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## **SURFACE SEA TEMPERATURE RECONSTRUCTION OF LA PAZ BAY, GULF OF CALIFORNIA: NEW EVIDENCE FROM PINCTADA MAZATLANICA $\delta^{18}\text{O}$**

Through the use of stable oxygen isotopes in bivalve shells, Holocene oceanic characteristics can be reconstructed from past surface sea temperatures (SSTs), allowing the study of climatic patterns and phenomena that affect marine and human communities. The goal of this study was to calculate Holocene summer SSTs for La Paz Bay through the novel analysis of  $\delta^{18}\text{O}$  in *Pinctada mazatlanica* shells from a  $^{14}\text{C}$  dated Holocene open camp site of Baja California Sur, México. Presently summer season aragonite  $\delta^{18}\text{O}$  of *P. mazatlanica* is  $-1.8 \pm 0.2\text{‰}$ , varying between  $-1.3\text{‰}$  and  $-1.9\text{‰}$  during the last 8.4 ky; For the years 8396 BP, 7708 BP and 7070 BP  $\delta^{18}\text{O}$  was enriched  $0.2\text{‰}$  to  $0.1\text{‰}$ , suggesting slightly colder SSTs vs. the present, while in 7805 BP,  $\delta^{18}\text{O}$  values were depleted  $-0.1\text{‰}$ , suggesting slightly warmer SST; in 6945 BP and 2087 BP,  $\delta^{18}\text{O}$  was enriched  $0.4\text{‰}$  to  $0.5\text{‰}$ , suggesting significantly colder SSTs vs. the present. The resulting Holocene SST tendencies align with and support a number of local and regional paleotemperature studies, establishing it as a novel paleotemperature proxy for La Paz Bay.

### **References**

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