COMMERCIAL FISHERIES RESEARCH FOUNDATION

CFRF NEWSLETTER

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The Commercial Fisheries Research Foundation (CFRF) is a non-profit, private research foundation founded and directed by members of the commercial fishing industry and other support businesses based in Rhode Island. Its primary mission is to support teams of scientists and fishing industry members working together collaboratively on research and data collection projects important to the fishing industry in the southern New England region.

MESSAGE CORNER:

Welcome to the third edition of the CFRF newsletter. This edition is dedicated to reporting on the major projects the CFRF staff and Board members have been directly engaged in during the past couple of years. They highlight our dedication to engaging in strategic projects important to the fishing industry based here in the southern New England region. They range from research fleets, to better utilization of an underutilized species, to forward looking conservation engineering initiatives, to assessing potential impacts on fisheries resources from offshore wind development, and are all centered on providing opportunities for members of our industry to work collaboratively with fisheries managers and scientists. Thank you to all of you who have participated in these projects, and to those who continue to support this foundation and maintain an interest in its work.

David Spencer, CFRF President, F/V Nathaniel Lee and Fred Mattera, CFRF Vice-President, NESTCO, Inc.

RESEARCH ON SCUP PROCESSING:

The CFRF completed its initial work on scup processing, focusing on investigating the most appropriate and cost effective means of filleting and packaging this hard to work with species in order to produce enough yield in the form needed to be marketable. The project was done in collaboration with three local Rhode Island processing companies, Seafreeze Ltd, Sea Fresh USA, Inc., and The TownDock, and a manufacturing company, Pisces Fish Machinery Inc., based in Wells, Michigan. Findings showed that Pisces was able to use existing machinery to develop a lineup of machinery able to process whole scup into boneless, skinless fillets. The lineup works best with fresh scup but can also be used on frozen scup effectively if the scup are de-frosted to a temperature of just 31-32 degrees F. The machinery is able to process about 30 fish/minute, with an estimated water usage of between 12-15 gallons/minute. Processing results in fillets averaging 4-5 ounces, with a yield on the order of 30-35% depending on the size of the scup. The results of the processing research are promising but additional challenges remain including limited waste water disposal options in Quonset Pt. and Pt. Judith, and low market demand resulting in low prices.

Johnson & Wales University student chef distributing food samples.

The CFRF partnered with the chefs and students at Johnson & Wales University and the RI Sea Grant Program to sponsor the RI Seafood Challenge on April 10, 2015. Scup was featured, and teams of students competed for top prize in a scup cook off challenge.

Panel of fishermen discussing scup harvesting.

Fishermen participated in a panel to discuss how they harvest scup. The event was an important opportunity to showcase this underutilized species, as well as the local commercial fishing industry.

For more information on this project see http://cfrfoundation.org/scup .

Funded through NOAA Award # NA09NMF4720414

SHELF RESEARCH FLEET PROJECT UPDATE:

The CFRF and Woods Hole Oceanographic Institution (WHOI) launched the Shelf Research Fleet project in October 2014. A fleet of nine fishing vessels has been collecting oceanographic data from across the continental shelf south of New England since then. Participant fishermen use Conductivity, Temperature, and Depth instruments (CTDs) and iPads to conduct water column profiles, view their data, and communicate data to WHOI and CFRF partners. Oceanographic data are processed and posted online in near real time (see: http://science.whoi.edu/users/seasoar/cfrfwhoi). Despite a number of technical difficulties, the Shelf Research Fleet has collected over 70 water column profiles from across the study area. To date, the following vessels have contributed oceanographic data: F/V Aces High (Point Judith, RI), F/V Cailyn Grace (Sakonnet Point, RI), F/V Debbie Ann (Point Judith, RI), F/V Heather Lynn (Point Judith, RI), F/V Mister G (Point Judith, RI), F/V Timberwolf (Point Judith, RI), and F/V Excalibur (Newport, RI). In April, members of the Shelf Research Fleet met with WHOI scientist, Glen Gawarkiewicz, to discuss recent oceanographic conditions and to share at-sea observations. Discussions focused on recent intrusions of warm, salty slope water to the inner shelf south of Rhode Island, formation and entrainment of Gulf Stream warm core rings, severe winter storms, and the impacts of these events on fisheries resources in the region. For more information about this dialog and the Shelf Research Fleet project, please visit: http://cfrfoundation.org/shelf-research-fleet .

Research fleet training session.

Funded by the MacArthur Foundation

BOEM Project Update: Identifying Research Needs and Approaches for Assessing Potential Impacts of Offshore Wind Farm Development on Fisheries Resources in the Northeast Region

The CFRF staff, working in partnership with the federal Bureau of Ocean Energy Management (BOEM) and the Cornell Cooperative Extension Marine Program, spent time over the fall and winter months gathering input from fisheries managers, scientists, and members of the commercial fishing industry on potential impacts to fisheries resources from offshore wind development in 3 northeast BOEM wind energy sites. The information gathered also included input on suggested research approaches to evaluate the impacts. Subject areas discussed included species of concern, potential impacts associated with construction and operational development activities on different life phases, likely environmental and ecological changes, and possible mitigation measures. Recommendations on how to best approach baseline survey work, and longer term monitoring were also received, as well as the process that should be followed in implementing a comprehensive research program. In addition, background research was conducted by the CFRF staff to uncover existing information on potential impacts and research approaches.

The CFRF has compiled the information received into a draft summary report, along with a list of suggested best practice protocols. This document is currently under review by BOEM and is expected to be made available publicly at the end of the summer. The project information is intended to assist BOEM as they develop guidelines and requirements for offshore wind energy developers.

For more information about this project or to provide input, please visit: http://cfrfoundation.org/offshore-wind .

Funded through BOEM Contract #M14PC00005

LOBSTER FLEET UPDATE:

June 2015 marked the start of the third year of data collection for the CFRF Lobster Research Fleet ("On-Deck Data Program"). Captains and crew members from 12 lobster fishing vessels continue to collect and relay biological lobster and Jonah crab data from a subsample of their commercial catch as well as three ventless traps. To date, biological data for more than 52,000 lobsters and 12,000 Jonah crabs has been collected. All biological data has been communicated to state and federal agencies for application in the 2015 lobster stock assessment and the Jonah crab Fishery Management Plan. The fleet also continues to collect and communicate bottom water temperature data from over 75 locations, ranging from the Gulf of Maine to Hudson Canyon. Early in the year, the On Deck Data program was updated to include the capability to record Jonah crab biological data from ventless traps. This data was requested by and has been communicated to the scientists and managers developing the Jonah crab Fishery Management Plan. This data is critical to answering research questions about Jonah crab size and sex distributions across the southern New England continental shelf.

In June 2015, the CFRF received an award from NOAA's Saltonstall-Kennedy Grant Program to continue the Lobster Research Fleet project through 2017. As part of this award, the CFRF will work with the Massachusetts Division of Marine Fisheries to assess Jonah crab size at age and size at sexual maturity. The CFRF is extremely pleased to have received this award and looks forward to continuing this collaborative data collection effort between fishermen and scientists.

For more information, please visit the CFRF Lobster Research Fleet project page at: http://cfrfoundation.org/lobster-research-fleet .

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CONSERVATION GEAR ENGINEERING PROJECTS:

Juvenile Butterfish Bycatch Reduction:

Over the winter months, the field trials for the proof of concept project entitled "Improvement of Trawl Net Selectivity in the Directed Butterfish Fishery Using Square Mesh and T-90 Codend Liners to Reduce Juvenile Butterfish" aimed at reducing the catch of juvenile butterfish was completed. Team partners included Captain Phil Ruhle Jr (F/V Prevail owned by Seafreeze, Ltd.), staff from the Cornell Cooperative Research Marine Program, and Jon Knight. The two experimental designs tested included an 8cm square mesh constructed cod liner and an 8cm T-90 mesh cod liner. A trawl net was modified to accommodate a "trouser trawl" design to tow the control and experimental codends simultaneously. Since 50% of butterfish are mature at 12 cm, the project goal was to determine the effectiveness of each of the experimental designs at reducing the capture of 12 cm butterfish by a minimum of 50%.

Final results from this proof of concept phase indicated a significant difference in the catch weights of butterfish compared to the control codend, and the square mesh codend reduced the catch of 12 cm butterfish by 66.5% and the T-90 codend reduced the catch of 12 cm buttefish by 67.1%. The team concluded that both of these experimental codends show potential to release juvenile butterfish in comparison to the current required codend. The final results of this proof of concept are currently under review by the members of the CFRF Conservation Engineering Review Panel. They will make a final recommendation on whether this work should continue past this proof of concept phase.

The final report for this proof of concept project is posted at http://cfrfoundation.org/projects .

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Winter Flounder Bycatch Reduction:

The CFRF has been completing its final phase of its Challenge Grant Program for Conservation Engineering Projects focused on winter flounder bycatch reduction (made possible through efforts by U.S. Senator Jack Reed – D-RI). Field work and submittal of the final report for the one remaining project was completed.
Final results for the project entitled "Testing of a Modified Groundgear to Reduce the Catch of SNE Winter Flounder in the Large Mesh Groundfish Fishery" (Project team: Pingguo He, Natalie Jones, Christopher Rillahan, SMAST, UMASS Dartmouth; Tor Bendiksen, Reidar's Manufacturing; and Aaron Williams & Tom Williams, Sr., F/V Tradition) indicated that the experimental gear containing "escape windows" located along the length of the groundgear was successful in reducing winter flounder, but the mean catch of the targeted species (cod) was also reduced significantly. However, the experimental net caught less small cod indicating that additional modifications to the groundgear may further reduce the loss of legal size Atlantic cod.

The final report for this project is posted at http://cfrfoundation.org/projects .

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GEAR TRIALS PROGRAM UPDATE:

The Gear Trials Program has been brought to a close, and has been successful in assisting local fishermen in being pro-active in reducing unwanted winter flounder bycatch in the southern New England stock area. Under this program, as part of the CFRF Challenge Grant Program for Conservation Engineering Projects, the CFRF issued vouchers to active members of small mesh trawling fleet in the region for purchase of either one or both successfully tested gear modifications to reduce winter flounder bycatch: 1) a 12" drop chain sweep and 2) a large mesh belly panel. By the close of the program, some 63 fishing vessels had been issued vouchers. Initial feedback indicated that fishing vessel captains were finding the gear to be effective in reducing winter flounder bycatch in a number of fishing situations in the small mesh trawl fisheries. Additional fishermen feedback is being compiled by the Cornell Cooperative Extension Marine Program staff, and will be posted in a final report issued later this summer.

A documentary video about this project can be viewed at http://cfrfoundation.org/gear-trials .

Funded through NOAA Award # NA09NMF4720414

RESEARCH PRIORITIES FOR THE COMING YEAR:

- Continued work on better utilization of scup
- Continuation of Shelf Research Fleet oceanographic data collection
- Continuation of the On-Deck Data Program – lobster and Jonah crab fleet
- Development of an industry based research fleet for quahog data collection
- Data collection to support new modeling approaches for black sea bass
- Continued evaluation of impacts on fisheries resources in the northeast BOEM Wind Energy Areas