

# MARINE ZOOLOGY

## Biodiversity of benthic and pelagic communities



The studies of the research group are focused on the biodiversity characterization of the benthic and pelagic communities from the taxonomic, ecologic, biogeographic, phylogenetic and historical point of view. The researches are mainly carried out in the Mediterranean Sea, although numerous studies are conducted also in the Indo-pacific, Caribbean Sea, Argentina, Chile and Antarctica. In particular, numerous expeditions have been made to the Southern Ocean to study the biodiversity and phylogeography of marine invertebrates thanks to barcoding techniques for the genetic characterization of the species. Additionally, the group is interested in evaluating communities changes at various temporal scales that, depending on the target species or the availability of the historical archives, may cover up to various millennia, as in the case of the paleo sponge fauna of the coralligenous assemblages. Various researches target the characterization, through Remotely Operated Vehicles and other innovative techniques such as underwater photogrammetry, of the deep communities, while others are focused on the monitoring of the hard and soft bottom assemblages after peculiar events determined by ongoing climatic changes, such as mass mortalities or the introduction of alien species.

Numerous studies are linked to the monitoring of the professional fishing activities in the Ligurian Sea, with the collection of quali-quantitative data on

catches and fishing effort, for the evaluation and management of the pelagic and demersal fishing stocks. These projects are also targeted on the evaluation of the impact of fishing activities on the benthic and pelagic ecosystems, by monitoring the fishing bycatch and the damages on the seafloor.

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