Potential of oxygen isotope records of micro-shells Carditella iejimensis as a late Holocene paleoenvironmental variabilities.

Akihisa Kitamura[1]; Tsuyoshi Watanabe[2]; Nagisa Yamamoto[3]; Tomohisa Irino[4]

[1] Insti, Geo, Shizuoka Univ; [2] Dept. of Geology, National Science Museum; [3] Institute of Geosciences, Shizuoka Uni; [4] EES, Hokkaido Univ.

We obtained a 43-cm thick sediment layer from a submarine limestone cave (31 m depth) on the fore reef slope of Ie Island, off Okinawa mainland, Japan. Oxygen isotope measurement was performed on the cavernicolous micro-bivalve Carditella iejimensis. The results show that there are two warmer intervals at AD 281+-40 and AD 1053+-40, which correspond to Roman Warm Period and Medieval Warm Period, respectively. These suggest that submarine cave sediments and oxygen isotope records of cavernicolous C. iejimensis can be used as a useful tool to reconstruct century scale paleoenvironmental and climatic variability in the Okinawa Island during Holocene.