

**Project Update:**  
**Empowering fishermen to collect essential data;**  
**Piloting the Research Fleet approach in the**  
**Atlantic sea scallop fishery**

*RSA Share Day: May 6<sup>th</sup> 2022*

**Carl Huntsberger, CFRF Research Biologist**  
N. David Bethoney, CFRF Executive Director



## Project Goal

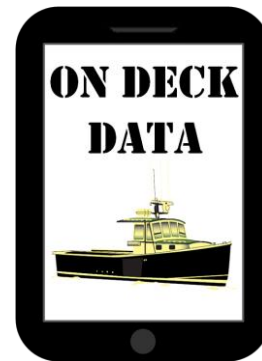
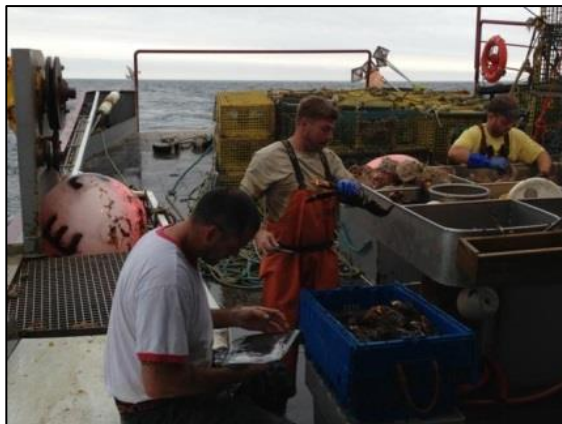
Assess the potential of the research fleet approach to increase biological data collection in the Atlantic sea scallop (*Placopecten magellanicus*) fishery

Priority #3 “*Scallop Biology: Research on scallop biology, including studies aimed at understanding recruitment processes...*”. The proposed project will develop a data platform to enable the industry to collect biological data.



# Our model of the research fleet

- Industry collected data to fill data gaps in management
- Steering committee: scientist, managers, and industry
- Two-way street developing trust in the data and results



CFRF Database						

# Examples of Our Research Fleets

- Lobster and Jonah Crab Fleet
  - 31 Vessels sampling > 181,000 lobsters & > 107,000 crabs since 2013
- Shelf Research Fleet
  - 6 Vessels Sampling- Bi-Weekly oceanographic profiles since 2014
- Black Sea Bass Research Fleet
  - 20 Vessels sampling + 40,000 fish sampled since 2016
- Whelk Research Fleet
  - Starting Fall 2022



# Project Plan

- 1) Develop a research fleet steering committee**
- 2) Develop data goals and a trial sampling protocol**
- 3) Modify CFRF's On Deck Data application for scallop data collection**
- 4) Collect fishery-dependent biological data from LA and LAGC vessels
- 5) Evaluate the data collection methods for practicality and accuracy
- 6) Outreach and education activities to share findings.

# Project Members

## Scientists and Managers

- Jessica Blaylock-NEFOP
- Deborah Hart- NEFSC
- Amber Lisi- ME DMR
- David Rudders- VIMS
- Kevin Stokesbury- SMAST



## Participating Fleet Members

- Chris Roebuck- LA- Point Judith, RI
- Rui Branco- LA- New Bedford, MA
- Vince Balzano- LAGC- Portland, ME
- Damian Parkington-LAGC-Provincetown
- Jesse Rose- LAGC-Harwich port, MA
- Beau Gribbin-LAGC-Provincetown, MA





# Scallop Research Fleet Data Goals

- Improve our understanding for spatial temporal variability in biological parameters
- Improve data collection in data poor areas (NGOM)
- Baseline of biological parameters/meat quality pre windfarms



# Initial Sampling Plan

Using the customized On Deck Data app

- Collect Location Data
  - Position, Date, Depth, Substrate, Bycatch
- Collect Individual biological data for:
  - 30 Scallops/Month- LAGC
  - 90 Scallops/Trip- LA
- Evaluate/Modify the sampling protocol





# Biological Data

- Shell Height
- Tissue Weight
- Meat Weight
- Gonad Weight
- Meat Quality Fair
- Female Ripe
- Add Note
- Take Picture
- Reset
- Save
- Standardized Photos

Scallop 1 of 3 (keeping) Observation

Size (mm)	Tissue Weight (g)
125	136.0
Meat Weight (g)	Gonad Weight (g)
36.0	15.9
Meat Quality Fair	
Female Ripe	
Add Note	Take Picture
Reset	Save



# Biological Data

- Shell Height
- Tissue Weight
- Meat Weight
- Gonad Weight
- Gonad Condition
- Meat Quality
- Presence of parasites
- Standardized Photos

Scallop 1 of 3 (keeping) Observation

Size (mm)	Tissue Weight (g)
125	136.0
Meat Weight (g)	Gonad Weight (g)
36.0	15.9
Meat Quality Fair	
Female Ripe	
Add Note	Take Picture
Reset	Save

Select Gonad Condition

Male Developing	Female Developing
Male Ripe	Female Ripe
Male Spawning	Female Spawning
Male Resting	Female Resting
Male Unknown	Female Unknown
Unknown	

Scallop 1 of 3 (keeping) Observation

Size (mm)	Tissue Weight (g)
125	136.0
Meat Weight (g)	Gonad Weight (g)
36.0	15.9
Meat Quality Fair	
Female Ripe	
Add Note	Take Picture
Reset	Save

Select Meat

Poor
Fair
Good
Unknown

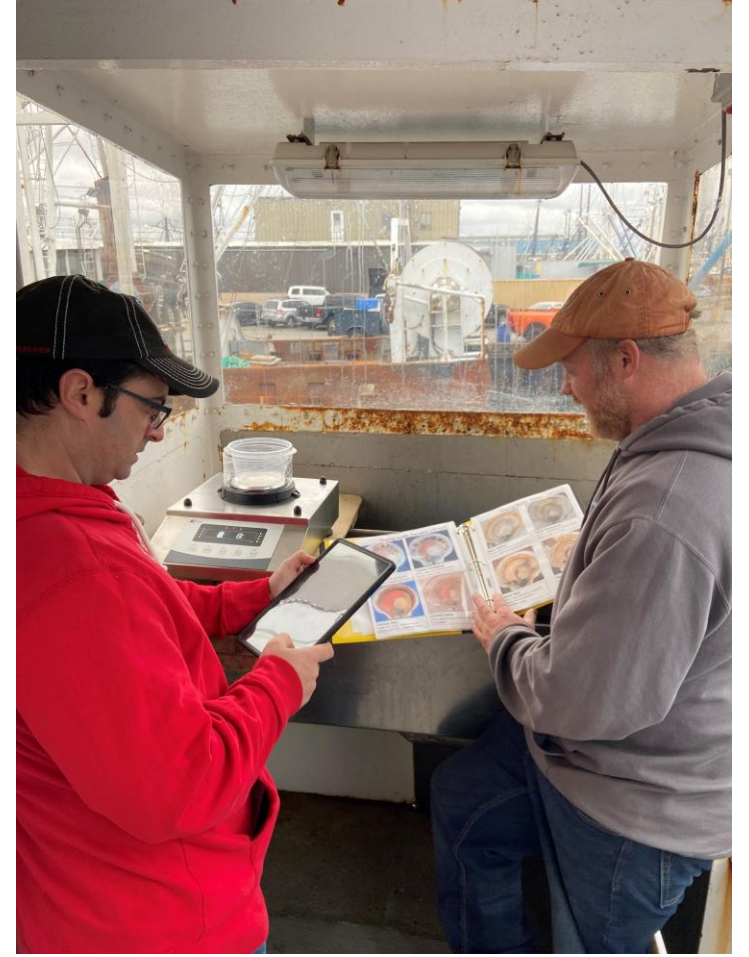
# Project Delays

- Longer than expected to establish and schedule meetings with the steering committee
- Late development of protocols delayed app development
- Ordered the sampling equipment in August 2021-
  - No issues with the tablets or calipers however
  - The scales did not arrive until March 11th: Not in working order
- Troubleshooting the scales until Mid April
- Started training fleet members April 20th





# Current Status-Fleet Testing Phase



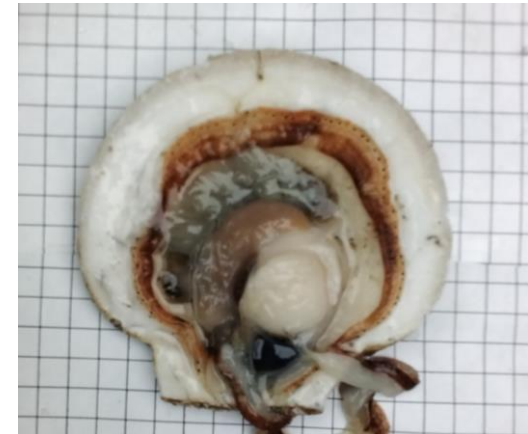
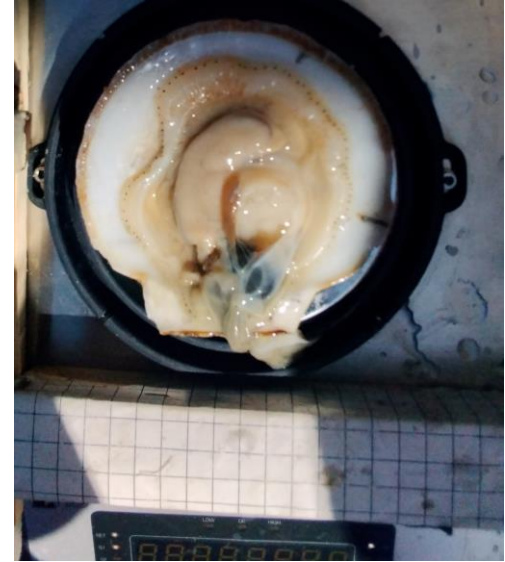
# Next Steps

## Now-Nov

- Continue working with the fleet members as they collect data, explore the option of collecting individual gonad weights
- Collecting standardized photos to be used for analysis

## Dec-March

- Evaluate the potential of this method for the scallop industry
- Apply for additional funding/other sources
- Prepare the final report and outreach events





# Any Questions?



Thanks to everyone involved!

<http://www.cfrfoundation.org/sea-scallop-research-fleet-pilot-project>

