



<http://dx.doi.org/10.11646/zootaxa.3964.4.6>

<http://zoobank.org/urn:lsid:zoobank.org:pub:B35FF290-0F0A-4F27-80D4-C4CFD01A2A70>

Rediscovery and redescription of *Leodice laurillardii* (Quatrefages, 1866) comb. nov. (Annelida: Eunicidae)—a rare European polychaete or just an overlooked species?

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Abstract

The eunicid polychaete, *Eunice laurillardii* Quatrefages, 1866, originally described from the central Mediterranean, has been discovered on the northern Iberian Peninsula, constituting the first report of the species since its original description. The new specimens are compared with the type collection and the species is redescribed. Furthermore, the species is assigned to the genus *Leodice* Savigny in Lamarck, 1818, based on information provided by re-examination of type material and the newly collected specimens. A summary of the complex taxonomic history of the species and a discussion of its current status are also provided.

Key words: Eunicida, *Eunice*, biodiversity, Iberian Peninsula, Bay of Biscay, Mediterranean

Introduction

European members of the polychaete genus *Eunice sensu lato* are relatively large worms that commonly inhabit crevices of rocks and live among algae along the shallow waters of Atlantic Europe and the Mediterranean Sea. Traditionally, intertidal and shallow water species have been mostly assigned to two species *E. torquata* Quatrefages, 1866 (or “ringed eunice”) and *E. harassii* Quatrefages, 1866 (Rioja 1918; Fauvel 1923; Day 1967; Campoy 1982). However, both species have been referred to the genus *Leodice* Savigny in Lamarck, 1818 in a recent revision (Zanol *et al.* 2014). Sometimes, they are merely identified on the basis of the presence/absence of a whitish ring in anterior chaetigers (present in the former species and lacking in the latter) and the colour of aciculae and subacicular hooks (dark in *L. torquata* and yellowish in *L. harassii*). This has led to an underestimation of the diversity of the *Eunice* and *Leodice* spp. in European shallow waters and masked the presence of other species within the genus that have remained overshadowed under a misnomer. We have studied the polychaete samples collected from the intertidal rocky shores of the southern Bay of Biscay in the context of a project aimed to investigate the eunicemorph polychaete fauna of northern Spain. Furthermore, we have re-examined the preserved Iberian eunicid material from the collections of Museo Nacional de Ciencias Naturales of Madrid (Spain) and the collections of the Department of Biology of Organisms and Systems of University of Oviedo (Spain). Among the studied material we discovered a species that has not been reported since its original description, *Eunice laurillardii* Quatrefages, 1866. This species was originally described from the Mediterranean Sea, based on several specimens from the French localities of Nice and Marseille and Palermo in Italy.

Here, we provide a redescription of *E. laurillardii* based upon type material (deposited in the Muséum National d’Histoire Naturelle, Paris) and newly collected specimens representing the first record of this species from northern Spain; we include detailed illustrations of the species and its ultrastructure. Furthermore, based on information provided by re-examination of the types and the new material, we reassign the species to the genus *Leodice* reinstated by Zanol *et al.* (2014) and mainly characterised by bearing regularly articulated styles of antennae and palps.