A project proposal for the construction of the underwater archaeological nature routes into the Protected Marine Area of Santa Maria di Castellabate

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Abstract

The coast from Punta Tresino to Ogliastro at the National Park of Cilento and Vallo di Diano is rich in caves while the bottom is cloaked in seagrass meadows on which shipwrecks dating from the Roman era and World War II were found. Natural landscapes, above and below water, interspersed with eloquent archaeological landmarks: coastal quarries, a roman harbour, remains of maritime villa with aquaria for fish farming. For this multileveled territory, a project proposal for the construction of underwater archaeological nature routes which aims to promote new ways of using archaeological heritage would be desirable.

Keywords: Protection, underwater archaeology, underwater cultural heritage, Santa Maria di Castellabate

Introduction

Since 1972 the Protected Marine Area (PMA) of Santa Maria di Castellabate near the city of Salerno (Italy) in the town of Castellabate (Figures 1, 2) is under marine biology protection and represents one of the first examples of a marine park in Italy and was definitively established in 2009 after lengthy bureaucratic process which lasted about thirty years. In 1998 Castellabate was named UNESCO world heritage site. Together with its coast it is included in the list of the "*most beautiful villages of Italy*".

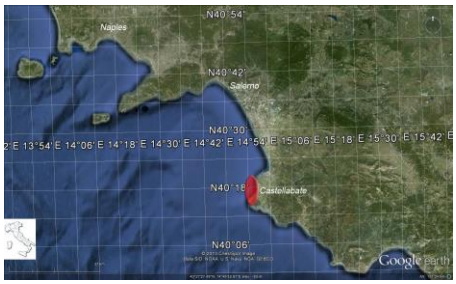

Fig 1. Campania Region (Italy).

The PMA, in the center of the National Park of Cilento and Vallo di Diano, is located between two extraordinary sites of the Megàle Hellas: Paestum and Velia. The coast from Punta Tresino to Ogliastro is rich in caves while the bottom is cloaked in seagrass meadows on which shipwrecks dating from the Roman era and World War II were found. Natural landscapes, above and below water, interspersed with eloquent archaeological landmarks: coastal quarries, a roman harbour, remains of maritime villa with aquaria for fish farming. For this multileveled territory, a project proposal for the construction of underwater archaeological nature routes which aims to promote new ways of using archaeological heritage would be desirable.

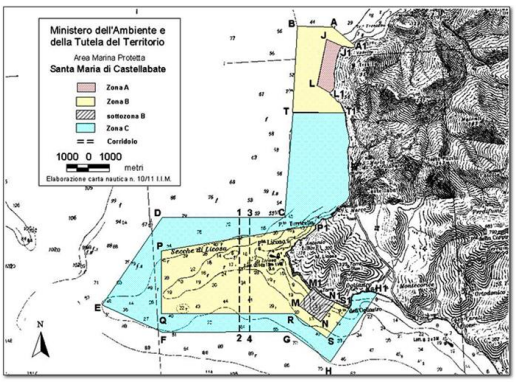

Fig 2. Protected Marine Area of Santa Maria di Castellabate in the Gulf of Salerno (IGM 1:25000) (by http://www.minambiente.it).

The oldest sources (Timeo, 566.T1 Jacobi FGH; Lyc. *Alex*., 712-731; 722-725; Ps. Arist. *De mirab. Ausc*. 103: 839 a, 33; Plin. *Nat. Hist.* 3.3.85; Dion. Halyc. *Antiq. Rom*. 1.53.2; Ovid. *Metam*. 15.708; Sil. 8.577; Solin., 2.13; Paul. Diac. *Hist. Lang*. 115, 15) relating to this portion of territory, relate to Licofrone, who in his great work the Cassandra or Alexandra, refers in one case to the mythical figures of the Sirens (*Alex*. 712-731), and in another case to Enipeo (*Alex*. 722-725) a Thessalian sea goddess, leading back to Poseidon in the Greek-Italic pantheon. It is typical in the Hellenistic tradition that *Promontorium Enipeum Posideion* is connected with *Leucosia*[1] - one of the three sirens, whose body has rejected on the hill by the currents and the tides. The reference to Licofrone (*Alex*. 724), one *hieron*, could indicate a site where there was a place of worship, or a sacred area. The name Leucosia also recurs in Strabo (6.1.1 C252, 6. C258 6. 2.C123 "*sailing from Poseidonia outside the Gulf, you reach the Island of Leucosia, a short distance from the continent: it took the name from one of the two Sirens who fell as the story goes, into the deep sea. Opposite the island rises the promontory of Sirenusse, which forms the Gulf of Posidonia*") and Pliny the Elder (*Nat. Hist.* II, 90, 204 and III, 3,85) and other scholars (Dion. Halyc. *Antiq. Rom*. I, 53, 2; Ovid. *Metam*. XV, 708; Sil. VIII, 577; Solin., II, 13; Paul. Diac. *Hist. Lang*. 115, 15).

Numerous references both to the island and the promontory (Figure 3) can be found in chronicles from the seventeenth to the nineteenth century (Antonini 1745: 462). At the beginning of the twentieth century also Mommsen, describing the ruins on the island, identified them as part of a public building, adding "*they are also in the sea along the beach*" and writing in this case, probably, about the western side of the island (Mazziotti 1904: 42). Most of the archaeological evidence is situated on the eastern side of the islet of Licosa (Figure 4) (Napoli 1970: 458; Schmiedt 1975: 69; Greco Pontrandolfo and Greco 1981: 148 nr 63; Johannowsky 1981: 1035; Cantalupo 1986: 33-34; Freschi 1988: 354; Greco and Vecchio 1992: 10, 11, 74-75; De Magistris 1995: 57-60). The structures still visible are related to a building dating from the end of the Republican and early Imperial era. There are parts of a mosaic floor with a two-coloured geometrical pattern (Blake 1930:42) (Figure 5), relating to an ambience sloping towards the sea. While on the western side, on the cliff facing the island, there are traces of a fish farm connected with *cetariae* situated on headland (Figure 6). The existence of a seaside villa, connected to a plant for the handling establishments and salting of fish, dating back to the first century BC and the first century AD. The central body of the villa was probably located on the cape, also due to the greater extension in respect to the island. On the latter there probably was a *dépendance* annexed perhaps close to the surroundings with a mosaic floor and at the same time productive *pars* identified on the headland and on the west side of the Isle of Licosa: caetariae and fish ponds with a complicated farming system (Figure 7) (Agizza 2011: 65-71).

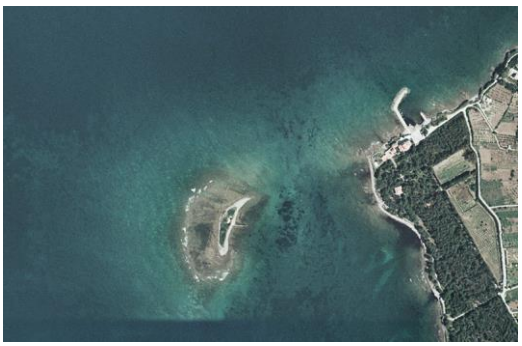

Fig 3. Promontory and Island of Licosa (by Comune di Castellabate).

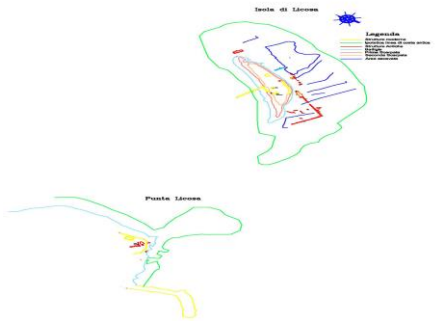

Fig 4. Plan of the structures on the island and cape of Licosa (drawn by author).

[1] On the question see: Zancani Montuoro P. 1954, 173-178; Sestieri 1950, 183; Greco E. 1979, 55; Ardovino A. M. 1986, 43-55; Fiammenghi C. A. 1986, 53-55; Treziny H. 1992, 45-61, 45-51.

Fig 5. Island of Licosa. Mosaic (photo by the author).

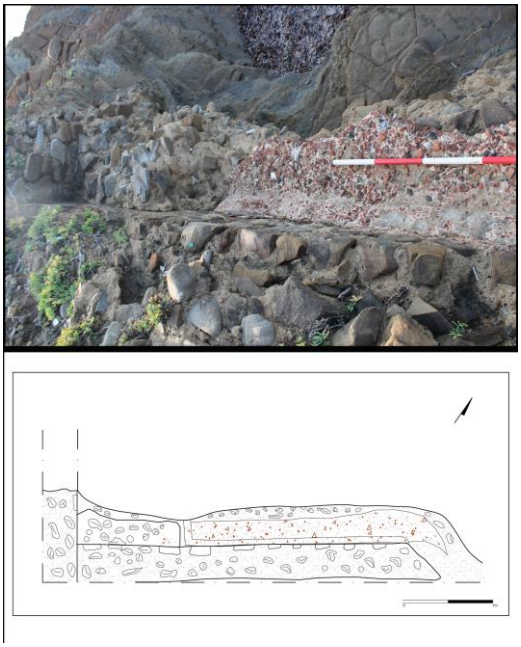

Fig 6. Cape of Licosa. Plan of the cetaria (photo and drawing by the author).

Fig 7. Island of Licosa. Plan of structures visible in the aerial photography: A. Wall of containment; B. Excavated canal; C. Pool (vivarium); D. Square structure and the remains of the structures indicated with white arrow (courtesy of Alisud).

Therefore, the Marine Protected Area is also characterized by a rich and remarkable biodiversity (Russo and Sgrosso 1995; Russo and Di Stefano 2003). Natural landscapes, above and below water, interspersed with other eloquent archaeological landmarks: coastal quarries (Figure 8), and a roman harbour (Figure 9).

Along the coast that stretches from Santa Maria of Castellabate up to the Punta Pagliarolo it is possible to recognize circular cuts, of which traces are preserved in negative semi-circular elements whose function is yet to be clarified in relation to the change of the sea level compared to the ancient times. It is very likely that it is a millstone quarries.

Fig 8. Santa Maria di Castellabate. Coastal quarries (photo by the author).

Fig 9. San Marco di Castellabate. Roman harbour (photo by the author).

There are many comparisons along the coast of South of Italy, northern Sicily, southern Calabria, Campania, and Puglia (Auriemma and Solinas 2009: 134-146). New data are presented for late Holocene relative sea-level change of two coastal sites in southern Italy. Data are based on precise measurements of submerged archaeological remains that are good indicators of past sea-level elevation (Scicchitano *et al*. 2011: 92-104). To the South of coastal quarries the roman harbour of S. Marco di Castellabate is situated while to the West of the modern port the roman structures are visible in *opus caementicium* (Lenormant 1883: 276; Sestieri 1950: 183; Schmiedt 1966: 315; 1975: 297; Gianfrotta 1974: 75; Johannowsky 1981: 1035; Fiammenghi 1986: 79; Greco and Vecchio 1992: Benini 2002:39-46), especially the quay orientated east-west, whose platforms are visible on the surface of the water, the other quay orientated north-south delimit a basin about twenty thousand square meters. The ancient port was connected to a small town whose traces are recognizable mainly in the necropolis, in which there were one hundred and fifty graves found dating from the first and the second century AD (Sestieri 1950; Fiammenghi 1983 531-532; 1985: 259-277; 1986: 79-81).

For this territory is multileveled, a project proposal for the construction of underwater archaeological nature routes (Figure 10) which aims to promote new ways of using archaeological heritage would be desirable. The coastline in question is proposed as a large "outdoor museum" where the testimonies of the past can be visited without altering the contexts of layers.

Fig 10. The coast of Castellabate with the underwater archaeological routes.

The only evidence concerning the presence of wrecks involves a site located about 3 miles off the lighthouse on the island of Licosa, and relates to the wreck of a cargo ship from which a part of the cargo and the wooden planks were recovered. The cargo consisted of wine amphorae of Dressel 1B type, and cookware accompanied by anchor stock so-called "*mobile*" type dating to the beginning of the first century BC.

Based on the model of the experience gained in recent years in Sicily (Figure 11), the proposal being assessed is that of an underwater archaeological site and natural route to dive with mask and fins on the surface or dive with experienced guides. Archaeologists, biologists and dive guides with the help of the teaching aids (brochures and short manual) will illustrate the path. Thus the visitors, after a briefing by the specialists, equipped with the educational panels that describe the archaeological sites: quarries on Punta Pagliarolo e Zona Lago, the roman harbour of San Marco, and the ruins of the maritime villa of Licosa, they will be able to dive into the waters of Castellabate.

A route will run from the north to the south, from coastal quarries to the foot of the siren Leucosia. The focus of the path is located along

the coast of Castellabate, and is represented by the roman port of *San Marco di Castellabate*, including his monumental structures (Figure 12), and bounded with an articulated itinerary between 2 and 5 m of depth marked by floats in midwater with some labels that will indicate and describe the artifacts.

Fig 11. Cala Tramontana (Island of Pantelleria). Underwater path (courtesy of the Soprintendenza del Mare – Regione Sicilia).

Fig 12. Route of the roman harbour of San Marco with his areas.

During the visit, the divers will get a look into a life on board through copies of nautical objects. While they will look through the cracks of time, they will also be able to admire the benthic population (sessile organisms and sciophilus-photophilous) and numerous species of fish that swim among the seagrass meadows. On the substrate, special labels will indicate the holes left from the poles used in the construction of the pier. In the last stage of the dive toward the shore, the visitors will be able to see an expanse of blocks cemented with large stones, probably the foundation of the quay running north-south close to the harbour basin.

Inside the perimeter it will be possible to observe the structures interspersed with copies of the amphorae (area B), the anchor stocks and the lead anchor stocks within objects of life on board (area C) - specimens that have been recovered at the end of the sixties (Gianfrotta 1974:77-107) (Figure 13). The copies faithfully reproduce by the exhibits in the *Museum of the Sea* in the castle of Castellabate (Figure 14).

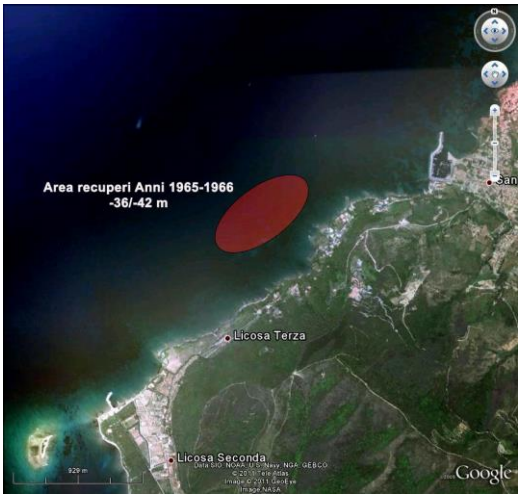

Fig 13. San Marco di Castellabate. Recoveries (1965-1966).

Fig 14. Villa Matarazzo and castle of Castellabate. The exhibits (photo by the author).

The project will enable educational and touristic visits of the ancient harbours' life above and below the water, and present the objects that characterized the dense network of exchanges with the whole Mediterranean.

The routes of San Marco and Licosa will be structured so as to be received well also by the divers with disabilities. Inside the mirror of the roman harbour will be realized, a "Tactile Underwater Path" of marine biology and archeology at the depth between of 2 and 5 meters (Figure 15). The artifacts and the exhibits, placed into the natural environment, will be provided with labels of *Braille* characters. Along the way divers with disabilities will be accompanied by ropes and guides.

Fig 15. Island of Ciclopi (Acitrezza, Catania). Tactile underwater path (courtesy of the Soprintendenza del Mare – Regione Sicilia. Photo S. Emma).

In the experimental stage the amount of potential users of natural and archaeological evidence can also expand and will be monitored by an underwater camera system connected with fixed locations of remote control (Figure 16) located in the Villa Matarazzo or in the castle of Castellabate, as it was done at several sites on the Sicilian coast and on the islands of Egadi and Pantelleria (Cala Minnola Levanzo, Cala Gadir) (Tusa 2005; 2010).

The goal we are aiming for is to show the underwater heritage as part of a vast museum linking wildlife, landscape, historical, anthropological and archaeological evidences, in accordance with the principles of the 2001 UNESCO Convention, to understanding the history of the relationship between the man and the sea for a proper development of the cultural tourism.

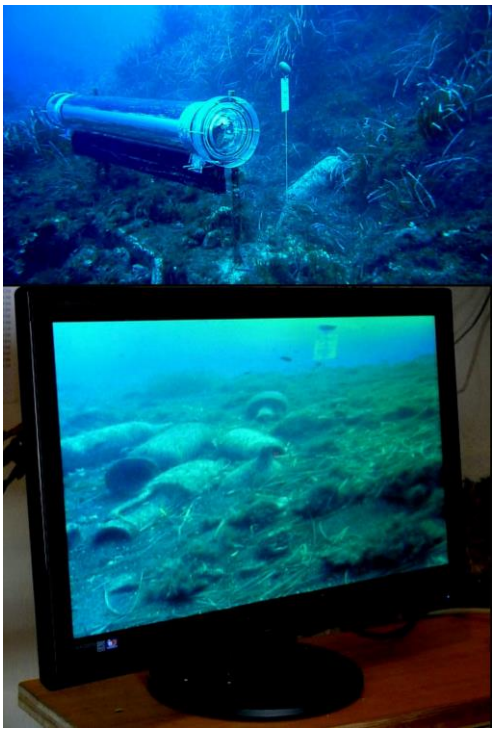

Fig 16. Cala Gadir (Island of Pantelleria). The underwater camera system on fixed locations connected with the remote control (courtesy of the Soprintendenza del Mare – Regione Sicilia).

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