

First record of *Neoscona jinghongensis* Yin, Wang, Xie & Peng, 1990 (Araneae, Araneidae) from India

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ABSTRACT: *Neoscona jinghongensis* Yin, Wang, Xie & Peng, 1990 is recorded for the first time from India, based on a specimen collected from Meghalaya. Detailed morphological description and photographic illustrations of the male habitus and copulatory organs are provided.

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KEY WORDS: Orb-weaver spider, new report, distribution, Meghalaya, biodiversity hotspot.

Globally, Araneidae Clerck, 1757 is the third most species-rich spider family after Salticidae Blackwall, 1841 and Linyphiidae Blackwall, 1859 (World Spider Catalog, 2025). The genus *Neoscona* was erected by Simon in 1864, with *Epeira arabesca* Walckenaer, 1841 as its type species. *Neoscona* Simon, 1864 is the fifth most species-rich genus and currently comprises 124 valid species worldwide, of which 29 are recorded from India (Caleb and Sankaran, 2025; World Spider Catalog, 2025). Yin *et al.* (1990) described *Neoscona jinghongensis* based on a female specimen, collected from Jinghong city of Yunnan Province, China. Subsequently, the male of the species was described by Mi *et al.* (2024) from Menglun Nature Reserve, Yunnan Province. In this paper, *N. jinghongensis* Yin, Wang, Xie & Peng, 1990 is reported from India for the first time based on a

male specimen collected from Meghalaya, part of the Indo-Burma biodiversity hotspot.

The specimen was collected by bush beating method and preserved (in 70% ethanol). Morphological examination of the specimen was carried out using a Leica M205A stereomicroscope. Images were captured with a Flexacam C3 camera attached to the Leica M205A stereomicroscope and processed using an extended focus montage LAS X software. The description of coloration is based on alcohol-preserved specimen. All measurements are in millimeters (mm). The distribution map was prepared with QGIS 3.34.9. Measurements of palp and leg segments are as follows: total length [femur, patella, tibia, metatarsus (excluded for palp), tarsus]. The studied specimen was deposited in the NZC-ZSI, Kolkata, India.

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Abbreviations used:

ALE - Anterior lateral eye; AME - Anterior median eye; ASL - Above sea level; C - Conductor;

E - Embolus; MA - Median apophysis; MOA - Median ocular area; NZC - ZSI National Zoological Collections of Zoological Survey of India; Pc - Paracymbium; PLE - Posterior lateral eye; PME - Posterior median eye; TA - Tegular apophysis

Systematic Account

Family Araneidae Clerck, 1757; Subfamily Araneinae Clerck, 1757;

Genus *Neoscona* Simon, 1864

***Neoscona jinghongensis* Yin, Wang, Xie & Peng, 1990 (Fig. 1)**

N. jinghongensis Yin *et al.*, 1990: 117, 165, figs. 288–290 (description of female); Yin *et al.*, 1997: 356, figs 252a–f; Song *et al.*, 1999: 299, figs. 175U–V, 176A, 180H.

N. flavescens Zhang & Zhang, 2011: 520, figs. 14–18 (male; misidentified as per Mi *et al.*, 2024: 305).

N. jinghongensis Mi *et al.*, 2024: 305, figs. 19A–J, 20A–E, 21A–E (description of male, female).

Material examined: 1♂; INDIA, Meghalaya, West Jaintia Hills, Thadlaskein; 25°30'12.4" N; 92°10'14.3" E; 139 m ASL; 11.vi.2024; Coll. P.P. Sudhin (No. NZC-ZSI-10113/18).

Diagnosis: The male copulatory organ of *N. jinghongensis* is most similar to that of *N. vigilans* (Blackwall, 1865) from which it can be easily distinguished by the terminal apophysis with a bifurcated upper layer (not bifurcated in *N. vigilans*), and conductor that is not bifurcated in prolateral view (bifurcated in *N. vigilans*). The female genitalia of *N. jinghongensis* is most similar to that of *N. bengalensis* Tikader & Bal, 1981, but differs in having a distally blunt scape (pointed in *N. bengalensis*), and sides of the scape that are almost parallel (deep constriction in *N. bengalensis*) (Mi *et al.*, 2024).

Description: Male (Fig. 1). Measurements: body length 7.47; carapace length -3.78, width 3.17; abdomen length 4.07, width 3.22; clypeus height 0.16. Eye diameters and interdistances: AME 0.18, ALE 0.14, PME 0.13, PLE 0.14, AME–AME 0.18, AME–ALE 0.28, PME–PME 0.08, PME–PLE 0.50, MOA length 0.53 with front width 0.48 and back width 0.35. Length of chelicera 1.08. Measurements of palp and legs: palp 2.52 [0.62, 0.33, 0.18, 1.39], leg I 13.91 [3.85, 1.79, 3.38, 3.42, 1.47], II 12.1 [3.54, 1.42, 2.75, 3.03, 1.36], III 6.99 [2.19, 1.04, 1.36, 1.49, 0.91], IV 10.52 [3.22, 1.36, 2.25, 2.68, 1.01]. Leg formula 1243. Carapace pear-shaped, yellowish brown with light reddish-brown lateral patches on thoracic region (Fig. 1A). Cervical groove obvious; fovea dark brown, longitudinal (Fig. 1A). Chelicerae light yellowish brown, with four promarginal and three retromarginal teeth (Fig. 1D). Endites nearly square, yellowish brown, with paler inner sides (Fig. 1B). Sternum cordiform, yellow, with interrupted paler longitudinal patches (Fig. 1B). Legs yellowish brown, with yellow annulations, covered with numerous spines and setae. Abdomen ovoid, greyish yellow, anteriorly with a pair of creamy white conspicuous patches, followed by four pairs of wedge-shaped dark brown patches; surface covered with several long scattered pale white and light brown setae and sigillae (Fig. 1A, C); venter greyish yellow with darker patches, and a pair of creamy yellow patches medially (Fig. 1B). Spinnerets yellowish brown (Fig. 1B–C).

Palp with two patellar bristles (Fig. 1F); paracymbium finger-like (Fig. 1G); median apophysis long, tapering distally with a gentle curve (Fig. 1G); embolus short, cone-shaped (Fig. 1I); conductor prominent, conical, strongly sclerotized at base but weakly sclerotized distally (Fig. 1G); terminal apophysis divided into two parts, upper part bifurcated, and lower part rounded distally (Fig. 1H).

Variation: The male specimen of *N. jinghongensis* collected from Meghalaya, India showed some variation in the abdominal pattern when compared with the specimen from China. Dorsal part of the abdomen possesses a pair of conspicuous creamy white patches anteriorly, along

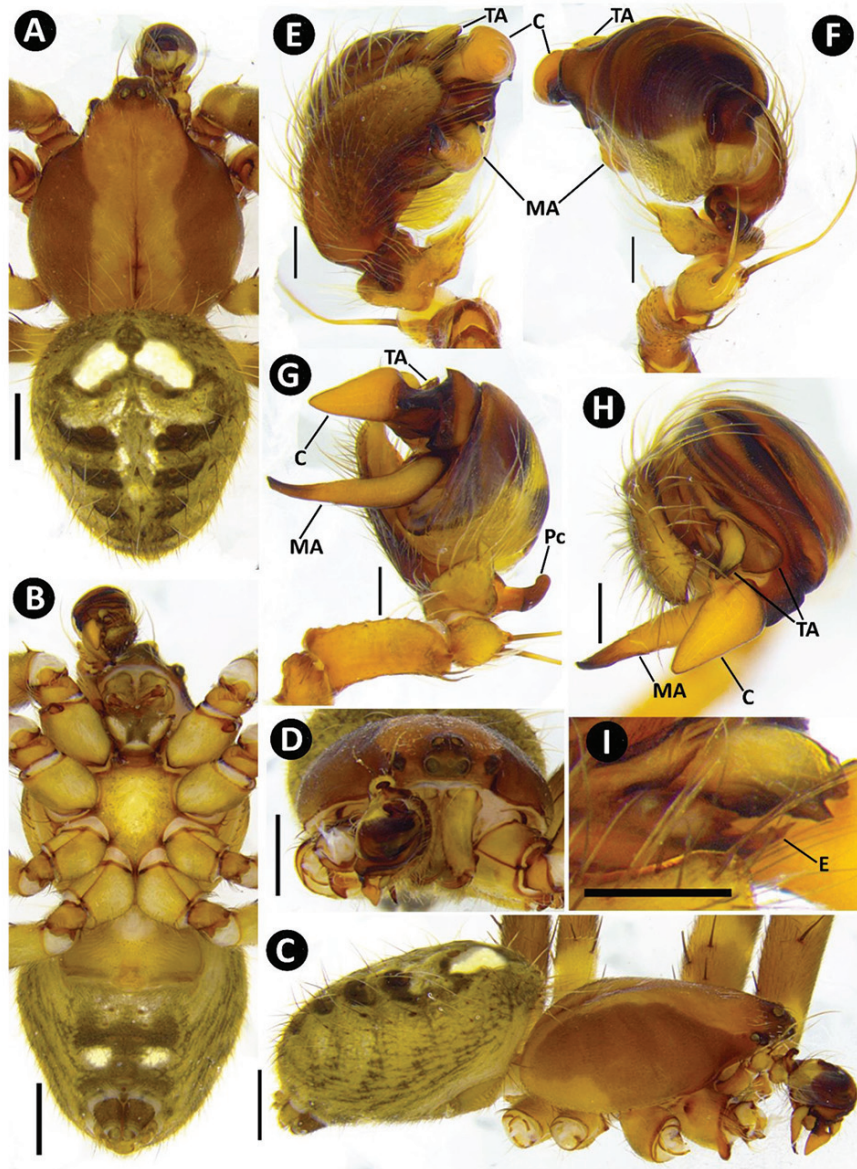


Fig. 1 Male *Neoscona jinghongensis*. A - Habitus dorsal view; B - ventral view; C - lateral view; D - frontal view; E - left palp (prolateral view); F - left palp (retrolateral view); G - left palp (ventral view); H - left palp (apical view); I - embolus. Scale bars: 1 mm for A–D; 0.25 mm for E–I

with more prominent wedge-shaped dark brown patches (Fig. 1A, C). This variation may be attributed to geographical separation.

Distribution: China, India (new record)

The genus *Neoscona* ranks fifth in terms of number of species after *Araneus* Clerck, 1757, *Mangora* O. Picard-Cambridge, 1889, *Cyclosa* Menge, 1866 *Alpaida* O. Picard-Cambridge, 1889 (World Spider

Catalog, 2025). The present study reports *N. jinghongensis* for the first time from India. With this addition, the number of species belonging to this genus increases from 29 (Caleb and Sankaran, 2025) to 30. The study also highlights the distributional range extension for the species since it was originally described from China. Additionally, the study reflects intraspecific morphological variation possibly arising from geographical isolation.

However, extensive surveys exclusively in the unexplored regions of the country are needed for further discoveries in future.

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