

LIFE PINNARCA

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To be cited as:

Chapter I:

Cortés-Melendreras, E., Martínez, P., Fernández-Torquemada, Y., Giménez-Casalduero, F., 2023. Findings on feeding recommendations from the University of Murcia Aquarium. *In*: Technical Report 7.3 - Report including the findings of feeding recommendations, LIFE Pinnarca NAT/ES/001265 'Protection and restoration of *Pinna nobilis* populations as a response to the catastrophic pandemic started in 2016', December 2023, pp. 1-28.

Chapter II:

García-March, J.R., Tena-Medialdea, J., Telle-Martínez, C., López-Ferrando, D., Balager-Benavent, J.I. Valera-Jiménez, M.J., 2023. Findings on feeding recommendations at IMEDMAR-UCV. *In*: Technical Report 7.3 - Report including the findings of feeding recommendations, LIFE Pinnarca NAT/ES/001265 'Protection and restoration of *Pinna nobilis* populations as a response to the catastrophic pandemic started in 2016', December 2023, pp. 29-46.

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Abstract

This report compiles available information on feeding recommendations for the fan mussel *Pinna nobilis* in aquariums and mesocosms. In the first chapter, we present current information and recommendations about the feeding of fan mussels, utilized for their successful *ex situ* maintenance in the Murcia University Aquarium. In the second chapter, we provide feeding information obtained from experiments conducted at the IMEDMAR-UCV facilities.

Chapter I. Findings on feeding recommendations from the Murcia University Aquarium

This chapter aims to address the existing knowledge gap regarding the feeding behavior of *Pinna nobilis*. It begins by summarizing findings from previous studies conducted in both natural environments and during *ex situ* maintenance. The subsequent section explores the current advancements and protocols in finding *in situ* individuals and feeding practices within the culture systems of this species at the Aquarium of the University of Murcia, as ensuring appropriate feeding practices is crucial for the effective maintenance of this species in *ex situ* systems, and consequently, for its survival.

1. Protocols of collection and translocation of *Pinna nobilis*

The collection of *Pinna nobilis* specimens from the natural environment for subsequent maintenance in the laboratory should be carried out, considering the specific conditions of each individual (Cortes Melendreras and Giménez Casalduero, 2020).

Pinna nobilis widely occupied habitats with sandy substrate near the rhizomes of *Posidonia oceanica*, although in the Mar Menor lagoon, it is found on both sandy and muddy substrates. In the former case, the fan mussel attaches to the substrate by connecting its byssus with small shells and the buried rhizomes of *Posidonia*. On the sandy and muddy substrates of the Mar Menor tends to anchor to the substrate in areas free of vegetation cover as well as in areas populated by *Cymodocea nodosa* or *Caulerpa prolifera*, attaching its byssus to small stones and bivalve shells buried in the sand and mud (Giménez Casalduero et al., 2020).

