

## A NEW SPECIES OF *LEPTOMASTIX* (HYMENOPTERA : ENCYRTIDAE) FROM GARHWAL

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ABSTRACT. A new species of *Leptomastix* Foerster (Hymenoptera : Encyrtidae) recorded from Garhwal (Uttar Pradesh), India is described. A key to the described Indian species is given.

### Genus *Leptomastix* Foerster

*Leptomastix* Foerster, 1856, *Hym. Stud.*, 2 : 34; Mayser, 1875, *Verh-Zool—Bot. Ges. Wien*, 25 : 729; Thomson, 1875, *Hym. Scan.*, 4 : 128 (*Stenoterys*); Ashmead, 1900, *Proc. U.S. Natl. Mus.*, 22 : 335-350; Mercet, 1921, *Fauna Iberica. Hymenopteros fam. Encyrtidos*, p. 119; Compere, 1928, *Univ. Calif. Pubs. Ent.*, 4 : 209; Compere, 1938, *Bull. Ent. Res.*, 29 (3) : 325 (key to the African species); Nikolskaya, 1952, *Fauna USSR, Moscow*, 44 : 153; Risbec, 1952, *Mem. Inst. Sci. Madagascar*, (E) 2 : 15; Ferriere, 1953, *Mitt. Schweiz. Ent. Ges.*, 26 : 1-45; Erdos & Novicky, 1955, *Beitr. zur. Ent.*, 5 : 165-202; De Santis, 1963, *Ann. Comm. Invest. Cient. Prov. Bs. Aires*, 4 : 84; Peck, Boucek & Hoffer, 1964, *Mem. Ent. Soc. Canada*, 34 : 63 (key to Encyrtidae); Trjapitzin, 1971, *Trudy Ent. Vses. Obshch*, 68 : 119; Shafee, 1971, *Bull. Ent.*, 12 (1) : 48; Hayat, Alam & Agarwal, 1972, *Alig. Musl. Univ. Publ. (Zool. Ser.) Ind. Ins. Types.*, 8 : 14; Khan, Yunus, & Shafee, 1975, *Geobios*, 2 : 193 (Indian species).

The genus can be easily recognized by its long antennae, pedicel shorter than the following funicle segment, tenth tergum of female enormously enlarged and covering greater part of abdomen, paratergites long and narrow. Characters proposed by Agarwal (1965) for the differentiation of the genus apply well to the Indian species. So far nine species have been reported from India. A new species is here described. All the measurements are in millimetres.

### KEY TO INDIAN SPECIES OF *LEPTOMASTIX* BASED ON FEMALES

1. Middle coxae yellow . . . . . 2  
Middle coxae black or brown . . . . . 6
2. Scape as long as or shorter than basal two funicle segments combined . . . . . 3  
Scape longer than basal two funicle segments combined, first funicle segment less than three times as long as wide and slightly longer than pedicel. . . . .  
. . . . . *L. salemensis* Hayat, Alam & Agarwal

3. Fore wing hyaline . . . . . 4  
 Fore wing uniformly infuscated, less than four times longer than wide. Post marginal vein as long as stigmal vein. Club distinctly shorter than first funicle segment. . . . . **L. singularis** Shafee
4. Ocelli in an obtuse angle triangle, basal ocellus 1.33 from eye and less than twice its diameter from occipital margin. Scape as long as basal two funicle segments combined . . . . . **L. dactylopii** Howard  
 Ocelli in an equilateral triangle, basal ocellus twice its diameter from eye and equal to its diameter from occipital margin. Scape shorter than basal two funicle segments combined. . . . . 5
5. Scape four and a half times longer than wide. Costal cell broad. Marginal vein distinctly shorter than post marginal vein, postmarginal vein twice the length of stigmal vein . . . . . **L. gunturiensis** Shafee  
 Scape about four times longer than wide. Costal cell narrow. Marginal vein longer than postmarginal vein, postmarginal vein about one and a half times longer than stigmal vein . . . . . **L. brevipedicelus** Yunus & Shafee
6. Club shorter than preceding two funicle segments combined. Scape shorter than basal two funicle segments combined . . . . . 7  
 Club as long as or longer than preceding two funicle segments combined. Scape longer than basal two funicle segments combined. . . . . 8
7. Scape about five times as long as wide; pedicel almost twice as long as wide, about two third of first funicle segment; axillae yellow; scutellum yellow; sub-marginal vein with 16 setae. . . . . **L. nigrocoxalis** Compere  
 Scape about seven times as long as wide; pedicel two and a half times as long as wide, less than half the length of first funicle segment; axillae dark brown; scutellum yellowish brown; sub-marginal vein with 18 setae . **L. longicornis** Yunus & Shafee
8. First funicle three times as long as wide, club longer than preceding two funicle segments combined; marginal and post marginal vein sub equal in length, each longer than stigmal vein; axillae reddish brown. . . . . 9  
 First funicle segment three and a half times as long as wide, club as long as preceding two funicle segments combined; marginal vein longer than post marginal and stigmal vein separately; axillae dark brown . . . . . **L. aligarhensis** Yunus & Shafee
9. Scape five times as long as wide; pedicel nearly twice as long as wide; width of frontovertex twice the length of first funicle segment; scutellum with a central elongated brown patch; speculum interrupted behind by four rows of discal setae; middle tibial spur as long as basitarsus, apical rim of tibia & tarsal segment 1-4 with 6, 7, 4, 5 & 2 pegs respectively . . . . . **L. brevis** Hayat, Alam & Agarwal  
 Scape six times as long as wide, pedicel two and a half times as long as wide; width of frontovertex less than twice the length of first funicle segment; scutellum without elongated brown patch; speculum interrupted behind by two rows of discal setae; middle tibial spur longer than basitarsus, apex of tibia & tarsal segment 1-4 with 9, 14, 6, 5 & 4 pegs respectively. . . . . **L. longiscapus**, sp. nov.

**Leptomastix longiscapus**, sp. nov. (Figs. 1-8)

*Female* : Head orange yellow, with a blackish patch on either side of occiput behind the eyes, wider than long in facial view (0.7 : 0.56); frontovertex slightly longer than wide (0.37 : 0.27), width of frontovertex less than twice the

length of first funicle segment, sparsely setose; ocelli in equilateral triangle; basal ocellus close to the occipital margin and removed from eye rim by a distance less than three times diameter of an ocellus; eyes bare; malar space shorter than transverse diameter of eye (0.16 : 0.2); antennal sockets removed from facial margin by a distance greater than the length of socket and close to oral margin than to the orbits; mandible bidentate (Fig. 1) both the teeth pointed and with seven long setae; maxillary palpi four segmented; labial palpi three segmented. *Antennae* (Fig. 2) Brownish black; scape yellowish ventrally and brownish dorsally, scape six times as long as wide (0.36 : 0.05) and longer than first two funicle segments combined; pedicel two and a half times as long as wide (0.11-0.04); first funicle segment three times as long as wide and shorter than second funicle segment, rest of the funicle segment decrease in length distad, of uniform width, sixth segment slightly wider; club three segmented three times as long as wide, longer than preceding two funicle segments united.

*Thorax* : Yellowish; pronotum with a long brown patch in the middle, anterior margin concave, acutely notched in the middle, posterior margin with 18 pairs of setae, mesonotum reticulate; axillae reddish brown, broadly contiguous in the middle, each axilla with nine prominent setae, scutellum wider than long (0.32 : 0.29), 3 long and brown setae near apex; mesopostphragma without notch at apex. *Wings* : Fore wings hyaline, three times as long as wide (1.71 : 0.57), marginal and post marginal veins subequal in (0.15 : 0.14), (Fig. 3); speculum interrupted behind by two rows of discal setae, marginal fringe short. Hind wings hyaline with long marginal fringe.

*Legs* : Pale yellow, fore coxae, with three long setae on outer face of distal half middle coxae brown, tarsi yellowish brown, tibial spur of middle leg longer than basitarsus (Fig. 4); apical rim of tibia and tarsal segment 1-4 with 9, 14, 6, 5 & 4 pegs respectively.

*Abdomen* : Dorsum brownish, longer than thorax (0.75 : 0.63), cercal plates situated at basal third, tenth tergum enormously enlarged, covering greater part of abdomen; paratergites long and narrow, ovipositor concealed; subgenital plate large (Fig. 5), posterior margin notched in the middle, anterior margin slightly concave; outer plates of ovipositor small (Fig 6) subtriangular, broad at base and narrow at distal end with ridge along dorsal margin; first valvifer semicircular with base little concave, articulated knobs prominent; second valvifer with dorsal margin thickened throughout; third valvulae subconical, imperceptibly articulated with second valvifer.

*Female length* : 1.94 mm.

*Male* : Resembles female except for the following differences : Mandible short with 11 small setae (Fig. 7), pedicel as long as wide, funicle segments with long and straight hairs, club unsegmented; as long as preceding two funicle segments combined (Fig. 8).

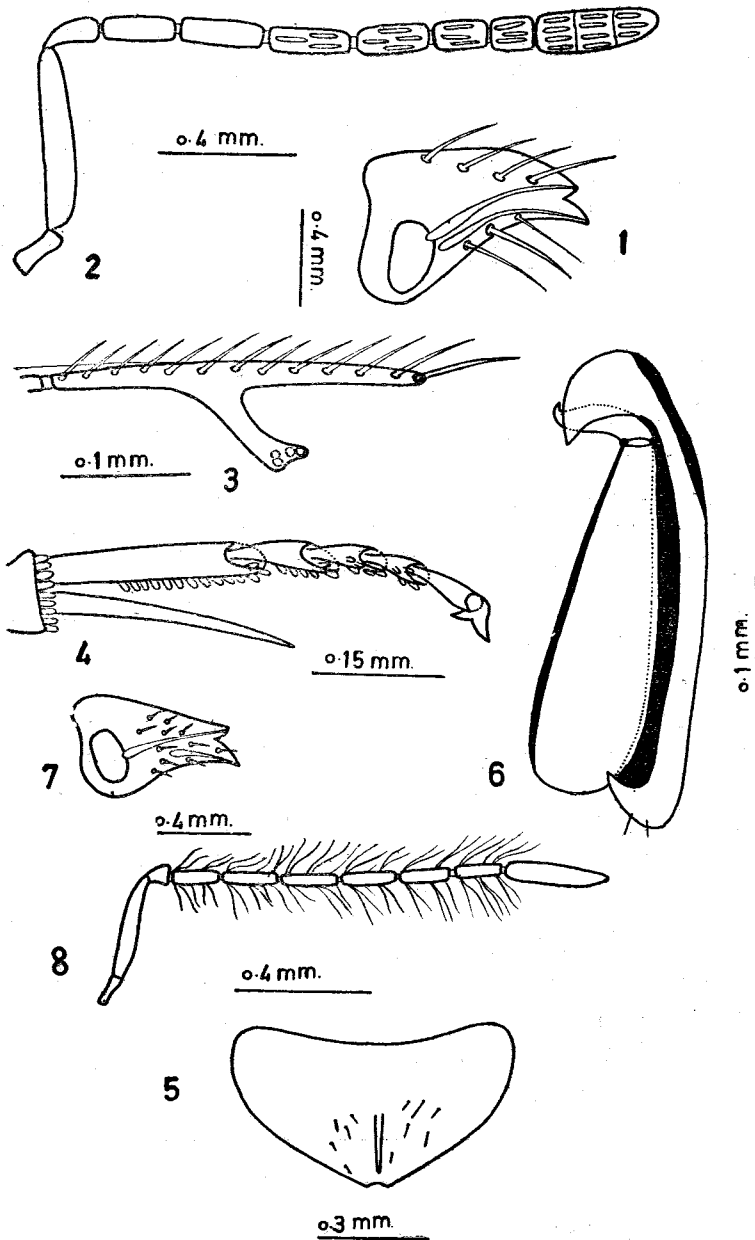
*Male length* : 0.91 mm.

*Holotype* ♀, *paratypes* 10♀ & 5 ♂♂, INDIA : UTTAR PRADESH : Garhwal, ex coccid on citrus sp., 5.ix.1975, Majid Ali Khan (Types in Zoological Museum, A.M.U., Aligarh).

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Figs. 1-8. *Leptomastix longiscapus* : 1, Mandible ♀; 2, Antenna, ♀; 3, Part of Fore wing venation ♀; 4, Part of Middle leg, ♀; 5, Subgenital plate, ♀; 6, Ovipositor, ♀; 7, Mandible, ♂; 8, Antenna, ♂.