

A NEW GENUS AND A NEW SPECIES OF EULOPHIDAE (HYMENOPTERA: CHALCIDOIDEA) FROM INDIA

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Abstract

A new genus and a new species of Eulophidae viz. *Anumanniola* Narendran gen. nov. and *Anumanniola lasallei* Narendran sp. nov. are described. The affinities of the new genus are also discussed.

Keywords

Anumanniola gen. nov., *Anumanniola lasalle* sp. nov., Eulophidae, Hymenoptera, India

Abbreviations

DZUC - Department of Zoology, University of Calicut
 MV - Marginal vein
 PMV - Postmarginal vein
 SMV - Submarginal vein
 T1 - First tergite

F1-F4 - Funicular segments 1-4
 OOL - Ocellocular distance
 POL - Post ocellar distance
 STV - Stigmal vein

Introduction

There are 294 genera of Eulophidae in the world (Noyes, 2001) and among these 150 genera are found in the Indo-Australian Region (Narendran & Fousi, 2002) and 53 genera in the Indian subcontinent. This new genus described hereunder possesses some distinctive characters which separate it from all known existing genera of this family. It does not fit into any of the keys of Boucek (1988), Graham (1991), Mani (1989), and Shauff *et al.* (1997). This necessitated the erection of a new genus.

Anumanniola Narendran gen. nov.

(Figs. 1-8)

Type species: *Anumanniola lasallei* Narendran sp. nov.

Material examined

Holotype: Female on card, 10.xii.2001, Sringeri, Karnataka, India, Coll. P.A. Sinu, DZUC Eul-I-T.C.N.

Etymology

The genus name is an anagram of *Naumanniola* Boucek. The species name is after Dr. John Lasalle of CSIRO, Australia.

Diagnosis

Head collapsing; POL slightly shorter than OOL; occipital carina indistinct; eyes not pilose; antennal formula 11142; toruli located near middle; flagellar segments flat and thin with deep, smooth concavity on one side; pronotum somewhat bell-shaped; mesoscutum with two pairs of strong setae; scutellum with two pairs of strong setae, middle part smooth and with a shallow groove in middle (Fig. 2), sides reticulate; propodeum with a pair of posteriorly diverging carinae; mid femur with a characteristic spine; forewing with apex infumate; PMV distinctly longer than STV; costal cell much shorter than MV; apex of metasoma tilted upwards.

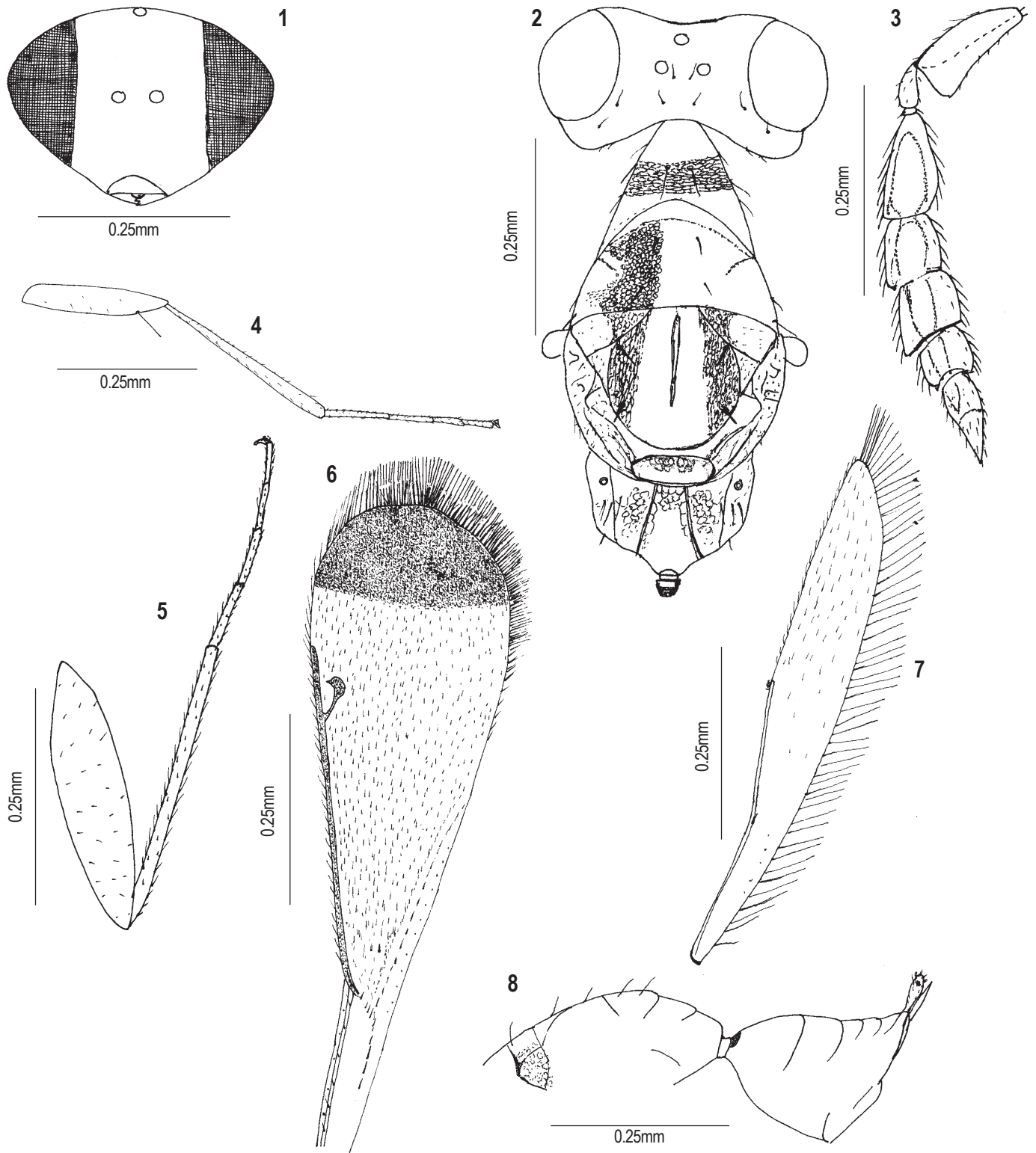
Remarks

This new genus belongs to the subfamily Eulophinae because of the set of characters like notauli incomplete, axillae not projecting forwards, forewing with postmarginal vein relatively long and submarginal vein without a distinct break with marginal vein and scutellum without submedian grooves. In the key to genera of Australasian Eulophidae by Boucek (1988) this new genus comes close to the genus *Naumanniola* Boucek in having somewhat similar type of pronotum, antennal insertion and clava

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Figures 1-8. *Anumanniola lasallei* sp. nov.

1 - Head front view; 2 - Head and mesosoma; 3 - Antenna; 4 - Foreleg; 5 - Hindleg; 6 - Forewing; 7 - Hindwing; 8 - Part of mesosoma and gaster.

appearing two segmented. However this new genus differs from *Naumanniola* in having: mid femur with a characteristic strong seta at subapical part (Fig. 4) (no such seta present in *Naumanniola*); propodeum without median carina (with a median carina in *Naumanniola*); MV much longer than costal cell (almost as long as costal cell in *Naumanniola*); forewing with apex infumate (not infumate in *Naumanniola*); scutellum smooth medially and reticulate on sides (not so in *Naumanniola*); PMV distinctly and clearly longer than STV (PMV slightly longer than STV in *Naumanniola*); antenna without trichoid sensillae (with trichoid sensillae in *Naumanniola* and flagellar segments with deep concavity on one side (not so in *Naumanniola*).

This new genus also superficially resembles *Closterocerus* Westwood of the subfamily Entedoninae in having somewhat wider antennal flagellum but differs from *Closterocerus* in several features in addition to the subfamily differences.

Anumanniola lasallei Narendran sp. nov

Diagnosis

Female: Length 0.69mm. Antenna brown with apical segment of clava pale white; head blackish-brown with metallic green refringence; eye and ocelli reflecting pale yellow; clypeus, mandibles and anterior lower part of gena pale brown; sides of vertex with violet tinge; pronotum metallic green with violet tinge; mesoscutum bright metallic green; median smooth part of scutellum metallic violet; reticulate sides of scutellum and axillae concolorous with mesoscutum; sides of mesosoma pale brown; propodeum metallic green but darker than mesoscutum; legs pale yellow; metasoma with petiole dark brown; T1 pale brown with metallic green reflections; remaining tergites dark brown; wings hayaline with apex of forewing infumate (Fig. 6); pubescence dark brown on vertex, pale brown on mesosoma.

Head: Width in dorsal view about 3x its median length; width in anterior view 1.36x its median length; frons smooth; vertex faintly reticulate (can be seen only under certain lights); POL slightly less than OOL (8:9); vertex with a pair of setae inside POL area posteriorly and behind this with three pairs of setae (Fig. 2); eyes without hairs; malar groove distinct (careful examination under proper lighting necessary to see this character); clypeus distinctly semiarched; left mandible bidentate (right mandible not visible, masked by left mandible); flagellar segments broad and thin with deep concavity on inner side; clava two segmented, apex pointed, without a spicule (Fig. 3); relative measurements of length: width of antennal segments: scape-8:15; pedicel-11:5, anellus-1:3, F1-25:13, F2-16:14, F3-17:16, F4-12:13, clava-23:9.

Mesosoma: Pronotum transversely reticulate, its median length 0.75x length of mesoscutum; mesoscutum distinctly reticulate with notauli faintly visible (under certain lights) on anterior

side (Fig. 2); anterior marginal area smooth and shiny; mesoscutum with two pairs of setae on outer side margin; scutellum median length a little less than 1.5x its width, 1.32x median length of mesoscutum; median part with longitudinal narrow fovea starting from base and exceeding beyond middle but not reaching posterior part; submedian areas smooth and shiny, sublateral part longitudinally reticulate (Fig. 2); scutellum with two pairs of strong setae; dorsellum bulging with deep pits on basal sides, remaining part of dorsellum smooth and shining. Prepectus large (Fig. 8) and reticulate. Propodeum with two submedian carinae, each carina diverging posteriorly, basal part of area between submedian carinae and sides of propodeum reticulate (Fig. 2), remaining regions of propodeum smooth and shiny; nucha absent. Middle femur with a strong seta (Fig. 4) at subapical part, fore and hind femora (Fig. 5) without such strong subapical seta; hind femur 4.4x as long as its width. Forewing (Fig. 6) length 3.22x its median width; distal part infumate; cubital and basal lines of setae present. Relative lengths of forewing veins: SMV 50, MV 78, PMV 20, STV 11, SMV with six dorsal setae; costal cell with a line of ventral setae; longest marginal fringe 0.024x width of forewing. Hind wing 7.1x as long as its maximum width (Fig. 7).

Metasoma: Metasoma shorter than mesosoma; petiole divided into two parts, broader than long (Fig. 2), anterior segment yellow, posterior part black ending in a pit on base of T1; ovipositor sheath tilted upwards, as long as half mid metatarsus, a little shorter than hind metatarsus.

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