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PALEOENVIRONMENTAL IMPLICATIONS THROUGH THE STUDY OF AN EEMIAN PALEOSOL IN NORTHWESTERN SARDINIA (ITALY)

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Sardinia is one of the main islands of the Mediterranean Sea where it occupies a central position. The Island has been considered tectonically stable since the last 2My and, therefore represents a key area to perform studies on climate and paleonvironmental changes that have occurred during the Quaternary. Several studies conducted along the NW coast of the island have documented and precisely dated, by the Optically Luminescence Technique, a quasi continuous succession of sandy deposits (aeolian and shallow marine) referred to MIS5; in particular the substages MIS5e and 5c. Most of these deposits are interlayered with soils. The aim of this work is to define the paleoenvironmental changes related to a soil belonging to the studied succession, by means of an in-depth micromorphological study. In particular, the presence of this paleosol is associated to the fast climatic fluctuations that took place between MIS5e and MIS5c. Three main phases were highlighted. A wet period, with intense carbonate leaching, was followed by the establishment of very dry conditions and by the formation of a thick calcrete horizon. Finally, a warm and wet phase lead to the rapid weathering of the calcrete top layer and to the formation of reddish horizons showing moderate pedogenic development.