

Faunistic aspects of the Tephritidae (Diptera) of the Monegros region (Spain, Ebro valley)

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The fruit flies (Diptera, Tephritidae) are from the economic point of view one of the most important families of Diptera in the Mediterranean region. Some species cause enormous damage in commercial fruit and olive plantations. Nevertheless they have so far received little attention in Spain. The lists of Encobet (1912a,b) are now out-of-date and should not be used for faunistic purposes. More recent and reliable lists were provided by Hering (1933) for the Albarracín region, by Séguy (1934a,b) for various parts of the country and by Mihalyi (1969) for Andalucía. Additional records are given by Hendel (1927) and Foote (1984). On the other hand, the fruit flies of the Canary Islands have been studied in detail by Merz (1992). In total, approximately 80 species have been recorded from mainland Spain.

The fruit flies fauna from Los Monegros region has been studied by Merz & Blasco-Zumeta, 1995 who record 24 species, a remarkable number despite the relatively poor vegetation of the Monegros-region, and despite the unspecific search methods used.

Most of the species found have a rather wide distribution in the Mediterranean region and occur wherever the suitable host plants occur. However, three species are known so far only from the Iberian Peninsula and may be regarded as endemic. These three represent 75 % of all endemic fruit fly species from Spain, because only *Dithryca guttulosa* (Loew, 1869) was not found during the study.

This high endemism highlights the important ecological value of the Monegros region. This is especially the case for *Rhagoletis zernyi* Hendel, 1927, which is entirely dependent on large populations of its host plant, *Juniperus thurifera* L. As this plant community continues to disappear, the survival of this remarkable species becomes even more endangered.

The other two endemic species, *Oedaspis fissa* Loew, 1862 and *Ptiloedaspis tavaresiana* Bezzi, 1920, are both very rarely represented in collections. All European Oedaspidini with known biology cause stem-galls on *Artemisia*. It is well known, that the species of this tribe are only rarely collected, because the adults have vestigial mouthparts and probably do not feed. Therefore their life as adult is very short (Freidberg & Kugler, 1989). In this respect it is noteworthy that not less than 6 specimens of *Oe. fissa* were collected, which indicates a good population of this endangered species for the Monegros region.

Another species to which our attention should be drawn is *Terellia vectensis* (Collin, 1937). Although it has a rather wide distribution (Merz, 1994), it is very seldom found, even at localities with good populations of its host plants, *Serratula* spp. One main reason for its rarity may be explained by the management of potential habitats. Only grazed meadows allow the species to build up good populations, whereas regular cutting eradicates this species.

The Monegros have one of the most distinctive ecosystems in the Iberian Peninsula and Europe, and so this paper's intention is twofold: first, to add to the knowledge of an insect group which is still imperfectly known in Spain, and to appreciate better a region of great scientific and natural value, whose high degree of biodiversity presently threatened in many ways (Pedrocchi *et al.*, 1988).

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