Pholcus taibaiensis Wang & Zhu, 1992

Wang, X-P., Zhu, M-S. 1992. One new species of the genus *Pholcus* from China (Araneae: Pholcidae). Acta Arachnol. Sinica 1(1): 20-22.

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太白幽灵蛛，新种 *pholcus taibaiensis* sp. nov.（图 1—6）

正模♂，配模♀，副模 1♂，3♀♀，陕西眉县（太白山蒿坪寺），1989 年 8 月 6—10 日；7♂♂，14♀♀，陕西周至县（太白山厚畛子），1991 年 7 月 11—12 日，王新平采. 模式标本分别保存在西安师范学院生物系及河北教育学院生物系.

雄体体长 3. 45—3. 55. 头部隆起. 头胸部黄色. 头部前中眼之后，后中眼之间具一对小点状黑斑，其后紧接一棒状黑斑. 胸部中线两侧各向胸部两侧及后侧方伸出二对褐色斑纹，末端呈分叉的细线状，与胸部边缘黑褐色亚缘线相连（如图 1）. 额较长，前倾，褐色，仅前中眼前方一小块区域为黄色. 前列眼前缘平直，后缘后凹，后列眼稍后凹（从背面观前列眼后凹，后列眼稍后凹）. 前中眼间距等于前中侧眼间距（0. 20：0. 20），中眼区后边大于前边（0. 33：0. 20），各眼直径之比为：前中眼＜后中眼＝后侧眼＜前侧眼（0. 13：0. 16：0. 16：0. 17）. 螯肢前后堤各一齿，螯肢前面近中央部位具二个突起. 胸板中央色浅，两侧具三对斑纹，后方具一个斑纹. 步足黄色具环纹. 腹部长卵圆形. 触肢器结构如图 2—3.

正模♂　体长 3. 50，头胸部 1. 44×1. 34，腹部 2. 06×0. 85.

雌体体长 3. 55—3. 65. 形态特征与雄体相似. 外雌器结构如图 4—5.

配模♀测量：体长 3. 60，头胸部 1. 13×1. 03，腹部 2. 47×1. 24. 步足式：1—2—4—3. 各步足长度为：

	腿节	膝、胫节	后跗节	跗节	全长
Ⅰ	5.71	6.03	9.20	1.59	22.53
Ⅱ	4.60	4.13	5.56	1.11	15.40
Ⅲ	3.33	3.18	4.13	0.64	11.28
Ⅳ	4.92	3.97	5.56	0.79	15.24

本新种头胸部背面花斑与豫幽灵蛛 *pholcus henanensis* Zhu et Mao. 1983 相似，但二者触肢器结构及外雌器内外观差异甚大.

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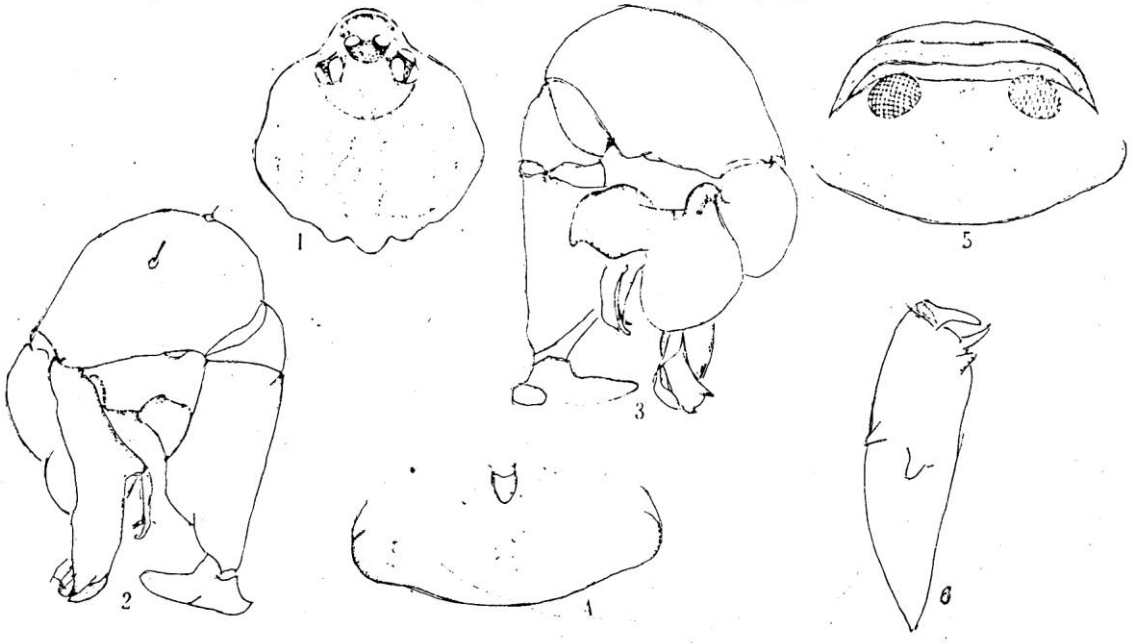

图 1—6 太白幽灵蛛，新种 *pholcus taibaiensis* sp. nov.

1. 头胸部背面观(cephalothorax, dorsal view)　2. 触肢器外侧面观(palpal organ, exo—lateral view)　3. 触肢器内侧面观(do., endo—lateral view)　4. 外雌器外观(epigynum, external view)　5. 外雌器内部结构(do., vulva)　6. 螯肢(chelicera)

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***pholcus taibaiensis* sp. nov** (figs. 1—6)

Holotype ♂, allotype♀, paratype1 ♂, 3♀♀, Mt. Taibai (34°00′N, 107°50′E), Shanxi Province, August 6—10, 1989. paratype 7 ♂ ♂, 10♀♀, taibai Mount, Shanxi Province, July 11—12, 1991. Collected by Wang Xin—ping, the Specimens are deposited in Xian Teacher′ s College.

Male(Holotype): total length 3. 50 mm. Cephalothorax 1. 44×1. 34 mm; abdomen 2. 06×0. 85 mm.

Female(Allotype): total length 3. 60 mm, Cephalothorax 1. 13×1. 03 mm; abdomen 2. 47×1. 24 mm.

The dorsal pattren of the cephalothorax of this new species is similar to that of *P. hengyuensis* Zhu *et* Mao, 1983, but we can distinguish them by the structure of palpal organ and epigynum.

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

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***Pholcus taibaiensis* Wang *et* Zhu**, 1992 (**fig**. 25I—K)
Pholcus taibaiensis Wang & Zhu, 1992: 20, f. 1—6.
Distribution: Shaanxi.

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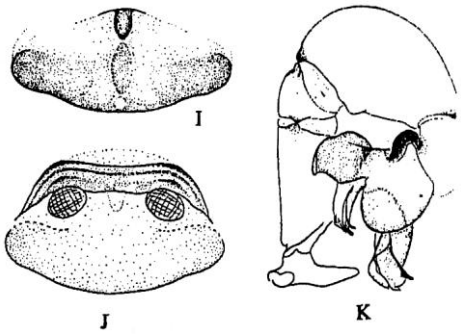

Zhang, F., Zhu, M.S. 2009. A review of the genus *Pholcus* (Araneae: Pholcidae) from China. Zootaxa 2037: 1-114.

***Pholcus taibaiensis* Wang & Zhu, 1992**
(Fig. 52)

Pholcus taibaiensis Wang & Zhu 1992: 20, f. 1–6. Song, Zhu & Chen 1999: 63, f. 25I–K.

Diagnosis. Among its close *Pholcus* relatives (see the remark of *P. clavatus*), this species is very similar to *P. songi* **sp. nov.** in the shape of the palpal bulb and epigynum, both with a branched appendix (Figs. 45H and 52H) and teat-shaped epigynal apophyses (Figs. 45A and 52A). It can be distinguished from this species by the shape of the procursus (Figs. 52G–I), by the shape of appendix, with a short branch near the tip (Figs. 52H–I), and by a shorter knob-shaped epigynal apophysis (Fig. 52A).

Redescription. Male (paratype) total length 3.6: cephalothorax 1.5 long, 1.4 wide; abdomen 2.1 long, 0.9 wide. Leg I: 31.9 (8.8+0.9+8.2+12.0+2.0), tibia II: 7.0, tibia III: 4.5, tibia IV: 6.4; tibia I L/D: 55. Prosoma shape as in Fig. 52C. Carapace short, broad and almost circular, ochre, with brown marks broadly connecting to ocular area. Cephalic region raised, with two slender brown longitudinal stripes centrally, ocular area dark yellow. Clypeus 0.55, slightly ochre, with small yellow mark centrally. Distance AME–AME 0.06. Chelicerae as in Fig. 52E, with pair of black serrated apophyses distally, pair of unsclerotized thumb-shaped apophyses proximolaterally and pair of small unsclerotized round apophyses proximocentrally. Labium and endites yellowish brown. Sternum yellow, with one yellow mark centrally and four pairs of yellow marks along the margin as in Fig. 52F. Femora, patellae and tibiae brown, with dark rings, metatarsi and tarsi light brown. Abdomen cylindrical, fawn, dorsum with numerous blackish brown spots as in Fig. 52C. Venter pale brown, with longitudinal stripe centrally. Palps as in Figs. 52H–I, bulb with a tile-shaped uncus, tip of appendix with a small branch. Procursus as in Fig. 52G.

Variation. Two males from Wolong Natural Reserve: Tibia I 7.8, 8.1; body length: 3.5. 3.5; color ligher than the specimen from type location.

Female (paratype): in general very similar to male. Total length 3.6, cephalothorax 1.1 long, 1.0 wide; abdomen 2.5 long, 1.2 wide. Tibia I: 5.3. Distance AME–AME 0.05. Epigynum roughly hill-shaped as in Fig. 52A, with a small knob-shaped apophysis on the top. Dorsal view as in Fig. 52B, with M-shaped sclerotized arch anteriorly and a pair of distant oval pore plates.

Distribution. Shaanxi, Sichuan.

Material. Types. Male holotype, female 'allotype', 1♂, 3♀ paratypes, CHINA: **Shaanxi**, Mei County, Mt. Taibai, Temple Haoping, August 7, 1989, leg. X. P. Wang (XTC and MHBU respectively, examined 1♂, 1♀ paratypes deposited in MHBU).

Material examined. CHINA: **Sichuan**: Wolong Natural Reserve, September 15, 1993, collector unknown, 2♂, 1♀ (MHBU).

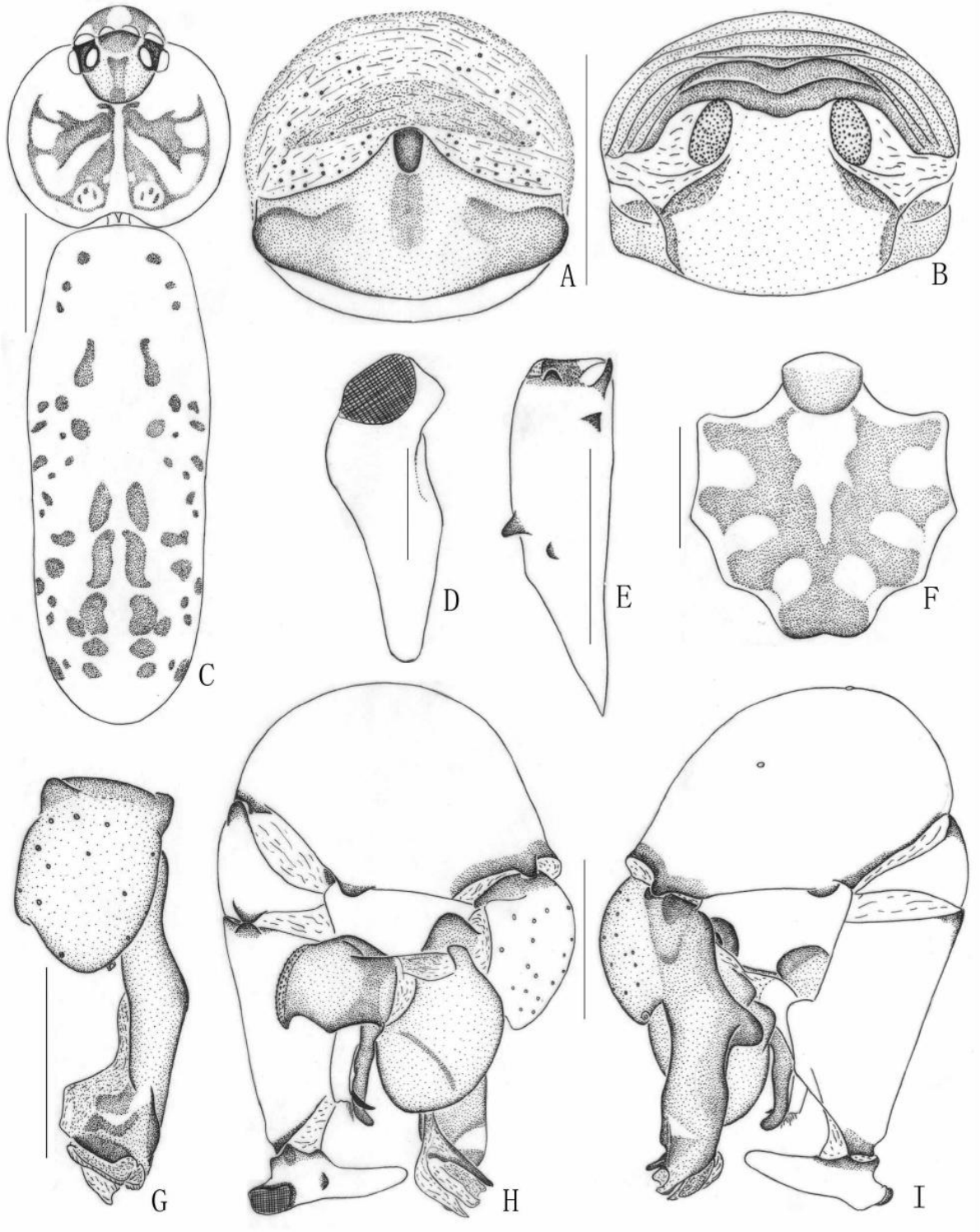

FIGURE 52. *Pholcus taibaiensis* Wang & Zhu, 1992. A. epigynum, ventral view. B. same, dorsal view. C. male body, dorsal view. D. trochanter of male left palp, dorsal view. E. male left chelicera, frontal view. F. male sternum, ventral view. G. left procursus, dorsal view. H. left palp, prolateral view. I. same, retrolateral view. Scale lines: 1.0mm (C), 0.5mm (A, B, E–I), 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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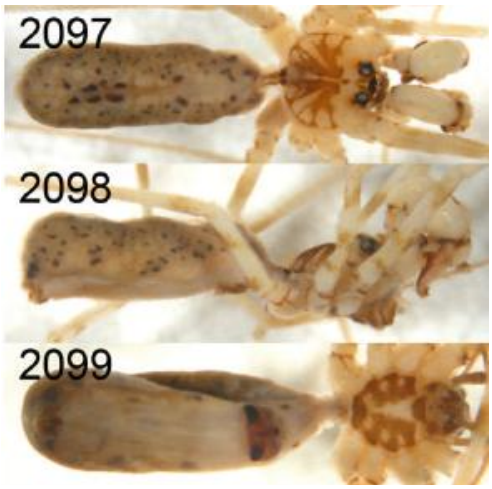

2097-2099. *Ph. taibaiensis*, male, dorsal and lateral views; female, ventral view.

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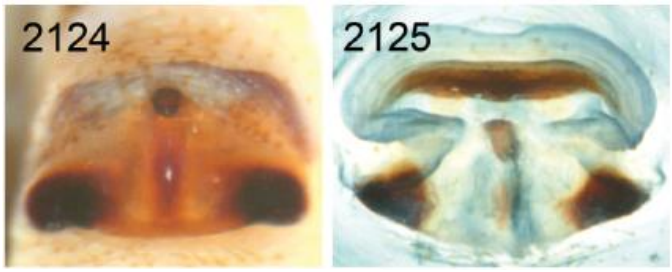

2124, 2125. *Ph. taibaiensis*.

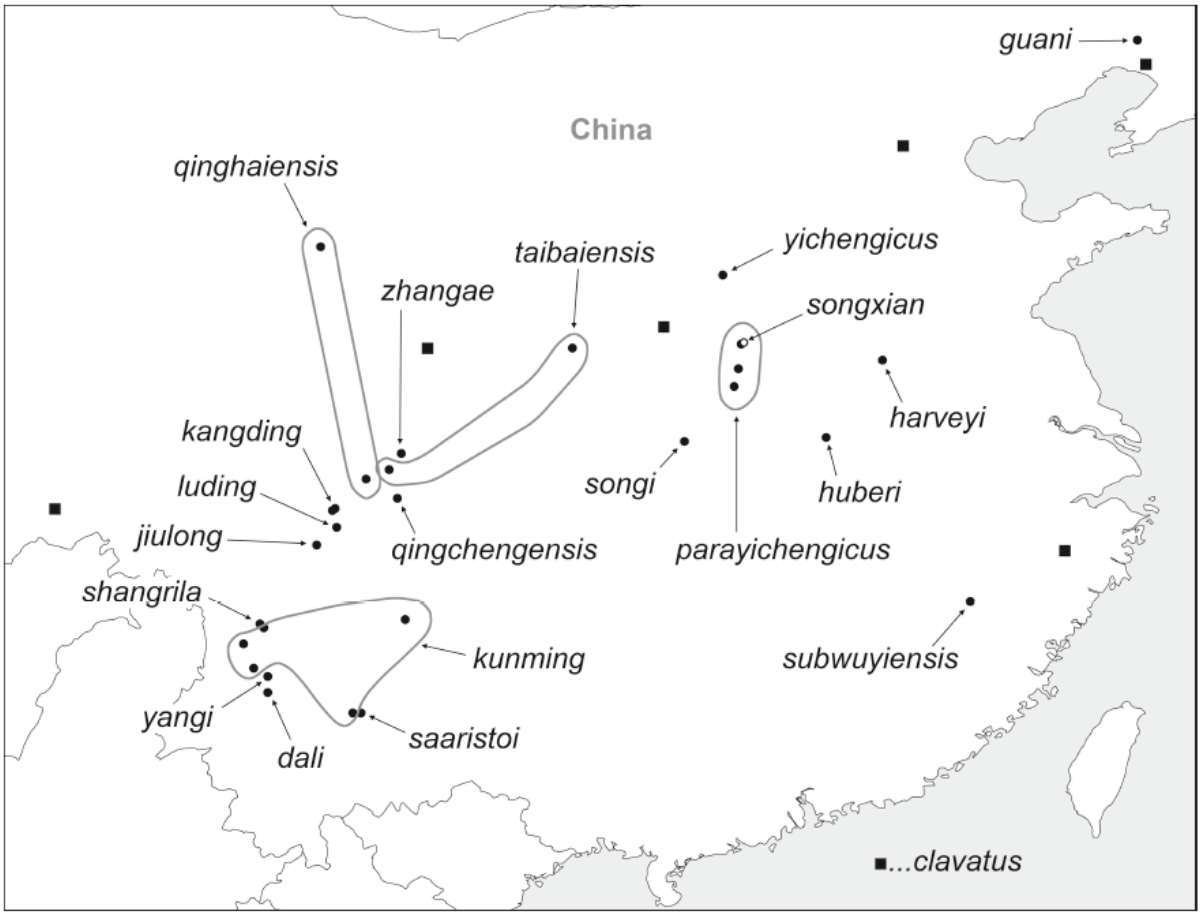

FIG. 2171. Known distribution of the *Pholcus yichengicus* species group.

Pholcus taibaiensis Wang & Zhu, 1992

Figs. 2097-2099, 2124, 2125, 2178-2183, 2185, 2199

Pholcus taibaiensis Wang & Zhu 1992: 20-22, figs. 1-6. Song *et al.* 1999: 63, figs. 25i-k (copied from Wang & Zhu 1992). Zhang & Zhu 2009a: 90, figs. 52a-i.

Types. Male holotype, 1♀ "allotype", 1♂3♀ paratypes from China, Shaanxi Prov., Mei County, Mt. Taibai (34°00'N, 107°50'E), Temple Haoping, 6.-10. viii.1989 (X. Wang), in IZCAS (holotype and "allotype" examined) and MHBU (1♂1♀ paratypes, not examined). 7♂10♀ paratypes from Mt. Taibai, 11.-12.vii.1991 (X. Wang), in XTC, not examined.

Diagnosis. Distinguished from congeners by details of male palp (Figs. 2178, 2179; shapes of trochanter apophysis, procursus, uncus, and appendix) and female genitalia (Figs. 2124, 2182); from the very similar *Ph. qinghaiensis* only by minor details of procursus and bulb (Figs. 2183, 2185) and (more clearly) by female genitalia (Figs. 2124, 2181, 2182 shapes of epigynum and internal structures).

Male (type locality). Total body length 4.4, carapace width 1.3. Leg 1: 33.5 (8.4 + 0.6 + 8.2 + 14.2 + 2.1), tibia 2: 5.4, tibia 3: 3.6, tibia 4: 4.9; tibia 1 L/d: 66. Habitus as in Figs. 2097 and 2098. Carapace ochre-yellow with distinctive brown pattern, ocular area with distinct median mark, clypeus light brown, sternum brown with light triangular mark medially and light spots near coxae 2-4 (cf. female, Fig. 2099), legs ochre-yellow, femora and tibiae with three dark rings each, femora also with proximo-ventral marks, abdomen with many dark spots dorsally, genital area light brown. Distance PME-PME 210 µm, diameter PME 125 µm, distance PME-ALE 45 µm, distance AME-AME 55 µm, diameter AME 100 µm. Ocular area moderately elevated, very few longer hairs posteriorly. No thoracic furrow; clypeus unmodified. Chelicerae as in Fig. 2180, distal apophyses with two tiny modified hairs each (Fig. 2199), two pairs of apophyses proximally. Sternum wider than long (0.95/0.70), unmodified. Palps as in Figs. 2178 and 2179, coxa unmodified, trochanter with thick ventral apophysis, femur with barely visible proximal hump dorsally and distinct ventral projections, tibia with distinctive modification ventrally proximally, procursus with two prolatero-dorsal spines, distally complex (Fig. 2183), bulb with large uncus, weakly sclerotized embolus with long transparent process distally, simple curved appendix with long pointed branch (longer than appears in Fig. 2185). Legs without spines, some curved hairs on tibiae (most hairs missing), few vertical hairs; retrolateral trichobothrium on tibia 1 at 6%; prolateral trichobothrium absent on tibia 1, present on other tibiae; tarsus 1 with ~20 pseudosegments but only distally ~10 quite distinct.

Variation. Pointed branch of appendix more curved in holotype. Shape of dark mark on ocular area varies slightly. Tibia 1 in 5 other males: 8.8-10.7 (mean 9.7; in holotype: 9.7).

Female. In general similar to male, triads closer together (distance PME-PME 185 µm). Tibia 1: 6.0, 6.3. Epigynum weakly elevated, anterior arc visible through cuticle, triangular plate strongly sclerotized laterally and with anterior 'knob' (Figs. 2124, 2181); internal genitalia as in Figs. 2125 and 2182.

Distribution. Known from Mt. Taibai area in Shaanxi Prov., and from Wolong Natural Reserve, Sichuan Prov. (Zhang & Zhu 2009a) (Fig. 2171).

Material examined. CHINA: *Shaanxi Prov.*: Mt. Taibai: 1♂1♀ types above; S flanks of Mt. Taibai, above Houshenzi, secondary broad-leaved forest, 1300-1700 m a.s.l., 20.vi.1997 (J. Martens, P. Jäger), 2♂ in SMF; same locality, 8.vi.1997 (P. Jäger, J. & B. Martens), 3♂1♀ in SMF.

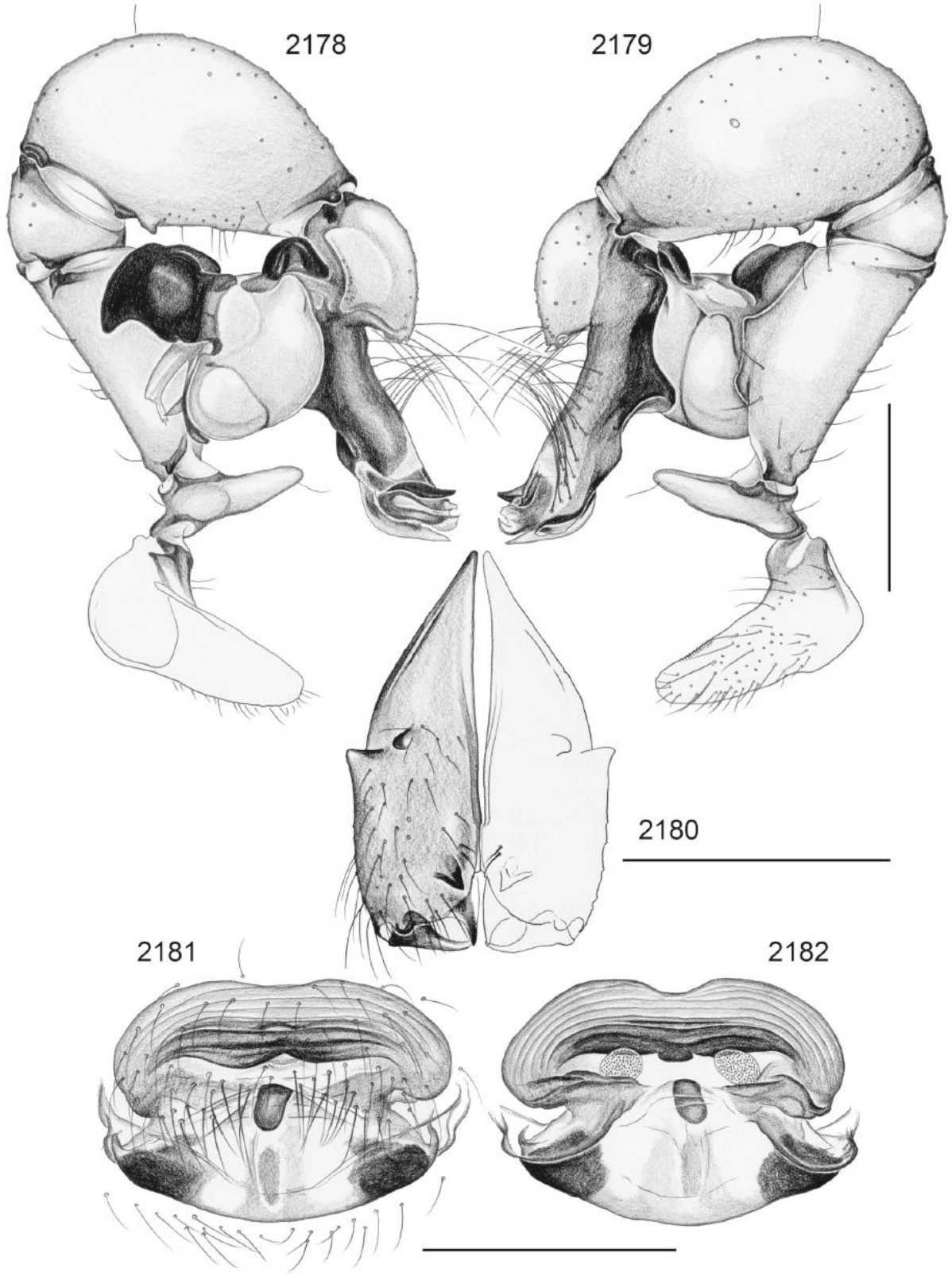

FIG. 2178-2182. *Pholcus taibaiensis*. 2178, 2179. Left male palp, prolateral and retrolateral views. 2180. Male chelicerae, frontal view. 2181, 2182. Cleared female genitalia, ventral and dorsal views. Scale lines: 0.5.

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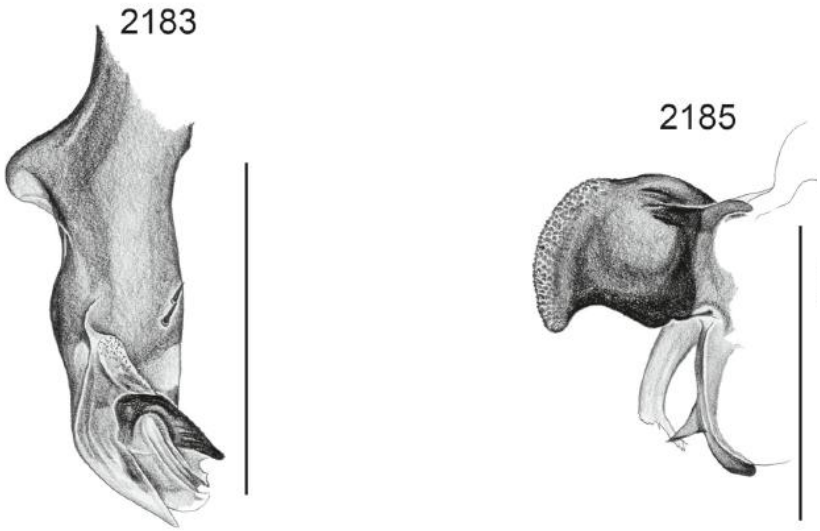

FIG. 2183-2188. *Pholcus taibaiensis* (2183, 2185) and *Ph. qinghaiensis* (2184, 2186-2188). 2183, 2184. Left procursi, prolateral views (at same scale). 2185, 2186. Left bulbal processes, prolateral views (at same scale). Scale lines: 0.5.

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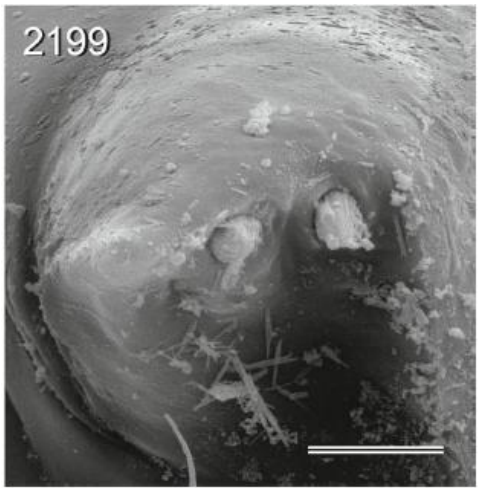

Ph. taibaiensis (2199). 2189, 2195, 2199. Distal male cheliceral apophyses.