

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:

Only a few times in my life have I greatly appreciated a time and place like this new year (graduating high school, birth of my children) and the backside of this Pandemic. Vaccines are being administered to the public, with hope of reaching herd immunity by mid-summer and yearning for a return to normalcy. The CFRF staff are starting to come back into the office eager and motivated, to meet the challenges of our most prolific number of research projects to date. This includes the newest member of the CFRF team, Hannah Verkamp, M.Sc., who I'd like to welcome aboard. The CFRF Board just completed the one-year performance review for Executive Director Dr. David Bethoney with sterling responses from the Board. Currently, David has increased our research capacity to 12 ongoing research projects, 2 new research projects about to start with 4 research proposals pending, an amazing accomplishment and leadership of a dedicated team. Several weeks ago, Dave Spencer and I were reflecting on what CFRF has achieved in the last 15 years and how we are realizing our dream! Thank you ALL! 2021 ROCKS!

Fred Mattera, CFRF President

NEW PROJECT: MAPPING HOTSPOTS AND PILOTING UNDERWATER VIDEO TO IMPROVE GHOST GEAR REMOVAL

Discarded or lost fishing gear left in the marine environment, ghost gear, is a global threat to ocean health as abandoned fishing gear continues to catch animals. It also often damages nets when caught during commercial fishing. The goal of this project is to create a map of ghost gear "hot spots" with Narragansett Bay and test a drop camera-grapple approach to target and remove ghost gear. The project will use local fisher knowledge to develop the map of ghost gear "hot spots" in Narragansett Bay. Using that map, we will work with commercial fishing vessels equipped with a drop camera to see if the camera can help refine ghost gear locations and aid removal efforts. At each site, the camera will be used to confirm the presence of discarded gear and define the scale of the debris field to help direct targeted grappling efforts to remove the gear. Two different live-feed cameras will be used; a camera designed for underwater use (pictured) and a cheaper system that adapts a GoPro.



Results from this pilot study will be presented to our Ghost Gear Steering Committee made up of fishers with knowledge of where abandoned fishing gear is located for discussion and evaluation. We will also share project results including images, video, and maps through an interactive website. This project is being conducted with support from the Commercial Fisheries Center of Rhode Island, the Global Ghost Gear Initiative, and is funded by 11th Hour Racing. In collaboration with the Global Ghost Gear Initiative, we will host a joint workshop to present results from this pilot study and provide information on the impact of ghost gear and other ghost gear initiatives to the community. Mapping will begin this spring and at-sea trials will run from late spring through summer 2021. Visit the CFRF project webpage www.cfrfoundation.org/ghost-gear for updates and images and videos of our results once the project starts.

Learn more about CFRF at www.cfrfoundation.org



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PROJECT UPDATE: BLACK SEA BASS RESEARCH FLEET

Over the last 6 months, through the end of the fall and early winter fishery, the Black Sea Bass Research Fleet was able to record catch, effort, and biological data from over 4,500 black sea bass. This sampling effort brings the total number sampled by the Fleet since December 2016 to over 29,000! In November, the CFRF announced an open call for applications to join the Research Fleet. Specifically, the CFRF was hoping to bring in new vessels and expand sampling efforts to the New Jersey fish pot fishery. We are pleased to announce the Black Sea Bass Research Fleet has welcomed three new vessels. The Rhode Island F/V Catherine Ann, lobster vessel owned and operated by Al Eagles, has been brought on board to further expand data collection within the Rhode Island lobster fishery. Representing the New Jersey fish pot fishery, the Fleet has also welcomed F/V Savannah Paige and F/V Saturn out of Cape May, New Jersey. The inclusion of the F/V Savannah Paige and F/V Saturn is a big first step for the Research Fleet expanding outside of the Rhode Island industry. Black sea bass is a fishery of coastwide importance and providing higher quality, larger resolution, data characterizing the fishery and its discards will have coastwide benefits. Visit the project at www.cfrfoundation.org/black-sea-bass-fleet to find more information and an application form.



PROJECT UPDATE: LOBSTER AND JONAH CRAB RESEARCH FLEET



Despite COVID-19, our Research Fleet continued to sample this winter with over 5,333 lobsters and 3,405 Jonah crabs measured. In total, our fleet has sampled over 166,633 lobsters and 96,395 Jonah crabs since June 2013! The Lobster and Jonah Crab Research Fleet provides biological and environmental data from commercial and ventless traps. Since our last update, the CFRF welcomed another offshore vessel to the fleet: F/V Dilligaf (Scituate, MA) and a few vessels changed ownership but are still involved in data collection. In addition to the normal day to day activities of the Lobster/Crab Fleet, we have several expanded initiatives. First, CFRF is working with Jim Manning at the Northeast Fisheries Science Center to incorporate CFRF's bottom water temperature data into his larger data set. Secondly, CFRF staff are leading analyses to explore the biological lobster/crab data within the Northeast Canyons and Marine Monument and explore if vessels are representative of statistical areas and the rest of the fleet. Stay tuned on these initiatives! The Research Fleet will continue data collection, with support by the Campbell Foundation, the Atlantic Coastal Cooperative Statistics Program, and NOAA's Saltonstall-Kennedy Program and we are looking to bring on additional offshore vessels. Visit the project webpage at www.cfrfoundation.org/jonah-crab-lobster-research-fleet to find more information and an application form..

PROJECT UPDATE: SHELF RESEARCH FLEET

Southern New England waters have experienced widespread warming over the past several decades. Since 2014, CFRF and Woods Hole Oceanographic Institution (WHOI) have engaged Rhode Island commercial fishermen in the collection of oceanographic data along the continental shelf to study these changes and the impact on fisheries. As of March 9th, over 696 water column profiles using wireless conductivity, temperature, and depth instruments were collected by the Shelf Research Fleet. In December, a strong bottom intrusion related to a warm core ring was observed by our Research Fleet. During this event, the temperature in the bottom intrusion was 58 °F, which was a 4-degree Fahrenheit jump, and had a salinity of 34.9 ppt. Our fishing partners relayed observations to the project team that Jonah crab catch shut off, as well as the high presence of jellyfish (pictured). As a result, WHOI's communications team interviewed Rob Walz, a fleet member of the CFRF/WHOI Shelf research Fleet, and Glen Gawarkiewicz, senior scientist at WHOI, about this event. You can listen to the audio story on our website. Finally, in March, CFRF hosted our virtual Shelf Fleet/Ocean Conditions meeting which involved a great discussion between members of the commercial fishing industry, scientists and academia. A huge thank you to those who joined us, and if you missed the meeting, you can find the presentation on our website www.cfrfoundation.org/shelf-research-fleet.



PROJECT UPDATE: SOUTH FORK WIND FARM FISHERIES MONITORING—BEAM TRAWL SURVEY



The South Fork Wind Farm beam trawl survey is well underway with six months of data collected on the benthic communities of the South Fork windfarm development area and two nearby reference areas. The beam trawl is designed to primarily target scallops and groundfish, however it is outfitted with a 2.4 cm knotless nylon liner to document all sizes of the benthic species present. The catch from each monthly survey has been relatively consistent with the eastern reference area dominated by crabs and skate and a handful of flatfish; the western reference area was rocky with many small invertebrates with high catches of scallop and skate with a few summer and winter flounder; and finally, the wind farm proposed area was predominantly little skate, scup, sea robins and a few scallops. In the colder months, with a few big storms moving through the area, we have seen a slight downturn in catch, particularly in finfish through the winter. Stay tuned to see what the warmer waters bring this spring as well as the beginning of our gillnet, ventless trap, and fish pot surveys each designed to target slightly different fisheries species in this area. Visit the project webpage at www.cfrfoundation.org/sfwf-beam-trawl-survey to stay up to date with the catch information from this survey.

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

CFRF has teamed up with the Rhode Island Chapter of The Nature Conservancy and the Rhode Island Department of Environmental Management on a project that will help develop a restoration plan for bay scallops in Rhode Island. Once an important commercial fisheries resource, bay scallop populations drastically declined in the 1980s as a result of widespread brown tide algal blooms. This crash led to an effective collapse of the fishery coastwide, including Rhode Island, and populations have not recovered since. Many factors, such as reduced seagrass meadows and impaired water quality, likely play a role in keeping bay scallop populations below their historic levels. In addition, the high mortality of larval bay scallops likely contributes to this limited recovery as bay scallop larvae are particularly vulnerable and fragile compared to other local bivalve species. The goal of this project is to identify areas in Point Judith Pond, RI that have historically supported bay scallop populations and that are suitable for future restoration efforts. This project will synthesize relevant information on bay scallop ecology and past restoration efforts to develop site-specific strategies that can be used in each area identified to maximize restoration success. Once complete, we hope it will be incorporated into the state's shellfish restoration program to facilitate implementation. For more information on this project visit www.cfrfoundation.org/catalyzing-bay-scallop. This project is funded by the Sarah K. de Coizart TENTH Perpetual Charitable Trust.



PROJECT RESULTS: RIVER HERRING BYCATCH AVOIDANCE PROGRAM

After over a decade of collaboration the River Herring Bycatch Avoidance Program has come to an end. The program, representing the work of CFRF, the University of Massachusetts Dartmouth School for Marine Science and Technology, the Massachusetts Division of Marine Fisheries, the commercial fishing industry, and contributions from several other organizations, fundamentally improved the understanding of river herring bycatch and how to reduce it in the Atlantic herring and Atlantic mackerel fisheries. It increased portside sampling of relevant vessels in Massachusetts and Rhode Island by over 100% at times. The data collected through portside sampling supported scientific publications, management decisions, and was the primary information source for near-real time communications of river herring bycatch. These communications positively influenced fishing habits and played a role in the approximate 60% decrease in total bycatch and 20% decrease in the bycatch rate prior to the establishment of river herring catch limits. Once river herring catch limits were established, the program helped the industry stay under these limits more often than what was expected by managers. Through the course of the project 26 vessels contributed data. This included 8 fishing companies and their 13 mid-water trawl vessels, representing the majority of Atlantic herring and mackerel catch in U.S., that were cornerstones of the program. The program was started with funding from the National Fisheries Wildlife Foundation, strengthened with funding from The Nature Conservancy, and then sustained by the Atlantic Herring Research-Set Aside Program. Cuts to the Atlantic herring quota made funding through the Research-Set Aside Program untenable and, along with the closure of near shore areas, reduced the need for the program. Thank you to all who supported and contributed to this program. More information can be found at www.umassd.edu/smast/bycatch/.



MORE ON-GOING PROJECTS:

- **Salinity Maximum Intrusions:** This project maps intrusions of warm, salty water that may influence fish distributions in Southern New England. Information on this project can be found at www.cfrfoundation.org/salinity-max.
- **Development of a Marketable Seafood Product from Scup:** This project is developing a frozen scup fillet product that meets consumer, fisherman, fish processor, and chef needs. More information can be found at www.cfrfoundation.org/scup-fillet.
- **Piloting A Low-Bycatch Commercial Squid Jig Fishery In Southern New England:** In partnership with The Town Dock, this project pilots the use of automatic jigging gear as a low bycatch method to harvest squid. Information on this project can be found at www.cfrfoundation.org/automatic-squid-jig.

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MORE ON-GOING PROJECTS:

- **A Pro-Seafood Climate Action Agenda:** A group of Rhode Island and Massachusetts fishing organizations initiated a process to craft a narrative on climate solutions that places wild seafood production at its core. Contact Mike Roles (mtroles@gmail.com) and 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. Information on this project can be found at www.cfrfoundation.org/atlantic-sea-scallop-socialecological-system.
- **Piloting a N-VIRO Dredge in the Southern New England Scallop Fishery:** This project seeks to pilot a dredge which could reduce bycatch, minimize habitat impacts, and improve fuel efficiency in the sea scallop fishery. Information on this project can be found at www.cfrfoundation.org/piloting-novel-dredge-type.

EDUCATION AND OUTREACH:

- In March, Michael Long presented results from the N-VIRO project “Piloting the Fuel Efficient, Low Bycatch, and Habitat Friendly N-Viro Dredge in the Southern New England Sea Scallop Fishery” at the National Shellfisheries Association Meeting.
- The impacts of COVID-19 on CFRF’s Research Fleets was presented at the NEFSC Cooperative Research Branch webinar “Cooperative Research: Facing the Challenges of COVID-19”
- An informational brochure for the Atlantic sea scallop social-ecological system project was distributed in March and can be viewed on our website along with other press releases at www.cfrfoundation.org/atlantic-sea-scallop-socialecological-system .
- The Pro-Seafood Climate Action Agenda team put together a sign-on letter for RI fishermen in response to NOAA's solicitation for input on climate resilient fisheries. Go to <http://bit.ly/RI-Climate-Resilient-Fisheries-Sign-On> to sign on.

RECENT RELEASES, PUBLICATIONS, AWARDS AND UPCOMING EVENTS:

- The CFRF Scup project was featured in the National Fishermen March Edition, “Northeast scup: With abundant biomass, fishermen look to expand market post-pandemic.” Visit www.cfrfoundation.org/news-releases to read the article.



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