

## **SURVEYS ON FAUNA BIODIVERSITY IN AQUATIC ENVIRONMENTS WITH PARTICULAR ATTENTION TO THE MARINE AND TRANSITIONAL SYSTEMS**

The Mediterranean Sea is a hotspot of biodiversity with a high rate of endemism. Despite this fact, it contains many regions and habitats that remain insufficiently studied, and several taxonomic groups are still poorly known. The description of new species is therefore a high priority, especially given the fact that Mediterranean biodiversity is threatened and influenced by many factors, such as the invasion of alien species, climate change and heavy human pressure (eg loss of habitat and degradation, pollution and eutrophication). In particular, species richness of invertebrates is still underestimated, with the great risk that many species not yet described can become extinct even before the research becomes aware of their existence and without knowing their functional role in the ecosystem and their biotechnological potential. In particular, introduction and spread of alien (non-native) species is one of the main threats to the biodiversity of aquatic ecosystems and it is becoming a growing problem for the international scientific community.

### *GOALS*

- Improvement of knowledge about species composition of benthic invertebrate communities in aquatic environments;
- Analysis about occurrence and spread of alien species and their effect on indigenous biodiversity, in particular in transitional environments, and commercial and tourist ports of the northern Adriatic Sea.

### *INSTRUMENTS AND METHODS*

In the framework of this research different instrumental techniques, such as optical and electronic microscopy, combined with phylogenetic analysis are used, through Real time PCR Biorad, and sequencer tools.

### *SUBJECTS*

Ecology, Animal ecology, Zoology, Molecular ecology, Genetics

### *WORKING GROUP*

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### *COLLABORATIONS*

The research group has both national (Ca 'Foscari University of Venice) and international (Alfred Wegener Institute, Germany; Aquatic Research & Consulting, USA; Smithsonian Environmental Research Center, USA; Universidad de Quintana Roo, México) collaborations.