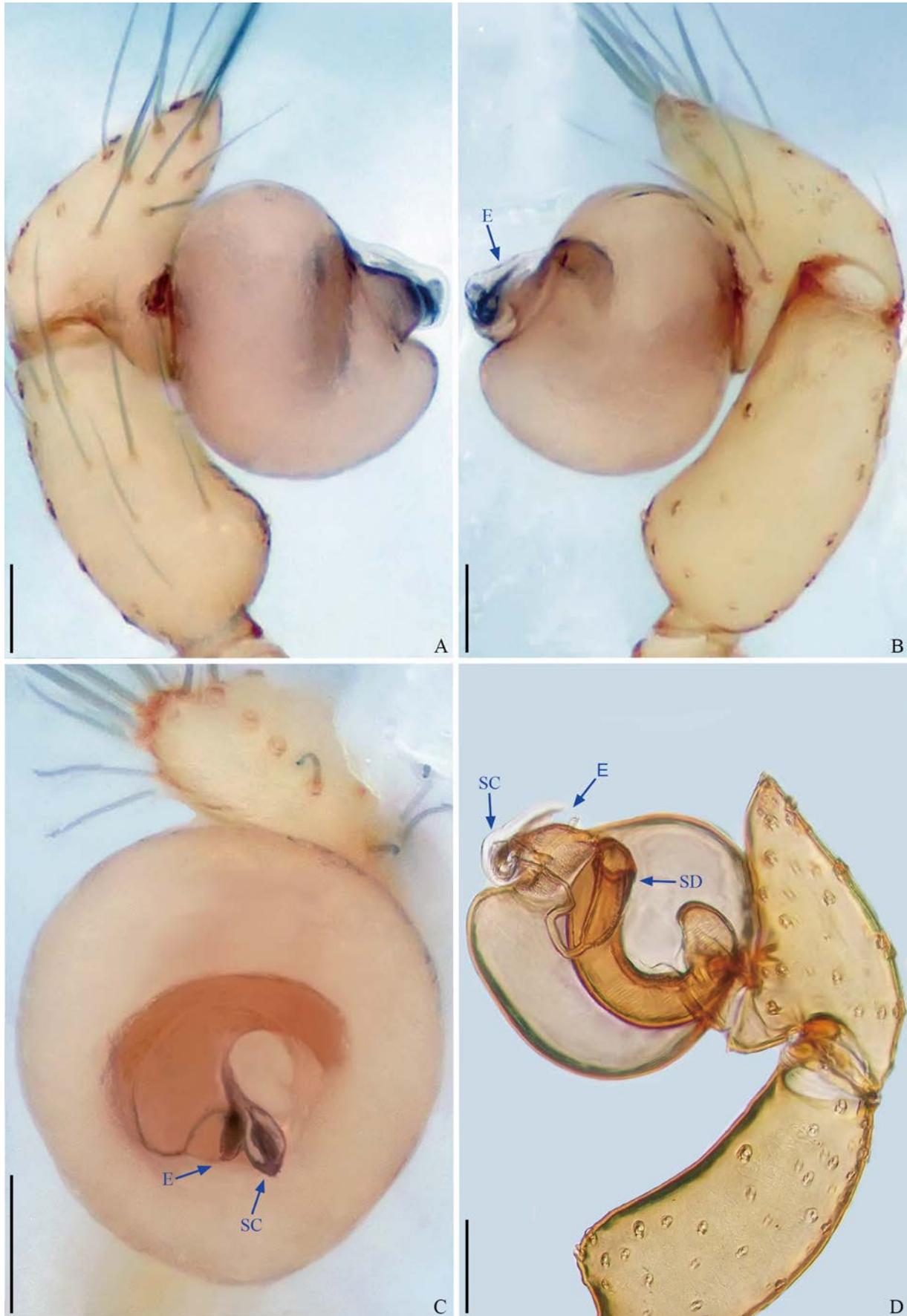


Figure 33. *Speocera manhao* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

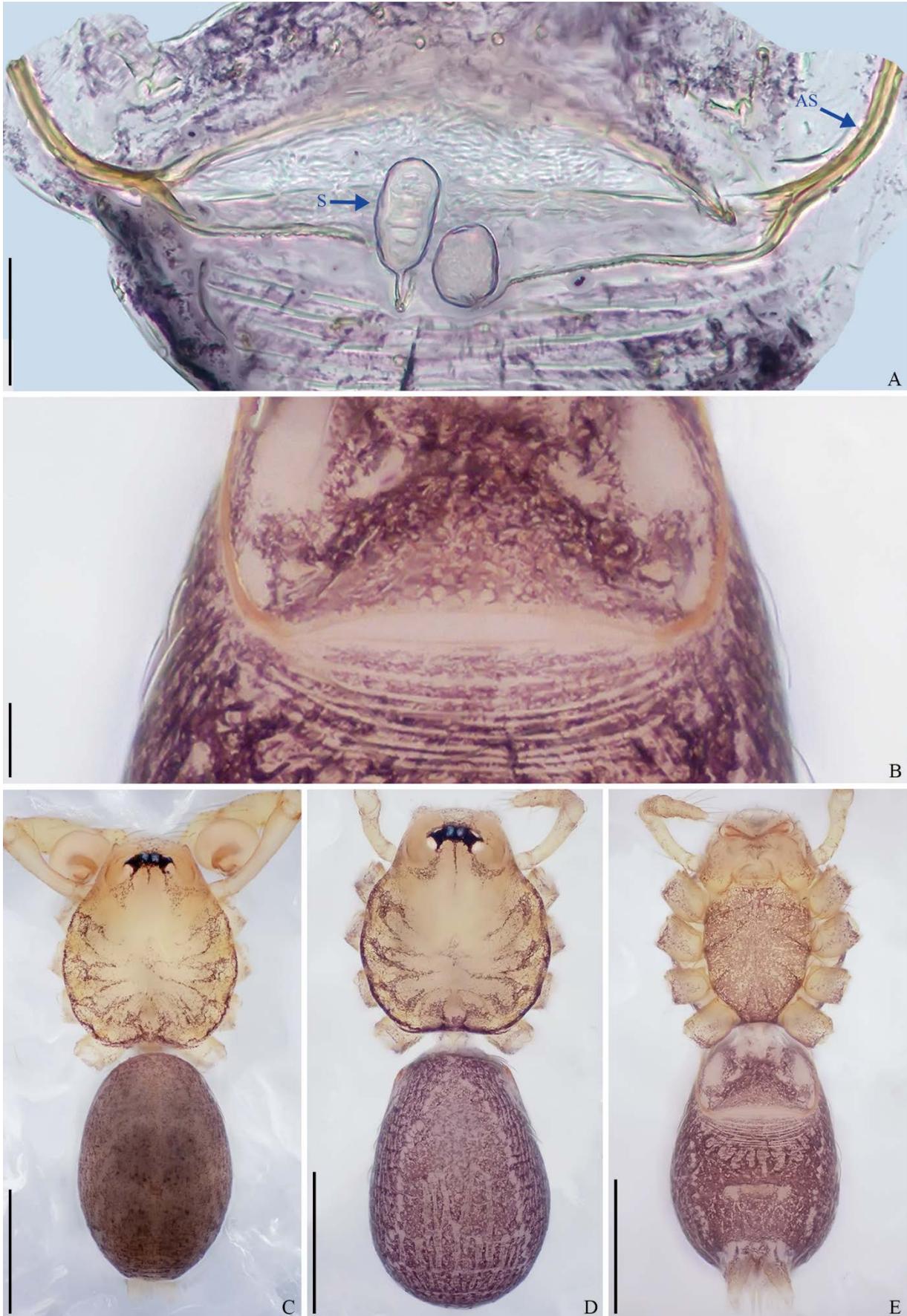


Figure 34. *Speocera manhao* Li & Li sp. nov. A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

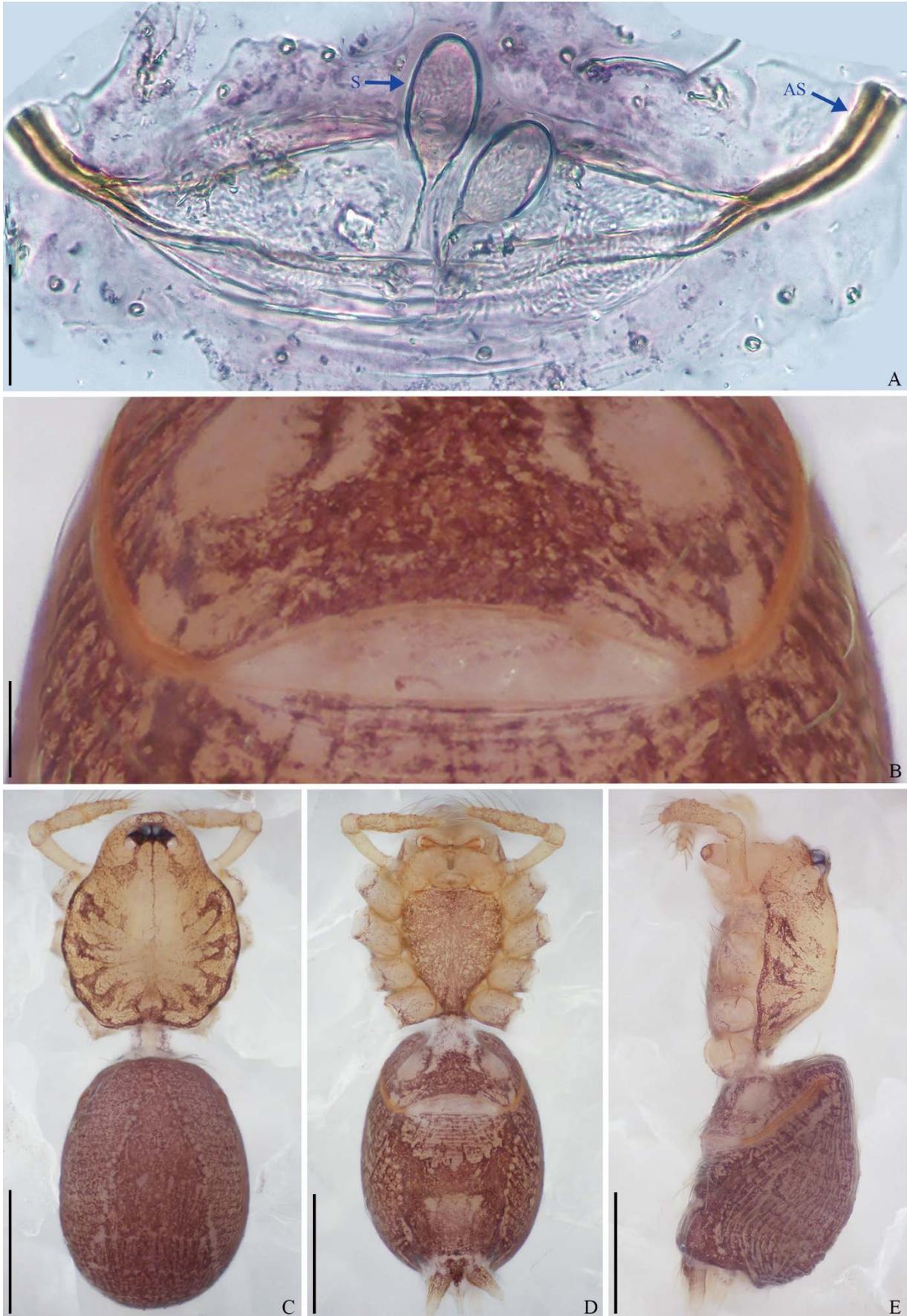


Figure 35. *Speocera melinh* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

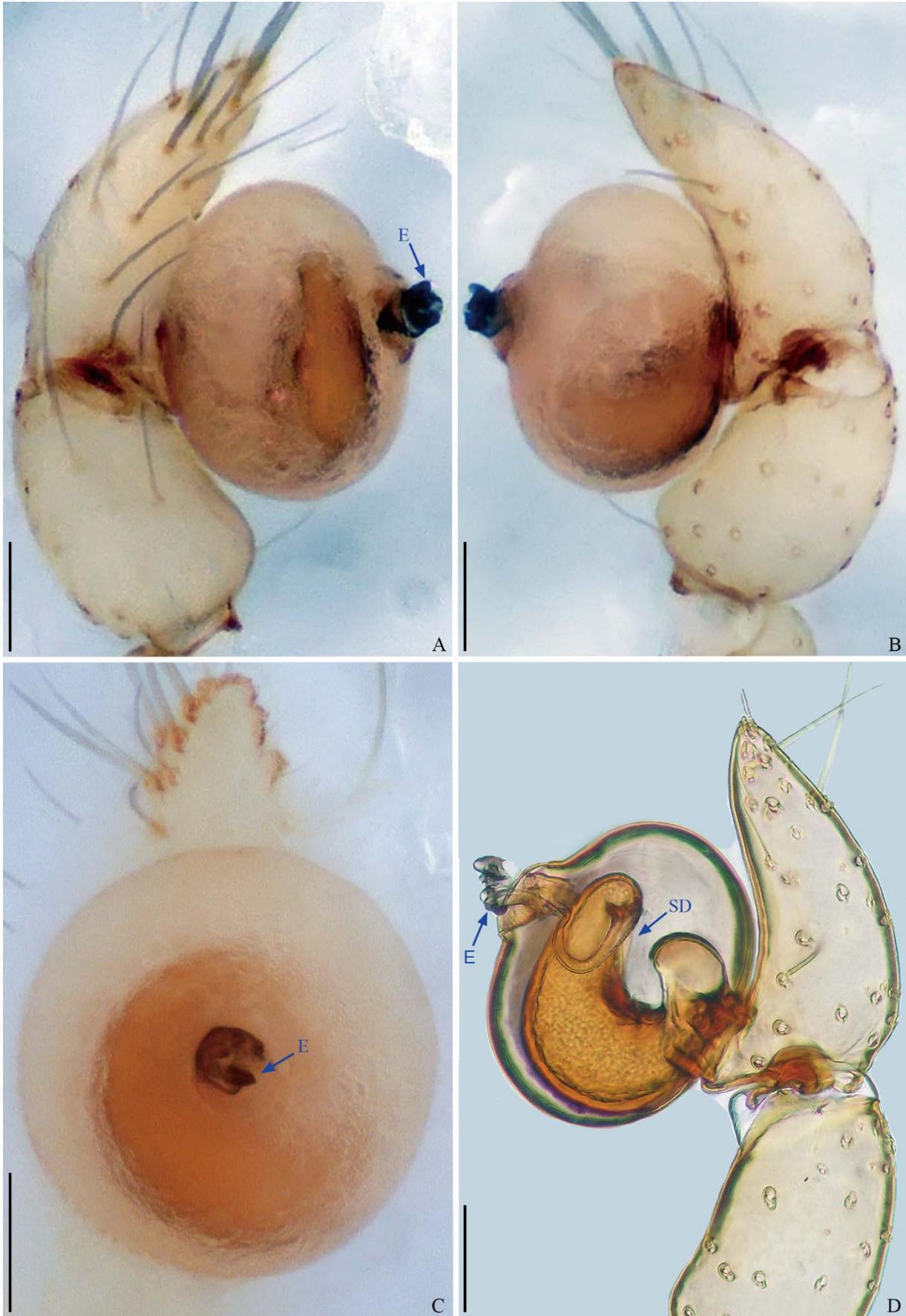


Figure 36. *Specocera nuichua* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

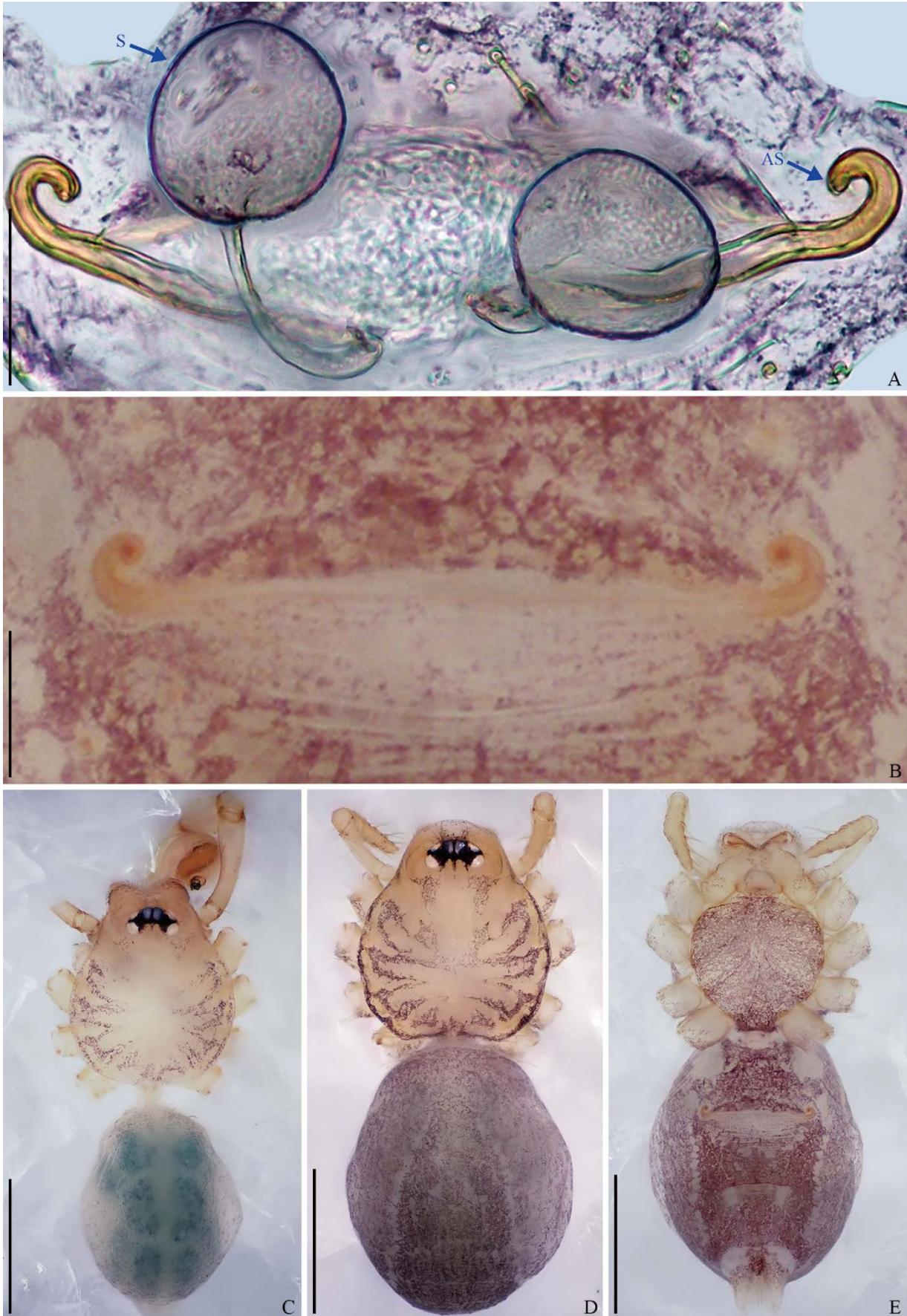


Figure 37. *Speocera nuichua* Li & Li sp. nov. A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

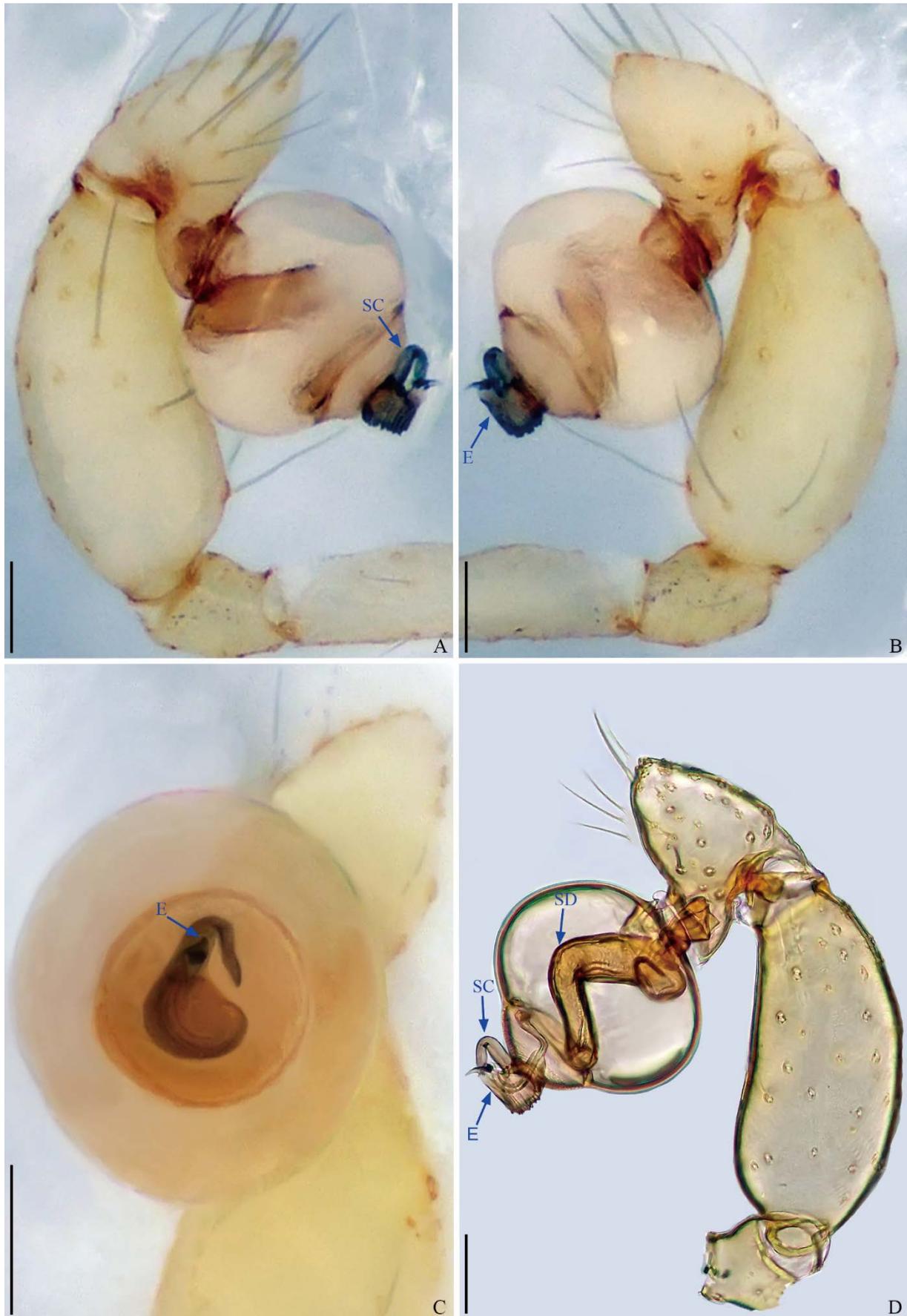


Figure 38. *Speocera payakumbuh* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

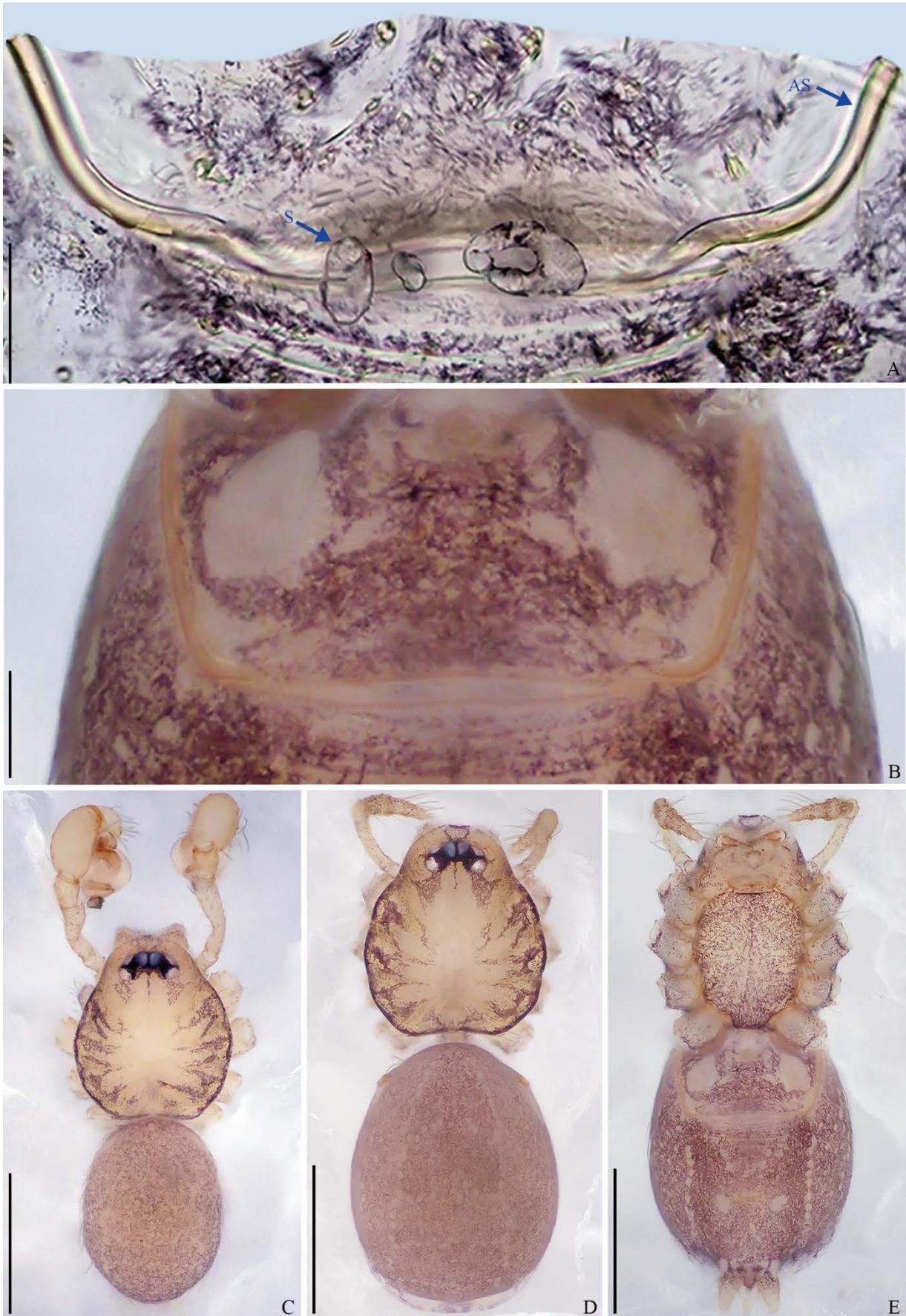


Figure 39. *Speocera payakumbuh* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

Female. Total length 0.99; carapace length 0.42; carapace width 0.37; abdomen length 0.56; abdomen width 0.42. Similar to male in color and general features (Figs 39D–E) but larger. Leg lengths I 1.51 (0.40, 0.14, 0.44, 0.30, 0.23); II missing; III 1.23 (0.32, 0.13, 0.31, 0.28, 0.20); IV 1.61 (0.45, 0.13, 0.44, 0.35, 0.25). Genitalia. Internal genitalia with afferent spermathecae long, extending past the sides of the abdomen (Fig. 39B); spermathecae oval (Fig. 39A).

Distribution. Known only from the type locality.

***Speocera suea* Li & Li sp. nov.** (Figs 40–41, 57B)

Material examined. Holotype ♂ (IZCAS), Thailand, Yala Province, Mueang Yala District, Outside of Suea Cave (6°31.355'N, 101°13.865'E), elev. 43 m, 20.X.2015, leg. Q. Zhao, G. Zhou & Z. Chen. Paratypes 1♂1♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. Males of the new species are similar to *S. ranongensis* Deeleman-Reinhold, 1995 (female unknown) but can be distinguished by the distinctly short palpal tibia that is about 1.2 times as long as the cymbium in the new species (Fig. 40A) vs two times longer than the cymbium in *S. ranongensis* (Deeleman-Reinhold, 1995: fig. 272); females of the new species are similar to *S. capra* Deeleman-Reinhold, 1995 but can be distinguished by the tubular spermathecae (Fig. 41A).

Description. Male. Total length 0.94; carapace length 0.38; carapace width 0.45; abdomen length 0.47; abdomen width 0.33. Prosoma: carapace broadly oval, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 41C); pars cephalica flat; fovea not visible. Sternum brown, as long as wide. Endites light yellow, suffused with purplish tinge; with serrula; labium light yellow, suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow, lateral margin slightly curved, with several setae; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 57B). Eyes: six contiguous eyes surrounded by black pigmentation; PME smallest, ALE largest (Fig. 41C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I, II, III missing; IV 1.94 (0.54, 0.14, 0.54, 0.43, 0.29). Genitalia (Fig. 40). Palpal femur long; palpal tibia about 1.2 times as long as cymbium. Cymbium conical, without prolateral extension. Bulb spherical, wider than high. Embolus ribbon-like, dark and basally with two long associated sclerites; sperm duct initially wide, narrowing distally (Fig. 40D).

Female. Total length 1.11; carapace length 0.50; carapace width 0.42; abdomen length 0.54; abdomen width 0.45. Similar to male in color and general features (Figs 41D–E) but larger. Chelicerae unmodified. Leg formula 4123; leg lengths I 1.81 (0.51, 0.15, 0.53, 0.36, 0.27); II 1.65 (0.45, 0.16, 0.45, 0.34, 0.26); III 1.45 (0.39, 0.13, 0.38, 0.31, 0.23); IV 1.95 (0.54, 0.16, 0.54, 0.43, 0.28). Genitalia. Internal genitalia with afferent spermathecae short, not extending past the sides of the abdomen (Fig. 41B); spermathecae tubular like (Fig. 41A).

Distribution. Known only from the type locality.

***Speocera tabuk* Li & Li sp. nov.** (Figs 42, 58J)

Material examined. Holotype ♀ (IZCAS), Philippines, Luzon Island, Kalinga Province, Tabuk City, road to Tabuk, forest along the road near a narrow water channel (17°24.757'N, 121°16.384'E), elev. 408 m, 2.VI.2015, leg. F. Ballarin & Y. Li.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. cuyapo* Li & Li **sp. nov.** but can be distinguished by the longer afferent spermathecae (cf. Figs 42B, 20B).

Description. Female. Total length 1.00; carapace length 0.48; carapace width 0.41; abdomen length 0.51; abdomen width 0.36. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 42C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide (Fig. 42D). Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 58J). Eyes: six contiguous eyes surrounded by black pigmentation, nearly subequal (Fig. 42C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I 1.76 (0.50, 0.15, 0.51, 0.34, 0.25); II 1.63 (0.46, 0.16, 0.45, 0.32, 0.25); III 1.43 (0.41, 0.14, 0.36, 0.30, 0.22); IV missing. Genitalia. Internal genitalia with afferent spermathecae short, straight, not extending past the sides of the abdomen (Fig. 42B); spermathecae amorphous (Fig. 42A).

Male. Unknown.

Distribution. Known only from the type locality.

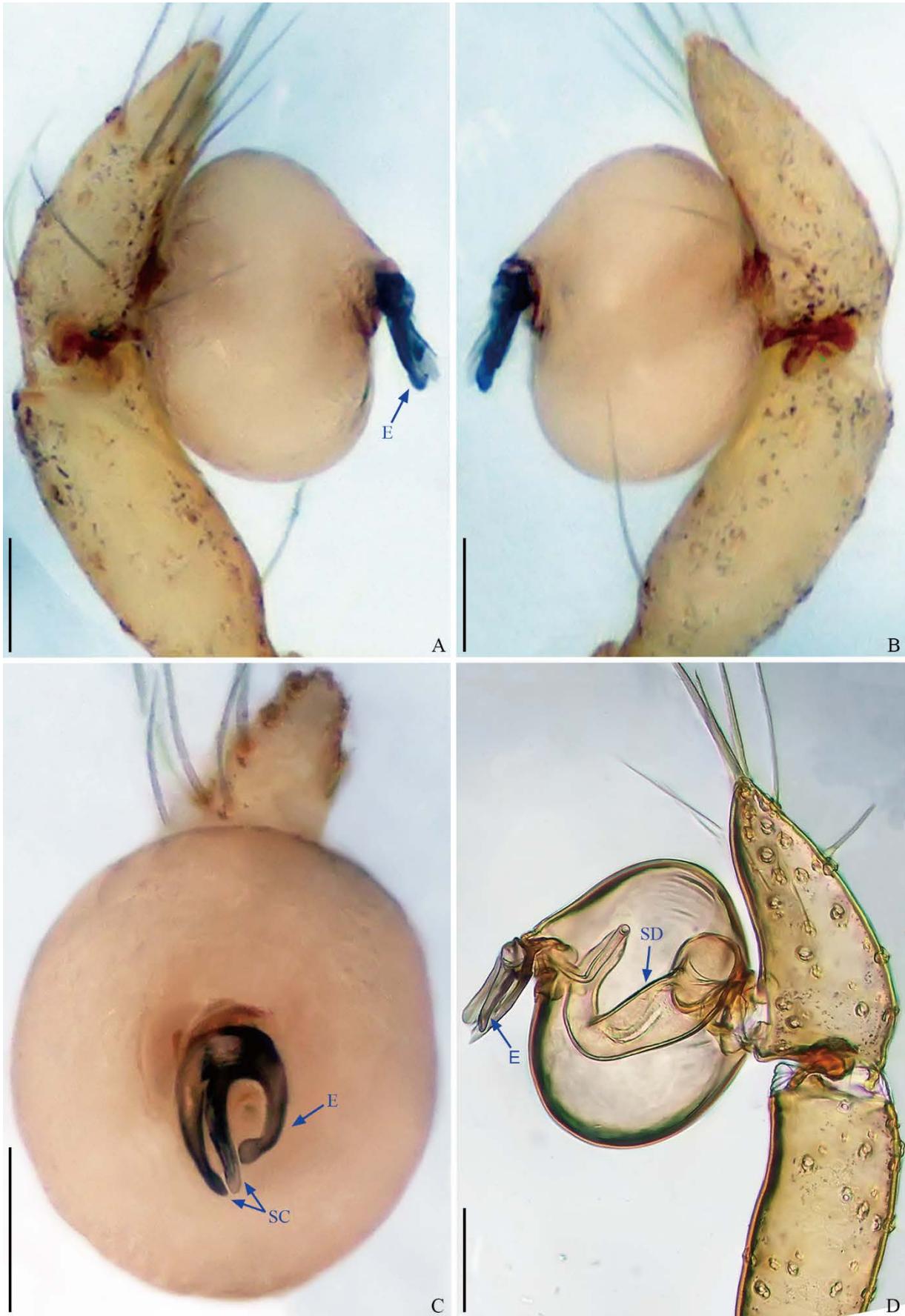


Figure 40. *Speocera suea* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

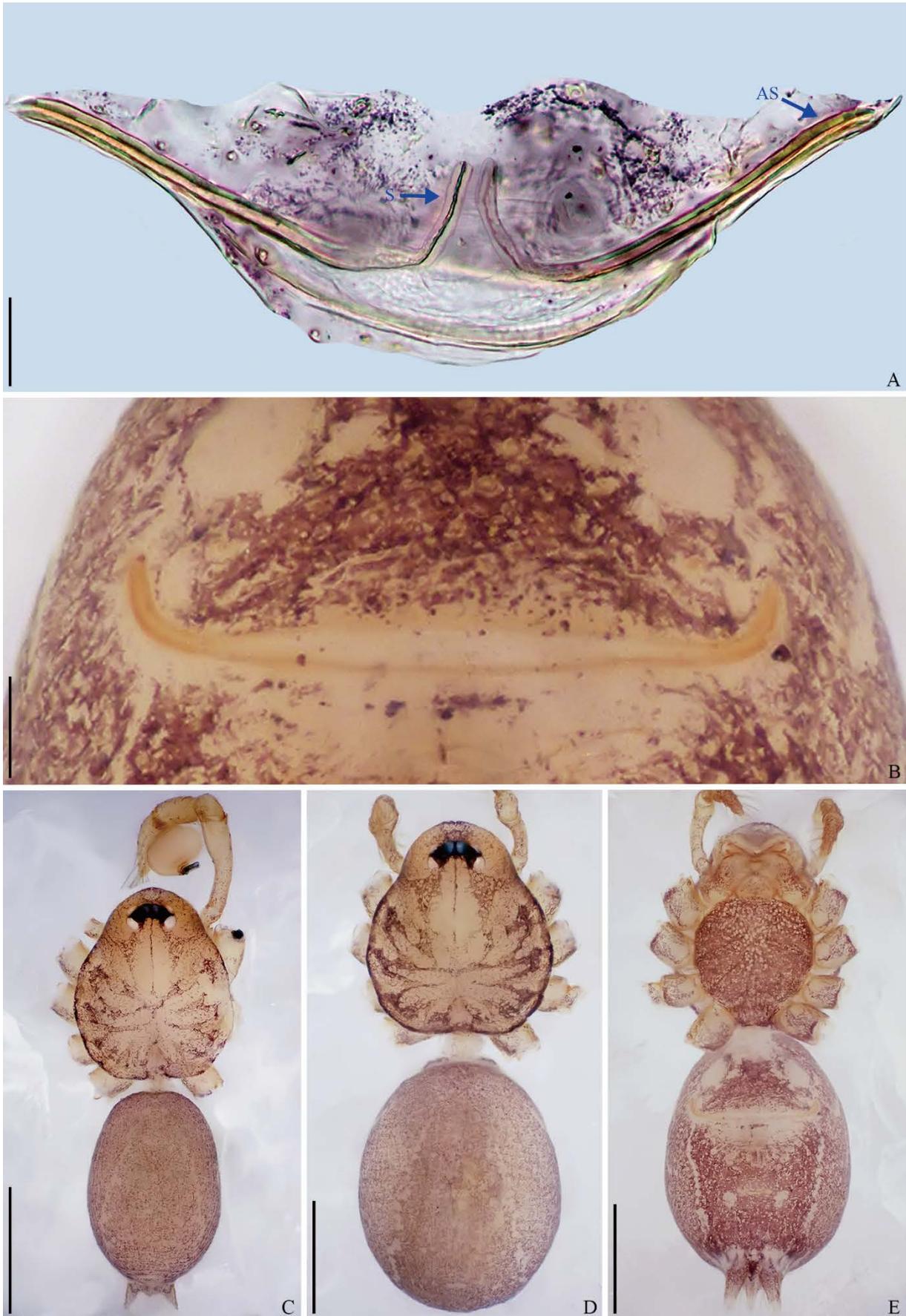


Figure 41. *Speocera suea* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

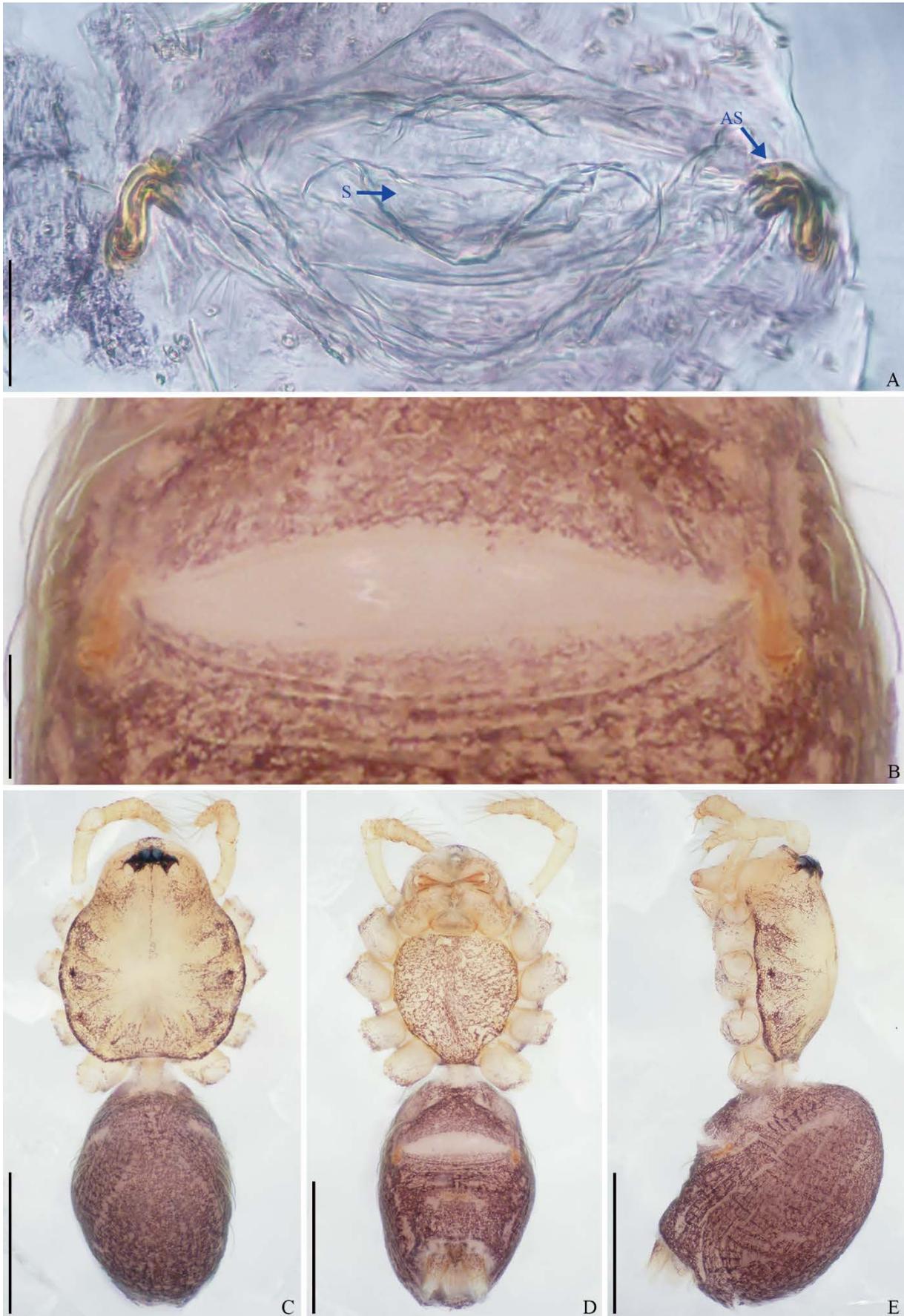


Figure 42. *Speocera tabuk* Li & Li **sp. nov.**, holotype, female. A. Genitalia, dorsal view. B. Genitalia, ventral view. C–E. Habitus, dorsal, ventral and lateral views. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

***Speocera trapezialis* Li & Li sp. nov.** (Figs 43–44, 56I)

Material examined. Holotype ♂ (IZCAS), Vietnam, Quang Binh Province, Phong Nha-ke Bang National Park, Botanic Garden (17°33.150'N, 106°18.083'E), elev. 117 m, 14.V.2016, Leg. Q. Zhao & Z. Chen. Paratype 1 ♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from ancient Greek and refers to the trapezoidal male palpal bulb; adjective.

Diagnosis. The males of this new species can be distinguished from all the other congeners by the trapezoidal palpal bulb (Figs 43A–B) and the females by the very long, tubular spermathecae (Fig. 44A).

Description. Male. Total length 0.99; carapace length 0.51; carapace width 0.43; abdomen length 0.53; abdomen width 0.36. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 44C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow, laterally slightly curved; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 56I). Eyes: six contiguous eyes surrounded by black pigmentation; PME and ALE nearly subequal, PLE largest (Fig. 44C). Opisthosoma oval; purplish. Legs light yellow; leg formula 4123; leg lengths I 2.04 (0.59, 0.14, 0.61, 0.41, 0.28); II 1.88 (0.55, 0.16, 0.54, 0.37, 0.26); III 1.63 (0.48, 0.13, 0.43, 0.34, 0.25); IV 2.15 (0.63, 0.14, 0.59, 0.47, 0.32). Genitalia (Fig. 43). Palpal femur long; palpal tibia as long as cymbium (Figs 43A–B). Cymbium conical, without prolateral extension. Bulb nearly trapezoidal. Embolus short, dark and basally without distinct associated sclerites; sperm duct initially wide, narrowing distally (Fig. 43D).

Female. Total length 1.19; carapace length 0.51; carapace width 0.42; abdomen length 0.50; abdomen width 0.37. Similar to male in color and general features (Figs 44D–E) but larger. Chelicerae unmodified. Leg lengths I 1.96 (0.55, 0.16, 0.58, 0.40, 0.28); II missing; III 1.57 (0.44, 0.14, 0.41, 0.34, 0.24); IV 2.11 (0.59, 0.15, 0.61, 0.46, 0.31). Genitalia. Internal genitalia with afferent spermathecae very short, strongly curved posteriorly from the epigastric furrow, not extending past the sides of the abdomen (Fig. 44B); spermathecae long, tubular (Fig. 44A).

Distribution. Known only from the type locality.

***Speocera trusmadi* Li & Li sp. nov.** (Figs 45–46, 57D)

Material examined. Holotype ♂ (IZCAS), Malaysia, Borneo, State of Sabah, Mount Trus Madi, Jungle Girl Camp (5°26.634'N, 116°27.079'E), elev. 1234 m, 1.V.2016, leg. Z. Chen. Paratype 1 ♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. capra* Deeleman-Reinhold, 1995, but males can be distinguished by the presence of a cluster of long setae on the lateral surface of the chelicerae (Fig. 57D) and the more flattened palpal bulb (Figs 45A–B), and the females by the oval spermathecae (Fig. 46A). *S. capra* males have the chelicerae with a lateral horn, the palpal bulb nearly round, and the females have small oval spermathecae (Deeleman-Reinhold, 1995: figs 273–279).

Description. Male. Total length 1.05; carapace length 0.50; carapace width 0.44; abdomen length 0.53; abdomen width 0.36. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with purplish pattern (Fig. 46C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow suffused with purplish tinge; with serrula; labium light yellow suffused with purplish tinge. Clypeus nearly vertical; short. Chelicerae light yellow, laterally excavated, with a cluster of long setae; promargin with a series of six teeth reaching the lamina; retromargin with two small denticles (Fig. 57D). Eyes: six contiguous eyes surrounded by black pigmentation; PME, ALE and PLE nearly subequal (Fig. 46C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I 2.18 (0.61, 0.16, 0.63, 0.48, 0.31); II 1.99 (0.56, 0.16, 0.54, 0.43, 0.30); III, IV missing. Genitalia (Fig. 45). Palpal femur long; palpal tibia about 1.2 times as long as cymbium, palpal tibia and cymbium incrassate. Cymbium conical, with large prolateral extension basally. Bulb spherical, wider than high, with a small tuberculate apophysis. Embolus a wide triangle, dark and basally without distinct associated sclerites; sperm duct initially wide, abruptly narrowing distally (Fig. 45D).

Female. Total length 1.18; carapace length 0.50; carapace width 0.43; abdomen length 0.61; abdomen width 0.48. Similar to male in color and general features (Figs 46D–E) but larger. Chelicerae unmodified. Leg lengths I 2.10 (0.59, 0.16, 0.60, 0.45, 0.30); II, III missing; IV 1.73 (0.47, 0.15, 0.43, 0.40, 0.28). Genitalia. Internal genitalia with afferent spermathecae very short, not extending past the sides of the abdomen (Fig. 46B); spermathecae oval (Fig. 46A).

Distribution. Known only from the type locality.

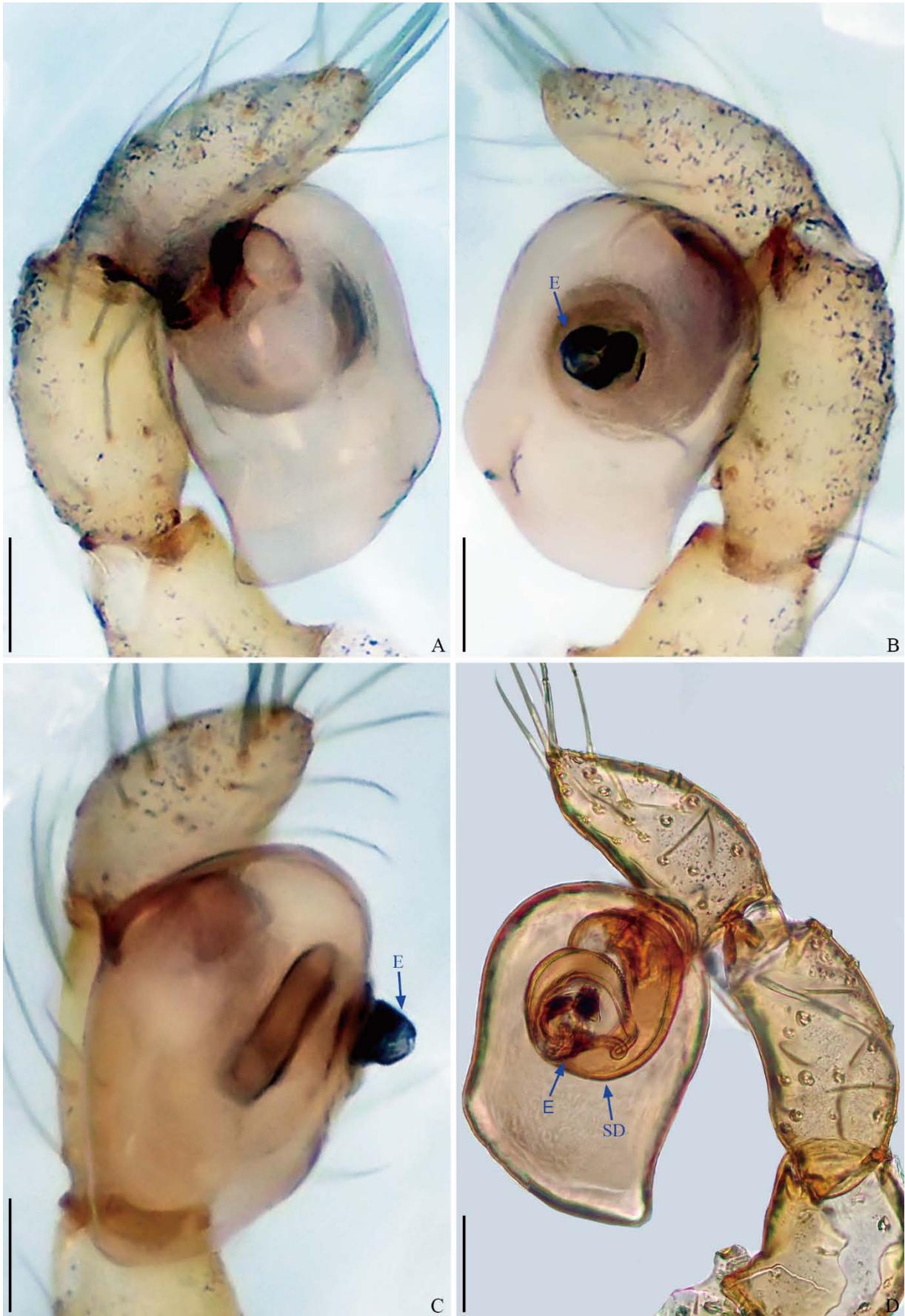


Figure 43. *Speocera trapezialis* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

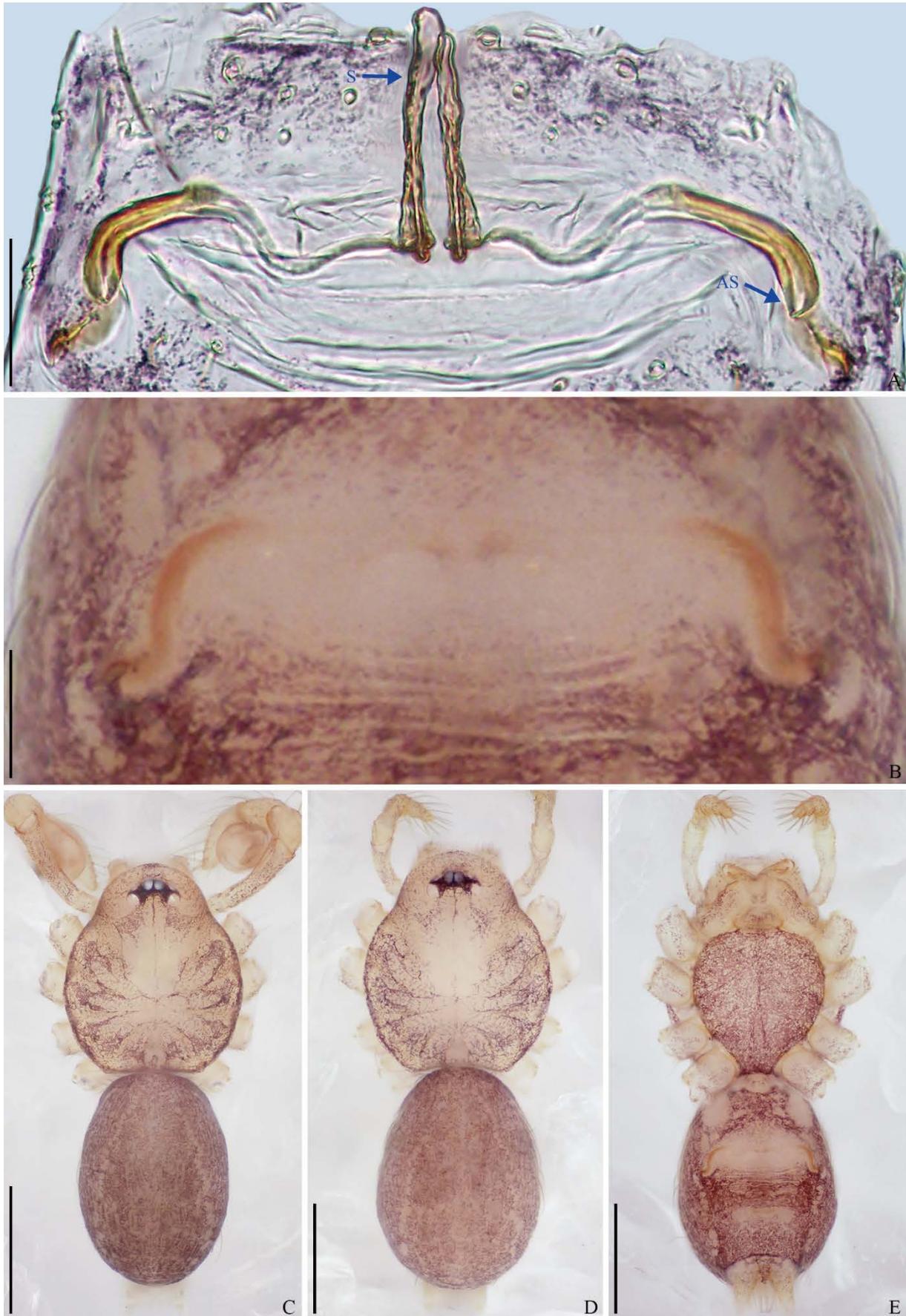


Figure 44. *Speocera trapezialis* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

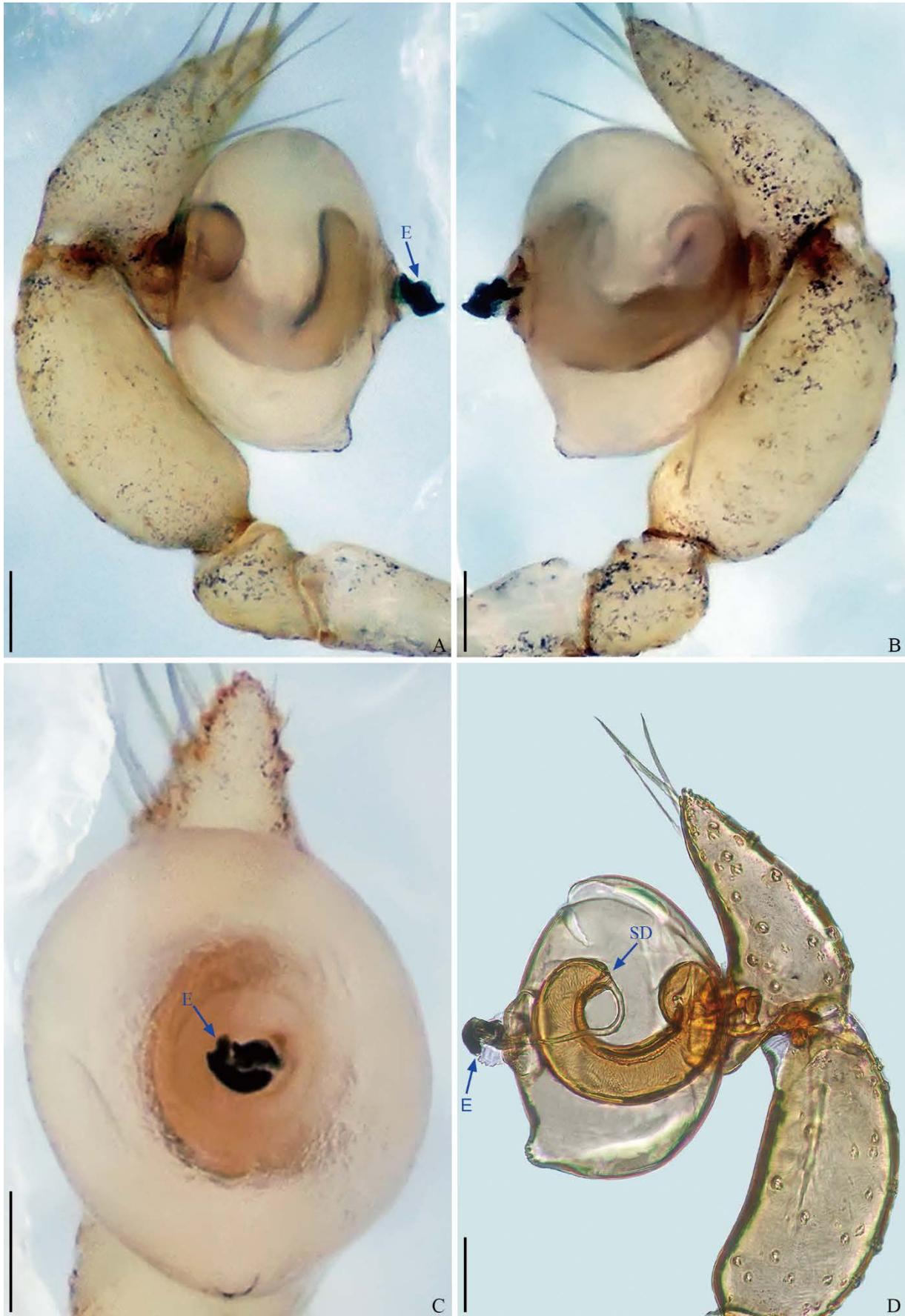


Figure 45. *Speocera trusmadi* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

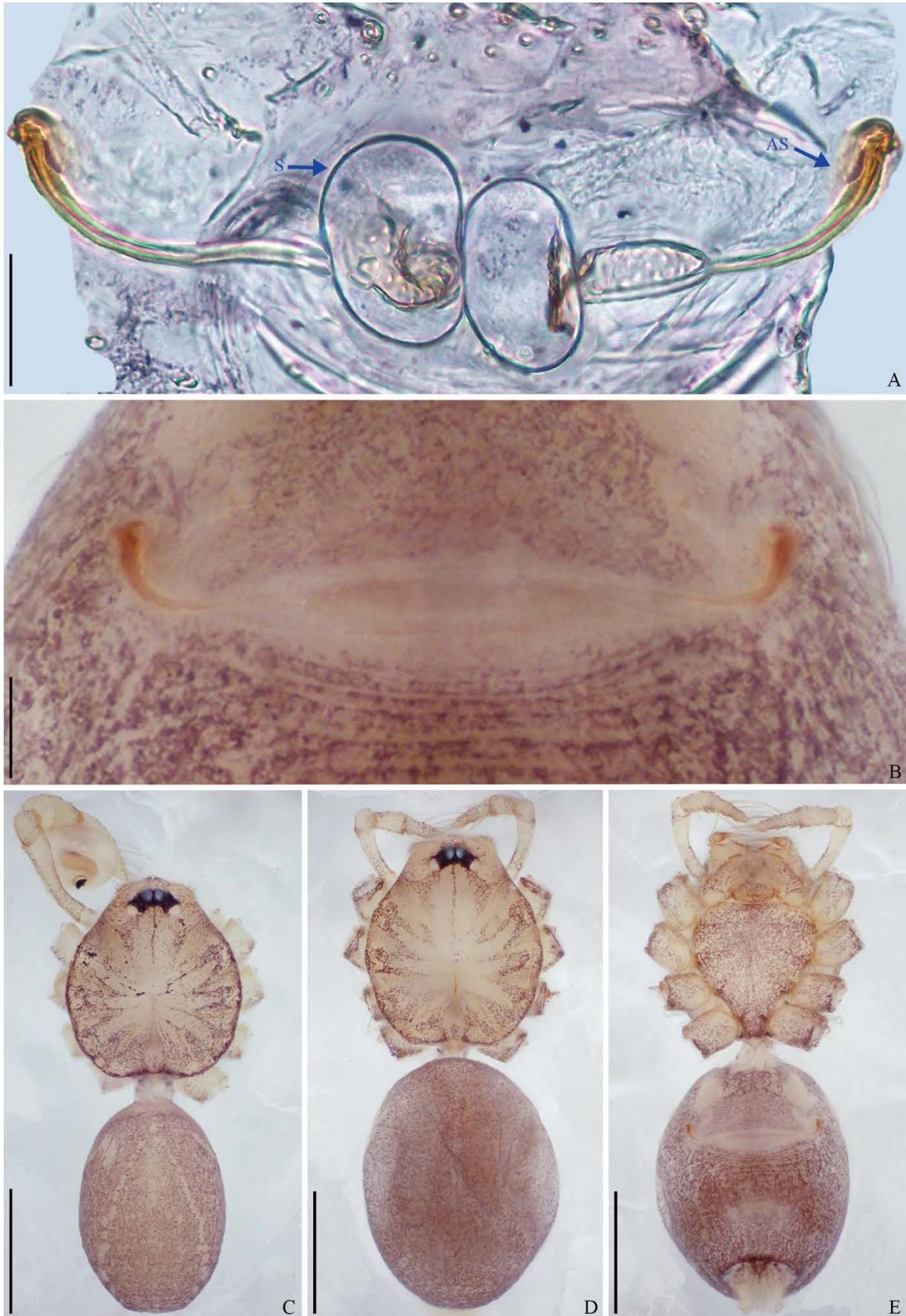


Figure 46. *Speocera trusmadi* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

***Speocera tubularis* Li & Li sp. nov.** (Figs 47–48, 57C)

Material examined. Holotype ♂ (CAS), Madagascar, Toliara Province, Andohahela National Park, rainforest near stream surrounded by disturbed slash/burn forest (24°45.501'S, 46°51.235'E), elev. 100 m, 12.XII.2008, leg. F. Alvarez-Padilla & H. Wood. Paratype 1♀ (CAS), same data as holotype.

Etymology. The specific name is from Latin and refers to the tubular shaped female spermathecae; adjective.

Diagnosis. The new species is similar to *S. ankalana* Li & Li sp. nov., but males can be distinguished by the laterally slightly curved chelicerae (Fig. 57C) and the short male palpal tibia that is 1.2 times as long as cymbium (Figs 47A–B) and females by the tubular shaped spermathecae (Fig. 48A). *S. ankalana* males have the chelicerae laterally strongly excavated (Fig. 55B) and the palpal tibia 1.6 times as long as the cymbium (Figs 3A–B), and the females have oval spermathecae (Fig. 4A).

Description. Male. Total length 0.85; carapace length 0.41; carapace width 0.36; abdomen length 0.44; abdomen width 0.31. Prosoma: carapace wide oval, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 48C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow; external margin slightly curved; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Fig. 57C). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 48C). Opisthosoma oval; light gray. Legs missing. Genitalia (Fig. 47). Palpal femur long; palpal tibia about 1.2 times as long as cymbium. Cymbium conical, without prolateral extension. Bulb spherical (Figs 47A–B). Embolus short, black, associated sclerites belt-like; sperm duct initially wide, narrowing distally (Fig. 47D).

Female. Total length 0.92; carapace length 0.42; carapace width 0.37; abdomen length 0.49; abdomen width 0.31. Similar to male in color and general features (Figs 48D–E) but larger. Chelicerae unmodified. Legs light yellow; leg lengths I 1.53 (0.45, 0.14, 0.43, 0.29, 0.23); II 1.78 (0.79, 0.13, 0.38, 0.27, 0.22); III 1.20 (0.34, 0.13, 0.29, 0.25, 0.20); IV missing. Genitalia. Internal genitalia with afferent spermathecae short, straight, not extending past the sides of the abdomen; tip of the afferent spermathecae shaped like a large question mark (Fig. 48B); spermathecae long, tubular (Fig. 48A).

Distribution. Known only from the type locality.

***Speocera xiaoxiaoae* Li & Li sp. nov.** (Figs 49–50, 57E–F)

Material examined. Holotype ♂ (IZCAS), China, Hainan Province, Tunchang County, Datong Town, Wolongshan Hill (19°27.545'N, 110°7.315'E), elev. 248 m, 6.VII.2014, leg. F. Li & X. Wang. Paratypes 2♂2♀ (IZCAS), same data as holotype.

Etymology. The specific name is taken after one of the collectors, Miss Xiaoxiao Wang; name in genitive case.

Diagnosis. The new species is similar to *S. zhigangi* Li & Li sp. nov. but can be distinguished by the slender male palpal tibia and cymbium (Figs 49A–B), the long, slender horn-shaped apophysis of the male chelicerae (Figs 57E–F), and the very long afferent spermathecae and elongated oval spermathecae (Figs 50A–B). *S. zhigangi* males have an incrassate palpal tibia and cymbium (Figs 53A–B), large, blunt, horn-shaped apophysis on the chelicerae (Figs 57G–H), and the females have short afferent spermathecae and small oval spermathecae (Figs 54A–B).

Description. Male. Total length 1.08; carapace length 0.50; carapace width 0.43; abdomen length 0.58; abdomen width 0.39. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 50C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, as long as wide. Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow, laterally strongly excavated, with a long, slender horn-shaped apophysis; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Figs 57E–F). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 50C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I 1.92 (0.56, 0.16, 0.56, 0.36, 0.28); II 1.70 (0.48, 0.15, 0.48, 0.33, 0.27); III, IV missing. Genitalia (Fig. 49). Palpal femur long; palpal tibia as long as cymbium (Figs 49A–B). Cymbium conical, with small prolateral extension basally. Bulb spherical. Embolus small, dark, associated sclerites absent; sperm duct initially wide gradually narrowing distally (Fig. 49D).

Female. Total length 1.09; carapace length 0.49; carapace width 0.43; abdomen length 0.59; abdomen width 0.41. Similar to male in color and general features (Figs 50D–E). Chelicerae unmodified. Leg formula 4123; leg lengths I 1.85 (0.52, 0.17, 0.53, 0.36, 0.27); II 1.67 (0.48, 0.16, 0.45, 0.32, 0.27); III 1.46 (0.42, 0.13, 0.37, 0.30, 0.25); IV 1.93 (0.53, 0.16, 0.56, 0.41, 0.28). Genitalia. Internal genitalia with afferent spermathecae long, straight, extending past the sides of the abdomen (Fig. 50B); spermathecae elongated, oval (Fig. 50A).

Distribution. Known only from the type locality.

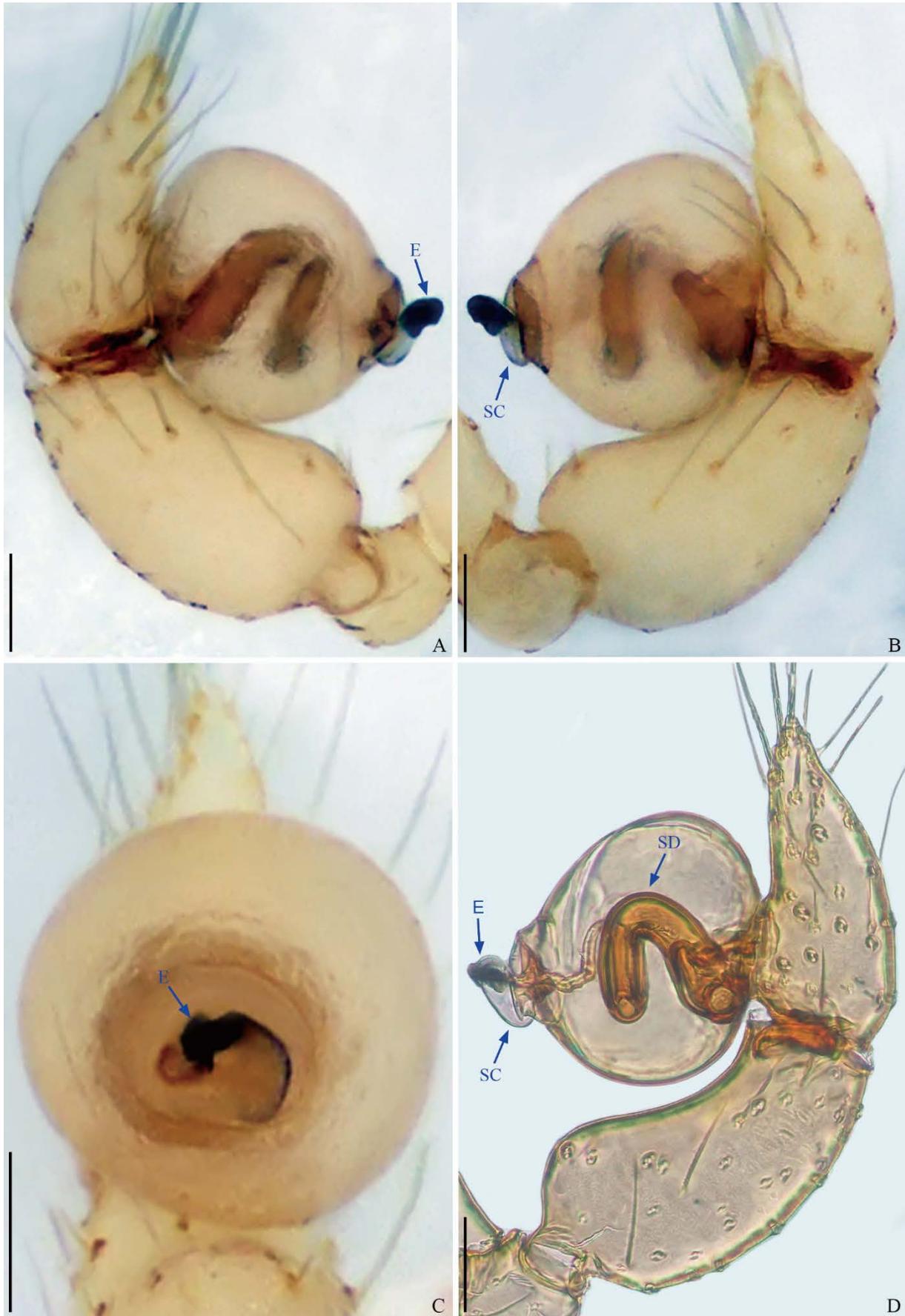


Figure 47. *Specocera tubularis* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

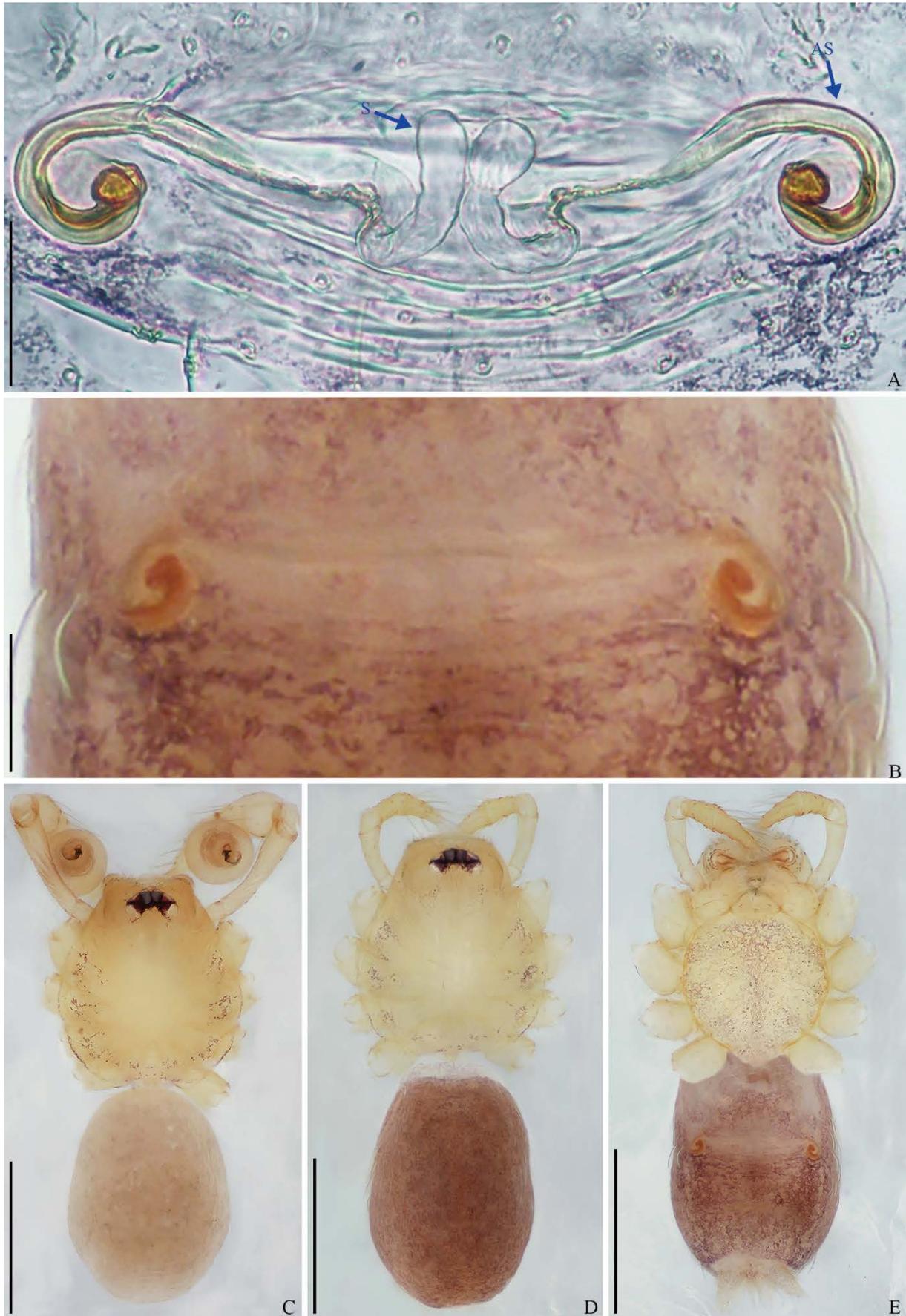


Figure 48. *Speocera tubularis* Li & Li sp. nov. A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

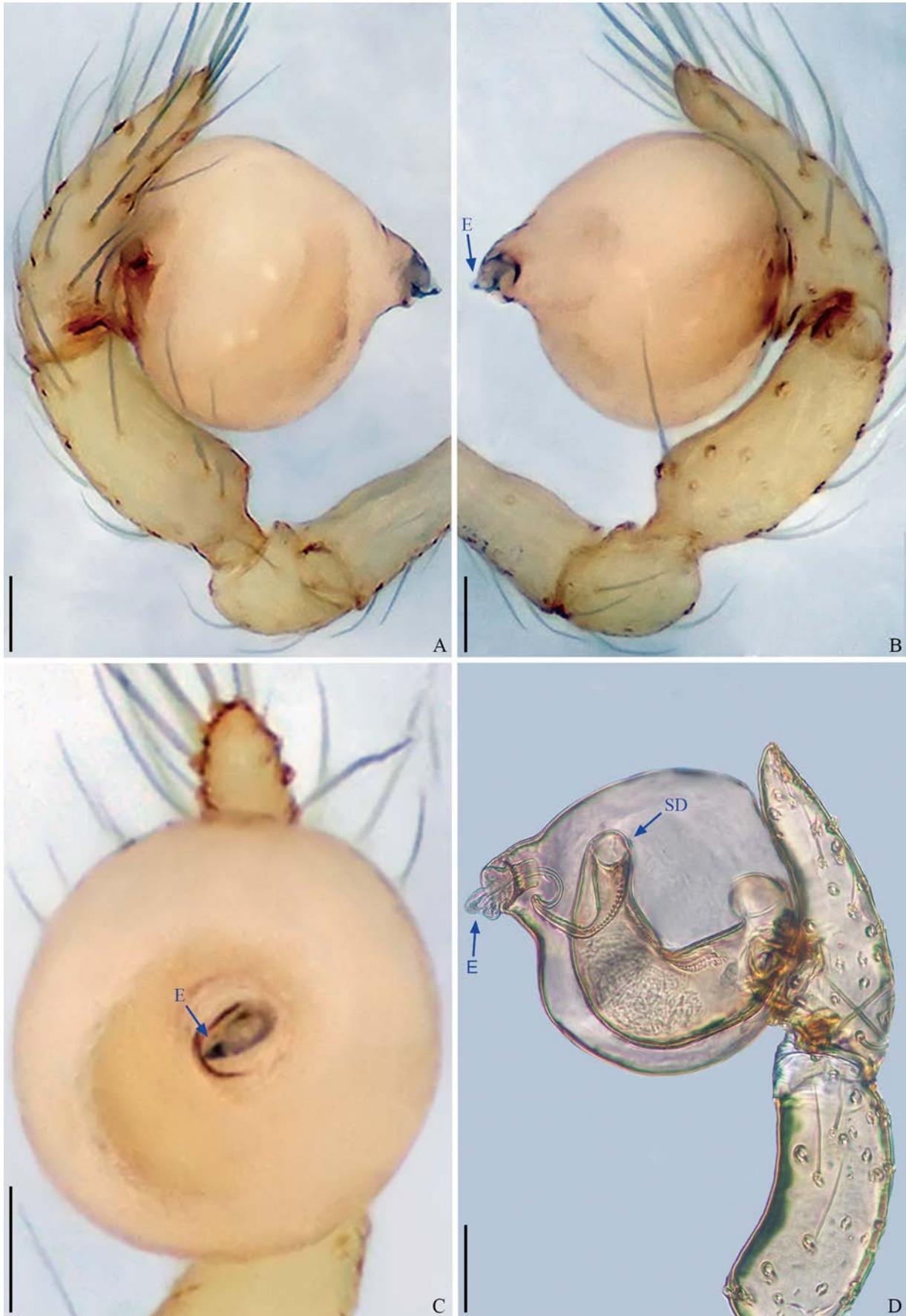


Figure 49. *Speocera xiaoxiaoae* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

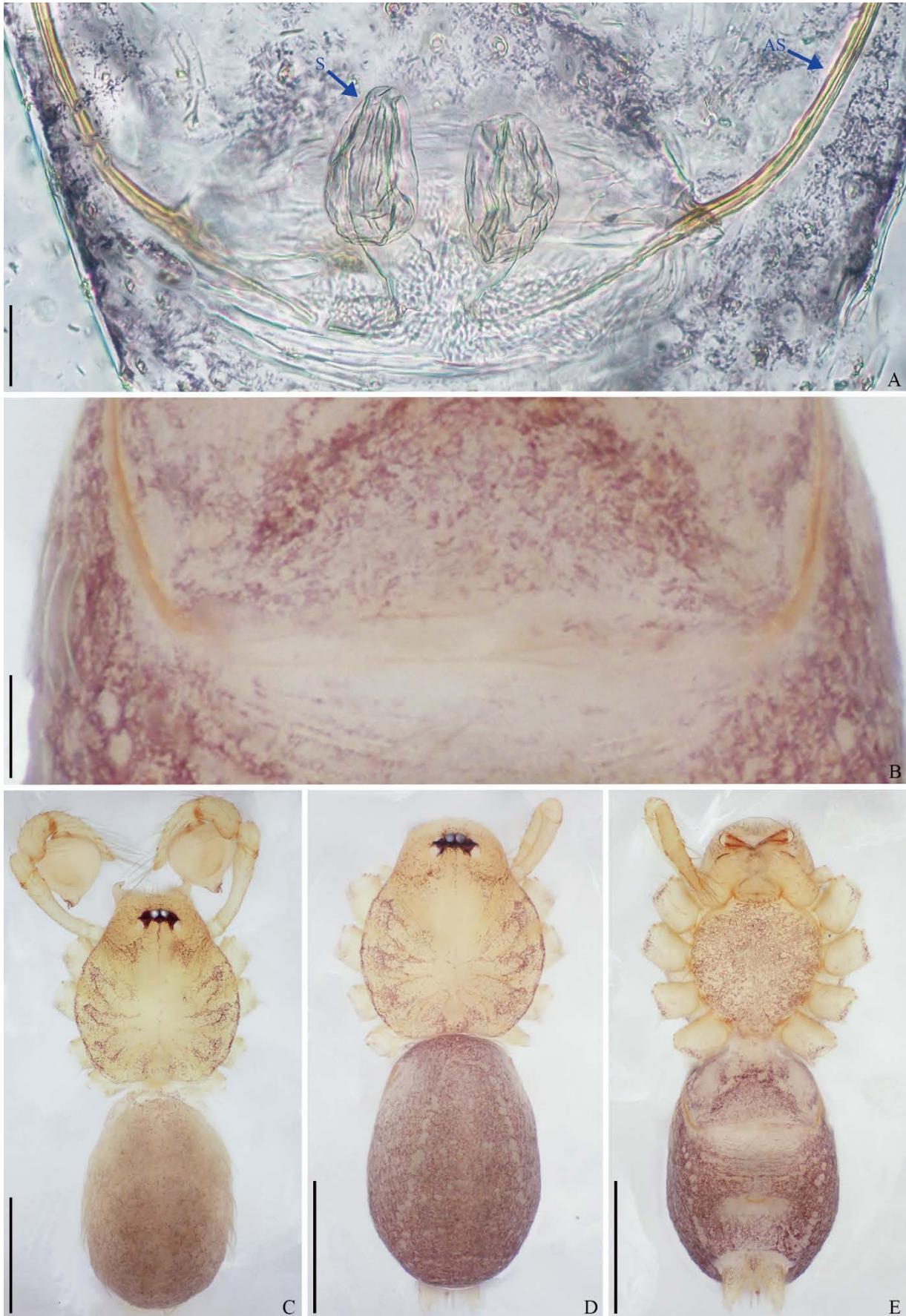


Figure 50. *Speocera xiaoxiaoae* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

***Speocera xuanson* Li & Li sp. nov.** (Figs 51–52, 57I–J)

Material examined. Holotype ♂ (IZCAS), Vietnam, Xuan Son National Park, Lun Cave (21°7.022'N, 104°57.443'E), elev. 398 m, 16.X.2012, leg. H. Zhao. Paratypes 2♂3♀ (IZCAS), same data as holotype.

Etymology. The specific name is derived from the type locality; noun.

Diagnosis. The new species is similar to *S. bicornea* Tong & Li, 2007, but males can be distinguished by the long associated sclerites of the embolus (Figs 51A–B) and females by the long afferent spermathecae extending to the upper sides of the abdomen (Figs 52B, D). *S. bicornea* males do not have the long associated sclerites of the embolus, and the females have short afferent spermathecae, not extending to upper sides of the abdomen (Tong & Li, 2007: fig. 7).

Description. Male. Total length 1.10; carapace length 0.48; carapace width 0.43; abdomen length 0.58; abdomen width 0.40. Prosoma: carapace pyriform, narrowing gradually anteriorly; shiny, light yellow, suffused with brownish pattern (Fig. 52C); pars cephalica flat; fovea not visible. Sternum yellow, suffused with brown, as long as wide. Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow, laterally strongly excavated, with a small horn-shaped apophysis; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Figs 57I–J). Eyes: six contiguous eyes surrounded by black pigmentation; PME smallest; PLE largest (Fig. 52C). Opisthosoma oval; light brown. Legs missing. Genitalia (Fig. 51). Palpal femur long; palpal tibia as long as cymbium (Figs 51A–B). Cymbium conical, with large prolateral extension basally. Bulb spherical, wider than high. Embolus wide, dark and basally with one long associated sclerite; sperm duct initially very wide, gradually narrowing distally (Fig. 51D).

Female. Total length 1.25; carapace length 0.51; carapace width 0.43; abdomen length 0.68; abdomen width 0.46. Similar to male in color and general features (Figs 52D–E) but larger. Chelicerae unmodified. Legs I, II, III missing; leg IV 2.06 (0.59, 0.15, 0.58, 0.42, 0.32). Genitalia. Internal genitalia with afferent spermathecae long, extending past the sides of the abdomen (Fig. 52B); spermathecae oval (Fig. 52A).

Distribution. Known only from the type locality.

***Speocera zhigangi* Li & Li sp. nov.** (Figs 53–54, 57G–H)

Material examined. Holotype ♂ (IZCAS), China, Hainan Province, Changjiang County, Bawangling Natural Reserve, Dongyi Protection Station (19°7.165'N, 109°9.100'E), elev. 684 m, 12.IV.2012, leg. Z. Chen. Paratype 1♀ (IZCAS), same data as holotype.

Etymology. The specific name is taken after the collector, Mr. Zhigang Chen; name in genitive case.

Diagnosis. The new species is similar to *S. bicornea* Tong & Li, 2007, but males can be distinguished by the male palpal bulb which is strongly constricted at the distal third (Figs 53A–B), and females by the large, oval spermathecae (Fig. 54A). *S. bicornea* males have a more flattened, spherical palpal bulb and females have very small spermathecae (Tong & Li, 2007: fig. 7).

Description. Male. Total length 1.03; carapace length 0.49; carapace width 0.42; abdomen length 0.48; abdomen width 0.34. Prosoma: carapace pyriform, narrowing gradually anteriorly; light yellow, suffused with purplish pattern (Fig. 54C); pars cephalica flat; fovea not visible. Sternum light yellow, suffused with purplish color, longer than wide. Endites light yellow with serrula; labium light yellow. Clypeus nearly vertical; short. Chelicerae light yellow, laterally strongly excavated, with a large, blunt horn-shaped apophysis; promargin with a series of six teeth reaching the lamina; retromargin with two very small denticles (Figs 57G–H). Eyes: six contiguous eyes surrounded by black pigmentation, PME smallest, PLE largest (Fig. 54C). Opisthosoma oval; purplish. Legs light yellow; leg lengths I missing; II 1.69 (0.49, 0.16, 0.48, 0.31, 0.26); III 1.46 (0.41, 0.14, 0.38, 0.30, 0.23); IV missing. Genitalia (Fig. 53). Palpal femur long; palpal tibia as long as cymbium (Figs 53A–B), palpal tibia and cymbium incrassate. Cymbium conical, with large prolateral extension basally. Bulb spherical, longer than wide, distal third strongly constricted. Embolus small, dark and basally with plate-shaped associated sclerites; sperm duct initially wide, gradually narrowing distally (Fig. 53D).

Female. Total length 1.08; carapace length 0.51; carapace width 0.44; abdomen length 0.53; abdomen width 0.38. Similar to male in color and general features (Figs 54D–E) but larger. Chelicerae unmodified. Leg lengths I 1.72 (0.50, 0.16, 0.50, 0.31, 0.25); II missing; III 1.42 (0.38, 0.14, 0.36, 0.30, 0.24); IV 1.88 (0.53, 0.16, 0.53, 0.38, 0.28). Genitalia. Internal genitalia with afferent spermathecae elongated, straight, not extending past the sides of the abdomen (Fig. 54B); spermathecae oval (Fig. 54A).

Distribution. Known only from the type locality.



Figure 51. *Speocera xuanson* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars = 0.05 mm.

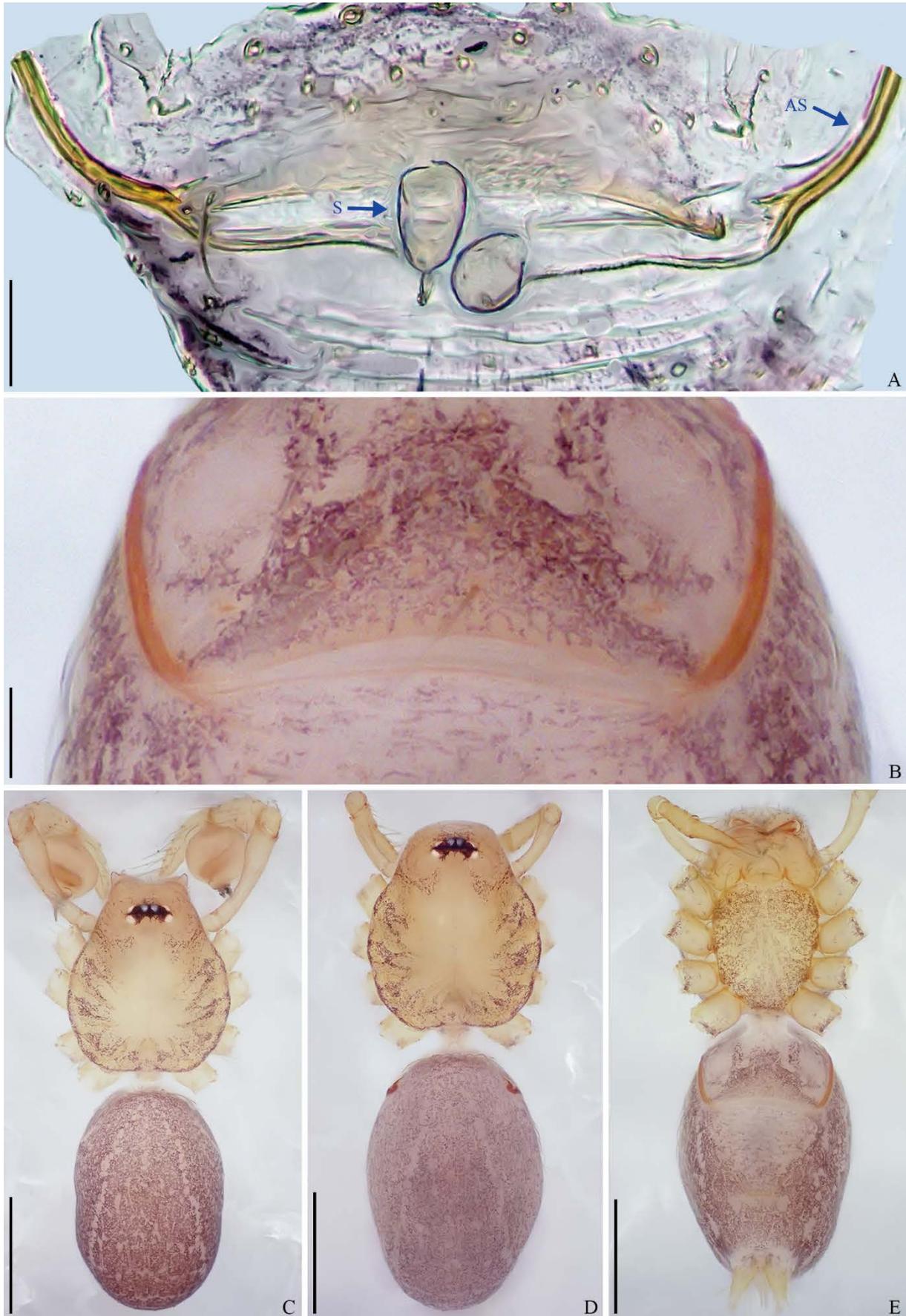


Figure 52. *Speocera xuanson* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.

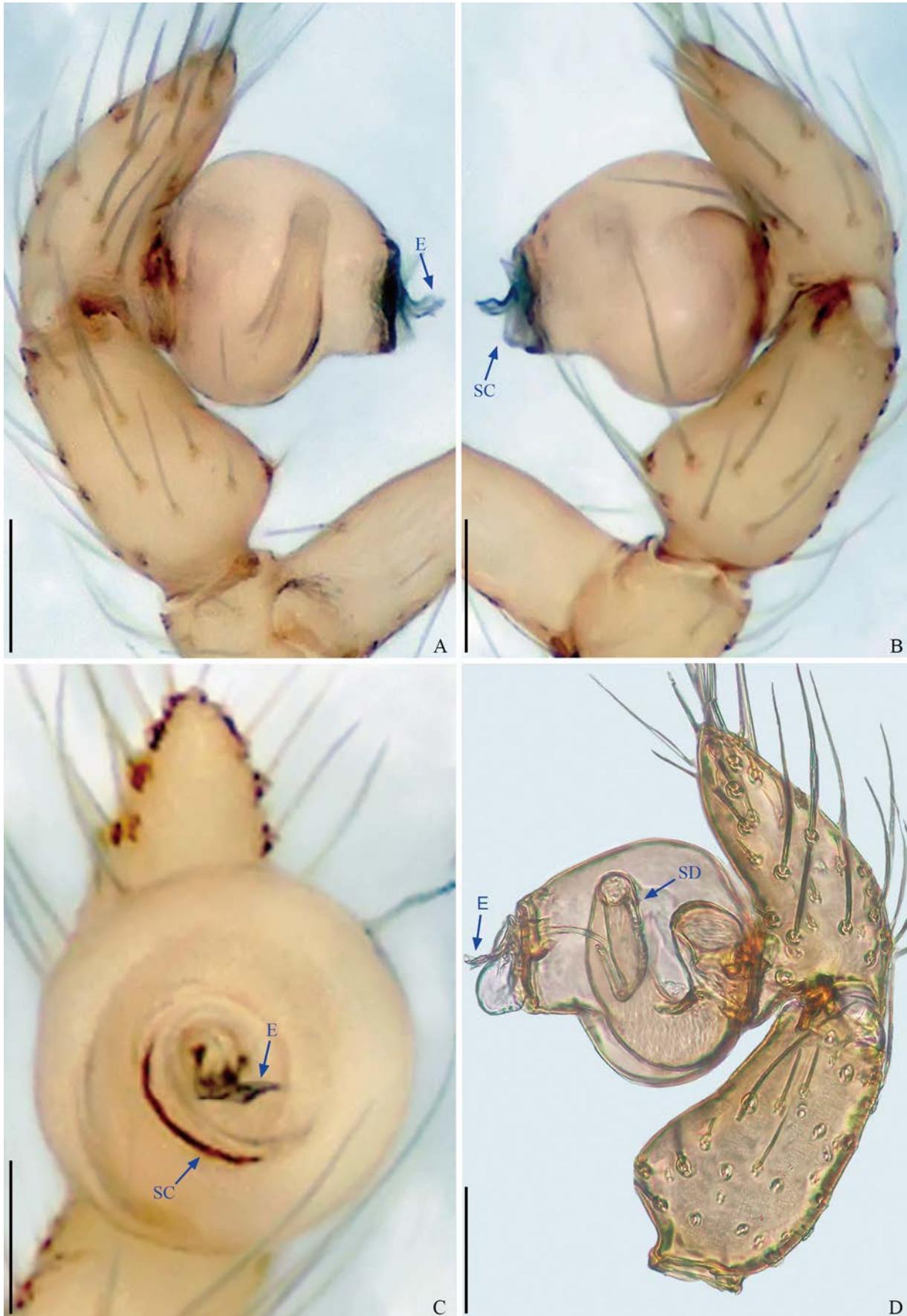


Figure 53. *Speocera zhigangi* Li & Li **sp. nov.**, holotype, male. A. Left palp, prolateral view. B. Left palp, retrolateral view. C. Left palp, dorsal view. D. Left palp, retrolateral view, cleared in lactic acid. Scale bars=0.05 mm.

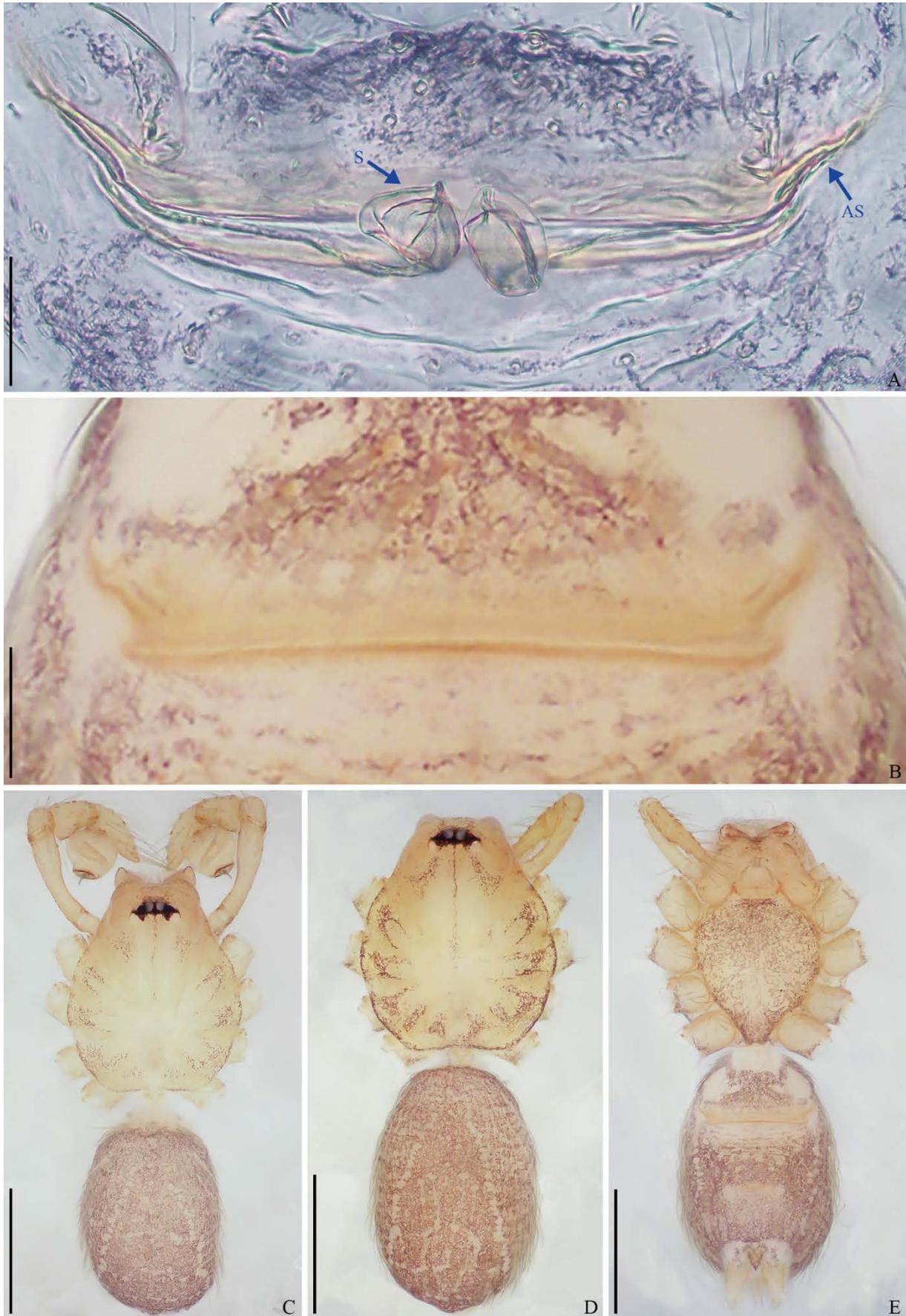


Figure 54. *Speocera zhigangi* Li & Li **sp. nov.** A, B, D, E. Paratype, female. C. Holotype, male. A. Genitalia, dorsal view. B. Genitalia, ventral view. C. Habitus, dorsal view. D. Habitus, dorsal view. E. Habitus, ventral view. Scale bars: A–B=0.05 mm; C–E=0.30 mm.



Figure 55. Male chelicerae of *Speocera* spp. A–E, G–H. Anterior view. F, I. Lateral view. A. *S. amber* Li & Li **sp. nov.** B. *S. ankalana* Li & Li **sp. nov.** C. *S. bachma* Li & Li **sp. nov.** D. *S. ballarini* Li & Li **sp. nov.** E–F. *S. bawangling* Li & Li **sp. nov.** G. *S. bukittinggi* Li & Li **sp. nov.** H–I. *S. cucphuong* Li & Li **sp. nov.** Scale bars=0.1 mm.



Figure 56. Male chelicerae of *Speocera* spp. A–E, G–I. Anterior view. F. Lateral view. A. *S. cattien* Li & Li **sp. nov.** B. *S. gexuejuni* Li & Li **sp. nov.** C. *S. heilan* Li & Li **sp. nov.** D. *S. lahrak* Li & Li **sp. nov.** E–F. *S. manhao* Li & Li **sp. nov.** (arrow shows the small apophysis) G. *S. longyan* Li & Li **sp. nov.** H. *S. nuichua* Li & Li **sp. nov.** I. *S. trapezialis* Li & Li **sp. nov.** Scale bars=0.1 mm.



Figure 57. Male chelicerae of *Speocera* spp. A–E, G, I. Anterior view. F, H, J. Lateral view. A. *S. payakumbuh* Li & Li **sp. nov.** B. *S. suea* Li & Li **sp. nov.** C. *S. tubularis* Li & Li **sp. nov.** D. *S. trusmadi* Li & Li **sp. nov.** E–F. *S. xiaoxiaoae* Li & Li **sp. nov.** G–H. *S. zhigangi* Li & Li **sp. nov.** I–J. *S. xuanson* Li & Li **sp. nov.** Scale bars=0.1 mm.



Figure 58. Female chelicerae of *Speocera* spp., anterior view. A. *S. balikpapan* Li & Li **sp. nov.** B. *S. batang* Li & Li **sp. nov.** C. *S. bontoc* Li & Li **sp. nov.** D. *S. cuyapo* Li & Li **sp. nov.** E. *S. dongjing* Li & Li **sp. nov.** F. *S. griswoldi* Li & Li **sp. nov.** G. *S. huifengi* Li & Li **sp. nov.** H. *S. huisun* Li & Li **sp. nov.** I. *S. melinh* Li & Li **sp. nov.** J. *S. tabuk* Li & Li **sp. nov.** Scale bars=0.1 mm.

Funding This study was supported by the National Natural Science Foundation of China (31572237, 31750002) to Yanfeng Tong, by the National Natural Science Foundation of China (31530067) and the Southeast Asia Biodiversity Research Institute, Chinese Academy of Sciences (2015CASEABRI005, Y4ZK111B01) to Shuqiang Li.

Acknowledgements The manuscript benefitted greatly from comments by Sarah Crews (San Francisco, USA). Theo Blick (Hummeltal, Germany) kindly checked etymology of the new species.

References

- Berland, L. 1914. Araneae (1re partie). In: Voyage, de C. Alluaud et R. Jeannel en Afrique Orientale (1911-1912). *Arachnida, III*. Résultats scientifiques, Paris. pp. 37–94.
- Deeleman-Reinhold, C.L. 1995. The Ochyroceratidae of the Indo-Pacific region (Araneae). *Raffles Bulletin of Zoology*, Supplement 2: 1–103.
- Dupérré, N. 2015. Descriptions of twelve new species of ochyroceratids (Araneae, Ochyroceratidae) from mainland Ecuador. *Zootaxa*, 3956(4): 451–475.
- Jocqué, R., Dippenaar-Schoeman, A.S. 2006. *Spider Families of the World*. Musée Royal de l'Afrique Central, Tervuren. 336 pp.
- Li, S.Q., Quan, R.C. 2017. Taxonomy is the cornerstone of biodiversity conservation – SEABRI reports on biological surveys in Southeast Asia. *Zoological Research*, 38(5): 213–214.
- Lin, Y.C., Pham, D.S., Li, S.Q. 2009. Six new spiders from caves of northern Vietnam (Araneae: Tetrablemmidae: Ochyroceratidae: Telemidae: Symphytognathidae). *Raffles Bulletin of Zoology*, 57: 323–342.
- Tong, Y.F., Li, S.Q. 2007. First records of the family Ochyroceratidae (Arachnida: Araneae) from China, with descriptions of a new genus and eight new species. *Raffles Bulletin of Zoology*, 55: 63–76.
- Wang, C.X., Li, S.Q. 2011. Three new species of Telemidae (Araneae) from western Africa. *Zootaxa*, 2902: 44–58.
- WSC. 2018. World Spider Catalog. Version 19.5. Natural History Museum Bern. Available from <http://wsc.nmbe.ch> (accessed 16 December 2018).