



## ***Theridion echinatum* Gao & Li, 2014, a junior synonym of *Theridion zonulatum* Thorell, 1890 (Araneae, Theridiidae) with comments on its web architecture**

PRADEEP M. SANKARAN\*, JOBI J. MALAMEL, MATHEW M. JOSEPH & POTHALIL A. SEBASTIAN

Division of Arachnology, Department of Zoology, Sacred Heart College, Thevara, Cochin, Kerala 682 013, India.

\*Corresponding author. E-mail: [pradeepmspala@rediffmail.com](mailto:pradeepmspala@rediffmail.com)

The spider genus *Theridion* was established by Walckenaer in 1805 with *Theridion pictum* (Walckenaer, 1802) as the type species. It is the most ‘species rich’ theridiid genus comprising 584 described species and 6 subspecies (World Spider Catalog 2015). *Theridion zonulatum* Thorell, 1890, ‘the zebra theridiid spider’, which is known only by the female, was described from Sumatra. Gao & Li (2014) described *Theridion echinatum* from the Yunnan Province in China based only on male specimens. During our surveys of Indian spiders, we came across a matching-pair of male and female theridiid spiders from the Kerala region in India. Our female spiders appeared to belong to *T. zonulatum*, while male spiders shared the features of *T. echinatum*. This led us to the conclusion that both *T. zonulatum* and *T. echinatum* are conspecific. In the present paper, we synonymise *T. echinatum* with *T. zonulatum*. The web architecture of *T. zonulatum* is also described.

The specimens were studied using a Zeiss Stemi 2000-C stereomicroscope. All measurements are in millimetres (mm). Length of palp and leg segments are given as: total (femur, patella, tibia, metatarsus (except palp), tarsus). Drawings were made by the aid of a drawing tube attached to the microscope. Field photos were taken with Canon EOS 6D with Canon Macro photo lens MP-E65 mm 1:2.8 lens attached. The microphotographic images were taken using a Leica DFC295 digital camera attached to Leica M205 C stereomicroscope with the software package Leica Application Suite (LAS), version 4.3.0. The specimens are deposited in a reference collection housed at the Division of Arachnology, Department of Zoology, Sacred Heart College, Thevara, Cochin, Kerala, India (ADSH).

Abbreviations used: ALE—anterior lateral eye, AME—anterior median eye, PLE—posterior lateral eye, PME—posterior median eye, I–IV—1<sup>st</sup> to 4<sup>th</sup> leg.

We are grateful to Rev. Fr. Prasanth Palackappillil CMI, Principal, Sacred Heart College, Thevara, Cochin providing all facilities for completing this work. We would like to thank Chief Conservator of Forest, Kerala State Forest Division for the collecting permit. Many thanks to Mr. Jimmy Paul for the field photographs of *T. zonulatum*. We extend our heartfelt thanks to Dr. Samuel Zschokke, University of Basel, Switzerland for providing literature support and Dr. Gustavo Hormiga, George Washington University (Washington, D.C.) and an anonymous reviewer for their constructive comments on an earlier version of the manuscript. The first author is indebted to Dr. A. V. Sudhikumar, Christ College, Thrissur, Kerala for his encouragement and valuable suggestions. We especially acknowledge Science and Engineering Research Board (SERB)—DST, New Delhi for providing funding support under Major Research Project: SR/SO/AS-99/2012.

### **Family Theridiidae Sundevall, 1833**

#### ***Theridion* Walckenaer, 1805**

#### ***Theridion zonulatum* Thorell, 1890**

(Figs. 1B–C, 2A–F, 3A–E)

*Theridion zonulatum* Thorell, 1890: 273 (Description of ♀)

*Theridion zebrinusum* Zhu, 1998: 165, figs. 103 A–C (Description and illustration of ♀). *Lapsus calami*.

*Theridion zebrinusum* Song, Zhu & Chen, 1999: 148, figs. 83 A–B (Illustration of ♀).