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Taxonomic notes on Indian species of *Echthroplexis* Förster
(Hymenoptera: Encyrtidae), with descriptions of two new species

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Echthroplexis FÖRSTER is accepted as valid genus. *Mashhoodiella* HAYAT is synonymised with *Echthroplexis* FÖRSTER. Other generic synonymy is quoted. Authors who synonymised the genera are cited in brackets after authors of genera. Six new combinations (*E. albiclavatus* [AGARWAL] comb. n., *E. albiscutellaris* [KHAN] comb. n., *E. echthromorpha* [HAYAT] comb. n., *E. ferrierei* [HAYAT *et al.*] comb. n., *E. indicus* [AGARWAL] comb. n., and *E. nigrinus* [AGARWAL] comb. n.) are established. Two new species: *E. tumkurensis* sp. n. and *E. longipedicellus* sp. n. are described and illustrated. Types deposited in Zoological Museum, Aligarh Muslim University, Aligarh, India.

Genus *Echthroplexis* FÖRSTER

Echthroplexis FÖRSTER, 1856: 33.

Type-species: *Coenocercus puncticollis* THOMSON.

Homalotylus MAYR, 1876: 752 (DE SANTIS, 1963: 162).

Type-species: *Encyrtus flaminus* DALMAN.

Nobrimus THOMSON, 1876: 137 (DE SANTIS, 1963: 162).

Type-species: *Encyrtus flaminus* DALMAN.

Mendozaniella BRETHES, 1913: 97 (TIMBERLAKE, 1919: 134).

Type-species: *Mendozaniella mirabilis* BRETHES.

Hemaenasioidea GIRAULT, 1916: 307 (TIMBERLAKE, 1919: 134).

Type-species: *Hemaenasioidea oculata* GIRAULT.

Lepidaphycus BLANCHARD, 1936: 13 (BLANCHARD, 1941: 16).

Type-species: *Lepidaphycus bosqi* BLANCHARD.

Neoaenasioidea AGARWAL, 1966: 71 (HAYAT *et al.*, 1975: 64).

Type-species: *Neoaenasioidea indica* AGARWAL.

Mashhoodiella HAYAT, 1972: 209. Syn. n.

Type-species: *Mashhoodiella echthromorpha* HAYAT.

Comments: HAYAT (1972) separated his genus *Mashhoodiella* from *Homalotylus* MAYR and *Isodromus* HOWARD on the basis of length and separated condition of funicle segments and length of fore wing venation etc. which are of specific value. Therefore, *Mashhoodiella* is treated here as synonym of *Echthroplexis* FÖRSTER.

Echthroplexis albiclavatus (AGARWAL) Comb. n.

Neoaenasioidea albiclavatus AGARWAL, 1970: 27.

Homalotylus albiclavatus (AGARWAL); HAYAT *et al.*, 1975: 69.

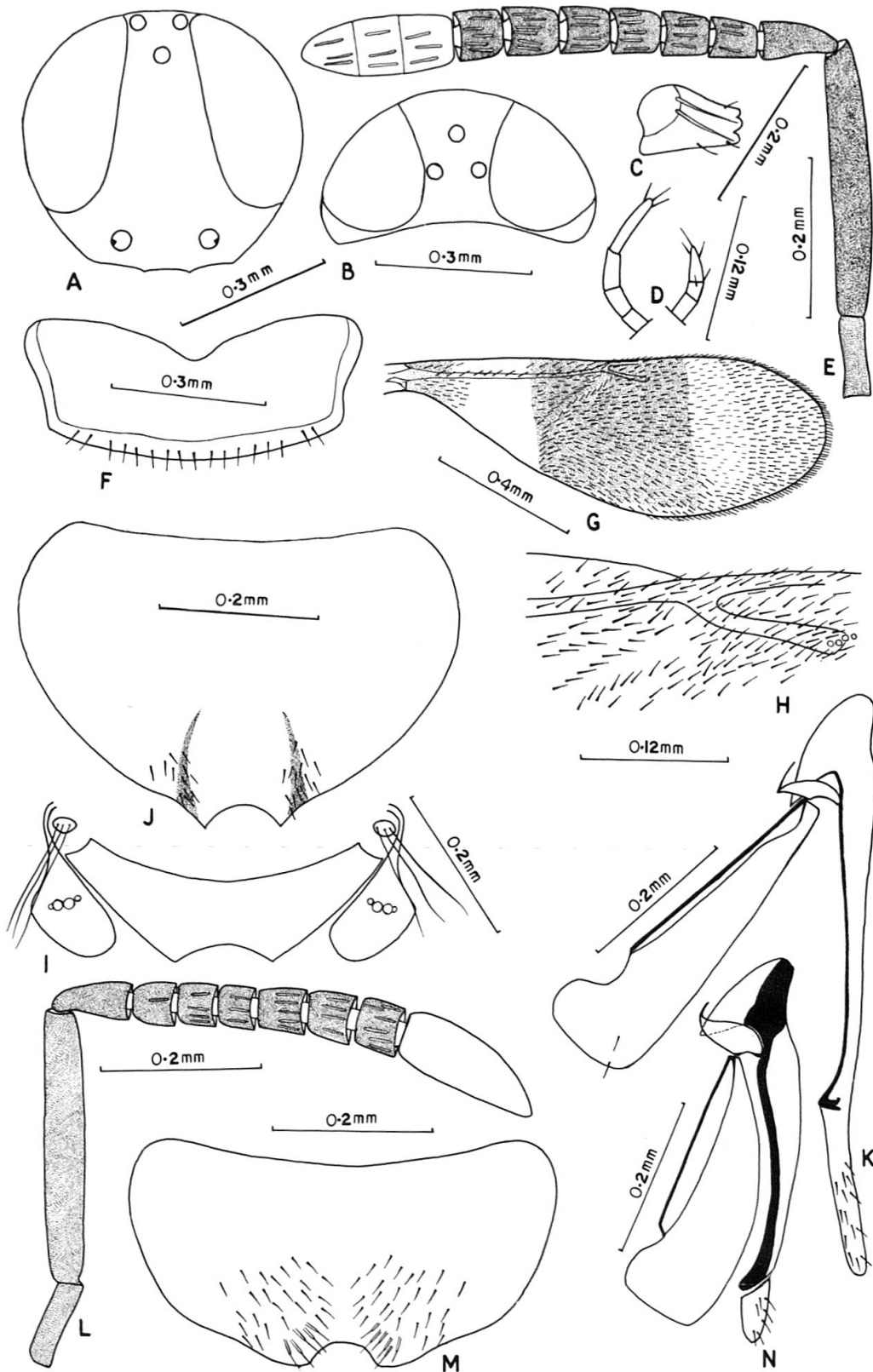


Fig. 1: A-K. *Echthroplexis nigrilus* (AGARWAL), ♀.
 (A) Head, facial view; (B) Head, dorsal view; (C) Mandible; (D) Maxillary and labial palpi; (E) Antenna; (F) Pronotum; (G) Fore wing; (H) Part of fore wing venation; (I) Apex of abdomen, dorsal view; (J) Subgenital plate; (K) Part of external genitalia.
 L-N. *Echthroplexis flaminus* (DALMAN) ♀.
 (L) Antenna; (M) Subgenital plate; (N) Part of external genitalia.

Host: Coccinellid larvae predaceous on coccids, *Pseudococcus* sp., *Nipaecoccus vastator* (MASKELL), *Centrocooccus insolitus* (GREEN).

Distribution: INDIA: Shencottah, Shoranur, Joginder Nagar, Lakhimpur kheri, Aligarh.

Echthroplexis albiscutellaris (KHAN) Comb. n.

Neoaenasioidea albiscutellaris KHAN, 1976: 181.

Host: Aphid

Distribution: INDIA: Aligarh.

Echthroplexis echthromorpha (HAYAT) Comb. n.

Mashhoodiella echthromorpha HAYAT, 1972: 210.

Host: *Ceroplastes* sp.

Distribution: INDIA: Aligarh.

Echthroplexis ferrierei (HAYAT *et al.*) Com. n.

Homalotylus ferrierei HAYAT *et al.*, 1975: 67.

Host: Coccinellid larvae on *Cerococcus* sp.

Distribution: INDIA: Nasik.

Echthroplexis flaminus (DALMAN) (Fig. 1 L-N)

Encyrtus flaminus DALMAN, 1820: 340.

Echthroplexis flaminus (DALMAN); DE SANTIS, 1963: 164.

Material examined. – 10 ♀, 2 ♂, INDIA: Andhra Pradesh, Guntur, 10.VIII.1968, ex coccinellid larvae predaceous on *Nipaecoccus vastator* (MASKELL) on *Solonum* sp. (S. ADAM SHAFEE).

Echthroplexis indicus (AGARWAL) Com. n. (Fig. 2 D-F)

Neoaenasioidea indica AGARWAL, 1966: 73.

Homalotylus indicus (AGARWAL); HAYAT *et al.* 1975: 67.

Host: Coccinellid larvae on *Rastrococcus iceryoides* (GREEN).

Distribution: INDIA: Shoranur, Aligarh.

Echthroplexis longipedicellus sp. n. (Fig. 2 B, C)

Female.

Head dark with bluish green reflections, slightly longer than wide in facial view; frontovertex slightly more than twice as long as wide; ocelli red, arranged in acute triangle, lateral ocellus close to eye margin and separated by four times its diameter from occipital margin; eyes silvery white; malar space as long as eye width; maxillary and labial palpi 4 and 3 – segmented respectively; mandibles tridentate. Antennae (Fig. 2 B) dark except sixth funicle segment and club white; scape cylindrical, six and a half times as long as wide; pedicel slightly more than three times as long as wide, as long as following two funicle segments together; funicle segments 1-6 gradually decreasing in length distad; first funicle segment slightly less than twice as long as wide, sixth as long as wide; club unsegmented, obliquely truncated at apex, as long as preceding three funicle segments together.

Thorax dark; mesoscutum with white and scutellum with dark small hairs. Forewings hyaline with a broad infuscated patch medially; marginal vein as long as wide, stigmal vein longer than marginal and postmarginal veins together; marginal fringe short. Legs dark except tibial spur and basal four tarsal segments white; middle tibial spur as long as basitarsus.

Abdomen dark, about as long as thorax; subgenital plate reaching apex of abdomen; ovipositor concealed, arising from basal one-third of abdominal venter; third valvulae short (Fig. 2 C).

Body length: 2.5 mm.

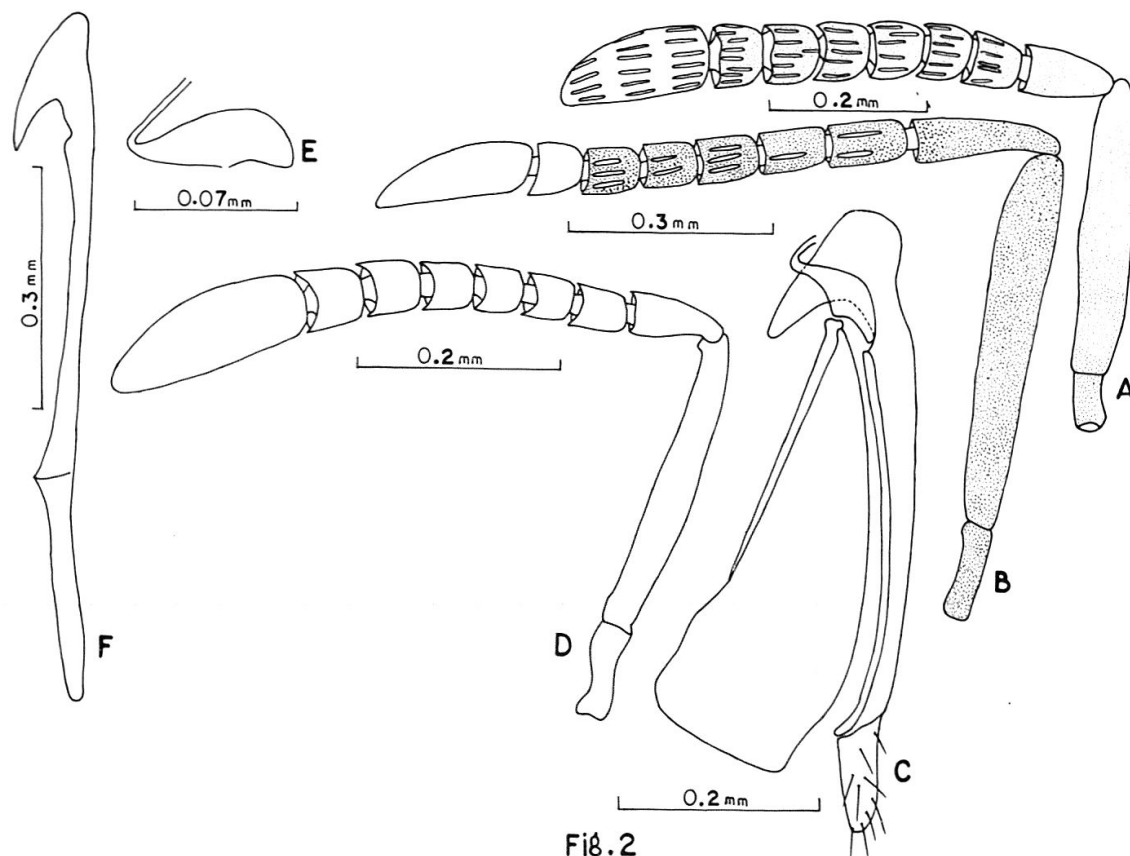


Fig. 2: A. *Echthroplexis tumkurensis* sp. n., ♀: Antenna.
 B, C. *Echthroplexis longipedicellus* sp. n., ♀.
 (B) Antenna; (C) Part of external genitalia.
 D-F. *Echthroplexis indicus* (AGARWAL), ♀.
 (D) Antenna; (E) First valvifer; (F) Second valvifer with third valvula.

Comments: In the key to species of *Homalotylus* MAYR given by HAYAT *et al.* (1975) *E. longipedicellus* sp. n. runs close to *E. flaminus* (DALMAN), from which it can be separated by its having antennae with sixth funicle segment white, pedicel more than three times as long as wide, funicle segments 1-5 distinctly longer than wide.

Holotype ♀, 4 ♀ Paratypes, INDIA: Uttar Pradesh, Aligarh, University campus, ex *Coccinellid* larvae feeding on *Aonidiella orientalis* (Newstead), on *Dalbergia sissoo*, 12.IX.1981 (ANIS FATMA).

Echthroplexis nigrinus (AGARWAL) Comb. n. (Fig. 1 A-K)

Neoaenasioidea nigrinus AGARWAL, 1970: 27.

Homalotylus nigrinus (AGARWAL); HAYAT *et al.*, 1975: 65.

Material examined. - 4♀, INDIA: Uttar Pradesh, Aligarh, University campus, ex Coccinellid larvae predaceous on Coccids, on *Dalbergia sissoo* 4.X.1983 (ANIS FATMA).

Echthroplexis terebratus HAYAT *et al.*

Echthroplexis terebratus HAYAT *et al.*, 1975: 69.

Host: *Nipaecoccus vastator* (MASKELL).

Distribution: INDIA: Ranipet.

Echthroplexis tumkurensis sp. n. (Fig. 2 A)

Female.

Head reddish brown, slightly longer than wide in facial view; frontovertex about twice as long as wide; ocelli white, arranged in equilateral triangle, lateral ocellus separated by twice its diameter from occipital margin and close to inner orbital margin; antennae inserted below lower level of eyes, inter-antennal space as wide as width of frons between eyes at median ocellus; malar space as long as eye width. Antennae (Fig. 2 A) yellowish brown except club white; scape cylindrical, slightly more than five times as long as wide; pedicel slightly less than twice as long as wide, distinctly longer than first funicle segment; funicle segments 1-6 gradually increasing in width distad, first as long as wide, sixth slightly wider than long; club entire, obliquely truncated apically, as long as preceding three funicle segments together.

Thorax reddish brown; mesoscutum with complete parapsidal furrows meeting medially on scuto-scutellar suture; mesoscutum and scutellum with numerous small setae. Forewings hyaline except broad infuscated patch medially; marginal vein very short, postmarginal vein shorter than stigmal vein. Hind wings hyaline. Legs reddish brown except tibial spur and tarsal segments of middle legs white; mid tibial spur as long as basitarsus.

Abdomen reddish brown, slightly shorter than thorax; cerci present on apical one-third of abdominal dorsum; ovipositor hidden, arising from basal half of abdominal venter.

Body length: 1.6 mm.

Comments: The new species is more closely related to *Echthroplexis indicus* (AGARWAL), from which it can be separated by having unexserted ovipositor, legs uniformly reddish brown except tibial spur and tarsal segments of middle legs white.

Holotype ♀, INDIA: Tumkur, ex Coccinellid larvae feeding on *Coccus* sp., on *Mangifera indica*, 5.VII.1968 (S. ADAM SHAFEE).

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