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Description of Metaphycus stephaniae sp. nov. (Hymenoptera, Chlacidoidea, Encyrtidae), a parasitoid of Stotzia ephedrae (Newstead) (Hemiptera, Coccoidea, Coccidae)

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Description of *Metaphycus stephaniae* sp. nov. (Hymenoptera, Chlacidoidea, Encyrtidae), a parasitoid of *Stotzia ephedrae* (Newstead) (Hemiptera, Coccoidea, Coccidae)

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Abstract
A new species belonging to the genus *Metaphycus* is described. *M. stephaniae* sp. nov. has been reared from *Stotzia ephedrae* (Newstead) collected in Israel on *Ephedra alte* C. A. Mey and on *Asparagus aphyllus* L. The new species is compared with its closest relatives, *M. hodzhevanishvilii* and *M. zebratus*.

Keywords: *Israel,* Metaphycus hodzhevanishvilii, Metaphycus zebratus

Introduction

More than 400 species are currently included in the genus *Metaphycus* (Noyes 2005). Apart from several Neotropical records from whiteflies, the species belonging to this genus are typically parasitic in soft and armoured scales. A major contribution to the knowledge of this genus has been recently provided with a review of European species (Guerrieri and Noyes 2000) and by a survey of species from Costa Rica (Noyes 2004). The aim of this paper is to describe *Metaphycus stephaniae* sp. nov., a parasitoid of *Stotzia ephedrae* (Newstead), and to separate it from the very close species *M. hodzhevanishvilii* and *M. zebratus*. The former is reported as a parasitoid of *Stotzia maxima* (Borchsenius) whilst *M. zebratus* is reported as a common parasitoid of *Eriopeltis festucae* (Fonscolombe). *Stotzia* spp. are potential pests of *Asparagus* and *Tamarix* spp.

Metaphycus stephaniae sp. nov.
(Figures 1–8)

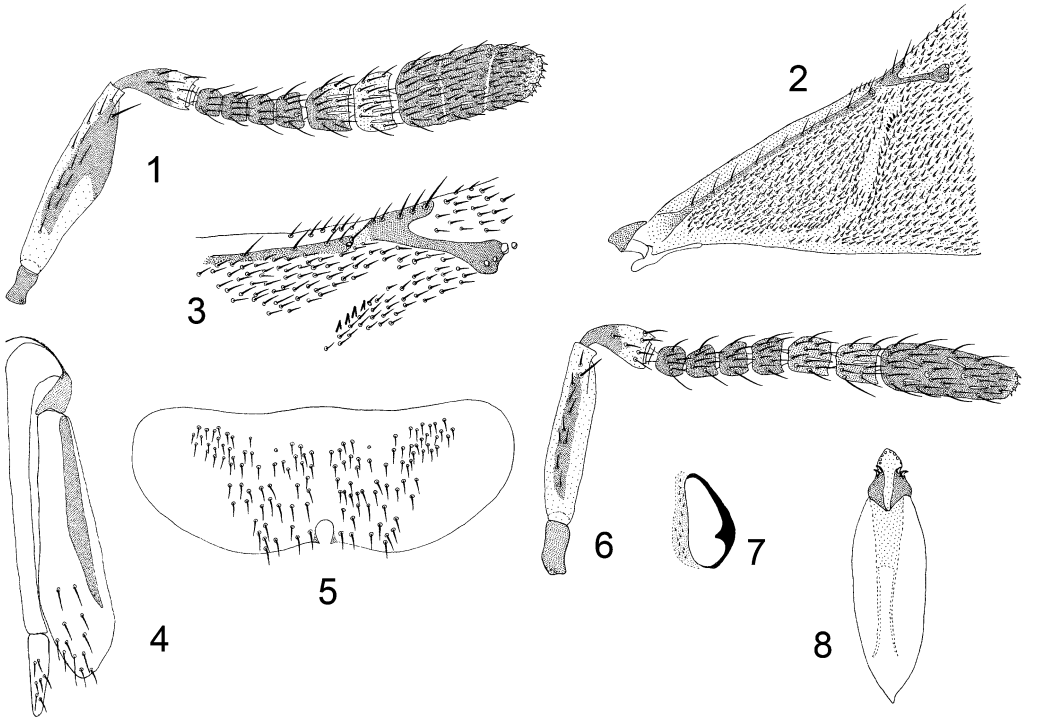
Description

Female. Holotype: length 1.6 mm.

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Figures 1–8. *Metaphycus stephaniae*. (1–5) ♀. (1) Antenna. (2) Base of fore wing. (3) Apex of venation. (4) Ovipositor. (5) Hypopygium. (6–8) ♂. (6) Antenna. (7) Left torulus. (8) Genitalia.

Head dark orange; antenna (Figure 1) brown except part of scape, apex of pedicel, apex of F5 and F6 yellow, clava black except paler apex; mesoscutum and scutellum yellow with brown suffusion; base of tegula yellow, the apex brown; metanotum and propodeum brown; forewing slightly and uniformly infuscate, venation brown; legs yellow, all femora brown, all tibiae with base and apex brown, and each with two dark rings, tarsi brown; gaster brown.

Head about 3.3 × as wide as frontovertex; ocelli forming an acute angle of about 30°; antenna (Figure 1) with scape about 3 × as long as broad, F1 subquadrate and about 0.35 × as long as pedicel; clava slightly truncate at apex. Relative measurements: HW 40, FV 14, OOL 2, OCL 5, OD 2, SL 24, SW 8.

Thorax with notaular lines complete, almost reaching the posterior part of mesoscutum; forewing about 2.2 × as long as broad, venation as in Figures 2, 3.

Gaster with ovipositor (Figure 4) not exserted.

Paratype: hypopygium as in Figure 5. Relative measurements: MT 75, OL 66, GL 14.

Male. Length 1.2 mm. Similar to female except antenna (Figure 6) and genitalia (Figure 8). Torulus (Figure 7) with a single row of tiny pores along the inner margin.

Variation

Very little in the material at hand. One female has the mesothorax pale yellow, not suffused with brown. Length ranges from 1.0 to 1.6 mm.

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Hosts

Metaphycus stephaniae is recorded below from *Stotzia ephedrae* on *Ephedra alte* and on *Asparagus aphyllis*.

Distribution

Israel.

Material examined

Holotype: ♀, Israel, Nes Ziyona, 26 February 2005, ex *Stotzia ephedrae* on *Ephedra alte* (Y. Ben Dov). Paratypes: 15♀, 4♂, same data as holotype; 3♀, Israel, Sha'ar Hagay, 1 May 1978, ex *Stotzia ephedrae* on *Asparagus aphyllis* (Y. Ben Dov). Holotype deposited in DEZA, Portici (Naples), Italy; 2♀, 2♂ paratypes deposited in the Natural History Museum, London, UK.

Comments

Metaphycus stephaniae is extremely similar to *M. hodzhevanishvilii* (Yasnosh 1972) and to *M. zebratus* (see Guerrieri and Noyes 2000), the females of all three species having the scape about 3 × as long as broad, almost complete notaular lines and legs with dark rings. In particular, *M. stephaniae* shares a similar host with *M. hodzhevanishvilii* (recorded from *Stotzia maxima*) but females of the two can be readily separated by the number of linear sensilla on the funicle: in *M. stephaniae* linear sensilla are present only on F5 and F6 while in *M. hodzhevanishvilii* they are present on F3–F6. Females of *M. stephaniae* can be separated with difficulty from those of *M. zebratus*. Indeed, just a darker F5 in the former can help. However, males of the two species can be separated easily because there is a row of tiny pores associated to the torulus of *M. stephaniae* whilst that of *M. zebratus* has none (Guerrieri and Noyes 2000). The species is named after my wife.

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