



Terrestrial planarians (Platyhelminthes, Tricladida, Terricola) from the Iberian Peninsula: new records and description of three new species

MIQUEL VILA-FARRÉ^{1,2}, EDUARDO MATEOS³, RONALD SLUYS⁴ & RAFAEL ROMERO^{1,5}

¹Departament de Genètica, Facultat de Biologia, Universitat de Barcelona

²E-mail: mvilafarre@gmail.com

³Departament de Biologia Animal, Facultat de Biologia, Universitat de Barcelona; E-mail: emateos@ub.edu

⁴Institute for Biodiversity and Ecosystem Dynamics & Zoological Museum, University of Amsterdam, P. O. Box 94766, 1090 GT Amsterdam, The Netherlands. E-mail: sluys@science.uva.nl

⁵E-mail: rromero@ub.edu

Abstract

Little is known about the taxonomy and distribution of terrestrial planarians on the Iberian Peninsula. Few studies have tried to investigate the local diversity of these animals, due to both their lack of economic interest and their low abundance. In this study we have made extensive searches and collections of terrestrial planarians from the Iberian Peninsula, thus gathering new information on their taxonomy and biogeography. The study includes the description of three new species of the genus *Microplana*, viz. *Microplana aixandrei* sp. nov., *Microplana grazalemica* sp. nov., and *Microplana gadesensis* sp. nov. We present distribution maps summarizing published and new records of land planarians. The present work substantially increases our knowledge on this group of animals in Spain and Portugal and at the same time also evidences the scarcity of data and studies on the biology of these organisms.

Key words: Platyhelminthes, Tricladida, Rhynchodemidae, *Microplana*, *Rhynchodemus*, Iberian Peninsula, Andalusia, Grazalema, biogeography, taxonomy, spermatophore

Introduction

Although a considerable amount of taxonomic and ecological knowledge on several European faunal groups is currently available, there are still some autochthonous elements of Europe that remain virtually unknown. Such is the case for terrestrial planarians (Platyhelminthes, Tricladida, Terricola). Research efforts on some relatively recently introduced terrestrial flatworm species has been considerable, due to their potential economic impact (Boag & Yeates, 2001; Murchie *et al.*, 2003), but resources for the study of autochthonous terrestrial planarians are virtually nonexistent. This apparent lack of interest of the scientific community results from different factors. First, autochthonous terrestrial flatworms have no economic impact. Second, these species are usually rare and hard to find, as is reflected in their taxonomic literature: 7 of the 19 known autochthonous European species are described on the basis of a single specimen. In addition, some of this material was lost, destroyed or is poorly preserved (Minelli, 1977). Finally, specimen identification requires an elaborate process that involves the production of histological sections, which have to be examined under a compound microscope. As a result, the general knowledge on this group of invertebrates in Europe is rather poor.

The Iberian Peninsula presents a low number of records for terrestrial planarians, as compared to other groups of animals in this area or to terrestrial planarians in some other European regions (Sluys, 1999). Furthermore, some of these planarian records correspond to unidentified species or to specimens with doubtful identity (H. Jones, personal communication).