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Preliminary Results of Tectonic Geomorphology Investigation of the Northern Cyprus coasts

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Cyprus, an island located in the Eastern Mediterranean region, is a part of subduction zone that defines the plate boundary at the southern margin of the Central Anatolian Plateau. The presence of uplifted marine terraces, wave-cut notches, surface ruptures and tsunami deposits are pieces of evidence of subduction related active deformation in the northern part of the island. To understand timing, mode and rate of deformation, we conducted high-resolution geomorphic mapping of marine terraces and levelling of wave-cut notches by using drone and DGPS. Tsunami boulders and boulder trains reaching up to 5-6 meters were discovered and surface rupture of an earthquake strechting from offshore to onshore was mapped for the first time with this study. Coral fossils were collected from marine terraces and tsunami boulders for age determinations by U-Th and 14C dating techniques, respectively. U-Th dating results indicate 144$\pm$12 (2s) ka for the MIS5e terrace at 40 m above sea level and 14C ages show the late Holocene (<4.5 ka) coseismic deformation. Here we will present tectonic implicatios from temporal and spatial distribution of marine terraces and wave-cut notches along the northern Cyprus. This study is supported by the Istanbul Technical University Research Found (Project no: 37548).