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# Seven new species of the spider genus *Cicurina* Menge, 1871 from Yintiaoling Nature Reserve, China (Araneae: Cicurinidae)

LU-YU WANG<sup>1,2</sup> & ZHI-SHENG ZHANG<sup>1,\*</sup>

<sup>1</sup>Key Laboratory of Eco-environments in Three Gorges Reservoir Region (Ministry of Education), School of Life Sciences, Southwest University, Chongqing 400715, China. <sup>2</sup> ≤ wangluyu1989@163.com; © https://orcid.org/0000-0002-5250-3473

<sup>2</sup> wangluyu1989@165.com; <sup>6</sup> https://orcid.org/0000-0002-5250-3473 \*Corresponding author: *zhangzs327@qq.com*; <sup>6</sup> https://orcid.org/0000-0002-9304-1789

#### Abstract

Seven new species of the genus *Cicurina* are described from Yintiaoling Nature Reserve, Chongqing, China: *C. guanshan* **sp. nov.**, *C. linkouzi* **sp. nov.**, *C. minuta* **sp. nov.**, *C. shuangyang* **sp. nov.**, *C. wuxi* **sp. nov.**, *C. yangi* **sp. nov.** and *C. yintiaoling* **sp. nov.** Morphological descriptions, photos and illustrations of copulatory organs are provided.

Key words: description, morphology, taxonomy

#### Introduction

The genus *Cicurina* comprises 147 species worldwide (WSC 2025), making it as one of the largest spider genera. Its taxonomic placement has been a subject of confusion and debate. Originally classified within the family Agelenidae, Lehtinen (1967) transferred it to Dictynidae. Wheeler *et al.* (2017) considered *Cicurina* as a member of Hahniidae. However, their analysis was based on limited unresolved taxa within the genus *Cicurina*, with particularly low support bootstrap (bs=2, see Wheeler *et al.* 2017: 585, fig. 5). Wang, Zhou & Peng (2019) did not agree with their conclusion, and placed *Cicurina* in Dictynidae. In the most recent study, Gorneau *et al.* (2023) reinstated the taxonomic position of Cicurinidae and transferred *Cicurina*, *Brommella* Tullgren, 1948 and *Chorizomma* Simon, 1872 into this family.

Although *Cicurina* is extremely diverse, most species are recorded from North America. A total of 31 species have been recorded in East Asia, including 24 in China, five in Japan and three in South Korea (WSC 2025). To our knowledge, the diversity of this genus from South China is strongly underestimated. For example, the Yintiaoling National Nature Reserve, located in Northeast of Chongqing Municipality of China and almost central part of China, transition zone from subtropical to temperate climate, had never explored until 2020 and no any record on *Cicurina*. All new species are described here using color photographs and hand drawings.

## Material and methods

All specimens are preserved in 75% ethanol and were examined, illustrated, photographed and measured using a Leica M205A stereomicroscope equipped with a drawing tube, a Leica DFC450 Camera and LAS software (Ver. 4.6). Male palps and epigynes were examined and illustrated after they were dissected. Epigynes were cleared, immersing them in a pancreatin solution (Álvarez-Padilla & Hormiga 2007). Eye sizes were measured as the maximum dorsal diameter. Leg measurements are shown as: total length (femur, patella and tibia, metatarsus, tarsus). All measurements are in millimetres. Specimens examined here are deposited in the Collection of Spiders, School of Life Sciences, Southwest University, Chongqing, China (SWUC).

Abbreviations used in the text: ALE, anterior lateral eye; AME, anterior median eye; MOA, median ocular area; PLE, posterior lateral eye; PME, posterior median eye.

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Taxonomy

Family Cicurinidae Kishida, 1955

Genus Cicurina Menge, 1871 洞叶蛛属

*Cicurina guanshan* sp. nov. 官山洞叶蛛 Figures 1A-B, 3-4

**Type material. Holotype male** (SWUC-T-CI-01-01), **CHINA, Chongqing Municipality, Wuxi County, Yintiaoling Nature Reserve**, Guanshan Administrative Station, Pianyanwu Cave, 31°29′43″N, 109°44′13″E, elev. 2292 m, 22 September 2022, L.Y. Wang, Q.L. Lu, X.L. Chen and H.Y. Chen leg. **Paratypes:** 3 males and 7 females



**FIGURE 1.** Photos of living specimens. A–B. *Cicurina guanshan* **sp. nov.** (A. male, B. female); C–D. *C. linkouzi* **sp. nov.** (female); E–F. *C. shuangyang* **sp. nov.** (C. male, D. female) (photos taken by Qian-Le Lu).



**FIGURE 2.** Photos of living specimens. A–B. *Cicurina wuxi* **sp. nov.** (A. male, B. female); C–D. *C. yangi* **sp. nov.** (C. male, D. female); E–F. *C. yintiaoling* **sp. nov.** (E. male, F. female) (photos taken by Qian-Le Lu).

(SWUC-T-CI-01-02~11), same data as holotype; 3 males and 7 females, (SWUC-T-CI-01-12~21) Guanshan Administrative Station, Modaoxi, 31°31′00″N, 109°44′33″E, elev. 1958 m, 22 September 2022, L.Y. Wang, Q.L. Lu, X.L. Chen and H.Y. Chen leg.; 5 males and 11 females, Pianyanwu Cave, 2 September 2020, Z.S. Zhang, L.Y. Wang, P. Liu and Y. Zhang leg.

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

**Diagnosis.** The new species is similar to *Cicurina lichuanensis* Wang, Zhou & Peng, 2019 (Wang, Zhou & Peng 2019: 354, figs 5A–D, 6A–G) in having a wide, short retrolateral tibial apophysis, a long and strong embolus, strong and hook-like conductor, posteriorly located epigynal atrium and round spermathecae, but differs from the latter by having the apical part of conductor as long as the width of the conductor base (Figs 3A–B, 4C–E), vs. about half the length of the conductor base in *C. lichuanensis* and the oval atrium (Figs 3D–E, 4F–G), vs. somewhat heart shaped in *C. lichuanensis*.

**Description.** Male (holotype, Fig. 4A) total length 6.00. Prosoma 3.28 long, 2.60 wide; Opisthosoma 2.72 long, 2.13 wide. Eye sizes and interdistances: AME 0.19, ALE 0.17, PME 0.17, PLE 0.16; AME–AME 0.09, AME–ALE 0.03, PME–PME 0.15, PME–PLE 0.14, ALE–PLE 0.08. MOA 0.49 long, anterior width 0.44, posterior width 0.52. Clypeus height 0.29. Chelicerae with three promarginal and six retromarginal teeth. Leg measurements: I 8.42 (2.21, 3.04, 1.99, 1.18); II 7.90 (2.22, 2.68, 1.91, 1.09); III 7.01 (1.94, 2.09, 1.92, 1.06); IV 9.47 (2.84, 3.02, 2.42, 1.19). Leg formula: 4123.

Palp (Figs 3A–B, 4C–E). Retrolateral tibial apophysis wide, with a single fold and truncated apex. Base of retrolateral tibial apophysis with two small apophyses, extending ventrally and dorsally. Embolus strong, originating at approximately 9-o'clock position, anterior part resting in long groove of conductor. Conductor strong, with hook-like tip.



**FIGURE 3.** *Cicurina guanshan* **sp. nov.** holotype male (A–B) and paratype female (C–D). A. Left male palp, ventral view; B. Same, retrolateral view; C. Epigyne, ventral view; D. Vulva, dorsal view. Abbreviations: At—atrium, CO—copulatory opening, Co—conductor, Em—embolus, FD—fertilization duct, RTA—retrolateral tibial apophysis, Sp—spermathecae.

**Female** (one of paratypes, Fig. 4B, SWUC-T-CI-01-02) total length 5.63. Prosoma 2.69 long, 1.93 wide; opisthosoma 3.05 long, 2.41 wide. Eye sizes and interdistances: AME 0.16, ALE 0.16, PME 0.15, PLE, 0.15; AME–AME 0.06, AME–ALE 0.01, PME–PME 0.12, PME–PLE 0.12, ALE–PLE 0.07. MOA 0.46 long, anterior width 0.39, posterior width 0.46. Clypeus height 0.19. Leg measurements: I 6.80 (1.94, 2.47, 1.49, 0.90); II 6.02 (1.72, 2.10, 1.38, 0.82); III 5.60 (1.74, 1.77, 1.37, 0.72); IV 7.11 (2.02, 2.38, 1.87, 0.84). Leg formula: 4123.

Epigyne (Figs 3C–D, 4F–G). Atrium oval. Copulatory openings located posterolaterally in atrium. Copulatory ducts short. Spermathecae large and spherical. Fertilization ducts hook-like.

Variation. Males (n = 12) total length 5.25–6.00; females (n = 25) total length 5.26–5.98.

**Distribution.** Known only from the type locality, Yintiaoling Natural Reserve, Chongqing, China. **Habitus.** Under stones of cave twilight zone and grassland.



**FIGURE 4.** *Cicurina guanshan* **sp. nov.** holotype male (A, C–E) and paratype female (B, F–G). A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, prolateral view; D. Same, ventral view; E. Same, retrolateral view; F. Epigyne, ventral view; G. Vulva, dorsal view.

*Cicurina linkouzi* sp. nov. 林口子洞叶蛛 Figures 1C-D, 5-6 Type material. Holotype female (SWUC-T-CI-02-01), CHINA, Chongqing Municipality, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, Guimenguan, 31°28′47″N, 109°54′5″E, elev. 1446 m, 1 December 2021, Z.S. Zhang, L.Y. Wang and T.Y. Ren leg. **Paratypes:** 3 females (SWUC-T-CI-02-02~04), same data as holotype; 2 females (SWUC-T-CI-02-05~06), Linkouzi, Fenshuihe, 31°29′16″N, 109°54′49″E, elev. 1672 m, 13 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.; 1 female (SWUC-T-CI-02-07), Guimenguan, 24 September 2022, L.Y. Wang, Q.L. Lu, X.L. Chen and H.Y. Chen leg.





**FIGURE 5.** *Cicurina linkouzi* **sp. nov.** holotype female. A. Epigyne, ventral view.; B. Vulva, dorsal view. Abbreviations: At—atrium, CD—copulatory duct, CO—copulatory opening, FD—fertilization duct, Sp—spermathecae.



FIGURE 6. Cicurina linkouzi sp. nov. holotype female. A. Female habitus, dorsal view; B. Epigyne, ventral view; C. Vulva, dorsal view.

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

**Diagnosis.** Females of the new species are similar to *Cicurina daweishanensis* Wang, Zhou & Peng, 2019 (Wang, Zhou & Peng, 2019: 352, figs 1A–B, 2A–C) in having a wide epigynal atrium and posteriorly located copulatory openings, but it differs from the latter by the trapezoidal atrium and the long and convoluted copulatory ducts (Figs 5A–B, 6B–C).

**Description. Females** (holotype, Fig. 6A). Total length 7.18. Prosoma 3.24 long, 2.19 wide; Opisthosoma 4.22 long, 3.20 wide. Eye sizes and interdistances: AME 0.04, ALE 0.18, PME 0.15, PLE 0.16; AME–AME 0.06, AME–ALE 0.03, PME–PME 0.16, PME–PLE 0.09, ALE–PLE 0.06. MOA 0.37 long, anterior width 0.17, posterior width 0.43. Clypeus height 0.24. Chelicerae with three promarginal and nine retromarginal teeth. Leg measurements: I 8.02 (2.27, 2.86, 1.69, 1.20); II 6.98 (2.09, 2.38, 1.50, 1.01); III 6.43 (1.91, 2.04, 1.59, 0.89); IV 8.77 (2.52, 2.93, 2.21, 1.11). Leg formula: 4123.

Epigyne (Figs 5A–B, 6B–C). Atrium nearly trapezoidal. Copulatory openings large, located on posterolaterally in atrium. Copulatory ducts long and convoluted, Spermathecae nearly spherical, with irregular edge. Fertilization ducts small, hook-shaped.

Male unknown.

**Variation.** Females (n = 6) total length 6.50–7.18

**Distribution.** Known only from the type locality, Yintiaoling Natural Reserve, Chongqing, China. **Habitus.** Leaf litters of evergreen broad-leaf forest.

#### *Cicurina minuta* sp. nov. 小洞叶蛛

Figures 7–8

**Type material. Holotype male** (SWUC-T-CI-03-01), **CHINA, Chongqing Municipality, Wuxi County, Vintiaoling Nature Reserve**, Hongqi Administrative Station, near Shuangtong Reservoir, 31°31′29″N, 109°49′30″E,



**FIGURE 7.** *Cicurina minuta* **sp. nov.** holotype male (A–B) and paratype female (C–D). A. Left male palp, ventral view; B. Same, retrolateral view; C. Epigyne, ventral view; D. Vulva, dorsal view. Abbreviations: At—atrium, CD—copulatory duct, CO—copulatory opening, Co—conductor, Em—embolus, FD—fertilization duct, RTA—retrolateral tibial apophysis, Sp—spermathecae.



**FIGURE 8.** *Cicurina minuta* **sp. nov.** holotype male (A, C–E) and paratype female (B, F–G). A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, prolateral view; D. Same, ventral view; E. Same, retrolateral view; F. Epigyne, ventral view; G. Vulva, dorsal view.

elev. 1261 m, 23 September 2022, L.Y. Wang, Q.L. Lu, X.L. Chen and H.Y. Chen leg. **Paratypes:** 5 females (SWUC-T-CI-03-02~06), same data as holotype; 3 females (SWUC-T-CI-03-07~09), Hongqi Administrative Station, 31°31′22″N, 109°49′36″E, elev. 1194 m, 10 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo

and T.Y. Ren leg.; 6 males and 5 females (SWUC-T-CI-03-10~20), Hongqi Administrative Station, Qinglongtan, 31°30'49"N, 109°49'23"E, elev. 1155 m, 2 September 2020, Z.S. Zhang, L.Y. Wang, P. Liu and Y. Zhang leg.; 1 male (SWUC-T-CI-03-21), Hongqi Administrative Station, 31°31'22"N, 109°49'33"E, elev. 1209 m, 30 November 2021, Z.S. Zhang, L.Y. Wang and T.Y. Ren leg.; 9 females (SWUC-T-CI-03-22~30), near Shuangtong Reservoir, 31°31'29"N, 109°49'30"E, elev. 1261m, 10 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.

**Etymology.** The specific epithet comes from the Latin adjective *minutus*, meaning 'small'; this refers to the small size of the species.

**Diagnosis.** The male and female of new species are similar to *Cicurina kekei* Wang, Zhou & Peng, 2019 (Wang, Zhou & Peng, 2019: 353, figs 3A–D, 4A–G) in the male having a strong retrolateral tibial apophysis and long embolus, with the female having anteriorly located copulatory openings, but it differs by the bifurcated conductor tip in retrolateral view (Figs 7A–B, 8C–E) vs hook-shaped in *C. kekei*; copulatory ducts convoluted (Figs 7C, 8F) vs S-shaped in *C. kekei*; oval atrium (figs 7C–D, 8F–G) vs archway-like in *C. kekei*.

**Description. Male** (holotype (Fig. 8A). Total length 2.67. Prosoma 1.25 long, 1.01 wide; Opisthosoma 1.46 long, 1.03 wide. Eye sizes and interdistances: AME 0.03, ALE 0.09, PME 0.08, PLE, 0.09; AME–AME 0.02, AME–ALE 0.01, PME–PME 0.05, PME–PLE 0.01, ALE–PLE 0.01. MOA 0.16 long, anterior width 0.07, posterior width 0.20. Clypeus height 0.08. Chelicerae with three promarginal and six retromarginal teeth. Leg measurements: I 3.23 (0.96, 1.09, 0.69, 0.49); II 2.97 (0.90, 0.99, 0.62, 0.46); III 2.68 (0.76, 0.91, 0.61, 0.40); IV 3.58 (0.98, 1.19, 0.84, 0.57). Leg formula: 4123.

Palp (Figs 7A–B, 8C–E). Retrolateral tibial apophysis strong, with single fold and rounded apex, approaching mid-part of cymbium. Base of retrolateral tibial apophysis with two small apophyses, extending ventrally and dorsally. Embolus originating at approximately 6-o'clock position. Embolus slender, anterior part resting in long groove of conductor. Conductor strong, anterior part long, with a pointed tip.

**Female**. (one of paratypes, Fig. 8B, SWUC-T-CI-03-02). Total length 2.73. Prosoma 1.13 long, 0.86 wide; opisthosoma 1.63 long, 1.24 wide. Eye sizes and interdistances: AME 0.03, ALE 0.08, PME 0.08, PLE, 0.08; AME–AME 0.02, AME–ALE 0.01, PME–PME 0.06, PME–PLE 0.02, ALE–PLE 0.01. MOA 0.14 long, anterior width 0.08, posterior width 0.18. Clypeus height 0.08. Leg measurements: I 2.69 (0.81, 0.97, 0.52, 0.39); II 2.52 (0.76, 0.89, 0.49, 0.38); III 2.25 (0.64, 0.75, 0.50, 0.36); IV 3.02 (0.87, 1.04, 0.68, 0.43). Leg formula: 4123.

Epigyne (Figs 7C–D, 8F–G). Atrium large and oval. Copulatory openings located on the shoulders of atrium. Copulatory ducts long and spiraled. Spermathecae large and round. Fertilization ducts small, hook-like.

Variation. Males (n = 8) total length 2.64–2.82; females (n = 22) total length 2.58–3.23.

**Distribution.** Known only from the type locality, Yintiaoling Natural Reserve, Chongqing, China. **Habitus.** Leaf litters of evergreen broad-leaf forest.

Cicurina shuangyang sp. nov. 双阳洞叶蛛 Figures 1E-F, 9-10

Type material. Holotype male (SWUC-T-CI-04-01), CHINA, Chongqing Municipality, Wuxi County, Shuangyang Township, Yintiaoling Nature Reserve, Hongqi Administrative Station, near Shuangtong Reservoir, 31°31′29″N, 109°49′30″E, elev. 1261 m, 10 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.; Paratypes: 1 male and 14 females (SWUC-T-CI-04-02~16), same data as holotype; 1 male and 2 females (SWUC-T-CI-04-02~16), same data as holotype; 1 male and 2 females (SWUC-T-CI-04-17~19), Linkouzi, Guimenguan, 31°28′47″N, 109°54′5″E, elev. 1490m, 12 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.; 1 female (SWUC-T-CI-04-20), Hongqi Administrative Station, 31°31′22″N, 109°49′33″E, elev. 1209 m, 30 November 2021, Z.S. Zhang, L.Y. Wang and T.Y. Ren leg.; 1 female (SWUC-T-CI-04-21), near Shuangtong Reservoir, 31°31′29″N, 109°49′30″E, elev. 1261 m, 23 September 2022, L.Y. Wang, Q.L. Lu, X.L. Chen and H.Y. Chen leg.

**Etymology.** The specific name is derived from the type locality.

**Diagnosis.** The male and female of the new species are similar to *Cicurina yangi* **sp. nov.** (Figs 13A–D, 14A–G) in the male having a wide and short retrolateral tibial apophysis, long and strong embolus and strong and C-shaped conductor, and in the female ball-shaped spermathecae, but it differs by distal end of conductor coiled

rod-like, turning anti-clockwise in ventral view (Figs 9A–B, 10C–E), vs needle-like, turning clockwise in *C. yangi*; epigynal atrium somewhat rectangular (Figs 9C, 10F), vs oval in *C. yangi*.

**Description. Male** (holotype, Fig. 10A). Total length 3.09. Prosoma 1.67 long, 1.40 wide; Opisthosoma 1.40 long, 1.15 wide. Eye sizes and interdistances: AME 0.06, ALE 0.11, PME 0.10, PLE 0.11; AME–AME 0.02, AME–ALE 0.01, PME–PME 0.08, PME–PLE 0.03, ALE–PLE 0.02. MOA 0.19 long, anterior width 0.14, posterior width 0.28. Clypeus height 0.13. Chelicerae with three promarginal and seven retromarginal teeth. Leg measurements: I 4.37 (1.24, 1.55, 0.96, 0.62); II 3.82 (1.10, 1.24, 0.92, 0.56); III 3.40 (1.00, 1.05, 0.80, 0.55); IV 4.61 (1.25, 1.57, 1.13, 0.66). Leg formula: 4123.

Palp (Figs 9A–B, 10C–E). Retrolateral tibial apophysis wide, with single fold and truncated apex. Base of retrolateral tibial apophysis with two small apophyses extending ventrally and dorsally. Embolus strong, originating at approximately 9-o'clock position, anterior part resting in long groove of conductor. Conductor strong, with thick and C-shaped tip.

**Female** (one of paratypes, Fig. 10B, SWUC-T-CI-04-02). Total length 3.24. Prosoma 1.56 long, 1.20 wide; opisthosoma 1.64 long, 1.33 wide. Eye sizes and interdistances: AME 0.04, ALE 0.09, PME 0.08, PLE, 0.09; AME–AME 0.02, AME–ALE 0.02, PME–PME 0.08, PME–PLE 0.06, ALE–PLE 0.03. MOA 0.23 long, anterior width 0.14, posterior width 0.26. Clypeus height 0.10. Leg measurements: I 3.87 (1.15, 1.38, 0.81, 0.53); II 3.53 (1.07, 1.23, 0.77, 0.46); III 3.19 (0.92, 1.00, 0.74, 0.53); IV 4.22 (1.18, 1.40, 1.05, 0.59). Leg formula: 4123.

Epigyne (Figs 9C–D, 10F–G). Atrium length two times the width. Copulatory openings located on the shoulders of atrium. Copulatory ducts short. Spermathecae large and ball-shaped. Fertilization ducts hook-like.

Variation. Males (n = 3) total length 3.03–3.09; females (n = 18) total length 2.83–3.25.

**Distribution.** Known only from the type locality, Yintiaoling Natural Reserve, Chongqing, China. **Habitus.** Leaf litters of evergreen broad-leaf forest.



**FIGURE 9.** *Cicurina shuangyang* **sp. nov.** holotype male (A–B) and paratype female (C–D). A. Left male palp, ventral view; B. Same, retrolateral view; C. Epigyne, ventral view; D. Vulva, dorsal view. Abbreviations: At—atrium, CD—copulatory duct, CO—copulatory opening, Co—conductor, Em—embolus, FD—fertilization duct, RTA—retrolateral tibial apophysis, Sp—spermathecae.



**FIGURE 10.** *Cicurina shuangyang* **sp. nov.** holotype male (A, C–E) and paratype female (B, F–G). A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, prolateral view; D. Same, ventral view; E. Same, retrolateral view; F. Epigyne, ventral view; G. Vulva, dorsal view.

*Cicurina wuxi* sp. nov. 巫溪洞叶蛛 Figures 2A-B, 11-12

**Type material. Holotype male** (SWUC-T-CI-05-01), **CHINA, Chongqing Municipality, Wuxi County, Yintiaoling Nature Reserve,** Guanshan Administrative Station, Yanzi Cave, 31°29'1"N, 109°43'49"E, elev. 2204 m, 22 September 2022, L.Y. Wang, Q.L. Lu, X.L. Chen and H.Y. Chen leg. **Paratypes:** 4 males and 5 females (SWUC-T-CI-05-02~10), same data as holotype.

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

**Diagnosis.** The male and female of the new species are similar to *Cicurina yintiaoling* **sp. nov.** in the male having a wide and short retrolateral tibial apophysis, long and strong embolus, strong and hook-like conductor, and the female having a posteriorly located epigynal atrium (Figs11A–D, 12A–G, 15A–D, 16A–G), but differs by the thin and strongly curved apical part of the conductor in ventral view (Figs 11A, 12D), vs apical part knife-shaped in *C. yintiaoling*; epigynal plate extending posteriorly in ventral view (Figs 11C, 12F), vs not extending posteriorly in *C. yintiaoling*; spherical spermathecae (Figs 11E, 12G), vs somewhat oval in *C. yintiaoling*.

**Description. Male** (holotype, Fig. 12A). Total length 4.64. Prosoma 2.48 long, 1.96 wide; Opisthosoma 2.16 long, 1.90 wide. Eye sizes and interdistances: AME 0.10, ALE 0.15, PME 0.15, PLE 0.13; AME–AME 0.03, AME–ALE 0.02, PME–PME 0.10, PME–PLE 0.08, ALE–PLE 0.05. MOA 0.32 long, anterior width 0.22, posterior width 0.39. Clypeus height 0.25. Chelicerae with three promarginal and seven retromarginal teeth. Leg measurements: I 6.35 (1.81, 2.19, 1.42, 0.93); II 5.64 (1.62, 1.85, 1.26, 0.91); III 5.28 (1.47, 1.67, 1.34, 0.80); IV 6.78 (1.90, 2.35, 1.70, 0.83). Leg formula: 4123.

Palp (Figs 11A–B, 12C–E). Retrolateral tibial apophysis wide, with single fold and rounded apex. Base of retrolateral tibial apophysis with two small apophyses, extending ventrally and anteriorly. Embolus strong, originating at approximately 9-o'clock position, anterior part resting in long groove of conductor. Conductor strong, with hook-like tip.



**FIGURE 11.** *Cicurina wuxi* **sp. nov.** holotype male (A–B) and paratype female (C–D). A. Left male palp, ventral view; B. Same, retrolateral view; C. Epigyne, ventral view; D. Vulva, dorsal view. Abbreviations: At—atrium, CO—copulatory opening, Co—conductor, Em—embolus, FD—fertilization duct, RTA—retrolateral tibial apophysis, Sp—spermathecae.

**Female** (one of paratypes, Fig. 12B, SWUC-T-CI-05-02). Total length 4.31. Prosoma 1.98 long, 1.51 wide; opisthosoma 2.65 long, 1.97 wide. Eye sizes and interdistances: AME 0.14, ALE 0.14, PME 0.11, PLE, 0.12; AME–AME 0.03, AME–ALE 0.02, PME–PME 0.11, PME–PLE 0.08, ALE–PLE 0.04. MOA 0.35 long, anterior width 0.28, posterior width 0.34. Clypeus height 0.13. Leg measurements: I 5.05 (1.43, 1.83, 1.05, 0.74); II 4.85 (1.37, 1.68, 1.03, 0.77); III 4.57 (1.27, 1.50, 1.12, 0.68); IV 6.26 (1.63, 2.09, 1.56, 0.98). Leg formula: 4123.

Epigyne (Figs 11C–D, 12F–G). Atrium large and oval. Copulatory openings located on shoulders of atrium. Copulatory ducts short. Spermathecae large and spherical. Fertilization ducts hook-like.



**FIGURE 12.** *Cicurina wuxi* **sp. nov.** holotype male (A, C–E) and paratype female (B, F–G). A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, prolateral view; D. Same, ventral view; E. Same, retrolateral view; F. Epigyne, ventral view; G. Vulva, dorsal view.

**Variation.** Males (n = 3) total length 4.01–5.03; females (n = 18) total length 4.11–5.09. **Distribution.** Known only from the type locality, Yintiaoling Natural Reserve, Chongqing, China. **Habitus.** Under stones of cave twilight zone.

*Cicurina yangi* sp. nov. 杨氏洞叶蛛 Figures 2C-D, 13-14

Type material. Holotype male (SWUC-T-CI-06-01), CHINA, Chongqing Municipality, Wuxi County, Yintiaoling Nature Reserve, Guanshan Administrative Station, Shizhuzi, 31°32'15"N, 109°41'49"E, elev. 2147 m, 1 September 2020, Z.S. Zhang, L.Y. Wang, P. Liu and Y. Zhang leg.; Paratypes: 11 males and 23 females (SWUC-T-CI-06-02~35), same data as holotype; 4 males and 2 females (SWUC-T-CI-06-36~41), Guanshan Administrative Station, Huajiaya, 31°31'33"N, 109°42'17"E, elev. 2192 m, 1 September 2020, Z.S. Zhang, L.Y. Wang, P. Liu and Y. Zhang leg.; 2 males and 2 female (SWUC-T-CI-06-42~45), Guanshan Administrative Station, Shuangshuijing, 31°32'16"N, 109°41'55"E, elev. 2127 m, 1 September 2020, Z.S. Zhang, L.Y. Wang, P. Liu and Y. Zhang leg.; 1 male (SWUC-T-CI-06-46), Hongqi Administrative Station, Qinglongtan, 31°30'49"N, 109°49'23"E, elev. 1155 m, 2 September 2020, Z.S. Zhang, L.Y. Wang, P. Liu and Y. Zhang leg.; 1 female (SWUC-T-CI-06-47), Linkouzi, 31°28'28"N, 109°52'39"E, elev. 1256 m, 2 September 2020, Z.S. Zhang, L.Y. Wang, P. Liu and Y. Zhang leg.; 2 males and 33 females (SWUC-T-CI-06-48~82), Shizhuzi, 8 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.; 5 females (SWUC-T-CI-06-83~87), Guanshan Administrative Station, Tianchiba, 31°31'12"N, 109°47'5"E, elev. 1692 m, 10 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.; 2 females (SWUC-T-CI-06-88~89), Hongqi Administrative Station, Maoxuanwo, 31°29'25"N, 109°47'35"E, elev. 2010 m, 11 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.; 4 females (SWUC-T-CI-06-90~93), Linkouzi, Guimenguan, 31°28'47"N, 109°54'5"E, elev. 1490 m, 12 April 2022, Z.S. Zhang, L.Y. Wang, Q.L. Lu, B. Tan, B. Luo and T.Y. Ren leg.; 2 females (SWUC-T-CI-06-94~95), Lanying Administrative Station, Huangcaoping, 1°25'53"N, 109°56'41"E, elev. 2254 m, 22 June 2022, B. Tan leg.; 1 female (SWUC-T-



**FIGURE 13.** *Cicurina yangi* **sp. nov.** holotype male (A–B) and paratype female (C–D). A. Left male palp, ventral view; B. Same, retrolateral view; C. Epigyne, ventral view; D. Vulva, dorsal view. Abbreviations: At—atrium, CD—copulatory duct, CO—copulatory opening, Co—conductor, Em—embolus, FD—fertilization duct, RTA—retrolateral tibial apophysis, Sp—spermathecae.

CI-06-96), Shizhuzi, 24 June 2022, B. Tan leg.; 2 males and 2 females (SWUC-T-CI-06-97~100), Luomadian, 31°32'46"N, 109°50'48"E, elev.1634 m, L.Y. Wang, Q.L. Lu, X.L. Chen, Y.J. Cai and X.Y. Zhang leg.

**Etymology.** The specific name is a patronym in honor of the chief leader of the Yintiaoling Nature Reserve, Mr. Zhiming Yang, in appreciation of his great support of the survey at Yintiaoling Nature Reserve.



**FIGURE 14.** *Cicurina yangi* **sp. nov.** holotype male (A, C–E) and paratype female (B, F–G). A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, prolateral view; D. Same, ventral view; E. Same, retrolateral view; F. Epigyne, ventral view; G. Vulva, dorsal view.

**Diagnosis.** The male and female of the new species are similar to *Cicurina longihamata* Wang, Mu, Yang & Zhang, 2024 in having a long embolus in male palp and similar copulatory ducts in epigyne (Figs 13A–D, 14C–G; Wang *et al.* 2024, figs 5A–D, 6C–G), but differs by the apical part of conductor S-shaped (Figs 13A, 14D), vs arc-shaped in *C. longihamata*; spermathecae round (Figs 13D, 14G), vs pear-shaped in *C. longihamata*.

**Description. Male** (holotype, Fig. 14A) total length 2.97. Prosoma 1.51 long, 1.10 wide; Opisthosoma 1.39 long, 1.05 wide. Eye sizes and interdistances: AME 0.03, ALE 0.08, PME 0.06, PLE 0.08; AME–AME 0.01, AME–ALE 0.02, PME–PME 0.08, PME–PLE 0.05, ALE–PLE 0.02. MOA 0.16 long, anterior width 0.08, posterior width 0.20. Clypeus height 0.14. Chelicerae with three promarginal and seven retromarginal teeth. Leg measurements: I 3.42 (0.95, 1.24, 0.70, 0.53); II 3.19 (0.97, 1.04, 0.62, 0.56); III 2.87 (0.82, 0.90, 0.65, 0.50); IV 3.85 (1.11, 1.24, 0.89, 0.61). Leg formula: 4123.

Palp (Figs 13A–B, 14C–E). Retrolateral tibial apophysis wide. Base of retrolateral tibial apophysis with two small apophyses, extending ventrally and dorsally. Embolus strong, originating at approximately 8-o'clock position, anterior part resting in groove of conductor. Conductor strong, with long and C-shaped tip.

**Female** (one of paratypes, Fig. 14B, (SWUC-T-CI-06-02). Total length 2.89. Prosoma 1.33 long, 0.94 wide; opisthosoma 1.56 long, 1.26 wide. Eye sizes and interdistances: AME 0.02, ALE 0.08, PME 0.06, PLE, 0.08; AME–AME 0.01, AME–ALE 0.01, PME–PME 0.05, PME–PLE 0.03, ALE–PLE 0.02. MOA 0.16 long, anterior width 0.05, posterior width 0.18. Clypeus height 0.08. Leg measurements: I 3.13 (0.95, 1.12, 0.59, 0.47); II 2.94 (0.92, 0.98, 0.63, 0.41); III 2.48 (0.72, 0.75, 0.59, 0.42); IV 3.63 (0.98, 1.26, 0.83, 0.56). Leg formula: 4123.

Epigyne (Figs 13C–D, 14F–G). Atrium oval. Copulatory openings located on shoulders of atrium. Copulatory ducts short. Spermathecae large and ball-shaped. Fertilization ducts long and hook-like.

Variation. Males (n = 23) total length 2.89–3.05; females (n = 77) total length 2.42–3.09.

**Distribution.** Known only from the type locality, Yintiaoling Natural Reserve, Chongqing, China. **Habitus.** Leaf litters of evergreen broad-leaf forest.

*Cicurina yintiaoling* sp. nov. 阴条岭洞叶蛛

Figures 2E-F, 15-16



**FIGURE 15.** *Cicurina yintiaoling* **sp. nov.** holotype male (A–B) and paratype female (C–D). A. Left male palp, ventral view; B. Same, retrolateral view; C. Epigyne, ventral view; D. Vulva, dorsal view. Abbreviations: At—atrium, CO—copulatory opening, Co—conductor, Em—embolus, FD—fertilization duct, RTA—retrolateral tibial apophysis, Sp—spermathecae.

**Type material. Holotype male** (SWUC-T-CI-07-01), **CHINA, Chongqing Municipality, Wuxi County, Vintiaoling Nature Reserve,** Qianzipa Administrative Station, Zhujiazhaizi Cave, 31°28′27″N, 109°47′9″E, elev. 1970 m, 23 September 2022, L.Y. Wang, Q.L. Lu, X.L. Chen and H.Y. Chen leg. **Paratypes:** 7 males and 14 females (SWUC-T-C7-01-02~22), same data as holotype.

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



**FIGURE 16.** *Cicurina yintiaoling* **sp. nov.** holotype male (A, C–E) and paratype female (B, F–G). A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, prolateral view; D. Same, ventral view; E. Same, retrolateral view; F. Epigyne, ventral view; G. Vulva, dorsal view.

Diagnosis. See diagnosis of Cicurina wuxi sp. nov.

**Description. Male** (holotype, Fig. 16A). Total length 4.73. Prosoma 2.45 long, 1.86 wide; Opisthosoma 2.26 long, 1.68 wide. Eye sizes and interdistances: AME 0.15, ALE 0.15, PME 0.14, PLE 0.14; AME–AME 0.04, AME–ALE 0.02, PME–PME 0.12, PME–PLE 0.09, ALE–PLE 0.03. MOA 0.33 long, anterior width 0.34, posterior width 0.38. Clypeus height 0.15. Chelicerae with three promarginal and six retromarginal teeth. Leg measurements: I 6.37 (1.79, 2.26, 1.35, 0.97); II 6.00 (1.73, 2.05, 1.33, 0.89); III 5.57 (1.61, 1.76, 1.39, 0.81); IV 7.58 (2.05, 2.35, 2.00, 1.18). Leg formula: 4123.

Palp (Figs 15A–B, 16C–E). Retrolateral tibial apophysis wide, with single fold and truncated apex. Base of retrolateral tibial apophysis with two small apophyses, extending ventrally and dorsally. Embolus strong, originating at approximately 9-o'clock position, anterior part resting in long groove of conductor. Conductor strong, with hook-like end.

**Female** (one of paratypes, Fig. 16B, SWUC-T-C7-01-02). Total length 5.37. Prosoma 2.49 long, 1.76 wide; opisthosoma 2.95 long, 1.93 wide. Eye sizes and interdistances: AME 0.15, ALE 0.13, PME 0.12, PLE, 0.14; AME–AME 0.04, AME–ALE 0.03, PME–PME 0.14, PME–PLE 0.11, ALE–PLE 0.03. MOA 0.35 long, anterior width 0.33, posterior width 0.38. Clypeus height 0.14. Leg measurements: I 5.94 (1.76, 2.18, 1.20, 0.80); II 5.55 (1.67, 1.98, 1.20, 0.70); III 5.44 (1.58, 1.78, 1.29, 0.79); IV 7.17 (1.97, 2.43, 1.80, 0.97). Leg formula: 4123.

Epigyne (Figs 15C–D, 16F–G). Atrium large and oval. Copulatory openings located on shoulders of atrium. Copulatory ducts short. Spermathecae large and spherical. Fertilization ducts hook-like.

Variation. Males (n = 8) total length 4.39–5.09; females (n = 14) total length 4.40–5.44.

Distribution. Known only from the type locality, Yintiaoling Natural Reserve, Chongqing, China.

Habitus. Under stones of cave twilight zone.

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