

A KEY TO SPECIES OF *GRAHAMISIA* DELUCCHI (HYMENOPTERA: PTEROMALIDAE: DIPARINAE) WITH DESCRIPTION OF A NEW SPECIES FROM INDIA

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Abstract

A new species of Pteromalidae, *Grahamisia malabarensis* sp. nov. is described from Calicut, Kerala, India. A key to species of genus *Grahamisia* is also provided.

Key words

Pteromalidae, *Grahamisia malabarensis* sp. nov., new species, key, India

Abbreviations

F1 to F7 = Funicular segments first to seventh

OOL = Ocellocular line

POL = Post ocellar line

DZCU = Department of Zoology, University of Calicut

Introduction

The genus *Grahamisia* was erected by Delucchi (1962) with *Grahamisia saetosa* sp. nov. Delucchi from Africa as the type-species. Since then Hedqvist (1963, 1969) added four more species from Africa and gave a key to species of *Grahamisia*. Later Xiao and Huang (1999) described a new species from China. In this paper, we describe a new species from India along with a revised key to species. This is the first report of the genus from India. Boucek *et al.* (1978) reported an undetermined species from Sri Lanka.

Grahamisia malabarensis sp. nov.

(Figs. 1-3)

Material examined

Holotype: Female, 2.ii.1997, Calicut University Campus, Kerala, India, coll. T.V. Mini (DZCU-Narendran collections, # T.V.202).

Paratype: One female, 16.xi.1996, Tiruvannur, Calicut, Kerala (DZCU-Narendran collections, # T.V.232).

Distribution

Malabar area (Kerala) lying between 10°15' and 12°18' N and 75°14' and 76°56' E.

The specimens were collected from pastures using sweep nets.

Etymology

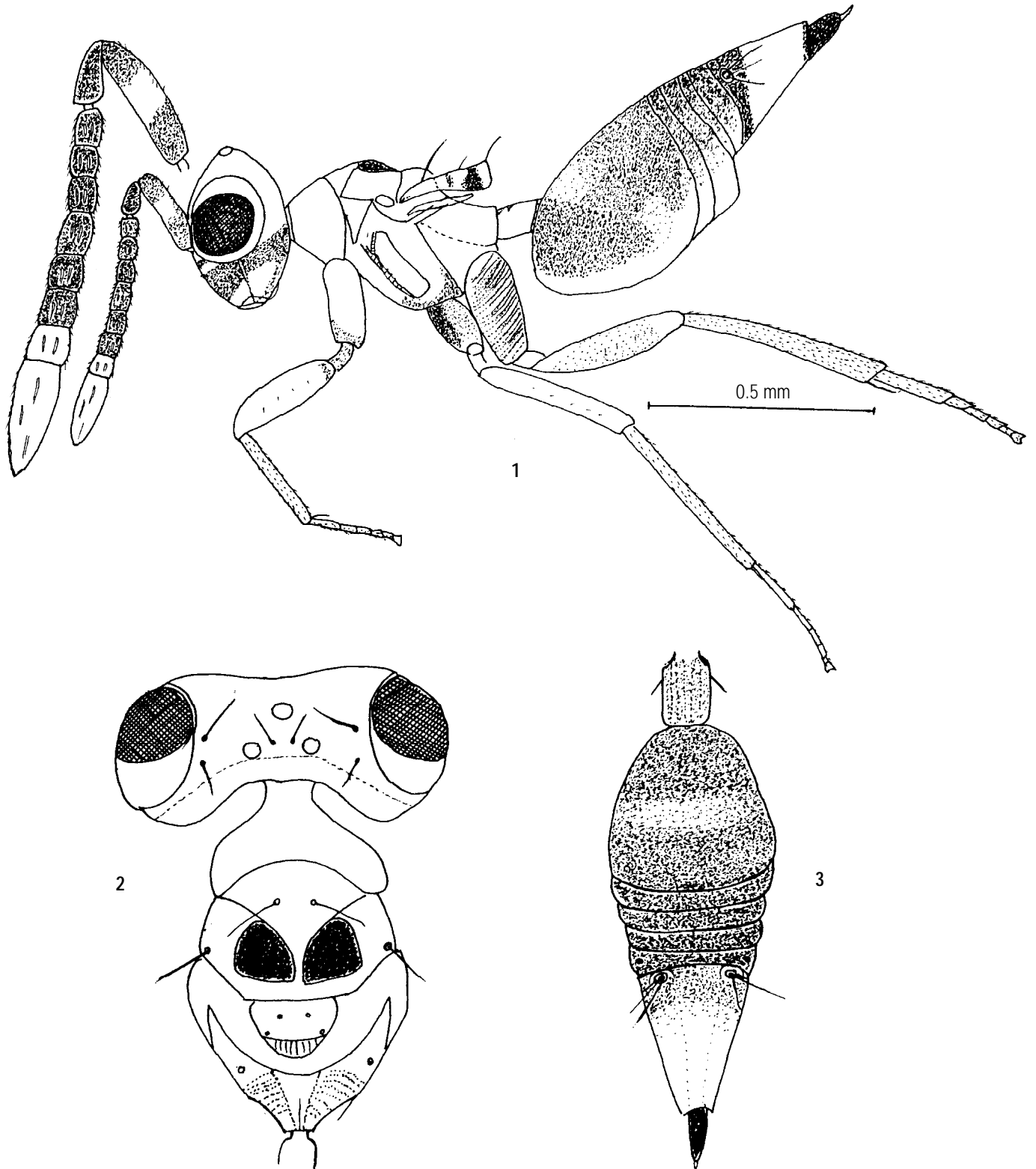
The species is named after the Malabar region of Kerala State.

Diagnostic features

Female: Length 1.45 - 1.6 mm. Head brownish-yellow with two dark brown bands on lower face (Fig. 1); eye black with pale yellow marginal area which enlarges postero-dorsally (Fig. 2); ocelli pale reflecting yellow; POL area with an inverted 'V' shaped brown patch; antenna blackish-brown with middle part of scape, ring segment, F7 and clava pale white or pale yellow. Mesosoma pale brownish-yellow with two large black spots (Fig. 2) on scapulae. Legs pale yellow with mid coxa darker on anterior part; stunted forewing with a dark transverse brown stripe immediately in front of apex and another faded stripe a little posterior to it near middle. Gaster dark brown with middle part of T1 and ventral part of gaster paler; epipygium pale yellow with base blackish-brown; ovipositor sheath blackish-brown; longer setae on body brownish-black.

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Figures 1-3. *Grahamisia malabarensis* sp. nov. (female)
1. Body profile; 2. Head and mesosoma (dorsal view); 3. Gaster (dorsal view).

Head wider than mesosoma, a little more than 3x as wide as median length dorsally; head width in front view a little more than 1.3x its length; frons moderately reticulate; scrobes shallow, transversely striate; with a sharp supraoccipital edge between vertex and occiput; POL 1.2x OOL; face below antennal sockets finely rugosoreticulate with small setae; clypeus slightly longer than wide, its lower margin straight; malar sulcus weak but distinct; vertex with three pairs of setae (Fig. 2); each mandible with three teeth; antenna inserted a little above level of ventral margin of eye; antennal formula 11171; scape short, not reaching front ocellus, with a few dorsal setae. Relative length: width of antennal segments: scape = 33:8; Pedicel = 15:6; F1 = 8:6; F2 = 7:6; F3 = 8:6; F4 = 10:8; F5 = 7:8; F6 = 10.5:8; F7 = 9:10; clava = 27:10.

Mesosoma: Pronotum distinctly punctate, not striate; anterior part of mesonotum with punctures finer than that of pronotum; notauli converge in middle of mesoscutum (Fig. 2); mesoscutum with a pair of strong setae; each scapula with a seta distally; black spot of scapula distinctly punctured; scutellum (Fig. 2) with two pairs of setae; frenum distinct; prepectus smooth; propodeum with a median carina, not quite reaching basal margin; length of propodeum subequal to that of scutellum; plicae indicated; wings stunted, hardly reaching base of petiole, with a black strong seta at base and another strong seta at apex, and with another relatively weaker seta posterior to apical seta.

Gaster: Smooth; its length (including petiole and ovipositor) 2x length of mesosoma; petiole 1.5x as long as its width, distinctly rugose; T1 largest, a little more than 2x combined length of T2 to T5; epipygium about 3x as long as ovipositor-sheath in dorsal view.

Male: Unknown

Host: Unknown.

Variation: The brown colour is more spread and body more darkish in paratype.

Discussion

This new species comes near *G. maculata* (Hedqvist) in the key to species by Hedqvist (1969) but differs from it by the characters mentioned in the key provided.

Current status of habitat

The pastures from where the collections were made are mostly disturbed by human interference.

Acknowledgements

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Key to species of *Grahamisia* Delucchi

1. Propodeum with longitudinal striations (Fig. 12.H. of Hedqvist, 1969; Fig. 6. of Xiao & Huang, 1999) 2
 - 1A. F1 to F4 yellow; F5 to apex of clava brown (Fig. 4 of Xiao & Huang, 1999); head with regular reticulation (China) *G. dictyodroma* Xiao & Huang
2. Pronotum with a sharp transeverse carina (Fig. 10B of Hedqvist, 1969) (Africa) *G. albomaculata* (Hedqvist)
 - 2A. Pronotum without a sharp transeverse carina 3
3. Scutellum with a black smooth area; T1 1.5x as long as T2 (Fig. 11F of Hedqvist, 1969) (Africa) *G. saetosa* Delucchi
 - 3A. Scutellum without a black area and T1 not 1.5x as long as T2 4
4. Gaster with two black setae on anterior of T1; pronotum with transverse striations; face without brown bands (Africa) *G. stramenia* Hedqvist
 - 4A. Gaster without two black setae on anterior of T1; pronotum without transverse striations as above; face with two brown bands (Fig. 1) 5
5. T1 length 4x length of T2 in dorsal view; clava nearly as long as combined length of preceeding three segments; propodeum without median carina; Forewing with seven strong setae (one at apex smaller); gaster yellow with two or three brown stripes (Fig. 9A of Hedqvist, 1969) (Africa) *G. maculata* (Hedqvist)
 - 5A. T1 length 8x length of T2 in dorsal view; clava longer than combined length of three preceeding segments; propodeum with a median carina (Fig. 3); forewing with three strong setae (Fig. 1); gaster mostly dark brown with slight paler area in middle of T1 and on ventrolateral side; epipygium yellow mostly (India) ***G. malabarensis* sp. nov.**