

Longshore variation of the relative sea-level history caused by a differing rate of uplift, Kujukuri strand plain

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The longshore variation in the relative sea-level history of the southern half of the Kujukuri strand plain, Pacific coast of eastern Japan, is reported and discussed in terms of a differing rate of uplift. The central part of the plain has experienced a 5-m fall in relative sea level during the last 6000 years. The relative sea-level fall is marked by the seaward lowering of the lithological boundary within the subsurface beach deposits of which age is younger seaward because of the beach progradation. The boundary is formed ca 1 m below the mean sea level at the time of deposition, and is detected by drill cores and ground-penetrating radar profiles. A ground-penetrating radar (GPR) survey was performed to reconstruct relative sea-level curves in the southern and southernmost parts of the strand plain. The relative sea-level history during the last 6000 years varies alongshore with a net sea-level fall being larger southward. The difference in the relative sea-level curve between the central and south parts temporally decreases from 2.4 m at 5.7 ka, through 1.6 m at 3.5 ka, to 0.9 m at 1.7 ka, becoming zero at the present. The trend was caused by the uplift of the southern part relative to the central, of which average rate is 0.42 m/ka. The rate is equivalent to that inferred from the last interglacial marine terrace surrounding the Kujukuri strand plain, of which elevation is +50-70 m and +110 m around the central and southern parts, respectively.