OBSERVATIONS ON CORAL FISHING (*CORALLIUM RUBRUM* L.) IN WESTERN SARDINIA

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In the last ten years the number of permits issued by the Autonomous Region of Sardinia for the fishing of red coral (*Corallium rubrum*) has gone from 77 in 1983 to 17 in 1993. This is most probably due to the fact that the amounts of coral fished have decreased year by year. This decrease, which was initially balanced by the increase in unit price, later led to a decrease of approximately 78% in the number of persons involved in this activity. The immediate consequence of this has been the adoption by regional authorities of measures limiting the use of certain kinds of equipment and the number of licences granted (Regional Presidential Decree n°59 & foll., dated 5 July 1979).

In the light of the economic and biological importance of this coral species, a survey was performed to establish the state of stocks of *C. rubrum* about which very little information was available, prior to the coming into force of the above-mentioned decree (BARLETTA *et al.*, 1968; BARLETTA & VIGHI, 1968). Biological material was collected at depths between 70 and 100 meters off the central western coast of Sardinia (Fig. 1).

B

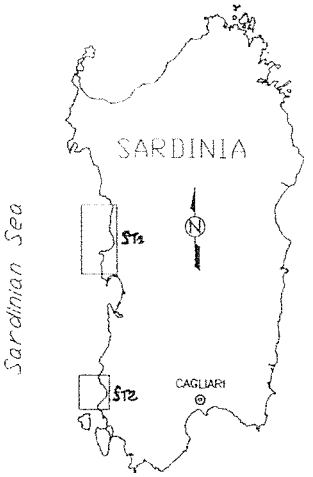

Fig. 1 Map of the studied zone.

Parameters measured on over 150 colonies were : width of the axis, height and weight.

Tab. 1 - Diameter (ø) - Height (h) - Weight (W) mean and relative Standard Deviations (s.d.) in samples of Mediterranean *Corallium rubrum* L.

LOCALITY	ø ± sd< (mm)	h±sd (cm)	Wt (g)	Depth min. max.	References
Corsica	12±3.4	10±2.8	35±28	70 - 90	Marin & Reynald, 1981
Bastia	12±3.8	12±3.9	56±53	70 - 90	Marin & Reynald, 1981
Carloforte	10.0±2.6	8.9±1.3	24±17	70 - 100	(present report)
Oristano	12.7±4.3	0.5±3.7	46.0±41.3	70 - 90	(present report)
Majorca	13.7	11.9	118.9	70 - 90	Garcia-Rodriguez & Masso, 1986

Of the parameters measured, in agreement with Garcia-Rodriguez, diameter at the base is undoubtedly the most significant. In the comparison of the mean diameter of samples taken at Oristano (Station 1) with those taken in analogous areas of Corsica, no significant differences emerge. Values of this parameter are higher than at Station 2 and lower than those of Majorca (Table 1).

The differences found are, in all probability and as supposed by MARIN and REYNALD (1981), attributable to the different intensity of exploitation practised on the populations. However, mean diameter values of samples from the colony at Station 1 (12.7 ± 4.3 mm) and at Station 2 (10.0 ± 2.6 mm) are higher than those found by GARCIA-RODRIGUEZ and MASSO (1986) (8.6 ± 0.7 mm) as the minimum level of exploitation and 8.5 mm as the minimum size for collection.

The mean size of diameter at the base of the populations sampled, together with the average amounts fished by a single operator (1.5 - 2 kg/day - present report), would lead to the supposition that coral resources in the areas considered are still in a balanced situation. However, it is to be hoped that a strategy of planned management based on rotation of exploited colonies in the Sardinian areas will prevail in order to protect stocks.

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