On the taxonomic position of *"Lyssomanes" karnatakaensis* and other Indian species formerly assigned to *Lyssomanes* (Araneae, Salticidae)

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Summary

A new monotypic genus, *Hindumanes* gen. n., is established to include the rare Indian species *H. karnatakaensis* (Tikader & Biswas, 1978) comb. n. (ex *Lyssomanes*), which is redescribed and figured. It is shown that *"L." karnatakaensis* cannot be assigned either to *Lyssomanes*, or to any of the Old World lyssomanine genera. Three additional new combinations (all ex *Lyssomanes*) are proposed for the following Indian species: *Asemonea santinagarensis* (Biswas & Biswas, 1992) comb. n., *Epeus chilapataensis* (Biswas & Biswas, 1992) comb. n., and *Telamonia sikkimensis* (Tikader, 1967) comb. n.

Introduction

The species *Lyssomanes karnatakaensis* was described by Tikader & Biswas (1978) from a single ♀ from SW India and was considered the sole representative of *Lyssomanes* in the Old World (Wanless, 1980c), though later Biswas & Biswas (1992) described two other Indian species which they included in *Lyssomanes*. Since the time of its original description, *L. karnatakaensis* has never been recorded again or its obscure taxonomic status been commented on. Recently, I identified a single ♀ of *"L." karnatakaensis* from the personal salticid collection of Mr John Murphy (JMPC; Hampton, UK), to whom I am very much obliged for giving access to his collection. This female was collected from the type locality of *L. karnatakaensis* and although I have been unable to examine the holotype, there is no doubt in the identification, as this species is characterised by the distinctive copulatory organs (cf. Figs. 1–2 and figs. 2–3 in Tikader & Biswas, 1978). Having examined this interesting species, I have come to the conclusion it has to be assigned to a new monotypic genus.

The aims of this brief paper are (1) to establish a new lyssomanine genus; (2) to redescribe *L. karnatakaensis*; and (3) to comment on the taxonomic status of the other "*Lyssomanes*" species described from India. All measurements are in mm.

Genus *Hindumanes* gen. n.

Type species: *Lyssomanes karnatakaensis* Tikader & Biswas, 1978.

Etymology: The generic name consists of two parts: "Hindu", referring to the country in which the main religion is Hinduism, and the second half of the generic name *Lysso**manes***, in which the type species was originally described. The generic name is masculine in gender.

Definition: Medium sized spiders ranging from about 5.9–6.5 mm in length. Sexual dimorphism is not described, as only females are known. *Carapace*: rather high; highest at approximately ALE-PLE level (eye field slightly raised); fovea present. *Eyes*: in four rows; anterior row widest; quadrangle length 35–41% of carapace length. *Clypeus*: rather low, vertical; about 34% of AME diameter. *Chelicerae*: medium size, subvertical; promargin with two widely separated small teeth; retromargin with five small equal teeth (but holotype of *H. karnatakaensis* possesses six retromarginal teeth; see Tikader & Biswas, 1978: sub *Lyssomanes k.*). *Maxillae*: subparallel; rectangular and elongate, with rounded anterior sides. *Labium*: rectangular and elongate. *Sternum*: nearly round, slightly elongated, with anterior side slightly procurved. *Pedicel*: short, visible in dorsal view. *Abdomen*: elongate, with no colour markings. *Spinnerets*: subequal in length and thickness. *Legs*: subequally developed, leg IV almost spineless (see below under description of *H. karnatakaensis*). *Leg formula*: I,II,IV,III in females. *Leg spination*: as described for *H. karnatakaensis* (see below). *Female palp*: general form, with long apical claws, all segments with spines (see below under description of *H. karnatakaensis*). *Male palp*: unknown. *Female genitalia*: rather simple (Figs. 1–2); epigynal plate transparent, internal structure therefore visible through integument (Fig. 1); epigyne with posterior outgrowth overhanging epigastric furrow; spermathecae characterised by short insemination ducts and bean-shaped receptacles (Fig. 2), glandular ducts absent.

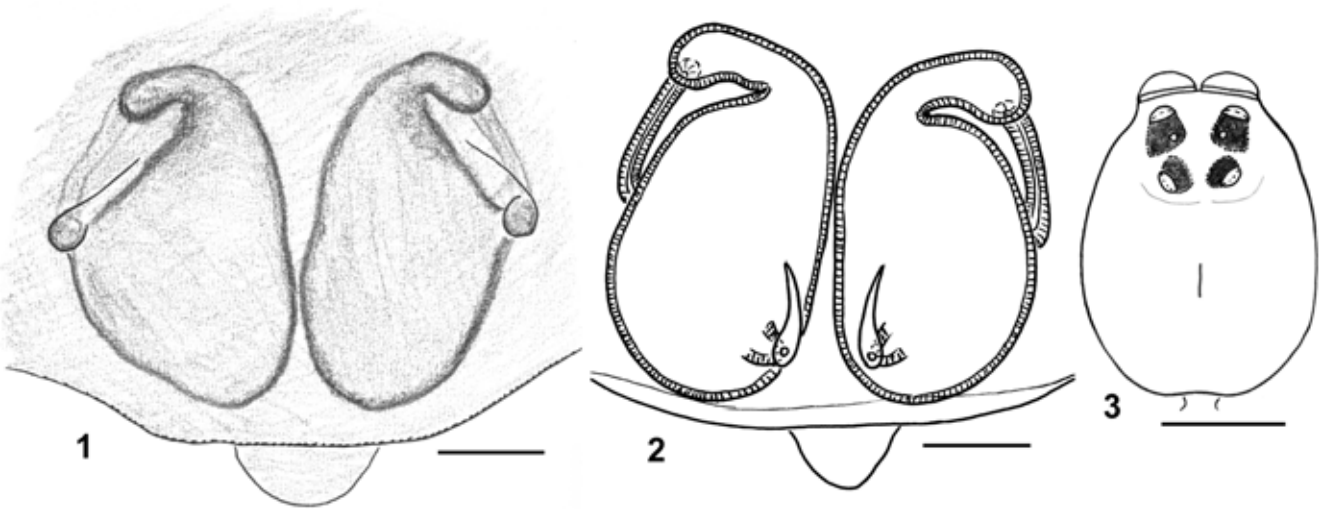
Diagnosis and taxonomic comments: *Hindumanes* is closest to *Pandisus* Simon, 1900, which is restricted to Madagascar, and to *Lyssomanes* Hentz, 1845. Although I have been able to examine only one female of the single species of *Hindumanes* (viz *H. karnatakaensis*), a number of diagnostic characters discussed below leave no doubt that this species should be included in a genus distinct from *Lyssomanes*. Thus, *Hindumanes* is the second lyssomanine genus (after *Macopaeus* Simon, 1900; see Wanless, 1980a) known at present from one sex (♀) only.

Hindumanes can be clearly distinguished from *Lyssomanes* by the following characters:

(1) The glandular ducts of the spermathecae are absent (Fig. 2), whereas they are always present and well-marked in true *Lyssomanes* (see Galiano, 1980, etc.).

(2) The epigyne of *Hindumanes* possesses a posterior outgrowth overhanging the epigastric furrow [not shown by Tikader & Biswas (1978)]. This character has never been recorded in true *Lyssomanes* (see Galiano, 1980, etc.).

(3) The eye pattern (i.e. arrangement and size of eyes, relative size of the eye quadrangle and carapace, etc.) was shown to be important for distinguishing the lyssomanine genera (Wanless, 1980c). The relative size of the eye field of *Hindumanes* is smaller compared with that in the described lyssomanine genera [cf. Fig. 3 and fig. 1 in Tikader & Biswas (1978) with figs. 2A–F in Wanless (1980c) and fig. 1 in Galiano (1998)]. For instance, the ratio "carapace width/PME-PME distance" in *Hindumanes* is about 2.3–2.5, while that in *Lyssomanes*



Figs. 1–3: *Hindumanes karnatakaensis* (Tikader & Biswas, 1978). **1** Epigyne; **2** Spermathecae, dorsal view; **3** Female carapace, dorsal view. Scale lines = 0.1 mm (1–2), 1.0 mm (3).

is 1.4–1.8, *Macopaeus c.* 1.4, *Chinoscopus c.* 1.3, *Onomastus c.* 1.2, *Pandisus c.* 1.3, *Asemonea* 1.1–1.4, and *Goleba c.* 1.6. Thus, this ratio is clearly less than 2.0 (average *c.* 1.5) in all the other genera, including *Lyssomanes*, whereas it is about 2.5 in *Hindumanes*.

(4) *Hindumanes* has no spines on the patellae of all legs, whereas *Lyssomanes*, as well as *Chinoscopus*, has both lateral and dorsal spines on the patellae (Galiano, 1998).

Furthermore, *Hindumanes* can easily be separated from the other lyssomanine genera. The members of *Chinoscopus*, the second known New World lyssomanine genus, are very small spiders, with a low, virtually flat carapace (relatively high in *Hindumanes*); the spination of the patellae in *Chinoscopus* is also different (see above). The genera *Asemonea* O. Pickard-Cambridge, 1869, *Goleba* Wanless, 1980 and *Macopaeus*, all from the Old World, contain species with rather large posterior median eyes (Wanless, 1980a, c); these are very small in *Hindumanes* (Fig. 3). The eye pattern of *Hindumanes* is similar to that of *Onomastus* Simon, 1900 and *Pandisus*, but the eye field is much narrower (see above). Also, the known species of *Onomastus* are characterised by an indistinct fovea and the apparent absence of insemination ducts (Wanless, 1980b); both characters are well developed in *Hindumanes*. The important diagnostic characters of *Pandisus*, apart from the minute PME, are the presence of a ventral furrow and distal apophysis on the femur of the male palp; both are irrelevant here, as we have only the female of *H. karnatakaensis*. Nevertheless, the conformation of the female copulatory organs of *Pandisus*, as illustrated in Wanless (1980c), is clearly different from the structures in *H. karnatakaensis* (Figs. 1–2); females of *Pandisus* species possess a kind of central epigynal pocket just in front of the epigastric furrow (absent in *H. karnatakaensis*) and the receptacles are only as wide as the insemination ducts (about ten times wider in *H. karnatakaensis*; Fig. 2).

Species included: Only the type, *H. karnatakaensis* (see below).

Distribution: SW India.

***Hindumanes karnatakaensis* (Tikader & Biswas, 1978) comb. n.** (Figs. 1–3)

Lyssomanes karnatakaensis Tikader & Biswas, 1978: 257, figs. 1–3 (D♀; ♀ holotype not examined).

Distribution: Only the type locality in SW India: Karnataka.

Description: *Male*: Unknown.

Female: Carapace 2.65 long, 2.00 wide, 1.20 high at PLE. Ocular area 0.93 long. Width of eye rows: AME-AME 0.96, ALE-ALE 0.66, PME-PME 0.36, PLE-PLE 0.56. Diameter of AME 0.45. Abdomen 3.88 long, 1.88 wide. Cheliceral length 1.13. Clypeal height 0.15. Length of leg segments: I 3.45+0.95+3.25+2.95+0.65; II 2.75+0.98+2.40+2.28+0.63; III 2.50+0.75+2.03+2.28+0.63; IV 2.55+0.78+2.23+2.63+0.55. Leg spination: I: Fm d 1-1-1, pr and rt 0-1-1; Tb v 4 pairs; Mt rt 1-0-0, v 3 pairs. II: Fm d 1-1-1, pr and rt 0-1-1; Tb pr and rt 0-0-1, v 4 pairs; Mt v 3 pairs. III: Fm d 1-1-1, pr and rt 0-1-1; Tb pr 1-1, rt and v 0-1; Mt pr and rt 1-0-0, v 1-1-0. IV: Fm d 1-1; Tb pr 0-0-1; Mt spineless. Coloration (in alcohol): entire body, palps and all legs light yellow, but black around ALE, PME and PLE; eye field covered with yellow-white lustrous appressed scales. Epigyne and spermathecae as in Figs. 1–2.

Material examined: INDIA: 1♀ (JMPC, 15846), Bangalore, Karnataka, December 1987, J. Murphy).

Comments on other "*Lyssomanes*" species from India

***Asemonea santinagarensis* (Biswas & Biswas, 1992) comb. n.**

Lyssomanes santinagarensis Biswas & Biswas, 1992: 368, 386–387, figs. 17–19 (D♀; ♀ holotype not examined).

Comments: The species was described as *Lyssomanes s.* from India (W. Bengal: North 24-Parganas Distr., Palta, Santinagar) from a single female. The type is inaccessible and I have been unable to re-examine it. However, the very characteristic eye pattern, as illustrated by Biswas & Biswas (1992: fig. 17; cf. Wanless,

1980c: fig. 2D) and the cheliceral armature (i.e. three retromarginal teeth), leave no doubt that this species has to be considered a member of *Asemonea*. The taxonomic relationships of *A. santinagarensis* with other species remain uncertain, as many of the *Asemonea* species are known only from males. Its possible relationship with *A. picta* Thorell, 1895 from Burma (Wanless, 1980c) is worth considering in the first place.

Epeus chilapataensis (Biswas & Biswas, 1992) comb. n.

Lyssomanes chilapataensis Biswas & Biswas, 1992: 368, 386, figs. 14–16 (D♀; ♀ holotype not examined).

Comments: The species was described as *Lyssomanes c.* from India (W. Bengal: Kochi Bihar Distr., Chilapata forest) from a single female. The type is inaccessible and I have been unable to re-examine it. However, as is clear from the original description (Biswas & Biswas, 1992: 386), the specimen possesses a single tooth on the retromargin of the chelicerae and two teeth on the promargin and, therefore, it is a unidentate salticid rather than a member of any lyssomanine genus. Judging from the original figures by Biswas & Biswas (1992), especially those of the strongly coiled spermathecae and the elongated body, it is obvious that this species is better assigned to *Epeus* Peckham & Peckham, 1885. Furthermore, the latter genus is known to have an eye pattern consisting of four visible rows (Prószyński, 1992: 171). This pattern was especially stressed by Biswas & Biswas (1992: 386) in the original description of *''L.'' chilapataensis*. The taxonomic relationships of this species with two other *Epeus* species recently described from India, viz *E. albus* Prószyński, 1992 and *E. indicus* Prószyński, 1992, remain unclear.

Telamonia sikkimensis (Tikader, 1967) comb. n.

Lyssomanes sikkimensis Tikader, 1967: 120, fig. 3a–b (D♀; ♀ holotype not examined).

Comments: The species was described from India (W. Sikkim: Ligship), but, as Wanless (1980c) has correctly noted already, it does not belong in any of the lyssomanine genera, but somewhere in the Unidentati. The original description by Tikader (1967: 120) clearly indicated that the species has the promargin with 2 teeth and the retromargin with a single tooth.

I have been unable to re-examine the holotype, but judging from the original figures by Tikader (1967: fig. 3a,b), it is safe to assign the species to *Telamonia* Thorell, 1887) (*sensu* Prószyński, 1984). This species is relatively large (total length 8 mm; see Tikader, 1967), with a characteristic V-shaped colour pattern on the dorsum (both characters are typical for many *Telamonia* species), its chelicerae have 2+1 teeth as in *Telamonia festiva* Thorell, 1887 (the type species of the genus; see Prószyński, 1967: fig. 5), and finally the record of this species in India does not contradict the Oriental distribution of the genus (Prószyński, 1984). Taxonomic relationships with other species described from India, especially with *Telamonia dimidiata* (Simon, 1899), remain unclear owing to the absence of a published illustration of the spermathecae of *T. sikkimensis*.

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