A new species of Parasteatoda Archer, 1946 (Araneae, Theridiidae) from Wuling Mountain, China

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Abstract: Parasteatoda aequipeiformis sp. nov. (male and female) is described from Wuling Mountain, China. Distribution data, detailed morphological characteristics, and illustrations of body and genital organs are presented.

Key words: Asia, comb-footed spiders, genital organs, morphology, taxonomy

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Town, Maliuxi Village, 29°57′07″N, 109°00′49″E, 825 m, 25 August 2017, Irfan Muhammad, Gu-chun Zhou leg. (HNU-HB-IV-1727).

**Diagnosis.** The male of this new species is very similar to that of *Parasteatoda asiatica* (Bösenberg & Strand, 1906) in the structure of the male palp, but can be distinguished by the following: 1) conductor terminal needle-shaped, without teeth in prolateral view (Figures 1D and 2C), while finger-shaped, with teeth in *P. asiatica* (Zhu, 1998, fig. 56E); 2) anterior margin of tibiae as wide as the genital bulb in ventral view (Figures 1B and 2B), while about 3/4 width of the genital bulb in *P. asiatica* (Zhu, 1998, fig. 56D). The female is similar to *P. quadrimaculata* (Yoshida et al., 2000), but can be distinguished by the following: 1) atrium opening upward in ventral view (Figures 3B and 4A), while atrium opening downward in *P. quadrimaculata* (Yoshida

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**Figure 1.** *Parasteatoda aequipeiformis* sp. nov. A - Male holotype, dorsal view; B - male palp, ventral view; C - male palp, prolateral view; D - male palp, retrolateral view. Scale bars: A, 0.5 mm; B–D, 0.1 mm.
et al., 2000, fig. 34); 2) fertilization ducts originate from the center of inner margin of spermathecae in ventral view (Figures 3B and 4A), while from the base of inner margin of spermathecae in \textit{P. quadriraculata} (Yoshida et al., 2000, fig. 34); 3) visible portion of copulatory ducts extend downward to epigastric furrow in dorsal view (Figures 3C and 4B), while they extend upward to median inner margin of spermathecae in \textit{P. quadriraculata} (Yoshida et al., 2000, fig. 35); 4) the spermathecae oval in new species (Figure 3A), while globular in \textit{P. asiatica} (Figure 3A; Yoshida et al., 2000, figs. 32 and 33).

**Etymology.** The specific name is a combination of the prefix “\textit{aequipei}” (dual-band) and “\textit{formis}” (form), referring to the abdomen with 2 transverse bands, adjective.

**Description.** Male (holotype, Figures 1 and 2). Total length 1.37–1.42, n = 4. Prosoma 0.70 long, 0.53 wide, opisthosoma 0.84 long, 0.66 wide. Clypeus 0.08 high. Carapace (Figure 1A) pear-shaped, dark brown, covered with long white hairs. Clypeus slightly bulging. Bases of eyes black. Fovea large and triangular. Cervical and radial groove distinct. Eye diameter and interdistances (Figure 1A). Eye sizes and interdistances: AME 0.06; PME 0.06; ALE 0.05; PLE 0.05; AME–AME 0.03; AME–ALE 0.01; PME–PME 0.03; PME–PLE 0.03; AEWR 0.17; PEWR 0.16 (Figure 1A). Chelicerae dark brown, 2 promarginal teeth, retromargin without tooth. Labium yellowish brown, distal area yellow, sparsely covered with brown hairs. Endites yellow. Sternum scutate and slightly bulging, yellowish brown, sparsely covered with long brown hairs. Legs yellow, covered with brown hairs and black annuli. Measurements of legs: I 2.59 (0.79, 0.83, 0.67, 0.30); II 1.77 (0.52, 0.54, 0.40, 0.31); III 1.86 (0.64, 0.53, 0.38, 0.31); IV 1.36 (0.41, 0.40, 0.27, 0.28). Leg formula: I, III, II, IV. Abdomen spherical (Figure 1A), dark brown, sparsely covered with long white hairs; median area with 1 transverse short white band; posterior median area with 1 transverse long white band; terminal area with 3 black arcs, scattered with grayish white spots. Ventral side brown, sparsely covered with brown hairs; sides with black twills; posterior area with 1 gray spot. Spinnerets grayish brown. Palp: palpal organ black, anterior margin of tibiae as wide as genital bulb (Figures 1B–1D, 2A–2C); embolus short (Figures 1B–1D, 2A–2C); conductor terminal needle-shaped (Figures 1B–1D, 2A–2C); left side of cymbium with 1 oval depression (Figures 1B–1D, 2A–2C).

Female (1 paratype, Figures 3 and 4). Total length 2.02–2.11, n = 5. Prosoma 1.00 long, 0.73 wide, opisthosoma 1.18 long, 0.99 wide. Clypeus 0.73 high. Carapace pear-shaped, dark brown (Figure 3A). Clypeus slightly bulging. Bases of eyes black. Fovea big, inverted triangular. Cervical groove distinct. Eye diameter and interdistances (Figure 3A). Eye sizes and interdistances (Figure 3A): AME 0.06; PME 0.06; ALE 0.07; PLE 0.07; AME–AME 0.06; AME–
Chelicerae black-brown, with 2 promarginal teeth, retromargin without tooth. Endites and labium yellow, distal area white, covered with brown hairs. Sternum scutate and yellowish brown, densely covered with long brown hairs. Legs light brown. Measurements of legs: I 3.68 (1.14, 1.14, 0.93, 0.47); II 2.33 (0.67, 0.73, 0.55, 0.38); III 1.82 (0.57, 0.50, 0.42, 0.33); IV 2.90 (0.89, 0.89, 0.67, 0.45). Leg formula: I, IV, II, III. Abdomen (Figure 3A) spherical, dark brown, densely covered with long white hairs; median area with 1 transverse short white band (Figure 3A); posterior median area with 1 transverse long white band; terminal area with 3 black arcs, scattered with grayish white spots (Figure 3A); ventral side.

Figure 3. *Parasteatoda aequipeiformis* sp. nov. A - Female paratype, dorsal view; B - epigynum, ventral view; C - vulva, dorsal view. Scale bars: A, 0.5 mm; B–C, 0.1 mm.

Figure 4. *Parasteatoda aequipeiformis* sp. nov. A - Epigynum, ventral view; B - vulva, dorsal view. Scale bars: A–B, 0.1 mm.
grayish white; median area brown, densely covered with short brown hairs and a pair of white spots (Figure 3A); posterior area with a pair of large triangular brown spots (Figure 3A). Spinnerets brown, densely covered with short brown hairs. Epigynum: atrium transverse, oval, and opening upwards (Figures 3B, 4A); copulatory openings semicircular (Figures 3B, 4A); copulatory ducts short, extend downward to epigastric furrow (Figures 3C, 4B); fertilization ducts originate from the central inner margin of spermathecae (Figures 3C, 4B); spermathecae pear-shaped (Figures 3C, 4B).

**Distribution.** Known only from Hunan and Chongqing, China (Figure 5).

**Nomenclatural acts.** This work and the nomenclatural acts it contains have been registered in ZooBank. The ZooBank Life Science Identifier (LSID) for this publication is: urn:lsid:zoobank.org:pub:5317492B-F5AB-4575-B800-EE6A465747D7

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References


