

Underwater landforms that reveal our past life. Shelters, grasslands, forests, river paleobeds. Palaeogeographic reconstruction of the landscape of NW Sicily from 16 ka to the Neolithic

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Keywords: underwater landforms, paleogeography, topography, sea-level change, Sicily.

The peculiar paleo-geographic evolution of Sicily, the main Mediterranean island, makes it a perfect environment to study the relationship among early peopling, marine environment and coastal changes through the last millennia. One of the main issue debated from ancient topographers and archaeologists dealing with human mobility, ancient viability and paleo environmental studies is the actual morphology of the coastline depending from relative sea level-change that deeply changed from 16 ka cal BP (-106,5 m) and 6.5 ka cal BP (-8,6 m) (Lambeck et al., 2011) directly influencing palaeocostlines, topographic and historical interpretations.

Our research aims at filling this gap, offering valid variables to territorial model eventually combining archaeological survey and excavation data with the actual ancient coastal morphology and the related distance from archaeological sites: all decisive factors for a precise palaeoenvironmental contextualization of the archaeological data and the reconstruction of littoral resource exploitation patterns, human occupation, and mobility patterns along the coasts.

In order to achieve our scope we have georeferenced the main archeological sites along the modern coastline of Sicily with a chronology spanning from the documented early peopling of the island (~ 16 ka cal BP) to the Neolithic. Then we take into consideration morphobathymetric, lithological and sea level change (both isostatic and tectonic), in order to reconstruct the ancient coastal morphology, the distance and altitude of sites from and on the sea and, in some cases, the eventual existence of submerged archeological deposits or features at five specific case study: Grotta del Tuono and Cala del Genovese (Egadi, Trapani), Baia dell'Uzzo (San Vito Lo Capo, Trapani), Grotta dell'Arco di Capo Zafferano (Bagheria, Palermo) and Riparo del Castello (Termini Imerese, Palermo).

The analysis of marine geology data made it possible to analyze the currently underwater territory, which was, instead, the territory that 16 ka constituted the spaces where the populations lived, sheltered, hunted and moved. The submerged morphologies reveal possible interesting settlement sites, hunting territories, paleobeds of rivers that crossed these plains. This analysis, faced in a general way from the Egadi to the gulf of Palermo and in particular from Capo Mongerbino to the gulf of Termini Imerese, is revealing very interesting information. It, carried out for 6 time slices, shows in an ever different way as a function of the sea level rise, how different the territories, the coast, their activities, their life were.