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中国管巢蛛属一新种及一新纪录种记述(蜘蛛目:管巢蛛科)

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摘要: 记述了产自中国海南和云南的2种管巢蛛:双羽管巢蛛,新种 *Clubiona bipinnata* sp. nov. 和拉玛管巢蛛 *Clubiona rama* Dankittipakul & Singtripop, 2008,新纪录种。提供了2个物种的外生殖器手绘点线图、显微照片及采集记录图。标本保存于贵州师范学院动物标本室。

关键词: 分类学; 管巢蛛属; 新种; 新纪录种; 中国

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A New and a Newly Recorded Species of Genus *Clubiona* (Araneae: Clubionidae) from China

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Abstract: Two sac spider species, *Clubiona bipinnata* sp. nov. and *C. rama* Dankittipakul & Singtripop, 2008 from Hainan and Yunnan provinces of China are identified, described and illustrated. *C. rama* is recorded from China for the first time. Sampling records of these two species are given in the map. Specimens are deposited in the specimen room of Guizhou Education University.

***Clubiona bipinnata* sp. nov.** (**Plate Ⅰ: 1 - 5**, **Fig. 1**)

Type material: Holotype ♀, Guangpo town, Lingshui county, Hainan province, China, 109°52.542′E, 18°48.124′N, Alt. 380 m, 11 Mar., 2010, Liu F. X. leg. Paratype 1 ♀, same data as holotype.

Etymology: The specific epithet derives from the Latin word "*bipinnatus*" (bipinnate), referring to the shape of the sclerites which located on the sides of copulatory openings. Adjective.

Diagnosis: *Clubiona bipinnata* sp. nov. seems close to *C. diversa* O. Pickard-Cambridge, 1862 (Almquist, 2006: 381, f. 329a - f) and *C. duoconcava* Zhang & Hu, 1991 (Zhang & Hu, 1991: 417, f. 1 - 4), but is consistently separable by its genitalia. Females of *C. bipinnata* sp. n. resemble those of *C. diversa* and *C. duoconcava* by the presence of copulatory openings which are close together, the copulatory ducts which ascend anteriorly and running parallel, but differ from the latter two by: 1) the presence of bipinnate sclerites which located on the sides of copulatory openings; 2) the absence of an sclerite plate which covered copulatory ducts and bursae; 3) relative size and relative positions of spermathecae and bursae.

Genitalia (**Plate Ⅰ: 2 - 5**): Atrium absent; spermathecae dark in color and visible through the semitransparent epigynal plate; copulatory openings small and close to each other, located at posterior portion of epigynal plate; there are two horizontal and feather-shaped sclerites on both sides of copulatory openings. Copulatory ducts ascend anteriorly and running parallel, then ascend obliquely and connect with more or less globular spermathecae; fertilization ducts short and curved, membranous. Bursae globular, relatively large, semitransparent.

***Clubiona rama* Dankittipakul & Singtripop, 2008** (**Plate Ⅱ: 6 - 11**, **Fig. 1**)

Material examined: 3 ♀, Menglun town, Xishuangbanna, Yunnan province, China, 101°12.893'E, 21°57.669'N, Alt. 680 m, 3 Jan., 2011, Gan W. J. leg.

Diagnosis: The females of *C. rama* differ from other congeners except of *C. tortuosa* Zhang & Yin, 1998 (Zhang & Yin,

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1998: 13, f. 14 – 15) in having the similar elongate-narrowed atrium, the slender and coiled copulatory ducts, and the reniform bursae, but can be distinguished by the course of copulatory ducts: 1) copulatory ducts ascend to anterior border of epigynal plate 2 times, instead of only once in *C. tortuosa*; 2) the mid-pieces of copulatory ducts are "3"-shaped, but not in *C. tortuosa*; 3) coil of copulatory ducts is more complicated in *C. rama*.

Genitalia (**Plate Ⅱ: 7 – 11**): Atrium anteriorly cordiform, posteriorly elongate-narrowed; copulatory openings small, located on lateral part of atrium, leading to parallel copulatory ducts which move posteriorly then ascend obliquely, forming "3"-shaped and descending posteriorly, finally connect with tubular spermathecae. Spermathecae strongly twisty; fertilization ducts short and curved; bursae reniform, relatively large, semitransparent.

Keywords: taxonomy; *Clubiona*; new species; newly recorded species; China

管巢蛛属 *Clubiona* Latreille, 1804 目前全球记录495 种,是管巢蛛科 Clubionidae 中多样性最高的类群,占该科已知种类的 80% 以上(World Spider Catalog,2017),广布于全球热带及温带地区(Dankittipakul & Singtripop,2008a)。近 10 年来,国内众多学者(Liu *et al.*,2007; Zhang *et al.*,2007; 张锋等,2007a,2007b; Zhang & Zhu 2009; 喻浩,2010; Yu *et al.*,2012; Wu & Zhang,2014a,2014b; Wang *et al.*,2015; Wu *et al.*,2015; Dong & Zhang,2016; He *et al.*,2016; Liu *et al.*,2016; Yu & Chen,2017)都对中国管巢蛛属进行过研究和报道,使得中国该属物种种数达到 122 种,位列我国漏斗蛛科 Agelenidae 龙角蛛属 *Draconarius*、狼蛛科 Lycosidae 豹蛛属 *Pardosa* 及幽灵蛛科 Pholcidae 幽灵蛛属 *Pholcus* 之后,成为中国蜘蛛属级阶元的第四大类群(李枢强,林玉成,2016; World Spider Catalog,2017)。然而,我国管巢蛛属的生物多样性调查仍不够充分,还有较多的新种和新纪录种亟待发现(He *et al.*,2016)。

笔者在检视采自海南和云南的标本(保存于贵州师范学院动物标本室)时,发现管巢蛛属一新种 *Clubiona bipinnata* sp. nov.和我国一新纪录种 *Clubiona rama* Dankittipakul & Singtripop, 2008。测量单位为 mm;分类学描述和术语参照 Dankittipakul 和 Singtripop(2008a,2008b)。

双羽管巢蛛,新种,*Clubiona bipinnata* sp. nov.(图版Ⅰ:1 ~ 5,图 1)

模式标本:正模♀,海南省陵水县光坡镇(109°52. 542′E,18°48. 124′N,海拔 380 m),2010 年 3 月 11 日,刘凤想采;副模 1♀,采集信息同正模。

词源学:新种名源自拉丁词"*bipinnatus*",意为"二羽状的",指本新种外雌器腹面插入孔两侧的骨片轮廓的形状。

鉴别特征:本新种近似于分离管巢蛛 *C. diversa* O. Pickard-Cambridge, 1862 (Almquist, 2006: 381, f. 329a ~ f)与双凹管巢蛛 *C. duoconcava* Zhang & Hu, 1991(张古忍,胡运谨, 1991: 417, f. 1 ~ 4),外雌器腹面均具有位于生殖板后位且紧靠的插入孔,同时外雌器背面均具有靠拢且向上并行行走的交配管及分为两室的纳精囊。但本新种与后两者的主要区别为:1)本种两插入孔两侧各具一横向、羽毛轮廓的骨片;2)后两种外雌器背面具有一覆盖交配管与纳精囊的大骨板,而本种则无;3)第一纳精囊与第二纳精囊的相对大小和位置有差异。

描述:雌性。体长 4. 53 ~ 4. 88(n = 2)。正模(图版Ⅰ:1)体长 4. 53;头胸部长 2. 37,宽 1. 78;腹部长 2. 16,宽 1. 39。背甲基本色为淡橙色且无明显斑纹,近卵圆形,头区稍狭窄并未隆起,前缘色深。中窝纵向,红色细缝状,眼区后部为头胸部隆起的最高处。8 眼2 列,前眼列背面观近平直,后眼列略前凹。眼直径:前中眼 0. 11,前侧眼 0. 14,后中眼 0. 10,后侧眼 0. 11;眼间距:前中眼间距 0. 15,前中侧眼间距 0. 08,后中眼间距 0. 34,后中侧眼间距 0. 19;中眼域长 0. 32,前边宽 0. 30,后边宽 0. 54,额高 0. 04。螯肢浅红褐色,前齿堤 4 齿,后齿堤 3 齿。颚叶淡黄色,长大于宽,其端部内侧具毛簇;下唇淡黄色,端部具若干长毛;胸板黄白色,心形。步足淡黄色,无明显斑纹。步足测量:Ⅰ 5. 01(1. 34,1. 99,1. 06,0. 63),Ⅱ 5. 74(1. 60,2. 23,1. 23,0. 70),Ⅲ 4. 57(1. 31,1. 47,1. 24,0. 54),Ⅳ 6. 29(1. 79,2. 06,1. 85,0. 59)。足式 4213。腹部卵圆形,背面基本色为淡黄色且散布有细小灰色羽状斑,前端中部具 2 条浅灰色细纵斑,后端中部隐约可见一黑色纵纹;腹面基本色为黄白色,自生殖沟至纺器具 2 条浅色细纵斑纹。

外雌器(图版Ⅰ:2 ~ 5):无交媾腔。透过半透明的生殖腹板,可见 1 对位于前位的第一纳精囊。两插入孔紧靠,小且不明显,位于生殖板后位。生殖孔及其两侧各覆盖有一横向、轮廓为羽毛状的骨片。对称的交配管自插入孔处平行上行至外雌器中部,继而向两侧横向行走,最终与球形的第一纳精囊相连;受精管短小弯曲,呈膜质飘带状。第二纳精囊较大,球状,膜质透明。

雄性未知。

分布(图 1):目前仅知分布于模式产地。

拉玛管巢蛛 *Clubiona rama* Dankittipakul & Singtripop, 2008(图版Ⅱ:6~11,图 1)

Clubiona rama Dankittipakul & Singtripop, 2008b: 645, f. 10~23 (♂ ♀);

Dhali *et al.*, 2016: 289, f. 7A~E, 8A~C (♀);

Dhali, Saha & Raychaudhuri, 2017: 58, f. 237~241, pl. 21 (♀).

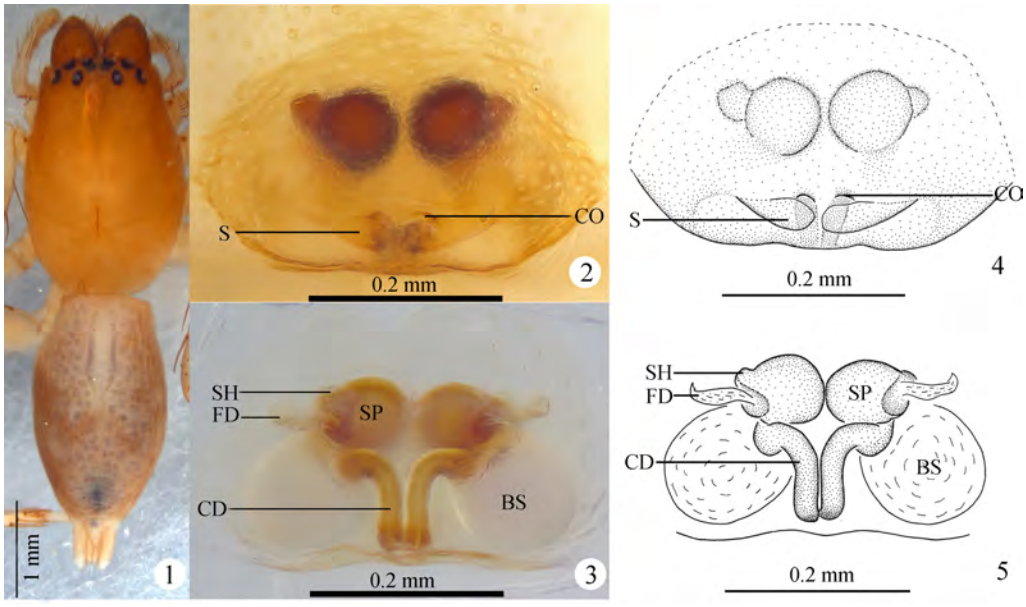
检视标本:3♀,云南省西双版纳勐仑沟谷雨林(101°12.893'E,21°57.669'N,海拔 680 m),2011 年 1 月 3 日,甘文瑾采。

鉴别特征:本种近似于曲管巢蛛 *Clubiona tortuosa* Zhang & Yin, 1998(张永靖,尹长民, 1998: 13, f. 14~15),外雌器腹面均具有纵向狭长的交媾腔,同时外雌器背面均具有位于前位的细长、弯曲的交配管,及位于后位的大且呈肾形的第二纳精囊,区别于同属其他物种。两种的主要区别在于交配管的盘绕方式和走向明显不同:曲管巢蛛交配管自插入孔向两侧上方行走后,随即折回外雌器中部与第一纳精囊相连,而拉玛管巢蛛的交配管在与第一纳精囊相连之前经历过 2 次上行并弯曲呈"3"形,其盘绕方式明显比曲管巢蛛复杂。

描述:雌性。体长 8.75~9.43(n=3)。1 雌蛛(图版Ⅱ:6)体长 9.12;头胸部长 3.39,宽 2.52;腹部长 5.47,宽 3.23。背甲基本色为浅红褐色且无明显斑纹,近卵圆形,头区稍狭窄且隆起,前缘色深。中窝纵向,黑色细缝状,中窝处为头胸部隆起之最高处。8 眼 2 列,前眼列背面观微后凹,后眼列略前凹。眼直径:前中眼 0.15,前侧眼 0.16,后中眼 0.15,后侧眼 0.16;眼间距:前中眼间距 0.14,前中侧眼间距 0.12,后中眼间距 0.37,后中侧眼间距 0.27;中眼域长 0.44,前边宽 0.45,后边宽 0.66,额高 0.09。螯肢红棕色,前齿堤 5 齿,后齿堤 3 齿。颚叶红褐色,长大于宽,端部内侧色浅且具毛簇;下唇红褐色,端部色浅,具若干长毛;胸板黄褐色,心形。步足浅红棕色,无明显斑纹。步足测量:Ⅰ 5.01(1.34,1.99,1.06,0.63),Ⅱ 5.74(1.60,2.23,1.23,0.70),Ⅲ 4.57(1.31,1.47,1.24,0.54),Ⅳ 6.29(1.79,2.06,1.85,0.59)。足式 4213。腹部卵圆形,背腹面均为灰白色且无斑纹。

外雌器(图版Ⅱ:7~11):交媾腔前端心形,后端狭长延伸至生殖板后位处。插入孔位于交媾腔前缘两侧,两对称的交配管自插入孔处向上到达外雌器上部后,平行折回至外雌器中部,继而向两侧上部倾斜,呈"3"形,然后再次弯折与外雌器中位的第一纳精囊相连。纳精囊分两部分:第一纳精囊管状,螺旋扭曲,受精管短小,膜质飘带状;第二纳精囊较大,肾形,膜质透明。

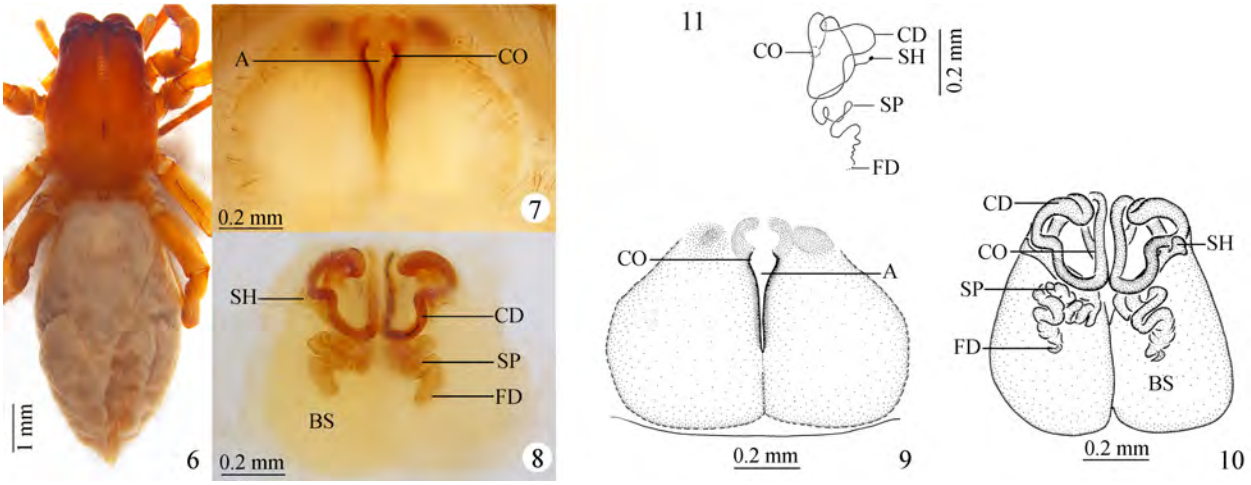
分布(图 1):中国(云南西双版纳,新分布)、泰国、印度。



图版Ⅰ　双羽管巢蛛,新种 *Clubiona bipinnata* sp. nov., 雌蛛正模

Plate Ⅰ　*Clubiona bipinnata* sp. nov., female holotype

1. 雌蛛外形, 背面观 female habitus, dorsal view; 2, 4. 外雌器腹面观 epigyne, ventral view; 3, 5. 外雌器内部结构背面观 vulva, dorsal view; BS. 第二纳精囊 bursae, CD. 交配管 copulatory duct, CO. 插入孔 copulatory opening, FD. 受精管 fertilization duct, S. 骨片 sclerite, SH. 纳精囊头 spermathecae head, SP. 纳精囊 spermathecae; 下同 the same below.



图版Ⅱ　拉玛管巢蛛 *Clubiona rama* Dankittipakul & Singtripop, 2008,新纪录种

Plate Ⅱ　*Clubiona rama* Dankittipakul & Singtripop, 2008, newly recorded species

6. 雌蛛外形, 背面观 female habitus, dorsal view; 7, 9. 外雌器腹面观 epigyne, ventral view; 8, 10. 外雌器内部结构背面观 vulva, dorsal view; 11. 外雌器左侧管道走向示意图 schematic course of left internal duct system; A. 交媾腔 atrium.

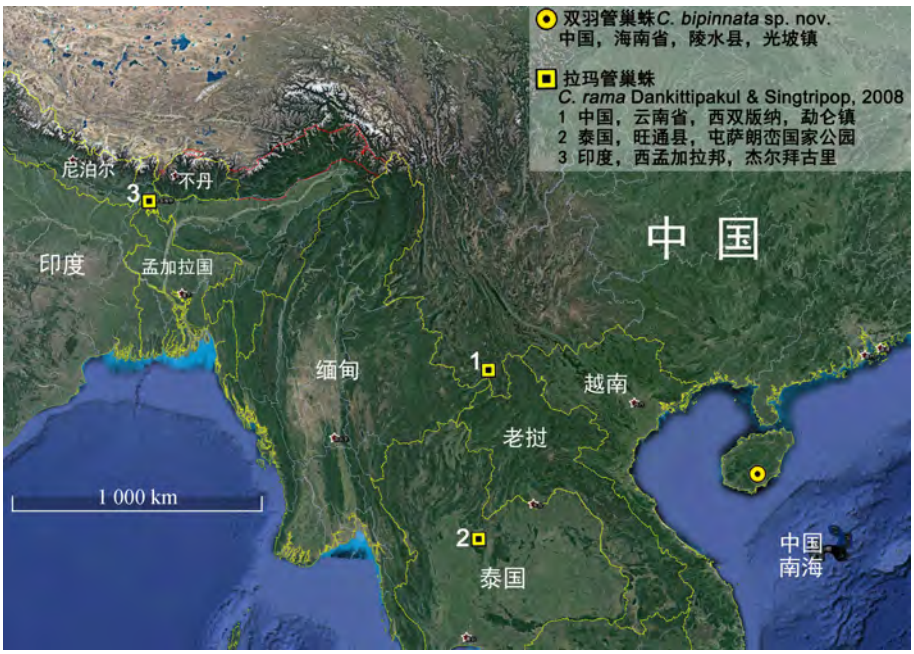


图 1　双羽管巢蛛和拉玛管巢蛛的分布记录点

Fig. 1　Sampling records of *Clubiona bipinnata* sp. nov. and *C. rama* Dankittipakul & Singtripop, 2008

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