Zootaxa 4006 (2): 330–346
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.4006.2.5
http://zoobank.org/urn:lsid:zoobank.org:pub:C6FF2AFA-3BD7-4B22-BE72-C48984714099

First record of genus *Orbiniella* Day, 1954 (Polychaeta: Orbiniidae) in North Atlantic Ocean with the description of a new species

JULIO PARAPAR[1,4], JUAN MOREIRA[2] & GUDMUNDUR VIDIR HELGASON[3]

[1] *Departamento de Bioloxía Animal, Bioloxía Vexetal e Ecoloxía, Facultade de Ciencias, Universidade da Coruña, rúa da Fraga 10, E-15008 A Coruña, Spain. E-mail: julio.parapar@udc.es*
[2]*Departamento de Biología (Zoología), Universidad Autónoma de Madrid, Campus de Cantoblanco, E-28049 Madrid, Spain*
[3]*Institute of Biology, University of Iceland, Sturlugata 7, IS-101 Reykjavik, Iceland*
[4]*Corresponding author*

Abstract

A new species of the genus *Orbiniella* Day, 1954 (Polychaeta: Orbiniidae), collected during the BIOICE programme on sedimentary bottoms off Iceland, is described. *Orbiniella petersenae* **sp. nov.** is a shelf and slope species (107 to 1,915 m) chiefly characterized by having notopodial postchaetal papilla from first chaetiger, long crenulated capillary chaetae and several acicular chaetae on each parapodial rami, and pygidium with four lobes. External micromorphology and gross internal anatomy were studied using, respectively, SEM and micro-CT; this is the first time these techniques are used for any species in this genus. A key to all species of this genus worldwide is provided.

Key words: taxonomy, *Orbiniella petersenae* **sp. nov.**, internal anatomy, SEM, micro-CT, BIOICE, Iceland

Introduction

The polychaete genus *Orbiniella* Day, 1954 was created for the orbiniid *Orbiniella minuta* Day, 1954 from Tristan da Cunha Island (Fig. 1). This genus was characterized by having a rounded prostomium, two achaetigerous segments and following segments without branchiae or parapodial lobes, and parapodia bearing crenulated capillaries and simple acicular chaetae. Hartman (1967) described three more species from Drake Passage and Antarctic Peninsula: *O. branchiata* Hartman, 1967, *O. drakei* Hartman, 1967 and *O. uniformis* Hartman, 1967. In the next three decades, six new species were further described, four from the Pacific Ocean: *O. nuda* Hobson, 1974, *O. aciculata* Blake, 1985, *O. hobsonae* Blake and Hilbig, 1990 and *O. plumisetosa* Buzhinskaja, 1993 (Hobson 1974; Blake 1985; Blake & Hilbig 1990; Buzhinskaja 1993), and two from the Indian Ocean: *O. dayi* Branch, 1998 and *O. marionensis* Gillet, 1999 (Branch 1998; Gillet 1999). Finally, the last species described to date was *O. andeepia* Narayawasmany and Blake, 2005 which is widely distributed across Antarctic deep basins of Drake Passage, North Weddell Sea and South Sandwich Islands (Narayawasmany & Blake 2005).

Buzhinskaja (1993) and Narayawasmany & Blake (2005) question whether *O. drakei* and *O. branchiata* actually fit within *Orbiniella*. In fact, *O. drakei* shows a conspicuous body regionalization and *O. branchiata* bears branchiae (Fig. 2); these characters do not agree with the accepted diagnosis of the genus (Fauchald 1977; Solis-Weiss & Fauchald 1989; Gillet 1999). Thus, *O. branchiata* should be included in a different genus or rather in a new genus (Blake 2000, see below). Furthermore, Buzhinskaja (1993) and Narayawasmany & Blake (2005) consider that *Falklandiella annulata* Hartman, 1967 should be placed in *Orbiniella* regarding its lack of distinctive characters. Buzhinskaja (1993) also suggests that *F. annulata* and *O. uniformis* Hartman, 1967 are the same species because they were only separated according to the lack/presence of eyes. According to these considerations, ten valid species are now recognised within *Orbiniella.*

The BIOICE (Benthic Invertebrates of Icelandic Waters) expeditions were part of an international programme which was first started in 1991. This was designed to provide extensive knowledge of the marine benthic fauna present in the 200-mile exclusive economic zone of Iceland. The sampling area covered a depth range from 20 to

 Accepted by P. Hutchings: 26 Jun. 2015; published: 24 Aug. 2015