

MARINE FAUNA ASSOCIATED WITH *LOLIGO VULGARIS* IN CATALAN WATERS (NW MEDITERRANEAN)

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Abstract

Fauna occurring in association with *Loligo vulgaris* was investigated by sampling on board commercial trawlers in two ports of Catalonia (NW Mediterranean) from October 2003 to December 2005. The composition of the hauls was similar in both ports but the biomass (kg/hour) captured by species varied according to the port. *Octopus vulgaris* and *Merluccius merluccius* were found in 100% of the trawls with *L. vulgaris* in both ports.

Keywords: *Biomass, Cephalopods, Western Mediterranean.*

Introduction

Loligo vulgaris have a very important economic value in southern European countries. Much is still to be known about this species in northwestern Mediterranean, and one area of particular interest is its interrelationships with the accompanying fauna. In Catalan waters, marine communities have been classified with regard to the most abundant species, both fishes [1] and cephalopods [2] but not the total community. The aim of this study is provide a better insight into the communities where *L. vulgaris* is found.

Material and Methods

Sampling was carried out on board commercial trawlers on a monthly basis, from October 2003 to December 2005 in Cambrils and Roses, Catalonia ports (NW Mediterranean). Differences between ports were tested with an "analysis of similarities" randomisation test (ANOSIM) from PRIMER statistical software.

Results and Discussion

ANOSIM test revealed that there are significant differences of the species composition in both groups of hauls ($P < 0,001$; $R = 0,759$).

Octopus vulgaris and *Merluccius merluccius* present 100% occurrence with *L. vulgaris* (Fig.1). Species like *Sardinella aurita* and *Seriola dumerili* have only appeared in the hauls carried out in Cambrils, while *Eutrigla gurnardus* has been captured only in Roses.

However the biomass (kg/hour) captured by species varied according to the port. *Merluccius merluccius* was more abundant in Roses while *Octopus vulgaris* was in Cambrils (Fig 2).

The species associated to the *L. vulgaris* captures showed that although they are mainly the same ones, the proportion of the appearance and mainly the biomass of the species is different in both ports. This can be due to that the characteristics of the habitat are different in the two areas and it rebounds in the species that inhabit each area. Roses area consists mainly of rocky coast, with predominance of sand and sandy muddy bottoms, while in Cambrils area the bottom is generally of muddy-sand and sand next to small formations of rocky barriers close to the coastal line [1].

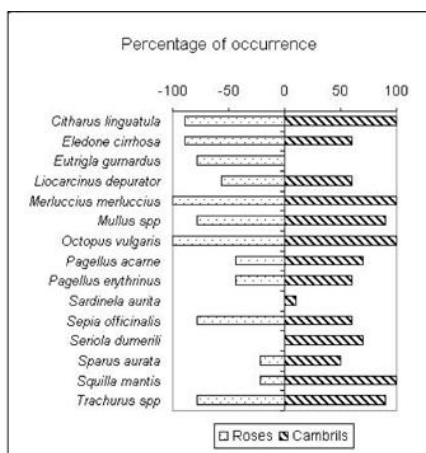


Fig. 1. Percentage of occurrence of the most important *Loligo vulgaris* associated species in the two study ports.

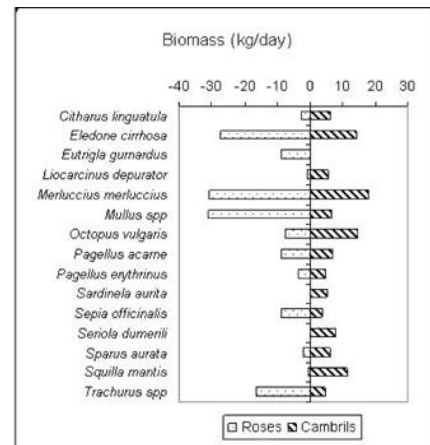


Fig. 2. Biomass of the most important *Loligo vulgaris* associated species in the two study ports.

References

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