

中国贵州栅蛛属一新种记述(蜘蛛目:栅蛛科)

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摘要: 记述了分布于中国贵州威宁的栅蛛属 *Hahnia* 一新种: 威宁栅蛛 *Hahnia weiningense* sp. nov.。提供了显微照片、手绘图版和生态照片。标本保存于西南大学生命科学学院。

关键词: 栅蛛属; 描述; 生态照; 威宁

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A New Species of the Genus *Hahnia* C. L. Koch, 1841 (Araneae: Hahniidae) from Guizhou, China

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Abstract: A new species of the genus *Hahnia* C. L. Koch, *Hahnia weiningense* sp. nov., is described from Weining county, Guizhou province, China. Micrograph, morphological illustrations and ecological photos of the new species are presented. Specimens are deposited in the School of Life Sciences, Southwest University, Chongqing, China (SWUC). All measurements are given in mm.

***Hahnia weiningense* sp. nov. (figs 1–16)**

Type material: Holotype ♂, Baicaoping, Weining county, Bijie city, Guizhou province, 104° 27.869' E, 26°55.899' N, Alt. 2 494 m, 18 May 2017, collected by Chen HM, Zhang ZS and Wang LY. The data of paratypes 4 ♂ and 3 ♀ are the same as those of holotype.

Etymology: The specific name is designated after the type locality Weining county.

Diagnosis: This new species differs from other species of *Hahnia* by the male palpal bulb which covered with a series dark brown setae near prolateral margin, distal setae longer and extended beyond cymbial margin in ventral (figs 5, 10) and dorsal view (figs 7, 12); female epigyne with a transverse oval atrium, the atrium nearly twice as wide as spermatheca. Additionally, this new species is similar to *Hahnia subsaccata* Huang & Zhang, 2017 (see Huang *et al.*, 2017: page 455, figs 10–12), but can be distinguished from the latter by palpal tegulum with longer setae near prolateral center, retrolateral tibial apophysis (RTA) and patellar apophysis more curved, tip of RTA pointing retrolaterally (figs 5–7, 10–12); epigyne with a wider atrium (compare with the diameter of spermatheca), longer copulatory ducts (compare with the diameter of spermatheca), sub-spermathecae nearly global, spermathecae not covered copulatory ducts in dorsal view (figs 8–9, 13–14).

Description: male holotype (figs 1–2). Total length 3.19. Carapace 1.69 long and 1.28 wide; opisthosoma 1.71 long

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and 1.12 wide. Eye sizes and interdistances: anterior median eye (AME) 0.06, anterior laterel eye (ALE) 0.10, posterior median eye (PME) 0.09, posterior lateral eye (PLE) 0.11; AME-AME 0.05, AME-ALE 0.04, PME-PME 0.08, PME-PLE 0.07, ALE-PLE 0.03. Median ocular area (MOA) 0.22 long, front width 0.15, back width 0.29. Clypeus height 0.19. Chelicerae with distinct stridulatory files, 3 promarginal, 5 retromarginal teeth. Leg measurements: I 4.96 (1.45, 1.69, 1.06, 0.76); II 4.70 (1.39, 1.54, 1.00, 0.77); III 4.23 (1.19, 1.30, 1.02, 0.72); IV 5.33 (1.48, 1.72, 1.27, 0.86). Leg formula: 4123. Spiracle long and transverse, the distance of spiracle to epigastric furrow as long as to spinnerets (fig. 2).

Male palpal patella with a hooked apophysis originating retrolaterally. RTA sharply curved. Tegulum covered with a series of setae near prolateral and proximal margin, the distal setae longer and extended beyond cymbial margin. Embolus originating retrolatero-proximally, its tip situated near the base of a membranous median apophysis. Cymbial furrow deep and nearly as long as half of cymbium (figs 5-7, 10-12).

Paratype females (figs 3-4). Total length 3.68-3.71. Prosoma 1.65-1.67 long, 1.24-1.28 wide; opisthosoma 1.96-2.26 long, 1.31-1.59 wide. One of them total length 3.68; prosoma 1.65 long, 1.24 wide; opisthosoma 1.96 long, 1.31 wide. Eye sizes and interdistances: AME 0.08, ALE 0.11, PME 0.11, PLE 0.11; AME-AME 0.06, AME-ALE 0.03, PME-PME 0.08, PME-PLE 0.07, ALE-PLE 0.03; MOA 0.22 long, front width 0.17, back width 0.32. Clypeus height 0.17. Leg measurements: I 4.57 (1.31, 1.52, 0.98, 0.76); II 4.28 (1.27, 1.35, 0.94, 0.72); III 3.94 (1.13, 1.20, 0.96, 0.65); IV 5.28 (1.53, 1.66, 1.28, 0.81). Leg formula: 4123.

Epigyne with a small and transversal oval atrium near posterior margin, and the atrium nearly twice as wide as spermatheca. Two copulatory openings located in the atrium. Copulatory ducts first extended antero-laterally, then coiled mesally and bifurcated, one branch short and connected with the sub-global subspermatheca, the other branch long and connected with the sub-global spermatheca; both spermathecae posterior-laterally located and widely separated. Fertilization ducts short and originating from posterior spermathecae, tip of fertilization ducts pointing laterally. A pair of curved and widely separated hoods located in the posterior of epigastric furrow (figs 8-9, 13-14).

Keywords: *Hahnia*; description; ecological photos; Weining

栅蛛属 *Hahnia* 由 C. L. Koch 于 1841 年建立, 隶属于栅蛛科 Hahniidae 栅蛛亚科 Hahniinae (Lehtinen, 1967), 是目前栅蛛亚科中包含种类最多的属, 全世界已知 101 种, 中国分布有 21 种 (World Spider Catalog, 2017), 中国贵州省目前仅已知分布有 1 种 (Zhang & Chen, 2015): 朱氏栅蛛 *Hahnia zhui* Zhang & Chen, 2015。

作者在鉴定采自贵州省威宁县的蜘蛛标本时, 发现栅蛛属一新种。标本保存于西南大学生命科学学院 (SWUC)。使用莱卡体视显微镜 (Leica M205C) 进行标本鉴定、拍照和绘图, 生态照片用佳能相机 (Canon EOS7D) 和佳能百微镜头 (Canon Macro 100 mm) 在室内拍摄。文中的测量单位均为 mm, 描述使用的英文缩写如下: ALE. 前侧眼 anterior lateral eye, AME. 前中眼 anterior median eye, MOA. 中眼域 median ocular area, PLE. 后侧眼 poste-

rior lateral eye, PME. 后中眼 posterior median eye, RTA. 胫节外侧突 retrolateral tibial apophysis。

威宁栅蛛 *Hahnia weiningense* sp. nov.

模式标本: 正模 ♂, 贵州省威宁县百草坪 (104°27.869'E, 26°55.899'N, 海拔 2 494 m), 2017 年 5 月 18 日, 陈会明、张志升、王露雨采; 副模 4 ♂ 3 ♀, 采集信息同正模。

词源学: 新种拉丁名以模式产地威宁县命名。

鉴别特征: 本种与栅蛛属其他种类的区别在于本种雄蛛触肢的生殖球近内侧具 1 列深褐色刚毛, 前端的刚毛较长且超出跗舟边缘, 雌蛛的外雌器具一横椭圆形且宽度约为纳精囊宽 2 倍的交配腔。本种与近囊栅蛛 *Hahnia subsaccata* Huang & Zhang, 2017 (Huang *et al.*, 2017: 455, 图 10~12) 近似, 但本种雄蛛触肢的生殖球靠近内侧边缘中部的刚毛更长, RTA 更弯曲且末端指向胫节外侧, 膝节突也更弯

曲(图版 I :5~7,图版 II :10~12);雌蛛外侧器的交配腔更宽(与纳精囊直径相比),交配管较长(与纳精囊直径相比),副纳精囊近球形,纳精囊不与交配管重叠(图版 I :8~9,图版 II :13~14)。

描述:正模,雄蛛(图版 I :1~2,图版 III :15)体长 3.19;背甲长 1.69,宽 1.28;腹部长 1.71,宽 1.12。背甲暗黄色,胸区边缘、放射沟、颈沟和头区大部分呈深棕色。中窝细、纵向、深黄褐色。眼丘黑色。两眼列均前凹,眼径为 AME 最小,PLE 最大:AME 0.06,ALE 0.10,PME 0.09,PLE 0.11;眼间距为:AME-AME 0.05,AME-ALE 0.04,PME-PME 0.08,PME-PLE 0.07,ALE-PLE 0.03。MOA 长介于前边宽与后边宽之间(0.22:0.15:0.29)。额高约为 AME 的 3 倍(0.19:0.06)。螯肢、侧结节黄褐色,外侧面具发声嵴,前齿堤 3 齿,后齿堤 5 齿。颚叶红褐色,长稍大于宽,前端内侧斜截。下唇浅黄褐色,宽大于长。胸板暗黄色,边缘黑褐色。步足黄色,具黑色环纹。步足测量: I 4.96 (1.45, 1.69, 1.06, 0.76); II 4.70 (1.39, 1.54, 1.00, 0.77); III 4.23 (1.19, 1.30, 1.02, 0.72); IV 5.33 (1.48, 1.72, 1.27, 0.86)。步足式:4123。腹部浅黑色,背面具 5 个“人”字斑。气孔中位(图版 I :2)。纺器黄色,后侧纺器长,末节短于基节。

触肢膝关节突钩状。RTA 钩状且基部宽、末端尖。插入器于生殖球外侧近基部起源,末端停留在外侧面近前端的膜片状中突背面,生殖球近内侧缘后半部密被 1 列深褐色刚毛,前端的刚毛较长且超出跗舟边缘。跗舟沟较深,长度约等于跗舟长的一半(图版 I :5~7,图版 II :10~12)。

副模,雌蛛(图版 I :3~4,图版 III :16)体长 3.68~3.71;背甲长 1.65~1.67,宽 1.24~1.28;腹部长 1.96~2.26,宽 1.31~1.59。一雌蛛体长 3.68;背甲长 1.65,宽 1.24;腹部长 1.96,宽 1.31。眼径为 AME 最小,其他 3 只眼等大:AME 0.08,ALE

0.11,PME 0.11,PLE 0.11;眼间距为:AME-AME 0.06,AME-ALE 0.03,PME-PME 0.08,PME-PLE 0.07,ALE-PLE 0.03。MOA 长介于前边宽与后边宽之间(0.22:0.17:0.32)。额高约为 AME 的 2 倍(0.17:0.08)。步足测量: I 4.57 (1.31, 1.52, 0.98, 0.76); II 4.28 (1.27, 1.35, 0.94, 0.72); III 3.94 (1.13, 1.20, 0.96, 0.65); IV 5.28 (1.53, 1.66, 1.28, 0.81)。步足式:4123。螯肢无发声嵴。其余特征同雄蛛。

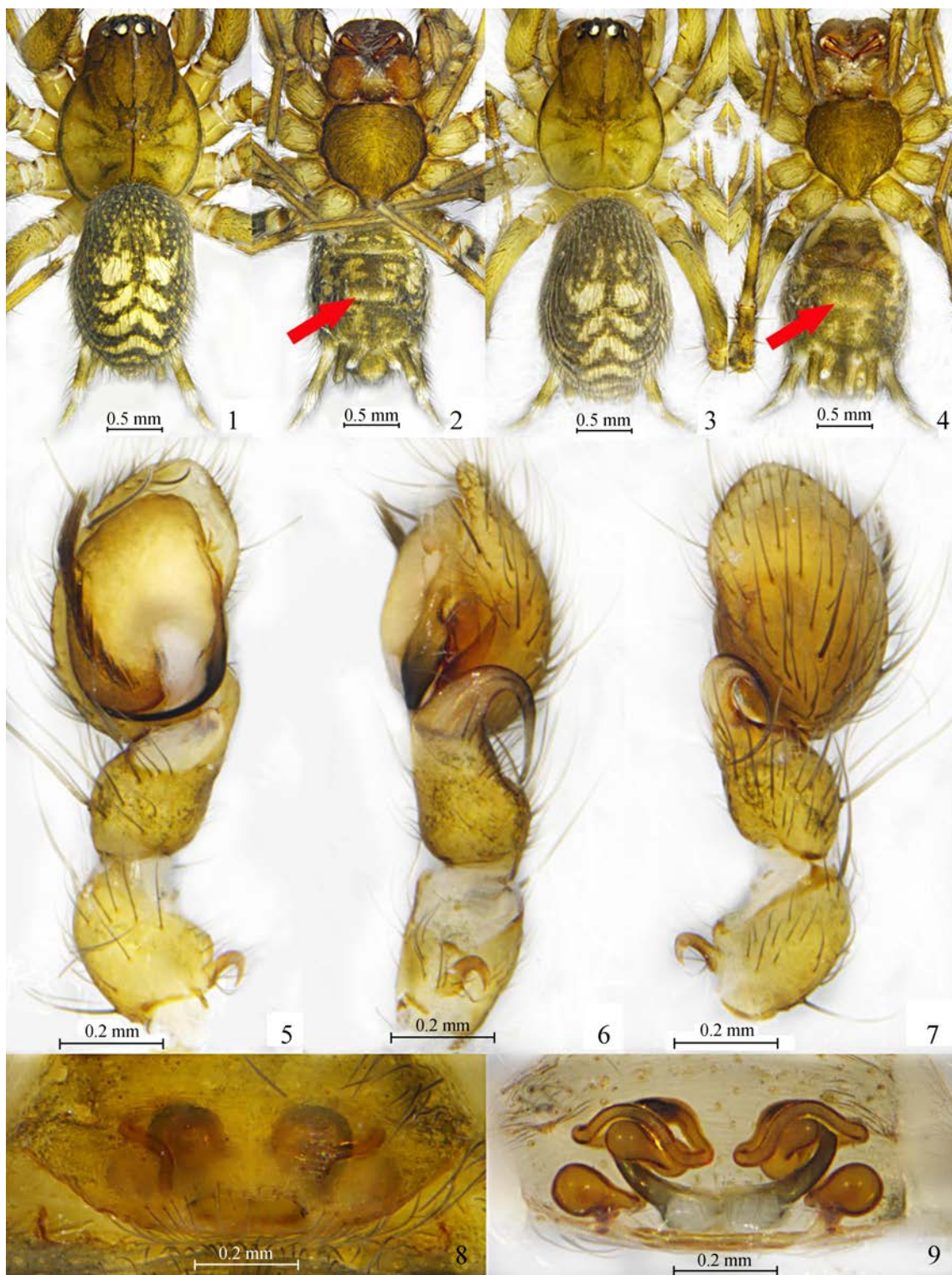
外雌器近后缘具一横椭圆形且宽度约为纳精囊宽 2 倍的交配腔。交配管起始部分较粗,向前缘延伸并分为 2 支:一支较短,与近球形的副纳精囊结合,另一支较长,向外侧盘绕后与近球形的纳精囊结合。受精管位于纳精囊内侧后端,末端指向外侧。生殖沟后方具 1 对弧形且相互远离的垂兜(图版 I :8~9,图版 II :13~14)。

分布:贵州省(威宁县)。

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参考文献:

- Huang GQ, Zhang ZS, Liu YH. 2017. Review of the comb-tailed spider genus *Hahnia* C. L. Koch, 1841 (Hahniidae) from Gaoligong Mountains in Yunnan, China [J]. *Zootaxa*, 4344(3): 444-464.
- Lehtinen PT. 1967. Classification of the cribellate spiders and some allied families, with notes on the evolution of the suborder Araneomorpha [J]. *Annales Zoologici Fennici*, 4: 199-468.
- World Spider Catalog. 2017. Natural history museum bern [EB/OL]. [2017-11-30]. <http://wsc.nmbe.ch/version16>.
- Zhang ZS, Chen HM. 2015. *Hahnia zhui* sp. nov. (Hahniidae), a special species with a unique shape of tegulum [J]. *Acta Arachnologica Sinica*, 24(2): 70-75.

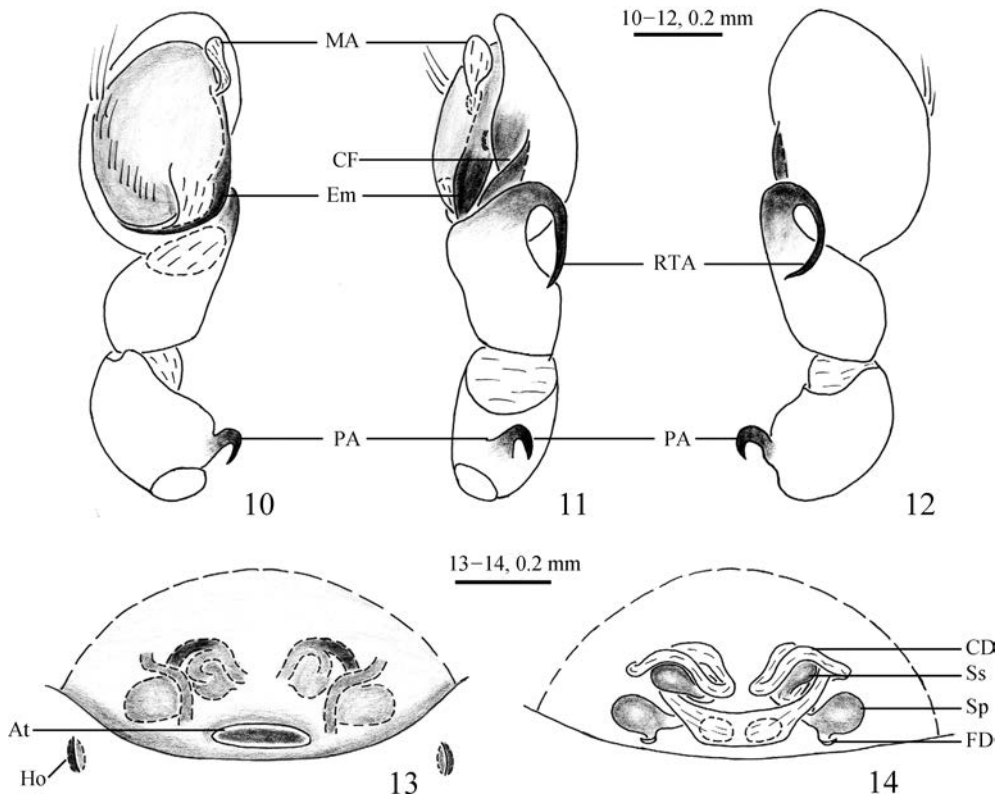


图版 I 威宁栅蛛 *Hahnia weiningense* sp. nov.

Plate I *Hahnia weiningense* sp. nov.

1~2、5~7. 雄蛛正模: 1. 背面观, 2. 腹面观, 5~7. 左触肢: 5. 腹面观, 6. 外侧面观, 7. 背面观; 3~4、8~9. 雌蛛副模: 3. 背面观, 4. 腹面观, 8~9. 外雌器: 8. 腹面观, 9. 背面观; 红色箭头指示气孔位置

1-2, 5-7. male holotype: 1. dorsal view, 2. ventral view, 5-7. left palp: 5. ventral view, 6. retrolateral view, 7. dorsal view; 3-4, 8-9. female paratype: 3. dorsal view, 4. ventral view, 8-9. epigyne: 8. ventral view, 9. dorsal view; red arrows indicating position of spiracle



图版 II 威宁栅蛛 *Hahnia weiningense* sp. nov.

Plate II *Hahnia weiningense* sp. nov.

10~12. 雄蛛正模: 左触肢, 10. 腹面观, 11. 外侧面观, 12. 背面观; 13~14. 雌蛛副模: 外雌器, 13. 腹面观, 14. 背面观; At. 交配腔, CD. 交配管, CF. 跗舟沟, Em. 插入器, FD. 受精管, Ho. 垂兜, MA. 中突, PA. 膝节突, RTA. 胫节外侧突, Sp. 纳精囊, Ss. 副纳精囊
 10-12. male holotype: left palp, 10. ventral view, 11. retrolateral view, 12. dorsal view; 13-14. female paratype: epigyne, 13. ventral view, 14. dorsal view; At. atrium, CD. copulatory duct, CF. cymbial furrow, Em. embolus, FD. fertilization duct, Ho. hood, MA. median apophysis, PA. patellar apophysis, RTA. retrolateral tibial apophysis, Sp. spermatheca, Ss. subspermatheca



图版 III 威宁栅蛛 *Hahnia weiningense* sp. nov. 生态照

Plate III Ecological photos of *Hahnia weiningense* sp. nov.

15. 雄蛛正模 male holotype, 背面观 dorsal view, 16. 雌蛛副模 female paratype, 背面观 dorsal view