

ON TEN UNAVAILABLE AND THIRTY-FOUR DUBIOUS NAMES FOR SPIDERS (ARANEAE) FROM INDIA

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Abstract: Ten names for spiders from India, currently recognised as valid by the World Spider Catalog (2024), are shown to be unavailable. Thirty-four spider names which available, but which instead present taxonomic problems are treated as *nomina dubia*.

Key words: nomenclature, notes, type repository

Sobre diez nombres indisponible y treinta y cuatro dudosos para arañas (Araneae) de la India

Resumen: Diez nombres de arañas de la India, actualmente reconocidos como válidos por el Catálogo Mundial de Araña (2024), no están disponibles. Treinta y cuatro nombres de arañas que están disponibles, pero que en cambio presentan problemas taxonómicos, se tratan como *nomina dubia*.

Palabras clave: nomenclatura, notas, repositorio de tipos.

Type specimens are the bedrock of taxonomy, as explained clearly in the International Code of Zoological Nomenclature (ICZN, 1999; hereafter the Code). Knowledge of the location of type material and the ability to access it is important for subsequent workers to be able to test and validate previous taxonomic hypotheses. Recently, after publication of Sherwood & El-Hennawy (2023) which dealt with the unavailable name *Stegodyphus semadohensis* Deshmukh, 2013, the senior author serendipitously encountered yet another paper on Indian spiders which made no mention of a type repository (*contra* Article 16.4.2 of the Code) and decided to further investigate the literature for additional cases. Using the World Spider Catalog (2024), she searched for all papers with the word India and/or the name of one of the 28 Indian states in the title. A total of 430 papers were subsequently consulted [excluding one additional paper consulted, Deshmukh (2013), see above] of which six contained at least one unavailable name. None of the ten total names found across all these works are currently recognised as unavailable by the World Spider Catalog (2024). Further correspondence with JC revealed other cases of species unrecognisable from their original descriptions and for which a type repository is not mentioned, but they were published prior to 1999 and are thus not subject to Article 16.4.2 of the Code. Nonetheless, these names are taxonomically unrecognisable due to their poor descriptions and are, alongside some names where a type repository was indicated but the material not to be found now in the collections, regarded herein as *nomina dubia*.

Unavailable names

Poltys godrejii Bastawade & Khandal, 2006 (Araneidae)

REMARKS: Bastawade & Khandal (2006: 175) described two new species of *Poltys* C. L. Koch, 1843 but failed to mention any repository. Thus, *Poltys godrejii* Bastawade & Khandal, 2006 is an unavailable name. The absence of figures and poor textual description in any case, had the name been available, would have rendered it a *nomen dubium* as it is totally unrecognisable from properly descri-

bed congeners. Furthermore, whilst the descriptions of Bastawade & Khandal (2006) clearly depict females, their material examined section states that they examined males for both *P. godrejii* and *P. rehmanii*, a clear contradiction.

Poltys rehmanii Bastawade & Khandal, 2006 (Araneidae)

REMARKS: As aforementioned, no type repository was mentioned in the paper in which the original description of this new name (and one other) appeared (Bastawade & Khandal, 2006: 175). Thus, *Poltys rehmanii* Bastawade & Khandal, 2006 is an unavailable name. Regardless, had the name been available it would have to have been rendered a *nomen dubium* due to the poor textual description, contradiction of the description and supposed material examined (see above), absence of figures, and the unknown fate of the type material.

Clubiona foliata Keswani & Vankhede, 2014 (Clubionidae)

REMARKS: Keswani & Vankhede (2014: 36) failed to mention a repository for the type material of *Clubiona foliata* Keswani & Vankhede, 2014 and thus it is an unavailable name. Had it been available, the name would have been invalid as the type material is synonymous with a senior name: *Clubiona filicata* O. Pickard-Cambridge, 1874 (see Caleb, 2020 who proposed a synonymy, without recognising *C. foliata* was unavailable). This is not the first unavailable name described by those authors, *Hygropoda mahendriensis* Vankhede, Keswani & Rajoria, 2013 (Pisauridae) is already recognised as unavailable by the World Spider Catalog (2024) due to the absence of both a diagnosis and no mention of a repository.

Ctenus goaensis Bastawade & Borkar, 2008 (Ctenidae)

REMARKS: Bastawade & Borkar (2008: 224) do not indicate a repository for the type material of *C. goaensis*. Thus, *Ctenus goaensis* Bastawade & Borkar, 2008 is an unavailable name. Jäger (2022: 18) attempted to transfer this species to his new genus *Bowie* Jäger, 2022 but since the species name is unavailable this transfer is invalid, although we wholeheartedly agree that the spider depicted by Bastawade & Borkar (2008) is indeed a morphospecies of *Bowie*.

Triaeris melghaticus Bastawade, 2005 (Oonopidae)

REMARKS: The description of this species contains very poor drawings, Platnick *et al.* (2012) remarked that the Indian species of *Triaeris* Simon, 1892 were likely all misplaced. No repository is

mentioned for the type material (Bastawade, 2005: 433) and *Triarisis melghaticus* Bastawade, 2005 is thus an unavailable name.

***Poecilotheria nallamalaiensis* Rao, Bastawade, Javed & Krishna, 2006 (Theraphosidae)**

REMARKS: Rao *et al.* (2006: 51) did not indicate a repository for the type material of this species, thus *Poecilotheria nallamalaiensis* Rao, Bastawade, Javed & Krishna, 2006 is an unavailable name. Gabriel (2010) already recognised this (albeit with a *lapsus calami*, writing the name may be a '*nomen dubium*'), and demonstrated that, in any case, the name would have been invalid as the type material is conspecific with *Poecilotheria formosa* Pocock, 1899.

***Camaricus bipunctatus* Bastawade, 2002 (Thomisidae)**

REMARKS: Bastawade (2002) described three new species of spider. Of these, one is valid (*Myrmarachne dirangicus* Bastawade, 2002) and two are unavailable. Of the two unavailable names, *Amaurobius indicus* Bastawade, 2002 is a junior homonym of both *Oedignatha indica* (Tikader, 1981) and *Oedignatha indica* Reddy & Patel, 1993, and was replaced with *Oedignatha raigadensis* Bastawade, 2006 (see also Sherwood, 2023). The second unavailable name is *Camaricus bipunctatus* Bastawade, 2002 – hitherto regarded as valid by the World Spider Catalog (2024) – not through homonymy but resultant from not mentioning a type repository (Bastawade, 2002: 278), in contrast to the other two species. Thus, *Camaricus bipunctatus* Bastawade, 2002 is an unavailable name.

***Tmarus srisailamensis* Rao, Bastawade, Javed & Krishna, 2006 (Thomisidae)**

REMARKS: Rao *et al.* (2006: 52) failed to mention a type repository for *Tmarus srisailamensis* Rao, Bastawade, Javed & Krishna, 2006, thus it is an unavailable name. This morphospecies may be distinct but the original drawings are schematic. It would be prudent to either consult the specimens used in the (unavailable) description or to collect topotypes to assess whether it represents a new species. As discussed above, a second unavailable name was described in the same work: *P. nallamalaiensis*.

***Episinus pentagonalis* Chakrabarti, 2013 (Theridiidae)**

REMARKS: Chakrabarti (2013: 799) failed to mention a type repository, thus *Episinus pentagonalis* Chakrabarti, 2013 is an unavailable name. The figures are of reasonably good quality and allow for differentiation of this morphospecies. We agree with Chakrabarti (2013) that this morphospecies is distinct from other valid congeners, but it would need to be properly described in order to be valid.

***Stemmops satpudaensis* Rajoria, 2015 (Theridiidae)**

REMARKS: Rajoria (2015: 22) did not mention a type repository for this species, thus *Stemmops satpudaensis* Rajoria, 2015 is an unavailable name. Although the figures are at somewhat unorthodox angles, and would have to be reimaged to improve quality, based on what can be seen of the embolus, this does appear to be a distinctive morphospecies and might warrant a proper, and valid, description in the future.

Nomina dubia

The following species were also described without any mention of repositories, but since they were described before 1999, they are not subject to Article 16.4.2 of the Code. Nonetheless, with the absence of information of the whereabouts of the type material and the poor quality of the descriptions, we consider these taxa unrecognisable. Remarks are given for select taxa.

***Stegodyphus hisarensis* Arora & Monga, 1992 nomen dubium (Eresidae)**

REMARKS: As noted by El-Hennawy (2016) this species is definitely

not an eresid and is either a philodromid or thomisid. However, as it is placed in this family by the World Spider Catalog (2024) and was never transferred, we treat it here in this family merely due to this fact.

***Hippasa haryanensis* Arora & Monga, 1994 nomen dubium (Lycosidae)**

REMARKS: Proposed as a *nomen nudum* by Sankaran & Caleb (2023) but this was invalid and the description is not subject to Article 16.4.2 of the Code (ICZN, 1999).

***Pardosa tikaderi* Arora & Monga, 1994 nomen dubium (Lycosidae)**

REMARKS: *Pardosa tikaderi* Arora & Monga, 1994 is also a homonym, see World Spider Catalog (2024); this species probably belongs to *Draposa* Kronstedt, 2010 but the original description and illustrations are not sufficient to recognise it from congeners, even if it were transferred there.

***Phintelloides singhi* (Monga, Singh & Sadana, 1989) nomen dubium (Salticidae)**

REMARKS: This species was described as *Marpissa singhi* Monga, Singh & Sadana, 1989, it was later transferred to *Phintelloides* Kanesaratnam & Benjamin, 2019 and considered a *species inquirenda* by Caleb & Acharya (2020).

***Theridion sadani* Monga & Singh, 1989 nomen dubium (Theridiidae)**

The descriptions of all the species below mention their respective types were, or would later be, in the Zoological Society of India, Kolkata (ZSI). The type material has subsequently not been located in ZSI (JC pers. obs.) and are considered lost, and their original descriptions are not of sufficient quality to allow for their unambiguous delineation from other known congeners. Thus, these species are unrecognisable. Remarks are only given for two species, which were discussed by prior works.

***Draconarius harduarae* (Biswas & Roy, 2008) nomen dubium (Agelenidae)**

***Himalmartensus mussooriensis* (Biswas & Roy, 2008) nomen dubium (Amaurobiidae)**

***Chorizopes tikaderi* Sadana & Kaur, 1974 nomen dubium (Araneidae)**

***Neoscona bomdilaensis* B. Biswas & K. Biswas, 2006 nomen dubium (Araneidae)**

***Gnaphosa kankhalae* Biswas & Roy, 2008 nomen dubium (Gnaphosidae)**

***Agroeca gangotrae* Biswas & Roy, 2008 nomen dubium (Liocranidae)**

***Arctosa sandeshkhaliensis* Majumder, 2004 nomen dubium (Lycosidae)**

***Lycosa bhatnagari* Sadana, 1969 nomen dubium (Lycosidae)**

***Pardosa suchismitae* Majumder, 2004 nomen dubium (Lycosidae)**

***Pardosa deboliniae* Majumder, 2004 nomen dubium (Lycosidae)**

***Nephila dirangensis* B. Biswas & K. Biswas, 2006 nomen dubium (Nephilidae)**

REMARKS: Sankaran *et al.* (2020a) suggested this species may be a synonym of *Nephila clavata* [now *Trichonephila clavata* (L. Koch, 1878)]. Unfortunately, the original description is not sufficiently detailed to state this with certainty and the type material is likely lost. *Nephila dirangensis* was never, in any case, transferred to the latter genus by any workers. Thus, we propose instead it be treated as a *nomen dubium*.

Oxyopes gurlanti Sadana & Gupta, 1995 *nomen dubium* (Oxyopidae)

Oxyopes ludhianaensis Sadana & Goel, 1995 *nomen dubium* (Oxyopidae)

Philodromus tiwarii Basu, 1973 *nomen dubium* (Philodromidae)

Marpissa pauariensis Biswas & Roy, 2008 *nomen dubium* (Salticidae)

Myrmarachne ludhianaensis Sadana & Gupta, 1998 *nomen dubium* (Salticidae)

Myrmarachne platypalpus Bradoo, 1980 *nomen dubium* (Salticidae)

Massuria roonwali (Basu, 1964) *nomen dubium* (Thomisidae)

Misumenoides naginae Biswas & Roy, 2008 *nomen dubium* (Thomisidae)

Ozyptila reeneae Basu, 1964 *nomen dubium* (Thomisidae)

Pistius barchensis Basu, 1965 *nomen dubium* (Thomisidae)

Pistius bhadurii Basu, 1965 *nomen dubium* (Thomisidae)

Pistius gangulyi Basu, 1965 *nomen dubium* (Thomisidae)

Pistius robustus Basu, 1965 *nomen dubium* (Thomisidae)

Thomisus sorajaii Basu, 1963 *nomen dubium* (Thomisidae)

Thomisus beautifularis Basu, 1965 *nomen dubium* (Thomisidae)

Xysticus hindusthanicus Basu, 1965 *nomen dubium* (Thomisidae)

Xysticus jaharai Basu, 1979 *nomen dubium* (Thomisidae)

Mallinella dibangensis (B. Biswas & K. Biswas, 2006) *nomen dubium* (Zodariidae)

REMARKS: This species was recently transferred from *Storena* Walckenaer, 1805 by Sankaran *et al.* (2020b) who stated it may be a synonym of *Mallinella redimita* (Simon, 1905). Unfortunately, the original drawings are not detailed enough to state this with certainty, being highly simplistic, and the holotype is likely lost. Thus, we propose instead it be treated as a *nomen dubium*.

Discussion

During the latter half of the 20th Century and the first decade of the 21st Century, Indian arachnologists, including B. K. Tikader, G. L. Sadana, B. Biswas, B. D. Basu, U. A. Gajbe, and D. B. Bastawade, published significant numbers of papers on Indian spiders. Their work involved the description of numerous new species whose types should have been in the Zoological Survey of India, Kolkata by now. However, as per the observations of JC, spanning from 2017 to 2020, some of these specimens have sadly never been deposited in the ZSI collections.

Among those contributors, Tikader, Gajbe, and Biswas stand out as many of their taxa have been found valid after undergoing subsequent revisions (e.g. Sankaran *et al.*, 2019, 2020a, 2020b, 2021; Sankaran & Caleb, 2023; Caleb & Wijesinghe, 2022; Caleb *et al.*, 2020, 2022; Caleb, 2023) because most of their types were available for scrutiny (although a few are lost). Nonetheless, Tikader often produced work of exceptionally poor quality, which caused a great burden on Indian spider taxonomy (Brignoli, 1976), but the vast majority of his type material is accessible and thus redescriptions can, and have been, produced over the ensuing decades.

Conversely, the species described by Arora, Bastawade, and Sadana pose a different challenge. None of their spider

type specimens have been located in ZSI. We suspect that these specimens never made it to Kolkata, possibly remaining in the arachnologists' institutional or private collections, which may have possibly suffered from neglect or loss over time. Compounding this issue, their descriptions often lacked sufficient taxonomic detail and were inadequately illustrated. Such vagueness rendered these species unrecognisable.

T. S. Reddy and B. H. Patel's contributions from 1989 to 1994 (see World Spider Catalog, 2024), totalling 32 newly-described species, are yet another example of the totality of type material being missing from ZSI. However, their descriptions and illustrations are of a comparatively better quality to those treated as *nomina dubia* here, with some of their work validated by later scholars (e.g. Kronestedt, 2010; Sankaran *et al.*, 2019; Jäger, 2022, Sankaran & Caleb, 2023). Hence, they don't fall into the category of *nomen dubium* in our opinion, as they offer sufficient detail for species recognition. It is important, in our opinion, that the concept of *nomen dubium* be restricted only to those names which are both unrecognisable from the original descriptions and for which the type material is missing. This said, it is important to note that none of the type material listed in Table I1 is present in ZSI and must be considered lost.

In light of these challenges and the considerable effort required to resolve even the 44 names herein, a comparative drop in the ocean of the known Indian spider fauna, it is crucial for the current generation of Indian arachnologists to follow the recommendations laid out by Nentwig *et al.* (2020). Firstly, type specimens of new species should be described comprehensively giving as much detail as is possible, with photographs and drawings made to the highest possible quality. Secondly, type material must be deposited in the stated repository as soon as possible after description, if not already found in the collections. Thirdly, institutional repositories should maintain their spider collections to a high standard and should maintain a list of type material, ensuring the collection is accessible to arachnologists.

Finally, we found that almost all of the *nomina dubia* we encountered were unrecognisable not only due to their poor textual descriptions, but also due to schematic and poor-quality drawings. In this regard, and considering the combined years of our careers spent discovering and describing new species, we disagree with Jäger (2016) that drawings are more important than photographs for taxonomic purposes. Whilst figures should always be made to a high quality, the fact remains that a bad drawing is far less objective than a bad photograph. Indeed, if the illustrator fails to notice a character of the genitalia, it will not be drawn, or if they misinterpret it, it will be drawn incorrectly. Whilst the integration of both drawings and photographs may be ideal for some cases, the fact remains that for many spiders today, with adequate equipment, photo-only descriptions can meet the standard of drawing-only descriptions. This is abundantly evident by comparing the contemporaneous publications of Indian colleagues against those authored just 30 years ago.

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Table I. A list of species whose types are missing from the Zoological Survey of India, Kolkata collections but are recognisable from their original descriptions, described by T. S. Reddy and B. H. Patel (sometimes in opposite authorship order) between 1988 and 1994. Select notes are given on the status of some taxa. Given none of these taxa are treated explicitly herein we do not cite the references to the papers by these two workers, and direct readers to the World Spider Catalog (2024) where a list can be easily obtained.

Family	Species	Notes
Agelenidae	<i>Tegenaria hemanginae</i> Reddy & Patel, 1992	–
Araneidae	<i>Chorizopes khedaensis</i> Reddy & Patel, 1993	–
Araneidae	<i>Chorizopes pateli</i> Reddy & Patel, 1993	–
Araneidae	<i>Guizygiella shivui</i> (Patel & Reddy, 1990)	–
Araneidae	<i>Neoscona dhumani</i> Patel & Reddy, 1993	–
Araneidae	<i>Neoscona murthi</i> Patel & Reddy, 1990	–
Araneidae	<i>Neoscona ujjvalai</i> Reddy & Patel, 1992	Certainly misplaced in the genus, close to <i>Araneus viridisomus</i> Gravely, 1921 except for the difference in course of the copulatory ducts, topotypes should be collected to verify its status.
Cheiracanthiidae	<i>Cheiracanthium sambii</i> Patel & Reddy, 1991	–
Cheiracanthiidae	<i>Cheiracanthium seshii</i> Patel & Reddy, 1991	–
Cheiracanthiidae	<i>Simalio aurobindoi</i> Patel & Reddy, 1991	–
Ctenidae	<i>Anahita dangsa</i> (Reddy & Patel, 1994)	–
Ctenidae	<i>Anahita tuniensis</i> (Patel & Reddy, 1988)	–
Liocranidae	<i>Oedignatha binoyii</i> Reddy & Patel, 1993	–
Liocranidae	<i>Oedignatha elhennawyi</i> Sherwood, 2023	Replacement name for <i>Oedignatha indica</i> Reddy & Patel, 1993.
Lycosidae	<i>Lycosa balaramai</i> Patel & Reddy, 1993	–
Lycosidae	<i>Lycosa thoracica</i> Patel & Reddy, 1993	–
Lycosidae	<i>Pardosa gopalai</i> Patel & Reddy, 1993	Probably a junior synonym of <i>Hippasa madraspatana</i> Gravely, 1924 but topotypes should be collected.
Lycosidae	<i>Trochosa gunturensis</i> Patel & Reddy, 1993	Probably a junior synonym of <i>Trochosa adjacens</i> O. Pickard-Cambridge, 1885 (see Sankaran & Caleb, 2023) but topotypes should be collected for both species if possible.
Pisauridae	<i>Dendrolycosa bobbiliensis</i> (Reddy & Patel, 1993)	Probably a junior synonym of <i>Dendrolycosa robusta</i> (Thorell, 1895) (see Jäger, 2011), but topotypes should be collected.
Pisauridae	<i>Hygropoda chandrakantii</i> (Reddy & Patel, 1993)	–
Pisauridae	<i>Nilus decorata</i> (Patel & Reddy, 1990)	–
Pisauridae	<i>Pisaura podilensis</i> Patel & Reddy, 1990	–
Tetragnathidae	<i>Meta abdominalis</i> Patel & Reddy, 1993	–
Thomisidae	<i>Thomisus godavariae</i> Reddy & Patel, 1992	–
Thomisidae	<i>Thomisus krishnae</i> Reddy & Patel, 1992	–
Titanoecidae	<i>Pandava andhraca</i> (Patel & Reddy, 1990)	Marusik <i>et al.</i> (2012) state this species may be a junior synonym of <i>Pandava laminata</i> (Thorell, 1878) but there are differences in the epigyne and but topotypes should be collected to verify its identity.
Zodariidae	<i>Laminion arakuense</i> (Patel & Reddy, 1989)	Recently transferred to <i>Laminion</i> Sankaran, Caleb & Sebastian, 2020 by Sankaran <i>et al.</i> (2020b).
Zodariidae	<i>Storenomorpha raghavai</i> (Patel & Reddy, 1991)	–

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