

Institut d'Estudis Avancats Illes Balears, Campus Universitari, PALMA DE MALLORCA (Spain)

Red mullet is mainly fished in the Southern part of Majorca Island between 25 and 50 m deep. The total Island catch varies yearly, the minimum registered was 132 t on 1970 and the maximum 400 t on 1961. In recent years the catches have oscilated around 200 t (213 t on 1989). As a part of the Island fishery study carried out by the Centre Oceanografic de Balears (IEO), the biology of red mullet was studied on 1989.

The length, weight, sex, maturity and age of 1092 red mullet were determined. The length range of the studied fish was comprised between 10 and 27 cm total length.

The catches were composed mainly by females, small immature fish appeared in early fall (figure 1). First maturing fish were 11 cm in length, while 50 % of maturity was reached at 15 cm by the females and at 17 cm by the males. The spawning season was limited to April-May.

The length-weight relationship determined is as follows :

	a	b	r
males	0.031742	2.66867	0.9591
females	0.016003	2.91282	0.9717
total	0.016003	2.91282	0.9748

The otoliths showed a concentric pattern of rings with abundant false rings. The evolution along the year of the opaque rings in the otolith margin (figure 2) showed the formation of a ring per year. Once the annual periodicity of the rings was validated, the age length key was determined using 1st July as birthdate. The fishes were from age Class 0 to age Class IV. The von Bertalanffy growth parameters were determined by means of FISHPARM programme. The values of the von Bertalanffy parameters were:

	L- cm	K	t	W- g
population	29.76	0.2376	-2.0649	310.74
males	23.39	0.2882	-3.3250	137.32
females	34.53	0.1364	-3.8210	505.75

The females showed a higher maximum length, while males had a bigger growth rate. These values are higher than the growth parameters reported from other Spanish areas (MORALES-NIN, 1986), probably due to the small age range present in the fishery.

Due to the bathymetric distribution of red mullet, the bigger (and older) fish are not available to the fishery and appear occasionally in the fishery directed to hake.

Figure 1.- Monthly proportion of males (Black bar), females (stripped bar) and indetermined fish (dotted bar).

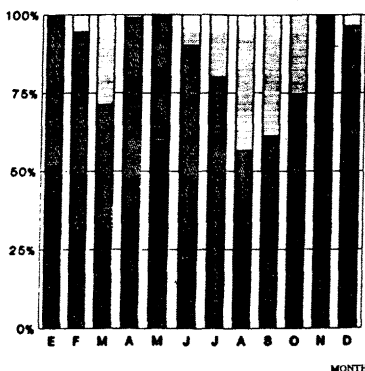
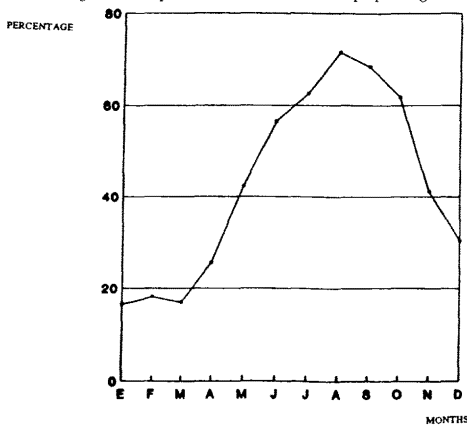


Figure 2.- Proportion of otoliths with an opaque ring in the edge.



REFERENCES

MORALES-NIN B., 1986. - Age and growth of *Mullus surmuletus* from the Catalan Sea. *Rapp. Proc. Verb. CIESM* 10(2): 232.