

A new corinnid species of the genus *Aetius* Pickard-Cambridge (Araneae: Corinnidae) from Sarawak, Borneo

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Abstract — *Aetius bicuspidatus* sp. nov. (Araneae: Corinnidae) is described here on the basis of male and female specimens collected from the Lambir Hills National Park, Sarawak, Borneo. The posterior carapace is elongated with bicuspid edge in both male and female. This character condition is very unique among *Aetius* species.

Key words — Castianeirinae, new species, Southeast Asia, taxonomy

Introduction

The genus *Aetius* O. Pickard-Cambridge 1897 (Araneae: Corinnidae) is comprised of three nominal species: *A. decollatus* O. Pickard-Cambridge 1897, *A. nocturnus* Deeleman-Reinhold 2001, and *A. tuberculatus* (Haddad 2013). *Aetius tuberculatus*, which is African species, belonged to the genus *Apochinomma* Pavesi 1881, but it has been transferred to *Aetius* by Caleb & Mathai (2016). In Borneo, after the comprehensive study on Corinnidae by Deeleman-Reinhold (2001), new corinnid species has been discovered by intense field works (Yamasaki et al. 2016, 2017). We here describe a new species of the genus *Aetius* on the basis of male and female specimens from the Lambir Hills National Park, Sarawak, Borneo.

Materials and Methods

Specimens were collected from understory vegetation at two sites in the Lambir Hills National Park, Sarawak, Borneo, and preserved in 99 % ethanol. The specimens were examined using a Nikon SMZ1270 stereoscope. Female genitalia were removed from the body, and cleared by immersing 10 % KOH solution for 12–24 hours. Images were captured using a Canon 60D digital camera attached to a Nikon SMZ1270, and focal planes of single image series were combined using Helicon focus 4.2.9.

The abbreviations used in the present paper are as fol-

lows; ALE, anterior lateral eye; PLE, posterior lateral eye; PME, posterior median eye; RTA, retrolateral tibial apophysis on the male palp. For the description of leg macrosetae, the number of macrosetae in dorsal (d), pro-ventral (pv) and retro-ventral (rv) parts of leg segments were recorded. All measurements are provided in millimeters. ALE–ALE, PME–PME and PLE–PLE were measured, including with eye lenses. Holotype and paratype are deposited at Kuching Insectarium of Forest Department Sarawak (KIFDS), which is managed by Research, Development and Innovation Divisions, Forest Department Sarawak. All authors participated in obtaining the specimens.

Taxonomy

Genus *Aetius* O. Pickard-Cambridge 1897
Aetius bicuspidatus sp. nov. Yamasaki
(Figs. 1–3)

Type material. Holotype male (LMB_TY20180829_CR02; KIFDS), 29.VIII.2018, Sungai Liku, T. Yamasaki leg. Paratype female (LMB_TY20180830_CR02; KIFDS), 30.VIII.2018, Tower 1 area, F. Hyodo leg. All collection sites belong to the Lambir Hills National Park, Sarawak, Borneo.

Diagnosis. *Aetius bicuspidatus* sp. nov. can be distinguishable from the other *Aetius* species by the bicuspid posterior projection on the carapace. This character condition is unique among the genus *Aetius*.

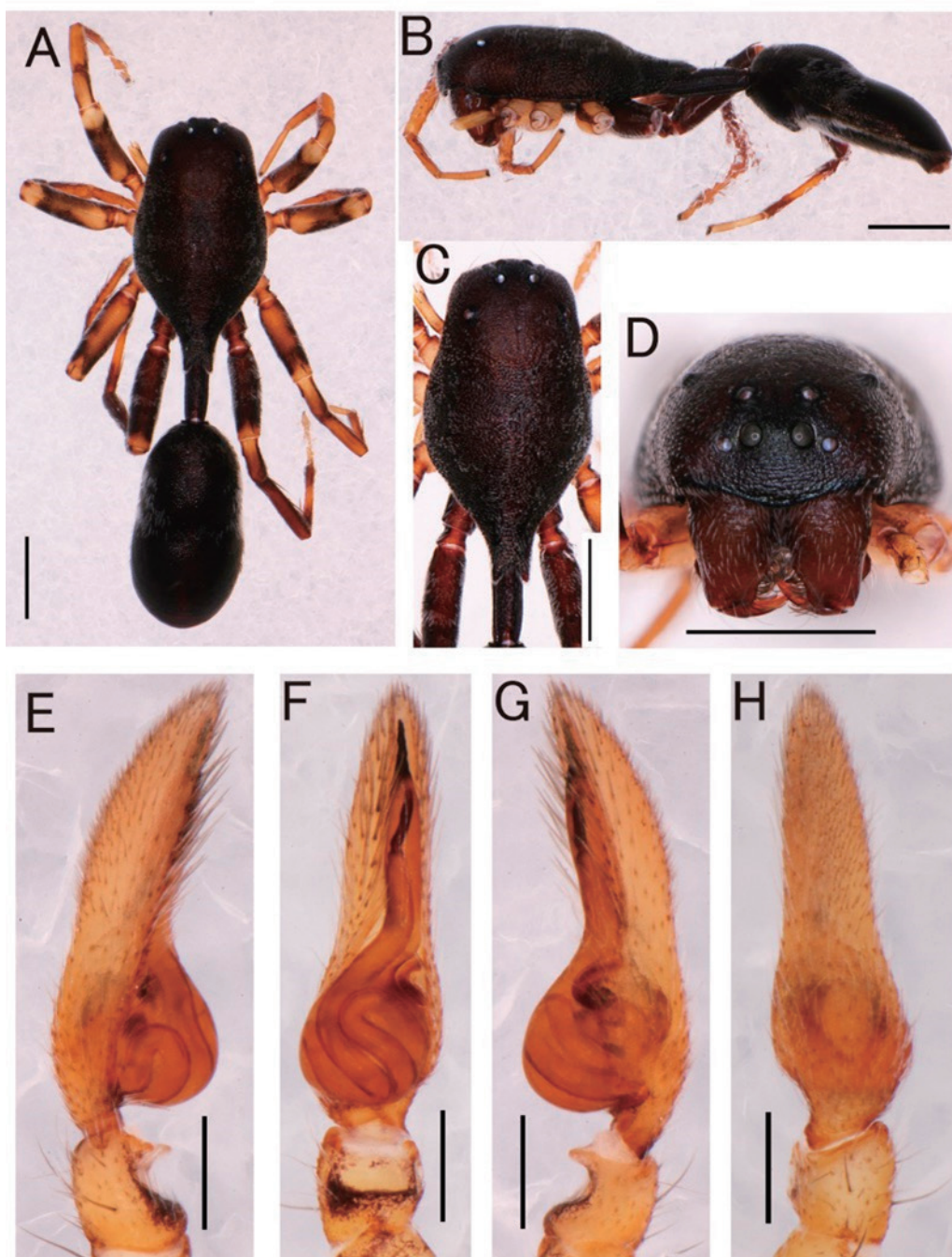


Fig. 1. *Aetius bicuspidatus* sp. nov., holotype male. A, habitus, dorsal view; B, same, lateral view; C, carapace, dorsal view; D, cephalic area, frontal view; E, left palp, prolateral view; F, same, ventral view; G, same, retrolateral view; H, same, dorsal view. Scales = 1 mm (A–D); 0.2 mm (E–H).

Measurements (Holotype male/paratype female). Carapace length 3.30/3.35; width 1.70/1.72. ALE–ALE 0.65/0.66; PME–PME 0.46/0.43; PLE–PLE 1.10/1.05. Pedicel length 1.23/1.37. Abdomen length 2.80/2.74.

Male (Figs. 1A–D). Carapace sub-pentagonal, covered with tubercles; margin of clypeus slightly convex; posterior

margin of carapace elongated, and bicuspid distally. Posterior eye row strongly recurved. Pedicel strongly sclerotized, long but shorter than width of carapace. Abdomen slender oval, covered by dorsal and ventral scuta; epigastric area sclerotized, forming very short pedicel collar.

Palp (Figs. 1E–H, 3A–C). Cymbium slender, tapering api-

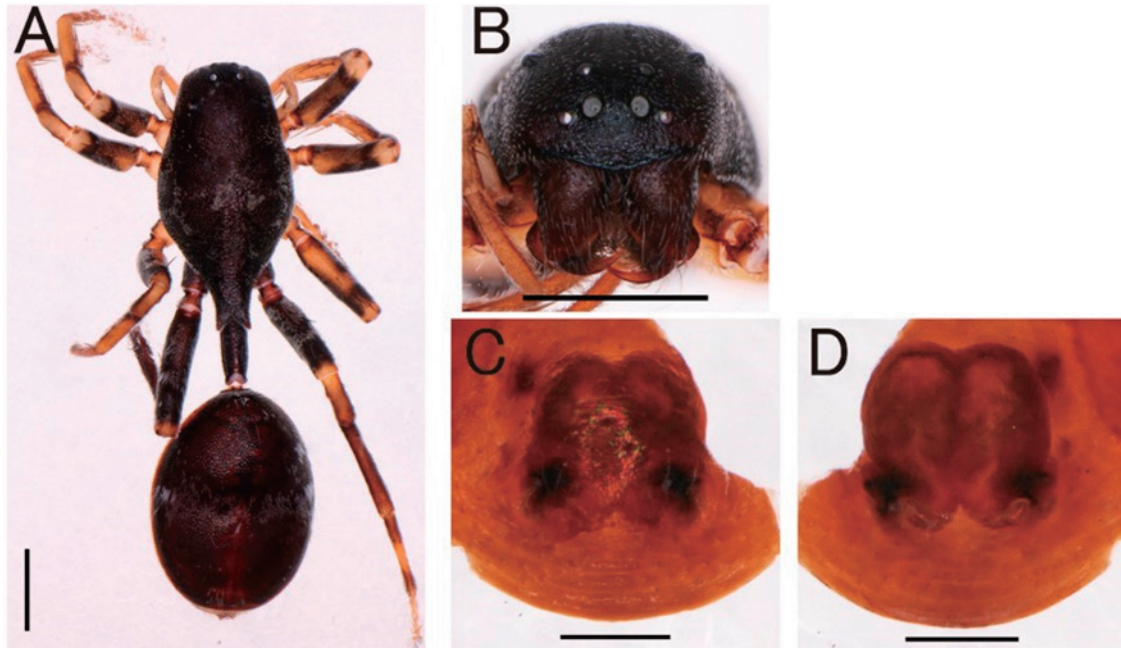


Fig. 2. *Aetius bicuspidatus* sp. nov., paratype female. A, habitus, dorsal view; B, cephalic area, frontal view; C, epigyne, ventral view; D, copulatory organs, dorsal view. Scales = 1 mm (A–B); 0.2 mm (C–D).

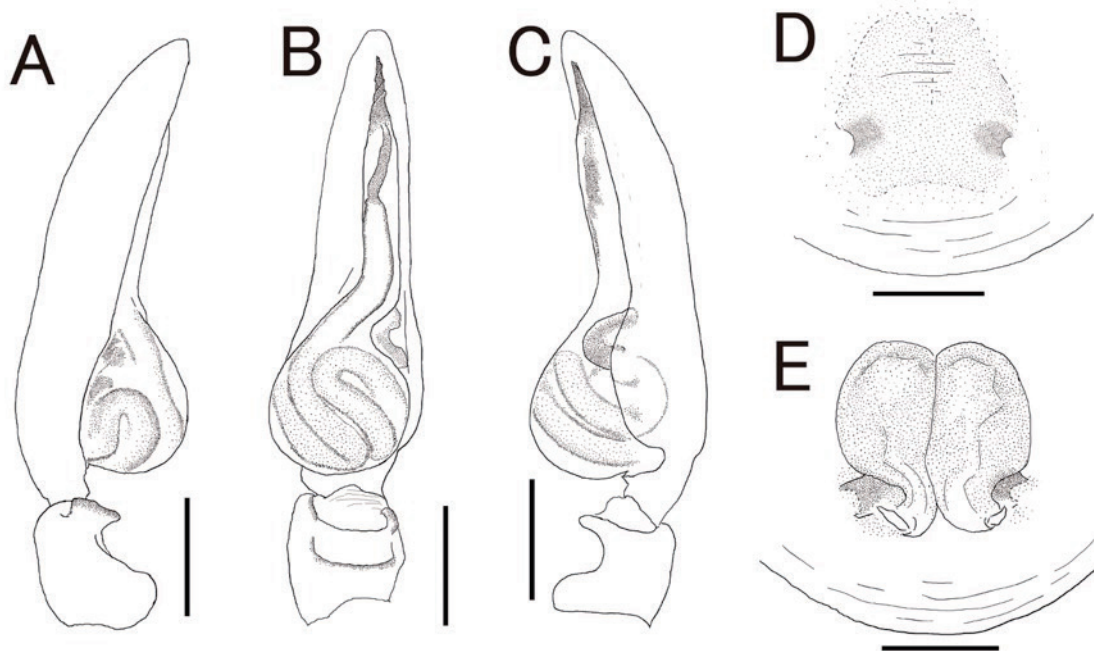


Fig. 3. *Aetius bicuspidatus* sp. nov. A, left palp, holotype male, prolateral view; B, same, ventral view; C, same, retrolateral view; D, epigyne, paratype female, ventral view; E, copulatory organs, paratype female, dorsal view. Scales = 0.2 mm.

cally. Bulb divided into spherical part posteriorly and narrow part anteriorly; longitudinal diameter of spherical part around one third length of cymbium; narrow part extending apically, with curved base. Subtegulum visible between spherical and narrow parts of bulb in ventral view. Embolus spine-shaped, with screw-like surface. Spermatheca twisted in spherical bulb, extending through narrow bulb part, and connecting embolus. Tibia concaved in ventral surface; distal margin developed, anterior corner forming digitiform projecting ventrally in retrolateral view, and anterior edge weakly sclerotized in prolateral view.

Leg macrosetae. Leg I: femur d1; tibia pv3, rv3; metatarsus pv2, rv2. Leg II: femur d1; tibia pv3, rv3; metatarsus pv2, rv2. Leg III: femur d3; tibia pv2, rv2; metatarsus pv4, rv1. Leg IV: femur d4; tibia pv2, rv2; metatarsus pv2, rv1.

Coloration (Figs. 1A–D). Carapace black, sparsely covered with white short plumose setae. Chelicera, labium, maxilla and sternum dark brown. Abdomen black, covered with fine setae and white plumose setae. Palp brownish cream. Legs brownish cream, femora tinged with black; leg IV darker than other legs.

Female (Figs. 2A–B). For somatic characters, coloration and setae almost same as in male, except for rounder abdomen.

Leg macrosetae. Leg I: femur d2; tibia pv3, rv3; metatarsus pv2, rv2. Leg II: femur d2; tibia pv3, rv3; metatarsus pv2, rv2. Leg III: femur d3; tibia pv2, rv2; metatarsus pv3, rv1. Leg IV: femur d3; tibia pv2, rv2; metatarsus pv2, rv2.

Copulatory organs (Figs. 2C–D, 3D–E). Epigyne simple, strongly sclerotized, with small copulatory opening. Copulatory duct short, connecting to spermatheca. Spermatheca oval, with fertilization duct posteriorly.

Etymology. The specific name is a Latin adjective, referring the bicuspid posterior projection on the carapace.

Distribution. Known from only the Lambir Hills National Park (but see Remarks).

Remarks. In morphological description for other *Aetius* species, the presence of RTA is clearly mentioned (Dankittipakul & Singtripop 2013; Sudhin et al. 2016; Caleb & Mathai 2016). The same structure was observed in *A. bicuspidatus* sp. nov. However, we did not use the term, RTA, for the structure because it seems to be an enlarged margin of the palpal tibia.

Koh & Bay (2019) shows male of *Aetius* sp. which has a bicuspid posterior projection on the carapace, and the

species is distributed in Sabah (Borneo) and Singapore. To clarify the taxonomic status of the species in Sabah and Singapore, further study is needed.

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