

## DESCRIPTION OF A NEW SPECIES OF *GOLLUMIELLA* HEDQVIST (HYMENOPTERA: EUCHARITIDAE) FROM THE SOUTHERN WESTERN GHATS, INDIA

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### ABSTRACT

A new species of eucharitid wasp, namely, *Gollumiella metallica*, sp. nov., is described from the tropical evergreen forests of Silent Valley National Park of Southern Western Ghats, Kerala, India. An updated checklist of species of Indo-Pacific genus *Gollumiella* Hedqvist is also provided.

### INTRODUCTION

The genus *Gollumiella* was erected by Hedqvist (1978) based on the type species *Gollumiella longipetiolata* Hedqvist from Philippines. The genus belongs to the tribe Eucharitini of the subfamily Eucharitinae (Heraty, 2002). At the time of its description, *Gollumiella* included only a single species, *G. longipetiolata* Hedqvist, which was placed as a junior synonym of *Losbanus* Ishii by Bouček (1988). *Gollumiella* was resurrected by Heraty (1992) in his revision of *Gollumiella* from the Indo-Pacific Region. The genus includes 9 species worldwide of which 2 species are reported from the Indian subcontinent (Heraty, 2002 & 2004; Noyes, 2015). In this paper, a new species, *Gollumiella metallica*, sp. nov., is described based on one specimen, which is the first record of the genus from the peninsular India. Affinities of the new species with the closely related species are provided with an updated checklist of the species of *Gollumiella*.

The holotype is deposited in the 'National Zoological Collections' of the Western Ghat Regional Centre, Zoological Survey of India, Kozhikode (= Calicut), India (ZSIK).

### MATERIAL AND METHODS

The holotype is collected with a sweep net from the tropical evergreen forest patch of Poochipara of Silent Valley National Park of South Western

Ghats, Kerala, India. It is examined under LEICA M60 stereozoom microscope and images captured with the camera model LEICA DFC-450. The drawings were done using the drawing tube of the same Leica microscope. All efforts to obtain more specimens of this new species both by field collection and through loan from museums did not succeed.

*Abbreviations used for the terms used in the text:*  
F = Flagellar segments; OOL = Ocellular line;  
PMV = Postmarginal vein; POL = Postocellar line;  
SMV = Submarginal vein; SSS = Scutoscuteellar sulcus; STV = Stigmal vein.

#### 1. *Gollumiella metallica* sp. nov.

(Figures A & B; Images 1-6)

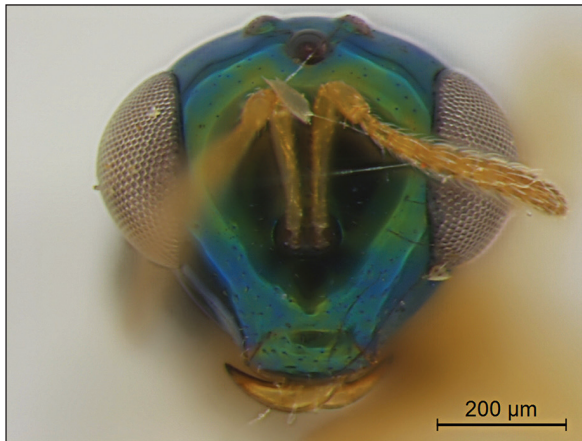
*Diagnosis:* This new species can be distinguished from all other species of *Gollumiella*



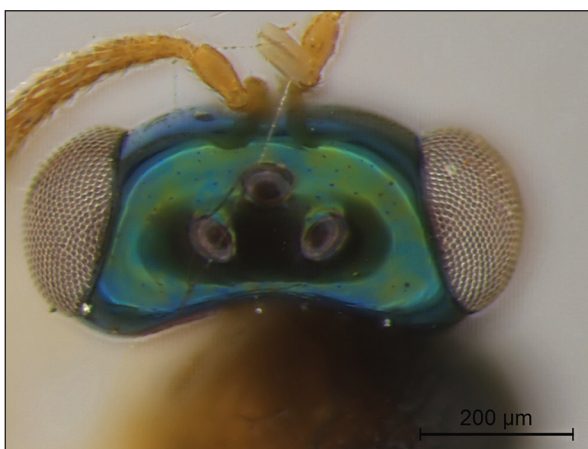
Image 1. *Gollumiella metallica* sp. nov. Holotype female.  
Body profile

by the combination of the following characters: Head metallic bluish green; antenna and legs including coxae yellow; mesosoma brownish yellow except dorsal part dark brown; F1 as long as broad, more than half length ( $0.6\times$ ) of F2; eyes separated by  $1.24\times$  their height; petiole curved ventrally in profile and completely smooth; head subcircular in frontal view; scape length  $0.72\times$  eye height; anterior tentorial pit and clypeogenal suture distinct; scape not reaching median ocellus; F1 and F2 distinctly separated; STV and PMV short and indistinct.

*Female*: Holotype (Image 1). Length 2.0 mm. Head metallic bluish green; mesosoma brownish yellow except dorsal part dark brown; gaster dark brown except ventre yellowish brown; antennae, legs and petiole yellow; tarsal claws brown; wings hyaline, venation clear (not coloured), except SMV pale brown.

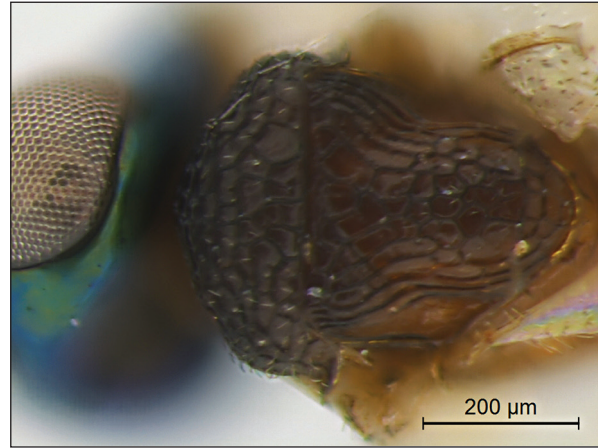


**Image 2.** *Gollumiella metallica* sp. nov. Holotype female.  
Head frontal view

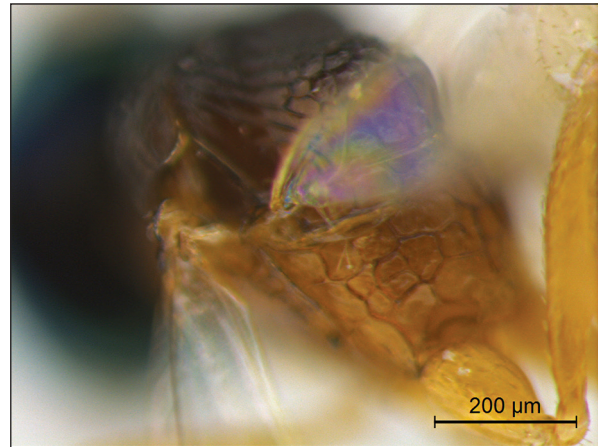


**Image 3.** *Gollumiella metallica* sp. nov. Holotype female.  
Head dorsal view

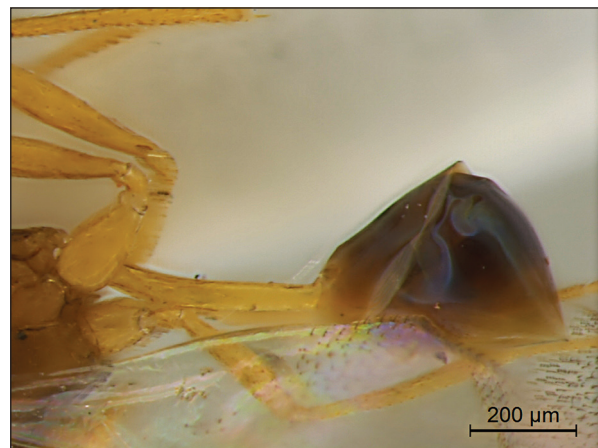
Head subcircular,  $1.18\times$  as broad as high (Image 2); POL  $0.71\times$  OOL (Image 3); face broadly rounded and smooth with scattered fine setae; gena slightly rounded in frontal view; occiput



**Image 4.** *Gollumiella metallica* sp. nov. Holotype female.  
Mesothorax dorsal view



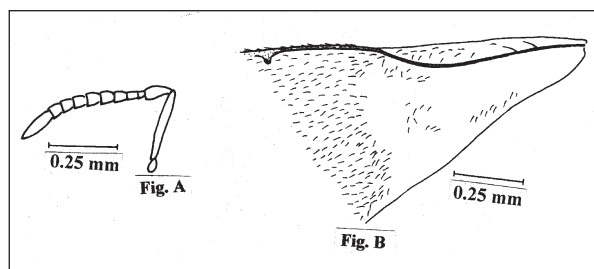
**Image 5.** *Gollumiella metallica* sp. nov. Holotype female.  
Mesosoma profile view



**Image 6.** *Gollumiella metallica* sp. nov. Holotype female.  
Metasoma

glabrous, with faint transverse aciculate sculpture, dorsal angle with vertex broadly rounded; clypeus sub-rounded apically with scattered fine setae; anteclypeus narrow with a row of fine apical setae directed over mouthparts; anterior tentorial pit and clypeogenal suture distinct; eyes separated by 1.24× their height; malar space 0.54× height of eye. Antenna 11-segmented (Fig. A); scape cylindrical, reaching 0.82× distance to median ocellus; scape length 0.72× eye height; funicle 8-segmented; F1 more than half (0.6×) length of F2; F1 and F2 distinctly separated; flagellum 0.72× height of head, moderately setose with long decumbent setae.

Mesosoma with shallow, rugose-alveolate sculpture (Images 4 & 5); SSS narrow, transversely carinate; scutellum longer than broad; frenal carina shallowly emarginate medially. Forewing (Fig. B) 2.09× as long as broad, 2.91× as long as mesothorax; speculum open basally; veins poorly defined; SMV with a few minute setae in proximal third; STV short and as long as broad; PMV short and indistinct; hindwing with 3 hamuli. Legs with coxae smooth and globose; hind coxa only slightly longer than broad; hind femur sparsely setose dorsally; tibia moderately setose.



Metasoma (Image 6): Petiole 2.36× as long as hind coxa, 0.92× as long as hind femur, narrow, ventrally curved in lateral view, glabrous over entire length; hypopygium and ovipositor not visible in the holotype.

*Male*: Unknown.

*Hosts and Biology*: Unknown.

*Material examined*: Holotype ♀, INDIA: Kerala, Palakkad district, Silent Valley National Park, Poochipara (11°06'48.17"N 76°25'12.23"E; elev. 1073 m), 21.ii.2013, Coll. P. M. Sureshan & Party (ZSIK Regd. No. ZSI/WGRS/I.R-INV.5287).

*Distribution*: India: Kerala.

*Etymology*: The species is named after the word "metallica" (itself derived from the Latin 'metallum' for metallic), in reference to the metallic bluish green head.

*Discussion*: The new species keys to *G. antennata* in Heraty (1992) in having: (1), The petiole curved ventrally in profile and completely smooth; (2), head subcircular in frontal view; and (3), antenna and legs including coxae yellow. But it distinctly differs from *G. antennata* in having: (1), head metallic bluish green (in *G. antennata* dark brown to black with faint metallic reflections); (2), mesosoma brownish yellow except dorsal part dark brown (in *G. antennata* mesosoma entirely dark brown to black); (3), F1 as long as broad, more than half length (0.6×) of F2 (in *G. antennata* F1 broader than long, less than half length of F2); and (4), eyes separated by 1.24× their height (in *G. antennata* eyes separated by 1.6–1.9× their height).

#### Checklist of species of the genus *Gollumiella* Hedqvist, 1978

(1). *G. antennata* (Gahan, 1940) — India: West Bengal. *Elsewhere*: Bangladesh; China: Hong Kong; Hawaii; Indonesia: Java; Laos; Malaysia; Singapore; Sri Lanka; Thailand; Vietnam.

(2). *G. buffingtoni* Heraty, 2004 — China: Beijing; Japan.

(3). *G. darlingi* Heraty, 2004 — Indonesia: Kalimantan.

(4). *G. guineensis* Heraty, 1992 — Indonesia: West Papua; Papua New Guinea: Bismarck Archipelago.

(5). *G. infuscata* Heraty, 1992 — Malaysia: Sarawak.

(6). *G. longipetiolata* Hedqvist, 1978 — India: Uttarakhand, West Bengal. *Elsewhere*: China: Guangdong; Indonesia: Java, Kalimantan; Japan; Malaysia: Peninsular; Nepal; Philippines; Singapore; Thailand; Vietnam.

(7). *G. metallica* Girish Kumar & Sureshan, sp. nov. — India: Kerala.

(8). *G. minuta* (Bouček, 1988) — Australia: Queensland.



(9). *G. neopetiolata* Heraty, 1992 — Director-in-Charge, Zoological Survey of Indonesia: West Papua; Malaysia: Sarawak; Philippines.

(10). *G. ochreatea* Heraty, 2004 — Malaysia: Peninsular.

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