## Palaeoenvironment Reconstruction using Calcareous Skeletons from Shell Mounds in Jeju Island, South Korea

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One of the most important fundamental information for paleoenvironmental research is to obtain accurate dating results. At present radiocarbon dating has been considered to be the best dating method for carbon-bearing materials which are less than 50,000 years old. This study is to understand paleoenvironments/paleoclimates using calcareous skeletons collected from shell mounds on Jeju Island. Skeletons used for this study are abalone shells (gastropod) and oysters (bivalve). Gastropods commonly consist of aragonite whereas oysters consist of low Mg-calcite which is resistant to post-depositional alteration. Two bivalve shells of the same species (Glycymeris albolineata) from the shell mounds of Sangmo-ri and U Island were analyzed for stable isotopes of oxygen and carbon. These sites are archaeologically estimated to be 2,300 yr BP and 3,500 yr BP, respectively. Both oxygen and carbon isotope values show well defined seasonal variations with more negative values during summer periods. Especially, oxygen isotope values reflect high summer and cold winter temperatures. However, interpretation of carbon isotope values are still problematic, because they are controlled either by dissolved inorganic carbon in seawater or by metabolic effects. To solve this problem, environmental monitoring of shell ecology is necessary.