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Redescription of *Sphecotypus taprobanicus* Simon 1897 (Araneae: Corinnidae)

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Abstract — *Sphecotypus taprobanicus* Simon 1897 is redescribed on the basis of the holotype female. Although the specimen is at a subadult stage, the shape of the carapace distinguishes *S. taprobanicus* from other Asian *Sphecotypus* species.

Key words — ant-mimicry, Castianeirinae, holotype, Sri Lanka, taxonomy

Introduction

The genus *Sphecotypus* O. Pickard-Cambridge 1895 consists of four species. The type species, *S. niger* (Perty 1833), is the only species from South America, while the others are from South and Southeast Asia. In Asia, *S. birmanicus* (Thorell 1897) is described from Myanmar, *S. borneensis* Yamasaki 2017 from Borneo, and *S. taprobanicus* Simon 1897 from Sri Lanka (World Spider Catalog 2022).

The identification of species described in the 19th century is difficult because these descriptions often lack illustrations showing crucial characters, which are necessary for recent spider taxonomy. Therefore, examination of type specimens is a simple method for identifying species described by legendary arachnologists, such as E. Simon and T. Thorell. Yamasaki et al. (2017) redescribed *S. birmanicus* on the basis of the holotype deposited at Museo Civico di Storia Naturale "Giacomo Doria," Genoa. However, the morphological information of *S. taprobanicu*s is not sufficiently available for identification. This study aims to redescribe *S. taprobanicus* on the basis of the holotype.

Materials and methods

The holotype of *S. taprobanicus* was examined under a microscope (LEICA MZ125) in the Muséum national d'Histoire naturelle, Paris (hereafter MNHN). Images were captured using an Olympus TG-5, which was attached to an eyepiece tube of a LEICA MZ125. Measurements were taken from images using ImageJ. Line drawings were made by tracing the images. For *S. birmanicus* and *S. borneensis*, the drawings were based on the figures used in Yamasaki et al. (2017).

Measurements are given in millimeters. The abbreviations used in this paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye.

Redescription

Sphecotypus taprobanicus Simon 1897
(Figs. 1A–D, 2A, 2D)

Sphecotypus taprobanicus Simon 1897: 170; Deeleman-Reinhold 2001: 331.

Material examined. Holotype female (subadult), MNHN 18347, Kandy, [Sri Lanka] (Fig. 1E).

Diagnosis. On the basis of females, the shape of the carapace can distinguish *Sphecotypus taprobanicus* from *S. birmanicus* and *S. borneensis*. With the carapace in lateral view, the thoracic dorsum is convex and highest at the middle part of the thoracic part in *S. taprobanicus* (Figs. 1B, 2A). On the other hand, the dorsum is modertely convex and highest at the posterior part in *S. birmanicus* (Fig. 2B), and almost flat in *S. borneensis* (Fig. 2C). PLE is slightly directed anteriorly in *S. taprobanicus* (Figs. 1B, 2A), but directed laterally in *S. birmanicus* and *S. borneensis* (Fig. 2B–C, E–F). Additionaly, the clypeus of *S. taprobanicus* is slightly extended anteriorly but obviously extended in *S. birmanicus* (Figs. 1B, 2A, 2D vs. Fig. 2B, E), and the carapace area between cephalic and thoracic parts of *S. taprobanicus* is wider than that of *S. borneensis* (Fig. 2A, D vs. Fig. 2C, F).

Measurements. Carapace length 3.19; cephalic width 1.16; thoracic width 1.33. Diameters of eyes: AME 0.11; ALE 0.09; PME 0.07; PLE 0.08. Width of anterior eye row

Fig. 1. *Sphecotypus taprobanicus*, holotype (MNHN 18347). A, habitus, dorsal view; B, habitus, lateral view; C, carapace, dorsal view; D, epigyne (no scale), ventral view; E, labels. Scales = 1 mm.

0.59; posterior eye row 0.94. Pedicel length 0.75. Abdomen length 2.72; width 2.18.

Female (subadult). Carapace constricted anterior 1/3 and divided into cephalic and thoracic parts; in dorsal view, anterior margin of cephalic part convex; lateral margins of thoracic part undulated; posterior end curving dorsally (Figs. 1B, 2A). Anterior eye row slightly recurved, while posterior eye row recurved. Pedicel long. Abdomen oval; anterior tip sclerotized, and providing tube-like structure, which covers posterior part of pedicel. Epigyne not well developed in holotype.

Coloration. Carapace, chelicera dark brown. Abdomen dark gray. Legs cream, tinged with black.

Male. Unknown.

Remarks. Simon's type specimens do not usually bear the labels indicating their type status. We considered a specimen with the MNHN 18347 label as the holotype because of the following reasons: (1) the locality information in the label and the original description is the same; (2) morphological information of the specimen agrees with the original description; (3) no other specimens bearing "*Sphecotypus taprobanicus*" labels could be found.

In general, the epigyne of the *Sphecotypus* species is strongly sclerotized. The epigyne of the holotype is not sclerotized, and the internal structures are visible through the epigastric surface (Fig. 1D). The internal structure is weakly sclerotized but undeveloped as in those of adult females of other *Sphecotypus* species. As a result, the holotype appears to be a subadult.

The information on complete copulatory organs was not obtained from the holotype in the present study. However, as already mentioned in diagnosis section, the species identity of *S. taprobanicus* is distinct from other species on the basis of the morphology of the carapace. For further study, reconsideration based on adult specimens of *Sphecotypus taprobanicus* is necessary.

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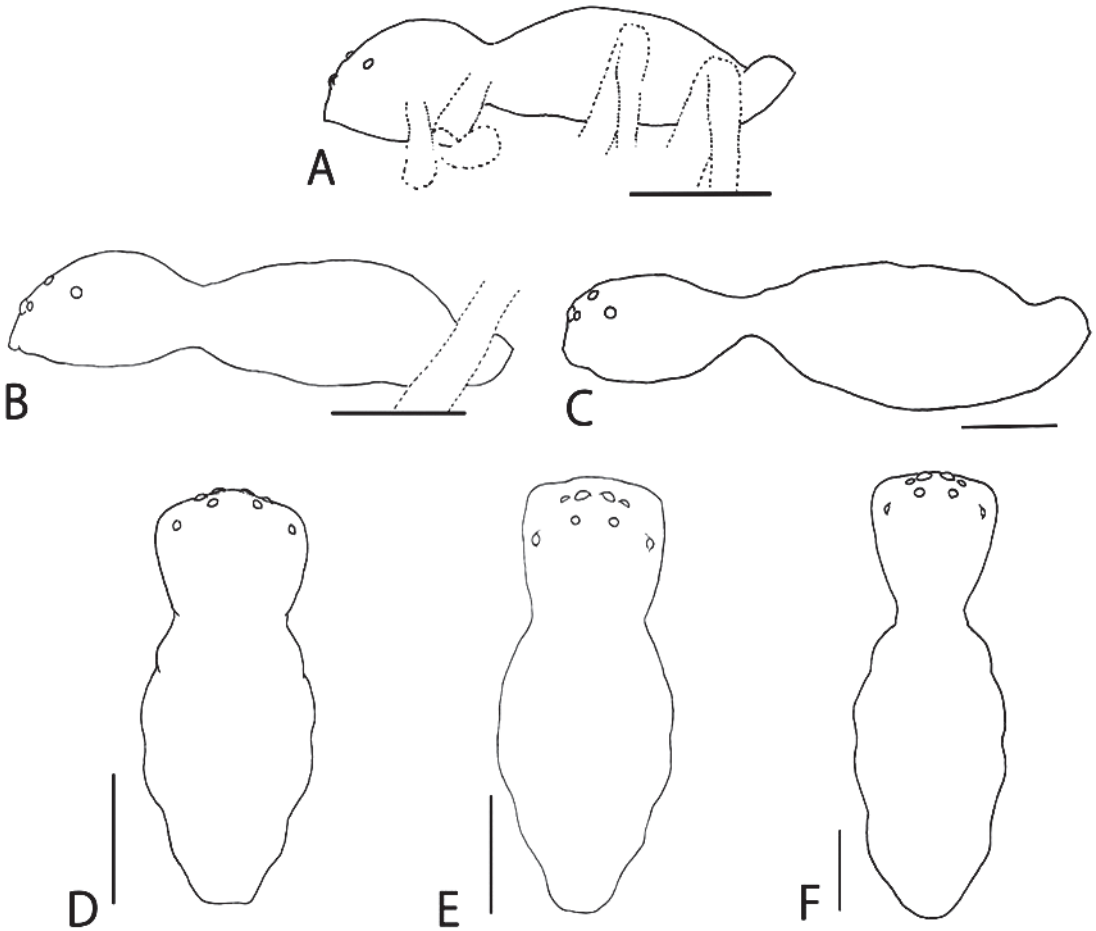

Fig. 2. The carapace of Asian *Sphecotypus* spp., holotype female of *S. taprobanicus* (A, D), holotype female of *S. birmanicus* (B, E), and paratype female of *S. borneensis* (C, F). A–C, carapace, lateral view; D–F, same, dorsal view. Scales = 1 mm. (B–C and E–F were traced from figures in Yamasaki et al. 2017.)

References

Deeleman-Reinhold, C. L. 2001. Forest spiders of South East Asia: with a revision of the sac and ground spiders (Araneae: Clubionidae, Corinnidae, Liocranidae, Gnaphosidae, Prodidomidae and Trochanterriidae [sic]). Brill, Leiden, 591 pp.

Perty, M. 1833. Arachnides Brasilienses. Pp. 191–209. In: de Spix, J. B. & Martius, F. P. (eds.) Delectus animalium articulatorum quae in itinere per Braziliam ann. 1817 et 1820 colligerunt. Monachii.

Pickard-Cambridge, O. 1895. Arachnida. Araneida. Pp. 145–160. In: Biologia Centrali-Americana, Zoology. London 1.

Simon, E. 1897. Histoire naturelle des araignées. Deuxième édition, tome second. Roret, Paris, pp. 1–192.

Thorell, T. 1897. Viaggio di Leonardo Fea in Birmania e regioni vicine. LXXIII. Secondo saggio sui Ragni birmani. I. Parallelodontes. Tubitelariae. Ann. Mus. Civ. Stor. Nat. Genova, 37: 161–267.

World Spider Catalog 2022. World Spider Catalog. Version 23.0. Natural History Museum Bern, online at http://wsc.nmbe.ch, accessed on 3rd March, 2022.

Yamasaki, T., Hashimoto, Y., Endo, T., Hyodo, F., Itioka, T. & Tavano, M. L. 2017. A new species of the genus *Sphecotypus* O. Pickard-Cambridge, 1895 from Borneo, with a comparison with the holotype of *S. birmanicus* (Thorell, 1897) (Araneae, Corinnidae). Ann. Mus. Civ. Stor. Nat. Giacomo Doria, 110: 21–32.

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