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Review of the monotypic genus *Hemathlophorus* MALAISE from India (Insecta: Hymenoptera: Tenthredinidae: Allantinae)

With 9 Figures

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Abstract. The monotypic genus *Hemathlophorus* MALAISE is reported with its species *H. formosanus* (ENSLIN) for the first time from India and is reviewed with addition of a new species *H. foveatus*. Both of these species are described and illustrated on a uniform pattern and a key is provided for their separation.

Introduction

The genus *Hemathlophorus* was established by MALAISE (1945) taking *Athlophorus formosanus* ENSLIN as its type species. However, in 1947 he gave its detailed generic characters alongwith a brief description of the type species. In the present text, in addition to the type species, a new species *H. foveatus* is described and illustrated on a uniform pattern. With the addition of new species the generic characters have also been slightly modified.

The holotype will be submitted to Indian Agricultural Research Institute, Pusa National Collections, New Delhi, India.

Abbreviations used in the text are: EL – eye length, IATS – inner apical tibial spur, ICD – inter-cenchrif distance, IDMO – inter-ocular distance at level of median ocellus, ITD – intertigular distance, LID – lower inter-ocular distance, MB – metabasitarsus, OATS – outer apical tibial spur, OCL – ocello-occipital line, OOL – oculo-ocular line, POL – postocellar line.

Genus *Hemathlophorus* MALAISE, 1945

Hemathlophorus MALAISE, 1945: Opuscula Ent. Suppl. IV: 97; MALAISE, 1947: Ark. Zool. 39 A (8): 20–21.

Type species: *Athlophorus formosanus* ENSLIN, 1911.

Adult. – Long, impunctate and very slender insect. Hind orbits carinate. Frontal area laterally limited by sharp antennal furrows, but is otherwise ill-defined. Postocellar area subconvex, almost quadrate in outline, clypeus almost semicircularly incised. Labrum rather large, almost flat. Mandibles asymmetric. Antenna long and slender, joint 4 longer than each 3 and 5, apical 4 joints distinctly compressed. Thorax elongate, scutellum subconvex. Mesopleura not elevated below. Abdomen not constricted on

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2nd segment. Legs slender, metafemur shorter than metatibia, metabasitarsus longer than following tarsal joints combined. Claw with acute basal lobe and subapical tooth distinctly longer than apical one.

Forewings with 2 radial and 3 cubital cells, 2nd cubital cell much shorter. Basal vein subparallel to 1st recurrent vein and joins subcosta close to origin of cubitus. Nervulus joins medius rather near the origin of basalis. Anal cross vein long, oblique, joins brachius at an angle about 60° – 80° . Hindwing without closed middle cell. Anellan cell petiolate.

Remarks. – To introduce and accomodate a new species in this genus, some of its generic characters related with different furrows of the head region, structure of median fovea, various body ratios, level of frontal area etc. have been intentionally droped and are now considered at species level only.

Key to species of genus *Hemathlophorus* MALAISE

1. Clypeus subrectangularly incised; median fovea deep pit-like in its anterior end and clearly reaching median ocellus; postocellar area as long as broad; head narrowing behind eyes; OOL:POL:OCL = 3:2:3; IATS:MB = 1:2. *H. foveatus* spec. nov.
- Clypeus circularly incised; median fovea broadly shallowly indicated in the middle only; postocellar area longer than broad as 4:3; head parallel behind eyes; OOL:POL:OCL = 4:2:5; IATS:MB = 1:4. *H. formosanus* (ENSLIN, 1911)

Hemathlophorus foveatus spec. nov. (Figs. 1, 3, 5, 7)

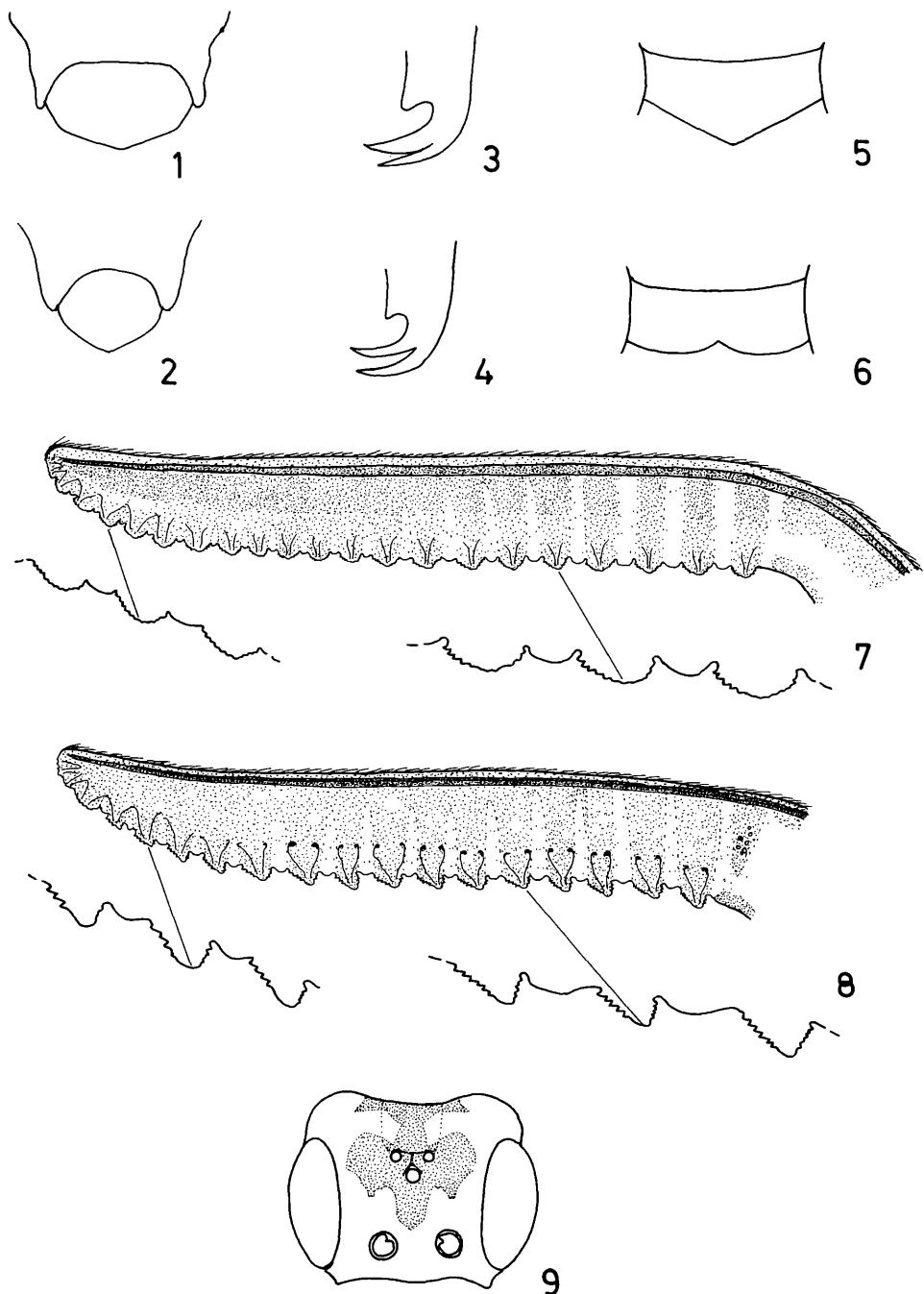
Female. – Colour: Head black, whitish are: clypeus, labrum, mandible barring apex; antenna fuscous, ferruginous are: scape, pedicel; whitish are: segments 7–9. Thorax black, whitish are: anterodorsal and posterolateral margins of pronotum, tegula, sagitated apex of mesonotal middle lobe, mesoscutellum, a small spot on anterodorsal and a broad spot on posterodorsal aspects of mesepisternum, extreme posterior margin of mesepimeron, metepimeron entirely; legs fulvous to ferruginous, fuscous are: extreme base of coxae of front four legs, ventral aspect except apical $\frac{1}{3}$ and dorsal aspect except apical $\frac{2}{3}$ of metacoxa, extreme apex of metatibia, metatrochanter except extreme apex and basal $\frac{1}{3}$; whitish are extreme apex of metabasitarsus and all following joints. Abdomen fuscous, fulvous are: anterior and posterior margins of tergites 2 and 3, posterior margins of tergites 4 and 5, a medial spot on posterior margin of tergite 8, sternites 2–5 entirely. Wings hyaline, costa and basal $\frac{1}{3}$ of stigma fulvous; subcosta, apical $\frac{2}{3}$ of stigma and rest of venation fuscous.

Structure: Length 7.5 mm. Antenna long, 2.9× head width; scape 2× its apical width; pedicel as long as its apical width; segment 3 shorter than 4 as 7:8; clypeus (Fig. 1) subrectangularly incised upto $\frac{1}{2}$ of its medial length; labrum (Fig. 1) with roundly pointed anterior margin, broader than long as 3:2; supraclypeal area convex; LID:IDMO:EL = 4:4:3; malar space 1× diameter of median ocellus; frontal area at level of eyes; supraantennal tubercles low lying and confluent with similar frontal ridges; median fovea deep pit-like in its anterior half and posteriorly distinctly reaching median ocellus; postocellar area subconvex; as long as broad; post-, inter- and circumocellar furrows sharp and distinct; lateral furrows excurred (bulging), distinct and ending well before hypothetical hind margin of head; head narrowing behind eyes; OOL:POL:OCL = 3:2:3; mesoscutellum subconvex; appendage neither carinated nor grooved; ICD:ITD = 1:4; metabasitarsus longer than following two joints combined as 4:3; IATS:MB:OATS = 2:4:1; tarsal claw (Fig. 3) with subapical tooth distinctly longer and stronger than apical one. Lancet (Fig. 7) having 22 serrulae. Hypopygium as in Fig. 5.

Sculpture and pubescence: Head and thorax impunctate, shining with general oily lustre; abdomen impunctate, subshining. Body covered with golden pubescence.

Male. – Not found.

Material examined. – Holotype: Female, Uttar Pradesh, Kalamunitop, 2700 m, 26.6.1991.



Figs. 1–9. 1, 3, 5, 6: *Hemathlophorus foveatus*; 2, 4, 6, 8, 9: *H. formosanus*. 1–2: clypeus & labrum; 3–4: tarsal claw; 5–6: hypopygium; 7–8: lancet; 9: head (colour pattern).

Distribution. – India: Uttar Pradesh.

Diagnostic combinations. – A combination of some significant characters such as clypeus subrectangularly incised (circularly incised in *formosanus*), median fovea deep pit-like (shallowly indicated in *formosanus*), postocellar area as long as broad (longer than broad in *formosanus*), general colour of head and thorax black (citrinus in *formosanus*), general colour of abdomen fuscous (citrinus in *formosanus*) keeps *H. foveatus* distinctly separated from its allied species *H. formosanus*.

Etymology. – Species name is after distinct pit-like median fovea.

***Hemathlophorus formosanus* (ENSLIN, 1911) (Figs. 2, 4, 6, 8, 9)**

Athlophorus formosanus ENSLIN, 1911: Soc. entomol. 25: 104.

Hemathlophorus formosanus (ENSLIN): MALAISE, 1945: Opusc. ent. Suppl. 4: 97; MALAISE, 1947: Ark. Zool. 39 A (8): 21.

Female. – Colour: Body citrinus, black are: antenna except a streak on outerside of first 3 segments, mandible apex more or less; a ‘club-ace’-shaped spot on the face and postocellar area, laterally not touching inner margins of eyes (Fig. 9); mesonotal middle lobe except extreme lateral margins and sagitated apex; mesonotal lateral lobe except posterior slopes; mesoscutellar appendage; a spot on anterodorsal aspect of mesepisternum; mesosternum entirely; a spot before and a spot behind metascutellum; an oval spot on dorsal aspect of metepimeron; propodeum except posteromesal margin; tergites 3, 4, 6 and 7 except anterior and broad posterior margins; medial rectangular longitudinal spot on tergite 8; ovipositor sheath; apical $\frac{1}{2}$ of ventral aspect of metacoxa; metafemur except a medial spot on dorsal aspect; apical $\frac{1}{2}$ of metatibia; apical 2 tarsi of all legs more or less. Wings hyaline; venation including costa, subcosta and stigma fulvous to fuscous.

Structure: Average length 7.0 mm. Antenna long, $3 \times$ head width; scape $2 \times$ its apical width; pedicel as long as its apical width; segment 3 shorter than 4 as 7:8; clypeus (Fig. 2) circularly incised upto $\frac{1}{2}$ of its medial length; labrum (Fig. 2) with pointed anterior margin, broader than long as 3:2; supraclypeal area convex; LID:IDMO:EL = 3:3:2; malar space $1 \times$ diameter of median ocellus; frontal area at level of eyes; supraantennal tubercles low lying and confluent with similar frontal ridges; median fovea broadly shallowly indicated; postocellar area subconvex, longer than broad as 4:3; postocellar furrow shallow; inter- and circumocellar furrows distinct; lateral furrows excurred (bulging), distinct and ending just before hypothetical hind margin of head; head parallel behind eyes; OOL:POL:OCL = 4:2:5; mesoscutellum subconvex; mesoscutellar appendage neither carinated nor grooved; ICD:ITD = 1:4; metabasitarsus longer than following 2 joints combined as 2:1; IATS:MB:OATS = 1:4:1; tarsal claw (Fig. 4) with a subapical tooth equally strong but slightly longer than apical one. Lancet (Fig. 8) with 16 serrulae. Hypopygium as in Fig. 6.

Sculpture and pubescence: Head, thorax and abdomen impunctate, shining. Body covered with silvery pubescence.

Male. – Not found.

Material examined. – Arunachal Pradesh, Bomdila, 2500 m, (4♀♀) 1.6.1989, (1♀) 9.5.1992. Nagaland, Akuiuto, 1500 m, (1♀) 10.5.1994.

Distribution. – Burma; Formosa; India: Arunachal Pradesh, Nagaland.

Diagnostic combinations. – Characters distinguishing *H. formosanus* from *H. foveatus* are discussed under the latter. The specimens run smoothly in MALAISE’s (1945) key and comply well with the available description of MALAISE (1947).

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