Research Article

A New Species of the Genus *Pholcus* Walckenaer, 1805 (Araneae, Pholcidae) from Hainan Island, China

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Received 13 January 2011; Accepted 17 February 2011

Academic Editors: K. Cheng and M. Kuntner

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A new species belonging to the genus *Pholcus* from Hainan Island, China, is described and illustrated, and under the name *Pholcus acerosus* sp. nov.

1. Introduction

The genus *Pholcus* was erected by Walckenaer, 1805, with *P. phalangioides* [10] as the type species. *Pholcus* is the largest group in the family Pholcidae; up to the present, 171 species have been reported, and of these, 68 species occur in China [1–4].

In China, Hainan Island is the farthest south province and the second largest island after Taiwan, with a land mass of about 34,000 km². Hainan Island is a vaulted mountain which is high in the middle with lower elevations on its surrounding areas. The climate in Hainan is always high temperature and wet, dry, and rainy seasons are distinct. During expeditions to Hainan Island in 2007, some spider specimens were collected. While examining the *Pholcus* specimens, we found a *Pholcus* species that is new to science. We diagnosed, described, and illustrated it under the name *Pholcus acerosus* sp. nov. in this paper.

2. Material and Methods

All measurements are given in millimeters. Carapace length was measured from the anterior margin to the rear margin of the carapace margin, excluding the clypeus. Total length is the sum of carapace and abdomen length, regardless of the petiolar. The measurements of leg I are as follows: total length (femur + patella + tibia + metatarsus + tarsus). All specimens were preserved in 75% alcohol, examined, illustrated, and measured under a Nikon SMZ1500 stereomicroscope equipped with an Abbe drawing device. Specimens of the new species were deposited in the Museum of Hebei University (MHBU), Baoding, China.

2.1. Taxonomy

*Pholcus* Walckenaer, 1805. *Pholcus* [4–9]. Type species: *Aranee phalangioides* [10], by subsequent designation. Diagnosis and description; see [4].

*Pholcus acerosus* sp. nov. (Figure 1).


2.2.1. Diagnosis. Among all three *Pholcus* species in Hainan Island: *Pholcus elongatus*, *P. exceptus* and *P. gui* the new species is similar to *P. gui* in the shape of the procursus, but can be distinguished from the latter by (1) the uncus narrower (Figure 1(d)), with eight small scales on the edge, (2) the appendix cleaver-shaped, with a medially needle-shaped spine from prolateral view (Figures 1(d) and 1(e)), (3) the tip of procursus complicated, with a dark spine-shaped process prolaterally (Figure 1(d)), and a transparent scoop-shaped process distally (Figures 1(d) and 1(e)), and
2.2.2. Etymology. The specific name is derived from the Latin word “acerosus”, meaning needle-shaped and referring to the long spine of the appendix.

2.2.3. Description. Male (holotype), total length 4.51: cephalothorax 1.37 long, 1.18 wide; abdomen 3.14 long, 1.10 wide. Leg I: 26.40 (6.83 + 0.55 + 6.92 + 10.10 + 2.00), tibia II: 4.55, tibia III: 3.10, tibia IV: 4.46; tibia I L/D: 44.36. Prosoma shape is as in Figures 1(a) and 1(b); Carapace yellowish, with brown radiated stripes in median; yellowish ocular area arose, with triad of eyes on a distinct eye-stalk; clypeus yellowish; sternum brown. Distance AME-AME 0.06. Diameter AME 0.08 ALE 0.18, PME 0.16, PLE 0.16. Chelicerae as in Figure 1(c), with a pair of black serrated apophyses distally, a pair of unsclerotized rounded apophyses proximocentrally, a pair of unsclerotized rounded apophyses proximolaterally, and a pair of triangle-shaped apophyses on the median of the serrated apophyses and the proximocentral apophyses. Legs yellow, but dark brown on patellae and basal part of tibiae, with darker rings on femora and tibiae. Abdomen pale gray, with a few large spots dorsally and laterally as in Figure 1(a). Palps as in Figures 1(d) and 1(e), the trochanter with ventral short apophysis; femur large, with a ventral bulge and a dorsal projection retrolaterally; patella triangular in retrolateral view, and unmodified; tibia swollen, spindle-shaped, and bears two trichobothria laterally and dorsally. Bulb with cleaver-shaped appendix, short embolus and broad uncus, uncus with eight small scales on edge. The tip of the procursus complicated, with a dark spine-shaped process prolaterally and a transparent scoop-shaped process distally.

2.2.4. Variation. Tibia I in the other males: 7.23. Body length in the other males: 4.81.

Females in general similar to males. Total length of bodies: 4.85–5.19. A specimen measured total length 5.19: cephalothorax 1.55 long, 1.27 wide; abdomen 3.64 long,
1.37 wide. Tibia I: 7.55. Distance AME-AME 0.08. Diameter AME 0.09, ALE 0.18, PME 0.16, PLE 0.16. Epigynum roughly triangular as in Figure 1(f), with a water-drop-shaped apophysis on the top and a pair of dark triangular shadow. Internal view as in Figure 1(g), with wavy sclerotized arch anteriorly, and a pair of almost oval wide pore plates.

2.2.5. Distribution. Only known from type locality presently.

**Abbreviations**

- ALE: Anterior lateral eye
- AME: Anterior median eye
- AME-AME: Distance between AMEs
- PLE: Posterior lateral eye
- PME: Posterior median eye
- A: Appendix
- E: Embolus
- Ea: Epigynal apophysis
- Pp: Pore plates
- Tp: Tip of the procursus
- U: Uncus.

**Acknowledgments**

Dr. J. MacDermott kindly helped reviewing the manuscript. Many thanks are due to two anonymous referees for valuable comments. This work was supported by the National Natural Science Foundation of China (no. 31071885, 31093430) and by the Doctoral Program Foundation of Institutions of Higher Education of China (no. 20091301120005) to Dr. F. Zhang.

**References**
