

Mid to Late Holocene Paleoceanography recorded in fossil corals from Kikai Island

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Holocene coral reefs are exposed largely along the coast of Kikai island in the central Ryukyu islands of Japan. The coral reefs provide clues to understand the palaeo-environment of this part of the Pacific ocean. Samples collected for this study are *Porites* sp. corals which record annual and seasonal variations in climate as oxygen and carbon isotope ratios. Corals were radiocarbon dated and age obtained were ranged from ca. 3000 BP to 5000 BP. 5000 BP is known as the time of "Mid-Holocene Climate Optimum" when global mean temperature was warmer than the present. Pristine nature of the corals were observed in X-ray photos and according to the XRD measurements, no secondary calcite was presented in the samples used for isotope analyses. We found progressive decrease in oxygen isotope ratios in fossil corals throughout the Holocene. Heavier oxygen isotope ratios during the mid-Holocene than the present is indicative of cooler or saltier seawater.