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Article in *Arachnology* · October 2018

DOI: 10.13156/arac.2018.17.9.463

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New record of *Cyrtarachne nagasakiensis* Strand, 1918 (Araneae: Araneidae) from India

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Abstract

Cyrtarachne nagasakiensis Strand, 1918 (Araneidae) is newly recorded from India on the basis of a specimen collected from Assam. A species description is provided, with figures of the habitus and internal genitalia.

Keywords: Assam • taxonomy

Introduction

Genus *Cyrtarachne* Thorell, 1868 has 55 accepted species worldwide (World Spider Catalog 2018). *Cyrtarachne nagasakiensis* Strand, 1918 was described for the first time from Nagasaki, Japan. Later, it was reported from Korea by Jo (1981) and from China by Hu & Li (1987). This paper describes the tenth *Cyrtarachne* species known from India. *Cyrtarachne nagasakiensis* Strand, 1918 is recorded in India for the first time, from the Jharbari Forest Range of Chirang Reserve Forest, Assam. This is an integral part of the Manas Biosphere Reserve, and is located in western Assam; it harbours a wide variety of flora and fauna. The habitat types in the reserve can be divided into Sal forest, evergreen and semi-evergreen forest, deciduous forest, grassland, and riverine forest. This reserve forest remains largely unexplored in terms of arthropod diversity. The present study is a part of doctoral research work on diversity of spiders in the Chirang Reserve Forest over a period of 4 years, from 7 June 2017 to 9 February 2021.

Materials and methods

The specimen was hand collected and photographed during a nocturnal survey at 10 pm in the Jharbari Forest Range within the Manas Biosphere Reserve, Kokrajhar, Assam, India. The specimen was examined and measured under a Leica EZ4 E stereo microscope. The epigyne was dissected under a Magnus MSZ-Bi, cleared in 10% KOH

overnight, and transferred to 80% ethanol after observation. The dissected specimen and epigyne were stored in glass vials and permanently preserved in Audman's preservative. All measurements were taken in millimetres. Leg measurements are given as total length followed by femur, patella, tibia, metatarsus and tarsus. The specimen is deposited in the Biodiversity Museum of Gauhati University, Northeast Region (BMGU) of India with Museum Accession No. (BMGU/A-10/ARA-23). Abbreviations: ALE = anterior lateral eye, AME = anterior median eye, PLE = posterior lateral eye, PME = posterior median eye. Interdistances of eyes are given by a hyphen (e.g. AME-PME).

Family Araneidae Clerck, 1757

Cyrtarachne Thorell, 1868

Cyrtarachne nagasakiensis Strand, 1918 (Figs. 1–10)

Diagnosis: *Cyrtarachne nagasakiensis* Strand, 1918 can be separated from other congeners by its oval-shaped spermatheca and highly coiled copulatory duct (Figs. 9–10). It is distinguishable from *C. bengalensis* Tikader, 1961 by the absence of small tubercles and complicated spiral ducts.

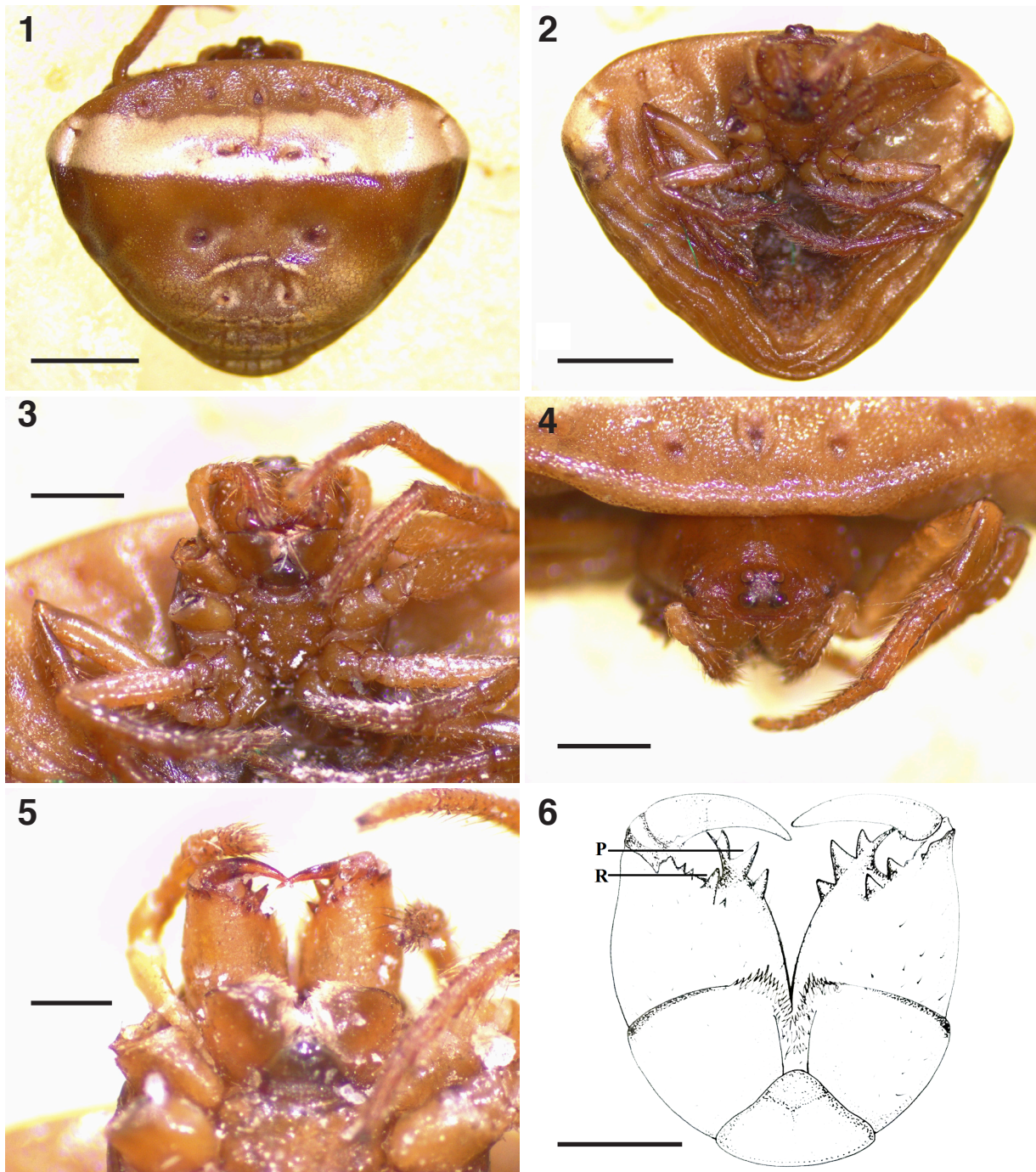
Specimen examined: 1♀, 26°36'22.6"N 90°14'33.1"E, 78 m a.s.l., Assam, India, collected by P. Basumatary on 19 July 2017.

Description of female: Total length 8.14; carapace 2.02 long, 2.38 wide; abdomen 6.12 long, 7.87 wide; sternum length 0.65 long, 1.02 wide; labium 0.28 long, 0.46 wide; maxillae 0.57 long, 0.54 wide (Figs. 1–4). Eye measurements: ALE 0.10, AME 0.16, PLE 0.09, PME 0.15, ALE-ALE 1.44, AME-AME 0.21, AME-PME: 0.11, AME-ALE 0.48, PME-PME 0.18, PLE-PLE 1.49, PME-PLE 0.55. Leg measurements: I 5.66 (1.96, 0.70, 1.42, 1.04, 0.54); II 5.61 (1.98, 0.76, 1.31, 0.97, 0.59); III 4.17 (1.44, 0.61, 0.83, 0.97, 0.32) and IV 5.83 (2.05, 0.84, 1.34, 0.93, 0.67). Carapace, chelicera, labium and sternum reddish brown. Chelicera with 3 promarginal and 2–4 retromarginal teeth (Figs. 5–6). Legs yellow brown, without spines. Abdomen elliptical, with broad white transverse band, without tubercles. Dorsum dark grey anteriorly with three pairs of sigilla, middle pair large and distinct (Fig. 1). Internal genitalia: epigyne with sclerotized rim (Figs. 7–8), copulatory ducts spherically coiled, spermathecae oval (Figs. 9–10).

Distribution: China, Korea, Japan and India (New record).

Acknowledgements

Our sincere thanks go to A. Swargowari, Addl. PCCF & CHD, Forest, BTC, Kokrajhar for granting permission to conduct studies at the Chirang Reserve Forest, and Department of Zoology, Gauhati University for aiding us with laboratory and equipment. Sangeeta Das acknowledges the UGC for a BSR fellowship. We greatly acknowledge Assam State Biodiversity Board for granting permission for collection of spider specimens. We would like to thank the District Magistrate of Kokrajhar for granting a security permit to conduct study at Jharbari Forest Range. We owe our sincere thanks to

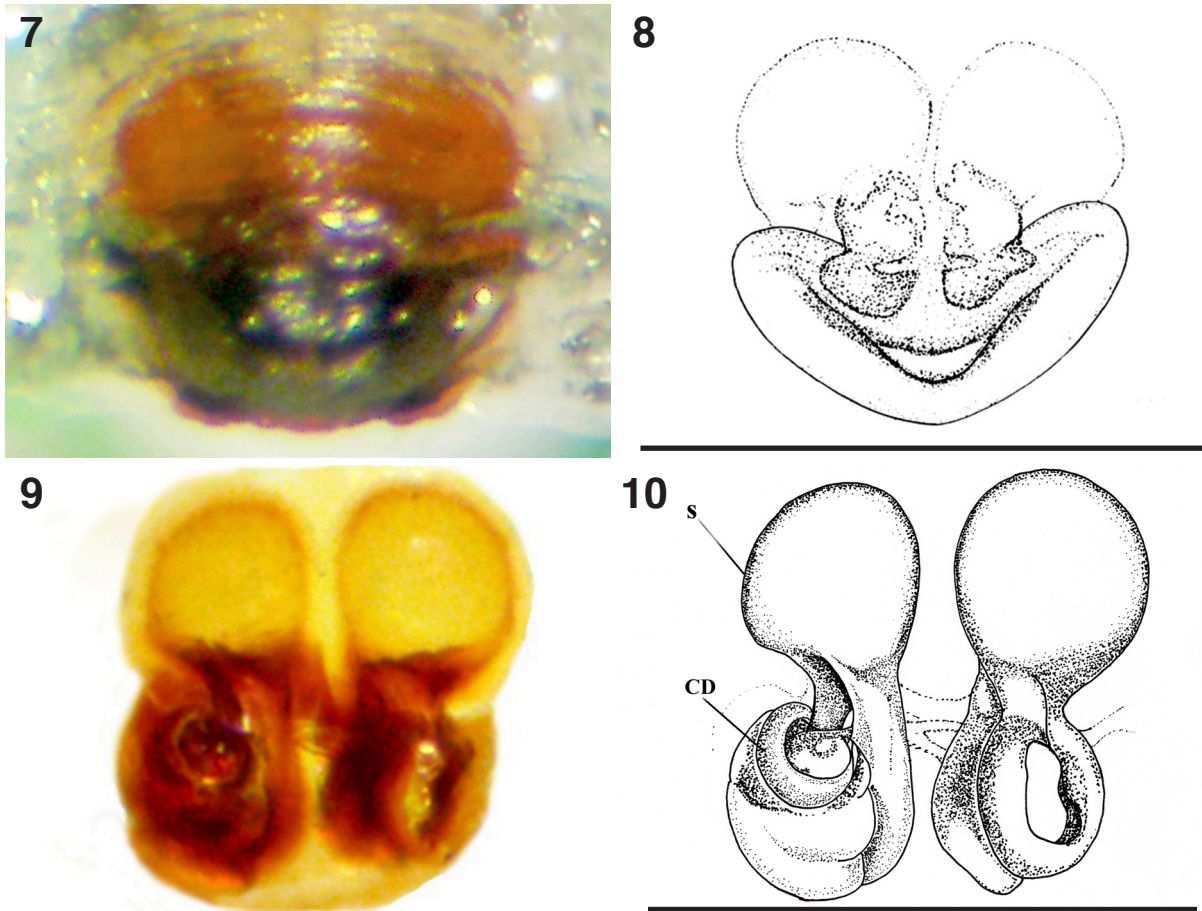


Figs. 1–6: *Cyrtarachne nagasakiensis* Strand, 1918. **1** female habitus, dorsal view; **2** female habitus, ventral view; **3** sternum; **4** prosoma, dorsal view; **5** chelicerae; **6** explanatory drawing of chelicerae, P = promarginal teeth, R = retromarginal teeth. Scale bars = 2 mm (1–2), 1 mm (3–4), 0.5 mm (5–6).

Director of Education, B.T.C. and Ananta Swargiary, Head of Department of Zoology, Bodoland University. We are grateful to the two anonymous reviewers for their constructive comments to improve the manuscript. We also thank K. Brahma, DFO of Haltugaon Division, BTC, Kokrajhar. Our heartfelt thanks also go to Bhuban Mushahary, Nirma Basumatary, Pabidash Narzary, Jarang Basumatary, Chandan Brahma, Miniswrag Borgoyary, Sinaiti Daimary and the forest officials of Jharbari Range office.

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Figs. 7–10: *Cyrtarachne nagasakiensis* Strand, 1918. **7** epigyne, ventral view; **8** explanatory drawing of epigyne, ventral view; **9** female internal genitalia, dorsal view; **10** explanatory drawing of female internal genitalia, dorsal view, S = spermatheca, CD = copulatory duct. Scale bars = 0.5 mm.