

- 1) Project Title: An Industry-Based Survey for Yellowtail Flounder in Southern New England
- 2) NOAA Award Number: NA09NMF4720414/NA10NMF4720285  
CFDA Number: 11.472
- 3) Project Team Members:
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  - Steve Follet, Owner and Operator,  
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401-487-4495
- 4) Period of Project: 7/1/2011 – 6/30/2013:
- 5) Identification of Supporting Institution: University of Massachusetts Dartmouth, School for Marine Science and Technology (SMAST). Funding was also provided by NOAA and the Massachusetts Marine Fisheries Institute (MFI).
- 6) Total Amount of Sub-Award: \$ 60,595.50
- 7) List of Equipment Purchased (\$5,000 or more in value) during project: 17,000 t-bar anchor tags were purchased from Floy Tag Inc. for use during the survey. The total cost of the tags was \$ 11,950.00. \$ 6,700 from this award was used to support the purchase of the tags
- 8) Summary of Tasks Scheduled: SMAST received funding from the Massachusetts Marine Fisheries Institute (MFI) to complete an industry-based survey for yellowtail flounder in southern New England. The purpose of the survey was to examine the abundance, distribution, and biological characteristics of yellowtail flounder in southern New England. The current grant allowed

SMAST to expand the scope of the industry-based survey, and allowed us to sample a larger proportion of the southern New England yellowtail flounder resource.

During the project period (7/1/2011 to 6/31/2013) we were scheduled to complete 12 sampling days on board the F/V Heather Lynn. The 12 survey days were scheduled for the fall of 2011, and were scheduled to be completed in concert with the yellowtail flounder survey that was funded by the MFI. Prior to the start of the survey, we planned to meet with Steve Follet and the crew of the Heather Lynn to plan the survey and discuss the survey protocols. We also planned to organize all of the gear for the survey, and purchase additional equipment as necessary. Following the completion of the survey, we planned to complete all data analysis in a timely matter. We also planned to present the results of the survey to academic scientists, fishermen, and at the Southern New England Yellowtail Flounder Stock Assessment Workshop (SAW 54), along with academic conferences and regional fishery management meetings.

- 9) Summary of Tasks Accomplished: Prior to the start of the survey, all survey equipment was organized, and transported to the F/V Heather Lynn in Point Judith, RI. Four trawl nets were also obtained from the Rhode Island Division of Fish and Wildlife (RIDFW). The RIDFW had previously used the nets between 2003 and 2005 during their industry-based survey for yellowtail flounder in southern New England. The nets were transported to Superior Trawl Inc., in Point Judith, RI, where they were inspected, and repaired as needed before the nets were transferred on to the F/V Heather Lynn for the survey. In addition, 17,000 plastic t-bar anchor tags were purchased from Floy Tag Inc.

The industry-based survey (including the work covered by the MFI grant) was completed between 9/27 and 11/9/2011 over the course of nine survey trips. A total of 263 survey tows were attempted during the survey, and 232 survey tows were completed successfully. During the survey we captured and measured 9,766 yellowtail flounder, and tagged 5,014 yellowtail flounder. We also collected 242 yellowtail flounder scale samples, which were provided to the Northeast Fisheries Science Center to help inform catch at age estimates during the stock assessment. The survey data were analyzed to assess the distribution of yellowtail flounder throughout the study area and used to generate both relative and absolute estimates of yellowtail flounder biomass.

The survey results were presented to an audience of fishermen, academic scientists and government scientists at the Commercial Fisheries Research Foundation's meeting about trawl surveys in South Kingstown, RI. The results of the survey were presented to members of the SMAST groundfish Steering Committee in Fairhaven, MA on February 27<sup>th</sup>, 2012. On the same day, the project was also presented to members of the Groundfish Plan Development Team in Mansfield, MA. The results of the survey were considered as the Groundfish Plan Development Team discussed re-opening fishery closed areas in southern New England and on Georges Bank. The major findings of the survey were also presented during the stock assessment workshop (SAW 54) for southern New England yellowtail flounder on April, 2<sup>nd</sup>. Finally, the results of the

survey were presented to a group of international scientists at the International Council for the Exploration of the Sea Annual Science Meeting (ICES ASC) which was held in Bergen, Norway in September, 2012.

10) Explanation of Problems Encountered or Differences Between the Scheduled and Accomplished Tasks: There were no problems encountered during this period. The work was completed as scheduled.

11) Summary of Major Project Results:

SMAST received funding from the Commercial Fisheries Research Foundation and the Massachusetts Marine Fisheries Institute to conduct an industry-based survey for yellowtail flounder in the waters of southern New England. The survey was completed between September and November of 2011. The F/V Heather Lynn and the F/V Travis and Natalie served as the industry partners during the survey. The study location was chosen to cover a large portion of the area sampled during the 2003-2005 RIDFW industry-based survey for yellowtail flounder. The objectives of the survey were to examine the abundance, distribution and biological characteristics of yellowtail flounder in the southern New England stock area.

All tow locations were chosen at random within the study site, and a total of 232 valid tows were completed over the course of nine survey trips. The largest mean yellowtail flounder catches were observed in the western portion of the study area, while the smallest catches were observed in the Nantucket Lightship Closed Area. A greater proportion of large (>32cm) yellowtail flounder were captured in the open areas, while the majority of yellowtail captured in the Nantucket Lightship were sublegal size. A total of 9,766 yellowtail flounder were measured during the survey, and 5,014 yellowtail were tagged. Survey tows were used to generate relative and absolute abundance estimates, and biological data collected during the survey was provided to the Northeast Fisheries Science Center for inclusion in the yellowtail flounder stock assessment. The results of the survey have been presented to fishermen, academic scientists, fishery managers, and government scientists at a number of meetings and conferences.