

SHORT COMMUNICATION

FIRST RECORD OF THE CRABS *Pirimela denticulata* (MONTAGU, 1808) AND *Xaiva biguttata* (RISSO, 1816) (CRUSTACEA: DECAPODA) FROM THE AZORES

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VIEIRA, C. M. & T. MORATO 2001. First record of the crabs *Pirimela denticulata* (Montagu, 1808) and *Xaiva biguttata* (Risso, 1816) (Crustacea: Decapoda) from the Azores. *Arquipélago. Life and Marine Sciences* 18A: 89-91. Ponta Delgada. ISSN 0873-4704.

The crabs *Pirimela denticulata* (Montagu, 1808) and *Xaiva biguttata* (Risso, 1816) identified in stomach contents of striped red mullet, *Mullus surmuletus* (Linnaeus, 1758) are recorded for the first time in Azorean waters, extending their known distribution range. A total of 59 individuals of *P. denticulata* and 12 of *X. biguttata* were identified in 22 and 10 mullets, respectively.

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INTRODUCTION

The decapod crustaceans of the Azores are still poorly known. Amongst the recent studies the papers of PAULA et al. (1992) and WIRTZ & MARTINS (1993) should be referred, since they together constitute the first checklist of the occurring decapods in the region. More recently, D'UDEKEM D'ACÓZ (1999) reviewed the distribution of decapods in the northeastern Atlantic and the Mediterranean, including a summary of the information available for the Azores.

In the absence of specific faunal studies regarding crustaceans from the Azores, the analysis of feeding habits of benthic generalist fish can provide useful information. The striped red mullet, *Mullus surmuletus* (Linnaeus, 1758), is a common shallow water fish species in the Azores (SANTOS et al. 1994; TEMPERA 1997), that mostly feeds on burrowing invertebrates, unearthing them with their snout (GOSLINE 1984), sometimes from considerable depths in the sediment. Studies of *M. surmuletus* and other

goatfish (Mullidae) diets from Red Sea have already contributed to the description of the polychaete fauna in that region (BEN-ELIAHU & GOLANI 1990).

The present work reports the first record of two brachyuran crabs, *Pirimela denticulata* (Pirimelidae) and *Xaiva biguttata* (Portunidae), in the Azores, based on individuals found on stomach contents of striped red mullet.

MATERIAL AND METHODS

The analysis of 116 *M. surmuletus* stomach contents was performed using a dissecting microscope. The stomachs were opened and the preys were sorted, counted, weighed, measured and identified to the species level whenever possible, depending on the level of prey digestion. The fish were collected between August 1997 and January 1998 in the Azorean Archipelago, at the islands of Santa Maria (Eastern group), Faial (Central group) and Corvo (Western group).

RESULTS AND DISCUSSION

Family PIRIMELIDAE Alcock, 1899

Pirimela denticulata (Montagu, 1808)

A total of 59 individuals were identified, consisting of juveniles and adults. The maximum carapace width was 11.9 mm for the largest measurable specimen and 2.8 mm for the smallest. These were found in 22 striped red mullets caught in Faial, Corvo and Santa Maria, on rocky substrate. Until now *Pirimela denticulata* was known from the east Atlantic coasts from England to Mauritania, as well as the Madeira, Canary and the Cape Verde Archipelagos, Mediterranean basin and an unconfirmed record in the Red Sea (D'UDEKEM D'ACÓZ 1999). This species lives burrowed in the sand or camouflaged on vegetation (ZARIQUIEY ALVAREZ 1968; GONZALEZ PEREZ 1995) and is distributed from the intertidal zone down to 250 m depth (D'UDEKEM D'ACÓZ 1999 and references therein).

Family PORTUNIDAE Rafinesque, 1815

Xaiva biguttata (Risso, 1816)

A total of 12 individuals, all juveniles, were identified in the stomach contents of ten striped red mullets. Although heavily digested due to their weak body structure and small size, some diagnostic characters, such as the triangular frontal region and the lanceolate dactylus of their fifth pereopod (INGLE 1980) were still distinct. Furthermore, C. d'Udekem d'Acoz compared them with well preserved juvenile *X. biguttata* from Lesbos island, Aegean Sea. The largest individual measured 5.6 mm in maximum carapace width and the smallest one, 2.0 mm. The fishes were caught on rocky substrate at Faial and Santa Maria Islands. This species has been recorded in the Eastern Atlantic Ocean from England to the Cape Verde Islands and in the Mediterranean Sea (D'UDEKEM D'ACÓZ 1999). It burrows in sand and also lives in mixed bottom areas with rock covered by algae, from the intertidal zone down to 10 m (ZARIQUIEY

ALVAREZ 1968; D'UDEKEM D'ACÓZ 1999 and references therein).

The records given in this study extend westward the distribution range presently known for these two crab species. These were only made possible by the analysis of the stomach contents of a predatory fish, given that there have been no specific studies on crustaceans in the area and that the two species are seldom observed in their natural habitat (D'UDEKEM D'ACÓZ pers. comm.). This is especially true for *Xaiva biguttata*, since adult specimens are probably burrowed deep in the sediment and therefore difficult to capture. Thus, fish diet can give clues to the ecology and biogeography of both predators and prey (BEN-ELIAHU & GOLANI 1990). However, this study evidences that a thorough baseline study has still to be carried out in order to know the infauna of the Azores.

ACKNOWLEDGEMENTS

Financial support was partly given by FCT (Fundação da Ciência e Tecnologia) through the project PRAXIS/3/3.2/EMG/ 1957/1995. This work was conducted at the Department of Oceanography and Fisheries of the University of Azores. Cédric d'Udekem d'Acoz helpfully confirmed the species identifications and Peter Wirtz gave valuable suggestions throughout the study.

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Accepted 12 December 2000.