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***Avetianella longoi* sp. n. (Hymenoptera Encyrtidae) egg parasitoid of
Phoracantha semipunctata F. (Coleoptera Cerambycidae)**

Abstract - *Avetianella longoi* sp. n. (Hymenoptera Encyrtidae) is described from Italy as an effective egg parasitoid of *Phoracantha semipunctata* F. (Coleoptera Cerambycidae), a serious pest of *Eucalyptus* spp. all over their growing areas.

Riassunto - *Avetianella longoi* sp. n. (Hymenoptera Encyrtidae) ooparassitoide di *Phoracantha semipunctata* F. (Coleoptera Cerambycidae).

Viene descritta una nuova specie di Imenottero Encirtide, *Avetianella longoi*, attivo ooparassitoide di *Phoracantha semipunctata* F., fitofago di primaria importanza di *Eucalyptus* spp. in tutti gli areali ove tali piante sono diffuse.

Key words: Hymenoptera Encyrtidae, *Avetianella longoi* sp. n., egg parasitoid, *Phoracantha semipunctata*, *Eucalyptus* spp., Italy.

INTRODUCTION

The *Eucalyptus* long horn borer, *Phoracantha semipunctata* Fabricius (Coleoptera Cerambycidae), has been accidentally introduced in the Mediterranean Basin about fourty years ago (Lepesme, 1950; Balachowsky, 1962; Mendel, 1987) and more recently in Italy (Piras, et al., 1970; Tassi, 1970), where it represents a serious pest of *Eucalyptus* spp. all over their growing areas.

The beetle is a good flyer and its females usually lay eggs on stressed trees; here, newly hatched larvae may feed on the bark surface, then into the bark itself and finally in the cambium.

In relation to its economic importance as well as the impracticability of chemical control, studies on its egg parasitoids complex have been started in Southern Italy by the Institute of agricultural Entomology, University of

Catania, and the Institute of Plant Protection, University of Reggio Calabria. These observations revealed the activity of an Encyrtid species that seems to play a remarkable role in biological control of the Eucalyptus long horn borer. This species belongs to the genus *Avetianella* Trjapitzin but it does not correspond to anyone of the presently known species. Therefore, it is described as new in the present paper.

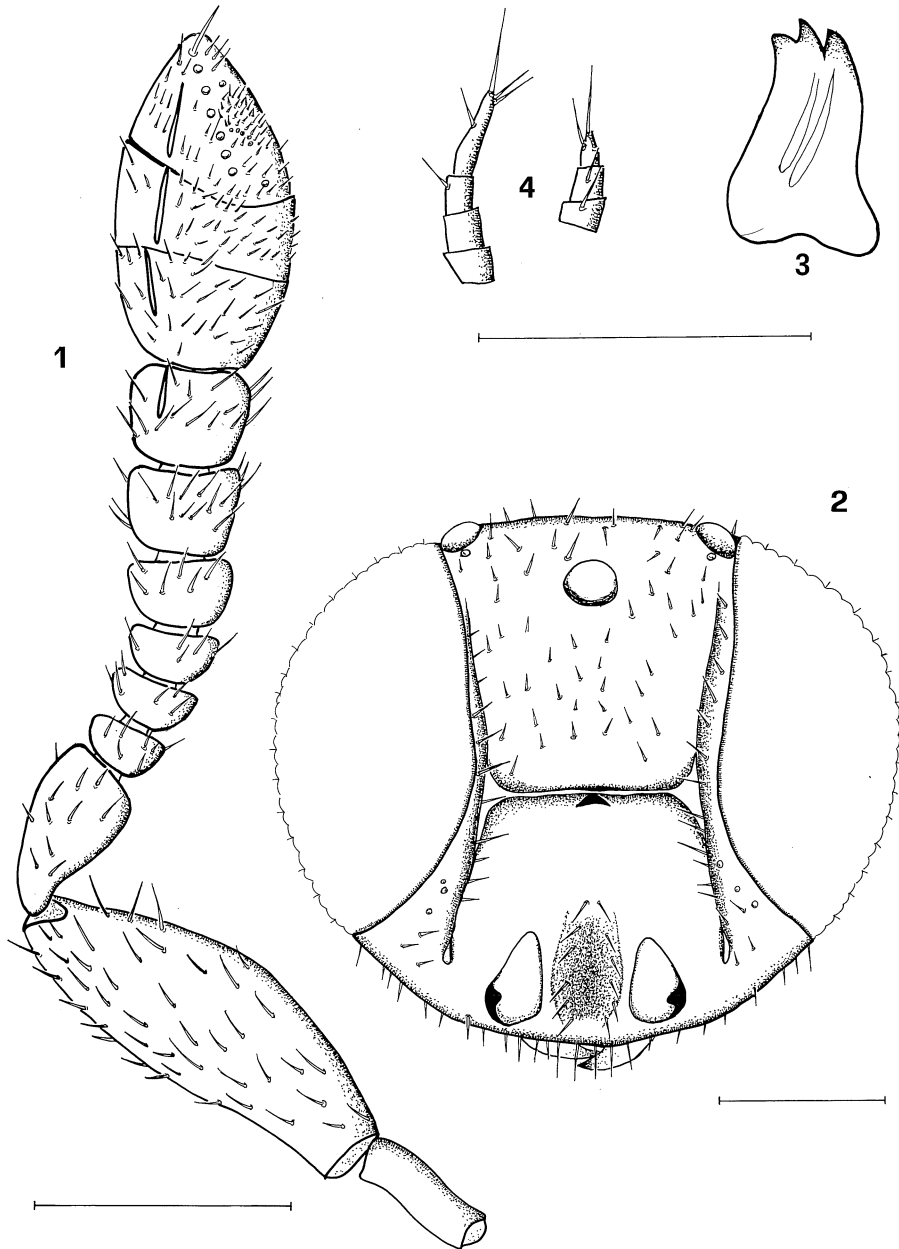
***Avetianella longoi* sp. n. (figs. 1-10)**

FEMALE: Length (including ovipositor) 1.2-1.6 mm (Holotype 1.6 mm).

Colour. Body near entirely dark brown with metallic lustre. Head with paler membranous lines; antennal clava dark brown with the third segment paler. All coxae dark brown with the distal third whitish; all femora dark brown with the proximal portion of mid femora whitish; all tibiae dark brown with apical half whitish; tarsi whitish. Wings hyaline with vein brown. Setae on the body pale.

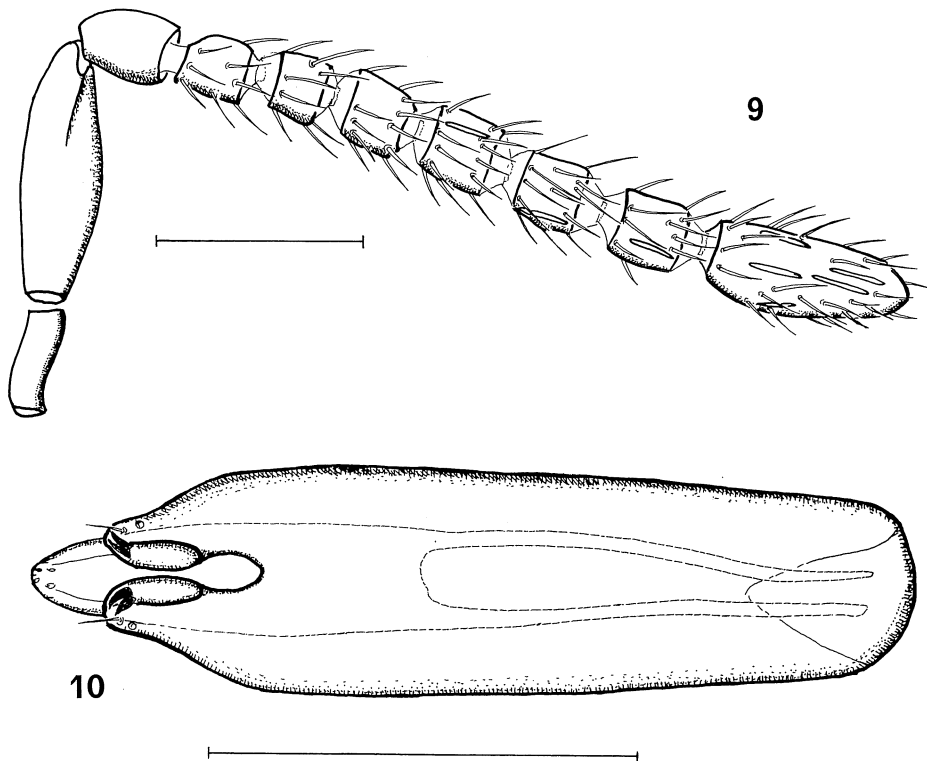
Head. In facial view, wider than long (fig. 1). Frontoververtex about one third as the head width; malar space half as long as eye length; distance between toruli 0.7 times as long as their distance from the eye margins; scrobal impression moderately deep, interantennal prominence bearing six pairs of setae. Face with a pair of vertical membranous lines running from level with anterior ocellus to antennal toruli, each line very close to eye margin; a horizontal membranous line connects these about half way between anterior ocellus and antennal toruli. Clypeal margin slightly convex. Antenna with radicle 0.3 times as long as scape length (fig. 2); scape 2.5 times as long as broad; pedicel as long as or slightly longer than the first three funicle segment combined; funicle segments wider than long and progressively longer distally; first funicle segment 0.16 times as long as the pedicel length and slightly transverse; second and third segment subequal; sixth segment nearly subquadrate; other proportions as in fig. 1; clava three segmented, nearly as long as the previous four funicle segments combined and slightly obliquely truncate at apex; setae on funicle short, the longest about 0.5 times the diameter of the smallest funicle segment; longitudinal sensilla on fourth, fifth, sixth funicle segments and clava. In the lower part of the third segments of the clava a densely setose area is present, with extremely small placoid sensilla and setae. Frontoververtex with sculpture as in fig. 6. Mandibles with three teeth (fig. 3), maxillary palps four segmented and labial palps three-segmented (fig. 4).

Thorax. In side view, dorso-ventrally very flattened; dorsally, the mesoscutum and scutellum both flat. In dorsal view, visible part of mesoscutum 1.5 times as broad as long (fig. 5); sculpture on mesoscutum and scutellum as in



Figs. 1-4 - *Avetianella longoi* sp. n., female paratype: 1. Antenna; 2. Head, facial view; 3. Mandible; 4. Maxillary and labial palps (scale lines represent 0.1 mm).

COMMENTS. *Avetianella* is a small genus described by Trjapitzin in 1968 (Trjapitzin, 1968, in Trjapitzin, 1971) with the type-species *Avetianella capnodiobia* obtained in America from *Capnodis tenebrionis* L. eggs (Trjapitzin, 1971). The genus, that has a wide distribution, is placed in the subfamily Encyrtinae subtribe Oobiinae (Trjapitzin, 1973) and is characterized by the presence of membranous lines on the frontovertex, clava three-segmented, maxillary palpi four-segmented (the fourth segment very long)



Figs. 9-10 - *Avetianella longoi* sp. n., male paratype: 9. Antenna; 10. Genitalia (scale lines represent 0.1 mm).

(fig. 4), labial palpi three-segmented, mandibles with three teeth and forewing with a distinctly petiolate stigmal vein. The species belonging to *Avetianella* genus, generally parasitize Coleoptera Cerambycidae and Buprestidae eggs (Noyes, 1980; 1990). In addition to the mentioned type-species the genus

includes also *A. dahlsteni* Trjapitzin, *A. depressa* (Girault), *A. batocerae* (Ferrière) and two undescribed neotropical species (Noyes, *in litteris*).

Avetianella longoi is very close to *A. dahlsteni*, described from California (Trjapitzin, 1971; Gordh and Trjapitzin, 1981). Nevertheless, the female of the new species mainly differs in the antenna shape, having a wider scape (four times as long as broad in *dahlsteni*) and a shorter clava (as long as funicle in *dahlsteni*); the exerted part of the ovipositor is greater in *dahlsteni* (nearly half as long as gaster). Moreover, the male antenna has funicle segments subquadrate in the new species (fig. 9) (they are longer than wide in *dahlsteni*) and funicle setae shorter.

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