

From Paleoceanography to Policy: applying historical coastal pH baselines from long lived shells and skeletons to contemporary shellfish aquaculture

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My summer project consisted of two parts: (1) constructing chronologies of crustose coralline algae (CCA) for a Sea Grant Research project and (2) running the spectrophotometer and processing chlorophyll for a biological experiment at the Schiller Coastal Studies Center (SCSC). The first portion of my project involved using a temperature proxy, Mg/Ca, to determine annual growth increments on CCA samples collected in the 1960s and early 2000s from the Gulf of Maine. CCA can record seawater conditions, such as seawater pH and temperature, due to its

seawater pH. I collected seawater samples from tanks of varying conditions (temperature, nutrients and pH), and ran the samples on the spectrophotometer. This helped verify tank seawater pH conditions and will help determine variability in tank seawater pH over the duration of the experiment.

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