



National Estuarine Research Reserve System Science Collaborative

Look but don't touch.

Comparing non-invasive and traditional sampling to assess oyster reef communities Robert Dunn, Matthew Kimball North Inlet-Winyah Bay NERR & Baruch Marine Field Laboratory

















Our Catalyst team is assessing multiple methods to examine oyster reef community structure and ecosystem function in 4 **Reserves across the southeast.**

Oyster reef biophysical sampling





Nekton counts exhibit similar trends between acoustic imaging and direct capture, but ARIS more effectively samples larger animals.



eDNA metabarcoding



- Targeting 3 mitochondrial genes
- •cox1 (metazoans)
- •12S (fish only)
- 16S (decapods only)



Amplifying each gene 4

Oyster disease assays





Parasite prevalence is high at all sites, but infection intensity is low.





Stable isotope analysis





The primary resource contributing to oyster reef food webs varies across the southeast, mainly related to tidal height.



Catalyst team members include Shelby Ziegler, Wil Atencio, Dan Bowling, Mercer Brugler, Jeb Byers, John Carroll, Nikki Dix, Dave Eggleston, Rachel Guy, Maggie Pelton, Bruce Pfirrmann, Hans

Provost and Justin Ridge. All illustrations by Maggie Pelton.