

The importance of size-fecundity relationships in the management of the European Lobster, *Homarus gammarus*

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Introduction

- ❑ An understanding of population characteristics is essential for the conservation and management of exploited aquatic species.
- ❑ Fecundity is a key population characteristic – bigger females produce more eggs.
- ❑ Protecting egg-bearing females by marking them with a V-notch in the tail capitalises on this characteristic and allows them to contribute more to future generations which ensures sustainable fisheries.
- ❑ Population characteristics vary with latitude so it is important to quantify these for specific managed stocks.
- ❑ This project will determine key population characteristics of lobster stocks that have been protected by V-notching within the INTERREG IVA area.

Key population characteristics and fecundity relationships in European lobsters to inform future stock management

Methods

Field surveys were carried out on lobster fishing boats to record:

- ❑ Proportions of males, berried and V-notched females in catches.
- ❑ Population size structure in catches.
- ❑ Proportions of catches returned to sea.

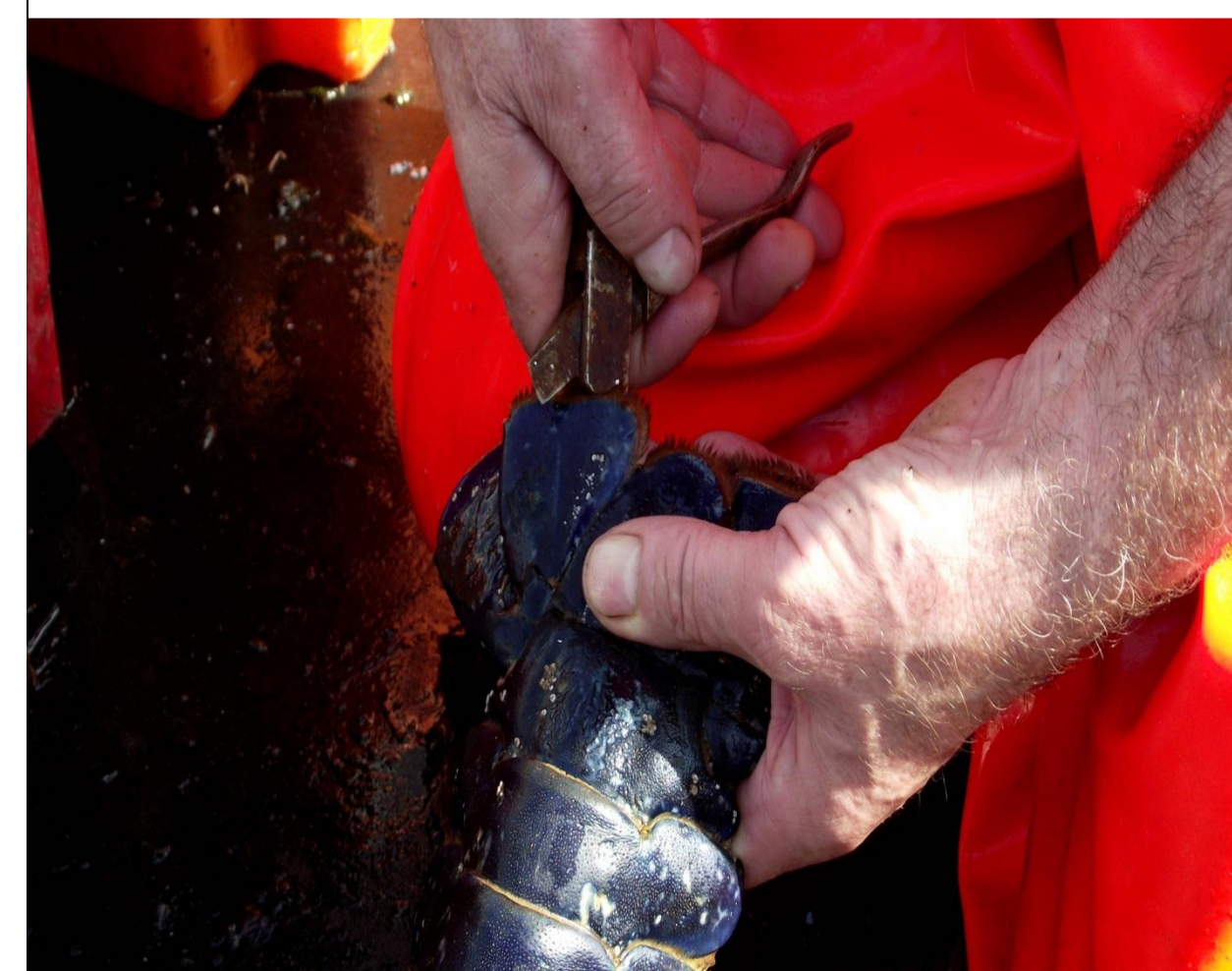
Laboratory studies involved:

- ❑ Sampling a wide range of sizes of berried females to establish size-fecundity relationships.

Results to date

- Fields Survey 1 (Portavogie):
 - ❑ 8.68% of the total haul was landed [4 males and 5 females].
 - ❑ Of the 91.32% returned, 94 individuals were under-sized (<87mm CL) and 1 was V-notched.
- Laboratory Studies:
 - Egg Counts [per lobster]:
 - ❑ Size Class A: 4,080 – 8,422 eggs
 - ❑ Size Class B: 7,163 – 10,816 eggs
 - ❑ Size Class C: 10,788 – 15,522 eggs

Pic: Lobster tail being V-notched



Summary

- ❑ Lobster stocks are an important, high-value aquatic resource.
- ❑ Historically stocks were not managed sustainably and were overfished.
- ❑ This IBIS project will complement population-genetic research by estimating the potential contribution to stock recruitment by protecting female lobsters.

