A NEW SPECIES AND A KEY TO SPECIES OF EUDEROMPHALE GIRault (HYMENOPTERA: EULOPHIDAE) FROM INDIA

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Abstract

A new species, Euderomphale stomale Narendran & Hayat belonging to the hymenopteran family Eulophidae, is described from Hoskote in Karnataka, India. A key to separate the Indian species is provided.

Keywords

Chalcidoidea, Eulophidae, key, Indian subcontinent, new species

Abbreviations

Cl1 = basal segment of clava; Cl2 = second segment of clava; Cl3 = apical segment of clava; OOL = ocellular distance; POL = postocular distance; MV = Marginal vein; PMV = Postmarginal vein; STV = Stigmal vein; NPCI = National Pusa Collection.

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The genus Euderomphale was erected by Girault in 1916 based on the type species Euderomphale fuscipennis Girault (which is a junior synonym of E. flavimeda (Howard) La Salle & Schaff, 1994.). From the Oriental region only two species are recorded so far. They are E. secunda (Mani) (Mani, 1939; Hussain & Khan, 1986), and E. longipediculatus Shafee, Rizvi & Khan (1988). E. postmarginalis Shafee, Rizvi & Khan (1988), was recently transferred to Entedonastichus Girault by Hayat and Perveen, in Hayat et al. (2005). In this paper we describe a third species, which is new to science from India. The holotype is deposited at NPCI, New Delhi.

Euderomphale stomale sp. nov.

(Figs. 1-7)

Material examined

Holotype: Female (on slide under 4 coverslips), 15.xii.2006, Hoskote, Karnataka, India, coll. Ankita (NPCI 15/6/53/1).

Etymology

Species name is an arbitrary combination of letters.

Description

Female: Length ca. 0.8mm. Head and mesosoma black, shiny, apparently smooth; gaster yellow with brown to dark brown bands as in figure 7; ovipositor sheath brown; scape nearly black, distally white; Cl3 largely brown, rest of antenna white.

Legs: coxae black, shiny as mesosoma; fore femur (except apical third), and mid femur, including trochanters, black; hind femur whitish with brown suffusions especially in upper half, tibiae white with upper margin of fore tibia, basal half or so of mid tibia, and basal two thirds and upper margin of hind tibia dark brown. Fore wing pale infuscate especially below venation.

Head: (Fig. 4) in front view, length: width 22.5:34; POL 2x OOL; antenial toruli situated at level of ventral margin of eyes. Antenna (Fig. 1) with relative length and maximum width of segments: Scape 48:11; pedicel 24:10; F1 - 4:6; F2 - 7:7; clava: Cl1 - 12:16; Cl2 - 13:16; Cl3 - 22:14. Mandibles bidentate (Fig. 5). Palps as in Figure 6.

Mesosoma: a little broader than long (35:30:75), pronotum with one seta on each corner; mesonotum with 1+1 seta along anterior margin, one at each lateral corner; each axilla with one seta at basal outer margin; scutellum 2x as broad as long, with one pair of longer setae on disc, one pair at posterior margin. Fore wing 2.76x as long as broad, marginal fringe 0.34x of wing width; setation and venation as in Figs. 2 and 3; hind wing 6.38x as long as broad; marginal fringe slightly shorter than wing width 9:10.5. Mid tibia slightly shorter than hind tibia (22:23).

Gaster: longer than mesosoma; ovipositor length about 1.3x length of hind tibia (29:23).

Male: Unknown.

Host: Unknown.

References

Girault, A.A. (1916). A new genus of omphaline eulaphid [sic] chalcis-
Grass yellows are among the most polyphagous of butterflies in their larval stages. Their larval food plants are leguminous and belong to the families Mimosaceae, Caesalpiniaceae and Fabaceae. New host plants are constantly being added to the existing list of larval food plants known for these species. In the present communication, we are reporting Calliandra calothyrsus Meissner (Family: Fabaceae) as a host plant of the Three-spot Grass Yellow (Eurema blanda (Boisdual)) for the first time.

While working on the butterflies of the southern Western Ghats, we came across many larvae of Three-spot Grass Yellow, Eurema blanda feeding on Calliandra calothyrsus near a garden at Narikuni, about 24 km north-east of Kozhikode town, on 12 November 2005. This plant is popularly known as ‘powder puff plant’ due to its powdery, puffy nature of flowers. It is an exotic shrub introduced from Central America during the early part of the last century. We reared as many as 12 larvae of the Three-spot Grass Yellow in the laboratory by feeding Calliandra calothyrsus leaves. All emerged successfully after a pupal period of 6-9 days.

The caterpillars of the Three-spot Grass Yellow Eurema blanda (Boisdual) are known to feed on Albizia spp., Acacia spp., Cassia fistula, Delonix regia, Monilius scapata, Pithecellobium dulce of the families Caesalpiniaceae, Fabaceae and Mimosaceae (Wynter-Blyth, 1957; Kunte, 2000).

Of the six species of Grass Yellows (Common Grass Yellow, Eurema hecabe (Linnæus), Small Grass Yellow, E. brigitta (Cramer), One-spot Grass Yellow, E. andersonii Moore, Three-spot Grass Yellow, E. blanda (Boisdual), Spotless Grass Yellow, E. laeta Boisdual and Nilgiri Grass Yellow, E. nilgiriensis Yata) known from Kerala (Gaonkar, 1996), the Three-spot Grass Yellow is locally common and restricted to the wet evergreen forests and well wooded country sides including sacred groves of northern Malabar.

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