

Description of *Metaphycus delucchii* sp. nov. (Hymenoptera : Encyrtidae), parasitoid of *Gossyparia spuria* (Modeer) (Homoptera : Eriococcidae), with preliminary biological information

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Objektyp: **Article**

Zeitschrift: **Mitteilungen der Schweizerischen Entomologischen Gesellschaft =
Bulletin de la Société Entomologique Suisse = Journal of the
Swiss Entomological Society**

Band (Jahr): **63 (1990)**

Heft 3-4: **Gedenkschrift zum Rücktritt von Prof. Dr. Vittorio Delucchi**

PDF erstellt am: **12.07.2024**

Persistenter Link: <https://doi.org/10.5169/seals-402398>

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Description of *Metaphycus delucchii* sp. nov. (Hymenoptera: Encyrtidae), parasitoid of *Gossyparia spuria* (MODEER) (Homoptera: Eriococcidae), with preliminary biological information

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Metaphycus delucchii sp. nov. (Hymenoptera: Encyrtidae), parasitoid of *Gossyparia spuria* (MODEER), (Hymenoptera: Eriococcidae) is described. Preliminary biological information is given.

INTRODUCTION

In the course of a study on the natural enemies of the elm scale *Gossyparia spuria* (MODEER), a new species of *Metaphycus* MERCET has been obtained and is here described.

To date no other species of this genus has been recorded on the same host (KOSZTARAB & KOZAR, 1988; TRJAPITZIN, 1989).

The new species is dedicated to Prof. VITTORIO DELUCCHI on the occasion of his retirement.

DESCRIPTION OF THE SPECIES

Metaphycus delucchii sp. nov.

Female (Figs. 1–2)

Body largely yellowish; head with occiput blackish above foramen; antennae with scape dark brown near the middle, pedicel blackish at basal half, first 3 funicular segments dusky, club dark brown on the basal segment, fading to whitish distally; pronotum grey-brown medially and with two small spots laterally; mesoscutum, at base, metanotum and propodeum more or less infuscated; wings hyaline, venation pale brown; middle and hind tibiae respectively with two and one subannular dark spots. Length about 0.9 mm.

Head about twice as long as wide; ocelli in a strongly acute-angled triangle (Fig. 2A); distance of posterior ocellus from the internal margin of eye about one third of the distance between posterior ocelli; frontovertex twice as long as wide, minimum width one fourth of the head width; toruli removed from each other by about twice the length of the antenna radicle and from the mouth by about one third the malar space; mandibles tridentate (Fig. 2B); maxillary and labial palpi two-segmented (Fig. 2C and D). Antenna (Fig. 2E) with radicle 2.5 times as long as wide; scape rather slender, 3.5 times as long as wide; pedicel about as long as funicle segments I–IV together; the latter subequal, small, not longer than

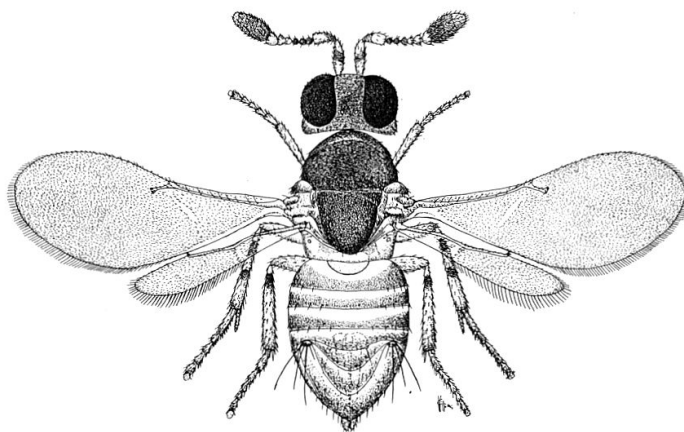


Fig. 1. *Metaphycus delucchii* sp. nov., female.

wider; funicle segments V–VI abruptly larger, subrectangular in profile view, slightly wider than long; club about as long as funicle, but wider. Linear sensilla only on funicle segments V–VI (1–2) and on each club segment (3–4).

Thorax shorter than gaster (40 : 50); mesoscutum (mid lobe) transverse, about one fourth shorter than scutellum, the sculpture cellulate-reticulate and setae rather sparse; metanotum and propodeum very narrow in the middle. Fore wing (Fig. 1) about 2.6 times as long as wide; fringe short; other characters as in Fig. 2F. Legs normal; mid-tibial spur as long as the adjacent tarsal segment.

Gaster longer than thorax; ovipositor inserted at level of cercoids, shorter than the mid-tibia (52 : 57), not or hardly exerted; third valvula about one fourth the length of the ovipositor.

Male

Similar in colouration to female except that scape and pedicel less extensively darkened; on the contrary, funicle segments I–V darkish and gaster dorsally suffused with brown.

Head with ocelli disposed in an equilateral triangle; internal margin of torulus with a row of 5–8 sensilla. Antenna as in Fig. 2G.

Genitalia (Fig. 2H) as in many other species, about 0.15 mm in length; volsellar digiti with two hooklets; body of the aedeagus slightly shorter than apodemes.

Material examined

Holotype, ♀, Italy, Polla (SA), V. 1989; ex *Gossyparia spuria* on *Ulmus campestris* L.; coll. G. VIGGIANI; 10 ♀ and 3 ♂ paratypes, same data.

Holotype and paratypes will be deposited at the Department of Agricultural Entomology and Zoology, University of Naples, Portici.

Comments

M. delucchii sp. n. belongs to the *M. alberti* (HOWARD) species-group (= *asterolecanii*-group) (VIGGIANI & GUERRIERI, 1989). Among the Palaearctic species it appears allied to *M. asterolecanii* (MERCET), from which it can be distinguished as follows:

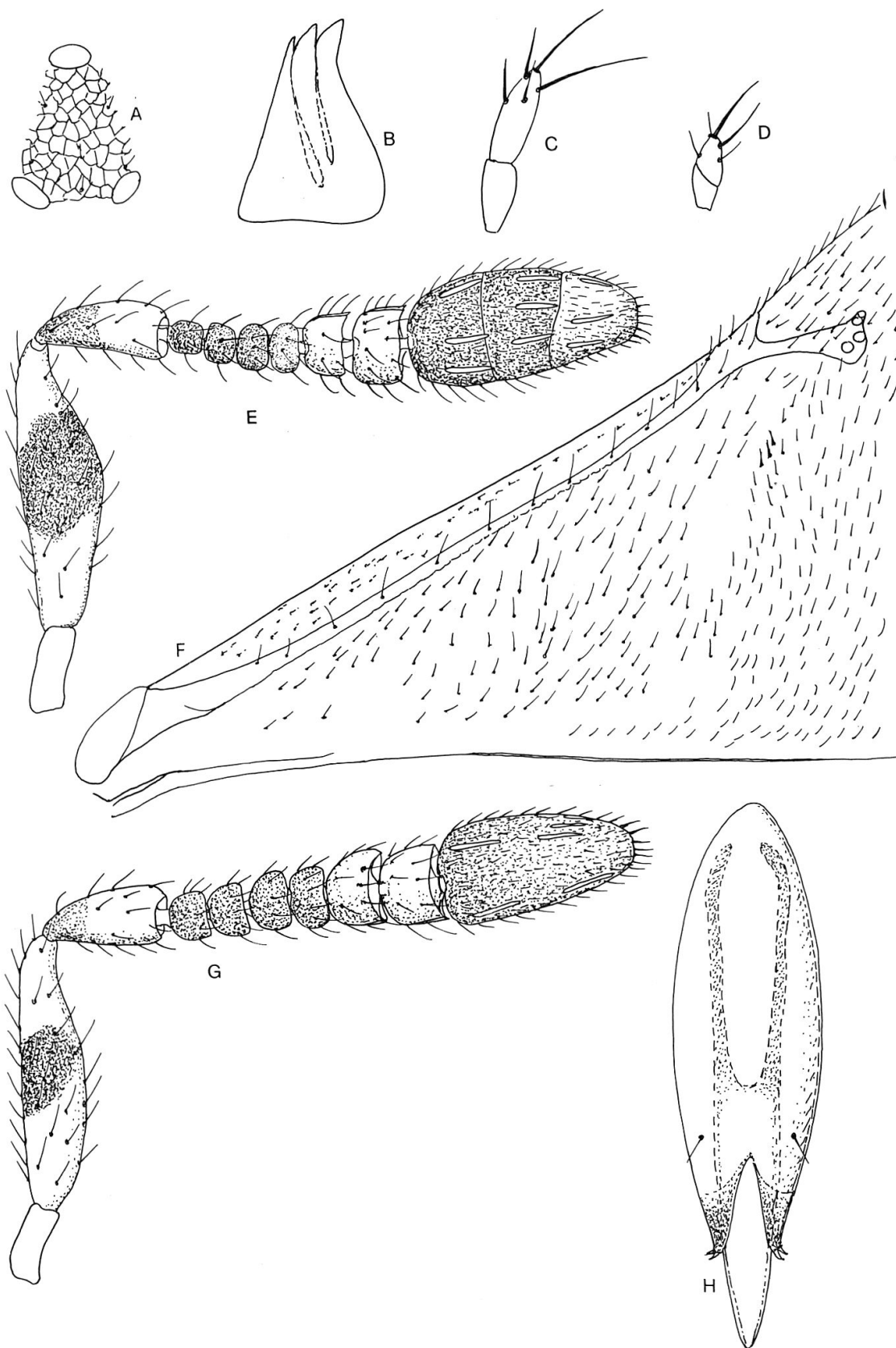


Fig. 2. *Metaphycus delucchii* sp. n. Female: A = Ocellar area; B = Mandible; C = Maxillary palpus; D = Labial palpus; E = Antenna; F = Basal part of the fore wing. Male: G = Antenna; H = Genitalia.

M. delucchii

Female:

Infuscation of scape transverse, subcircular, not reaching the distal part of the segment;

fore tibiae immaculate; hind tibiae with one subcircular black spot at base;

funicle segments, except the first, at least 1.5 times wider than long, without linear sensilla; funicle segments V–VI larger, with 1–2 linear sensilla;

club as long as funicle.

Male:

Linear sensilla only on funicle segments V–VI.

M. asterolecanii

Female:

Infuscation of scape elongate, reaching the distal part of the segment;

fore tibiae with one subcircular black spot near the base; hind tibiae with two subcircular dark spots;

funicle segments as long as wide or slightly wider; funicle segments II–VI with 1–4 linear sensilla;

club shorter than funicle (0.6).

Male:

Linear sensilla on funicle segments II–VI.

In the key by COMPÈRE (1957), concerning some species of *Metaphycus* with maxillary and labial palpi 2-segmented, *M. delucchii* runs near *M. praevidens* (SILV.). Following the key by ANNECKE & MYNHARDT (1981) for the South African species of the same group, *M. delucchii* runs near *M. amblydentis* (ANN. & MYNH.) and *M. brochus* (ANN. & MYNH.).

Biological notes

The new species is a rather common parasitoid of the elm scale. It develops almost all year round on several stages of the host (first and second nymphal instars, young females), and attacks as a solitary, endophagous parasitoid. The host skin is yellowish (first nymph) or dark red (second nymph and female).

ACKNOWLEDGEMENT

The autor thanks very much Dr. M. COPLAND, University of London, Wye College, for reviewing the manuscript.

RESUME

La nouvelle espèce *Metaphycus delucchii* sp. nov. (Hymenoptera: Encyrtidae), parasitoïde de *Gossyparia spuria* (MODEER) (Hymenoptera: Eriococcidae), est décrite. Des notes biologiques préliminaires sont données.

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