

CHANGES IN A NORTH WESTERN MEDITERRANEAN FISH COASTAL ASSEMBLAGE ON THE BASIS OF THE CATCHES OF THE CAMOGLI TUNA TRAP

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Abstract

The tuna trap of Camogli is an installation of small dimensions which operates from April to September. The fishermen who note down the caught species with accuracy during every single fish operation, made fishing statistics available since 1951. Considering that the characteristics of the installation are substantially unchanged in the years, the data recorded may be a valid witness of the evolution of the fish population. This work presents the data corresponding to two periods of five years each (1956-1960, 1996-2000) making a comparison on the yields and on the dominant species. During the last five years the Carangidae has become more important : in particular *Seriola dumerili* which in the fifties was a catch of secondary importance has become the most important species.

Keywords : tuna trap, fish-catches, Western Mediterranean, *Seriola dumerili*.

Introduction

The tuna trap of Camogli (Ligurian Sea, Western Mediterranean) is an installation which belongs to a pluricentenary tradition. It's a small sized tuna trap (about 8300 m²), still made of coconut fibre in prevalence, positioned near the Portofino headland.

The fishermen generally make three hauls per day (dawn, morning, afternoon); sometimes more on indication of a guardian who observes with a view-finder while fishes enter in the death chamber.

For their cooperative organization, fishers always noted caught species in details in every single fish operation. Fishing statistics have been available since 1951. The catches of the 1951-74 period were described (1). Since the characteristics of the installation are essentially unchanged in the years, data recorded may be a valid witness of the evolution of the fish population.

Camogli's tuna trap also provided records of the presence of new species in the Mediterranean like the shark *Sphyrna mokarran* (2) and the marlin *Makaira indica* (3).

Sharks have been the object of a paper which focused on a considerable decrease from the fifties to seventies (4), a trend which was observed also in Mediterranean demersal resources (5).

Methods

This work presents two sets of five years data (1956-1960, 1996-2000), making a comparison on the yields and on the most abundant species. The data belonging to the first period comes from literature (1); the last period was elaborated thanks to the documentation belonging to the "Cooperativa Pescatori Camogli".

Shark catches have been analysed without considering some species which now are released alive because they haven't any commercial value (i.e. *Cethorinus maximus*).

Results

Total catches appear to be increased (fig.1), but there are no significant difference according to the Mann-Whitney test (U=2).

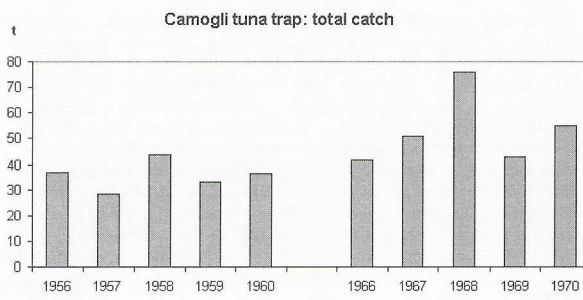


Figure 1 – Camogli tuna trap : total catches (t) in two periods, 1956-1960 and 1996-2000.

Considering the ten main species over the last years (fig. 2) *Auxis rochei*, *Sarda sarda* and *Scomberesox saurus* decrease. On the contrary, increased catches were recorded for *Mola mola*, *Sarpa salpa* and especially for Carangidae with *Trachurus* sp.p. and *Seriola dumerili*, which now is the main species, while in the fifties was captured sporadically. *Scomber japonicus* apparently has taken the place of *Scomber scombrus*.

Mola mola, despite the increasing occurrence, has been recently banned as a commercial product by the " Italian Ministry of Health", as a potential dangerous Tetraodontidae. So the landings are no more comparable.

Among the three shark families of potential commercial value only Alopiidae has given some catches, confirming the above mentioned negative trend (Tab. 1).

The increase of Carangidae and other southern species such as *Sphyrna viridensis* might be linked to the global warming of last years.

The spreading of this family in the Mediterranean is confirmed by the recent adding of two non native species (*Seriola carpenteri* and *Seriola fasciata*) to the *S. dumerili* fishery in the Sicilian Straits (6; Andaloro p.c.).

Average catch of the ten species in the years 1956-1960 and 1996-2000.

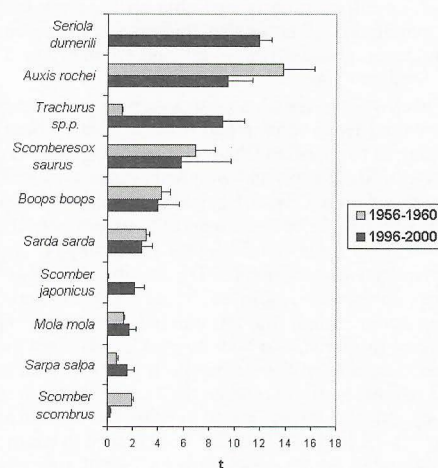


Figure 2 – Camogli tuna trap : average catches (t) of ten main species in two periods 1956-1960 and 1996-2000.

Tab. 1 – Camogli tuna trap : shark catches in the two periods.

Family	1956-60	1996-2000
Alopiidae	11	7
Carcharhinidae	1	0
Triakidae	13	0
Total	25	7

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