FIRST RECORD OF THE SPIDER GENUS INDOSMODICINUS FROM CHINA, WITH DESCRIPTION OF THE HITHERTO UNKNOWN MALE OF INDOSMODICINUS BENGALENSIS (ARANEAE: THOMISIDAE)

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ABSTRACT: The genus *Indosmodicinus* Sen, Saha & Raychaudhuri, 2010 is reported for the first time from China, with the description and illustrations of the hitherto unknown male.

KEY WORDS: Thomisidae, Smodicinini, Indosmodicinus, new male morph, first record, China.

Presently, the tribe Smodicinini Ono, 1993 includes 4 genera: *Smodicinus* Simon, 1895, *Parasmodix* Jézéquel, 1966, *Smodicinodes* Ono, 1993 and *Indosmodicinus* Sen, Saha & Raychaudhuri, 2010. Smodicinine spiders are characterized by a sclerotized prosomal crest with 4 or 6 tubercles furnished with strong setae at each tip (Ono, 1993). The genera *Smodicinus* (type species *S. coroniger* Simon, 1895) and *Parasmodix* (type species *P. quadrituberculata* Jézéquel, 1966) are monotypic, and known so far from Africa; the other two genera, *Smodicinodes* (includes four species: type species *S. kovaci* Ono, 1993; *S. schwendingeri* Benjamin, 2002; *S. hupingensis* Tang, Yin & Peng, 2004; *S. yaoi* Tang & Li, 2010), and *Indosmodicinus*, however a monotypic (known by type species *I. bengalensis* Sen, Saha & Raychaudhuri, 2010 from India) till date known from Asia (Platnick, 2011).

While studying the thomisids of Hainan Island, China, we could find smodicinine taxa. These include the female of *I. bengalensis*. A male specimen of the said taxa with general habitus and pattern very similar to the female *I. bengalensis* could also be found. While confirming thestatus of the recorded *I. bengalensis* we have re-examined the type material deposited in the Entomology Laboratory, Department of Zoology, University of Calcutta, Regn. No. EZC 0020-09, and affirm that they are the same species.

Record of *Indosmodicinus* for the first time from China relimits its north ward distribution. The knowledge about the taxa gets further expanded with the first record of the male morph of the species in question. We therefore, describe & illustrate the said morph.

MATERIAL AND METHODS

Collected specimens were preserved in 75% alcohol and examined, drawn and measured under a Tech XTL-II stereomicroscope equipped with an Abbe drawing device. Photographs were taken using the Free Angle Observation System VHX- 100. All measurements given in the text are in millimeters. Materials are in the deposition of of Hebei University Museum, Baoding, China (MHBU).

Abbreviations used are: A, atrium; ALE, anterior lateral eyes; AME, anterior median eyes; AME–ALE, distance between AME and ALE; AME–AME, distance between AME; Cd, copulatory duct; Co, copulatory opening; As, anterior spermatheca; E, embolus; Fd, fertilization duct; MOA, median ocular area; Pce, proximal cymbial extension; PLE, posterior lateral eyes; PME, posterior median eyes; PME–PLE, distance between PME and PLE; PME–PME, distance between PME; Ps, posterior spermatheca; Rta, retrolateral tibial apophysis; Sd, sperm duct; T, tegulum; Vta, ventral tibial apophysis.

TAXONOMY

Indosmodicinus Sen, Saha & Raychaudhuri, 2010

Indosmodicinus Sen, Saha & Raychaudhuri, 2010: 345. Type species: *Indosmodicinus bengalensis* Sen, Saha & Raychaudhuri, 2010, by original designation.

Diagnosis. See Sen, Saha & Raychaudhuri (2010).

Remark. Benjamin (2002) discussed the status of the genera *Smodicinus*, *Parasmodix* and *Smodicinodes*,. He further commented that a single genus might accommodate all the taxa following a thorough phylogenetic analysis. Sen *et al.* (2010) proposed the new genus *Indosmodicinus* for the new Smodicinini species from India, and offered sharp differences from all known smodicinine genera. A generic appraisal and rearrangement is however not the scope of the present work and should be done on a broader scale.

Indosmodicinus bengalensis Sen, Saha & Raychaudhuri, 2010

(Figs. 1-11)

Indosmodicinus bengalensis Sen, Saha & Raychaudhuri, 2010: 345, f. 1-7.

Description

Male: Total length 3.45. Carapace 1.40 long, 1.20 wide; Abdomen 1.80 long, 1.40 wide. Carapace (Fig. 2) dark brown, with a sclerotized crest extending all through posteriorly, further extended over the abdomen, broad anteriorly and narrow posteriorly: raised behind the anterior eve row, with a middle longitudinal vellow band extending from base to apex, bearing a long seta at the base; with 3 pairs of developed tubercular projections on the edge, each projection long, pointed, extending much beyond carapace. Among them anterior pair finger-shaped, broad at base; median pair outwardly and downwardly curved; posterior pair bifurcate apically, inner one further bifid; except anterior pair, tip of each projections with a short, dagger-shaped sting. Eight eyes in two rows, black, lateral eyes large, median eyes small, posterior eye row much wider than the anterior, ALEs on a tubercular base, situated at outer basal angle of the anterior pair of projection, PLEs situated at the inner basal half of the same projection; MOA trapezoid. Eves measurements: AME 0.09, ALE 0.20, PME 0.07, PLE 0.18; AME-AME 0.23, AME-ALE 0.21, PME-PME 0.50, PME-PLE 0.38. MOA length 0.40 with front width 0.38 and back width 0.64. Clypeus dark brown, broad, anterolateral angles with 2 strong, claw-shaped tubercular projections, anterior margin with 8 long setae. Chelicerae dark brown, flat, anteriorly pale and scopulate, with one promarginal tooth and no retromarginal tooth. Endites, labium and sternum dark brown. Endites and labium (Figs. 4 and 6) distinctly

longer than wide, length almost equal. Legs long, yellow, with white and brown bands, each femur with a small dorsal spine. Leg measurements: I 4.70 (1.50, 0.62, 1.15, 0.95, 0.48); II 4.90 (1.55, 0.62, 1.22, 1.03, 0.48); III 3.77 (1.20, 0.42, 0.90, 0.80, 0.45); IV 4.09 (1.32, 0.38, 1.00, 0.94, 0.45). Leg formula: 2143. Abdomen dorsum grey, pentagonal, with a caudal hump (Fig. 2); decorated with brown, with a pair of posteromedian spots, encircled by yellow circular band, each band with a transverse white band running outwardly. Venter light brown, with a pair of white spots laterally below the epigastric furrow, lateral margins dark brown. Spinnerets brown.

Palp: Tibia with blunt and digitiform ventral tibial apophysis; retrolateral tibial apophysis short, with pointed tip, covered by cymbial extension in ventral view; cymbium modified, with a proximal extension containing the embolar tip, without dorsal outgrowth; tegulum disk-shaped, without apophysis; embolus with a wide base, tapering and long, winding one and a half way around tegulum (Figs 9–11).

Female: Total length 4.42. Carapace 1.75 long, 1.54 wide; Abdomen 2.45 long, 1.91 wide. Carapace whitish grey. Eye measurements: AME 0.08, ALE 0.24, PME 0.07, PLE 0.18; AME–AME 0.29, AME–ALE 0.23, PME–PME 0.60, PME–PLE 0.51. MOA length 0.50 with front width 0.45 and back width 0.75. Endites and labium (Figs. 3 and 5) distinctly longer than wide, but length of labium much short than that of endites. Femur I with a distinctly protuberance (Fig. 1). Leg measurements: I 5.30 (1.83, 0.72, 1.15, 1.10, 0.50); II 5.71 (1.90, 0.72, 1.35, 1.21, 0.53); III 4.52 (1.55, 0.50, 1.07, 0.98, 0.42); IV 5.00 (1.75, 0.45, 1.17, 1.18, 0.45). Leg formula: 2143. Abdomen dorsum grey, pentagonal, with a caudal hump; decorated with black, with 3 pair of spots, anteromedian two pairs round and small, posteromedian pair diagonal brown line, encircled by yellow circular band (Fig. 1); venter dark brown, with whitish grey spots. Other characteristics same as the male.

Epigynum: atrium slightly longer than wide, and two sclerotized lip-shaped margins concealing oblique fertilization ducts; spermathecae bilobed, with an anterior, large chamber and a posterior, small chamber; copulatory ducts long, convoluted (Figs 7–8).

Material examined. 1Å, China: Hainan, Lingshui County, Diaoluo Mountain (E 109°52', N 18°43'), 6 June 2009, Chao Zhang leg.; 1 \bigcirc , Ledong County, Jianfengling Mountain (E 108°48', N 18°42'), 1 June 2009, Chao Zhang leg.; 2 \bigcirc juveniles, Ledong County, Jianfengling Mountain, 12 November 2008, Ming-Sheng Zhu leg.

Distribution. China, India.

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Figure 1-11. *Indosmodicinus bengalensis* Sen, Saha & Raychaudhuri, 2010. 1. Female (dorsal view), 2. Male (dorsal view), 3. Endites of female, 4. Endites of male, 5. Labium of female, 6. Labium of male, 7-8. Epigynum of female, 9-11. Palp of male.