

SUPPLEMENTARY MATERIALS

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Supplementary Text S1 Taxonomic account

References to figures in the cited papers are listed in lowercase (figure or figures); figures from this paper are noted with a capital letter (Figure or Figures). The specimens studied are deposited in the College of Life Science, Shenyang Normal University (SYNU) in Liaoning, China, the Museum of Hebei University (MHBU) in Hebei, China, and the Institute of Zoology, Chinese Academy of Sciences (IZCAS) in Beijing, China.

The following abbreviations are used in the descriptions: ALE = anterior lateral eye, AME = anterior median eye, PME = posterior median eye, L/d = length/diameter ratio; used in the illustrations: b = bulb, da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, pr = procurus, u = uncus.

Family Pholcidae C.L. Koch, 1850

Subfamily Pholcinae C.L. Koch, 1850

Genus *Pholcus* Walckenaer, 1805

Type species: *Aranea phalangioides* Fuesslin, 1775.

Pholcus phungiformes species group

Diagnosis: This species group can be easily distinguished from all other *Pholcus* species groups by the following combination of characters: the male chelicerae usually with frontal apophyses (e.g., Figure S6D, absent in *P. beijingensis*), the male palpal tibia with a prolatero-ventral modification (e.g., Figure S5A), the procurus usually with dorsal spines (e.g., arrowed in Figure S10D, absent in *P. beijingensis*), and the appendix absent (e.g., Figure S6C) but sometimes with a ‘pseudo-appendix’ (apophysis arising from uncus rather than from bulb, e.g., arrowed 1 in Figure S16C), and the epigyne sclerotized, with a knob (e.g., Figure S6A).

Brief description: Ocular area slightly elevated, without eye stalks, AME present. Thoracic furrow absent. Clypeus and sternum unmodified. Sternum wider than long. Male chelicerae usually with three pairs of apophyses (proximo-laterally, distally, and frontally), distal apophyses usually with two teeth each. Male palpal coxa unmodified, trochanter with ventral apophysis, femur relatively short and wide, tibia with prolatero-ventral modification, tarsus without dorsal elongation, procurus with distinct ventral ‘knee’, usually with dorsal spines. Appendix absent, sometimes with ‘pseudo-appendix’, embolus weakly sclerotized. Legs without spines or curved setae. Sexual dimorphism slight, female legs slightly shorter, chelicerae unmodified. Epigyne sclerotized, usually with distinctive whitish area between anterior and posterior areas, with knob, vulva with anterior arch and pair of pore plates (modified from Huber 2011).

Identification key

- 1 Bulb with ‘pseudo-appendix’2
- Bulb without ‘pseudo-appendix’3
- 2 Procurus with large, curved prolatero-distal sclerite (arrowed in Figure S15C); uncus with distal notch (arrowed 2 in Figure S16C); vulval pore plates narrow (Figure S16B).....*P. luquanbei* sp. nov.
- Procurus with short prolatero-subdistal apophysis (arrowed in figure 6C in Zhu et al., 2018);

	uncus without notch (figure 7C in Zhu et al., 2018); vulval pore plates wide (figure 7B in Zhu et al., 2018).....	<i>P. ningan</i>
3	Width/length of procurus about 1/10 (e.g., Figure S19A, B).....	4
–	Width/length of procurus much larger than 1/10.....	5
4	Male cheliceral frontal apophyses directed downward (Figure S20D); procurus with prolatero-distal membranous process and sclerotized retrolatero-distal apophysis (Figure S19B, C); vulval pore plates nearly elliptic (Figure S20B).....	<i>P. tianmenshan sp. nov.</i>
–	Male cheliceral frontal apophyses directed forward (figure 1E, I in Liu & Tong, 2015); procurus with prolatero-subdistal and dorso-distal membranes, without retrolatero-distal apophysis (Figure S24C); vulval pore plates narrow anteriorly and wide posteriorly (Figure S24B).....	<i>P. xianrendong</i>
5	Procurus with long prolatero-subdistal sclerite (e.g., arrowed 1 in Figure S10C).....	6
–	Procurus without prolatero-subdistal sclerite.....	8
6	Prolatero-subdistal sclerite of procurus wide, with angular apophysis (figure 144A, C in Yao & Li, 2012); vulval pore plates triangular (figure 145B in Yao & Li, 2012).....	<i>P. phoenixus</i>
–	Prolatero-subdistal sclerite of procurus narrow, without angular apophysis.....	7
7	Prolatero-subdistal sclerite of procurus curved (arrowed 1 in Figure S10C); procurus with short, weakly sclerotized ventro-subdistal apophysis (arrowed in Figure S10B); uncus medially strongly protruding and distally strongly curved (arrowed 1, 2 in Figure S11C); vulval anterior arch medially curved (Figure S11B); pore plates anteriorly wide and posteriorly narrow and pointed (Figure S11B).....	<i>P. jiguanshan sp. nov.</i>
–	Prolatero-subdistal sclerite of procurus straight (arrowed 1 in Figure S27C); procurus with long and strongly sclerotized ventro-subdistal apophysis (arrowed in Figure S27B); uncus not protruding medially, distally slightly curved (arrowed in Figure S28C); vulval anterior arch laterally curved (Figure S28B); pore plates nearly elliptic (Figure S28B)....	<i>P. yaoshan sp. nov.</i>
8	Uncus with proximal apophysis (e.g., arrowed 1 in Figure S9A).....	9
–	Uncus without proximal apophysis.....	11
9	Procurus with one angular distal apophysis (arrowed 2 in Figure S17C); uncus medially strongly protruding and distal apophysis with small angular apophysis (arrowed 1, 3 in Figure S18C); vulva with pair of small, nearly triangular lateral sclerites and vulval anterior arch M-shaped (Figure S18B).....	<i>P. shenshi sp. nov.</i>
–	Procurus with two distal apophyses (e.g., arrowed 2, 3 in Figure S9C); uncus not protruding medially and distal apophysis without angular apophysis; vulva with pair of large, nearly triangular lateral sclerites and vulval anterior arch wing shaped (e.g., Figure S9B).....	10
10	One distal apophysis of procurus thick and large (arrowed 2 in Figure S9C); uncus with narrow proximal apophysis and slender distal apophysis (not bifurcated distally, arrowed 1, 2 in Figure S9A); epigyne not curved posteriorly (figures 1j, 2f in Tong & Ji, 2010).....	<i>P. hamatus</i>
–	One distal apophysis of procurus short and small (arrowed 2 in Figure S25C); uncus with wide (nearly quadrate) proximal apophysis and short, wide distal apophysis (distally bifurcated, arrowed 1, 2 in Figure S26C); epigyne posteriorly strongly curved (Figure S26A).....	<i>P. xingqi sp. nov.</i>
11	Procurus with long, spine-shaped/long, pointed apophysis (e.g., arrowed 3 in Figure S13C, arrowed in Figure S7C).....	12

- Procursus without long, spine-shaped/long, pointed apophysis.....18
- 12 Procursus with long, spine-shaped apophysis.....13
- Procursus with long, pointed apophysis.....16
- 13 Procursus with spine-shaped prolatero-distal apophysis (arrowed 1 in Figure S4C) and short, pointed retrolatero-subdistal apophysis (arrowed 2 in Figure S4C); vulval pore plates nearly triangular (Figure S4B).....***P. foliaceus***
- Procursus with spine-shaped distal apophysis, without retrolatero-subdistal apophysis; vulval pore plates not triangular.....14
- 14 Procursus without prolateral and ventral apophysis (figure 63B, C in Yao & Li, 2012); vulval straight anterior arch with pair of separated sclerites (figure 64B in Yao & Li, 2012); pore plates round (figure 64B in Yao & Li, 2012).....***P. fengcheng***
- Procursus with pointed prolatero-subdistal apophysis (e.g., arrowed 1 in Figure S13C).....15
- 15 Procursus with curved, pointed ventro-subdistal apophysis (arrowed 2 in Figure S13C) and dorso-subdistally strongly protruding (arrowed in Figure S13B); male cheliceral frontal apophyses small and nipple-shaped (Figure S14D); epigyne very slightly curved posteriorly (Figure S14A); vulval anterior arch large and strongly sclerotized (Figure S14B); pore plates elliptic (Figure S14B).....***P. longxigu sp. nov.***
- Procursus without ventro-subdistal apophysis and not protruding dorso-subdistally (figures 173A–C, 175A, B, 176A in Yao & Li, 2012); male cheliceral frontal apophyses large and face downward (figure 176D in Yao & Li, 2012); epigyne strongly curved posteriorly (figures 174A, 176C in Yao & Li, 2012); vulval anterior arch divided into two adjacent elliptic sclerites (figures 174B, 175D in Yao & Li, 2012); pore plates nearly teardrop shaped (figures 174B, 175D in Yao & Li, 2012).....***P. tongi***
- 16 Procursus without prolatero-subdistal apophysis and dorso-subdistal apophysis (Figure S7A–C); vulval anterior arch slightly curved (Figure S8B).....***P. guanshui sp. nov.***
- Procursus with pointed prolatero-subdistal apophysis (e.g., figure 69C in Yao & Li, 2012); vulval anterior arch laterally strongly curved (e.g., figure 70B in Yao & Li, 2012).....17
- 17 Procursus with short, pointed prolatero-subdistal apophysis provided with long membranous process (figure 69A, C in Yao & Li, 2012) and without dorso-subdistal apophysis (figure 69A, B in Yao & Li, 2012); vulval anterior arch without dorsal sclerites (figure 70B in Yao & Li, 2012).....***P. gaoi***
- Procursus with long, pointed prolatero-subdistal apophysis provided with short, membranous process (figures 191A, C, 193A, 194A in Yao & Li, 2012) and distinct dorso-subdistal apophysis (figures 191A–C, 193A, B, 194A in Yao & Li, 2012); vulval anterior arch with pair of large dorsal sclerites (figures 192B, 193D in Yao & Li, 2012).....***P. wangi***
- 18 Procursus only with large, curved prolatero-subdistal membranous process (arrowed in Figure S5A).....***P. gaizhou sp. nov.***
- Procursus with prolateral membranous process and sclerotized apophysis.....19
- 19 Procursus with large, curved prolatero-distal sclerite (e.g. figure 55C in Yao & Li, 2012)....20
- Procursus without large, curved prolatero-distal sclerite.....21
- 20 Procursus with small, nearly angular dorso-distal sclerite, without retrolateral membranous process (figure 163B, D in Yao & Li, 2012); uncus distally wide (figure 163A in Yao & Li, 2012); vulval anterior arch wavy and pore plates narrow (figure 164B in Yao & Li, 2012).....***P. sublingulatus***

- Procursus without dorso-distal sclerite, with large retrolateral membranous process (figure 55B, D in Yao & Li, 2012); uncus distally narrow (figure 55A in Yao & Li, 2012); vulval anterior arch straight and pore plates wide (figure 56B in Yao & Li, 2012).....*P. decorus*
- 21 Procursus with small, stick-shaped dorso-distal projection provided with two short spines (arrowed 3 in Figure S12D) and bifurcated distal apophysis (arrowed in Figure S12C); vulval pore plates narrow, pointed anteriorly and posteriorly (Figure S12B).....*P. jiuwei*
- Procursus without stick-shaped dorso-distal projection and bifurcated distal apophysis; vulval pore plates nearly elliptic.....22
- 22 Uncus distally strongly curved (e.g., Figure S30C).....23
- Uncus not curved (e.g., Figure S22C).....24
- 23 Procursus with angular ventro-distal apophysis and blunt distal apophysis (arrowed 2, 3 in Figure S29C), without dorso-subdistal membranous process; epigyne not curved posteriorly (Figure S30A); vulval anterior arch wavy (Figure S30B).....*P. yuhuangshan sp. nov.*
- Procursus without ventro-distal apophysis, with curved, prolatero-subdistal membranous process (arrowed 2 in Figure S23C), dorso-subdistal membranous process (arrowed 3 in Figure S23C) and distal membranous process (arrowed 4 in Figure S23C); epigyne strongly curved posteriorly; vulval anterior arch strongly curved (Figure S23B).....*P. wangtian*
- 24 Procursus with curved prolatero-subdistal apophysis, blunt dorso-subdistal apophysis, curved, distal membranous lamella, and three long dorso-subdistal spines (figure 106A, C in Yao & Li, 2012); uncus distally wide (figure 106A in Yao & Li, 2012).....*P. lingulatus*
- Procursus with prolatero-distal membranous process provided with long nearly s-shaped apophysis and three short dorso-subdistal spines, without dorso-subdistal apophysis and distal membranous lamella (arrowed 1, 2 in Figure S21C and arrowed in Figure S21D); uncus distally narrow (Figure S22C).....*P. wangjiang sp. nov.*

***Pholcus decorus* Yao & Li, 2012**

Pholcus decorus Yao & Li, 2012: 14, figures 55A–D, 56A–E, 57A–E, 58A–D.

Type material examined: Holotype: ♂ (IZCAS), China, Liaoning, Anshan, Qianshan Mountain (41°02.00'N, 123°08.00'E), 20 June 2009, Yan-Feng Tong leg. **Paratypes:** 4♂, 6♀ (IZCAS), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00021, Ar00022), 2♀ (SYNU-Ar00023, Ar00024), China, Liaoning, Anshan, Qianshan Mountain (41°02.00'N, 123°08.00'E, 640 m), 14 July 2019, Zhi-Yuan Yao, Hao Xu, Ya-Fei Xin & Xiang Wang leg.

Diagnosis: The species resembles *P. wangtian* Tong & Ji, 2010 (Figure S23, figures 1g–i, 1, 4a–f in Tong & Ji, 2010) by having similar male chelicerae and bulbal apophyses (figures 55A, 57A, D, 58C in Yao & Li, 2012) but can be easily distinguished by the procurus with a prolatero-distal sclerite with a lateral membranous lamella and a retrolateral membranous process (figures 55A, C, 57A, 58A in Yao & Li, 2012; procurus with a spine-shaped prolatero-subdistal apophysis with lateral, curved membranous process and dorso-subdistal membranous process with a small pointed apophysis in *P. wangtian*, arrowed 1–3 in Figure S23C), by the male palpal trochanter with a long ventral apophysis (figures 55A, B, 57A, B in Yao & Li, 2012; with short ventral apophysis in *P.*

wangtian, figure 4a, b in Tong & Ji, 2010), by the epigyne not curved posteriorly (figures 56A, 58D in Yao & Li, 2012; strongly curved posteriorly in *P. wangtian*, figures 1l, 4e in Tong & Ji, 2010), and by the vulva with a straight anterior arch and oval pore plates (figures 56B, 57E in Yao & Li, 2012; anterior arch strongly curved and pore plates long elliptic in *P. wangtian*, Figure S23B).

Description (amendments): Male (SYNU-Ar00021). Procurus with large prolatero-distal sclerite with lateral membranous lamella and large retrolateral membranous process, with dorso-distal membranous process (figures 55A–D, 57A–B in Yao & Li, 2012). Female (SYNU-Ar00023). Vulva with straight anterior arch (figures 56B, 57E in Yao & Li, 2012).

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus fengcheng* Zhang & Zhu, 2009**

Pholcus fengcheng Zhang & Zhu, 2009: 28, figure 11A–I. Yao & Li, 2012: 16, figures 63A–D, 64A–C.

Type material examined: Holotype: ♂ (MHBU), China, Liaoning, Fengcheng, Fenghuangshan Mountain (40°24.00'N, 124°00.00'E), 25 July 2005, Ming-Sheng Zhu leg. **Paratype:** 1♀ (MHBU), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00025, Ar00026), 2♀ (SYNU-Ar00027, Ar00028), China, Liaoning, Fengcheng, Fenghuangshan Mountain (40°24.00'N, 124°00.00'E, 110 m), 13 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. foliaceus* Peng & Zhang, 2013 (Figure S4, figures 1A–G, 2A–F in Peng & Zhang, 2013) by having similar male chelicerae, bulbal apophyses, and by the epigyne (figures 63B, 64A in Yao & Li, 2012, figure 11A, E, H in Zhang & Zhu, 2009) but can be easily distinguished by the procurus with a prolatero-subdistal membranous process and without a retrolateral apophysis (figure 63A–D in Yao & Li, 2012; procurus with long, prolatero-distal spine-shaped apophysis and short, pointed retrolatero-subdistal apophysis in *P. foliaceus*, arrowed 1, 2 in Figure S4C) and by the straight vulval anterior arch with a pair of large sclerites, and pore plates round (figure 64B in Yao & Li, 2012; anterior arch nearly w-shaped, and pore plates nearly triangular in *P. foliaceus*, Figure S4B).

Description (amendments): Male (SYNU-Ar00025). Cheliceral distal apophyses with two teeth each. Procurus with large, prolatero-subdistal membranous process and long, spine-shaped distal apophysis; uncus with scaly edge; embolus weakly sclerotized, with some transparent distal projections (figure 63A–D in Yao & Li, 2012). Female (SYNU-Ar00027). Vulva with straight anterior arch provided with pair of large sclerites and pair of round pore plates (figure 64B in Yao & Li, 2012).

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus foliaceus* Peng & Zhang, 2013**

Figure S4

Pholcus foliaceus Peng & Zhang, 2013: 75, figures 1A–G, 2A–F.

Material examined: 3♂ (SYNU-Ar00029–Ar00031), 3♀ (SYNU-Ar00032–Ar00034), China, Liaoning, Fushun, Xinbin County, Muqi Town, Hemu National Forest Park (41°45.83'N, 124°41.75'E, 600 m), 24 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. fengcheng* Zhang & Zhu, 2009 (figure 11A–I in Zhang & Zhu, 2009, figures 63A–D, 64A–C in Yao & Li, 2012) by having similar male chelicerae, bulbal apophyses, and by the epigyne (Figure S4A, figures 1C, D, 2A, E in Peng & Zhang, 2013) but can be easily distinguished by the procurus with a long, prolatero-distal spine-shaped apophysis and a short, pointed retrolatero-subdistal apophysis (arrowed 1, 2 in Figure S4C; procurus with prolatero-subdistal membranous process and without retrolateral apophysis in *P. fengcheng*, figure 63A–D in Yao & Li, 2012) and by the vulval anterior arch nearly w-shaped and pore plates nearly triangular (Figure S4B; vulval anterior arch straight with a pair of large sclerites, pore plates round in *P. fengcheng*, figure 64B in Yao & Li, 2012).

Description (amendments): Male (SYNU-Ar00029). Cheliceral distal apophyses without teeth. Procurus with long, prolatero-distal spine-shaped apophysis (arrowed 1 in Figure S4C) and short, pointed retrolatero-subdistal apophysis (arrowed 2 in Figure S4C); uncus with scaly edge (Figure S4A); appendix absent. Female (SYNU-Ar00032). Epigyne (figures 1D, 2E in Peng & Zhang, 2013) with lateral and median brown marks. Vulva (Figure S4B) with nearly w-shaped anterior arch and pair of nearly triangular pore plates.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

Pholcus gaizhou Yao & Li, sp. nov.

Figures S5, S6

Holotype: ♂ (SYNU-Ar00035), China, Liaoning, Yingkou, Gaizhou, Xiaoshipeng Town, Xiaoshipeng Village, roadside of G305 (40°14.51'N, 122°25.75'E, 207 m), 16 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 1♂ (SYNU-Ar00036), 1♀ (SYNU-Ar00037), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. xianrendong* Liu & Tong, 2015 (Figure S24, figures 1A–J, 2A–F in Liu & Tong, 2015) by having similar male chelicerae (Figure S6D) but can be easily distinguished by the width/length ratio of the procurus being about 1/6 (Figure S5A, B; about 1/10 in *P. xianrendong*, figure 1C, G, H, J in Liu & Tong, 2015), the procurus with a large, prolatero-subdistal membranous process (Figure S5A, C; without a prolateral membranous process in *P. xianrendong*, Figure S24C), the uncus nearly triangular (Figure S6C; narrow and leaf shaped in *P. xianrendong*, Figure S24A), the epigyne not curved posteriorly (Figure S6A; strongly curved posteriorly in *P. xianrendong*, figure 2C, E in Liu & Tong, 2015), and by the small and long elliptic vulval pore plates (Figure S6B; large, narrow anteriorly and wide posteriorly in *P. xianrendong*, Figure S24B).

Description of holotype: Male (SYNU-Ar00035). Total length 5.67 (5.88 with clypeus), carapace 1.52 long, 1.88 wide, opisthosoma 4.15 long, 1.71 wide. Leg I: 42.39 (10.73, 0.74, 10.74, 17.47, 2.71), leg II: 29.89 (8.38, 0.76, 7.43, 11.75, 1.57), leg III: 21.81 (6.38, 0.64, 5.28, 8.13, 1.38), leg

IV: 29.27 (8.59, 0.75, 7.18, 11.19, 1.56); tibia I L/d: 57. Eye interdistances and diameters: PME-PME 0.29, PME 0.16, PME-ALE 0.04, AME-AME 0.08, AME 0.11. Width/length ratio of sternum (1.23/0.89). Habitus as in Figure S6E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brown marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S6D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S5A, B; trochanter with short (as wide as long), retrolaterally strongly bulged ventral apophysis; femur with small retrolatero-proximal apophysis and indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus slender, with large, curved, prolatero-subdistal membranous process (arrowed in Figure S5A); uncus with scaly edge (Figure S6C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S6C). Retrolateral trichobothrium of tibia I at 5% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 33 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00037). Similar to male, habitus as in Figure S6G, H. Total length 5.81 (6.03 with clypeus), carapace 1.57 long, 1.88 wide, opisthosoma 4.24 long, 1.81 wide; tibia I: 9.09; tibia I L/d: 51. Eye interdistances and diameters: PME-PME 0.25, PME 0.16, PME-ALE 0.04, AME-AME 0.06, AME 0.10. Width/length ratio of sternum (1.14/0.78). Epigyne (Figure S6A) with lateral and median brown marks and short knob. Vulva (Figure S6B) with curved, sclerotized anterior arch and pair of small, long elliptic pore plates.

Variation: Tibia I in paratype male (SYNU-Ar00036): 10.86.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figures 1, S1F).

***Pholcus gaoi* Song & Ren, 1994**

Pholcus gaoi Song & Ren, 1994: 20, figures 1–7. Song, Zhu & Chen, 1999: 57, figure 23L–O. Zhang & Zhu, 2009: 29, figure 12A–G. Yao & Li, 2012: 17, figures 69A–D, 70A–C.

Type material examined: Holotype: ♀ (only epigyne examined; MHBU), China, Liaoning, Kuandian County (40°07.00'N, 124°07.00'E), June 1986, Shu-Sen Gao leg. **Paratypes:** 1♂, 1♀ (MHBU), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00038, Ar00039), 2♀ (SYNU-Ar00040, Ar00041), China, Liaoning, Dandong, Kuandian County, Shihugou Town, Laodaopai Village, roadside of G201 (40°46.45'N, 124°43.91'E, 292 m), 8 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. wangi* Yao & Li, 2012 (figures 191A–D, 192A–E, 193A–D, 194A–D in Yao & Li, 2012) by having similar male chelicerae, bulbal apophyses, and by the epigyne (figures 69A, 70A in Yao & Li, 2012) but can be easily distinguished by the procurus without a dorso-subdistal apophysis (figure 69A, B in Yao & Li, 2012; with a distinct dorso-subdistal apophysis in *P. wangi*, figures 191A–C, 193A, B, 194A in Yao & Li, 2012), the procurus with a short prolatero-subdistal apophysis with a long membranous process (figure 69A, C in Yao & Li, 2012; with long prolatero-subdistal apophysis with short membranous process in *P.*

wangi, figures 191A, C, 193A, 194A in Yao & Li, 2012), and by the vulval anterior arch without dorsal sclerites (figure 70B in Yao & Li, 2012; with pair of large dorsal sclerites in *P. wangi*, figures 192B, 193D in Yao & Li, 2012).

Description (amendments): Male (SYNU-Ar00038). Cheliceral distal apophyses without teeth. Palpal tibia with prolatero-ventral projection; procurus with small, sclerotized prolatero-subdistal apophysis with large, curved membranous process, small distal membranous process, and large, long, sclerotized retrolatero-distal apophysis; uncus with scaly edge; embolus weakly sclerotized, with some transparent distal projections (figure 69A–D in Yao & Li, 2012). Female (SYNU-Ar00040). Epigyne with median brown marks (figure 70A in Yao & Li, 2012).

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus guanshui* Yao & Li, sp. nov.**

Figures S7, S8

Holotype: ♂ (SYNU-Ar00042), China, Liaoning, Dandong, Kuandian County, Guanshui Town, Renshi Village, roadside of S202 (40°54.65'N, 124°32.93'E, 320 m), 10 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 2♀ (SYNU-Ar00043, Ar00044), same data as holotype; 2♂ (SYNU-Ar00045, Ar00046), 2♀ (SYNU-Ar00047, Ar00048), same data as holotype but 9 July 2020.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. wangi* Yao & Li, 2012 (figures 191A–D, 192A–E, 193A–D, 194A–D in Yao & Li, 2012) by having similar male chelicerae, bulbal apophyses, and by the epigyne (Figure S8A, C, D) but can be easily distinguished by the procurus without a dorso-subdistal apophysis and prolatero-subdistal apophysis (Figure S7A–C; with distinct a dorso-subdistal apophysis and sclerotized prolatero-subdistal apophysis in *P. wangi*, figures 191A–C, 193A, B, 194A in Yao & Li, 2012) and by the vulval anterior arch slightly curved and without dorsal sclerites (Figure S8B; anterior arch laterally strongly curved and with pair of large dorsal sclerites in *P. wangi*, figures 192B, 193D in Yao & Li, 2012).

Description of holotype: Male (SYNU-Ar00042). Total length 5.85 (5.96 with clypeus), carapace 1.88 long, 2.07 wide, opisthosoma 3.97 long, 1.64 wide. Leg I: 56.22 (14.36, 0.84, 14.79, 24.16, 2.07), leg II: 39.19 (10.65, 0.92, 10.08, 15.90, 1.64), leg III: 27.29 (7.70, 0.73, 6.98, 10.59, 1.29), leg IV: 36.11 (10.50, 0.75, 9.23, 14.10, 1.53); tibia I L/d: 77. Eye interdistances and diameters: PME-PME 0.26, PME 0.13, PME-ALE 0.05, AME-AME 0.05, AME 0.12. Width/length ratio of sternum (1.33/1.13). Habitus as in Figure S8E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brown marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S8D) with pair of proximo-lateral apophyses, pair of distal apophyses without teeth, and pair of frontal apophyses. Palps as in Figure S7A, B; trochanter with long (much longer than wide), retrolaterally strongly bulged ventral apophysis; femur with small retrolatero-proximal apophysis and indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with large, curved,

prolatero-subdistal membranous process (arrowed in Figure S7A) and long, pointed ventro-distal apophysis (arrowed in Figure S7C); uncus with scaly edge (Figure S8C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S8C). Retrolateral trichobothrium of tibia I at 4% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 36 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00043). Similar to male, habitus as in Figure S8G, H. Total length 5.63 (5.75 with clypeus), carapace 1.54 long, 1.86 wide, opisthosoma 4.09 long, 1.61 wide; tibia I: 9.39; tibia I L/d: 47. Eye interdistances and diameters: PME-PME 0.25, PME 0.15, PME-ALE 0.07, AME-AME 0.06, AME 0.10. Width/length ratio of sternum (1.25/1.01). Epigyne (Figure S8A) curved posteriorly, with median brown marks and nearly angular knob. Vulva (Figure S8B) with slightly curved, sclerotized anterior arch and pair of large, elliptic pore plates.

Variation: Tibia I in two paratype males (SYNU-Ar00045, Ar00046): 13.46, 13.76. Tibia I in the other three paratype females (SYNU-Ar00044, Ar00047, Ar00048): 8.70, 8.88, 9.19.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus hamatus* Tong & Ji, 2010**

Figure S9

Pholcus hamatus Tong & Ji, 2010: 98, figures 1a–c, j, 2a–g.

Type material examined: Holotype: ♂ (SYNU), China, Liaoning, Benxi, Huanren County, Wunüshan Mountain (41°19.00'N, 125°25.00'E, 584 m), 27 July 2008, Yan-Feng Tong leg.

Paratypes: 9♂, 4♀ (SYNU), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00049, Ar00050), 2♀ (SYNU-Ar00051, Ar00052), China, Liaoning, Benxi, Huanren County, Wunüshan Mountain (41°19.00'N, 125°25.00'E, 584 m), 25 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. xingqi* sp. nov. (Figures S25, S26) in having similar male chelicerae and by the vulva (Figure S9B, figure 2d, g in Tong & Ji, 2010) but can be easily distinguished by the procurus with a thick, pointed distal apophysis (arrowed 2 in Figure S9C; pointed distal apophysis short and small in *P. xingqi*, arrowed 2 in Figure S25C), by an uncus with a narrow proximal apophysis and slender distal apophysis (arrowed 1, 2 in Figure S9A; proximal apophysis wide, distal apophysis short, wide, and distally bifurcated in *P. xingqi*, arrowed 1, 2 in Figure S26C), and by the epigyne not curved posteriorly (figures 1j, 2f in Tong & Ji, 2010; posteriorly strongly curved in *P. xingqi*, Figure S26A).

Description (amendments): Male (SYNU-Ar00049). Cheliceral distal apophyses with two teeth each. Palpal tibia with prolatero-ventral projection; procurus with large, curved prolatero-distal membranous process (arrowed 1 in Figure S9C) with two pointed sclerotized apophyses (arrowed 2, 3 in Figure S9C) and small membranous process (arrowed in Figure S9D), and with dorsal spine (arrowed 4 in Figure S9C); uncus with short proximal apophysis, slender, curved distal apophysis, and scales (arrowed 1, 2 in Figure S9A); embolus weakly sclerotized, with some transparent distal projections (Figure S9A). Female (SYNU-Ar00051). Vulva (Figure S9B) with pair of large, nearly triangular lateral sclerites.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus jiguanshan* Yao & Li, sp. nov.**

Figures S10, S11

Holotype: ♂ (SYNU-Ar00053), China, Liaoning, Dandong, Fengcheng, Jiguanshan Town, roadside of S320 (40°33.18'N, 123°48.18'E, 322 m), 13 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 2♂ (SYNU-Ar00054, Ar00055), 3♀ (SYNU-Ar00056–Ar00058), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. yaoshan* sp. nov. (Figures S27, S28) in having similar male chelicerae and by the epigyne (Figure S11A, D) but can be easily distinguished by the procurus with a curved prolatero-subdistal sclerite (arrowed 1 in Figure S10C; prolatero-subdistal sclerite straight in *P. yaoshan*, arrowed 1 in Figure S27C) and a short, weakly sclerotized ventro-subdistal apophysis (arrowed in Figure S10B; ventro-subdistal apophysis long and strongly sclerotized in *P. yaoshan*, arrowed in Figure S27B), by the uncus medially strongly protruding and distally strongly curved (arrowed 1, 2 in Figure S11C; uncus not protruding medially, distally slightly curved in *P. yaoshan*, arrowed in Figure S28C), by the vulval anterior arch ridge shaped (medially curved, Figure S11B) (anterior arch laterally curved in *P. yaoshan*, Figure S28B), and by pore plates that are anteriorly wide and posteriorly narrow and pointed (Figure S11B; pore plates nearly elliptic in *P. yaoshan*, Figure S28B).

Description of holotype: Male (SYNU-Ar00053). Total length 5.99 (6.25 with clypeus), carapace 1.66 long, 1.86 wide, opisthosoma 4.33 long, 1.83 wide. Leg I: 48.62 (12.31, 0.92, 12.38, 20.34, 2.67), leg II: 33.39 (9.21, 0.88, 8.33, 13.33, 1.64), leg III: 24.36 (6.95, 0.69, 6.12, 9.21, 1.39), leg IV: 32.73 (9.23, 0.75, 8.93, 12.14, 1.68); tibia I L/d: 73. Eye interdistances and diameters: PME-PME 0.24, PME 0.16, PME-ALE 0.04, AME-AME 0.04, AME 0.12. Width/length ratio of sternum (1.32/1.07). Habitus as in Figure S11E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus brownish, with brown median marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S11D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S10A, B; trochanter with long (much longer than wide), retrolaterally strongly bulged ventral apophysis; femur with small retrolatero-proximal apophysis and indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with long, curved prolatero-subdistal sclerite provided with pointed proximal apophysis (arrowed 1, 2 in Figure S10C), curved distal apophysis (arrowed 3 in Figure S10C), short ventro-subdistal apophysis (arrowed in Figure S10B), and two dorsal spines (arrowed in Figure S10D); uncus with scales, medially strongly protruding and distally strongly curved (arrowed 1, 2 in Figure S11C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S11C). Retrolateral trichobothrium of tibia I at 2% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 39 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00056). Similar to male, habitus as in Figure S11G, H. Total length 5.46 (5.60 with clypeus), carapace 1.46 long, 1.68 wide, opisthosoma 4.00 long, 1.72 wide; tibia I: 8.92; tibia I L/d: 39. Eye interdistances and diameters: PME-PME 0.21, PME 0.16, PME-ALE 0.05, AME-AME 0.06, AME 0.09. Width/length ratio of sternum (1.18/0.78). Clypeus brown. Epigyne (Figure S11A) with antero-median brown marks, short knob, and pair of lateral protrusions anterior to epigynal plate (arrowed in Figure S11A). Vulva (Figure S11B) with ridge-shaped, sclerotized anterior arch, pair of anteriorly wide and posteriorly narrow and pointed pore plates, and pair of large, nearly round lateral sclerites.

Variation: Tibia I in two paratype males (SYNU-Ar00054, Ar00055): 10.78, 12.73. Tibia I in the other two paratype females (SYNU-Ar00057, Ar00058): 8.23, 8.38.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus jiuwei* Tong & Ji, 2010**

Figure S12

Pholcus jiuwei Tong & Ji, 2010: 99, figures 1d–f, k, 3a–g.

Type material examined: Holotype: ♂ (SYNU), China, Liaoning, Benxi, Pingshan County, Xing'an Village (41°15.00'N, 123°42.00'E), 11 August 2008, Jiu-Wei Bian leg. **Paratypes:** 2♂, 5♀ (SYNU), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00059, Ar00060), 1♀ (SYNU-Ar00061), China, Liaoning, Benxi, Pingshan County, Xing'an Village, Shuangquansi Temple (41°15.00'N, 123°42.00'E), 30 August 2020, Yan-Feng Tong leg.

Diagnosis: The species can be easily distinguished from all known congeners by the procurus with a large, curved, prolatero-distal membranous process with a small, pointed apophysis (arrowed 1, 2 in Figure S12D), a small, stick-shaped dorso-distal projection with two short spines (arrowed 3 in Figure S12D), and a bifurcated distal apophysis (arrowed in Figure S12C), and by the vulva with long and narrow, anteriorly and posteriorly pointed pore plates (Figure S12B).

Description (amendments): Male (SYNU-Ar00059). Cheliceral distal apophyses with two teeth each. Palpal tibia with prolatero-ventral projection; procurus with large, curved, prolatero-distal membranous process provided with small pointed apophysis (arrowed 1, 2 in Figure S12D), small, stick-shaped dorso-distal projection with two short spines (arrowed 3 in Figure S12D), and bifurcated distal apophysis (arrowed in Figure S12C); uncus with scaly edge (Figure S12A); embolus weakly sclerotized, with some transparent distal projections (Figure S12A). Female (SYNU-Ar00061). Epigyne strongly curved posteriorly, with lateral brown marks (figures 1k, 3f in Tong & Ji, 2010).

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus lingulatus* Gao, Gao & Zhu, 2002**

Figure S1A

Pholcus lingulatus Gao, Gao & Zhu, 2002: 74, figures 1–8. Zhang & Zhu, 2009: 47, figure 24A–H. Huber, 2011: 471, figures 2147, 2148, 2159, 2160, 2243–2247. Yao & Li, 2012: 23, figures

106A–D, 107A–C.

Type material examined: Holotype: ♀ (MHBU), China, Jilin, Huadian, Weishahe River (42°48.00'N, 127°12.00'E), 13 August 1973, collector unknown. **Paratype:** 1♂ (MHBU), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00062, Ar00063), 2♀ (SYNU-Ar00064, Ar00065), China, Jilin, Tonghua, Ji'an, Qingshi Town, Shihu Village, roadside of G331 (41°27.00'N, 126°24.85'E, 478 m), 28 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. wangjiang* sp. nov. (Figures S21, S22) by having similar male chelicerae and female genitalia (figure 24B, C, E in Zhang & Zhu, 2009, figures 2246, 2247 in Huber, 2011, figure 107A, B in Yao & Li, 2012) but can be easily distinguished by the procurus with a curved prolatero-subdistal apophysis, a blunt dorso-subdistal apophysis, a curved distal membranous lamella, and three long dorso-subdistal spines (figure 106A, C in Yao & Li, 2012; procurus with prolatero-distal membranous process with long, nearly s-shaped apophysis and three short dorso-subdistal spines, without dorso-subdistal apophysis and distal membranous lamella in *P. wangjiang*, arrowed 1, 2 in Figure S21C and arrowed in Figure S21D) and by the uncus distally wide and slightly curved (figure 106A in Yao & Li, 2012; uncus distally narrow and not curved in *P. wangjiang*, Figure S22C).

Description (amendments): Male (SYNU-Ar00062). Cheliceral distal apophyses with two teeth each. Procurus with pointed, curved prolatero-subdistal apophysis, blunt dorso-subdistal apophysis, curved, and distal membranous lamella; uncus with scaly edge; embolus with some transparent distal projections (figures 2243–2245 in Huber, 2011, figure 106A–D in Yao & Li, 2012). Female (SYNU-Ar00064). Epigyne strongly curved posteriorly, with lateral brown marks. Vulval pore plates elliptic (figures 2246, 2247 in Huber, 2011, figure 107A, B in Yao & Li, 2012).

Natural history: The species was found on rock walls.

Distribution: China (Jilin, type locality; Figure 1).

***Pholcus longxigu* Yao & Li, sp. nov.**

Figures S13, S14

Holotype: ♂ (SYNU-Ar00066), China, Liaoning, Benxi, Huanren County, Yahe Town, Longxigu Scenic Spot (41°09.53'N, 125°04.88'E, 350 m), 26 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 3♂ (SYNU-Ar00067–Ar00069), 5♀ (SYNU-Ar00070–Ar00074), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. tongi* Yao & Li, 2012 (figures 173A–D, 174A–E, 175A–D, 176A–D in Yao & Li, 2012) by having similar bulbal apophyses (Figure S14C) but can be easily distinguished by the procurus with a curved, pointed ventro-subdistal apophysis (arrowed 2 in Figure S13C; without a ventro-subdistal apophysis in *P. tongi*, figures 173A, C, 175A, 176A in Yao & Li, 2012), by the procurus dorso-subdistally strongly protruding (arrowed in Figure S13B; not protruding dorso-subdistally in *P. tongi*, figures 173B, 175B in Yao & Li, 2012), by the male cheliceral frontal apophyses small and nipple-shaped (Figure S14D; frontal apophyses large and face downward in *P. tongi*, figure 176D in Yao & Li, 2012), by the epigyne very slightly curved posteriorly (Figure S14A; strongly curved posteriorly in *P. tongi*, figures 174A, 176C in Yao & Li,

2012), by the vulval anterior arch large and strongly sclerotized (Figure S14B; anterior arch divided into two adjacent elliptic sclerites in *P. tongi*, figures 174B, 175D in Yao & Li, 2012), and by elliptic pore plates (Figure S14B; nearly teardrop shaped in *P. tongi*, figures 174B, 175D in Yao & Li, 2012). Also see diagnosis for *P. wangtian*.

Description of holotype: Male (SYNU-Ar00066). Total length 6.76 (7.06 with clypeus), carapace 1.88 long, 2.16 wide, opisthosoma 4.88 long, 2.40 wide. Leg I: 53.37 (13.76, 0.98, 14.05, 22.85, 1.73), leg II: 38.67 (10.25, 0.95, 9.99, 15.76, 1.72), leg III: 26.29 (7.51, 0.72, 6.52, 10.03, 1.51), leg IV: 33.94 (9.92, 0.73, 8.76, 12.78, 1.75); tibia I L/d: 70. Eye interdistances and diameters: PME-PME 0.29, PME 0.15, PME-ALE 0.05, AME-AME 0.07, AME 0.13. Width/length ratio of sternum (1.32/1.11). Habitus as in Figure S14E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brown marks; sternum brown. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S14D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S13A, B; trochanter with short (as wide as long) ventral apophysis; femur with indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with prolatero-subdistal membranous process provided with pointed apophysis (arrowed 1 in Figure S13C), curved, pointed ventro-subdistal apophysis (arrowed 2 in Figure S13C), and long, spine-shaped distal apophysis (arrowed 3 in Figure S13C); uncus with scaly edge (Figure S14C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S14C). Retrolateral trichobothrium of tibia I at 3% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 35 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00070). Similar to male, habitus as in Figure S14G, H. Total length 6.14 (6.49 with clypeus), carapace 1.86 long, 2.01 wide, opisthosoma 4.28 long, 1.65 wide; tibia I: 10.75; tibia I L/d: 53. Eye interdistances and diameters: PME-PME 0.22, PME 0.12, PME-ALE 0.06, AME-AME 0.05, AME 0.11. Width/length ratio of sternum (1.32/1.11). Clypeus dark brown. Epigyne (Figure S14A) with lateral and median brown marks and short knob. Vulva (Figure S14B) with large, strongly sclerotized anterior arch and pair of elliptic pore plates.

Variation: Tibia I in three paratype males (SYNU-Ar00067–Ar00069): 13.35, 14.52, 14.63. Tibia I in the other four paratype females (SYNU-Ar00071–Ar00074): 9.25, 9.77, 10.16, 10.49.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus luoquanbei* Yao & Li, sp. nov.**

Figures S15, S16

Holotype: ♂ (SYNU-Ar00075), China, Liaoning, Anshan, Xiuyan County, Yanghe Town, near Luoquanbei Reservoir, roadside of S312 (40°02.35'N, 123°27.13'E, 148 m), 14 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 1♂ (SYNU-Ar00076), 2♀ (SYNU-Ar00077, Ar00078), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species can be easily distinguished from all known congeners by the procurus

with a large, curved prolatero-distal sclerite (arrowed in Figure S15C), by the bulb with a 'pseudo-appendix' (arrowed 1 in Figure S16C), by the uncus with a distal notch (arrowed 2 in Figure S16C), and by the long, elliptic vulval pore plates (Figure S16B).

Description of holotype: Male (SYNU-Ar00075). Total length 6.18 (6.35 with clypeus), carapace 1.78 long, 2.07 wide, opisthosoma 4.40 long, 1.87 wide. Leg I: 53.16 (13.48, 1.04, 13.63, 22.45, 2.56), leg II: 37.05 (10.35, 0.92, 9.48, 14.53, 1.77), leg III: 25.94 (7.64, 0.84, 6.31, 9.81, 1.34), leg IV: 33.59 (9.68, 0.86, 8.41, 12.96, 1.68); tibia I L/d: 68. Eye interdistances and diameters: PME-PME 0.31, PME 0.16, PME-ALE 0.06, AME-AME 0.07, AME 0.11. Width/length ratio of sternum (1.33/0.99). Habitus as in Figure S16E, F. Carapace yellowish, with brown radiating marks; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brown marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S16D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S15A, B; trochanter with long (much longer than wide), retrolaterally strongly bulged ventral apophysis; femur with indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple, with large, curved prolatero-distal sclerite (arrowed in Figure S15C), retrolatero-distal membranous process (arrowed in Figure S15B), and two strong and one slender dorsal spines (arrowed in Figure S15D); bulb with short curved 'pseudo-appendix' (arrowed 1 in Figure S16C); uncus with scaly edge and notch (arrowed 2 in Figure S16C); embolus weakly sclerotized, with some transparent distal projections (Figure S16C). Retrolateral trichobothrium of tibia I at 2% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 36 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00077). Similar to male, habitus as in Figure S16G, H. Total length 5.12 (5.29 with clypeus), carapace 1.50 long, 1.73 wide, opisthosoma 3.62 long, 1.49 wide; tibia I: 8.57; tibia I L/d: 54. Eye interdistances and diameters: PME-PME 0.21, PME 0.17, PME-ALE 0.04, AME-AME 0.05, AME 0.07. Width/length ratio of sternum (1.07/0.79). Clypeus dark brown. Epigyne (Figure S16A) curved posteriorly, with lateral and antero-median brown marks and short knob. Vulva (Figure S16B) with slightly curved, sclerotized anterior arch and pair of long, elliptic pore plates.

Variation: Tibia I in paratype male (SYNU-Ar00076): 13.34. Tibia I in another paratype female (SYNU-Ar00078): 9.03.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figures 1, S1C).

***Pholcus ningan* Yao & Li, 2018**

Pholcus ningan Yao & Li, in Zhu et al., 2018: 243, figures 6A–D, 7A–H.

Type material examined: Holotype: ♂ (IZCAS), China, Heilongjiang, Mudanjiang, Ning'an, Jingpohu Lake Scenic Spot (44°03.32'N, 128°56.61'E, 353 m), 12 July 2016, Zhi-Gang Chen leg.

Paratypes: 2♂, 3♀ (IZCAS), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00079, Ar00080), 2♀ (SYNU-Ar00081, Ar00082), China, Heilongjiang, Mudanjiang, Ning'an, Jingpohu Lake Scenic Area (44°03.32'N, 128°56.61'E,

353 m), 4 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. wangjiang* sp. nov. (Figures S21, S22) in having similar male chelicerae and by the epigyne (figure 7A, D in Zhu et al., 2018) but can be easily distinguished by the procurus with a short prolatero-subdistal apophysis (arrowed in figure 6C in Zhu et al., 2018; with long, nearly s-shaped prolatero-distal apophysis in *P. wangjiang*, arrowed 2 in Figure S21C), by the uncus distally nearly rectangular (figure 7C in Zhu et al., 2018; distally nearly semicircular in *P. wangjiang*, Figure S22C), and by the vulva with large, nearly round antero-lateral sclerites (figure 7B in Zhu et al., 2018; antero-lateral sclerites narrow and curved in *P. wangjiang*, Figure S22B).

Description (amendments): Male (SYNU-Ar00079). Procurus with one strong and one slender dorsal spine (figure 6D in Zhu et al., 2018). Female (SYNU-Ar00081). Epigyne curved posteriorly, with lateral and antero-median marks. Vulva with pairs of large, nearly round antero-lateral sclerites (figure 7A, B in Zhu et al., 2018).

Natural history: The species was found on rock walls.

Distribution: China (Heilongjiang, type locality; Figure 1).

***Pholcus phoenix* Zhang & Zhu, 2009**

Pholcus phoenix Zhang & Zhu, 2009: 69, figures 37A–I, 38A–I. Yao & Li, 2012: 30, figures 144A–D, 145A–C

Type material examined: Holotype: ♂ (only left palp and chelicerae examined; MHBUS), China, Liaoning, Fengcheng, Fenghuangshan Mountain (40°24.00'N, 124°00.00'E), 25 July 2005, Ming-Sheng Zhu leg. **Paratypes:** 1♂, 2♀ (MHBUS), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00083, Ar00084), 2♀ (SYNU-Ar00085, Ar00086), China, Liaoning, Fengcheng, Fenghuangshan Mountain (40°24.00'N, 124°00.00'E, 139 m), roadside of G304, 13 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. yaoshan* sp. nov. (Figures S27, S28) by having similar male chelicerae and by the epigyne (figure 37A, E in Zhang & Zhu, 2009, figure 145A in Yao & Li, 2012) but can be easily distinguished by the procurus with a wide prolatero-subdistal sclerite with an angular apophysis (figure 144A, C in Yao & Li, 2012; prolatero-subdistal sclerite narrow and without angular apophysis in *P. yaoshan*, arrowed 1 in Figure S27C) and a short ventro-subdistal apophysis (figure 144B in Yao & Li, 2012; ventro-subdistal apophysis long in *P. yaoshan*, arrowed in Figure S27B), by the uncus distally strongly curved (figure 144A in Yao & Li, 2012; uncus distally slightly curved in *P. yaoshan*, arrowed in Figure S28C), and by the triangular vulval pore plates (figure 145B in Yao & Li, 2012; pore plates nearly elliptic in *P. yaoshan*, Figure S28B).

Description (amendments): Male (SYNU-Ar00083). Cheliceral distal apophyses with two teeth each. Palpal tibia with prolatero-ventral projection; procurus with wide prolatero-subdistal sclerite provided with small proximal sclerite and angular apophysis, small ventro-subdistal apophysis, and curved dorso-distal apophysis; uncus with scaly edge; embolus weakly sclerotized, with some transparent distal projections (figure 144A–D in Yao & Li, 2012). Female (SYNU-Ar00085). Epigyne with lateral and median brown marks and pair of lateral protrusions anterior to epigynal plate. Vulva with pair of large lateral sclerites (figure 145A, B in Yao & Li,

2012).

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus shenshi* Yao & Li, sp. nov.**

Figures S17, S18

Holotype: ♂ (SYNU-Ar00087), China, Liaoning, Dandong, Kuandian County, Taipingshao Town, Kanchuangou Village, roadside of G331 (40°47.48'N, 125°02.75'E, 336 m), 7 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 4♂ (SYNU-Ar00088–Ar00091), 6♀ (SYNU-Ar00092–Ar00097), same data as holotype.

Etymology: The specific name is dedicated to the Shenyang Normal University in Liaoning, China and is a noun in apposition. Shenshi (Chinese Pinyin) is a short name for the university.

Diagnosis: The species resembles *P. xingqi* sp. nov. (Figures S25, S26) in having similar male chelicerae (Figure S18D) but can be easily distinguished by the procurus with a large, angular distal apophysis (arrowed 2 in Figure S17C; with two, small distal apophyses in *P. xingqi*, arrowed 2, 3 in Figure S25C), by the uncus medially strongly protruding, with a nearly angular proximal apophysis, distal apophysis with small angular apophysis (arrowed 1–3 in Figure S18C; uncus not protruding medially, proximal apophysis nearly quadrate, distal apophysis distally bifurcated in *P. xingqi*, arrowed 1, 2 in Figure S26C), by the epigyne not curved posteriorly (Figure S18A; posteriorly curved in *P. xingqi*, Figure S26A), and by the vulval anterior arch M-shaped (Figure S18B; wing shaped in *P. xingqi*, Figure S26B).

Description of holotype: Male (SYNU-Ar00087). Total length 5.36 (5.51 with clypeus), carapace 1.63 long, 1.75 wide, opisthosoma 3.73 long, 1.41 wide. Leg I: 36.22 (9.41, 0.66, 9.09, 14.81, 2.25), leg II: 25.81 (7.09, 0.64, 6.49, 10.03, 1.56), leg III: 17.60 (5.08, 0.55, 4.29, 6.67, 1.01), leg IV: 24.32 (6.96, 0.61, 6.24, 9.17, 1.34); tibia I L/d: 45. Eye interdistances and diameters: PME-PME 0.27, PME 0.14, PME-ALE 0.05, AME-AME 0.06, AME 0.13. Width/length ratio of sternum (1.11/0.87). Habitus as in Figure S18E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus brown; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S18D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S17A, B; trochanter with long (much longer than wide), retrolaterally strongly bulged ventral apophysis; femur with small retrolatero-proximal apophysis and indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with large, curved prolatero-distal membranous process (arrowed 1 in Figure S17C) provided with large, angular distal apophysis (arrowed 2 in Figure S17C) and small membranous process (arrowed in Figure S17D); uncus medially strongly protruding (arrowed 1 in Figure S18C) and with scales, proximal apophysis nearly angular (arrowed 2 in Figure S18C), distal apophysis with small angular apophysis (arrowed 3 in Figure S18C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S18C). Retrolateral trichobothrium of tibia I at 5% proximally; legs with

short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 31 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00092). Similar to male, habitus as in Figure S18G, H. Total length 4.31 (4.46 with clypeus), carapace 1.37 long, 1.41 wide, opisthosoma 2.94 long, 1.35 wide; tibia I: 6.71; tibia I L/d: 33. Eye interdistances and diameters: PME-PME 0.20, PME 0.11, PME-ALE 0.05, AME-AME 0.06, AME 0.11. Width/length ratio of sternum (0.87/0.61). Epigyne (Figure S18A) with anterior brown marks and short knob. Vulva (Figure S18B) with M-shaped, sclerotized anterior arch, pair of small, round pore plates, and pair of small, nearly triangular lateral sclerites.

Variation: Tibia I in four paratype males (SYNU-Ar00088–Ar00091): 9.11, 9.51, 9.74, 10.01. Tibia I in the other five paratype females (SYNU-Ar00093–Ar00097): 6.26, 6.91, 6.94, 7.21, 7.32.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus sublingulatus* Zhang & Zhu, 2009**

Pholcus sublingulatus Zhang & Zhu, 2009: 83, figure 48A–J. Yao & Li, 2012: 33, figures 163A–D, 164A–C.

Type material examined: Paratypes: 1♂, 1♀ (female: only epigyne examined; MHB), China, Jilin, Changbaishan Mountain Natural Reserve (42°00.00'N, 128°06.00'E), 11 August 2004, Zhi-Sheng Zhang leg.

Other material examined: 2♂ (SYNU-Ar00098, Ar00099), 2♀ (SYNU-Ar00100, Ar00101), China, Jilin, Baishan, Fusong County, Xianrenqiao Town, Xianrenqiao Village, roadside of X094 (42°11.56'N, 127°13.65'E, 528 m), 29 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species can be easily distinguished from all known congeners by the procurus with a large, curved prolatero-distal sclerite and a small dorso-distal sclerite (figure 163D in Yao & Li, 2012), by the uncus flat and nearly elliptic (figure 163A in Yao & Li, 2012), and by the vulval anterior arch wavy (figure 164B in Yao & Li, 2012).

Description (amendments): Male (SYNU-Ar00098). Cheliceral distal apophyses with two teeth each. Procurus with large, curved prolatero-distal sclerite, small dorso-distal sclerite, and two strong and one slender dorsal spines; uncus flat and nearly elliptic, with scaly edge; embolus with some transparent distal projections (figure 163A–D in Yao & Li, 2012). Female (SYNU-Ar00100). Epigyne curved posteriorly, with lateral brown marks. Vulva with pair of nearly triangular lateral sclerites and pore plates elliptic (figure 164A, B in Yao & Li, 2012).

Natural history: The species was found on rock walls.

Distribution: China (Jilin, type locality; Figure 1).

***Pholcus tianmenshan* Yao & Li, sp. nov.**

Figures S19, S20

Holotype: ♂ (SYNU-Ar00102), China, Liaoning, Dalian, Zhuanghe, Xianrendong Town, Tianmenshan Mountain National Forest Park (40°09.33'N, 122°53.10'E, 233 m), 15 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 1♂ (SYNU-Ar00103), 2♀ (SYNU-Ar00104, Ar00105), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. xianrendong* Liu & Tong, 2015 (Figure S24, figures 1A–J, 2A–F in Liu & Tong, 2015) in having similar bulbal apophyses and by the epigyne (Figure S20A, C) but can be easily distinguished by the procurus with a prolatero-distal membranous process and a sclerotized retrolatero-distal apophysis (arrowed in Figure S19B, C; with prolatero-subdistal and dorso-distal membranes, without retrolatero-distal apophysis in *P. xianrendong*, arrowed 1, 2 in Figure S24C), by the male cheliceral frontal apophyses facing downward (Figure S20D; facing forward in *P. xianrendong*, figure 1E, I in Liu & Tong, 2015), and by the vulval pore plates nearly elliptic (Figure S20B; pore plates narrow anteriorly and wide posteriorly in *P. xianrendong*, Figure S24B).

Description of holotype: Male (SYNU-Ar00102). Total length 6.26 (6.56 with clypeus), carapace 1.87 long, 2.09 wide, opisthosoma 4.39 long, 1.85 wide. Leg I: 46.62 (9.55, 0.95, 12.68, 20.34, 3.10), leg II: 34.85 (9.48, 0.83, 9.28, 13.55, 1.71), leg III: 26.16 (7.35, 0.78, 6.71, 9.90, 1.42), leg IV: 34.80 (10.30, 0.82, 9.17, 13.20, 1.31); tibia I L/d: 55. Eye interdistances and diameters: PME-PME 0.26, PME 0.16, PME-ALE 0.04, AME-AME 0.05, AME 0.11. Width/length ratio of sternum (1.46/1.28). Habitus as in Figure S20E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brown marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S20D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S19A, B; trochanter with short (as wide as long), retrolaterally strongly bulged ventral apophysis; femur slender, with small retrolatero-proximal apophysis and distinct ventral protuberance; tibia slender, with prolatero-ventral projection; procurus slender and simple, with prolatero-distal membranous process (arrowed in Figure S19C) and retrolatero-distal apophysis (arrowed in Figure S19B); uncus narrow, with scaly edge (Figure S20C); embolus weakly sclerotized, with some transparent distal projections (Figure S20C). Retrolateral trichobothrium of tibia I at 2% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 35 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00104). Similar to male, habitus as in Figure S20G, H. Total length 6.53 (6.73 with clypeus), carapace 1.94 long, 2.06 wide, opisthosoma 4.59 long, 1.78 wide; tibia I: 10.36; tibia I L/d: 51. Eye interdistances and diameters: PME-PME 0.27, PME 0.17, PME-ALE 0.06, AME-AME 0.06, AME 0.12. Width/length ratio of sternum (1.28/1.06). Clypeus brown. Epigyne (Figure S20A) strongly curved posteriorly, with n-shaped brown marks and short knob. Vulva (Figure S20B) with strongly curved, sclerotized anterior arch and pair of large nearly elliptic pore plates.

Variation: Tibia I in paratype male (SYNU-Ar00103): 12.83. Tibia I in another paratype female (SYNU-Ar00105): 10.60.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus tongi* Yao & Li, 2012**

Pholcus tongi Yao & Li, 2012: 34, figures 173A–D, 174A–E, 175A–D, 176A–D.

Type material examined: Holotype: ♂ (IZCAS), China, Liaoning, Benxi, Huanren County, Wunüshan Mountain (41°20.00'N, 125°25.00'E), 27 August 2008, Yan-Feng Tong leg. **Paratypes:** 4♂, 4♀ (IZCAS), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00106, Ar00107), 2♀ (SYNU-Ar00108, Ar00109), China, Liaoning, Benxi, Huanren County, Huanren Town, Wunüshan Mountain (41°20.00'N, 125°25.00'E, 687 m), 25 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. longxigu* sp. nov. (Figures S13, S14) in having similar bulbal apophyses (figures 173A, 175A in Yao & Li, 2012) but can be easily distinguished by the procurus without a ventro-subdistal apophysis (figures 173A, C, 175A, 176A in Yao & Li, 2012; procurus with a curved, pointed ventro-subdistal apophysis in *P. longxigu*, arrowed 2 in Figure S13C), by the procurus not protruding dorso-subdistally (figures 173B, 175B in Yao & Li, 2012; dorso-subdistally strongly protruding in *P. longxigu*, arrowed in Figure S13B), by the male cheliceral frontal apophyses large and facing downward (figure 176D in Yao & Li, 2012; frontal apophyses small and nipple-shaped in *P. longxigu*, Figure S14D), by the epigyne strongly curved posteriorly (figures 174A, 176C in Yao & Li, 2012; very slightly curved posteriorly in *P. longxigu*, Figure S14A), by the vulval anterior arch divided into two adjacent elliptic sclerites (figures 174B, 175D in Yao & Li, 2012; anterior arch large and strongly sclerotized in *P. longxigu*, Figure S14B), and by the pore plates nearly teardrop shaped (figures 174B, 175D in Yao & Li, 2012; elliptic in *P. longxigu*, Figure S14B).

Description (amendments): Male (SYNU-Ar00106). Procurus with short, prolatero-subdistal spine-shaped apophysis with lateral membranous processes and long, distal spine-shaped apophysis with dorsal membranous process (figure 173A–D in Yao & Li, 2012). Female (SYNU-Ar00108). Epigyne strongly curved posteriorly, with lateral and median brown marks. Vulval anterior arch divided into two adjacent elliptic sclerites (figures 174A, B, 175D, 176C in Yao & Li, 2012).

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus wangi* Yao & Li, 2012**

Pholcus wangi Yao & Li, 2012: 37, figures 191A–D, 192A–E, 193A–D, 194A–D.

Type material examined: Holotype: ♂ (IZCAS), China, Liaoning, Dandong, Kuandian County, Tianhuashan Scenic Spot (41°04.00'N, 124°34.00'E), 17 August 2009, Hui-Ming Chen, Zhong Li & Hu-Peng Wang leg. **Paratypes:** 1♂, 8♀ (IZCAS), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00110, Ar00111), 2♀ (SYNU-Ar00112, Ar00113), China, Liaoning, Dandong, Kuandian County, Guanshui Town, Tianhuashan Scenic Spot (41°04.00'N, 124°34.00'E, 405 m), 14 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. guanshui* sp. nov. (Figures S7, S8) by having similar male chelicerae, bulbal apophyses, and the epigyne (figures 191A, 192A, 193A, C, 194C, D in Yao & Li, 2012) but can be easily distinguished by the procurus with a distinct dorso-subdistal apophysis and sclerotized prolatero-subdistal apophysis (figures 191A–C, 193A, B, 194A in Yao & Li, 2012; without dorso-subdistal apophysis and prolatero-subdistal apophysis in *P. guanshui*,

Figure S7A–C) and by the vulval anterior arch laterally strongly curved and with pair of large dorsal sclerites (figures 192B, 193D in Yao & Li, 2012; anterior arch slightly curved and without dorsal sclerites in *P. guanshui*, Figure S8B). Also see diagnoses for *P. gaoi* and *P. yuhuangshan* sp. nov.

Description (amendments): Male (SYNU-Ar00110). Procursus with large, prolatero-subdistal membranous process with small pointed apophysis and long, pointed ventro-distal apophysis (figures 191A–C, 193A, B, 194A in Yao & Li, 2012). Female (SYNU-Ar00112). Epigyne curved posteriorly, with median brown marks. Vulval anterior arch with pair of large dorsal sclerites (figures 192A, B, 193D, 194C in Yao & Li, 2012).

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus wangjiang* Yao & Li, sp. nov.**

Figures S21, S22

Holotype: ♂ (SYNU-Ar00114), China, Jilin, Tonghua, Ji'an, Qingshi Town, Haozigou Village, near Wangjiang Bridge, roadside of G331 (41°19.78'N, 126°24.03'E, 226 m), 28 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 1♂ (SYNU-Ar00115), 1♀ (SYNU-Ar00116), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. ningan* Yao & Li, 2018 (figures 6A–D, 7A–H in Zhu et al., 2018) in having similar male chelicerae and by the epigyne (Figure S22A, D) but can be easily distinguished by the procurus with a long, nearly s-shaped prolatero-distal apophysis (arrowed 2 in Figure S21C; with short prolatero-subdistal apophysis in *P. ningan*, arrowed in figure 6C in Zhu et al., 2018), by the uncus distally nearly semicircular (Figure S22C; distally nearly rectangular in *P. ningan*, figure 7C in Zhu et al., 2018), and by the vulva with narrow and curved antero-lateral sclerites (Figure S22B; antero-lateral sclerites large and nearly round in *P. ningan*, figure 7B in Zhu et al., 2018). Also see diagnosis for *P. lingulatus*.

Description of holotype: Male (SYNU-Ar00114). Total length 4.93 (5.11 with clypeus), carapace 1.44 long, 1.63 wide, opisthosoma 3.49 long, 1.59 wide. Leg I: 42.14 (10.70, 0.74, 10.50, 17.85, 2.35), leg II: 28.44 (7.95, 0.73, 6.78, 11.33, 1.65), leg III: 19.05 (5.40, 0.65, 4.85, 7.05, 1.10), leg IV: 20.01 (5.80, 0.66, 4.95, 7.35, 1.25); tibia I L/d: 55. Eye interdistances and diameters: PME-PME 0.23, PME 0.14, PME-ALE 0.06, AME-AME 0.05, AME 0.10. Width/length ratio of sternum (1.13/0.99). Habitus as in Figure S22E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brownish marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S22D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S21A, B; trochanter with long (much longer than wide), retrolaterally strongly bulged ventral apophysis; femur with retrolatero-proximal apophysis and indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with large, prolatero-distal membranous process provided with long, pointed, nearly s-shaped sclerotized

apophysis (arrowed 1, 2 in Figure S21C) and two strong and one slender dorsal spines (arrowed in Figure S21D); uncus with scales (Figure S22C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S22C). Retrolateral trichobothrium of tibia I at 2% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 37 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00116). Similar to male, habitus as in Figure S22G, H. Total length 5.58 (5.77 with clypeus), carapace 1.46 long, 1.66 wide, opisthosoma 4.12 long, 2.38 wide; tibia I: 8.68; tibia I L/d: 46. Eye interdistances and diameters: PME-PME 0.22, PME 0.15, PME-ALE 0.07, AME-AME 0.07, AME 0.11. Width/length ratio of sternum (1.08/0.93). Clypeus brown. Epigyne (Figure S22A) with lateral brown marks and short knob. Vulva (Figure S22B) with slightly curved, sclerotized anterior arch, pair of nearly elliptic pore plates, and pair of curved antero-lateral sclerites.

Variation: Tibia I in paratype male (SYNU-Ar00115): 11.22.

Natural history: The species was found on rock walls.

Distribution: China (Jilin, type locality; Figures 1, S1D).

***Pholcus wangtian* Tong & Ji, 2010**

Figure S23

Pholcus wangtian Tong & Ji, 2010: 102, figures 1g–i, 1, 4a–f.

Type material examined: Holotype: ♂ (SYNU), China, Liaoning, Benxi, Huanren County, Wangtian Cave (41°11.00'N, 125°16.00'E), 26 August 2008, Yan-Feng Tong leg. **Paratypes:** 8♂, 18♀ (SYNU), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00117, Ar00118), 2♀ (SYNU-Ar00119, Ar00120), China, Liaoning, Benxi, Huanren County, Wangtian Cave (41°11.00'N, 125°16.00'E, 306 m), 26 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. longxigu* sp. nov. (Figures S13, S14) by having similar male chelicerae and bulbal apophyses (Figure S23A, figure 4D in Tong & Ji, 2010) but can be easily distinguished by the procurus with a spine-shaped prolatero-subdistal apophysis, a large dorso-subdistal membranous process, and a distal membranous process (arrowed 1, 3, 4 in Figure S23C; with pointed prolatero-subdistal apophysis, curved, pointed ventro-subdistal apophysis, and long, spine-shaped distal apophysis in *P. longxigu*, arrowed 1–3 in Figure S13C), by the epigyne strongly curved posteriorly (figures 1l, 4e in Tong & Ji, 2010; very slightly curved posteriorly in *P. longxigu*, Figure S14A), and by the vulval anterior arch strongly curved (Figure S23B; anterior arch large and strongly sclerotized in *P. longxigu*, Figure S14B). Also see diagnosis for *P. decorus*.

Description (amendments): Male (SYNU-Ar00117). Cheliceral distal apophyses with two teeth each. Palpal tibia with prolatero-ventral projection; procurus with spine-shaped prolatero-subdistal apophysis with lateral, curved membranous process (arrowed 1, 2 in Figure S23C), large, dorso-subdistal membranous process with small pointed apophysis (arrowed 3 in Figure S23C), distal membranous process (arrowed 4 in Figure S23C), and dorsal spine (arrowed 5 in Figure S23C); uncus with scaly edge (Figure S23A); embolus weakly sclerotized, with some transparent distal projections (Figure S23A). Female (SYNU-Ar00119). Epigyne strongly curved

posteriorly. Vulva (Figure S23B) with strongly curved anterior arch and pair of long elliptic pore plates (wide anteriorly and narrow posteriorly).

Natural history: The species was found on rock walls near the cave entrance.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus xianrendong* Liu & Tong, 2015**

Figure S24

Pholcus xianrendong Liu & Tong, 2015: 32, figures 1A–J, 2A–F.

Type material examined: Holotype: ♂ (SYNU), China, Liaoning, Dalian, Zhuanghe, Xianrendong National Forest Park (39°54.00'N, 122°53.40'E), 25 June 2014, Yan-Feng Tong leg.

Paratypes: 4♂, 8♀ (SYNU), same data as holotype.

Other material examined: 2♂ (SYNU-Ar00121, Ar00122), 2♀ (SYNU-Ar00123, Ar00124), China, Liaoning, Dalian, Zhuanghe, Xianrendong Town, Bingyugou Scenic Spot (40°00.92'N, 122°59.63'E, 108 m), 15 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Diagnosis: The species resembles *P. tianmenshan* sp. nov. (Figures S19, S20) in having a similar bulbal apophyses and by the epigyne (Figure S24A, figure 2C, E in Liu & Tong, 2015) but can be easily distinguished by the procurus with prolatero-subdistal and dorso-distal membranes and without a retrolatero-distal apophysis (arrowed 1, 2 in Figure S24C; with prolatero-distal membranous process and sclerotized retrolatero-distal apophysis in *P. tianmenshan*, arrowed in Figure S19B, C), by the male cheliceral frontal apophyses facing forward (figure 1E, I in Liu & Tong, 2015; facing downward in *P. tianmenshan*, Figure S20D), and by the vulval pore plates narrow anteriorly and wide posteriorly (Figure S24B; pore plates nearly elliptic in *P. tianmenshan*, Figure S20B). Also see diagnosis for *P. gaizhou* sp. nov.

Description (amendments): Holotype male. Cheliceral distal apophyses with two teeth each. Palpal tibia with prolatero-ventral projection; procurus with blunt tip with prolatero-subdistal and dorso-distal membranes (arrowed 1, 2 in Figure S24C); uncus narrow, with scaly edge (Figure S24A); embolus weakly sclerotized, with some transparent distal projections (Figure S24A). Paratype female. Epigyne strongly curved posteriorly, with n-shaped brown marks. Vulva (Figure S24B) with pair of anteriorly narrow and posteriorly wide pore plates.

Natural history: The species was found on rock walls and under the roof of an old house.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus xingqi* Yao & Li, sp. nov.**

Figures S25, S26

Holotype: ♂ (SYNU-Ar00125), China, Jilin, Tonghua, Ji'an, Dalu Town, Dalu Village, near Xingqi Power Station, roadside of X004 (40°59.75'N, 125°46.55'E, 403 m), 27 June 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 1♂ (SYNU-Ar00126), 2♀ (SYNU-Ar00127, Ar00128), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. hamatus* Tong & Ji, 2010 (Figure S9, figures 1a–c, j, 2a–g in Tong & Ji, 2010) in having similar male chelicerae and by the vulva (Figure S26B, D) but can be

easily distinguished by the procurus with a short, small, pointed distal apophysis (arrowed 2 in Figure S25C; pointed distal apophysis thick in *P. hamatus*, arrowed 2 in Figure S9C), by the uncus with a wide proximal apophysis and short, wide distal apophysis (distally bifurcated) (arrowed 1, 2 in Figure S26C; proximal apophysis narrow, distal apophysis slender in *P. hamatus*, arrowed 1, 2 in Figure S9A), and by the epigyne posteriorly strongly curved (Figure S26A; not curved posteriorly in *P. hamatus*, figures 1j, 2f in Tong & Ji, 2010). Also see diagnosis for *P. shenshi* sp. nov.

Description of holotype: Male (SYNU-Ar00125). Total length 5.06 (5.23 with clypeus), carapace 1.38 long, 1.68 wide, opisthosoma 3.68 long, 1.44 wide. Leg I: 36.35 (9.43, 0.67, 8.94, 15.03, 2.28), leg II: 24.36 (6.83, 0.58, 6.12, 9.39, 1.44), leg III: 16.55 (4.53, 0.60, 4.05, 6.33, 1.04), leg IV: 23.24 (7.08, 0.55, 5.83, 8.58, 1.20); tibia I L/d: 60. Eye interdistances and diameters: PME-PME 0.22, PME 0.17, PME-ALE 0.06, AME-AME 0.06, AME 0.13. Width/length ratio of sternum (1.19/0.92). Habitus as in Figure S26E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus brown; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S26D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S25A, B; trochanter with long (much longer than wide) ventral apophysis; femur with indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with large prolatero-distal membranous process (arrowed 1 in Figure S25C) with two, small pointed apophyses (arrowed 2, 3 in Figure S25C) and small membranous process (arrowed in Figure S25D), and with dorsal spine (arrowed in Figure S25A); uncus with nearly quadrate proximal apophysis (arrowed 1 in Figure S26C), distal apophysis (arrowed 2 in Figure S26C, distally bifurcated), and scales; appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S26C). Retrolateral trichobothrium of tibia I at 3% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 36 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00127). Similar to male, habitus as in Figure S26G, H. Total length 4.68 (4.84 with clypeus), carapace 1.37 long, 1.42 wide, opisthosoma 3.31 long, 1.69 wide; tibia I: 7.82; tibia I L/d: 49. Eye interdistances and diameters: PME-PME 0.19, PME 0.15, PME-ALE 0.03, AME-AME 0.05, AME 0.11. Width/length ratio of sternum (0.96/0.77). Epigyne (Figure S26A) curved posteriorly, with short knob. Vulva (Figure S26B) with wing-shaped, sclerotized anterior arch, pair of small, oval pore plates, and pair of nearly triangular lateral sclerites.

Variation: Tibia I in paratype male (SYNU-Ar00126): 9.58. Tibia I in another paratype female (SYNU-Ar00128): 7.57.

Natural history: The species was found on rock walls.

Distribution: China (Jilin, type locality; Figure 1).

Pholcus yaoshan Yao & Li, sp. nov.

Figures S27, S28

Holotype: ♂ (SYNU-Ar00129), China, Liaoning, Anshan, Xiuyan County, Yaoshan Town,

Yaoshan Scenic Spot (40°37.66'N, 123°24.71'E, 206 m), 12 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 1♂ (SYNU-Ar00130), 3♀ (SYNU-Ar00131–Ar00133), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. phoenixus* Zhang & Zhu, 2009 (figures 37A–I, 38A–I in Zhang & Zhu, 2009, figures 144A–D, 145A–C in Yao & Li, 2012) by the similar male chelicerae and the epigyne (Figure S28A, D) but can be easily distinguished by the procurus with a narrow prolatero-subdistal sclerite (arrowed 1 in Figure S27C; prolatero-subdistal sclerite wide and with angular apophysis in *P. phoenixus*, figure 144A, C in Yao & Li, 2012) and a long ventro-subdistal apophysis (arrowed in Figure S27B; ventro-subdistal apophysis short in *P. phoenixus*, figure 144B in Yao & Li, 2012), by the uncus distally slightly curved (arrowed in Figure S28C; uncus distally strongly curved in *P. phoenixus*, figure 144A in Yao & Li, 2012), and by the vulval pore plates nearly elliptic (Figure S28B; pore plates triangular in *P. phoenixus*, figure 145B in Yao & Li, 2012). Also see diagnosis for *P. jiguanshan* sp. nov.

Description of holotype: Male (SYNU-Ar00129). Total length 5.83 (6.04 with clypeus), carapace 1.58 long, 1.78 wide, opisthosoma 4.25 long, 1.64 wide. Leg I: 44.29 (10.52, 0.79, 11.24, 19.17, 2.57), leg II: 31.42 (8.66, 0.74, 8.12, 12.27, 1.63), leg III: 21.37 (5.87, 0.64, 5.43, 8.27, 1.16), leg IV: 28.92 (8.02, 0.71, 7.46, 11.14, 1.59); tibia I L/d: 75. Eye interdistances and diameters: PME-PME 0.25, PME 0.16, PME-ALE 0.06, AME-AME 0.04, AME 0.12. Width/length ratio of sternum (1.22/1.02). Habitus as in Figure S28E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brown marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S28D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S27A, B; trochanter with long (much longer than wide), retrolaterally strongly bulged ventral apophysis; femur with small retrolatero-proximal apophysis and indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with long, straight prolatero-subdistal sclerite provided with pointed proximal apophysis (arrowed 1, 2 in Figure S27C), curved distal apophysis (arrowed 3 in Figure S27C), distally blunt ventro-subdistal apophysis (arrowed in Figure S27B), and two dorsal spines (arrowed in Figure S27D); uncus with scales, distally slightly curved (arrowed in Figure S28C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S28C). Retrolateral trichobothrium of tibia I at 2% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 35 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00131). Similar to male, habitus as in Figure S28G, H. Total length 5.84 (6.02 with clypeus), carapace 1.66 long, 1.80 wide, opisthosoma 4.18 long, 1.82 wide; tibia I: 8.92; tibia I L/d: 64. Eye interdistances and diameters: PME-PME 0.22, PME 0.16, PME-ALE 0.06, AME-AME 0.06, AME 0.11. Width/length ratio of sternum (1.10/0.93). Clypeus brown. Epigyne (Figure S28A) with median brown marks, short knob, and pair of lateral protrusions anterior to epigynal plate (arrowed in Figure S28A). Vulva (Figure S28B) with laterally slightly curved, sclerotized anterior arch, pair of nearly elliptic pore plates, and pair of large lateral sclerites.

Variation: Tibia I in paratype male (SYNU-Ar00130): 10.62. Tibia I in the other two paratype females (SYNU-Ar00132, Ar00133): 9.08, 9.76.

Natural history: The species was found on rock walls.

Distribution: China (Liaoning, type locality; Figure 1).

***Pholcus yuhuangshan* Yao & Li, sp. nov.**

Figures S1B, S29, S30

Holotype: ♂ (SYNU-Ar00134), China, Jilin, Tonghua, Dongchang District, Yuhuangshan Park (41°43.80'N, 125°56.10'E, 422 m), 6 July 2020, Zhi-Yuan Yao & Xiang Wang leg.

Paratypes: 2♂ (SYNU-Ar00135, Ar00136), 4♀ (SYNU-Ar00137–Ar00140), same data as holotype.

Etymology: The specific name refers to the type locality and is a noun in apposition.

Diagnosis: The species resembles *P. wangi* Yao & Li, 2012 (figures 191A–D, 192A–E, 193A–D, 194A–D in Yao & Li, 2012) by the similar male chelicerae (Figure S30D) but can be easily distinguished by the procurus with a short, angular ventro-distal apophysis and blunt distal apophysis (arrowed 2, 3 in Figure S29C; with long ventro-distal apophysis, without distal apophysis in *P. wangi*, figures 191A–C, 193A, B, 194A in Yao & Li, 2012), by the uncus distally strongly curved (Figure S30C; not curved distally in *P. wangi*, figures 191A, 193A in Yao & Li, 2012), by the epigyne not curved posteriorly (Figure S30A; posteriorly strongly curved in *P. wangi*, figures 192A, 194C in Yao & Li, 2012), and by the vulval anterior arch without dorsal sclerites (Figure S30B; with pair of large dorsal sclerites in *P. wangi*, figures 192B, 193D in Yao & Li, 2012).

Description of holotype: Male (SYNU-Ar00134). Total length 5.32 (5.52 with clypeus), carapace 1.65 long, 1.87 wide, opisthosoma 3.67 long, 1.56 wide. Leg I: 42.95 (11.25, 0.73, 11.00, 17.62, 2.35), leg II: 30.14 (8.25, 0.75, 7.55, 11.84, 1.75), leg III: 21.11 (6.06, 0.65, 5.28, 7.86, 1.26), leg IV: 27.82 (8.11, 0.73, 7.10, 10.23, 1.65); tibia I L/d: 55. Eye interdistances and diameters: PME-PME 0.25, PME 0.11, PME-ALE 0.05, AME-AME 0.05, AME 0.10. Width/length ratio of sternum (1.15/0.97). Habitus as in Figure S30E, F. Carapace yellowish, with brown radiating marks and marginal brown bands; ocular area yellowish, with median and lateral brown bands; clypeus yellowish, with brown marks; sternum yellowish, with brown marks. Legs yellowish, but dark brown on patellae and whitish on distal parts of femora and tibiae, with darker rings on subdistal parts of femora and proximal and subdistal parts of tibiae. Opisthosoma yellowish, with dorsal and lateral spots. Chelicerae (Figure S30D) with pair of proximo-lateral apophyses, pair of distal apophyses with two teeth each, and pair of frontal apophyses. Palps as in Figure S29A, B; trochanter with long (much longer than wide), retrolaterally strongly bulged ventral apophysis; femur with small retrolatero-proximal apophysis and indistinct ventral protuberance; tibia with prolatero-ventral projection; procurus simple proximally but complex distally, with large, prolatero-subdistal membranous process provided with short spine-shaped apophysis (arrowed 1 in Figure S29C), angular ventro-distal apophysis (arrowed 2 in Figure S29C), and blunt distal apophysis (arrowed 3 in Figure S29C); uncus with scaly edge (Figure S30C); appendix absent; embolus weakly sclerotized, with some transparent distal projections (Figure S30C). Retrolateral trichobothrium of tibia I at 5% proximally; legs with short vertical setae on tibiae, metatarsi, and tarsi; tarsus I with 34 distinct pseudosegments.

Description of paratype: Female (SYNU-Ar00137). Similar to male, habitus as in Figure S30G, H. Total length 5.53 (5.72 with clypeus), carapace 1.67 long, 1.86 wide, opisthosoma 3.86 long, 2.06 wide; tibia I: 9.26; tibia I L/d: 46. Eye interdistances and diameters: PME-PME 0.22, PME 0.13, PME-ALE 0.07, AME-AME 0.05, AME 0.07. Width/length ratio of sternum (1.25/1.02). Clypeus brown. Epigyne (Figure S30A) with lateral brown marks and short knob. Vulva (Figure S30B) with wavy, sclerotized anterior arch, pair of nearly elliptic pore plates, and two pairs of long lateral sclerites.

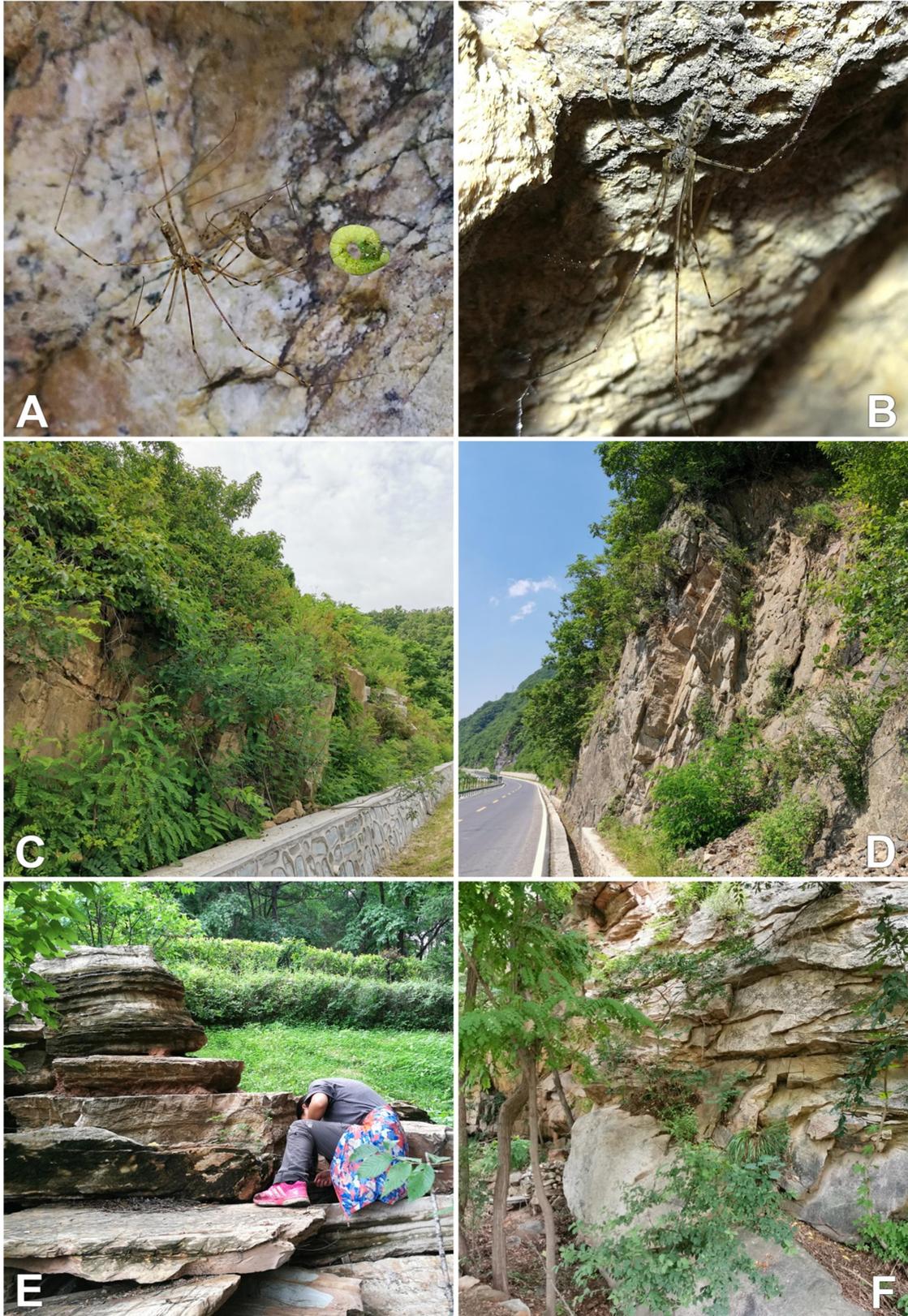
Variation: Tibia I in two paratype males (SYNU-Ar00135, Ar00136): 11.13, 11.56. Tibia I in the other three paratype females (SYNU-Ar00138–Ar00140): 7.89, 8.66, 9.26.

Natural history: The species was found on rock walls near a waterfall.

Distribution: China (Jilin, type locality; Figures 1, S1E).

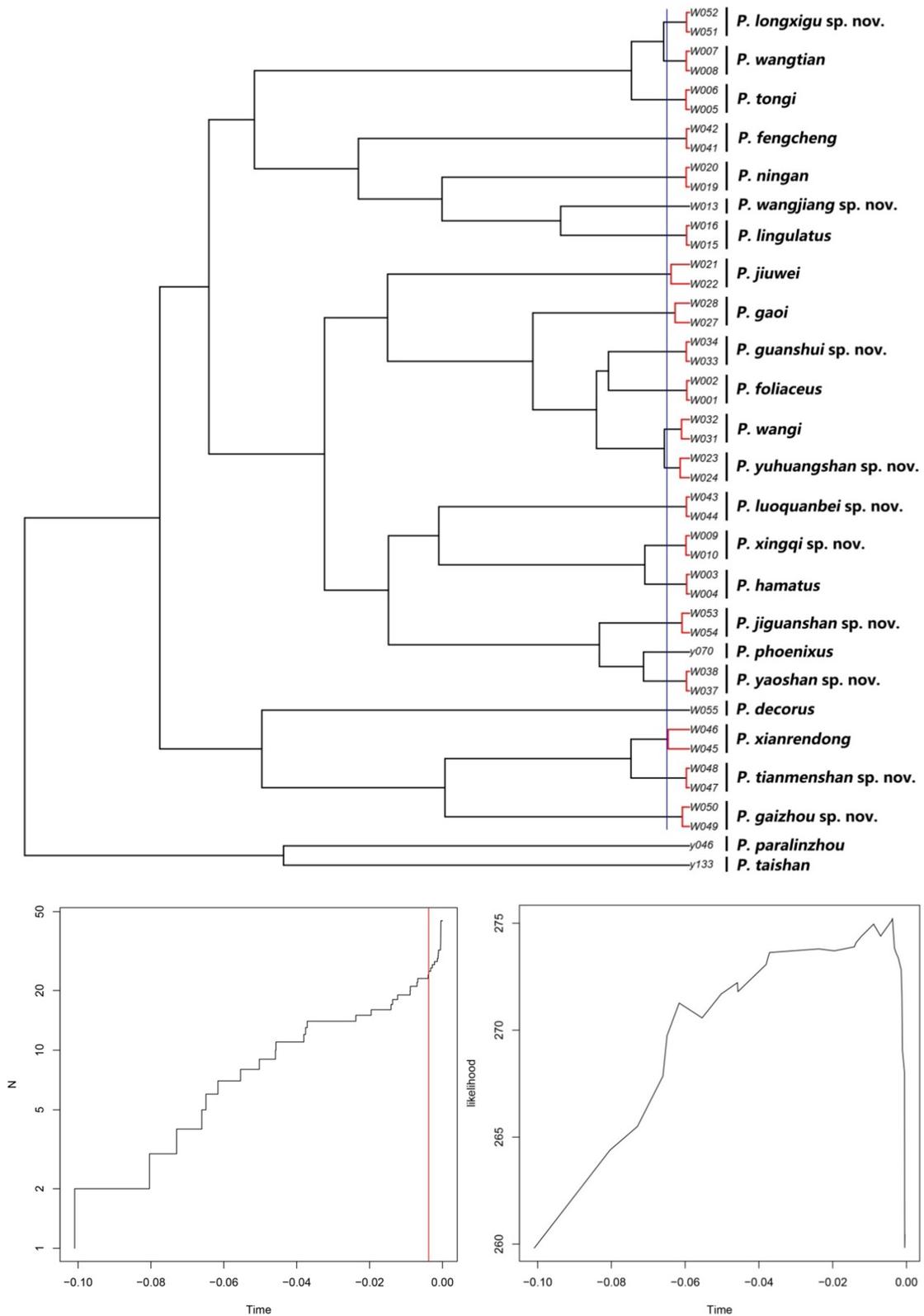
REFERENCES

- Fuesslin JC. 1775. *Verzeichnis der ihm bekannten schweizerischen Insekten, mit einer ausgemahlten Kupfertafel: nebst der Ankündigung eines neuen Insekten Werkes*. Zürich and Winterthur, 62 pp. (Araneae, pp. 60–61).
- Gao YQ, Gao JC, Zhu MS. 2002. Two new species of the genus *Pholcus* from China (Araneae: Pholcidae). *Acta Zootaxonomica Sinica*, **27**: 74–77.
- Huber BA. 2011. Revision and cladistic analysis of *Pholcus* and closely related taxa (Araneae, Pholcidae). *Bonner Zoologische Monographien*, **58**: 1–509.
- Koch CL. 1850. *Übersicht des Arachnidensystems*. Lotzbeck JL, Nürnberg, Heft 5, pp: 1–77.
- Liu Y, Tong YF. 2015. A new species of the genus *Pholcus* Walckenaer, 1805 from Xianrendong National Forest Park, Liaoning Province, China (Araneae: Pholcidae). *Acta Arachnologica Sinica*, **24**(1): 31–34.
- Peng YQ, Zhang F. 2013. Two new *Pholcus* species from northern China (Araneae: Pholcidae). *Acta Arachnologica*, **62**(2): 75–80.
- Song DX, Ren LY. 1994. Two new species of the genus *Pholcus* from China (Araneae: Pholcidae). *Journal of Hebei Normal University*, **1994**: 19–23.
- Song DX, Zhu MS, Chen J. 1999. *The spiders of China*. Hebei Science and Technology Publishing House, Shijiazhuang, 640 pp.
- Tong YF, Ji LZ. 2010. Three new species of the spider genus *Pholcus* (Araneae: Pholcidae) from Liaodong Mountain, China. *Entomologica Fennica*, **21**: 97–103.
- Walckenaer CA. 1805. *Tableau des aranéides ou caractères essentiels des tribus, genres, familles et races que renferme le genre Aranea de linné, avec la désignation des espèces comprises dans chacune de ces divisions*. de l'imprimerie de Dentu, Paris, 88 pp.
- Yao ZY, Li SQ. 2012. New species of the spider genus *Pholcus* (Araneae: Pholcidae) from China. *Zootaxa*, **3289**: 1–271.
- Zhang F, Zhu MS. 2009. A review of the genus *Pholcus* (Araneae: Pholcidae) from China. *Zootaxa*, **2037**: 1–114.
- Zhu KL, Yao ZY, Bai XJ, Li SQ. 2018. Five new species of the spider genus *Pholcus* Walckenaer, 1805 (Araneae: Pholcidae) from China and Thailand. *Zootaxa*, **4377**(2): 235–253.



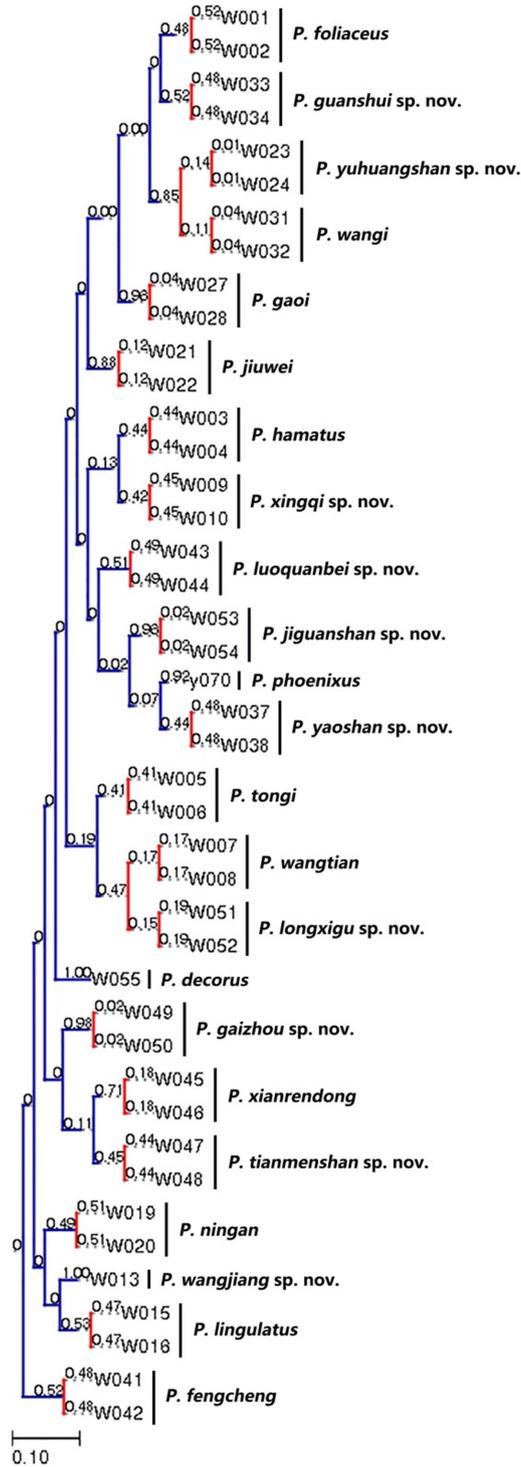
Supplementary Figure S1 Live specimens and habitats

A: *Pholcus lingulatus* Gao, Gao & Zhu, 2002, male and female; B: *P. yuhuangshan* sp. nov., female; C–F: Habitats for *P. luoquanbei* sp. nov., *P. wangjiang* sp. nov., *P. yuhuangshan* sp. nov., and *P. gaizhou* sp. nov., respectively. Photographs by Zhi-Yuan Yao.

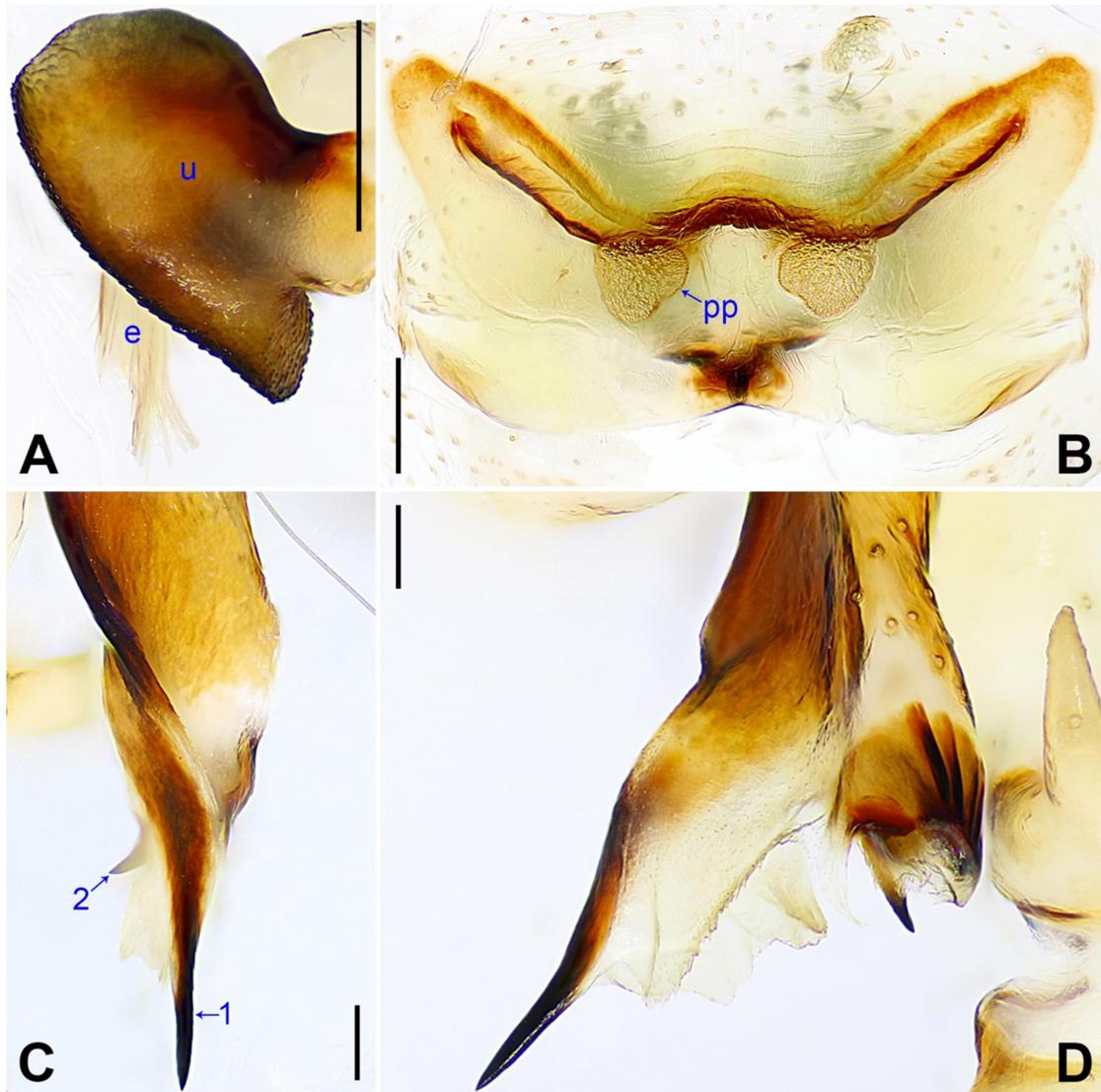


Supplementary Figure S2 Result of GMYC species delimitation analysis based on the COI gene tree

The blue line indicates the maximum-likelihood transition point where the branching rates switch from inter-specific to intra-specific events, as estimated by the GMYC model. Below are the lineages-through-time plot (left) and the single-threshold GMYC likelihood profile plot (right).

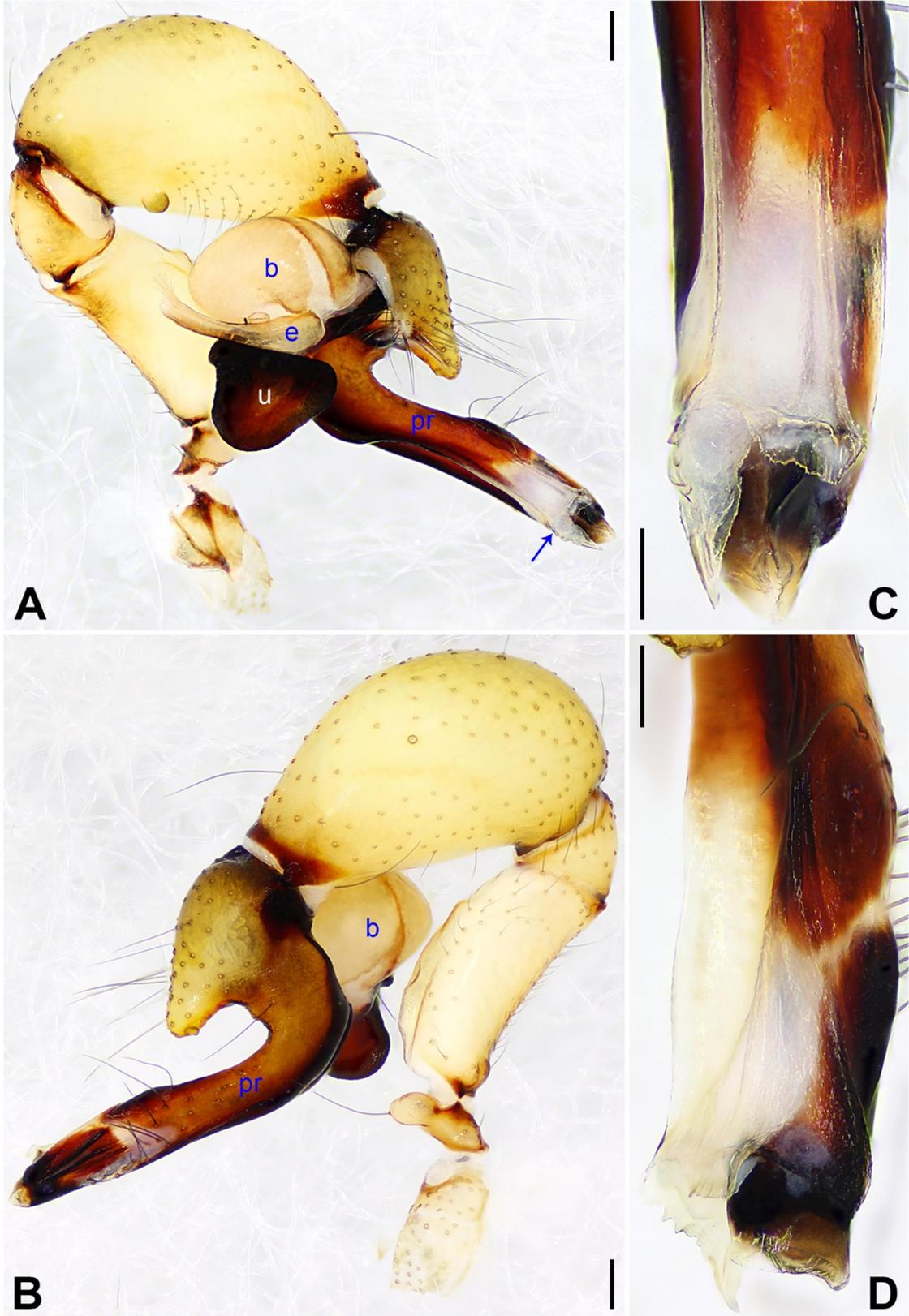


Supplementary Figure S3 Result of bPTP species delimitation analysis based on COI gene tree derived from likelihood analysis



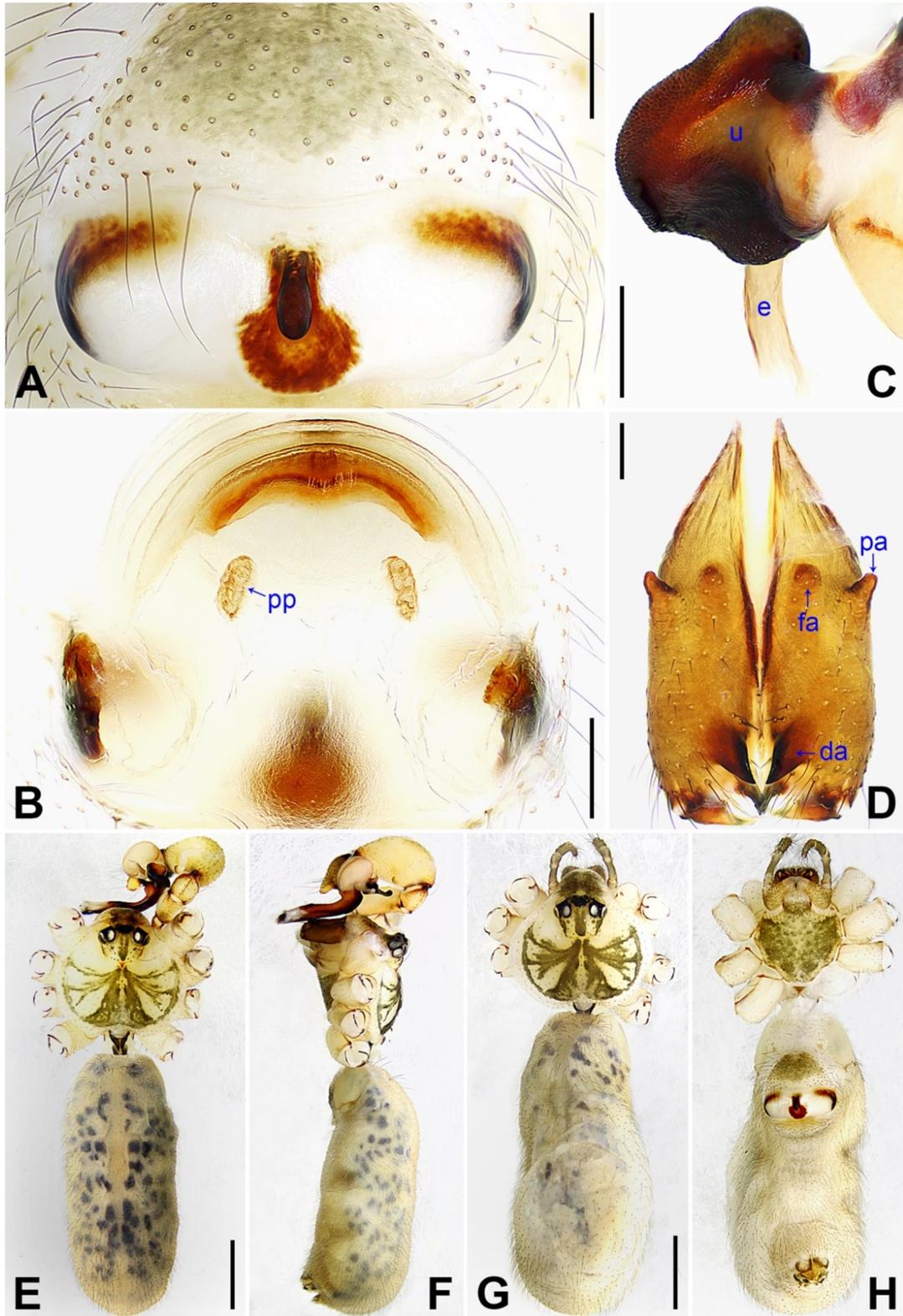
Supplementary Figure S4 *Pholcus foliaceus* Peng & Zhang, 2013

A: Bulbal apophyses, prolateral view; B: Vulva, dorsal view; C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at prolatero-distal spine-shaped apophysis, arrow 2 points at pointed retrolatero-subdistal apophysis; D: Dorsal view). e = embolus, pp = pore plate, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



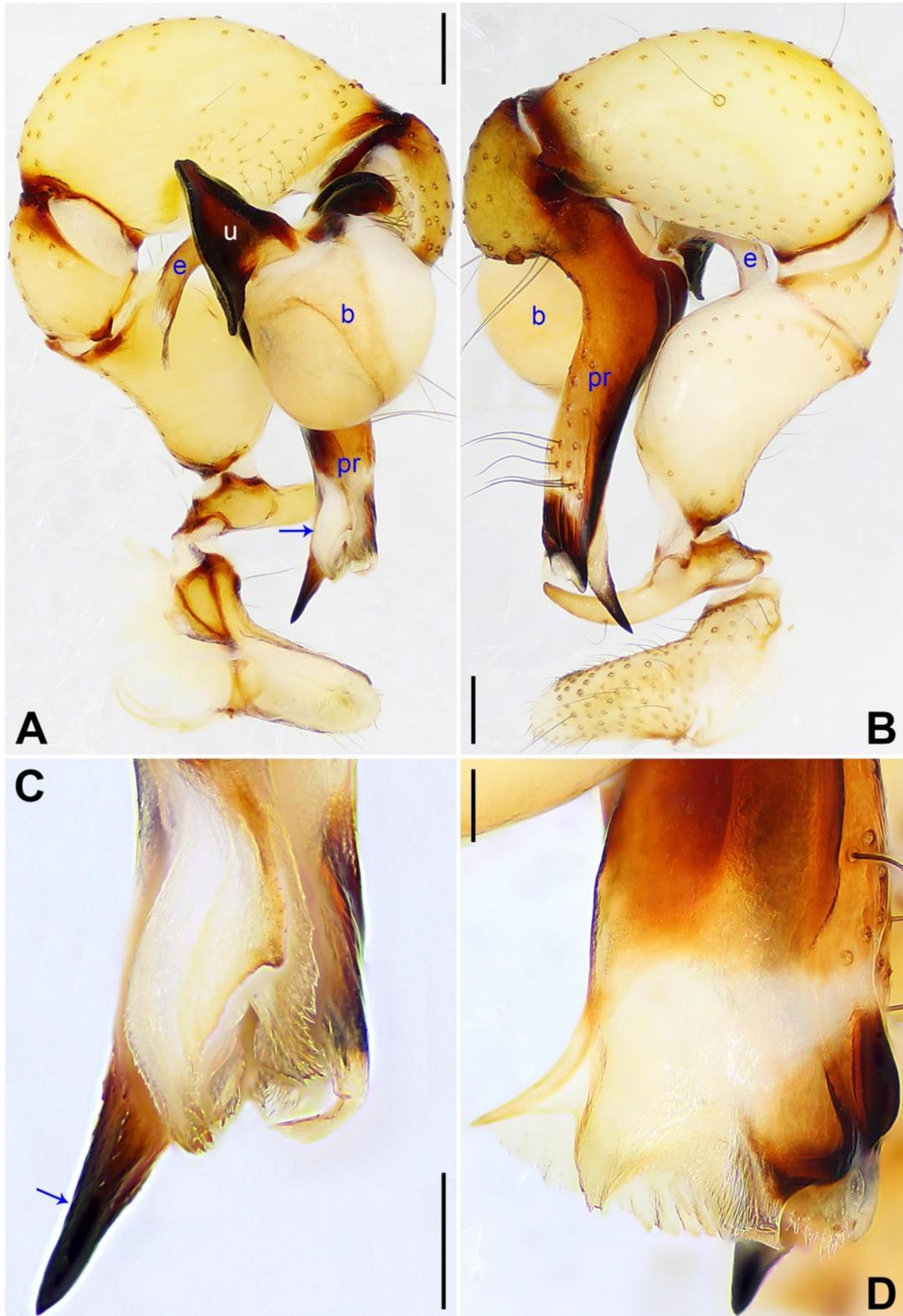
Supplementary Figure S5 *Pholcus gaizhou* sp. nov., holotype male

A, B: Palp (A: Prolateral view, arrow points at prolatero-subdistal membranous process; B: Retrolateral view); C, D: Distal part of procurus (C: Prolateral view; D: Dorsal view). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



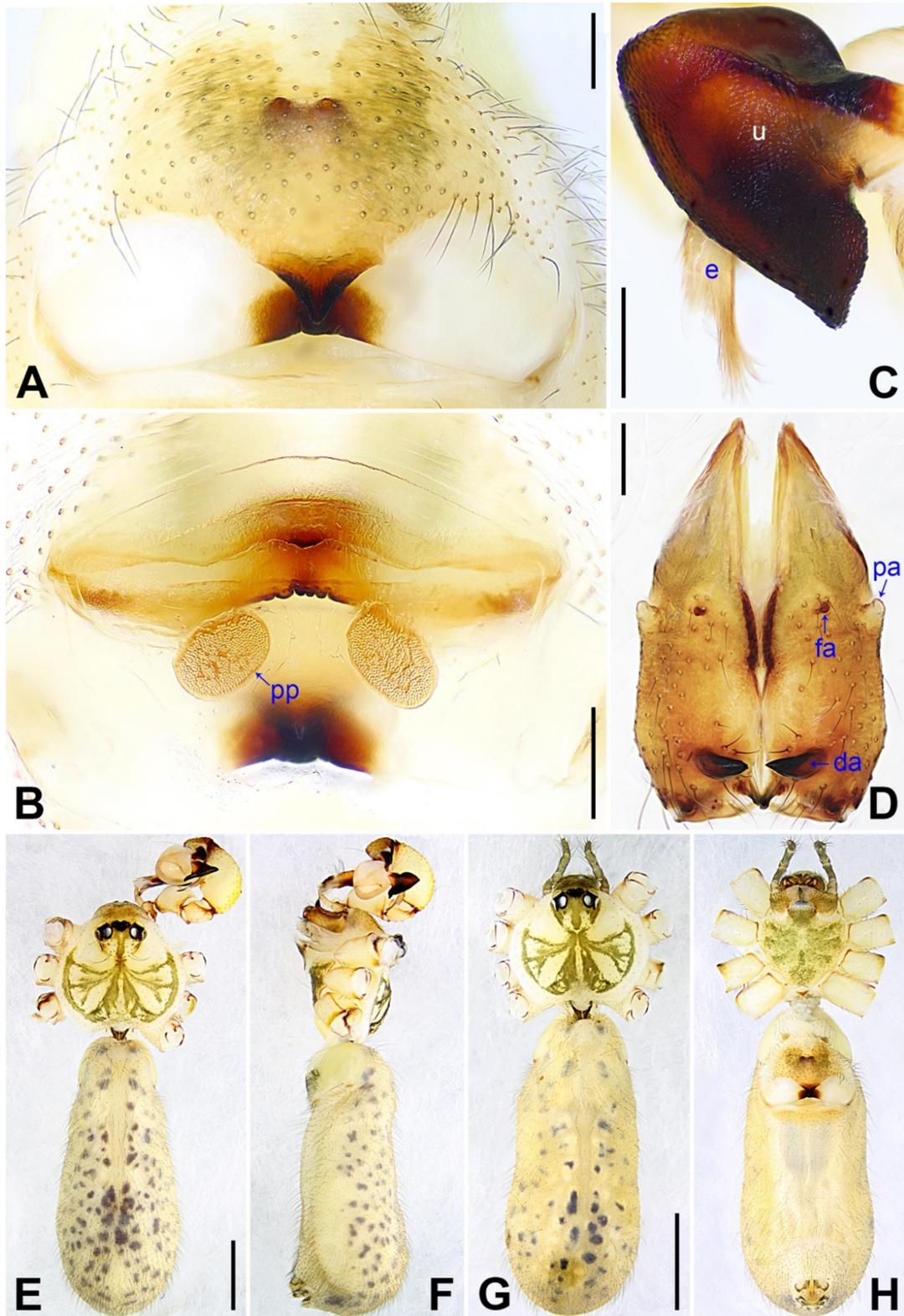
Supplementary Figure S6 *Pholcus gaizhou* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



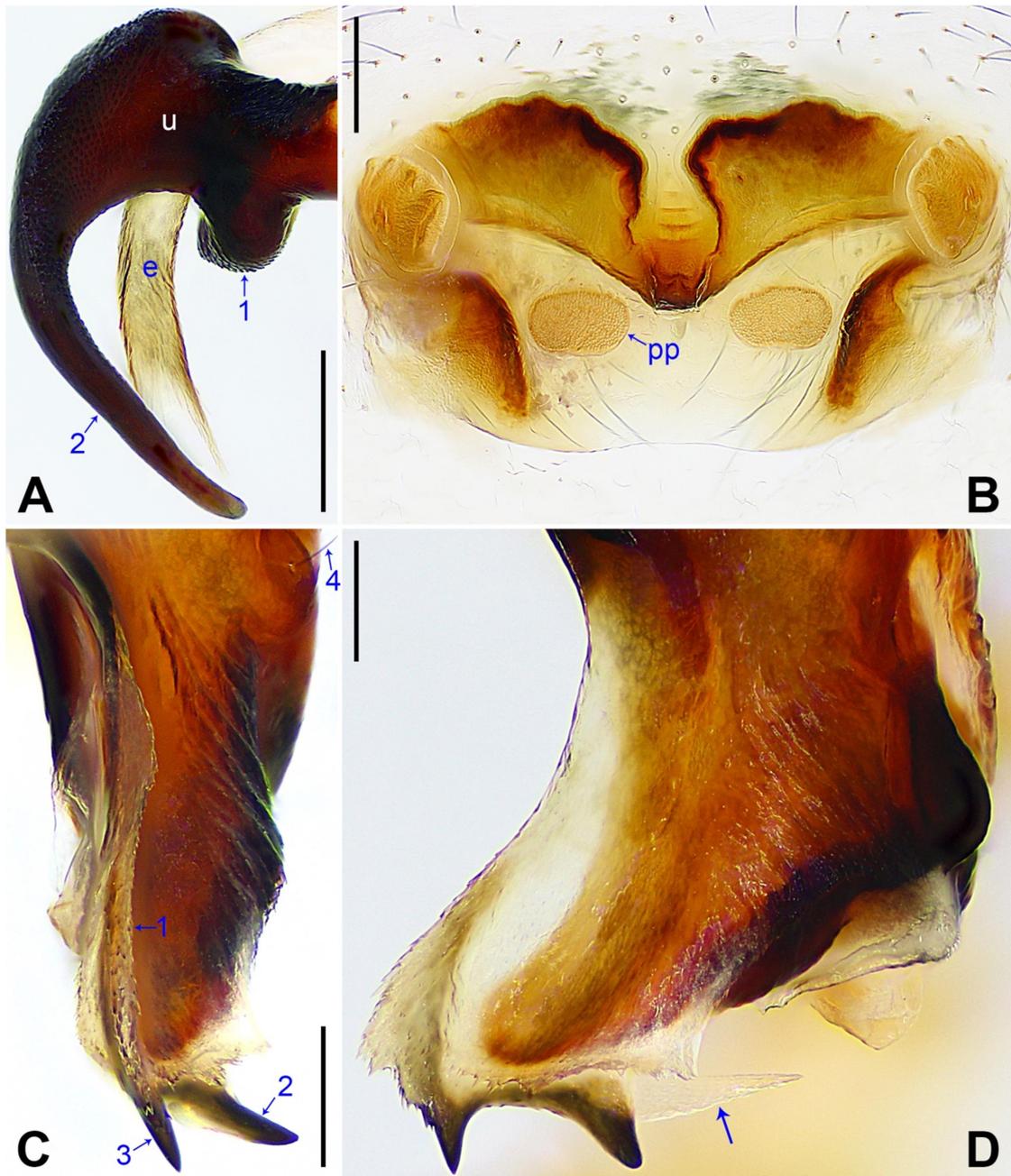
Supplementary Figure S7 *Pholcus guanshui* sp. nov., holotype (A, C, D) and paratype (B) males

A, B: Palp (A: Prolateral view, arrow points at prolatero-subdistal membranous process; B: Retrolateral view); C, D: Distal part of procurus (C: Prolateral view, arrow points at ventro-distal apophysis; D: Dorsal view). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



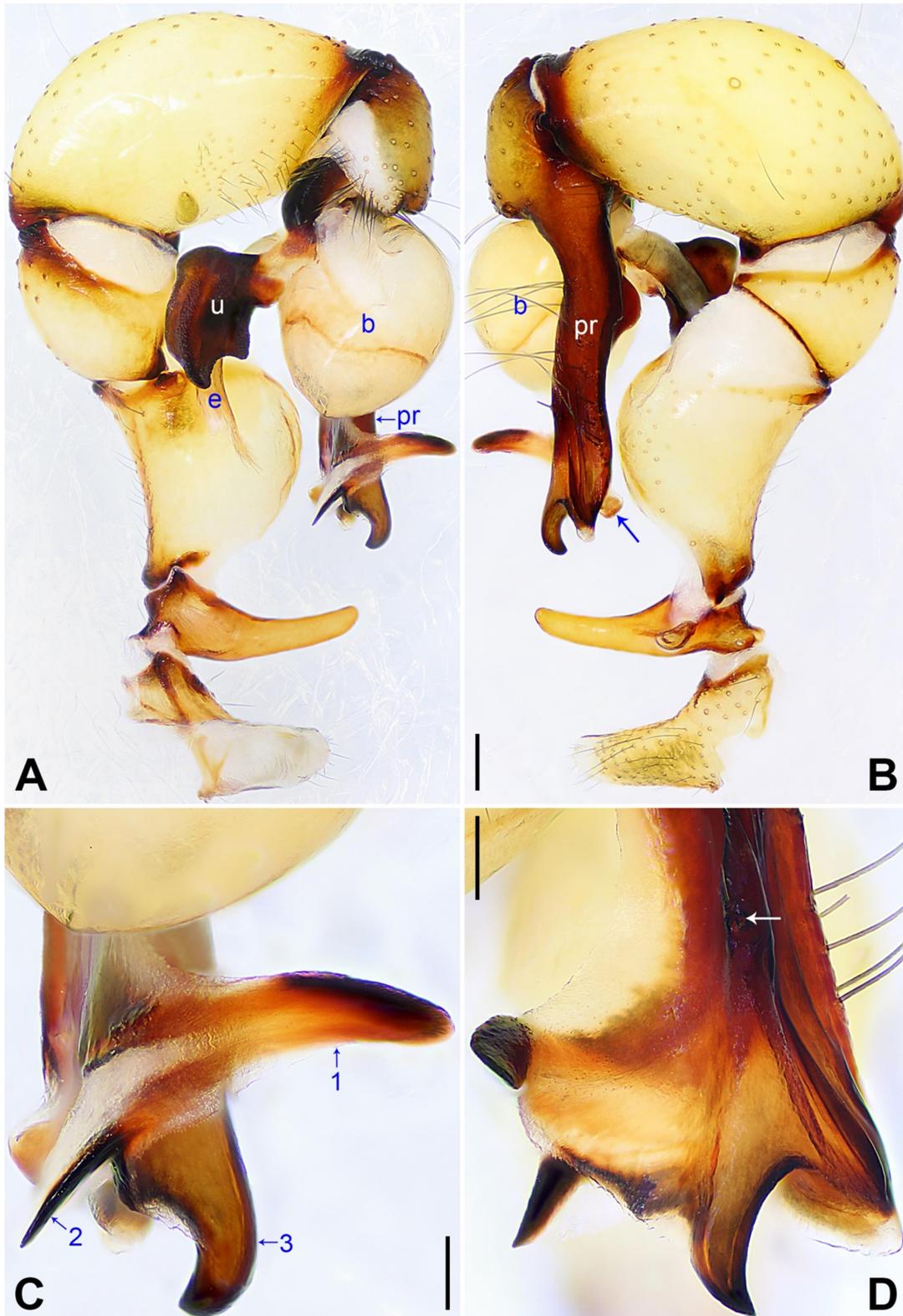
Supplementary Figure S8 *Pholcus guanshui* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



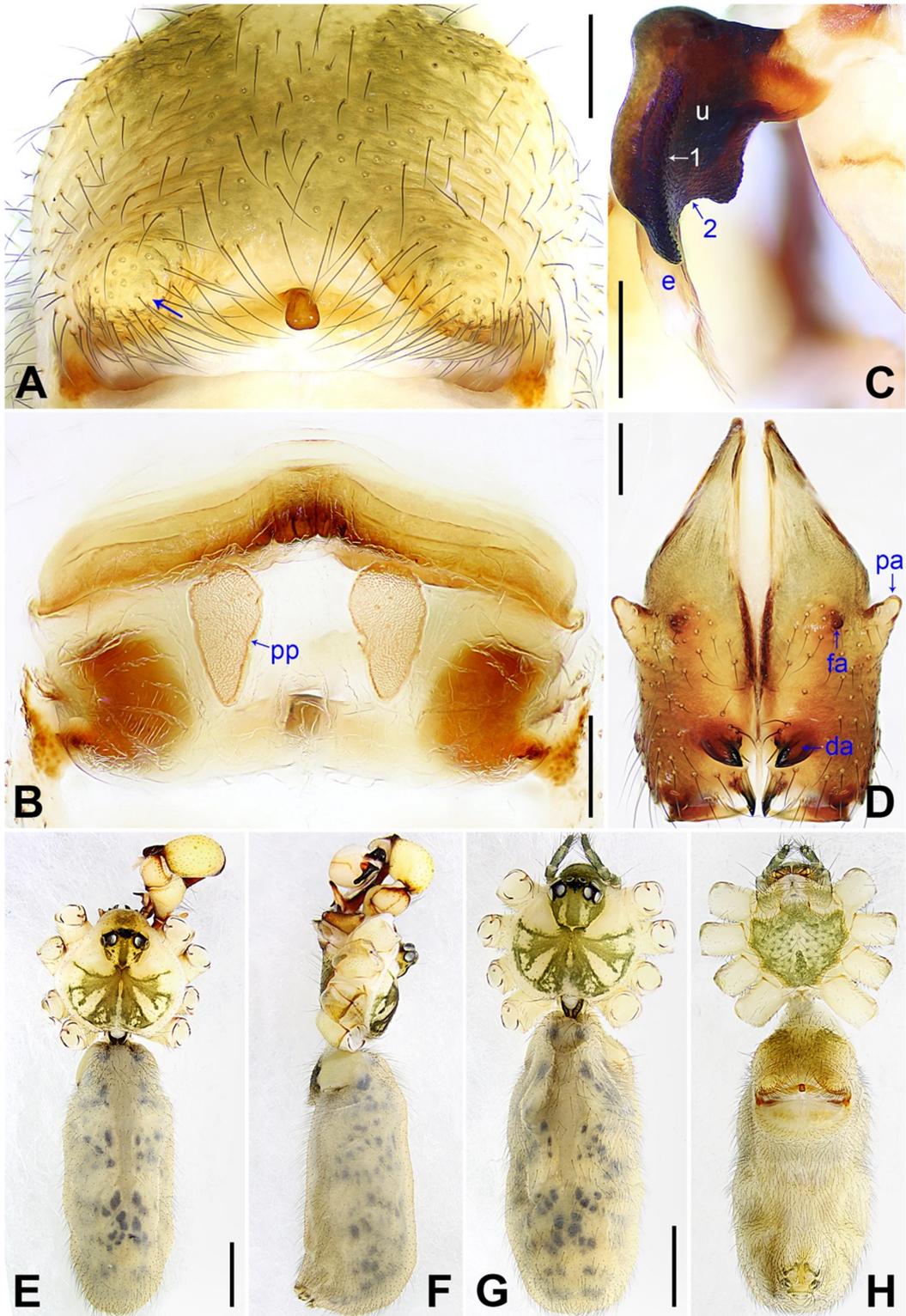
Supplementary Figure S9 *Pholcus hamatus* Tong & Ji, 2010

A: Bulbal apophyses, prolateral view (arrows 1, 2 point at proximal and distal apophysis, respectively); B: Vulva, dorsal view; C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at prolatero-distal membranous process, arrows 2, 3 point at two pointed apophyses, arrow 4 points at dorsal spine; D: Dorsal view, arrow points at membranous process). e = embolus, pp = pore plate, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



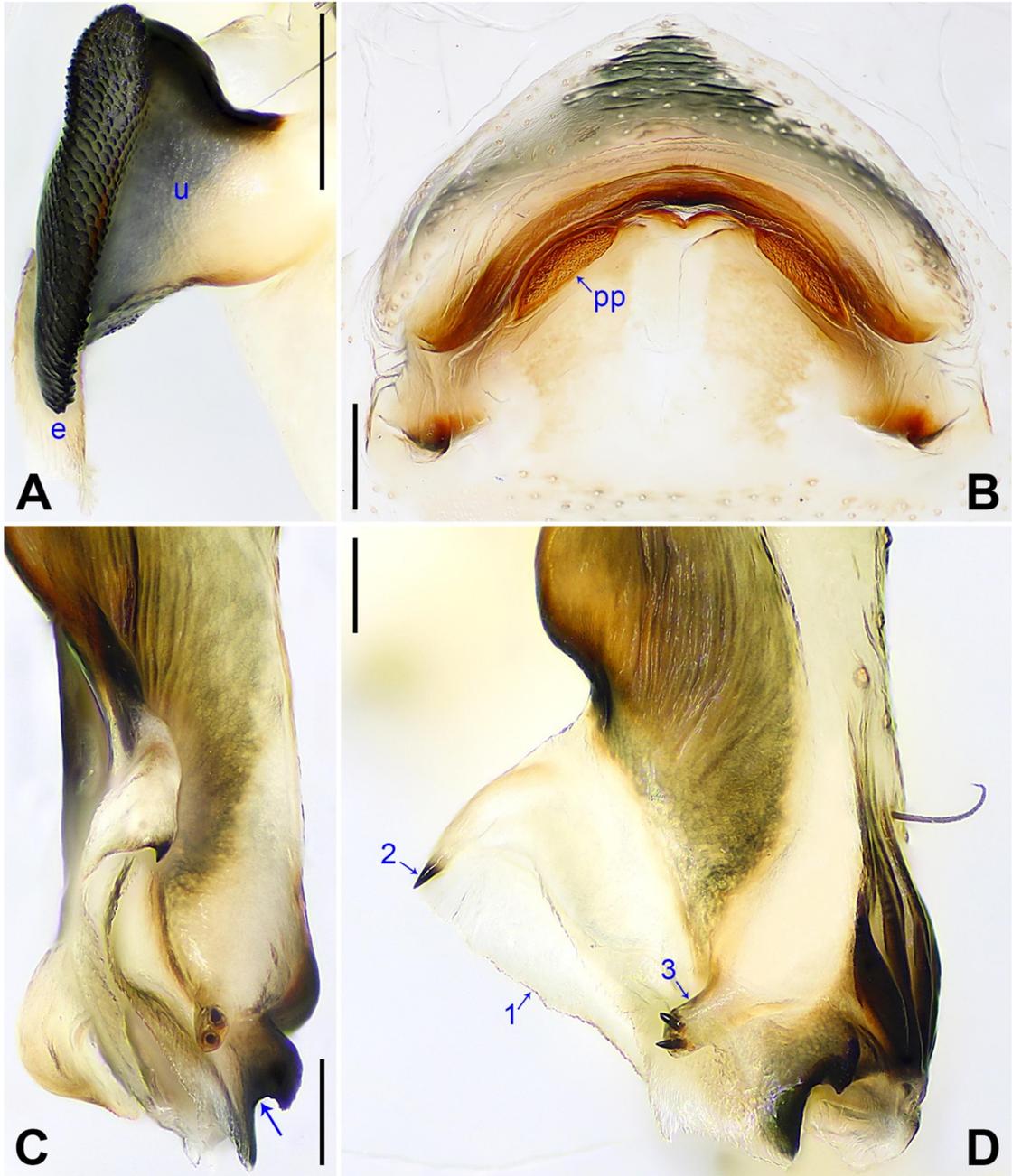
Supplementary Figure S10 *Pholcus jiguanshan* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view, arrow points at ventro-subdistal apophysis); C, D: Distal part of procurcus (C: Prolateral view, arrow 1 points at curved prolatero-subdistal sclerite, arrow 2 points at pointed apophysis, arrow 3 points at curved distal apophysis; D: Dorsal view, arrow points at dorsal spines). b = bulb, e = embolus, pr = procurcus, u = unculus. Scale bars: 0.20 (A, B), 0.10 (C, D).



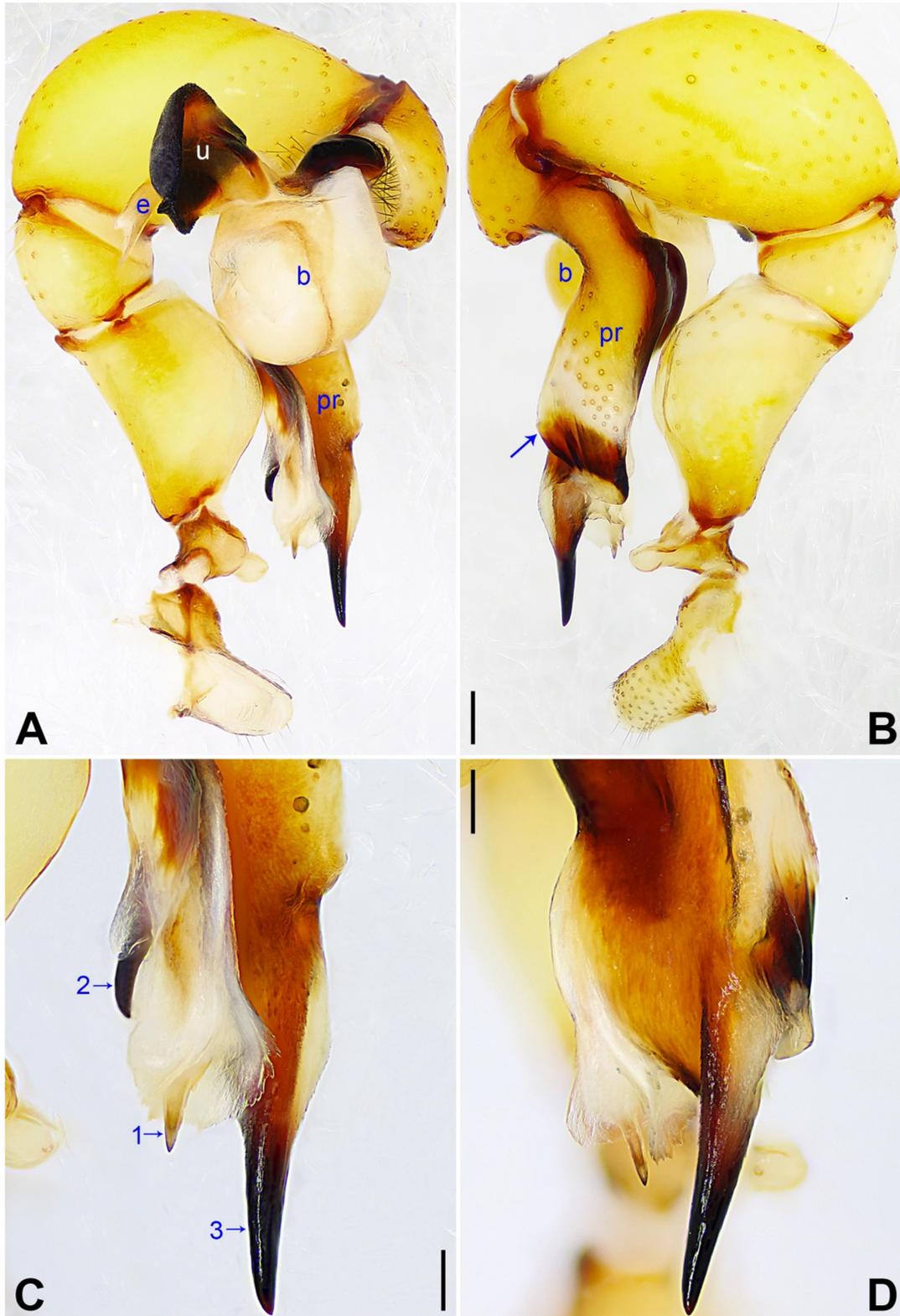
Supplementary Figure S11 *Pholcus jiguanshan* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view, arrow points at lateral protrusion; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view, arrow 1 points at median protrusion, arrow 2 points at strongly curved distal part; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



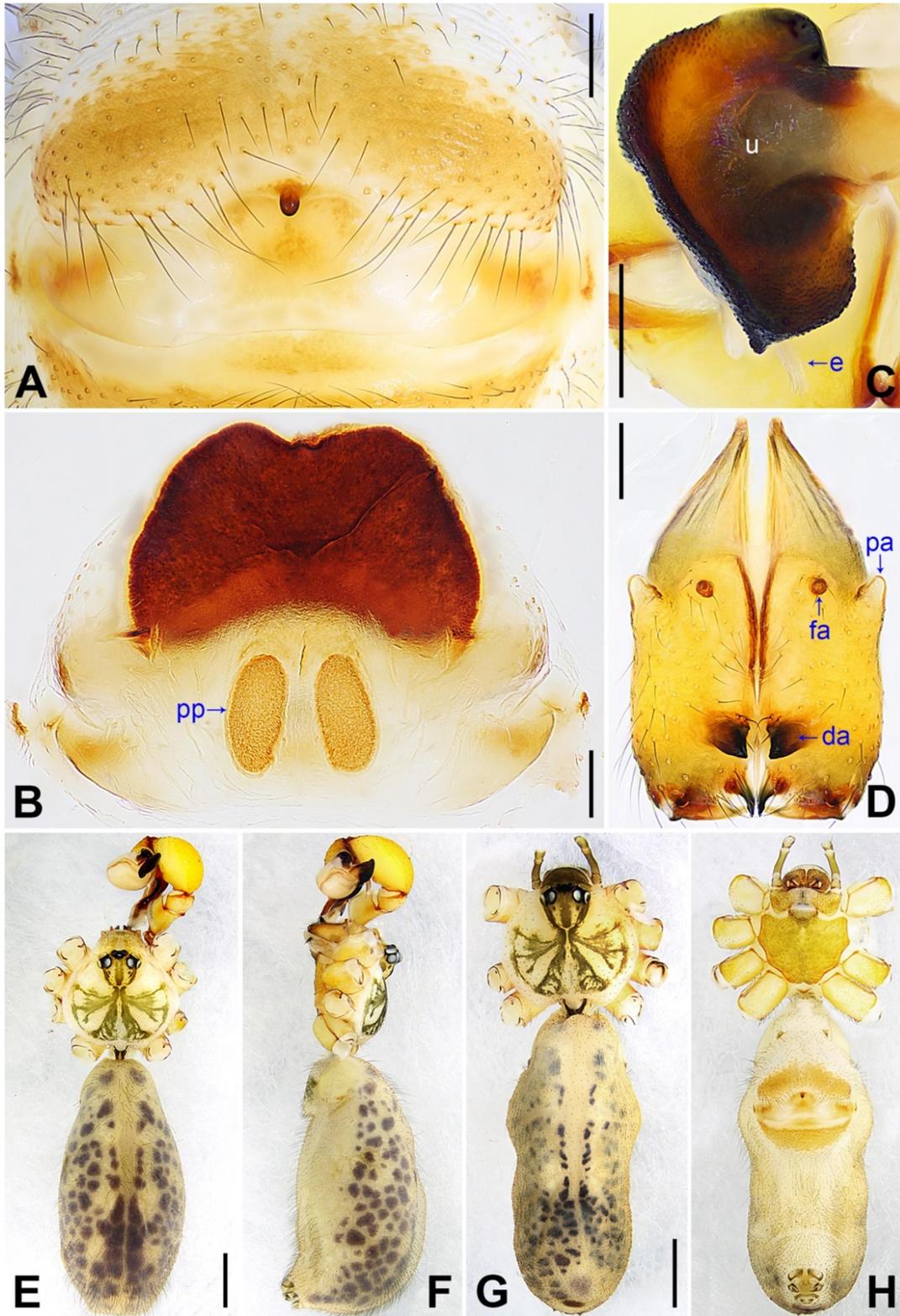
Supplementary Figure S12 *Pholcus jiuwei* Tong & Ji, 2010

A: Flipped right bulbal apophyses, prolateral view; B: Vulva, dorsal view; C, D: Distal part of procurus (C: Prolateral view, arrow points at bifurcated distal apophysis; D: Dorsal view, arrow 1 points at curved, prolatero-distal membranous process, arrow 2 points at small pointed apophysis, arrow 3 points at stick-shaped dorso-distal projection). e = embolus, pp = pore plate, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



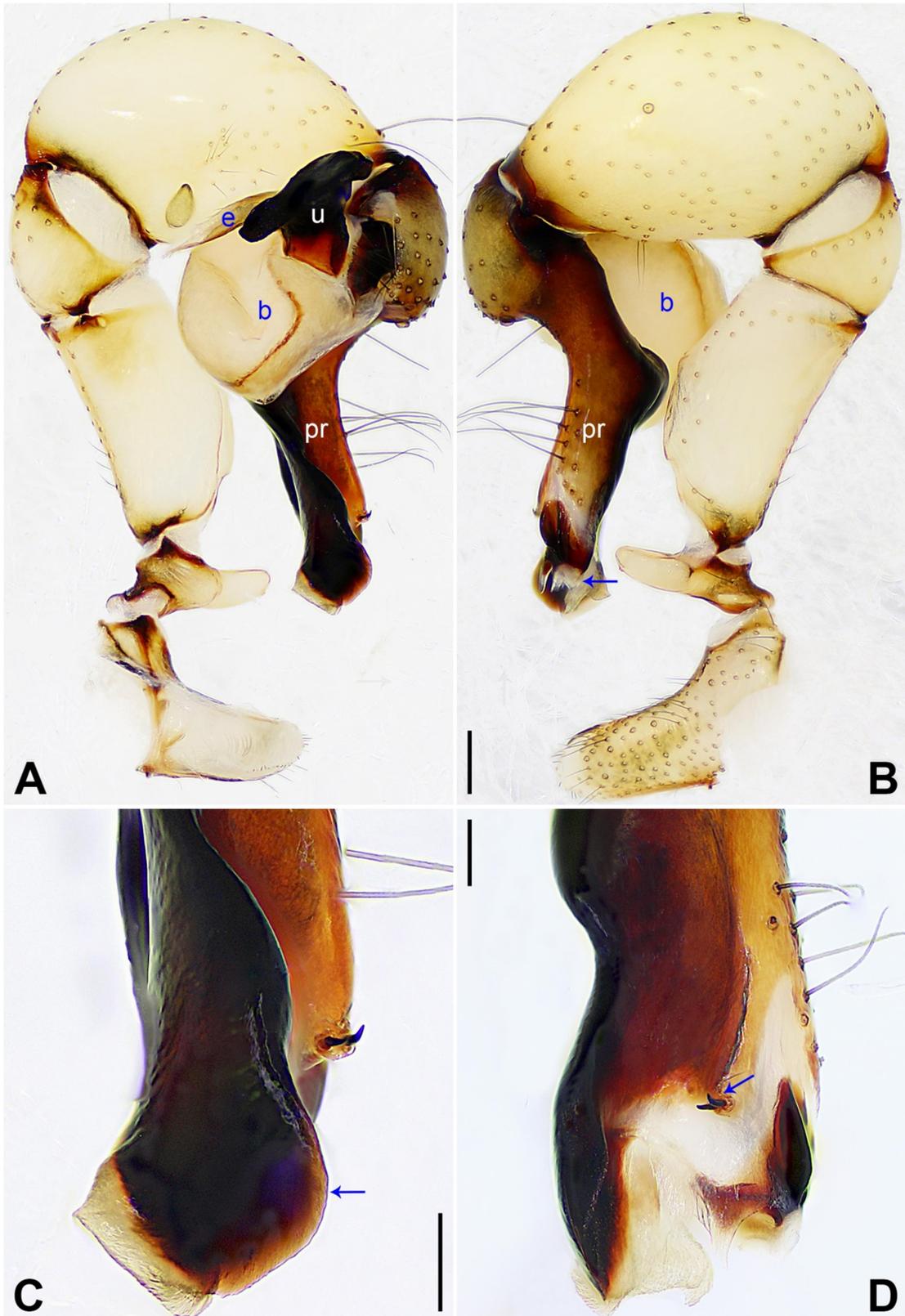
Supplementary Figure S13 *Pholcus longxigu* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view, arrow points at strongly protruding dorso-subdistal part); C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at pointed prolatero-subdistal apophysis, arrow 2 points at pointed ventro-subdistal apophysis, arrow 3 points at spine-shaped distal apophysis; D: Dorsal view). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



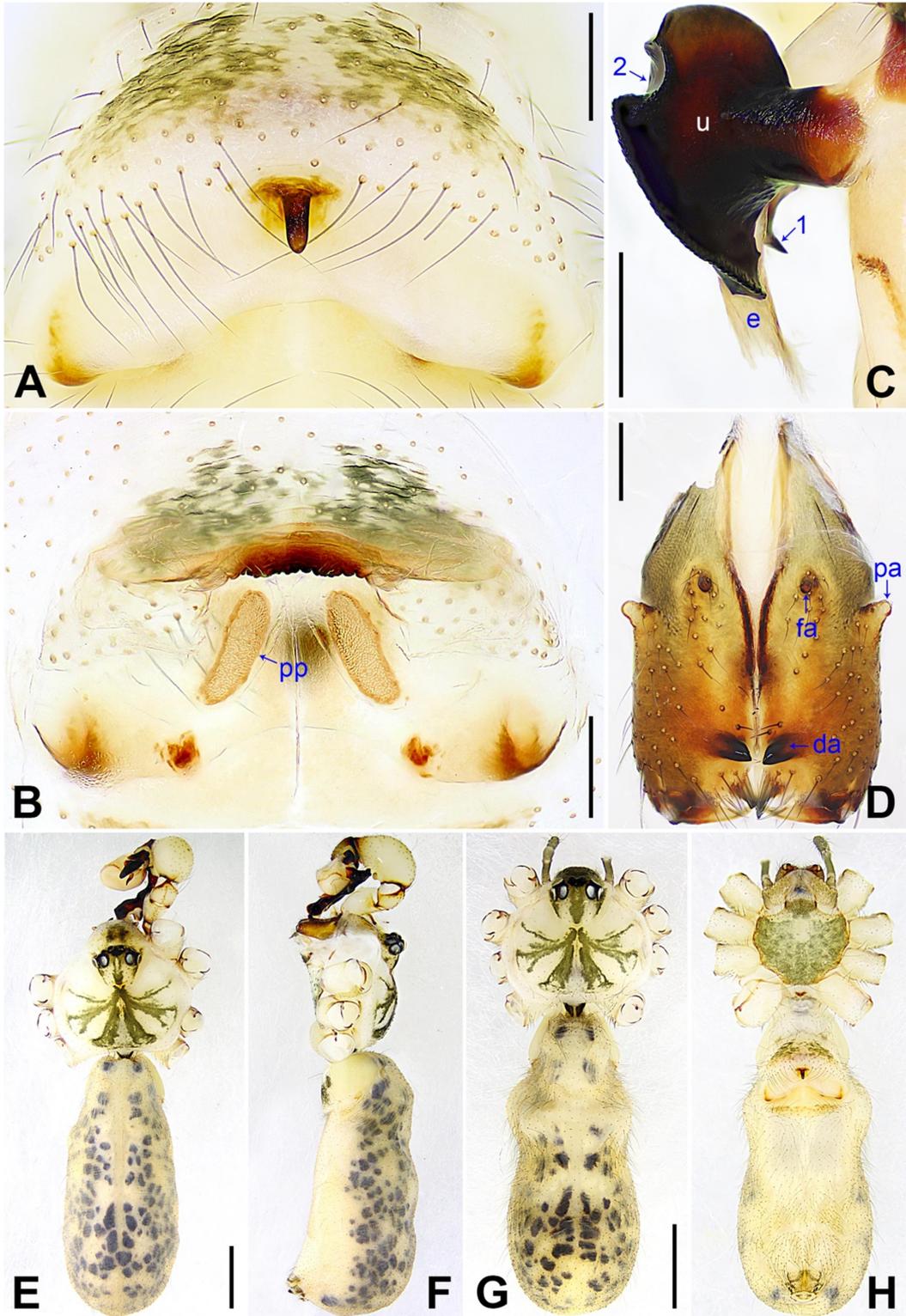
Supplementary Figure S14 *Pholcus longxigu* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, proximal view; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



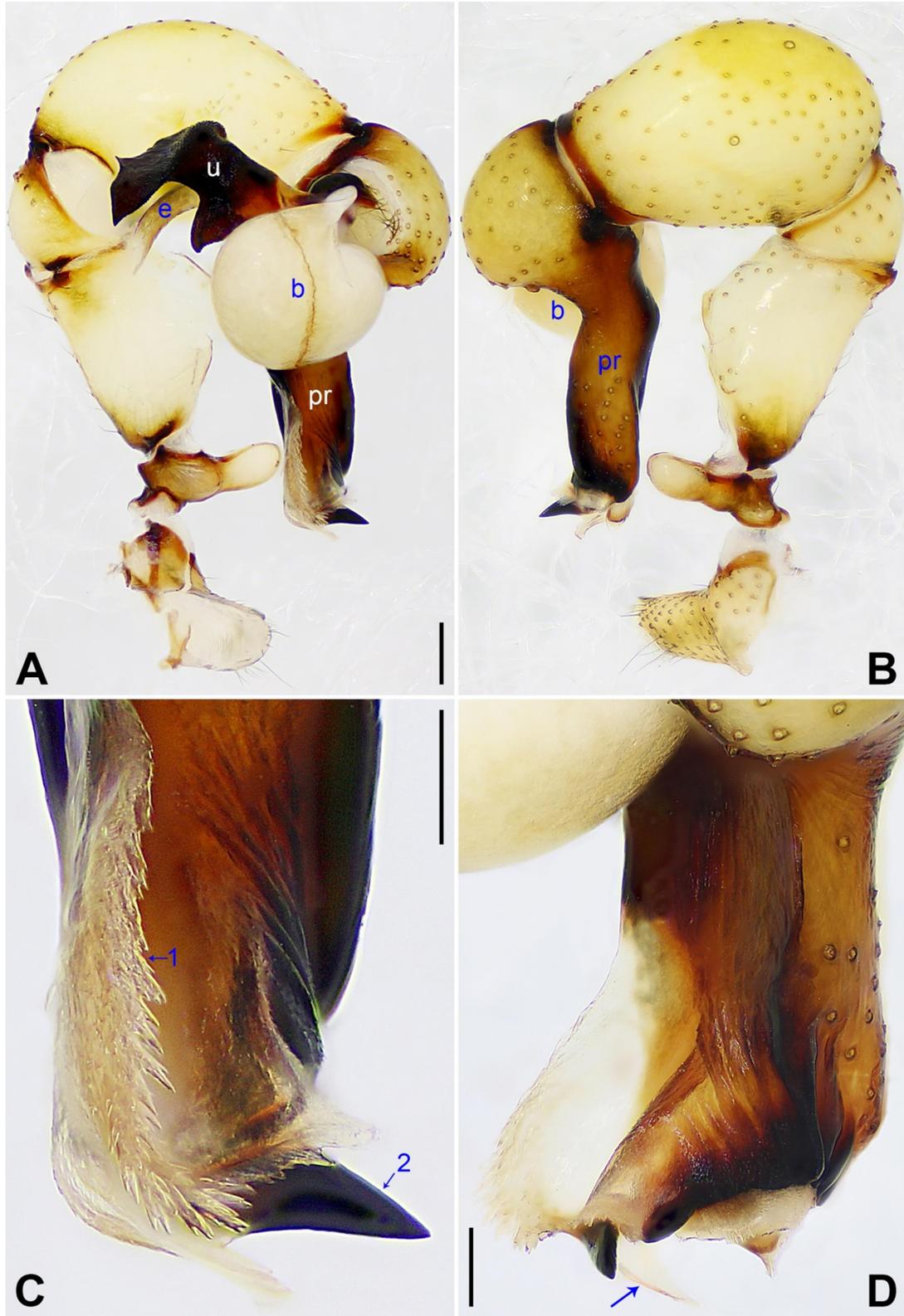
Supplementary Figure S15 *Pholcus luoquanbei* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view, arrow points at retrolatero-distal membranous process); C, D: Distal part of procurus (C: Prolateral view, arrow points at prolatero-distal sclerite; D: Dorsal view, arrow points at dorsal spine). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



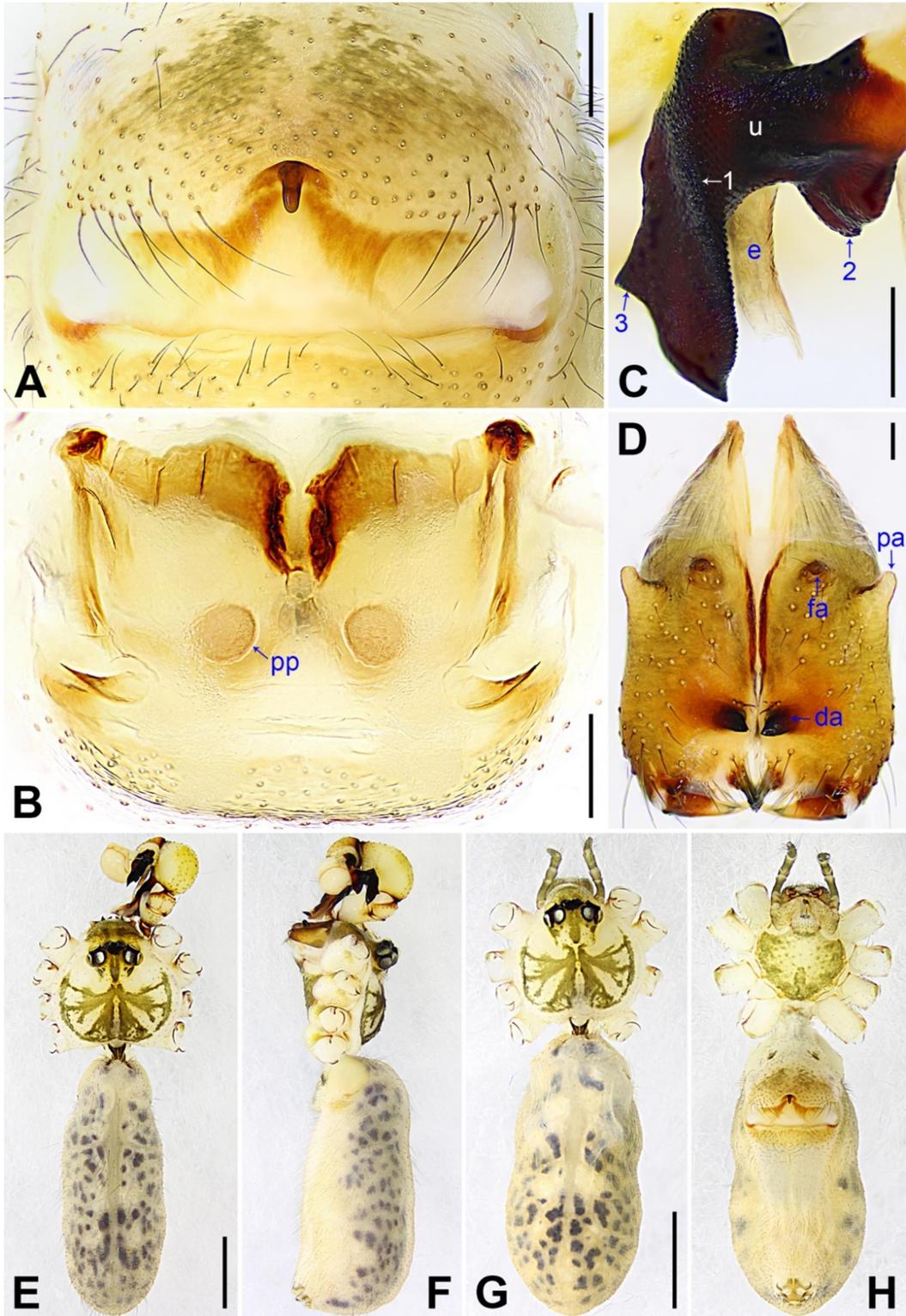
Supplementary Figure S16 *Pholcus luoquanbei* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view, arrow 1 points at ‘pseudo-appendix’, arrow 2 points at notch; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



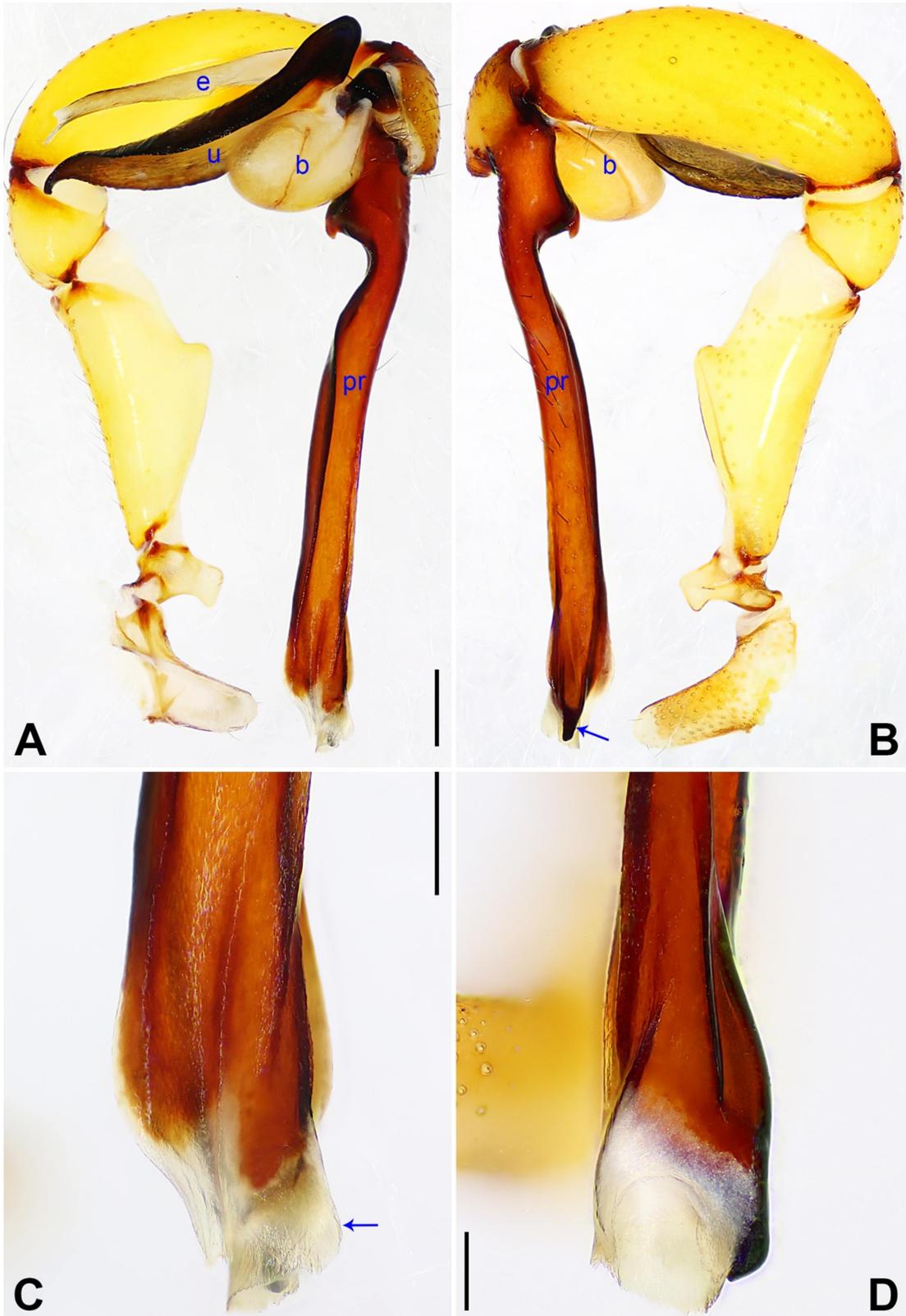
Supplementary Figure S17 *Pholcus shenshi* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view); C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at prolatero-distal membranous process, arrow 2 points at large, angular distal apophysis; D: Dorsal view, arrow points at membranous process). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



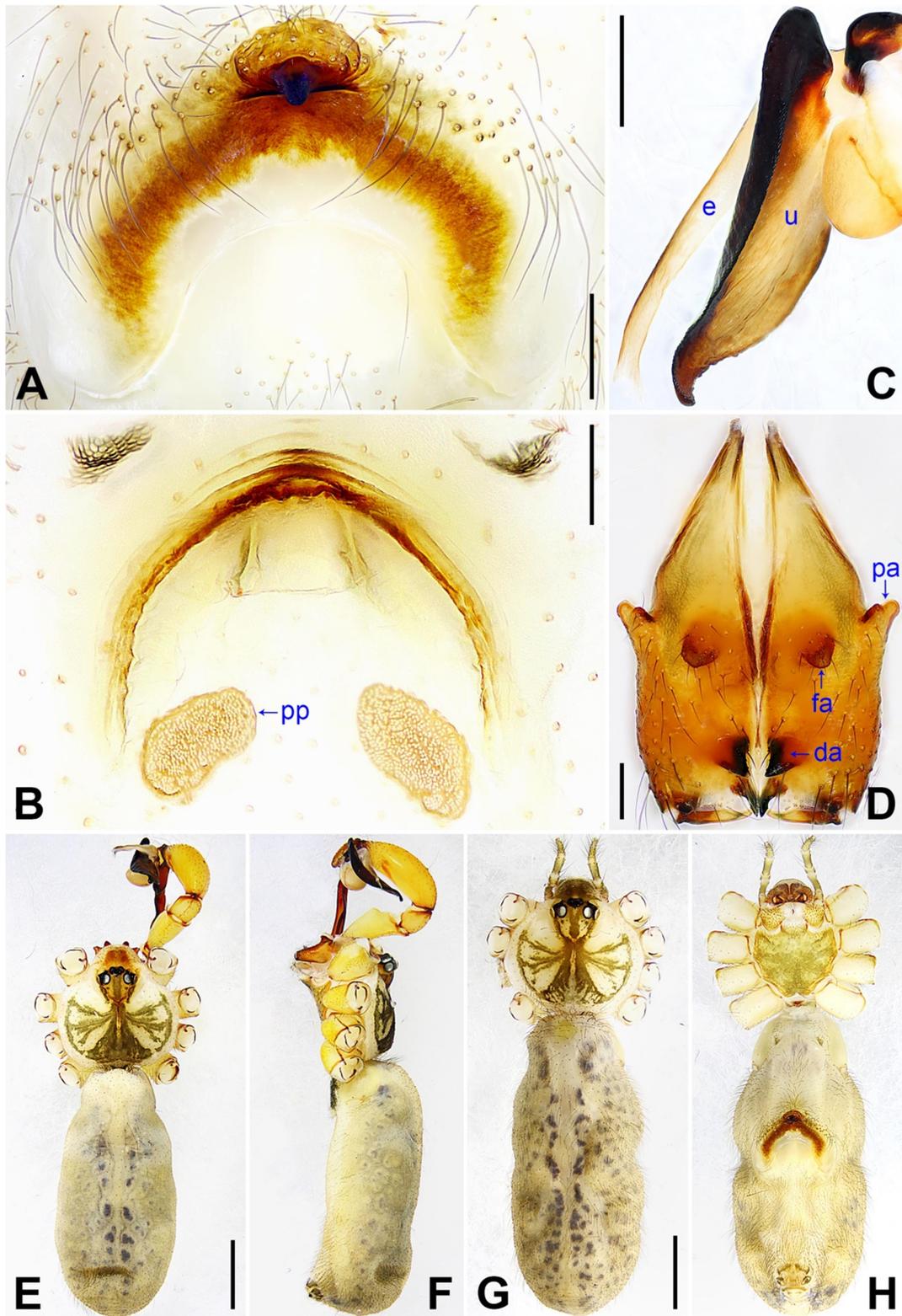
Supplementary Figure S18 *Pholcus shenshi* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, prolatral view, arrow 1 points at median protrusion, arrow 2 points at proximal apophysis, arrow 3 points at small angular apophysis; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



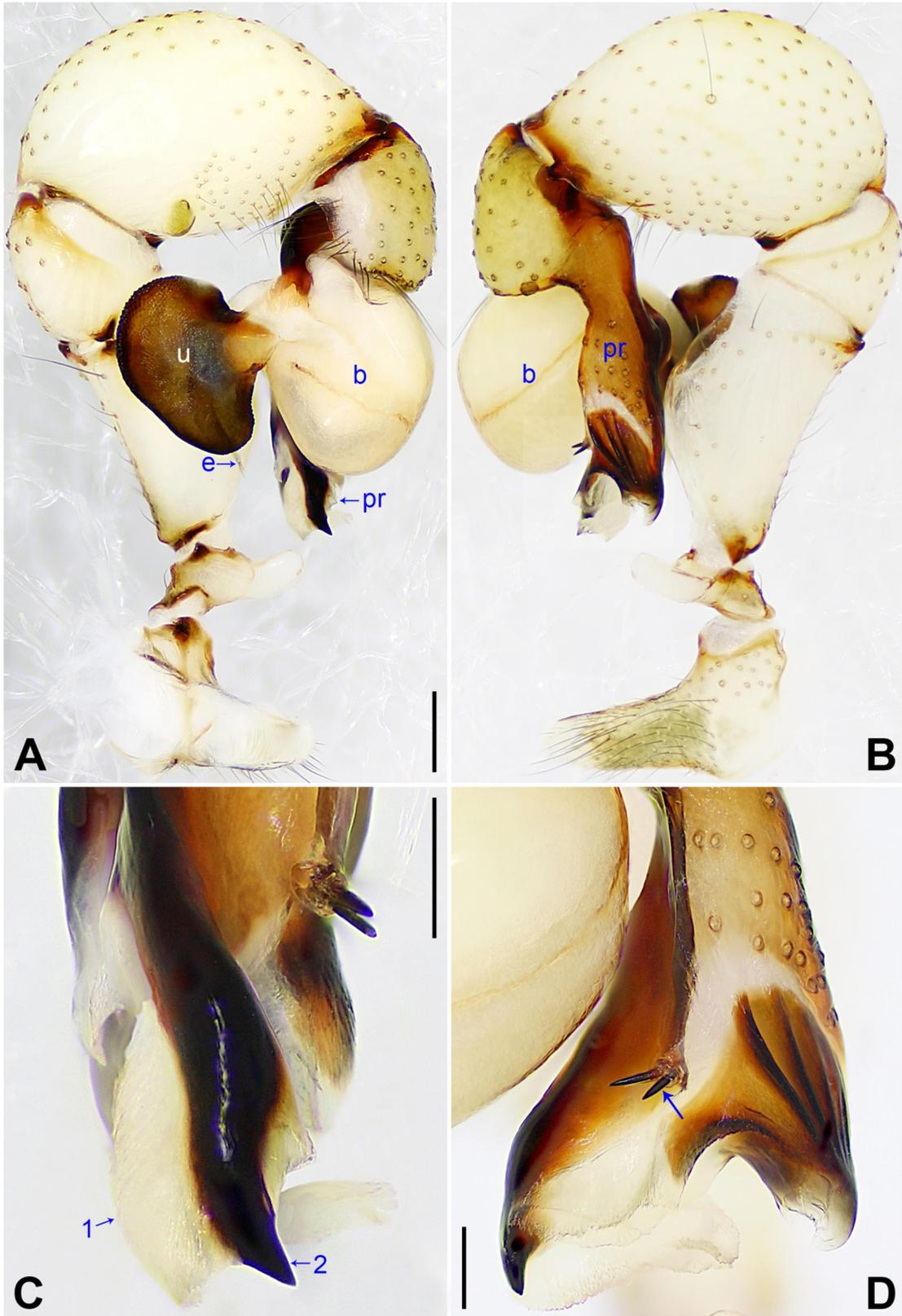
Supplementary Figure S19 *Pholcus tianmenshan* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view, arrow points at retrolatero-distal apophysis); C, D: Distal part of procurus (C: Prolateral view, arrow points at prolatero-distal membranous process; D: Dorsal view). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



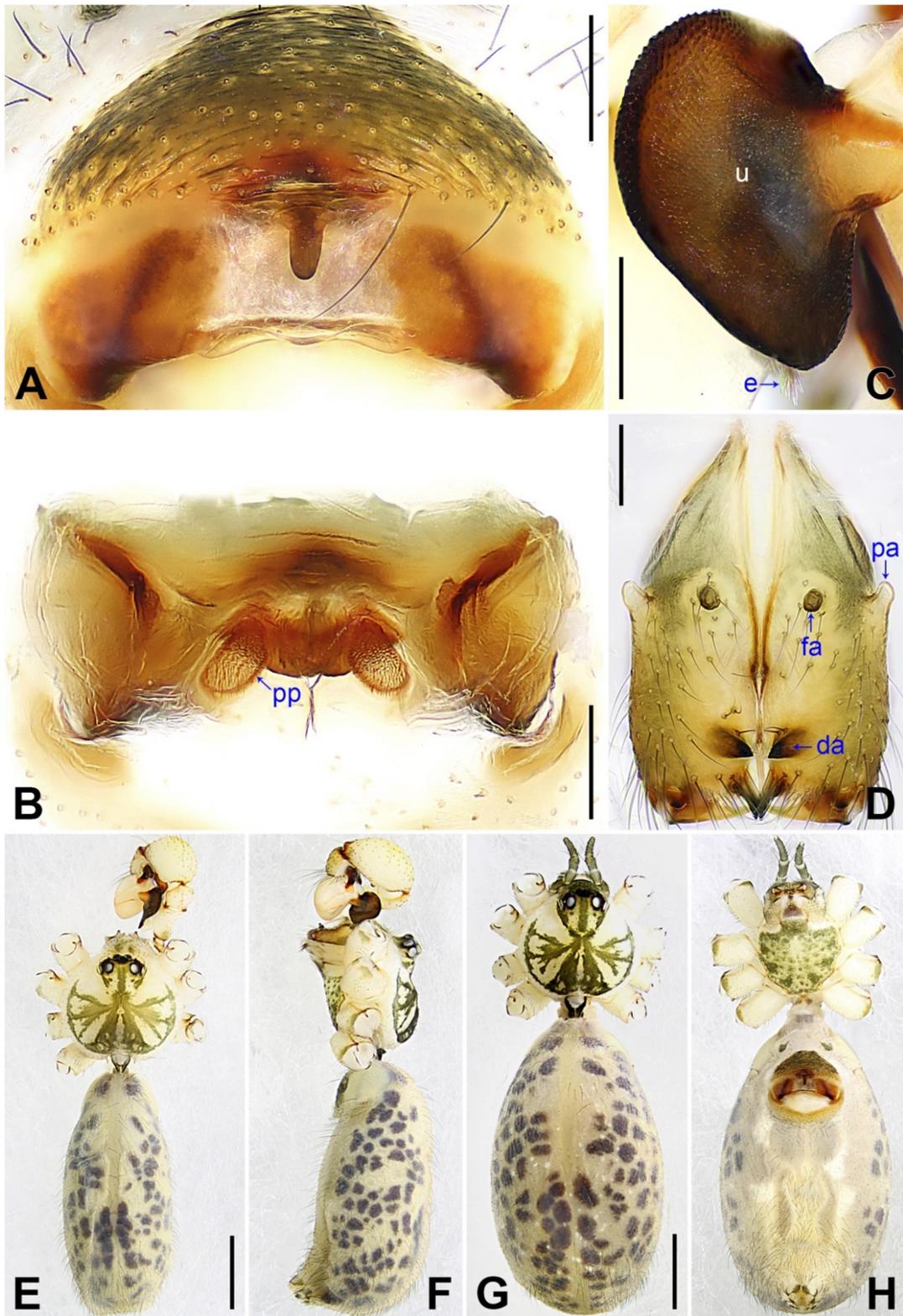
Supplementary Figure S20 *Pholcus tianmenschan* sp. nov., holotype (D–F) and paratype (C) males, paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, proximal view; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



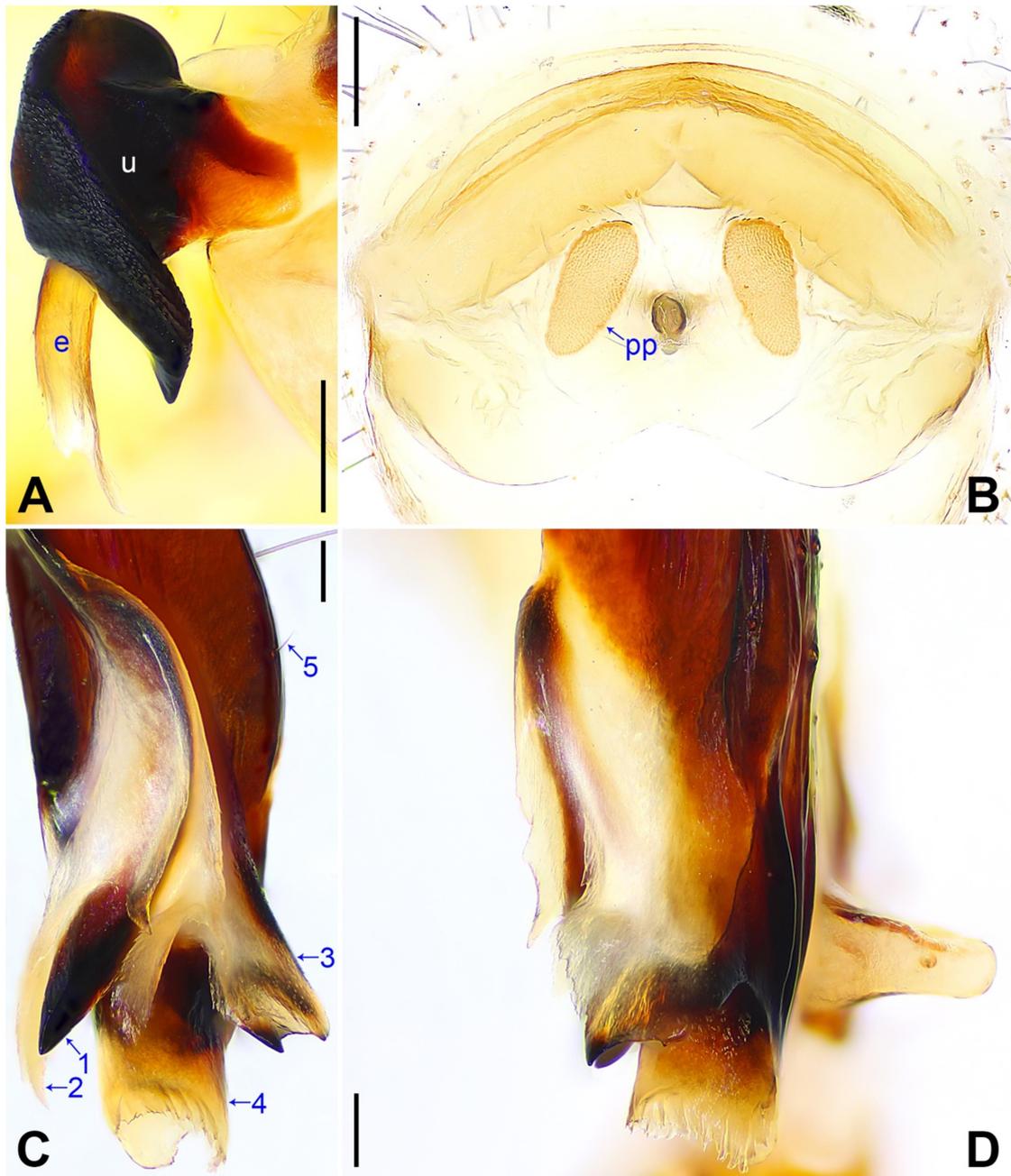
Supplementary Figure S21 *Pholcus wangjiang* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view); C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at prolatero-distal membranous process, arrow 2 points at nearly s-shaped sclerotized apophysis; D: Dorsal view, arrow points at dorsal spines). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



Supplementary Figure S22 *Pholcus wangjiang* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



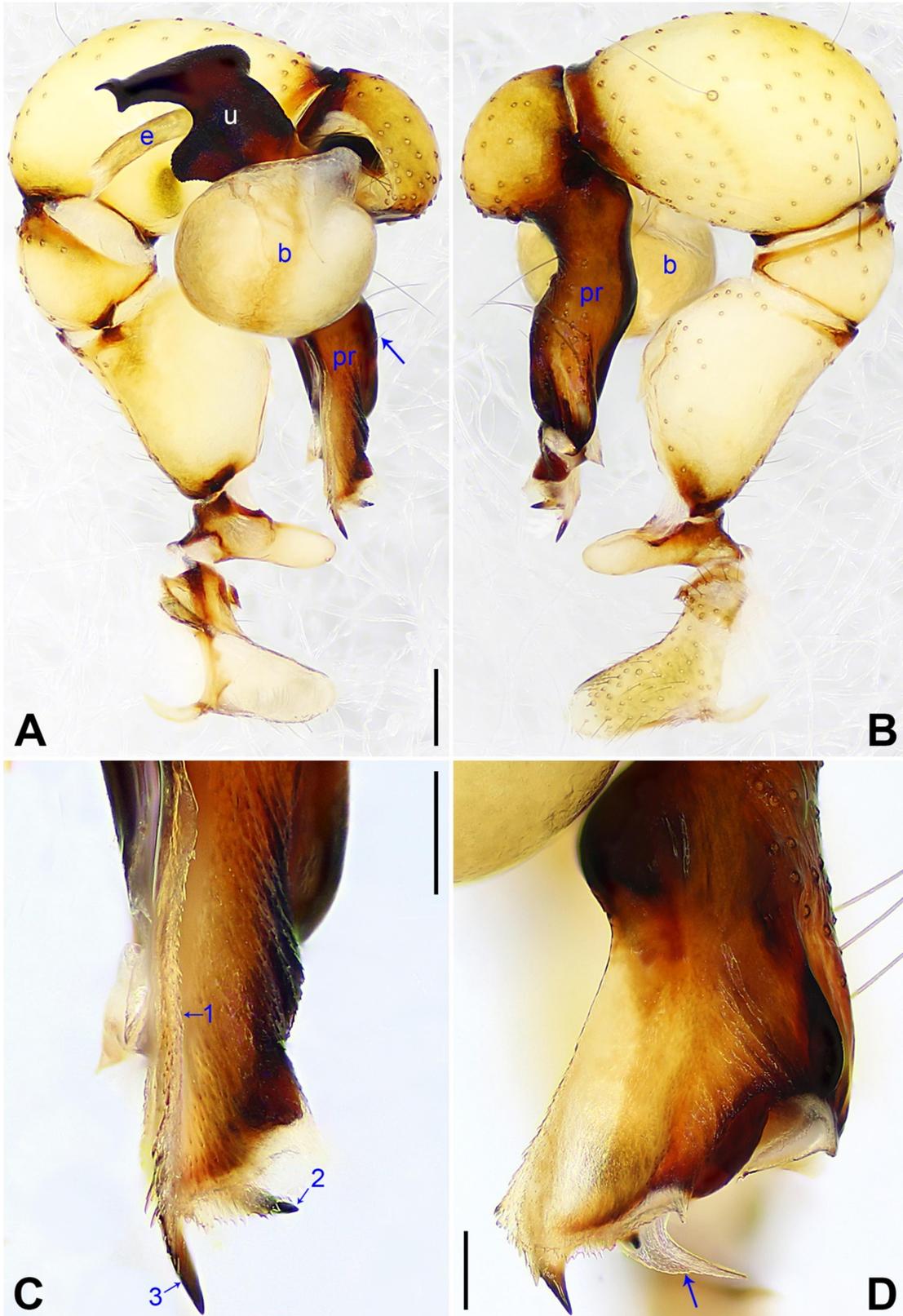
Supplementary Figure S23 *Pholcus wangtian* Tong & Ji, 2010

A: Bulbal apophyses, prolateral view; B: Vulva, dorsal view; C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at spine-shaped prolatero-subdistal apophysis, arrow 2 points at curved membranous process, arrow 3 points at dorso-subdistal membranous process, arrow 4 points at distal membranous process, arrow 5 points at dorsal spine; D: Dorsal view). e = embolus, pp = pore plate, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



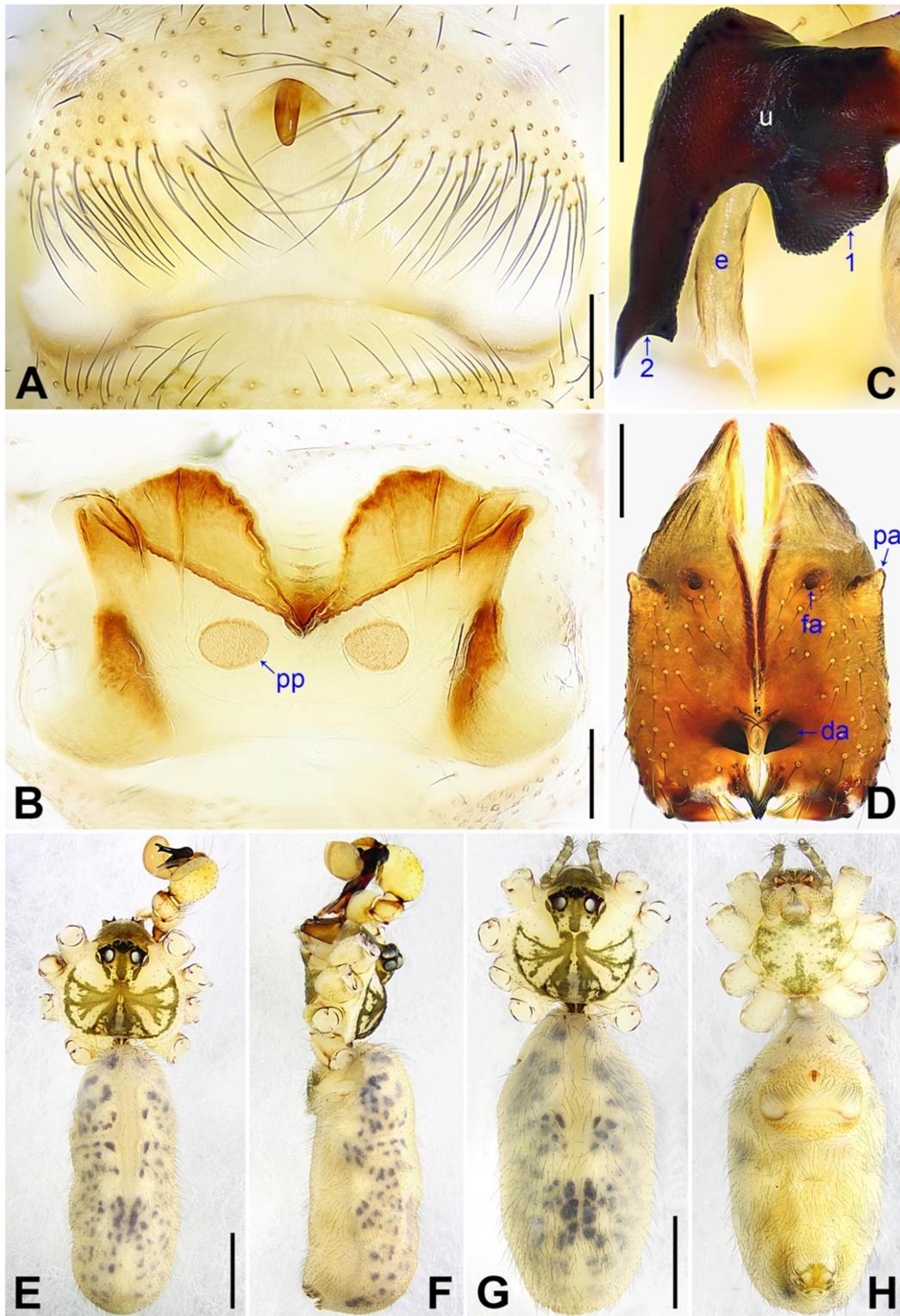
Supplementary Figure S24 *Pholcus xianrendong* Liu & Tong, 2015

A: Bulbal apophyses, prolateral view; B: Vulva, dorsal view; C, D: Distal part of procurus (C: Prolateral view, arrows 1, 2 point at prolatero-subdistal and dorso-distal membrane, respectively; D: Dorsal view). e = embolus, pp = pore plate, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



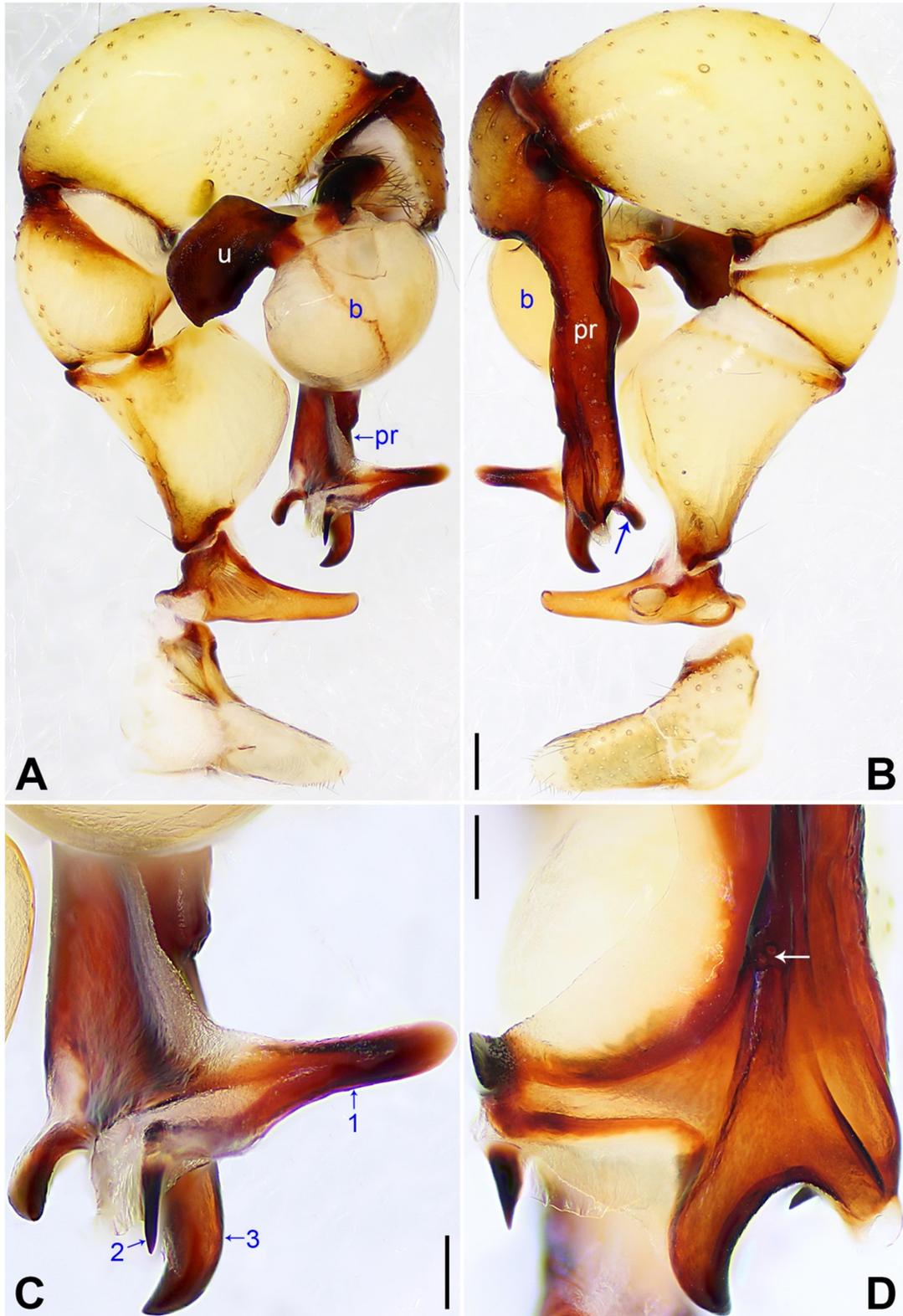
Supplementary Figure S25 *Pholcus xingqi* sp. nov., holotype male

A, B: Palp (A: Prolateral view, arrow points at dorsal spine; B: Retrolateral view); C, D: Distal part of procrurus (C: Prolateral view, arrow 1 points at prolatero-distal membranous process, arrows 2, 3 point at two pointed apophyses; D: Dorsal view, arrow points at membranous process). b = bulb, e = embolus, pr = procrurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



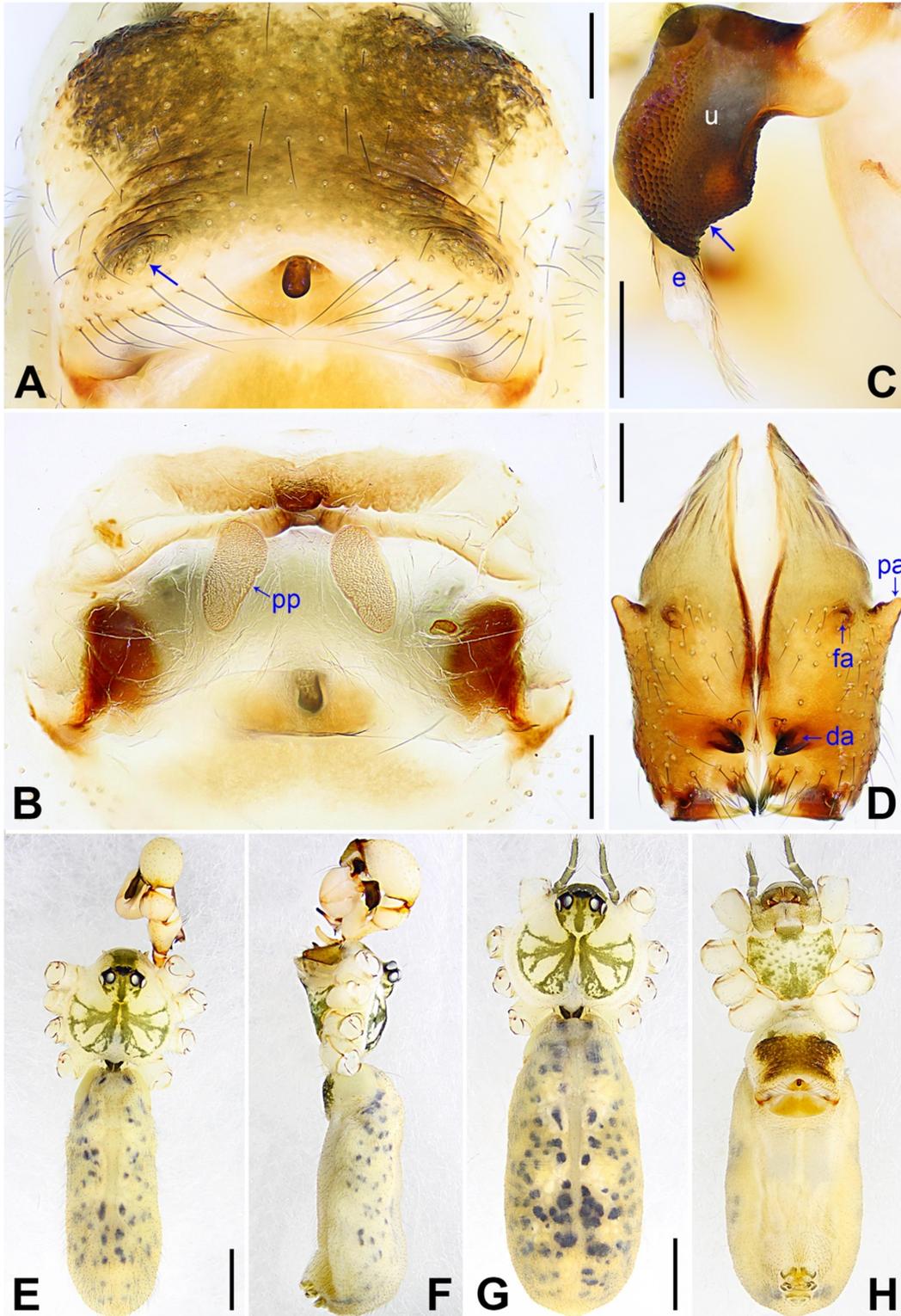
Supplementary Figure S26 *Pholcus xingqi* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view, arrows 1, 2 point at proximal and distal apophysis, respectively; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



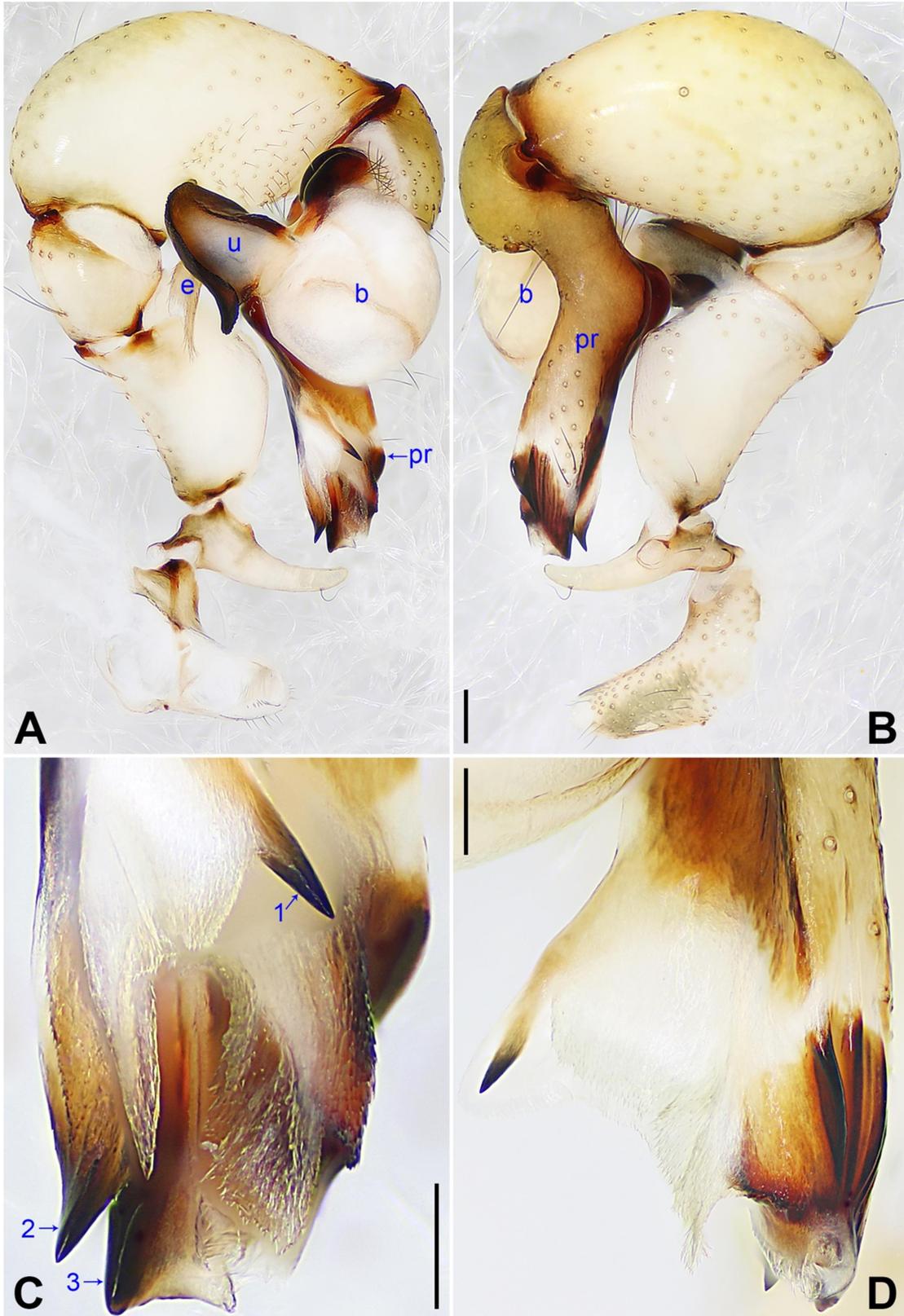
Supplementary Figure S27 *Pholcus yaoshan* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view, arrow points at ventro-subdistal apophysis); C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at straight prolatero-subdistal sclerite, arrow 2 points at pointed apophysis, arrow 3 points at curved distal apophysis; D: Dorsal view, arrow points at dorsal spines). b = bulb, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



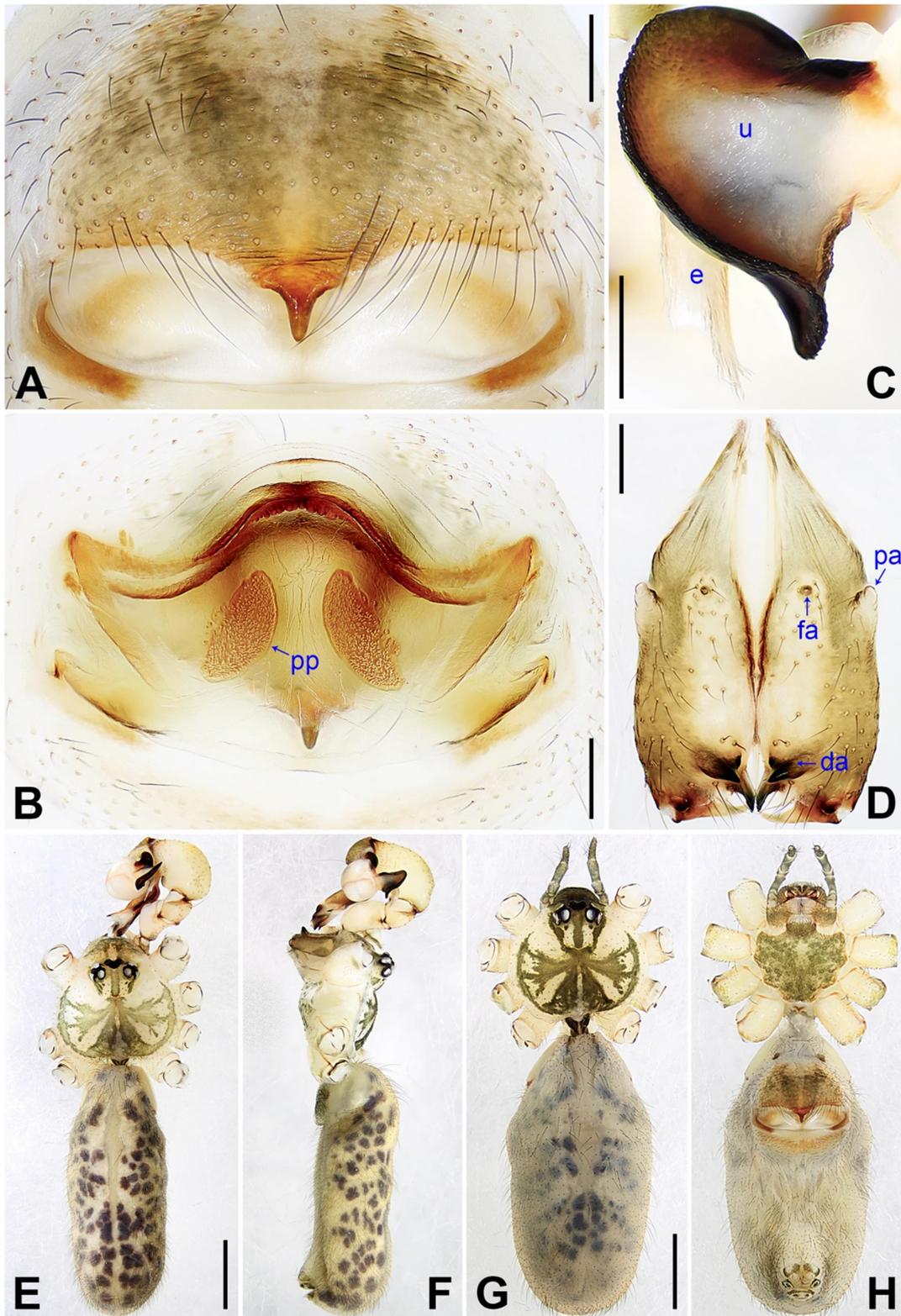
Supplementary Figure S28 *Pholcus yaoshan* sp. nov., holotype (D–F) and paratype (C) males, paratype female (A, B, G, H)

A: Epigyne, ventral view, arrow points at lateral protrusion; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view, arrow points at slightly curved distal part; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).



Supplementary Figure S29 *Pholcus yuhuangshan* sp. nov., holotype male

A, B: Palp (A: Prolateral view; B: Retrolateral view); C, D: Distal part of procurus (C: Prolateral view, arrow 1 points at spine-shaped apophysis, arrow 2 points at angular ventro-distal apophysis, arrow 3 points at blunt distal apophysis; D: Dorsal view). b = bulb, e = embolus, pr = procurus, u = uncus. Scale bars: 0.20 (A, B), 0.10 (C, D).



Supplementary Figure S30 *Pholcus yuhuangshan* sp. nov., holotype male (C–F) and paratype female (A, B, G, H)

A: Epigyne, ventral view; B: Vulva, dorsal view; C: Bulbal apophyses, prolateral view; D: Chelicerae, frontal view; E–H: Habitus (E, G: Dorsal view; F: Lateral view; H: Ventral view). da = distal apophysis, e = embolus, fa = frontal apophysis, pa = proximo-lateral apophysis, pp = pore plate, u = uncus. Scale bars: 0.20 (A–D), 1.00 (E–H).

Supplementary Table S1 Voucher specimen information

Species	Code	GenBank number	Locality
<i>P. decorus</i>	W055	MW721824	Qianshan Mountain, Anshan, Liaoning, China
<i>P. fengcheng</i>	W041	MW721810	Fenghuangshan Mountain, Fengcheng, Liaoning, China
	W042	MW721811	
<i>P. foliaceus</i>	W001	MW721782	Hemu National Forest Park, Muqi Town, Xinbin County, Fushun, Liaoning, China
	W002	MW721783	
<i>P. gaizhou</i> sp. nov.	W049	MW721818	roadside of G305, Xiaoshipeng Village, Xiaoshipeng Town, Gaizhou, Yingkou, Liaoning, China
	W050	MW721819	
<i>P. gaoi</i>	W027	MW721801	roadside of G201, Laodaopai Village, Shihugou Town, Kuandian County, Dandong, Liaoning, China
	W028	MW721802	
<i>P. guanshui</i> sp. nov.	W033	MW721805	roadside of S202, Renshi Village, Guanshui Town, Kuandian County, Dandong, Liaoning, China
	W034	MW721806	
<i>P. hamatus</i>	W003	MW721784	Wunüshan Mountain, Huanren County, Benxi, Liaoning, China
	W004	MW721785	
<i>P. jiguanshan</i> sp. nov.	W053	MW721822	roadside of S320, Jiguanshan Town, Fengcheng, Dandong, Liaoning, China
	W054	MW721823	
<i>P. jiuwei</i>	W021	MW721797	Shuangquansi Temple, Xiangan Village, Pingshan County, Benxi, Liaoning, China
	W022	MW721798	
<i>P. lingulatus</i>	W015	MW721793	roadside of G331, Shihu Village, Qingshi Town, Jian, Tonghua, Jilin, China
	W016	MW721794	
<i>P. longxigu</i> sp. nov.	W051	MW721820	Longxigu Scenic Spot, Yahe Town, Huanren County, Benxi, Liaoning, China
	W052	MW721821	
<i>P. luoquanbei</i> sp. nov.	W043	MW721812	roadside of S312, near Luoquanbei Reservoir, Yanghe Town, Xiuyan County, Anshan, Liaoning, China
	W044	MW721813	
<i>P. ningan</i>	W019	MW721795	Jingpohu Lake Scenic Area, Ning'an, Mudanjiang, Heilongjiang, China
	W020	MW721796	
<i>P. phoenixus</i>	y070	MW721809	roadside of G304, Fenghuangshan Mountain, Fengcheng, Liaoning, China
<i>P. tianmenshan</i> sp. nov.	W047	MW721816	Tianmenshan Mountain National Forest Park, Xianrendong Town, Zhuanghe, Dalian, Liaoning, China
	W048	MW721817	
<i>P. tongi</i>	W005	MW721786	Wunüshan Mountain, Huanren Town, Huanren County, Benxi, Liaoning, China
	W006	MW721787	

<i>P. wangi</i>	W031	MW721803	Tianhuashan Scenic Spot, Guanshui Town, Kuandian County, Dandong, Liaoning, China
	W032	MW721804	
<i>P. wangjiang</i> sp. nov.	W013	MW721792	roadside of G331, near Wangjiang Bridge, Haozigou Village, Qingshi Town, Ji'an, Tonghua, Jilin, China
<i>P. wangtian</i>	W007	MW721788	Wangtian Cave, Huanren County, Benxi, Liaoning, China
	W008	MW721789	
<i>P. xianrendong</i>	W045	MW721814	Bingyugou Scenic Spot, Xianrendong Town, Zhuanghe, Dalian, Liaoning, China
	W046	MW721815	
<i>P. xingqi</i> sp. nov.	W009	MW721790	roadside of X004, near Xingqi Power Station, Dalu Village, Dalu Town, Ji'an, Tonghua, Jilin, China
	W010	MW721791	
<i>P. yaoshan</i> sp. nov.	W037	MW721807	Yaoshan Scenic Spot, Yaoshan Town, Xiuyan County, Anshan, Liaoning, China
	W038	MW721808	
<i>P. yuhuangshan</i> sp. nov.	W023	MW721799	Yuhuangshan Park, Dongchang District, Tonghua, Jilin, China
	W024	MW721800	
<i>P. paralinzhou</i>	y046	MW721825	Yuntaishan Scenic Spot, Xiuwu County, Jiaozuo, Henan, China
<i>P. taishan</i>	y133	MW721826	Taishan Mountain, Taian, Shandong, China