TECTONIC GEOMORPHIC INDICES OF THE KIT FOX HILLS, NORTHERN DEATH VALLEY, CALIFORNIA

Abstract

The Kit Fox Hills (KFH) is one of the few localities in Death Valley National Park that have not been thoroughly studied. Bounded by the Northern Death Valley Fault Zone on the southwest side and unnamed faults on the north-east side, the KFH are a tectonically active area. Valley height/valley width (VW/VH) ratios and longitudinal profiles that display the gradients of stream-channels may be used to determine uplift rates in tectonically active regions. The VW/VH ratios, from north to south are 0.85, 0.53, 0.26, 1.07, and 0.54. The five stream profiles all display areas where the stream is not in equilibrium, which is evidence of tectonic activity. The east end of the profiles coincides with the unnamed fault, which means that this is an active fault as well. The greatest separation on each profile is at the Northern Death Valley Fault Zone, which is the main structure for the KFH.