

中国三窝蛛属一新种(蜘蛛目:卵形蛛科)

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摘要: 记述了采自中国贵州省的三窝蛛属(*Trilacuna*)一新种, 取名为花冠三窝蛛 *T. corollifora* sp. nov.。提供了外形和外生殖器照片, 以及地理分布信息, 并对形态特征进行了详细描述。

关键词: 分类学; 卵形蛛; 新种; 贵州省

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A New Species of *Trilacuna* Tong & Li, 2007 from China (Araneae: Oonopidae)

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Abstract: A new species of the genus *Trilacuna* Tong & Li, 2007 from Guizhou Province of China is reported and named as *T. corollifora* sp. nov. (♂ ♀). The photos of the spider body and copulatory organs and information on geographic distribution are provided, and the morphology is described in detail.

Key words: taxonomy; goblin spider; new species; Guizhou Province

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The family Oonopidae is diverse, currently containing 115 genera^[1]. The genus *Trilacuna* was originally established to accommodate two new species from Southwest China^[2], but up to now, a total of 39 species^[1] of the genus were described, including five from Thailand and Malaysia^[3], two from Sumatra, Indonesia^[3], two from Vietnam^[4], seven from Bhutan, India, Nepal, and Pakistan^[5], one from Iran^[6], one from Korea^[7], 17 from Southwest China^[2, 8-13], and four from Myanmar^[14].

While the spider specimens collected from Guizhou Province in 2017 were examined, one new species was recognized and was named here as *T. corollifora* sp. nov. (♂ ♀).

1 Materials and methods

The specimens were placed in 75% ethanol for long term storage. Vulvae of the female were cleaned in lactic acid before examination and photography. Left male palps were dissected and used for description and color photography. Specimens were examined and measured with a Leica M205C stereomicroscope. Photos were taken with a digital camera Kuy Nice E3IS PM mounted on an Olympus BX53 microscope. Composite images were created using Helicon Focus 7.0, and finally modified and produced by Adobe Photoshop CS6. All length measurements are given in millimeters (mm). Leg mea-

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Biographies: LIU Ziyue (1999—), female, born in Changde, Hunan Province, postgraduate; *Corresponding author: PENG Xianjin (1963—), male, born in Cili, Hunan Province, professor of Hunan Normal University, focusing on spider systematics, E-mail: xjpeng@126.com.

surements are given as follows: total length (femur, patella + tibia, metatarsus, tarsus).

All materials studied are deposited in the College of Life Sciences, Hunan Normal University, Changsha, China. The following abbreviations are used in the text: ALE, anterior lateral eye; MOA, median ocular area; PLE, posterior lateral eye; PME, posterior median eye.

2 Taxonomy

Family Oonopidae Simon, 1890

Genus *Trilacuna* Tong & Li, 2007

Type species: *Trilacuna rastrum* Tong & Li, 2007

Trilacuna corollifora sp. nov. (Figs.1~4)

Type materials. Holotype. ♂, China, Guizhou Province, Tongren City, Shiqian Country, Foding Mountain, 27°20'56.39"N, 108°09'45.81"E, 666 m, 2 November 2017, G. C. Zhou leg (HNU-GZ-IV-1706-01). Paratypes. 3♂ 2♀, same data as holotype (HNU-GZ-IV-1706-02); 1♂ 2♀, Foding Mountain, 27°19'53.67"N, 108°09'21.52"E, 672 m, 1 November 2017, T. Tian and D. Q. Li leg (HNU-GZ-IV-1702).

Etymology. This specific epithet is due to the corolla-shaped structure at the end of the palpal organ.

Diagnosis. The male of this new species is similar to that of *T. songyuae* Tong & Li, 2018 (see Tong *et al.*, 2018^[8]: 51, Figs.7C~D), but can be distinguished by: 1) Tibia only with one long penniform seta on prolateral surface in the new species (Fig.2A) (vs. with numerous long penniform setae in *T. songyuae*); 2) Cymbium with three long, spear-like setae on basal part of prolateral surface in the new species (Fig.2A) (vs. with two short, spear-like setae in *T. songyuae*); 3) Bulb much wider basally in the new species (Fig.2) (vs. slightly wider basally in *T. songyuae*). The female of this new species resembles that of *T. xinping* Tong, Zhang & Li, 2019 (see Tong *et al.*, 2019^[9]: 43, Figs.25C~D), but can be distinguished by: 1) Epigyne with a transverse sclerite in the new species (Fig.4A) (vs. without this transverse sclerite in *T. xinping*); 2) Transverse bars

almost straight in the new species (Fig.4B) (vs. curved in *T. xinping*); 3) The base of apodeme distinctly overpasses the epigastric furrow in the new species (Fig.4B) (vs. close to the epigastric furrow in *T. xinping*).

Description. Male (holotype) (Fig.1). Body yellow-brown, chelicerae and sternum lighter. Total length 1.71; carapace 0.81 long, 0.65 wide; abdomen 0.85 long, 0.57 wide. Carapace with black granulate. The cervical and radial grooves indistinct. Clypeus 0.07 high. Eye sizes and interdistances: ALE largest, PLE smallest; PME—PME 0.01, PME touching each other; PME—PLE 0.03; ALE—PLE 0.02, ALE—PLE separated by less than ALE radius; MOA 0.07 long, anterior width 0.14, posterior width 0.09. Chelicerae yellow and straight, proximal region with one hair with elevated hair base; labium rectangular, anterior margin deeply incised. Endites are wide. The posterior part of the sternum has two rows of short, italic thick setae. Legs yellow. Measurements of legs: I, 1.69 (0.50, 0.64, 0.36, 0.19); II, 1.65 (0.46, 0.64, 0.35, 0.20); III, 1.41 (0.45, 0.43, 0.33, 0.20); IV, 2.01 (0.59, 0.74, 0.45, 0.23). Leg formula: 4123. Abdomen oval, booklung covers large, smooth back surface, with yellow-brown setae; the abdominal exoskeleton has a high degree of sclerotization and forms sclerites. Spinnerets pale yellow.

Abdomen (Fig.1G). Sperm pore situated in epigastric region, in front of anterior spiracles, small and oval; between anterior and posterior spiracles, there is a small dark dot, surrounded by rows of long setae.

Palp (Fig.2). Orange. Tibia have a very long seta on prolateral surface. Cymbium with three long, spear-like setae on basal part of prolateral surface. Bulb kidney-shaped, wider basally. Embolus system complex, with a strongly sclerotized sickle-shaped protuberance and double valve outgrowth prolaterally; a cluster of long hair behind the double valve outgrowth; with a lateral curved branch, comb-shaped lobes and a hair brush retrolaterally.

Female (paratype, HNU-GZ-IV-1706) (Fig.3). The same as male except noted. Slightly larger than male. Total length 1.87; carapace 0.74 long, 0.63

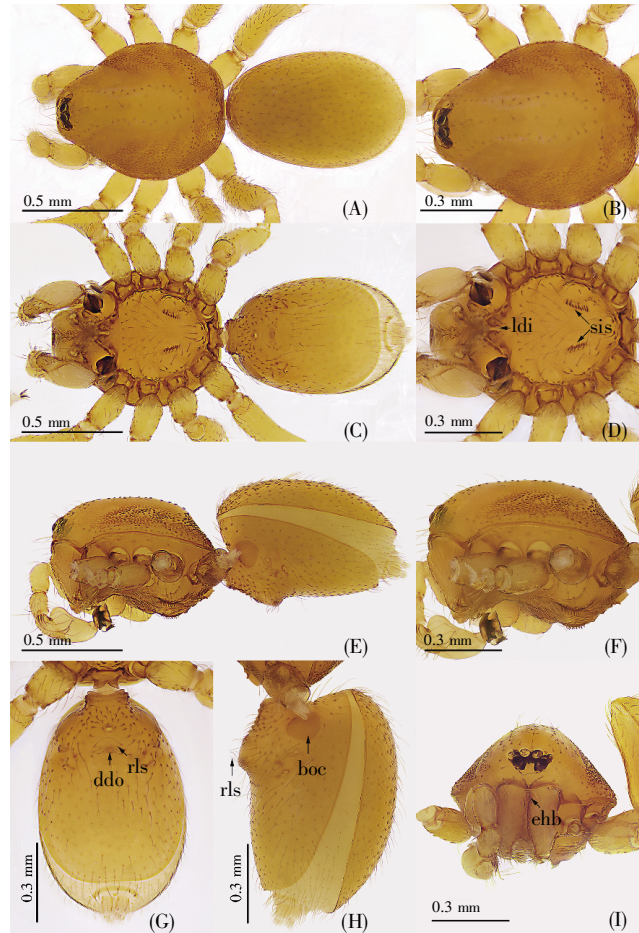


Fig.1 *Trilacuna corollifera* sp. nov., male holotype

(A) Habitus, dorsal view; (B) Prosoma, dorsal view; (C) Habitus, ventral view; (D) Prosoma, ventral view; (E) Habitus, lateral view; (F) Prosoma, lateral view; (G) Abdomen, ventral view; (H) Abdomen, lateral view; (I) Prosoma, anterior view. boc: Booklung covers; ddo: Dark dot; ehb: Elevated hair base; ldi: Labium deep incision; rls: Rows of long setae; sis: Short, italic thick setae.

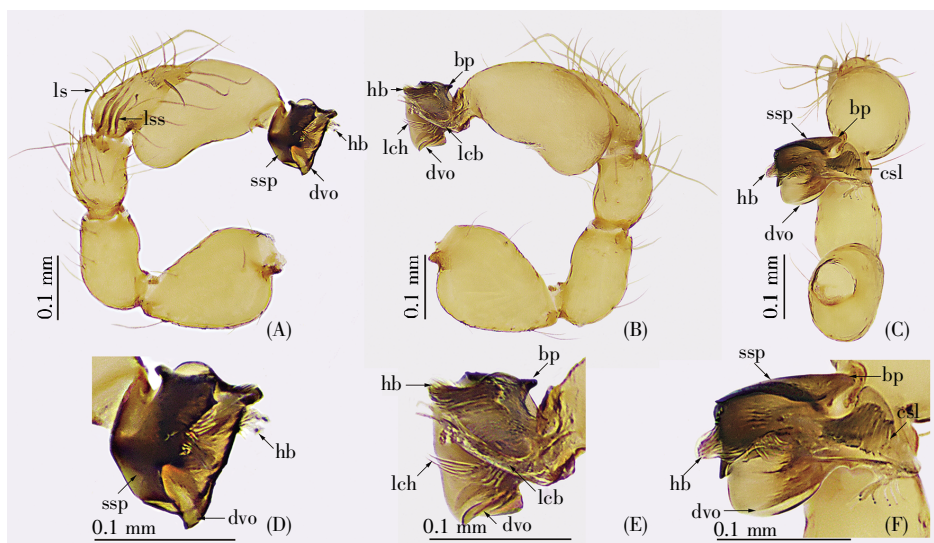


Fig.2 *Trilacuna corollifera* sp. nov., male left palp

(A) Left palp, prolateral view; (B) Left palp, retrolateral view; (C) Left palp, ventral view; (D) Apex of palpal bulb, prolateral view; (E) Apex of palpal bulb, retrolateral view; (F) Apex of palpal bulb, ventral views. bp: Basal projection; csL: Comb-shaped lobes; dvo: Double valve outgrowth; hb: Hair brush; lcb: Lateral curved branch; lch: Long cluster of hairs; ls: Long seta; lss: Long, spear-like setae; ssp: Sickle-shaped protuberance.

wide; abdomen 0.99 long, 0.63 wide. Clypeus 0.06 high. Eye sizes and interdistances: ALE largest, PLE smallest; PME—PME 0.01, PME touching each other; PME—PLE 0.03; ALE—PLE 0.02, ALE—PLE separated by less than ALE radius; MOA 0.09 long, anterior width 0.14, posterior width 0.09. Measurements of legs: I, 1.66 (0.51, 0.64, 0.29, 0.22); II, 1.53 (0.46,

0.58, 0.30, 0.19); III, 1.48 (0.46, 0.48, 0.35, 0.19); IV, 1.93 (0.54, 0.71, 0.43, 0.25). Leg formula: 4123. Abdomen lighter than that of male. Sternum without two rows of short, italic thick setae.

Genitalia. Ventral view (Fig.4A): with sclerotized arches anterior to the spiracles and a dark knob-like marking can be seen through the cuticle.

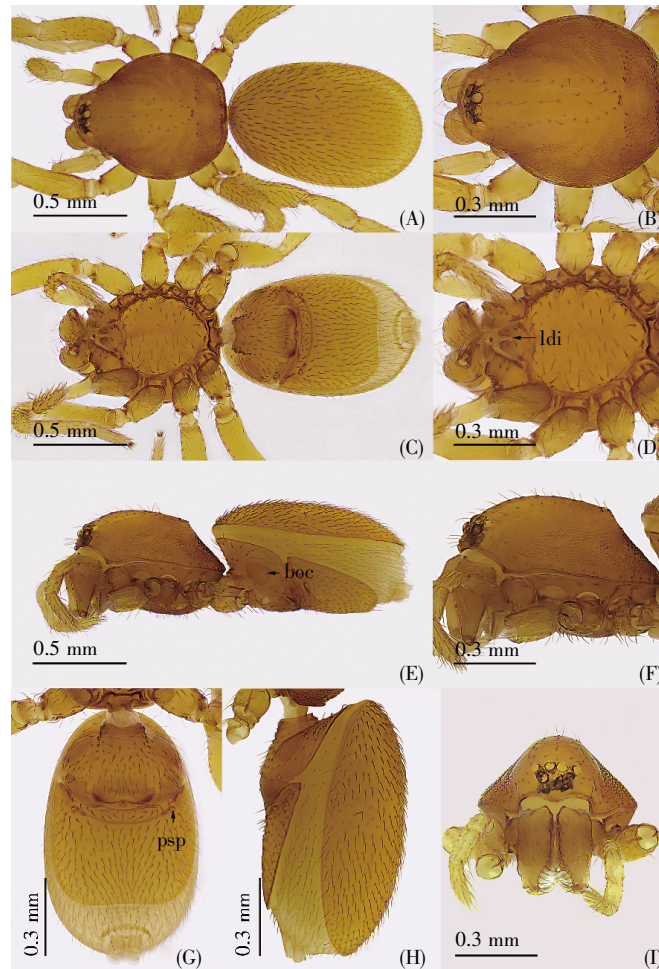


Fig.3 *Trilacuna corollifera* sp. nov., female paratype collected together with holotype

(A) Habitus, dorsal view; (B) Prosoma, dorsal view; (C) Habitus, ventral view; (D) Prosoma, ventral view; (E) Habitus, lateral view; (F) Prosoma, lateral view; (G) Abdomen, ventral view; (H) Abdomen, lateral view; (I) Prosoma, anterior view. boc: Booklung covers; ldi: Labium deep incision; psp: Posterior spiracle.

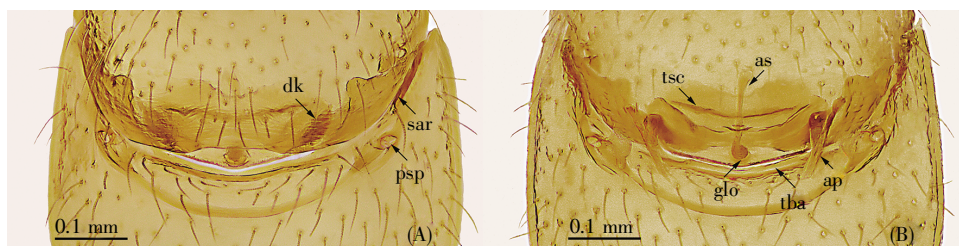


Fig.4 *Trilacuna corollifera* sp. nov., female genitalia

(A) Epigyne, ventral view; (B) Epigyne, posterior view. ap: Apodeme; as: Anterior sclerite; dk: Dark knob-like marking; glo: Globose structure; psp: Posterior spiracle; sar: Sclerotized, recurved arches; tba: Transverse bars; tsc: Transverse sclerite.

Dorsal view (Fig.4B): the posterior of the anterior sclerite is a globular structure; and the anterior sclerite is perpendicular to the transverse sclerite, transverse bars almost straight, with two long apodemes.

Distribution. China (Guizhou).

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