

Snowy Grouper Citizen Science Project Idea
5/23/2022

March 2022 Council Meeting Guidance: Work with the Council’s Citizen Science Program to explore development of a project to gather supplemental snowy grouper data

- Include outreach to dealers
- Consider creating a workgroup (Design Team) to include NMFS Science Center, state TIP samplers, CitSci workgroup, dealers, and Sea Grant members
- Consider state data collection when developing a project

Potential Objectives:

- Explore if there are regional differences in size distribution for commercial snowy grouper in the South Atlantic
- Collect additional length data to supplement current data collection programs as snowy grouper fishery dependent data could become more limited when ACLs are reduced

Available Snowy Grouper commercial length and/or age data

Catch and Effort Estimates

Table 1. Snowy grouper commercial landings and trips by state for 2015-2018 (data source: Coastal Logbook Dataset).

Values	Year	State Postal			
		NC	SC	FL/GA	Total
Trips	2015	515	313	466	1,294
	2016	538	253	310	1,101
	2017	522	335	205	1,062
	2018	721	246	173	1,140
Pounds (ww)	2015	47,121	27,129	35,752	110,002
	2016	70,403	40,581	22,332	133,317
	2017	65,044	43,215	18,600	126,859
	2018	76,135	35,890	14,693	126,719

- Pounds landed and the number of trips by state are provided as background and context for the number of length and/or age samples.
- NC had the highest number of trips and pounds landed each year.
- State with the highest trips/pound (estimated by averaging info above) varied by year.

Biological Samples

Table 2. Commercial snowy grouper age samples by state used in the most recent SEDAR 36 Update assessment for 2015-2018 (data source: NOAA’s Trip Interview Program (TIP) and/or states).

Commercial Handline

Year	NC		SC		GA & FL		Coastwide	
	Number of Fish	Number of Trips	Number of Fish	Number of Trips	Number of Fish	Number of Trips	Number of Fish	Number of Trips
2015	461	55	31	17	149	30	641	102
2016	374	57	65	22	90	14	529	93
2017	347	32	60	24	101	10	508	66
2018	419	43			62	7	481	50

Commercial Longline

Year	NC & SC		GA & FL		Coastwide	
	Number of Fish	Number of Trips	Number of Fish	Number of Trips	Number of Fish	Number of Trips
2015			73	11	73	11
2016	29	12	36	8	65	20
2017	36	13			54	17
2018	40	12			64	16

- Size at age is variable for many snapper grouper species, including snowy grouper, so age data are more informative than length data. When sufficient age data are not available, length data become more important.
- Siegfried et al. (2016) found that age composition data have the largest effect on accuracy of catch at age assessments.
- In the SEDAR 36 Update assessment
 - When minimal age composition data were available, ages were used.
 - Minimum samples size cutoff for age compositions was 25 or more fish or 5 or more trips. If fewer than 25 fish and 5 trips, then length samples would be used to describe age classes.
- Comparing the overall number of coastwide trips (Table 1) with the number of trips with biological samples included in the SEDAR 36 Update assessment (Table 2) an average of 8% of trips were sampled between 2015-2018.
- Longline age samples have been more limited in the recent time period.

South Atlantic Deepwater Longline Survey (SADL)

- Started in 2020; anticipate completing annually
- Focal species: tilefishes and deepwater groupers
- Provides additional biological data on snowy grouper

Table 3. SADL survey effort and snowy grouper catch for 2020 and 2021 (source: [Price et al. SADL presentation for SAFMC SSC April 2022 meeting](#))

Year	Number of Vessels	Total Number of Trips	Total Snowy Grouper Caught	Proportion Positive Trips for Snowy Grouper
2020	2	46	29	0.17
2021	4	187	229	0.27

- Data available through current data collection programs are likely sufficient to compare the size distribution of commercial snowy grouper by region, and if not immediately will likely be sufficient as more data is collected from the SADL survey.
- Snowy grouper age samples collected through current data collection programs are currently sufficient for use in stock assessment. Supplemental length samples may not be used in the assessment unless there is a decrease in otolith sampling.

Potential Citizen Science Project Development

If the Council was interested in pursuing a citizen science project working with dealers to supplement commercial length or age data, it would be helpful to further refine the project idea by:

- Identifying species where supplemental commercial biological data would be helpful and determine the type of samples that would need to be collected (e.g. length, age). Would these data be helpful for snowy grouper? If not, are there other species where these data could be helpful?
- Identifying the intended use of the data – stock assessment, regional management, something else?
- Getting feedback from dealers to determine if these data are something they would be potentially interested and willing to collect.
- Solidifying project partners.

Resources Required

- Funding to Support:
 - Project Coordinator
 - Data collection platform and storage
 - Tools to collect age samples or lengths
 - Data processors (and ageing, if needed)
 - Outreach materials (recruitment, retention, re-engagement)
- Project Coordinator:

- Individual to oversee daily project activities, coordinate collaboration among partners, provide support to project volunteers, develop outreach materials, data QA/QC, etc.
- If project for a single species, may not need a full-time Coordinator
- Design Team:
 - Interdisciplinary group working together to develop project to help ensure data meet intended use
 - Team would discuss topics including sampling design, data needs and data collection process, data management, outreach, potential data use, etc.
 - Membership would depend on the specific project, but potential members could include: SEFSC representatives (assessment, TIP program, ageing), state agency representatives (TIP samplers, fisheries statistics, ageing), dealers, fishermen, Sea Grant and/or others with outreach expertise, Council staff
 - Team would likely need to meet over several months
- Data Collection Platform and Storage:
 - If SciFish mobile app used as data collection platform, data would be stored in ACCSP Data Warehouse
- Outreach:
 - Travel to train dealer participants, potential transport of supplies/samples, etc.
 - Support and/or partnerships to recruit and retain volunteer dealers
- Partner Ageing Lab (if collecting otoliths):
 - Identify and support partner ageing lab(s) to process and age otoliths, data management, etc; likely need partnership between federal and/or state agencies to help coordinate getting samples to partner aging lab
- Additional project needs:
 - Supplies for sample collection, storage, and transport (as needed); data collection and processing supplies; training materials, etc.

Council Action:

- Provide staff guidance on whether to pursue development of a citizen science project working with dealers to supplement commercial snowy grouper biological data at this time.

References

Siegfried, K.I., E. H. Williams, K.W. Shertzer, and L.G. Coggins. 2016. Improving stock assessments through data prioritization. *Canadian Journal of Fisheries and Aquatic Sciences* 73: 1703-1711.