



Research Note

First report of *Lohiella longicornis* (Noyes & Hayat) (Hymenoptera: Chalcidoidea: Encyrtidae) from India with a key to Indian species

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ABSTRACT: The encyrtid species, *Lohiella longicornis* (Noyes & Hayat) is reported for the first time in India and the male of the species is described. A key to the Indian species of *Lohiella* is provided along with host details.

KEY WORDS: Encyrtidae, *Lohiella longicornis*, description, male, key to species

(Article chronicle: Received: 03-01-2013; Revised 09-03-2013; Accepted: 10-03-2013)

The genus *Lohiella* Noyes (1980), erected with *Encyrtus flaviclavus* Howard as the type species, is known to be distributed in India, China, Hong Kong and Costa Rica (Noyes, 2012). *Philosindia* Noyes & Hayat (1984), established with the type species *P. longicornis*, was later synonymised with *Lohiella* by Noyes (2010). At present, there are 14 species worldwide under *Lohiella* (Noyes, 2012), with only *L. inglisiae* Hayat (2003) known from India. In this paper, *Lohiella longicornis* (Noyes & Hayat) is reported for the first time from India (Karnataka), as a parasitoid of *Drepanococcus chiton* (Green) (Hemiptera: Coccidae). Further, a description of the hitherto undescribed male of this species and a key to both sexes of the Indian species of *Lohiella* are provided. The specimens are deposited in the reference collections of the National Bureau of Agriculturally Important Insects (NBAII), Bangalore. All measurements were taken directly from the divisions of an ocular micrometer and images were taken from Leica M205A stereo microscope and stacked using Combine ZP.

***Lohiella longicornis* (Noyes & Hayat)** (Figs. 1–6)

Philosindia longicornis Noyes & Hayat, 1984: 324–325, female. Hong Kong, Taipakau.

Lohiella longicornis: Noyes, 2010: 630.

Description

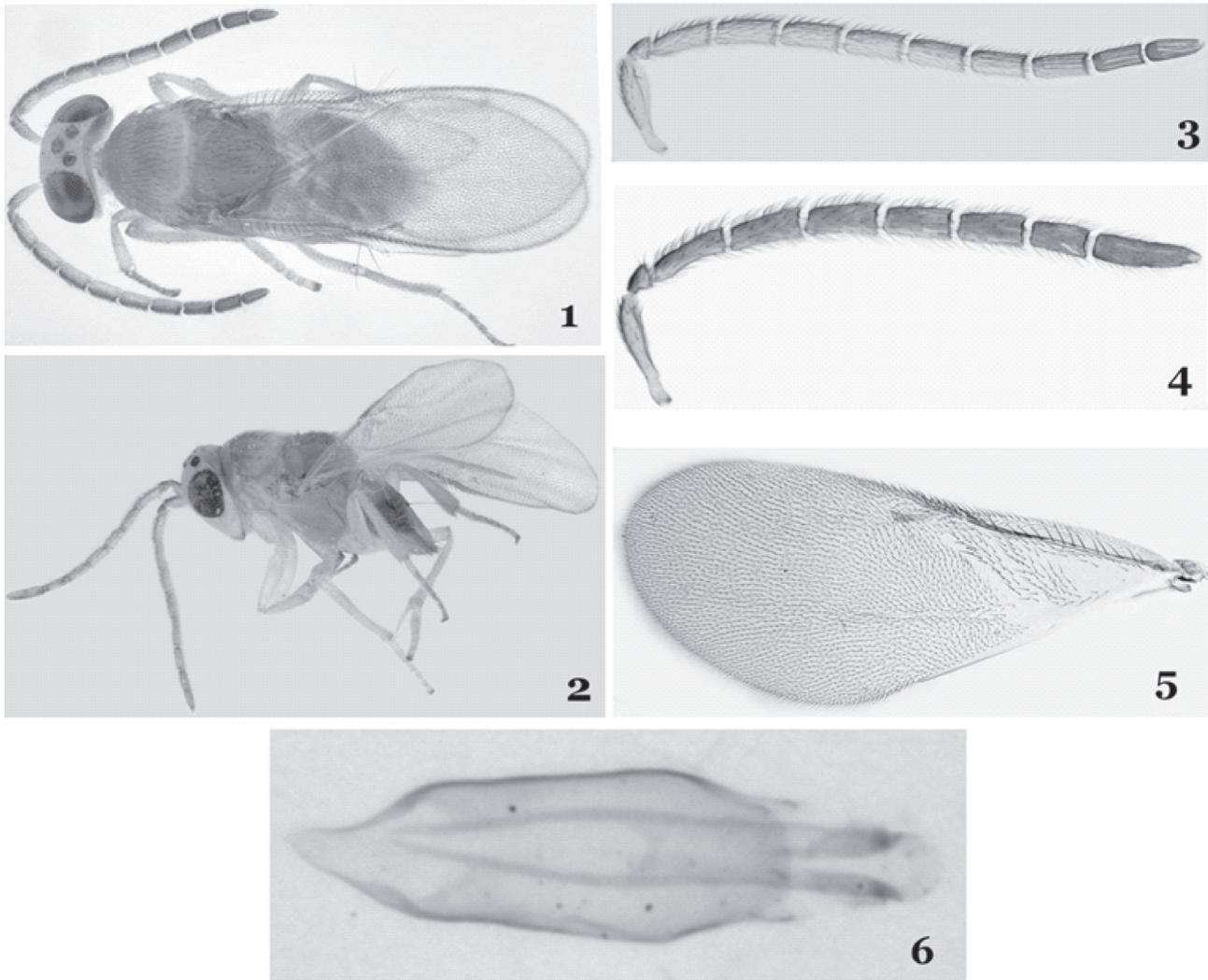
Male (Fig. 2): Length: 1.30–1.40 mm. Body generally yellowish orange as in female. Head lemon yellow; eyes black; gaster a little darker; legs including coxae yellowish

white; distal half of mandible reddish brown; distal half of mesoscutum pale yellowish; wings hyaline, venation of fore wing testaceous yellow.

Head. Frontovortex 0.5× head width in frontal view; head 1.06× wider than high in frontal view; malar space slightly shorter than eye length; eyes almost touching occipital margin posteriorly; posterior ocelli much closer to occipital margin than eye margin; head with hexagonal sculpture in occipital region and elongated polygonal sculpture in rest; antennal toruli situated higher on head, height of a torulus 0.53 of distance between a torulus and mouth margin. Antenna 10-segmented (Fig. 4); scape 2.32× as long as wide, shorter than frontovortex width; pedicel subquadrate, 0.3× as long as scape; funicle segments subequal or gradually shortened distally; clava 2-segmented, 3.9× as long as broad, shorter than preceding 2 segments combined. Mandible with two teeth and a truncation. Maxillary palp long, four-segmented; labial palp 3-segmented.

Mesosoma subequal to metasoma, 1.2× as long as wide; dorsum of mesoscutum with reticulate sculpture, shallower than on scutellum. Fore wing 2.46× as long as broad; longest marginal fringe 0.06 × wing width. Hind wing 3.5× as long as broad. Mid basitarsus as long as mid tibial spur, the latter 0.34× mid tibial length.

Metasoma. Genitalia (Fig. 6) with short digiti and each digitus with a denticle; phallobase long, with short parameres.



Figs. 1–6. *Lohiella longicornis*: 1. Female; 2. Male; 3. Antenna, female; 4. Antenna, male; 5. Fore wing, female; 6. Male genitalia

Relative measurements (all measurements taken at 10× except antenna and marginal fringe, 40×): Head [frontal] width (height), 48 (45); frontovertex width, 26; eye height, 25; malar space, 18; antennal toruli height, 8; distance between antennal toruli, 6; distance between a torulus and mouth margin, 15; radicle length, 20; length and width of scape, 66 (15); pedicel, 20 (18); F1, 56 (18); F2, 52 (20); F3, 51 (22); F4, 49 (22); F5, 47 (22); F6, 42 (21); clava, 78 (20); mesosoma length (width), 70 (58); fore wing length (width), 150 (61); longest marginal fringe length, 14; hind wing length (width), 91 (26); mid tibia length, 52; mid tibial spur length, 18; mid basitarsus length, 16; metasoma length (width), 75 (45); genitalia length, 16; phallobase length, 10.

Female: The female of this species was described in detail by Noyes and Hayat (1984). A photograph of the female is provided here (Fig. 1).

Distribution: China: Hong Kong (Noyes and Hayat, 1984; Noyes, 2012). India (**new record**): Karnataka.

Host: *Drepanococcus chiton* (Green) (Hemiptera: Coccidae) (**new host record**). Hosts unknown for the types from Hong Kong.

Material examined: INDIA: Karnataka, Bengaluru, Hebbal, 25.ix.2012, ex. *Drepanococcus chiton* (Green) on indet. weed, Sunil Joshi, 15 females, 17 males (NBAIL).

Comments: Noyes and Hayat (1984) have described the female of *L. longicornis* in detail. The male of *L. longicornis* is similar to the female in most of the features except for the following: antennae 10-segmented with 6-segmented funicle and 2-segmented clava, flagellum uniformly yellowish brown (in female, antenna is 11-segmented (Fig. 3) with an undifferentiated, nine-segmented flagellum, dorsal surface of flagellar segments

1-7 and whole of two apical flagellar segments brownish). *Drepanococcus chiton* has been recorded earlier as a host of an unidentified species of *Lohiella* (Noyes, 2012).

Key to Indian species of *Lohiella*

1. Antenna with flagellum 9-segmented, clava either 3-segmented or undifferentiated from funicle (Female)2
 - Antenna with flagellum 7- or 8-segmented, clava solid or 2-segmented (Male)3
2. Clava not differentiated from funicle; scape 2.76× as long as broad; flagellum clearly longer than twice head width; postmarginal vein 1.5× as long as stigmal; ovipositor slightly shorter than mid tibia; scape with only dorsal margin brownish *longicornis* (Noyes and Hayat)
 - Clava 3-segmented, compact; scape about 2× as long as head; flagellum not quite twice as long as head width; postmarginal vein slightly longer than stigmal; ovipositor longer than mid tibia; scape dark brown in basal half *inglisiae* (Hayat)
3. Clava 2-segmented; scape with only dorsal margin brownish; fore wing 2.46× as long as broad *longicornis* (Noyes and Hayat)
 - Clava solid; scape in about basal half pale brown; fore wing 2.16× as long as broad *inglisiae* (Hayat)

ACKNOWLEDGEMENT

This work was carried out under the Network Project on Insect Biosystematics funded by the Indian Council of Agricultural Research, New Delhi. Thanks are due to Dr. Mohammad Hayat, Aligarh Muslim University, for confirming the identity of the parasitoid.

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