

## **Local climate variability through the Holocene era in coastal British Columbia: insights from archeology and high-resolution stable oxygen isotope sclerochronology**

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Coastal shell midden sites can provide millennial-scale records of human-environmental interaction as well as insights into past environmental change. Marine shells within these archaeological deposits record changes in ambient environments in both the shell chemistry and within their micro-growth structures. Micro-growth lines are deposited on a daily basis as bivalves secrete calcium carbonate to build their shell when submerged during periods of high tides; the growth patterns are referred to as lunar daily growth increments (LDGI). This paper will discuss how the biogeochemical analysis of archaeological shells has shown changes in local climates on the northern coast of British Columbia. It will also discuss how these data can be used to identify cultural and climatic events that contributed to the collapse of the salmon economy between 4000–2000 years BP.