

## Pre-Genroku Kanto Tsunami Deposits found in Koajiro Bay, Miura Peninsula, Japan

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In the years of 1293, 1703, and 1923, the last three major tsunamis are suggested to have occurred in the Sagami trough by tsunami deposits found in Koajiro Bay in the Miura peninsula. The most likely Kanto earthquake, a great interplate event near Tokyo, before the 1703 Genroku event would be the 1293 Sho'o (or Ei'nin) earthquake. The suggested long interseismic interval following the 1293 earthquake may be explained if simultaneous rupturing on a splay fault of the plate interface and a large stress drop take place associated with the Sho'o (or Ei'nin) earthquake. The Kanagawa prefecture indicated in 2003 that the last event on the Kozu-Matsuda fault, a probable splay fault of the plate interface, took place in 1100-1350 A.D.

When the next active period of seismicity starts in the Tokyo metropolitan area is one of the key issues in this country because of a great potential socioeconomic impact of a large earthquake on the mega cities. Since the duration of active period before the two known Kanto earthquakes is 80-90 years, we can answer this question if we could estimate the occurrence time of the next Kanto earthquake. However, a great Kanto earthquake before the 1703 Genroku event have not yet been identified, although the 1293 Sho'o (or Ei'nin) and the 1433 Eikyo earthquakes are suggested from historical documents by Ishibashi, in 1991 and 1994, respectively.

Long and handy Geoslicer surveys in Kaojiro Bay and its tidal flat, respectively, show at least four recent event layers. In the tidal flat the event layer mainly consists of shell fragments, gravels and coarse sand, but shell fragments are missing in the event layer in the bay. The radio carbon dating of the recent three events is consistent with tsunamis in 1293, 1703, and 1923. As was reported by Shimazaki and others in the Fall meeting of the Seismological Society of Japan in 2008, the shallowest three event layers in the tidal flat are judged to be tsunami deposits of the great Kanto earthquake because the grain-size and diatom analyses indicate co-event uplift and inter-event subsidence. The age of 1060-1260 A.D. (2 sigma: including calendar year correction) is obtained from the inner bay fine sediments just below the third layer from the top. Consistently, the third event layer in the bay contains a shell dated 1230-1400 A.D. (2 sigma: including marine reservoir correction).