Relict Forms of a Disappeared Mountain. The Periglacial Deposits in Asinara Island-Sardinia, Italy

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Abstract: Asinara Island is located in northwestern Sardinia (Italy) and only recently has been divested as a maximum-security prison and returned to nature protection as a National Park with Marine Protected Area along the coastal perimeter. Geologically, the island is formed by a Paleozoic basement in transition between the metamorphic rocks and the Pre-Hercynian granitic batholith of Sardinia. New surveys carried out to reconstruct the recent evolution of the landscape have shown a lot of deposits formed by large blocks of granitoid and anphibolitic rocks representing a favorable situation to produce this material formation in terms of differential erosion in periglaciar environment. Similar morphologies are possible to observe in many places in Sardinia continental hard rocks as effect of the conditions of refreezing periods ("glacial"). These deposits are commonly known as " block streams " or " block fields " and reported for the first time in Italy in 1990 in the central area of the island of Sardinia, about 500 meters above sea level. Their presence in Sardinia is always documented in a range of altitudes not less than 350-400 meters and, in this case for the first time they have been identified in close proximity to the coastline. In addition, some of these deposits cover the thalwegs present on the granite rocks in the central portion of the island. The most interesting cases are represented by the deposits located on the northwestern side, near the lighthouse of Punta Scorno. The widespread presence of these deposits suggests significant areal erosion of the island terrain; they probably accumulated during the colder episodes that have characterized the Middle and Upper Pleistocene of the entire western Mediterranean. These testify the existence of an energy relief higher than the present one and a coastline located about 25 kilometers from the current position, however, documented by the block stream of Cala Arena, the first deposit located for the first time under the sea.

Key words: *Blockstreams, climate variations, natural resources management, National Park, Asinara Island, Italy.*

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