

NEW SPECIES OF *HYLLUS* C. L. KOCH (ARANEAE: SALTICIDAE) FROM INDIA

John T. D. Caleb*, Anulin Christudhas*,
K. Laltanpuii* and M. Chitra*

*Department of Zoology, Madras Christian College, Tambaram, Chennai-59, Tamil Nadu, INDIA. E-mails: caleb_woodgate@yahoo.com; anulindhas@yahoo.com; laltetei@yahoo.co.in; mrcv82@gmail.com

[Caleb, J. T. D., Christudhas, A., Laltanpuii, K. & Chitra, M. 2014. New species of *Hyllus* C. L. Koch (Araneae: Salticidae) from India. *Munis Entomology & Zoology*, 9 (2): 634-637]

ABSTRACT: A new species of jumping spiders from the genus *Hyllus* C. L. Koch namely *Hyllus manu* sp. nov. is described from Chennai, India. Morphological characters and illustrations of the genitalia are provided.

KEY WORDS: *Hyllus manu* sp. nov., new species, Salticidae, Chennai (Madras), South India.

Salticidae is the most diverse family with 5678 species and 597 genera in the world (Platnick, 2014). In India it is known by 207 described species from 73 Genera (Keswani et al., 2012). However, Salticidae is one of the least studied families among Indian spiders (Sunil, 2013). The Genus *Hyllus* is known by three species from India namely *Hyllus bos* (Sundevall), *Hyllus pudicus* Thorell and *Hyllus semicupreus* (Simon) (Keswani et al., 2012).

Spiders of the genus *Hyllus* are generally stout, hairy and dull coloured. Most species in the genera have "horns" formed by tufts of long bristles located at posterior median eyes. *Hyllus* includes medium-sized to large spiders with rounded carapace, clearly wider than eye field. Male pedipalp has generally long embolus, often with accompanying *pars pendula*. Epigyne is more sclerotized (Wesołowska, 2008; Proszynski, 2013).

Specimens were collected as part of spider diversity study within the Madras Christian College campus. The campus encloses a scrub jungle with an expanse of 365 acres. In this paper a new species *Hyllus manu* sp.nov. is being described from Chennai, South India.

MATERIALS AND METHODS

Specimens were collected and photographed using DSLR Nikon D60, 18-55mm lens (reversed for macro photographs). Specimens were preserved in 70% alcohol and later examined using a stereoscopic microscope (NIKON SMZ1000). Male palps were detached, examined and kept in a separate vial along with the original specimen and female genitalia were excised using fine surgical scalpel. The epigyne was then transferred to Petri dish containing KOH 10% aqueous solution for clearing. USB digital microscope with Micro-measure Software was used for making measurements. The type specimen will be eventually deposited in the Zoological survey of India, Regional Station, Chennai. Description is based on fresh specimen. All measurements are in mm (millimeters).

Abbreviations used: ALE = Anterior lateral eyes, AME = Anterior median eyes, PLE = Posterior lateral eyes, PME = Posterior median eyes. AME-AME = Mutual distance between eyes, GPS = global positioning system.

RESULTS

Hyllus manu sp. nov.

(Figs. 1-10)

Description: Male:

Carapace: 3.38 Long, 2.67 Wide; **Abdomen:** 4.00 Long, 2.16 Wide; **Total length:** 7.38 **Cephalothorax:** Covered by blackish hairs scales, patch of white hairs extend from the lateral sides to meet at the posterior. Clypeus covered with black hairs. Anterior eyes covered by orange scales (Fig. 3). Eye size and inter distance between AME 0.68, ALE 0.36, PME 0.10, PLE 0.34; AME-AME 0.08, AME-ALE 0.07, PME-PME 1.83, PME-PLE 0.41, ALE-PLE 0.92. Clypeus height 0.17. Chelicerae black, 2 promargin and 1 retromargin teeth, Sternum oval shaped covered with yellowish hairs uniformly, Leg I robust, long and dark, Femur of all legs white at the base and black on the other half. Leg measurements: I 8.29 (2.36, 1.15, 2.21, 1.33, 1.24); II 6.40 (2.08, 1.19, 1.34, 0.98, 0.81); III 7.07 (2.54, 1.05, 1.40, 1.10, 0.98); IV 6.20 (2.10, 0.82, 1.40, 1.05, 0.83). Leg formula: 1324. Palp covered with dense paler yellowish hairs, bulbus with an extended process downwards, embolus long (Figs. 7 & 8).

Abdomen: long and narrow, anterior part covered by white hairs and runs mid longitudinally downwards, lateral sides black in color. Faint chevron shaped markings seen on the dorsum. Spinnerets with white hairs in the middle and blackish laterally.

Female: Carapace: 3.09 Long, 2.31 Wide; Abdomen 3.39 Long, 1.76 Wide; Total length 6.48 Eye measurements: AME 0.59, ALE 0.34, PME 0.09, PLE 0.24, AME-AME 0.07; AME-ALE 0.09; PME-PME 1.70; PME-PLE 0.32; ALE-PLE 0.72; Clypeus height: 0.35, clypeus covered by transverse narrow stripes of white hair (Fig. 6). Leg measurements: I 5.86 (2.03, 0.61, 1.77, 0.74, 0.71); II 5.04 (1.61, 1.01, 1.15, 0.58, 0.69); III 5.95 (2.07, 0.77, 1.35, 0.84, 0.92); IV 5.64 (1.80, 0.59, 1.39, 0.89, 0.97) Leg formula: 3142. Coloration pattern as in male but differs in the following. General body color dull with reddish brown spots spread sparsely in between white hairs. Cephalothorax with a white patch running from the middle to the posterior. Abdomen with paler mid-dorsal white patch and chevron shaped markings. Epigyne placed on a sclerotized plate (Fig. 9), internal view shows copulatory ducts coiling around the spermathecae (Fig. 10).

Etymology: Named in honor of our Guide, Dr. Manu Thomas Mathai.

Type material: Holotype – 1 male; 10.vi.2013, (GPS 12.916041° N, 80.125961° E, 32 m); **Allotype:** 1 female 12.x.2012; **Paratypes:** 1 male 12.x.2012, 1 male 23.xi.2012. Coll. John Caleb T.D. and Anulin Christudhas. GPS (data same as holotype).

Type Locality: South India, Chennai, Madras Christian College, Scrub jungle regions.

Distribution: Known heretofore from Chennai, S. India.

Diagnosis: This species can be separated from other congeners by the posterior protrusion of the bulb (Figs. 7, 8) and shape of retro lateral tibial apophysis.

Females resemble *H. semicupreus* but can be distinguished by the copulatory ducts coiling around the spermathecae (Fig. 10) and abdominal pattern (Fig. 4).

Natural History: Found among low vegetation and shrubs in the scrub regions of MCC campus.

ACKNOWLEDGEMENTS

Special thanks to Dr. Jerzy Proszynski for his valuable comments, for identifying and confirming the species. We are greatly indebted to the Staff and colleagues at the Department of Zoology, MCC for their unfailing support.

LITERATURE CITED

Keswani, S., Hadole, P. & Rajoria, A. 2012. Checklist of Spiders (Arachnida:Araneae) from India-2012. Indian Journal of Arachnology, 1 (1): 1-129.

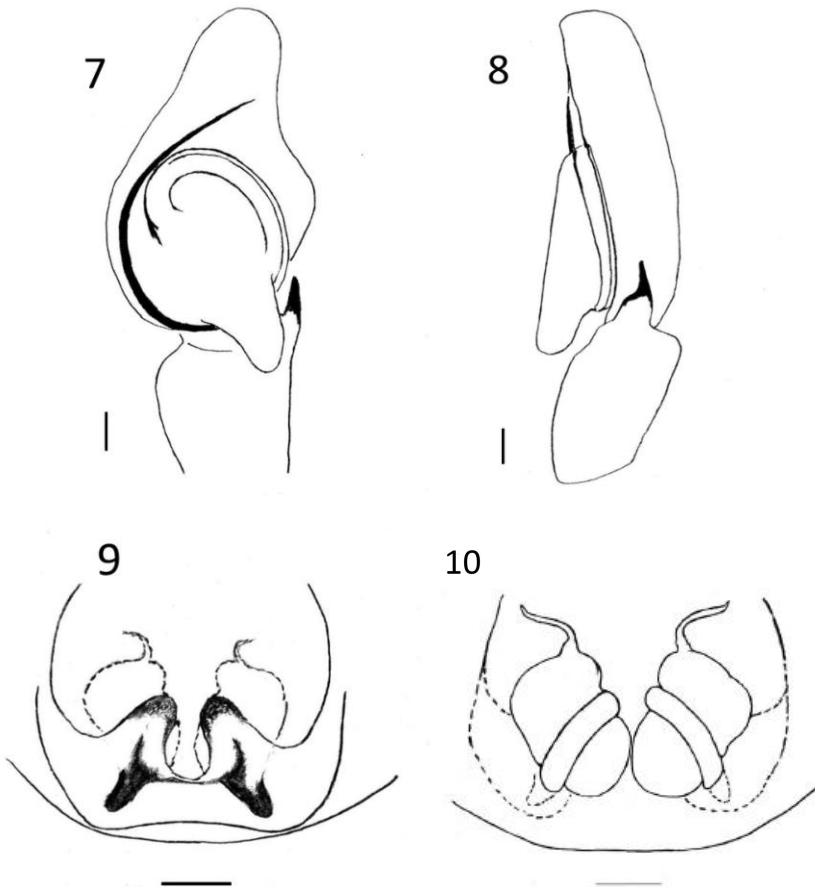
Platnick, N. I. 2014. The world spider catalog, version 14.5. American Museum of Natural History, online at <http://research.amnh.org/iz/spiders/catalog/INTRO1.html> (Accessed on 10th January 2014).

Prószyński, J. 2013. Salticidae (Araneae) of the world. <http://salticidae.org/salticid/main.htm>. (Accessed on 5th December 2013).

Sunil, J. K. 2013. New species of *Yaginumaella* Proszynski from India (Araneae: Salticidae). Munis Entomology and Zoology, 8 (1): 63-66.

Weslowaska, W. 2008. Taxonomic notes on the genus *Hyllus* C. L. Koch, 1846 in Africa (Araneae: Salticidae). Wrocław, 19 (2): 319-334.





Figures 1-10: *Hyllus manu* sp. nov., 1. Dorsal view of male, 2. Lateral view, 3. Frontal view, 4. Dorsal view of female, 5. Lateral View, 6. Front view, 7. Palp ventral view, 8. Palp retro-lateral view, 9. Epigyne, ventral view, 10. Internal genitalia, dorsal view. Scale bars: Figs 7-10, 0.1 mm.