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ON A NEW SPECIES OF *PARAMESIUS* WESTWOOD (DIAPRIIDAE : HYMENOPTERA : INSECTA) FROM INDIA

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INTRODUCTION

Genus *Paramesius* (Diapriidae : Proctotrupoidea : Hymenoptera) was erected by Westwood in 1832, with the type species, *Paramesius rufipes* Westwood. From Indian Region, the genus is known only by 5 species, viz. *P. incompletus* Kieffer, *P. monticola* (Kieffer), *P. malabarensis* Rajmohana & Narendran, *P. deccanus* Sharma and *P. pleuralis* Kieffer. Major taxonomic treatments on the Indian fauna include Sharma (1979), Mani & Sharma (1982) and Rajmohana (2006). In this paper, a new species, viz., *Paramesius primoris* is described, illustrated and affinities with other species discussed. This also forms the first report and description of a female belonging to *Paramesius* from India.

The present work is a part of the study conducted for assessing the diversity of Platygastroidea and Proctotrupoidea (Hymenoptera), at the high elevation forests of South Western Ghats, in 2006. Studies were made using Leica MZ16 stereomicroscope. Digital images were captured using Leica DFC 420 camera and series overlaid by Combine Z software. Terminology of the morphological terms follows as of Masner & Garcia (2002).

The Holotype is deposited at the Western Ghats Field Research Station, Zoological Survey of India, Calicut.

ABBREVIATIONS

OOL-Ocellular length; OD-Ocellar diameter; POL-Posterior Ocellar length; *pm*-Post marginal vein; A1-A13: antennal segments 1 to 13; T2-Second tergite of

metasoma; HH-Head height (measured in lateral view); HL-Head length (measured in lateral view); HW-Head width (measured in dorsal view); MH-Mesosoma height; (measured in lateral view); MW-Mesosoma width (measured in dorsal view); MTL-Metasoma length (measured in dorsal view); MTW-Metasoma width (measured in dorsal view).

NEW DESCRIPTION

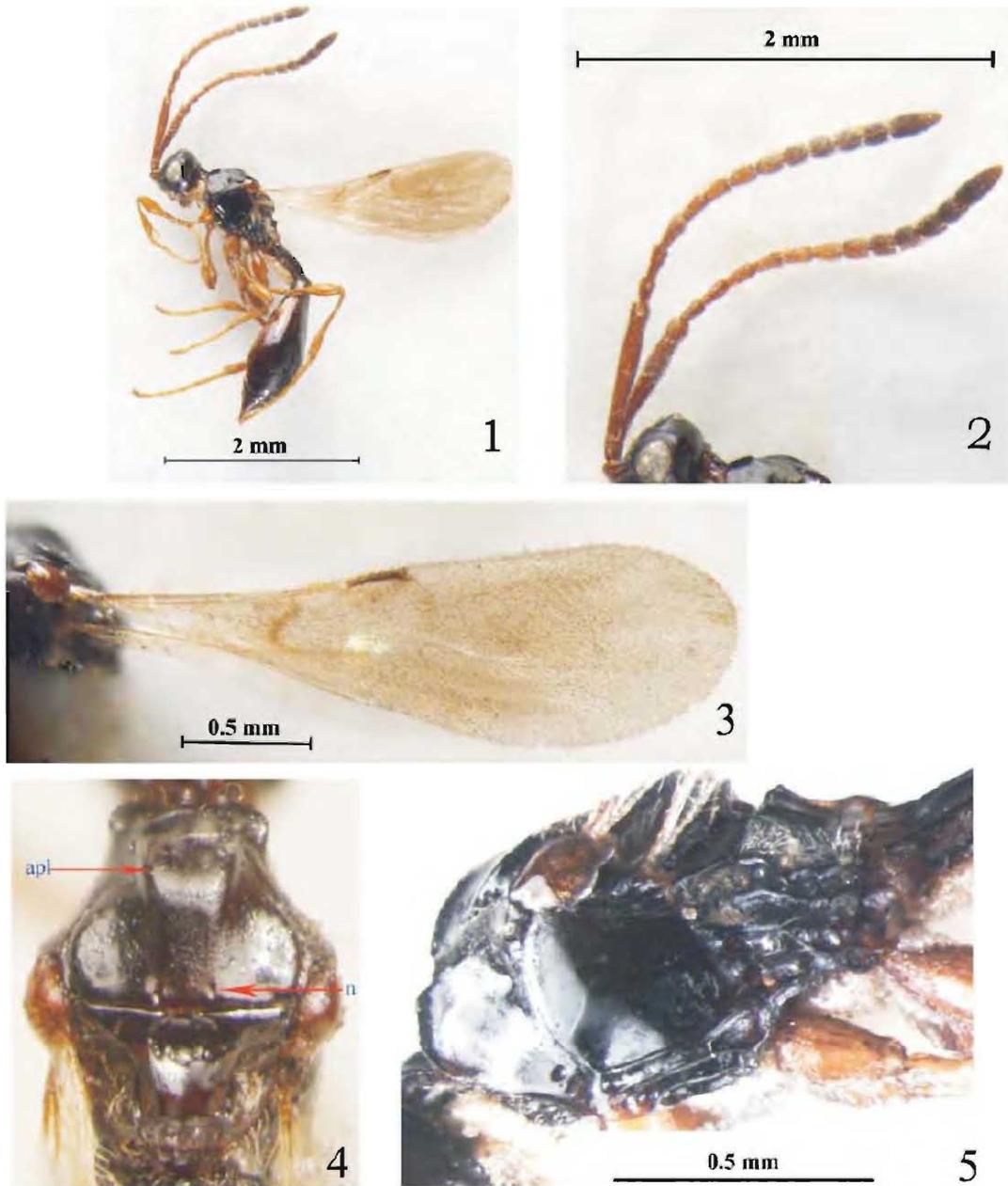
Paramesius primoris sp. nov.

(Figs. 1-5)

Holotype : Female. Length = 3.6 mm; head and body shining black; legs including coxae honey brown; basal antennal segments reddish brown, terminal segments of clava blackish brown, eyes silvery white, bordered by a very narrow black rim; wings infusate, veins reddish brown.

Head : (HH : HL : HW = 49 : 46 : 44); smooth and shiny; globose; transverse dorsally; toruli separated by a carinated emargination; pubescence on face denser than that on frons, vertex and occiput; temples a little longer than eye length when viewed dorsally, strongly receding; eyes large and ovoid, with sparse, erect, long setae; postgenal cushion sparse; occipital flange step-like, wide, bare, non-crenulate; tentorial pit distinct, small; clypeus convex; mandibles bidentate; malar sulcus absent; malar space : eye height = 9 : 20 (In lateral view); lower tooth longer and stouter; upper small tooth with a blunt end; ocelli arranged in a close triangle; lateral ocelli close to each other than with orbits; OOL : OD : POL = 12 : 5 : 10. Antenna with 13 segments; clava 6 segmented, not abrupt, rather incrassate towards

Plate 1



Figs. 1-5 : *Paramesius primoris* sp. nov. Female

1. Body (profile) 2. Antenna 3. Fore wing 4. Mesosoma dorsal view 5. Mesosoma (profile)

tip (Fig. 2); A3 longer than A2, subequal to A4; A13 as long as length of preceding two segments combined; ventral pit absent; proportions of length to width of antennal segments from scape being : 61 : 8, 13 : 6, 14 : 6, 14 : 6, 12 : 6, 11.5 : 6, 11.5 : 6, 9.5 : 7, 9.5 : 8, 9.5 : 8, 10 : 9, 11 : 9, 21 : 9.

Mesosoma : (MH : MW = 57 : 54); wider than head in dorsal view; convex dorsally; cervix strongly developed, with large and deep longitudinal impressions; pronotal shoulders well developed, sharp laterally; median mesoscutum with unusually raised zone amidst anterior parallel lines; epomium well developed; sharply angled; pronotal setae long and sparse; propleuron with a dense cushion; posterior margin of pronotum not bordered by a row crenulae, except one or two towards forecoxa (Fig. 5); notauli very much reduced, impressed pit-like (Fig. 4), situated posteriorly near trans scutellar articulation; humeral sulcus long, reaching well beyond level of tegula with a few crenulae restricted to part anterior to tegula, this part subequal to part bordering tegula; parapsidal lines absent; anterior scutellar pit large, with very short impressions of longitudinal keel posterolaterally; scutellar disc subquadrate; not much elevated; lateral keels sharp, lateral scutellar pits elongated, deep and wide; post scutellar pits large; axillar depression moderate; mesopleuron convex; sternaulus indicated by two to three long ridges (Fig. 5); epicnemial pits two to three; posterior margin of mesopleuron non crenulated; metapleuron clothed with fine pubescence, anterobasally with longitudinal carinae, developing to cell-like large irregular areolae towards hind coxa; metanotum with three minute equidistant keels medially, hairy; propodeum moderately elongate; median longitudinal keel moderately raised anteriorly; a pair of plicae present on either side part between them smooth; setation moderate; posterior rim of propodeum broad and smooth; legs hairy; foretibia without an outward directed tooth; forewing with a distinct pigmented basalis; length of submarginal : marginal = 30 : 7; postmarginal and stigmal highly reduced; medial vein indicated as a clear hairless line; marginal fringe moderate; forewing length : width = 34 : 11 (Fig. 3).

Metasoma : (MTL : MTW = 51 : 20); petiole 2.7x as long as wide, with five to six, non parallel longitudinal

striae; laterally with long setae; densely setose ventrally (Fig. 1); metasoma behind petiole spindle shaped; smooth and shiny; conical and pointed apically; rest of metasoma 3.1x length of petiole. T2 extending to 0.8x length of metasoma; basal margin of T2 without any incisions medially on basal margin or devoid of any basal patch of striae; metasoma more hairy towards tip.

Male : Unknown.

Host : Unknown.

Etymology : The species is named *primoris*, ('primoris' in Latin = first), being the first description of a female *Paramesius* from India.

Material examined : *Holotype* : Female : India : Kerala : Idukki district : Munnar (9°15' N and 76°37' E, at an altitude nearly 1520m), 5.xii.2006, coll. Mohana, in Yellow Pan Trap set among grasses and herbs in a homestead vegetation (Reg. No : ZSI/INV/3020).

DISCUSSION

All the 5 species described hitherto under *Paramesius* from Indian Region, were males. Thus *P. primoris* sp. nov. forms the first female to be reported and described from this region.

In *P. primoris*, the notauli are highly reduced and are seen only as a pair of tiny impressed pits, anterior to transscutellar articulation. This character along with the extremely raised anteromedian mesoscutum (the area between anterior parallel lines), makes this species distinct from *P. malabarensis* and *P. deccanus* as well as all other Oriental species. Further *P. primoris* does not possess an outward directed spine on foretibia as that of *P. deccanus*. From *P. monticola* (Kieffer), this species differs mainly in scutellar fovea not being entirely striated and from *P. pleuralis* Kieffer, by possessing only one fovea on scutellum instead of two. The abbreviate notauli and the much shorter, non-crenulate humeral sulcus differentiates *P. incompletus* Kieffer from *P. primoris* sp. nov.

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