



**A NEW SPECIES OF *CALLISCELIO* ASHMEAD
(PLATYGASTRIDAE : HYMENOPTERA : INSECTA) FROM INDIA**

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INTRODUCTION

Genus *Calliscelio* (Platygastridae: Hymenoptera) was erected by Ashmead in 1893, based on the type species *Calliscelio laticinctus*. A total of 66 species are known globally (Johnson, 2011), out of which 10 species (Narendran and Ramesh Babu, 1996-97; Masner *et al.*, 2009) have been recorded from the Indian Region. This paper describes yet another species of *Calliscelio*, namely *C. rugosus*, new to science. Adequate illustrations are provided and affinities with the already known species are discussed in detail.

The present work is a part of the ongoing systematic studies on Scelioninae (Platygastridae) of South Western Ghats, Kerala. Specimens for this study were sorted from Prof. T. C. Narendran Collection of Parasitic Hymenoptera, maintained at the Systematic Entomology Lab, University of Calicut, Kerala. Studies were made using Leica M 205 A stereomicroscope and imaging done with Leica DFC 500 camera. The images were processed using the extended focus Montage software by Leica. The holotype and other material mentioned in this paper are deposited at the Western Ghat Regional Centre, Zoological Survey of India, Calicut, Kerala.

ABBREVIATIONS

OOL- Ocellocular Length; OD- Ocellar Diameter; POL- Posterior Ocellar Length; PM- Post Marginal vein; STG- Stigmal vein; M- Marginal vein; A1- A12- antennal segments; T1- T6-tergites of metasoma; HL- Head Length; HW Head Width; L- Length; W- Width.

NEW DESCRIPTION

Calliscelio rugosus sp. nov.

(Figs. 1-8)

Holotype : Female: Length: 1.97mm; head black, mesosoma honey brown except posterior scutellum being more blackish; basal one-fourth of metasoma, including T1 and basal 1/3rd of T2 yellowish brown, but anterodorsal horn on basal T1 blackish brown; rest of metasoma brownish black; eyes silvery; antennal radical and A1-A5 yellowish brown, A6-A12 blackish brown; legs including coxae yellowish brown; forewings slightly infuscate, veins brown.

Head: (HL: HW= 42: 43); slightly transverse dorsally; frons smooth medially and densely hairy towards orbits; gena hairy; eyes glabrous; clypeus narrow with pointed lateral corners; minimal distance between inner orbits in front of median ocellus less than eye height (19: 24); vertex on either side of median ocellus, ocellar triangle and a short patch anterior to median ocellus with coriaceous sculpture; occiput with same sculpture as that on vertex; lateral ocelli almost touching inner orbits; OOL: OD: POL= 1: 2.5: 12; occipital carina complete and crenulate; temples bulging laterally; malar sulcus distinct; mandibles tridentate; antenna 12 segmented with a distinct 6 segmented club; A1 longer than length of following 6 segments combined; A3 longer than A2 and A4; relative proportions of antennal segments (L:W) being: (31: 5); (6: 3); (8: 4); (5: 3); (4: 3); (3: 3); (3: 5); (5: 6); (5: 7); (6: 7); (5: 7); (5: 6).

Mesosoma : (In dorsal view L: W= 47: 37); not as wide as head dorsally; cervical collar foveolate;

mesoscutum and mesoscutellum not smooth but with fine coriaceous microsculpture; notauli distinct, narrow, extending throughout, nonfoveolate; humeral sulcus non-foveolate; mesoscutellum with dense setae; scutoscuteellar sulcus extremely narrow medially, foveolate and wider laterally; anterior margin of mesoscutellum crenulated; metascutellum with a transverse row of pits and carina throughout; propodeum medially excavate; metascutellar plate overlapping propodeum medially, extending to anterior T1; lateral triangular area of propodeum coriaceous and densely setose; anterior margin of pronotum between forecoxa and cervix smooth; netrion prominent with foveolate anterior border; mesopleural carina distinct, with a few longitudinal rows of cell-like sculpture beneath; meso and metapleura without pubescence, traces of a row of cell-like sculpture near mesepimeral sulcus anteriorly and posteriorly separating mesepisternum with mesepimeron; metapleural carina indicated; metapleuron near hind coxae bare, but with some irregular foveae; forewing narrow (L:W= 133: 33); PM distinctly longer than M, nearly 2x length of STG, also (M: STG: PM= 4: 17: 12); setae on SM, M and PM long erect and distinct; *basalis* present as a colouration.

Metasoma : (L:W= 122: 38) In dorsal view more than 2x as long as head and mesosoma combined; T1 with a distinct horn anteriorly on its dorsomedian; rest of T1, including lateral margins with strong longitudinal striations and without interspersed reticulations; 6- 7 lateral setae distinct; horn on T1 with closely placed irregular transverse wrinkles, non-foveolate and non- reticulate; area lateral and lower to horn with fine irregular foveae; T2 longest of all segments, 1.5x length of T1 and 1.4x length of T3; T2 longitudinally striate, median striae reaching nearly three-fourth (0.74) of length of T2, interstices smooth; tergites from T3 onwards smooth dorsally ; metasoma widest at middle of T3; T3 2.1x longer than T4; T4 onwards pilose; T6 elongate, with dense pilosity as compared to preceding segments; relative proportions of length to metasomal tergites T1 to T5 being (23: 16); (36: 35); (25: 38); (12: 32); (8: 2).

Male : Unknown.

Host : Unknown.

Etymology : The species is named '*rugosus*' (in Latin = 'wrinkled'), after the irregular wrinkles on the dorsal horn on T1.

Material Examined : Holotype. Female (ZSI/WGRS/A 01). INDIA: Kerala, Thiruvananthapuram District, Neyyar Dam (8°29' North Latitude and 77°17' East Longitude), Coll: Santhosh on 05-xi-2007.

Paratypes : 2 Females (ZSI/WGRS/A 02 & ZSI/WGRS/A 03), 1 Female (ZSI/WGRS/A 04). INDIA: Kerala, Malappuram District, Calicut University Campus (11° 13' Latitude and 75° 48' Longitude), Coll. T. C. Narendran on 12-ix-2007.

DISCUSSION

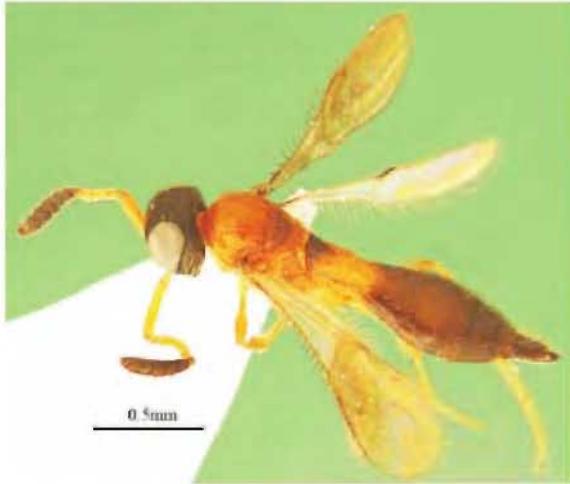
Of the 10 species of *Calliscelio* known from Indian Region, *Calliscelio agaliensis* Narendran and Ramesh Babu stands apart in having a black horn-like triangular elevated area anteriorly on dorsomedian of T1. Rest of T1 being yellow, this black patch remain much distinct. *Calliscelio rugosus* sp. nov. resembles *C. agaliensis* in possessing such a raised black median triangular area on T1. It keys to couplet No.8 in the key to Indian species by Narendran and Ramesh Babu (1996-1997). However this new species differs from *C. agaliensis* in: 1) Head black (yellow in *C. agaliensis*) 2). Horn on T1 with non-foveolate transverse wrinkles (in *C. agaliensis* horn on T1 smooth); 3) metascutellar plate with an irregular transverse row of pits and a median longitudinal carina (in *C. agaliensis* metascutellar plate transparent and with six longitudinal carina); 4) medial striae almost reaching posterior margin of T2 (medial striae just reaching only half of T2 in *C. agaliensis*).

The following key couplet can separate *Calliscelio rugosus* sp. nov. from *Calliscelio agaliensis* Narendran & Ramesh Babu

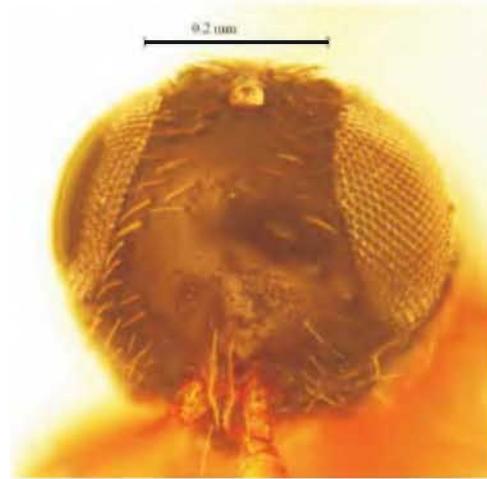
1. Metascutellar plate extended as a transparent lamina with six longitudinal carinae; head yellowish brown; horn on T1 smooth
C. agaliensis Narendran & Ramesh Babu
- Metascutellar plate with transverse row of pits and carina throughout; head black; horn on T1 with dense transverse wrinkles
C. rugosus sp. nov.

EXPLANATION OF FIGURE

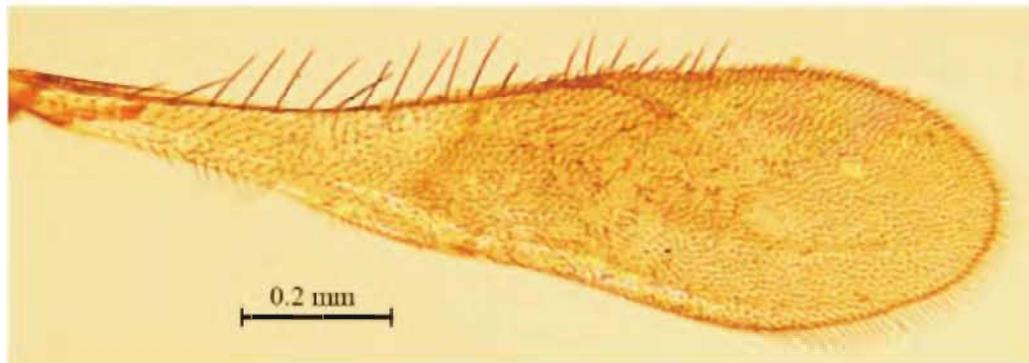
Figs. 1-8: *Calliscelio rugosus* sp. nov. - Female



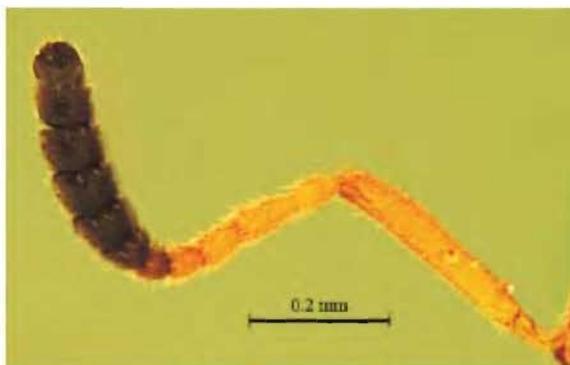
1. Body (profile)



2. Head (front view)



3. Forewing



4. Antenna



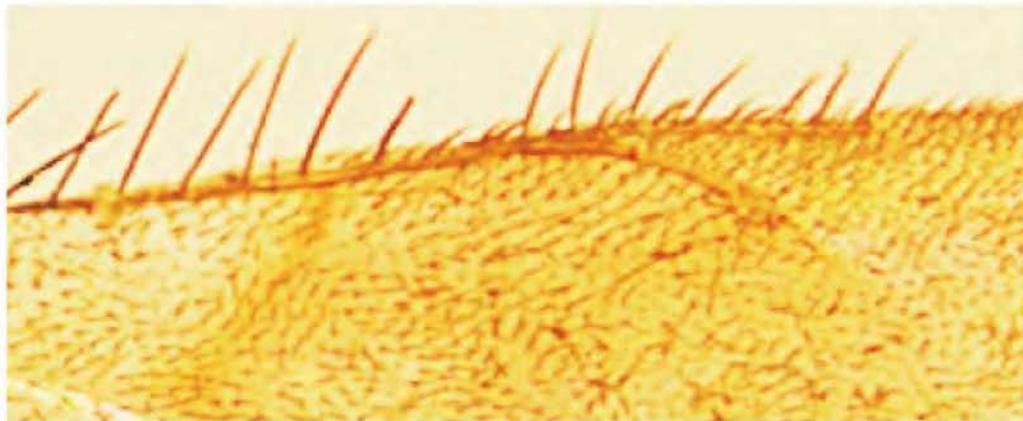
5. Mesosoma (lateral view)



6. Mesosoma (dorsa view)



7. Metascutellar plate and T1 horn



8. Forewing venation

ACKNOWLEDGEMENTS

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