

**FIRST RECORD OF *DOLICHOGNATHA*
LONGICEPS (THORELL, 1895) FROM INDIA
(ARANEAE: TETRAGNATHIDAE)**

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ABSTRACT: *Dolichognatha longiceps* (Thorell, 1895) is a recorded from India for the first time. Detailed illustration and description of *D. longiceps* is provided. This species is characterized by the absence of posterior median eyes.

KEY WORDS: *Dolichognatha longiceps* (Thorell, 1895), Western Ghats, new species.

The Western Ghats, one of the 25 biodiversity hot-spots identified in the world is well known for its rich and unique assemblage of flora and fauna. However, the diversity of the invertebrate fauna is poorly studied from these regions. The family Tetragnathidae is strikingly diverse in the Indian subcontinent, with multiple species occurring in different states. The family contains 1020 species and 56 genera in the world (Platnick, 2013). Until 2009 only 47 species in 10 genera species had been described from this family in India (Sebastian & Peter, 2009). The important genera found in India are *Dyschiriognatha*, *Herennia*, *Leucauge*, *Nephila*, *Nephilengys*, *Opadometa*, *Orsinome*, *Tetragnatha*, and *Tylorida*. The studies on Indian tetragnathidae were limited to the works of Gravely (1921-22), Pocock (1900), Sheriff (1919-1929), Tikader (1970, 1977) and Jose (2004). The family is most diverse in the tropical regions and many species from India still remain unknown to science. In this study, I record the occurrence of a rare tetragnathid spiders namely *Dolichognatha longiceps* (Thorell, 1895) from Western Ghats of India.

MATERIALS AND METHODS

The spiders were collected during a study on the diversity of tetragnathids spiders in Western Ghats, India. Collected spiders were preserved in 70% ethyl alcohol and studied under Stereomicroscope, Leica S4E. Digital images of the specimens were taken in alcohol with Canon Power Shot S40 digital camera mounted on a Leica S4E stereoscopic microscope. All pencil drawings were scanned and further improved with the help of the Adobe Photoshop CS2 programs. All measurements are in mm. Eye measurements are taken with an ocular micrometer. The status of the species was confirmed by referring to Dimitrov (2010).

Gross morphological features were investigated using a dissecting microscope and illustrated using a Camera Lucida attachment. For each individual examined, measurements were taken of the separation between each of the eyes, tooth pattern on the chelicerae, fang structure, and form and pattern of the dorsum and venter of the abdomen, the carapace and sternum. Scanning electron microscopic images were taken at IISC using JEOL- JSM-5600 scanning electron microscope at an accelerating voltage of 4-10 V. The type material is preserved in 80% alcohol

and deposited in a reference collection housed at the Department of Zoology, Deva Matha College, Kuravilangad, Kerala, India. (Voucher No ARO0106).

Abbreviations used are as follows: AME = Anterior median eyes, ALE = Anterior lateral eyes, D = Dorsal Teeth, H = Height, IISC = Indian Institute of Science, L = Length, PME = Posterior median eyes, PLE = Posterior lateral eyes, V = Ventral teeth, W = Width.

TAXONOMY

Fam: Tetragnathidae Menge, 1866

Gen. *Dolichognatha* O. P.-Cambridge, 1869

Type sp.: *Dolichognatha nietneri* O. P. Cambridge, 1869.

Diagnosis: The genus *Dolichognatha* can be most easily distinguished from close relatives (*Meta* and *Metellina*) by the very long male chelicerae and the characteristic shape and coloration of the prosoma. Cephalic region rectangular and elongated with dark sides, aggregate spigots not embracing the flagelliform spigot, PME and PLE without canoe tapetum, PME smaller than PLE, abdomen with anterior tubercles, and web horizontal with closed web hub close to the substrate (Dimitrov et al., 2010).

Distribution: India, Thailand, East Africa, Sri Lanka, Congo, Comoro Is., Venezuela, Borneo, Brazil, New Guinea, Queensland, Guyana, Sumatra, USA to Venezuela, Peru, Samoa, Panama, West Indies, northern South America, Taiwan, Okinawa Is.

***Dolichognatha longiceps* (Thorell, 1895)**

(Figs. 1-2)

Prolochus longiceps Thorell, 1895: 122.

Prolochus longiceps Simon, 1895a: 932, f. 1004.

Dolichognatha longiceps Dimitrov, Álvarez-Padilla & Hormiga, 2010: 15.

Material examined: 1 female, Idamalayar, 10°13'18"N 76°42'21"E, 2 November 2003, Elevation 900m, Coll. Sunil Jose K.

Description: Female from Idamalayar, Kerala. Total length: 6 L, Cephalothorax: 2.5 L, 1.4 W; Abdomen: 3.5 L, 2.3 W, AME= 0.069, ALE= 0.125, PLE= 0.125, AME-ALE=0.045, AME-AME= 0.050, PLE-PLE=0.212. Morphometry of legs and palp are given in Table 1.

Colour in life: Carapace darker at the cephalic region and lateral margins of thorax. Mid dorsal dark band till foveae. Abdomen pale yellowish with dorsal chalk white patterns. Legs pale yellowish, with dark bands at the ends and middle of each segment.

CARAPACE: Longer than wide, anterior half narrower, and raised at cephalic region medially. Lateral margins and median area darker, the area between it yellowish. Fovea deeper, pointed anteriorly. The cephalic area contains two small yellowish patches in the dark brown area. **Eyes:** Six eyes, PME absent, ALE=PLE, both rows slightly recurved, ocular region wider than long, all eyes encircled with black surrounds. **Sternum:** Longer than wide, heart shaped, tapering to coxae IV. Ventral surface bears a median black broad line and three pairs of black patches

on the lateral margins. *Labium*: Shorter, wider than long, yellowish. *Maxillae*: Yellowish, blackish patches present on the lower half, anterior margin truncated. *Chelicerae*: Yellowish, outer margin bears three teeth, inner margin without teeth. *Legs*: Longer, yellowish brown, spiny, provided with dark brown bands, metatarsi of all legs with dark bands on distal and proximal ends and in the middle. First leg longer than second, leg formula 1423.

ABDOMEN: Longer than broad, stouter, much higher than cephalothorax, anterior margin overhangs the cephalothorax, dorsum with whitish patches. Ventrums with a large whitish patch. *Epigyne*: Medially broad, copulatory openings located near to the posterior margin.

Distribution: *INDIA*: Idamalayar, Kerala; Myanmar; Thailand.

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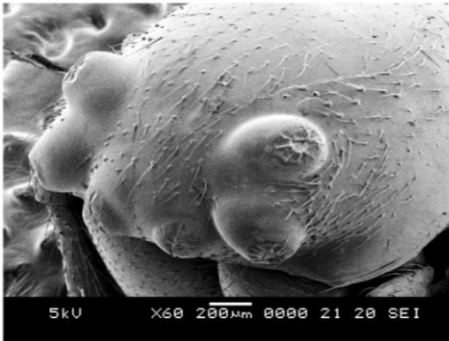
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Table 1. Measurements of the leg and pedipalp segments ♀.

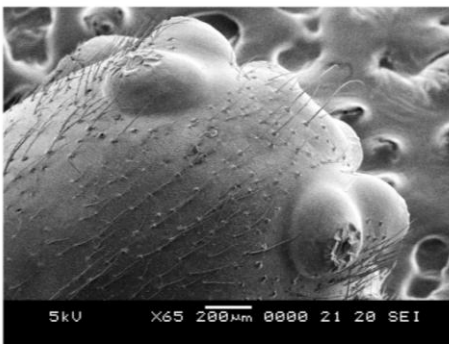
Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	5.0	0.6	3.0	5.2	1.4	15.20
II	3.0	0.5	2.1	3.0	1.0	09.60
III	2.0	0.4	1.1	1.7	0.7	05.90
IV	3.8	0.5	3.5	4.0	1.1	12.90
Palap	0.8	0.4	1.1	1.7	0.7	04.70



A



C



B



D

Figure 1. *Dolichognatha longiceps* (Thorell, 1895).

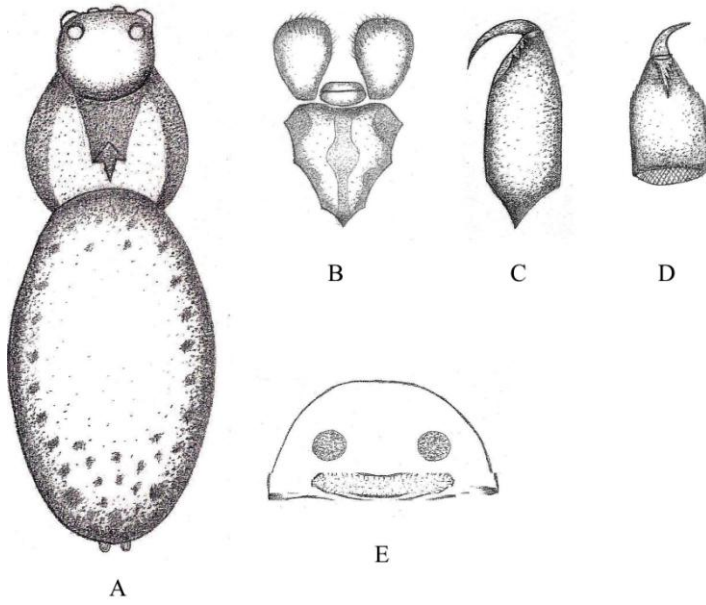


Figure 2. *Dolichognatha longiceps* (Thorell, 1895).