

A NEW SPECIES OF *PARASTEPHANELLUS* ENDERLEIN (HYMENOPTERA: STEPHANIDAE) FROM INDIA

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Abstract

A new species *Parastephanellus mufeedae* sp. nov. is described from India. Its differences with the only other Indian species, *P. malabaricus* Narendran, are discussed.

Keywords

Hymenoptera, Stephanidaes Parastephanellus, new species, India

Abbreviations

CU - Cubital

POL - Postocellar line

RS - Radial sector

OOL - Ocellocular line

PP1-PP6 - Post-petiolar segments 1-6

ZSIC - Western Ghats Field Research Station, Zoological Survey of India, Kozhikode

Introduction

The genus *Parastephanellus* Enderlein is confined to Indo-Australian Region. The genus contains about 40 species (Elliot, 1922, 1927; Madl, 1993; Narendran & Sheela, 1995). From Indian subcontinent only one species, *Parastephanellus malabaricus* Narendran, is so far recorded (Narendran & Sheela, 1995). In this paper we record a second species from India, which on closer study proved to be new to science. This new species is described below.

The genus *Parastephanellus* is characterised as follows: Discoidal cell petiolate, less than half smaller than cubital cell; radius (4RS) not touching margin of forewing; external submedian cell (2CU) open posteriorly.

Parastephanellus mufeedae sp. nov.

(Figures 1-6)

Material examined

Holotype: Female, 8.ix.1999, Tirur, Kerala, Coll. C.A. Mufeeda.

Distribution

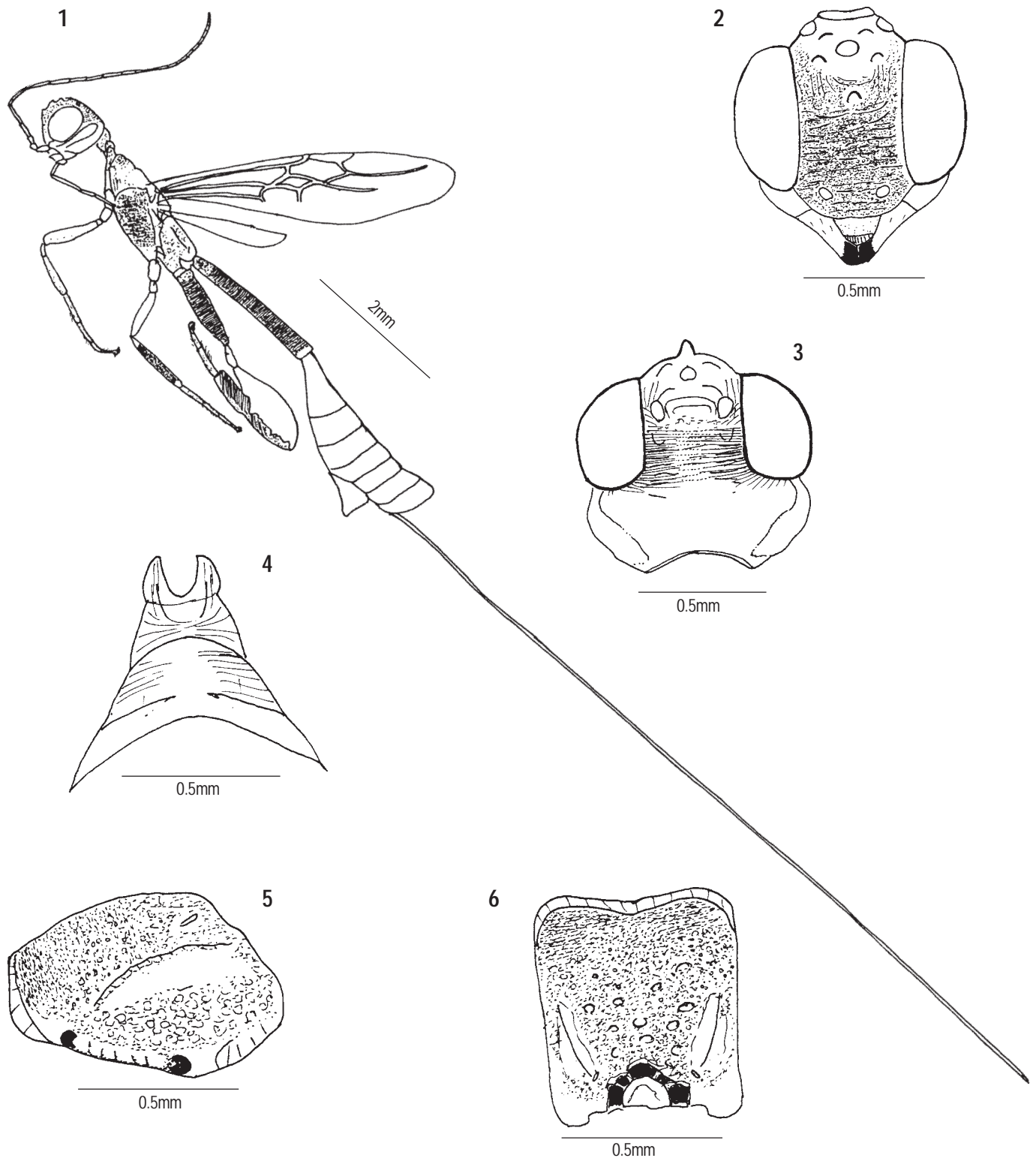
India: Tirur in Kerala (ca. 11°00'N, 76°00'E). The specimen was collected by bare hand from a mixed crop area.

Etymology

The species is named after C.A. Mufeeda who collected the specimen.

Diagnostic characters

Female: Length 8.2mm (excluding terebra); length of terebra 13mm. Black with following parts as follows: lower frons just above toruli, anterior frontal tooth, mandibles (except black apex) reddish-brown; antenna pale brown with scape slightly darker; maxillary palp pale brown with basal segment slightly darker; gena with a pale yellow strip adjacent to posterior margin of



Figures 1-6. *Parastephanellus mufeedae* sp. nov. (female)
1 - Body profile; 2 - Head in anterior view; 3 - Head in dorsal view; 4 - Pronotum dorsal view;
5 - Metapleuron side view; 6 - Propodeum dorsal view.

eye; ocelli pale reflecting yellow; eye black with margins paler. Legs black with fore trochanter, bases and apices of fore and mid femora, bases and apices of fore and mid tibiae slightly paler; fore and mid tarsi brown; apex of hind tibia brown; hind metatarsus pale yellow; other tarsal segment and pretarsus darker. Terebra black without a sub-basal band, wings hyaline with stigma and veins pale brown except for a pale white colour at base of stigma. Pubescence silvery on mesopleura.

Head: Width in anterior view 1.24x distance between front ocellus and lower labral margin; width in dorsal view 1.4x distance between front ocellus and occipital margin, frons with transverse irregular carinae, interstices rugose and reticulate. Vertex with two cross carinae between hind ocelli followed by several medially broken cross striae and carinae, without a median longitudinal sulcus; post vertex smooth and shiny; occipital carina narrow, not forming acute or subacute angle medially (Fig.3). POL 6.2x OOL; head with five frontal teeth. Antennal scape a little more than 1.6x as long as pedicel, 1.25x as long as first flagellar segment; second flagellar segment 1.75x as long as first flagellar segment; flagellar segments third, fourth and fifth equal in length and each longer than second flagellar segment.

Mesosoma: Carina apicale distinct without pubescence; color with oblique and transverse carinae; pronotal fold with distinct excavation; preanular region with transverse striae distinct on sides with median part smooth and shiny, posterior margin smooth and shiny. Mesoscutum with a median line of pits; notauli distinct and pitted surface sparsely pitted on posterior half; axillae separated by a large pit anterior to scutellum; axillae coarsely rugose-punctate; scutellum faintly reticulate and shiny with sparse pits on sides. Mesopleuron densely pubescent on anterior dorsal part, remaining part finely reticulate and sparsely punctate. Metapleura with anterior and posterior foveae distinct; interfoveolar area smooth and shiny with five weak cross striae; post-foveolar area with a few carinae (Fig.5). Propodeum (Fig.6) densely and finely reticulate with a few sparse shallow pits; parapiciolar depression narrow, smooth and shiny; spiracular frontal impression smooth and shiny. Relative lengths of body parts (mesosoma): pronotum 15.4; mesoscutum 5.13; scutellum 7.7; propodeum 14.1; hind coxa 23. Hind coxa 0.56x length of petiole, annulate. Hind femur (Fig. 1) a little longer than hind coxa, about 3.4x its maximum width, ventral margin bidentate with a basal tubercle interspace between middle and distal teeth with three or four visible denticles when tibia and femur are closed together.

Metasoma: Petiole annulate, basal area with irregular rugae and reticulation, distal tip smooth; petiole distinctly shorter than combined length of postpetiolar segments (41:52); PP1 a little longer than 2.4x PP2; terebra 4.55x as long as combined length of postpetiolar segments; as long as 2.55x metasoma (petiole + postpetiolar segments); PP5 and PP6 deeply emarginate.

Male: Unknown

Host: Unknown

Discussion

This new species differs from the only other Indian species *Parastephanellus malabaricus* Narendran in having: vertex with several cross striae (Fig. 2) behind two strong carinae (in *malabaricus* vertex with very weak striae behind two strong carinae and striae indistinct in the middle part, mostly smooth); vertex with a median longitudinal groove (without such a groove in *malabaricus*); pronotal fold indistinct (distinctly excavated in *malabaricus*); preanular region with transverse striae on sides (smooth and shiny in *malabaricus*) mesoscutum without a median longitudinal row of deep pits but with a median carina present (in *malabaricus* mesoscutum with a median longitudinal row of pits and without a median longitudinal carina); and metanotum without a smooth area separating from propodeum (in *malabaricus* metanotum with a smooth area separating it from propodeum).

This new species comes near *P. laevicollis* Morley in the key to species by Elliott (1922) but differs from it in having: pronotum medially smooth (in *laevicollis* pronotum mostly smooth); face reddish-brown (white in *laevicollis*), terebra a little longer than 1.5x length of body (terebra 1.22x as long as length of body in *laevicollis*) and propodeum not smooth medially (in *laevicollis* propodeum smooth medially).

Current status of habitat

The mixed crop area from where the collections were made is mostly disturbed by human interference.

Acknowledgement

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