

EMILIO GUERRIERI

Department of Agricultural Entomology and Zoology,
University of Naples «Federico II», Portici, Italy

Description of *Eucoccidophagus adrianae* sp. n. with
redescription of *Eucoccidophagus biroi* (Erdös)
(Hymenoptera: Encyrtidae)

In the course of a survey of some coccids, an undescribed encyrtid has been obtained from young females of *Eriococcus agropyri* (Borchsenius). The species, which is here described, belongs to the genus *Eucoccidophagus* HOFFER (1963) and is closely related to *E. biroi* (Erdös) which is redescribed.

Eucoccidophagus adrianae sp. n.

Female (Fig. I). - Colour mainly brown with faint metallic reflections; apical third of the scape and Ist to IIIrd funicular segments paler; fore wings infuscated with a darker curved band in the basal third, the venation brown; fore tibiae, distal part of middle tibiae and hind tibiae yellowish. Length about 0.5 mm.

Head (Fig. II, 1) with subpolygonal sculpture and V-shaped membranous lines which are contiguous with the scrobes hardly impressed on the face; eyes setose; ocelli in a strongly obtuse triangle, POL 3 times OOL; fronto-vertex a little wider than long and as wide as half the head width. Mandible (Fig. II, 2) with 4 teeth, the lower one more pointed; maxillary palpi (Fig. II, 3) with 3 segments, labial (Fig. II, 4) with 2. Antennae (Fig. II, 5) inserted close to the mouth opening; radícula 1.5 times as long as wide; scape cylindrical, with subpolygonal sculpture, 3.5 times as long as wide; pedicel a trifle shorter than Ist to IIIrd funicular segments; these latter subequal and about 1.3 times wider than long; IVth to VIth funicular segments longer and wider than preceding ones; IVth funicular segment long 0.8 times its width and 0.7 times the Vth one; this latter a little longer than wide; VIth funicular segment shorter than preceding one and a trifle wider than long; club 3-segmented, pointed at the apex, as long as IIIrd to VIth funicular segments and 2.3 times its width. Linear sensilla on Vth and VIth funicular segments and on each club segment with the following distribution: 1, 2, 3, 4, 1.

Pronotum with subpolygonal sculpture. mesoscutum twice as long as wide and with subpolygonal sculpture; notular lines reaching half way across mesoscutum; scutellum as long as wide, with subpolygonal sculpture and 20-22 setae arranged in 6 almost transverse rows; metanotum with a sublateral carina; propodeum with a faintly subpolygonal sculpture. Fore wings 2.4 times as long as wide; costal cell well developed 10 times as long as wide and with 10-12 setae arranged in a marginal row dorsally; submarginal vein (Fig. II, 6) expanded in the apical third, with 11 setae, about 3 times as long as marginal and postmarginal veins together; marginal vein very short, a trifle longer than wide, with 2 primary setae; postmarginal vein as long as the stigmal vein, the former with 4 primary setae, the latter with one; linea calva with regular edges, interrupted in the middle by 1-2 small setae; fringe 1/9 as long as discal width; hind wings 4.5 times as long as wide; fringe more than 1/3 as long as discal width. Mid tibial spur 2/3 of the corresponding basitarsus. Gaster almost as long as thorax and with cercal plates inserted at its end; hypopygium (Fig. II, 7) reaching apex of abdomen; epipygium as in Fig. II, 8; ovipositor (Fig. II, 9) inserted in the middle of the gaster and provided with distally pointed paratergites (Fig. II, 8).

Male. Similar to female. Antenna (Fig. III, 1) with radicle 1.5 times as long as wide; scape cylindrical, 3.3 times as long as wide; pedicel 1.3 times longer than wide and as long as 2 following segments; Ist to IIIrd funicular segments subequal and as long as wide; IVth to VIth funicular segments longer and

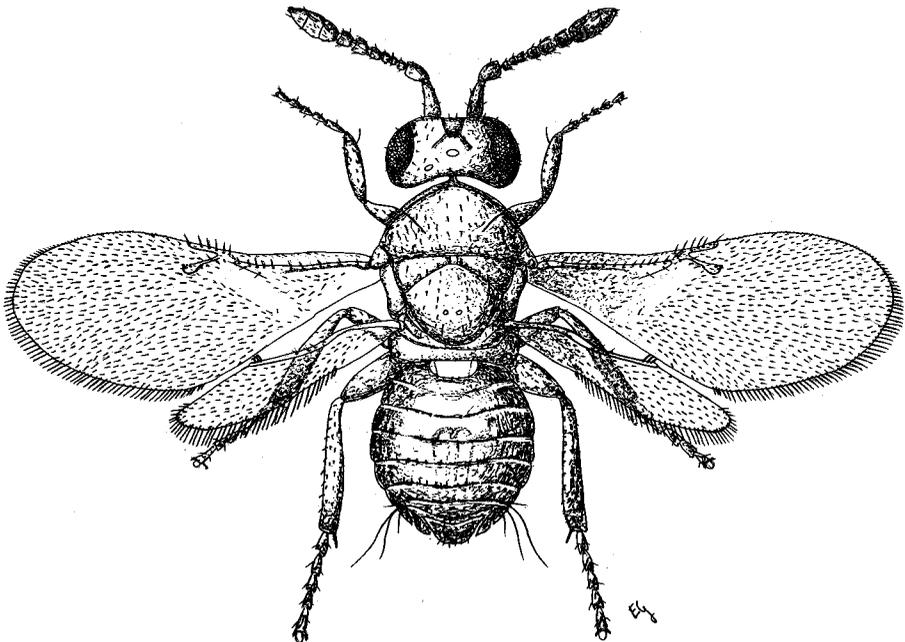


Fig. I - *Eucoccidophagus adrianae* sp. n. - Female.

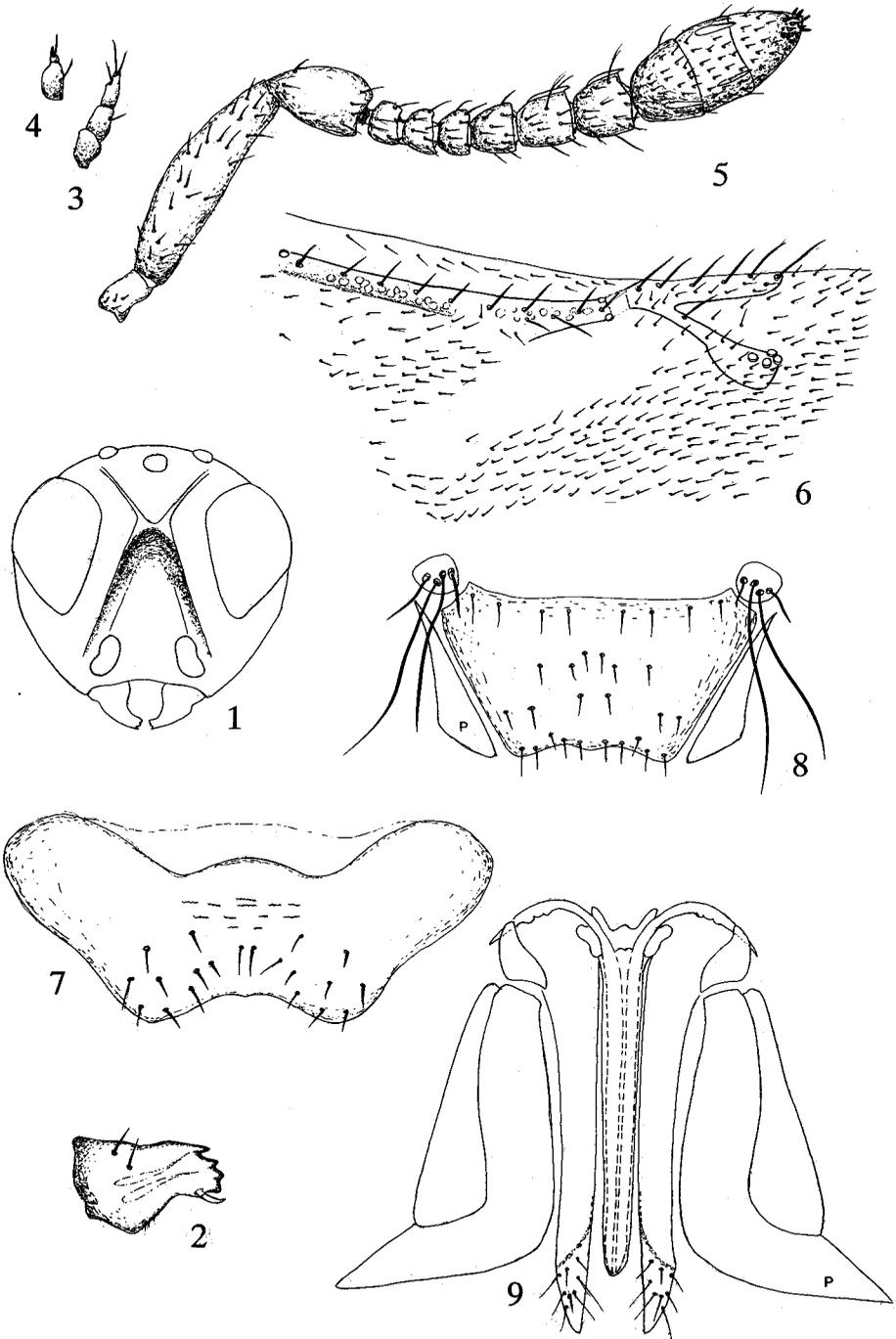


Fig. II - *Eucoccidophagus adrianae* sp. n. Female. 1. Head in front view. 2. Mandible. 3. Maxillary palp. 4. Labial palp. 5. Antenna. 6. Particular of fore wing venation. 7. Hypopygium. 8. Epipygium. 9. Ovipositor. p = paratergite.

wider than preceding ones, of the same width but of increasing length and respectively 1.2, 1.4 and 1.5 times longer than wide; club solid, strongly pointed at the apex, 2.8 times longer than wide and shorter than preceding 3 segments; all funicular segments provided with setae as long as VIth funicular segment. Linear sensilla on IVth to VIth funicular segments and on club with the following distribution: 1, 1, 1, 3.

In almost all the examined males, one of the 2 antennae of the same individual is anomalous (Fig. III, 2) in showing the fusion of the first 2 funicular segments.

Phallobase (Fig. III, 3) opened dorsally and at the back, 2.4 times as long as wide, provided with a ventral carina, without parameres but with digiti each with 2 teeth; aedeagus (Fig. III, 4) short and stout, with apodemes 2.7 times longer than its body.

The species is named in memory of my mother Adriana.

Material examined - Holotype, ♀, on slide. ITALY: Isca d'Ecclesia (PZ), 22.VI.1993, ex *Eriococcus agropyri* on *Agropyrum repens*, leg. S. Marotta; paratypes, 13 ♀, 5 ♂ on slide, 3 ♀, 3 ♂, mounted on card, same data of holotype. Holotype and paratypes are deposited at the Department of Agricultural Entomology and Zoology of the University of Naples.

Some paratypes will be deposited at the British Museum of Natural History, London.

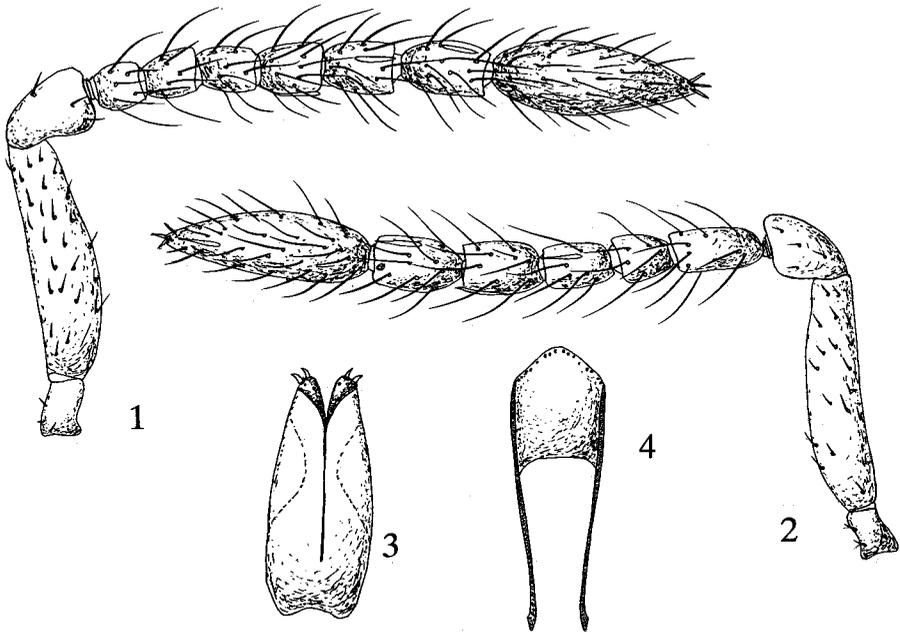


Fig. III - *Eucoccidophagus adrianae* sp. n. Male. 1. Antenna. 2. Anomalous antenna. 3. Phallobase. 4. Aedeagus.

Biology - *Eucoccidophagus adrianae* sp. n. is a gregarious parasitoid of *Eriococcus agropyri*, feeding on *Agropyrum repens* P.B. From 1 young female of the eriococcid, up to 15 females and 5 males have been obtained.

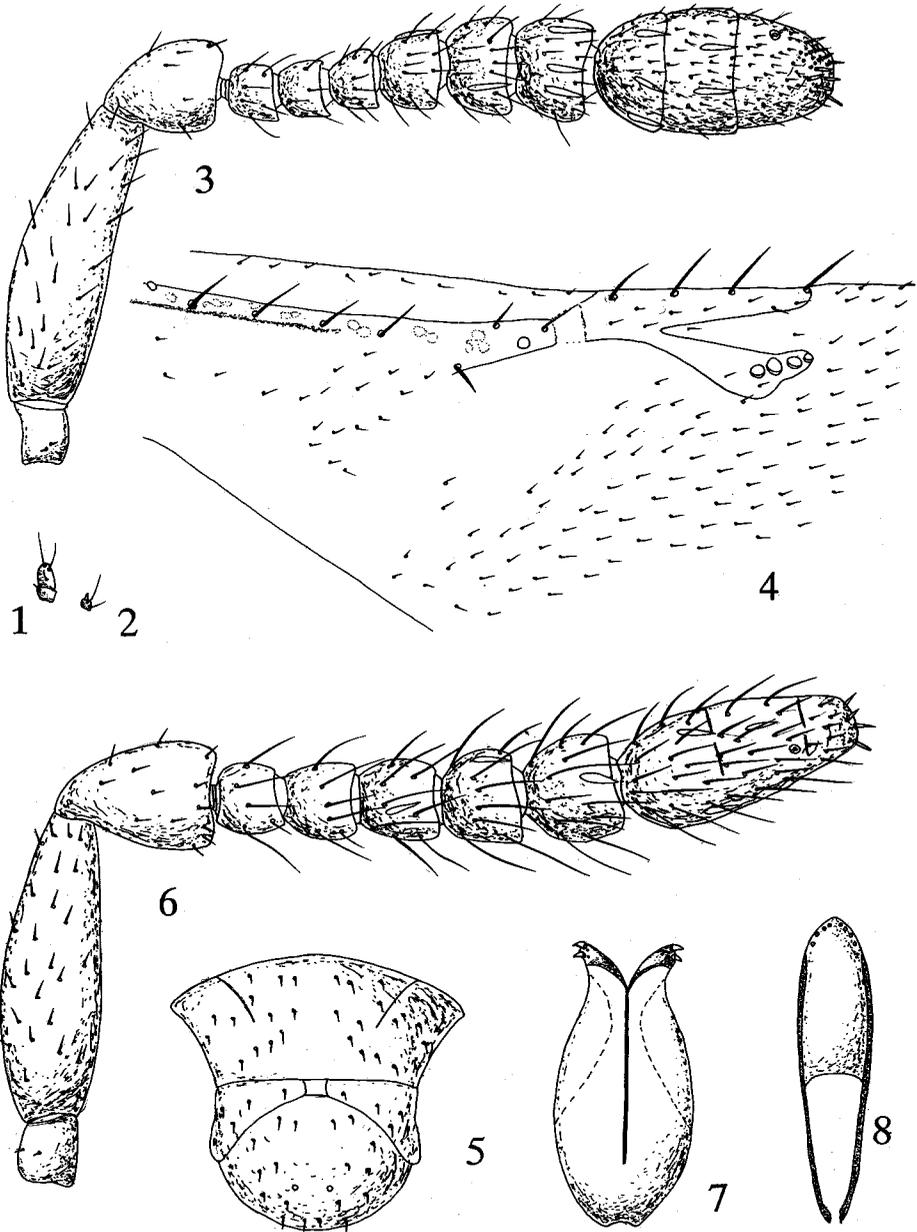


Fig. IV - *Eucoccidophagus biroi* (Erdős). Female. 1. Maxillary palp. 2. Labial palp. 3. Antenna. 4. Particular of fore wing venation. 5. Mesoscutum, Axillae and Scutellum. Male. 6. Antenna. 7. Phallobase. 8. Aedeagus.

Comment - The genus *Eucoccidophagus* includes 5 species, all Palaearctic, characterized by mandible with 4 teeth and face with membranous lines contiguous to scrobes which are well impressed (TRJAPITZIN, 1981). Among the known species of this genus, *E. adrianae* appears close to *E. biroi* (ERDÖS, 1956). This latter, was reported to have a darker curved band in the basal third of fore wing (ERDÖS, 1956), complete parapsidal furrows and male antenna with 2-segmented club (TRJAPITZIN, 1989).

In remounting on slide the *E. biroi* lectotype (♀) and paralectotype (♂) as designated by V. Trjapitzin, it came out that some of these characters were mistaken and that there were good reasons to make a redescription of this species.

Eucoccidophagus biroi (Erdös)

Female. Colour mainly brown with faintly metallic reflections; fore wings infuscated with a darker curved band in the basal third, the venation brown. Length about 0.6 mm.

Mandible with 4 teeth; maxillary palpi (Fig. IV, 1) with 2 segments, labial (Fig. IV, 2) with one. Antenna (Fig. IV, 3) with radícula subquadrate; scape cylindrical, with subpolygonal sculpture, 3.5 times longer than wide; pedicel 1.2 times as long as wide, and a little longer than Ist and IInd funicular segments together; all funicular segments wider than long; Ist to IIIrd subequal, and about 1.2 times wider than long; IVth to VIth funicular segments wider and longer than preceding ones and about 1.3 times as wide as long; club 3-segmented, rounded at the apex, shorter than IIIrd to VIth funicular segments and 1.8 times longer than wide. Linear sensilla on IVth to VIth funicular segments and on each club segment with the following distribution: 1, 3, 5, 5, 6, 1.

Thorax with pronotum very short and with subpolygonal sculpture; mesoscutum (Fig. IV, 5) 2 times wider than long, with few setae arranged in 10 almost transverse rows and subpolygonal sculpture; notular lines incomplete, reaching the half of mesoscutum; axillae 1.6 times wider than long each with 4 setae; scutellum as long as wide, with subpolygonal sculpture and about 20-22 setae arranged in 6 almost transverse rows; metanotum strongly transverse provided with a sublateral carina and 4 small setae; propodeum also transverse and with a faintly subpolygonal sculpture. Fore wings about 3 times longer than wide; costal cell with 10-12 setae arranged in a marginal row dorsally; submarginal vein (Fig. IV, 4) expanded in the apical third, provided with 8 setae, a little more than 2.5 times as long as marginal and postmarginal veins together; marginal vein 1.5 times longer than wide, with 1 primary seta; postmarginal vein a little shorter than stigmal one, the former, with 3 primary setae; linea calva with almost regular edges, interrupted in the basal half by 1-2 small setae; fringe 1/7 as long as discal width. Mid tibial spur 3/4 of the corresponding basitarsus. Gaster almost as long as thorax and with cercoids inserted at its end; ovipositor inserted in the middle of the gaster and provided with distally rounded paratergites.

tesdes *Male*. Similar to female. Antenna (Fig. IV, 6) with radicle subquadrate; scape cylindrical, 3.1 times as long as wide; pedicel 1.5 times longer than wide and clearly longer than 2 following segments; all funicular segments but IIIrd (that is subquadrate), wider than long, of increasing length and width towards the apex; Ist funicular segment about 1.5 times wider than long; Vth and VIth subequal; club truncate at the apex, with 2 incomplete segmentations, 2.2 longer than wide and as long as IVth to VIth funicular segments; all funicular segments provided with setae as long as VIth funicular segment. Linear sensilla on IIIrd to VIth funicular segments and on club with the following distribution: 2, 2, 2, 2, 5.

The other male antenna showed a more indistinct and incomplete segmentation of the club.

Phallobase (Fig. IV, 7) opened dorsally and at the back, twice longer than wide, provided with a ventral carina, without parameres but with digiti each with 2 teeth; aedeagus (Fig. IV, 8) with apodemes twice longer than its body.

Material examined - Lectotype, 1 ♀, remounted on slide, Csepel. Birò, 9.VII.1908, Hym. Typ. n° 8607 Mus. Budapest; paralectotypes, 1 ♂, remounted on slide, N. Enyed Birò, 23.VII.1917, Hym. Typ. n° 8612 Mus. Budapest, 1 ♀, mounted on card, Budapest Birò, 26.VII.1916, Hym. Typ. Mus. Budapest n° 8609.

Comment. *E. biroi* (Erdős) and *E. adrianae* sp. n. can be separated by the following characters:

	<i>E. biroi</i>	<i>E. adrianae</i>
Palpi formula	2, 1	3, 2
Female:	all funicular segments wider than long;	Vth funicular segment longer than wide, VIth subquadrate;
	club rounded at apex, less than 2 times as long as wide;	club pointed at apex, more than 2 times as long as wide;
	fore wings narrow, 3 times as long as wide with fringe 1/7 the discal width;	fore wings broad, 2.4 times as long as wide with fringe 1/9 the discal width;
Male:	all funicular segments (except IIIrd) wider than long; club with truncated apex and 2 incomplete segmentations;	Ist to IIIrd funicular segments subquadrate, IVth to VIth longer than wide; club pointed at the apex, without any kind of segmentation;
	aedeagus elongate with apodemes twice as long as its body.	aedeagus short and stout with apodemes 2.7 times as long as its body.

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SUMMARY

Eucoccidophagus adrianae sp. n., (Hymenoptera: Encyrtidae) parasitoid of *Eriococcus agropyri* (Borchsenius) (Homoptera: Eriococcidae) is described and compared with the closely related species *E. biroi* (Erdős) which is redescribed.

RIASSUNTO

È descritto *Eucoccidophagus adrianae* sp. n., (Hymenoptera: Encyrtidae) parassitoide di *Eriococcus agropyri* (Borchsenius) (Homoptera: Eriococcidae) e confrontato con la specie affine *E. biroi* (Erdős) della quale è fornita una ridescrizione.

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