



## Systematics of the Euro-Mediterranean *Empis* (*Kritempis*) (Diptera: Empididae: Empidinae)\*

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\*In: Cerretti, P., Mason, F., Minelli, A., Nardi, G. & Whitmore, D. (Eds), *Research on the Terrestrial Arthropods of Sardinia (Italy)*. Zootaxa, 2318, 1–602.

### Abstract

The Euro-Mediterranean subgenus *Kritempis* Collin of *Empis* Linnaeus is here redefined on the basis of three synapomorphies, namely (1) hypandrium reduced to its lateral arms, (2) presence of a posteroventral group of spine-like setae on the female mid tibia at base, (3) anal vein faint, incomplete. This subgenus includes eight species: *Empis* (*K.*) *algira* Macquart, *E.* (*K.*) *livida* Linnaeus, *E.* (*K.*) *macquarti* Becker, *E.* (*K.*) *macropalpa* Egger, *E.* (*K.*) *nigrimana* Becker, *E.* (*K.*) *sardoa* **sp. nov.**, *E.* (*K.*) *sibillina* Bezzi and *E.* (*K.*) *taffertensis* **sp. nov.** A detailed diagnosis of the group as well as a key to all known species is provided. All species are described or redescribed, exclusive of the well-known *E.* (*K.*) *livida*. The holotype of *E.* (*K.*) *algira* is identified and a lectotype designated for *E.* (*K.*) *macquarti*, *E.* (*K.*) *macropalpa* and *E.* (*K.*) *sibillina*. *Empis hoffmannseggii* Loew is moved from the subgenus *Kritempis* to the subgenus *Coptophlebia* Bezzi. The subgenus is restricted to the Mediterranean basin exclusive of *E.* (*K.*) *livida* which is widely distributed in Europe and Algeria where the species is newly recorded.

**Key words:** Systematics, Diptera, Empididae, Empidinae, *Empis*, *Kritempis*, new species, monophyly, Euro-Mediterranean distribution, Sardinia, Morocco

### Introduction

The Empidinae (Diptera: Empididae) are well adapted to temperate areas of the Palaearctic region, where three huge genera, *Empis* Linnaeus, *Rhamphomyia* Meigen and *Hilara* Meigen that include hundreds of species, are known (Chvála & Wagner 1989). The first two genera were divided into several subgenera (e.g. see Bezzi 1909; Frey 1909; Collin 1926), and the subgenus *Kritempis* Collin of *Empis* was created for five species with a Mediterranean distribution, including *E. algira* Macquart as type species, as well as *E. livida* Linnaeus which has a large west Palaearctic distribution (Collin 1926). However the status of a number of these Mediterranean species was questioned by Chvála and Wagner (1989) and Chvála (1994), who finally restricted the subgenus to three species. In this paper the monophyly of *Kritempis* is assessed on the basis of three morphological characters; the species originally recognized as belonging to *Kritempis* are kept in this group, all known species, exclusive of *E. livida*, as well as two new species from Sardinia and Morocco, are described. *Kritempis* is considered a typical Mediterranean group of Empidinae as confirmed by the discovery of *E. livida* in North Africa, and *E. hoffmannseggii* Loew is moved to the subgenus *Coptophlebia* Bezzi.

### Material and methods

This work is primarily based on the study of type material except for *Empis livida*, that is a well-known,