

Event Abstract

The fan mussel *Pinna rudis* – occurrence and association with *Pontonia pinnophylax* in Terceira Island (Azores, NE Atlantic).

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Pinna rudis is known as one of the biggest fan mussels in the Azores, reaching a length of up to 80cm. The specimens are generally found attached by numerous byssus threads, with their pointed anterior ends buried vertically in the substratum (mud, sandy mud or gravel). However, currently there is a notorious lack of basic knowledge about this species, with no specific studies available in the literature. The objective of the present work was to study the occurrence of *Pinna rudis* in the coast of Terceira Island, by analysing the spatial distribution of the individuals, and investigate the symbiotic association with the shrimp *Pontonia pinnophylax*. Along the south coast of Terceira Island, 23 dives in 13 sites were performed using 30 meters transects. The dives were made from August to October 2004, limited by meteorological conditions. The length of each pinnid was measured in situ, and above the sediment, to avoid unnecessary removal. During the study period, 28 *P. rudis* were observed with a length range from 10 to 30cm. The majority measured about 10 to 15cm. The occurrence of *P. rudis* was not the same at the different sites selected, occurring mainly in small patches of sand in rocky bottoms. Only solitary individuals were observed. No correlation between the length of the animals and the depth of their occurrence was detected. The shrimp *Pontonia pinnophylax* was found living within the largest bivalves and at deeper depths. The occupancy rate of *Pinna rudis* by *Pontonia pinnophylax* was 57% (containing one or two shrimps). It is believed that the life cycles of these two species may be linked. The exact relationship between these two species remains unclear and needs to be studied experimentally; however it is believed that this is a mutualistic association.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Keywords: *Pinna rudis*, occurrence, spatial distribution, *Pontonia pinnophylax*, symbiotic association

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