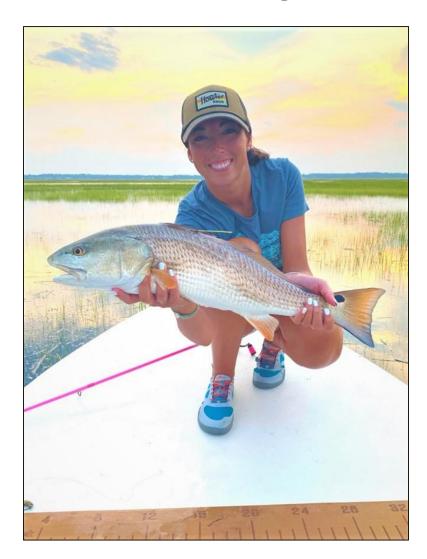
Georgia Saltwater Anglers' and Captains' Attitudes Toward Saltwater Fishing Issues



Study Conducted for Georgia Department of Natural Resources Coastal Resources Division

2022



GEORGIA SALTWATER ANGLERS' AND CAPTAINS' ATTITUDES TOWARD SALTWATER FISHING ISSUES

2022

Responsive Management National Office

Mark Damian Duda, Executive Director
Martin Jones, Senior Research Associate
Tom Beppler, Senior Research Associate
Steven J. Bissell, Ph.D., Qualitative Research Associate
Andrea Criscione, Senior Research Associate
Patrick Doherty, Research Associate
Gregory L. Hughes, P.E., Research Associate
Amanda Center, Survey Center Manager
Alison Lanier, Business Manager

130 Franklin Street Harrisonburg, VA 22801 540/432-1888

Email: mark@responsivemanagement.com www.responsivemanagement.com

Responsive Management would like to thank Kathy Knowlton of the Georgia Department of Natural Resources, Coastal Resources Division, for her input, support, and guidance on this project.

EXECUTIVE SUMMARY

Responsive Management conducted this study for the Georgia Department of Natural Resources, Coastal Resources Division (CRD), to determine saltwater anglers' and captains' participation in various types of marine fishing, their satisfaction levels, and their attitudes toward marine fishing issues. The survey included questions specifically about four main species: red drum, spotted seatrout, flounder, and sheepshead. The study entailed two scientific, probability-based multi-modal surveys: one of recreational saltwater anglers and one of professional fishing captains and guides (hereinafter referred to simply as captains).

The population of saltwater anglers from which the sample was obtained was provided by the CRD. A probability-based selection process was used to ensure that each angler had an equal chance of being contacted. A screener question ensured that only those who had saltwater fished in Georgia waters in the past 12 months were interviewed.

The population of captains also was provided by the CRD. An effort was made to contact every captain listed in this registry, so in this sense the effort was an attempt at a *census* rather than a sampling of saltwater fishing captains.

The survey questionnaires were developed cooperatively by the CRD and Responsive Management. The surveys were computer coded for both telephone surveying and online surveying.

The telephone surveys were coded using Responsive Management's computer-assisted telephone interviewing (CATI) system. An important aspect of this CATI system is that the computer controls which questions are asked, but each telephone survey is administered by a live interviewer.

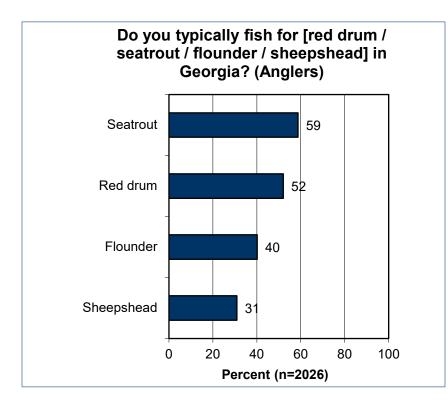
The online surveys were coded in an online survey platform. Note that the online surveys were closed, meaning they were available only to respondents who were specifically selected for the surveys and who were sent the unique access code. Respondents could complete a survey only once. The surveys could not be accessed through a general internet search.

Responsive Management obtained 2,026 completed surveys from recreational saltwater anglers and 107 completed surveys from saltwater fishing captains. The telephone and online phases of both surveys were conducted in January and February 2022. The analysis of data was performed using IBM SPSS Statistics as well as proprietary software developed by Responsive Management.

FISHING ACTIVITIES

The survey found that 85% of Georgia saltwater anglers fished inshore waters, 57% fished nearshore waters, and 26% fished offshore waters. In total, 96% fished either inshore or nearshore waters and were asked many follow-up questions. Fishing with a hook and line is by far the most common method, done by 98% of inshore/nearshore anglers. Two more activities were done by at least a quarter of inshore/nearshore anglers: crabbing (29%) and cast netting for shrimp (28%).

Nearly all captains take clients fishing in inshore waters, just over half take them fishing in nearshore waters, and a little more than a quarter take them fishing in offshore waters.



More than half of saltwater anglers fish for seatrout and red drum, with lesser amounts fishing for flounder and sheepshead, as shown in the graph at left.

The survey asked about night fishing: 28% of anglers fished at night, typically from a shore location.

Of licensed saltwater anglers, 39% have saltwater fished for more than 20 years, while 42% have saltwater fished for 10 years or less.

DAYS OF FISHING

Days of fishing among anglers are summarized in the following table.

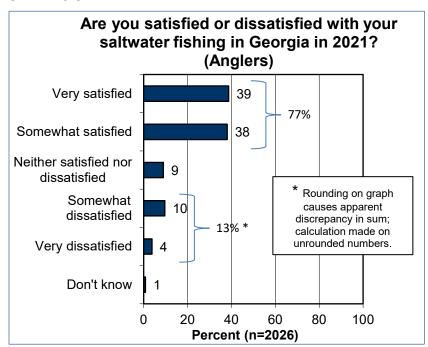
| Summary Table of Days of Fishing Activity | | | | | | | |
|---|---|--------------------------------------|--|---------------------------------------|---|--|--|
| Activity | Percent of All Saltwater Anglers Participating | Mean Days (Among Participants) | Median Days (Among Participants) | Percent Participating 10 Days or Less | Percent Participating More Than 30 Days | | |
| Fishing with a hook and line in inshore/nearshore waters | 94 | 23.9 | 12 | 47 | 18 | | |
| Crabbing with a trap or hand line in inshore/nearshore waters | 28 | 12.7 | 5 | 75 | 7 | | |
| Cast netting for shrimp in inshore/nearshore waters | 27 | 11.6 | 5 | 74 | 7 | | |
| Fishing on an inshore artificial reef in inshore/nearshore waters | 14 | 11.7 | 5 | 72 | 5 | | |
| Gigging for flounder in inshore/nearshore waters | 7 | 7.5 | 4 | 87 | 2 | | |
| Seining for shrimp in inshore/nearshore waters | 4 | 7.3 | 4 | 86 | 1 | | |
| Harvesting oysters or clams in inshore/nearshore waters | 3 | 6.5 | 2 | 79 | 1 | | |
| Total days doing any of the above activities | 96 | 27.7 | 15 | 44 | 23 | | |
| Fishing for spotted seatrout | 59 | 21.6 | 12 | 48 | 17 | | |
| Fishing for red drum | 52 | 21.9 | 12 | 48 | 17 | | |
| Fishing for flounder | 40 | 19.4 | 10 | 52 | 15 | | |
| Fishing for sheepshead | 31 | 15.3 | 10 | 62 | 9 | | |

SATISFACTION WITH FISHING ACTIVITIES OVERALL

As the graph at right shows, 77% of saltwater anglers are satisfied with their saltwater fishing in Georgia in 2021, while 13% are dissatisfied. Regarding satisfaction with fishing in *inshore and nearshore* waters: 79% are satisfied, 10% are dissatisfied.

Among captains, 64% are satisfied with inshore/nearshore fishing, while 29% are dissatisfied.

In perceived trends in fishing quality, 42% of anglers say that it stayed the same, and



the percentage saying that it declined (22%) exceeds the percentage saying that it improved (12%). However, captains are more pessimistic, with 58% saying it has declined, compared to 22% saying it has stayed the same and 16% saying it has improved.

CONSTRAINTS TO AND DISSATISFACTIONS WITH FISHING

The top-named constraints or dissatisfactions are lack of time, distance/travel time, the weather, not enough fish, and lack of access.

OPINIONS ON REGULATIONS

Satisfaction with the current saltwater fishing regulations (70%) exceeds dissatisfaction (16%) among anglers. Their top reason for dissatisfaction is a dislike of the current limits. Other prominent reasons are that the regulations are too strict or that they are not strict enough (with about a third of the dissatisfied anglers saying each of those responses).

Among captains, dissatisfaction (57%) with the current saltwater fishing regulations exceeds satisfaction (38%). They most commonly do not like the current limits and/or think that the regulations are not strict enough.

There is no consensus among captains on the desired daily creel limit for red drum, with a third wanting 2 fish to be the limit, and a quarter wanting 5 fish to be the limit.

COUNTIES OF FISHING

The top counties that saltwater anglers fish in (and depart from if they fish in a boat) are Glynn and Chatham Counties. The table shows the counties from north to south.

| Percent of Those Fishing the Given Species in the County (or Who Depart to Go Fishing From the County) (Anglers) | | | | | | | |
|--|----|----|----|----|--|--|--|
| Counties (from North to South) Red drum Spotted seatrout Flounder Sheepshead | | | | | | | |
| Chatham | 34 | 33 | 33 | 30 | | | |
| Bryan | 17 | 17 | 15 | 14 | | | |
| Liberty | 12 | 12 | 13 | 12 | | | |
| McIntosh | 27 | 27 | 25 | 28 | | | |
| Glynn | 36 | 38 | 38 | 38 | | | |
| Camden | 16 | 18 | 19 | 18 | | | |

Most commonly, captains are based out of Glynn or Chatham Counties.

RED DRUM FISHING

Just about half of saltwater anglers fish for red drum, and they most typically fish in and/or depart from Glynn, Chatham, and McIntosh Counties. The overwhelming majority of captains (89%) guide anglers seeking red drum. Among anglers who fish for that species, the mean amount of time fishing is 21.9 days annually, while the median is 12 days.

Almost two thirds of red drum anglers are satisfied with their red drum fishing (62%), but almost a quarter are dissatisfied (24%). Satisfaction is greater for the average size (60%) than the number (55%) of red drum. Nonetheless, both have substantial percentages who are dissatisfied: 31% are dissatisfied with the number of red drum that they are catching, and 21% are dissatisfied with the average size. The more avid red drum anglers have a higher percentage being dissatisfied.

The survey asked about targeting large red drum of more than 36 inches: 35% of red drum anglers do. These anglers were asked follow-up questions about using conservation measures (circle hooks and short leader lines). The overwhelming majority of those who target large red drum use circle hooks (87% do so), and 54% also use short leader lines.

The survey explained the current regulations to respondents (5 per day per person with a 14- to 23-inch slot limit with year-round harvest) before asking about satisfaction or dissatisfaction with the red drum regulations. About two thirds of anglers are satisfied (65%), while about a quarter are dissatisfied (23%). Among captains, dissatisfaction (62%) with the current red drum regulations far exceeds satisfaction (32%).

Regarding preferences for slot sizes, no single choice emerges among anglers or captains. By far, among red drum anglers, the most common desired daily creel limit for red drum is 5 fish.

Among red drum anglers, there is more support for (58%) than opposition to (20%) to the establishment of a vessel limit for red drum. Captains have even higher support: 77% support it, while 13% oppose it.

The majority of red drum anglers (55%) oppose the establishment of a season for red drum, while only about a quarter (28%) support it. Captains' results are similar: 56% oppose it, while 33% support it.

Anglers are about evenly divided on their perceptions of the number of red drum in Georgia waters. For each size range given, the most common response is that anglers are seeing about the same. Captains' perceptions are less positive: in the two shorter lengths (less than 23 inches and 23 inches to 36 inches), captains most commonly say the fish are declining. In the longer length range (more than 36 inches), captains most commonly say they are about the same.

SPOTTED SEATROUT FISHING

Well more than half of saltwater anglers fish for spotted seatrout, and the large majority of captains take clients fishing for seatrout. Most commonly, anglers fish in and/or depart from Glynn, Chatham, and McIntosh Counties. Among anglers, the mean number of days fishing for spotted seatrout is 21.6 days, while the median is 12 days.

About two thirds of spotted seatrout anglers (69%) say that they are satisfied with their spotted seatrout fishing in Georgia, while 17% are dissatisfied. Satisfaction is slightly lower, however, for the number of spotted seatrout that anglers are catching (62% are satisfied, while 22% are dissatisfied). It is lower still for the average size of spotted seatrout (only 54% are satisfied, while 28% are dissatisfied).

Among captains, 55% are satisfied with spotted seatrout fishing overall, while 36% are dissatisfied. Regarding the number, 62% are satisfied, and 31% are dissatisfied. Also among captains, 38% are satisfied with the average size of spotted seatrout, while 57% are dissatisfied.

Spotted seatrout anglers generally release from a quarter to a third of the spotted seatrout that they catch (the mean is 36.2% released; the median is 25% released). Of note is that about a third (32%) keep all the legal spotted seatrout that they catch (noncoastal residents are more likely to keep all the legal spotted seatrout that they catch, compared to coastal residents).

Most seatrout anglers who release fish do so because they practice catch and release. About a third who release do so because they have enough fish, and a follow-up question to that found

that two thirds have enough fish regardless of the limit, while about a third release them because they have reached the regulatory limit.

Satisfaction with the spotted seatrout regulations is more than double the dissatisfaction with it among anglers: 64% are satisfied, while 24% are dissatisfied. The results are largely opposite among captains: 33% are satisfied, while 62% are dissatisfied.

FLOUNDER FISHING

Somewhat under half of saltwater anglers fish for flounder, with Glynn, Chatham, and McIntosh Counties being the ones they most typically fish in and/or depart from. A little over half of captains take clients to fish for flounder in Georgia. The days fishing for flounder by anglers are as follows: the mean is 19.4 days, and the median is 10 days among anglers.

Overall among flounder anglers, 57% are satisfied, while 23% are dissatisfied. Regarding the number of flounder, 49% of anglers are satisfied, and 31% are dissatisfied. For the average size of flounder, 54% are satisfied, and 23% of anglers are dissatisfied.

Among captains, 57% are satisfied, while 32% are dissatisfied. Regarding the number of flounder, 52% of captains are satisfied, but 37% of them are dissatisfied. Regarding the size, 49% are satisfied, and 35% are dissatisfied.

Concerning satisfaction or dissatisfaction with the flounder regulations, satisfaction is three times the dissatisfaction among anglers: 66% are satisfied, while 21% are dissatisfied. Again, captains are the opposite, with 33% satisfied and 62% dissatisfied with the flounder regulations.

Gigging for flounder is much less common than fishing for them using a hook and line, among Georgia anglers. The survey findings suggest that a hook and line is used over a gig by about 9 to 1.

SHEEPSHEAD FISHING

A little under a third of saltwater anglers fish for sheepshead in Georgia, and they most commonly fish in and/or depart from Glynn, Chatham, and McIntosh Counties. Just under half of captains take clients to fish for sheepshead. The mean days of fishing for sheepshead among anglers is 15.3 days, and the median is 10 days.

Overall, 67% of sheepshead anglers are satisfied with their sheepshead fishing, while 14% are dissatisfied with it. Regarding the number of sheepshead, 61% are satisfied, and 19% are dissatisfied. For the average size of sheepshead, 65% of anglers are satisfied, and 12% are dissatisfied.

Satisfaction (71%) far exceeds dissatisfaction (13%) for sheepshead fishing, among captains who took people fishing for sheepshead. Satisfaction is greater for the number of sheepshead (73%) than for the average size of them (65%), although satisfaction is relatively high for both among captains.

Among anglers, satisfaction with the regulations for sheepshead is at 72%, which exceeds dissatisfaction, which is at 15%. The majority of captains are dissatisfied with the sheepshead regulations (65%), while 31% are satisfied.

TABLE OF CONTENTS

| Introduction and Methodology | 1 |
|--|----|
| Survey Sample | 1 |
| Questionnaire Design | 1 |
| Multi-Modal Survey Administration | 2 |
| Data Analysis | 3 |
| Sampling Error | |
| Additional Information About the Presentation of Results in the Report | 4 |
| Fishing Activities | 6 |
| Days of Fishing | 9 |
| Satisfaction with Fishing Activities Overall | 16 |
| Constraints to and Dissatisfactions with Fishing | 18 |
| Opinions on Regulations | 19 |
| Counties of Fishing | 20 |
| Red Drum Fishing | 21 |
| Spotted Seatrout Fishing | 40 |
| Flounder Fishing | 51 |
| Sheepshead Fishing | 61 |
| Demographic Information | 69 |
| Trends in Angler Survey Data | 74 |
| Fishing Activities | 74 |
| Satisfaction With Fishing Activities Overall | 76 |
| Opinions on Regulations | 77 |
| Red Drum Fishing | 78 |
| Spotted Seatrout Fishing | 84 |
| Survey of Captains | 87 |
| Fishing Activities | 87 |
| Days of Fishing | 89 |
| Satisfaction with Fishing Activities Overall | 91 |
| Constraints to and Dissatisfactions with Fishing | 92 |
| Opinions on Regulations | 93 |
| Counties of Fishing | 95 |
| Red Drum Fishing | 96 |
| Spotted Seatrout Fishing | |
| Flounder Fishing | |
| Sheepshead Fishing | |
| Demographic Information | |
| Trends in Captains Survey Data | |
| About Responsive Management | |

INTRODUCTION AND METHODOLOGY

Responsive Management conducted this study for the Georgia Department of Natural Resources, Coastal Resources Division (CRD), to determine saltwater anglers' and captains' participation in various types of marine fishing, their satisfaction levels, and their attitudes toward regulations and other marine fishing issues. The survey included questions specifically about four main species: red drum, spotted seatrout, flounder, and sheepshead. The study entailed two scientific, probability-based multi-modal surveys: one of recreational saltwater anglers and one of professional fishing captains and guides (hereinafter referred to simply as captains). Specific aspects of the research methodology are discussed below.

SURVEY SAMPLE

The population of saltwater anglers was provided by the CRD and consisted of licensed resident anglers with saltwater fishing privileges in Georgia (i.e., anglers possessing a Saltwater Information Program permit). The sample was de-duplicated to remove multiple entries of the same angler (because multiple years were represented in the population) and to limit cases to adults age 16 years old or older. Next, a probability-based selection process was used to ensure that each angler had an equal chance of being contacted. A screener question ensured that only those who had fished in Georgia salt waters during 2021 were interviewed.

The population of captains also was provided by the CRD from its database of licensed resident captains. An effort was made to contact every captain listed in this registry, so in this sense the effort was an attempt at a *census* rather than a sampling of saltwater fishing captains. As with the angler survey, a screener ensured that only those who provided saltwater guide services in Georgia in the past 12 months were interviewed.

QUESTIONNAIRE DESIGN

The survey questionnaires were developed cooperatively by the CRD and Responsive Management, based on the goals of the study and the research team's familiarity with fishing and outdoor recreation. The surveys were computer coded for both telephone surveying and online surveying.

The telephone surveys were coded using Responsive Management's computer-assisted telephone interviewing (CATI) system. An important aspect of this CATI system is that the computer controls which questions are asked, but each telephone survey is administered by a live interviewer.

The online surveys were coded in an online survey platform. Note that the online surveys were closed, meaning they were available only to respondents who were specifically selected for the surveys and who were sent the unique access code. Respondents could complete a survey only once. The surveys could not be accessed through a general internet search.

For both the online and telephone surveys, the survey instruments were programmed to automatically skip questions that did not apply and to substitute phrases in the surveys based upon previous responses, as necessary, for the logic and flow of the interviews. There were slight differences between the telephone and online versions of the surveys to accommodate

each survey mode, but otherwise the surveys were identical. Responsive Management conducted pretests of the survey questionnaires in both modes to ensure proper wording, flow, and logic in the surveys. Both the online and telephone versions produced data that could be exported directly into Responsive Management's data analyses programs.

MULTI-MODAL SURVEY ADMINISTRATION

For anglers selected for the survey sample, those with an email address were contacted using that mode, and the remaining anglers were contacted by telephone (both landlines and cell phones were called). The emails were sent on behalf of the CRD, assuring potential respondents of the legitimacy of the survey. Those contacts with emails that were determined to be to invalid were put back into the telephone sample so that attempts could be made to reach them by telephone. This additional effort to reach them ensured that the survey was as fully representative of anglers overall as possible.

The emails directed at captains were sent out first via the online platform used for surveying. However, additional attempts were made to contact nonrespondents via an email address based at Responsive Management, which added to the efficacy of contact procedures, as these would not be flagged as illegitimate. Finally, all captains who had not completed the survey were also called multiple times. Additionally, CRD staff sent emails to introduce the survey to captains, as well as reminder emails to encourage them to complete the survey.

Note that there was some fluidity of methods, because the email provided a number that people could call if they preferred to do the survey that way, so some in the sample as email respondents ended up completing the survey by telephone. Additionally, some respondents were called on the telephone, but then they completed the survey online prompted by the telephone call, so these respondents from the telephone sample ended up completing the survey online. Ultimately, the survey was administered in the mode that was most convenient to the respondent.

For the telephone phase, telephone interviews were conducted Monday through Friday from noon to 9:00 p.m. and Saturday from noon to 7:00 p.m., local time, using interviewers with experience conducting computer-assisted surveys about fishing and natural resources. A five-callback design was used to maintain the representativeness of the telephone sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day.

For quality control, Survey Center Managers monitored the telephone interviews in real time and provided feedback to the interviewers. To further ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the standards established by the Council of American Survey Research Organizations. Methods of instruction included lecture and role-playing. The Survey Center Managers and other professional staff conducted briefings with the interviewers prior to the administration of these surveys. Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and qualifiers for participation, interviewer instructions within the survey questionnaires, reading of the survey questions, skip

patterns, and probing and clarifying techniques necessary for specific questions in the survey questionnaires.

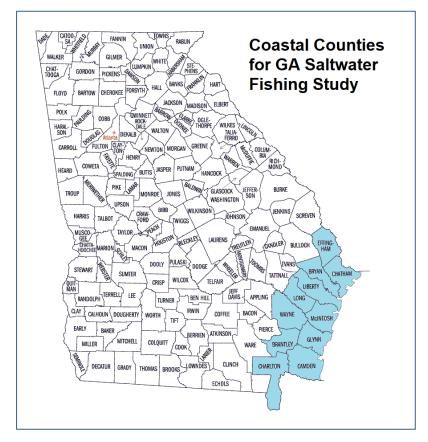
After obtaining the completed questionnaires (both the telephone and online versions), the Survey Center Managers and/or statisticians checked each completed survey to ensure clarity and completeness. In addition, the surveys included proprietary quality control code to further ensure the quality of the data.

Responsive Management obtained 2,026 completed surveys from recreational saltwater anglers. Approximately three quarters of anglers selected in the sample chose to take the survey online. In the survey of recreational saltwater anglers, 0.21% of the telephone contacts terminated the survey before completing, and 0.19% of the email contacts terminated the survey before completing; these terminated surveys were not used in the final dataset of 2,026 completed surveys. Responsive Management obtained 107 completed surveys from saltwater fishing captains, representing 55% of licensed resident captains. The telephone and online phases of both surveys were conducted in January and February 2022.

DATA ANALYSIS

The analysis of data was performed using IBM SPSS Statistics as well as proprietary software developed by Responsive Management.

Crosstabulations were run on many of the questions based on area of residence (coastal versus noncoastal—see the accompanying map) and by avidity. For the avidity questions, 10 days was chosen as the threshold. Questions are crosstabulated by those who fished 10 or fewer days versus those who fished for more than 10 days. For each question that was examined more closely through these crosstabulations, the coastal/noncoastal crosstabulation is shown first followed by the days of participation crosstabulation. Trends were also run comparing the current results to the results from a similar study conducted in 2017.



SAMPLING ERROR

Throughout this report, findings of the saltwater angler survey are reported at a 95% confidence interval. For the entire sample of saltwater anglers, the sampling error is at most plus or minus 2.17 percentage points. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or minus 2.17 percentage points of each other. Sampling error was calculated using the formula described below, with a sample size of 2,026 and a population size of 387,157 saltwater anglers.

Sampling Error Equation

$$B = \left(\sqrt{\frac{N_p(.25)}{N_s} - .25}\right) (1.96)$$
Where: B = maximum sampling error (as decimal)
$$N_P = \text{population size (i.e., total number who could be surveyed)}$$

$$N_S = \text{sample size (i.e., total number of respondents surveyed)}$$

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley & Sons, NY. **Note**: This is a simplified version of the formula that calculates the <u>maximum</u> sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

Due to the census approach of contacting saltwater fishing captains, calculation of a sampling error does not apply.

ADDITIONAL INFORMATION ABOUT THE PRESENTATION OF RESULTS IN THE REPORT

In examining the results, it is important to be aware that the questionnaires included several types of questions:

- Open-ended questions are those in which no answer set is read to the respondents;
 rather, they can respond with anything that comes to mind from the question.
- Closed-ended questions have an answer set from which to choose.
- Single or multiple response questions: Some questions allow only a single response, while other questions allow respondents to give more than one response or choose all that apply. Those that allow more than a single response are indicated on the graphs with the label, "Multiple Responses Allowed."
- Scaled questions: Many closed-ended questions (but not all) are in a scale, such as those that go from very satisfied to very dissatisfied.
- Series questions: Many questions are part of a series, and the results are primarily intended to be examined relative to the other questions in that series (although results of the questions individually can also be valuable). Typically, results of all questions in a series are shown together.

Some graphs show an average, either the mean or median (or both). The mean is simply the sum of all numbers divided by the number of respondents. Because extremely high or low numbers relative to most of the other responses may skew the mean, the median is shown as well. The median is the number at which half the sample is above and the other half is below. In

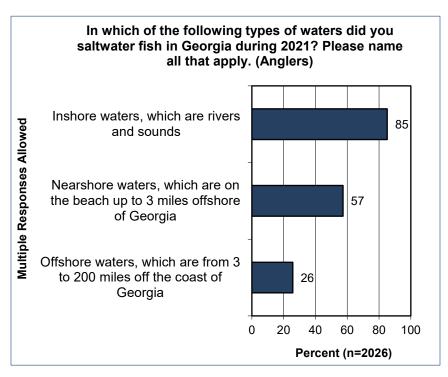
other words, a median of 150 means that half the sample gave an answer of more than 150 and the other half gave an answer of less than 150.

Most graphs show results rounded to the nearest integer; however, all data are stored in decimal format, and all calculations are performed on unrounded numbers. For this reason, some results may not sum to exactly 100% because of this rounding on the graphs. Additionally, rounding may cause apparent discrepancies of 1 percentage point between the graphs and the reported results of combined responses (e.g., when "very satisfied" and "somewhat satisfied" are summed to determine the total percentage who are satisfied).

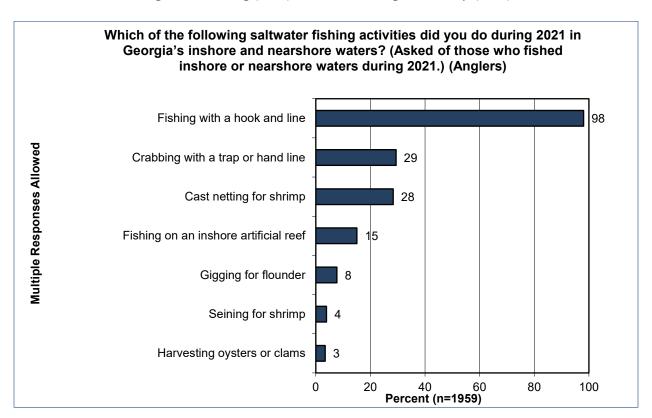
The results of the angler survey are presented first, starting on the following page. Then a separate section is included for the survey of captains.

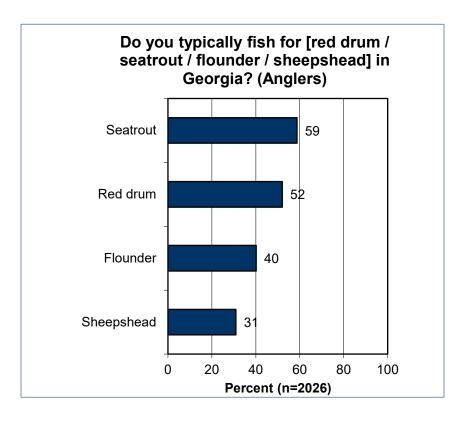
FISHING ACTIVITIES

Nearly all Georgia saltwater anglers fish inshore waters (85% do so), and more than half (57%) fish in nearshore waters. Less commonly, they fish offshore waters (26% do so), which are 3 or more miles from shore. In total, 96% fished either inshore or nearshore waters and were asked the following question regarding the type of fishing done in those waters, hereinafter referred to as inshore/nearshore anglers.



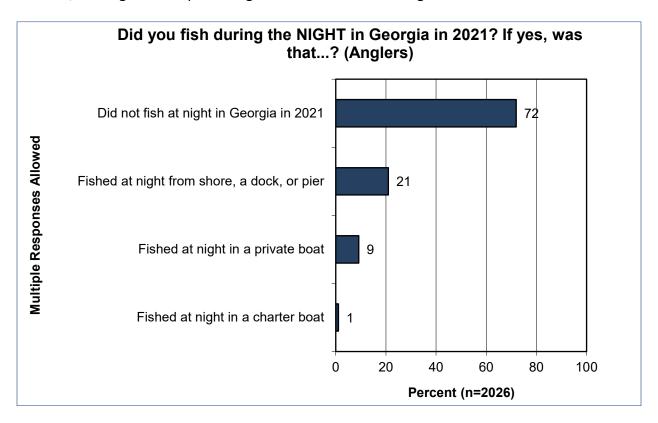
Fishing with a hook and line is ubiquitous: almost all inshore/nearshore anglers did this type of fishing in those waters in 2021. Two more activities were done by at least a quarter of inshore/nearshore anglers: crabbing (29%) and cast netting for shrimp (28%).



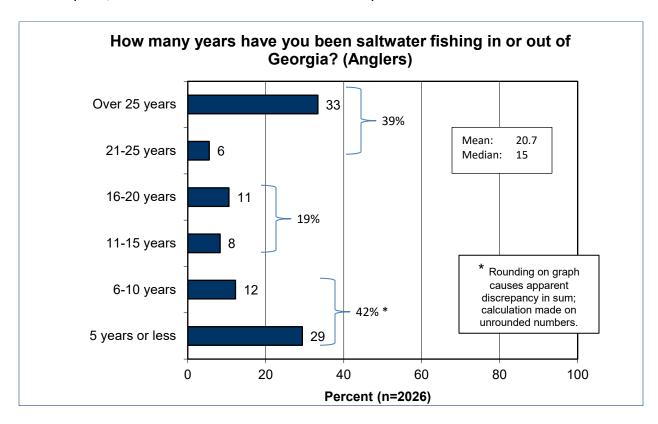


The survey also asked specifically about fishing for four species: red drum, seatrout, flounder, and sheepshead. More than half fish for seatrout and red drum, with lesser amounts fishing for flounder and sheepshead. Note that each of these fish species has its own section further on in this report.

Another type of fishing asked about is night fishing: 28% fished at night, typically from a shore location, although a small percentage fished from a boat at night.



Licensed saltwater anglers have a somewhat dichotomous categorization based on years fishing: they either have saltwater fished for a long time or they are quite new to saltwater fishing, with only a small percentage in between. Overall, 39% have saltwater fished for more than 20 years, while 42% have saltwater fished for 10 years or less.



DAYS OF FISHING

The survey asked about the days of participation in some of the various fishing activities that were discussed above. A summary table is first presented of all the days questions, followed by the individual graphs for the activities.

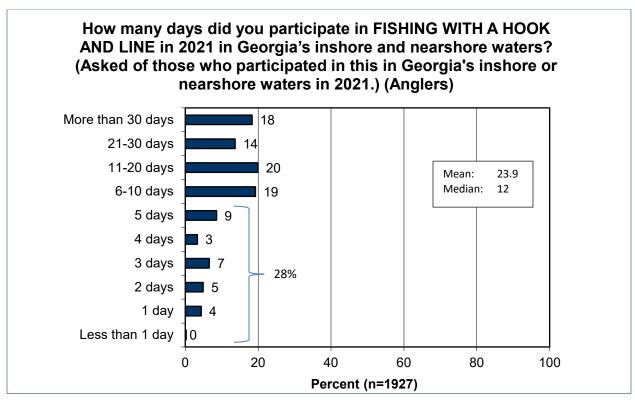
The first part of the table shows days in the types of fishing in inshore/nearshore waters, arranged by the percentage who do the activity. This is followed by the days fishing for each of the four major species that the survey asks about: spotted seatrout, red drum, flounder and sheepshead.

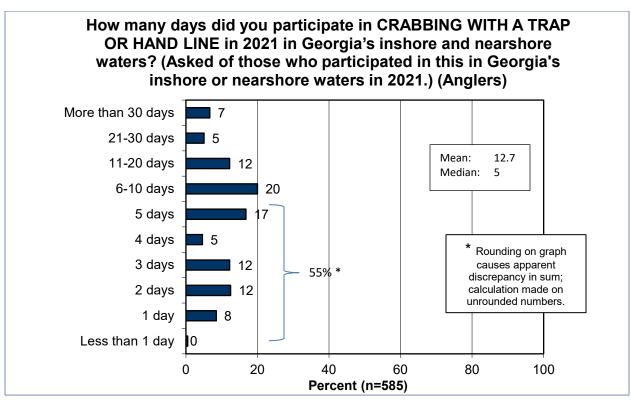
The activity with the highest mean number of days is fishing with a hook and line in inshore/nearshore waters. Three others activities are in a middle tier for mean days: crabbing with a trap or hand line, fishing on an inshore artificial reef, and cast netting for shrimp.

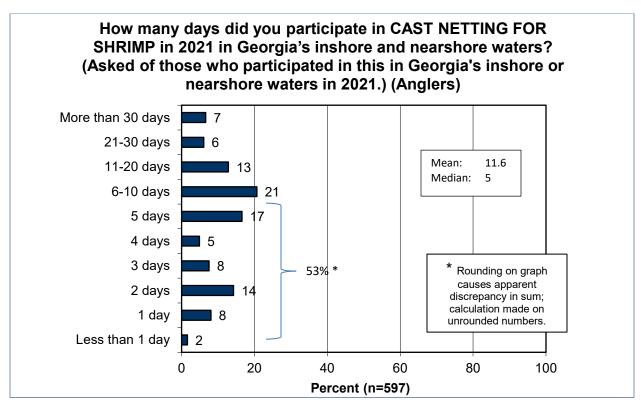
Regarding fishing for the four major fish species, sheepshead has a markedly lower mean number of days compared to the other fish, which are all close (from 19.4 to 21.9 mean days).

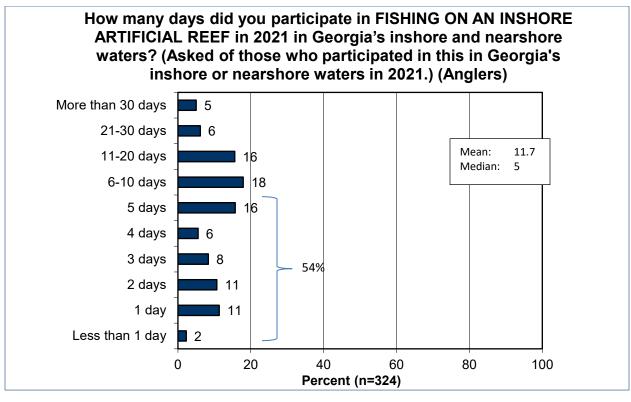
| Summary Table of Days of Fishing Activity | | | | | | | |
|---|--|--------------------------------------|--|---------------------------------------|---|--|--|
| Activity | Percent of All Saltwater Anglers Participating* | Mean Days (Among Participants) | Median Days (Among Participants) | Percent Participating 10 Days or Less | Percent Participating More Than 30 Days | | |
| Fishing with a hook and line in inshore/nearshore waters | 94 | 23.9 | 12 | 47 | 18 | | |
| Crabbing with a trap or hand line in inshore/nearshore waters | 28 | 12.7 | 5 | 75 | 7 | | |
| Cast netting for shrimp in inshore/nearshore waters | 27 | 11.6 | 5 | 74 | 7 | | |
| Fishing on an inshore artificial reef in inshore/nearshore waters | 14 | 11.7 | 5 | 72 | 5 | | |
| Gigging for flounder in inshore/nearshore waters | 7 | 7.5 | 4 | 87 | 2 | | |
| Seining for shrimp in inshore/nearshore waters | 4 | 7.3 | 4 | 86 | 1 | | |
| Harvesting oysters or clams in inshore/nearshore waters | 3 | 6.5 | 2 | 79 | 1 | | |
| Total days doing any of the above activities | 96 | 27.7 | 15 | 44 | 23 | | |
| Fishing for spotted seatrout | 59 | 21.6 | 12 | 48 | 17 | | |
| Fishing for red drum | 52 | 21.9 | 12 | 48 | 17 | | |
| Fishing for flounder | 40 | 19.4 | 10 | 52 | 15 | | |
| Fishing for sheepshead | 31 | 15.3 | 10 | 62 | 9 | | |

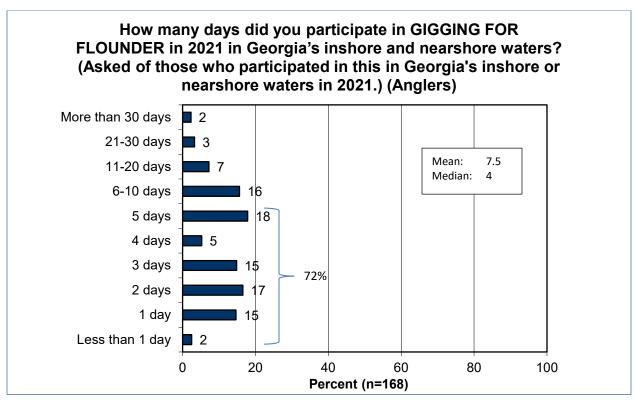
^{*}The graph previously presented showed the percentage of those who had fished inshore or nearshore waters; this column shows the percentage out of all saltwater anglers.

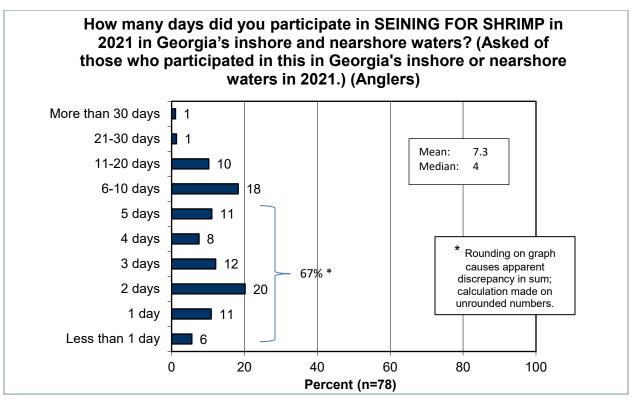


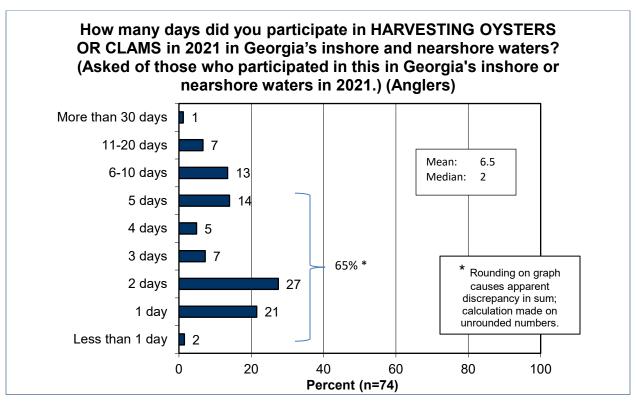


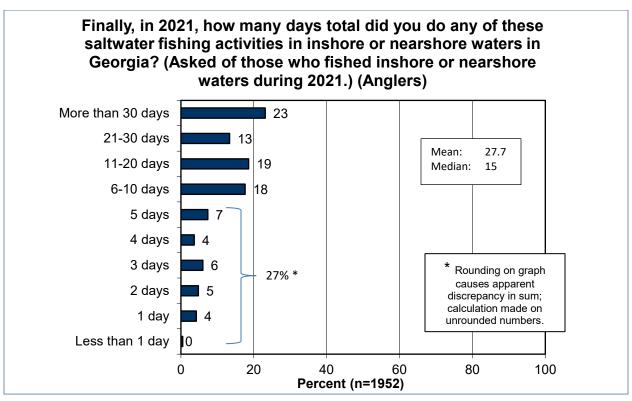




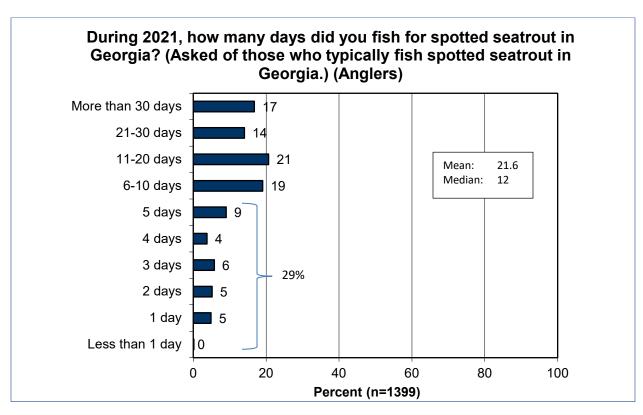


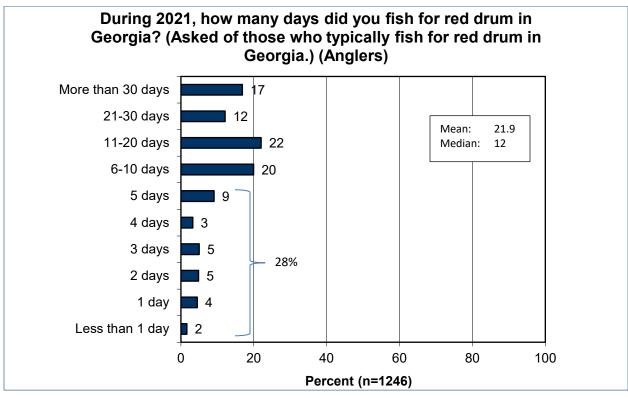


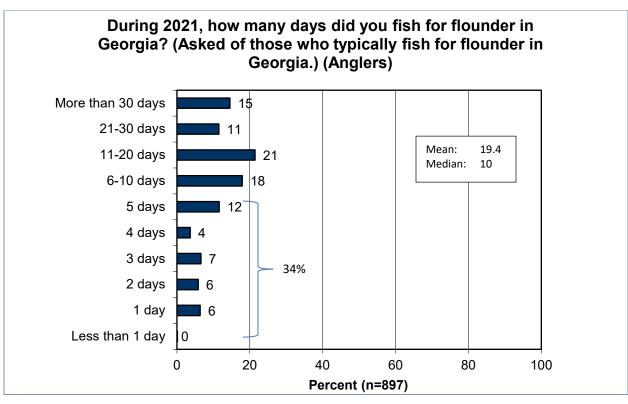


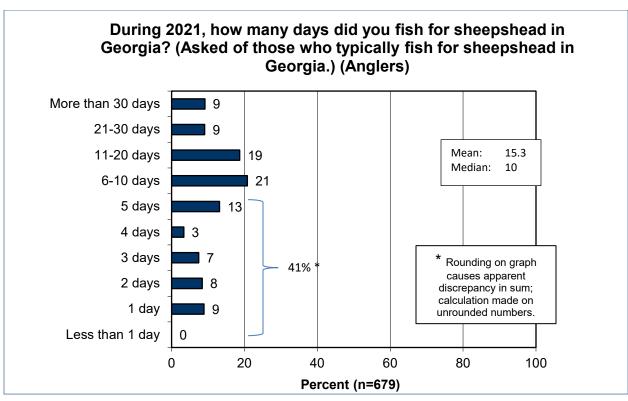


Note that, for the reader's convenience, these days fishing questions are also shown in each of the individual sections for these species.





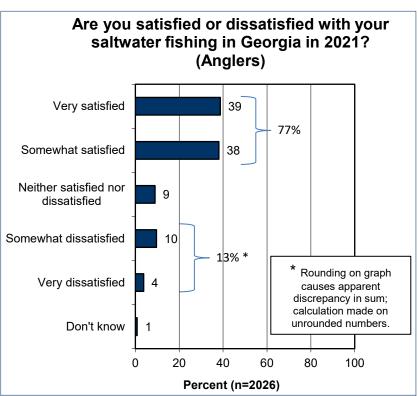


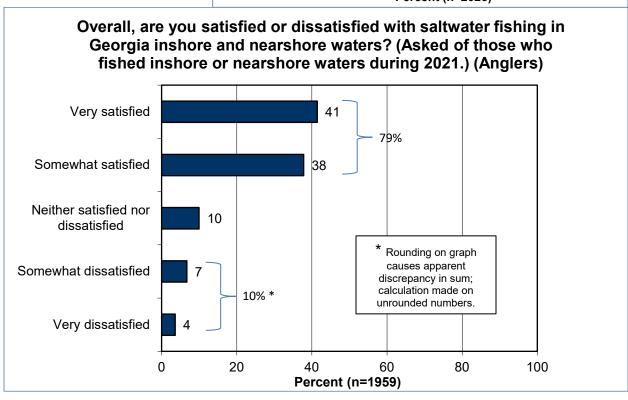


SATISFACTION WITH FISHING ACTIVITIES OVERALL

The survey asked about satisfaction overall and in inshore/nearshore waters, as well as for the four major species. This report section first looks at satisfaction overall and in inshore/nearshore waters.

Overall, more than three quarters of saltwater anglers were satisfied with their saltwater fishing in Georgia in 2021: 77% were satisfied. This far exceeds dissatisfaction, which stands at 13%. Almost identical results were found regarding satisfaction with fishing in inshore and nearshore waters: 79% were satisfied, while only 10% were dissatisfied.

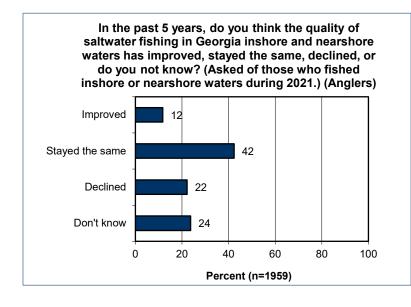




The survey then asked about satisfaction/dissatisfaction with fishing for the four major species (red drum, spotted seatrout, flounder, and sheepshead) and for the number of them caught, their average size, and the regulations pertaining to them. The graphs for these questions are shown within the individual report sections for each species, but the results are included in this summary table that shows all satisfaction/dissatisfaction questions.

| Summary Table of Satisfaction/Dissatisfaction Questions (Anglers) | | | | | | |
|---|----------------|--------------------|--------------------|-----------------------|-------------------|--------------------|
| Activity | Very satisfied | Somewhat satisfied | Total Satisfied | Somewhat dissatisfied | Very dissatisfied | Total dissatisfied |
| Saltwater fishing | 39 | 38 | 77 | 10 | 4 | 13 |
| Saltwater fishing in inshore and nearshore waters | 41 | 38 | 79 | 7 | 4 | 10 |
| Current saltwater fishing regulations | 35 | 35 | 70 | 10 | 6 | 16 |
| Red drum fishing | 25 | 37 | 62 | 15 | 9 | 24 |
| Number of red drum you catch | 20 | 35 | 55 | 19 | 12 | 31 |
| Average size of red drum you catch | 26 | 35 | 60 | 14 | 7 | 21 |
| Fishing regulations for red drum | 38 | 27 | 65 | 13 | 10 | 23 |
| Spotted seatrout fishing | 27 | 42 | 69 | 13 | 4 | 17 |
| Number of spotted seatrout you catch | 25 | 38 | 62 | 16 | 6 | 22 |
| Average size of spotted seatrout you catch | 18 | 36 | 54 | 22 | 6 | 28 |
| Fishing regulations for spotted seatrout | 38 | 26 | 64 | 15 | 9 | 24 |
| Flounder fishing | 21 | 37 | 57 | 16 | 7 | 23 |
| Number of flounder you catch | 18 | 32 | 49 | 21 | 10 | 31 |
| Average size of flounder you catch | 17 | 37 | 54 | 16 | 7 | 23 |
| Fishing regulations for flounder | 40 | 26 | 66 | 11 | 10 | 21 |
| Sheepshead fishing | 27 | 39 | 67 | 10 | 4 | 14 |
| Number of sheepshead you catch | 25 | 36 | 61 | 12 | 7 | 19 |
| Average size of sheepshead you catch | 26 | 39 | 65 | 8 | 3 | 12 |
| Fishing regulations for sheepshead | 46 | 26 | 72 | 10 | 5 | 15 |

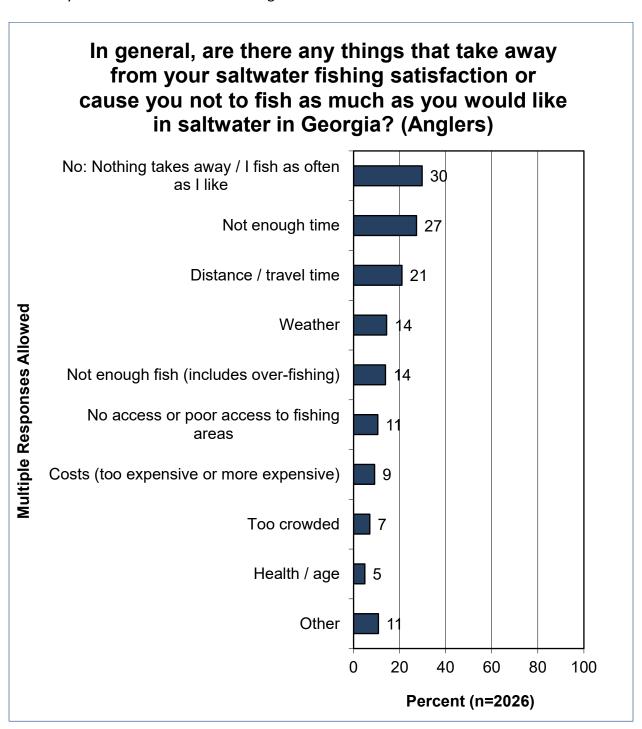
Rounding in table causes apparent discrepancy in some sums; calculations made on unrounded numbers.



Finally in this section, those who fished in inshore or nearshore waters in Georgia in 2021 were asked if they think that the quality of saltwater fishing there has improved, stayed the same, or declined. Although the most common response is that it stayed the same (42%), the percentage saying that it declined (22%) is almost double the percentage saying that it improved (12%).

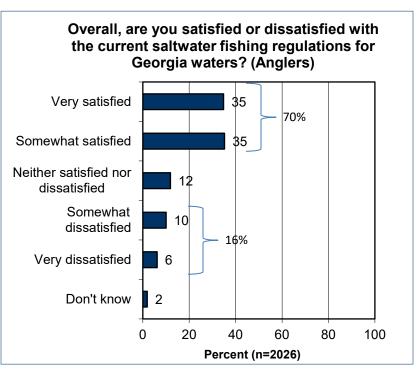
CONSTRAINTS TO AND DISSATISFACTIONS WITH FISHING

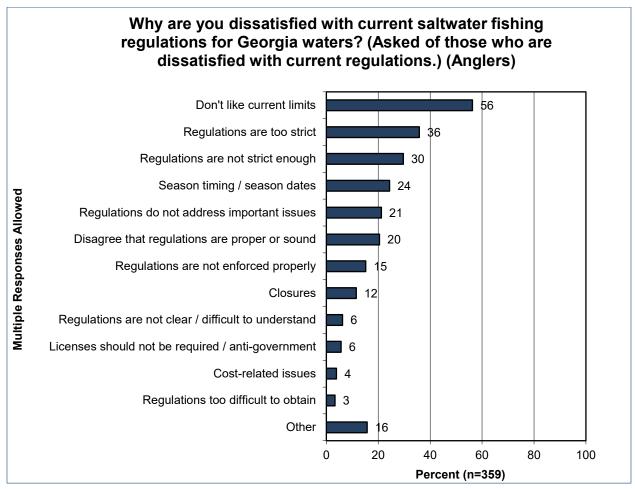
An open-ended question asked about dissatisfactions with or constraints to participation in saltwater fishing in Georgia. About a third of saltwater anglers indicated that nothing takes away from their fishing enjoyment. Otherwise, the top-named items are lack of time, distance/travel time, the weather, not enough fish, and lack of access. All other items were named by less than 10% of saltwater anglers.



OPINIONS ON REGULATIONS

As was previously shown in the satisfaction/dissatisfaction table, satisfaction with the current saltwater fishing regulations (70%) far exceeds dissatisfaction (16%). The top reasons for dissatisfaction are shown below, asked in an open-ended question. The top is a dislike of the current limits (about half of those who got the question gave a response related to this). Other prominent reasons are that the regulations are too strict or that they are not strict enough (about a third in each of those camps).





COUNTIES OF FISHING

The county (or counties, for those anglers fishing in more than one county) of fishing were asked of the four major species. Before getting to the individual report sections for each of those four species, this section looks at counties of fishing. Note that, for the reader's convenience, the county graphs are also shown within each species section (red drum, spotted seatrout, flounder, and sheepshead). The question wording was as follows:

 In which coastal counties do you fish for [red drum / spotted seatrout / flounder / sheepshead] or do you depart from to go fishing for [red drum / spotted seatrout / flounder / sheepshead] if you use a boat? Please name all that apply.

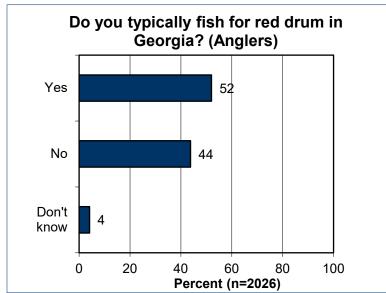
In the top tier are Glynn and Chatham Counties—about a third fish in or depart from these counties for all the species. The first table shows the counties from north to south; the second table shows them ranked from most popular to least.

| Percent of Those Fishing the Given Species in the County (or Who Depart to Go Fishing From the County) (Anglers) | | | | | | |
|--|----------|------------------|----------|------------|--|--|
| Counties (from North to South) | Red drum | Spotted seatrout | Flounder | Sheepshead | | |
| Chatham | 34 | 33 | 33 | 30 | | |
| Bryan | 17 | 17 | 15 | 14 | | |
| Liberty | 12 | 12 | 13 | 12 | | |
| McIntosh | 27 | 27 | 25 | 28 | | |
| Glynn | 36 | 38 | 38 | 38 | | |
| Camden | 16 | 18 | 19 | 18 | | |
| Out of state and then boat into the state | 1 | 1 | 1 | 1 | | |

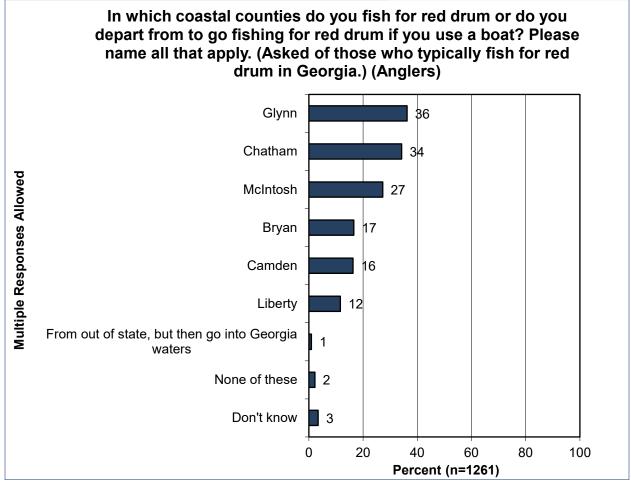
| Percent of Those Fishing the Given Species in the County (or Who Depart to Go Fishing From the County) (Anglers) | | | | | | |
|--|----------|------------------|----------|------------|--|--|
| Counties (Most Fished to Least Fished)* | Red drum | Spotted seatrout | Flounder | Sheepshead | | |
| Glynn | 36 | 38 | 38 | 38 | | |
| Chatham | 34 | 33 | 33 | 30 | | |
| McIntosh | 27 | 27 | 25 | 28 | | |
| Camden | 16 | 18 | 19 | 18 | | |
| Bryan | 17 | 17 | 15 | 14 | | |
| Liberty | 12 | 12 | 13 | 12 | | |
| Out of state and then boat into the state | 1 | 1 | 1 | 1 | | |

^{*} The exception in this ranking is in the red drum column, where Camden and Bryan Counties are not in order (shaded cells); otherwise, the ranking is correct for every species and every county. In short, the popularity of counties for fishing are about the same for all species.

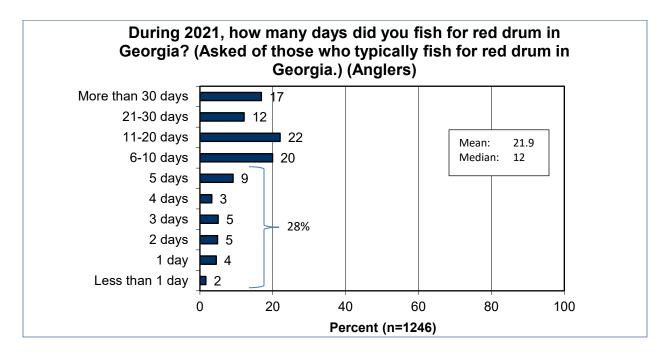
RED DRUM FISHING



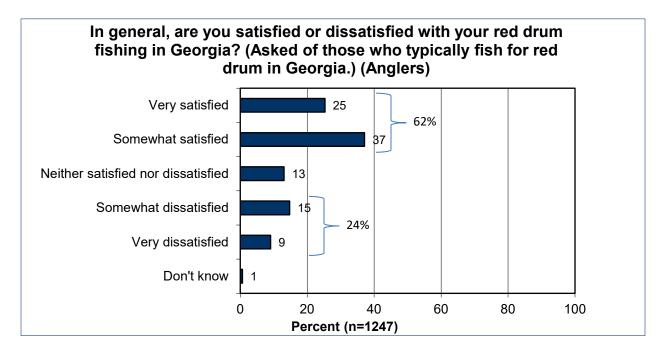
Just about half of saltwater anglers fish for red drum, and they most typically fish in and/or depart from Glynn, Chatham, and McIntosh Counties.



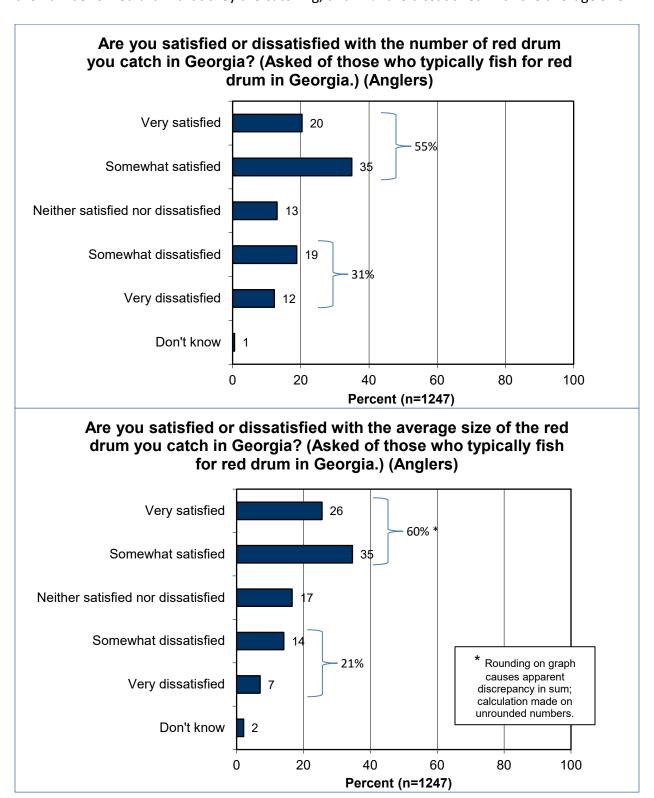
The days fishing for red drum are shown, among those who fish for that species. The mean is 21.9 days, while the median is 12 days. Just over a quarter (28%) fish in the 1-5 day range. (This graph was previously shown in the section on days of fishing but is also shown here for the reader's convenience.) Avidity based on these results were run in crosstabulations that are discussed in this section.



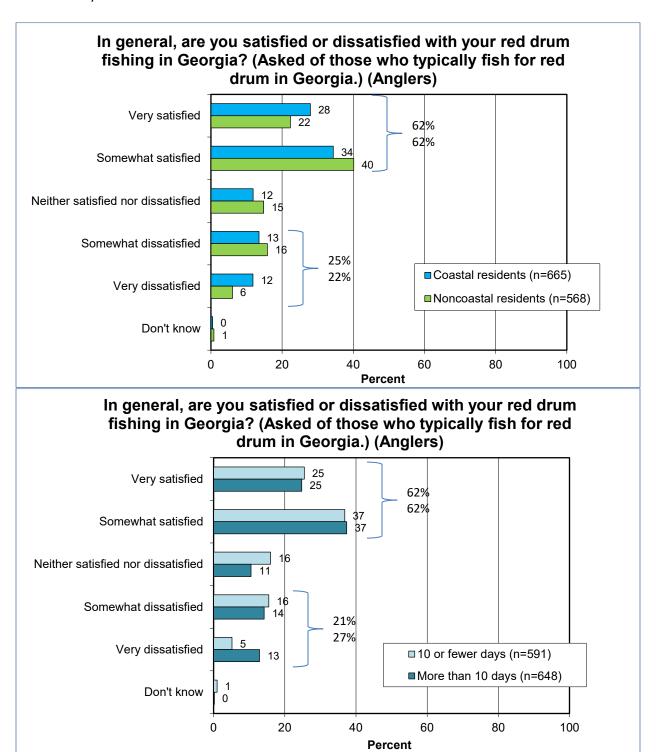
Three aspects of satisfaction or dissatisfaction were asked in the survey: overall for the species, the number of fish being caught, and the average size. Almost two thirds of red drum anglers are satisfied with their red drum fishing (62%), but almost a quarter are dissatisfied (24%).



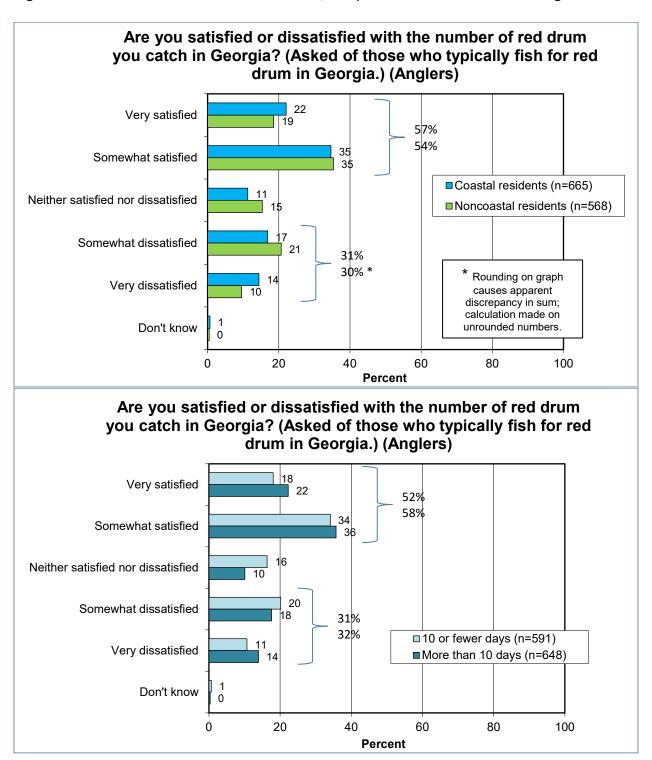
Satisfaction is greater for the average size (60%) than the number (55%) of red drum. Nonetheless, both have substantial percentages who are dissatisfied: 31% are dissatisfied with the number of red drum that they are catching, and 21% are dissatisfied with the average size.



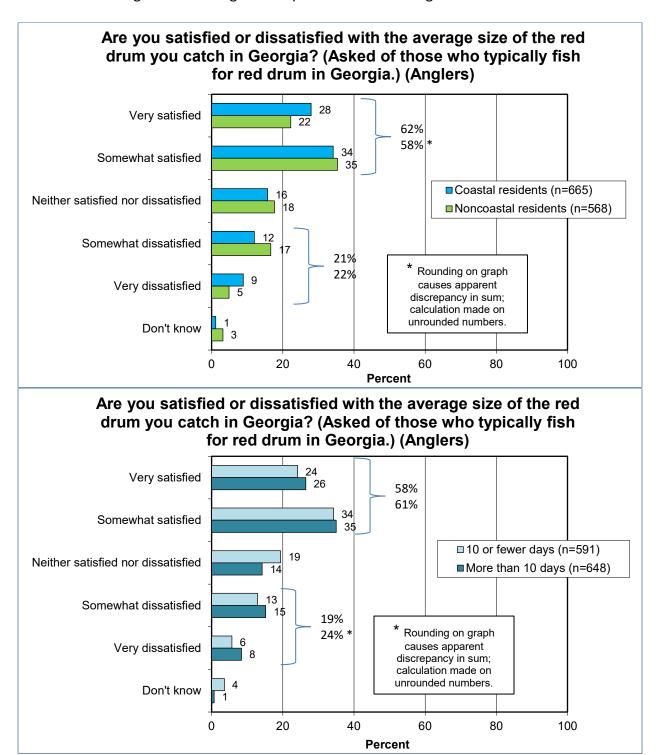
These satisfaction questions were examined more closely through crosstabulations of the data. The analysis found that coastal and noncoastal residents are similar: among both groups, 62% are satisfied, although coastal residents have a slightly higher percentage being very satisfied. For both groups, about a quarter are dissatisfied. In the avidity crosstabulation, the more avid red drum anglers have a higher percentage being dissatisfied (they are the same in satisfaction).



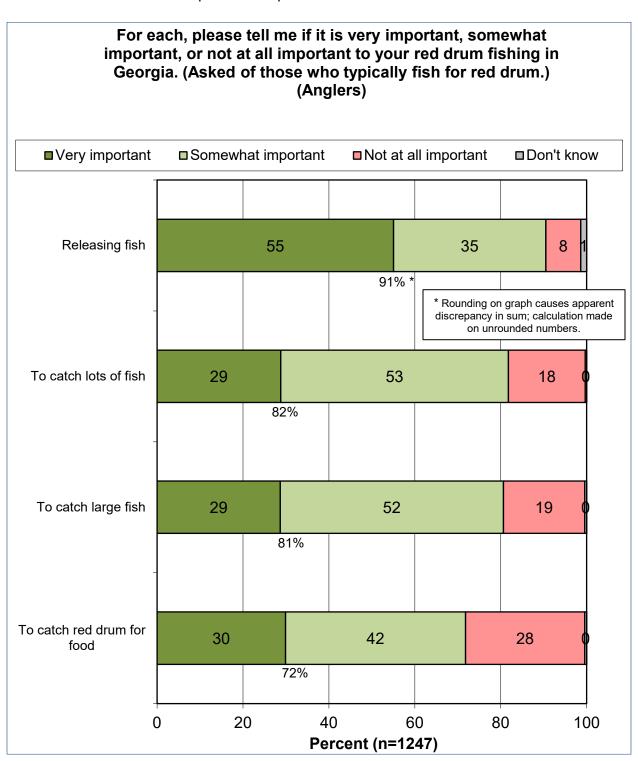
The crosstabulations show little difference between coastal and noncoastal residents on satisfaction with the number of red drum. The more avid red drum anglers have a slightly higher satisfaction rate with the number of fish, compared to less avid red drum anglers.



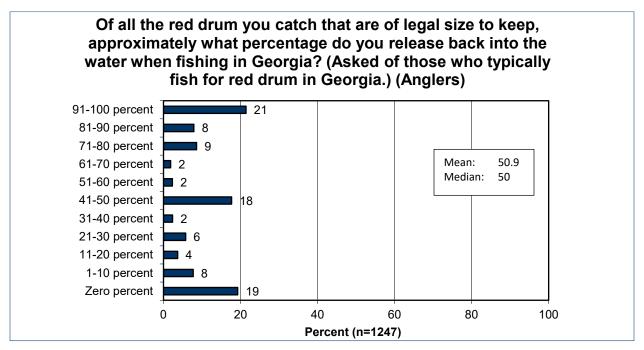
Crosstabulations on the question regarding the size of red drum finds just slightly higher satisfaction among more avid anglers compared to less avid anglers.

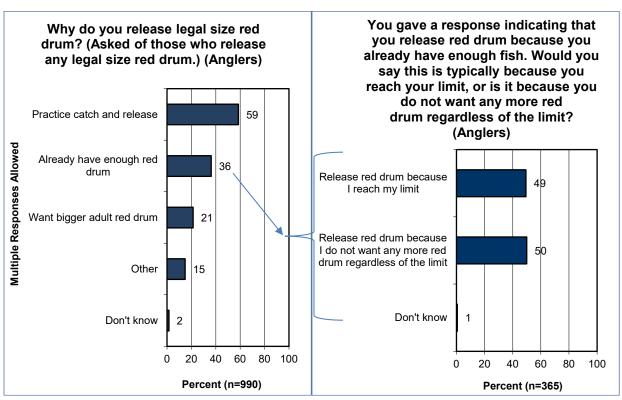


The motivations for red drum fishing were explored along with the importance of releasing fish as part of the red drum fishing experience. More than half say that releasing fish is *very* important in their red drum fishing. Two of the three motivations have nearly identical results: fishing to catch lots of fish (29% say this is very important, and 53% say it is somewhat important—a sum of 82%) and fishing to catch large fish (29% say this is very important, and 52% say it is somewhat important—a sum of 81%). Just slightly less important is fishing for food. The sum of the two "important" responses are shown below the bars.

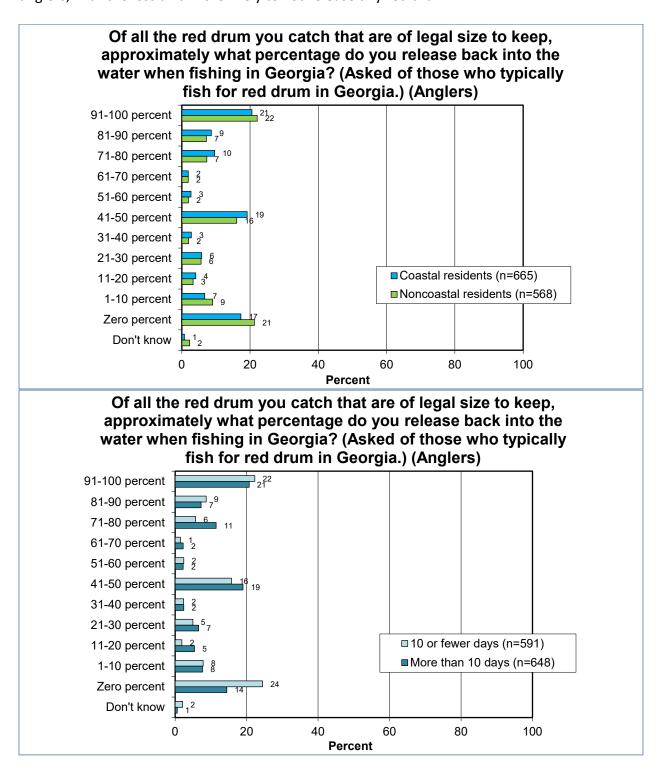


About equal percentages release no red drum (19%) or release all or nearly all red drum (21%). The median percentage released is 50%—or about half. Those who release them were asked follow-up questions. Most saltwater anglers release fish because they practice catch and release (i.e., they simply believe it is the right thing to do), but about a third who release do so because they have enough fish, about evenly divided between those who have reached their legal limit and those who may have not reached their limit but just do not want more fish.





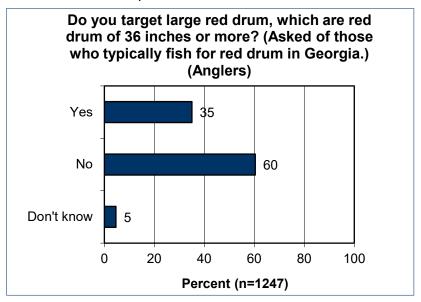
In the crosstabulations, there are only slight differences between coastal and noncoastal residents, but there are more marked differences between more avid and less avid red drum anglers, with the less avid more likely to *not* release any red drum.



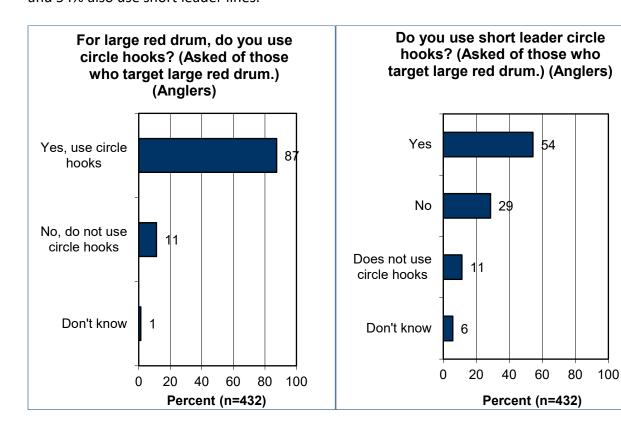
One aspect of releasing fish is whether the fish is likely to survive. One way this is done is through the use of circle hooks and short leader lines. A circle hook is sharply curved back and usually decreases mortality rates of released fish compared to conventional J-hooks. A short-

leader circle hook means that the weight is not more than 6 inches from the hook; fish do not generally swallow the line past the weight.

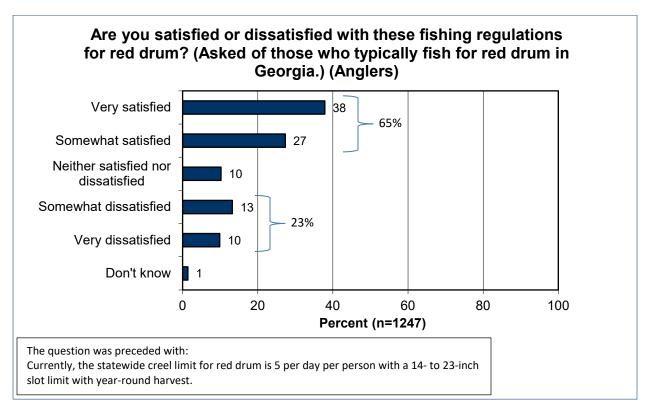
These conservation measures are important for large red drum, so the survey first asked about targeting large red drum of more than 36 inches (of which 35% of red drum anglers do), and then it followed up with questions about using those conservation measures.

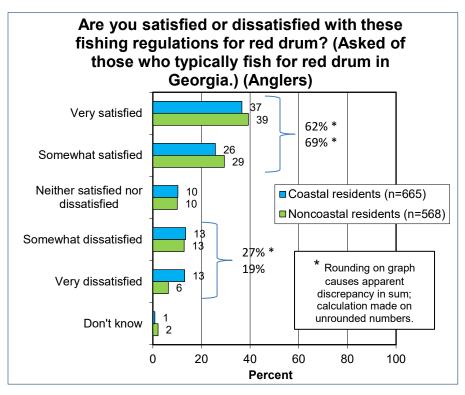


The overwhelming majority of those who target large red drum use circle hooks (87% do so), and 54% also use short leader lines.

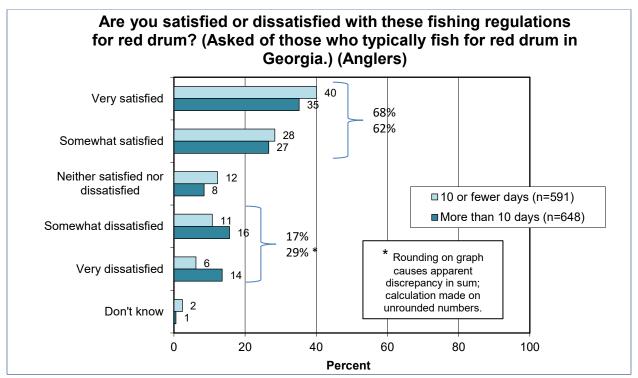


The survey explained the current regulations to respondents (5 per day per person with a 14- to 23-inch slot limit with year-round harvest) before asking about satisfaction or dissatisfaction with the red drum regulations. About two thirds are satisfied (65%), while about a quarter are dissatisfied (23%). The graph on the following page shows the things that would make anglers more satisfied with the regulations.



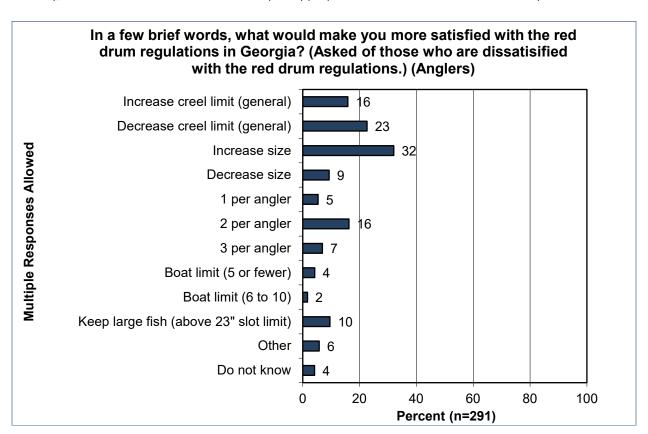


Coastal resident red drum anglers are slightly less satisfied with the regulations, compared to noncoastal residents. An even greater difference emerges in the crosstabulation by avidity, with the more avid red drum anglers having a much higher percentage being dissatisfied with the red drum regulations (following page).

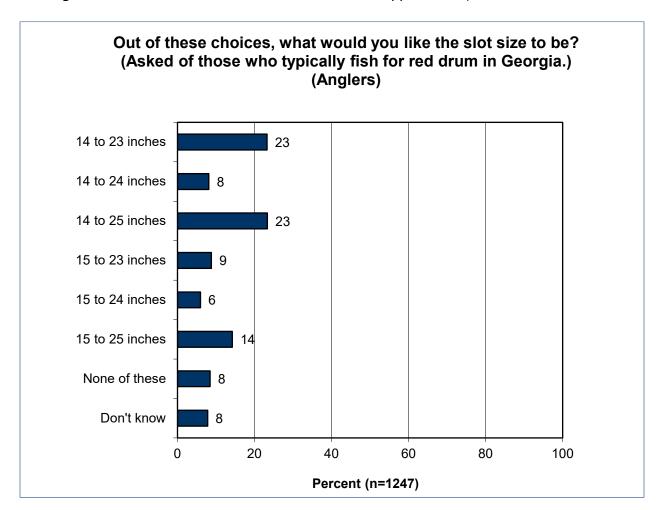


The question was preceded with:

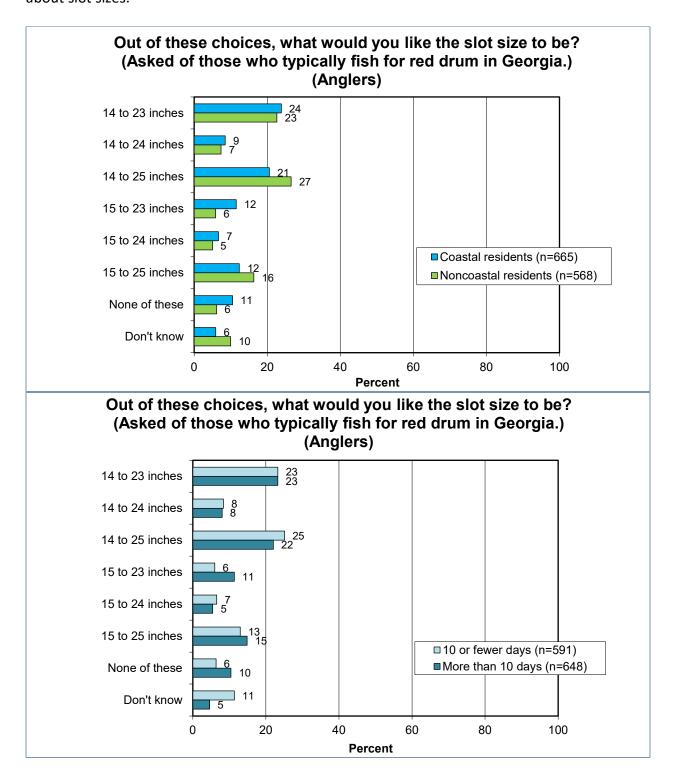
Currently, the statewide creel limit for red drum is 5 per day per person with a 14- to 23-inch slot limit with year-round harvest.

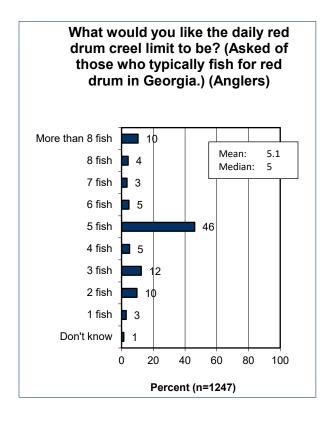


Of the slot sizes that were presented to respondents, the top choices are 14 to 23 inches and 14 to 25 inches. No single choice emerges among anglers, although the low end is most commonly 14 inches. Among those who responded with "none of these," nearly all want a minimum size that is larger than the choices that were given, typically in the range of 16 to 18 inches, with accompanying upper values from 23 to 27 inches (no graph is shown because of the huge number of distinct combinations of lower and upper values).



Crosstabulations are shown, with no marked differences between groups on this question about slot sizes.

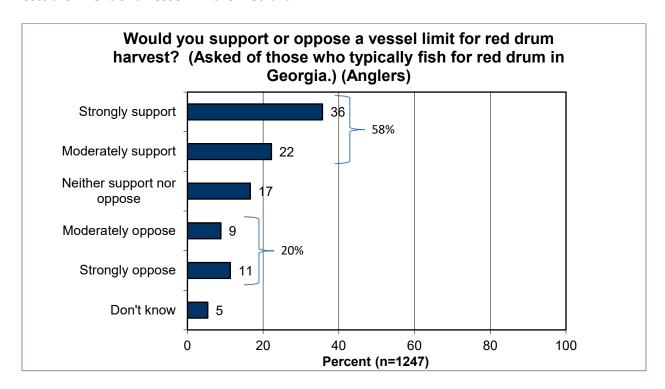




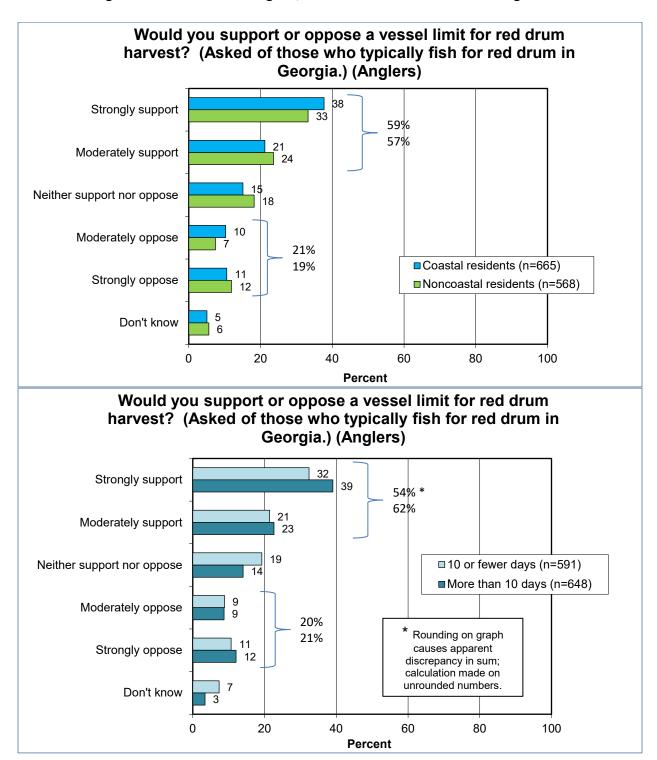
By far, the most common desired daily creel limit for red drum is 5 fish. The crosstabulation analysis was run on the mean, median, and mode, as shown in the accompanying table, with only slight differences in the means and no differences in the medians or modes.

| | Mean | Median | Mode |
|----------------------|------|--------|------|
| Coastal residents | 5.0 | 5 | 5 |
| Noncoastal residents | 5.3 | 5 | 5 |
| 10 or fewer days | 5.3 | 5 | 5 |
| More than 10 days | 5.0 | 5 | 5 |

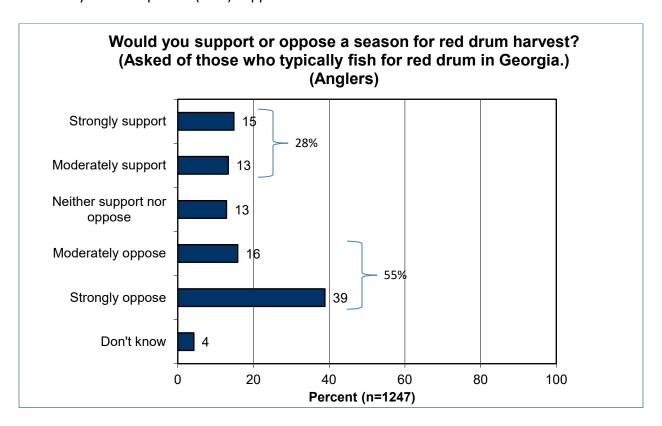
Among red drum anglers, there is more support for (58%) than opposition to (20%) to the establishment of a vessel limit for red drum.



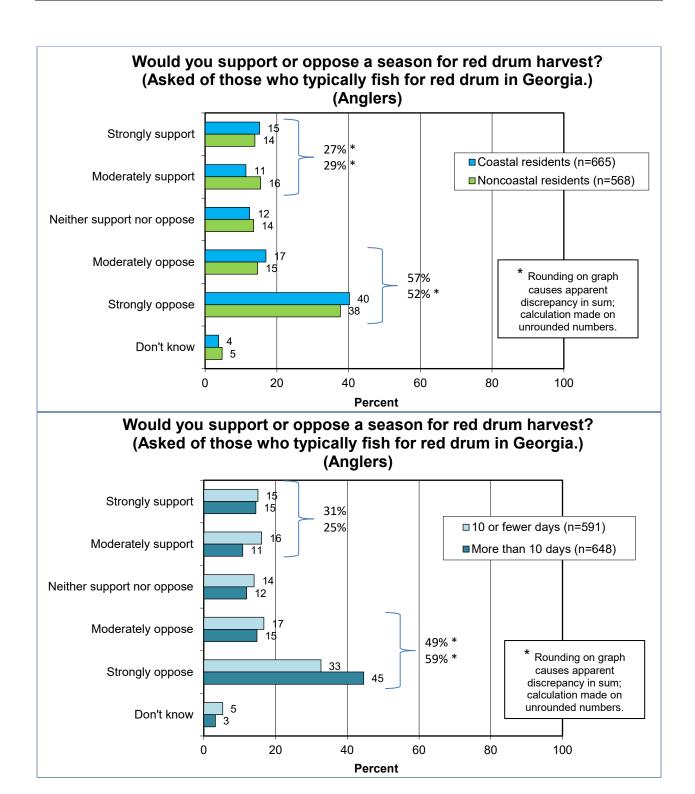
Coastal and noncoastal resident red drum anglers are about the same in their opinions on a vessel limit for red drum. However, the crosstabulation by avidity shows much greater support for this among more avid red drum anglers, relative to less avid red drum anglers.



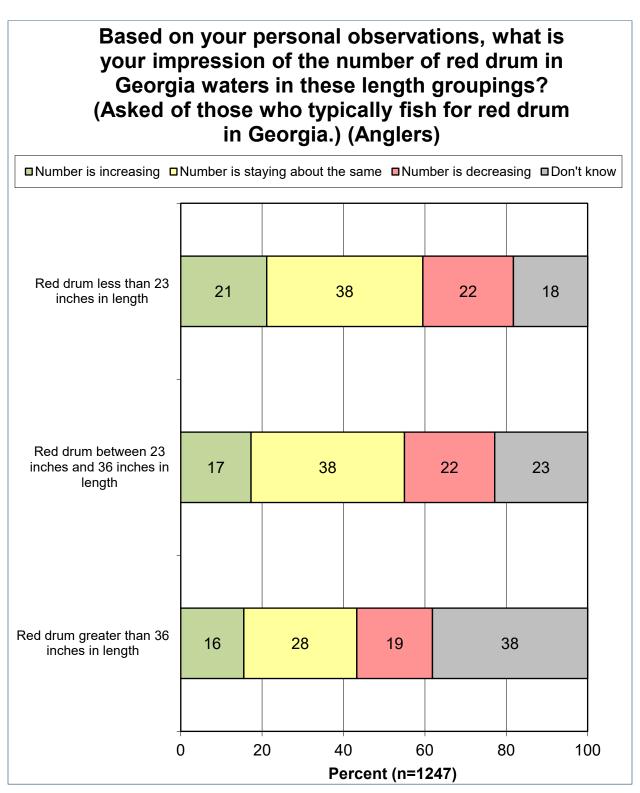
The majority of red drum anglers (55%) oppose the establishment of a season for red drum, while only about a quarter (28%) support it.



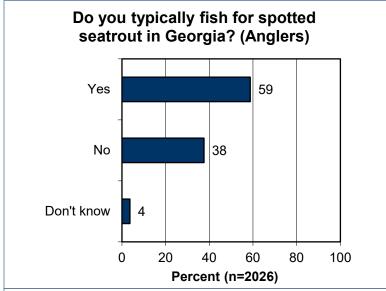
As shown in the crosstabulation graphs on the next page, there is not much difference between coastal and noncoastal residents on this question. On the other hand, the crosstabulation by avidity finds much more opposition among more avid red drum anglers than among less avid red drum anglers.



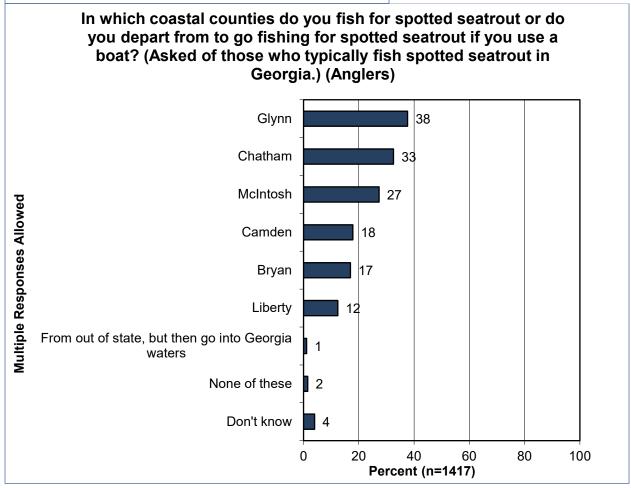
Anglers are about evenly divided on their perceptions of the number of red drum in Georgia waters. For each size range given, the most common response is that anglers are seeing about the same. Also for each, the percentages saying that there has been an increase is just slightly under the percentage saying that there has been a decrease, but they are close to each other.



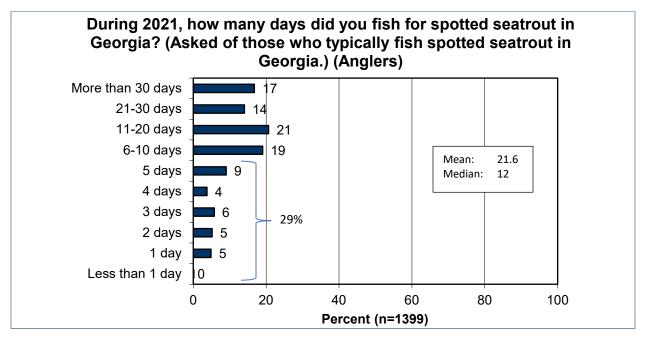
SPOTTED SEATROUT FISHING



Well more than half of saltwater anglers fish for spotted seatrout—the most popular of the four main species examined in this survey. Most commonly, they fish in and/or depart from Glynn, Chatham, and McIntosh Counties.

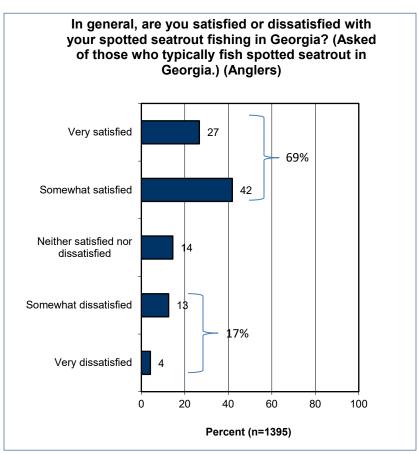


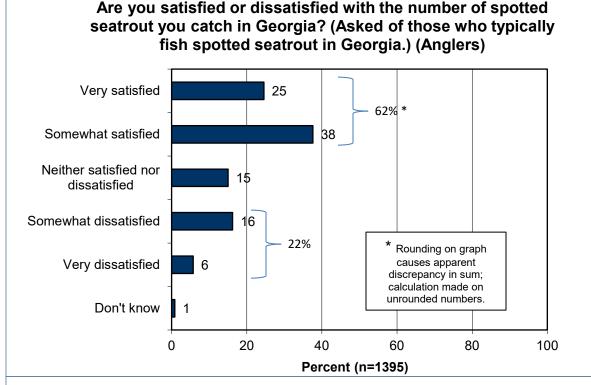
The days fishing for spotted seatrout are in the graph below, among those who fish for spotted seatrout. The mean is 21.6 days, while the median is 12 days. Almost a third (29%) fish in the 1-5 day range. (This graph was previously shown in the section on days of fishing but is also shown here for the reader's convenience.)



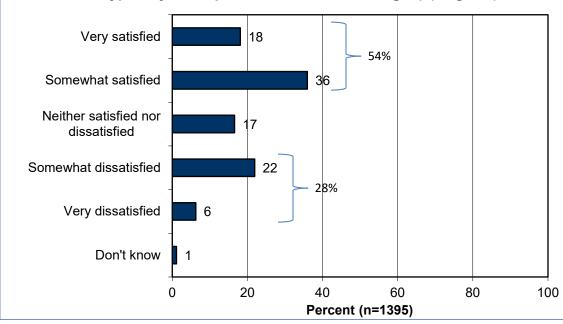
Three aspects of satisfaction or dissatisfaction were asked in the survey: overall for the species, the number of fish being caught, and the average size. About two thirds of spotted seatrout anglers (69%) say that they are satisfied with their spotted seatrout fishing in Georgia, while 17% are dissatisfied.

Satisfaction is slightly lower, however, for the number of spotted seatrout that anglers are catching (62% are satisfied, while 22% are dissatisfied). It is lower still for the average size of spotted seatrout (only 54% are satisfied, while 28% are dissatisfied (see graphs on the next page).

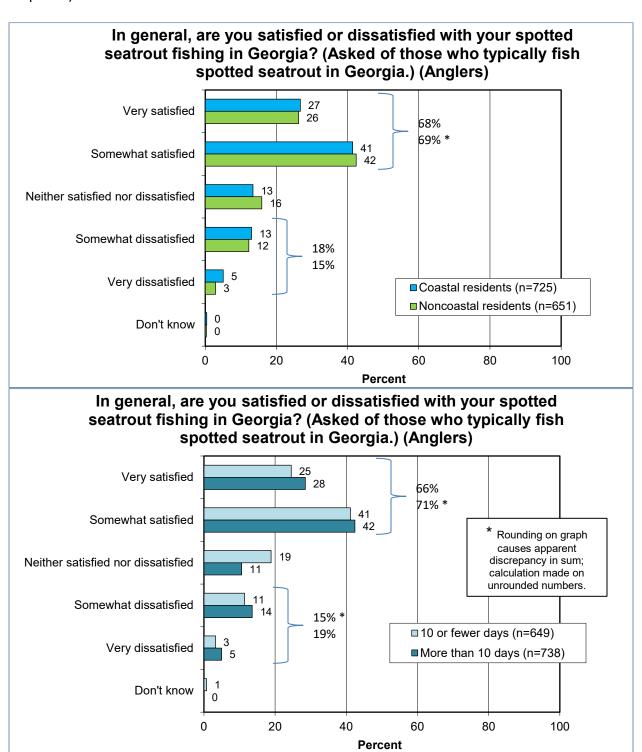


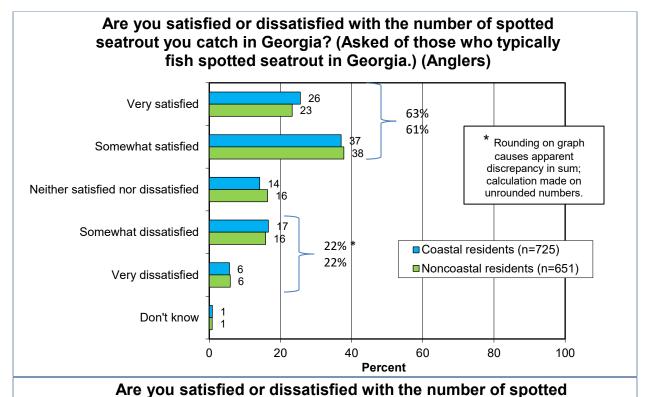


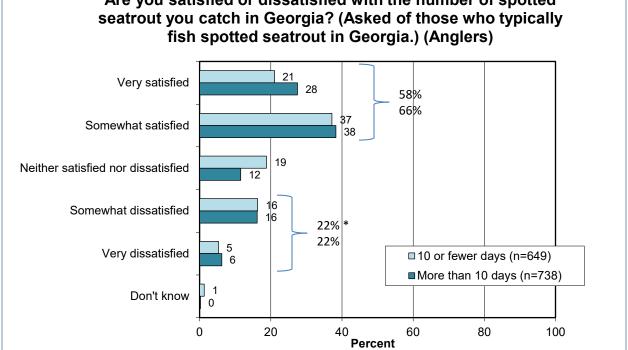


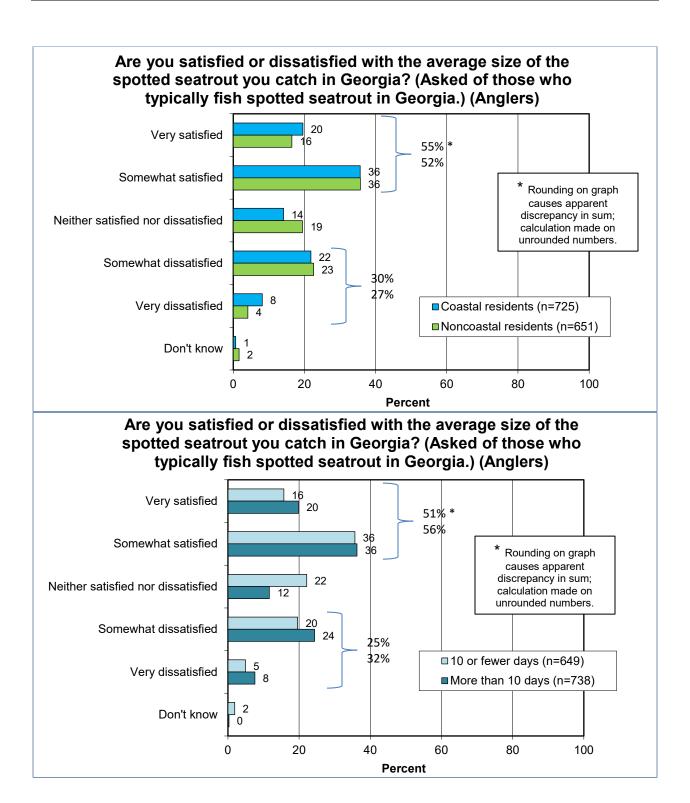


On all three crosstabulations, there is no marked difference between coastal and noncoastal anglers. On the crosstabulations by avidity, however, the more avid anglers have higher overall satisfaction, higher satisfaction with the number of spotted seatrout caught, and higher satisfaction with the average size of spotted seatrout. On this latter (average size), more avid anglers also have higher dissatisfaction (because they have a lower percentage in the neither response).

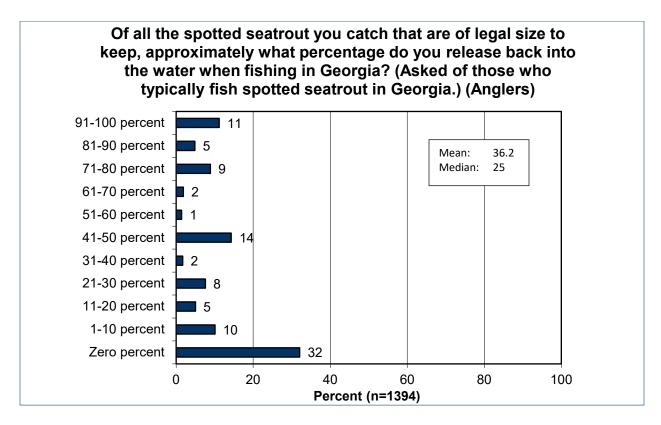




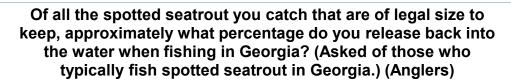


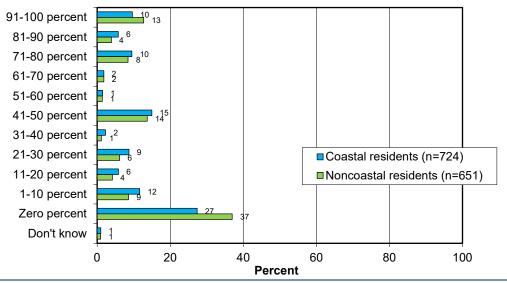


Spotted seatrout anglers generally release from a quarter to a third of the spotted seatrout that they catch (the mean is 36.2% released; the median is 25% released). Of note is that about a third (32%) keep all the legal spotted seatrout that they catch.

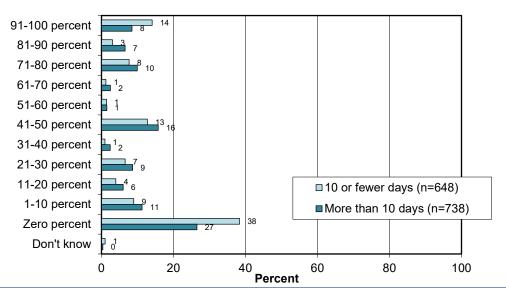


The crosstabulations on the following page show that noncoastal residents are more likely to keep all the legal spotted seatrout that they catch (37% do, compared to only 27% of coastal residents). One could conjecture that anglers traveling farther to fish are more interested in keeping the fish that they catch. Additionally, the crosstabulation by avidity shows that less avid seatrout anglers are more likely to keep all the spotted seatrout that they catch (38% do, compared to only 27% of more avid seatrout anglers).

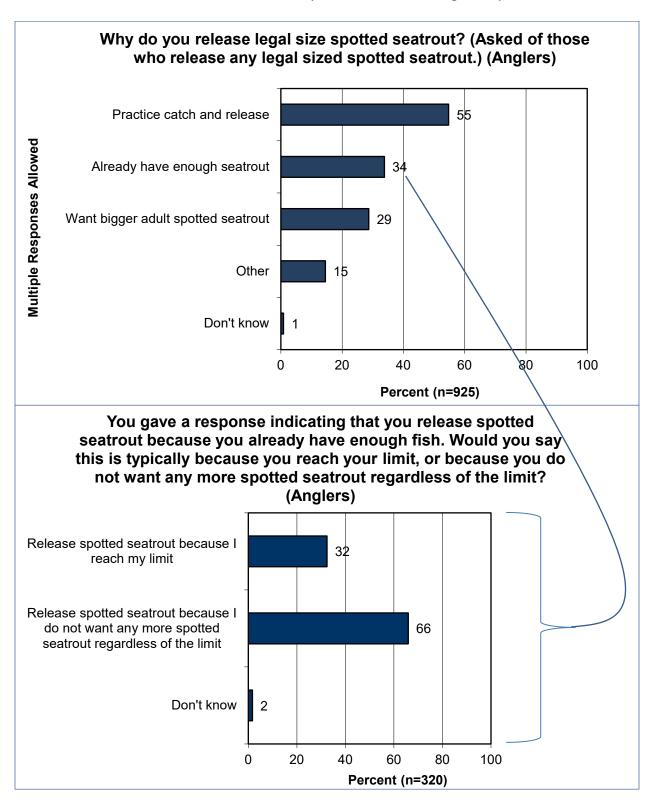




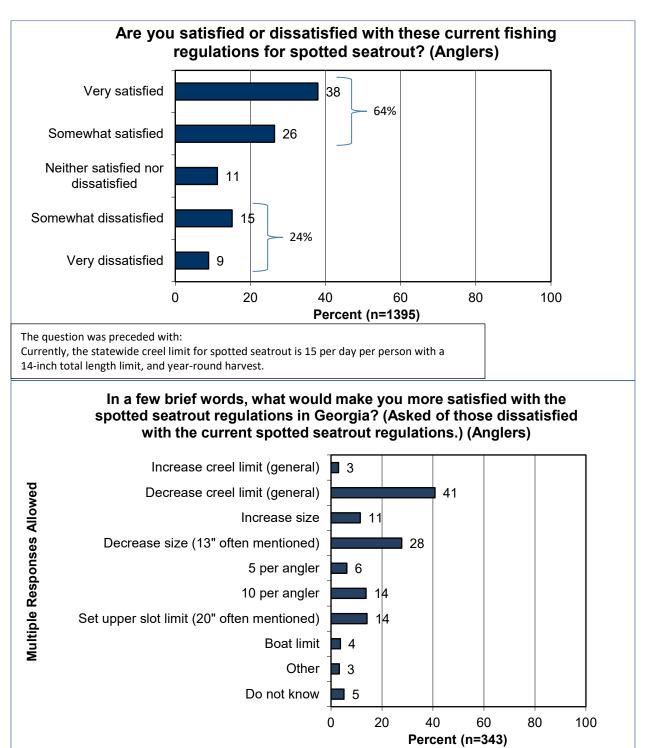
Of all the spotted seatrout you catch that are of legal size to keep, approximately what percentage do you release back into the water when fishing in Georgia? (Asked of those who typically fish spotted seatrout in Georgia.) (Anglers)

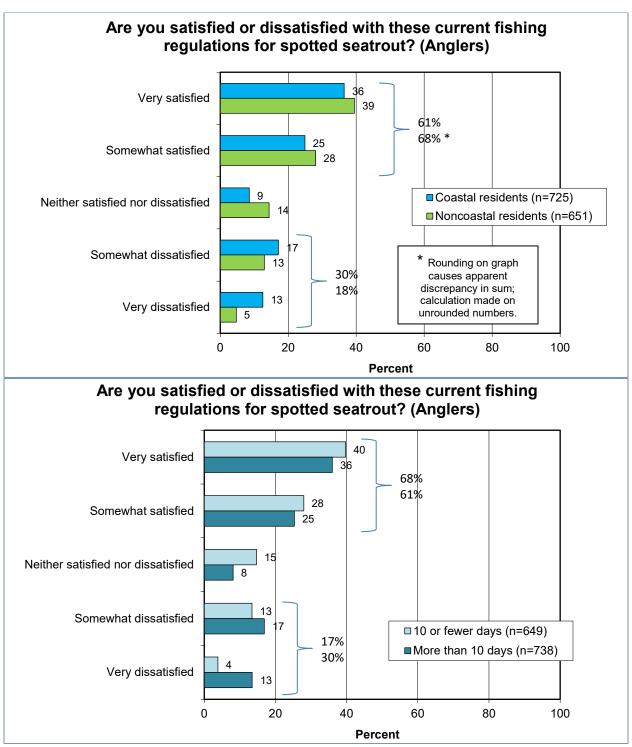


Those who release spotted seatrout were asked follow-up questions, and most seatrout anglers who release fish do so because they practice catch and release (i.e., they simply believe it is the right thing to do). Meanwhile, about a third who release do so because they have enough fish, and a follow-up question to that found that two thirds have enough fish regardless of the limit, while about a third release them because they have reached the regulatory limit.



Satisfaction with the spotted seatrout regulations is more than double the dissatisfaction with it: 64% are satisfied, while 24% are dissatisfied. Coastal residents are slightly less satisfied/more dissatisfied. Satisfaction is also higher among the less avid, and dissatisfaction is much higher among more avid anglers compared to the less avid spotted seatrout anglers (these latter crosstabulation graphs are on the following page). A graph shows responses to the open-ended question about what would make anglers more satisfied with the regulations.



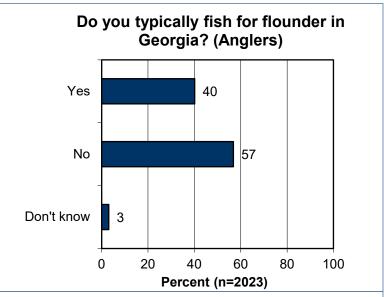


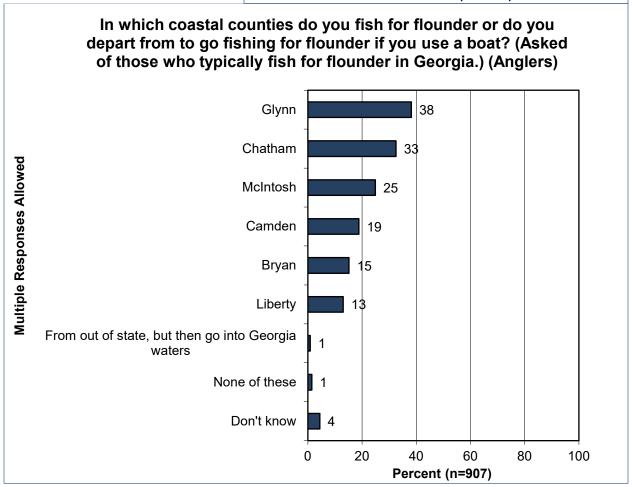
The question was preceded with:

Currently, the statewide creel limit for spotted seatrout is 15 per day per person with a 14-inch total length limit, and year-round harvest.

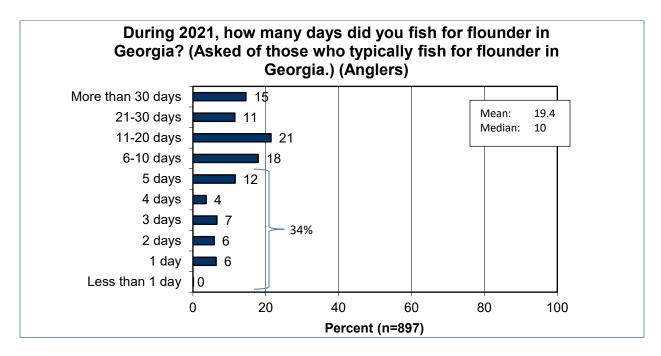
FLOUNDER FISHING

Somewhat under half of saltwater anglers fish for flounder, with Glynn, Chatham, and McIntosh Counties being the ones they most typically fish in and/or depart from.

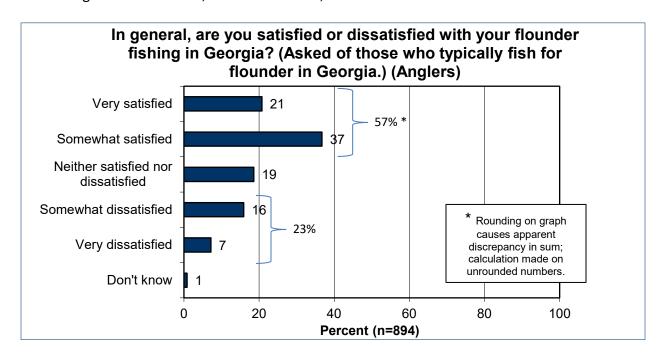


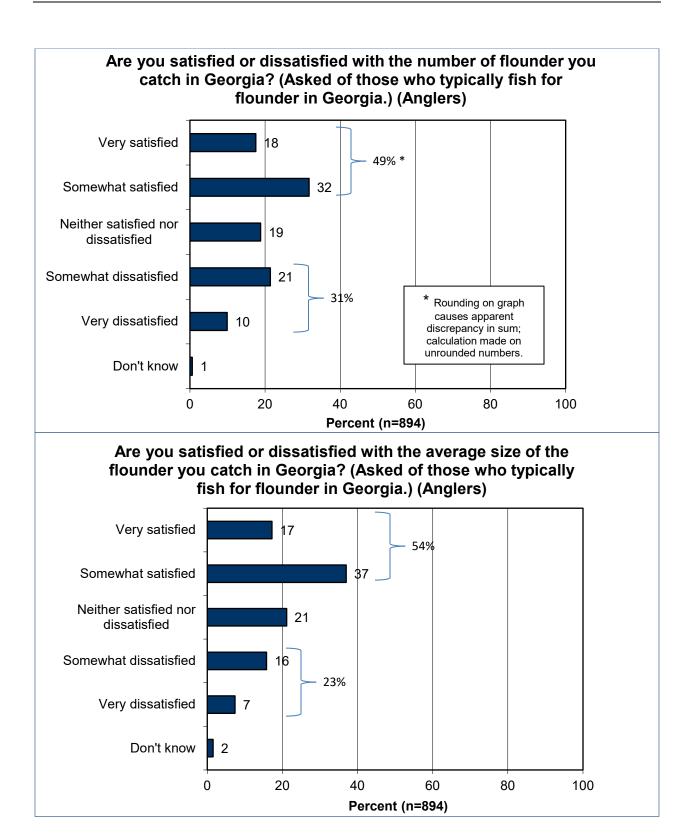


The graph below shows the days fishing for flounder, among those who fish for that species. The mean number of days is 19.4 days, and the median is 10 days. Just over a third (34%) fish in the 1-5 day range. (This graph was previously shown in the section on days of fishing but is also shown here for the reader's convenience.)

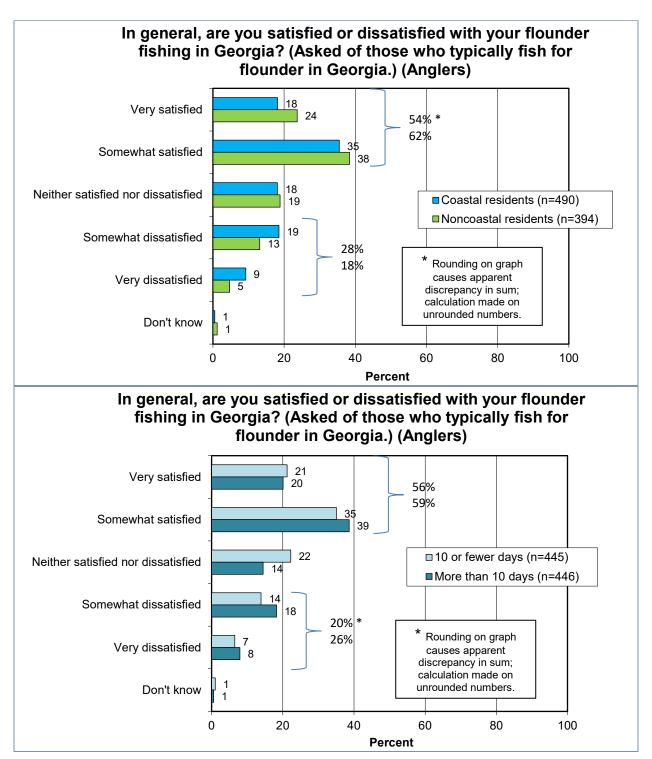


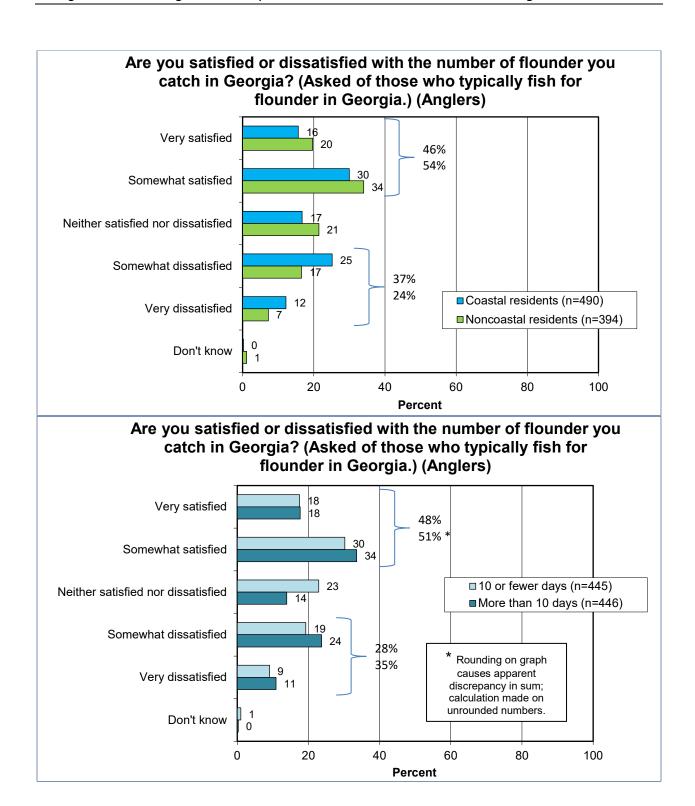
Three aspects of satisfaction or dissatisfaction were asked in the survey: overall for the species, the number of fish being caught, and the average size. Overall, 57% are satisfied, while 23% are dissatisfied. Regarding the number of flounder, 49% are satisfied, and 31% are dissatisfied. For the average size of flounder, 54% are satisfied, and 23% are dissatisfied.

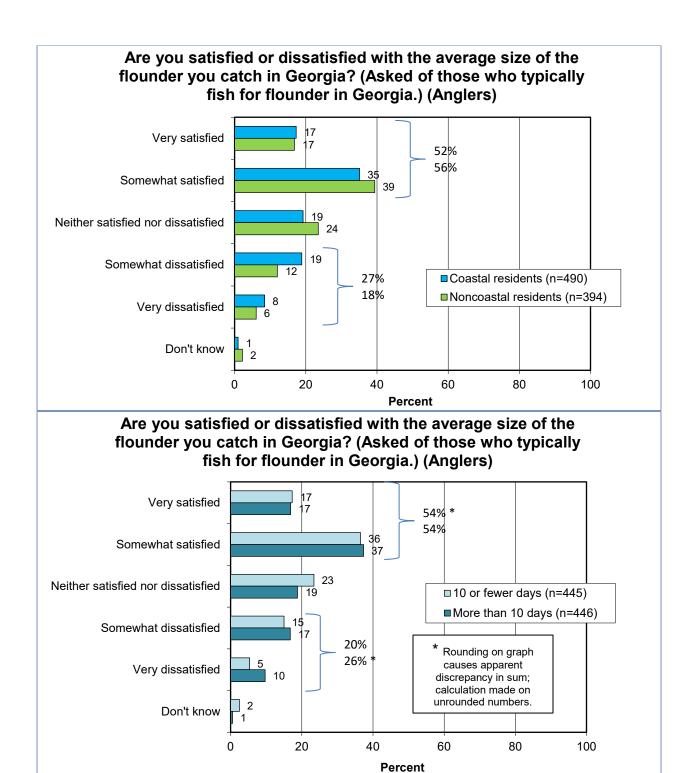




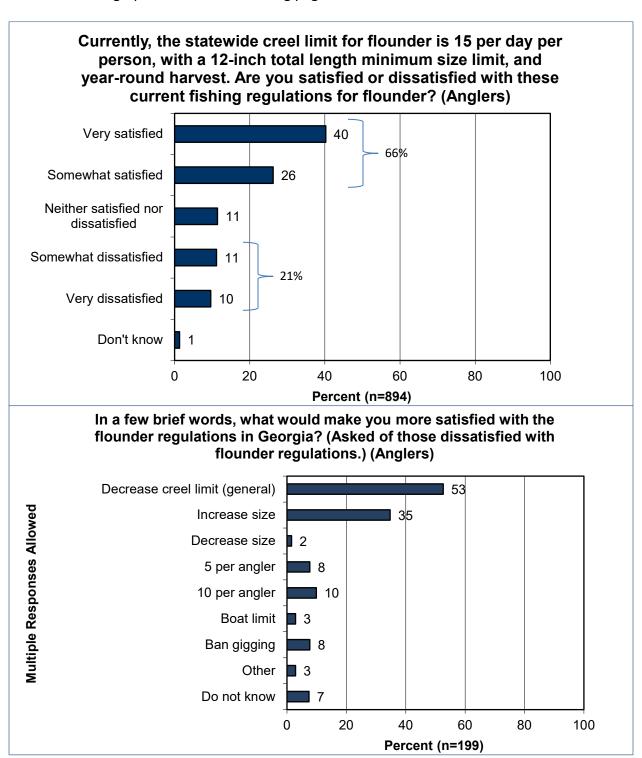
Noncoastal residents are more satisfied with their flounder fishing overall than are coastal residents, among flounder anglers. The more avid are a little more dissatisfied overall, compared to their less avid counterparts. This holds true regarding satisfaction/dissatisfaction with the number and size of flounder caught (see graphs on the following pages).

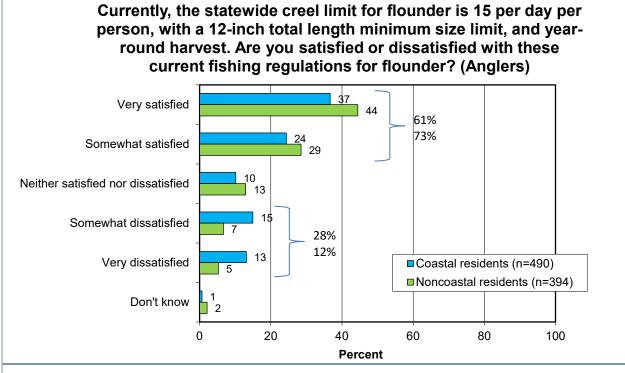


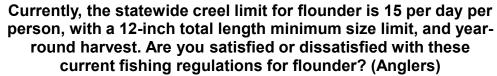


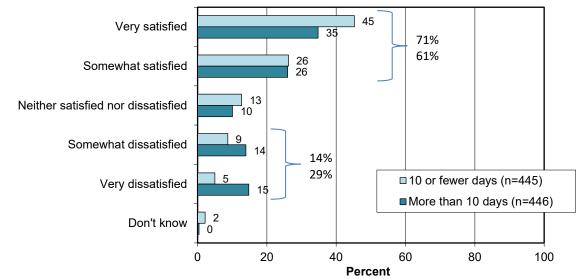


Overall among flounder anglers, satisfaction with the flounder regulations is three times the dissatisfaction: 66% are satisfied, while 21% are dissatisfied. Noncoastal residents are more satisfied than coastal residents, and less avid flounder anglers have a higher satisfaction rate than do more avid flounder anglers. A graph is included of responses to the open-ended follow-up question about what would make anglers more satisfied with the regulations. The crosstabulation graphs are on the following page.

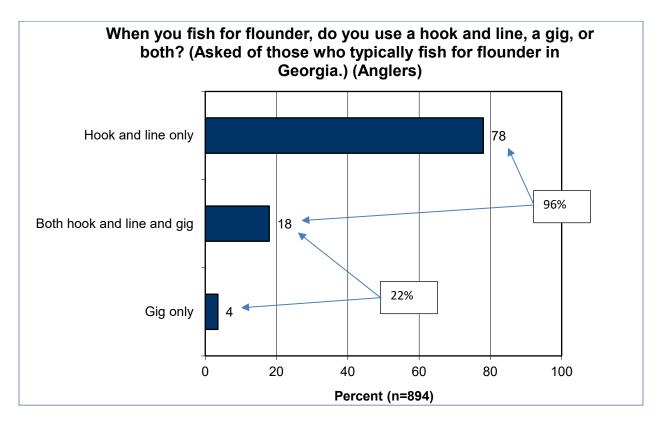




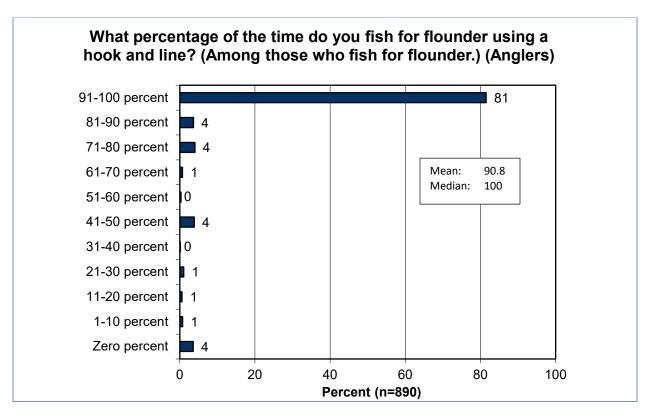


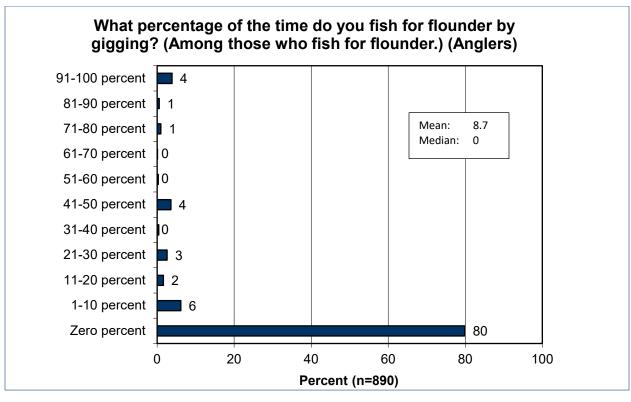


Gigging for flounder is much less common than fishing for them using a hook and line, among Georgia anglers. Furthermore, those who use a gig most commonly also use a hook and line when fishing for flounder: only 4% exclusively use a gig for flounder.

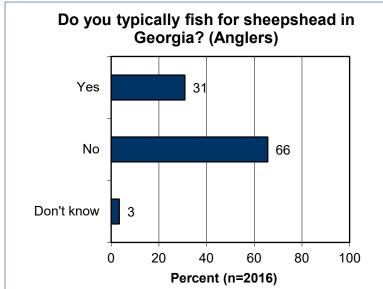


The amount of time spent gigging for flounder versus fishing for them using a hook and line was explored by asking flounder anglers to indicate the percentage of time that they do each type of flounder fishing. The survey findings suggest that a hook and line is used over a gig by about 9 to 1.

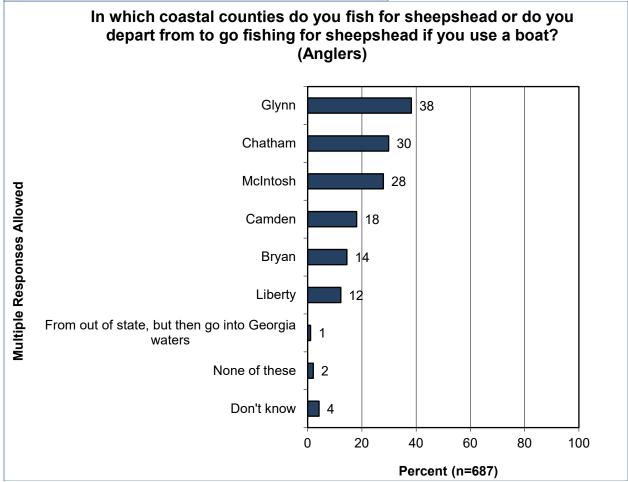




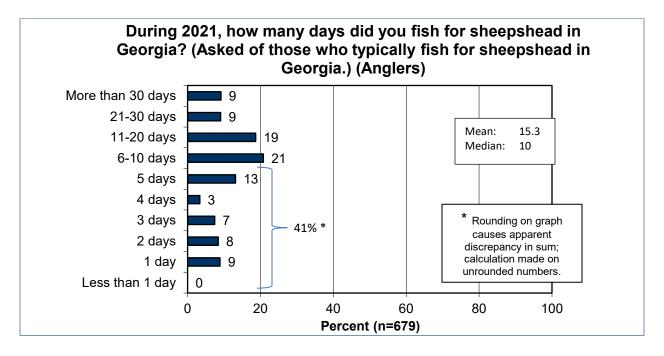
SHEEPSHEAD FISHING



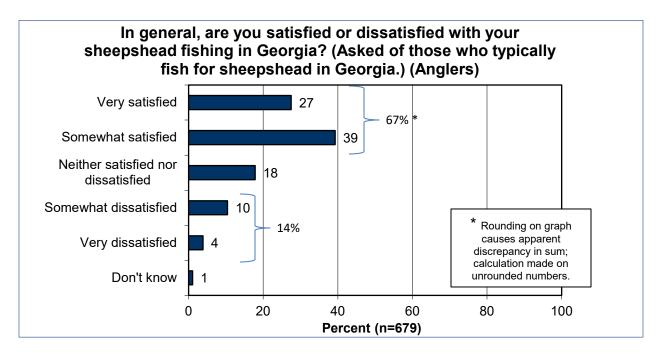
A little under a third of saltwater anglers fish for sheepshead in Georgia, and they most commonly fish in and/or depart from Glynn, Chatham, and McIntosh Counties.

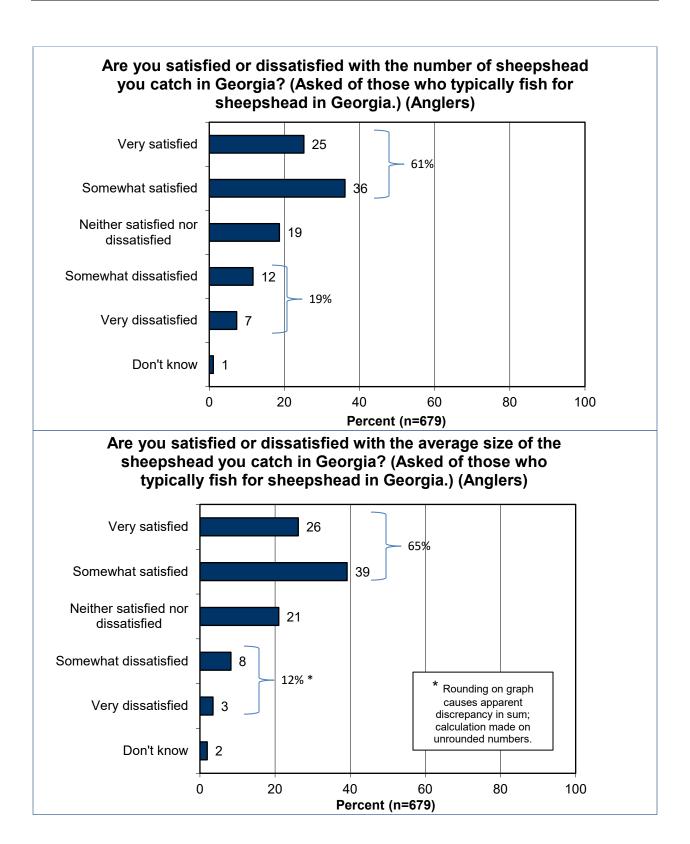


Sheepshead fishing days are shown, among those who fish for sheepshead. The mean days of fishing for this species is 15.3 days, and the median is 10 days. For this species, 41% fish in the 1-5 day range. (This graph was previously shown in the section on days of fishing but is also shown here for the reader's convenience.)

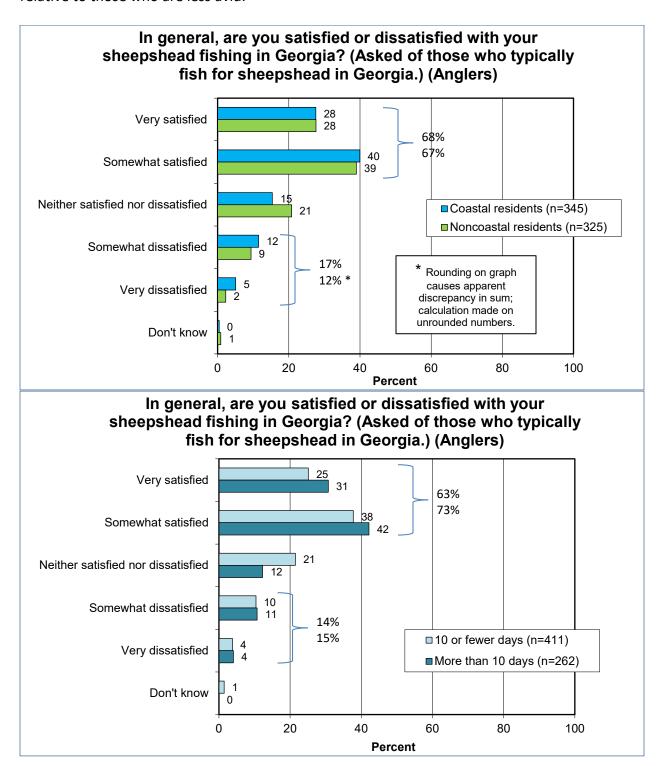


Three aspects of satisfaction or dissatisfaction were asked in the survey: overall for the species, the number of fish being caught, and the average size. Satisfaction overall far exceeds dissatisfaction with sheepshead fishing (67% are satisfied, and only 14% are dissatisfied). These results are mirrored regarding satisfaction/dissatisfaction with the number and average size of sheepshead that are caught (see graphs on the following page for these results).

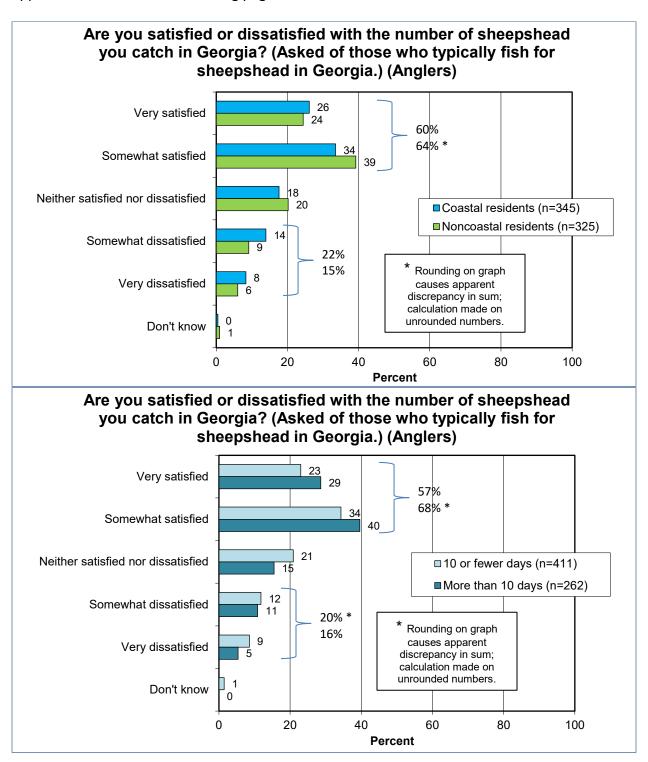




Satisfaction and dissatisfaction overall are about the same among coastal and noncoastal residents. The second crosstabulation shows greater satisfaction among the more avid anglers, relative to those who are less avid.



Regarding the number of sheepshead caught, dissatisfaction is greater among coastal residents, which holds true regarding the average size as well. Satisfaction is greater among the more avid for both the number and size, compared to the less avid sheepshead anglers. These graphs appear below and on the following page.

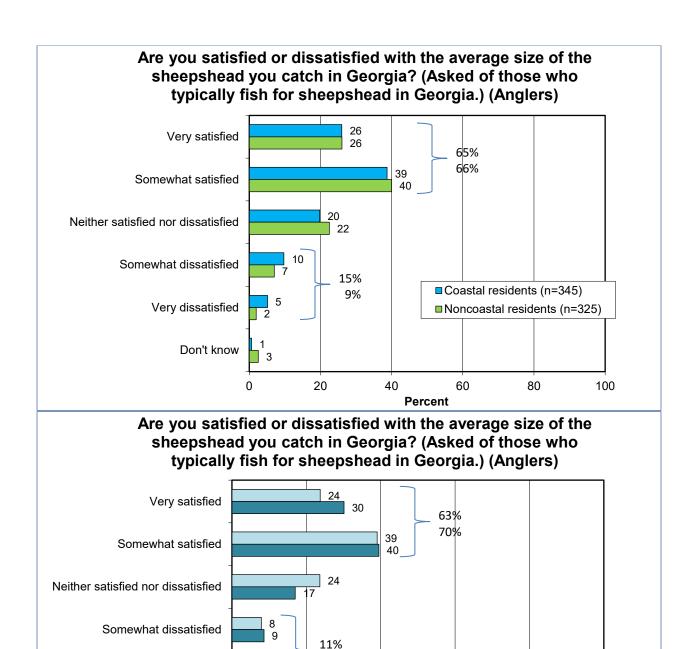


■10 or fewer days (n=411)

80

100

■More than 10 days (n=262)



13%

40

60

Percent

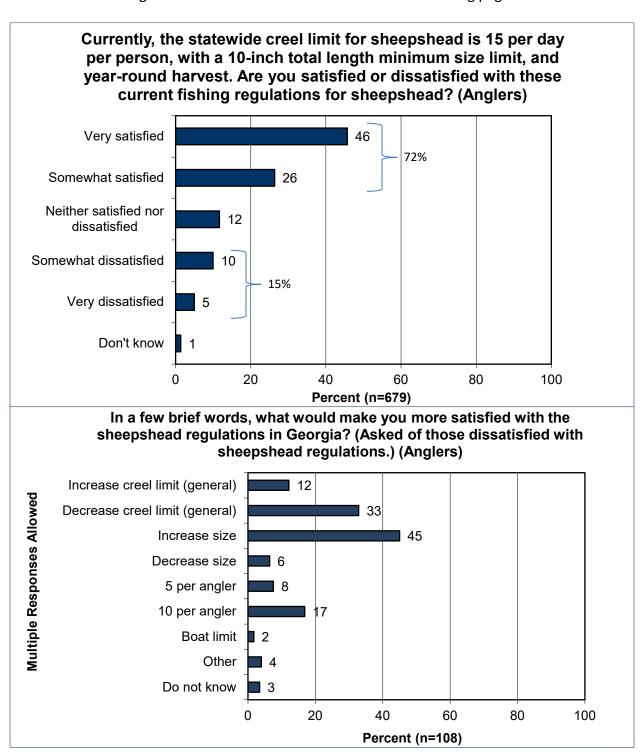
20

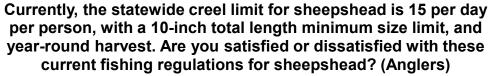
Very dissatisfied

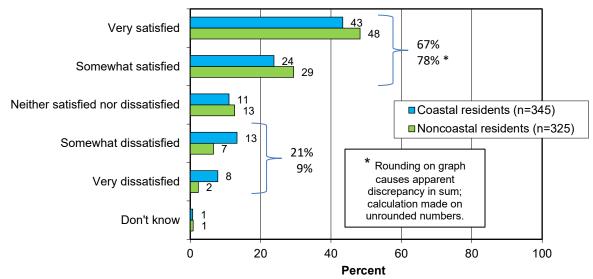
Don't know

0

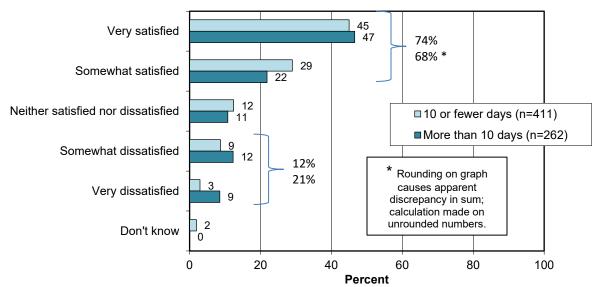
Satisfaction with the regulations for sheepshead (15 per day per person, with a 10-inch total length minimum size limit, and year-round harvest) stands at 72% and far exceeds dissatisfaction (which is at 15%). Noncoastal residents have a higher rate of satisfaction than do coastal residents. More avid sheepshead anglers have a greater rate of dissatisfaction, compared to their less avid counterparts. A graph shows what would make anglers more satisfied with the regulations. The crosstabulations are on the following page.





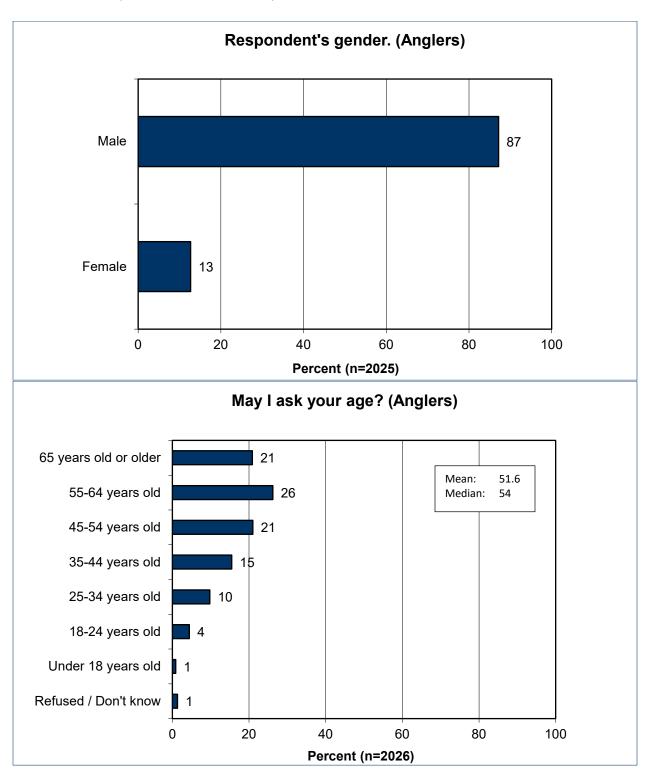


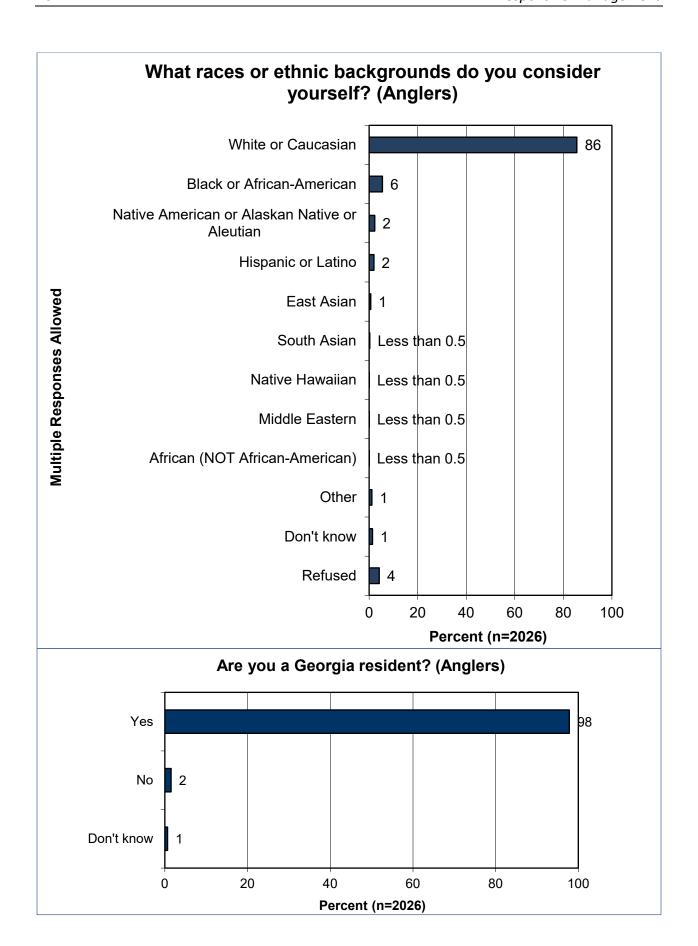
Currently, the statewide creel limit for sheepshead is 15 per day per person, with a 10-inch total length minimum size limit, and year-round harvest. Are you satisfied or dissatisfied with these current fishing regulations for sheepshead? (Anglers)



DEMOGRAPHIC INFORMATION

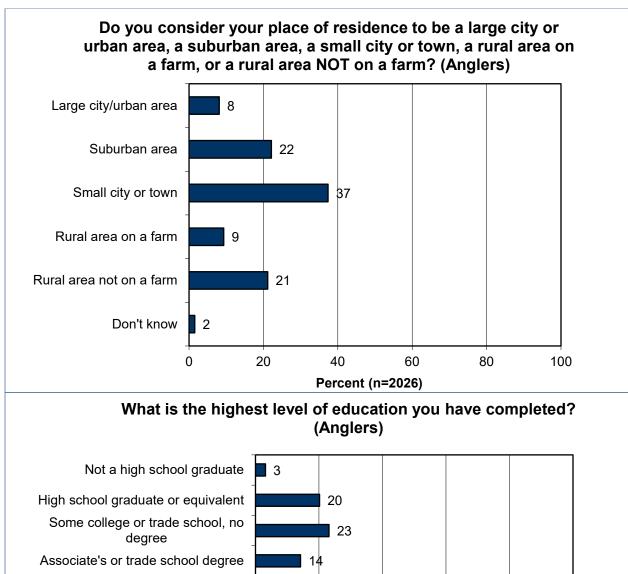
The following demographic information was obtained to help analyze the results. The survey obtained data on gender, age, ethnicity, state and county of residence, characteristic of the residential area (urban-rural continuum), education, and income.

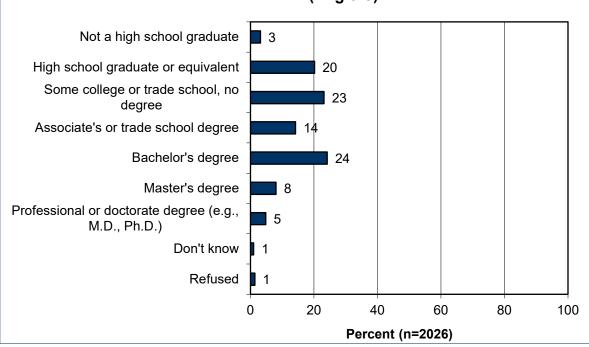


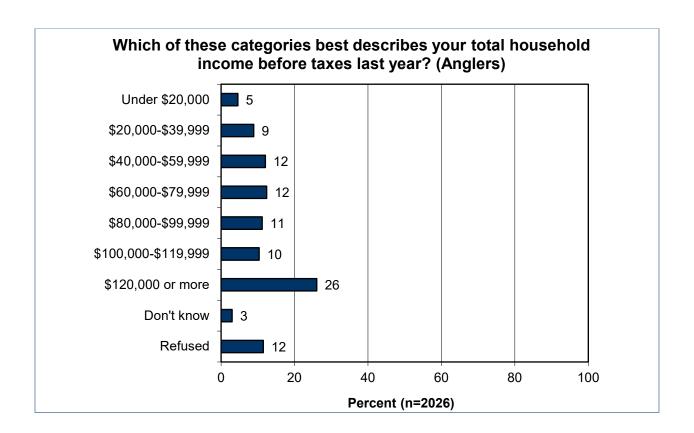


| Counties of Residen | ce: Percent of Salt | water Anglers Living i | n Each County | | |
|---------------------|---------------------|------------------------|---------------|------------|-----|
| Appling | 0.7 | Elbert | 0.1 | Morgan | 0.4 |
| Atkinson | 0.2 | Emanuel | 0.7 | Murray | 0.3 |
| Bacon | 0.5 | Evans | 0.7 | Muscogee | 0.3 |
| Baker | 0.1 | Fannin | 0.1 | Newton | 0.5 |
| Baldwin | 0.3 | Fayette | 0.6 | Oconee | 0.4 |
| Banks | 0.2 | Floyd | 0.4 | Oglethorpe | 0.2 |
| Barrow | 0.5 | Forsyth | 1.0 | Paulding | 0.4 |
| Bartow | 0.4 | Franklin | 0.3 | Peach | 0.1 |
| Ben Hill | 0.2 | Fulton | 1.8 | Pierce | 1.5 |
| Berrien | 0.1 | Gilmer | 0.1 | Pike | 0.1 |
| Bibb | 0.8 | Glascock | 0.0 | Polk | 0.0 |
| Bleckley | 0.3 | Glynn | 8.2 | Pulaski | 0.2 |
| Brantley | 1.6 | Gordon | 0.1 | Putnam | 0.2 |
| Brooks | 0.1 | Grady | 0.1 | Rabun | 0.2 |
| Bryan | 4.7 | Greene | 0.2 | Randolph | 0.1 |
| Bulloch | 4.0 | Gwinnett | 2.2 | Richmond | 1.0 |
| Burke | 0.5 | Habersham | 0.3 | Rockdale | 0.4 |
| Butts | 0.2 | Hall | 1.0 | Schley | 0.1 |
| Calhoun | 0.1 | Hancock | 0.0 | Screven | 0.5 |
| Camden | 4.9 | Haralson | 0.1 | Spalding | 0.2 |
| Candler | 0.4 | Hart | 0.2 | Stephens | 0.1 |
| Carroll | 0.4 | Heard | 0.1 | Talbot | 0.0 |
| Catoosa | 0.1 | Henry | 1.0 | Tattnall | 1.1 |
| Charlton | 0.3 | Houston | 1.0 | Taylor | 0.1 |
| Chatham | 13.0 | Irwin | 0.1 | Telfair | 0.2 |
| Chattahoochee | 0.0 | Jackson | 0.5 | Thomas | 0.3 |
| Chattooga | 0.3 | Jasper | 0.1 | Tift | 0.4 |
| Cherokee | 1.1 | Jeff Davis | 0.6 | Toombs | 0.5 |
| Clarke | 0.5 | Jefferson | 0.2 | Towns | 0.1 |
| Clayton | 0.4 | Jenkins | 0.1 | Treutlen | 0.2 |
| Clinch | 0.2 | Johnson | 0.2 | Troup | 0.1 |
| Cobb | 1.9 | Jones | 0.3 | Turner | 0.1 |
| Coffee | 1.4 | Lamar | 0.2 | Twiggs | 0.1 |
| Colquitt | 0.2 | Lanier | 0.1 | Union | 0.1 |
| Columbia | 1.7 | Laurens | 0.8 | Upson | 0.1 |
| Cook | 0.2 | Lee | 0.1 | Walker | 0.2 |
| Coweta | 0.5 | Liberty | 3.4 | Walton | 0.5 |
| Crawford | 0.2 | Lincoln | 0.1 | Ware | 2.0 |
| Crisp | 0.1 | Long | 0.7 | Washington | 0.2 |
| Dawson | 0.1 | Lowndes | 0.7 | Wayne | 2.0 |
| Decatur | 0.1 | Lumpkin | 0.3 | Webster | 0.1 |
| DeKalb | 1.2 | McDuffie | 0.5 | Wheeler | 0.1 |
| Dodge | 0.3 | McIntosh | 3.5 | White | 0.2 |
| Dooly | 0.1 | Macon | 0.3 | Whitfield | 0.2 |
| Dougherty | 0.1 | Madison | 0.3 | Wilcox | 0.1 |
| Douglas | 0.5 | Meriwether | 0.1 | Wilkes | 0.1 |
| Echols | 0.1 | Monroe | 0.2 | Wilkinson | 0.3 |
| Effingham | 3.0 | Montgomery | 0.3 | Worth | 0.2 |

Counties listed at 0.0 are actually greater than 0 but less than 0.05; counties not listed had no respondents.







TRENDS OF ANGLER SURVEY DATA

The trends data are presented in this section, comparing the current results with the results from the 2017 survey, which was conducted using similar methods.

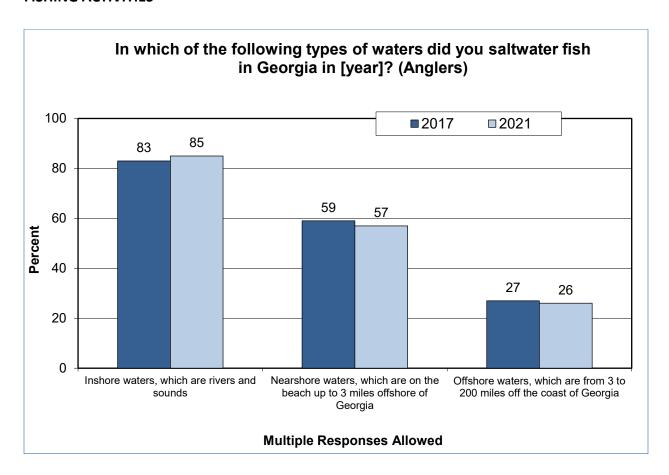
Among the findings, satisfaction with saltwater fishing overall dropped just slightly between the two surveys. Furthermore, the percentage saying that fishing has declined was higher in the current survey, compared to 2017.

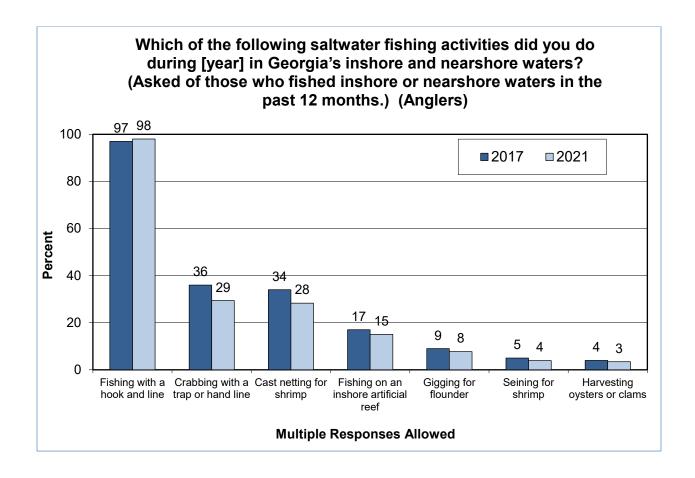
Satisfaction with red drum fishing fell a little between the two surveys.

Participation in spotted seatrout fishing rose somewhat. Satisfaction with seatrout fishing fell just slightly.

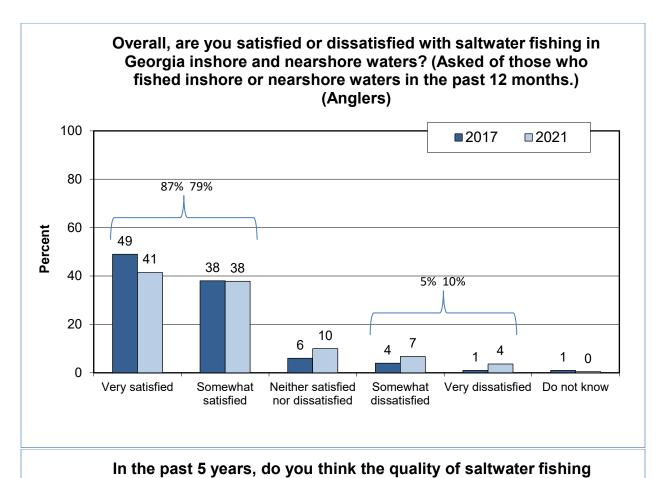
Brackets show the sums for satisfaction and support questions; there may be an apparent 1-percentage point discrepancy in the values shown on the graph and the sum because the sums were calculated on unrounded numbers while the graphs show numbers rounded to the integer.

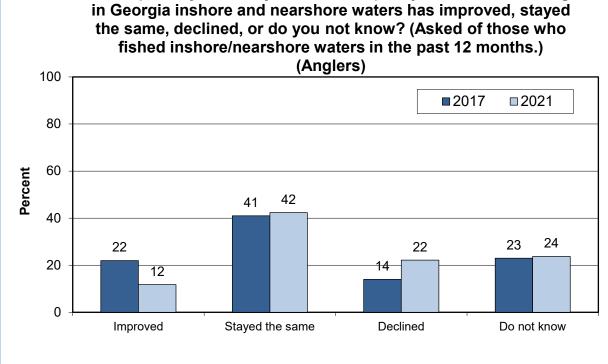
FISHING ACTIVITIES



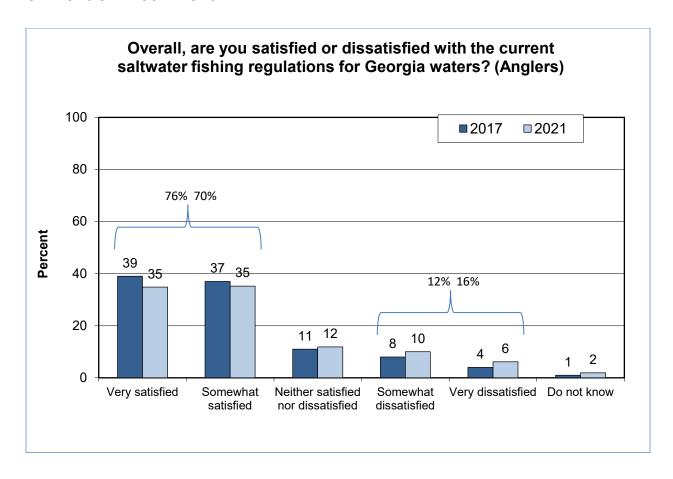


SATISFACTION WITH FISHING ACTIVITIES OVERALL

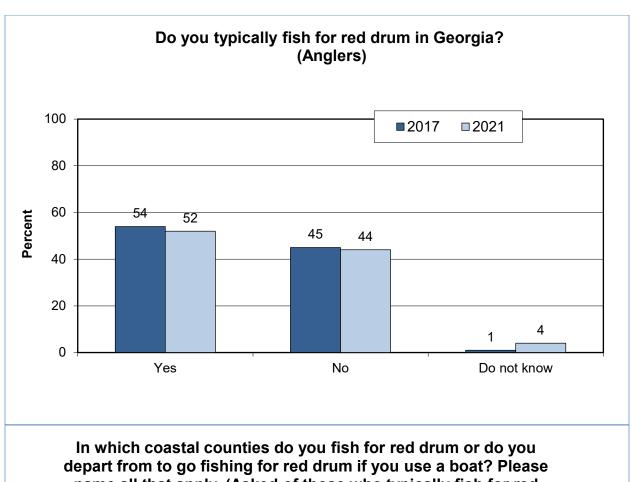


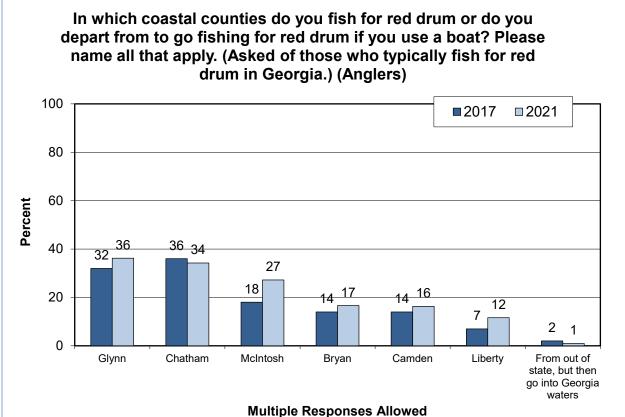


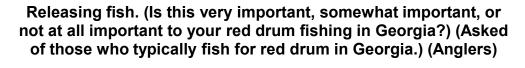
OPINIONS ON REGULATIONS

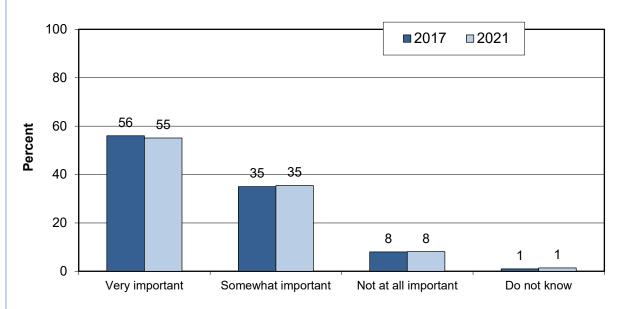


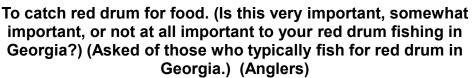
RED DRUM FISHING

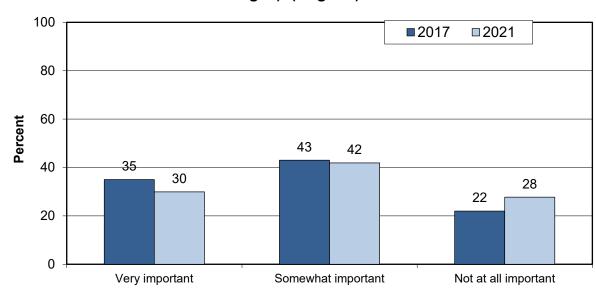


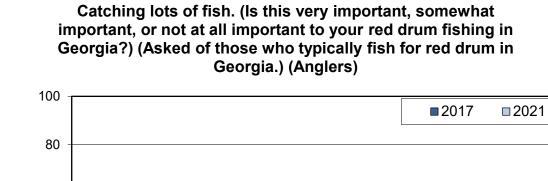


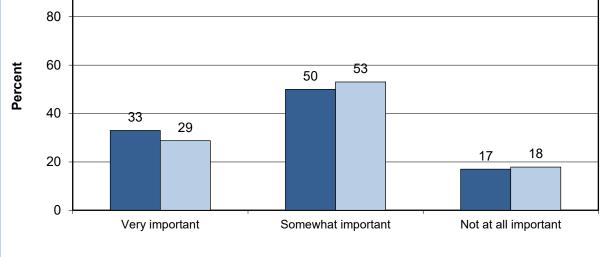


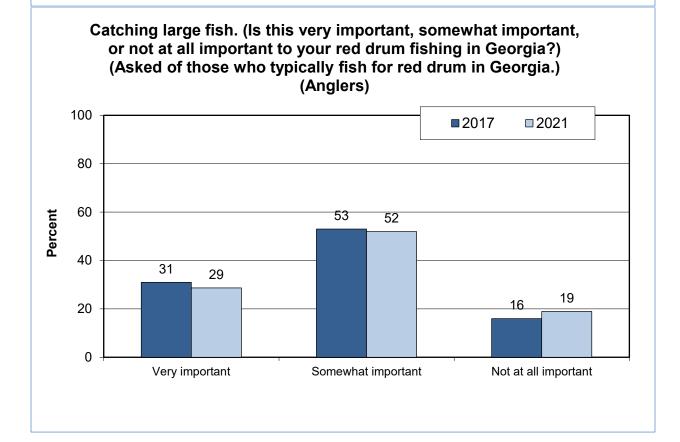


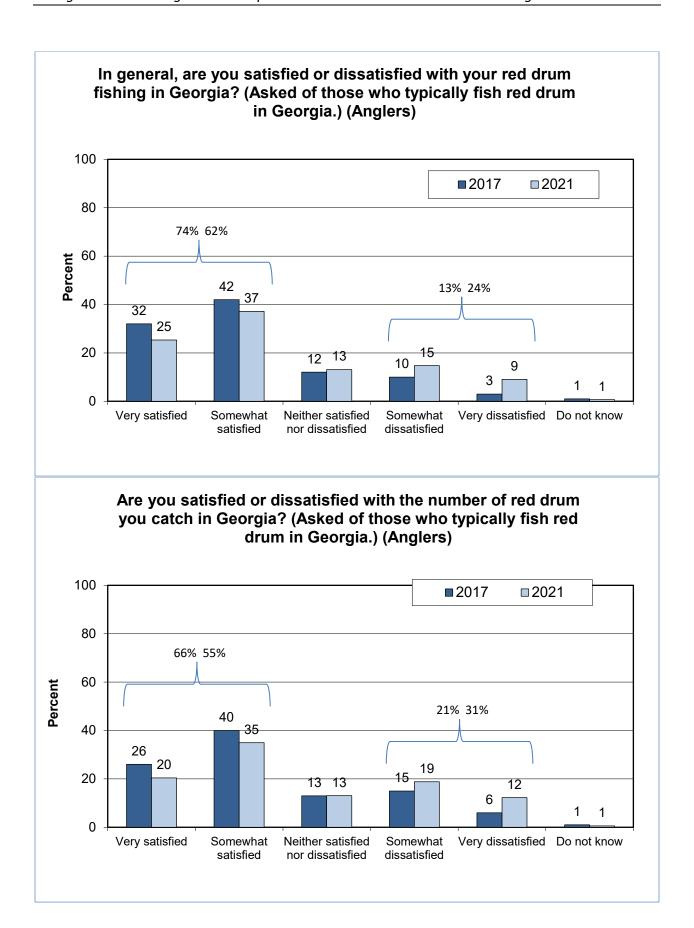


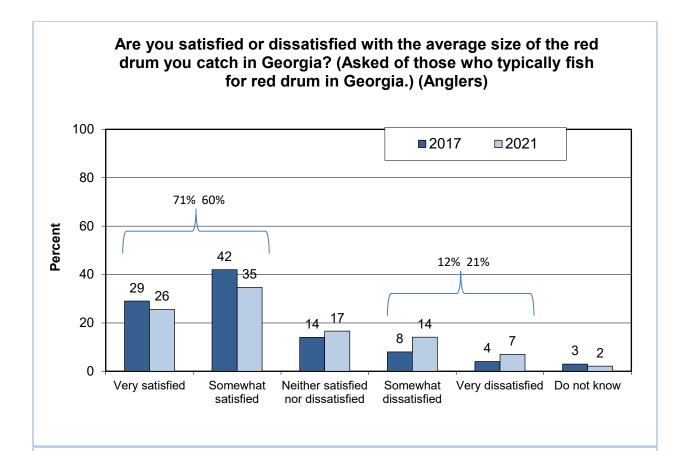


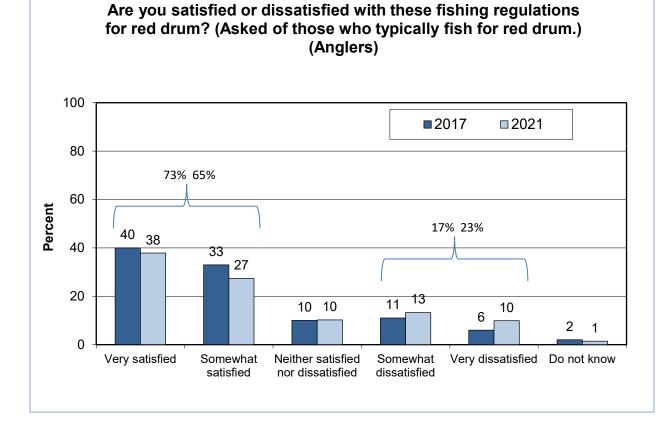


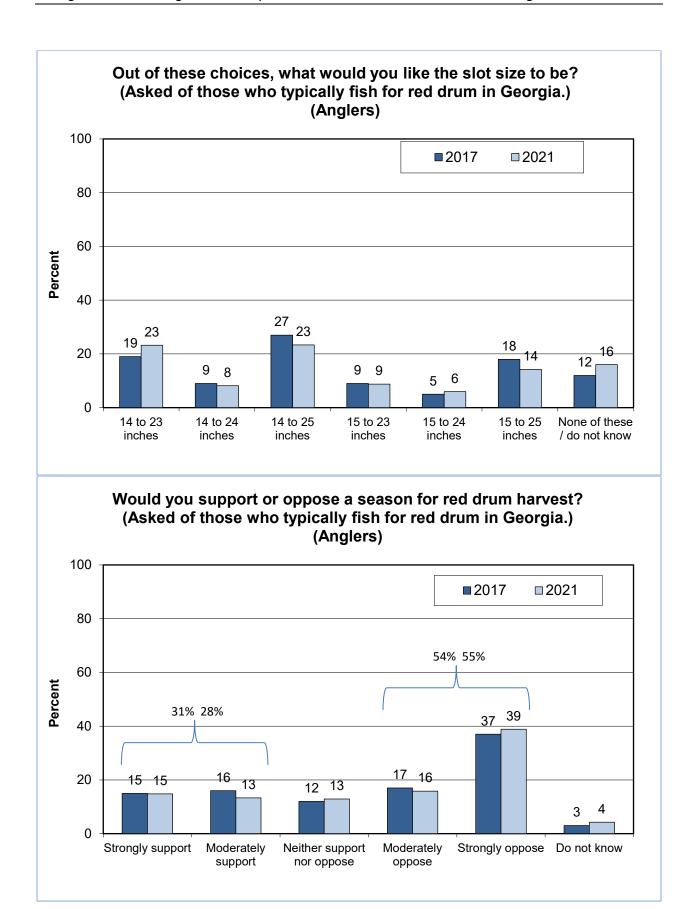




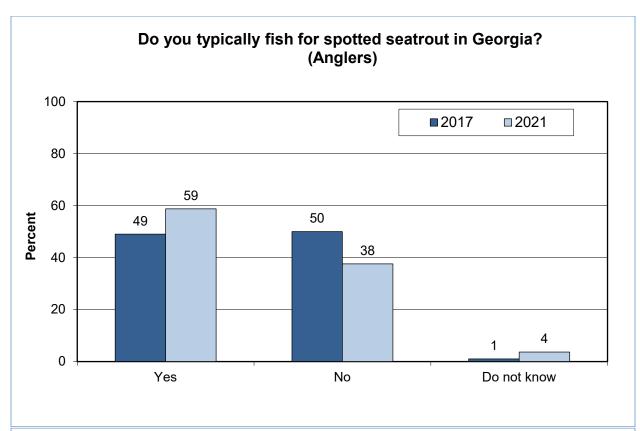


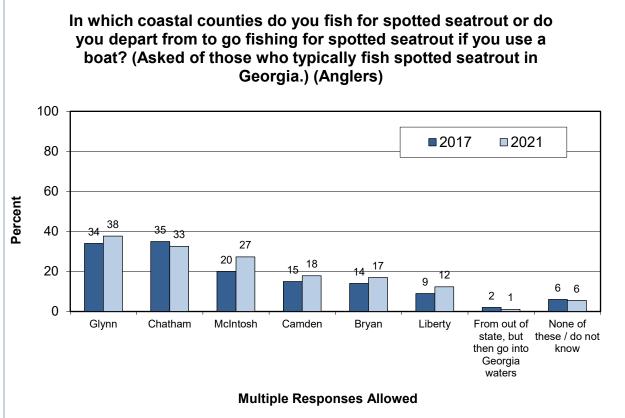


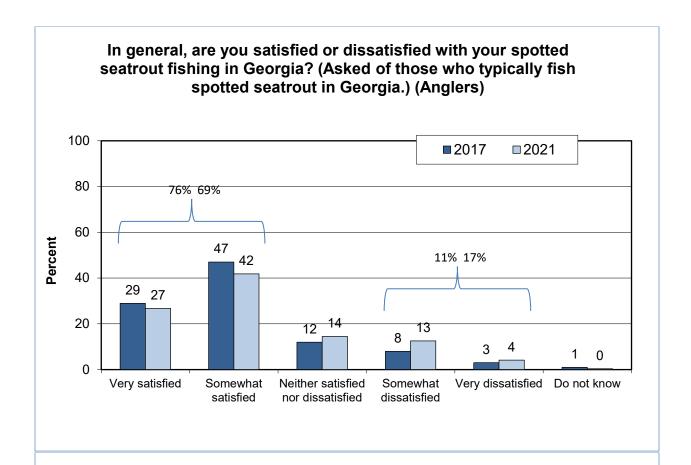


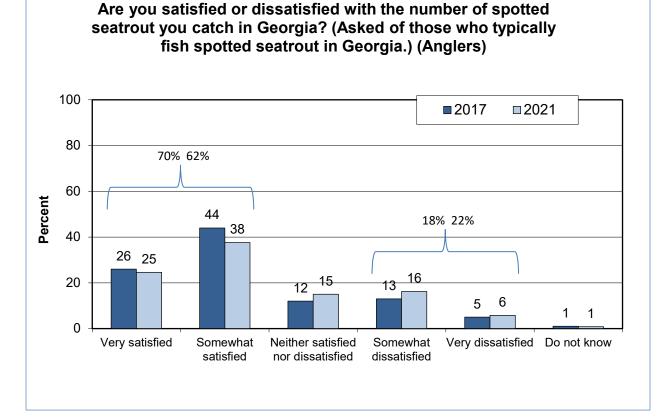


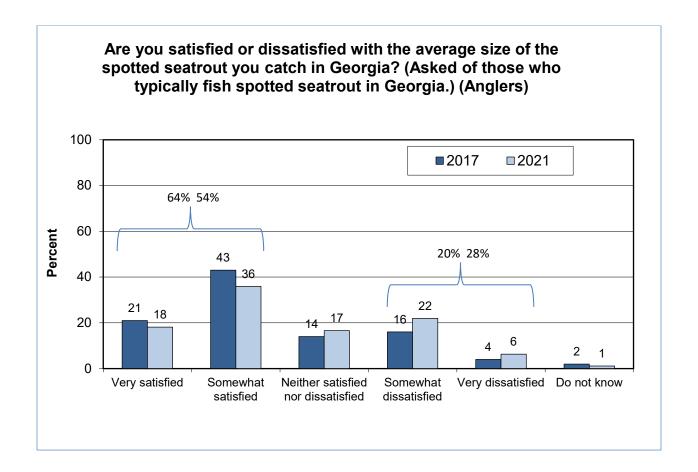
SPOTTED SEATROUT FISHING







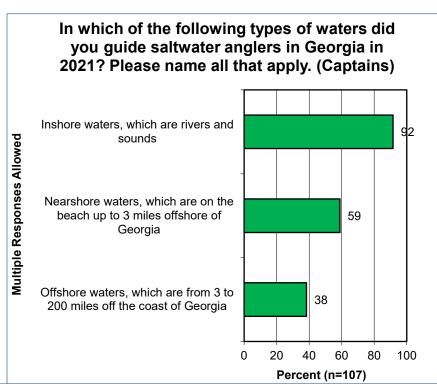


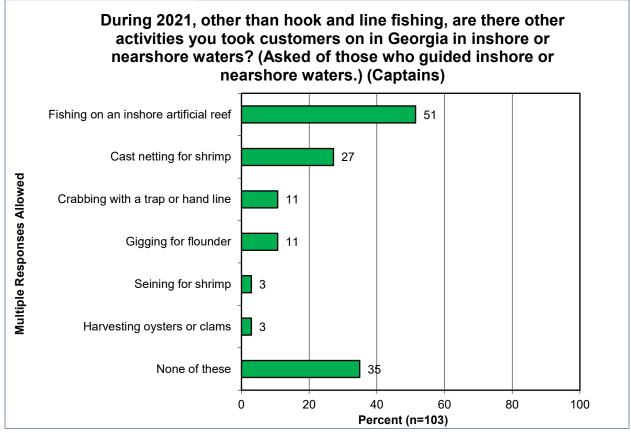


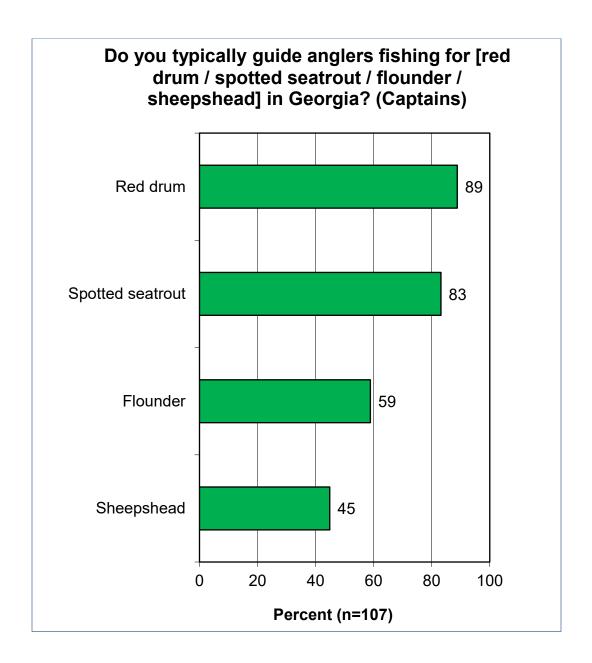
SURVEY OF CAPTAINS

FISHING ACTIVITIES

Nearly all captains take clients fishing in inshore waters, just over half take them fishing in nearshore waters, and a little more than a third take them fishing in offshore waters. Within inshore/nearshore waters, the most common types of fishing activities that captains take clients to do are fishing in an inshore artificial reef and cast netting for shrimp.

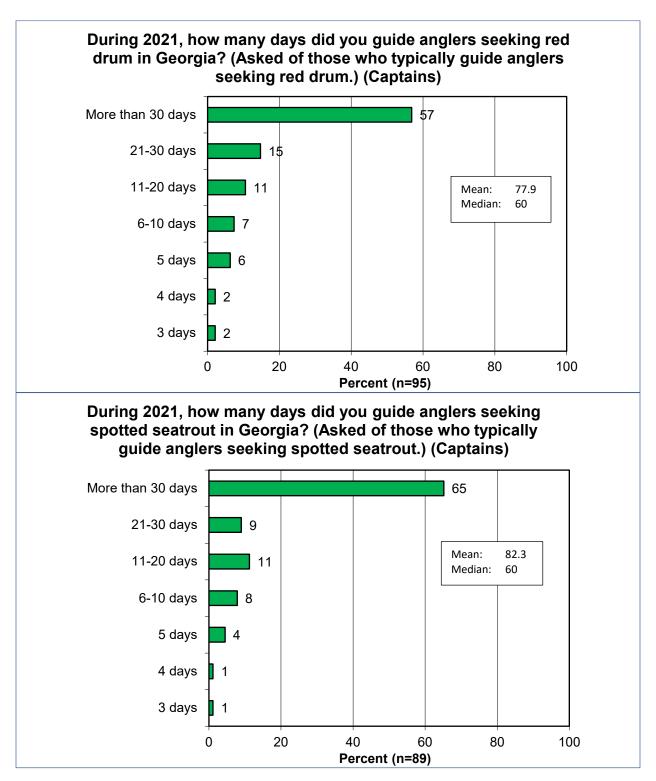


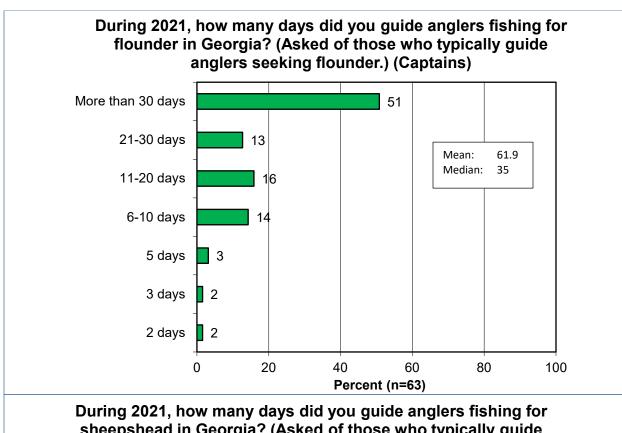


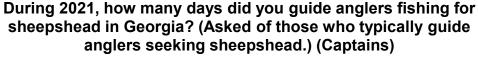


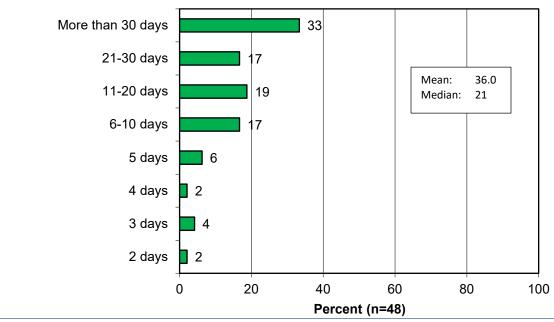
DAYS OF FISHING

Days of taking clients fishing for red drum, spotted seatrout, flounder, and sheepshead are presented in the next four graphs. The means are of those who guided for anglers seeking the given species (i.e., those who did not guide for the species are not included in the calculation of means and medians). Of the four species, those guiding spotted seatrout and red drum have the highest mean number of days.

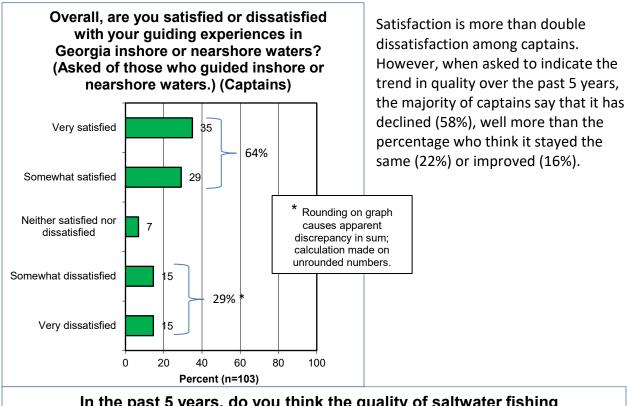


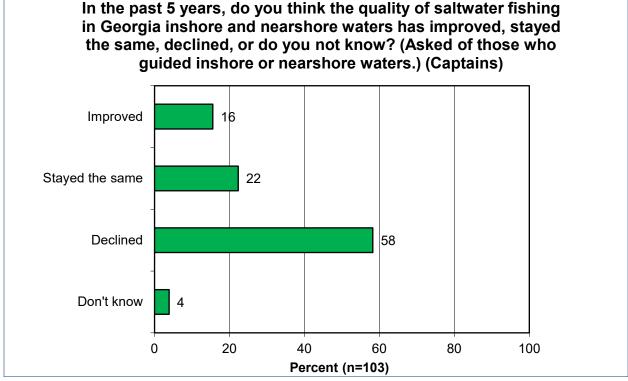






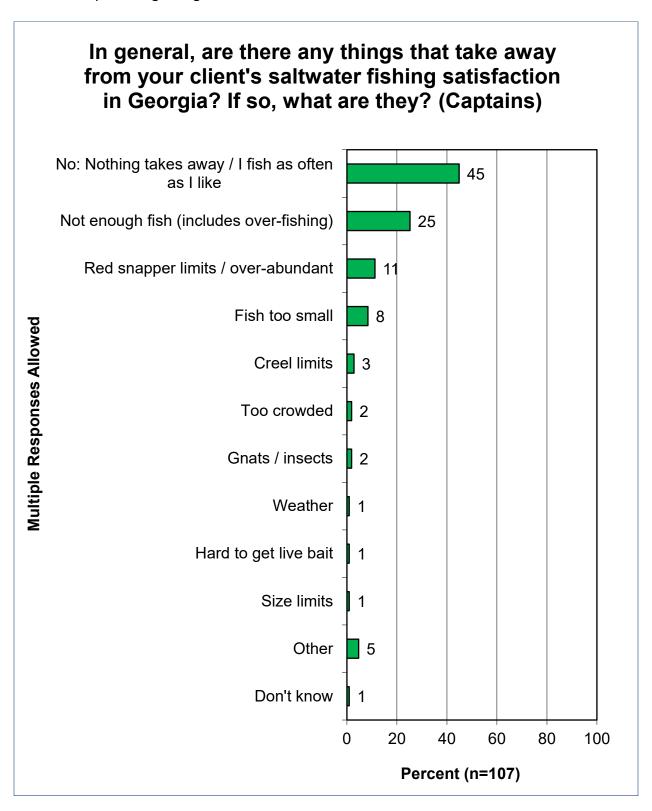
SATISFACTION WITH FISHING ACTIVITIES OVERALL



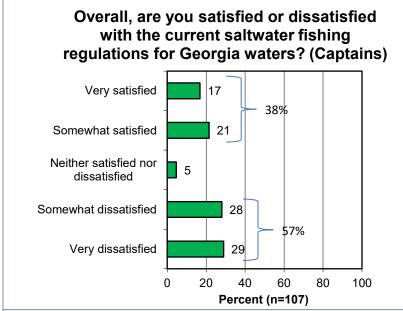


CONSTRAINTS TO AND DISSATISFACTIONS WITH FISHING

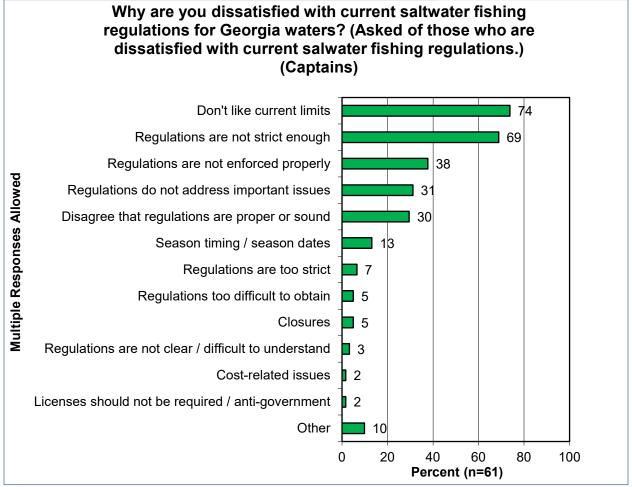
In an open-ended question, captains' most common response regarding any things that take away from their client's saltwater fishing satisfaction is that nothing takes away. The most common response regarding a dislike or constraint is a lack of fish.



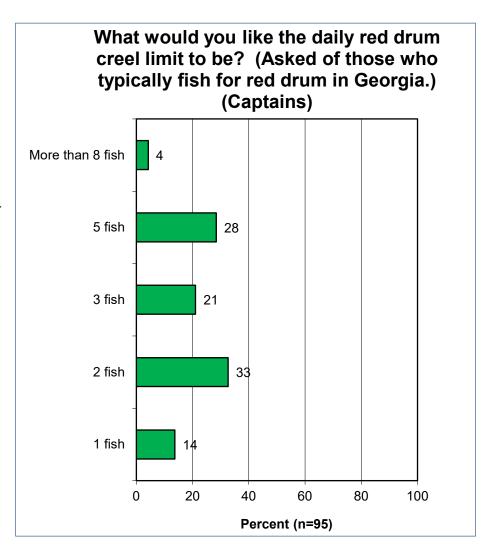
OPINIONS ON REGULATIONS



Among captains, dissatisfaction with the current saltwater fishing regulations far exceeds satisfaction. The most common reasons for dissatisfaction (asked in an open-ended question) are that there is a problem with the current limits and that the regulations are not strict enough.

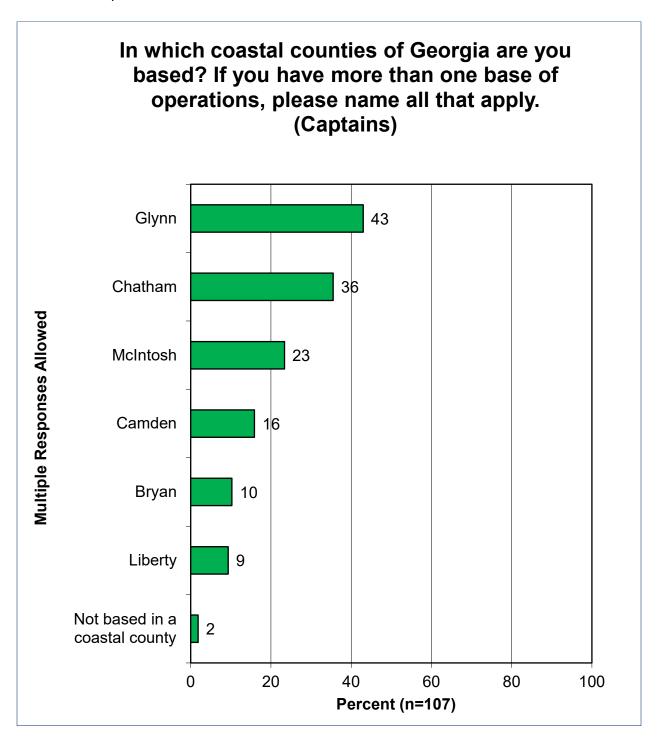


There is no consensus on the desired daily creel limit for red drum, with a third wanting 2 fish to be the limit, and a quarter wanting 5 fish to be the limit, with the rest scattered among other possible limits.

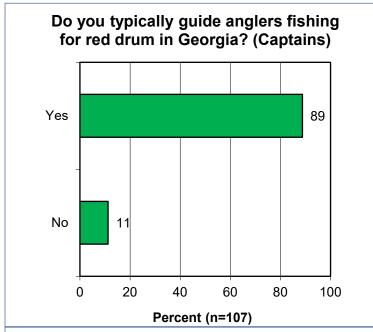


COUNTIES OF FISHING

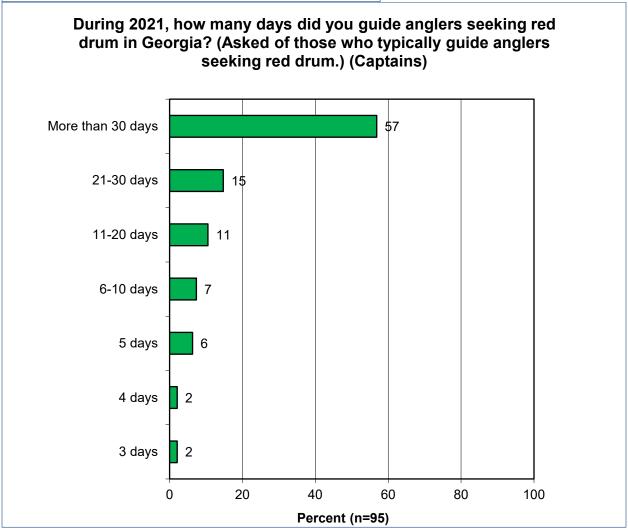
Most commonly, captains are based out of Glynn or Chatham Counties. Multiple responses were allowed because some captains may have more than one location that they identify as their base of operations.



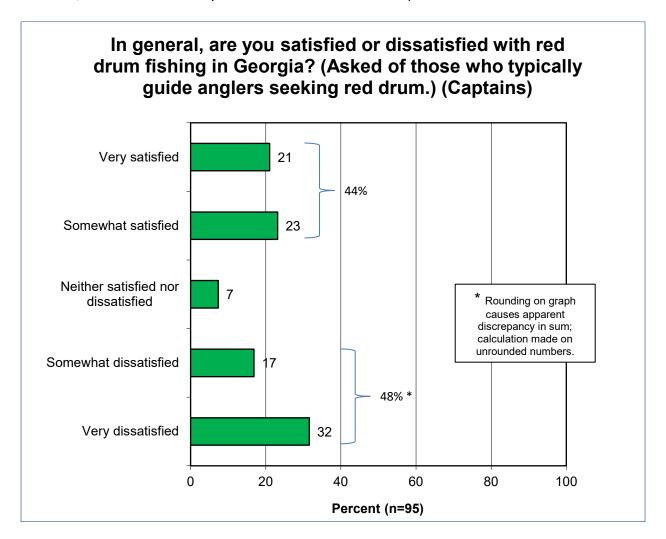
RED DRUM FISHING

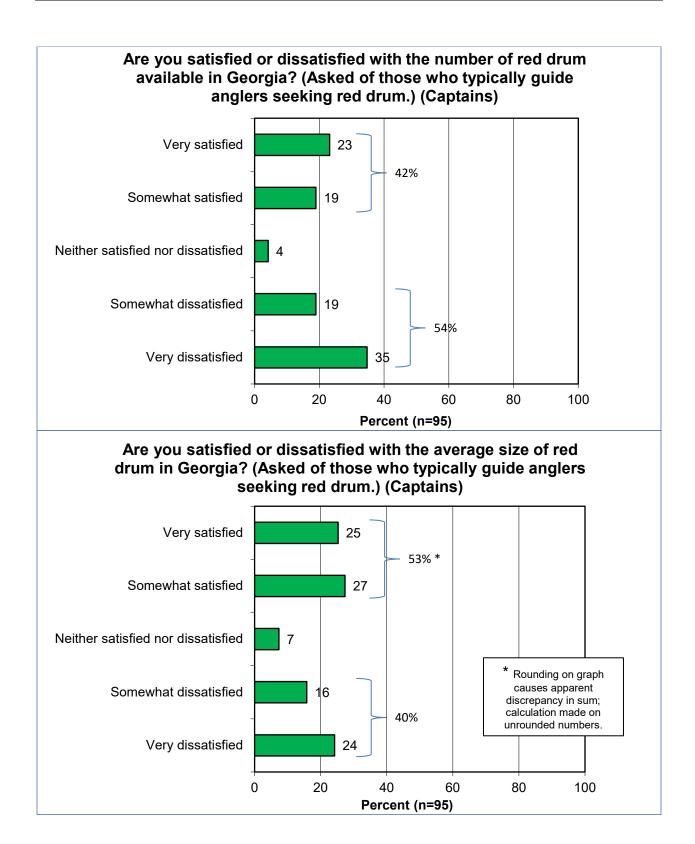


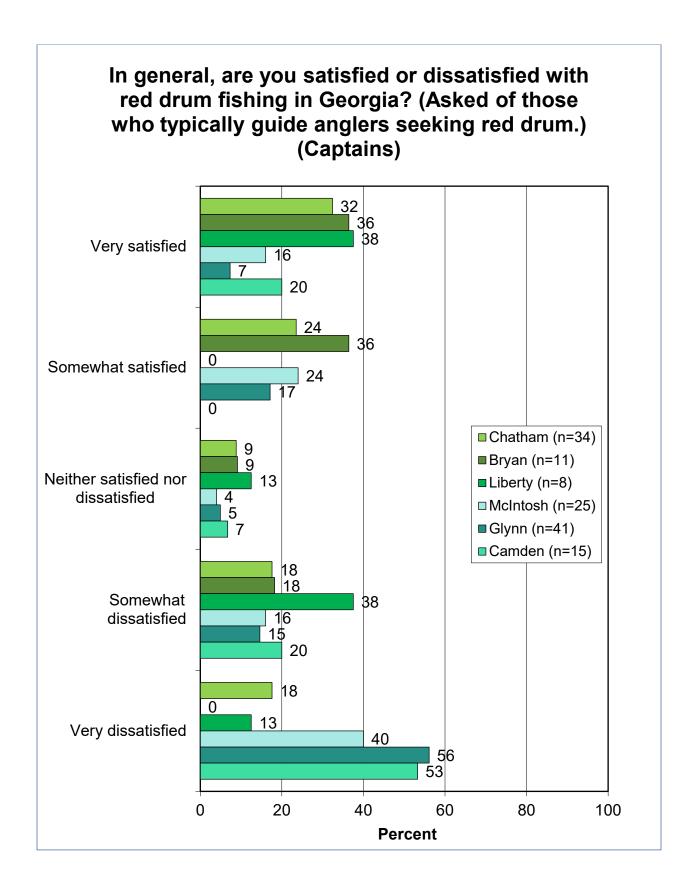
The overwhelming majority of captains (89%) guide anglers seeking red drum. Their days of taking people fishing for red drum are shown, as well.

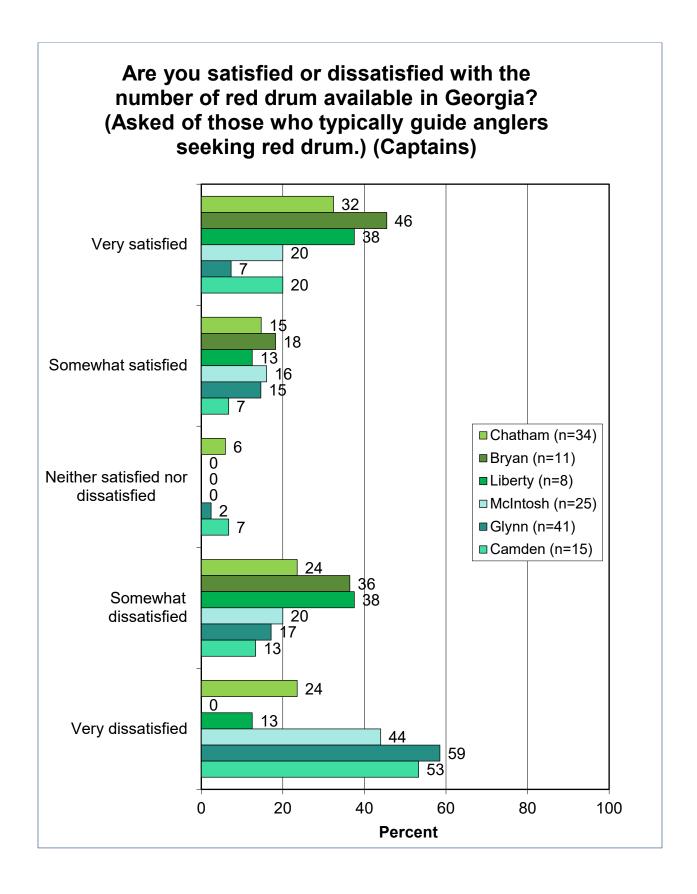


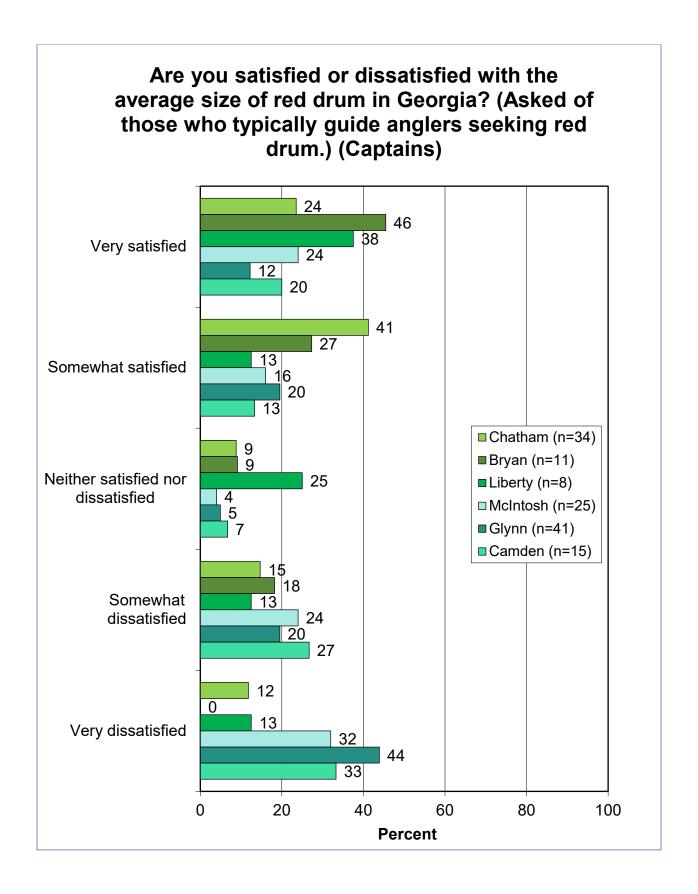
Captains are split on satisfaction/dissatisfaction with red drum fishing, with 44% being satisfied but 48% being dissatisfied. These results are mirrored in the questions about satisfaction or dissatisfaction with the number of red drum and average size. Regarding the number, 42% are satisfied compared to 54% who are dissatisfied. Satisfaction is higher for the average size of red drum, as 53% are satisfied and 40% are dissatisfied. Crosstabulation results by county are included, based on the county that serves as their base of operations.



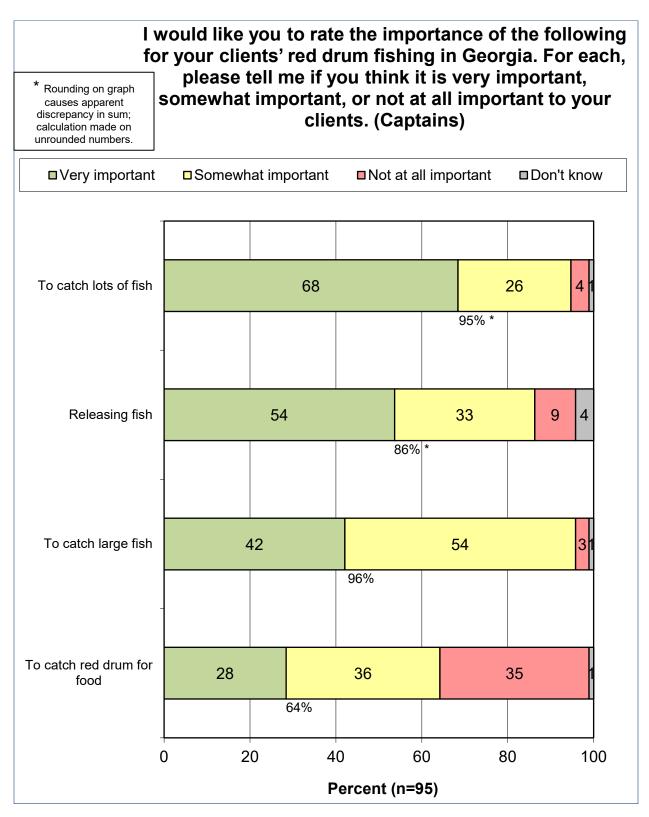




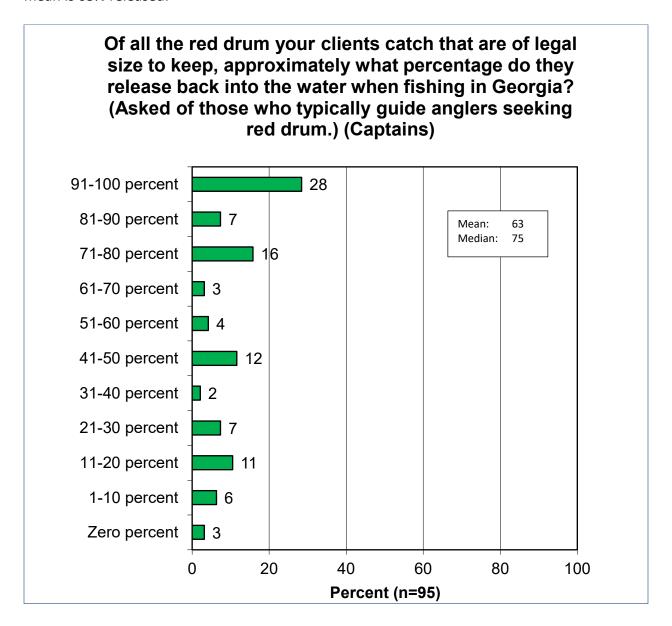


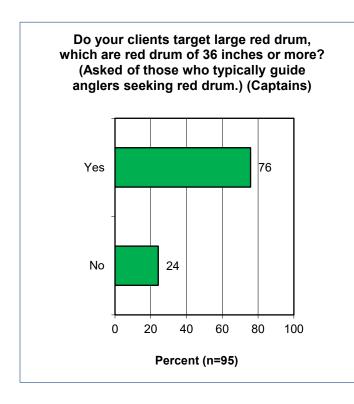


Among captains, the most important reasons for fishing for red drum among their clients are to catch lots of fish (68% say this is very important) and to release fish (54% say this is very important). On the other hand, catching large fish is less important, and catching red drum for food has the lowest importance of the four items rated.



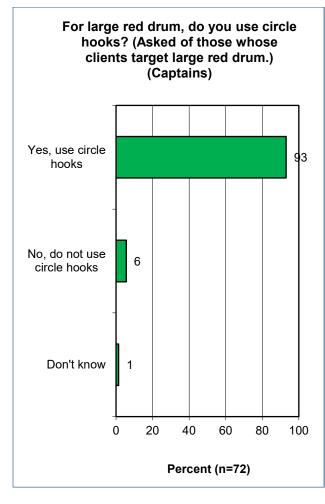
Captains' clients more commonly release legal red drum that they catch than keep them. The mean is 63% released.

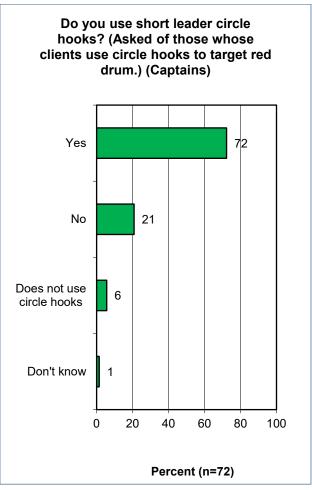


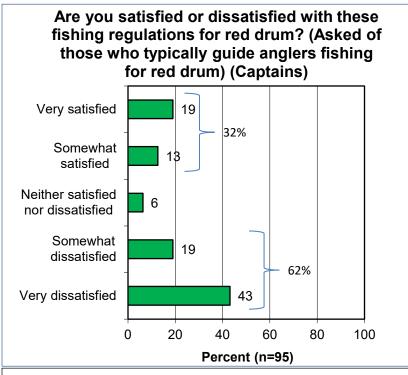


About three quarters of captains have clients who target large red drum (of 36 inches or more). When targeting these fish, an important aspect that affects the survivability of the fish, when they are released, is the use of circle hooks (a hook that is sharply curved back, which decreases mortality) and the use of short leaders when using circle hooks (a short leader has the weight no more than 6 inches from the hook, which keeps the fish from swallowing the hook deeply).

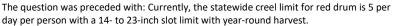
Of those whose clients target large red drum, 93% use circle hooks, and 72% use short leader circle hooks.

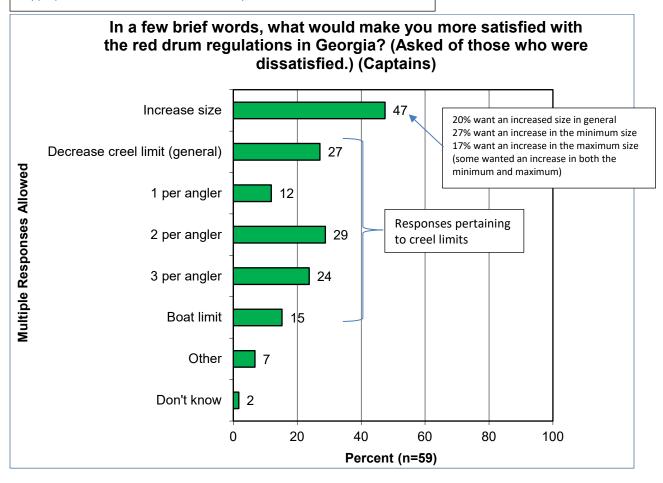




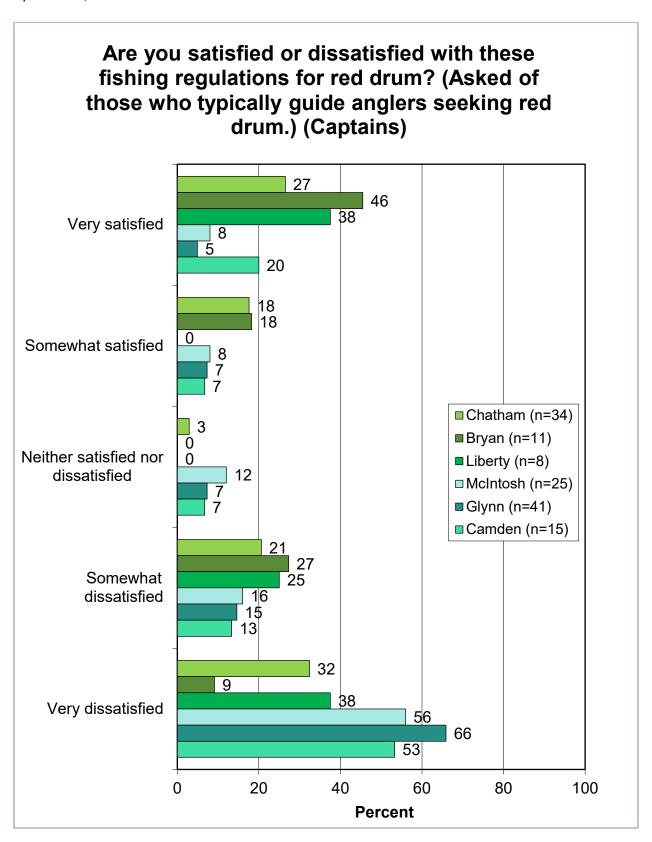


Dissatisfaction with the current red drum regulations far exceeds satisfaction among captains. The next graph shows their responses to an open-ended question that asked those who were dissatisfied to say what would make them more satisfied. The graph shows general responses at the top of the graph followed by all the responses pertaining to creel limits underneath.

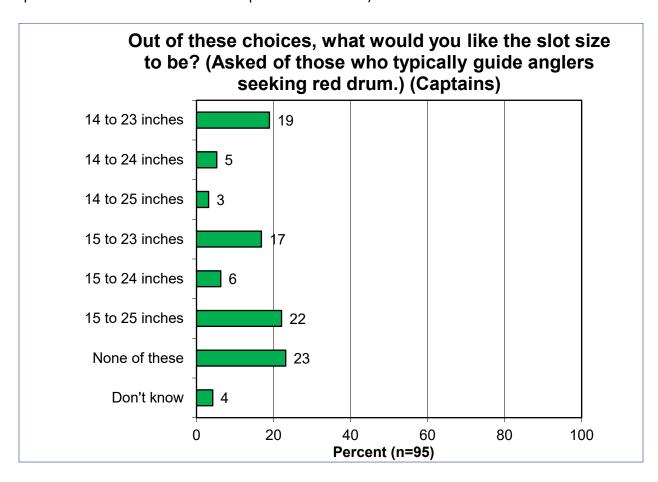




A crosstabulation was run on the satisfaction question by county in which captains base their operations, as shown below.

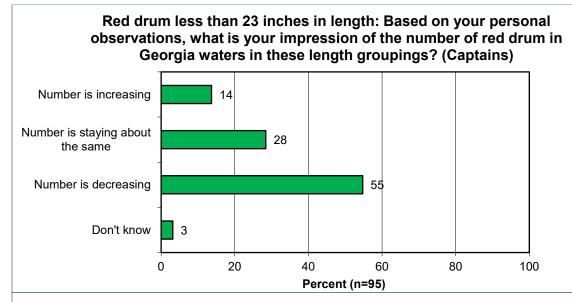


There is no consensus on the desired slot size, as each of the choices presented to captains garnered some support. The most common responses (other than none of the choices) was a slot size of 15 to 25 inches or a slot size of 14 to 23 inches. Among those who responded with "none of these," nearly all want a minimum size that is larger than the choices that were given, typically in the range of 16 to 18 inches, with accompanying upper values from 23 to 27 inches (because the sample size is small—only those who responded with "none" received the question—a tabulation of these responses is included).

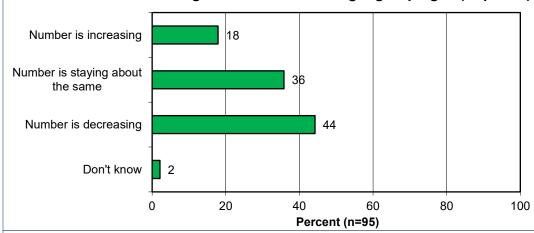


| 17 AS A MINIMUM AND 26 MAX |
|----------------------------------|
| 17 to 27 |
| 18 to 23 |
| 18 to 27 |
| 18-25' |
| 18-27 |
| 18-27 |
| 18'-27' |
| 20-25 |
| None [does not want a slot size] |
| |
| |

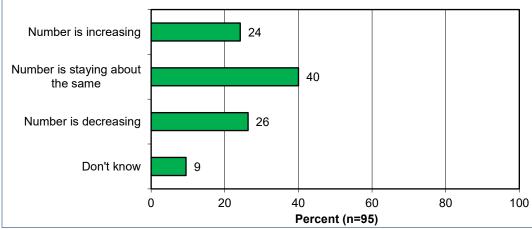
The following page shows captains' observations on the number of red drum of various sizes. Most commonly, they think the numbers of red drum of the small and intermediate sizes are decreasing, while they most commonly think the largest red drum number is staying about the same.



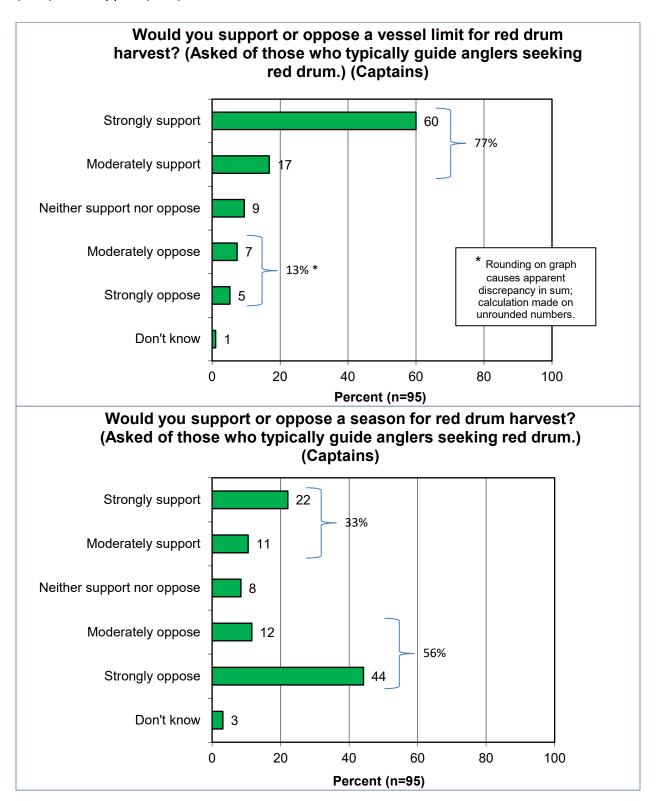
Red drum between 23 inches and 36 inches in length: Based on your personal observations, what is your impression of the number of red drum in Georgia waters in these length groupings? (Captains)



Red drum greater than 36 inches in length: Based on your personal observations, what is your impression of the number of red drum in Georgia waters in these length groupings? (Captains)

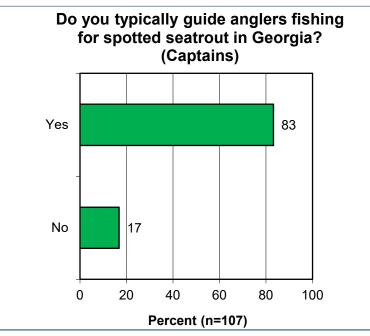


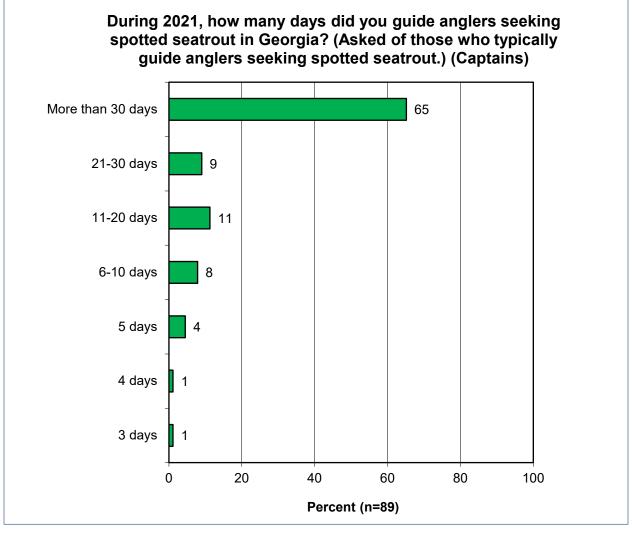
There is much support for a vessel limit for red drum: 77% support it, with 60% strongly supporting it. Regarding the establishment of a season for red drum, there is more opposition (56%) than support (33%).



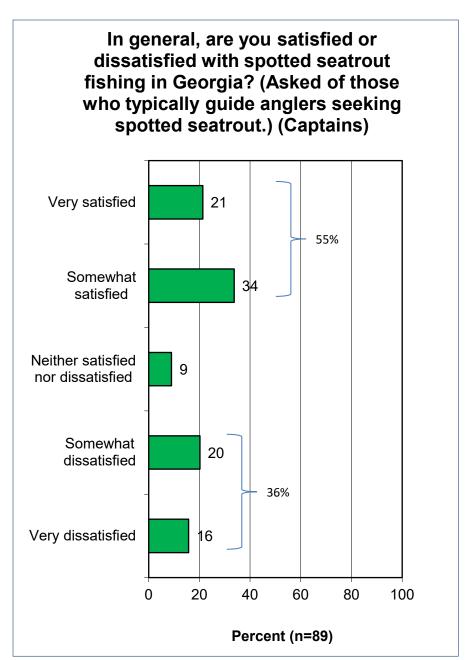
SPOTTED SEATROUT FISHING

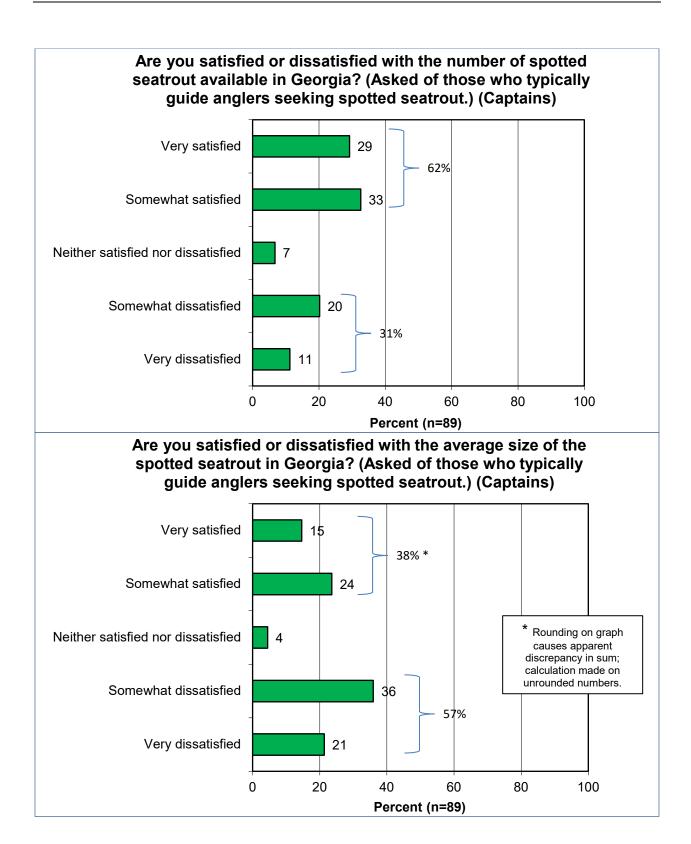
A large percentage of captains take anglers fishing for spotted seatrout. Their days of doing so are shown as well.



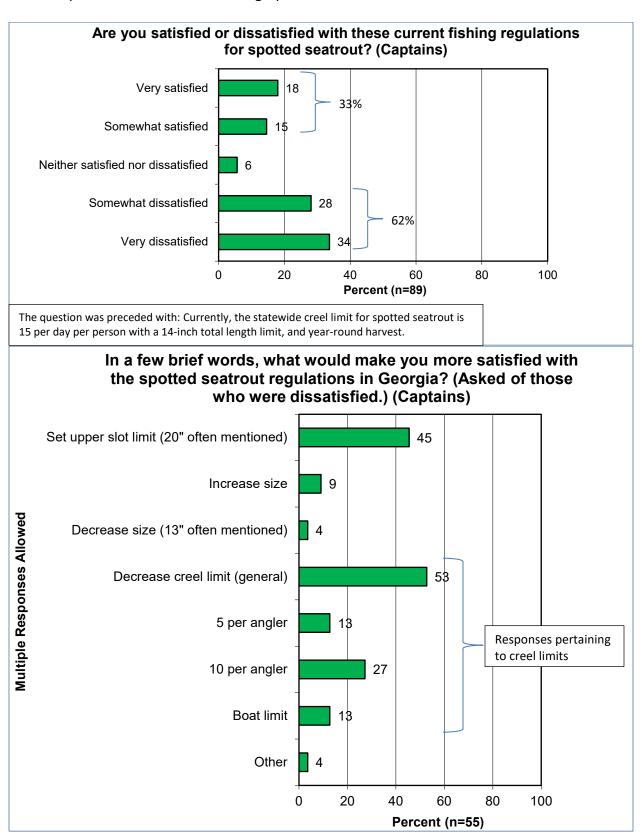


Just over half of those taking clients to fish for spotted seatrout are satisfied (55%) with the fishing for that species. On the other hand, about a third (36%) are dissatisfied. The dissatisfaction appears to stem from the average size of spotted seatrout rather than the number, as 62% are satisfied with the number but only 38% are satisfied with the average size.



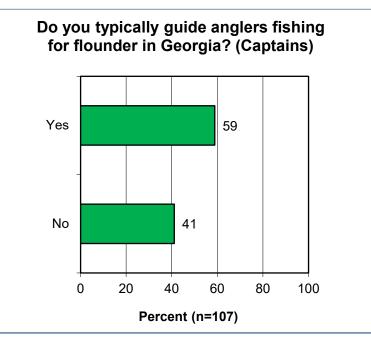


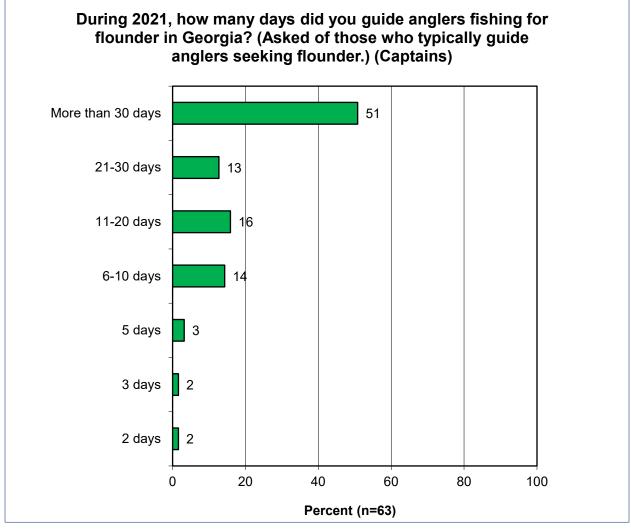
The majority of captains are dissatisfied with the current spotted seatrout regulations. The things that would make them more satisfied are shown in the graph. Three relate to size, and those responses at the bottom of the graph relate to the creel limit.

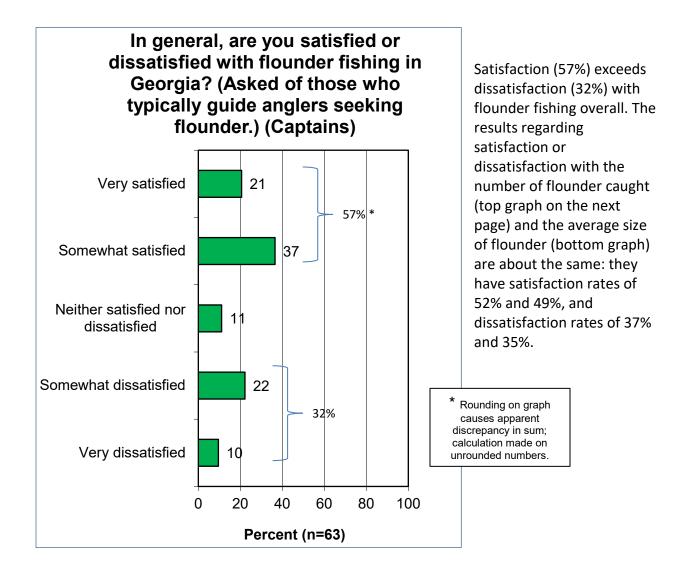


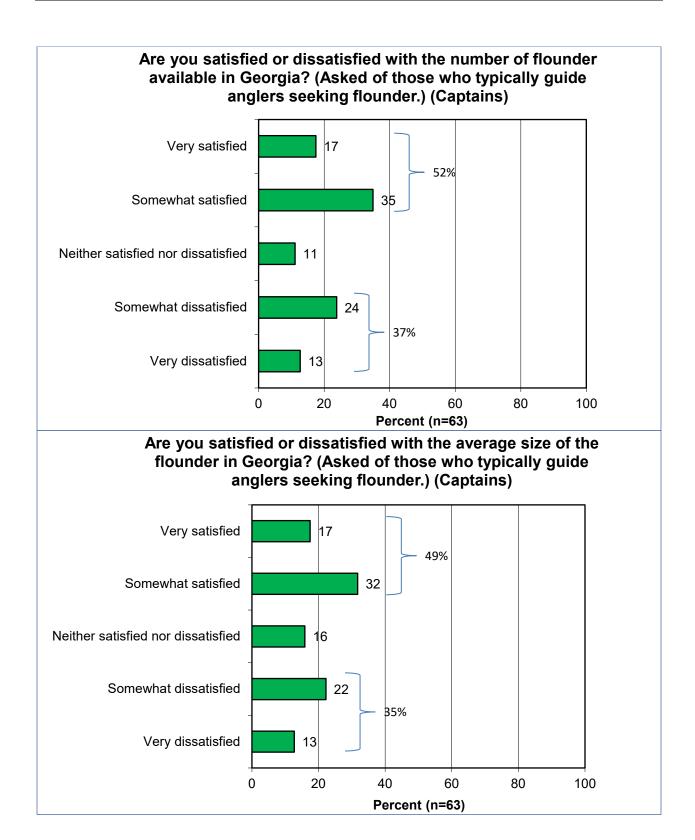
FLOUNDER FISHING

Somewhat over half of captains take clients to fish for flounder in Georgia. Their days of doing so are shown, as well.

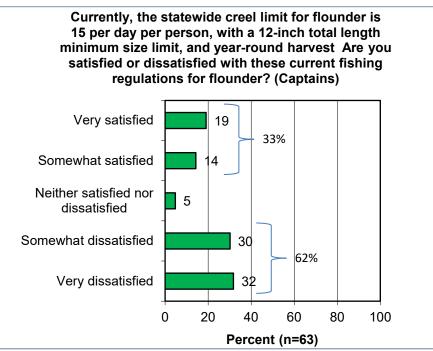


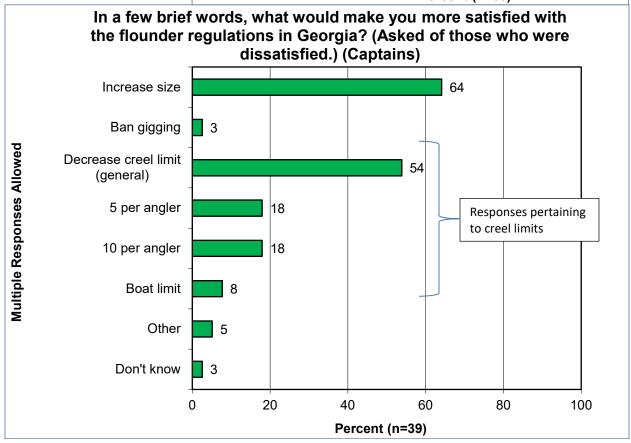




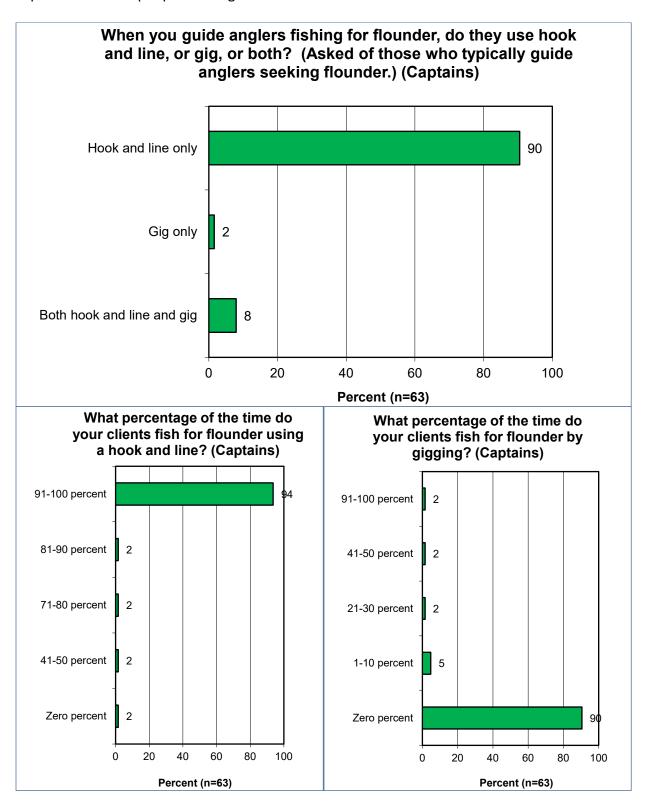


Dissatisfaction with the current flounder regulations (62%) is almost double the satisfaction (33%) with them. The majority of those dissatisfied want an increased size limit; a majority also want a decrease in the creel limit (fortunately, those two outcomes are not mutually exclusive). Note that multiple responses could be given to the open-ended question.

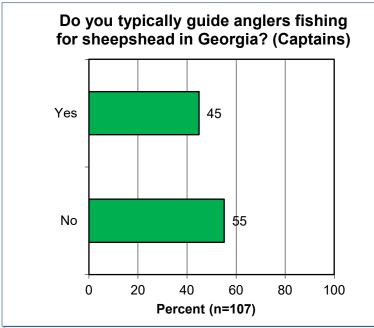




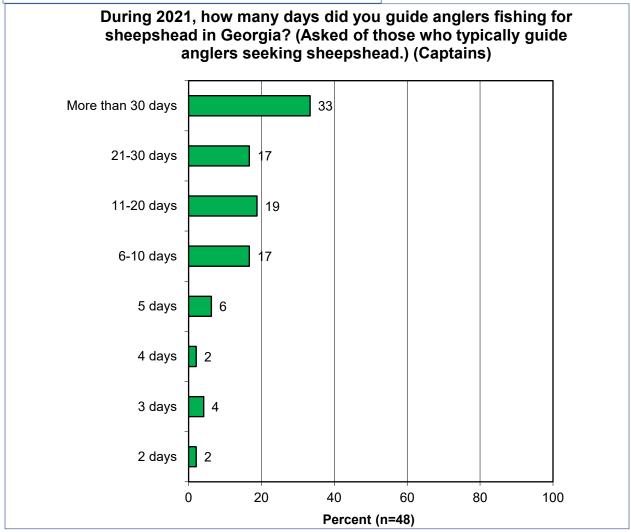
Hook and line fishing far exceeds gigging as the method of take for flounder, among clients of captains who take people seeking flounder.



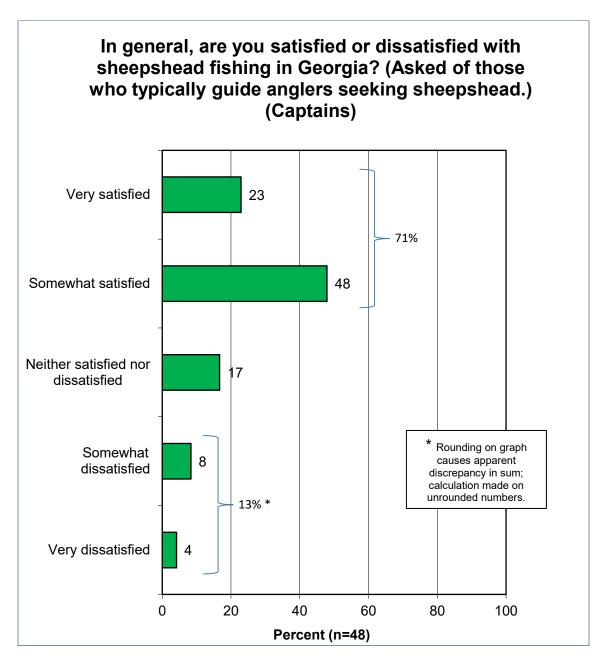
SHEEPSHEAD FISHING

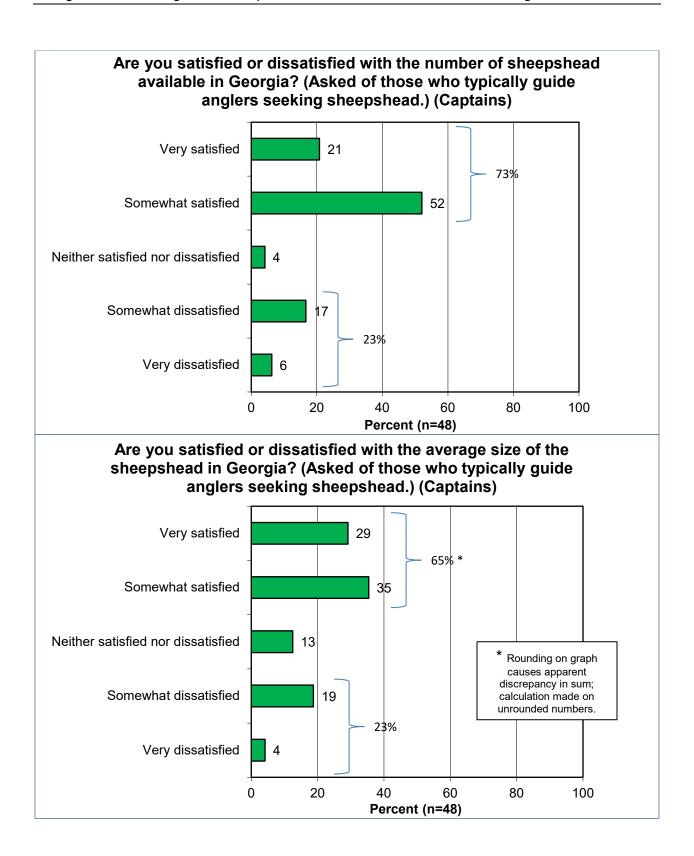


Just under half of captains take clients to fish for sheepshead. Their days of doing so are shown in the accompanying graph.

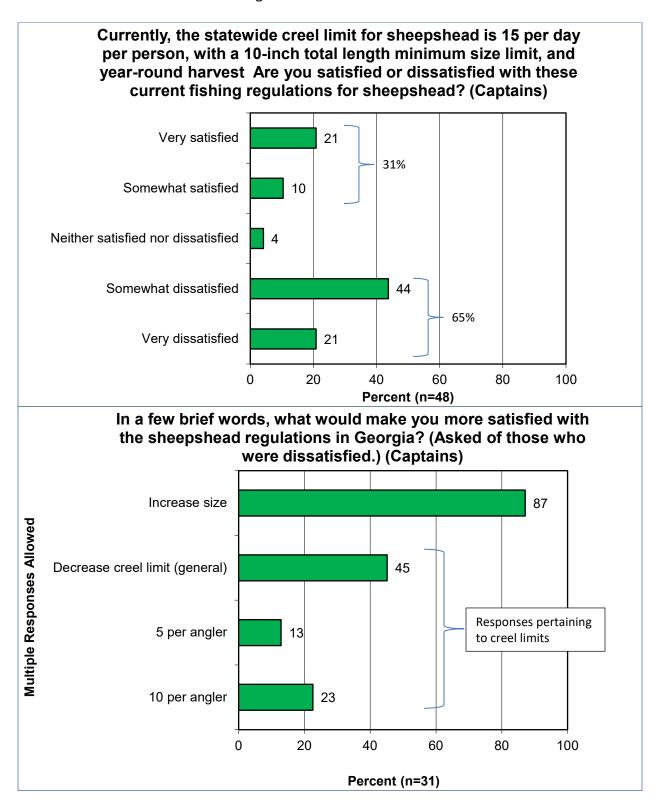


Satisfaction (71%) far exceeds dissatisfaction (13%) for sheepshead fishing, among captains who took people fishing for sheepshead. Satisfaction is greater for the number of sheepshead (73%) than for the average size of them (65%), although satisfaction is relatively high for both (these graphs are on the following page).



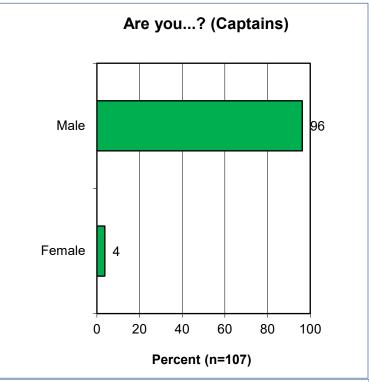


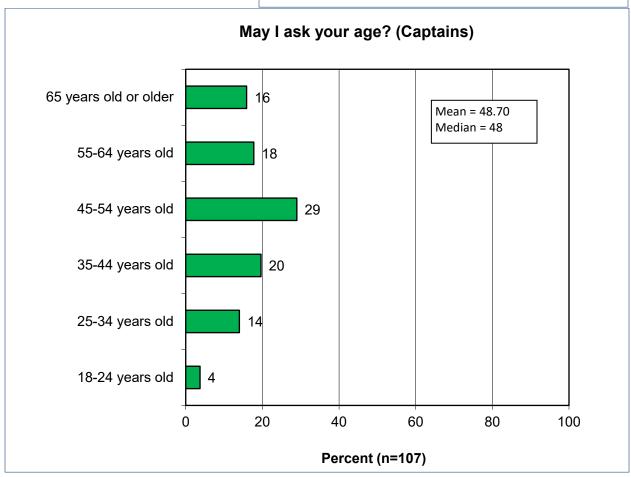
The majority of captains are dissatisfied with the sheepshead regulations (65%). Nearly all of those who are dissatisfied want a larger size limit.

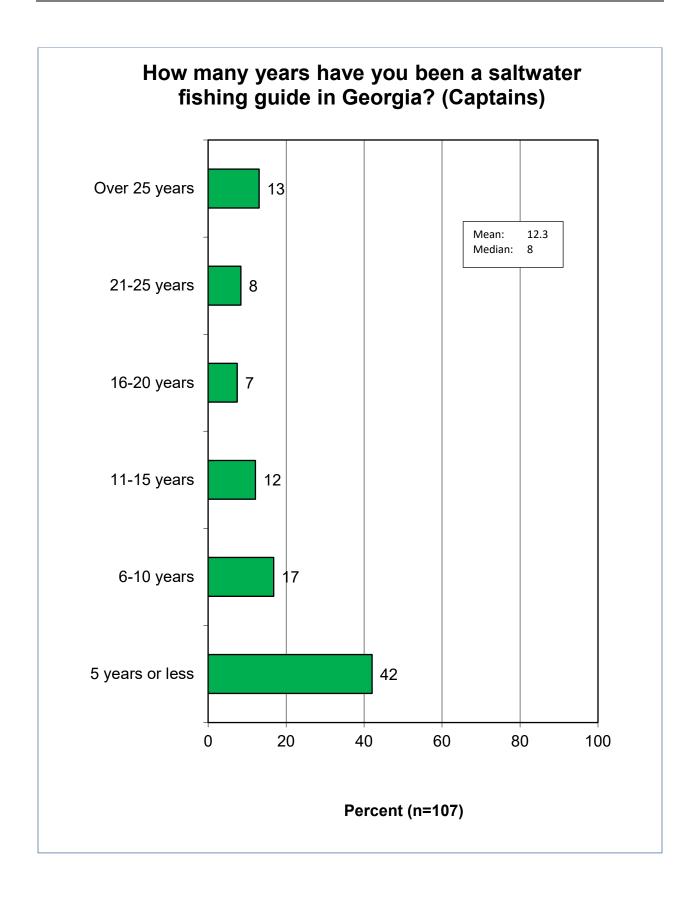


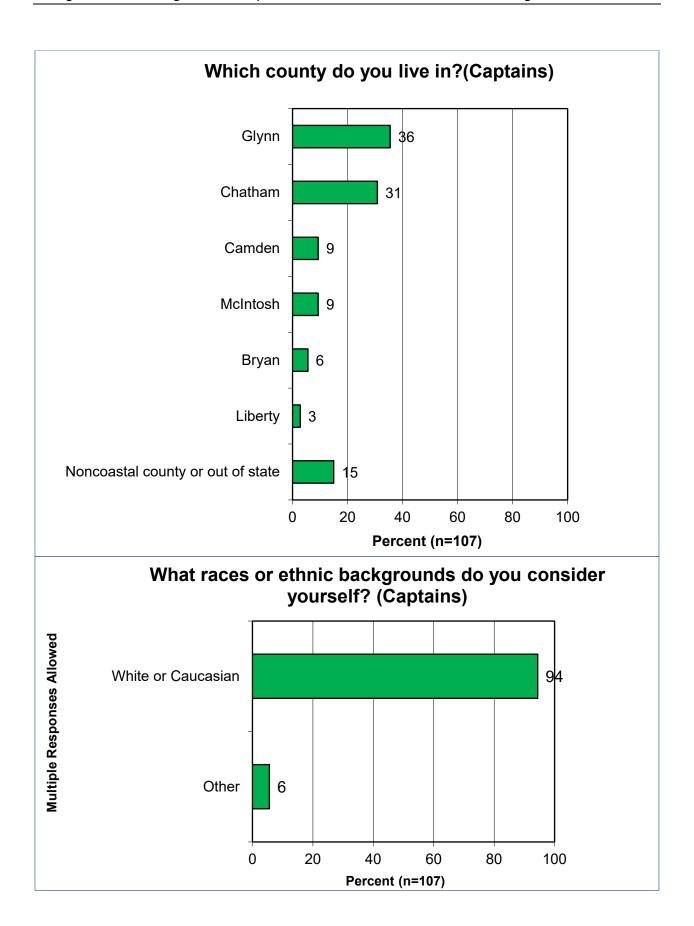
DEMOGRAPHIC INFORMATION

Only limited demographic information is included in this section to preserve respondent anonymity. Graphs are included for gender, age, years of guiding, county of residence (which is not necessarily the county of the base of operations), and ethnicity. (The counties and ethnicity graphs have amalgamated categories to preserve respondent anonymity.)







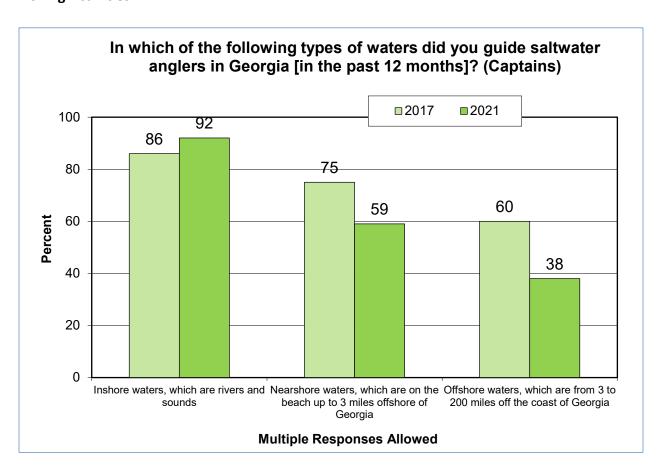


TRENDS IN CAPTAINS SURVEY DATA

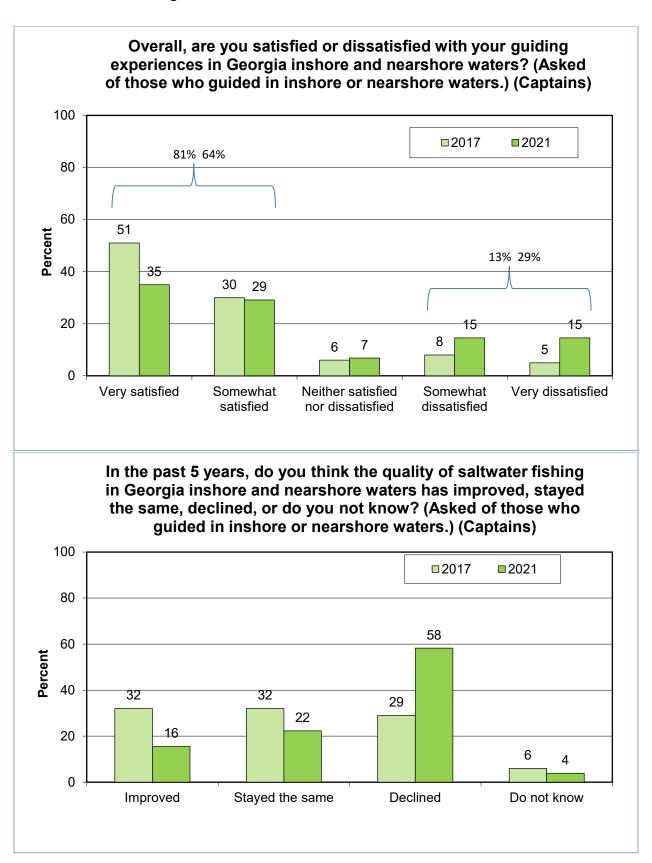
This trends section compares the survey of captains in 2017 with this current survey. In general, their dissatisfaction has increased since 2017.

Brackets show the sums for satisfaction and support questions; there may be an apparent 1-percentage point discrepancy in the values shown on the graph and the sum because the sums were calculated on unrounded numbers while the graphs show numbers rounded to the integer.

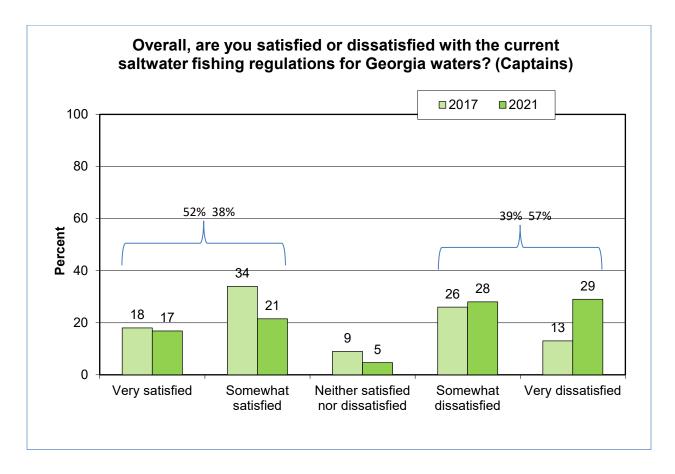
Fishing Activities



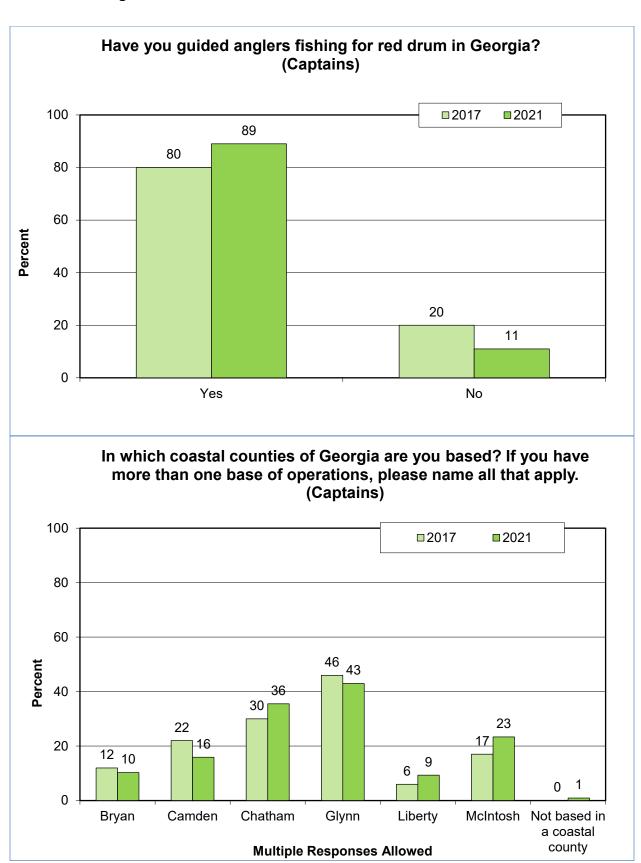
Satisfaction With Fishing Activities Overall

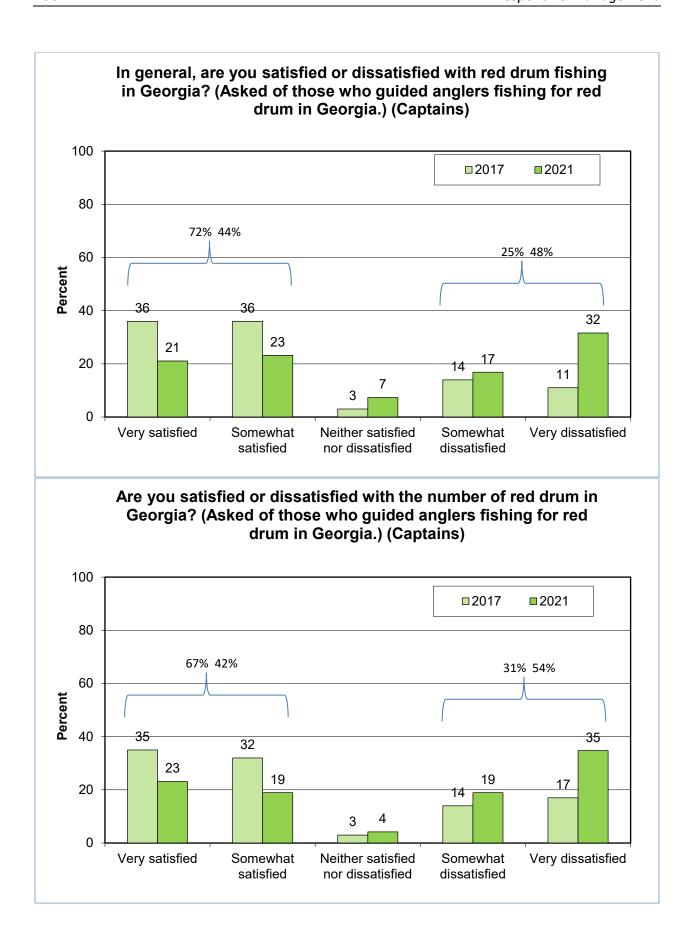


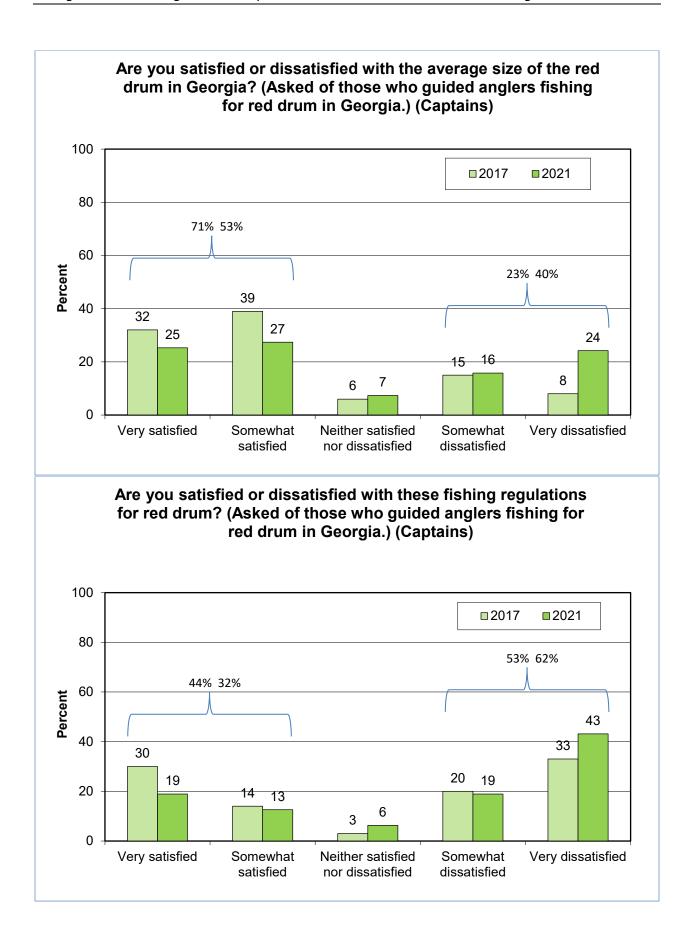
Opinions on Regulations

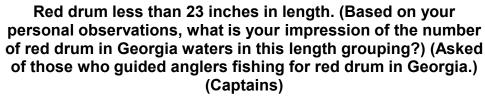


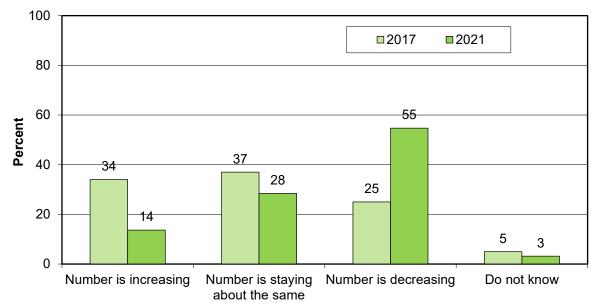
Red Drum Fishing



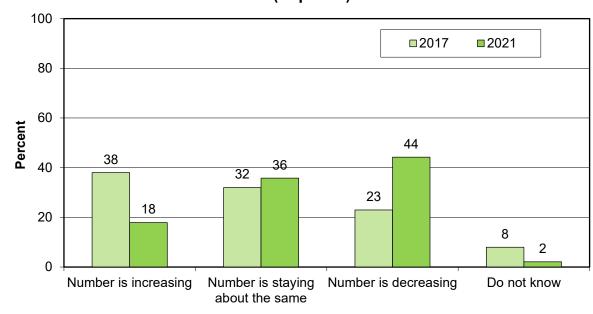


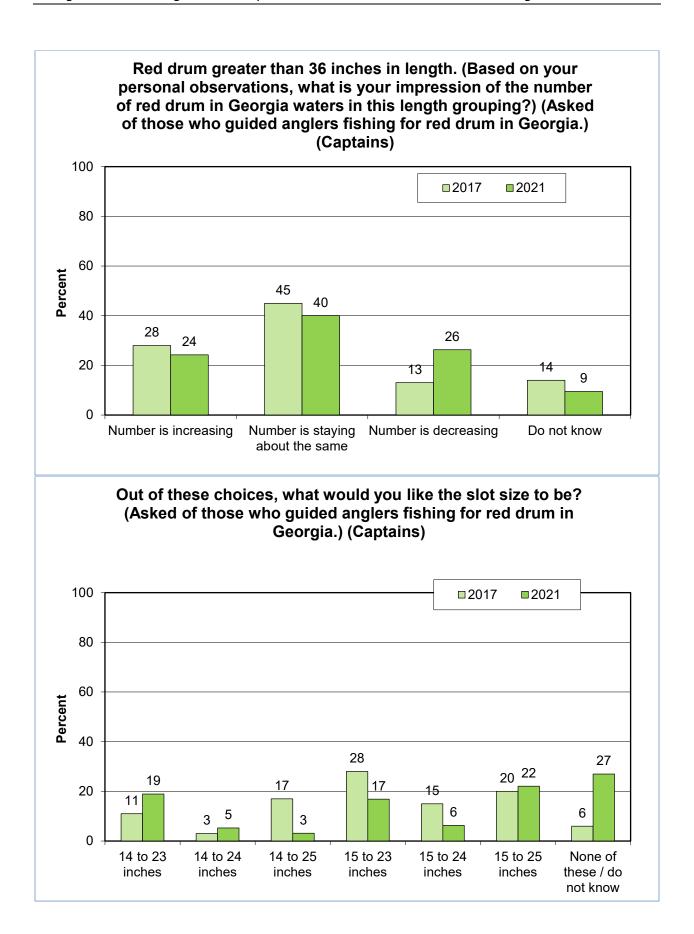


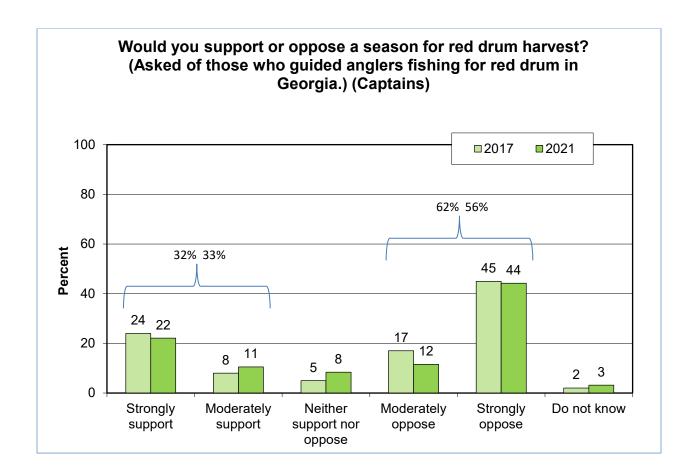




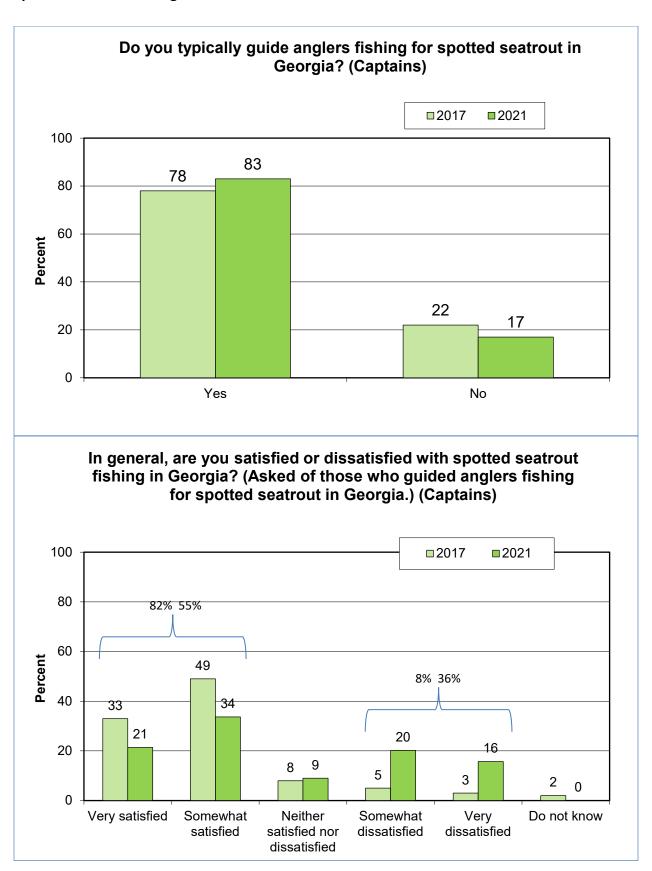
Red drum between 23 in. and 36 in. in length. (Based on your personal observations, what is your impression of the number of red drum in GA waters in this length grouping?) (Asked of those who guided anglers fishing for red drum in Georgia.) (Captains)

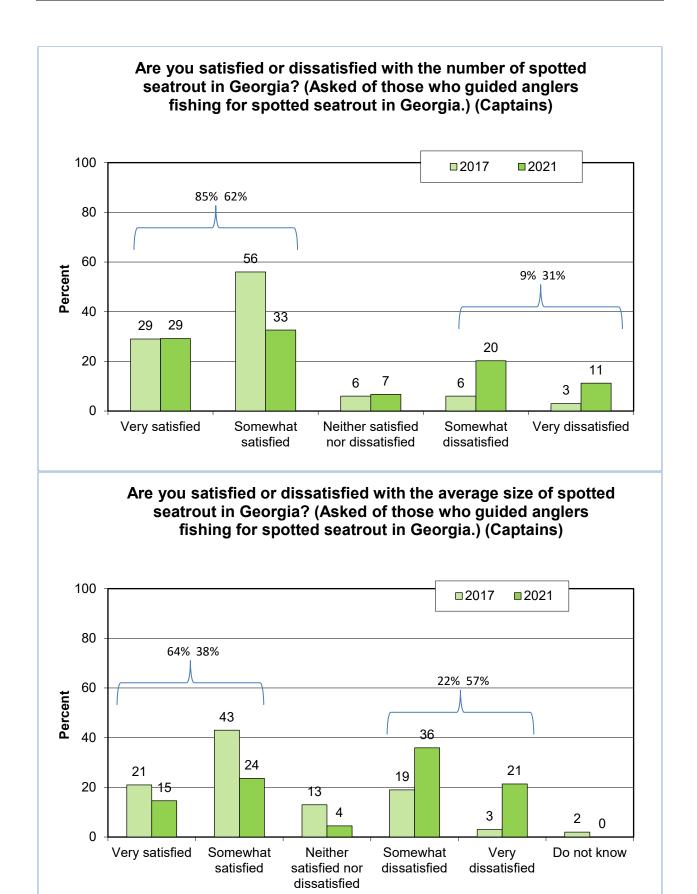






Spotted Seatrout Fishing





ABOUT RESPONSIVE MANAGEMENT

Responsive Management is an internationally recognized survey research firm specializing in natural resource and outdoor recreation issues. Our mission is to help natural resource and outdoor recreation agencies, businesses, and organizations better understand and work with their constituents, customers, and the public. Focusing only on natural resource and outdoor recreation issues, Responsive Management has conducted telephone, mail, and online surveys, as well as multi-modal surveys, on-site intercepts, focus groups, public meetings, personal interviews, needs assessments, program evaluations, marketing and communication plans, and other forms of human dimensions research measuring how people relate to the natural world for more than 30 years. Utilizing our in-house, full-service survey facilities with 75 professional interviewers, we have conducted studies in all 50 states and 15 countries worldwide, totaling more than 1,000 human dimensions projects *only* on natural resource and outdoor recreation issues.

Responsive Management has conducted research for every state fish and wildlife agency and every federal natural resource agency, including the U.S. Fish and Wildlife Service, the National Park Service, the U.S. Forest Service, Bureau of Land Management, U.S. Coast Guard, and the National Marine Fisheries Service. Additionally, we have also provided research for all the major conservation NGOs including the Archery Trade Association, the American Sportfishing Association, the Association of Fish and Wildlife Agencies, Dallas Safari Club, Ducks Unlimited, Environmental Defense Fund, the Izaak Walton League of America, the National Rifle Association, the National Shooting Sports Foundation, the National Wildlife Federation, the Recreational Boating and Fishing Foundation, the Rocky Mountain Elk Foundation, Safari Club International, the Sierra Club, Trout Unlimited, and the Wildlife Management Institute.

Other nonprofit and NGO clients include the American Museum of Natural History, the BoatUS Foundation, the National Association of Conservation Law Enforcement Chiefs, the National Association of State Boating Law Administrators, and the Ocean Conservancy. As well, Responsive Management conducts market research and product testing for numerous outdoor recreation manufacturers and industry leaders, such as Winchester Ammunition, Vista Outdoor (whose brands include Federal Premium, CamelBak, Bushnell, Primos, and more), Trijicon, Yamaha, and others. Responsive Management also provides data collection for the nation's top universities, including Auburn University, Clemson University, Colorado State University, Duke University, George Mason University, Michigan State University, Mississippi State University, North Carolina State University, Oregon State University, Penn State University, Rutgers University, Stanford University, Texas Tech, University of California-Davis, University of Florida, University of Montana, University of New Hampshire, University of Southern California, Virginia Tech, West Virginia University, Yale University, and many more.

Our research has been upheld in U.S. Courts, used in peer-reviewed journals, and presented at major wildlife and natural resource conferences around the world. Responsive Management's research has also been featured in many of the nation's top media, including *Newsweek*, *The Wall Street Journal*, *The New York Times*, CNN, National Public Radio, and on the front pages of *The Washington Post* and *USA Today*.

responsivemanagement.com