



**Mid-Atlantic Research Set-Aside (RSA) Program
2003 Fishing Year**

02-RSA-001 - National Fisheries Institute, Inc., A *Loligo* Squid: Extension of Gear Modification Study Through Scup Migratory Season. - Principal Investigator - Daniel Cohen.
125

Project Description: To test the effectiveness of the 5.5” square mesh selection in the extension, and/or other gear configurations recommended by Manomet and industry participants, for reducing bycatch of scup (and potentially whiting) and retaining *Loligo* in the *Loligo* fishery during scup migration both inshore and offshore; 2) collect additional catch, discard and length-frequency data on black sea bass, summer flounder, whiting and other important commercial species; and 3) use of a *Loligo* study fleet to identify locations of high scup discarding for directed gear experimentation.

RSA Amount: 140,543 lbs *Loligo*, 23,325 lbs scup, 21,338 lbs black sea bass

Project Period: May 1 2003 – December 31, 2003. Extended to May 31, 2004

Award Status: **Completed**. Study activities were designed to be conducted concurrently with a NMFS NEFSC *Loligo* net testing project scheduled for January 2004. Study personnel had anticipated using the same gear and methodology as the NEFSC if the technology proved successful, however, the gear proved unsuccessful and another design was tested. The alternate design utilized an extension panel of 10 meshes of 10-inch diamond mesh attached to the belly of the net followed by 100 meshes of 1.875-inch diamond mesh with a funnel attachment of 1.875-inch diamond mesh. The funnel was attached to the belly of the net and extended into the small mesh section of the extension.

The experimental net appeared to fish the same as the standard net in the study. An increase in mesh size or reconfiguration of the funnel in the extension may permit escapement of finfish however, the cumulative data of three studies suggests that the insertion of a large mesh panel in the extension is unlikely to provide a successful net design. One result of this project is that it continued to demonstrate the low bycatch of scup for the tows observed in the directed *Loligo* fishery. Further work on net configurations aimed at scup bycatch reduction in the *Loligo* fishery does not seem to be warranted at this time.

02-RSA-002 - National Fisheries Institute, Inc., A Development of a Supplemental Finfish Survey Targeting Mid-Atlantic Migratory Species. - Principal Investigator B Eric Powell.

Project Description: To supplement the survey database with information on the migratory behaviors of recreationally and commercially important species, so that the influence of this ever-changing spatial distribution can be included in the stock assessment.

RSA Amount: 67,163 lbs summer flounder, 23,325 lbs scup, 21,338 lbs black sea bass, 140,543 lbs *Loligo*, 198,413 lbs *Illex*, 702,712 lbs. mackerel, 141,900 lbs bluefish

Project Period: April 1 - December 31, 2003.

Award Status: **Completed.** Two cruises have been conducted (March and May 2003) designed to track the seasonal movements of selected fish species, and to extend the survey range beyond the domain of the NMFS-NEFSC surveys. Target species were summer flounder, scup, black sea bass, monkfish, spiny dogfish, silver/offshore hake, and *Loligo* squid. A combined total of 53 tows were taken along the sampling transects fixed sampling stations located in both Hudson River Canyon and Baltimore Canyon. Sample processing protocol followed standard NMFS survey methods. Each tow was sorted to species and catch weights were obtained for each species. These species included: summer flounder, scup, black sea bass, monkfish, spiny dogfish, skates, yellowtail flounder, winter flounder, American lobster, silver/offshore hake, and *Loligo* squid. Neither yellowtail flounder nor winter flounder were caught in any of the tows. NFI requested early termination of this award as all planned tasks have been completed earlier than expected. A new end date of June 30, 2003 was requested. Due to the voluminous and conclusionary details provided in the second semi-annual report, it was agreed to accept the second semi-annual report as a completion report.

02-RSA-004 - University of Rhode Island (URI), ABycatch Characterization and Reduction from Codend Mesh Size Increases in the Directed Bottom Trawl Northern-Inshore Scup Fishery.@ Principal Investigator - Laura Skrobe.

Project Description: The effects of increasing mesh size on the characterization and reduction of bycatch from the directed scup bottom trawl fishery is proposed. A commercial fishing vessel will be used to conduct the sea sampling in cooperation with the University of Rhode Island (URI). URI will also lead the data analysis, interpretation, and outreach. The Rhode Island Department of Environmental Management is collaborating on the project. The project is designed to investigate the bycatch characterization of the currently regulated mesh size (4.5 inch diamond for 25 meshes with 100 meshes of 5 inch immediately forward of the 4.5 inch) and 2 experimental nets (6 inch and 6.5 inch square shaped meshes). The change of bycatch between the regulated mesh size and the experimental sizes will be evaluated.

RSA Amount: 20,000 lbs scup

Project Period: April 1 - August 31, 2003

Award Status: **Withdrawn.** A bottom trawl scup bycatch characterization study was to have been conducted during the months of April – July, 2003. However, the project was not initiated because the ex-vessel scup prices during the summer months was insufficient to cover the university's research costs not the fishing vessel's participation costs. As a result, a request to terminate the project was submitted and accepted.

02-RSA-005 - University of Rhode Island, AEffects of Increasing Mesh Size in the Summer Flounder Fishery in Southern New England Inshore Rhode Island Waters. - Principal Investigator - David Beutel.

Project Description: The effects of increasing mesh size in the summer flounder fishery in inshore Rhode Island waters is proposed. Commercial fishing vessels will be used to conduct the study with University of Rhode Island (URI) staff aboard. URI will also lead the data analysis, interpretation, and outreach. The Rhode Island Department of Environmental Management is collaborating on the project. The project is designed to investigate the mesh size selectivity of summer flounder for 4 codend mesh sizes and shapes, 6.5 and 7.0 inch diamond, and 7.0 and 8.0 inch square. The use of larger mesh sizes will result in the reduction of regulatory discards in the summer flounder fishery as well as the reduction of bycatch and other species.

RSA Amount: 24,000 lbs summer flounder

Project Period: April 1 - October 31, 2003. Extended to January 31, 2004.

Award Status: **Completed**. The effects of increasing codend mesh size on catch efficiency and size selectivity for summer flounder in southern New England and inshore Rhode Island waters was investigated. The alternate tow method was used to examine four experimental codend mesh sizes, 6.5" diamond, 7.0" square, 7.0" diamond, and 8.0" square, with a small mesh codend as the control. Length at retention values increased with increasing mesh size for each shape, however the increases between 6.5" diamond, 7.0" square, and 7.0" diamond were slight. The 8.0" square had larger values of length at retention than the other three mesh sizes. All length at retention values were higher than the minimum size limit for summer flounder for all codends resulting in low retention of undersize fish. When comparing the parameter values calculated in this study to other studies conducted on summer flounder with smaller mesh sizes, it is apparent that an increase in mesh size would help reduce the retention of sublegal-size summer flounder especially from the current legal mesh size; however when increasing to 8.0" square there is a significant decrease in the numbers of legal-size fish as well. It is important to have an acceptable balance between the retention of undersize fish and the escape of commercial sized fish.

02-RSA-006 - Wizard Enterprises, Effect of Vent Size on Sex Ratios of Black Sea Bass Retained in the Coastal Pot Fishery. - Principal Investigator - Joan Berko.

Project Description: Evaluate the selectivity of three black sea bass pot escape vent sizes on size and sex of captured fish. Results will be used to determine effects of fishing mortality, and optimum size of fish removed from the population while still sustaining the fishery.

RSA Amount: 25,000 lbs black sea bass

Project Period: May 1 - November 30, 2003

Award Status: **Withdrawn**. Difficulties associated with obtaining the State scientific collection permit were not resolved until mid-July. Upon receipt, it was determined that insufficient time remained under the project to conduct the project as planned. As a result, a request to terminate the project was submitted and accepted. No fish were landed or sold under the RSA Program.