

HQR023-P13

Room:Convention Hall

Time:May 24 14:00-16:30

Holocene relative Sea-level Changes in Sekiyado lowland, Japan

Takashi Chiba^{1*}, Shigeo SUGIHARA², Yoshiaki Matsushima³, Kazuo Masubuchi⁴, Yusuke Arai²

¹Grad. School of Frontier Sci., The Univ., ²Meiji Univ., ³Kanagawa Pre. Museum of Natural History, ⁴Kawasakishi board of education

Paleo Kinu bay has formed on lowlands located along the middle to lower reaches Tone river during the Holocene transgression (called the Jomon transgression) period (Endo et al., 1983). Moreover, in Holocene, many shell mounds were made by Jomon and Yayoi people in coastal areas of this bay. So far Kashima lowland (Kikuchi, 1969; 1988), Takagami lowland (Ota et al., 1985; Kashima et al., 1985), Kinosaki lowland (Sugihara et al., 1997; 2000) and lake Kasumigaura (Saito et al., 1990) were surveyed for paleo environmental changes by the Jomon transgression. However, timings and details of paleo sea level changes by the Jomon transgression is not emerged in paleo Kinu bay during Holocene.

In order to reveal the timings and details of sea level changes in paleo Kinu bay during Holocene, we have basically analyzed 4 cores, and drawn Age-depth and sea level curve. The results are as follows;

Stage 1 (about 12000-7000 cal yrBP) : the Jomon transgression occurred and the sea level rose from -25m to +2.5m (Masubuchi 2010). In this period, however, two small regressions (about 8500 cal yrBP and 7500 cal yr BP) are recognized.

Stage 2 (7000-4000 cal yrBP) : sea level fell from +3m to 0m gradually.

Stage 3 (4000-2500 cal yrBP) : sea level fell and reached its the lowest stand (about -2m) during 3000-2500 cal yr BP.

Stage 4 (2500 cal yrBP-) : sea level rose from -2m to 0m

These three regression events (about 8500, 7500, and 3000-2500 cal yrBP) consistent with the colder stage in 8200 cal yrBP, the colder stage in 7400cal yr BP, and the Yayoi regression, respectively (Koizumi and Sakamoto, 2010). In addition, the tide range in this bay is estimated at least a range of plus/minus 4m from diatom analysis during Holocene.

Keywords: Relative sea level change, Holocene, Paleo kinu bay, Sekiyado lowland, Diatom analysis