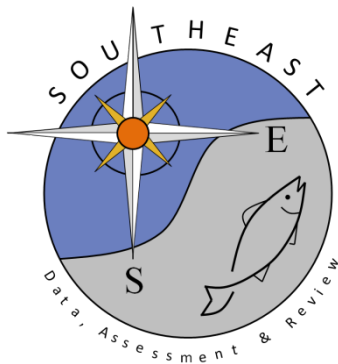


## **Southeast Region Headboat Survey Data for Snowy Grouper (*Epinephelus niveatus*) in the Atlantic**

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SEDAR36-WP-12

Submitted: 12 July 2013



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Please cite this document as:

Sustainable Fisheries Branch, National Marine Fisheries Service, Southeast Fisheries Science Center, Beaufort, NC. 2013. Southeast Region Headboat Survey Data for Snowy Grouper (*Epinephelus niveatus*) in the Atlantic. SEDAR36-WP12. SEDAR, North Charleston, SC. 10 pp.

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## **Introduction**

Recreational landings and effort data for snowy grouper from the Southeast Region Headboat Survey (SRHS) are presented. Discard data and biological sampling data from both the SHRS and At-Sea Observer program are presented. Issues addressed include the estimation of headboat discards back in time.

## **SRHS Landings**

Landings during 1972-1980 were taken directly from SEDAR 4, only total South Atlantic landings were provided. Snowy grouper landings were estimated as in SEDAR 4 and are provided by state during 1981-2012. Final Southeast Region Headboat Survey (SRHS) landings estimates are shown in Table 1.

## **SRHS Logbook Discards**

The Southeast Region Headboat Survey logbook form was modified in 2004 to include a category to collect self-reported discards for each reported trip. This category is described on the form as the number of fish by species released alive and number released dead. Port agents instructed each captain on criteria for determining the condition of discarded fish. A fish is considered “released alive” if it is able to swim away on its own. If the fish floats off or is obviously dead or unable to swim, it is considered “released dead”. These self-reported data are currently not validated within the Headboat Survey. Due to low snowy grouper sample sizes in the MRFSS At-Sea Observer Headboat program, it was determined that the logbook discard data would be used from 2004-2012. However, because the one snowy grouper per angler aggregate bag limit was enacted in 2006 the RWG recommended assuming negligible discards of snowy grouper for the SRHS in 1972-2003. Final discard estimates from the SRHS are shown in Table 2 by year and state.

## **Headboat At-Sea Observer Survey Discards**

An observer survey of the recreational headboat fishery was launched in NC and SC in 2004 and in GA and FL in 2005 to collect more detailed information on recreational headboat catch, particularly for discarded fish. Headboat vessels are randomly selected throughout the year in each state, and the east coast of Florida is further stratified into northern and southern sample regions. Biologists board selected vessels with permission from the captain and observe anglers as they fish on the recreational trip. Data collected include number and species of fish landed and discarded, size of landed and discarded fish, and the release condition of discarded fish (FL only) Data are also collected on the length of the trip, area fished (inland, state, and federal waters)

and, in Florida, the minimum and maximum depth fished. In the Florida Keys (sub-region 3) some vessels that run trips that span more than 24 hours are also sampled to collect information on trips that fish farther offshore and for longer durations, primarily in the vicinity of the Dry Tortugas. Due to low snowy grouper sample sizes the MRFSS At-Sea Observer data was not recommended for use in this assessment.

### **Southeast Region Headboat Survey Mean Weight and Effort**

Dockside mean weights for the headboat fishery are tabulated for 1972-2012 in Table 3. Estimated headboat angler days (SRHS) were calculated as in SEDAR 4 and are provided in Table 4.

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## Tables

Table 1 Estimated headboat landings of snowy grouper in the South Atlantic 1972-2012. Due to headboat area definitions and confidentiality issues, Georgia and East Florida landings must be combined.

Year	FLE/GA		SC		NC		South Atlantic	
	Number	Weight (lbs)	Number	Weight (lbs)	Number	Weight (lbs)	Number	Weight (lbs)
1972							1,035	11,288
1973							636	10,979
1974							1,793	21,120
1975							1,039	13,580
1976							2,486	24,603
1977							1,157	7,650
1978							797	10,097
1979							1,142	9,877
1980							2,264	19,841
1981	1,771	8,727	1,060	6,826	215	1,307	3,046	16,860
1982	412	2,679	1,685	12,950	146	950	2,243	16,579
1983	1,228	7,671	2,595	15,670	72	147	3,895	23,489
1984	125	516	290	1,271	155	640	570	2,426
1985	232	774	848	3,468	28	86	1,108	4,328
1986	326	753	1,982	7,142	368	566	2,676	8,461
1987	133	466	975	3,863	26	86	1,134	4,415
1988	86	292	849	2,930	18	57	953	3,279
1989	230	1,674	671	1,790	217	563	1,118	4,028
1990	165	745	454	1,939	58	162	677	2,847
1991	232	848	267	1,183	30	155	529	2,186
1992	62	229	99	413	77	234	238	877
1993	59	234	193	620	73	234	325	1,088
1994	74	117	308	525	56	88	438	730
1995	102	185	223	413	70	130	395	728
1996	165	743	489	2,471	68	208	722	3,422
1997	97	717	252	1,298	62	194	411	2,209
1998	72	558	19	177	81	563	172	1,299
1999	111	384	25	109	6	23	142	515
2000	130	459	11	13	37	42	178	513
2001	84	197	215	495	112	261	411	953
2002	57	164	109	313	34	101	200	578
2003	7	60	28	245	31	163	66	467
2004	134	284	1	2	45	96	180	382
2005	294	1,244	39	303	14	70	347	1,617
2006	16	75	-	-	81	594	97	669
2007	39	46	90	163	44	74	173	283
2008	18	20	12	24	23	47	53	91
2009	23	32	11	22	74	150	108	204
2010	39	79	-	-	38	59	77	139
2011	33	35	-	-	30	31	63	67
2012	41	56	-	-	19	30	60	85

Table 2. Estimated South Atlantic snowy grouper discards (number of fish) for SRHS by year and state\*. Due to headboat area definitions and confidentiality issues, Georgia and East Florida data must be combined.

Year	FLE/GA	SC	NC	South Atlantic
2004	6	-	14	20
2005	64	4	2	70
2006	20	-	-	20
2007	9	11	4	24
2008	16	2	3	21
2009	89	1	6	96
2010	40	-	8	48
2011	30	8	3	41
2012	47	-	4	51

\*Assume no discards prior to 2004.



Table 3. Mean weight (kg) of snowy grouper measured in the SRHS by year and state, 1972-2012.

Year	FLE/GA			SC			NC					
	N	Mean (kg)	Min (kg)	Max (kg)	N	Mean (kg)	Min (kg)	Max (kg)	N	Mean (kg)	Min (kg)	Max (kg)
1972					7	8.66	5.45	11.35	63	4.51	0.50	11.80
1973					6	9.33	3.45	14.98	17	4.02	1.14	9.99
1974					156	5.03	0.45	11.58	40	2.67	0.55	14.53
1975					132	4.03	0.27	14.06	18	5.34	0.55	25.88
1976					99	4.42	0.45	13.48	23	4.31	0.91	14.53
1977					19	2.89	0.27	8.31	39	2.94	0.45	12.76
1978	4	1.16	0.40	3.10	36	2.13	0.25	5.65	6	1.75	0.05	3.80
1979					24	3.93	0.74	9.65	9	2.59	0.54	4.60
1980	10	4.38	0.88	11.35	39	3.55	0.19	14.85	5	1.62	0.86	3.35
1981	33	1.62	0.42	3.90	14	2.92	1.20	4.05	6	2.38	0.60	7.45
1982	3	1.47	0.35	3.50	18	3.49	0.69	10.15	3	1.18	0.90	1.50
1983	4	3.72	0.18	7.25	53	2.83	0.45	11.50	13	0.93	0.34	2.85
1984	8	1.55	0.63	3.50	32	1.95	0.38	6.83	2	0.62	0.49	0.76
1985	16	1.28	0.20	8.20	25	2.08	0.46	6.20	31	0.90	0.27	2.32
1986	6	0.48	0.20	0.85	49	1.56	0.18	8.40	22	0.76	0.25	3.10
1987	12	1.48	0.50	3.65	18	1.78	0.62	3.20	5	0.51	0.21	0.78
1988	1	1.12	1.12	1.12	37	1.63	0.14	4.25	7	0.71	0.20	1.00
1989	27	3.27	0.51	11.36	22	1.20	0.39	3.10	2	0.71	0.67	0.75
1990	1	0.71	0.71	0.71	2	0.91	0.47	1.34	3	1.15	0.31	2.56
1991					1	1.06	1.06	1.06	2	1.67	0.67	2.66
1992	1								1	0.36	0.36	0.36
1993	1	0.18	0.18	0.18	4	0.63	0.47	0.91	2	0.42	0.26	0.58
1994	1	0.46	0.46	0.46	7	0.74	0.46	1.37	7	0.76	0.36	1.29
1995	1	0.50	0.50	0.50	6	1.12	0.37	1.80	4	0.42	0.17	0.54
1996					9	1.55	0.66	2.47	10	0.62	0.12	1.98
1997	14	3.07	0.50	7.49	11	1.76	0.67	4.29	8	0.68	0.27	1.02
1998	3	2.23	0.66	4.19	2	1.16	0.84	1.48	5	0.62	0.47	0.78
1999	1	0.44	0.44	0.44								
2000	3	0.85	0.58	1.14					1	0.38	0.38	0.38
2001	9	1.11	0.20	2.88					3	0.67	0.61	0.74
2002	2	0.91	0.46	1.35					3	0.35	0.29	0.39
2003	7	0.74	0.31	1.53	1	0.48	0.48	0.48				
2004	16	0.96	0.30	2.18								
2005	3	0.83	0.71	1.03					2	0.40	0.40	0.40
2006									1	0.48	0.48	0.48
2007	4	0.51	0.20	0.89	1	0.46	0.46	0.46	1	1.38	1.38	1.38
2008	1	0.21	0.21	0.21								
2009	3	1.39	0.55	2.43								
2010	8	0.99	0.31	1.90					2	0.65	0.65	0.65
2011	2	0.63	0.59	0.67								
2012	3	0.63	0.50	0.71					2	5.29	5.29	5.29

Table 4. SRHS estimated angler days by year and state, 1981-2012.

Year	FLE/GA	SC	NC	South Atlantic
1981	298,883	59,030	19,374	377,287
1982	293,133	67,539	26,939	387,611
1983	277,863	65,733	23,830	367,426
1984	288,994	67,314	28,865	385,173
1985	280,845	66,001	31,384	378,230
1986	317,058	67,227	31,187	415,472
1987	333,041	78,806	35,261	447,108
1988	301,775	76,468	42,421	420,664
1989	316,864	62,708	38,678	418,250
1990	322,895	57,151	43,240	423,286
1991	280,022	67,982	40,936	388,940
1992	264,523	61,790	41,176	367,489
1993	236,973	64,457	42,786	344,216
1994	242,781	63,231	36,691	342,703
1995	210,714	61,739	40,295	312,748
1996	199,857	54,929	35,142	289,928
1997	173,273	60,150	37,189	270,612
1998	155,341	61,342	37,399	254,082
1999	164,052	55,499	31,596	251,147
2000	182,249	40,291	31,351	253,891
2001	163,389	49,265	31,779	244,433
2002	151,546	42,467	27,601	221,614
2003	145,011	36,556	22,998	204,565
2004	175,400	48,763	27,255	251,418
2005	172,839	34,036	31,573	238,448
2006	175,522	56,074	25,736	257,332
2007	157,150	60,729	29,002	246,881
2008	123,943	47,287	17,158	188,388
2009	136,420	40,919	19,468	196,807
2010	123,662	44,951	21,071	189,684
2011	124,041	44,645	18,457	187,143
2012	139,623	41,003	20,766	201,392