Appendix 1: SMALL-MESH GILL NET CHARACTERIZATION IN THE NORTH CAROLINA SPOTTED SEATROUT FISHERY

Issue

The small-mesh gill-net fishery in North Carolina is managed and regulated by species-specific fishery management plans (FMPs), and numerous Marine Fisheries Commission (MFC) rules and Division of Marine Fisheries (DMF) proclamations. However, concerns about biological impacts from the use of small mesh gill nets remain. The primary issues to be addressed concern greater flexibility with constraining harvest in the spotted seatrout fishery, reducing bycatch, and to the greatest extent practical reducing conflict between gill-net users and other stakeholders. Specific management options for gill-net regulations can be found in Appendix 2: Sustainable Harvest Issue Paper.

Origination

The North Carolina Marine Fisheries Commission.

Background

At their August 2021 business meeting, the MFC passed a motion to not initiate rulemaking on small-mesh gill nets but refer the issue through the FMP process for each species, and any issues or rules coming out of the species-specific FMP to be addressed at that time. In North Carolina, small-mesh gill nets are the predominant gear used to harvest spotted seatrout. Most spotted seatrout are harvested commercially using set gill nets or runaround gill nets. Per direction from the MFC, small-mesh gill nets must be addressed during review of the spotted seatrout FMP.

North Carolina General Statutes authorize the MFC to adopt rules for the management, protection, preservation, and enhancement of the marine and estuarine resources within its jurisdiction (G.S. 113-134; G.S. 143B-289.52). The MFC has authority to adopt FMPs and the DMF is charged with preparing them (G.S. 113-182.1; G.S. 143B-289.52). Further, the MFC may delegate to the DMF director in its rules the authority to issue proclamations suspending or implementing MFC rules that may be affected by variable conditions (G.S. 113-221.1; G.S. 143B-289.52). Variable conditions include compliance with FMPs, biological impacts, bycatch issues, and user conflict, among others (MFC Rule 15A NCAC 03H .0103). The estuarine gill-net fishery in North Carolina is managed and regulated by FMPs and numerous MFC rules and DMF proclamations. Rules are periodically amended to implement changes in management goals and strategies for various fisheries and are the primary mechanism for implementing FMPs under the Fisheries Reform Act of 1997 (FRA).

In recent years, modifications to gill-net management resulting from the adoption of FMPs or other circumstances have largely been implemented through the DMF Director's proclamation authority, not through rulemaking. This is primarily due to the need to implement management changes in a timely fashion and to accommodate variable conditions. Over time, this has resulted in incongruent restrictions between rules and proclamations. Additionally, many of the rules related to small mesh gill nets were first developed prior to the FRA and have not been thoroughly evaluated since the addition of more recent rules developed through the FMP process.

The spotted seatrout small-mesh gill-net fishery operates year-round, but the type of gill net used varies by season and area (NCDMF 2018). Multiple species may be landed during a single trip; however, the target species usually dominates the catch (NCDMF 2018). In North Carolina, gill nets are restricted to a minimum mesh size of 2.5 inches stretched mesh [ISM; MFC Rule 15A

NCAC 03J .0103(a)]. The DMF categorizes gill nets from 2.5 to less than 5 ISM as small-mesh (Daniels 2013). Although the rule uses “mesh length” and not “mesh size”, their meanings are identical for the purpose of this document; this helps to demarcate the discussion of “mesh size” from “net length” throughout the document. Small-mesh gill nets are generally classified into three categories based on how the net is deployed and fished: set gill nets, runaround gill nets, and drift gill nets [Figure 1.1; Table 1.1; (Steve, et al. 2001)]. For the purposes of this document, “set” gill nets, or “set nets”, includes anchored, fixed, and stationary gill nets.

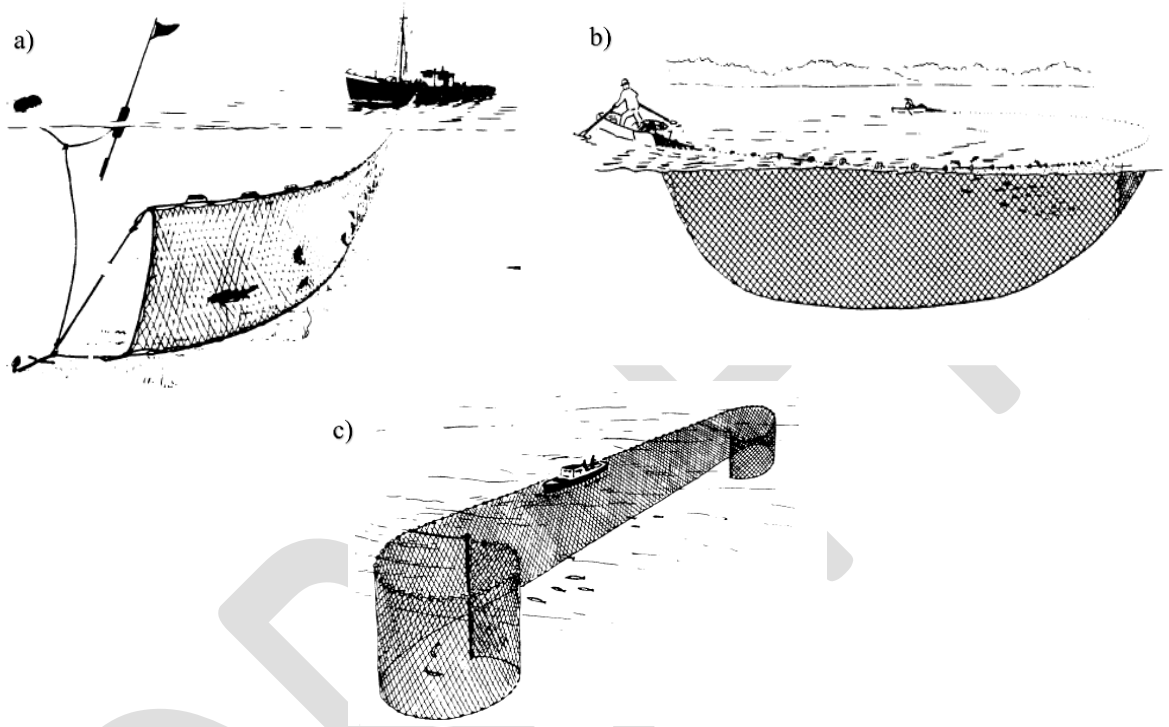

Figure 1.1. Illustrations of (a) set, (b) runaround, and (c) drift gill nets extracted from Steve et al. (2001).

Set nets (Figure 1.1a) are the second most common gill-net type used for commercial spotted seatrout harvest in North Carolina. They are kept stationary with the use of anchors or stakes attached to the bottom or attached to some other structure attached to the bottom, at both ends of the net (MFC Rule 15A NCAC 03I .0101). Set nets can be further classified as sink or float gill nets (Steve et al. 2001). A sink gill-net fishes from the bottom up into the water column a fixed distance by having a lead line (bottom line) heavy enough to sink to the bottom. Depending on the height of the net and the depth of the water, the float line (top line) may or may not be submerged below the surface of the water. A float gill net may fish the entire water column by having the top line with buoys sufficient for floating on the surface of the water, or a portion of the water column depending on the depth of the net (number of meshes deep). Set nets are deployed by dropping one end of the net and running out the rest of the length of net usually in a line. Once deployed, soak times for fishing set nets vary depending on factors such as target species, water temperature, season, waterbody, and regulations (NCDMF 2018).

A runaround gill net is the most common gill-net method used for commercial spotted seatrout harvest in North Carolina. It is an actively fished gear used to encircle schools of fish (Figure 1.1b). They are deployed with a weight and a buoy at one end that enables the rest of the net to

be fed out, creating a closed circle around the school of fish due to the vessel's path. Runaround gill nets tend to be deep nets capable of fishing the entire water column. Mesh sizes and net lengths vary depending on the target species (Steve et al. 2001). Another form of runaround gill net is the strike net or drop net. Rather than deploying the net in a circle, the net is set parallel to shore, often with one end anchored to the bank. Once the net is set, the boat is driven between the net and the shore to drive fish into the net (NCDMF 2018). Soak times for all types of runaround gill nets are almost always an hour or less.

Table 1.1. Small-mesh gill net gear categories with descriptions and capture method descriptions.

Small-Mesh Gill Net Gear Categories	Sub-Categories	Gear Description	Capture Method
Anchored/Fixed/Stationary/Set	Sink	Attached to bottom or some other structure by anchors or stakes at both ends. Sink nets are fished from the bottom up into the water column.	Passively Fished - For both sink and float set nets the gear is left in place for a period of time. Fish, if appropriately sized, swim into the net and are gilled.
	Float	Attached to bottom or some other structure by anchors or stakes at both ends. Float nets are fished from the top down into the water column. Depending on target species nets fish part of the water column or the entire water column.	
Runaround	Circle	Attached to the bottom at one end. Once the end is set, the rest of the net is then fed out of a boat creating a circle and meeting back at the original set point. Generally, these nets fish the entire water column.	Actively Fished - Used to encircle a school of fish. Primary target species for this gear is striped mullet.
	Strike/Drop	Attached to the bottom at one end. Deployed along shore with the terminal end finishing at another point along the shore. The boat is driven into the blocked section to "drive" the fish into the net and are then retrieved.	Actively Fished - Used to corral or intercept a school of fish and then immediately retrieved. Primary target species for this gear is striped mullet, and spotted seatrout to a lesser extent.
Drift		Attached to boat or free-floating with close attendance. Lighter lead lines and no anchors allow the net to drift. Depending on target species and water depth, nets fish part of the water column or the entire water column. Primarily used in Pamlico Sound to target Spanish mackerel and bluefish.	Actively Fished - Drift with the water current with continuous attendance.

Drift gill nets are unanchored, non-stationary gill nets that are actively attended (i.e., remain attached to the vessel or the fishing operation remains within 100 yards of the gear; Figure 1.1c) and tend to have shorter soak times than set gill nets. They are constructed with lighter lead lines

to allow for the net to drift with the current. The small-mesh drift gill nets currently employed in North Carolina estuaries are primarily used to target Spanish mackerel and bluefish in Pamlico Sound. This gear can also be used to target spot (as a sink net) and striped mullet (typically fishing the entire water column) in areas primarily from Core Sound and south (Steve et al. 2001). Drift gill nets typically account for less than 0.5% of annual spotted seatrout landings. However, from 2019 through 2022 drift gill nets accounted for 2.5% of spotted seatrout landings.

METHODS

Information specific to the North Carolina gill net fishery was gathered from two DMF sampling programs briefly described below:

N.C. Trip Ticket Program

The N.C. Trip Ticket Program began in 1994. This program requires licensed commercial fishermen to sell their catch to licensed fish dealers, who are then required to complete a trip ticket for every transaction. Data collected on trip tickets include gear type, area fished, species harvested, and total weights of each species. Information recorded on trip tickets for gear type and characteristics is self-reported by the dealer. This information may be verified by DMF fish house staff after the fact, but the potential exists that some trips may be mischaracterized by dealers. In 2004, trip tickets included mesh size categories for gill nets: small-mesh < 5-inch ISM and large-mesh ≥ 5-inch ISM. However, the use of this new field was not prevalent until about 2008 because dealers were still using old trip tickets they had on hand.

Commercial Fish House Sampling

Commercial fishing activity is monitored through fishery-dependent (fish house) sampling. Sampling occurs dockside as fish are landed. Commercial fishermen and/or dealers are interviewed by DMF staff, and the catch is sampled. Samplers collect data on location fished, effort (soak time, net length, etc.), gear characteristics (net type, net depth, mesh size, etc.), and the size distribution of landed species.

Commercial Observer Program

On board observations of commercial estuarine gill nets, primarily set gill nets, occur through Program 466. Observers collect data on effort (soak time, net length, etc.), location fished, gear characteristics, size, and the fate (harvest, discard, etc.) of captured species. The Observer Program was born out of the need to estimate incidental takes of protected species such as sea turtles and Atlantic sturgeon in estuarine set gill nets per the Endangered Species Act Section 10 Incidental Take Permits (NMFS 2013, 2014). As a result, observations of runaround or drift gill nets are rare.

The following analysis and information presented are used to characterize the spotted seatrout small-mesh gill-net fishery in North Carolina relative to time, area, configuration, and species composition of the harvested and discarded catch. Data from biological years 2012 through 2022 for these three programs were used to characterize the current North Carolina spotted seatrout small-mesh gill-net fisheries.

Using trip ticket data, trips where spotted seatrout were the species of highest abundance in landings or the most abundant finfish species of those species typically targeted with small-mesh gill nets were considered targeted spotted seatrout trips. Basing analysis on trips where spotted seatrout are the presumed target species allows for results that describe the gear parameters associated with the directed spotted seatrout fishery (see NCDMF 2008 for further description of

methodology). Once targeted spotted seatrout trips were identified, the method of fishing (set gill net or runaround gill net), mesh size, and net length were characterized based on available fish house sampling data from 2012 through 2022. Analysis of fish house sampling data was limited to samples where only one gear was used on the trip.

Regional analysis of the spotted seatrout small-mesh gill-net fishery was investigated by waterbody of landing. Waterbodies were grouped into seven regions using distinct area boundaries or clear differences in fishing practices (Figure 1.2).

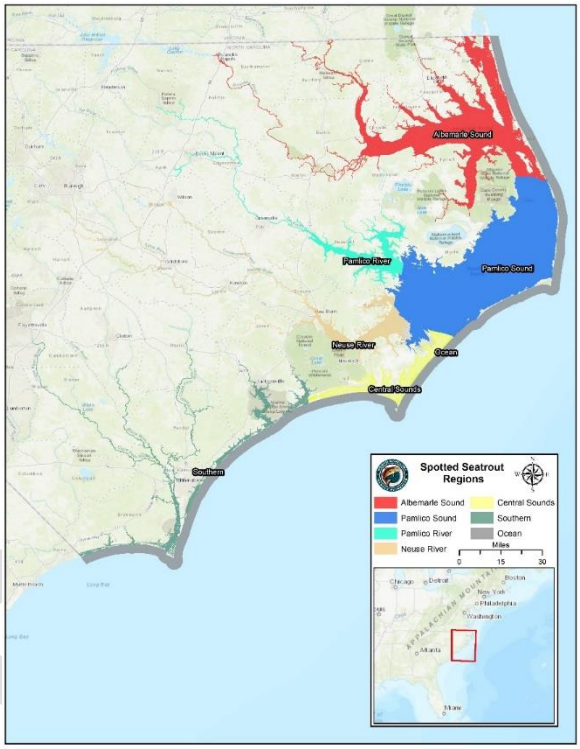

Figure 1.2. Map of defined regions used for regional characterization of the spotted seatrout small-mesh gill-net fishery.

RESULTS

For information regarding characterization of small-mesh gill nets across all fisheries in North Carolina please refer to the Small Mesh Gill Net Rule Modifications Information Paper presented to the MFC at its August 2021 business meeting.

Spotted Seatrout Fishery General Characterization

The commercial spotted seatrout fishery is currently managed with a 14” minimum size limit and 75-fish daily trip limit (except for the stop net fishery). Since 2012, runaround gill net has been the primary gear used to harvest spotted seatrout in the commercial fishery, followed by small-mesh set gill net (Figures 1.3 and 1.4). From April through October, most spotted seatrout harvest comes from small-mesh set gill nets. However, from November through March, commercial landings switch to runaround gill nets as spotted seatrout aggregate in the fall and winter and are more easily targeted by commercial fishermen (Figure 1.5).

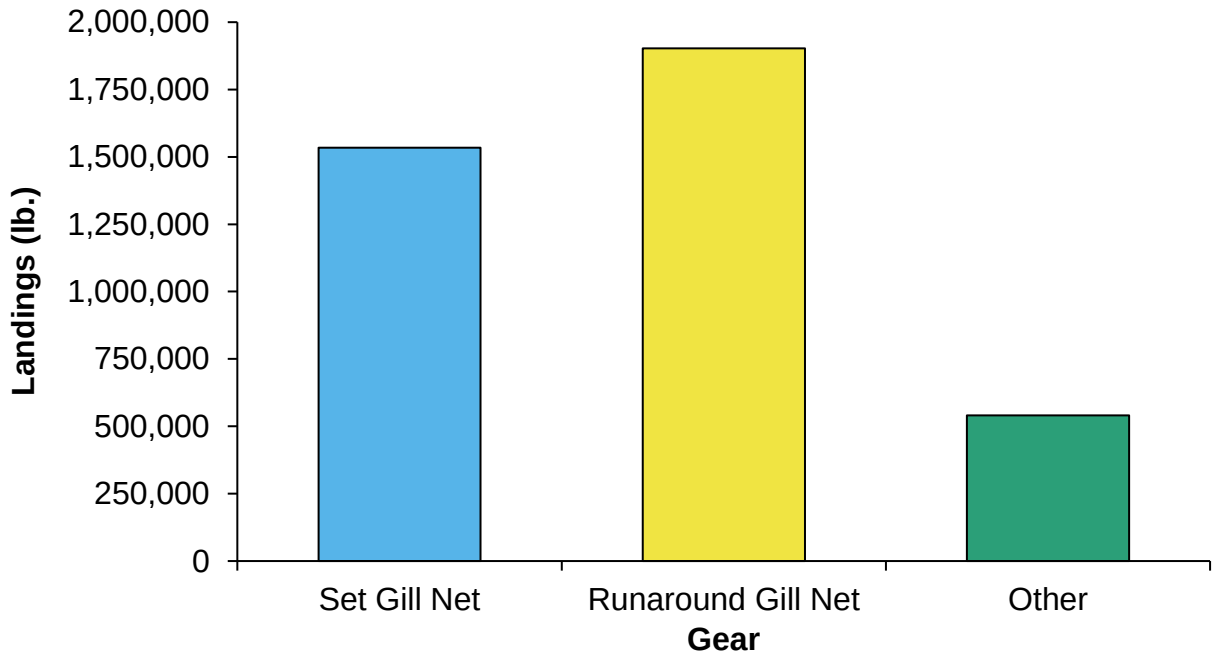

Figure 1.3. Spotted seatrout commercial landings by gear reported through the North Carolina Trip Ticket Program, 2012–2022.

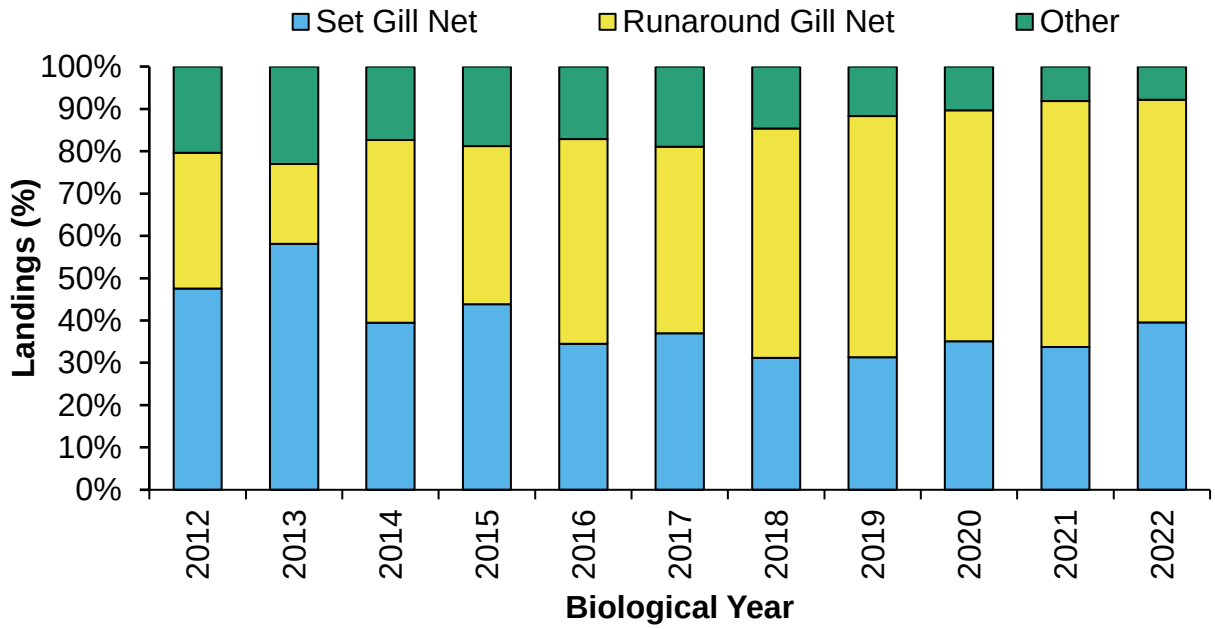

Figure 1.4. Percent of spotted seatrout commercial landings by year and gear reported through the North Carolina Trip Ticket Program, 2012–2022.

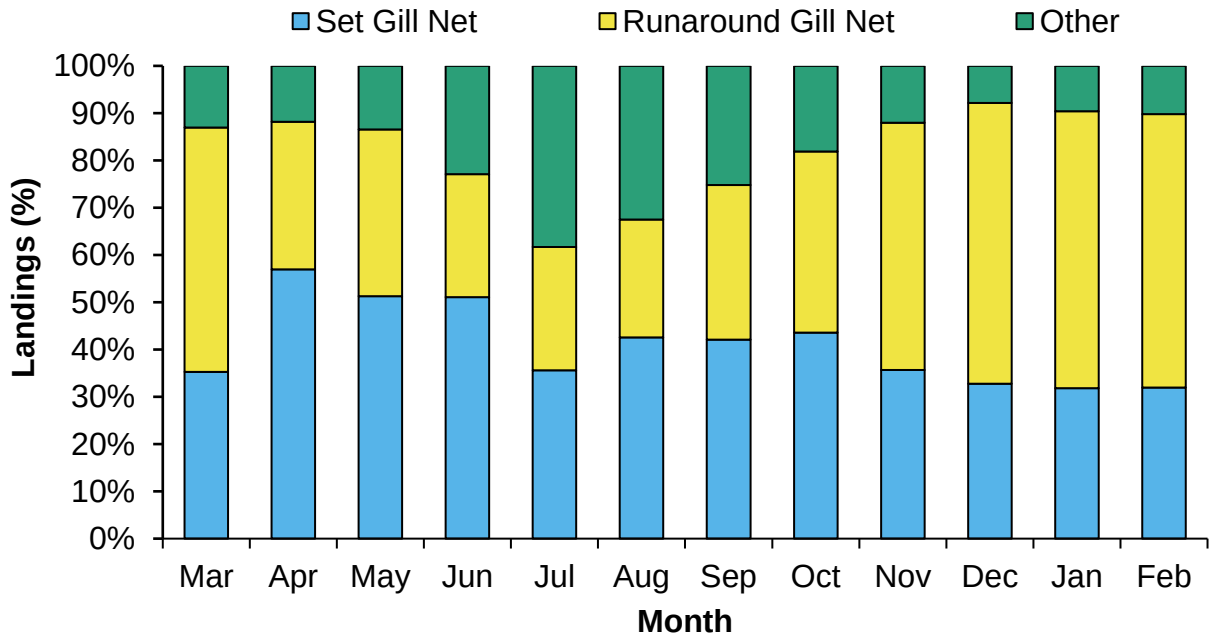

Figure 1.5. Percent of spotted seatrout commercial landings by month and gear reported through the North Carolina Trip Ticket Program, 2012–2022.

Spotted seatrout are caught with stretched mesh sizes ranging from 2.5 ISM to 4.88 ISM in North Carolina. Mesh size does not appreciably affect the size of spotted seatrout caught in small mesh gill nets (set and runaround). As stretched mesh size increases, the size of spotted seatrout increases to some degree but there is a lot of overlap in the size of spotted seatrout caught with various mesh sizes (Figure 1.6). An R^2 value of 0.17 indicates a weak linear relationship between mesh size and the size of spotted seatrout harvested. The lack of a strong relationship between mesh size and size of spotted seatrout captured makes it unrealistic to use mesh size restrictions to protect or select for different sizes of spotted seatrout. The lack of selectivity is likely due to spotted seatrout having a relatively soft body resulting in a wide size range of fish able to become lodged in a particular mesh size. Also, spotted seatrout frequently become entangled in gill nets around the mouth area either by their teeth or jaw.

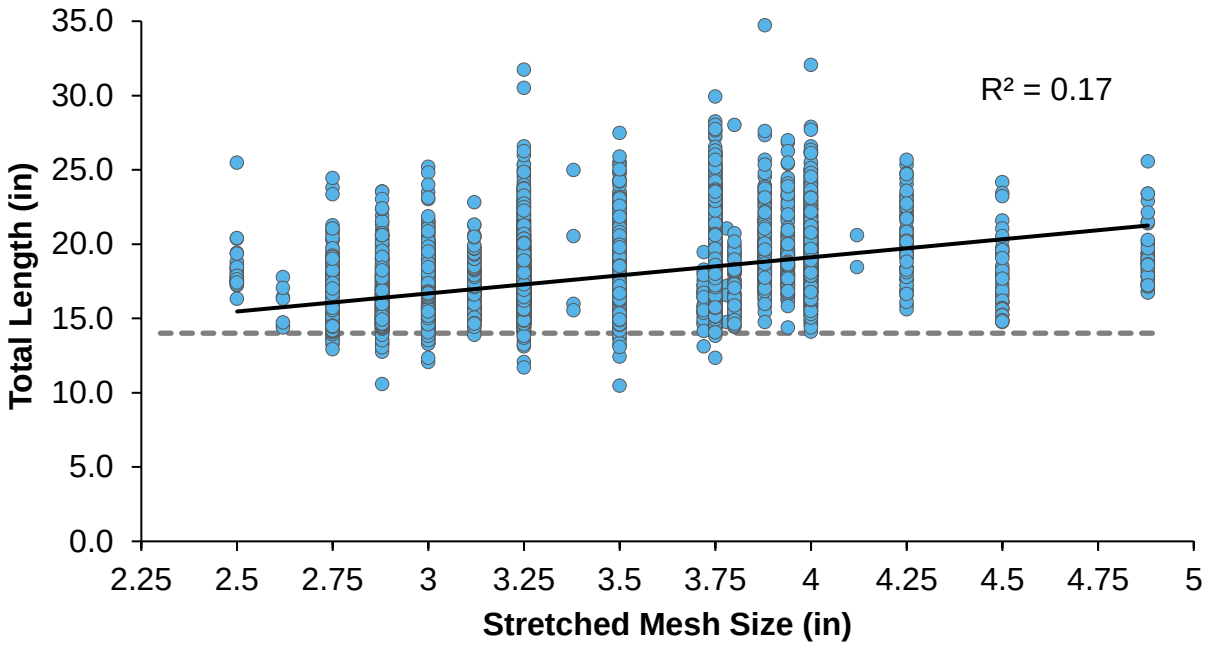

Figure 1.6. Relationship of stretched mesh size versus total length of spotted seatrout sampled from the commercial fish house sampling program (2012-2022). A trendline is provided for reference. The dashed gray line shows the current 14-inch TL minimum size limit.

Since 2012, most spotted seatrout harvest occurs in Pamlico Sound (28%) and the Neuse and Bay rivers (24%; Figure 1.7). These are followed by the Central Sounds (13%), Southern (13%), Albemarle Sound (11%), and Pamlico and Pungo rivers (9%). Runaround gill net is the primary gear used to harvest spotted seatrout in the Neuse and Bay rivers and Central Sounds regions. Small mesh set gill net is the dominant gear in the other regions. (Figure 1.8). The increase in commercial landings beginning in 2019 has been largely driven by an expansion of the spotted seatrout fishery in the Pamlico Sound, Neuse and Bay rivers, and Pamlico and Pungo rivers regions.

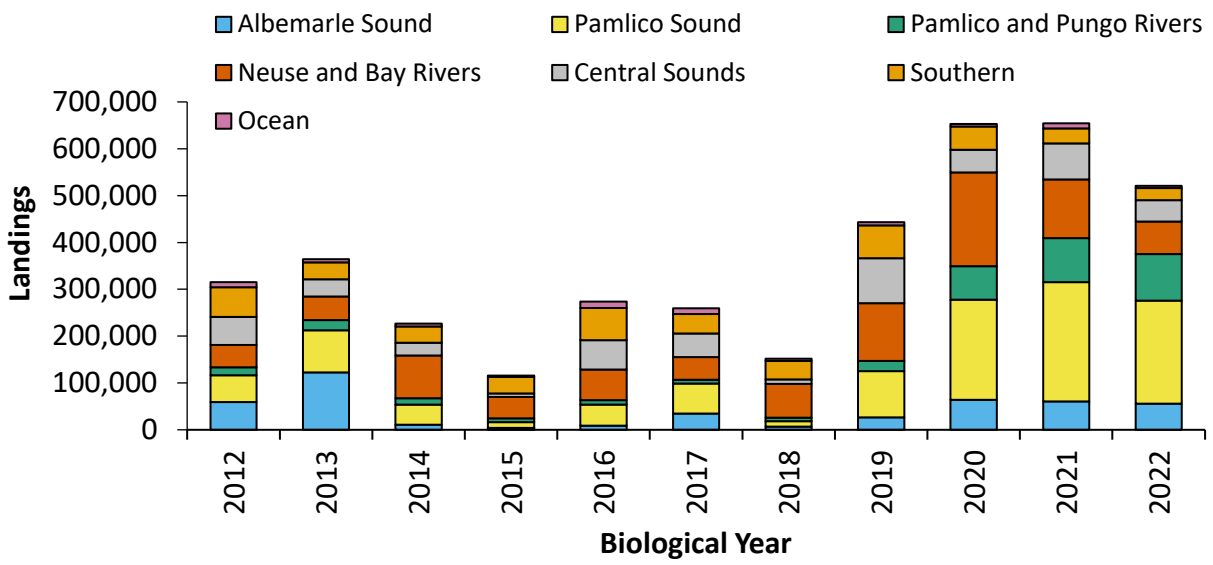

Figure 1.7. Annual commercial landings of spotted seatrout commercial landings by region reported through the North Carolina Trip Ticket Program, 2012–2022.

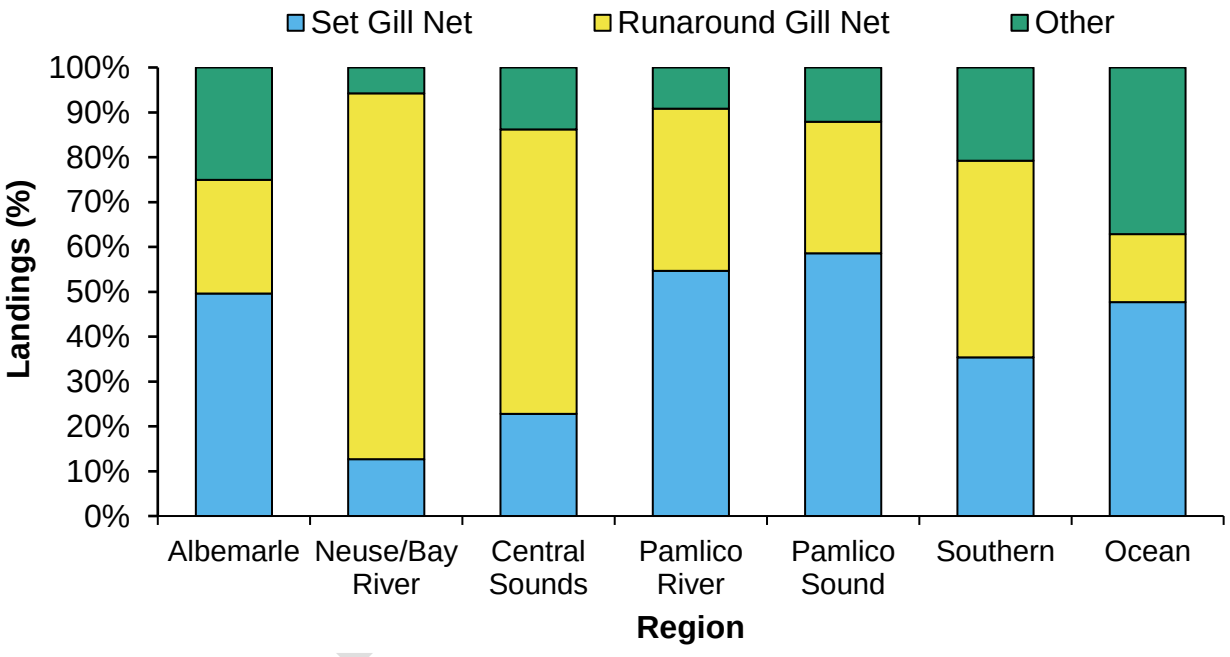

Figure 1.8. Percent of annual spotted seatrout commercial landings by gear and area reported through the North Carolina Trip Ticket Program, 2012–2022.

Set Gill Nets

Spotted seatrout targeted small-mesh set gill-net trips were defined as trips where spotted seatrout were the species of highest abundance or the most abundant finfish species. Small-mesh set gill nets are the second most common gear used to capture spotted seatrout (Figures 1.3 - 1.4) in North Carolina and are the dominant gear in the Albemarle Sound, Pamlico River, Pamlico Sound, and Ocean regions (Figure 1.8). Spotted seatrout are the third most important species

targeted in the North Carolina small-mesh set gill-net fishery behind bluefish and Spanish mackerel (Figure 1.9). They make up the largest proportion of monthly small-mesh set gill-net trips in November, December, and January.

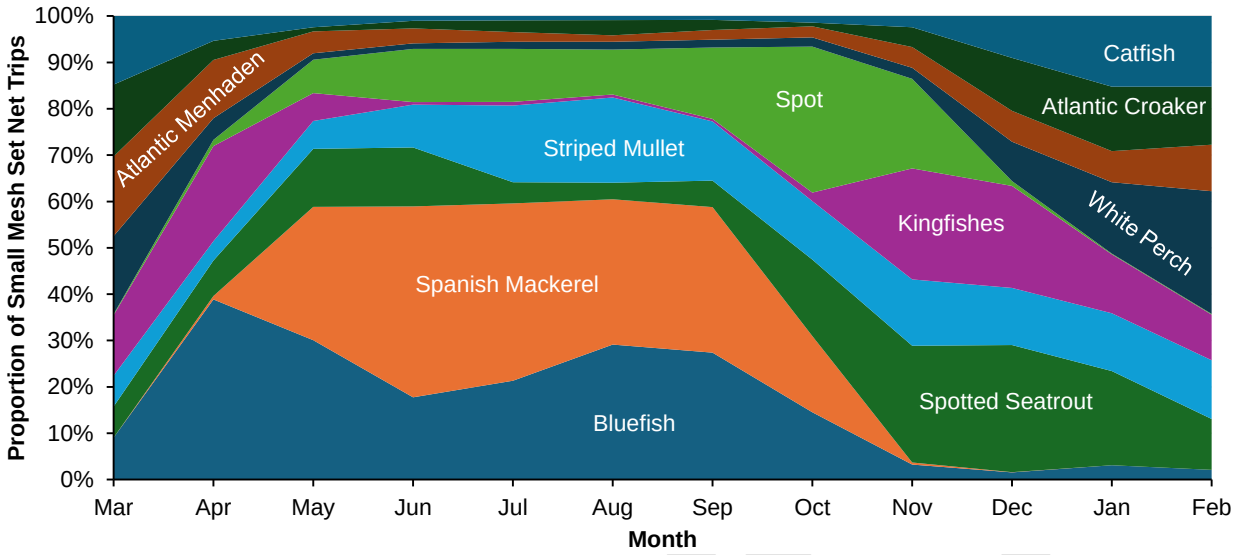

Figure 1.9. Percentage of total set gill-net trips for each of the 10 primary target species across months in N.C. waters during 2012-2022.

Spotted seatrout are primarily landed incidentally in the set gill-net fishery during most of the year, however they are targeted more in the fall and winter months as spotted seatrout aggregate in smaller waterbodies. From 2012 through 2018, the use of set gill nets to target spotted seatrout declined through 2018. Beginning in 2019, the number of trips increased and has remained higher, although the number of participants has remained steady since 2015 (Figure 1.10). This increase in trips matches well with the increase in landings in the spotted seatrout fishery over the same period.

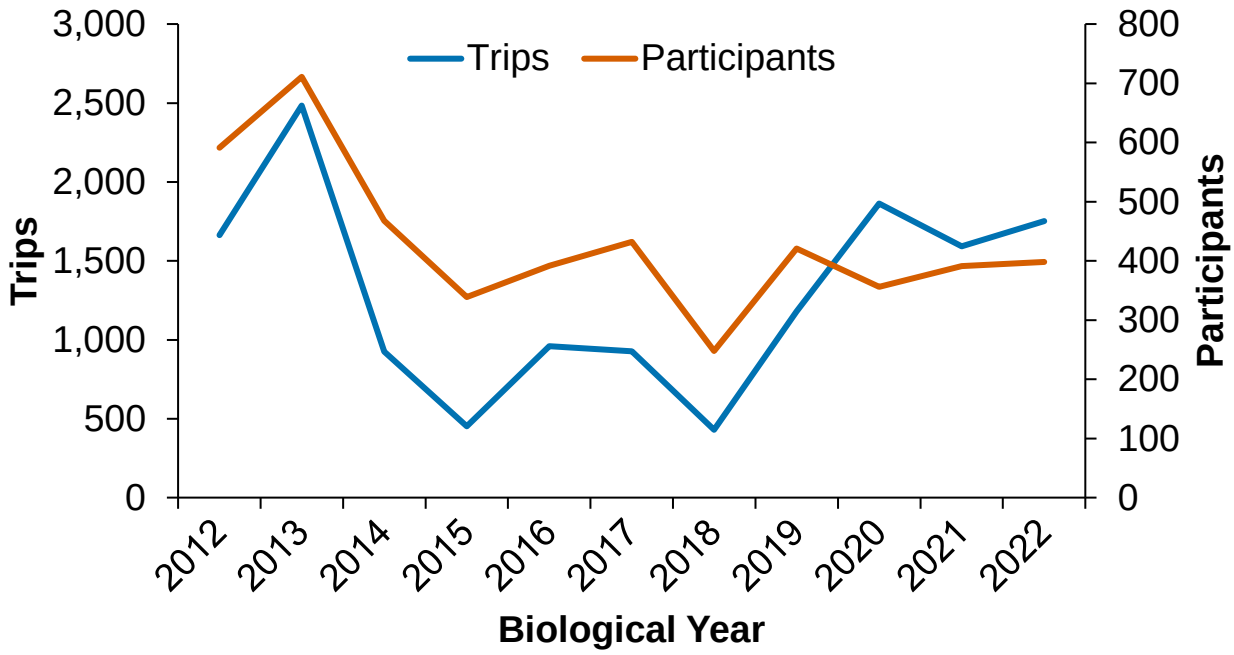

Figure 1.10. Targeted trips and participants in the set small mesh gill net spotted seatrout fishery by year reported through the North Carolina Trip Ticket Program, 2012-2022.

Approximately 50% of targeted spotted seatrout small mesh set gill net trips land 30 or less spotted seatrout (Figure 1.11). However, roughly 24% of trips land more than 60 spotted seatrout and about 16% of trips land 71-75 spotted seatrout per trip. Most of these trips, roughly 70%, occur from October through January (Figure 1.12), although approximately 20% of the trips occurring each month from November through March land 71-75 spotted seatrout per trip (Figure 1.13). Trips landing 71-75 spotted seatrout per trip account for approximately 35% of small-mesh set gill-net landings from targeted spotted seatrout trips (Figure 1.14).

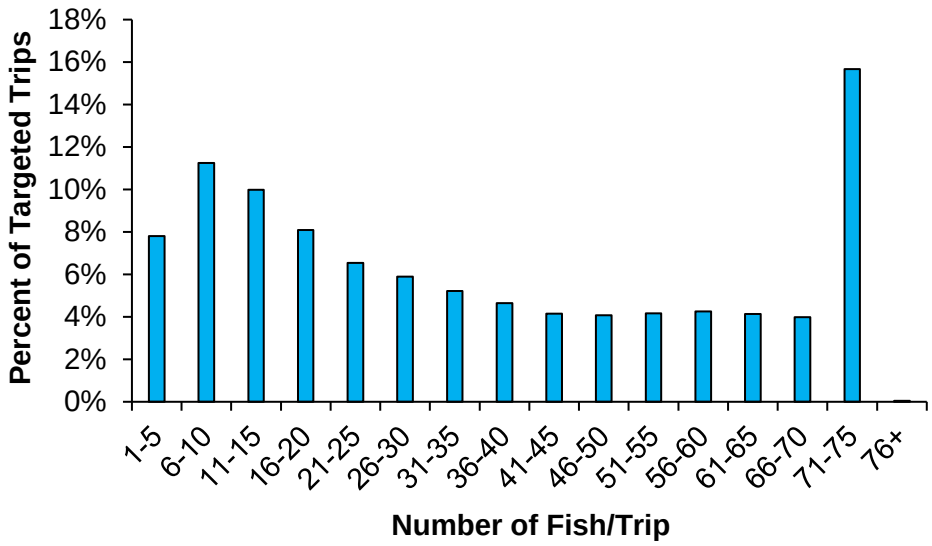

Figure 1.11. Percent of targeted spotted seatrout trips grouped by number of fish landed per trip in the small mesh set gill net fishery reported through the North Carolina Trip Ticket Program, 2012–2022.

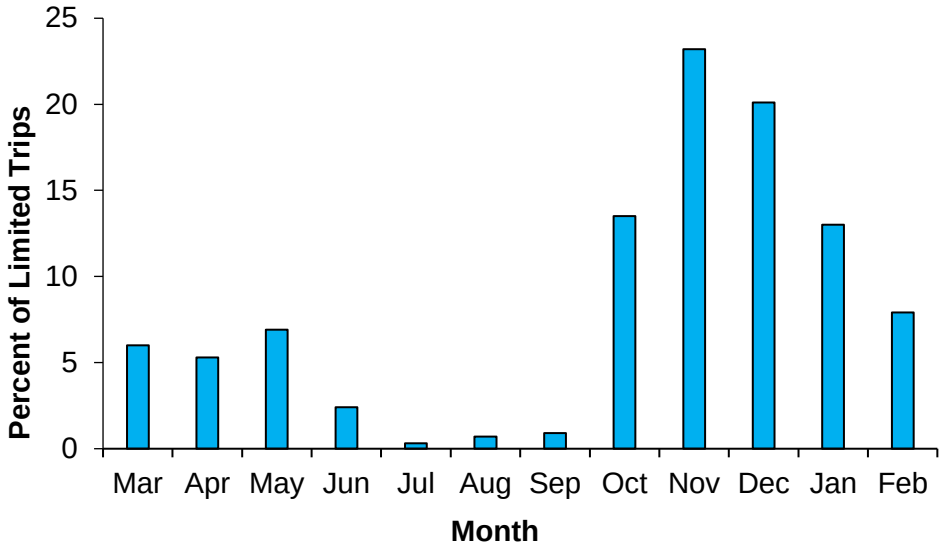

Figure 1.12. Monthly distribution of total trips reaching the trip limit (71-75 fish estimated to be landed) for targeted spotted seatrout trips in the small mesh set gill net fishery reported through the North Carolina Trip Ticket Program, 2012–2022. For example, if there are 100 trips in a year that reached the trip limit and 10 of those trips occurred in March, then the percent of annual trip limit trips in March will be 10%.

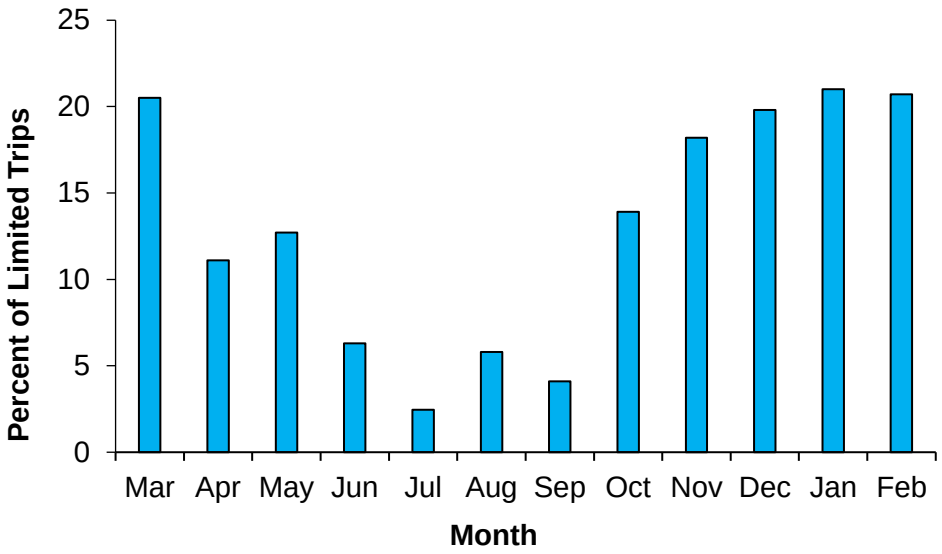

Figure 1.13. Percent of monthly trips reaching the trip limit (71-75 fish estimated to be landed) for targeted spotted seatrout trips in the small mesh set gill net fishery reported through the North Carolina Trip Ticket Program, 2012–2022. For example, if there are 100 trips in March and 10 of those trips reached the trip limit, then the percent of trip limit trips in March will be 10%.

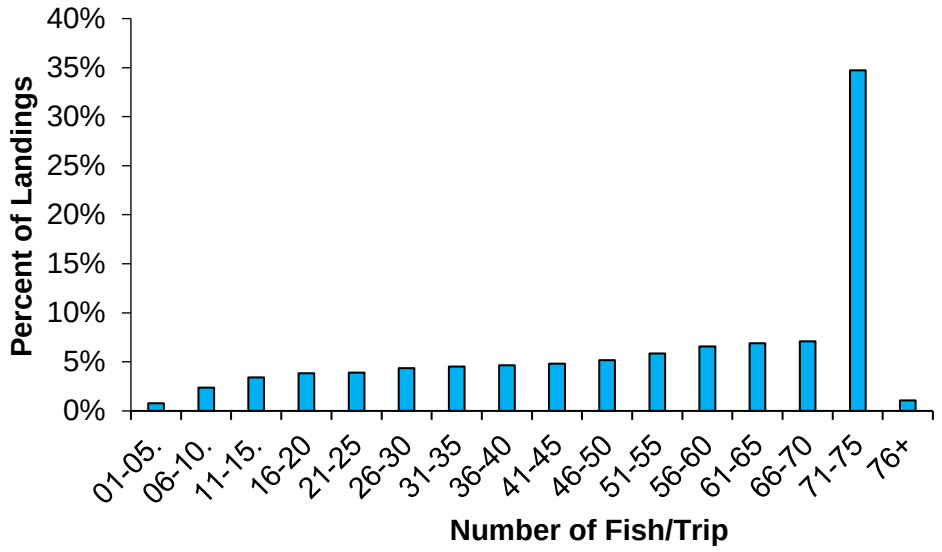

Figure 1.14. Percent of total pounds landed grouped by number of fish landed per targeted spotted seatrout trip in the small mesh set gill net fishery reported through the North Carolina Trip Ticket Program, 2012–2022.

The modal mesh size used to catch spotted seatrout in the set gill net fishery was 3.0 ISM (Table 1.2). Average total net length was 691 yards, with a maximum of 3,000 yards. Approximately 42% of all set gill net trips fished 500 yards or less of gill net (Figure 1.15). For reference, small mesh gill nets are currently restricted to a maximum of 800 yards. Reducing the yardage fished could be a means to reduce harvest in this fishery. Yardage restrictions would be best used in

conjunction with trip limits to ensure minimal discards. For more information on possible management applications of set gill net yardage restrictions, see Appendix 2.

Table 1.2. Small mesh (<5 inch ISM) set gill net trips in North Carolina using data from the N.C. Trip Ticket Program with associated gear characteristics from commercial fish house sampling, 2012-2022.

Species	Trips	Avg/Yr.	Modal Mesh	Avg Yds	Max Yds
Spotted seatrout	14,224	1,293	3.0	691	3,000

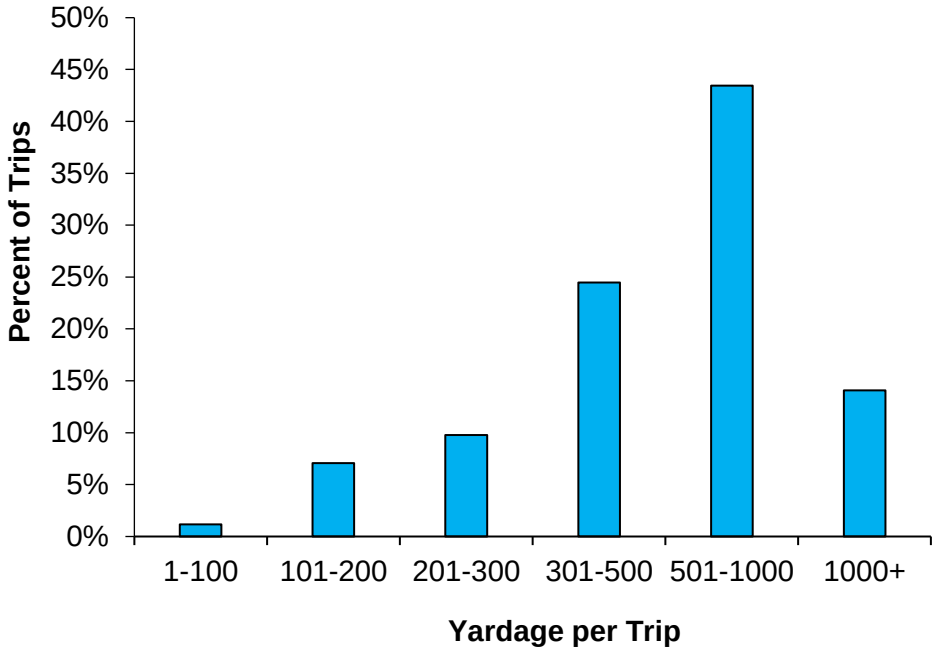

Figure 1.15. Percent of total trips sampled grouped by yards fished per trip in the spotted seatrout small mesh set gill net fishery using data from the commercial fish house sampling program, 2012–2022.

When targeting spotted seatrout with small-mesh set gill nets, it is common to catch other species incidentally. The most common species landed incidentally when targeting spotted seatrout with set gill nets are striped mullet, bluefish, red drum, white perch, black drum, and spot (Figure 1.16). Conversely, spotted seatrout are most commonly caught incidentally when set gill net fishermen are targeting bluefish, striped mullet, and spot (NC trip ticket data). This overlap between the spotted seatrout and bluefish, striped mullet, and spot set gill net fisheries could have management implications for these fisheries if gear restrictions are put in place to restrict spotted seatrout harvest.

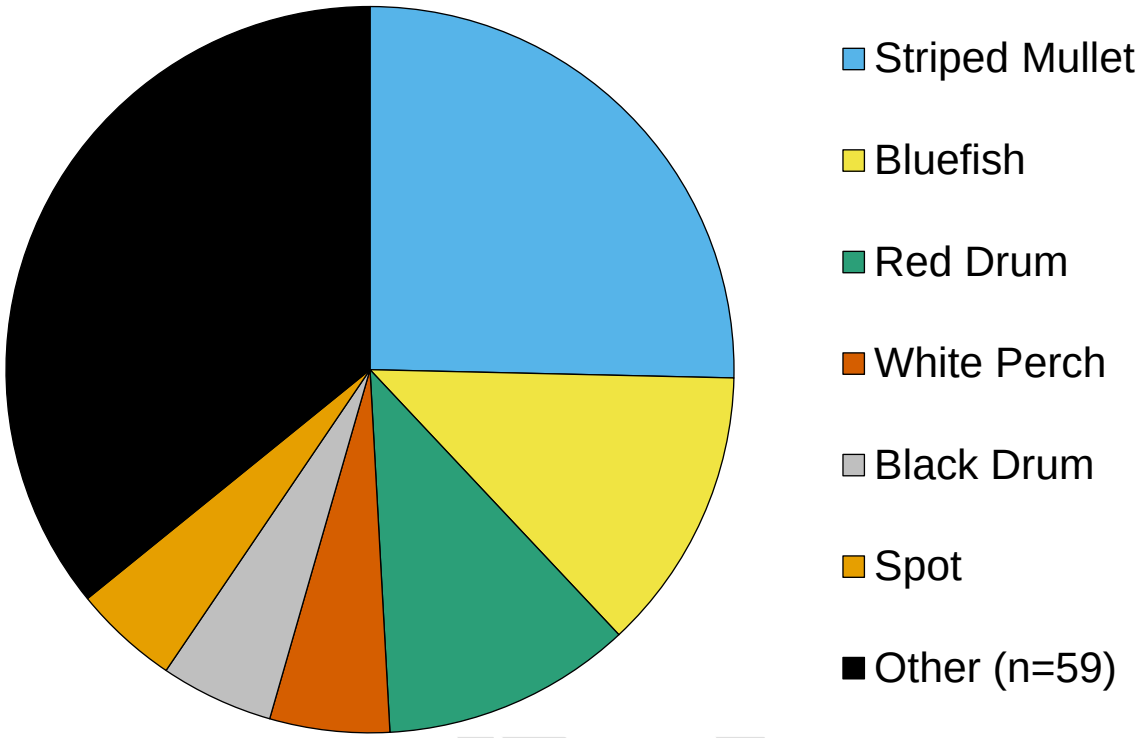

Figure 1.16. Proportion of incidental catch landed by species in the set small-mesh set gill-net spotted seatrout fishery reported through the North Carolina Trip Ticket Program, 2012–2022.

Spotted seatrout discards in the set gill-net fishery are difficult to characterize due to limited data but appear to be minimal based on observations from the commercial observer program. Of the over 3,466 spotted seatrout observed in set small-mesh gill nets (2012-2022), 392 fish were discarded. A discard rate of 11.3%. The low rate of spotted seatrout discards in the set small-mesh fishery is likely due to there being an adequate trip limit for commercial harvest. Increased restrictions on spotted seatrout harvest could increase discards in this fishery. For more information on spotted seatrout bycatch in the set gill-net fishery, please refer to the Spotted Seatrout Bycatch section of the FMP.

Discards of other species from spotted seatrout targeted small mesh set gill net trips could not be characterized due to limited data. Of the 1,044 observed small mesh set gill net trips observed from the observer program (2012-2022), only 114 spotted seatrout targeted trips have been observed. In those trips, 18 managed species were discarded, including Atlantic menhaden, red drum, black drum, blue crab, and southern flounder.

Runaround Gill Nets

Spotted seatrout targeted runaround gill-net trips were defined as trips where spotted seatrout were the species of highest abundance in landings or were the most abundant finfish species. Runaround gill nets are the predominant gear used to catch spotted seatrout in North Carolina (Figures 1.3 and 1.4) and the dominant gear in the Neuse and Bay rivers, Central Sounds, and Southern regions (Figure 1.8). The runaround gill-net fishery is more targeted than the set gill-net fishery and is the main gear used to catch spotted seatrout when they form aggregations in smaller waterbodies from November through March (Figure 1.5). During this time, catches from runaround gill nets can be higher as fishermen target spotted seatrout after the fall striped mullet season. Spotted seatrout is the second most targeted species in the North Carolina runaround

gill-net fishery (Figure 1.17). Spotted seatrout targeted trips make up the largest proportion of runaround gill-net trips from December through March.

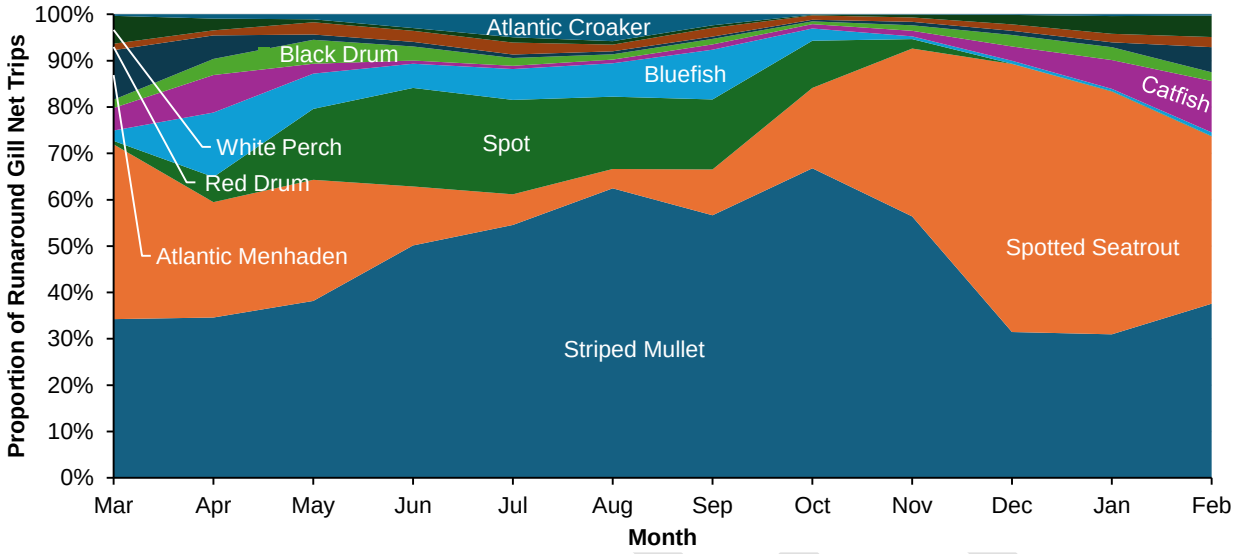

Figure 1.17. Percent of total runaround gill-net trips for each of the 10 primary target species across months in N.C. waters during 2012-2022.

From 2012 through 2018, effort and participation in this fishery remained relatively consistent, then increased sharply in 2019 and has remained high through 2022 (Figure 1.18). The increase in targeted spotted seatrout trips could be due to fishermen shifting to the fishery from other more restricted fisheries.

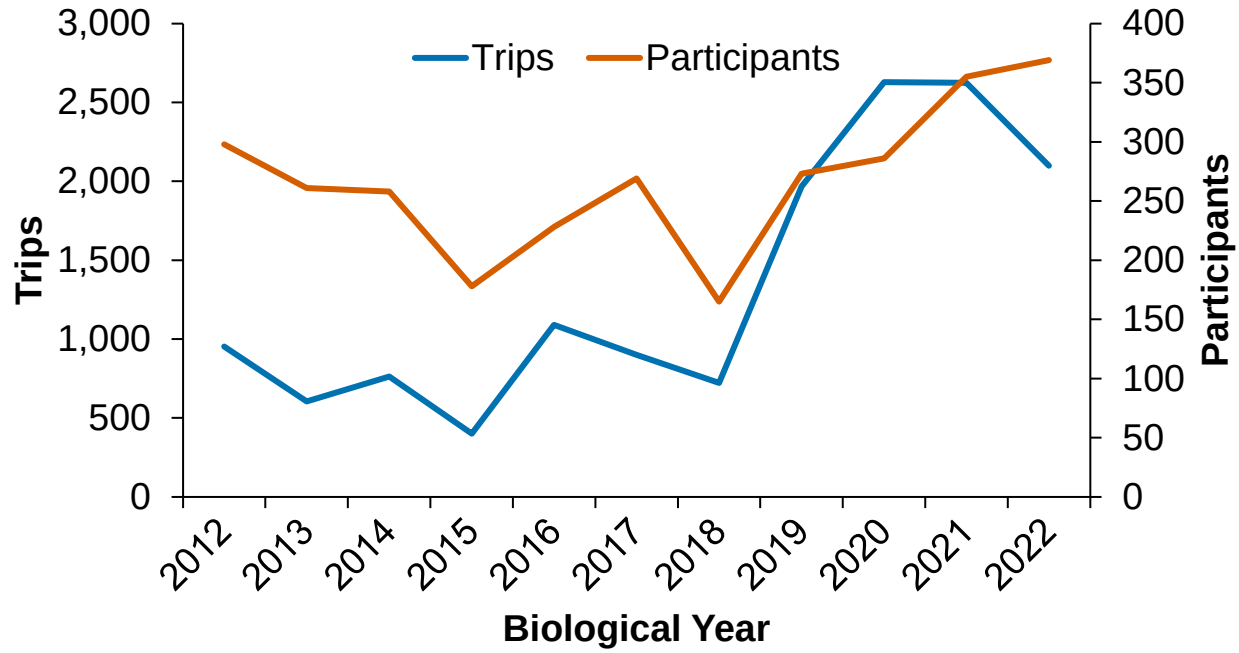

Figure 1.18. Targeted trips and participants in the runaround gill-net spotted seatrout fishery by year reported through the North Carolina Trip Ticket Program, 2012–2022.

Runaround gill nets tend to land more spotted seatrout per trip than set gill nets, with roughly 33% of trips landing 30 or less spotted seatrout. Approximately 38% of targeted spotted seatrout runaround gill-net trips land more than 60 spotted seatrout with 27% of targeted trips landing 71-75 spotted seatrout (Figure 1.19). This is likely due to runaround gill nets being able to better target spotted seatrout aggregation areas in the fall and winter months. Most of these trips, roughly 73%, occur from October through January (Figure 1.20), although approximately 30% of the trips occurring each month from November through March land 71-75 spotted seatrout per trip (Figure 1.21). Trips landing 71-75 spotted seatrout per trip account for approximately 47% of runaround gill-net landings from targeted spotted seatrout trips (Figure 1.22).

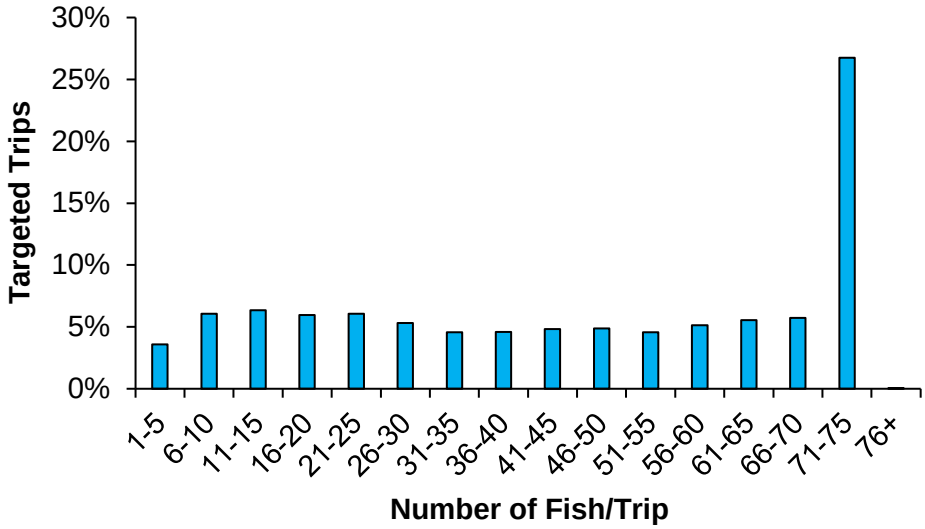

Figure 1.19. Percent of targeted spotted seatrout trips grouped by number of fish landed per trip in the runaround gill-net fishery reported through the North Carolina Trip Ticket Program, 2012–2022.

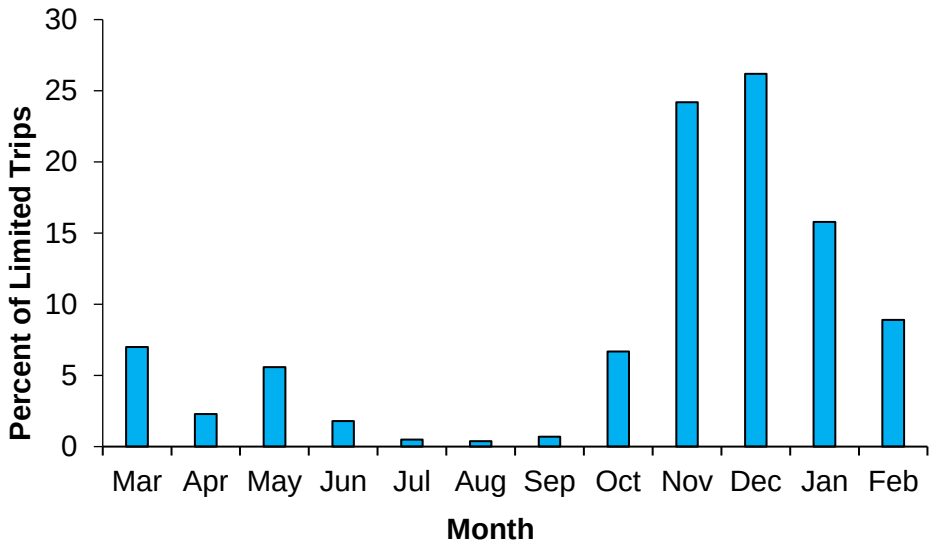

Figure 1.20. Monthly distribution of total trips reaching the trip limit (71-75 fish estimated to be landed) for targeted spotted seatrout trips in the runaround gill-net fishery reported through the North Carolina Trip Ticket Program, 2012–2022. For example, if there are 100 trips in a year that reached the trip limit and 10 of those trips occurred in March, then the percentage of annual trip limit trips in March will be 10%.

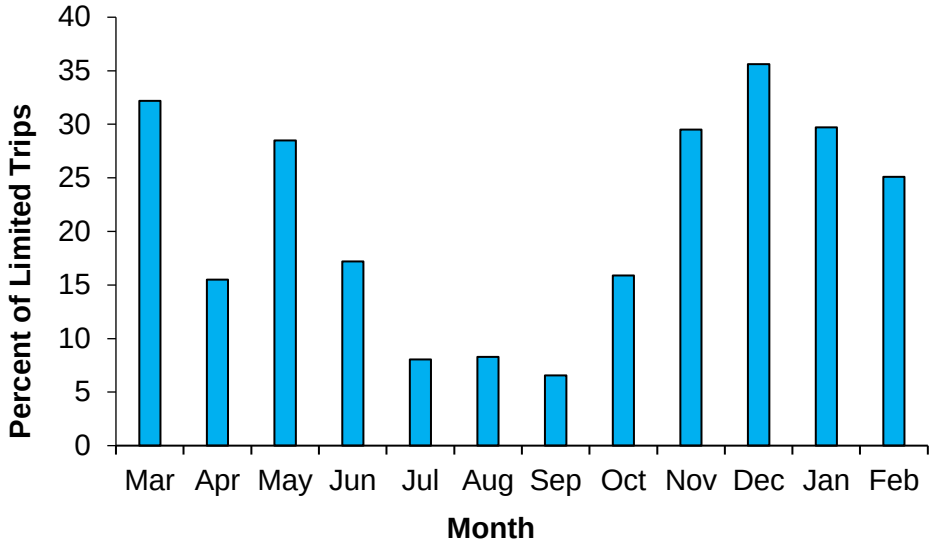

Figure 1.21. Percent of monthly trips reaching the trip limit (71-75 fish estimated to be landed) for targeted spotted seatrout trips in the runaround gill-net fishery reported through the North Carolina Trip Ticket Program, 2012–2022. For example, if there are 100 total trips in March and 10 of those trips reached the trip limit, then the percentage of trip limit trips in March will be 10%.

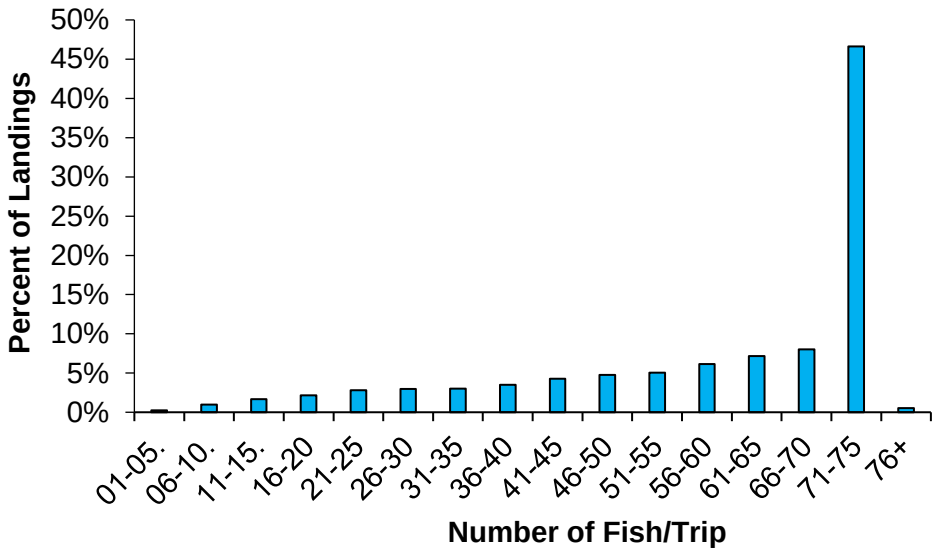

Figure 1.22. Percent of total pounds landed grouped by number of fish landed per targeted spotted seatrout trip in the runaround gill-net fishery reported through the North Carolina Trip Ticket Program, 2012–2022.

Runaround gill nets have a higher modal mesh size (3.75 ISM) than set small-mesh gill nets (3.0 ISM; Table 1.3). The average net length is 430 yards with a maximum of 3,000 yards, with 72% of trips fishing 500 yards (Figure 1.23). Runaround gill nets tend to be shorter than set gill nets because runaround gill nets are actively fished to encircle schools of fish. This allows for less yardage needed to catch the fish than passively fished set gill nets. Since runaround gill nets are already significantly shorter, and can be fished several times consecutively, maximum yardage restrictions may not be effective in restricting harvest in this fishery. For more information on possible management applications of runaround gill net yardage restrictions, see Appendix 2.

Table 1.3. Small-mesh (<5 inch ISM) runaround gill-net trips in North Carolina using data from the N.C. Trip Ticket Program with associated gear characteristics from fish house sampling, 2012-2022.

Species	Trips	Avg/Yr.	Modal Mesh	Avg Yds	Max Yds
Spotted seatrout	14,749	1,340	3.75	430	3,000

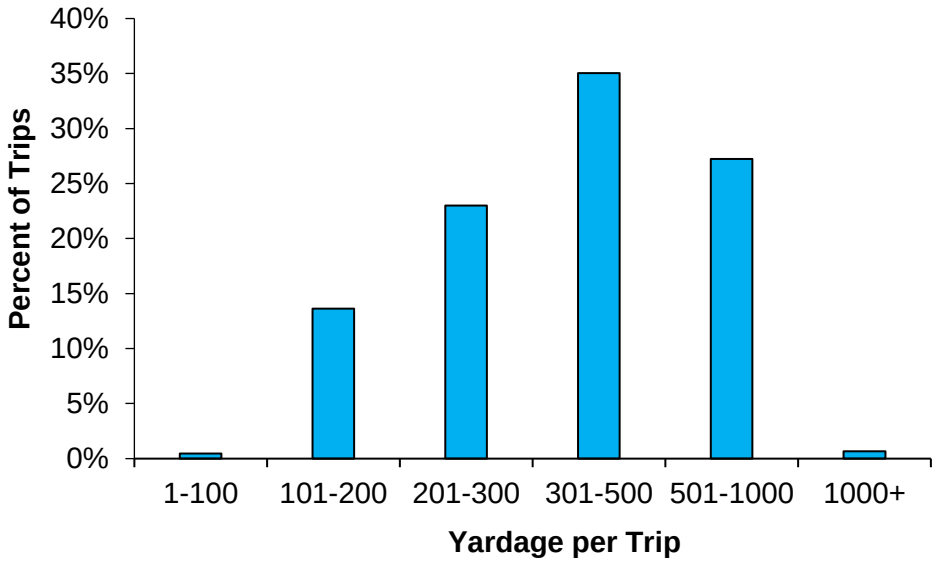

Figure 1.23. Percent of total trips sampled grouped by yards fished per trip in the spotted seatrout runaround gill net fishery using data from the commercial fish house sampling program, 2012–2022.

When targeting spotted seatrout with runaround gill nets, it is common to catch other species incidentally. The most common species landed incidentally when targeting spotted seatrout with runaround gill nets are striped mullet, red drum, black drum, bluefish, white perch, and spot (Figure 1.24). Conversely, spotted seatrout are most commonly caught incidentally when runaround gill-net fishermen are targeting striped mullet, spot, and bluefish (NC trip ticket data). This overlap between the spotted seatrout and striped mullet, spot, and bluefish runaround gill-net fisheries could have management implications for these fisheries if gear restrictions are put in place to restrict spotted seatrout harvest.

No data is available to characterize discards in this fishery because the observer program does not prioritize observing runaround gill-net trips.

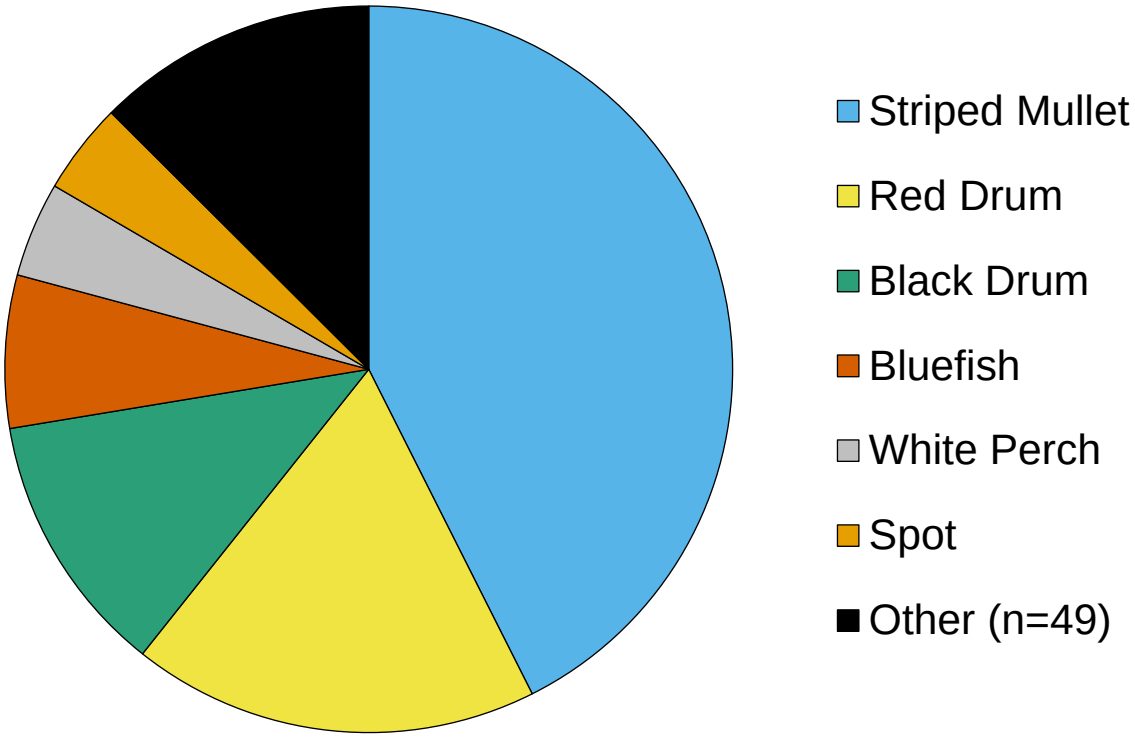

Figure 1.24. Proportion of incidental catch landed by species in the runaround gill-net spotted seatrout fishery reported through the North Carolina Trip Ticket Program, 2012–2022.