

***Panjange camiguin* Huber, 2015**

Huber BA, Nuñeza OM. 2015. Evolution of genital asymmetry, exaggerated eye stalks, and extreme palpal elongation in *Panjange* spiders (Araneae: Pholcidae). *European Journal of Taxonomy* 169: 1-46.

p. 9



8–10. *Pa. camiguin* Huber sp. nov. 8. ♀ with parasitized eggsac, from Camiguin Island. **9.** ♂ from Bohol Island. **10.** ♂ from Camiguin Island.

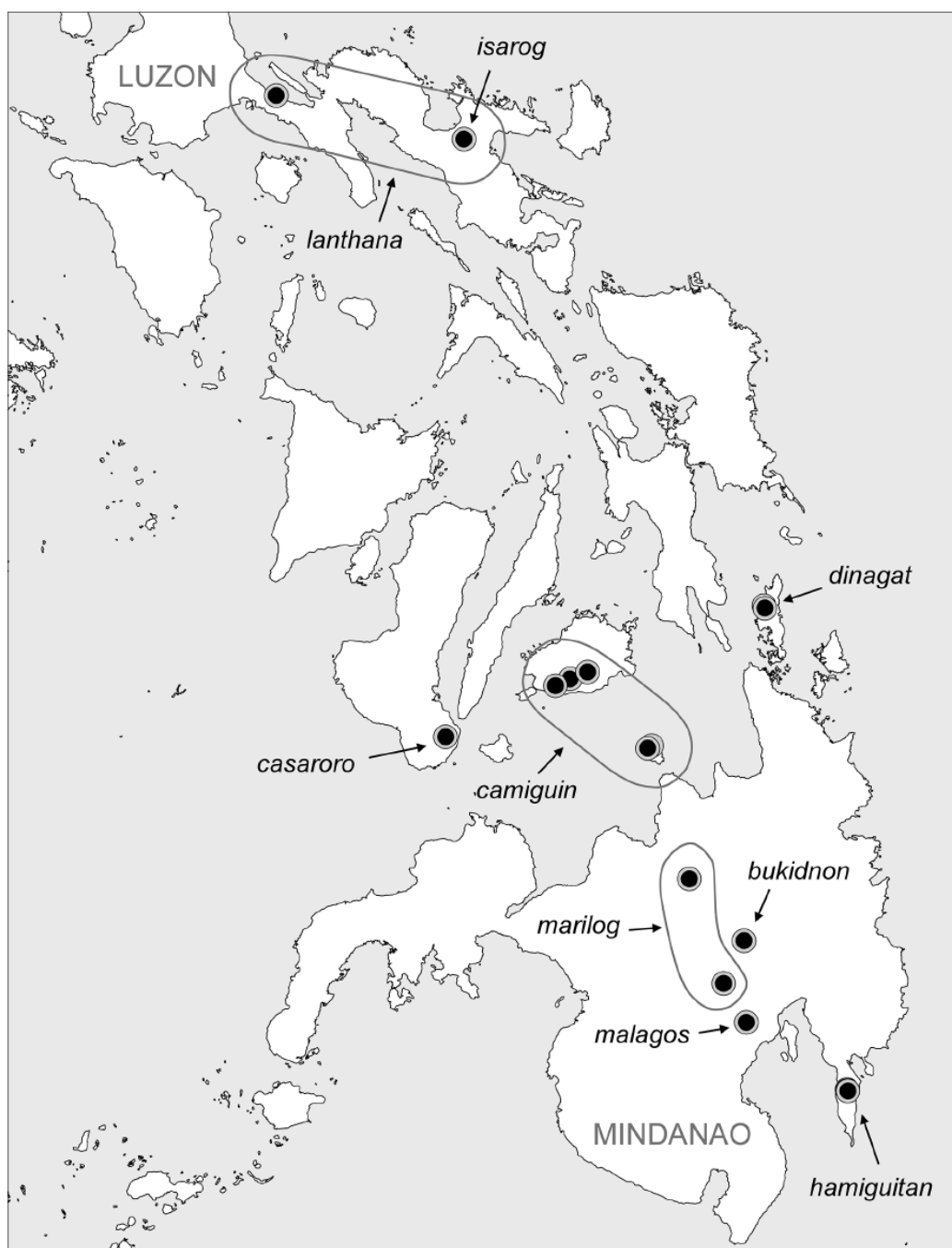


Fig. 16. Known distribution of the *Panjange lanthana* group.

Panjange camiguin Huber sp. nov.

[urn:lsid:zoobank.org:act:A8245A4A-D792-4023-8E50-0922A9C29FD6](https://zoobank.org/urn:lsid:zoobank.org:act:A8245A4A-D792-4023-8E50-0922A9C29FD6)

Figs 8–10, 35–63

Diagnosis

Easily distinguished from closest known relatives (*Pa. malagos* Huber sp. nov.; *Pa. casaroro* Huber sp. nov.) by morphology of male palps (Figs 38–39; symmetric modifications of trochanter and femur; asymmetric shapes of procursi; Figs 41–44), by proximally modified male chelicerae (densely covered

with small scales; Fig. 47), and by strong internal sclerite in female genitalia (Fig. 37). From most congeners (except *Pa. casaroro* Huber sp. nov.) also by contiguous tips of male ocular processes (Figs 35, 45, 48–49); from *Pa. casaroro* Huber sp. nov. also by absence of process between eye stalks (Fig. 35), and by simple epigynal scape (Fig. 36; not with two distal lobes).

Etymology

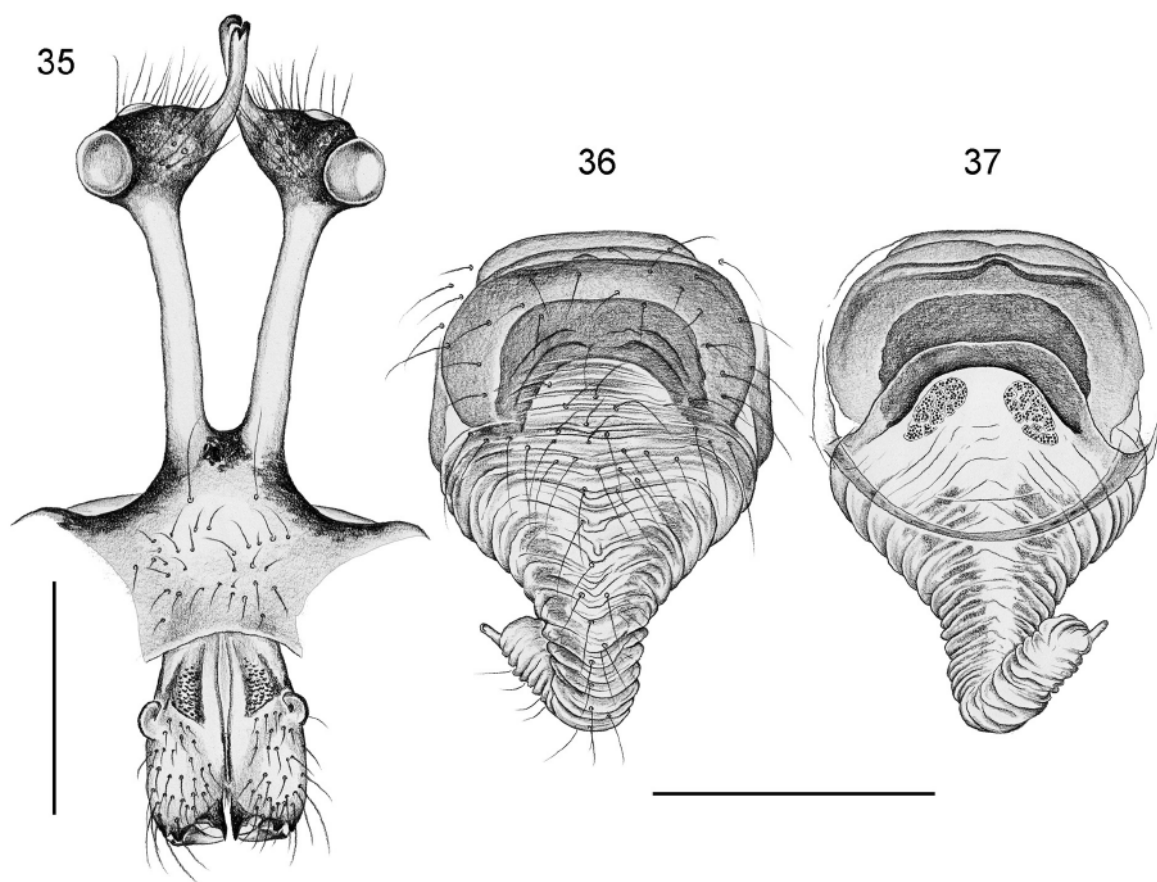
The species name is derived from the type locality; noun in apposition.

Type material

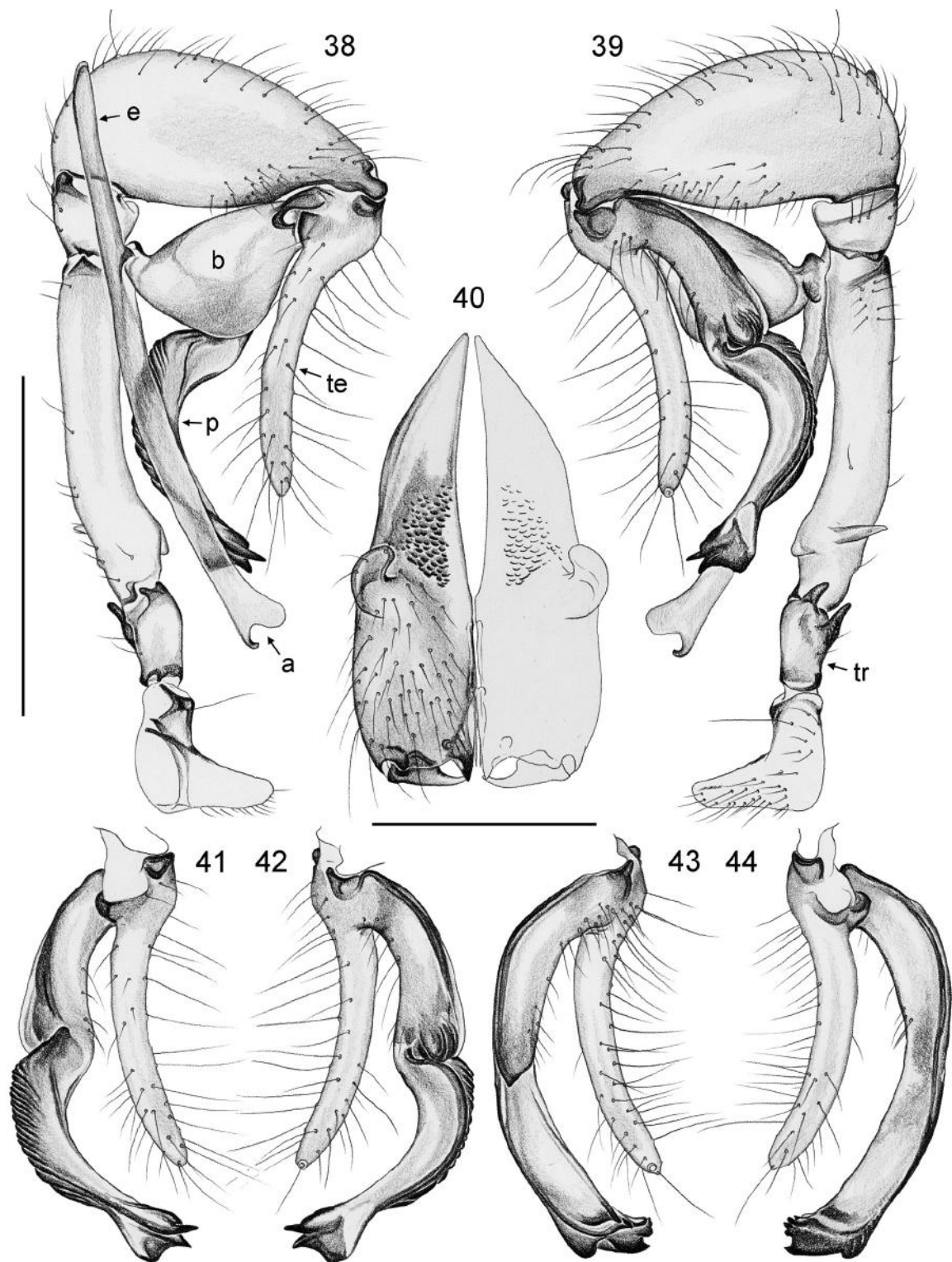
PHILIPPINES: holotype ♂, in ZFMK (Ar 13002), Camiguin Island, Katibawasan Falls (9.215°N, 124.720°E), 300 m a.s.l., on leaves, 19 Feb. 2014 (B.A. Huber, P.N. Banaag).

Other material examined

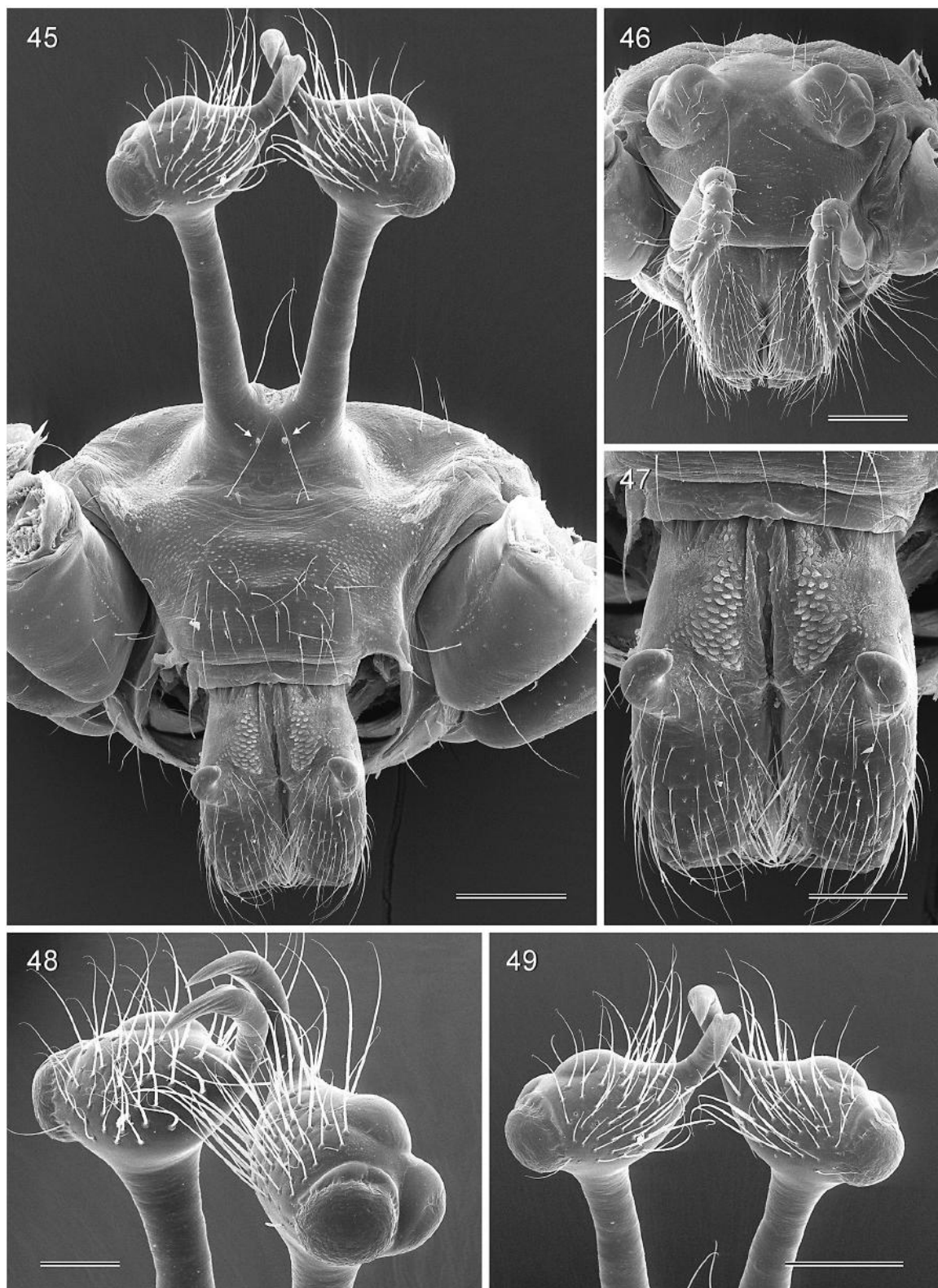
PHILIPPINES: Camiguin Island: 7 ♂♂, 17 ♀♀, 1 juv. in ZFMK (Ar 13003, 13004) and 1 ♂, 1 ♀ in MSU-IIT, same data as holotype; 2 ♀♀, 2 juvs in pure ethanol, in ZFMK (Phi 235), same data; 2 ♂♂, 2 ♀♀, 2 juvs in ZFMK (Ar 13005) and 1 ♂, 1 ♀ in MSU-IIT, all poorly preserved, same locality, 5–6 May 2014 (E.P. Mondejar); 2 ♂♂, 7 ♀♀, 1 juv. in ZFMK (Ar 13006), Mt. Hibok Hibok (9.196°N, 124.692°E), 600 m a.s.l., on leaves, 18 Feb. 2014 (B.A. Huber, P.N. Banaag); 2 ♀♀, 2 juvs in pure ethanol, in ZFMK (Phi 241), same data. Bohol Island: 2 ♂♂, 5 ♀♀ in ZFMK (Ar 13007), near Loboc, above Loboc River (~9.655°N, 124.015°E), ~250 m a.s.l., forest near caves, 5 Mar. 2014 (B.A. Huber);



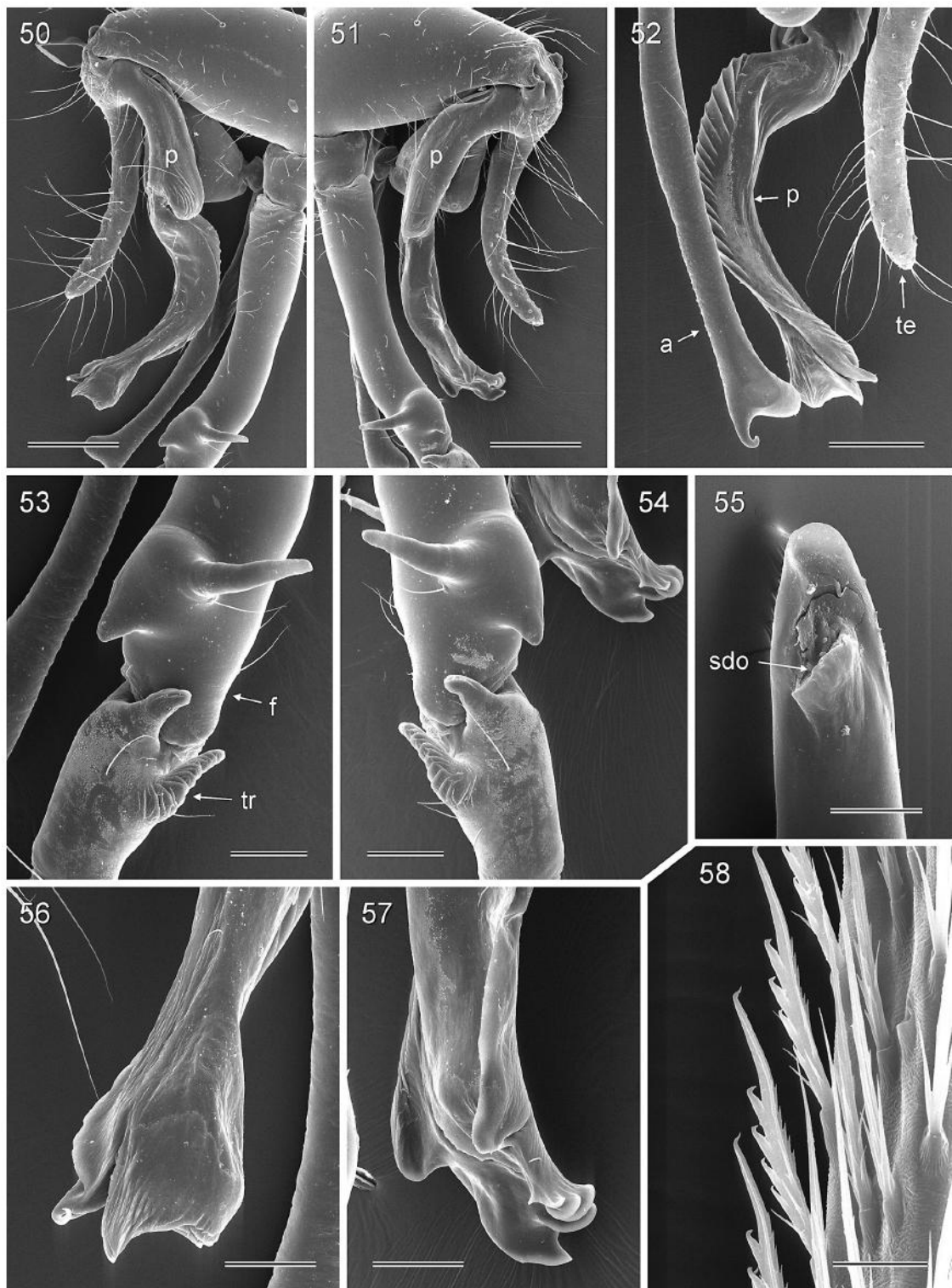
Figs 35–37. *Panjange camiguin* Huber sp. nov. (ZFMK, Ar 13003, 13004). **35.** Male prosoma and chelicerae, frontal view. **36–37.** Cleared female genitalia, ventral and dorsal views. Scale bars = 0.5 mm.



Figs 38–44. *Panjange camiguin* Huber sp. nov. (ZFMK, Ar 13003). **38–39.** Left male palp, prolateral and retrolateral views. **40.** Male chelicerae, frontal view. **41–42.** Left male tarsus and procursus, prolateral and retrolateral views. **43–44.** Right male tarsus and procursus, retrolateral and prolateral views. Abbreviations: a = appendix; b = genital bulb; e = embolus; p = procursus; te = tarsal elongation; tr = trochanter. Scale bars: 38–39, 41–44 = 1 mm; 40 = 0.3 mm.

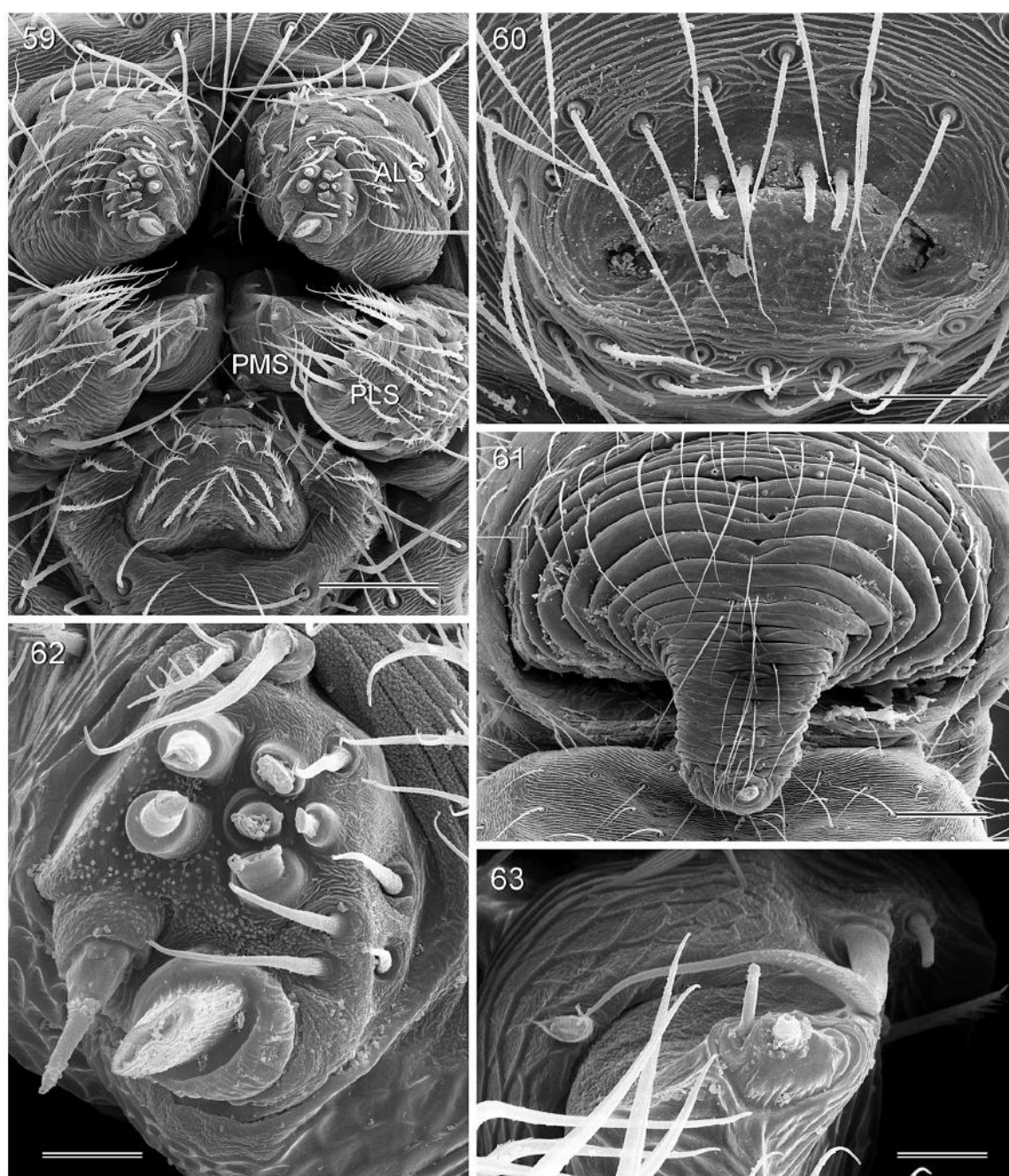


Figs 45–49. *Panjange camiguin* Huber sp. nov., SEM micrographs (ZFMK, Ar 13003, 13004). **45–46.** Male and female prosomata, frontal views (arrows point at tiny AME remnants). **47.** Male chelicerae. **48–49.** Male eye triads and ocular processes, oblique frontal and frontal views. Scale bars: 45–46, 49 = 200 μm ; 47–48 = 100 μm .



Figs 50–58. *Panjange camiguin* Huber sp. nov., SEM micrographs (ZFMK, Ar 13003, 13004). **50–51.** Left and right male palps, retrolateral views. **52.** Left procursus and appendix, prolateral view. **53–54.** Left and right male palpal trochanters and femora proximally, retrolateral views. **55.** Tip of embolus. **56–57.** Left and right procursus tips, retrolateral views. **58.** Comb-hairs on female tarsus 4. Abbreviations: a = appendix; f = femur; p = procursus; sdo = sperm duct opening; te = tarsal elongation; tr = trochanter. Scale bars: 50–51 = 300 μ m; 52 = 200 μ m; 53–54 = 100 μ m; 55 = 30 μ m; 56–57 = 80 μ m; 58 = 20 μ m.

1 ♀, 3 juvs in pure ethanol, in ZFMK (Phi 199), same data; 1 ♀ with 8 hymenopteran parasites and 2 juveniles emerged from same egg sac, in pure ethanol in ZFMK (Phi 291), same data (Fig. 8); 1 ♂, 4 ♀♀, 1 juv. in ZFMK (Ar 13008), Rajah Sikatuna (Magsaysay Park) (9.705°N, 124.123°E), 430 m a.s.l., forest, on leaves, 6 Mar. 2014 (B.A. Huber); 4 juvs in pure ethanol in ZFMK (Phi 194), same data; 5 ♂♂, 11 ♀♀, 34 juvs in ZFMK (Ar 15064) and 2 ♂♂, 2 ♀♀ in MSU-IIT, Bilar, Barangay Riverside (~9.705°N, 12.125°E), 15 Jun. 2015 (M.R.B. Dacar).



Figs 59–63. *Panjange camiguin* Huber sp. nov., SEM micrographs (ZFMK, Ar 13003, 13004). **59.** Female spinnerets. **60.** Male gonopore. **61.** Epigynum and scape, ventral view. **62.** Female ALS. **63.** Female PMS. Abbreviations: ALS = anterior lateral spinneret; PLS = posterior lateral spinneret; PMS = posterior median spinneret. Scale bars: 59 = 60 µm; 60 = 30 µm; 61 = 100 µm; 62–63 = 10 µm.

Assigned tentatively

PHILIPPINES, Bohol Island: 2 ♂♂, 4 juvs in ZFMK (Ar 15065) and 1 ♂ in MSU-IIT, Garcia Hernandez, Barangay Datag (~9.719°N, 124.262°E), 8 Jun. 2015 (M.R.B. Dacar); 3 ♂♂, 4 ♀♀, 4 juvs in ZFMK (Ar 15066) and 1 ♂, 1 ♀ in MSU-IIT, Valencia, Barangay Marawis (9.723°N, 124.202°E), 10–11 Jun. 2015 (M.B.R. Dacar); 2 ♂♂, 8 ♀♀, 5 juvs in ZFMK (Ar 15067) and 1 ♂, 1 ♀ in MSU-IIT, Sierra Bullones, Barangay Nan-od (~9.748°N, 124.264°E), 4–5 Jun. 2015 (M.R.B. Dacar).

Description

Male (holotype)

MEASUREMENTS. Total body length 5.0, carapace width 1.0. Leg 1: 43.2 (9.8 + 0.5 + 9.9 + 21.1 + 1.9), tibia 2: 6.1, tibia 3: 3.1, tibia 4: 5.0; tibia 1 L/d: 103. Distance PME–PME 355 µm, diameter PME 125 µm, distance PME–ALE ~35 µm; with tiny AME lenses barely visible in dissecting microscope, diameter ~10 µm (Fig. 45).

COLOR. Carapace pale ochre with darker triangular mark posteriorly, pair of dark marks lateral of base of eye stalks, and median mark in AME area; clypeus without pattern; sternum whitish; legs ochre-yellow with dark brown patellae and tibia-metatarsus joints; abdomen pale gray, with black marks dorsally, monochromous ventrally.

BODY. Habitus as in Figs 9–10; ocular area raised, triads on long additional stalks with further distal processes whose contiguous tips seem to form a functional unit (Figs 35, 45, 48–49); without process between eye stalks; carapace without median furrow; clypeus unmodified; sternum wider than long (0.70/0.50), unmodified.

CHELICERAE. As in Fig. 47, with pair of curved, weakly sclerotized lateral processes, proximally densely covered with small scales; without modified hairs; without stridulatory ridges.

PALPS. As in Figs 38–39, 50–51; proximal segments symmetric in shape and apparently also in size (Figs 53–54); coxa with strong ventro-distal rim but otherwise unmodified; trochanter with distinctive pair of apophyses (retrolateral and dorsal; Figs 53, 54); femur with weakly sclerotized retrolateral process directed toward dorsal and short ventral process directed toward proximal (Figs 53, 54); patella very small; tibia large; tarsus with long whitish elongation; procursi of left and right palps slightly but clearly different, distal part of procursus hinged in left palp, not hinged in right palp (Figs 41–44); bulb symmetric in shape, with long processes extending in opposite directions (dorsal embolus; ventral appendix), apparently slightly longer in left palp.

LEGS. Without spines and curved hairs; few vertical hairs; retrolateral trichobothrium on tibia 1 at 3%; prolateral trichobothrium absent on tibia 1, present on other tibiae; tarsus 1 with > 20 pseudosegments, only distally fairly distinct.

Male (variation)

Tibia 1 in 11 other males: 8.6–10.1 (mean 9.5). Males from the three eastern sites on Bohol Island (Datag, Marawis, Nan-od) differ slightly but consistently from other specimens in the tip of the right procursus that has a distinct retrolateral process. Specimens from these localities are therefore assigned tentatively.

Female

In general similar to male but eye triads on low humps and much closer together (distance PME–PME 260 µm), without AME remnants (Fig. 46); posterior mark on carapace smaller, often medially divided; dark abdomen spots in some specimens very indistinct or even absent. Tibia 1 in 32 females: 6.4–8.2 (mean

7.1). Epigynum apparently symmetric, mostly weakly sclerotized, with strong internal transversal sclerite visible through cuticle; extensible scape with strong transversal folds, laterally light brown to orange, with small median process at tip (Figs 36, 61); internal genitalia as in Fig. 37, also apparently symmetric.

Natural history

The spiders were found on the undersides of large leaves to which they attach fairly dense but barely visible sheets of silk. One female was collected on 5 Mar. 2014 with a parasitized egg sac from which all eggs hatched on 12 Mar. 2014 (two spiders and eight wasps).

Distribution

Known from Camiguin and Bohol Islands (Fig. 16).