

Two new species of the genus *Neoantistea* (Araneae: Hahniidae) from Northeast of Chongqing, China

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Abstract

Two new species of the genus *Neoantistea* are described from Chongqing, China: *N. wuxi* **sp. nov.** (male, female) and *N. yu* **sp. nov.** (male, female). Morphological descriptions, photos and illustrations of habitus, and copulatory organs are provided.

Key words: description, morphology, taxonomy

Introduction

The comb-tailed spider genus *Neoantistea* was established by Gertsch (1934) based on the species *N. agilis* (Keyserling, 1887). Presently, twenty-five species are included, most of them (20) are recorded from America and a few (5) are found in Asia (WSC 2025). In China, there is only one record: *N. quelpartensis* Paik, 1958 from the Chinese provinces of Liaoning, Henan and Zhejiang (Song, Zhu, Gao & Guan 1994; Song, Zhu & Chen 1999; Zhu & Zhang 2011; Zha 2018). But most probably, it was misidentified, if the figures from different literatures (Paik 1958; Zhu & Zhang 2011; Zha, 2018) were carefully compared.

In this paper, two new species of the genus *Neoantistea* from Wuxi and Chengkou counties, Northeast of Chongqing Municipality are described: *N. wuxi* **sp. nov.** (♂♀) and *N. yu* **sp. nov.** (♂♀). All specimens were collected from leaf litters of natural forests.

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 pancreatin (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; **PLE**—posterior lateral eye; **PME**—posterior median eye.

Taxonomy

Family Hahniidae Bertkau, 1878

Genus *Neoantistea* Gertsch, 1934

Neoantistea wuxi sp. nov.

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Figures 1A–B, 2–3

Type material. Holotype male (SWUC-T-HA-13-01), China, Chongqing City, Wuxi County, Yintiaoling Nature Reserve, Tianchiba, 31°31'12"N, 109°47'05"E, elev. 1692 m, 10 April 2022, Z.S. Zhang, L.Y. Wang and T.Y. Ren leg. **Paratypes:** 3 males and 5 females (SWUC-T-HA-13-02~09), with same data as for holotype; 1 male and 1 female (SWUC-T-HA-13-10~11), Linkouzi, Guimenguan, 31°28'47"N, 109°54'5"E, elev. 1490 m, 12 April 2022, Z.S. Zhang, L.Y. Wang and T.Y. Ren leg.; 1 male and 7 females (SWUC-T-HA-13-12~19), Linkouzi, Fenshuihe, 31°29'47"N, 109°55'33"E, elev. 1796 m, 13 April 2022, Z.S. Zhang, L.Y. Wang, B. Tan, B. Luo, Q.L. Lu and T.Y. Ren leg.; 1 male and 1 female (SWUC-T-HA-13-20~21), Hongqi Administrative Station, Shuangtong Reservoir, 10 April 2022, Z.S. Zhang, L.Y. Wang, B. Tan, B. Luo, Q.L. Lu and T.Y. Ren leg.; 1 female (SWUC-T-HA-13-22), Linkouzi, 31°28'27"N, 109°52'38"E, elev. 1261 m, 1 December 2021, Z.S. Zhang, L.Y. Wang and T.Y. Ren leg.; 1 female (SWUC-T-HA-13-23), Linkouzi, 31°28'28"N, 109°52'39"E, elev. 1256 m, 2 September 2020, Z.S. Zhang, L.Y. Wang, Y. Zhang and P. Liu leg.



FIGURE 1. Photos of living specimens. A–B. *Neoantistea wuxi* sp. nov. (A. male, B. female); C. *Neoantistea yu* sp. nov. (female) (photos taken by Qian-Le Lu).

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

Diagnosis. The new species is similar to *N. yu* sp. nov. (Figs 4–6) in having similarly shape of tibial retrolateral apophysis, copulatory ducts, spermathecae, as well as a similarly positioned of fertilization ducts. Males can be distinguished by the horn-shaped palpal patellar apophysis, the presence of a dorsal tibial hump and curved tibial retrolateral apophysis (Figs 2A–C, 3C–E). Females be distinguished by the joined copulatory openings of epigyne (2D–E, 3F–G).

Description. Holotype male (Fig. 3A). Total length 2.24. Prosoma 1.01 long, 0.84 wide; Opisthosoma 1.34 long, 1.06 wide. Eye sizes and interdistances: AME 0.06, ALE 0.10, PME 0.10, PLE 0.09; AME–AME 0.02, AME–ALE 0.01, PME–PME 0.05, PME–PLE 0.03, ALE–PLE 0.02. MOA 0.20 long, anterior width 0.13, posterior width 0.24. Clypeus height 0.09. Chelicerae, yellowish brown. Chelicerae with 2 promarginal, 3 retromarginal teeth. Labium yellowish brown, wider than long. Endites yellowish brown, longer than wide. Sternum yellowish brown and scutellate with sparse black hairs. Legs yellowish brown. Leg measurements: I 3.06 (0.90, 1.00, 0.66, 0.50); II 3.00 (0.91, 0.94, 0.65, 0.50); III 2.79 (0.78, 0.86, 0.69, 0.46); IV 3.37 (0.95, 1.05, 0.87, 0.50). Leg formula: 4123. Opisthosoma oval, dorsum yellowish brown, dorsally with six light chevrons, venter yellowish brown.

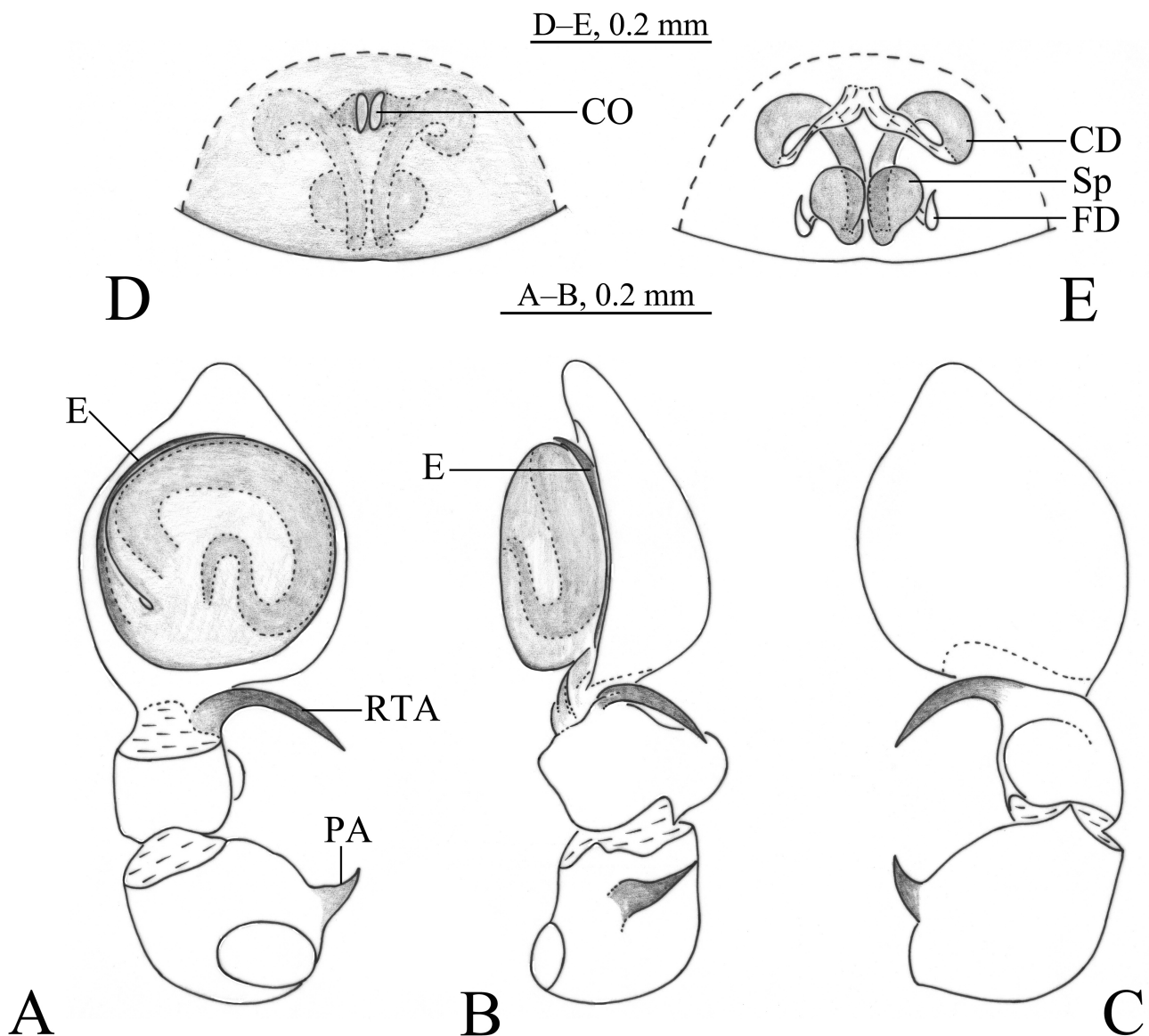


FIGURE 2. *Neoantistea wuxi* sp. nov., male holotype (A–C) and female paratype (D–E). A. Left male palp, ventral view; B. Same, retrolateral view; C. Same, dorsal view; D. Epigyne, ventral view; E. Vulva, dorsal view. Abbreviations: CD—copulatory duct; CO—copulatory opening; E—embolus; FD—fertilization duct; PA—patellar apophysis; RTA—retrolateral tibial apophysis; Sp—spermathecae.



FIGURE 3. *Neoantistea wuxi* **sp. nov.**, male holotype (A, C–E) and female paratype (B, F–G). A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, ventral view; D. Same, retrolateral view; E. Same, dorsal view; F. Epigyne, ventral view; G. Vulva, dorsal view.

Palp (Figs 2A–C, 3C–E). Patella with short apophysis, curving and with a sharp end. Tibia with dorsal hump, tibial retrolateral apophysis arc-shaped, as long as the tibia length. Embolus originating at about 7:30 o'clock position, clockwise curved along the bulbus margin.

Female (Fig. 3B) (SWUC-T-HA-13-02). Total length 2.37. Prosoma 1.09 long, 0.89 wide; opisthosoma 1.65 long, 1.25 wide. Eye sizes and interdistances: AME 0.05, ALE 0.09, PME 0.09, PLE, 0.09; AME–AME 0.02, AME–ALE 0.02, PME–PME 0.05, PME–PLE 0.03, ALE–PLE 0.02. MOA 0.21 long, anterior width 0.14, posterior width 0.26. Clypeus height 0.08. Leg measurements: I 2.79 (0.81, 0.93, 0.60, 0.45); II 2.75 (0.80, 0.88, 0.60, 0.47); III 2.54 (0.69, 0.79, 0.64, 0.42); IV 3.21 (0.91, 1.05, 0.79, 0.46). Leg formula: 4123. All other color pattern same pattern as in male.

Epigyne (Figs 2D–E, 3F–G). Copulatory openings small, almost elliptic. The beginning of copulatory ducts thin and transparent, posterior of copulatory ducts thick and C-shaped. Spermathecae small, almost spherical. Fertilization ducts thin, hook-shaped.

Variation. Males ($n = 7$) total length 1.99–2.24. Females ($n = 16$) total length 2.34–2.74.

Distribution. Known only from the type locality, Chongqing, China.

Neoantistea yu sp. nov.

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Figures 1C, 4–6

Type material. **Holotype male** (SWUC-T-HA-14-01), **China, Chongqing City, Chengkou County, Dabashan Nature Reserve**, Heyu Township, Xumu Village, 31°55'24"N, 109°01'56"E, elev. 1593 m, 28 March 2013, X.K. Jiang and X.W. Meng leg. **Paratypes:** 7 males and 8 females (SWUC-T-HA-14-02~16), with same data as for holotype; 7 males and 2 females (SWUC-T-HA-14-17~25), Lantian Township, Sanhe Village, 31°57'10"N, 108°59'15"E, elev. 1647 m, 26 March 2013, X.K. Jiang and X.W. Meng leg.; 17 females (SWUC-T-HA-14-26~42), Heyu Township, Xumu Village, 31°54'29"N, 109°03'33"E, elev. 1670 m, 27 March 2013, X.K. Jiang and X.W. Meng leg.; 1 female (SWUC-T-HA-14-43), Dongan Township, Chaoyang Village, 31°47'01"N, 109°13'55"E, elev. 1507 m; 30 March 2013, X.K. Jiang and X.W. Meng leg.; **Wuxi County, Yintiaoling Nature Reserve**, 3 females (SWUC-T-HA-14-44~46), Guanshan Administrative Station, Shuangshuijing, 31°32'12"N, 109°41'58"E, elev. 2179 m, 1 September 2020, Z.S. Zhang, L.Y. Wang, Y. Zhang and P. Liu leg.; 4 females (SWUC-T-HA-14-47~50), Guanshan Administrative Station, Tianchiba, 31°31'12"N, 109°47'05"E, elev. 1692 m, 10 April 2022, Z.S. Zhang, L.Y. Wang, B. Tan, B. Luo, Q.L. Lu and T.Y. Ren leg.; 6 females (SWUC-T-HA-14-51~56), Linkouzi, Fenshuihe, 31°29'47"N, 109°55'33"E, elev. 1796 m, 13 April 2022, Z.S. Zhang, L.Y. Wang, B. Tan, B. Luo, Q.L. Lu and T.Y. Ren leg.

Etymology. The specific name is derived from the type locality; Yu is an abbreviated name for Chongqing.

Diagnosis. The new species is similar to *N. wuxi* sp. nov. (Figs 2–3) in having similarly shaped tibial retrolateral apophysis, copulatory ducts, spermathecae, as well as a similarly positioned of fertilization ducts. Male can be distinguished by the biforked patellar apophysis, no hump on tibia, and short tibial retrolateral apophysis (Figs 4A–C, 5C–E). Female are distinguished by separated copulatory openings of the epigyne (4D–E, 5F–G, 6B–C).

Description. Male holotype (Fig. 5A) total length 2.34. Prosoma 1.14 long, 0.90 wide; Opisthosoma 1.30 long, 0.95 wide. Carapace yellowish brown. Eye sizes and interdistances: AME 0.05, ALE 0.08, PME 0.08, PLE 0.08; AME–AME 0.03, AME–ALE 0.03, PME–PME 0.07, PME–PLE 0.04, ALE–PLE 0.02. MOA 0.20 long, anterior width 0.09, posterior width 0.26. Clypeus height 0.14. Chelicerae, yellowish brown. Chelicerae with 3 promarginal, 3 retromarginal teeth. Labium yellowish brown, wider than long. Endites yellowish brown, longer than wide. Sternum yellowish brown and scutellate with sparse black hairs. Legs yellowish brown. Leg measurements: I 3.16 (0.95, 1.05, 0.69, 0.47); II 3.23 (0.94, 1.06, 0.72, 0.51); III 2.87 (0.80, 0.91, 0.70, 0.46); IV 3.38 (0.95, 1.06, 0.82, 0.55). Leg formula: 4213. Opisthosoma oval, dorsum yellowish brown, dorsally with six light chevrons, venter yellowish brown.

Palp (Figs 4A–C, 5C–E). Patella with short apophysis, with a biforked end. Tibial retrolateral apophysis small, with a sharp end, as long as the tibia width. Embolus originating at about 7:30 o'clock position, clockwise curved along the bulbus margin.

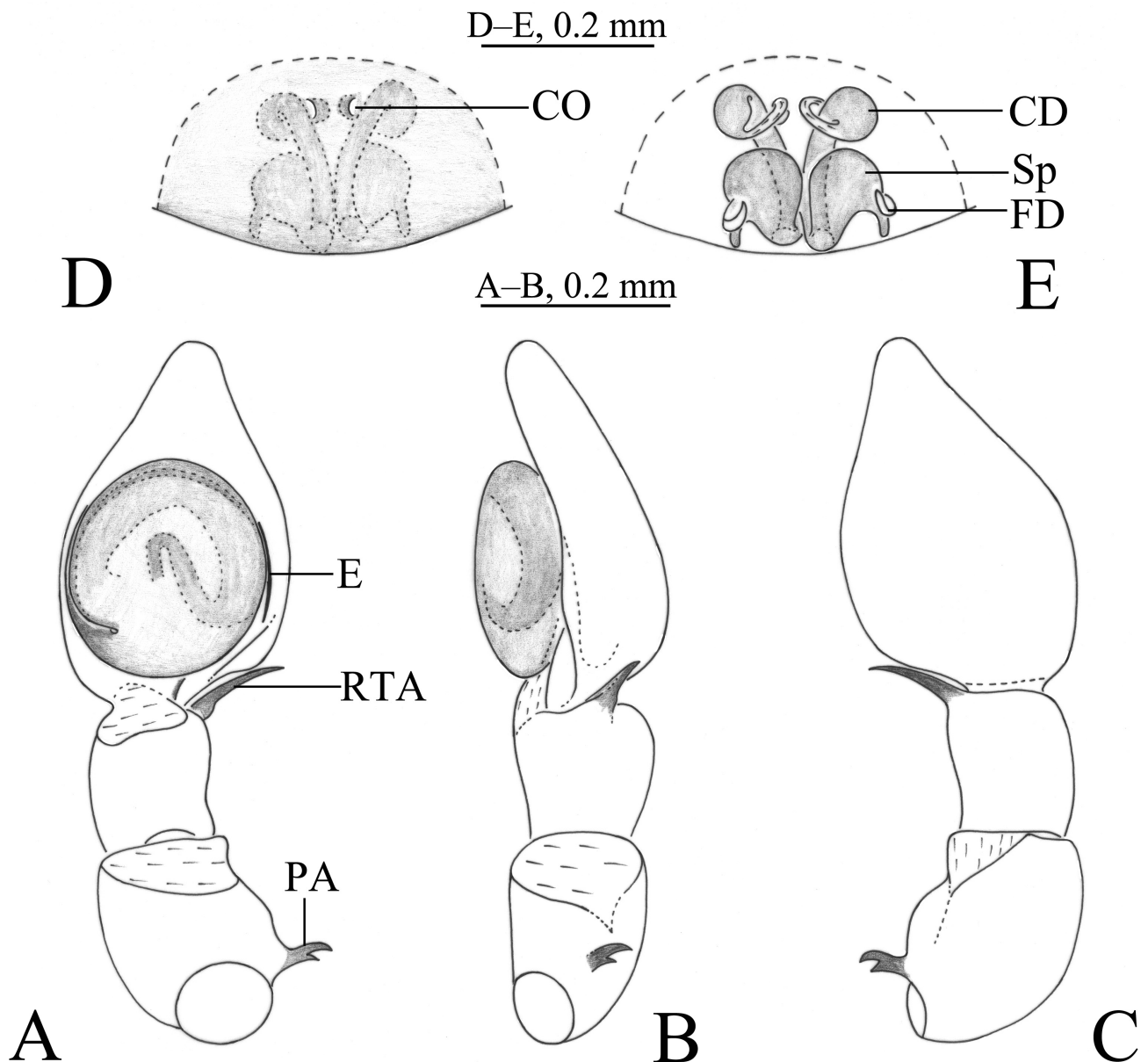


FIGURE 4. *Neoantistea yu* sp. nov., male holotype (A–C) and female paratype (D–E). A. Left male palp, ventral view; B. Same, retrolateral view; C. Same, dorsal view; D. Epigyne, ventral view; E. Vulva, dorsal view. Abbreviations: CD—copulatory duct; CO—copulatory opening; E—embolus; FD—fertilization duct; PA—patellar apophysis; RTA—retrolateral tibial apophysis; Sp—spermathecae.

Female (Fig. 5B) (SWUC-T-HA-14-02). Total length 2.08. Prosoma 1.05 long, 0.79 wide; opisthosoma 1.11 long, 0.93 wide. Eye sizes and interdistances: AME 0.05, ALE 0.07, PME 0.06, PLE, 0.07; AME–AME 0.03, AME–ALE 0.02, PME–PME 0.07, PME–PLE 0.05, ALE–PLE 0.03. MOA 0.18 long, anterior width 0.12, posterior width 0.18. Clypeus height 0.10. Leg measurements: I 2.60 (0.76, 0.86, 0.58, 0.40); II 2.54 (0.74, 0.84, 0.57, 0.39); III 2.41 (0.68, 0.78, 0.59, 0.36); IV 2.95 (0.85, 0.96, 0.72, 0.42). Leg formula: 4123. All other color pattern same pattern as in male.

Epigyne (Figs 4D–E, 5F–G, 6B–C). Copulatory openings small, almost semicircular. The beginning of copulatory ducts thin, posterior of copulatory ducts thick. Spermathecae small, almost spherical. Fertilization ducts thin, hook-shaped.

Variation. Males ($n = 15$) total length 2.34–2.93. Females ($n = 41$) total length 2.08–2.66.

Distribution. China (Wuxi and Chengkou Counties, Northeast of Chongqing).

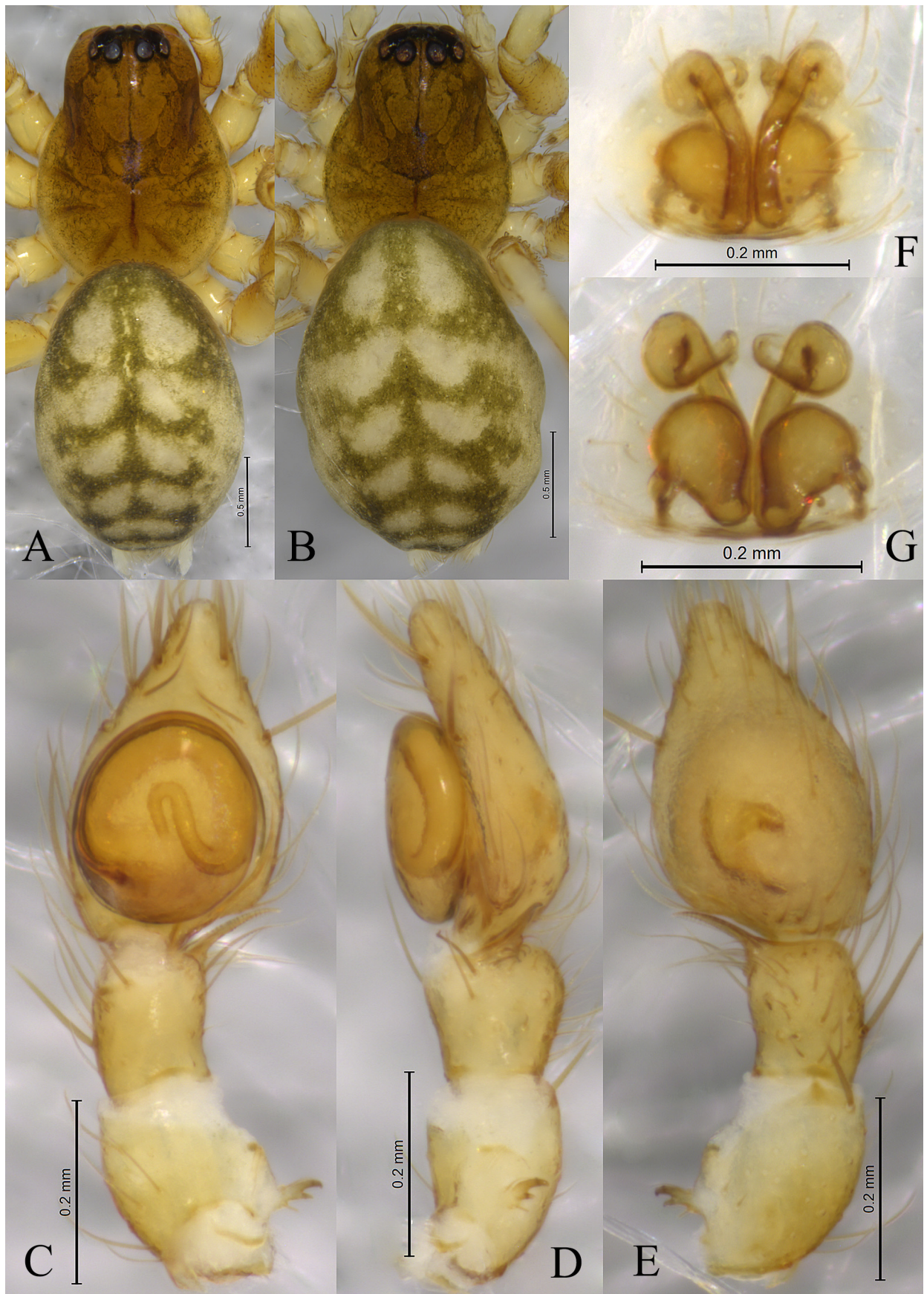


FIGURE 5. *Neoantistea yu* **sp. nov.**, male holotype (A, C–E) and female paratype (B, F–G) from Chengkou County, Chongqing, China. A. Male habitus, dorsal view; B. Female habitus, dorsal view; C. Left male palp, ventral view; D. Same, retrolateral view; E. Same, dorsal view; F. Epigyne, ventral view; G. Vulva, dorsal view.

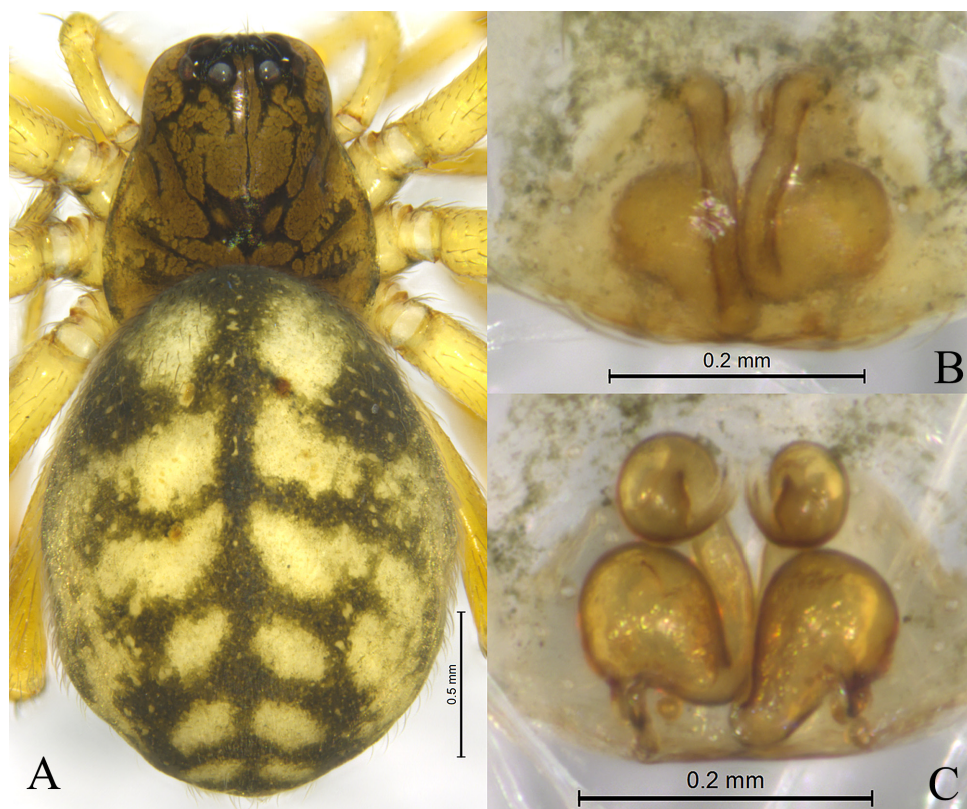


FIGURE 6. *Neoantistea yu* sp. nov., female paratype from Yintiaolong Nature Reserve, Wuxi County, Chongqing, China. A. Female habitus, dorsal view; B. Epigyne, ventral view; C. Vulva, dorsal view.

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