Mid-Atlantic Research Set-Aside (RSA) Program
2002 Fishing Year

01-RSA-001 - Massachusetts Division of Marine Fisheries, "Testing and Further Development of Scup-Excluding Net Modifications." Principal Investigator – Arne Carr.

Project Description: To design and test modifications to the trawl net extension to sharply reduce the bycatch of scup in the inshore and offshore fisheries that have notable bycatches of scup without having a major reduction of catch in the targeted species.

RSA Amount: 118,000 lbs of scup, 40,000 lbs of *Loligo*

Award Status: ***Withdrawn***.

01-RSA-005 - Virginia Institute of Marine Science, "The Effect of Circle and Square Escape Vents on Discard Reduction in the Black Sea Bass Trap Fishery." Principal Investigator – Robert Fisher.

Project Description: To evaluate the effectiveness of various sizes of escape vents, both of circular and square vent designs, in reducing discards as part of the black sea bass fishing mortality rate reduction strategy.

RSA Amount: 33,180 lbs of black sea bass

Project Period: January 1 – December 31, 2002

Award Status: ***Completed***. Under current management, 2" square and 2 3/8" circle vent sizes are required to select out the minimum legal size black sea bass of 11". This study fished 150 traditional wire mesh traps of uniform design using various escape vent openings for both circle (2 ¼", 2 3/8", 2 ½", and 2 5/8") and square (1 7/8", 2", 2 1/8", and 2 ¼") design between June and December 2002. Total catch and number of sub-legal sea bass decreased, as escape vent size increased in both circular and square escape vent designs, while mean length of fish increased. The catch of legal sized sea bass increased as vent size increased up to a point; it leveled off at the 2 ¼" square and 2 5/8" circle vent sizes relative to the other vents within its shape series. In general, circular escape vents caught more sea bass relative to square vents. Examination of size selectivity (proportion of fish retained and length frequency distribution) however, indicate that any given circle vent testing resulted in selection of smaller fish than that of its corresponding square vent.

01-RSA-011 - National Fisheries Institute, Inc., "Loligo Squid Gear Modification Study." Principal Investigator – Eric N. Powell.

Project Description – To test the effectiveness of the 5.5" mesh square extension escapement panel for reducing bycatch of scup and retaining *Loligo* in the offshore winter *Loligo* fishery within and outside the Gear Restricted Areas (GRA). Investigators will also compare the 5.5" mesh square extension and the standard 1 7/8" mesh net without the extension within and outside the GRAs for retaining *Loligo* squid and reducing bycatch of scup.

RSA Amount: 80,775 lbs of scup, 25, 500 lbs of black sea bass, 187,000 lbs of *Loligo*

Project Period: March 1, 2002 – March 31, 2003

Award Status: ***Completed***. Modified gear was required in 2003 on any boat fishing in areas otherwise closed to the fishery to reduce scup discarding. The purpose of this study was to evaluate the success of the 2003 net regulations and the potential influence on time-area closures (GRAs) in achieving a reduction in scup discarding. The regulations are based on three expectations. (1) Reduction in discarding in the *Loligo* squid fishery will materially reduce total scup discarding. (2) Exclusion of *Loligo* squid fishing vessels from the GRAs will result in these vessels fishing in areas that inherently produce fewer scup discards without equivalently increasing discarding in other sensitive species. (3) The use of a square-mesh large-mesh section in the extension will reduce scup discarding to the extent that otherwise would be achieved if the boats fished outside the GRAs without the economic cost imposed by redeploying the fleet.

The PI reported in the completion report that analysis of the NMFS-NEFSC observer database offers no support for the belief that Expectation 1 has been met. Squid catches were too low to sustain a directed fishery in the northern GRA during this study. Thus, had this area been open, limited scup discarding would have occurred. In this study, squid catches averaged 1,025 kg tow $^{-1}$ in the southern GRA. Thus, had the GRA been open *Loligo* fishing would have taken place. Yet, in the 34 tows taken by two vessels, not a single scup was caught. Redeployment of the fleet clearly increased scup discarding in 2003. Thus, Expectation 2 was not met. Field tests demonstrated that the implemented net modification can produce reduced catches of mostly smaller-sized finfish without impairing squid catch, but the data also indicate that this result may not be routinely achieved. Thus, Expectation 3 was not completely met. The history of the scup discarding issue in the *Loligo* squid fishery demonstrates that discard reduction cannot be accomplished without adequate prior evaluation of the sources of discards, without the requisite and concomitant experimental evaluation of the results of regulatory reform, and without adequate commercial-scale testing of prospective reforms prior to implementation.

NMFS Concerns over Report: Much of the information contained in the report is not related to the project. Of the three "expectations" noted above, only the third is related to project supported research. The conclusion section of the report is not related to the research objectives, but is used to argue in detail that the GRAs are not a good management tool. The conclusion section suggests that reducing the minimum size (presumably for scup) would achieve better results, though no data are provided to support such a recommendation.

01-RSA-012 - William Gell, "Evaluation of Catch Efficiency and Size Selectivity of Inshore New England Fish Pots for Black Sea Bass and Scup as a Function of Escape Vent Size." Principal Investigator – Laura Scrobe.

Project Description: The evaluation of the catch efficiency and size selectivity of inshore New England fish pots for black sea bass and scup is proposed. Two inshore commercial fishing vessels will conduct the field trials. The University of Rhode Island will lead the data analysis, interpretation and outreach. The RI Dept. of Environmental Management is collaborating on the project. The project is designed to investigation the efficiency of four escapement vent sizes ranging from 2.38 to 3.4 inches in reducing the bycatch of sub-legal black sea bass and scup, while minimally affecting the catch of legal fish.

RSA Amount: 24,000 lbs of scup, 7,325 lbs of black sea bass.
Project Period: January – December 31, 2002.

Award Status: ***Completed***. Effects of increasing escape vent size on catch efficiency and size selectivity were studied in the New England inshore pot fisheries targeting black sea bass (*Centropristis striata*) and scup (*Stenotomus chrysops*). Commercial fishing vessels fished experimental fish pots equipped with circular escape vents of varying sizes (2.38, 2.75, 3.10, and 3.40 inches); an unvented pot served as the control. In general, the catches of undersize black sea bass and scup were reduced as vent size increased. The results suggested however, that fishing pots with larger size escape vents also reduced the catch of legal-size fish. Selection characteristics for each vent size and species were generated using the SELECT method. The estimated selectivity patterns suggested that increasing the escape vent size in fish pots could alleviate fishing pressure on smaller size fish, though the probabilities of retaining larger size fish could be compromised. Changes in the size of the circular escape vents affected black sea bass and scup differently. As such, proposed management measures need to consider the gear and species-specific nature of selectivity parameters.

01-RSA-013 - Association of United Boatmen of NJ and NY, " Pilot Study to Collect Black Sea Bass Catch and Discard Data in NJ/NY's Winter Ports and Charter Boat Fishery." Principal Investigator – Raymond Bogan.

Project Description: To collect catch and effort data on discards and landings of black sea bass in the winter offshore black sea bass party boat fishery take takes place during the November – February time frame. The study would also evaluate the impact of a 50 fish/angler bag limit on this fishery.

RSA Amount: 10,000 lbs black sea bass.

Award Status: ***Withdrawn***.