

On the occurrence of two species of *Encarsia* (Hymenoptera: Aphelinidae) parasitoids of *Aleuroclava* sp. (Hemiptera: Aleyrodidae) in Southern Italy

G. Viggiani, F. M. Iaccarino

Laboratorio di Lotta biologica - Dipartimento di Agraria, Università degli Studi di Napoli "Federico II", Portici (NA), Italy

Abstract

Two species of *Encarsia* (*E. aseta* and *E. sophia*) were identified as parasitoids of *Aleuroclava* sp, probably *A. aucubae*. The occurrence of *Encarsia aseta* is recorded for the first time in Europe. The phenology of both, pest and parasitoids, is under study.

Short paper

In late summer 2016 a species of *Aleuroclava* was found in Portici (NA) on leaves of mulberry (*Morus alba*) and then on leaves of lemon (*Citrus limon*). The whitefly, currently in the process of being identified, but probably *A. aucubae* (Kuwana), is rather widespread on several plants, recently recorded from Europe, Northern Italy (as *A. guyavae*, Pellizzari & Šimala, 2007), Slovenia (Seljak, 2012) Croatia (Šimala *et al.*, 2015), Montenegro (Malumphy *et al.*, 2015), and France (Streito *et al.*, 2014). On each leaf of the host plant normally a scarce population of young stages has been found. A high percentage of puparia were parasitized (Figure 1). On a sample at random of 50 leaves, 96% of them had *Aleuroclava* puparia present, and an average of 1.5 puparia/leaf. Of 145 puparia examined, 50% showed the parasitoid exit hole. Until now from the puparia of *Aleuroclava* two species of *Encarsia* (Hymenoptera Aphelinidae) emerged and were identified

by the first author of the present note as *E. aseta* and *E. sophia*. The first species (Figure 2) was described originally from India (Hayat & Polaszek, 1992) and then recorded from China and Hawaii (Huang & Polaszek, 1998), Taiwan (Chou *et al.*, 1999), and Australia (Schmidt & Polaszek, 2007). The occurrence of *E. aseta* in Southern Italy repre-



Figure 1. Puparium of *Aleuroclava* sp. with exit hole of *Encarsia aseta*.



Figure 2. *Encarsia aseta*.

Correspondence: Gennaro Viggiani, Laboratorio di Lotta biologica - Dipartimento di Agraria, Università degli Studi di Napoli "Federico II", via Università 133, 80055 Portici (NA), Italy.
Tel.: + 39.081.2539003 - Fax: +39.081.7755872.
E-mail: genviggi@unina.it

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sents the first record from Europe. This rather peculiar species, with a short body (about 0.7 mm in length) completely yellow, mid lobe of mesoscutum without setae, and known only from the female sex, belongs to the *parvella* group of *Encarsia* (Hayat, 1998).

E. sophia is a species widely distributed all over the world, parasitoid of several whiteflies and recorded also from Italy (Pedata & Viggiani, 1993; Viggiani, 1996).

The phenology of the whitefly host *Aleuroclava* sp. in Southern Italy and its complex of parasitoids are under study.

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