FIRST REPORT OF *HYPTIOTES AFFINIS* BÖSENBERG & STRAND, 1906 (ARANEAE: ULOBORIDAE) FROM INDIA

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ABSTRACT: *Hyptiotes affinis* Bösenberg & Strand, 1906 is reported from India for the first time. Illustrations of the habitus, male palp and distribution map are provided. DNA barcode data obtained for this species is available at BOLD.

KEY WORDS: Uloboridae, *Hyptiotes affinis*, India, new record

The family Uloboridae is represented by 281 species under 18 genera worldwide. Of which, 22 species under 5 genera are known from India (World Spider Catalog, 2017). These araneomorph entelegyne spiders are small to medium size with cribellum and calamistrum. The genus *Hyptiotes* Walckenaer, 1837 was erected from the type species *Hyptiotes paradoxus* (C. L. Koch, 1834) and is represented by 16 species worldwide, of which two species were reported from India; *Hyptiotes himalayensis* Tikader, 1981 and *Hyptiotes indicus* Simon, 1905 (World Spider Catalog, 2017). The members of the genus can be distinguished by the posterior eyes placed on tubercles and triangular carapace.

While studying the spiders from Sikkim state of India, we recognized this triangular web spider previously unknown in the country. This species was previously known from China, Korea, Taiwan, and Japan. The objective of the present study is to provide the first record of *Hyptiotes affinis* Bösenberg & Strand, 1906 from India along with DNA barcode data.

MATERIAL AND METHODS

The specimen was handpicked and stored in 70% alcohol. It was later examined and photographed by the Leica EZ4 HD stereomicroscope. All images were then processed with the aid of LAS core software (LAS EZ 3.0). Species was identified using diagnostic keys provided by Kim & Lee (2013). All measurements are in millimeters. The studied specimen has been deposited in the NZC (National Zoological Collections) at the Zoological Survey of India, Kolkata. Legs were used for isolation of genomic DNA. Amplification of the cytochrome C oxidase subunit I (mtCOI) gene was performed following Barrett & Hebert (2005). The sequencing was carried out on 3730 DNA Analyzer (Applied BioSystems) in the in-house sequencing facility of Zoological Survey of India. The resulting sequence was submitted to BOLD (Barcode of Life Data Systems) under the project titled "Barcoding Spiders of India".

TAXONOMY

Hyptiotes affinis Bösenberg & Strand, 1906
(Figs. 1-4)

Material Examined: 1 male, 15 September 2016, Rongli, East Sikkim, India, (27°12′13″N, 88°42′7″E, 877m), ZSI-AA-543, leg. Rushati Dey.
Diagnosis: The species can be recognized by the thin sinuous embolus and curved basal part with tiny and sharp median apophysis (Fig. 3).
Comments: The DNA barcode data of *H. affinis* was evaluated in the similarity search engine of NCBI (National Centre for Biotechnology Information). The sequence developed in our study showed 90% similarity with sequences of same genus and closely related to *H. gertschi* Chamberlin & Ivie, 1935.
Distribution: China, Korea, Taiwan, Japan, India (New Record).

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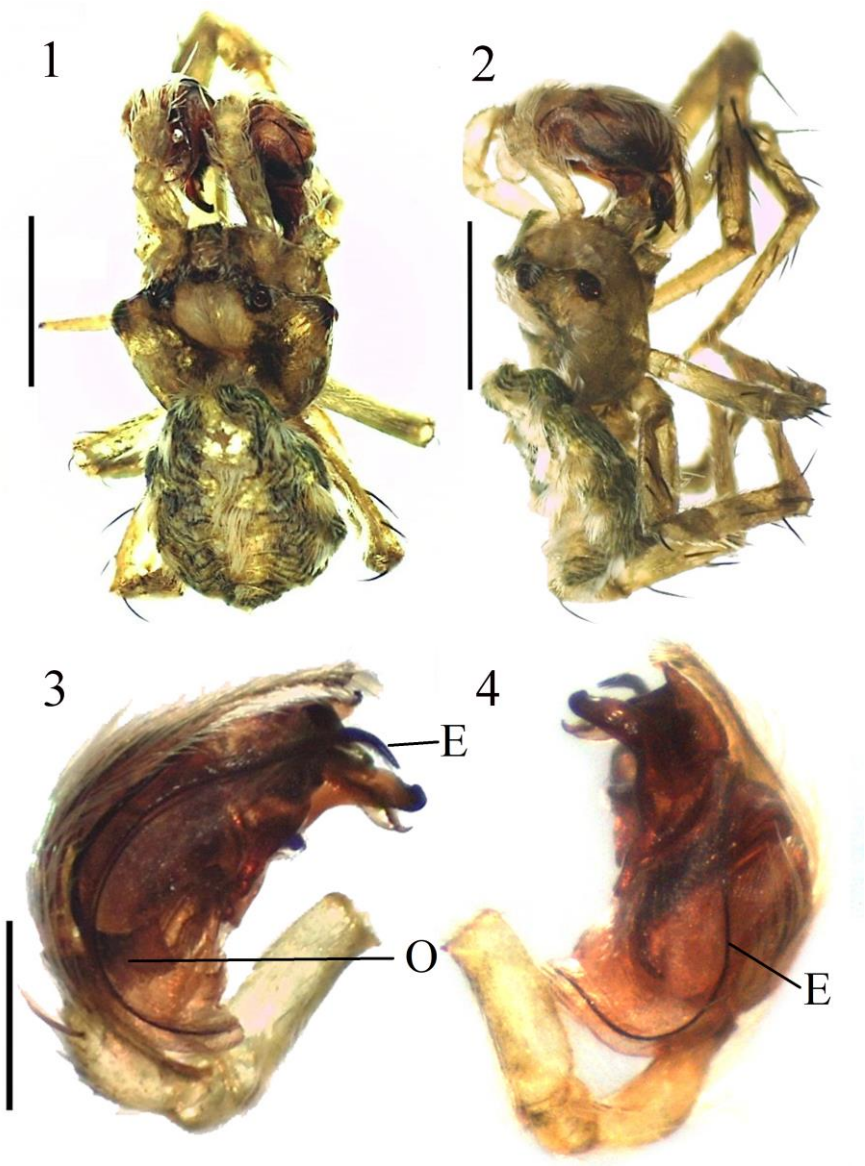

Figures 1-4. *Hyptiotes affinis,* male. 1, dorsal view; 2, ventral view; 3, male left palp, ventral view; 4, same, retrolateral view. Abbreviations: E – embolus, E – embolus, O – origin of embolus. Scales; 1–2, 1 mm; 3, 0.5mm.