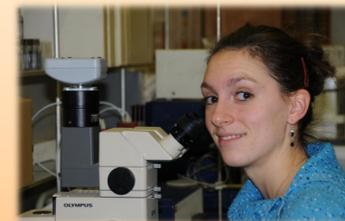


# INTERANNUAL VARIATION (2003-2008) OF CALYCOPHORAN SIPHONOPHORES IN THE BAY OF CALVI (CORSICA)

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## INTRODUCTION

Calycophoran siphonophores are widely distributed in the seas all over the world and are planktonic carnivorous predators which could have a major impact on the structure and dynamics of the zooplankton. They may represent up to 20 % of the zooplankton biomass. Copepods are their principal types of prey.

## RESULTS (I)

*Chelophyes appendiculata* represents the most common species of Calycophoran living in the upper layers and is very dominant throughout the northwestern Mediterranean, especially in the area of Ligurian divergence. This species seems to be less abundant or absent in Gibraltar Strait, Alboran sea, in the South Western Mediterranean, in the Thyrenean Sea and in the Gulf of Tigulio and finally in the Adriatic where *Muggieae* sp. or *Lensia* sp. are dominant.

## RESULTS (II)

In Calvi the dominant species *Chelophyes appendiculata* (Eschscholtz, 1829) was present throughout the year, with a peak of reproduction during the summer. The different developmental stages (nectophores - asexual stage and the eudoxids - sexual stage) appear and follow each other during all the year.

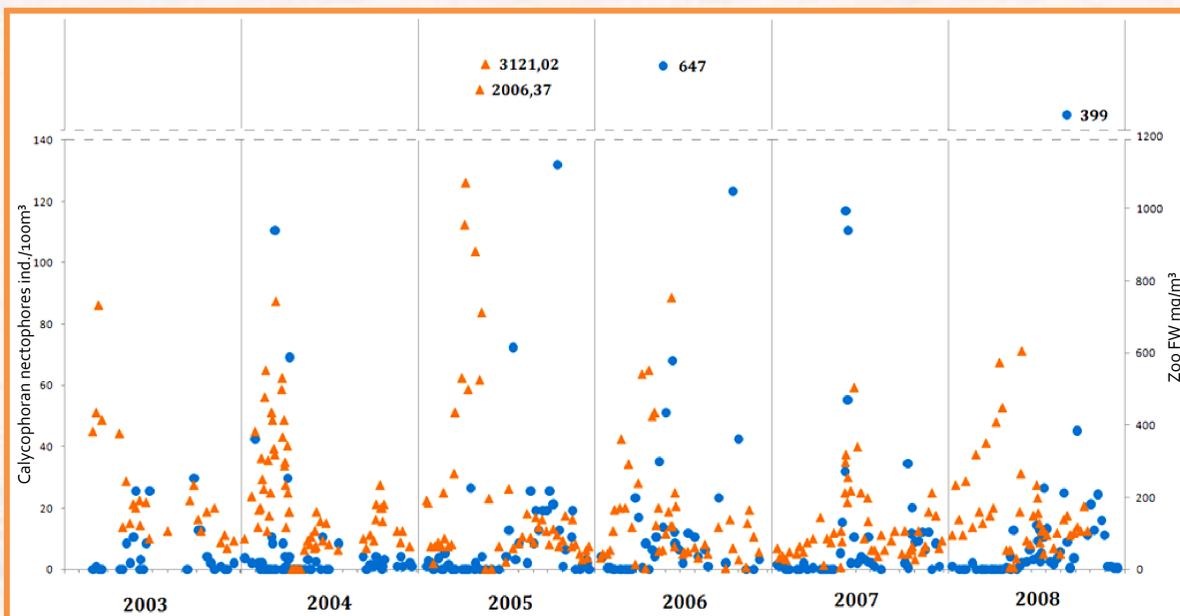


Figure 3 : Interannual variation of zooplankton fresh weight (▲) and Calycophoran nectophores (●) in the Bay of Calvi from 2003 to 2008.

## AIMS

- (I) To summarize the knowledge on the Calycophoran in Mediterranean Sea
- (II) To determine the seasonal and interannual variation and the link with the mesozooplankton abundance

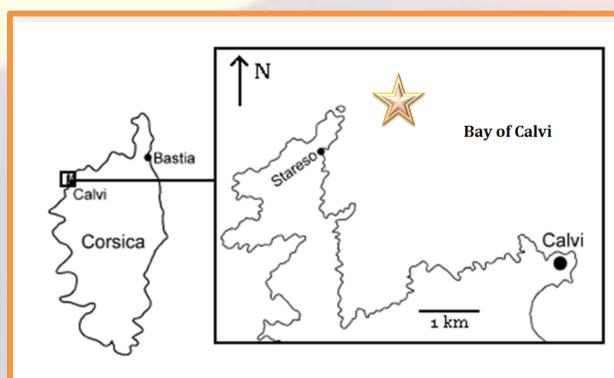


Figure 1 : Location where the weekly time series wp2 zooplankton sampling were carried out at 5m depth in the Bay of Calvi from 2003 to 2008



Figure 2 : *Chelophyes appendiculata*, polygastic stage (Calvi)

The comparison of the nectophores abundance with the mesozooplankton biomass shows a good correlation (Fig. 3). We have noted that the maximum values of abundances in 2006 and 2008 correspond to years of *Pelagia noctiluca* important invasions.

These results agree with previous investigations made in the northwestern Mediterranean basin concerning the presence and temporal variation of *C. appendiculata* in Villefranche sur Mer. The main difference between these studies is that *C. appendiculata*, in Calvi, occurs in larger abundance throughout the year.

This species is a species characteristic of the central waters of the Ligurian divergence and its dominance in Calvi could be explained by the strong influence of offshore waters input Corsican occidental coast.

## CONCLUSIONS AND PERSPECTIVES

More than other plankton species, siphonophores present variability in composition in different regions of the Mediterranean probably due to local hydroclimatic conditions. Actual data aren't enough to explain these variations.

A integrated study of the calycophoran diversity and its variability should be carried out between the different laboratories.