

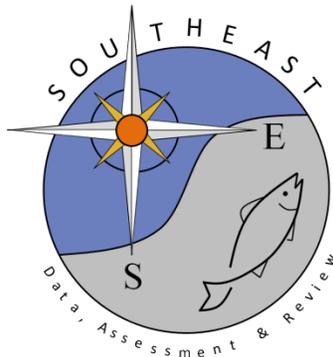
# Georgia Headboat Red Snapper Catch & Effort Data, 1983-2014

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SEDAR41-DW01

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## Georgia Headboat Red Snapper Catch & Effort Data, 1983-2014

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## SAFMC Review of Red Snapper Discard Data, August 2015

In preparation for the SEDAR24 Red Snapper Data Workshop in May 2010, Captain Steve Amick offered to provide detailed red snapper catch records from 1983 through 2009. He has operated charter and headboats of varying passenger numbers out of Savannah, Georgia since 1979. He recorded his catch records in personal logbooks at the end of every fishing day, including number of released fish (a data element not available for headboats from the NMFS survey until 2004). Through a cooperative effort with personnel at the Georgia Department of Natural Resources, Captain Amick provided his daily catch records (by month and year, starting in 1983) using a hard copy datasheet template. These data were then used to review the discard rate for the headboat sector from 1983-2007 for SEDAR24. In preparation for the SEDAR41 Red Snapper Data Workshop planned for August 2015, Capt. Amick provided the five newest years of data (2010-2014), as well as lengths of most discarded red snapper during those years. Details of the data and summary graphics are in the text below. Of particular note are changes to the manner in which Capt. Amick fished since 2010 due to the red snapper harvest moratorium, in addition to harvest/season restrictions on black sea bass, vermilion snapper and grouper species. The following components all changed: number of hooks per angler (reduced), and altered bait and rigging; reduced vessel fishing range/average depth fished; increased number of anglers/vessel trip; customer fishing experience sharply decreased. **These changes result in the need for extreme caution when comparing the 1983-2009 time series to that of 2010-2014.** However, combined, these data represent ~4,400 snapper-grouper fishing trips in which ~45,000 anglers caught ~48,000 and harvested ~22,000 red snapper. They also represent the lengths of ~2,000 red snapper released during 2010-2014.

During 2010-2013, only ~23% of the red snapper caught were <20 inches. However, in 2014, that increased substantially to ~60% of the caught red snapper were <20 inches. It is not possible to determine whether these changes in percentages of fish <20 inches (as compared to the 1993-2009 value of ~67% of landings released alive) are due to the significant change in the fishing open season/area/technique now used on this vessel, a change in the red snapper population, or both.

Though Capt. Amick kept logbooks from 1979-1982, those data were not submitted since this time period covers his initial fishing years. During that time he was running a wider

variety of trips, not as concentrated toward red snapper, and still learning prime fishing areas within the snapper-grouper fishing grounds.

The following monthly totals are included throughout the entire time period: vessel, trip type (½ or ¾ day), number fish <20 inches (both, alive and dead), number ≥ 20 inches (prior to 2010, these were harvested, and data are broken down by number weighing <15 pounds and those ≥15 pounds based on weight estimates by the captain), number anglers with and without catch, number vessel trips with and without catch. The additional data field of average depth fished (in feet) was added in 2010. Significant weather events such as hurricanes and tropical storms are also noted. Until 2010, Captain Amick typically fished depths of 90-120 feet in the NMFS headboat survey grid 31-80 southeast of Savannah, GA. His vessels included a 30ft T-craft (6 passengers) from 1983-1988, 31ft Morgan (average 9 passengers) from 1989-1992 and 41ft Morgan (average 12 passengers) from 1993 to present.

Trip data represent snapper-grouper fishing trips and do not include those in which the entire trip was trolling, or trips less than 6 hours or nearshore targeting only black sea bass (i.e., those trips in which red snapper are rarely caught off the Georgia Coast). Trips that were combination trolling and bottom fishing were included.

Table 1 presents various measures of angler, trip and catch statistics for each year. Data include both ½ and ¾ day trips since only a small proportion were ½ day (~1.5%):

- Average Number Anglers per Vessel Trip – sum of total number anglers divided by sum of total number vessel trips
- Total Catch per Angler Trip – sum of total number red snapper caught divided by sum of total number anglers, where total number red snapper caught = (number <20inches) + (number ≥20 inches that <15 lbs) + (number ≥20 inches that ≥15lbs)
- Total ≥20 inches per Angler Trip (prior to 2010 = harvested) – sum of total number red snapper ≥20 inches divided by sum of total number anglers, where total number red snapper ≥20 inches = (number ≥20 inches that <15 lbs) + (number ≥20 inches that ≥15lbs)
- 15lb & Greater per Angler Trip – sum of total number red snapper ≥20 inches that ≥15lbs divided by sum of total number anglers
- % <20 inches – Sum of total number red snapper <20 inches divided by sum of total number red snapper caught
- % Vessel Trips with Catch – sum of total number vessel trips with at least one red snapper caught divided by sum of total number vessel trips

Captain Amick has participated in the NMFS headboat survey since 1994 (including a pilot electronic reporting format in 2009) and has been a member of both the SAFMC and the Snapper-Grouper Advisory Panel. He provided (in combination with three other captains within his business) ~70% of the red snapper otoliths (n=482) collected in cooperation with GADNR summer and fall of 2009. He and another captain also provided 130 red snapper fin clip samples as part of a cooperative effort with Texas A&M during summer 2009.

Table 1. Annual red snapper catch per unit of effort from Savannah, GA headboat.

Year	Average Number Anglers per Vessel Trip	Total Catch per Angler Trip	Total $\geq 20$ inches per Angler Trip	Number $\geq 20$ inches = $\geq 15$ lbs per Angler Trip	% $< 20$ inches	% Vessel Trips WITH Catch
1983	5.92	1.46	1.46	0.035	0.00%	84.62%
1984	5.91	1.16	1.16	0.025	0.00%	76.03%
1985	5.96	1.69	1.69	0.060	0.00%	83.58%
1986	5.97	1.10	1.10	0.037	0.00%	73.33%
1987	5.98	2.05	2.05	0.031	0.00%	90.91%
1988	6.00	1.32	1.32	0.027	0.00%	91.61%
1989	8.94	1.17	1.17	0.026	0.00%	87.95%
1990	8.66	0.64	0.64	0.018	0.00%	76.55%
1991	8.35	0.64	0.61	0.021	4.37%	72.09%
1992	8.38	1.22	0.16	0.033	87.21%	84.68%
1993	12.53	0.83	0.17	0.013	80.18%	86.83%
1994	13.33	0.75	0.26	0.017	64.58%	92.86%
1995	12.65	0.42	0.19	0.013	54.63%	77.78%
1996	11.42	0.28	0.16	0.017	40.34%	67.47%
1997	11.78	0.84	0.14	0.022	83.21%	86.83%
1998	11.62	1.01	0.19	0.042	81.26%	95.15%
1999	12.36	1.46	0.32	0.044	78.31%	92.47%
2000	12.11	2.24	0.26	0.030	88.60%	97.59%
2001	13.47	1.48	0.41	0.023	72.60%	97.30%
2002	12.55	1.31	0.73	0.019	44.29%	99.38%
2003	11.95	0.93	0.40	0.022	56.80%	91.12%
2004	10.91	1.27	0.42	0.034	66.89%	96.89%
2005	12.09	0.93	0.29	0.038	68.49%	95.39%
2006	11.75	0.81	0.24	0.035	70.35%	82.31%
2007	11.69	1.58	0.22	0.032	86.19%	92.65%
2008	8.97	2.30	0.91	0.046	60.41%	97.39%
2009	8.79	1.46	0.85	0.044	41.91%	94.87%
2010	11.36	0.46	0.33	0.048	27.25%	81.82%
2011	11.60	0.45	0.36	0.071	20.22%	78.16%
2012	11.72	0.32	0.24	0.065	24.06%	64.79%
2013	12.21	0.27	0.21	0.080	21.94%	74.65%
2014	12.53	0.44	0.18	0.074	60.21%	79.41%

Table 2. Average red snapper catch per unit of effort through varying time periods, from Savannah, GA headboat.

Year	Average Number Anglers per Vessel Trip	Total Catch per Angler Trip	Total $\geq 20$ inches per Angler Trip	Number $\geq 20$ inches = $\geq 15$ lbs per Angler Trip	% $< 20$ inches	% Vessel Trips WITH Catch
93-09 average	11.76	1.17	0.36	0.029	67.00%	90.84%
08-09 average	8.88	1.88	0.88	0.045	51.16%	96.13%
10-14 average	11.88	0.39	0.26	0.068	30.74%	75.77%

Figure 1. Red Snapper CPUE (total catch per angler trip), catch of fish 20 inches and greater (previously harvested) and percent fish less than 20 inches, for **entire** time series 1983-2014 (encompassing all three fishing vessels).

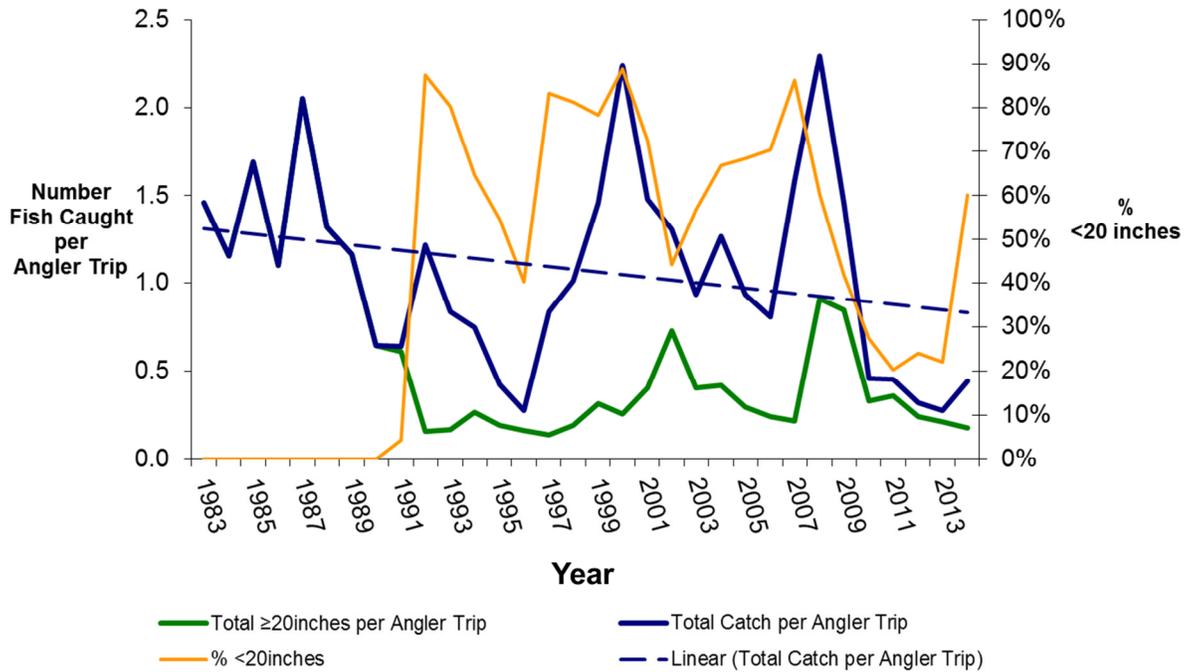


Figure 2. Red Snapper CPUE (total catch per angler trip), catch of fish 20 inches and greater (previously harvested) and percent fish less than 20 inches, for **truncated** time series 1993-2014 (in which fishing occurred from only one vessel).

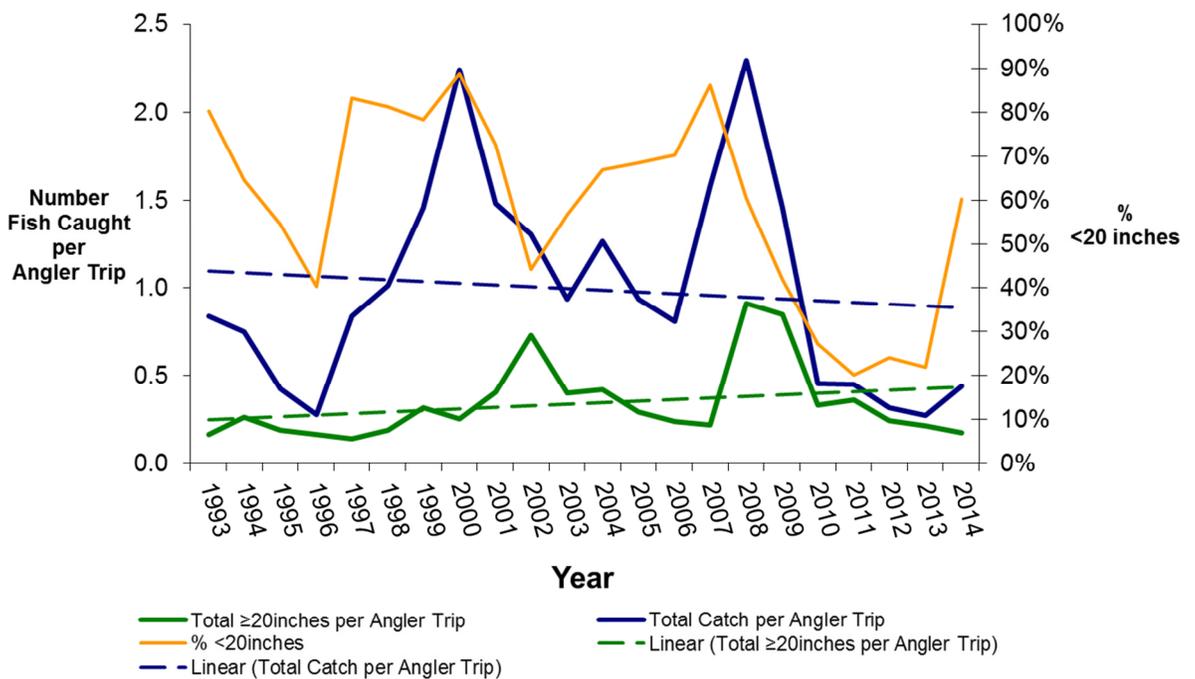


Figure 3. Red Snapper catch of fish 20 inches and greater (previously harvested), including a subset of fish estimated to weigh 15 pounds and greater.

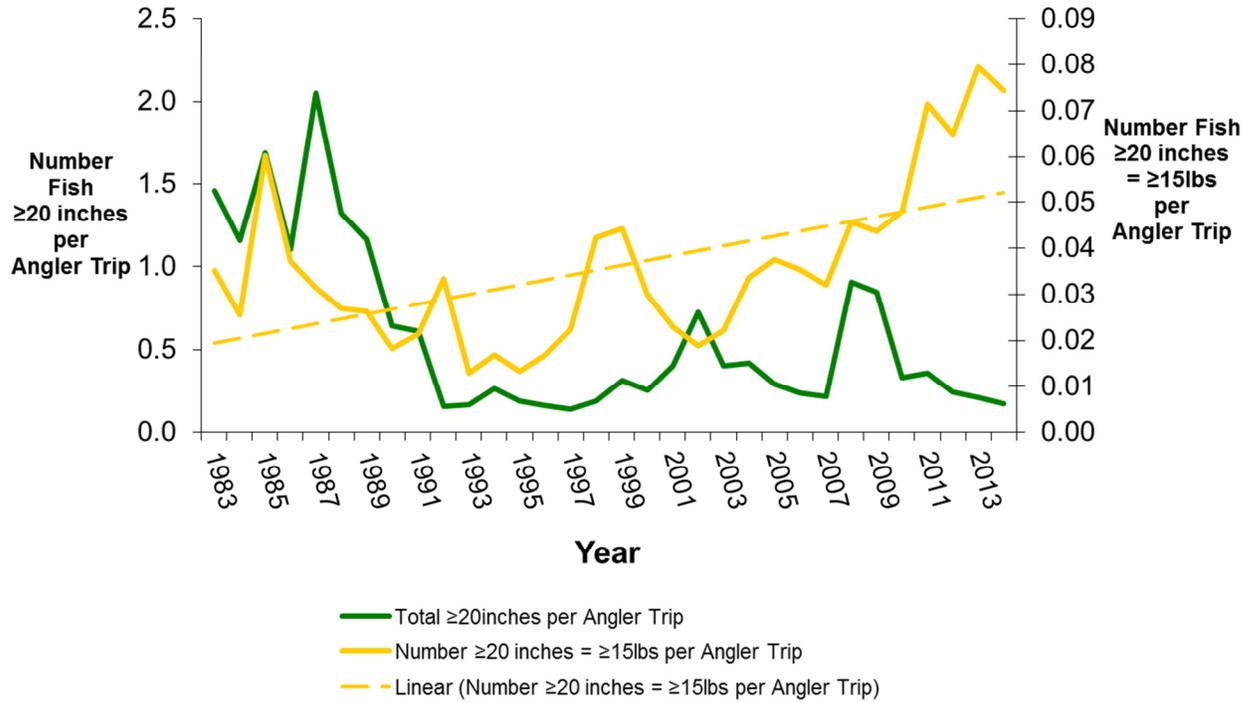


Figure 4. Percent of vessel trips with at least one red snapper caught per trip and average number of anglers per vessel trip.

