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Two new species of *Asecodes* Foerster  
(Hym., Eulophidae)  
parasitic upon *Galeruca* spp.  
(Col., Chrysomelidae) in Italy

*Asecodes* Foerster is known only from the western palaeartic and four species are recognised by Bouček & Askew (1968). *A. mento* (Walker) is a gregarious endoparasite of the larvae of the heather beetle, *Lochmaea suturalis* (Thomson) (Col., Chrysomelidae) (Golightly 1962), but nothing is known of the host relations of the three other species.

Several specimens of an undescribed species of *Asecodes* from Italy were submitted for identification by Sara S. Rosenthal of the United States Department of Agriculture to the first author. This new species, which is described below, is a larval parasite of *Galeruca rufa* Germar (Col., Chrysomelidae).

Other specimens of *Asecodes* were obtained by Caterina Uscidda of the University of Sassari, Institute of Agricultural Entomology, from larvae of *Galeruca sardoa* Gené and submitted for identification to the second author of the present note<sup>(1)</sup>. These specimens represent another undescribed species of *Asecodes*.

*Asecodes galerucae* sp.n. \*

*Female*. — Head and thorax shining black with very weak, blueish reflections on frons, vertex and scutellum. Gaster black with very weak, metallic reflections on first tergite posteriorly. Ovipositor valves testaceous. Scape and pedicel brown, flagellum dark brown. Mandibles testaceous. Legs including coxae brownish, narrowly paler at knees and paler on three basal tarsal segments of

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\* This species is to be attributed to R. R. Askew.  
(<sup>1</sup>) Studies on the Hymenoptera Chalcidoidea: LIX.

mid and hind legs. Tegulae brown. Wings very faintly infumate behind marginal and stigmal veins, and narrowly around stigma. Length 0.8 - 1.0 mm.

Malar space about half the transverse diameter of an eye in front view. Eyes separated by 1.2 times their height, very sparsely pilose. POL:OOL as 1.4:1. Antennal scape as long as an eye, reaching to level of median ocellus, 4.5 times as long as broad, toruli with lower margins slightly below lower edges of eyes; combined length of pedicel and flagellum greater than breadth of head (23:19); pedicel in profile twice as long as broad, about as long as first

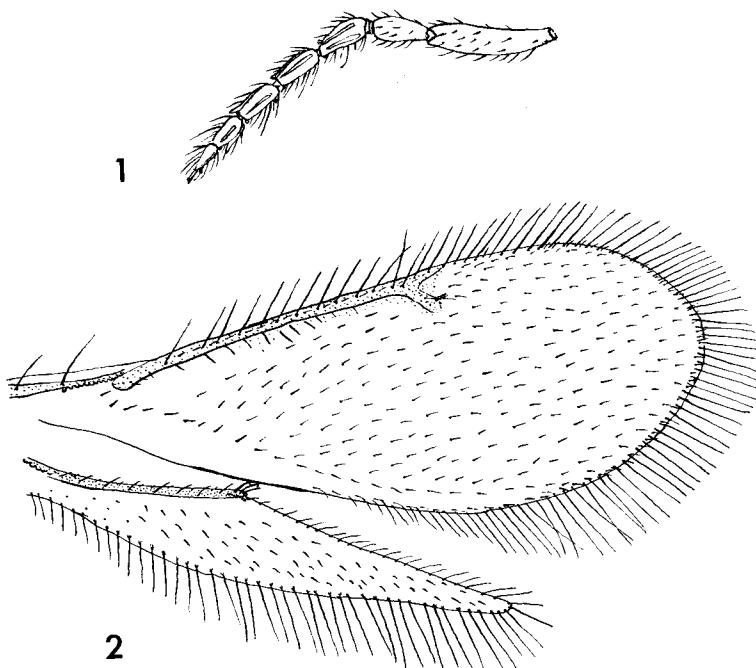


FIG. I. - *Asecodes galerucae* sp.n. - 1. Left antenna of female. - 2. Right forewing and hindwing of female.

funicle segment; two anelli minute, transverse; funicle segments and pedicel of uniform breadth, the first funicle segment slightly more than twice as long as broad, slightly longer than second funicle segment and 1.2 times as long as the third; claval segments tapering, the first twice as long as broad, the second with terminal spine slightly more than half length of body of segment, clava including spine 0.9 times as long as funicle segments two plus three; placoid sensillae long, two or three visible on each funicle segment in profile; trichoid sensillae on flagellum scattered, those on first funicle segment about half the length of the segment, those on second and third funicle segments two-thirds to three-quarters as long as segments and projecting for a space exceeding

segment width; basiconic capitate sensillae distally and basally on funicle and claval segments (Fig. I, 1).

Thorax plus propodeum 1.3 times as long as broad. Mesoscutum with very weak, scarcely discernible, alutaceous sculpture; scutellum and dorsellum virtually smooth and shining. Scutellum as long as broad and slightly longer than prothorax plus mesoscutum. Propodeum medially slightly more than one third as long as scutellum, very weakly sculptured laterally, smooth medially and lacking median carina and plicae; spiracles small and round, separated from anterior edge by about 1.5 times a diameter and by a triangular fovea which extends medially to behind the dorsellum.

Forewing (Fig. I, 2) 1.25 times as long as body, narrow, about 2.9 times as long as maximum breadth, the disc sparsely pilose but with relatively long apical fringe, the longest apical hairs slightly more than one quarter as long as greatest breadth of wing. Hindwing (Fig. I, 2) apically pointed, the fringe on the posterior margin two thirds the breadth of the wing at the level of the three hamuli.

Gaster 1.3 times as long as broad, slightly shorter than thorax plus propodeum. Ovipositor sheaths in dorsal view exerted for a distance rather less than length of first segment of hind tarsus.

*Male.* — Resembles the female but antennae relatively longer, combined length of pedicel and flagellum much greater than breadth of head (23:15). Scape flattened and expanded, 2.5 times as long as broad, its anterior edge strongly convex. Gaster 1.5 times as long as broad, slightly longer than thorax plus propodeum.

Holotype ♀. Italy, Rome, reared from *Galeruca rufa* Germar on *Convolvulus arvensis* L., 5. vii. 1974 (S. S. Rosenthal).

Paratypes 3 ♂ 19 ♀. Same data as holotype.

The holotype and ten paratypes will be deposited in the British Museum (Natural History); remaining paratypes are retained in the author's collection.

*A. galerucae* is allied to *A. mento* and *A. hyperion* Graham (subgenus *Ganahlia* Dalla Torre), sharing with these species the character of sparse forewing pilosity, but differing from both in its shorter malar space which is only half the transverse diameter of an eye (three-quarters in the two other species). In this last respect, *A. galerucae* most resembles species of the subgenus *Asecodes* s. str.

#### *Asecodes caterinae* sp.n. \*

*Female.* — Body black with very weak blueish reflections on the dorsum. Legs narrowly pale brown at knees and on the three basal tarsal segments. Wings faintly infumate. Length : 0.9-1.0 mm.

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\* This species is to be attributed to G. Viggiani.

Malar space at least one third the length of an eye in front view. Mandible (Fig. II, 1) with two very small teeth. Maxillary and labial palpi (Fig. II, 2 and 3) uniaarticulate; the first palpi each with a relevant linear sensillum. Antenna (Fig. II, 4) with scape 3-3.2 as long as broad; pedicellus shorter than the first funicular segment, the latter 1.5-1.7 as long as broad; subsequent segments slightly shorter.

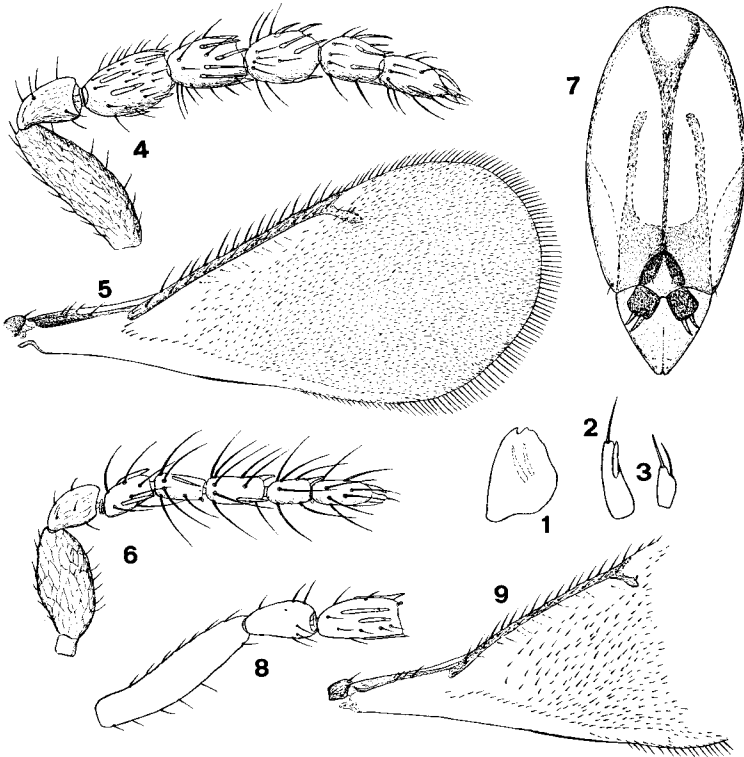


FIG. II. - *Asecodes caterinae* sp.n. - Female - 1. Mandible. - 2. Maxillary palpus. - 3. Labial palpus. - 4. Antenna. - 5. Forewing. - Male - 6. Antenna. - 7. Copulatory organ. - *Asecodes mento* (Walk.). - 8. Part of the female antenna. - 9. Basal part of the forewing.

Thorax very similar to that of *A. galerucae* Askew. Forewing (Fig. II, 5) rather large, as in *A. mento* (Walker), 2.2-2.5 times as long as broad, but with a relatively denser pilosity particularly evident on the area under the marginal vein. Legs normal.

Gaster ovate, slightly shorter than the thorax, 1.1-1.2 times as long as broad; ovipositor not extruded.

*Male*. — Similar to the female, but the body of minor size (0.7-0.8 mm); antenna (Fig. II, 6) with scape 2 times as long as broad; flagellar segments with

long bristles composing whorls on the flagellum; forewing with fringe one fifth-one sixth (one sixth-one seventh in the female) as long as breadth of wing; gaster 1.5 times as long as broad.

Copulatory organ (Fig. II, 7) short, 0.160 mm in length, slightly more than 2 times as long as broad; parameres not developed; subsquare digiti with two hooks; aedeagus with body 1.5 times as long as broad and longer than the apodemes.

Holotype. - 1 ♀, Italy, Oristano (Sardinia), 30-6-1977, ex larva of *Galeruca sardoa* Gené; coll. C. Uscidda.

Paratypes. - 20 females and 3 males, with same data as holotype.

The holotype and some paratypes will be deposited in the Institute of Agricultural Entomology of Portici; remaining paratypes will be preserved in the following institutions: British Museum (Natural History), London; Department of Zoology, University of Manchester. Some specimens will be retained in the author's collection.

The species is dedicated to the collector, Dr. Caterina Uscidda, University of Sassari, Institute of Agricultural Entomology.

*Asecodes caterinae* sp. n. is allied particularly to *A. mento* (Walk.), but from the latter it is distinguishable by the broader antennal scape (3-3.2 as long as broad; in *mento*, 4-4.5 times as long as broad) (Fig. II, 8), flagellum with segments slightly shorter, forewing pilosity more dense (Fig. II, 9); mesoscutum and scutellum smoother and colour of body only with a weak blueish reflection on the dorsum.

From the new species *A. galerucae* Askew, *A. caterinae* differs mainly in having a shorter malar space and a different shape of antenna and wings.

#### Key to species of *Asecodes* (females)

- 1 (6) Malar space hardly half the transverse diameter of an eye.
- 2 (5) Body mainly bronze-or greenish-black. Forewing relatively densely haired.
- 3 (4) Scutellum distinctly longer than broad (in male up to 1.5 times as long as broad). Forewing 2.7-3 times as long as broad ... *coronis* (Walker).
- 4 (3) Scutellum not or hardly longer than broad in both sexes. Forewing of female about 2.5, of male 2.3-2.7, times as long as broad ... *lagus* (Walker).
- 5 (2) Body black with very weak bluish reflections on frons, vertex and scutellum. Forewing relatively sparsely haired ... *galerucae* Askew
- 6 (1) Malar space at least three-quarters the transverse diameter of an eye.
- 7 (8) Gaster about twice as long as broad, slightly shorter than rest of body (forewing much as in *A. mento*) ... *hyperion* Gradam
- 8 (7) Gaster at most 1.1-1.2 times as long as broad, slightly shorter than rest of body.

- 9 (10) Antennal scape 4-4.5 times as long as broad; first funicular segment at least 2 times as long as broad; scutellum with a delicate alutaceous sculpture in the proximal two-thirds; gaster almost circular ...  
... *mento* (Walker)
- 10 (9) Antennal scape 3-3.2 as long as broad; first funicular segment 1.5-1.7 times as long as broad; scutellum smoother; gaster ovate ...  
*caterinae* Viggiani

#### SUMMARY

The authors describe two new species of *Asecodes* Foerster (Hym. Eulophidae) from Italy: *Asecodes galerucae* Askew and *Asecodes caterinae* Viggiani. The first species is a larval parasite of *Galeruca rufa* Germar and the second one attacks larvae of *Galeruca sardoa* Gené (Col. Chrysomelidae).

A key of the known species of *Asecodes* is given.

#### RIASSUNTO

Gli autori descrivono due nuove specie di *Asecodes* Foerster (Hym. Eulophidae) scoperte in Italia: *Asecodes galerucae* Askew e *Asecodes caterinae* Viggiani. La prima specie è un parassita larvale di *Galeruca rufa* Germar e la seconda attacca larve di *Galeruca sardoa* Gené (Col. Chrysomelidae).

È data una chiave per le specie note di *Asecodes*.

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