

## A NEW SPIDER GENUS OF THE TRIBE SMODICININI (ARANEAE: THOMISIDAE) FROM INDIA

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ABSTRACT: A new supra specific taxa *Indosmodicinus* is proposed to accommodate a new species *I. bengalensis*. It is here described and illustrated. This is the first record of Smodicinini from India.

KEY WORDS: Thomisidae, Smodicinini, *Indosmodicinus*, new genus, *I. bengalensis*, new species, India.

The tribe Smodicinini Ono includes 3 genera, *Smodicinus* Simon, 1895; *Parasmodix* Jézéquel, 1966 and *Smodicinodes* Ono, 1993. Of these the genera *Smodicinus* Simon (Dippenaar-Schoeman, 1980) and *Parasmodix* Jézéquel are monotypic and known from Africa. On the other hand 3 Asian species *Smodicinodes kovaci* Ono, 1993, *S. schwendingeri* Benjamin, 2002 and *S. hupingensis* Tang et al., 2004 are the only members of the genus *Smodicinodes* Ono. So far not a single smodicinine spider is known from India (Platnick, 2009; Sebastian & Peter, 2009).

The most typical character of Smodicinini is the prosomal crest with 4 or 6 tubercles furnished with strong setae at each tip (Ono, 1993).

Recently a spider species resembling both African and Asian Smodicinini is recorded from India. The individuals are collected from the two Reserve Forests of North Bengal, namely Jaldapara Wildlife Sanctuary and Mahananda Wildlife Sanctuary. Having prosomal crest formed by 3 pairs of tubercles, the spiders undoubtedly belong to the tribe Smodicinini. This smodicinine spider shows close resemblance to the prosomal crest of *Smodicinus coroniger* Simon and the opisthosoma of *Smodicinodes hupingensis* Tang et al.. But it is considerably different from both the species and all other known species as well. It can sharply be distinguished from all smodicinine genera by the differently shaped and length of prosomal tubercular projections, opisthosomal shape, caudal hump and as well as female genitalia. A new genus is proposed to accommodate the present species.

### MATERIALS AND METHODS

Spiders were collected and preserved following Tikader (1987). The materials were studied using Stereo Zoom Binocular Microscope, model Zeiss SV- 11. The measurements indicated in the text are in millimeters, made with an eye piece graticule.

Abbreviations: AME= anterior median eyes, ALE= anterior lateral eyes, PME= posterior median eyes, PLE= posterior lateral eyes.

## TAXONOMY

### *Indosmodicinus* gen. nov.

**Diagnosis:** Prosomal crest long, tubercular projections of the crest long, pointed, extending much beyond the prosomal margin, anterior pair finger like, broad at base, median pair outwardly and downwardly curved, posterior pair extending up to basal 1/3 of opisthosoma, bifurcate apically, inner one further bifid, distinct neck region between median and posterior pair; anterolateral clypeal tubercular projections much long, strong, claw like; legs moderately long, not slender, each femora with a small dorsal spine; opisthosoma long, pentagonal, with a distinct caudal hump; spermatheca bilobed, copulatory duct long divisible into 2 parts.

**Type species:** *Indosmodicinus bengalensis* sp. nov.

**Etymology:** The generic name is derived from the name of the country.

**Remark:** The new genus belongs to the tribe Smodicinini of the subfamily Thomisinae. The present genus *Indosmodicinus* appears close to *Smodicinus* Simon than to *Smodicnoides* Ono in the shape of prosomal crest. Differential diagnosis of the mentioned genera are presented in table 1.

### *Indosmodicinus bengalensis* sp. nov.

**Description:** Female (Holotype):

Total length- 3.48, carapace length-1.24, carapace width-1.18, abdominal length-2.21, abdominal width-1.66. Prosoma (fig.1) whitish grey, globose, with a yellowish grey crest extending all through posteriorly, further extended over the abdomen, broad anteriorly and narrow posteriorly, warty, raised near the ocular area, depressed behind, further raised at the posterior 1/3, with a midlongitudinal yellowish white band extending from base to apex; with 6 broad tubercular projections on the edge, each projection long, pointed, extending much beyond prosoma. Of these anterior pair finger like, broad at base, median pair outwardly and downwardly curved, distinct neck region between median and posterior pair, posterior pair long, broad, extending up to basal 1/3 of opisthosoma, bifurcate apically, inner one further bifid, tip of each projections with a short, dagger shaped seta. Eyes 8, on the crest, black, lateral eyes large, sub equal, median eyes small, sub equal, posterior row much wider than the anterior, anterolaterals on a tubercular base, situated at outer basal angle of the anterior pair of projection, posterolaterals situated at the inner basal half of the same projection, posteromedians with a black patch around, further angularly with 2 yellow broad patch approaching the median band, laterally and downwardly with 2 yellow, long, rather narrow band marking the base of median pair of projection, ocular quad trapezoid. Clypeus yellowish grey, broad, anterolateral angles with 2 long, strong, claw like tubercular projections, margin with 6 long setae. Inter ocular distance: AME-AME=0.27, ALE-AME=0.21, ALE-ALE=0.86, PME-PME=0.54, PLE-PME=0.37, PLE-PLE=1.51, ALE-PLE=0.45, AME-PME=0.29. Chelicerae (fig.2) yellowish black, broad, only promargin with a tooth, anteriorly scopulate, fangs yellow, curved. Maxillae (fig.3) grey, margins pale, longer than broad, basally truncate, broad posteriorly, outer margin incurved, clothed with few brown hairs; labium grey, apical margin pale and convex, with few hairs, longer than broad, with a 'U' shaped brown patch; sternum (fig.4) brown, except anterior margin, top like, longer than broad, clothed with brown hairs.

Legs long, yellowish white, with a black band on apices of femora, greater part of tibia I and II, base of metatarsi I and II, this in III and IV paler, each femora with a small dorsal spine, tarsal claw 2. Leg formula 2143.

Opisthosoma (fig.1) grey, pentagonal, with a caudal hump, dorsum variably decorated with black, with few scattered small brown spots, of these posteromedians largest (muscular apodemes), encircled by yellow circular band, each band with a oblique white band running outwardly, 2 pairs of small black patch just behind it; venter greyish white, with broad, transverse, brown band, just below the epigastric furrow, posterior half with 2 oblique brown bands uniting at base of spinnerets, in between these 2 bands a broad median longitudinal yellow band, its lateral margins with 9 pairs of brown spots arranged in longitudinal series, spinnerets grey black.

Epigynum-Internal genitalia (figs. 5 & 6): atrium longer than broad, 2 lip like fertilization duct, opening visible bilaterally; spermatheca broad, bilobed, copulatory duct long, divisible into 2 parts, apically narrow, convoluted, basally sac like, copulatory openings oblique.

**Material Examined:** Holotype: Female, Sissamara, Jaldapara Wildlife Sanctuary, Jalpaiguri, West Bengal, India, Coll. D. C. Dhali, 12.iv.2009. Paratypes: 1 Female, Mairadanga, Jaldapara Wildlife Sanctuary, Jalpaiguri, West Bengal, India, Coll. S. Sen, 14.iv.2009; 1 Female, Sevok, Mahananda Wildlife Sanctuary, Darjeeling, West Bengal, India, Coll. S. Sen, 18.v.2009.

**Type Deposition:** Entomology Laboratory, Department of Zoology, University of Calcutta, Regn. No. EZC 0020-09.

**Distribution:** India: West Bengal.

**Etymology:** The specific epithet is derived from the name of the State.

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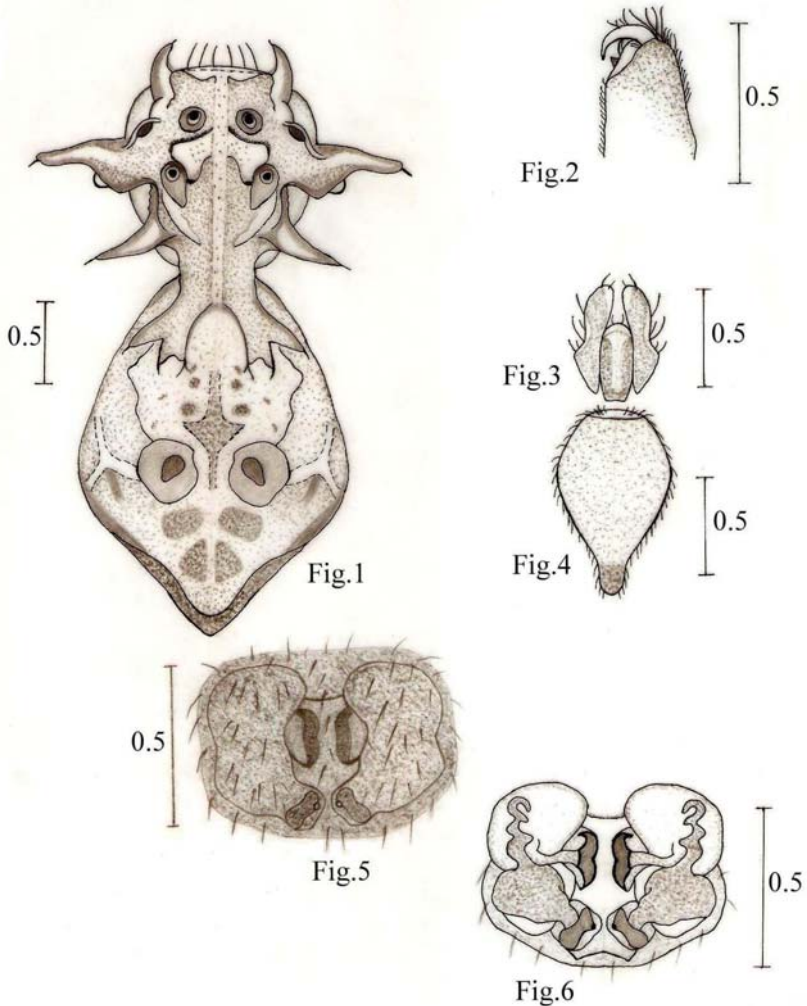
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*Indosmodicinus bengalensis* gen. et sp. nov.



**Figures 1-6.** *Indosmodicinus bengalensis* gen. et sp. nov.: Female: 1. Whole body, 2. Chelicerae, 3. Maxillae and labium, 4. Sternum, 5. Epigynum, 6. Internal genitalia.



**Figure 7.** *Indosmodicinus bengalensis* gen. et sp. nov. (female): Photograph

**Table 2.** Length of legs of female holotype of *Indosmodicinus bengalensis* gen et sp. nov. (in mm).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.65	0.60	1.04	0.86	0.69	4.84
II	1.65	0.65	1.21	1.17	0.39	5.07
III	1.21	0.30	0.95	0.52	0.30	3.28
IV	1.34	0.34	1.0	0.65	0.43	3.74

**Table 1.** Showing the differences between *Indosmodicinus* gen. nov., *Smodicinus* Simon and *Smodicynodes* Ono.

<b>Characters</b>	<b><i>Indosmodicinus</i> gen. nov.</b>	<b><i>Smodicinus</i> Simon</b>	<b><i>Smodicynodes</i> Ono</b>
A. Prosomal crest	All 3 pairs of tubercular projections long, pointed, extending much beyond prosoma.	Tubercular projections long, pointed, except anterior pair extending up to the margin of prosoma.	Tubercular projections small, blunt, except anterior pair never reaching the prosomal margin.
	Median pair extending outwardly and downwardly.	Median pair extending downwardly.	Median pair too small, directed upwardly.
	Presence of long neck region between median and posterior pair.	Such neck region absent.	Such neck region absent.
	Posterior pair extended upto basal 1/3 of opisthosoma, bifurcate, inner one further bifid.	Posterior pair not extending beyond the prosoma, bifurcate but inner one not bifid.	Posterior pair neither extending upto prosomal margin nor bifurcate.
B. Clypeus	Anterolateral tubercular projections long, strong, claw like.	Anterolateral tubercular projections absent.	Anterolateral tubercular projections very small.
	Median tubercle absent.	Median tubercle absent.	Median tubercle present.
	Setae 3 pairs, similar.	Setae 2 pairs.	Setae 3, middle one longest.
C. Cheliceral margin	Promargin with a small tooth.	Each margin with a setae.	Promargin with 2 small teeth ( <i>S. kovaci</i> Ono) or with 5 beard shaped long hairs ( <i>S. hupingensis</i> Tang et al.).
D. Opisthosoma	Long, pentagonal.	Small, oval.	Elongate oval ( <i>S. kovaci</i> Ono) or pear shaped ( <i>S. hupingensis</i> Tang et al.).
	Caudal hump present.	Caudal hump absent.	Caudal hump absent.
E. Epigynum- Internal genitalia	Epigynum without guide pocket; spermatheca bilobed, copulatory duct long, divisible into 2 parts, apically narrow and convoluted and basally sac like.	Epigynum without guide pocket, with a median depression; spermatheca and copulatory duct small.	Epigynum with a guide pocket in the anterior part; spermatheca divided into 2 parts, tubular part with a reniform gland, the closed part oval ( <i>S. kovaci</i> Ono) or spermatheca long, stick shaped, each with 'U' shaped copulatory duct, copulatory opening small ( <i>S. hupingensis</i> Tang et al.).