Biology and host relations of Diplazontinae (Hym., Ichneumonidae), parasiting aphidophagous Syrphidae (Diptera), in several Mediterranean crops

S. Rojo, S. Bordera & M.A. Marcos-García

Hoverflies are of considerable economic importance because larvae of most species are predatory, feeding on plant aphid-pests. There are many papers dealing with some aspects of the biology of several common hoverfly species, but the biology of aphid-feeding larvae of most of them is still poorly known. In relation with this, little is know about the effect of parasitic Hymenoptera.

Aphidophagous Syrphidae are attacked by a wide range of parasitoids such as Figitidae (Cynipoidea) and Encyrtidae (Chalcidoidea) but the larger parasites are the Diplazontinae, that seem entirely specialised to hoverfly larvae. Diplazontines are koinobiont endoparasitoids. Oviposition is into the egg or larva and emergence is from the puparium (Fitton & Rotheray, 1982).

For two years we have sampled syrphid larvae from the aphid colonies of the most important fruit trees and orchard crops of the south-eastern Spain. Larvae have been reared in a climatic room (21 °C , 80% R.H. and 14 daylengt) to allow them to develop into adults. Weeds with aphids and adults hoverflies have been also collected in the field. About 400 syrphid larvae parasitized by diplazontines, have been studied.

This is the first study on the relationship of syrphid species with their parasitoid diplazontines in Spain. In the present contribution we undertake the following items: the relative abundance of each parasitoid in each crop, the relatioship syrphid-aphid-diplazontine, the phenology in relation with the presence of the syrphid larvae in the crop, and different aspects related with the life cycle of hoverflies larvae (length of preimaginal stages, percentage of parasitism etc...).

REFERENCE

FITTON, M. G. & ROTHERAY, G. E., 1982. A key to the European genera of diplazontine ichneumon-flies, with notes on the British fauna. *Systematic Entomology*, 7: 311-320.

S. Rojo, S. Bordera & M.A. Marcos-García. Department of Environmental Sciences and Natural Resources. University of Alicante. Ap. Correos 99. 03008 Alicante. (Spain)