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***Paradiopatra* Ehlers, 1887 (Annelida: Onuphidae) from southwestern Europe with the description of a new species and new ultramorphological data for the genus**

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Abstract

This work recognises five species of *Paradiopatra* from southwestern Europe, represented in the Bay of Biscay, the Atlantic coasts of Iberia and the western Mediterranean Sea. One species, *Paradiopatra florencioi* **sp. nov.**, is newly described from the Cantabrian slope, northern Spain. We are presenting detailed diagnoses of all species and report ontogenetic changes of *P. bihanica* and *P. hispanica*. Scanning electron microscopy elucidated previously known Methylene Blue or Green staining patterns of the ventral glandular pads as cuticular pores. A dichotomous key to all species is included.

Key words: polychaetes, Eunicida, taxonomy, Iberian Peninsula, Bay of Biscay, ventral glandular pads, cuticular pores, key

Introduction

Paradiopatra Ehlers, 1887 is a cosmopolitan genus of Onuphidae Kinberg, 1865 that can be found from the shallow subtidal to the greatest depths, being more speciose along the continental slope and abyssal depths. A recent world-wide revision of the genus (Budaeva & Fauchald 2011) together with the description of six new species from eastern Australia (Paxton & Budaeva 2013) brought the number of world-wide *Paradiopatra* species to 32, of which seven were recognised for European waters. Budaeva & Fauchald (2011) considered *P. fiordica* (Fauchald, 1974) and *P. quadriscupis* (M. Sars in G.O. Sars, 1872) as limited to northern Europe (Norway to Iceland) and *P. iberica* (Hartmann-Schröder, 1975), described from the continental slope of the northeastern Iberian Peninsula, as a junior synonym of the cosmopolitan *P. ehlersi* (McIntosh, 1885); *P. hartmanae* (Kirkegaard, 1980) was reported from northern Europe and the east coast of North America.

Southwestern Europe, represented by the Bay of Biscay, the Atlantic coast of Iberia and the western Mediterranean basin harbours four valid species of *Paradiopatra*: *P. bihanica* (Intes & LeLoeuff, 1975), *P. capbretonensis* Aguirrezabalaga *et al.*, 2002, *P. ehlersi* and *P. hispanica* (Amoureux, 1972). Here, we present an updated revision of *Paradiopatra* of this region and describe *Paradiopatra florencioi* **sp. nov.** from the Bay of Biscay.

Methyl Green or Blue staining has been utilised for a long time as a taxonomic tool to highlight glandular structures in preserved onuphid specimens (Eulenstein 1914; Winsnes 1985; Budaeva & Fauchald 2011). We are showing here that the staining patterns of the ventral glandular pads of *Paradiopatra* species are patterns formed by the cuticular pores of the pads and expect that these structures are also present in other genera of Onuphidae and can be used as an additional systematic character.