South Carolina Sea Grant Consortium

PROJECT REPORT

Date:	June 23, 2008

Please complete this form and submit it both in hard copy and electronically by July 1, 2008 to:
coopfish@scseagrant.org

If this is your Final Report, please fill out ALL SECTIONS LISTED BELOW. Specifically, please use this form to provide four-pages of narrative about your project under the following sections of the form:
Project Objectives,
Project Results (link the results by objective),
Benefits,
Interactions

Please also include information and/or comments about future work that is needed with relation to this project under the Follow Up and Future Options sections.

Check One:	☒ **Final Report**	☐ **Annual Progress Report**	☐ **"Seed" Project Report**

Initiation Date:	5/15/07	**Reporting Period From:**	6/1/07	**To**	6/5/08

Project Number:	R70G	**Date of Report:**	6/23/08
Project Title:			

Principal Investigator:	Donald Lombardi – **Home Phone (843) 525-0861, Cell (843) 368-2603**
Affiliation(s):	Active USCG Captain, 33 Years, License #1130727, Issue #7

Co-Principal Investigator:	Len Conapinski
Affiliation(s):	Helper, Mate

Associate Investigator:	
Affiliation(s):	

Associate Investigator:	
Affiliation(s):	

Objectives: Please refer to your original project summary form. Note any significant changes in objectives below. Otherwise, leave blank.

To investigate and document legal and undersized fish (Black Sea Bass) and injuries to released fish.

Project Results (Results to Date, if Annual Report): Summarize results of your Sea Grant project. Structure your response by Project Objective. Be complete. Also, note any unanticipated problems in meeting project objectives.

In June 2007, the South Atlantic Fisheries Council has increased the minimum size requirement of Black Sea Bass from 11" to 12" total length. In May of 2006, the minimum size was 10" total length.

During the June to November period many people anchor over reefs and fish for Black Sea Bass while they live/line for King Mackerel and Cobia. Others, like me, target only Black Sea Bass year-round. I felt there would be a problem with the very high amount of caught and released fish when people try to catch the limit of 15 12" fish per person. If fisherman injure or kill a large amount of released fish it would go against the South Carolina Cooperative Fisheries goals.

This investigation took place over a 12 month period fishing offshore 30 trips to five Beaufort area artificial reefs, not natural live bottom. The names of these reefs are: (1) PA-4 Hunting Island (6H1), (2) PA-44 Betsy Ross, (3) PA-48 Eagles Nest, (4) PA-49 Hilton Head, and (5) PA-42 Beaufort 45.

The water depths were from 45 feet to 90 feet and, I made six (6) trips to each reef during the four (4) seasons.

After locating good structure I either anchored or drifted depending on current or wind.

Two fishermen used identical rod and reels and bait on double hook bottom rigs, one with #2 circle hooks and one with #2 "J" hooks.

Using waterproof paper, the daily results were documented as follows:

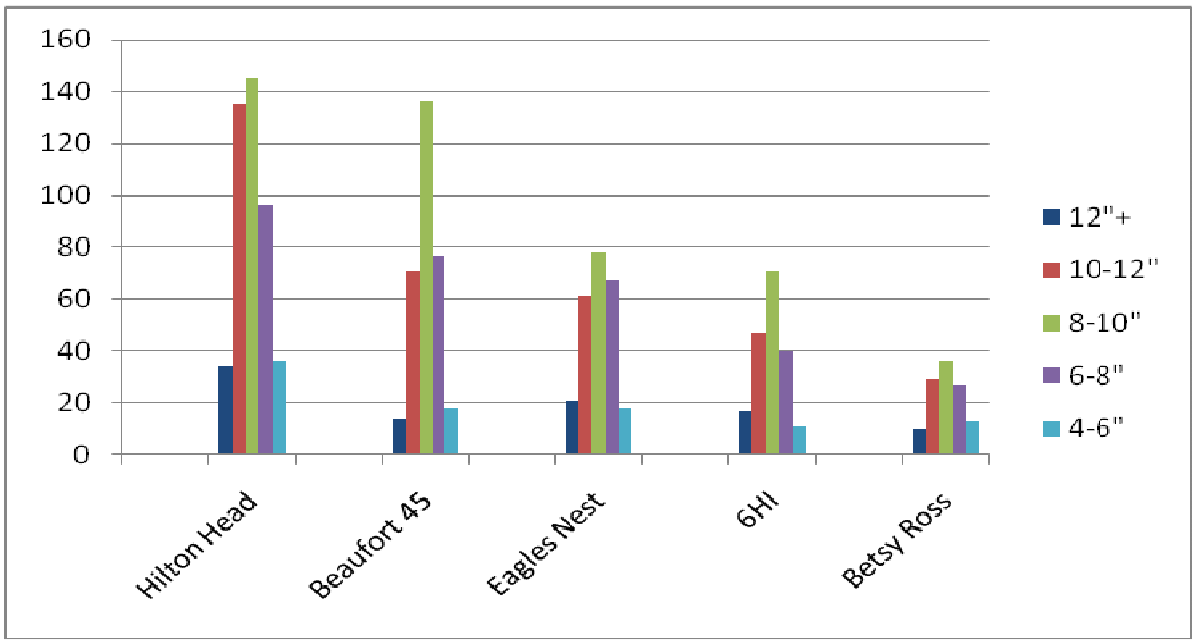
- The amount of 12" TL or longer.
- Undersized released fish were measured by size category.
- The amount gill/gut hooked on circle and "J" hooks.

An observation of released fish was included.

All the day's information was put on a trip report that was used to compile the following info.

Individual Reef Results and Totals

Reefs	12"+	10-12"	8-10"	6-8"	4-6"	Total	Ratio	"J" Gut/Gil	"C" Gut/Gil
Hilton Head	34	135	145	96	36	446	13/1	12	3
Beaufort 45	14	71	136	77	18	306	21.8/1	5	2
Eagles Nest	21	61	78	67	18	245	11.7/1	12	0
6HI	17	47	71	40	11	196	11.5/1	6	0
Betsy Ross	10	29	36	27	13	115	11.5/1	3	1
Totals	**96**	**343**	**466**	**307**	**96**	**1308**	**13.6/1**	**38**	**6**



Reef Name	Water Depth
Hilton Head	50 feet
Beaufort 45	45 feet
Eagles Nest	70 feet
6HI	50 feet
Betsy Ross	90 feet

1,308 Black Sea Bass were caught and of that total 96 were 12" or longer. That is a ratio of 13.6 to 1 or **7.3%**. If the size limit was still 10", the ratio would be 3 to 1. The Hilton Head (PA-49) was the best producer with a total of 446 fish.

A total of 38 fish caught on "J" hooks were gut or gill hooked. Six (6) fish caught on circle hooks were gut or gill hooked. When released all 44 of these fish were visibly injured and probably did not survive. This total of 44 was much lower than I had anticipated and I believe the use of power pro braided line was the reason. There is no stretch and you felt every bite and reacted quicker than with monofilament. Still, circle hooks are best to reduce injury, approximately six (6) times better.

Release Details

	10"/12"	8"/10"	6"/8"	4"/6"
Drifted Away	2	4	2	0
Float then Swim	9	17	10	0
Swam Away	332	445	295	96
Total	**343**	**466**	**307**	**96**

Benefits: List any documented, quantifiable economic effects of this project to date. Cite companies, agencies, or other groups applying project results. Indicate anticipated uses outside the research community.

I have always believed that commercial landings of Black Sea Bass are very accurate but recreationally caught landings are mostly a speculation. Used on an average, this research might give a more accurate daily result of a fishing trip.

Also, the commercial minimum size for Black Sea Bass is 10". To increase the size of the fish mass this size must be increased.

Circle hooks have again been proven to cause less damage and injury to the fish that are released.

Interactions: List and describe significant interactions with other universities, state/federal agencies, business, industry, and the general public throughout the duration of the project.

	Name of Entity:		Name of Interaction:
1	South Carolina Department of Natural Resources	1	Pat Harris, Ph.D., Associate Marine Scientist
2	South Carolina Sea Grant Consortium	2	Amber Von Harten
3		3	
4		4	
5		5	

Publications: Cite those publications published during the project year specified. You are required to send ten (10) copies of each to the Consortium office.

Journal Articles – Include author(s), title, year, journal name, volume number, and page numbers.

N/A

Other Articles – Include articles published in proceedings volumes and as book chapters.

N/A

Technical Reports – Include title, author(s), date, and publisher.

N/A

Outreach/Education Publications – Include Web site, curricula, manuals, etc.

N/A

Presentations – Include title of talk, name of meeting or conference, date, and location.

N/A

Planned Publications – Include title, author(s), expected publication date, and publisher.

N/A

Patents and Copyrights: List any patents or copyrights (awarded or pending) resulting from this project.

N/A

Other Products: Describe any unanticipated products or benefits that have resulted from this project.

A pleasant surprise was the amount of keeper red snappers (4) and (20) shorts plus 15 to 18 small grouper. I do not believe in venting due to slime introduction and careless needle placement. Some of the short snapper and most of the grouper had their stomach blown out. I used my own design of release system with good results. I also have an idea for a commercial application.

Follow-up: Describe any follow-up activities that should be undertaken to ensure that results of this project are applied to their fullest extent.

Black sea bass fishing in South Carolina during June, July, August, September and October was not very productive for 12"+ fish. Non-stop junk fish and small sea bass were caught. November, December, January, February, March, April & May were much better for quantity and size, but good weather opportunities were less.

Visual observations of released fish showed mortality rates of 20% or more due to Barracuda around the boat. Nothing I did seemed to help. During cold weather loons showed up on most reefs. 1 or 2 were not a problem because you could throw fish back away from them. When loons were thick they got most every released fish, so I devised a release method of using a 5 gallon bucket of water for small sea bass. After 8 to 10 fish were in the bucket I would dump them. The loons were afraid of the bucket and moved away and all the bubbles concealed the fish. After that I never saw a loon capture a released fish.

I would be willing to work with Amber Von Harten to produce a summary of results for publication to other fishermen.

Future Efforts (optional): List or describe future research or education efforts that would address questions or needs that surfaced during the conduct of this project.

Comments (optional): How helpful were the S.C. Sea Grant Consortium, S.C. Sea Grant Extension Program and S.C. Department of Natural Resources staff during the project? Suggestions on improving any aspect of agency interactions are welcome.

This last year was enjoyable because I fished a lot, caught many fish and learned some new techniques. My research was made easier due to information from Amber Von Harten and Elaine L. Knight at the South Carolina Sea Grant Consortium. Dr. Pat Harris from the South Carolina Department of Natural Resources was also very helpful in sharing his previous research on snapper/grouper. Original instructions were clear and concise and the few questions I had later were answered promptly.

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(Principal Investigator's Signature)

Print Name:
Donald Lombardi