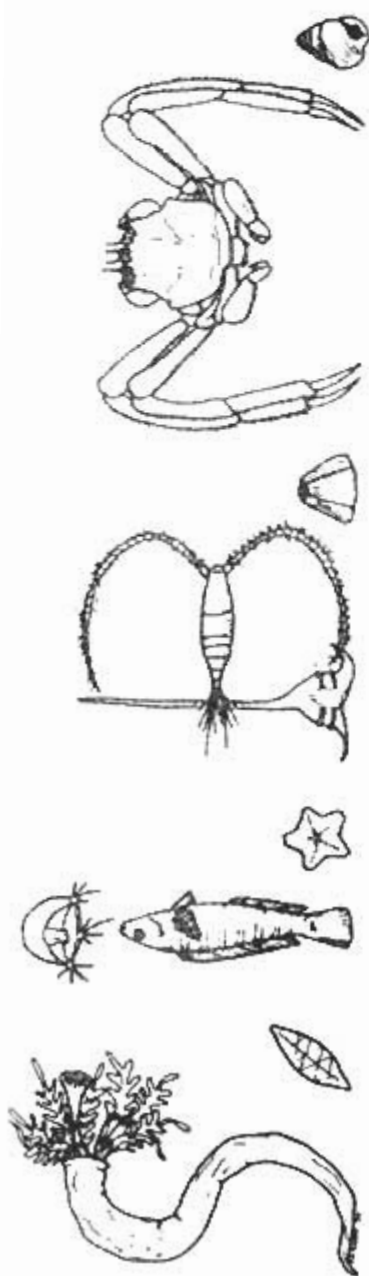


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COMPARATIVE STUDY OF THE MARINE BIOTA BEFORE AND AFTER THE DEPLOYMENT OF AN ARTIFICIAL REEF IN GRAN CANARIA ISLAND (CANARY ISLANDS, SPAIN)

In the framework of a large Artificial Reef Programme run by the Canarian Government, one artificial reef was constructed in 1991 in the southern coast of Gran Canaria Island. Prior to its deployment, a detailed study of the marine biota present in the selected area was conducted and the main results were published elsewhere. After the reef was deployed in the sandy bottom, a periodical assessment of the marine biota associated was conducted until 1997.

This contribution will summarize and compare the main results obtained from the main marine groups analyzed (macroalgae, invertebrates and fish) during the preliminary (November 1990–March 1991) and assessment periods (November 1991–1997). Several interesting trends can be observed after the analysis of the results obtained, such as changes in biota composition (both benthic and pelagic), increase of complexity of benthic communities or high predatory pressure upon nearby fish species.

After the first months of deployment, several benthic species arrived to the surfaces of the modules and they builded up complex benthic communities, with photophilous species in the upper surfaces and more sciaphilous species in the lateral and lower sides of the reef units. The ichthiofauna composition changed, with less number of sandy bottom species, such as pleuronectiforms, and at the same time was observed an increase of pelagic species. After 2 years, the structures of these benthic communities were highly evolved; the ichthiofauna associated to the reef modules was rather diverse and many species spawn in the area or used the reef area as a nursery ground. Further development was truncated by the quick development of dense echinoderms populations. Nevertheless, the ichtiofauna composition was not very much affected; although fish biomass decreased. At present time, the reef area is holding a marine biota rather similar to that observed in any other natural rocky bottoms along the canarian coasts.