

CFRF NEWSLETTER

JULY 2022 ISSUE 18

COMMERCIAL FISHERIES RESEARCH FOUNDATION

The Commercial Fisheries Research Foundation is a non-profit, private research foundation founded and directed by members of the commercial fishing industry. The CFRF's primary mission is to conduct collaborative research and education projects that assist in the achievement of sustainable fisheries and vibrant fishing communities.

MESSAGE CORNER:

A special thanks to David Spencer, CFRF's first and formidable President, as he resigns from CFRF's Board. David was instrumental in launching CFRF as a research foundation with funds appropriated by Senator Reed in 2007. With David's guidance and these funds, CFRF then hired a small staff and drafted an initial request for proposals on significant topics relative to fisheries needs. David influenced CFRF's industry and academia partnerships by providing strategic counsel and fisheries data to augment scientific decision making for a sustainable future in fisheries. He was influential in developing the successful Lobster and Jonah Crab Research Fleet using tablets at sea to record data. This program now generates the largest source of Lobster and Jonah crab scientific data beyond state boundaries. David's mission was to make a positive difference in the livelihood of our fishing community. David motivated and inspired the dream of utilizing industry's independent research to create an impact and cause a reality. His impressive leadership in fisheries research and for the fishing industry itself, personifies his devoted commitment. We thank you!

PROJECT RESULTS: CATALYZING THE RESTORATION AND CONSERVATION OF THE BAY SCALLOP

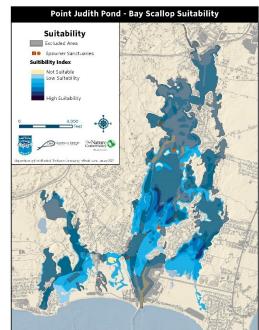
We completed our work with the Rhode Island Department of Environmental Management and The Nature Conservancy to conduct



a study that will help catalyze the restoration of the bay scallop in Rhode Island. Bay scallops once supported significant fisheries along the United States east coast, but mass population declines in the 1900s led to a nearly total loss of the fishery. In some places, intensive, long-term restoration efforts have allowed bay scallop fisheries to return and persist. However, bay scallops are environmentally sensitive, so careful planning is needed to ensure the greatest chance that such efforts will be successful. Point Judith Pond was once the epicenter of the bay scallop fishery in Rhode Island. To support the development of an upcoming Rhode

Island Shellfish Restoration Plan, we set out to determine which locations in Point Judith Pond are most likely to support bay scallops

in the present day. We did this by creating a habitat suitability index that ranks sites throughout the pond based on several factors that are known to influence bay scallop growth and survival. For example, bay scallops have a strong association with eelgrass habitats, which provide juveniles with protection from predators such as crabs and sea stars, so this factor is extremely important when evaluating whether locations are suitable for bay scallops. On the other hand, bay scallops are not likely to grow and survive well in areas with fluid, silty bottoms, so these areas are probably best avoided when it comes to restoration efforts. The ranked index suggests there are a range of sites throughout the pond that are likely to provide adequate habitat once again for bay scallops. These results can be used as a guide to help identify where to focus renewed restoration efforts in Point Judith Pond and can be a foundational piece of the bay scallop section of the Rhode Island Shellfish Restoration Plan. A manuscript on this project has been accepted for publication in the August issue of Journal of Shellfish Research. Reach out to us next month if you'd like to read more! Thanks to the Sarah K. de Coizart Perpetual Charitable Trust for funding this project. Information on this project can be found here.



Learn more about CFRF at www.cfrfoundation.org



PROJECT UPDATE: BLACK SEA BASS RESEARCH FLEET

The Black Sea Bass Research Fleet has officially surpassed the 5-year mark of data collection, with over 42,600 fish sampled! Sampling was slow through the winter, as usual, but is starting to pick up for the summer season, and over 1,600 fish have been sampled so far in 2022. A Research Track Stock Assessment is currently underway for northern black sea bass, so we have been working hard to ensure that the data is included in the current assessment efforts. The Black Sea Bass Research Fleet represents the first application of the Research Fleet model to a fish species, and we are excited to illustrate the value of collaborative research with the fishing industry in the assessment and sustainable management of finfish. The Research Fleet will continue data collection at least through 2023 with support from the Atlantic Coastal Cooperative Statistics Program. We are grateful to our industry collaborators for participating in this project! More information can be found here.



PROJECT UPDATE: ELECTRONIC GEAR LOCATION MARKING APPLICATION

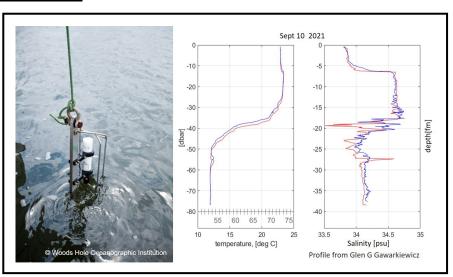


Our new project to test an electronic gear location marking application (app) is officially underway! We have begun using the Trap Tracker app to record the location of the gillnet, fish pot, and ventless lobster trap gear that we are using for our South Fork Wind Farm fisheries monitoring surveys. Our goal is to determine how accurately the app shows the location of fixed fishing gear, whether it is feasible for the app to be used at-large within the fishing industry, and whether it could be used to help reduce gear conflicts between mobile and fixed gear fisheries. We are still recruiting mobile gear fishermen to test the app during their regular fishing activities; participants will receive significant compensation for testing as well as a free cell service signal booster. If you fish in or regularly transit through the area shown in the picture and are interested in participating or learning more about the project, please email Katie at kviducic@cfrfoundation.org. This project is support by the National Fish

and Wildlife Foundation. Stay tuned for project updates here!

PROJECT UPDATE: SALINITY MAXIMUM INTRUSIONS

This project seeks to map intrusions of warm, salty water that may influence fish distributions off the coast of southern New England. The research cruise for this year's salinity maximum investigation is scheduled for August 30 -September 7th. We are again looking for help from the Shelf Research Fleet to record locations of any high salinity or warm water intrusions to help direct the research cruise. The cruise will take place on the R/V Endeavor and this year will be supplemented with a 2-day biological survey, August 31-September 1, through one of the salinity intrusions. The survey will be conducted by the F/V Darana R and will document the species composition within the salinity intrusion. CFRF personnel Noelle



Olsen and Susan Inglis intend to participate in the survey. Be sure to check out the publication section to read a new manuscript by Dr. Glen Gawarkiewicz and colleagues, including CFRF's Aubrey Ellertson, about these intrusions. This project is funded by the National Science Foundation. Check out the blog and our project page for more information.

PROJECT UPDATE: SCALLOP RESEARCH FLEET

The Scallop Research Fleet has started sampling! After two months, data for over 300 scallops has been uploaded to us! As expected, this trial period has had some challenges and successes. The major challenge is that the at-sea scales purchased have not performed well on all vessels, making the measurements of individual scallops difficult. Three of the vessels so far have stopped collecting weights and switched to recording images of the whole scallop. As the Research Fleet continues sampling, we are looking at the practicality of continuing with recording the weights or whether it is more beneficial, and more accurate, to record images or aggregate weights. In the future we will explore options for automated data analysis of these images and the potential to extract the estimated volume of each tissue, color of the meat (indicating the quality), and determine the reproductive stage. Stay tuned as the Research Fleet completes the sixmonth trial sampling period. This project is funded by the



Scallop Research Set Aside program. For updates visit the project page here.

PROJECT UPDATE: SHELF RESEARCH FLEET

Participants in the Shelf Research Fleet take salinity. temperature, and depth profiles while they're out fishing to help us understand changes in the ocean environment. Fishermen have collected nearly 800 profiles since the project started, and this summer, the Shelf Research Fleet is welcoming back Jim Violet and his crew of the F/V Excalibur. Recently, Shelf Research Fleet data was used by Dr. Ke Chen and colleagues in a manuscript describing a marine heat wave on the Northeast US shelf. The data is also being used in the preparation for the upcoming Salinity Maximum Intrusions project cruise at the end of the summer. Thanks to efforts of Woods Hole Oceanographic Institution (WHOI) project lead Dr. Glen Gawarkiewicz, we are happy to announce the Shelf Research Fleet will remain active through the next year with funding from WHOI. We are thankful for the previous financial supporters of the Shelf Research Fleet, the Van



Beuren and the MacArthur Foundations. More information can be found on the Shelf Research Fleet <u>here</u>.

New Project: Methods to Assess Sea Scallop Condition in Relation to Wind Farm Development

The most economically important species surveyed by our South Fork Wind Farm beam trawl pre-construction survey is the sea scallop. However, the low number of scallops caught in the wind farm area of the survey caused concern that the data would not be sufficient to evaluate any potential impacts on the scallops. Local scallopers knew areas of high scallop abundance within the South Fork construction area but outside the area that the beam trawl survey operates. Funding from the Scallop Research Set Aside program allowed us to supplement the scallop sampling during this survey by supporting an additional tow in these areas of higher scallop density during each month of the existing survey. For the first two months of this project, the single additional tow each survey has more than doubled the scallop catch in the South Fork area, allowing more data to be collected on the baseline condition of this species. As part of this project, we are also



collecting additional biological information on scallops with the hopes that these methods will be incorporated in future windfarm surveys. More information can be found on the <u>project</u> page.

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More On-Going Projects:

- A Pro-Seafood Climate Action Agenda: A group of RI and MA fishing organizations initiated a process to craft a narrative on climate solutions that places wild seafood production at its core. Contact Sarah Schumann (schumannsarah@gmail.com) for more information.
- Assessing the Vulnerability of the Atlantic Sea Scallop Social-Ecological System: This project looks at how vulnerable sea scallop fishing communities are to ocean acidification and warming water temperatures and develops recommendations on how to build resiliency to these changes. For more information on this project visit here.
- **Ghost Gear Removal Plan:** This project will develop a removal program for abandoned and derelict fishing gear for Rhode Island. See our <u>project webpage</u> for workshop, public meeting announcements and outreach materials.
- Lobster Research Fleet: This Research Fleet provides year-round biological data and environmental data from lobster and Jonah crab traps. More information can be found here.
- Phase II Piloting a N-Viro Dredge in the Scallop Fishery: This project builds on previous work to utilize this dredge to reduce bycatch, including small scallops, in the sea scallop fishery. To follow along with the N-Viro dredge project and read the Phase I project report, visit the CFRF project webpage here.
- **Piloting a Low-Bycatch Automatic Squid Jig Fishery:** This project investigates the feasibility of automatic squid jigging machinery, used in other large-scale squid fisheries worldwide, in the southern New England Longfin squid fishery. Check out the project here for more information and updates.
- **South Fork Wind Farm Fisheries Monitoring— Beam Trawl** This survey is designed to help determine potential impacts of wind farm development on bottom dwelling animals. More information can be found here.
- South Fork Wind Farm Fisheries Monitoring—Fish Pot Survey: This survey is designed to determine the spatial scale of potential impacts on the abundance and distribution of structure associated finfish in the immediate area around the wind farm installation. More information on this project can be found on the project webpage.
- South Fork Wind Farm Fisheries Monitoring—Gillnet Survey: This survey is designed to assess the seasonal abundance and distribution of monkfish and winter skate in the South Fork Wind area and two reference control areas to the east and west. More information on this project can be found here.
- South Fork Wind Farm Fisheries Monitoring—Ventless Trap Survey: The goal of the survey is to assess the seasonal abundance, distribution, movement, and habitat use of lobster and Jonah crab in the South Fork Wind Farm area and two reference areas to the east and west. More information can be found at here.
- Whelk Research Fleet: In partnership with RI DEM, this project seeks to fill data gaps in the combined Knobbed and Channeled Whelk fishery across southern New England through fishermen collected data. Please visit the webpage for more information here.

EDUCATION AND OUTREACH:

- In July, Mike Long attended the ICES PICES Early Career Scientist Conference and presented "Establishing Baseline American Lobster and Jonah Crab Demographics for Assessment of Marine National Monument Impacts"
- In June, Aubrey Ellertson and Carl Huntsberger presented data from the Lobster and Jonah Crab Research Fleet at to the Jonah Crab Benchmark Stock Assessment Data Workshop.
- In June, Carl Huntsberger presented "Fishery-dependent data informs American lobster (Homarus americanus) stock structure and commercial fleet heterogeneity" and Hannah Verkamp presented "Scoping Bay Scallop Restoration in Rhode Island" at the AFS southern New England chapter summer meeting.
- In April, Carl Huntsberger attended the annual Benthic Ecology Meeting and presented "Fishery-dependent data informs American lobster (Homarus americanus) stock structure and commercial fleet heterogeneity"

RECENT RELEASES, PUBLICATIONS, AWARDS AND UPCOMING EVENTS:

• Recent Publication: "Increasing Frequency of Mid-Depth Salinity Maximum Intrusions in the Middle Atlantic Bight." (Gawarkiewicz et al. 2022)

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