

Supporting Information

Table S1. Available literature on the coralligenous assemblages of Mesco Reef, with a short synopsis of the most relevant information.

Year	References	Information type	Main results
1936	Tortonese and Faraggiana [34]	Naturalistic observations.	Occurrence of <i>Petrosia dura</i> (= <i>P. ficiformis</i>), <i>Eunicella verrucosa</i> , <i>Paramuricea chamaleon</i> (= <i>P. clavata</i>) and <i>Retepora cellulosa</i> (= <i>Reteporella grimaldii</i>).
1958	Motta [24]	Underwater observations by scuba.	Seabed profile to 50 m depth, reef morphology, list of the most conspicuous species.
1958	Roghi [35]	Underwater observations by scuba.	Abundance and large size of <i>Gerardia savaglia</i> (= <i>Savalia s.</i>).
1959	Rossi [36]	List of species, qualitative information on octocorals.	Abundance of <i>Eunicella stricta</i> (= <i>E. singularis</i>) at 20-25 m depth; dominance of <i>Paramuricea chamaleon</i> (= <i>P. clavata</i>) at around 30 m depth, followed by <i>Leptogorgia sarmentosa</i> , <i>Eunicella verrucosa</i> , <i>Gerardia savaglia</i> (= <i>Savalia s.</i>), <i>Alcyonium coralloides</i> and <i>Rolandia coralloides</i> .
1960	Tortonese [37]	Naturalistic observations.	Abundance of <i>Eunicella stricta</i> (= <i>E. singularis</i>) in the 'precoralligenous', and of <i>Paramuricea chamaleon</i> (= <i>P. clavata</i>) and <i>Alcyonium coralloides</i> in the coralligenous; occurrence of <i>Gerardia savaglia</i> (= <i>Savalia s.</i>), <i>Eunicella verrucosa</i> , <i>Leptogorgia sarmentosa</i> , <i>Rolandia coralloides</i> , <i>Coenocyathus mouchezii</i> (= <i>Phyllangia americana m.</i>), and <i>Josephella marenzelleri</i> .
1960	Roghi [25]	Description of the underwater photographic survey methodology.	Abundance of <i>Paramuricea chamaleon</i> (= <i>P. clavata</i>) and <i>Gerardia savaglia</i> (= <i>Savalia s.</i>).
1961	Rossi [38]	Influence of environmental factors on biotic assemblages.	Fine sedimentation favours the occurrence of <i>Eunicella verrucosa</i> , <i>Alcyonium coralloides</i> , <i>Cellaria fistulosa</i> , <i>Pteria hirundo</i> ; some bryozoans and scleractinian corals are mud-tolerant; presence of sciaphilic species at depths lower than usual due to water turbidity.
1961-62	Rossi [44]	Photoquadrats, cover data.	Eight biotic assemblages based on substrate slope and depth; high cover of gorgonacea, mainly <i>Paramuricea chamaleon</i> (= <i>P. clavata</i>), frequency of <i>Gerardia savaglia</i> (= <i>Savalia s.</i>).
1975	Associazione Parmasub [39]	Qualitative information, list of species.	No apparent pollution; little difference as compared to what previously reported by Rossi.
1978	Andreoli et al. [40]	Qualitative information.	Benthic assemblages in good conditions. <i>Paramuricea clavata</i> shallower than usual, sponges and scleractinian corals scarce, richness of bryozoans.
1985	Ardizzone and Belluscio [41]	ROV (Remotely Operated Vehicle) transects.	Short description of the coralligenous habitat as observed on videos. Presence of <i>Paramuricea clavata</i> , <i>Eunicella singularis</i> , <i>E. verrucosa</i> and <i>Lophogorgia sarmentosa</i> (= <i>Leptogorgia s.</i>).
1985	Relini et al. [42]	Qualitative descriptions.	Absence of <i>Gerardia savaglia</i> (= <i>Savalia s.</i>) and reduced frequency of <i>Eunicella singularis</i> and <i>Paramuricea clavata</i> , as compared to Rossi's observations; turbid water below 25 m and high sedimentation rate at depth.

1988	Peirano and Tunesi [46]	Photoquadrats, cover data on anthozoans.	Increased cover of <i>Paramuricea clavata</i> and <i>Leptopsammia pruvoti</i> as compared to Rossi's data. <i>L. pruvoti</i> also occurs in shallow waters. <i>Alcyonium coralloides</i> scarce.
1989	Tunesi et al. [43]	Visual survey, distribution of gorgonians.	Schematic distribution maps of <i>Eunicella singularis</i> , <i>Eunicella verrucosa</i> , <i>Paramuricea clavata</i> and <i>Leptogorgia ceratophyta</i> (= <i>L. sarmentosa</i>).
1990	Peirano and Sassarini [47]	Photoquadrats, cover data.	Dominance of <i>Paramuricea clavata</i> , <i>Parazoanthus axinellae</i> and <i>Leptogorgia sarmentosa</i> .
1996	Salvati [48], Peirano et al. [49], Bianchi et al. [50]	Photoquadrats, cover data.	Decreased algal cover and increased cover of <i>Parazoanthus axinellae</i> and <i>Leptopsammia pruvoti</i> in shallow water, as compared to Rossi's data, putatively due to increased water turbidity. <i>Alcyonium coralloides</i> and <i>Eunicella singularis</i> not recorded anymore.
2000	Morri and Bianchi [29]	Comparison of existing information on biotic cover and analysis of environmental data.	Great dissimilarity between biological data of the 1990s and the early 1960s; diminished water transparency between the 1950s and the 1990s; temperature increased between 1959 and 1996, much less so between 1990 and 1996.
2008	Roghi [51], Roghi et al. [52]	Photoquadrats, cover data.	Scarcity of massive sponges, change in bushy bryozoan species, and reduced gorgonian cover with respect to previous information; occurrence of the alien algae <i>Womersleyella setacea</i> and <i>Caulerpa racemosa</i> (= <i>C. cylindracea</i>).