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# A new species of *Cirratulus* (Annelida: Polychaeta) described from a shallow-water whale bone in Antarctica

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## Abstract

A new species of *Cirratulus* Lamarck, 1818 is described from the shallow Antarctic waters of Deception Island (South Shetland Islands). *Cirratulus balaenophilus* **sp. nov.** is the first cirratulid to be described from a fresh whale bone that was experimentally deployed for one year on the Antarctic sea floor. The species is characterized by the lack of spines and eyes, the number of dorsal tentacles arranged in an arc, and its light yellow-orange color in life. The cytochrome *c* oxidase subunit I (COI) sequence is presented, as well as some remarks about its feeding preferences and ecology. A comparison with congeneric species occurring in Antarctica and adjacent waters is also provided.

**Key words:** Deception Island, Whalers Bay, taxonomy, COI, Cirratulidae

## Resumen

Se describe una nueva especie del género *Cirratulus* Lamarck, 1818 de las aguas someras antárticas de Isla Decepción (Islas Shetland del Sur). *Cirratulus balaenophilus* **sp. nov.** es el primer cirratúlido descrito originalmente de un hueso fresco de ballena colocado experimentalmente durante un año en el fondo marino antártico. Esta especie se caracteriza por la ausencia de espinas (sedas aciculares) y de ojos, por el número de tentáculos dorsales dispuestos en arco, así como por su color amarillo-anaranjado en vida. Se aporta la secuencia de la subunidad I de la citocromo *c* oxidasa (COI), así como algunos comentarios sobre las preferencias alimentarias y ecología de la especie. También se hace una comparativa con especies de su mismo género que se encuentran en la Antártida y aguas adyacentes.

## Introduction

Whale bones around Deception Island constitute a relatively common hard substrate that has been systematically overlooked in studies of benthic fauna. These bones, which are very frequent and conspicuous in the intertidal and subtidal waters of Port Foster (ST & CA, personal observations), originated from the Norwegian-Chilean whaling factory that operated in Whalers Bay in the early 20$^{th}$ century (Dibbern 2010). In order to describe the invertebrate community that whale bones could sustain, we deposited the caudal vertebra of a minke whale (*Balaenoptera acutorostrata* Lacépède, 1804) on the sea floor in the area of Whalers Bay in January 2009. Similar experiments using whale remains conducted in other geographic areas (e.g., east Pacific) emphasize the importance of polychaetes as the most abundant and diverse taxon to be associated with whale bones (Baco & Smith 2003). After retrieval and examination of the bone, we identified at least five undescribed polychaete species belonging to the families Cirratulidae, Terebellidae, Dorvilleidae, and Siboglinidae. One of the most abundant of these was a new species of the genus *Cirratulus* Lamarck, 1818.

The genus *Cirratulus*, the most speciose of the multitentaculate cirratulids, consists of more than 50 currently accepted species. Six of these species are described or recorded from the Southern Ocean and adjacent waters (see Table 1): *C. cirratus* (O. F. Müller, 1776), the type species for the genus considered as cosmopolitan with a wide

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