



Lower to Middle Pleistocene coastal deposits from the western coast of Eivissa (Occidental Mediterranean): chronology and evolution

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Colluvial and aeolian successions in coastal environments are useful indicators of geomorphological changes that occurred during the Pleistocene. By their study it is possible to unravel the evolution of the coastal landscape. Pleistocene aeolian deposits interbedded with colluvial deposits and palaeosols have been observed in areas of Cap Negret, Punta de Sa Pedrera, Cala Bassa, and Cala Compte, western coast of Eivissa. These deposits span almost continuously along 14 km of the coast, covering an area of approximately 22 km². Here we present a sedimentological and stratigraphical description of these Pleistocene outcrops. Five major sedimentary facies have been described involving the succession of aeolian, colluvial and edaphic environments. Carbonate sandstones, breccias, conglomerates, and fine-grained deposits are the main components of these sequences. OSL dating of 15 samples collected from aeolian levels indicates that their deposition took place between Lower to Middle Pleistocene. The sedimentological and chronological analysis of these deposits allows reconstructing the coastal Pleistocene environmental history from MIS 26 to MIS 6. We are showing that while wind direction and coastal relief are major controls on Lower to Middle Pleistocene coastal landscape evolution on western Eivissa, episodes of aeolian activity and dune formation in the Western Mediterranean can be linked to periods of low sea level.

Keywords: Eolian dunes, Pleistocene, Climatic evolution, Eivissa.