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**A NEW SPECIES OF *PHILOLEMA* CAMERON (HYMENOPTERA :
EURYTOMIDAE) PARASITIC ON SPIDER EGGS (ARACHNIDA :
ARANEAE) FROM INDIA**

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INTRODUCTION

The genus *Philolema* was raised by Cameron in 1908 based on the type species *Philolema carinigena* Cameron. Boucek (1988 : 106) stated that *Philolema* Cameron would be emerged with *Eurytoma* Illiger. But most of the recent workers (Narendran, 1994; Lotfalizadeh *et al.*, 2007) considered it as a distinct genus. The generic classification in the family Eurytomidae is still very unsatisfactory. In the most recent classification (Lotfalizadeh *et al.*, 2007; Noyes, 2009) this new species comes under *Desantisca* species group of the genus *Philolema*. In *Desantisca* species group all species are parasitic on spider eggs. This species group consists of 4 valid species from the Indian subcontinent namely, *Philolema* (= *Desantisca*) *belgaumensis* (Narendran) from Maharashtra, India, *P.* (= *D.*) *palanichamyi* (Narendran) from Tamil Nadu, India, *P.* (= *D.*) *uloborae* (Narendran) and *P.* (= *D.*) *lankana* (Narendran) from Nugegoda, Sri Lanka (Narendran, 1994; Noyes, 2009). In this paper one new species is described from West Bengal, India based on specimens which emerged from unidentified spider egg sacs.

The Holotype and Paratype are deposited in the 'National Zoological Collections' of the Zoological Survey of India, Kolkata (NZSI).

MATERIALS AND METHODS

The egg sacs of the unidentified spider species are collected from the spider web. They reared in the laboratory from which the parasite emerged out. The specimens are card mounted and studied under Wild Heerbrugg Stereozoom microscope (Made in Switzerland) and drawings were made using the drawing tube of the microscope.

The following abbreviations are used in the text :

F1-F6 = Funicular segments 1 to 6; MV = Marginal vein; PMV = Post marginal vein; OOL = Ocellular line; POL = Postocellar line; SMV = Submarginal vein; STV = Stigmal vein; T1-T6 = Gastral tergites 1 to 6.

RESULTS

Philolema nadia Narendran and Girish Kumar sp. nov.

(Figs. 1-4)

Holotype : Female : Length 1.86 mm. Black. Mandible blackish brown; antenna brownish black with scape and pedicel black; tegula black; fore and mid tibiae pale brown except at bases and apices yellow; hind tibia dark brown except base and apex yellow; all tarsi yellow with apical tarsal segment yellowish brown; claws brown. Wings hyaline, veins whitish yellow with some brown margins on fore wing veins. Body hairs short, thick and white, originate from each umbilical puncture; hairs sparse on clypeus and supraclypeal area, absent on lateral corner of pronotum, scapula, axilla and mesopleuron (except a line of hairs on carina of mesopleuron anteriorly).

Head : Densely and umbilicately punctate including malar space; interstices narrow; front view as in Fig. 1; scrobe deep, its lateral margins carinate, dorsal margin ecarinate; relative measurement of dorsal width of head : length = 23.5 : 10; POL : OOL = 5 : 2; eye without pubescence. Antenna 11162; scape not reaching front ocellus; antenna (Fig. 2) with sensilla and setae; length: width of antennal segments : scape = 15 : 5.5; pedicel = 4 : 3.2; F1 = 9 : 6; F2 = 6 : 7; F3 = 6.5 : 7.5; F4 = 6.8 : 8; F5 = 7 : 8; F6 = 7 : 7.2; club = 12.3 : 6.5.

Mesosoma : Densely and umbilicately punctate; interstices narrow; punctures weak on lateral corner of pronotum, scapula, axilla, lateral sides of propodeum and mesopleuron; mesopleuron with some transverse striations; relative length of mesosoma (including pronotal collar) strictly in dorsal view : width (excluding tegulae) : maximum height = 26.5 : 14.5 : 19; anterior margin of propodeum ecarinate; scutellum slightly jutting out posteriorly; posterior margin of propodeum concave medially (Fig. 4), propodeum with transverse rows of shallow pits; tegulae with a few irregularly scattered punctures on proximal half. Hind femur broad and flattened. Forewing (Fig. 3) 2.15 × as long as wide; relative lengths of veins : SMV = 32; MV = 7; STV = 5.5; PMV = 8.

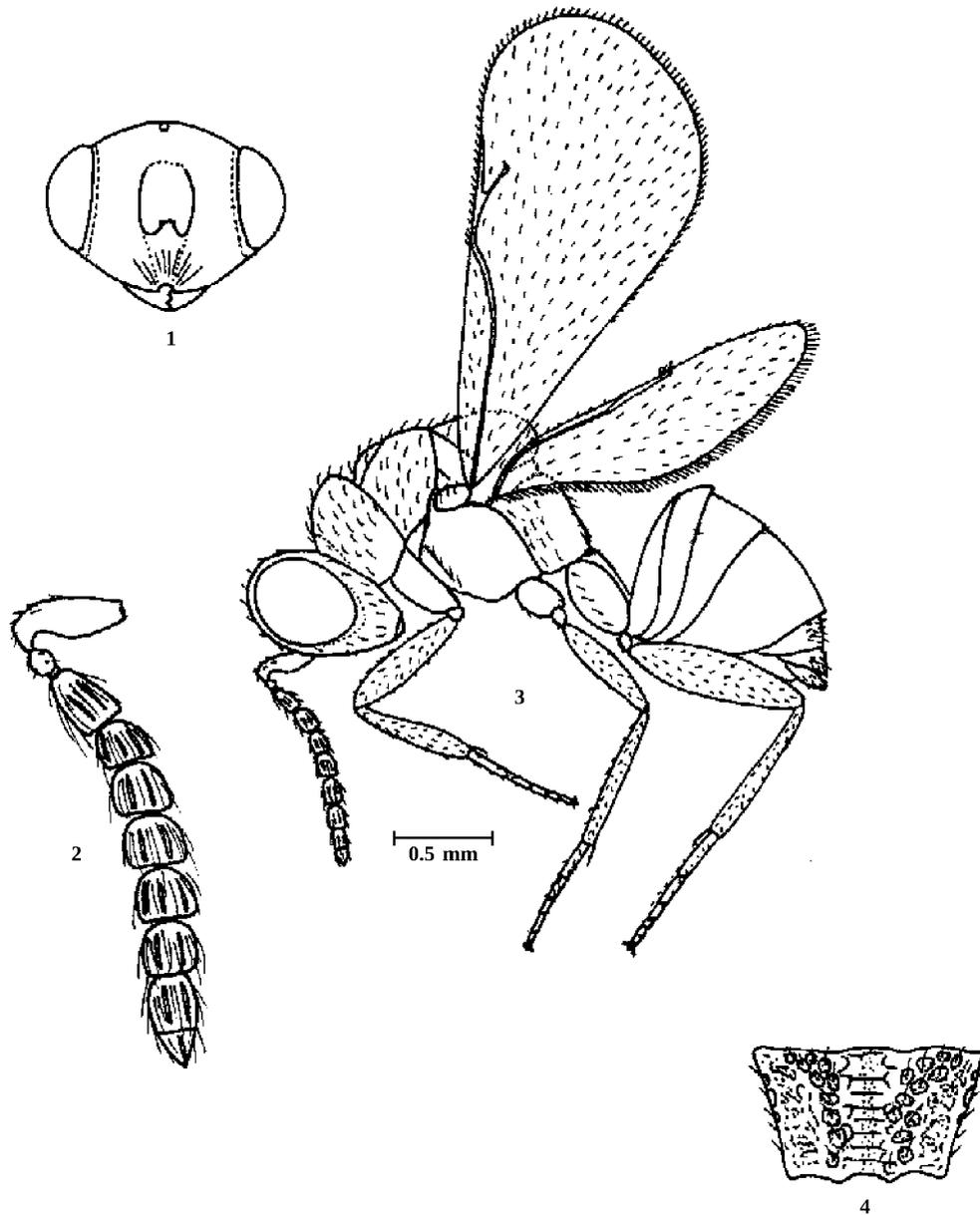
Metasoma : Petiole strongly sculptured, length subequal to length of hind coxa; gaster not compressed from sides; T1 to T4 without hairs, T5 with a bunch of fine lateral hairs and T6 with a bunch of fine apical hairs.

Male : Unknown.

Host : Egg sacs of unidentified spiders.

Biology : Unknown.

Distribution : India : West Bengal.



Figs. 1-4. *Philolema nadia* Narendran and Girish Kumar sp. nov. Female. Fig. 1. Head front view. Fig. 2. Antenna. Fig. 3. Body profile. Fig. 4. Propodeum

Etymology : The species is named after the district from where the type specimens were collected.

Material examined : Holotype Female : India, West Bengal, Nadia Dist., Bahadurpur, 9-xi-2008, coll. S. Talukdar (NZI Reg. No. 11422/H3). Paratype : 1 Female, same data of Holotype (NZSI Reg. No. 11423/H3).

DISCUSSION

This new species comes close to *Philolema* (= *Desantisca*) *uloborae* (Narendran) but distinctly differs from it in having : (1). Antenna brownish black with scape and pedicel black (In *P. uloborae* antenna yellow with club and distal funicular segment brownish tinge); (2). Scrobe deep, its lateral margins carinate (in *P. uloborae* scrobe shallow, its lateral margins ecarinate) and (3). Eye without pubescence (in *P. uloborae* eye pubescent).

SUMMARY

A new species of *Philolema* Cameron viz., *Philolema nadia* Narendran and Girish Kumar sp. nov., emerged from the spider eggs, is described from India and its affinities to the closest relative are discussed.

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