Boulder deposits on the southeastern coast of Cyprus and their relation with paleotsunami events of the Eastern Mediterranean

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Cyprus has a long record of tsunami waves, as noted by archaeological and geological records. Large boulder deposits have been noted in the southeastern and western part of the Island. At Cape Greco (southeastern Cyprus) large boulders have been noted, however, no detailed geomorphological research has taken place so far and the related high energy event remains undated. Our research focuses at Cape Greco Peninsula in order to record in detail and interpret the large boulders deposits. The boulders, located at 3 m amsl, are fragments of a layer of an upper Pleistocene aeolianite, which is overlaying unconformly a lower Pleistocene calcarenite. Dimensions and spatial distribution of 272 small, medium and large boulders were documented, while their precise distance from the coastline was recorded by field mapping and remote sensing, using GNSS, drone and GIS technics. Several large boulders weighting more than ~30 metric tons were found up to 60m inland. Geomorphologic mapping and morphometric measurements, along with the presence of marine organisms suggests that some of the boulders were removed from their original intertidal zone and were transported inland by the force of large waves. In this work, we attempt to determine the extreme event that caused their transport inland. We further attempt a correlation of the event with already known tsunami events from Eastern Mediterranean, based on the estimated wave heights and the radiocarbon dating of marine gastropods (*Vermetus sp.*).