Pholcus pennatus Zhang, Zhu & Song, 2005

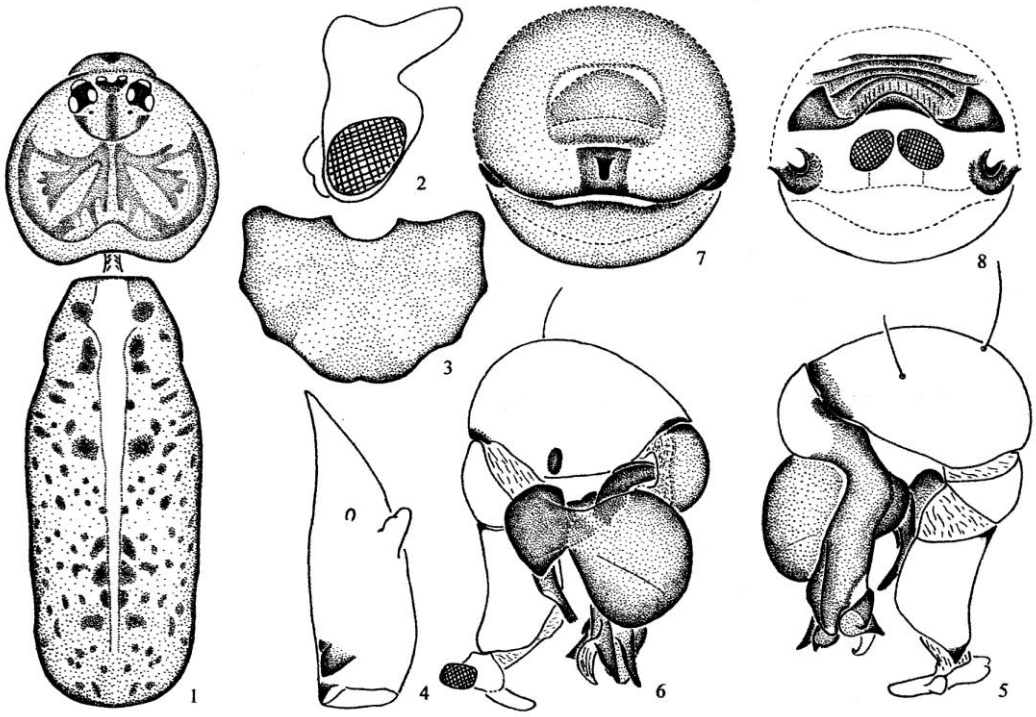
Zhang, F., Zhu, M.S., Song, D.X. 2005. A new species of the genus *Pholcus* (Araneae, Pholcidae) from Taihang Mountains area, China. Acta zootaxon. sin. 30: 65-66.

p. 265

This paper deals with a new species belonging to the genus Pholcus collected from Taihang Mountains Area: Pholcus pennatus sp. nov. Type specimens are deposited in the College of Life Sciences, Hebei University. All measurements are given in millimeters.

Pholcus pennatus sp. nov. (Figs. 1-8)

Diagnosis. This new species resembles Pholcus beijingensis Zhu et Song, 1999 (Song, Zhu & Chen, 1999: 52, fig. 22Z, A′-C′, 23A-C), but can be readily distinguished from the latter in: 1) the end of protarsus with two sclerotized apophyses, rather than one apophysis; 2) the spur of trochanter of male palpal boot-shaped instead of hook-like; 3) chelicerae shape as in Fig. 4, with pair of black apophyses distally, pair of unsclerotized rounded apophyses proximolaterally and pair of small apophyses centrally, but the latter without the pair of small apophyses centrally; and also resembles P. jixianensis Zhu et Yu, 1983 (Zhu, Mao & Yu, 1983), but differs from the the latter by: 1) chelicerae with pair of small apophyses centrally, but the latter without the apophyses; 2) the uncus of male palp rounded, rather than triangular; 3) the spur of trochanter of male palpal distinct shorter than



Figs. 1-8. Pholcus pennatus sp. nov. 1. Male, dorsal view. 2. Trochanter of left male palp. 3. Sternum of the male. 4. Left chelicera of the male, dorsal view. 5. Left palpal of the male, retrolateral view. 6. Same, prolateral view. 7. Epigynum, ventral view. 8. Same, dorsal view.

that of the latter.

Male holotype. Total body length 4.91: cephalothorax 1.53 long, 1.49 wide; abdomen 3.20 long, 1.26 wide. Clypeus 0.46 high, with a brown triangular patch. Carapace light yellow, short, broad and almost circular. Cephalic region raised, with a brown longitudinal central mark. Thoracic region with brown patterns. Both eye rows recurved. AME-AME < AME-ALE (0.04 :0.05), PME-PME > PME-PLE (0.20 :0.03); MOA 0.19 long, front width 0.24, back width 0.43. AME < PME < PLE < ALE (0.10 : 0.12 :0.13 :0.15). Chelicerae shape as in Fig.4, brown, with pair of black apophyses distally, pair of unsclerotized rounded apophyses proximolaterally and pair of small apophyses centrally. Labium light brown. Endites yellow. Sternum light brown, with irregular yellowish brown patches. Legs exceedingly long and slender, femor, patellae and tibiae yellow with yellowish brown patches, metatarsi and tarsi yellowish brown. Measurements of legs: Ⅰ 37.58 (9.45 +10.13 +15.30 +2.70); Ⅱ 25.20 (6.75 +7.11 + 9.90 + 1.44); Ⅲ 17.51 (5.00 + 4.86 + 6.53 + 1.12); Ⅳ 23.74 (6.70 +6.30 +9.45 +1.29). Leg formula: 1243. Abdomen cylindrical, yellow, dorsum with many small black brown spots, light brown in venter. Spinnerets yellowish brown.

Female. Total length of bodies 4.86-5.23. A specimen measured, total body length 5.02. Cephalothorax 1.60 long, 1.70 wide; abdomen 3.33 long, 1.64 wide. Measurements of legs: Ⅰ 31.13 (8.01 +8.45 +12.42 +2.25); Ⅱ 21.55 (5.85 + 5.95 +8.35 +1.40); Ⅲ 17.02 (4.73 +4.50 +6.75 +1.04); Ⅳ 21.38 (6.30 +5.85 +7.92 +1.31). Leg formula: 1243. Color and markings as in male.

Holotype ♂, Zhangshiyan Scenic Area, Zanhuang County (37.6° N, 114.3° E; atl. 800-1 000 m), Hebei Province, 13 June 1998, ZHU Ming-Sheng and ZHANG Feng leg. Paratypes 2 ♂♂, 4 ♀♀, same data as holotype.

Etymology. The specific name refers to the chelicerae with pair of small apophyses centrally.

太行山区幽灵蛛属一新种记述 (蜘蛛目，幽灵蛛科)

张　锋　朱明生　宋大祥
河北大学生命科学学院　保定　071002

摘　要　记述了太行山区蜘蛛区系研究中发现的幽灵蛛科幽灵蛛属 1 新种：短突幽灵蛛 Pholcus pennatus sp. nov.。模式标本保存在河北大学生命科学学院。文中测量单位 mm。

短突幽灵蛛，新种 Pholcus pennatus sp. nov. (图 1～8)

正模 ♂，副模 2 ♂♂，4 ♀♀，河北省赞皇县嶂石岩，1998-06-13，朱明生、张锋采。

鉴别特征　新种近似于北京幽灵蛛 Pholcus beijingensis Zhu et Song, 1999，但有如下 3 点区别：1) 跗前突末端具有 2 个硬化的突起，而后者只有 1 个；2) 转节距呈倒靴状而非钩状；3) 雄蛛螯肢除具有成对的端突和外侧突，另外在前面近中央处有 1 对小的突起。本种也近于蓟幽灵蛛 P. jixianensis Zhu et Yu, 1983，但有 3 点区别：1) 雄蛛螯肢前面近中央处具 1 对小的突起，后者无这样的突起；2) 本种的雄蛛触肢钩状突约呈圆形，后者略呈三角形；3) 雄蛛触肢转节距明显短于后者。

词源：新种根据雄蛛螯肢前面中央具有 1 对短小的突起而命名。

关键词　蜘蛛目，幽灵蛛科，幽灵蛛属，新种，太行山区.
中图分类号　Q959.226

Zhang, F., Zhu, M.S. 2009. A review of the genus *Pholcus* (Araneae: Pholcidae) from China. Zootaxa 2037: 1-114.

***Pholcus pennatus* Zhang, Zhu & Song, 2005**
(Fig. 35)

Pholcus pennatus Zhang, Zhu & Song 2005: 65, f. 1–8.

Diagnosis. Among its near *Pholcus* relatives (see the remark of *P. alloctospilus*) this species is very similar to *P. gaoi* in the shape of the palpal bulb and epigynum, both without appendix of palpal bulb (Fig. 35G), and with a knob-shaped epigynal apophysis and a sclerotized arch of epigynum anteriorly (Figs. 13A–B). It can be distinguished from *P. gaoi* by the shape of the tip of the procursus (Figs. 35G–H), by the shorter ventral apophysis of trochanter (Figs. 35D, G–H), and by the close pore plates (Fig. 35B).

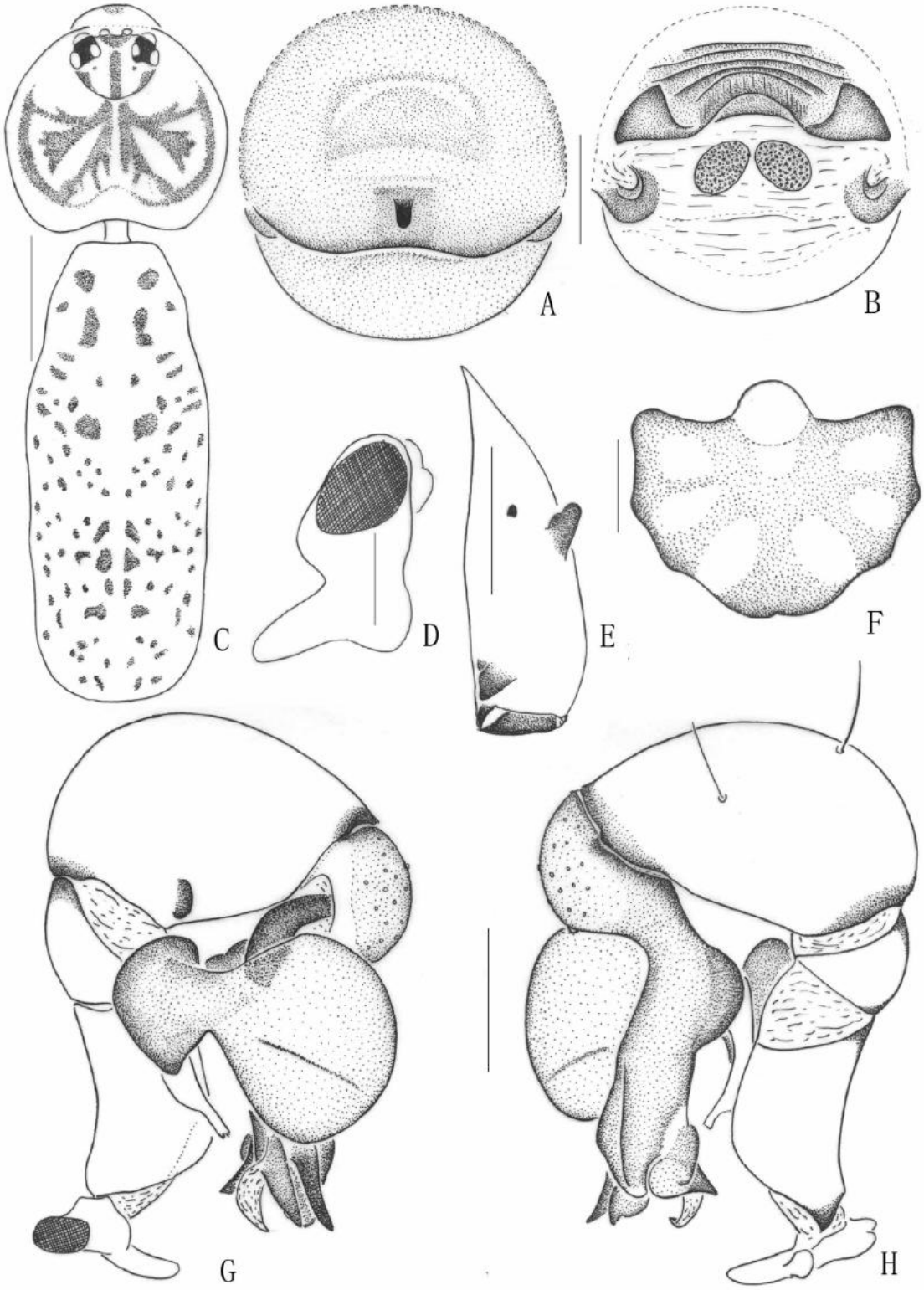


FIGURE 35. *Pholcus pennatus* Zhang, Zhu & Song, 2005 (illustrations modified from Zhang *et al*. 2005). A. epigynum, ventral view. B. same, dorsal view. C. male body, dorsal view. D. trochanter of male left palp, retrolaterodorsal view. E. male left chelicera, frontal view. F. male sternum, ventral view. G. left palp, prolateral view. H. same, retrolateral view. Scale lines: 1.0mm (C), 0.5mm (A, B, E–H), 0.2mm (D).

Redescription. Male (holotype) total length 4.9: cephalothorax 1.5 long, 1.5 wide; abdomen 3.2 long, 1.3 wide. Leg I: 37.6 (9.5+0.8+9.3+15.3+2.7), tibia II: 6.4, tibia III: 4.4, tibia IV: 5.6; tibia I L/D: 62. Prosoma shape as in Fig. 35C. Carapace short, broad and almost circular, ochre, with pair of brown marks broadly connecting to ocular area. Cephalic region raised, with a brown longitudinal stripe centrally, ocular area dark yellow. Clypeus 0.46, slightly ochre, with a brown triangular patch centrally. Distance AME–AME 0.04. Diameter AME 0.10, ALE 0.15, PME 0.12, PLE 0.13. Chelicerae as in Fig. 35E, with pair of black serrated apophyses distally, pair of unsclerotized thumb-shaped apophyses proximolaterally and pair of small unsclerotized rounded apophyses proximocentrally. Labium and endites light yellow. Sternum slightly ochre, with three pairs of brown marginal marks and an anterior mark as in Fig. 35F. Femora, patellae and tibiae brown, with dark rings, metatarsi and tarsi brown. Abdomen cylindrical, pale ochre, dorsum with many brown spots as in Fig. 35C. Venter pale brown, without marks. Palps as in Figs. 35G and 35H, bulb with a mushroom-shaped uncus and transparent embolus, without appendix.

Variation. Tibia I in four male paratypes: 8.9, 8.9, 9.2, 9.2. Body length in four male paratypes: 4.7, 4.8, 4.8, 4.9.

Female: in general very similar to male. Total length of paratypes 4.8–5.1. A specimen measured (paratype), total length 5.0: cephalothorax 1.6 long, 1.7 wide; abdomen 3.4 long, 1.6 wide. Tibia I: 7.7. Distance AME–AME 0.04. Epigynum roughly round as in Fig. 35A, with a nipple-shaped apophysis. Dorsal view as in Fig. 35B, with a W-shaped sclerotized arch anteriorly and a pair of egg-shaped pore plates centrally.

Material examined. CHINA: **Hebei**: Zanhuang County, Mt. Zhangshiyan, June 15, 1998, leg. M. S. Zhu and F. Zhang, male holotype, 4♀, 4♂ paratypes (MHBU).

Distribution. Known from type locality only.

Huber, B. A. 2011. Revision and cladistic analysis of *Pholcus* and closely related taxa (Araneae, Pholcidae). Bonner zool. Monographien 58: 1-510.

p. 447

2152-2154. *Ph. pennatus*, male, dorsal and lateral views; female abdomen, ventral view.
2165, 2166. *Ph. pennatus*.

Pholcus pennatus Zhang, Zhu & Song, 2005

Figs. 2152-2154, 2165, 2166, 2224-2228

Pholcus pennatus Zhang, Zhu & Song 2005: 65-66, figs. 1-8. Zhang & Zhu 2009a: 65-67, figs. 35a-h (copied from Zhang *et al.* 2005).

Types. Male holotype, 2♂4♀ paratypes from China, Hebei Prov., Zanhuang County (37°36'N, 114°18'E), Zhangshiyan Scenic Area, 800-1000 m a.s.l., 13. vi.1998 (M. Zhu, F. Zhang), in MHBU (1♂1♀ paratypes examined). Zhang & Zhu (2009a) report 4♂4♀ paratypes and give a slightly different date (15. vi.1998).

Diagnosis. Distinguished from congeners without appendix by distinctive shapes of procursus (Figs. 2225, 2226; distal elements) and female genitalia (Figs. 2165, 2228; epigynum shape, lateral internal membranous structures).

Male (type locality). Total body length 5.2, carapace width 1.75. Leg 1: 42.7 (11.0 + 0.8 + 10.4 + 18.2 + 2.3), tibia 2: 7.5, tibia 3: 5.2, tibia 4: 7.1; tibia 1 L/d: 62. Habitus as in Figs. 2152 and 2153. Carapace pale ochre-yellow with distinct brown pattern, ocular area with lateral and median brown marks, clypeus slightly darkened, sternum light brown, darker posteriorly and at margins, lighter behind labium, legs pale ochre-yellow, indistinct darker rings on femora subdistally, in patella area, and on tibiae subdistally, some marks proximo-ventrally on femora, abdomen gray, many dark spots dorsally and laterally, ventrally only genital area brown (cf. female, Fig. 2154). Distance PME-PME 250 µm, diameter PME 125 µm, distance PME-ALE 55 µm, distance AME-AME 60 µm, diameter AME 105 µm. Ocular area moderately elevated, few stronger hairs posteriorly. No thoracic furrow; clypeus unmodified. Chelicerae as in *Ph. phungiformes* (cf. Fig. 2251). Sternum wider than long (1.15/0.90), unmodified. Palps as in Figs. 2224 and 2225, coxa unmodified, trochanter with

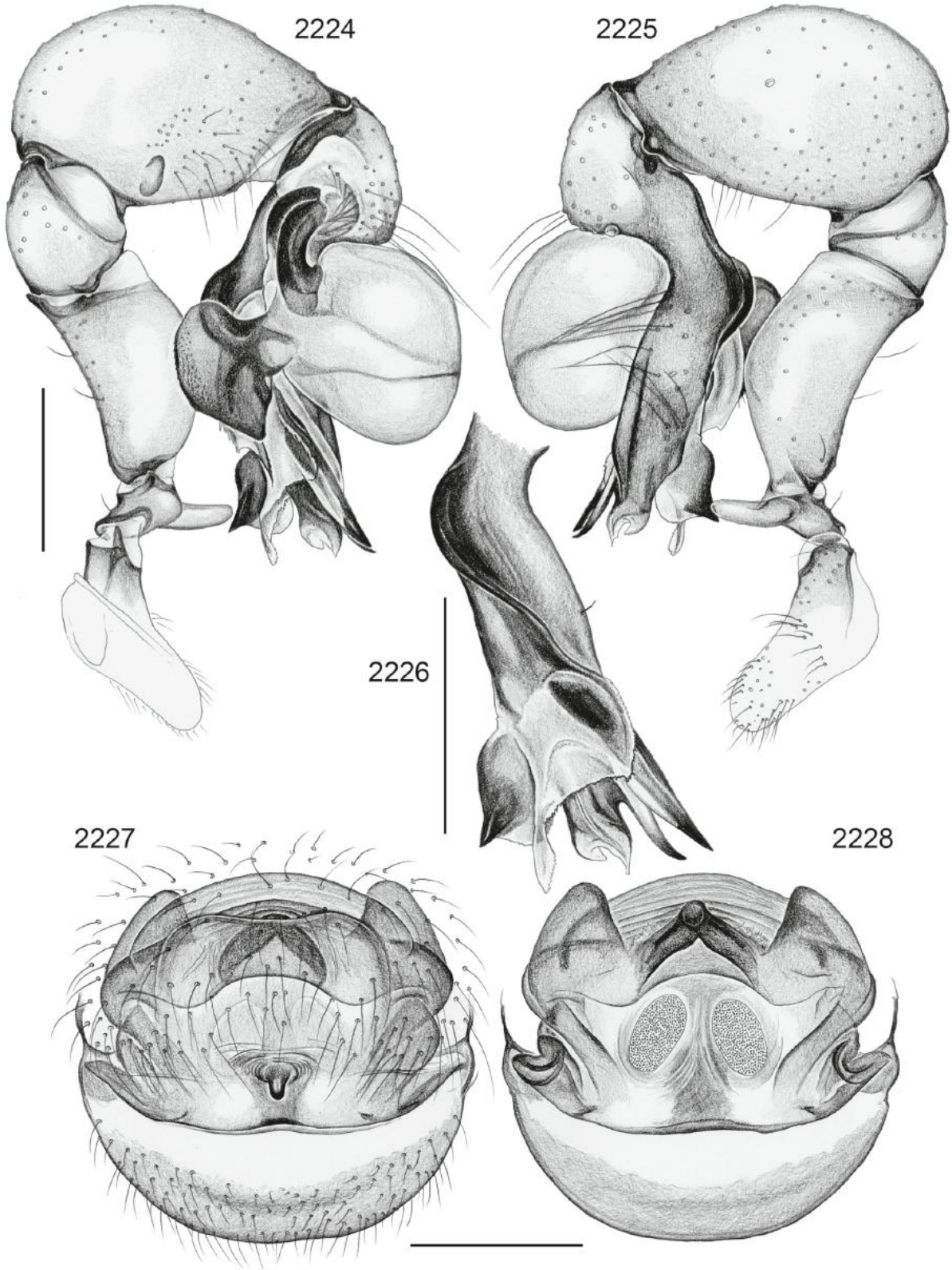


FIG. 2224-2228. *Pholcus pennatus*. 2224, 2225. Left male palp, prolateral and retrolateral views. 2226. Left procursus, prolateral view. 2227, 2228. Cleared female genitalia, ventral and dorsal views. Scale lines: 0.5.

retrolateral apophysis bending towards ventral, femur barely modified, tibia with sclerotized area slightly projecting on prolatero-ventral side, procursus with distinctive distal processes, dorsally with thin 'spine', with distinctive ventral sclerite distally, bulb with uncus, weakly sclerotized embolus, without appendix (reduced to small transparent projection). Legs without spines, with curved hairs on tibiae and metatarsi (especially anterior legs), few vertical hairs; retrolateral trichobothrium on tibia 1 at 5%; prolateral trichobothrium absent on tibia 1, present on other tibiae. Tarsal pseudosegments indistinct, only distally ~10 quite distinct.

Variation. Tibia 1 in other male: 10.5 (missing in third male examined).

Female. In general similar to male, triads closer together (distance PME-PME 185 µm); tibia 1: 7.6 (missing in other females examined). Epigynum with large anterior plate, median plate only medially sclerotized, with sclerotized 'knob', posterior plate also large (Figs. 2165, 2227); internal genitalia as in Figs. 2166 and 2228.

Distribution. Known from type locality in Hebei Province, China, only (Fig. 2216).

Material examined. CHINA: *Hebei Prov.*: Zanhuang County: Zhangshiyan Scenic Area: 1♂1♀ paratypes above; same locality, 1.ix.2006 (Y. Tong), 2♂2♀ in IZCAS (Ar 21796).