

***Pholcus bessus* Zhu & Gong, 1991**

Zhu, M.S. & Gong, L-S. 1991. Four new species of the genus *Pholcus* from China. *Acta Zootaxonomica Sinica* 16(1): 18-26.

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山谷幽灵蛛,新种 *Pholcus bessus* sp. nov. (图 3)

正模♂,配模♀,副模 2♂♂ 2♀♀,河北井陘县苍岩山,1985年8月26日,朱明生采。

雄蛛体长 3.56—3.57。头部隆起。头胸部黄色,胸部中线两侧各有 1 块棕色斑。额长而向前倾斜,中央有 1 对棕色斑。从背面观察,两眼列均后凹,但前眼列前缘平直。前中眼间距小于前中侧眼间距 (0.03:0.05); 中眼区域后边大于前边 (0.17:0.03), 长小于宽 (0.07:0.17)。各眼直径之比为: 前中眼<前侧眼=后中眼=后侧眼 (0.07:0.15)。螯肢前、后齿堤各有 1 齿,螯肢前面近中央位置有 2 个突起。胸板浅棕色,中央有 1 个、两侧各有 3 个黄斑。步足黄色,无环形斑。腹部卵圆形,黄色,触肢器如图。

正模测量 体长 3.56。头胸部 1.06×1.25 , 腹部 2.50×1.28 。足式为 $I > II > IV > III$; 各足长度为:

	腿 节 femur	膝、胫节 patella, tibia	后跗节 metatarsus	跗 节 tarsus	全 长 total length
I	6.46	7.04	9.60	1.79	24.89
II	4.70	5.06	6.56	1.09	17.41
III	3.97	3.68	4.78	0.83	13.26
IV	4.96	5.29	5.92	0.92	17.09

雌蛛体长 4.31—4.37。特征似雄蛛。外雌器如图。

配模测量 体长 4.35。头胸部 1.15×1.28 ，腹部 3.20×2.56 。足式为 $I>II>IV>III$ ；各足长度为：

	腿 节 femur	膝、胫节 patella, tibia	后跗节 metatarsus	跗 节 tarsus	全 长 total length
I	5.60	6.18	7.78	1.76	21.32
II	4.38	4.46	5.44	1.09	15.37
III	3.20	3.04	3.84	0.77	10.85
IV	4.42	4.80	5.18	0.93	15.33

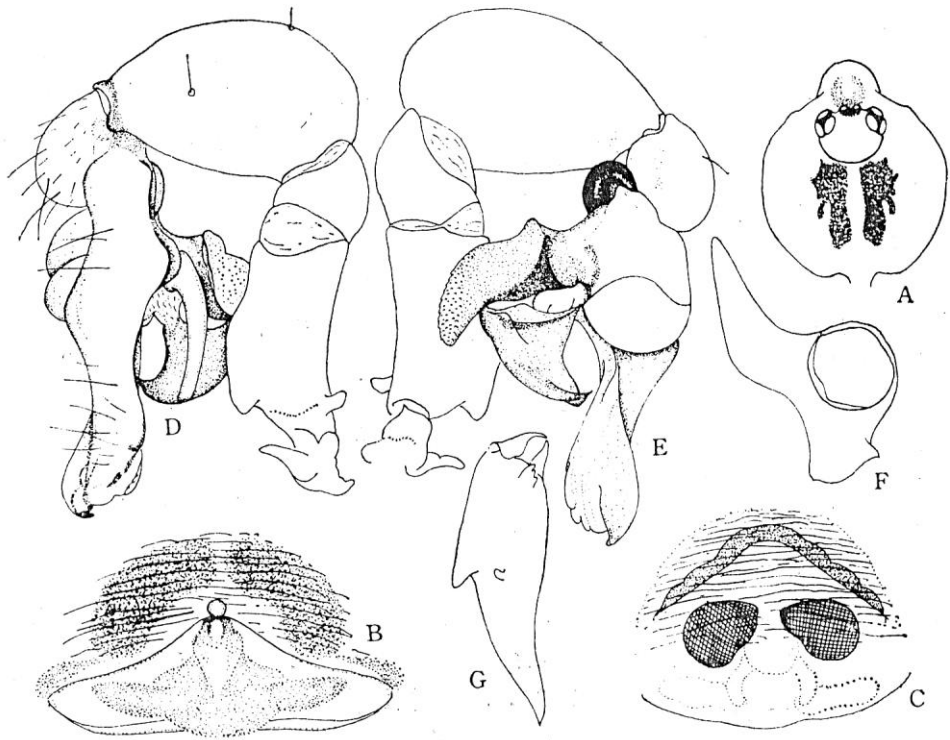


图3 山谷幽灵蛛,新种 *Pholcus bessus* sp. nov.

- A. 头胸部背面 (cephalothorax, dorsal view) B. 外雌器外面 (epigynum, external view)
C. 同上,内面 (do., vulva) D. 雄蛛左触肢外侧面 (σ^7 left palpal organ, exo-lateral view)
E. 同上,内侧面 (do., endo-lateral view) F. 雄蛛触肢转节 (σ^7 trochanter of palp)
G. 雄蛛螯肢 (σ^7 chelicera)

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本新种的头胸部背斑和触肢器的钩状突与 *Pholcus affinis* Schenkel (Zhu, 1987: 118—119, fig. 1) 很相近,但前者触肢器的跗前突腹面有弯钩,后者则无;又两者的触肢器钩状突及触肢的转节距形状均不同,故认为系新种。

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3. *Pholcus bessus* sp. nov. (fig. 3)

Holotype ♂, allotype ♀, paratypes 2 ♂♂ 2 ♀♀, Jingxing County, Hebei Province (38°3'N,

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114°10'E), August 26, 1985.

Male (Holotype) total length 3.56 mm, cephalothorax 1.06×1.25 mm, abdomen 2.50×1.28 mm, Female (Allotype): total length 4.35 mm, cephalothorax 1.15×1.28 mm, abdomen 3.20×2.56 mm.

The new species quite closes to *P. affinis*, but differs from the latter in the shape of the protarsus and spur of the trochanter, and also in the structure of the epigynum and vulva.

Song, D., Zhu, M., and Chen, J. 1999. The Spiders of China. Hebei Science and Technology Publishing House. 640 pp., 4 plates.

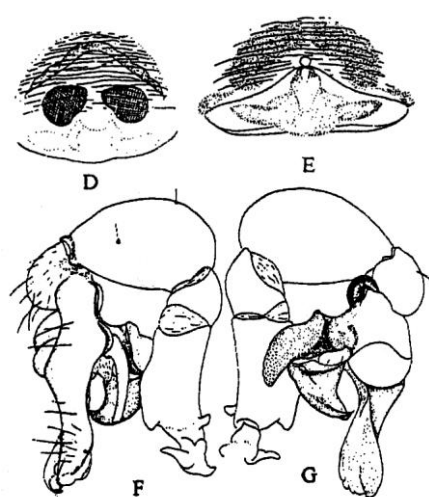
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Pholcus bessus Zhu et Gong, 1991 (fig. 23D—G)

Pholcus bessus Zhu & Gong, 1991: 20, f. 3.

Distribution: Hebei (Jingxing County).

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

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***Pholcus bessus* Zhu & Gong, 1991**

(Fig. 3)

Pholcus bessus Zhu & Gong 1991: 20, f. 3A–G. Song, Zhu & Chen 1999: 57, f. 23D–G. Song, Zhu & Chen 2001: 74, f. 31A–G.

Diagnosis. This species resembles *P. crypticolens*, *P. manueli* and *P. spilis*, probably near relatives, in the shape of the palpal bulb, all with broad, almost triangular appendices; all femora of male palps with a dorsal projection retrolaterally; all epigyna with large pore plates. *P. bessus* can be distinguished from *P. crypticolens* and *P. spilis* by the shape of tip of the procurus (Figs. 3F–G), by the broad V-shape of the anterior sclerotized arch of epigynum (Fig. 3B), and by the carapace with butterfly-shaped central marks (Fig. 3C), from *P. manueli* by the shape of tip of the procurus and the larger appendix of the bulb (Figs. 3F–G).

Redescription. Male (holotype), total length 3.6: cephalothorax 1.1 long, 1.3 wide; abdomen 2.5 long, 1.3 wide. Leg I: 36.1 (9.2+0.6+9.4+14.6+2.3), tibia II: 6.5, tibia III: 4.2, tibia IV: 5.8; Tibia I L/D: 72. Prosoma shape as in Fig. 3C. Carapace short, broad and almost circular, ochre, with brown butterfly-shaped marks broadly connecting to ocular area. Cephalic region clothed with short, erect and black hairs, without brown marks centrally; ocular area light yellow. Clypeus 0.40, unmodified, slightly ochre, without yellow marks. Distance AME–AME 0.03. Diameter AME 0.07, ALE 0.15, PME 0.15, PLE 0.15. Chelicerae as in Fig. 3E, with pair of black serrated apophyses distally, pair of unsclerotized thumb-shaped apophyses proximolaterally and pair of small unsclerotized rounded apophyses proximocentrally. Labium light yellow. Sternum longer than wide, yellow, with three pairs of gray patches laterally and a mark centrally. Femora, patellae and tibiae ochre, with dark rings, metatarsi and tarsi brown. Abdomen cylindrical, pale ochre, dorsum with numerous blackish marks. Venter pale brown. Palps as in Figs. 3F and 3G, bulb with a curved uncus and a triangular appendix, femur with a small projection retrolaterally.

Variation. Tibia I in two other males: 8.8, 9.1. Body color in holotype deeper than in other males and females.

Female: in general very similar to male. Total body length 4.3–4.4. Female ('allotype'), total length 4.4: cephalothorax 1.2 long, 1.3 wide; abdomen 3.2 long, 2.6 wide. Tibia I 5.6 (in other female missing). Epigynum roughly rectangular as in Fig. 3A, with a knob-shaped apophysis on the top. Dorsal view as in Fig. 3B, with a broad V-shaped sclerotized arch anteriorly and a pair of large oval pore plates.

Distribution. Known from type locality and one neighboring locality in Mt. Zhangshiyan, Zhanhuang County, Hebei Province, China.

Material examined. CHINA: **Hebei:** Jingxing County, Mt. Cangyan, August 26, 1985, leg. M. S. Zhu, male holotype, female 'allotype', 2♂, 1♀ paratypes (MHBU); Zhanhuang County, Mt. Zhangshiyan, June 15, 1998, leg. F. Zhang, 1♀ assigned tentatively (MHBU).

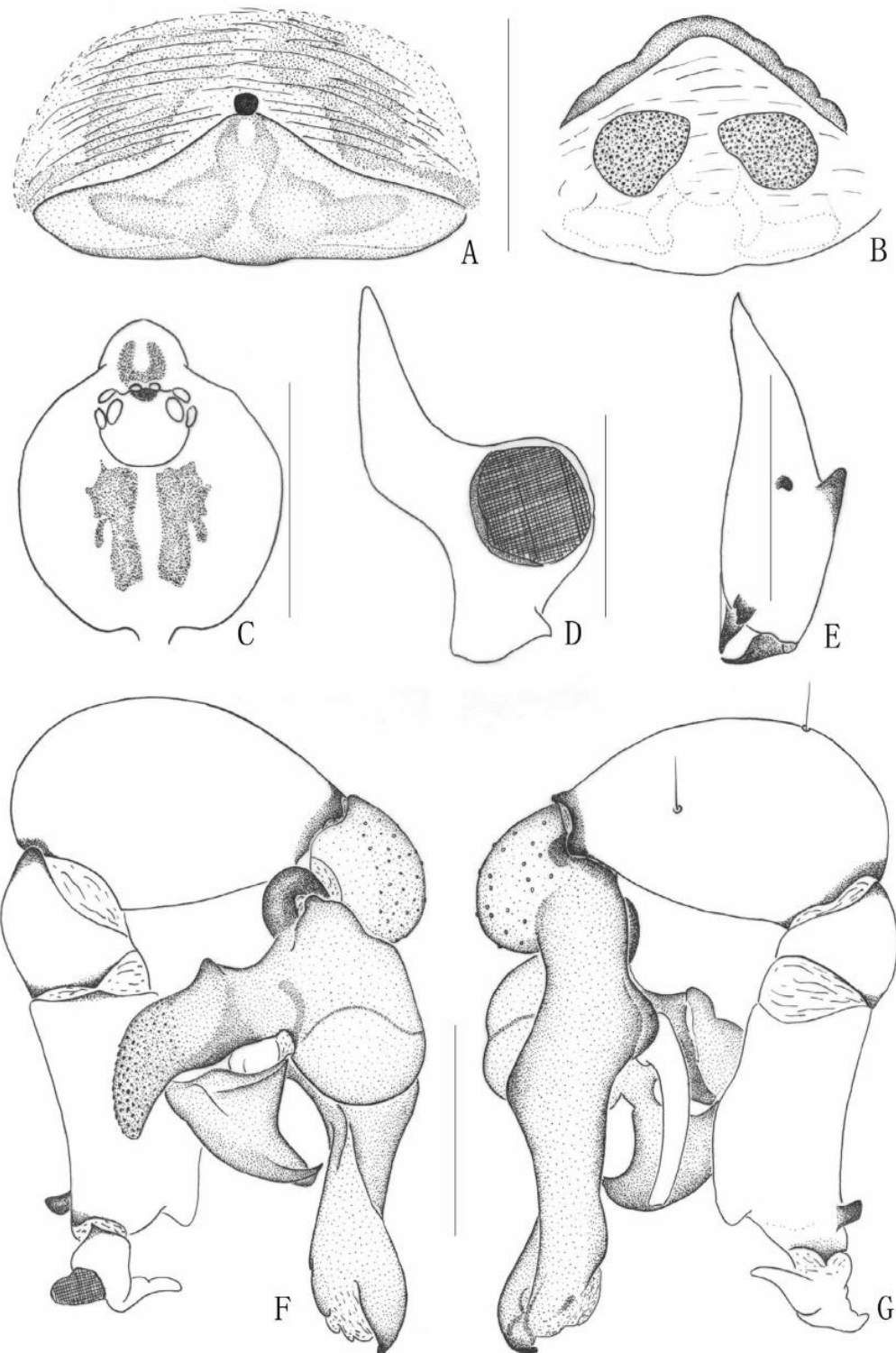
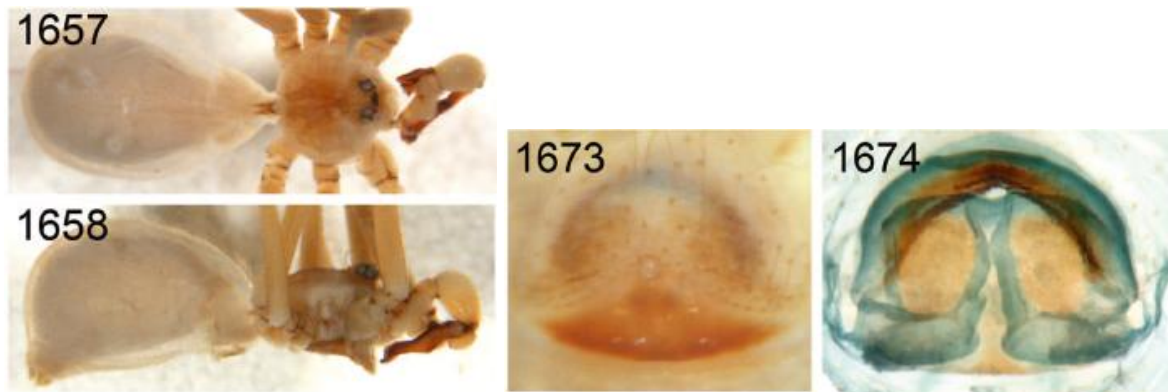


FIGURE 3. *Pholcus bessus* Zhu & Gong, 1991 (illustrations modified from Zhu & Gong 1991). A. epigynum, ventral view. B. same, dorsal view. C. male prosoma, dorsal view. D. trochanter of male left palp, retrolaterodorsal view. E. male left chelicera, frontal view. F. left palp, prolateral view. G. same, retrolateral view. Scale lines: 1.0mm (C), 0.5mm (A, B, E–G), 0.2mm (D).

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

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1657, 1658. *Ph. bessus*, male, dorsal and lateral views.

1673, 1674. *Ph. bessus*.

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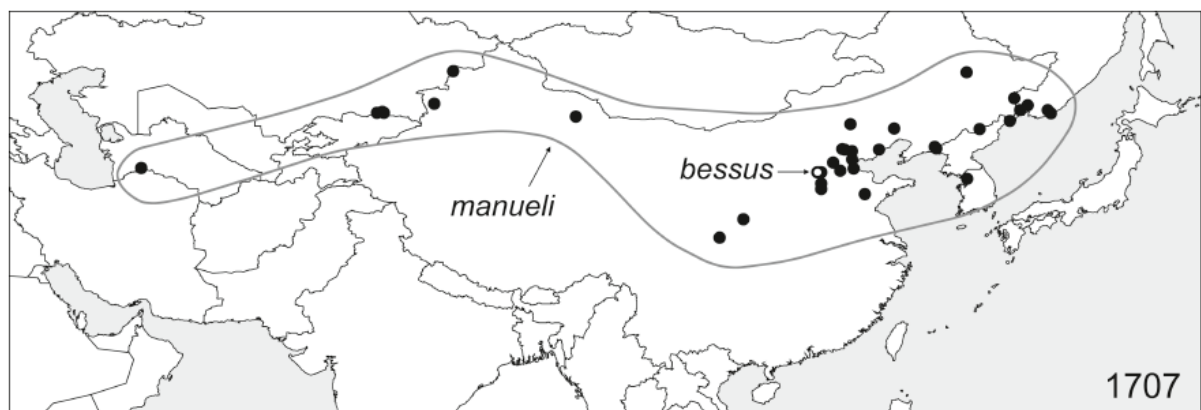


FIG. 1707, 1708. Known distributions of *Pholcus bessus* and of *Ph. manuli* in Asia (1707)

by male procursus with distinctive dorsal sclerite distally (Fig. 1743); from very similar *Ph. manueli* by shapes of procursus, appendix, ventral femur modifications, and by female genitalia (Figs. 1742-1745). *Male* (Zhangshiyan). Total body length 3.4, carapace width 1.2. Leg 1: 22.3 (5.7 + 0.5 + 5.7 + 8.5 + 1.9), tibia 2: 4.0, tibia 3: 2.8, tibia 4: 3.8; tibia 1 L/d: 46. Habitus as in Figs. 1657 and 1658. Carapace ochre-yellow with brown median mark divided medially, clypeus slightly darkened medially, sternum brown, with indistinct lighter spots near coxae 2-4 and distinct light mark anteriorly, legs monochromous ochre-yellow, abdomen ochre-gray with some indistinct lighter spots visible through cuticle, ventrally only genital area light brown. Distance PME-PME 160 μ m, diameter PME 105 μ m, distance PME-ALE 25 μ m, distance AME-AME 45 μ m, diameter AME 60 μ m. Ocular area moderately elevated, ~12 stronger hairs posteriorly on each side. No thoracic furrow; clypeus unmodified. Chelicerae similar to *Ph. manueli* (cf. Fig. 1731) but slightly smaller and proximo-lateral apophyses slightly larger. Sternum wider than long (0.8/0.6), unmodified. Palps as in Figs. 1742 and 1743, coxa unmodified, trochanter with slender retrolatero-ventral apophysis, femur with proximal apophysis dorsally and distinctive protuberance ventrally, tibia ventrally unmodified, procursus with dorsal flattened apophysis like *Ph. manueli* but without prolateral pointed apophysis, two small dorsal spines, bulb similar to *Ph. manueli*, only appendix different. Legs without spines and curved hairs, few vertical hairs; retrolateral trichobothrium on tibia 1 at 6%; prolateral trichobothrium absent on tibia 1, present on other tibiae. Tarsal pseudosegments indistinct, even distally poorly visible in dissecting microscope.

Variation. Tibia 1 in male paratype examined: 6.4; in this male the lateral light spots on the sternum are more distinct, the abdomen lacks light spots. Zhang & Zhu (2009a) report much longer legs: tibia 1 in holotype: 9.4, in paratypes: 8.8, 9.1. These are obviously mismeasurements as also the original description (Zhu & Gong 1991) gives a much lower value for the holotype (patella + tibia: 7.0).

Female. In general similar to male, triads barely closer together (distance PME-PME 145 μ m). Tibia 1: 5.1 (missing in other female examined). In both females examined, the lateral light spots on the sternum are more distinct and the abdominal light spots are less distinct. Epigynum similar to *Ph. manueli*, but median part of anterior arc not so strongly curved

Pholcus bessus Zhu & Gong, 1991

Figs. 1657, 1658, 1673, 1674, 1742-1745

Pholcus bessus Zhu & Gong 1991: 20-22, 25-26, figs. 3a-g. Song *et al.* 1999: 57, figs. 23d-g (copied from Zhu & Gong 1991). Zhang & Zhu 2009a: 15, figs. 3a-g (copied from Zhu & Gong 1991).

Types. Male holotype, female "allotype", and 2♂2♀ paratypes from China, Hebei Prov., Jingxing County (38°03'N, 114°10'E), Mt. Cangyan, 26.viii.1985 (M. Zhu), in MHBV (1♂1♀ paratypes examined).

Diagnosis. Easily distinguished from most congeners

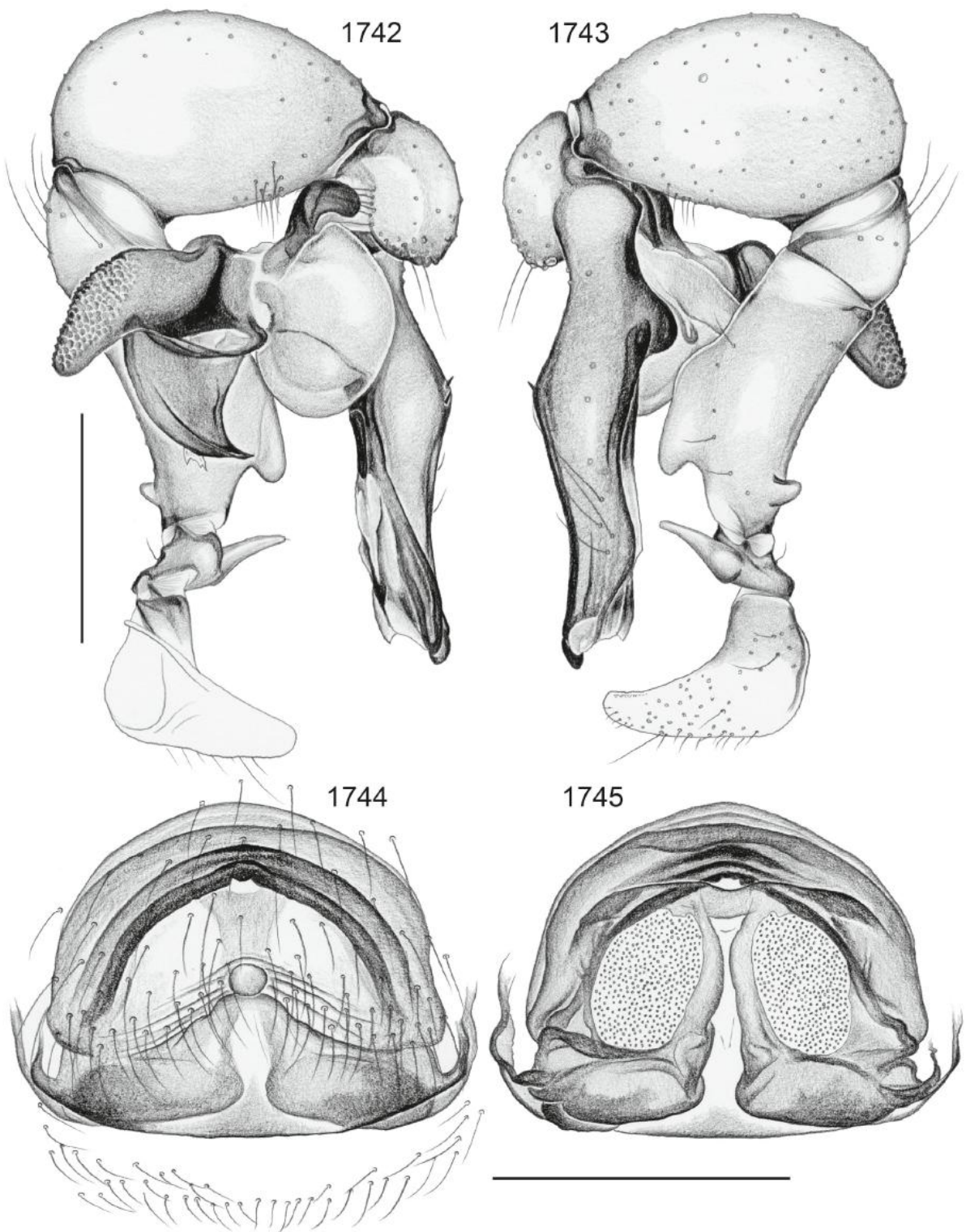


FIG. 1742-1745. *Pholcus bessus*. 1742, 1743. Left male palp, prolateral and retrolateral views. 1744, 1745. Cleared female genitalia, ventral and dorsal views. Scale lines: 0.5.

(Figs. 1673, 1744); internal genitalia as in Figs. 1674 and 1745.

Distribution. Known from China, Hebei Prov., only (Fig. 1707).

Material examined. CHINA: *Hebei Prov.*: Jingxing County, Mt. Cangyan: 1♂1♀ paratypes above. Zhanhuang County, Zhangshiyan [37°36'N, 114°18'E], 1.ix.2006 (Y. Tong), 1♂1♀ in IZCAS (Ar 21797).