Geophysical Research Abstracts
Vol. 15, EGU2013-6597, 2013
EGU General Assembly 2013

The relationship between Holocene cultural site distribution and marine terrace uplift on the coast fringing Coastal Range, Taiwan

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According to the collision of Philippine Sea plate and Eurasia plate, a series of left-lateral active faults with reverse sense exists in the Longitudinal Valley of east Taiwan. The Holocene marine terraces along the east coast of the Coastal Range in Taiwan are well known for their very rapid uplift and record tectonic history of this active collision boundary. The Holocene marine terrace sequence resulting from successive sea level change and tectonic activation is subdivided into several steps where the highest and oldest terrace, back to ca 13,000yr BP, reaches up to ca 80 m above sea level, and the lower terraces are mostly erosional ones, overlain by less than 1m thick coral beds in situ. The uplift of the coast is very high, ranging from 5 to 10 m/ka.

According to the fabrics of potsherds and geochronological data, the prehistoric cultures in eastern Taiwan could be classified into three stages: Fushan (ca 5000-3500yr BP), Peinan/Chilin (ca3500-2000yr BP), Kweishan (ca2000-1000 yr BP) and Jinpu (ca 1000-400yr BP) cultural assemblages respectively. A great difference exists between the various cultural stage, not only the pottery making techniques, but also the distributions of archaeological sites. Combined with the dynamic geomorphic evolution of marine terraces and the distribution of prehistoric culture sites on the east coast of the Coastal Range, a coastal migration trend could be established.