INTRODUCTION

Coralligenous communities represent some of the most productive and diverse biological structures in the Mediterranean (Laubier, 1966; Laborel, 1987). They generally develop on rocks in dim-light conditions and mainly occur in the circalittoral zone. These assemblages are directly or indirectly subjected to human-related pressures such as sedimentation due to pollution, invasion by alien species, physical damages by divers or nets, bioerosion by borers and grazers, and climate change (Ballesteros, 2006). The fragility of the coralligenous habitats is related to the stability of the environment in which it has evolved, the combined effects of erosion and bioconstruction, and the low demographic dynamics of their inhabitants (Linares et al., 2010).

This paper aims to summarize the results of the first field surveys performed within the framework of the EU SEAS-ERA project CIGESMED (www.cigesmed.eu), aiming to assess the diversity of benthic coralligenous assemblages across the Mediterranean.

MATERIAL AND METHODS

Scuba-assisted surveys within coralligenous habitats (depths down to ca. 40 m) were performed at 6 sites in Turkey (Aegean and Levantine Seas), 7 sites in Greece (Aegean and Ionian Seas) and 7 sites in south France (Gulf of Lions) in 2013. Coralligenous assemblages were determined through the use of visual count techniques (e.g. direct observations and photographic quadrats). Photograquadrats were analyzed using photoQuad software.

RESULTS

A total of 267 species belonging to 11 systematic groups were encountered. Algae ranked first in terms species richness (83 species), followed by Foraminifera (55), Cnidaria (32), Bryozoa (22) and Echinodermata (14). Five invasive species (Caulerpa cylindracea, Halimeda tuna, Flabellia petiolata, Phorbas tenacior Leptopsammia pruvoti Madracis pharensis Rocellaria dubia Echinaster sepositus Halocynthia papillosa) were commonly recorded at the western Mediterranean locations and, less so, in the eastern basin, since they were recorded only in one site (Lambiri) in Greece (Ionian Sea).

The present study detected different coralligenous assemblages in the western and eastern Mediterranean Sea. In the western basin, gorgonians were found to be dominant even in shallow-depths, whereas these animals were rare or absent in the first fieldwork session performed at the eastern Mediterranean sites. However, a number of algae and invertebrates were common in the different Mediterranean areas and could be useful for future monitoring programs and the implementation of biotic indices that have already been developed (e.g. Index-Cor) or will be developed within the framework of CIGESMED.

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BIBLIOGRAPHY


