

DESCRIPTION OF THE MALE OF *AULOGYMNUS TESTACEOVIRIDIS* (ERDÖS, 1961) (HYM., CHALCIDOIDEA, EULOPHIDAE)

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Description of the male of Aulogymnus testaceoviridis (Erdös, 1961) (Hym., Chalcidoidea, Eulophidae).—The male of *Aulogymnus testaceoviridis* (Erdös) is described for the first time. The main features of the female are redescribed and the species is differentiated from related species of *Aulogymnus*.

Key words: *Aulogymnus testaceoviridis*, Allotype, Male.

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INTRODUCTION

The subgenus *Olynx* Förster includes all those species of the genus *Aulogymnus* Förster which are parasites of cynipids; at present 10 species are known.

In 1961 ERDÖS described *Olynx testaceoviridis* from a single female, caught on *Quercus roboris* in Bükk (Hungary). It is now included in the genus *Aulogymnus* Förster (PUJADE, 1985).

The aim of this study is to present a further description of the species, to erect an allotype, to redescribe the female and to differentiate the species from related ones.

STUDIED MATERIAL

14 ♂♂ and 11 ♀♀ collected in Riells (Girona, Catalonia, Spain), (10-VI-84), on *Quercus suber* L. in *Andricus burgundus* Gir. Allotype: 1 ♂, 21-VI-84, deposited in Pujade's collection in the Department of Zoology, University of Barcelona. Remaining material: 20-VI-84 (3 ♀♀), 21-VI-84 (6 ♂♂ and 4 ♀♀), 22-VI-84 (4 ♂♂) 23-VI-84 (2 ♂♂ and 4 ♀♀), 23-VI-84 (1 ♂), deposited in Pujade's

collection except 1 ♂ and 1 ♀) bequeathed to Askew (Department of Zoology, University of Manchester) and (1 ♂ and 1 ♀) bequeathed to Nieves (Instituto Español de Entomología, Madrid).

DESCRIPTIONS

Description of the allotype (male)

Colour.— Body generalized dark metallic green, darker on the gaster, with an arched post-ocellar yellow line (fig. 1) and bearing another subdivided yellow line running from the median ocellus towards the antennae. Coxae concolorous with thorax; femora brown except in their basal part which is yellow like the rest of the legs.

Head.— Oval (fig. 1a). Malar groove well-defined, half length of eye height. Antennae with white hairs and abundant sensillae (fig. 5a), inserted below middle of face; scape reaching the level of the median ocellus and pedicel half the length of the first funicle segment, which is clearly broader than the second segment. The final two segments are longer than broad, the last about twice as long

as broad. The antennal formula is: 30/9/1/1/15/13/12/12/18. POL:OOL ratio as 2:1.

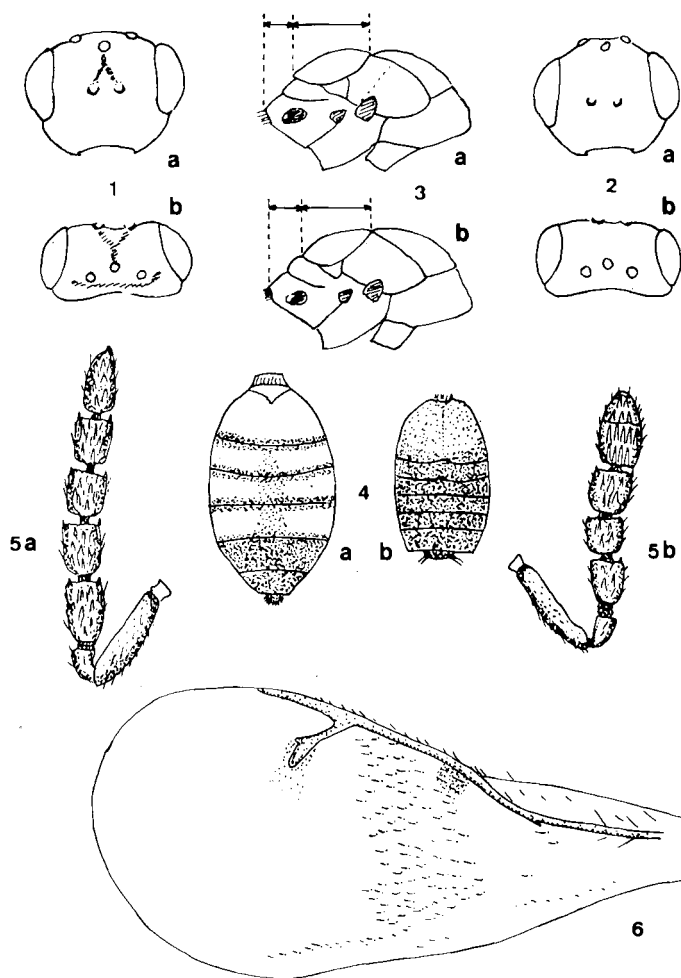
Thorax.— Strongly convex (fig. 3a). Scutellum with two darker longitudinal lines and bearing two pairs of long bristles. Mesonotum: scutellum ratio as 22:13, and propodeum: metanotum as 5.5:7. Horizontally, the length of these latter joined parts is not half as long as the scutellum (fig. 3a). Forewings practically hyaline (fig. 6) with two small fuscous marks at marginal and stigmal vein; speculum open; marginal vein: stigmal vein ratio as 2:1.

Gaster.—Ovate, although truncated distally (fig. 4b). Ratio 22:12. Shorter than thorax.

Female

Differs from the male in the following features:

Colour.— Generalized yellow except on the propodeum and on the ventral side of thorax which is always dark and with metallic green reflections. Flagellum brown. The three terminal somites of the gaster are dark as are the posterior edges of the first three. In



Figs. 1-6. *Aulogygnus testaceoviridis* (Erdős): 1. Head of male, frontal position (a), occipital position (b); 2. Head of female, frontal position (a), occipital position (b); 3. Thorax (laterally), male (a), female (b); 4. Gaster: female (a), male (b); 5. Antennae: male (a), female (b); 6. Forewing.

1. Cabeza del macho, posición frontal (a), posición occipital (b); 2. Cabeza de la hembra, posición frontal (a), posición occipital (b); 3. Tórax, visión lateral, macho (a), hembra (b); 4. Gaster, hembra (a), macho (b); 5. Antena, macho (a), hembra (b); 6. Ala anterior.

some specimens the thorax may be more fuscous on the scutellum and posterior part of the mesonotum, although the yellow-hue always stands out.

Head.— Post-ocellar yellow lines and those which depart from the antennae disappear in the generalized yellow colour of the head (fig. 2). Antennae (fig. 5b) with white hairs and pedicel clearly shorter than the first funicle segment, which is longer than the second funicle; club with the first segment longer than the second, each one bearing two bands of sensilla. Antennal formula: 30/10/1/1/12/10/12/20 (=13+7). POL:OOL ratio as 8.5:5 (fig. 2).

Thorax.— Mesonotum: scutellum ratio as 19.5:18 and metanotum: propodeum as 5:5.5 (fig. 3b).

Gaster.— Ovate (27:21), as long as or slightly longer than thorax (fig. 4b).

DISCUSSION

Among the *Aulogymnus* Förster that parasitise Cynipinae, *A. testaceoviridis* (Erdős) belongs to a group of five species characterized by a pedicel shorter than the first funicle segment and by an open speculum. For that reason it has to be differentiated from the other four.

ASKEW (1959a) studied in detail *A. euedoreschus* (Walker), *A. trilineatus* (Mayr), *A. gallarum* (L.), and *A. gallarum* f. *pulchra* (Mayr) and later (1959b) described *A. albipes* (Askew) collected in Israel which together with *A. testaceoviridis* completes the five species group, and NIEVES (1983) made a contribution studying the Iberian species.

Females of *A. testaceoviridis*, due to their colouring, are readily distinguishable from the rest of the species. This fact persuaded ERDÖS (1962) to describe the species from the only collected specimen. Leaving out the coloration, the ratio first funicle segment: second funicle segment separates them easily, since in *A. testaceoviridis* (E.) it is 1:1 whilst in the remainder it is 1.5:1. The length ratio marginal vein: stigmal vein differs from *A. albipes* (Askew) and *A. trilineatus* (Mayr) whe-

re it is 2.5:1 whilst in *A. testaceoviridis* (Erd.) it is 2:1, as in the remaining species. The forewing markings in *A. testaceoviridis* (Erd.) are very small and diffuse, being distinct and extensive in the other species. Due to the great convexity of the thorax, in profile (laterally and horizontally) the length of metathorax plus propodeum is less than half the length of the scutellum, and in this respect it differs from all other species except *A. albipes* (A.), from which it differs in the relative gaster length. Finally, in females of *A. testaceoviridis* (Erd.) the first funicle segment: pedicel ratio is always less than 2:1, whereas in the remaining species it is more or equal.

In males, differences in colouration between the different species are not characteristic; they all possess a generalized metallic green all over the body. The almost inconspicuous forewing marks differentiate males of *A. testaceoviridis* from those of *A. albipes*. The fourth funicle segment: fifth funicle segment ratio separates them from the rest of the species, since in *A. testaceoviridis* the fifth segment is always larger whilst in the remaining species it is at most equal to the fourth. Due to the propodeum plus metathorax length being less than half the horizontal length of the scutellum, they resemble only *A. albipes*, whereas the similar breadth of funicle segments one and two separates them clearly from the other species. Taking into account these differences, males of *A. testaceoviridis* are as distinct as females from allied species.

This species was cited for the first time on *Q. roboris* L. by ERDÖS (1961), out of the cynipidogenic host. At first PUJADE (1985) thought that it was a parasite of *Andricus luteicornis* Kieffer, because there were no antlers on the surface of these cynipid galls collected on *Q. suber* L. At this time only the gall was available and hence the host was identified with reservation. Later, after further sampling, it was concluded that this Eulophid parasitises *Andricus burgundus* Giraud (PUJADE, 1985, in press). The emergence of *A. testaceoviridis* takes place at the same time as that of the host cynipid.

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RESUM

Descripció del mascle de Aulogymnus testaceoviridis (Erdős, 1961) (Hym., Chalcidoidea, Eulophidae).— En aquest treball es descriu per primer cop el mascle de l'espècie *Aulogymnus testaceoviridis* (Erdős), fins avui desconegut. També es redescriuen les característiques morfològiques més importants de les femelles trobades. Finalment es diferencia aquesta espècie de les altres més properes pertanyents a aquest gènere.

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