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Environmental change at the Western Japan during the Jomon period and its effects on human activity

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The mid-Holocene is well known for its warmer climate than that of the present. The warm Holocene climate provided a good environment for people living in Japan. Interestingly, the population of the Eastern Japan was larger than that of the western Japan throughout the Jomon period. It was the Yayoi period that the population density of the western Japan and the Tohoku region had been reversed. It is important to assess the influence of environmental change on human activity at the Jomon sites, because we need to estimate the impacts of future global warming in Japan. Sediment cores were recovered from the southwestern Seto-Inland Sea (e.g., Hiroshima Bay) during the 2009 cruise KT09-14 of R/V Tansei-maru. In this study, I use the core H3 recovered from Hiroshima Bay for reconstruction of high resolution climatic and environmental change at the western Jomon sites. Our goal is to understand the relationship between environmental change and the rise and fall of the human population at the western Japan from the Jomon period to the Yayoi period. At the present moment, we carried out ¹⁴C-dating and estimated sedimentation rate of core H3. Furthermore we are reconstructing sea surface temperature (SST) based on relationship between SST and undersaturation of C³⁷ alkenone of prymnesiophyte coccolithophorides.

Keywords: Jomon sites, Western Japan, environmental change, ¹⁴C-dating, alkenone paleothermometer