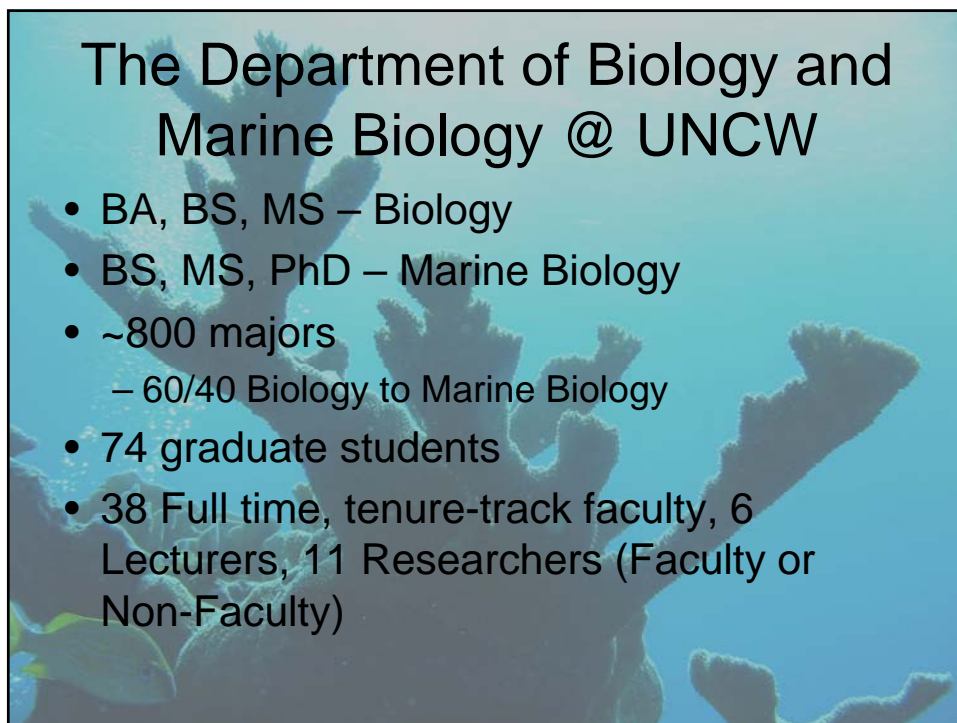




Dr. Chris Finelli
Associate Professor and Chair
Department of Biology and Marine Biology
Dobo 102
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910-962-3487



**The Department of Biology and
Marine Biology @ UNCW**

- BA, BS, MS – Biology
- BS, MS, PhD – Marine Biology
- ~800 majors
 - 60/40 Biology to Marine Biology
- 74 graduate students
- 38 Full time, tenure-track faculty, 6 Lecturers, 11 Researchers (Faculty or Non-Faculty)

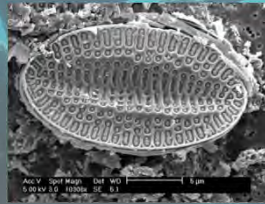
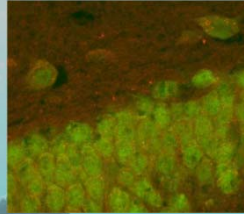


On Campus Facilities

- Cell and Molecular Biology
 - PCR
 - Gel documentation
 - Biochemical assays
- Seawater and flume
- Collections
 - Mammals (15000 specimens)
 - Birds (2000 specimens)
 - Fish and Herps (26000 specimens)
 - David J. Sieren Herbarium (25000 specimens)

Microscopy Facility

- SEM
- TEM
- Confocal
- Light
- Imaging



Burevitch Field Support Facility



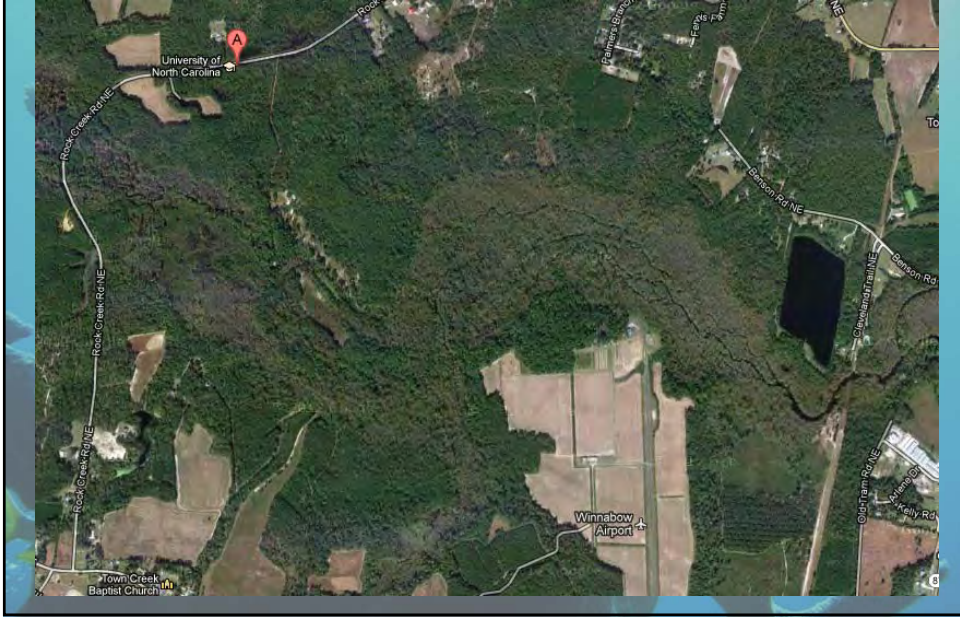
Kresge Greenhouse



Campus Natural Areas



Ev-Henwood



NE Cape Fear Ecological Site



Broadfoot Property @ Pages Creek



Hewletts Creek Research Lease



Center for Marine Science

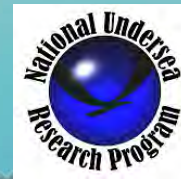
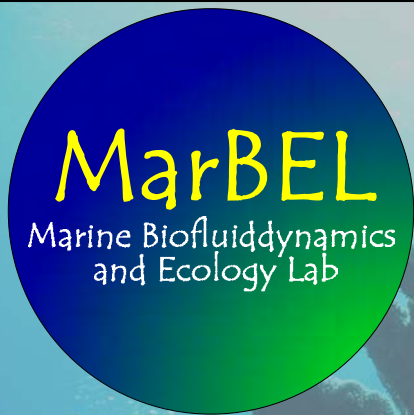
- Gene Sequencing
- Nutrients and water quality
- Isotope Ratio Mass Spec
- Aquaculture
 - (Finfish and shellfish)
- Boats and SCUBA
- Machine Shop
- Instrumentation
- Seawater facilities



How can you get involved?

- www.uncw.edu/bio
- Directed Independent Study
- Honors Projects
- Volunteer
- Be active and persistent

What do these organisms have in common?

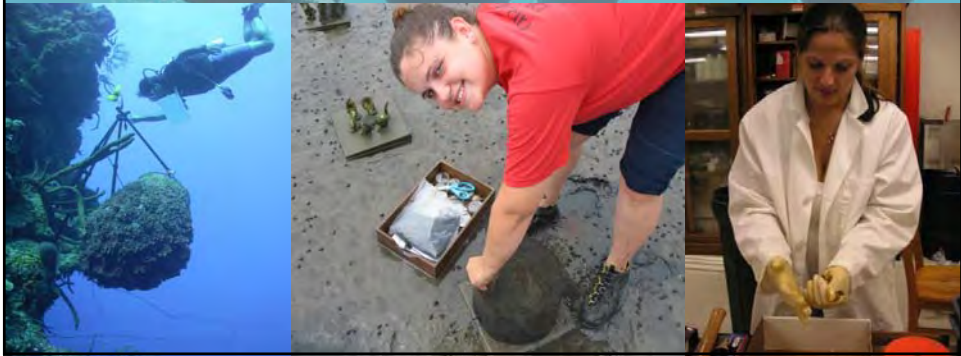


Chris Finelli (UNCW, Associate Professor)
John Carroll (UNCW, Postdoctoral Associate)
Steven McMurray (UNCW, Graduate Student)
Inga Conti-Jerpe (UNCW, Graduate Student)
Heather Stoker (UNCW, Graduate Student)
Tammy Bleier (UNCW, Undergraduate Student)
John Marion (UNCW, Undergraduate Student)

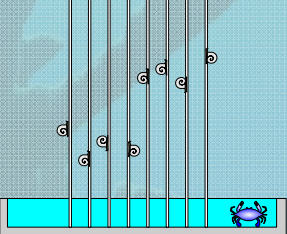
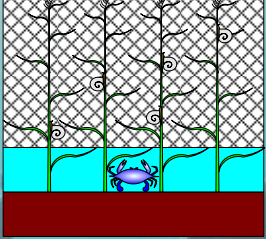

MarBEL
Marine Biofluidynamics
and Ecology Lab

Marine Biofluidynamics and Ecology Lab

- How do water currents influence biological systems?
 - Field and lab approaches
 - Funding from NSF, Sea Grant, NURP (~\$1M since 1999)
 - Graduate and undergraduate participation



Predator effects on Periwinkle Snails



Oyster Reefs & Coral Reefs: Critical Habitats in Coastal Ecosystems

- Focal points of production and biodiversity.
- Fisheries hot spots.
- Provide critical ecosystem services.



http://www.mcatoolkit.org/images/1_3_Conservation_Oyster.jpg



Both are severely degraded.

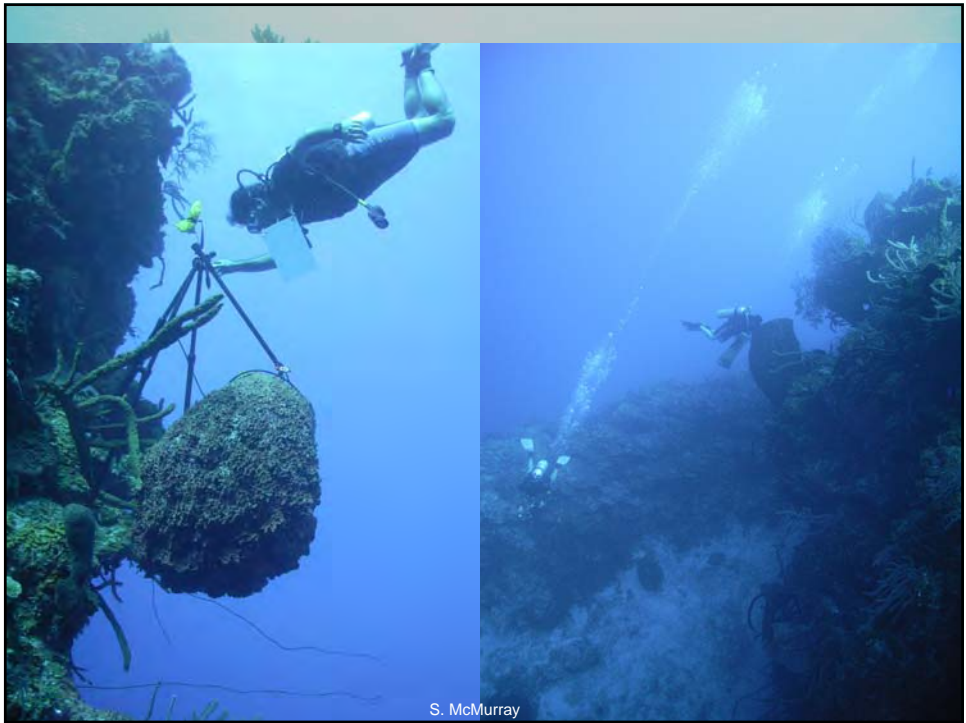
Coral Reef Research

- Among the most diverse and productive ecosystems, but also among the most threatened.
- Research:
 - Filtration rates of Caribbean sponges
 - Effects of water flow on feeding by coral reef fishes
- International student opportunities: Bahamas, Belize.
- Ties with NURC Key Largo

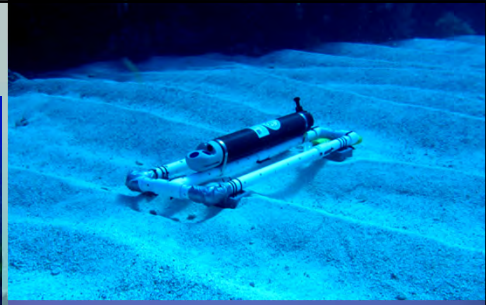


Image courtesy of Ray Clarke, Sarah Lawrence College

Filtration Rates of the Giant Barrel Sponge, *Xestospongia muta*



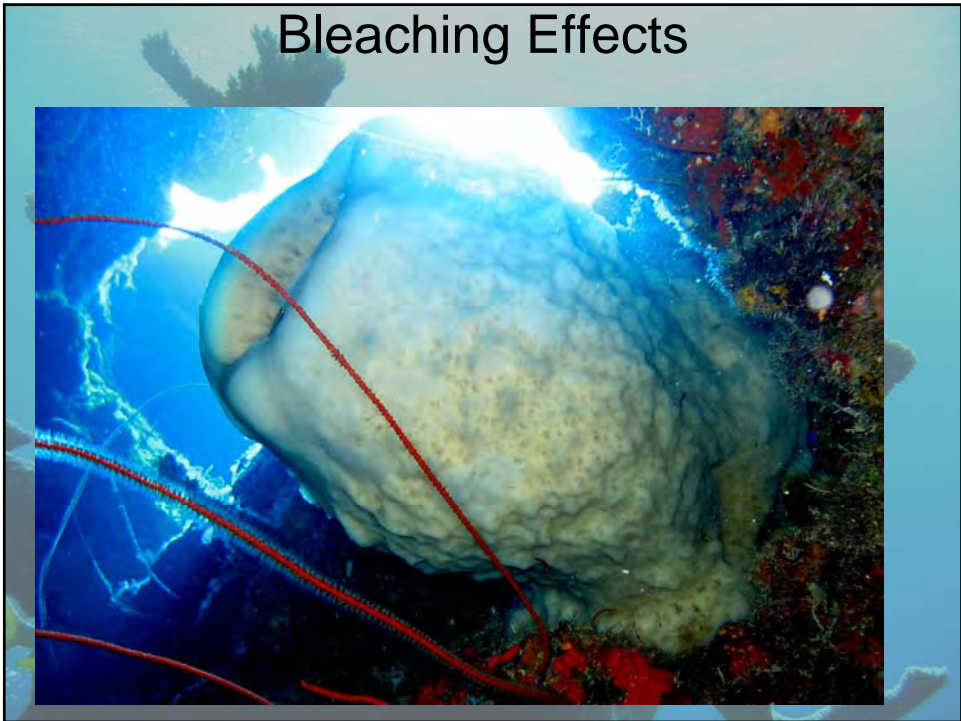
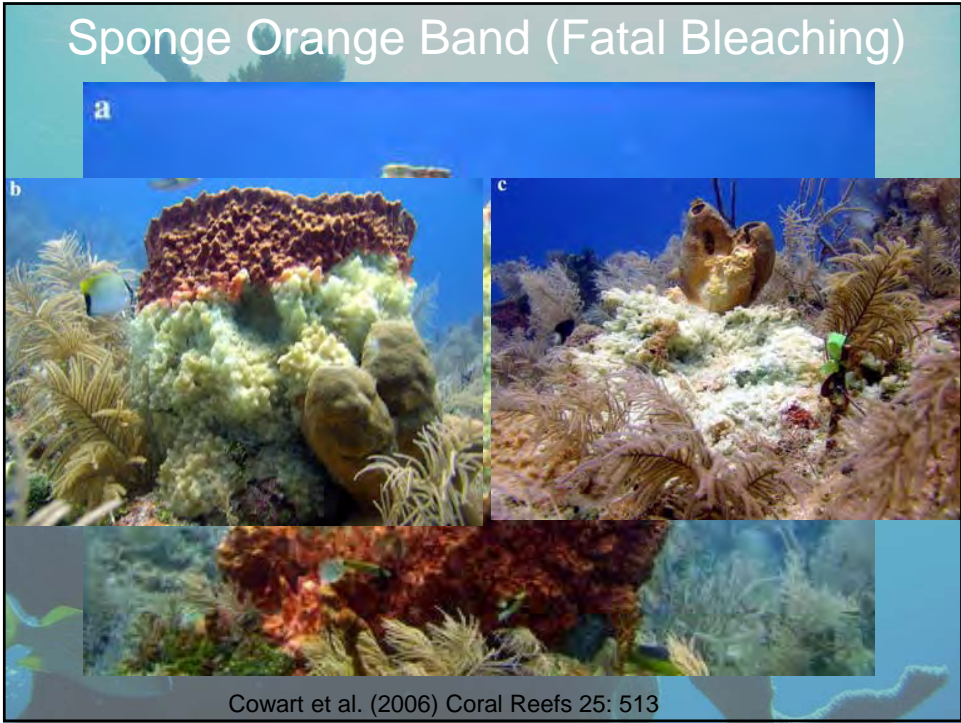
Methods

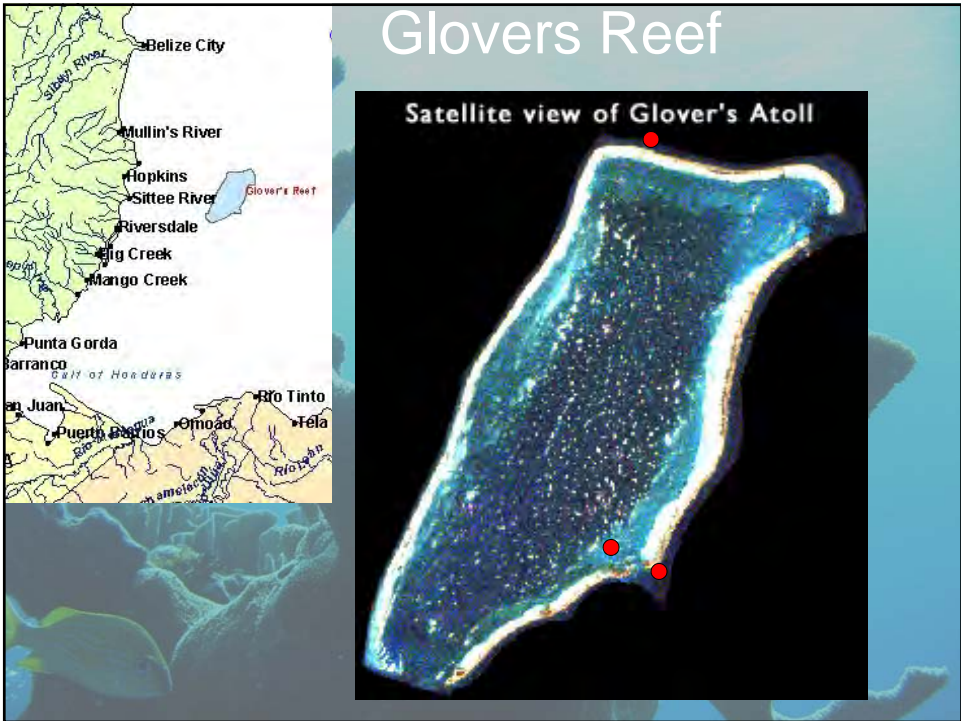


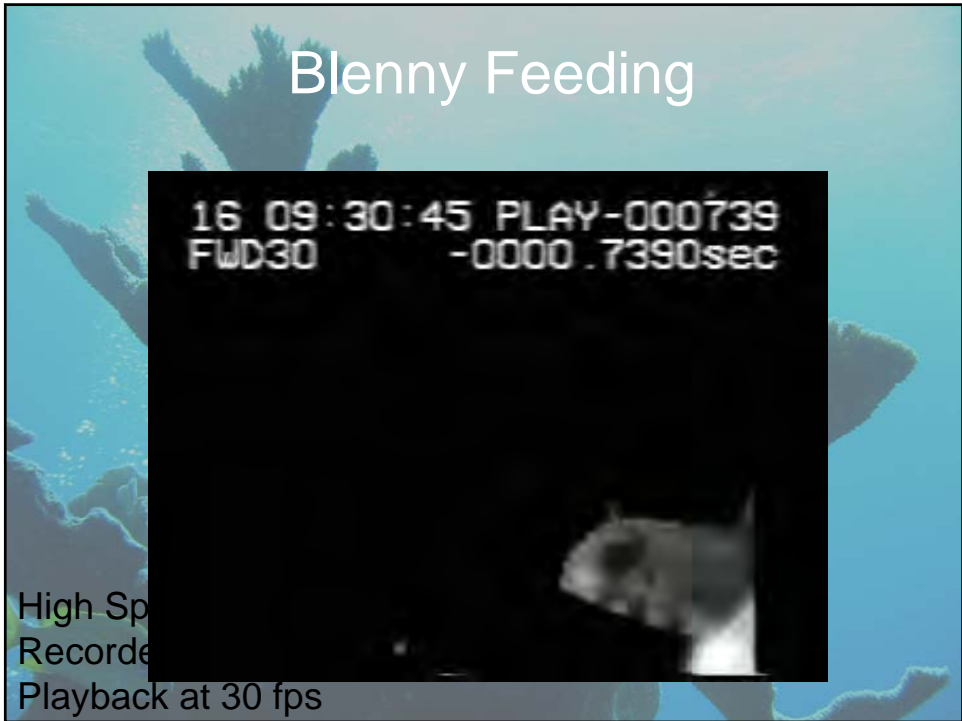
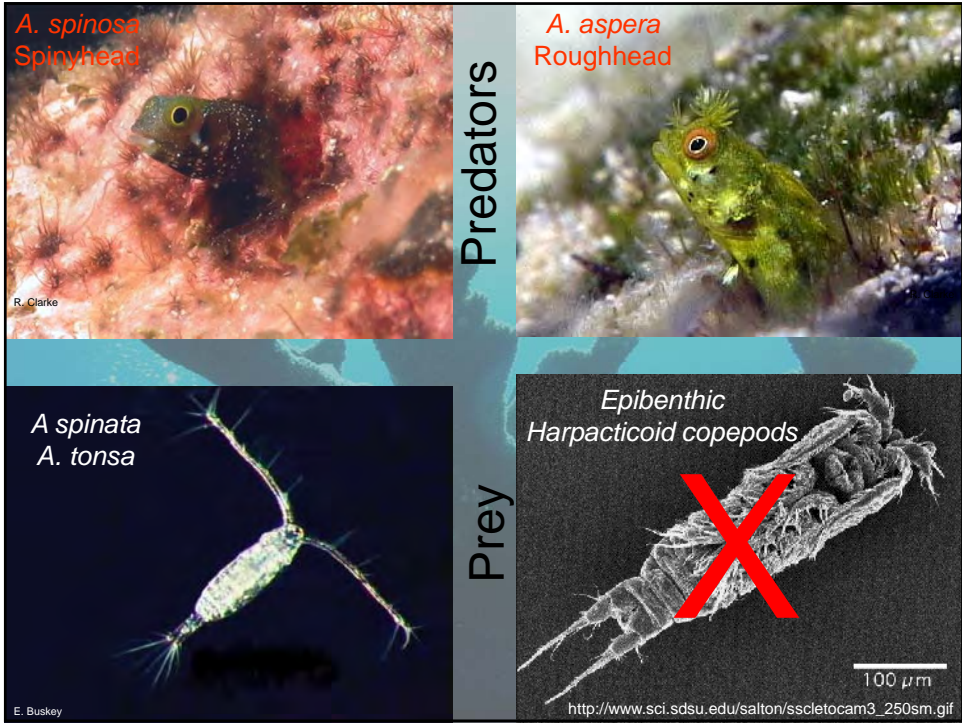
Cyclic Bleaching



Susanna Lopez-Legentil

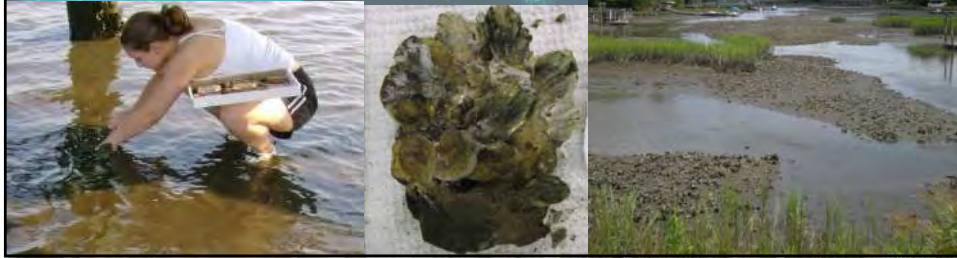
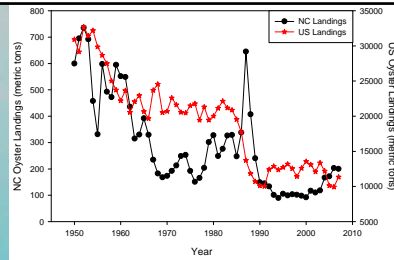




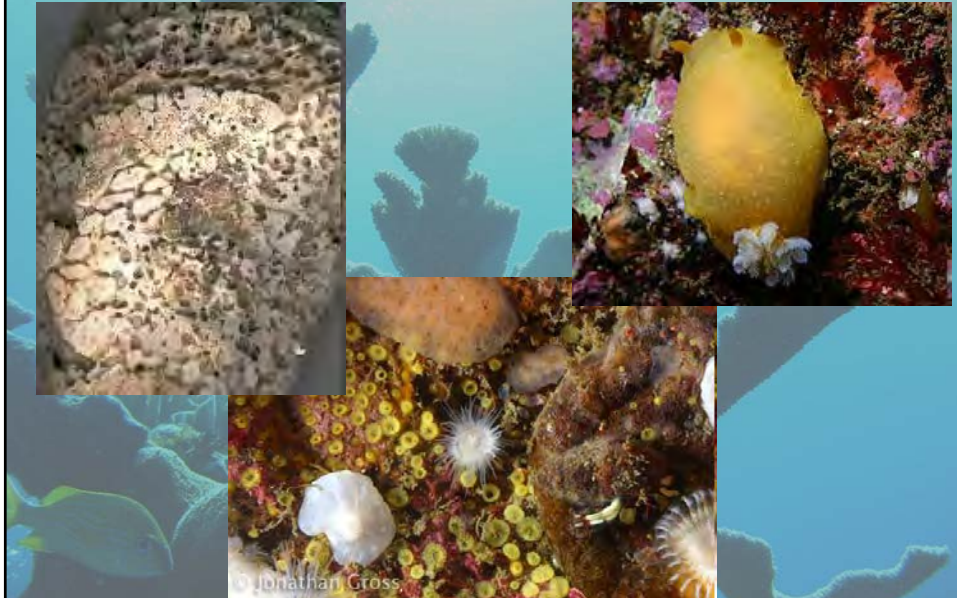


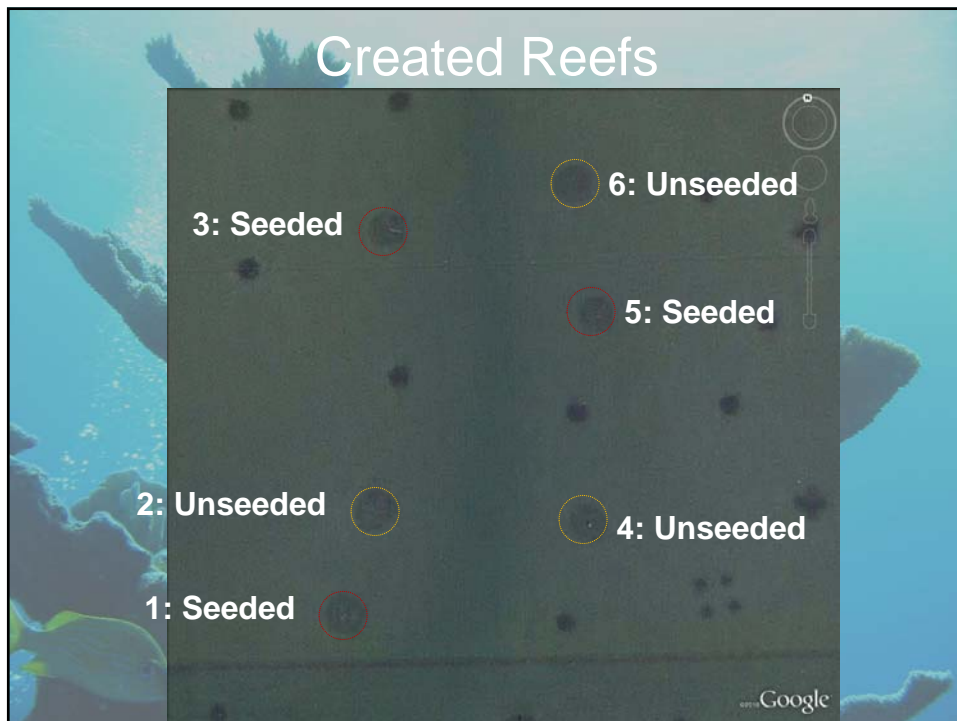
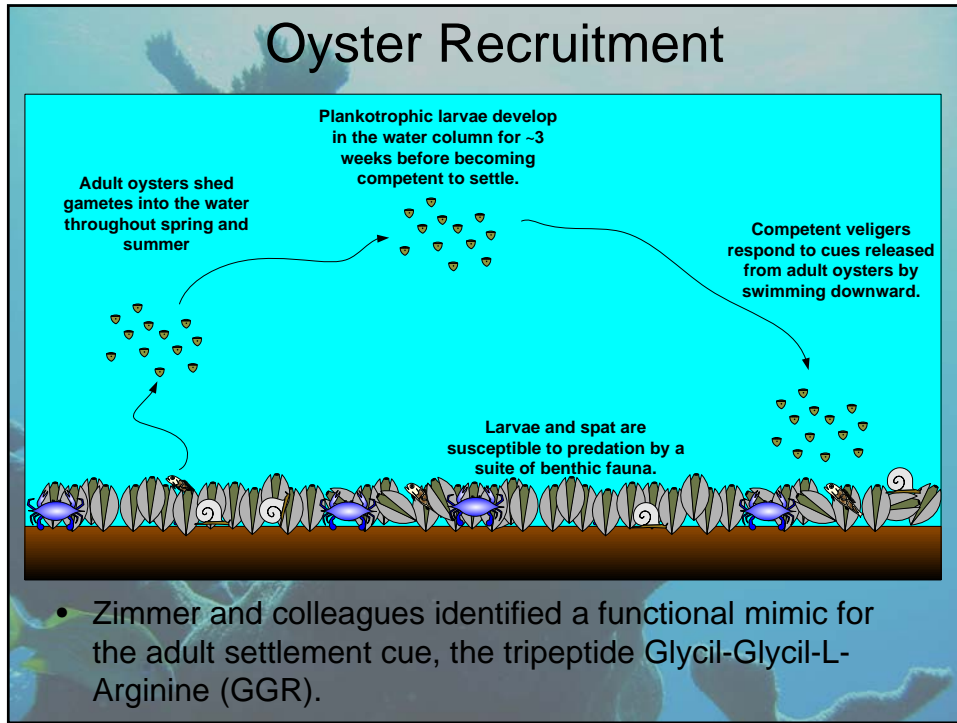
Oyster Reef Research

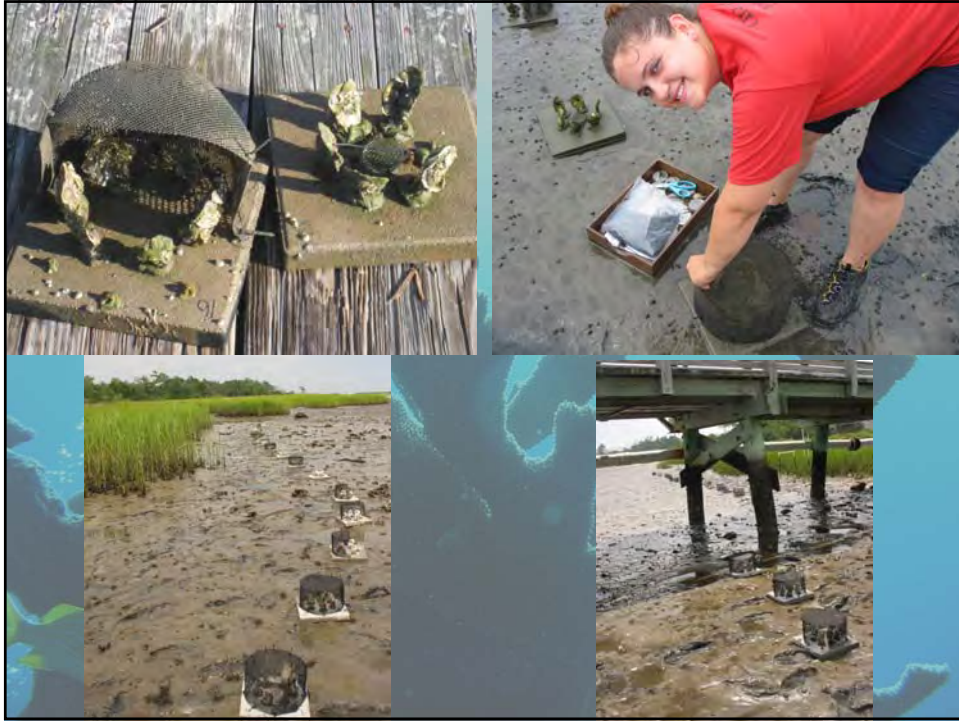
- Locally and nationally oyster populations are in decline.
 - Decreased fisheries
 - Loss of critical ecosystem services
- Sea Grant funded projects to aid oyster reef restoration by increasing juvenile oyster settlement and survival on artificial reef substrates.
- Local focus facilitates student participation



Interactions between oysters, boring sponges, and nudibranchs





A large graphic featuring an underwater scene with coral and fish. In the center is a circular logo with a blue-to-green gradient. The logo contains the text "MarBEL" in yellow, "Marine Biofluidynamics" in white, and "and Ecology Lab" in white. Below the logo, the text "Thanks for listening!!" is written in black.

MarBEL
Marine Biofluidynamics
and Ecology Lab

Thanks for listening!!