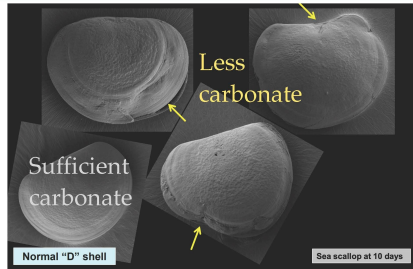


A Field Guide to observing impacts of OA on Sea Scallops on the East Coast of the US



What is Ocean Acidification (OA)?

When carbon dioxide (CO_2) from the air is added to seawater, it changes the water chemistry, which reduces the pH and carbonate levels in the ocean.



OA makes it energetically more difficult for marine calcifiers (like Sea Scallops) to generate a shell that requires carbonate.

Saturation state (Ω) is a measure of how close they are to an energetic threshold (1). Lower Ω can result in less energy available for growth.

Image: D. McCorkle, WHOI

What about Sea Scallops? Can we observe impacts of OA on Sea Scallops in the field?

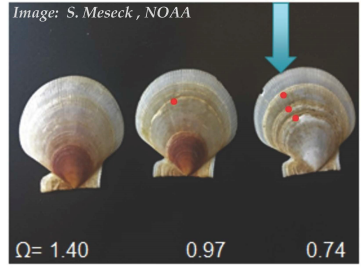
Growth ring discoloration

Color changes

Image: S. Meseck, NOAA

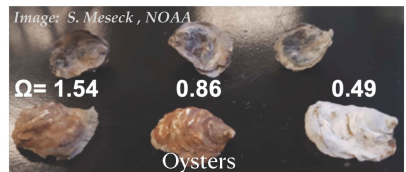
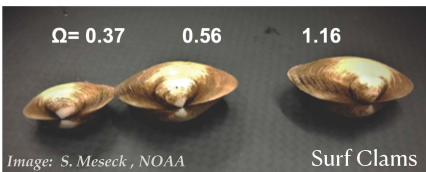


Image: S. Meseck, NOAA



Preliminary evidence from lab work suggests **yes!** Much like other bivalves, the shell of Sea Scallops experiences color changes, bleaching, and thinning with lower saturation states (Ω , a measure of carbonate concentrations in seawater)

Other bivalves do the same thing... Scallops are not alone



Have you seen these changes in scallop shells?
Join one of our workshops



Or contact: Susan Inglis singlis@cfrfoundation.org 508-817-7025



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Where can I find out more information on OA?

OAP

