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Description of a new species of *Centrodora* FOERSTER, with notes on some other aphelinids (Hymenoptera: Chalcidoidea)

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A new species of the aphelinid genus *Centrodora* FOERSTER (*C. lineascapa*, sp. n.) is described from material collected in Aligarh, India. *Azotus qadrii* AGARWAL and *Eretmocerus gunturiensis* HAYAT are considered valid species and replacement names are provided for two secondary homonyms in the genera *Centrodora* and *Coccophagus*.

Genus *Centrodora* FOERSTER

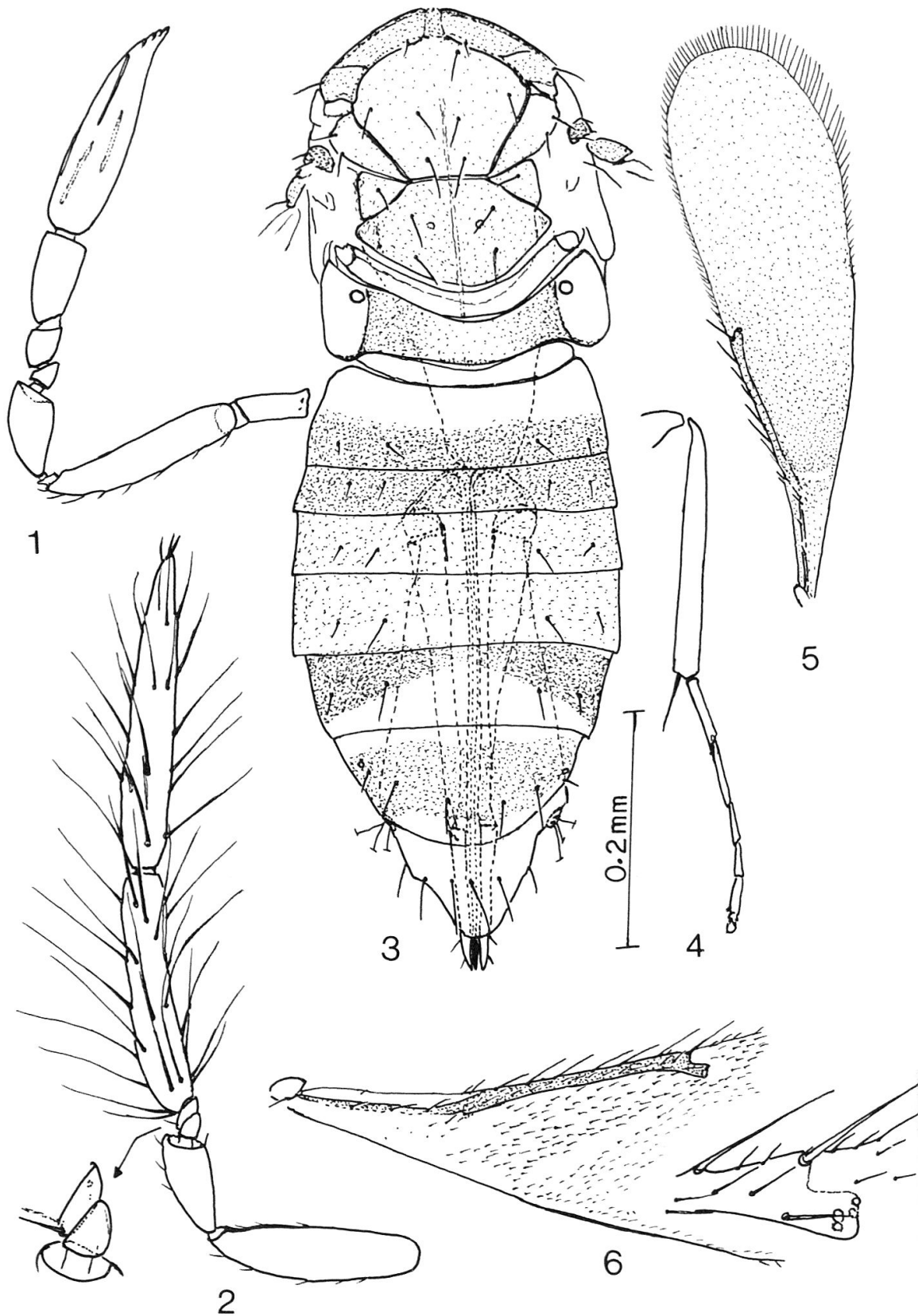
HAYAT (1983) should be consulted for synonyms of this genus. The genus contains 40 species from the world. The new species described here appears to belong to a group characterized by a more or less distinct linea calva in the forewing; antennal clava, in female, with apex acuminate and slightly curved ventrad; and the male antenna with the basal two segments of funicle minute and anelliform, and the third segment elongate, slightly shorter than clava and both provided with very long setae. To this group belong eight species: *oophaga*, *locustarum*, *xiphidii*, *amoena*, *dorsati*, *hexatracha*, *speciosissima* and *lineascapa* sp. n. *C. haeckeli* (GIRAULT), 1913: p. 181) comb. nov. from *Aphelinus*, probably also belongs to this group (I have seen the type female).

Centrodora lineascapa sp. n.

Female. Length, approx. 0.9 mm (holotype); one paratype, 0.77 mm.

Body mostly yellowish to pale brown yellow; facial area pallid, malar space dusky; thorax pale orange yellow, pronotum except sides, brownish; mesoscutum and scutellum suffused with brown and with a median longitudinal pale line; propodeum suffused brownish on each side mesad of spiracle; pleura pallid with pale dusky suffusions; gaster pallid with faint brown suffusions above, posterior half of tergum I, whole of tergum II, large patches on tergum V and most of tergum VI brown; last tergum and ovipositor sheaths (= third valvulae) pallid (Fig. 3). Antennal scape and pedicel pallid with some dusky suffusions; funicle faintly suffused with dusky and clava nearly brownish. Forewing hyaline below submarginal vein, rest of disc with a infuscation which gets paler distad (Fig. 5). Hindwings hyaline. Legs pale with indefinite brownish suffusions.

Frontovertex, at narrowest, about one-third the width of head and at level of front ocellus, nearly half the head width; in front view, about one-eighth broader than high; setae on frontovertex dark brown and each about half the length of those on mid lobe of mesoscutum; eyes with pale setae; ocelli with apical angle strongly obtuse, the lateral ocelli almost touching eye margins; malar sulcus (= subocular suture) distinct; antennal toruli with their upper margins al-



Figs. 1–6. *Centrodora lineascapa* sp. n.: (1) Antenna, female; (2) Antenna with basal two funicle segments enlarged, male; (3) Thorax and gaster, dorsal; (4) Mid tibia and tarsus, drawn on same scale as Fig. 3; (5) Forewing showing infuscation, female; (6) Basal half of forewing showing setation and with distal veins enlarged and shown separately. Figs. 3–6 are from the holotype, 1 and 2 from paratypes.

most in line or slightly below a line drawn across lower eye margins. Mandibles with three rather sharply pointed teeth and a small dorsal truncation. Antenna and rest of body as illustrated in figures. Mid lobe of mesoscutum with 8–10 setae (7 in holotype, 10 in one paratype); each side lobe and axilla with 2 and 1 setae respectively; scutellum with 4 setae. Forewing three and a half to three and two-thirds times as long as wide with the longest marginal fringe one-fourth to two-seventh the width of wing; venation extending to about half length of wing; costal cell slightly shorter than marginal vein; submarginal vein with 3 and marginal vein with 6–7 setae; linea calva distinct, closed apically by a few setae. Hindwings nearly eight times as long as wide and with the longest marginal fringe slightly longer than width of wing. Legs characteristic for the genus: long and slender; mid leg with basitarsus slightly longer than tibial spur and subequal to the second segment (Fig. 4). Gaster about one and a half times as long as thorax with details as shown in figure 3; ovipositor nearly twice as long as mid tibia (Figs. 3 and 4 are drawn on the same scale); third valvula about twice as long as mid basitarsus.

Male

Body colour about as in female except as follows: vertex lemon yellow; occiput above foramen and frons pallid; face and the rest of occiput infusate; malar space a little darker. Thorax pallid; center of pronotum darker; sides of pronotum, mesoscutum and scutellum faintly infusate brown. Gaster with tergum I infusate brown, terga II and III nearly pallid; rest of gaster yellow brown with two rather distinct brownish bands on terga V and VI; last tergum pallid. Antennae and legs pale brownish.

Structurally similar to female except for the relatively smaller size (thorax and gaster combined, 0.56 mm), different conformation of the antennal segments (Fig. 2); mid lobe of mesoscutum, scutellum, side lobe and axilla respectively with 8, 4, 2 and 1 setae.

Holotype ♀, INDIA: Uttar Pradesh, Aligarh, 10.10.1985 (M. HAYAT), collected by sweeping on grasses. The specimen cleared and mounted on a slide (slide No. 5).

Paratypes: All from Aligarh and all on slides: 1 ♂, 28.3.1979 (M. VERMA), slide No. 3; 1 ♀, 22.3.1979 (M. VERMA), slide No. 1; 1 ♀, 14.8.1979 (M. HAYAT & M. VERMA), slide No. 2; 1 ♀ (head missing), 8.11.1979 (M. HAYAT & M. VERMA), slide No. 4.

Holotype and the male paratype deposited in the British Museum (Natural History). London, and rest of the material in the author's collection.

Comments: The new species appears close to *C. speciosissima*, but differs by the normal scape, the narrow and elongate F3 and clava of the male antenna; unexserted ovipositor, uniformly infusate (except hyaline basal third) forewings and different body colour. From *xiphidii*, *oophaga* and *locustarum*, it differs by the different body colour, unexserted ovipositor, and in the male, by the longer F3 and clava and the unexpanded scape. In these three species the scape in male is slightly flattened and shorter, F3 about two and a half times as long as wide and clava relatively shorter. The males of *hexatricha* have similar antennae but the scape is enlarged and flattened as in *speciosissima*. The female of *lineascapa* sp. n. differs from that of *hexatricha* in forewing infuscation, F2 distinctly longer and larger than F1, F3 about twice as long as wide and mid lobe of mesoscutum normally with 8

setae. The new species is also distinct from *amoena* and *haeckeli* in several characters including proportions of antennal segments, body colour and wing infuscation. (See FERRIÈRE, 1965; WATERSTON, 1917 and HAYAT, 1981 for details on the species discussed above.) The new species is the fourth from India. The others are: *oophaga* (GIRAULT), *azizi* HAYAT and *mumtazi* HAYAT.

Centrodora giraulti, nom. nov.

Tumidiscapus australiensis GIRAULT, 12.1913, Mem. Qd. Mus., 2: 195, ♂. Preoccupied by *Centrodora australiensis* (GIRAULT, 9.1913, Archiv. Naturgesch, 79 AH6: 74, ♀), originally described in *Paraphelinus*, a synonym of *Centrodora* (see HAYAT, 1983).

Coccophagus ghesquierei, nom. nov.

Aneristus saissetiae GHESQUIÈRE, 1949, Bull. Annl. Soc. r. ent. Belg., 85: 159, ♂. Preoccupied by *Coccophagus saissetiae* GAHAN, 1922, Proc. U. S. Natn. Mus., 61: 17, ♀, ♂. The genus *Aneristus* is a synonym of *Coccophagus* (see HAYAT, 1983).

Azotus qadrii AGARWAL

SHAFEE & RIZVI (1984) considered this species as a synonym of *A. delhiensis* LAL. This synonymy is not accepted here as I have already shown (HAYAT, 1979: 187–188) that the two species are quite distinct not only on some morphological characters, but also on biological grounds. *A. qadrii* is a hyperparasitoid of diaspids whereas *A. delhiensis* is a specific aleyrodid parasitoid. These authors have also placed *Azotus* in synonymy with *Ablerus*. This synonymy at first glance appears correct and is partly supported by similar structure of the male genitalia. However, I plan to deal with this problem in a separate paper.

Eretmocerus gunturiensis HAYAT

In a recent communication, SHAFEE & RIZVI (1984) placed this species in synonymy with *E. serius* SILVESTRI. This synonymy was based partly on conjecture and partly also on the (mis)identification of the material recorded as *serius* by these authors. It is evident from their publication that they have not seen any type material of these species and they have overlooked GERLING'S (1969) paper. GERLING has shown that the original material under *serius* was actually a complex of three species, *serius*, *orientalis*, and *silvestrii*. *E. gunturiensis* (misspelt *gunturensis*, by SHAFEE & RIZVI) differs from these three species in having (1) marginal vein with four long setae; (2) linea calva in forewing proximally bordered by about 13 setae; and (3) forewing disc distad of linea calva rather densely setose, ca. 200 setae compared to about 90 in *serius*, 117 in *silvestrii* and about 350 in *orientalis*. These three species also appear to be host specific: *serius* (host, *Aleurocanthus woglumi* ASHBY), *orientalis* (*A. incertus* SILV.), and *silvestrii* (*A. spiniferus* Q.).

It may, however, be noted that the *E. serius*-complex is known from India, but so far there is no study to indicate which of these four species was reported several times from this country. It is thus apparent that SHAFEE & RIZVI misidentified either one or both the materials recorded by them from Guntur (India) and Pakistan.

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