Patterns in Oyster Shell Biomass in Suwannee Sound

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• Restoration efforts in Apalachicola, Pensacola, St. Andrews, and Suwannee Sound
• Assume cultch biomass and oyster populations health are related
• Limited information on these relationships for wild oyster populations
Study Area

- Suwannee Sound, FL
- Lone Cabbage Reef
- One of the largest oyster restoration projects in Florida
- ~5 km in length ~12,233 m³ of material
- Since 2015 Suwannee Sound had the largest number of trips in Florida
- Intertidal reefs
Is there sufficient oyster shell biomass?

• Relationships between live oyster density and shell biomass
  • Intertidal reefs Areas open and closed to harvest
  • Potentially have high density of small size oysters
  • Common reef type in Suwannee Sound
  • Adjacent to subtidal bars that do support harvest

• Methods
  • Live density from ongoing line-transect monitoring
  • Grub box for shell biomass estimation – standard area of excavation
Analyses

• Stock-Recruitment Models
• Relationships between shell biomass and oyster density
• Stock-recruitment relationship for oysters
  • Beverton-Holt curve
Results
Key Results

• Positive relationships
• Possible inflection points
• Inform management and restoration
Conclusions

• Management focused on removals of live oysters
• Restoration focused on replacing cultch material
• Better manage live oysters to create cultch
• Inform management and restoration
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