The caper fly *Capparimyia savastani* (Martelli) (Diptera: Tephritidae)

Luca Mazzon*
Isabel Martinez-Sañudo*

*Department of Agronomy, Food, Natural Resources, Animals and Environment (DAFNAE) – University of Padua (Italy)

Capparimyia Bezzi (Dacinae, Ceratitidini) is a genus primarily distributed in the Afrotropical Region. It includes eight species which develop in host plants of the Capparidaceae family. The eight species were all reviewed, a key was provided as well as a study outlining the relationships among the species and evolutionary trends regarding host use within the Capparidaceae (De Meyer & Freidberg, 2005). Flies of this genus are unique among the tribe of Ceratitidini infesting flower buds as well as fruits. *Capparimyia savastani* is a small tephritid fly with typical glossy black thoracic markings and a wing pattern similar to that of Mediterranean fruit fly *Ceratitis capitata*. The “caper fly” *C. savastani* is the only species of the genus present outside the Afrotropical Region. The species is widely distributed in several countries of the Mediterranean basin (southern France, southern
Italy, Malta, Algeria, Tunisia, Libya, Egypt, Israel and Jordan) as well as in Pakistan and Oman. Recently it has been also recorded in Spain (Balearic Islands) and Greece (Milos Island) (Miranda et al., 2008; Papachristos et al., 2009). Moreover, unofficial records report the presence of this species in southern Spain (Almeria).

The caper fly develops in the flower buds and fruits of the common European caper (Capparis spinosa L.) which is a spontaneous shrub in the Mediterranean basin. The European caper is also cultivated in some countries for its edible flower buds that are used, when pickled, as a relish in European cuisine. In these regions, C. savastani is the main economic pest of the caper plant. Female lays three to five eggs inside each bud or fruit of the caper plant. The damage caused to the flower buds compromises their use and their commercial value (Donati & Belcari, 2003; Campo et al., 2007). Nowadays the geographic range of the caper fly seems to be increasing probably due to the growing economic interest of its host plant. A study carried out in Sicily island (Italy), reports that C. savastani performs 6 generations per year.
and reaches the highest population density in summer when almost all the flower buds are infested (in average 3 larvae per flower bud and from 10 to 85 in the fruits) (Longo & Siscaro, 1987). Planning an effective control of this fly is very difficult because the insecticides use could affect the natural enemies, the insect pollinators during the flowering period and the quality of the product. In Sicily, according to integrated pest management programs for caper crops, spinosad formulations are suggested when the first adults are captured in yellow sticky traps.

References

Luca Mazzon
Università di Padova
Laboratorio di Entomologia – DAFNAE
Dipartimento di Agronomia Animali Alimenti Risorse Naturali e Ambiente
Viale dell’Università, 16
AGRIPOLIS – 35020 Legnaro (PD)
' 3284110487 - 0498272813 - Fax 0498272811