

Marine Fungi: the missing tile in the Ocean Biodiversity mosaic

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In recent years, the *Mycotheca Universitatis Taurinensis* (MUT) carried out several research programs aiming to assess the marine fungal biodiversity mainly in the Mediterranean Sea, a biodiversity hotspot in the world. Several biotic and abiotic marine substrates,, were investigated: algae, seagrasses, invertebrates, wood, water and sediments from natural and anthropic sites. The isolated fungi cover all fungal groups, despite taxa belonging to Ascomycetes are predominant. Our results show how marine fungi are ubiquitous in the oceans and play key roles in several niches despite often neglected.

Preliminary studies show that, in marine ecosystems as in the terrestrial one, some taxa are ubiquitous while others are specific and closely related to a specific host or substrate. The distribution of the mycobiota in the marine environment is far from being fully described. It is therefore difficult to understand how marine fungi can respond to climate change and/or interact with other marine organisms.

To date, marine fungi have been studied principally for the production of secondary metabolites. Despite they shown to be an untapped source of novel molecules of biotechnological importance, almost unknown remains the role of these metabolites in interactions with other organisms that populate the Ocean.

Key words: marine fungi, marine microorganisms, ocean biodiversity, bluebiotechnology.

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