

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:

This time of year inspires gratitude and reflection and the CFRF feels fortunate to have a diverse network of collaborators that helps us achieve our mission of supporting sustainable fisheries in New England. Since 2003, the CFRF has worked with over 150 fishermen from Maine to New Jersey, as well as hundreds of fisheries scientists, managers, and culinary professionals that have helped make the CFRF's work truly impactful. These efforts have resulted in new tools to reduce bycatch, better data for stock assessments, and a growing sense of trust and cooperation among fisheries stakeholders. Conducting research and education that benefits the fishing industry is at the heart of CFRF's mission, and we are very proud of our accomplishments to date. We hope you enjoy a cornucopia of local seafood this Holiday season!

Fred Mattera, CFRF President

PROJECT RESULTS: SNE COOPERATIVE VENTLESS TRAP SURVEY

The Southern New England Cooperative Ventless Trap Survey (SNECVTS), in collaboration with the University of Rhode Island Graduate School of Oceanography, successfully completed its latest year of monitoring and data analysis for the Rhode Island/Massachusetts Wind Energy Area. With three years of baseline data collected in 2014, 2015, and 2018, the lease site at Cox Ledge now has a multi-year record of pre-construction conditions at one of the first offshore wind energy lease sites in the United States. All data from the 2018 monitoring season and a final report were submitted to the Bureau of Ocean Energy Management (BOEM) for review and approval in July of 2019, and the final report will be released upon BOEM's approval. Although at-sea sampling and the final report have been completed for SNECVTS, there are still over 2,500 lobsters tagged with SNECVTS t-bar tags in Southern New England. If you catch any of these tagged lobsters, please report them to CFRF by calling 401-515-4892 or emailing Michael Long at mlong@cfrfoundation.org with the date and location of capture. Recapture data from years following initial tagging will provide valuable multi-year movement data for lobsters in the region, particularly for lobsters which have been recaptured multiple times. CFRF and URI staff would like to thank all the fishing vessel captains, crews, and sea samplers who contributed to SNECVTS throughout its three years of data collection. If you'd like to find out more about SNECVTS, visit the CFRF website: www.cfrfoundation.org/snecvts/.



PROJECT RESULTS: ASMFC LOBSTER MATURITY ASSESSMENT PROJECT

Temperature is perhaps the most prominent environmental force on American lobster life history and in defining its habitat. In Southern New England, waters have experienced dramatic and widespread warming. This increase in bottom water temperature has been known to influence the species molting and growth, maturity, and egg extrusion and development. As a result, the CFRF in partnership with the MA Division of Marine Fisheries, the Atlantic States Marine Fisheries Commission and the Maine Department of Marine Resources, conducted an American lobster maturity study this summer to provide updated maturity information to be used in the upcoming lobster stock assessment.



Three fishing vessels from CFRF's Lobster and Jonah Crab Research Fleet, collected 208 non egg-bearing female lobsters this summer from NMFS statistical areas 537 and 562. For each lobster a suite of biological data was collected and recorded. A. Ellertson and CFRF summer intern, F. Hart, dissected lobsters at the University of Massachusetts Dartmouth School for Marine Science and Technology (SMASST) in New Bedford, MA. All data was shared with Maine Department of Marine Resources for further analyses and final maturity determinations. Stay tuned for the final report that will be published on our webpage (www.cfrfoundation.org/asmfc-lobster-maturity) in early 2020!

Learn more about CFRF at www.cfrfoundation.org



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PROJECT UPDATE: BLACK SEA BASS RESEARCH FLEET

The Black Sea Bass Research Fleet has been busy sampling this summer and fall. We saw an abundance of younger, just legal-sized, black sea bass this season compared to the last few years. After 3 full years of data collection, the Research Fleet has now sampled over 20,000 black sea bass from over 1,500 locations throughout southern New England and the Mid-Atlantic! The Research Fleet also collected just shy of 2,000 black sea bass from inshore, RI state, waters for laboratory analysis by RI DEM. In December, the CFRF and RI DEM will be expanding our collection program and begin investigating stomach contents and aging of black sea bass from the offshore federal waters of southern New England throughout the winter. This work will be providing invaluable biological data on the ecological role black sea bass play as they overwinter offshore of southern New England. Further, this will serve as a comparison of the diet composition of black sea bass from offshore waters to the collected black sea bass from inshore, which was largely dominated by crabs. In other news, the CFRF welcomed a few new members into the Research Fleet this past season: Gary Mataronas Sr., F/V X-Terminator, Joe Baker, F/V Harvest Moon, and John Walker, F/V Blue Label. We are incredibly thankful for the new members jumping right into sampling with the Fleet and look forward to continuing the work next season when the black sea bass come back inshore!

The CFRF has been busy highlighting and promoting the Research Fleet design and collaborative research as a whole: in May, at the Wakefield Fisheries Symposium in Anchorage, AK, about collaborative research and in November, at the Gulf of Maine 2050 Symposium. For more information about the project, please visit our project webpage at: www.cfrfoundation.org/black-sea-bass-fleet.



PROJECT UPDATE: DEVELOPMENT OF A MARKETABLE SEAFOOD PRODUCT FROM SCUP



Throughout the summer and fall, CFRF, the Pier Fish Company, and Johnson and Wales University (JWU) have been working diligently through scup processing trials and culinary evaluations. The team was first put on hold for over a month in the late spring and early summer due to the spring spawn of scup, after which fish were coming in with poor body condition, which caused softer fillets along with decreased yield during processing. Despite this delay, and multiple other roadblocks encountered along the way, progress has been made to develop a marketable refreshed scup fillet. Fresh fillets have received great feedback from all culinary professionals and public consumers who have worked with or tasted them; however, the biggest hurdle with the project to date has been a strong and

undesirable taste associated with refreshed fillets. Pier Fish is currently in the process of trying several freezing techniques, fillet cuts, and treatments to combat the undesirable taste in the refreshed fillets, and with JWU will continue to evaluate all the different products that Pier Fish develops.

The Sustainability Incubator also completed a Fishery Improvement Project (FIP) pre-assessment of the scup fishery, which revealed that the scup fishery already meets the Marine Stewardship Council (MSC) Fisheries Standard. There are still several steps which need to be taken before scup can receive full MSC sustainability certification, but the scup fishery is now in an excellent position to move forward! If you'd like to follow along with our scup processing and marketing efforts, visit the CFRF website: www.cfrfoundation.org/scup-fillet.

PROJECT UPDATE: LOBSTER AND JONAH CRAB RESEARCH FLEET

The Lobster and Jonah Crab Research Fleet has steadily increased sampling throughout the summer and fall months. To date the Research Fleet has sampled biological data from over 141,600 lobsters and 65,000 Jonah crabs. This June, marked six years of data collection! We are grateful for the continued support from industry, scientists and fishery managers who continually use and request CFRF's data. From Maine to New Jersey, the Research Fleet has begun to address the data needs surrounding lobster and Jonah crab and has contributed to the sustainable management of these valuable resources. This spring, the CFRF was pleased to welcome the F/V Bug Catcha from Port Clyde, ME, captained by Gerry Cushman. Welcome to the team Gerry! The CFRF will continue to evolve and grow to address the data needs and priorities of stock assessment scientists and managers, and promote the value of fishermen as research partners. This past summer and fall, CFRF staff shared project results at the Wakefield Fisheries Symposium in Anchorage, AK, as well as the Gulf of Maine 2050 International Symposium in Portland, ME.

ATTENTION FISHERMEN: Are you interested in being involved in CFRF's Lobster and Jonah Crab Research Fleet? Please contact Aubrey at: aellertson@cfrfoundation.org or 401-515-4892. For more information about the project, please visit our project webpage at: www.cfrfoundation.org/jonah-crab-lobster-research-fleet.



NEW PROJECT: PILOTING A N-VIRO DREDGE IN SNE SCALLOP FISHERY

The N-Viro scallop dredge pilot project is CFRF's first experience with NOAA's research set aside (RSA) program. All funds for the research project are generated through the sale of scallops harvested under a research specific quota the foundation has received from NOAA. This project seeks to pilot a novel gear type that has been proven effective at reducing bycatch in the king and queen scallop fisheries. Two N-Viro dredges have been delivered to the port of Galilee and have been rigged to fish. Unfortunately, the project missed the 2019 scalloping season. Our captains look forward to putting the experimental dredges in the water when they get back to scalloping in the spring. Three Limited Access General Category (LAGC) scallop fishing vessels will be fishing the smaller (9ft) N-Viro dredge including F/V Mister G, F/V Harvest Moon and F/V Brooke C. The larger dredge (15ft) will be fished on the F/V Karen Elizabeth, a Limited Access scallop vessel. The N-Viro dredges will be tested for bycatch reduction, improved fuel efficiency and comparable scallop catch rates against a traditional New Bedford style dredge. For more information about this project, please visit www.cfrfoundation.org/piloting-novel-dredge-type !



NEW PROJECT: SALINITY MAXIMUM INTRUSIONS

CFRF recently received an award from the National Science Foundation for a project partnering with Woods Hole Oceanographic Institute (WHOI), the School for Marine Science and Technology (SMAST) and National Marine Fisheries Service (NMFS). Scientists led by Glen Gawarkiewicz will be attempting to map mid-depth salinity maximum intrusions on the Southern New England Continental Shelf. The project will consist of two research cruises: a 7 day pilot cruise in May 2020 and a 14 day main cruise in May of 2021. Researchers will use autonomous underwater vehicles to measure the physical properties of the salinity maximum intrusions, which are associated with warm core rings. The combination of the CTD/VMP data and the daily surveys from the two REMUS vehicles will be combined to obtain daily three-dimensional maps of temperature, salinity, and microstructure in the salty intrusions. The CFRF will lead the outreach efforts included in the project, which seek to share project information and discuss implications with the commercial fishing industry. Look forward to more information regarding this project in the coming months as it develops at www.cfrfoundation.org/salinity-max !

PROJECT UPDATE: OPERATIONALIZING REAL-TIME TELEMETRY SYSTEMS

The CFRF staff continues to work with the Gulf of Maine Lobster Foundation and the Northeast Fisheries Science Center to install real-time telemetry systems on fishing vessels throughout the Northeast. The system includes a wireless temperature, depth, and orientation probe that attaches to fixed or mobile gear. The goal of this project is to expand the availability of real-time oceanographic data on the New England continental shelf and allows ocean circulation modelers to better understand changing ocean conditions. This summer and fall, the CFRF staff helped install telemetry equipment on F/V Virginia Marie and F/V Terri-Ann, both lobster/crab boats out of Sandwich, MA. To view real time bottom temperatures from fishing vessels involved please visit: <https://studentdrifters.org/huanxin/telemetry.html> .



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PROJECT UPDATE: SHELF RESEARCH FLEET

Climate change is most often described as a global phenomenon, but it has begun to affect people and their environments at a regional scale. The ocean waters surrounding Southern New England are some of the most productive in the world. But as these waters warm, concerns have been raised about how this will impact fisheries resources and the people who depend upon them. There is an urgent need to better understand the environmental changes taking place, and how these changes are affecting the ecosystem. To address these needs, the CFRF has worked with the Woods Hole Oceanographic Institution (WHOI) to engage fishermen in the collection of oceanographic data from across the continental shelf south of Rhode Island. Fleet participants continue to use wireless Conductivity, Temperature and Depth instruments and iPads to collect water column profiles, view their data, and communicate that data to CFRF and WHOI partners. As of November 2019, the fleet has collected over 599 profiles. Fishermen involved are learning more about the ocean conditions they are working in, and the data has been used by both individual research fleet participants to refine fishing practices, as well as physical oceanographers studying the propagation of warm core rings on the southern New England continental shelf.

ATTENTION FISHERMEN: The CFRF is currently seeking fishing vessels that fish between 40 and 70 fathoms south of Rhode Island to participate in the Shelf Research Fleet. If you are interested please contact Aubrey at: aellertson@cfrfoundation.org or 401-515-4892. For more information please visit our project webpage: www.cfrfoundation.org/shelf-research-fleet .



RECENT RELEASES, PUBLICATIONS, AWARDS AND UPCOMING EVENTS

(DOCUMENTS AVAILABLE AT WWW.CFRFOUNDATION.ORG/NEWS-RELEASES)

- **Press:** “How eating sea bass and crab can help Maine lobstermen” - Press Herald, April 2019
- **Event:** AFS SNEC Chapter Winter Meeting – Hyatt Regency, Cambridge, MA - January 13-14, 2020
- **Event:** Maine Fishermen's Forum—Rockland, ME – March 5-8, 2020
- **Event:** Seafood Expo North America—Boston, MA – March 15-17, 2020
- **Event:** MA Lobstermen’s Association Annual Meeting— Hyannis, MA – April 16-19, 2020



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