

**Zeitschrift:** Contributions to Natural History : Scientific Papers from the Natural History Museum Bern

**Herausgeber:** Naturhistorisches Museum Bern

**Band:** - (2015)

**Heft:** 30

  

**Artikel:** Linyphia bilobata Roy & al., 2015, is a junior synonym of Chrysso scintillans (Thorell, 1895) (Araneae: Linyphiidae, Theridiidae)

**Autor:** Breitling, Rainer

**DOI:** <https://doi.org/10.5169/seals-787078>

### **Nutzungsbedingungen**

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

### **Conditions d'utilisation**

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

### **Terms of use**

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

**Download PDF:** 07.07.2025

**ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>**

# *Linyphia bilobata* ROY & al., 2015, is a junior synonym of *Chrysso scintillans* (THORELL, 1895) (Araneae: Linyphiidae, Theridiidae)

Rainer Breitling

## ABSTRACT

Contrib. Nat. Hist. 30: 1–7

*Linyphia bilobata* ROY, SEN, SAHA & RAYCHAUDHURI, 2015, was recently described as a newly discovered linyphiid species known only from West Bengal, India. The detailed description and figures show that *L. bilobata* is actually identical to *Chrysso scintillans* (THORELL, 1895), a widespread theridiid species of Southeast Asia (syn. nov.). The status of other *Linyphia* species described from India is examined, and the following provisional generic transfers are suggested for species currently placed in *Linyphia*: *Chrysso urbasae* (TIKADER, 1970), comb. nov., *Chrysso sikkimensis* (TIKADER, 1970), comb. nov., *Tylorida nicobarensis* (TIKADER, 1977), comb. nov., *Lepthyphantes stramineus* (O. PICKARD-CAMBRIDGE, 1885), comb. nov., and *Lepthyphantes peramplus* (O. PICKARD-CAMBRIDGE, 1885), comb. nov.

Keywords: Araneae, spiders, Linyphiidae, Theridiidae, new combinations, synonymy

## Introduction

When van Helsdingen published his world-wide revision of the genus *Linyphia* LATREILLE, 1804, and its allies, he did not report any species of *Linyphia* from India (van Helsdingen 1969, 1970). The latest checklist for India, however, mentions 5 species in the genus, all of them considered endemic (Siliwal & al. 2005). A sixth species was recently described from West Bengal as *Linyphia bilobata* ROY, SEN, SAHA & RAYCHAUDHURI, 2015. This new addition to the list of Indian *Linyphia* species motivated a re-examination of the genus on the subcontinent.

## The identity of *Linyphia bilobata*

The description of *Linyphia bilobata* by Roy & al., based on 8 female specimens, is very detailed and accompanied by excellent illustrations, including habitus drawings, details of the chelicerae, maxillae, labium and sternum, the epigyne and internal genitalia, as well as a colour photograph of the holotype female. Together, this information allows a clear identification of *L. bilobata* as being identical to *Chrysso scintillans* (THORELL, 1895) (**syn. nov.**). *C. scintillans* is a theridiid species that is widespread and common throughout Southeast Asia, with published records from Japan, China, Korea, and the Philippines (Amalin & Barrion 1990, Namkung 2002, Song & al. 1999, Yoshida 2009), in addition to the type locality in Tharawaddy, Myanmar, about 1,200 km southeast of the type locality of *L. bilobata*.

*Chrysso scintillans* has been described repeatedly under various names (*Physcoa scintillans* THORELL, 1895; *Argyria venusta* YAGINUMA, 1957; and *Chrysso bidens* XING, GAO & ZHU, 1994). Its rather isolated position amongst *Chrysso* species led to its repeated assignment as the type species of a new genus (*Physcoa* THORELL, 1895 and *Argyria* YAGINUMA, 1957 = *Argyroaster* YAGINUMA, 1960). Numerous detailed descriptions and illustrations are available to support the identification of *L. bilobata* with this species (e.g., Levi 1962, Levi & Levi 1962, Namkung 2002, Shinkai 2006, Song & al. 1999, Xing & al. 1994, Yaginuma 1957, 1960, Yoshida 2001, 2003, 2009, Zhu 1998). A few selected details should suffice to illustrate the excellent agreement between the species described by Thorell (1895) and Roy & al. (2015). They also highlight the lasting quality of Thorell's eloquent descriptions.

The ocular quadrangle is described by Roy & al. as "nearly square", corresponding to Thorell's slightly more detailed "Area oculorum mediorum paullulo (parum) latior antice quam postice, et aequae longa ac lata antice" ("area of the middle eyes very slightly (hardly) broader in the front than in the back, and as long as broad in the front"). This description matches the figure in Roy & al. exactly. The anterior eye row is described as "strongly recurved... as viewed dorsally", which could be considered a literal translation of Thorell's "series oculorum antica desuper visa fortiter recurva est."

The maxillae of *L. bilobata* are "nearly twice as long as wide", which Thorell describes as "saltem dimidio sed non duplo longiores quam latiores" ("at least by half, but not twice longer than wide"); the labium is "wider than long" (Thorell: "paullo latius quam longius", "a bit broader than long").

The cephalothorax is "yellow brown" (Thorell: "luteo-testacea"). The legs are of the same colour, but are "banded". Thorell's detailed description of this banding matches the photograph of the holotype in all details. The picture

|                       | Leg I                   | Leg II                 | Leg III       | Leg IV         |
|-----------------------|-------------------------|------------------------|---------------|----------------|
| <i>P. scintillans</i> | 11 $\frac{2}{3}$ (1.00) | 7 $\frac{1}{4}$ (0.62) | plus 4 (0.36) | paene 8 (0.67) |
| <i>L. bilobata</i>    | 15.00 (1.00)            | 8.40 (0.56)            | 5.60 (0.37)   | 9.00 (0.60)    |
| <i>C. bidens</i>      | 15.52 (1.00)            | 8.40 (0.54)            | 5.04 (0.32)   | 8.88 (0.57)    |
| <i>A. venusta</i>     | 18.80 (1.00)            | 10.50 (0.56)           | 5.70 (0.30)   | 10.70 (0.57)   |

**Table 1.** Absolute leg length in mm (and relative leg length compared to leg I) in the female type material of the four species here considered as synonyms of *Chrysso scintillans*, according to the data in the original descriptions.

shows dark reddish-brown bands at the end of the femora, and black rings at the ends of the tibiae, metatarsi of legs I, II, and IV, as well as red brown rings in middle of femora I, II, IV, and tibia I. Thorell describes this as "in reliquis pedibus (3ii exceptis) femora, tibiae et metatarsis apice sat late nigra sunt" ("in the other legs, except the third, the femora, tibiae and metatarsi are broadly black at their tips") and "femora praetera (ut tibiae 1i paris) annulo nigro versus basin cincta" ("moreover, the femora, as well as the tibiae I, are banded with a black ring towards the base"). The legs are further described as "clothed with pale brown moderate hairs", while Thorell more precisely refers to "pili pallide testacei, excepto in annulo nigro apicali tibiaryum saltem 4i paris, ubi nigra sunt" ("pale brown hairs, except in the black apical bands of the tibiae, especially of leg IV, where they are black"); a detail that is clearly visible in the photo of the holotype of *L. bilobata*.

Table 1 shows the detailed agreement in the relative length of the legs in the female type material of *Physcoa scintillans*, *Linyphia bilobata*, *Chrysso bidens* and *Argyria venusta*. The same consistency is also found in the relative lengths of the individual leg segments (not shown, as they are not reported in the original description by Thorell). In all cases, the observed differences are well within the range of measurement uncertainty and inter-individual variation.

The shape of the opisthosoma is "sub pentagonal" in *L. bilobata*, while "desuper visum breviter pentagono-ovatum fere est abdomen" ("viewed from above the abdomen is quite shortly pentagonal-oval") in *C. scintillans*. The colour pattern of the "off white" abdomen "widest at the middle, each end marked by a black hump, tip black, blunt and round" is again described in some more detail by Thorell (1895), who refers to "macula magna humerali nigra vel maculis ejusmodi binis utrinque" ("a large black shoulder spot or two such spots on each side") with "apice coni apicalis nigro" ("black tip of the apical cone"). The illustrations by Roy & al. again match Thorell's description in all details.

In *L. bilobata*, the "epigynal plate [is] marked by 2 transverse nearly parallel lines"; these lines are clearly visible, e.g., in the illustration in Levi (1962), while Thorell states that "vulva ex sulco transverso lato et forti constat, ... et ita foveas duas transversas plus minus discretas format": "the epigyne consists of a strong and broad transverse groove, and in this way forms two more or less distinct transverse lines".

Thorell did not examine the internal genitalia of *Chrysso scintillans*, but the bilobed spermathecae after which *L. bilobata* has been named are also a distinct feature of the former. Illustrations are provided, e.g., in Xing & al. (1994) and Yoshida (2001) and also show the short fertilization duct mentioned by Roy & al.

### Other Indian species of *Linyphia*

The misidentification of *Linyphia bilobata* can most likely be traced back to the work of Tikader, who described three species of *Linyphia* from India in 1970 and 1977. One of these, *Linyphia urbanasae* TIKADER, 1970, was first reported from Sikkim, India, but is widespread and rather common in South-east Asia, as evidenced by numerous photos of this distinctively coloured species from India, Malaysia, Singapore and Taiwan, which can be found on the internet. The species is certainly a theridiid, as can be seen from the schematic illustration of the epigyne in the original description, but most importantly from its habitus, which indeed closely resembles that of *Chrysso scintillans*. As documented repeatedly on the internet, the species also shows the maternal care behaviour reported for other species of theridiids, including members of *Chrysso* (Miller & Agnarsson 2005, Shinkai 2006). While the exact generic affiliation within Theridiidae remains doubtful without studying authentic material of *L. urbanasae*, the available evidence supports a provisional transfer to the genus *Chrysso*, as *Chrysso urbanasae* (TIKADER, 1970), **comb. nov.** The genus *Chrysso*, as currently used, is certainly a heterogeneous polyphyletic assemblage (Deeleman-Reinhold 2009), and a confident placement of *C. urbanasae* will require a careful revision of the entire group.

In the same publication, which is well-known for its dubious generic assignments (Brignoli 1976), Tikader described a second species of *Linyphia*, *L. sikkimensis* TIKADER, 1970, which he considers to be highly similar to *C. urbanasae*. This species also seems to be rather common (the type series included 13 female and 3 male specimens). The illustrations of the male and female genitalia certainly exclude any affinity with *Linyphia*, but the correct placement is difficult to determine. Considering the close similarity to *C. urbanasae* men-

tioned in the original description, it would seem reasonable to very tentatively transfer the species to *Chrysso*, as *Chrysso sikkimensis* (TIKADER, 1970), **comb. nov.**, with the strong caveat that even the family affiliation is not quite clear in this case.

The heterogeneity of Tikader's concept of *Linyphia* is illustrated by his third Indian species placed in this genus, *Linyphia nicobarensis* TIKADER, 1977. In this case, the description and illustrations leave no doubt that this species is very closely allied and probably even identical to the common *Tylorida striata* (THORELL, 1877), a member of Tetragnathidae. This species was also described by Tikader as being similar to *L. urbasae*, but size, shape, colour and markings all exactly match *T. striata*, which was already reported from the Nicobar Islands by Thorell (1891), from a location no more than 30 km from the type locality of *L. nicobarensis*. The illustration of the epigyne is, however, difficult to match to the epigyne of *T. striata*. While this may be due to the highly schematic nature of the drawing, it justifies provisional treatment of *L. nicobarensis* as a distinct species, *Tylorida nicobarensis* (TIKADER, 1977), **comb. nov.**

Two further species of *Linyphia* were described from British India by O. Pickard-Cambridge (1885). *Linyphia perampla* from the Sind Valley, India, was described as "very nearly allied to *Linyphia collina*, L. KOCH" (= *Megalepthyphantes collinus* (L. KOCH, 1872)); *Linyphia straminea* from Murree, Pakistan, was considered as "in its form and general structure... very like *Linyphia ericaea*, BL." (= *Palliduphantes ericaeus* (BLACKWALL, 1853)). In both cases, there is no indication of a close relationship with *Linyphia* in the modern sense. The two species are therefore provisionally transferred to the genus *Lepthyphantes sensu lato*, as *Lepthyphantes stramineus* (O. PICKARD-CAMBRIDGE, 1885), **comb. nov.**, and *Lepthyphantes peramplus* (O. PICKARD-CAMBRIDGE, 1885), **comb. nov.**

"*Linyphia striata*", a species described by Sebastian & al. (2009) without valid assignment of a holotype, has recently been identified as probably being identical to *Theridion zonulatum* THORELL, 1890 (Ehrler & al. 2014).

In conclusion, the genus *Linyphia*, as defined by van Helsdingen (1969), seems to be absent from the Indian subcontinent.

## Acknowledgements

I thank the team of the World Spider Catalogue for their immensely useful work towards making the entire araneological literature available to the scientific community, greatly facilitating studies like this one.



## References

- Amalin, D.M. & Barrion, A.A. (1990): Spiders of white potato (*Solanum tuberosum* L.) in the lowland. – The Philippine Agricultural Scientist 73: 179–184.
- Blackwall, J. (1853): Descriptions of some newly discovered species of Araneida. – Annals and Magazine of Natural History (2) 11: 14–25.
- Brignoli, P.M. (1976): On some recent papers about Indian spiders. – Bulletin of the British Arachnological Society 3: 211–213.
- Deeleman-Reinhold, C.L. (2009): Spiny theridiids in the Asian tropics. Systematics, notes on behaviour and species richness (Araneae: Theridiidae: *Chrysso*, *Meotipa*). – Contributions to Natural History 12: 403–436.
- Ehrler, R., Ackermann, G., Grabolle, A. & Breitling, R. (2014): *Theridion zonulatum* Thorell 1890, a senior synonym of *Theridion zebrinusum* Zhu 1998. – Acta Arachnologica, Tokyo 63(2): 79–82.
- Helsdingen, P.J. van (1969): A reclassification of the species of *Linyphia* Latreille based on the functioning of the genitalia (Araneida, Linyphiidae), I. – Zoologische Verhandelingen 105: 1–303.
- Helsdingen, P.J. van (1970): A reclassification of the species of *Linyphia* based on the functioning of the genitalia (Araneida, Linyphiidae), II. – Zoologische Verhandelingen 111: 1–86.
- Koch, L. (1872): Apterologisches aus dem fränkischen Jura. – Abhandlungen der Naturhistorischen Gesellschaft zu Nürnberg 6: 127–152.
- Levi, H.W. (1962): More American spiders of the genus *Chrysso* (Araneae, Theridiidae). – Psyche, Cambridge 69: 209–237.
- Levi, H.W. & Levi, L.R. (1962): The genera of the spider family Theridiidae. – Bulletin of the Museum of Comparative Zoology at Harvard College 127: 1–71.
- Miller, J. & Agnarsson, I. (2005): A redescription of *Chrysso nigriceps* (Araneae, Theridiidae) with evidence for maternal care. – Journal of Arachnology 33: 711–714.
- Namkung, J. (2002): The spiders of Korea. – 648 pp., Seoul.
- Pickard-Cambridge, O. (1885): Araneida. – In: Scientific results of the second Yarkand mission, pp. 1–115, Calcutta.
- Roy, T.K., Sen, S., Saha, S. & Raychaudhuri, D. (2015): A new *Linyphia* Latreille, 1804 (Araneae: Linyphiidae) from West Bengal, India. – Munis Entomology and Zoology 10(1): 61–64.
- Sebastian, P.A., Sudhikumar, A.V., Mathew, M.J. & Samson, P.D. (2009): Suborder Araneomorphae. – In: Sebastian, P.A. & Peter, K.V. (eds.), Spiders of India, pp. 114–396, Hyderabad.
- Shinkai, E. (2006): Spiders of Japan. – 335 pp., Tokyo.
- Siliwal, M., Molur, S. & Biswas, B.K. (2005): Indian spiders (Arachnida: Araneae): updated checklist 2005. – Zoos' Print Journal 20(10): 1999–2049.
- Song, D.X., Zhu, M.S. & Chen, J. (1999): The Spiders of China. – 640 pp., Shijiazhuang.
- Thorell, T. (1890): Studi sui ragni Malesi e Papuani. IV, 1. – Annali del Museo Civico di Storia Naturale di Genova 28: 1–419.
- Thorell, T. (1891): Spindlar från Nikobarerna och andra delar af södra Asien. – Bihang till Kongliga Svenska Vetenskaps-Akademiens Handlingar 24(2): 1–149.
- Thorell, T. (1895): Descriptive catalogue of the spiders of Burma. – 406 pp., London.

- Tikader, B.K. (1970): Spider fauna of Sikkim. – Records of the Zoological Survey of India 64: 1–83.
- Tikader, B.K. (1977): Studies on spider fauna of Andaman and Nicobar islands, Indian Ocean. – Records of the Zoological Survey of India 72: 153–212.
- Xing, S.Y., Gao, J.C. & Zhu, C.D. (1994): Two new species of the family Theridiidae from China (Araneae: Theridiidae). – Acta Zootaxonomica Sinica 19: 164–167.
- Yaginuma, T. (1957): Two new conopisthine spiders from Japan. – Acta Arachnologica, Tokyo 15: 11–16.
- Yaginuma, T. (1960): Spiders of Japan in colour. – 186 pp., Osaka.
- Yoshida, H. (2001): A revision of the Japanese genera and species of the subfamily Theridiinae (Araneae: Theridiidae). – Acta Arachnologica, Tokyo 50: 157–181.
- Yoshida, H. (2003): The spider family Theridiidae (Arachnida: Araneae) from Japan. – 224 pp., Osaka.
- Yoshida, H. (2009): Theridiidae. – In: Ono, H. (ed.), The Spiders of Japan with keys to the families and genera and illustrations of the species. pp. 356–393, Kanagawa.
- Zhu, M. S. (1998): Fauna Sinica: Arachnida: Araneae: Theridiidae. – xi + 436 pp., Beijing.

### **Address of the author:**

Rainer Breitling  
Faculty of Life Sciences  
University of Manchester  
M1 7DN Manchester  
United Kingdom

E-mail: [rainer.breitling@manchester.ac.uk](mailto:rainer.breitling@manchester.ac.uk)



## INSTRUCTIONS TO AUTHORS

**Content:** Contributions to Natural History is a publication series of the Natural History Museum Bern (NMBE). Publications cover the fields of zoology, palaeontology, and geology (including mineralogy and meteoritics) and should be related to scientific collections (preferably to those of the NMBE) and/or to research activities of museum scientists. In zoology, priority is given to contributions on taxonomy and systematics, biodiversity, morphology, faunistics, biogeography and all other aspects of organismic biology.

**Language:** Manuscripts may be written in English (preferred), German or French.

**Review:** Manuscripts will be peer-reviewed in any case by external referees.

**Submission of manuscripts:** Manuscripts should be sent as Email-attachments (preferred), on CD, or as three paper copies, including figures and tables, to the managing editor. After reviewing, authors should send the revised version of the manuscript in MS Word or Word for Macintosh and as a txt file. Figures should be sent after reviewing as originals or in an electronic version (tiff or jpg with maximal quality). Resolution must be 300 dpi for colour and greyscale figures, and 1200 dpi for line and ink drawings. Concerning figures and tables, authors should pay attention to the print area of 195 x 117 mm (including legends). Full breadth figures/tables are 117 mm wide with the legend at the base; all others are 85 mm wide with the legend at the side. If sent as originals, indicate magnification or size reduction of the figures at the backside of each original. For compilation of figures into plates, the use of a vector graphics editor (like Adobe Illustrator, Adobe InDesign, or Inkscape, but NOT Adobe Photoshop) is mandatory and figures must be labelled with a 13 pt sans-serif font (e.g. Arial, Helvetica, or Frutiger). Plates should be saved as PDF or EPS. Tables should be sent as Excel files (preferred) or as Word files using the tabs function.

**Presentation:** Manuscripts must be clear and concise in style. Telegraphic style is recommended for descriptions. Establishment of new taxa must be in accordance with the rulings of the last edition of the International Code of Zoological Nomenclature and authors are expected to be familiar with the rulings of the Code. Name-bearing types must be deposited in a museum or in another institutional collection. Nomenclatural authors must be written in SMALL CAPS, with a comma between author and year of description. Bibliographical authors are written in normal style and without comma between author and year. Use "&" for co-authors and "& al." instead of "et al.". Scientific names of genus-, species-, and subspecies-rank or (in case of citation of names proposed before 1961) of forms and varieties must be written in *italics*.

Manuscripts should be organised in the following way (in brackets: optional): Title, (sub-title), Author(s), Abstract, (Kurzfassung, Résumé), Introduction, Material and Methods, (Abbreviations), Results, Discussion, Acknowledgements, References, Address(es) of author(s), (Appendices). Figures, tables and legends should be on separate sheets. In case of large manuscripts, contents and index can be added. Footnotes should be avoided. Colour prints are possible in certain cases.

Manuscripts should be typed or printed and be double-spaced throughout (including legend). Pages must be numbered. References must strictly follow the journal's style. Do not cite papers as "in prep." or other unpublished manuscripts like diploma theses or expert opinions, unless these manuscripts are accepted for publication in a scientific journal ("in press"). Examples for citation of literature:

Meyer, A.H., Schmidt, B.R. & Grossenbacher, K. (1989): Analysis of three amphibian populations with quarter-century long time series. — *Proceedings of the Royal Society of London B* 265: 523–528.

Groh, K. & Poppe, G. (2002): A conchological iconography. Family Acavidae excluding Ampelita. — 69 pp., 44 plates, Hackenheim.

Selden, P.A. & Dunlop, J.A. (1998): Fossil taxa and relationships of chelicerates. — In: Edgecombe, G.D. (ed.), *Arthropod fossils and phylogeny*, pp. 303–331, New York.

**Proofs:** Proofs are sent to the authors for correction.