

RECENT GLACIAL VARIATIONS AND CLIMATIC CHANGE IN THE CENTRAL MEDITERRANEAN AREA

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The recent evolution of the glacial processes in central Mediterranean plays an important role in the reconstruction of climatic change both at a local and at a regional scale. In fact starting from the end of the LIA the glacial processes and the related glacial and peri-glacial morphology have been reduced in space and importance and have been confined by the general warming only on the highest peaks and sectors of the central Apennine. Particularly the Calderone glacier is the unique apparatus of the Apennine Belt, the southernmost glacier in Europe (42° 28' 15" N) and in the whole central-Mediterranean area. The present situation shows a considerable reduction in surface area: - 41% of the total supposed (about 10.5 ha, at the LIA time), in thickness, - 64% of the total supposed (about 55 m, at the LIA time) and in volume. The reconstruction has been performed in GIS environment started from both historical description and drawings/maps and also confirmed by photographic images, collected during the research of available literature. Since the 1994 a set multidisciplinary researches started in order to evaluate, in GIS environment, the actual role of the glacier as indicator in global changing processes and, if possible, in induced effects of industrial activity. In this perspective the reduction of the Calderone glacier and the most significant morphological variations of principal glacial and peri-glacial features in the area have been studied and elaborated in order to obtain valuable parameters of the warming trend of the actual climatic regime.