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Original article

A new genus and new species of diplurid spider
(Araneae: Mygalomorphae: Dipluridae) from northeast India

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ABSTRACT

A new diplurid genus and species is described from northeast India based on a single female specimen from Jampui hills. *Orientothele* gen. nov. is placed in the subfamily Diplurinae based on the presence of one row of teeth on the chelicerae. The new genus and species can be diagnosed from most diplurid genera in lacking lyra on the prolateral face of maxilla, paired claw with one row of teeth, maxilla with numerous cuspules, scopulae absent on all legs, and spermathecae consisting of two elongate stalks with bulbous receptacles at their tips which are bent inwards. *Ischnothele indicola* Tikader, 1969 is here treated as *incertae sedis* with regards to its generic placement in light of the discovery of *Orientothele* gen. nov.

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Introduction

The mygalomorph spider family Dipluridae Simon, 1889 is represented globally by 188 species in 24 genera (World Spider Catalog 2016). Members of this family are presently known to be distributed in the Neotropical, southern Nearctic, Afrotropical, Madagascar, Oriental, Sino-Japanese, Oceanian, and Australian realms with its greatest diversity in Australia and the Neotropical region. These spiders possess long posterior lateral spinnerets which are used to make an irregular web with a retreat within it (Schwendinger 2009). In Asia, however, their diversity seems to be poorly represented largely due to the fact that only a handful of investigations have been made on mygalomorph spiders as a whole (Coyle 1995; Mirza et al 2014; Raven 1985; Sanap and Mirza 2015; Siliwal et al 2015b). In India, this family is represented by 2 genera and 4 species namely: *Indothele dumicola* Pocock, 1900; *Indothele mala* Coyle, 1995; *Indothele rothi* Coyle, 1995; *Ischnothele indicola* Tikader, 1969 (Hadole and Rajoria 2012). Of these, the generic allocation of *Ischnothele indicola* is here called into doubt (see discussion).

Northeast India is a biodiversity hotspot (Myers et al 2000) and several vertebrate centric studies have been carried out in this area. However, with a few invertebrate inventories, the arthropod assemblage remains poorly documented. With regards to this, we visited the northeast Indian state of Tripura during which we collected a specimen of a diplurid spider. The collected specimen differs from all known species and genera from Asia. A detailed comparison of museum material aids us to conclude that the specimen is a new species and we also propose a new genus to embody it.

Materials and methods

Specimens were collected and preserved in 70% ethanol and the holotype was deposited in the collection of the National Centre of Biological Sciences, Bangalore. Measurements were taken using a Mitutoyo digital caliper (Mitutoyo Corporation, Japan). Spermathecae were dissected and cleaned using a needle. Specimens were examined using an Olympus SZ40 stereo-binocular microscope. Photographs were taken using a Canon 70D (Canon Inc, Tokyo) mounted with a 100-mm macro. Eye measurements were taken using the software ImageJ (National Institutes of Health, USA) (<http://imagej.nih.gov/ij/>). All measurements were given in millimeters and with a standard error of ± 0.01 mm. To study the morphology of spigots, an apical segment of one of the posterior

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lateral spinnerets was removed for scanning electron microscopy. The segment was processed in a critical point drier to remove traces of ethanol and water following coating with gold. Scanning electron microscopy imaging was done using a Zeiss Merlin Compact (Carl Zeiss Microscopy GmbH, Göttingen). Comparative material of the genus *Indothele* spp. was examined from the collection of the National Centre for Biological Sciences, Bangalore. The Life Science Identifiers (LSID) for the manuscript is: urn:lsid:zoobank.org:pub:B4E74A19-CF00-425D-B01F-AAE89C09E9B3.



Figure 1. *Orientothele alyratus* gen. et. sp. nov. holotype female NCBS AR142 in life.

Taxonomic accounts

Family Dipluridae Simon, 1889

Subfamily Diplurinae Simon, 1889

Orientothele gen. nov.

urn:lsid:zoobank.org:act:1C88D2EE-9B55-4E67-8201-3232D7604038

Type species: *Orientothele alyratus* gen. et. sp. nov.

Diagnosis. *Orientothele* gen. nov. is here placed in the subfamily Diplurinae based on the presence of one row of teeth on the chelicerae. The new genus and species can be diagnosed from most diplurid genera in lacking lyra on the prolateral face of the maxilla, paired claw with one row of teeth, maxilla with numerous cusps, scopulae absent on all legs, and spermathecae consists of two elongate stalks with bulbous receptacles at their tips which are bent inwards. Male unknown.

Description. A medium sized spider in relation to members of this family reaching a total length of 17.2 mm excluding chelicerae length. All legs bearing three claws, superior tarsal claws with a single row of sigmoid dentition and inferior tarsal claw with three dentitions. Scopulae absent. Two pairs of spinnerets and the posterior lateral spinneret long and widely spaced. Apical segment of posterior lateral spinnerets entire, no pseudosegmentation seen. Metatarsi of all legs with distal preening combs. Chelicerae with 13 promarginal teeth in a row of teeth and with 28 basosomal teeth. Maxillary and labial cusps present. Labio-sternal

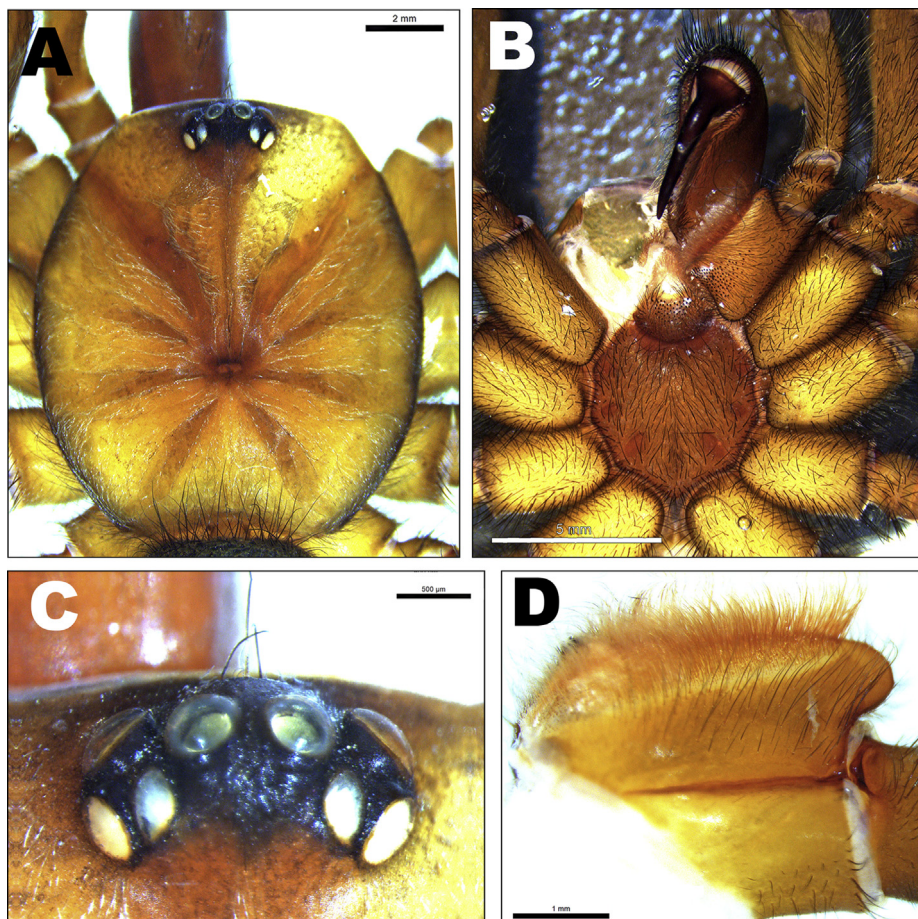


Figure 2. *Orientothele alyratus* gen. et. sp. nov. holotype female NCBS AR142. A, carapace; B, sternum and coxa; C, eyes; D, prolateral maxilla.

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