



## The Bibionidae (Diptera) of Sardinia, with description of two new species\*

JEAN-PAUL HAENNI

Muséum d'histoire naturelle, Rue des Terreaux 14, CH-2000 Neuchâtel, Switzerland. E-mail: jean-paul.haenni@unine.ch

\*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 occurrence of eight species of Bibionidae is reported from Sardinia, mainly based upon recent collections made in the south-western part of the island. Two species, *Dilophus bispinosus* Lundström, 1913 and *D. humeralis* Zetterstedt, 1850, are new records for Sardinia, while two species are described as new to science: *Bibio sardocyrneus* **sp. nov.** (from Sardinia and Corsica) and *Dilophus sardous* **sp. nov.** (from Sardinia). The presence on the island of a ninth species, *D. femoratus* (Meigen, 1804), is considered as dubious. Finally, the following synonymy is proposed: *Bibio hortulanus* (Linnaeus, 1758) = *Bibio siculus* Loew, 1846 **syn. rev.**

**Key words:** Diptera, Bibionidae, Italy, Sardinia, Corsica, faunistics, new species, new records

### Introduction

The Bibionidae are a small family of characteristic, robust nematoceran Diptera often with marked sexual dimorphism. The adults are often abundant in open, semi-open or wooded habitats. They are most frequent and diverse in semi-open and mosaic agricultural/wooded landscapes. In some species males may form large aerial mating swarms. The larvae of most species live in mass-aggregations of up to several hundreds specimens. They are phytosaprophagous and develop in decaying vegetable matter, mainly in leaf litter and soils rich in humus. In temperate Europe some species may become minor pests, as the larvae can feed on roots of grasses and crops (D'Arcy Burt & Blackshaw 1991).

About 45 species of bibionid flies are known in Europe (Skartveit 2004). The Italian fauna as a whole includes 19 species according to Dahl *et al.* (1995) and Skartveit (2004), both lists being mainly based upon literature records although they differ for some species. Additional species have been recently recorded by Rivosecchi and Di Luca (2001), Skartveit and Thaler (2001), Vanin (2002, 2003, 2006), Sommaggio *et al.* (2004) and Zeegers (2006), increasing the number of species known from Italy to 22.

The study of the Bibionidae from Sardinia has been nearly completely neglected. The only records are based on the old collections made by Costa (1882, 1883), while one species was recorded by Haenni (1982). Accordingly only four species are mentioned from the island by Dahl *et al.* (1995) in the *Checklist delle specie della fauna italiana*, namely *Bibio hortulanus* (Linnaeus, 1758), *Dilophus antipedalis* Wiedemann in Meigen, 1818, *D. febrilis* (Linnaeus, 1758) and *D. femoratus* Meigen, 1804. In Fauna Europaea (Skartveit 2004) the same species are considered as present in Sardinia, together with two others, *Bibio marci* (Linnaeus, 1758) and *B. siculus* Loew, 1846, although the latter species is merely a synonym of *B. hortulanus* (Linnaeus, 1758) (see comment below this species).