

CONTRIBUTION TO THE BIOLOGY OF THE DEEP-SEA SWIMMING  
CRAB *BATHYNECTES MARAVIGNA* (PRESTANDREA, 1839)  
(DECAPODA, PONTUNIDAE) IN WATERS OF THE CANARY ISLANDS  
(CENTRAL-EAST ATLANTIC)

BY

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ABSTRACT

Two exploratory trap fishing surveys were carried out from February to April, and from June to July 2003, respectively, at depths ranging between 200 and 1200 m, with the objective to evaluate deep fishery resources of the Canary Archipelago. *Bathynectes maravigna* was relatively frequent in catches, as an indication of its abundance in deep waters off the Archipelago (0.15 gram per fishing hour; SD = 0.45). This crab was captured in the whole range of depths sampled, although its highest biomass was found between 600 and 1000 m (0.22 gram per fishing hour; SD = 0.55), on muddy-rocky bottoms. There were no significant differences in the average length and weight between males and females, although significant differences were observed in average length and weight according to the island of origin and date of fishing. The *b* parameter of the length-weight relationship describes a negative allometric growth pattern.

RESUMEN

Se realizaron dos campañas de pesca exploratoria de febrero a abril y de junio a julio de 2003, respectivamente, entre los 200 y 1200 m de profundidad con el objeto de evaluar los recursos pesqueros profundos del Archipiélago Canario. *Bathynectes maravigna* fue relativamente frecuente en las capturas, indicativo de su abundancia en las aguas profundas del Archipiélago (0,15 gramos por hora de pesca; SD = 0,45). Este cangrejo fue capturado en todo el rango de profundidades muestreado, aunque su mayor densidad se encontró entre los 600 y 1000 m de profundidad (0,22 gramos por hora de pesca; SD = 0,55), tanto sobre fondos fangosos como rocosos. No hubo diferencias entre macho y hembras en las tallas y pesos promedios, aunque se observaron diferencias en los pesos y tallas medias según la isla de procedencia y el periodo de captura. El parámetro *b* de la relación talla-peso describe un patrón de crecimiento alométrico negativo.

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## INTRODUCTION

*Bathynectes maravigna* (Prestandrea, 1839) is a deep-sea crab normally present on the upper continental slope from 100 to 1455 m depth, on both sides of the North Atlantic and in the Mediterranean Sea (Zariquiey-Álvarez, 1968; Lewis, 1977; Manning & Holthuis, 1981; García-Raso, 1984, 1996; Noël, 1992; Abelló et al., 2001). In the eastern Atlantic it has been reported from Norway and Iceland to the northeast of Morocco and the Canary Islands (Caullery, 1896; Nobre, 1936; Christiansen, 1969; Clark, 1986; González-Gurriarán & Méndez, 1986; Fransen, 1991; González-Pérez, 1995; García-Raso, 1996). The species has also been mentioned from the vicinity of the Menez Gwen hydrothermal site (Biscoito, 1997), but probably beyond the influence of the vent (Martin & Haney, 2005). It is assumed that the Canary Islands and the Western Sahara-Mauritania region constitute the southernmost limit of its geographical distribution (González-Pérez, 1995).

The biology of this species is practically unknown and, with the exception of Rodríguez-Marín (1993) and Abelló et al. (2001), the majority of the studies are practically limited to report its presence and bathymetric range in different areas, particularly in the Mediterranean Sea (Sardá et al., 1982; Pipitone & Tumbiolo, 1993; Mura & Cau, 1994; García-Raso, 1996; Fariña et al., 1997; Maynou & Cartès, 2000; Monteiro et al., 2001; Abelló et al., 2002; Politou et al., 2005; Ungaro et al., 2005; Cartes et al., 2007; Fanelli et al., 2007; Özcan et al., 2009). On the other hand, off the Canary Archipelago, González-Pérez (1995) reported its presence on rocky bottoms with fine mud and hexactinellid sponges, at the upper slope of the islands, between 366 and 850 m depth. In October 1991, Landeira et al. (2009) collected planktonic larvae of *Bathynectes* spp. in oblique hauls from 200 m depth to the surface, in the warm lee region and nearshore stations around Gran Canaria Island, in a relatively high abundance (1.3 larvae/100 m<sup>3</sup>; 6.63% of the total decapod larvae caught). Also, Carvalho et al. (2007) reported the presence of ovigerous females in this area in June, October, and November.

The aim of this paper is to provide some additional information on the distribution patterns of *Bathynectes maravigna* along the Canary Archipelago (Central-East Atlantic), as well as on some biological aspects of its local population.

## MATERIAL AND METHODS

In 2003, two exploratory fishing surveys were carried out, one from February to April and another between June and July, off five islands of the Canary Archipelago