Research Article

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

Yan-Qiu Peng and Feng Zhang

College of Life Sciences, Hebei University, Baoding, Hebei 071002, China

Correspondence should be addressed to Feng Zhang, dudu06042001@163.com

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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. phalangoides* [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 petiolus. 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: *Aranea phalangoides* [10], by subsequent designation. Diagnosis and description; see [4].

Pholcus acerosus sp. nov. (Figure 1).

2.2. Type Material. Holotype male, China: Hainan Province, Lin'gao County, Mount Gaoshanling (109°69'E, 19°91'N), 27 July 2007, Feng Zhang leg. Paratypes: 1♂, 3♀, same data as holotype (MHBU).

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 procurus, 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 procurus 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

FIGURE 1: *Pholcus acerosus* sp. nov. Male holotype and female paratype. (a) male body, dorsal view; (b) male prosoma, lateral view; (c) male left chelicera, frontal view; (d) left palp, prolateral view; (e) same, retrolateral view; (f) epigynum, ventral view; (g) same, dorsal view. Scale lines: 1.0 mm (a-b), 0.5 mm (c-g).

(4) the broader epigynal apophysis and almost oval wide pore plates (Figures 1(f) and 1(g)).

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 procurus 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 procurus
U:	Uncus.

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