



Two new species of *Xanthempis* Bezzi (Diptera, Empididae, Empidinae) endemic to the Pyrenees

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Abstract

Two new species endemic to the Pyrenees and belonging to the subgenus *Xanthempis* of the genus *Empis* are described: *E. (X.) fagina* **sp. nov.** and *E. (X.) virgulata* **sp. nov.** A key is given for the six presently known Pyrenean species, four of which are endemic to this area.

Key words: *Empis*, *Xanthempis*, new species, *E. (X.) fagina*, **sp. nov.**, *E. (X.) virgulata*, **sp. nov.**, Pyrenees

Introduction

Within the tribe Empidini of the subfamily Empidinae, the subgenus *Xanthempis* Bezzi of the genus *Empis* Linnaeus is easily recognizable on account of the yellowish ground color of the body, the dichoptic eyes of the male, the absence of acrostichals and the characteristic occipital and scutal patterns usually found in the species. In addition, *Xanthempis* is defined by a series of apomorphic characters especially found in the head and the prothorax (Chvála 1994, 1996; Daugeron 1997, 2000; Shamshev 1998, 2007).

The subgenus was erected by Bezzi (1909) to include 20 species mainly distributed in western Europe. In recent years, the subgenus was extensively investigated from a taxonomic point of view (Chvála 1994, 1996; Daugeron 1997, 2000; Shamshev 1998), with 51 species included in a provisional list of *Xanthempis* (Daugeron 2000), with the distribution of the subgenus extended throughout the Palaearctic realm (including Europe, the Mediterranean basin, the Caucasus and the eastern Palaearctic from Siberia to Japan). However it is suspected that the subgenus is much richer with many species to be discovered in the Palaearctic hotspots of richness; this hypothesis was recently confirmed by Shamshev (2007) and Shamshev and Kustov (2008) with the description of five and one species endemic to the Caucasus and the Sicily respectively.

In western Europe the biodiversity is particularly rich around the Mediterranean basin, where most endemics are associated with mountains south of 45°N, such as the Southeasternmost part of the Alps, and the Pyrenees (Williams *et al.* 2000; Deharveng *et al.* 2000). In addition to *E. (X.) hypandrialis* Daugeron and *E. (X.) montivaga* Daugeron only known from the Pyrenees (Daugeron 2000), I describe in this paper two additional species endemic to this area: *E. (X.) fagina* **sp. nov.** and *E. (X.) virgulata* **sp. nov.**

Materials and methods

This study is based on material housed in the Muséum national d'Histoire naturelle, Paris (MNHN), and collected by Malaise traps in a beech forest in the Pyrenees between May and July 2006. The type materials are deposited in the MNHN and the Natural History Museum, London (NHM).