Aetana kiukoki Huber, 2015

Huber BA, Nuñeza OM, Leh Moi Ung C. 2015. Revision, phylogeny, and microhabitat shifts in the Southeast Asian spider genus *Aetana* (Araneae, Pholcidae). European Journal of Taxonomy 162: 1-78.

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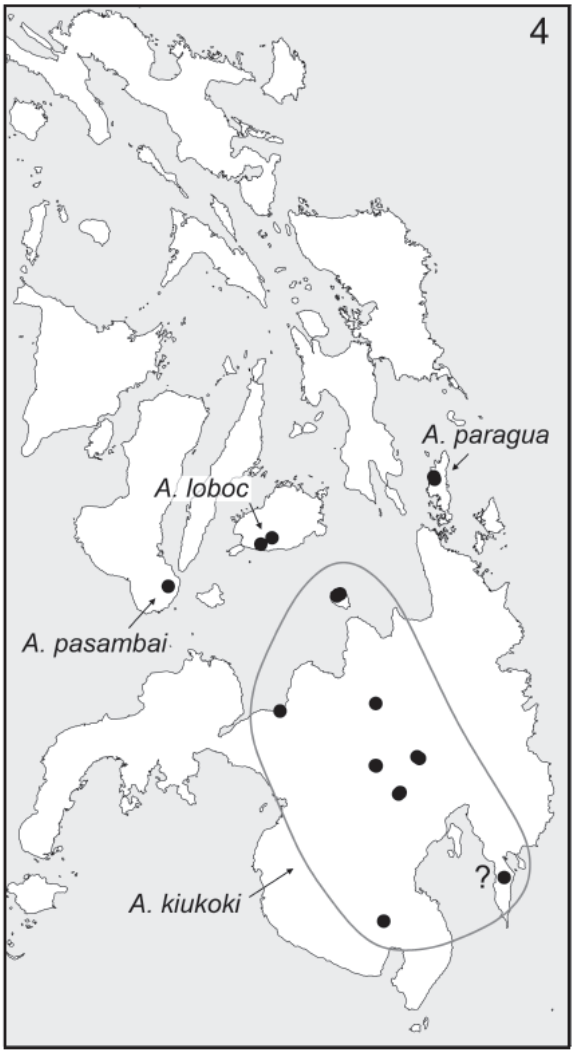

Figs 3–4. Known distributions of the *Aetana ocampoi* (3) and *A. kiukoki* (4) groups. The question mark denotes a female specimen assigned tentatively to *A. kiukoki*.

Aetana kiukoki Huber, sp. nov.
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Figs 51–52, 57–69, 87–89

Diagnosis

Distinguished from closest known relatives (*A. paragua* Huber, sp. nov., *A. loboc* Huber, sp. nov., *A. pasambai* Huber, sp. nov.) by distinctive modification of male clypeus (Figs 59, 62, 65; similar only in *A. paragua* Huber, sp. nov., see Fig. 72), and long tongue-shaped posterior projection of epigynum (Figs 60, 87; very similar in *A. paragua* Huber, sp. nov., see Fig. 73; much shorter in *A. loboc* Huber, sp. nov., see Fig. 78; female of *A. pasambai* Huber, sp. nov. unknown). Distinguished from *A. paragua* Huber, sp. nov. also by longer male eye stalks (Fig. 59), more strongly curved apophysis on male palpal femur (Fig. 58), different shape of distal procursus elements (Fig. 58), and pore plates closer together (Fig. 61). Distinguished from *A. loboc* Huber, sp. nov. and *A. pasambai* Huber, sp. nov. also by modification of male palpal femur (only one large retrolateral process; Fig. 58) and absence of median process on male ocular area.

Etymology

Named for Filipino painter Ang Kiukok (1931–2005).

Material examined

Holotype

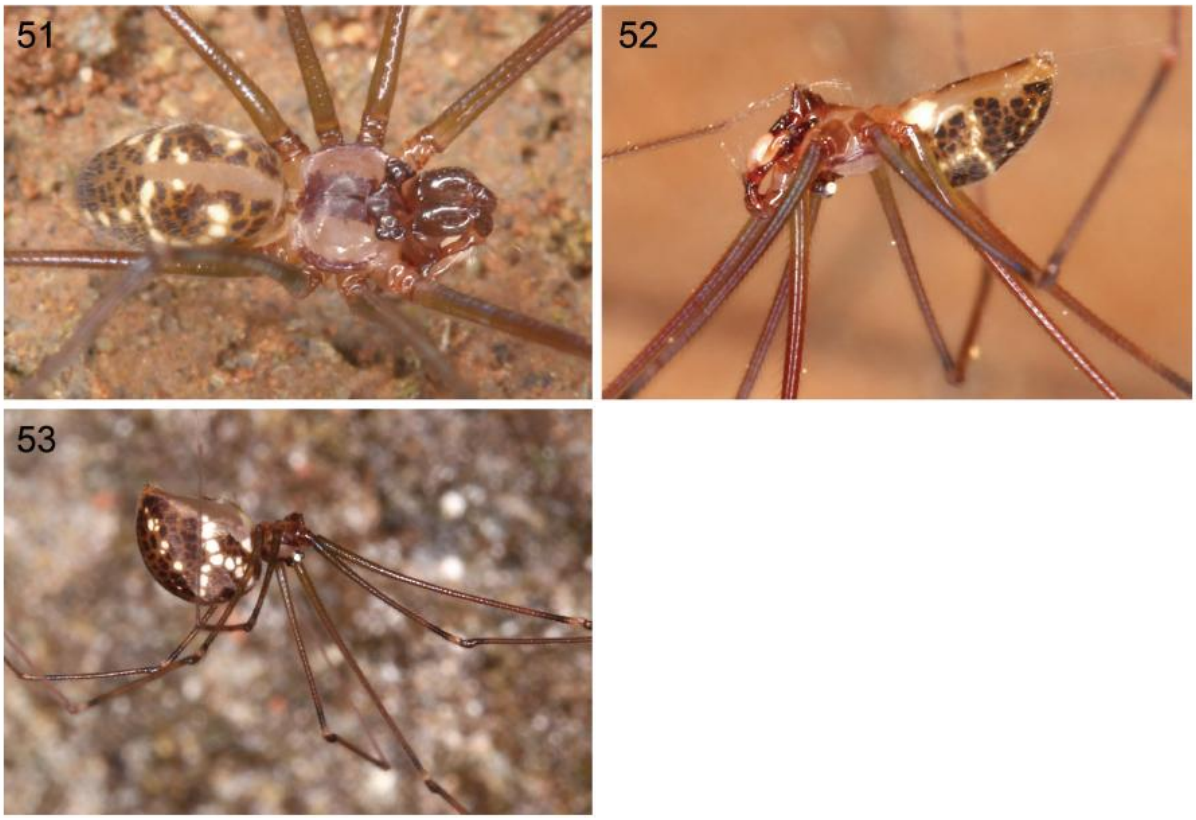
PHILIPPINES: ♂, Mindanao, Davao del Sur Prov., Marilog Distr., Baganihan (7.469° N, 125.250° E), 1210 m a.s.l., primary forest near road, near ground, 15 Feb. 2014 (B.A. Huber), ZFMK (Ar 13934).

Other material

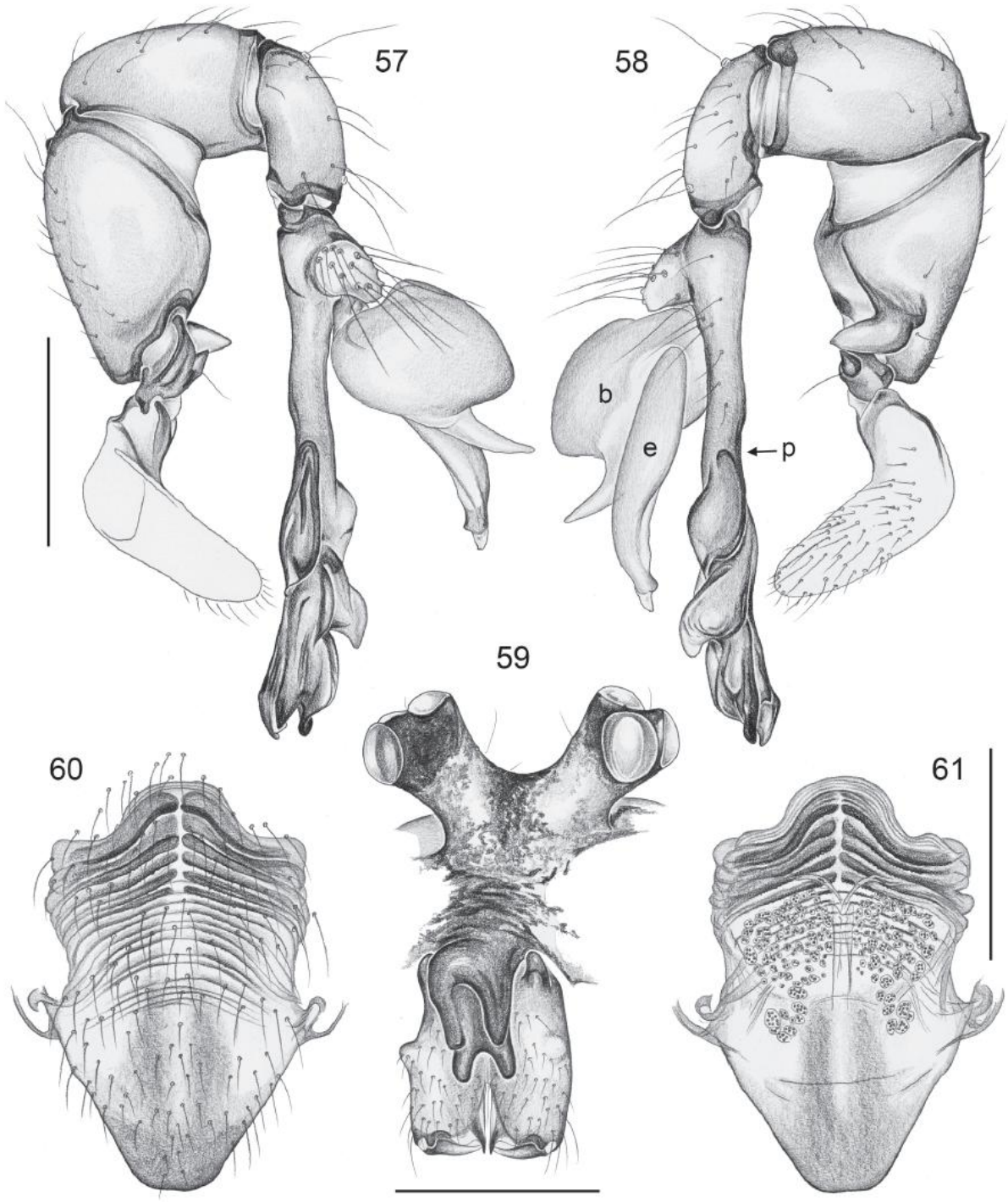
ꓘ (Ar 13935-36); 1 ♀, 6 juvs, in pure ethanol, same data, ZFMK (Phi 256). – 1 ♀, 11 juvs from Barangay Baganihan, 'site 1' (7.438° N, 125.226° E), 1000 m a.s.l., 5 Dec. 2014 (M.A. Responte), MSU-IIT; 4 ♀♀, 17 juvs, from same locality, 'site 2' (7.456° N, 125.239° E), 6 Dec. 2014 (M.A. Responte), MSU-IIT; 9 juvs, from same locality, 'site 3' (7.470° N, 125.245° E), 7 Dec 2014 (M.A. Responte), MSU-IIT. – 4 ♀♀, 1 juv., Marilog Distr., Epol Spring Resort (7.456° N, 125.237° E), ~1100 m a.s.l., degraded forest, near ground, 15 Feb. 2014 (B.A. Huber), ZFMK (Ar 13937); 3 ♀♀, in pure ethanol, same data, ZFMK (Phi 253). – 1 ♂, 1 ♀, 10 juvs, from Epol Falls, 'site 2' (7.454° N, 125.239° E), 1150 m a.s.l., 2 Dec. 2014 (M.A. Responte), MSU-IIT; 1 ♀, 4 juvs, from same locality, 'site 3' (7.451° N, 125.240° E), 1200 m a.s.l., 3 Dec. 2014 (M.A. Responte), MSU-IIT; 1 juv., from same locality, 'site 1' (7.455° N, 125.237° E), 1100 m a.s.l., 1 Dec. 2014 (M.A. Responte), MSU-IIT. – 6 ♂♂, 2 ♀♀, 2 juvs, Mt. Matutum, Kawit Forest, 'site 1' (6.338° N, 125.104° E), 950 m a.s.l., along brook, near ground, 13 Feb. 2014 (B.A. Huber), ZFMK (Ar 13938); 4 juvs, in pure ethanol, same data, ZFMK (Phi 268). – 1 ♂, 2 ♀♀, Bukidnon Prov., Barangay San Jose, Blue Water Cave (7.706° N, 125.032° E), 200 m a.s.l., near ground at cave entrance, 16 Feb. 2014 (B.A. Huber), ZFMK (Ar 13939); 4 ♀♀, 1 juv., in pure ethanol, same data, ZFMK (Phi 251). – 2 ♂♂, 2 ♀♀, 1 juv., Barangay San Jose, Kabyaw Cave (~7.704° N, 125.038° E), ~200 m a.s.l., near ground near cave entrance, 16 Feb. 2014 (B.A. Huber), ZFMK (Ar 13940). – 4 ♂♂, 8 ♀♀, Barangay San Jose, doline near Kabyaw Cave (7.703° N, 125.038° E), 220 m a.s.l., near ground, 16 Feb. 2014 (B.A. Huber), ZFMK (Ar 13941). – 3 ♀♀, Bukidnon Prov., CEDAR (Center for Ecological Development and Recreation) (8.251° N, 125.034° E), 760 m a.s.l., forest along river, near ground, 16 Feb. 2014 (B.A. Huber), ZFMK (Ar 13942); 1 ♀, in pure ethanol, same data, ZFMK (Phi 246). – 1 ♂, 4 ♀♀, 3 juvs, from CEDAR (8.251° N, 125.027° E), 15 Nov. 2014 (E.P. Mondejar), MSU-IIT. – 3 ♂♂, 7 ♀♀, Bukidnon Prov., Santo Domingo (7.782° N, 125.397° E), 560 m a.s.l., forest remnant along brook, near ground, 8–9 Feb. 2014 (B.A. Huber), ZFMK (Ar 13943); 1 ♀, 6 juvs, in pure ethanol, same data, ZFMK (Phi 285). – 2 ♂♂, Bukidnon

Prov., near Santo Domingo, Penolohan (7.769° N, 125.420° E), 640 m a.s.l., forest above Salug River, near ground, 8 Feb. 2014 (B.A. Huber) ZFMK (Ar 13944); 2 ♀♀ in pure ethanol, same data, ZFMK (Phi 277). – 5 ♂♂, 15 ♀♀, 3 juvs, Misamis Occidental Prov., Iligan, NPC Nature's Park near Cristina Falls (8.186° N, 124.192° E), 90 m a.s.l., near ground, 17 Feb. 2014 (B.A. Huber), ZFMK (Ar 13945-46); 3 ♀♀, 2 juvs, in pure ethanol, same data, ZFMK (Phi 244).

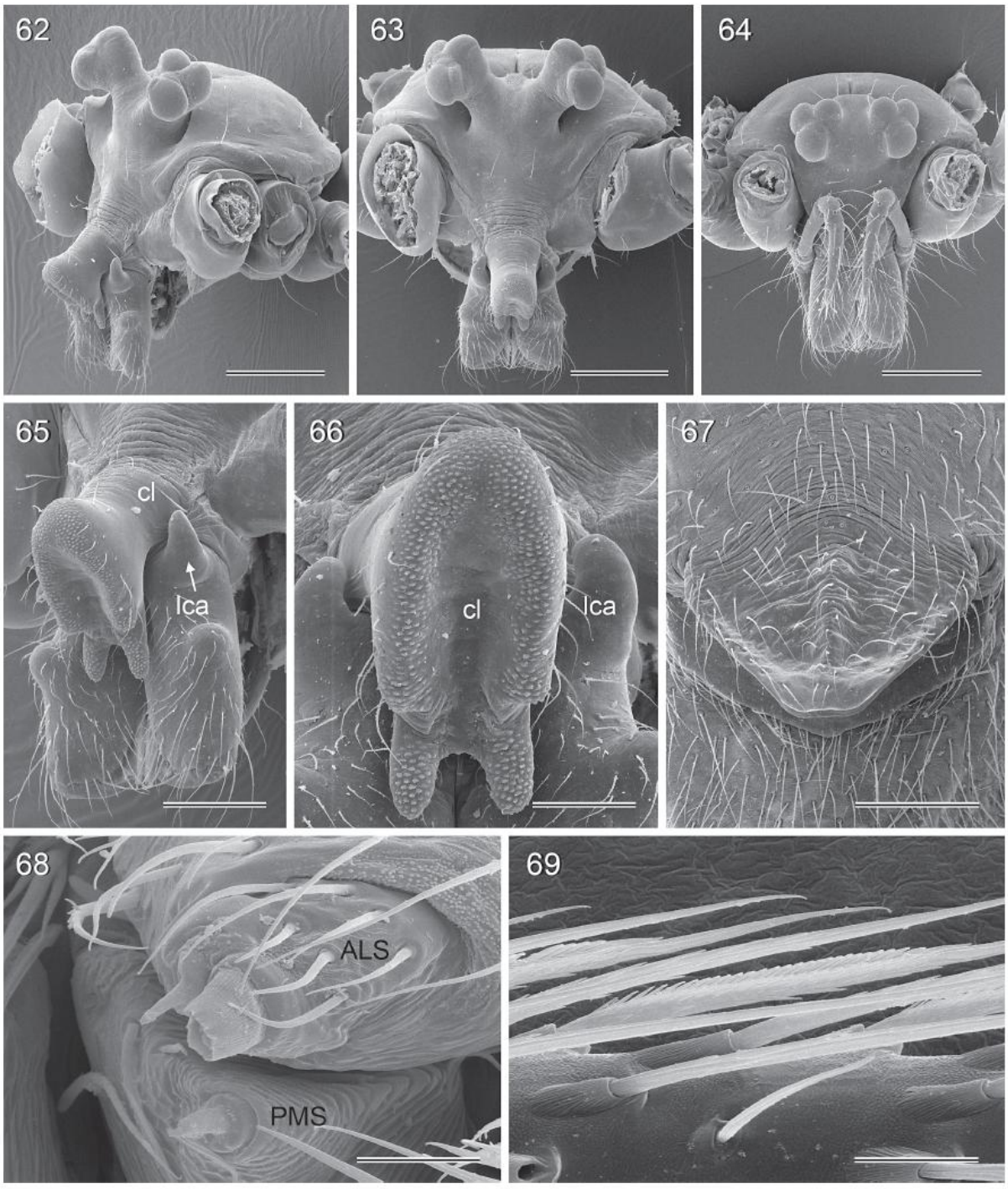
PHILIPPINES, Camiguin Isl.: 13 ♂♂, 11 ♀♀, 1 juv., Katibawasan Falls (9.215° N, 124.720° E), 300 m a.s.l., near ground, 19 Feb. 2014 (B.A. Huber, P.N. Banaag), ZFMK (Ar 13947-48); 1 ♀, in pure ethanol, same data, ZFMK (Phi 236). – 9 ♂♂, 12 ♀♀, 20 juvs, from Katibawasan (9.213° N, 124.718° E), 5–6



Figs 51–56. Live specimens. *Aetana kiukoki* group. **51–53**. *A. kiukoki* Huber, sp. nov., ♂ from Baganihan (51), ♂ and ♀ from Santo Domingo (52–53), Mindanao.



Figs 57–61. *Aetana kiukoki* Huber, sp. nov. **57–58**. Left male palp, prolateral and retrolateral views. **59**. Male prosoma, oblique frontal view. **60–61**. Cleared female genitalia, ventral and dorsal views. b = genital bulb; e = embolus; p = procursus. Scale lines: 0.5 mm.



Figs 62–69. *Aetana kiukoki* Huber, sp. nov. **62–63**. Male prosoma, oblique frontal and frontal views. **64**. Female prosoma, frontal view. **65**. Male clypeus and chelicerae, oblique frontal view. **66**. Male clypeus modification, frontal view. **67**. Epigynum, ventral view. **68**. Male ALS and PMS. **69**. Comb-hair on female tarsus 4. cl = clypeus; lca = lateral cheliceral apophysis. Scale lines: 62–64 = 400 µm; 65, 67 = 200 µm; 66 = 100 µm; 68–69 = 20 µm.

May 2014 (E.P. Mondejar), MSU-IIT. – 8 ♂♂, 6 ♀♀, 1 juv., Mt. Hibok Hibok (9.196° N, 124.692° E), 600 m a.s.l., near ground, 18 Feb. 2014 (B.A. Huber, P.N. Banaag), ZFMK (Ar 13949-50); 2 ♀♀, 1 juv., in pure ethanol, same data, ZFMK (Phi 240).

Assigned tentatively (no male available)
PHILIPPINES, Mindanao Isl., Davao Oriental: 1 ♀, from Mount Hamiguitan WS (access San Isidro), 'site 1' (6.720° N, 126.172° E), 490 m a.s.l., 9 Feb. 2015 (M.A. Responte), ZFMK (Ar 13951); 7 juvs, from same locality, 'site 3' (6.732° N, 126.179° E), 1250 m a.s.l., 11 Feb. 2015 (M.A. Responte), MSU-IIT.

Description

Male (holotype)
Measurements. Total body length 3.0, carapace width 1.2. Leg 1: 34.2 (7.9 + 0.5 + 8.0 + 14.8 + 3.0), tibia 2: 5.0, tibia 3: 3.5, tibia 4: 5.1; tibia 1 L/d: 72. Distance PME-PME 355 µm, diameter PME 150×120 µm, distance PME-ALE ~35 µm; AME absent.

Color. Carapace ochre-yellow with narrow lateral marginal bands and wide dark brown median band including ocular area and clypeus; sternum with pair of wide brown bands converging posteriorly; legs greenish ochre with slightly darker rings on femora (subdistally, with light tip), and tibiae (proximally and subdistally, the latter followed by light tip); abdomen ochre-gray, dorsally and laterally covered with many black and white marks, ventrally with dark band behind gonopore and very indistinct mark in front of spinnerets.

Body. Habitus as in Figs 51–52; ocular area raised, each triad on additional short stalk directed toward lateral (Figs 59, 62–63), without median process; carapace with very shallow median furrow in anterior part only (Fig. 63); clypeus with large distinctive process, strongly protruding in upper part, with two pairs of rounded apophyses in distal part, densely covered with small scales (Figs 65, 66); sternum wider than long (0.75/0.60), unmodified. ALS and PMS as in Fig. 68.

Chelicerae. As in Fig. 59, with pair of dark lateral apophyses proximally and pair of weakly sclerotized humps laterally, without modified hairs; without stridulatory ridges.

Palps. As in Figs 57–58; coxa unmodified; trochanter with short retrolatero-ventral apophysis; femur with strong retrolateral apophysis distally curved toward ventral; patella large; tibia small, dorsal trichobothrium in very proximal position, retrolateral trichobothrium in very distal position; tarsus with long procursus, distally complex, apparently with two hinged structures; bulb with large embolus and smaller, semitransparent, pointed process.

Legs. Without spines; with curved hairs on metatarsi 1–3 (few curved hairs also on tibiae 1–2); few vertical hairs; retrolateral trichobothrium on tibia 1 at 3%; prolateral trichobothrium absent on tibia 1, present on other tibiae; tarsus 1 with ~30 pseudosegments, only distally distinct.

Male (variation)
Tibia 1 in 48 other males: 7.0–9.8 (mean: 8.2). Ventral mark behind gonopore in most males slightly asymmetrical.

Female
In general similar to male (Fig. 53) but clypeus unmodified; eye triads much closer together (distance PME-PME 155 µm), not on stalks (Fig. 64); without stridulatory apparatus between carapace and abdomen. Tibia 1 in 56 females: 4.9–7.5 (mean: 6.1); dark and light rings on legs often more distinct than in males. Tarsus 4 comb-hairs with very dense tines (Fig. 69). Epigynum in anterior part weakly

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sclerotized, internal structures visible through cuticle, with flat, tongue-shaped scape (Figs 60, 87), without membranous pockets behind epigynum. Internal genitalia as in Figs 61 and 89; pore plates close together; without sclerotized internal pockets; with distinct transversal sclerotized ridges provided with many small teeth. The single female from Mt. Hamiguitan cannot be unambiguously assigned to this species rather than to *A. paragua* and is therefore assigned tentatively.

Natural history

The spiders were found in domed sheet webs close to the ground, usually in well protected dark spaces among and under large rocks and logs in forests. Males and females were sometimes found together in one web. At Baganihan, some specimens (especially juveniles) were found among mosses in deep furrows of trees up to 1.5 m above the ground. At both localities on Camiguin Island, the spiders were observed to be much more agile and quick when disturbed than at other localities.

Distribution

Known from numerous localities on Mindanao Island and from Camiguin Island (Fig. 4).

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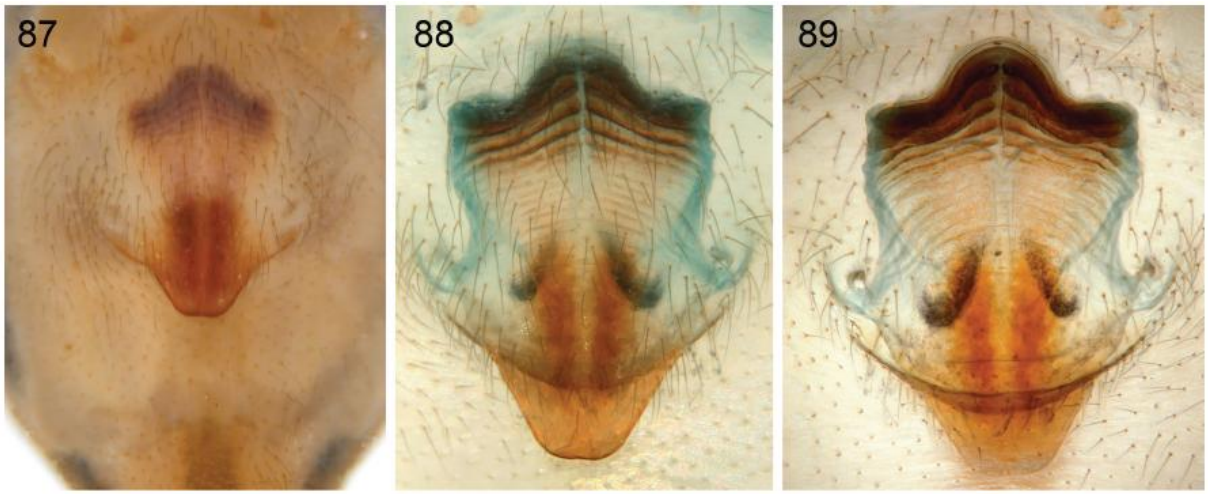

Figs 87–95. *Aetana kiukoki* group. Female genitalia; untreated in ventral view, cleared in ventral and dorsal views. — **87–89**. *A. kiukoki* Huber, sp. nov. —