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インダス遺跡から産出した耳石化石による環境復元
Paleoenvironemtal reconstruction using Fossil otolith from Indus Civilization sites

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Oxygen and carbon isotope ratio of modern and fossil otoliths (ear stones) of catfish, Aripsis spp., from the gulf of Khambhat and the Gulf of Kutch, North West India, were measured for reconstructing the past environmental history during the Holocene. Since the fossil otoliths are obtained from the Indus Civilization archaeological sites, we aimed to see relationships between environments and civilizations in the past. Close correlations between the instrumental data and oxygen isotopes ensure reliability of proxy data for sea-surface temperature (SST) and we successfully revealed fluctuations of SST in mid to late Holocene period. We also are able to trace ecological information of the catfish in the past using stable isotopes. Both oxygen and carbon isotope ratio suggests migration from river to ocean of the modern catfish as its growth. In our presentation, we will discussed detailed method of reconstructions of paleo SST in the context of regional climate changes with the civilizations.

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