

LIFE PINNARCA

LIFE NAT/ES/001265



DELIVERABLE DC2.1

LOCATIONS OF FAN MUSSEL SURVIVORS
(EXHAUSTIVE SHALLOW CENSUS)



IMEDMAR-UCV

CSIC-IEO
CIMAR (UA)
IOPR
UAEGEAN
UNINA
IRTA

INDEX

Abstract	3
Background	3
IMEDMAR-UCV LOCATIONS	3
Calpe – Puerto Blanco	4
Census location	4
Moraira.....	5
Census Location.....	5
Jávea	5
Granadella Cove	6
Cape of San Antonio.....	6
Almería	8
Terreros island.....	8
El Calón.....	8
Loza del Payo.....	8
San Andrés island, Carboneras.....	8
Agua Amarga	9
Punta de la Loma Pelada	9
CSIC-IEO LOCATIONS	9
Methods	11
Exhaustive shallow census in the Balearic Islands	11
Cabrera.....	11
Mallorca.....	13
Menorca	15
Ibiza and Formentera	18
IOPR LOCATIONS	18
Ingril lagoon (Occitan coast).....	22
Grazel lagoon (Occitan coast):	24



Urbinu lagoon (Corsica).....	28
Diana lagoon (Corsica).....	30
UAEGEAN LOCATIONS.....	34
Methods.....	34
Study area.....	34
IRTA LOCATIONS.....	45
Shallow census in the Ebro Delta bays.....	45
Fangar bay.....	45
Alfacs Bay.....	47
Results.....	48
CIMAR (UA) LOCATIONS.....	49
Fan mussel survivors in the Mar Menor lagoon.....	49
UNINA LOCATIONS.....	50
Campania.....	50
Venice lagoon.....	51
Croatia.....	51
References.....	51
Appendices.....	53

Abstract

The identification of resistant individuals is one of the key actions for the conservation of *Pinna nobilis*. This not only enhances our understanding of the protozoan's impact on populations but also elucidates the number of individuals exhibiting resilience to the disease, thereby increasing the chances of the species' survival. The focus lies in searching for individuals in their natural habitat, which would allow the discovery of either individuals in areas free of Haplosporidium or individuals resistant to the disease.

In this report, we present the results of visual shallow censuses, offering quantitative insights into the number of individuals—both living and deceased—of both *P. nobilis* and *P. rudis*. Furthermore, we gather valuable information regarding the conditions of the identified living individuals and the environment in which they reside."

Background

The location of live *Pinna nobilis* specimens in the marine environment is an activity of great importance, given its current situation, as it could involve individuals resistant to the parasite. This action considers two assumptions: (i) finding survivors in parasite-free areas, which may not necessarily imply that the individuals are disease-resistant, and (ii) finding survivors in open-sea areas, which would imply that the individuals are resistant.

Because deep areas are more difficult to survey than shallow ones, the information regarding the possible occurrence of surviving fan mussels is scarce. Furthermore, unnoticed relict populations could occur in some areas, which would be of paramount importance for the recovery of the species. On the other hand, if individuals resistant to the parasite are found in open waters, and once the captive breeding cycle of the noble pen shell is successfully closed, they could be artificially reproduced to have new resistant juveniles that could be reintroduced into the natural environment.

This document presents various locations where visual censuses were conducted with the aim of finding live individuals in their natural habitat. The censused points are areas where healthy populations of *Pinna nobilis* were known to exist prior to the arrival of the parasite, so it is not inconceivable that resistant individuals may still exist.

IMEDMAR-UCV LOCATIONS

The methodology employed for conducting visual censuses at all the sampling points by the IMEDMAR-UCV team involved four divers positioned in parallel, conducting 4 parallel transects (as shown in Figure 1), with surface references taken using a diving compass.