Oxygen isotope record of the cavernicolous micro-bivalve Carditella iejimensis from surface sediments

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Oxygen isotope measurement was performed on the cavernicolous micro-bivalve Carditella iejimensis (below 4.0 mm height) in surface sediments from a submarine limestone cave (31 m depth) on the fore-reef slope of Ie Island, off Okinawa mainland, Japan. The results show that average values of the 18O derived temperature of small (1.0-2.4 mm in shell height) and large shells (2.5-4.0 mm in shell height) are 23.8+-0.6 degree and 24.9+-0.9 degree, respectively. Compared to these values and the water temperature records, we think that the 18O derived temperature of small shell represents mean value of water temperature at 30 m depth (T30m) during May and June, while the 18O derived temperature of shell material far 2.4 mm from the umbo exhibits T30m at July.