

2023 Sport Fish Restoration Project Award – Angler R3

Project Title: South Carolina Marine Game Fish Tagging Program

Contact: Matt Perkinson, Saltwater Fishing Outreach Coordinator, SCDNR, 217 Fort Johnson Charleston, SC 29412. PerkinsonM@dnr.sc.gov, (843) 953-6602

Program Coordinator: Joey Coz

Project Overview:

The South Carolina Marine Game Fish Tagging Program (MGFTP) is the longest running volunteer tagging program in the Southeast and partners with recreational anglers in all of South Carolina's coastal counties to deploy external fish tags in marine game fish. Since 1974, the program has supplemented fishery dependent and independent data collection at the state and federal level, allowing for more informed management decisions in South Carolina and beyond. Program recaptures provide data on movement and migratory patterns, length frequency characterization for released fish, habitat utilization, and exploitation rates. Beyond data collection, the MGFTP is an essential angler outreach tool that promotes the benefits of proper fish handling and catch and release fishing. This holistic approach that includes scientific data collection alongside angler education addresses multiple goals of the Sport Fish Restoration Program.

Need:

This program is one of the few sources for characterizing length frequencies of fish released by saltwater recreational anglers. Length composition data, especially that of released fish (defined as Type B2, NOAA Recreational Fisheries Data Documentation), has been identified as being a significant data gap in stock assessments. Additionally, each recapture provides an opportunity to engage and educate the recreational fishing community.

Approach:

Project personnel assemble and provide tagging equipment to recreational anglers who have completed either a hands-on or virtual training workshop on proper techniques for fish tagging. Each tagger is given standardized nylon dart tags printed with a unique alphanumeric code, a REWARD message, and a website address for reporting recaptures. Anglers record tagging information based on standard protocols and that data is entered into a relational database following strict quality control measures to ensure accuracy. Fish history data is provided to both taggers and recapturing anglers and summary data is made available through multiple data products. Tagging and recapture data is also provided to researchers and fisheries managers upon request.

Impacts on the Public:

The consistent interaction between staff and recreational anglers makes the tagging program an excellent conduit for promoting resource stewardship. The program is routinely used as a means with which to educate anglers on proper fish handling, release techniques, and ethical angling practices. South Carolina's coastal population continues to grow, resulting in a new group of recreational anglers participating in the program, many of which are new to saltwater fishing. The short- and long-term recovery of tagged fish allows these new participants to recognize the benefits of catch and release

firsthand. Monthly reports and an annual report are generated and made available to all participants and other interested parties. Additionally, a monthly tagging newsletter with a distribution of over 1,500 subscribers provides information on emerging issues in recreational fisheries, highlights notable recaptures and trends, and recognizes individual taggers for their contributions to the program. The success of this program depends on the cooperation of recreational anglers and our ongoing relationship with participants provides them with a better understanding of the fishery management process and associated management decisions.

Results:

Since its inception in 1974, MGFTP participants have tagged over 190,000 fish from 151 different species. During that same time, more than 12,000 anglers have recaptured a tagged fish with over 22,000 total recaptures to date. The most commonly tagged and recaptured species are red drum, sheepshead, black drum, flounder, spotted seatrout, and cobia. The generated data have been utilized in several stock assessments, including red drum, cobia, flounder, and bluefish. In particular, cobia tagging data was instrumental in helping determine the stock boundary between Atlantic and Gulf of Mexico cobia stocks.

Due to the sheer volume of fish tagged and recaptured, we've seen countless interesting movements of fish over time, particularly those pelagic species with wide ranging migrations. Fish tagged off South Carolina as part of the program have been captured as far north as Massachusetts (spiny dogfish, nurse shark), as far south as the Ascension Islands off Brazil (Blue Marlin), and as far west as Mississippi (cobia). These unique recaptures often inspire wonder in the tagging and recapturing anglers and tend to spark interest in the migratory patterns of coastal species.

Conclusion

The MGFTP has served as an important source of data on fish migratory patterns and exploitation rates over time and protocols are being refined to allow for even finer resolution location data and more detailed analysis. However, the greatest value of the program is as a tool for outreach and education. Our trained taggers are often positive influencers within the recreational fishing community and spread the message of proper fish handling and ethical angling. Each recapture event is an opportunity for outreach with anglers that see firsthand the value of catch and release fishing. Sportfish Restoration funds are essential to keeping this long-term program running and we look forward to a fruitful partnership into the future.

FY2022 (July 2, 2021-July 1, 2022) Data

- 2,973 fish tagged
- 102 taggers
- 730 recaptures
- 605 recapturing anglers
- 23 species tagged
- Top species tagged: red drum (1784), flounder (592), sheepshead (221), black drum 145), cobia (71), striper (43)