

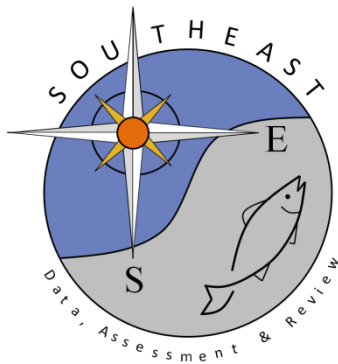
Marine Resources Monitoring, Assessment and Prediction Program: Snowy
Grouper Length and Age Compositions for the SEDAR36 Standard Stock
Assessment

Tracey I. Smart

SEDAR36-WP-10

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**Marine Resources Monitoring, Assessment and Prediction Program: Snowy Grouper Length and Age
Compositions for the SEDAR 36 Standard Stock Assessment**

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June 2013

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SEDAR36-WP10

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Chevron Traps

Length data include all chevron trap collections from 1996 through 2012, regardless of catch code, function of the gear, location or depth.

Lengths are total length in cm in 1-cm bins (centered on the integer; 10 cm = 9.5-10.4) derived from length frequency measurements of snowy grouper.

Table 1. Length % Composition of snowy grouper collected by chevron trap from 1996 to 2012. Lengths were measured with 1-cm resolution and are total length. The total number of fish for all years was 377, ranging from 2 to 61 fish per year, with observed lengths for chevron traps ranging from 16 to 84 cm.

[illegible]

37	10	3.33	1.64	0.00	0.00	0.00	0.00	0.00	5.26	4.55	0.00	0.00	9.09	0.00	0.00	7.14	8.70	2.33
38	16	5.00	1.64	4.55	14.29	0.00	7.69	10.34	5.26	0.00	25.00	0.00	9.09	0.00	0.00	7.14	0.00	0.00
39	4	0.00	0.00	0.00	0.00	0.00	0.00	3.45	5.26	0.00	0.00	0.00	0.00	50.00	0.00	7.14	0.00	0.00
40	7	3.33	3.28	4.55	0.00	0.00	0.00	3.45	0.00	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	10	3.33	1.64	0.00	14.29	0.00	0.00	10.34	0.00	4.55	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00
42	15	6.67	0.00	0.00	0.00	20.00	0.00	6.90	15.79	0.00	25.00	10.00	9.09	0.00	16.67	7.14	0.00	0.00
43	19	8.33	6.56	13.64	0.00	20.00	0.00	10.34	0.00	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.65
44	14	1.67	4.92	0.00	0.00	0.00	10.26	6.90	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	8.70	0.00
45	10	1.67	6.56	0.00	14.29	0.00	0.00	3.45	0.00	4.55	0.00	0.00	0.00	0.00	0.00	14.29	0.00	0.00
46	18	6.67	4.92	0.00	0.00	0.00	5.13	3.45	10.53	9.09	0.00	10.00	0.00	0.00	0.00	0.00	4.35	4.65
47	14	1.67	6.56	4.55	0.00	20.00	0.00	6.90	5.26	4.55	0.00	0.00	0.00	0.00	0.00	7.14	4.35	2.33
48	15	6.67	4.92	0.00	0.00	0.00	5.13	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	9.30
49	16	3.33	4.92	4.55	0.00	0.00	2.56	0.00	0.00	4.55	0.00	10.00	0.00	0.00	0.00	7.14	4.35	11.63
50	21	1.67	3.28	9.09	0.00	0.00	5.13	0.00	0.00	9.09	0.00	0.00	18.18	0.00	33.33	14.29	8.70	9.30
51	15	5.00	1.64	4.55	0.00	0.00	7.69	0.00	0.00	0.00	0.00	10.00	0.00	0.00	16.67	0.00	13.04	4.65
52	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	9.09	0.00	0.00	0.00	0.00	2.33
53	15	3.33	6.56	4.55	14.29	20.00	2.56	0.00	0.00	4.55	0.00	0.00	0.00	0.00	0.00	0.00	8.70	4.65
54	14	6.67	3.28	4.55	0.00	0.00	5.13	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	7.14	4.35	4.65
55	8	0.00	0.00	4.55	0.00	0.00	5.13	0.00	5.26	0.00	25.00	0.00	0.00	0.00	0.00	7.14	4.35	2.33
56	8	0.00	3.28	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	9.30
57	6	1.67	0.00	0.00	0.00	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.70	4.65
58	7	0.00	3.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	4.35	4.65
59	4	3.33	0.00	0.00	0.00	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33
60	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	2.33
61	5	0.00	0.00	4.55	0.00	0.00	2.56	0.00	0.00	0.00	0.00	0.00	18.18	0.00	0.00	0.00	4.35	0.00
62	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	2.33
63	3	3.33	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33
65	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33
66	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	2	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00

	101	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	102	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	103	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	104	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	105	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	106	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fish / Year	-	60	61	22	7	5	39	29	19	22	4	10	11	2	6	14	23	43	23
Traps / Year	-	22	18	8	4	3	13	10	8	13	3	8	6	2	5	10	10	23	23

Age data include all chevron trap collections from 1996 through 2012, regardless of catch code, function of the gear, location or depth. Ages are in 1-year bins and are derived from increments counts of snowy grouper.

Table 2. Age % Composition of snowy grouper collected by chevron trap from 1996 to 2012. Ages were determined with 1-year resolution from increment counts. The total number of fish for all years was 364, ranging from 2 to 61 fish per year, with observed ages for chevron traps ranging from 1 to 10.

[illegible]

15	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fish /																		
Year	-	56	61	20	7	5	38	28	19	22	4	10	11	2	6	13	18	44
Traps /																		
Year	-	20	18	8	4	3	13	10	8	13	3	8	6	2	5	9	11	23

Short-bottom longline

Length data include all short-bottom longline collections from 1996 through 2011, regardless of catch code, function of the gear, location or depth. Lengths are total length in cm in 1-cm bins (centered on the integer; 10 cm = 9.5-10.4) derived from length frequency measurements of snowy grouper.

Table 3. Length % Composition of snowy grouper collected by short-bottom longline from 1996 to 2011. Lengths were measured with 1-cm resolution and are total length. The total number of fish for all years was 717, ranging from 10 to 170 fish per year, with actual lengths ranging from 21 to 106 cm.

[illegible]

37	4	0.00	0.00	0.00	0.00	2.78	0.00	3.70	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	2	0.00	0.00	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
39	8	7.69	0.00	0.00	0.00	0.00	2.33	14.81	1.92	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00
40	9	0.00	0.00	0.00	0.00	0.00	0.00	7.41	1.92	0.00	2.78	0.00	0.00	0.00	0.00	2.97	1.18
41	8	7.69	0.00	0.00	0.00	2.78	2.33	7.41	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
42	9	7.69	0.00	3.70	0.00	2.78	0.00	3.70	1.92	0.00	0.00	0.00	0.00	0.00	0.00	1.98	1.18
43	12	0.00	0.00	0.00	0.00	5.56	4.65	11.11	1.92	0.00	2.78	0.00	0.00	0.00	0.00	1.98	0.59
44	13	0.00	0.00	0.00	0.00	0.00	0.00	7.41	5.77	0.00	0.00	2.94	0.00	0.00	4.76	4.95	0.59
45	8	0.00	0.00	0.00	3.03	2.78	0.00	3.70	1.92	0.00	2.78	2.94	0.00	0.00	0.00	0.00	1.18
46	6	0.00	2.63	0.00	0.00	0.00	6.98	0.00	1.92	0.00	0.00	0.00	0.00	1.64	0.00	0.00	0.00
47	20	0.00	2.63	3.70	3.03	2.78	2.33	0.00	9.62	20.00	5.56	0.00	0.00	0.00	0.00	0.99	2.94
48	19	0.00	0.00	7.41	12.12	8.33	4.65	0.00	1.92	10.00	2.78	2.94	0.00	0.00	0.00	0.99	1.76
49	12	0.00	0.00	0.00	3.03	0.00	2.33	0.00	0.00	10.00	8.33	2.94	0.00	0.00	0.00	1.98	1.76
50	23	7.69	2.63	0.00	6.06	0.00	4.65	0.00	1.92	10.00	8.33	2.94	0.00	1.64	0.00	1.98	4.71
51	24	7.69	0.00	0.00	0.00	2.78	6.98	11.11	5.77	10.00	2.78	5.88	6.67	0.00	0.00	2.97	2.94
52	21	15.38	5.26	3.70	3.03	5.56	2.33	3.70	1.92	0.00	2.78	0.00	0.00	3.28	0.00	2.97	2.35
53	11	7.69	2.63	0.00	3.03	0.00	2.33	3.70	1.92	20.00	0.00	2.94	0.00	0.00	0.00	0.00	1.18
54	22	0.00	2.63	3.70	6.06	0.00	0.00	3.70	5.77	0.00	8.33	11.76	0.00	1.64	4.76	0.99	2.35
55	17	0.00	0.00	3.70	9.09	0.00	6.98	3.70	0.00	0.00	2.78	2.94	0.00	1.64	0.00	1.98	2.35
56	15	0.00	7.89	0.00	3.03	2.78	0.00	0.00	0.00	0.00	2.78	2.94	6.67	3.28	0.00	1.98	1.76
57	20	0.00	5.26	3.70	3.03	2.78	2.33	3.70	3.85	10.00	0.00	11.76	6.67	1.64	4.76	0.99	1.18
58	21	0.00	2.63	7.41	12.12	5.56	0.00	0.00	3.85	0.00	2.78	2.94	0.00	1.64	4.76	0.99	2.94
59	14	0.00	7.89	0.00	0.00	0.00	2.33	3.70	3.85	0.00	0.00	2.94	0.00	1.64	0.00	0.00	2.94
60	22	0.00	7.89	7.41	12.12	2.78	2.33	3.70	1.92	0.00	5.56	0.00	0.00	3.28	9.52	0.99	1.18
61	16	0.00	2.63	3.70	3.03	2.78	0.00	0.00	3.85	0.00	2.78	2.94	6.67	6.56	0.00	0.00	1.76
62	11	0.00	5.26	0.00	3.03	0.00	0.00	0.00	0.00	10.00	0.00	2.94	0.00	4.92	0.00	1.98	0.59
63	11	0.00	0.00	11.11	0.00	2.78	0.00	3.70	0.00	0.00	2.78	2.94	0.00	3.28	0.00	0.99	0.59
64	9	0.00	5.26	3.70	0.00	2.78	0.00	0.00	1.92	0.00	0.00	0.00	0.00	1.64	0.00	0.99	1.18
65	14	0.00	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	2.78	0.00	6.67	3.28	4.76	0.99	2.94
66	13	0.00	0.00	3.70	0.00	2.78	4.65	0.00	3.85	0.00	0.00	0.00	6.67	4.92	0.00	1.98	0.59
67	15	0.00	0.00	0.00	0.00	0.00	4.65	0.00	0.00	0.00	0.00	0.00	6.67	4.92	4.76	2.97	2.94
68	19	7.69	2.63	0.00	0.00	0.00	4.65	0.00	1.92	0.00	0.00	5.88	6.67	4.92	9.52	3.96	1.18

69	12	0.00	0.00	7.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	0.00	2.97	3.53
70	27	7.69	0.00	0.00	0.00	2.78	6.98	0.00	3.85	0.00	0.00	5.88	13.33	8.20	4.76	3.96	3.53
71	19	0.00	0.00	0.00	0.00	0.00	2.33	0.00	0.00	0.00	5.56	0.00	6.67	1.64	9.52	7.92	2.35
72	11	7.69	0.00	7.41	0.00	2.78	2.33	0.00	0.00	0.00	2.78	0.00	0.00	3.28	0.00	0.99	1.18
73	17	0.00	0.00	3.70	0.00	0.00	0.00	0.00	1.92	0.00	2.78	2.94	0.00	3.28	0.00	8.91	1.18
74	16	7.69	5.26	0.00	0.00	0.00	4.65	0.00	1.92	0.00	0.00	2.94	0.00	0.00	0.00	1.98	4.12
75	14	0.00	0.00	3.70	0.00	0.00	6.98	0.00	3.85	0.00	0.00	0.00	6.67	1.64	4.76	1.98	1.76
76	13	0.00	2.63	0.00	3.03	0.00	0.00	0.00	0.00	0.00	2.78	0.00	0.00	3.28	9.52	1.98	2.35
77	15	7.69	5.26	0.00	6.06	0.00	0.00	0.00	0.00	0.00	2.78	2.94	0.00	0.00	4.76	1.98	2.94
78	11	0.00	5.26	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	3.96	1.76
79	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	0.00	2.78	0.00	13.33	8.20	4.76	0.99	1.76
80	14	0.00	0.00	0.00	0.00	2.78	0.00	0.00	3.85	0.00	0.00	2.94	0.00	1.64	4.76	2.97	2.94
81	9	0.00	2.63	0.00	0.00	2.78	0.00	0.00	1.92	0.00	0.00	0.00	6.67	0.00	0.00	0.99	2.35
82	7	0.00	2.63	0.00	0.00	0.00	2.33	0.00	0.00	0.00	2.78	2.94	0.00	0.00	0.00	2.97	0.00
83	9	0.00	2.63	3.70	0.00	2.78	0.00	0.00	1.92	0.00	2.78	0.00	0.00	0.00	0.00	1.98	1.18
84	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.28	0.00	0.99	0.59
85	9	0.00	2.63	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	0.00	0.99	2.94
86	5	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	1.76
87	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	0.00	0.00	1.76
88	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	1.18
89	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
90	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.35
91	5	0.00	0.00	0.00	0.00	0.00	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.35
92	7	0.00	2.63	3.70	0.00	0.00	2.33	0.00	0.00	0.00	0.00	2.94	0.00	1.64	0.00	0.99	0.59
93	1	0.00	0.00	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	3	0.00	0.00	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	0.00	0.00	0.59
95	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	0.00	0.00	0.59
96	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	2	0.00	0.00	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
98	1	0.00	0.00	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00

101	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.59
104	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00
Fish / Year	-	13	38	27	33	36	43	27	52	10	36	34	15	61	21	101	170
Lines / Year	-	9	14	13	14	19	18	10	25	6	19	16	6	20	5	45	57

Age data include all short-bottom longline collections from 1996 through 2011, regardless of catch code, function of the gear, location or depth. Ages are in 1-year bins and are derived from increments counts of snowy grouper.

Table 2. Age % Composition of snowy grouper collected by short-bottom longline from 1996 to 2011. Ages were determined with 1-year resolution from increment counts. The total number of fish for all years was 664, ranging from 10 to 127 fish per year, with observed ages for chevron traps ranging from 2 to 20.

[illegible]

15	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	0.00
18	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	0.00
19	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
20	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00
Fish / Year	-	13	38	25	33	36	42	27	52	10	36	30	15	61	21	98	127
Lines / Year	-	9	14	12	14	19	18	10	25	6	19	15	6	20	5	43	57

Figures

Figure 1. Length percent compositions of snowy grouper collected by chevron trap from 1996 to 2012.

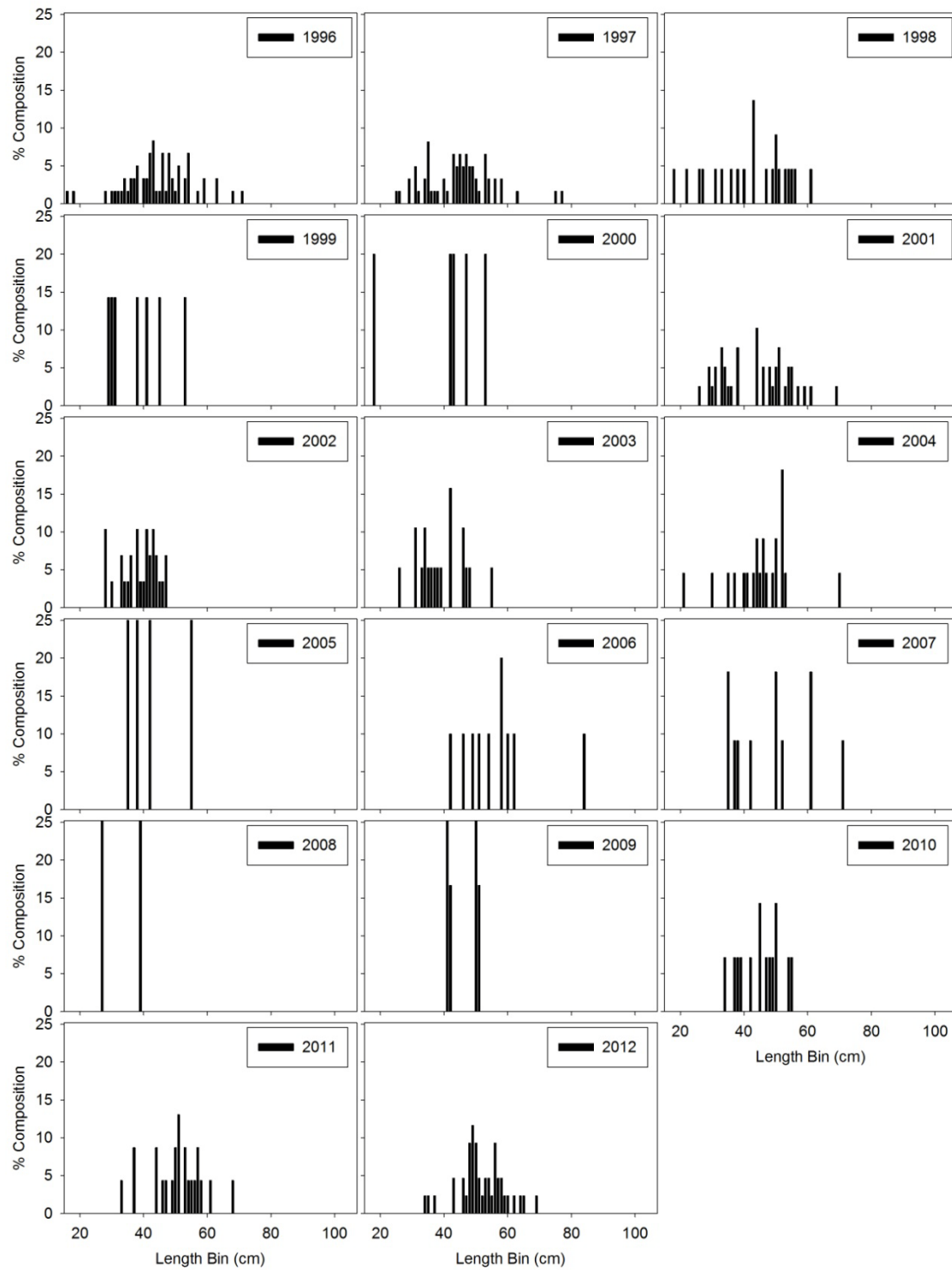


Figure 2. Age percent compositions of snowy grouper collected by chevron trap from 1996 to 2012.

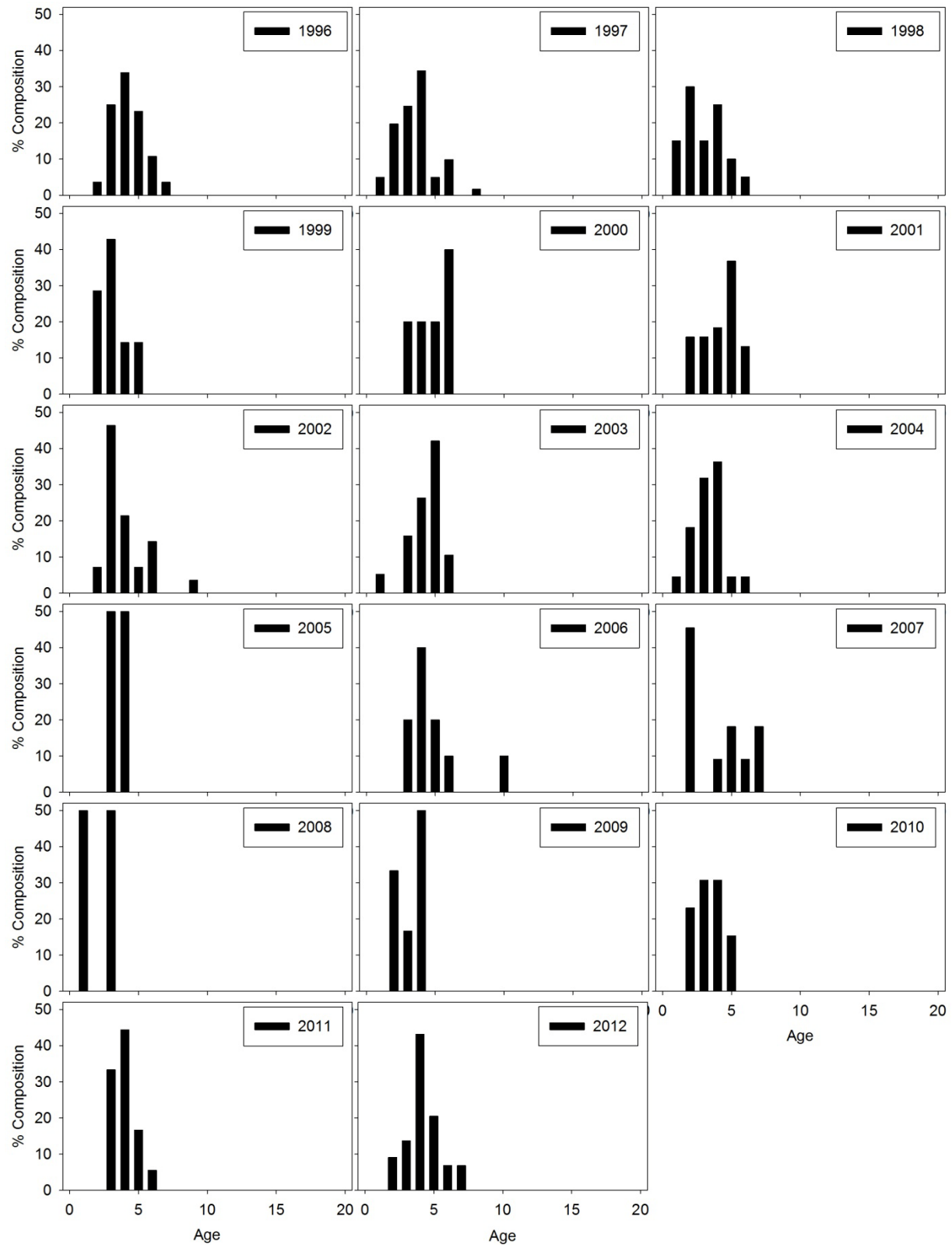


Figure 3. Length percent compositions of snowy grouper collected by short-bottom longline from 1996 to 2011.

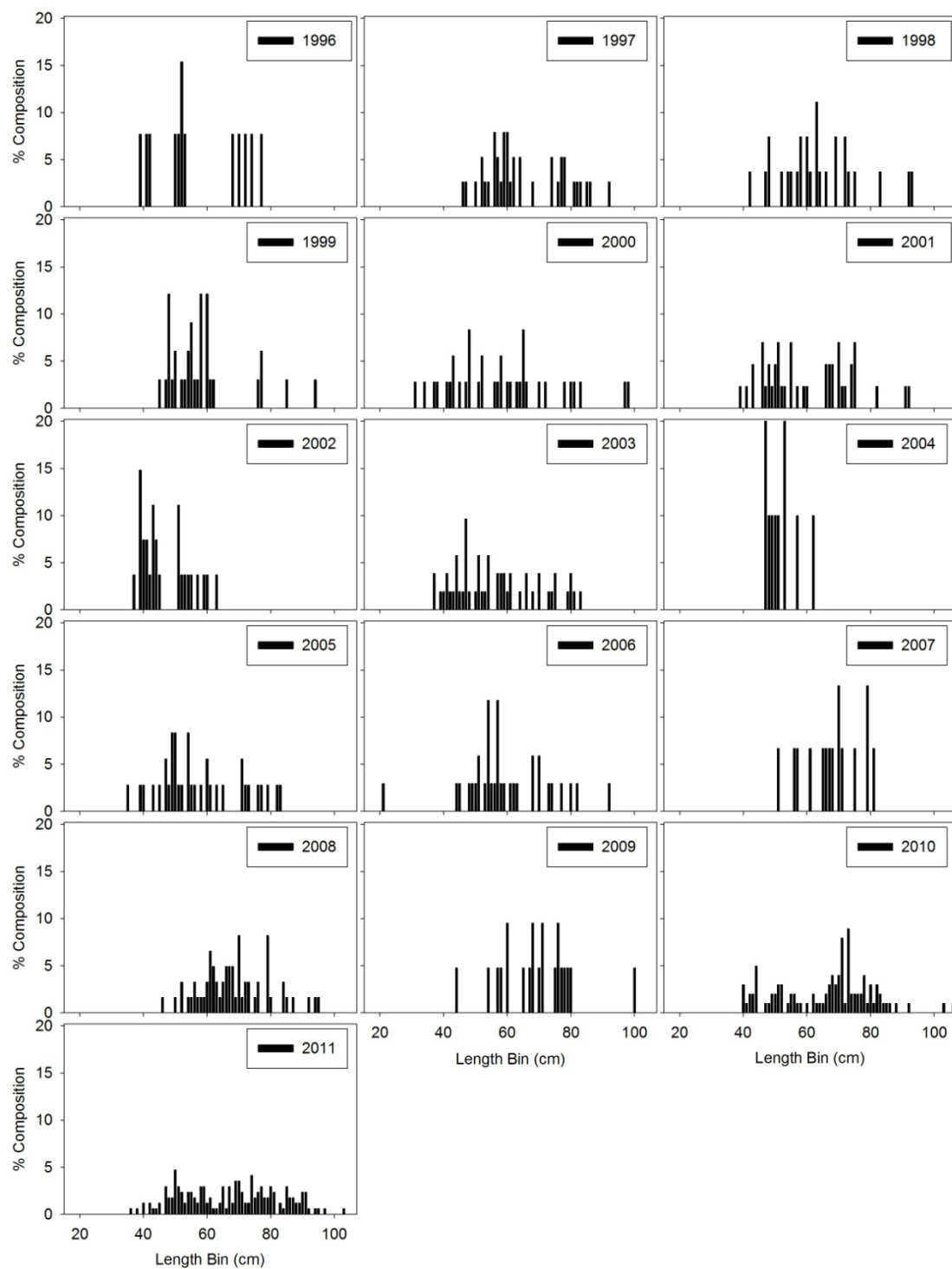
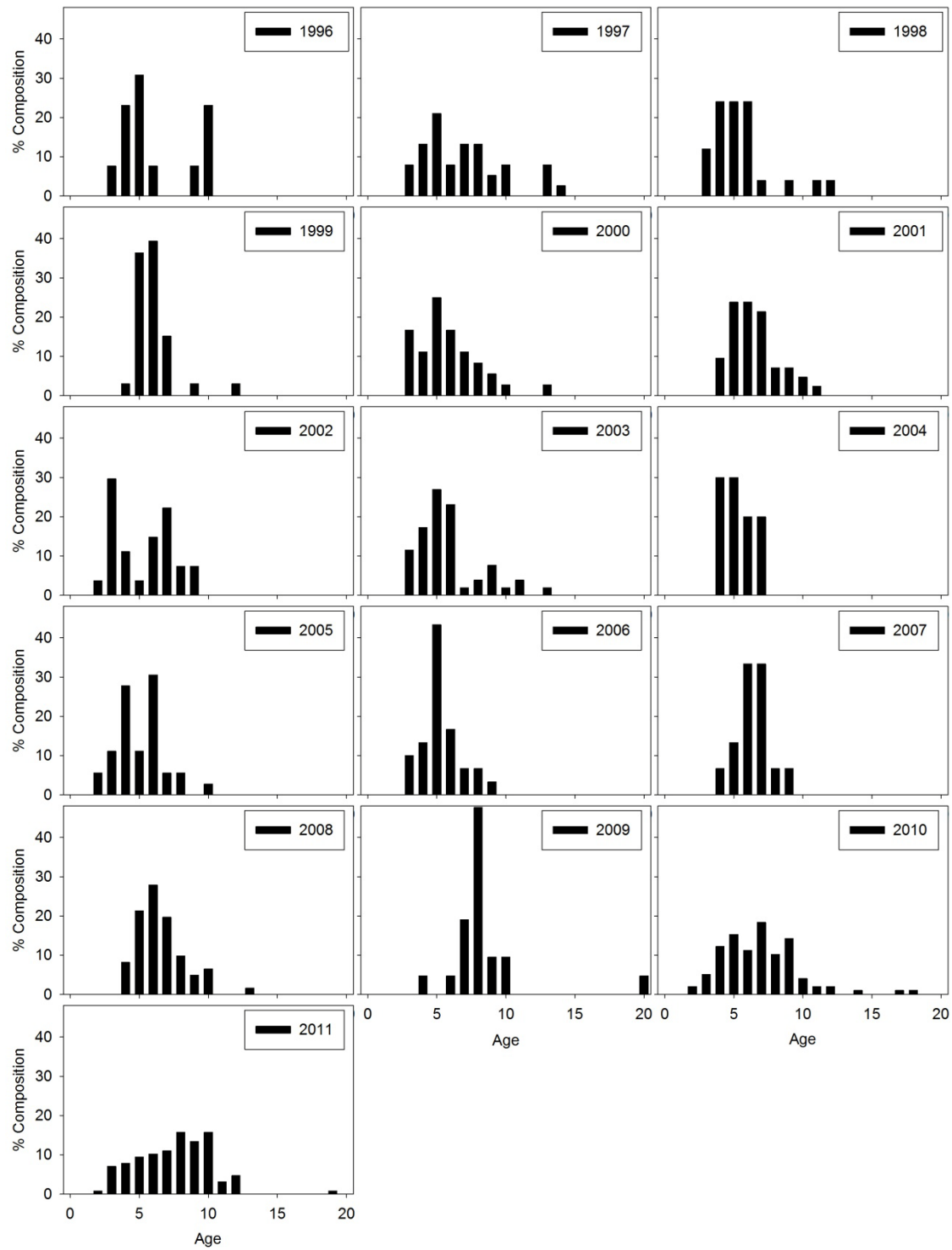


Figure 4. Age percent compositions of snowy grouper collected by short-bottom longline from 1996 to 2011.



Addendum to SEDAR 36 Length and Age Compositions: Length comps presented for SEDAR 4 included years that will not be included in indices of abundance for chevron traps in SEDAR 36. These length comps have been updated due to potential changes following quality assurance / quality control measure enacted over the interim years. Age comps were not presented for SEDAR 4 and so those years that will not be included in indices of abundance for chevron traps in SEDAR 36 have been calculated for the first time, below.

Table 5. Length % Composition of snowy grouper collected by chevron trap from 1990 to 1995. Lengths were measured with 1-cm resolution and are total length. The total number of fish for all years was 88, ranging from 0 to 59 fish per year, with observed lengths for chevron traps ranging from 23 to 64 cm. No fish were collected in 1992 and 1995.

Length	Fish	1990	1991	1992	1993	1994	1995
16	0	0.00	0.00	0.00	0.00	0.00	0.00
17	0	0.00	0.00	0.00	0.00	0.00	0.00
18	0	0.00	0.00	0.00	0.00	0.00	0.00
19	0	0.00	0.00	0.00	0.00	0.00	0.00
20	0	0.00	0.00	0.00	0.00	0.00	0.00
21	0	0.00	0.00	0.00	0.00	0.00	0.00
22	0	0.00	0.00	0.00	0.00	0.00	0.00
23	1	11.11	0.00	0.00	0.00	0.00	0.00
24	1	11.11	0.00	0.00	0.00	0.00	0.00
25	0	0.00	0.00	0.00	0.00	0.00	0.00
26	1	0.00	0.00	0.00	0.00	1.69	0.00
27	1	11.11	0.00	0.00	0.00	0.00	0.00
28	3	0.00	0.00	0.00	5.26	3.39	0.00
29	1	0.00	0.00	0.00	0.00	1.69	0.00
30	2	0.00	0.00	0.00	0.00	3.39	0.00
31	2	0.00	0.00	0.00	0.00	3.39	0.00
32	4	0.00	0.00	0.00	10.53	3.39	0.00
33	3	0.00	0.00	0.00	5.26	3.39	0.00
34	3	0.00	0.00	0.00	5.26	3.39	0.00
35	2	0.00	0.00	0.00	5.26	1.69	0.00
36	1	0.00	0.00	0.00	0.00	1.69	0.00
37	1	0.00	0.00	0.00	0.00	1.69	0.00
38	4	0.00	0.00	0.00	0.00	6.78	0.00
39	1	0.00	0.00	0.00	0.00	1.69	0.00
40	1	0.00	0.00	0.00	0.00	1.69	0.00
41	3	0.00	100.00	0.00	0.00	3.39	0.00
42	4	11.11	0.00	0.00	5.26	3.39	0.00
43	2	11.11	0.00	0.00	0.00	1.69	0.00
44	3	11.11	0.00	0.00	5.26	1.69	0.00
45	3	0.00	0.00	0.00	0.00	5.08	0.00
46	6	0.00	0.00	0.00	15.79	5.08	0.00

47	2	0.00	0.00	0.00	5.26	1.69	0.00
48	3	0.00	0.00	0.00	0.00	5.08	0.00
49	0	0.00	0.00	0.00	0.00	0.00	0.00
50	5	22.22	0.00	0.00	5.26	3.39	0.00
51	2	0.00	0.00	0.00	0.00	3.39	0.00
52	4	0.00	0.00	0.00	5.26	5.08	0.00
53	2	0.00	0.00	0.00	5.26	1.69	0.00
54	2	0.00	0.00	0.00	10.53	0.00	0.00
55	1	11.11	0.00	0.00	0.00	0.00	0.00
56	0	0.00	0.00	0.00	0.00	0.00	0.00
57	2	0.00	0.00	0.00	0.00	3.39	0.00
58	3	0.00	0.00	0.00	0.00	5.08	0.00
59	2	0.00	0.00	0.00	0.00	3.39	0.00
60	2	0.00	0.00	0.00	5.26	1.69	0.00
61	2	0.00	0.00	0.00	5.26	1.69	0.00
62	1	0.00	0.00	0.00	0.00	1.69	0.00
63	1	0.00	0.00	0.00	0.00	1.69	0.00
64	1	0.00	0.00	0.00	0.00	1.69	0.00
65	0	0.00	0.00	0.00	0.00	0.00	0.00
66	0	0.00	0.00	0.00	0.00	0.00	0.00
67	0	0.00	0.00	0.00	0.00	0.00	0.00
68	0	0.00	0.00	0.00	0.00	0.00	0.00
69	0	0.00	0.00	0.00	0.00	0.00	0.00
70	0	0.00	0.00	0.00	0.00	0.00	0.00
71	0	0.00	0.00	0.00	0.00	0.00	0.00
72	0	0.00	0.00	0.00	0.00	0.00	0.00
73	0	0.00	0.00	0.00	0.00	0.00	0.00
74	0	0.00	0.00	0.00	0.00	0.00	0.00
75	0	0.00	0.00	0.00	0.00	0.00	0.00
76	0	0.00	0.00	0.00	0.00	0.00	0.00
77	0	0.00	0.00	0.00	0.00	0.00	0.00
78	0	0.00	0.00	0.00	0.00	0.00	0.00
79	0	0.00	0.00	0.00	0.00	0.00	0.00
80	0	0.00	0.00	0.00	0.00	0.00	0.00
81	0	0.00	0.00	0.00	0.00	0.00	0.00
82	0	0.00	0.00	0.00	0.00	0.00	0.00
83	0	0.00	0.00	0.00	0.00	0.00	0.00
84	0	0.00	0.00	0.00	0.00	0.00	0.00
85	0	0.00	0.00	0.00	0.00	0.00	0.00
86	0	0.00	0.00	0.00	0.00	0.00	0.00
87	0	0.00	0.00	0.00	0.00	0.00	0.00
88	0	0.00	0.00	0.00	0.00	0.00	0.00
89	0	0.00	0.00	0.00	0.00	0.00	0.00
90	0	0.00	0.00	0.00	0.00	0.00	0.00

91	0	0.00	0.00	0.00	0.00	0.00	0.00
92	0	0.00	0.00	0.00	0.00	0.00	0.00
93	0	0.00	0.00	0.00	0.00	0.00	0.00
94	0	0.00	0.00	0.00	0.00	0.00	0.00
95	0	0.00	0.00	0.00	0.00	0.00	0.00
96	0	0.00	0.00	0.00	0.00	0.00	0.00
97	0	0.00	0.00	0.00	0.00	0.00	0.00
98	0	0.00	0.00	0.00	0.00	0.00	0.00
99	0	0.00	0.00	0.00	0.00	0.00	0.00
100	0	0.00	0.00	0.00	0.00	0.00	0.00
101	0	0.00	0.00	0.00	0.00	0.00	0.00
102	0	0.00	0.00	0.00	0.00	0.00	0.00
103	0	0.00	0.00	0.00	0.00	0.00	0.00
104	0	0.00	0.00	0.00	0.00	0.00	0.00
105	0	0.00	0.00	0.00	0.00	0.00	0.00
106	0	0.00	0.00	0.00	0.00	0.00	0.00
Fish / Year	-	9	1	0	19	59	0
Traps / Year	-	5	1	0	3	9	0

Age data include all chevron trap collections from 1990 through 1995, regardless of catch code, function of the gear, location or depth. Ages are in 1-year bins and are derived from increments counts of snowy grouper.

Table 6. Age % Composition of snowy grouper collected by chevron trap from 1990 to 1995. Ages were determined with 1-year resolution from increment counts. The total number of fish for all years was 82, ranging from 0 to 59 fish per year, with observed ages for chevron traps ranging from 2 to 6.

Age	Fish	1990	1991	1992	1993	1994	1995
1	0	0.00	0.00	0.00	0.00	0.00	0.00
2	20	0.00	0.00	0.00	26.32	25.42	0.00
3	17	25.00	0.00	0.00	21.05	20.34	0.00
4	26	0.00	0.00	0.00	36.84	32.20	0.00
5	17	75.00	0.00	0.00	15.79	18.64	0.00
6	2	0.00	0.00	0.00	0.00	3.39	0.00
7	0	0.00	0.00	0.00	0.00	0.00	0.00
8	0	0.00	0.00	0.00	0.00	0.00	0.00
9	0	0.00	0.00	0.00	0.00	0.00	0.00
10	0	0.00	0.00	0.00	0.00	0.00	0.00
11	0	0.00	0.00	0.00	0.00	0.00	0.00
12	0	0.00	0.00	0.00	0.00	0.00	0.00
13	0	0.00	0.00	0.00	0.00	0.00	0.00
14	0	0.00	0.00	0.00	0.00	0.00	0.00
15	0	0.00	0.00	0.00	0.00	0.00	0.00
16	0	0.00	0.00	0.00	0.00	0.00	0.00
17	0	0.00	0.00	0.00	0.00	0.00	0.00
18	0	0.00	0.00	0.00	0.00	0.00	0.00
19	0	0.00	0.00	0.00	0.00	0.00	0.00
20	0	0.00	0.00	0.00	0.00	0.00	0.00
Fish / Year	-	4	0	0	19	59	0
Traps / Year	-	1	0	0	3	9	0

Figure 5. Length percent compositions of snowy grouper collected by chevron trap from 1990 to 1994. No fish were measured in 1992 or 1995.

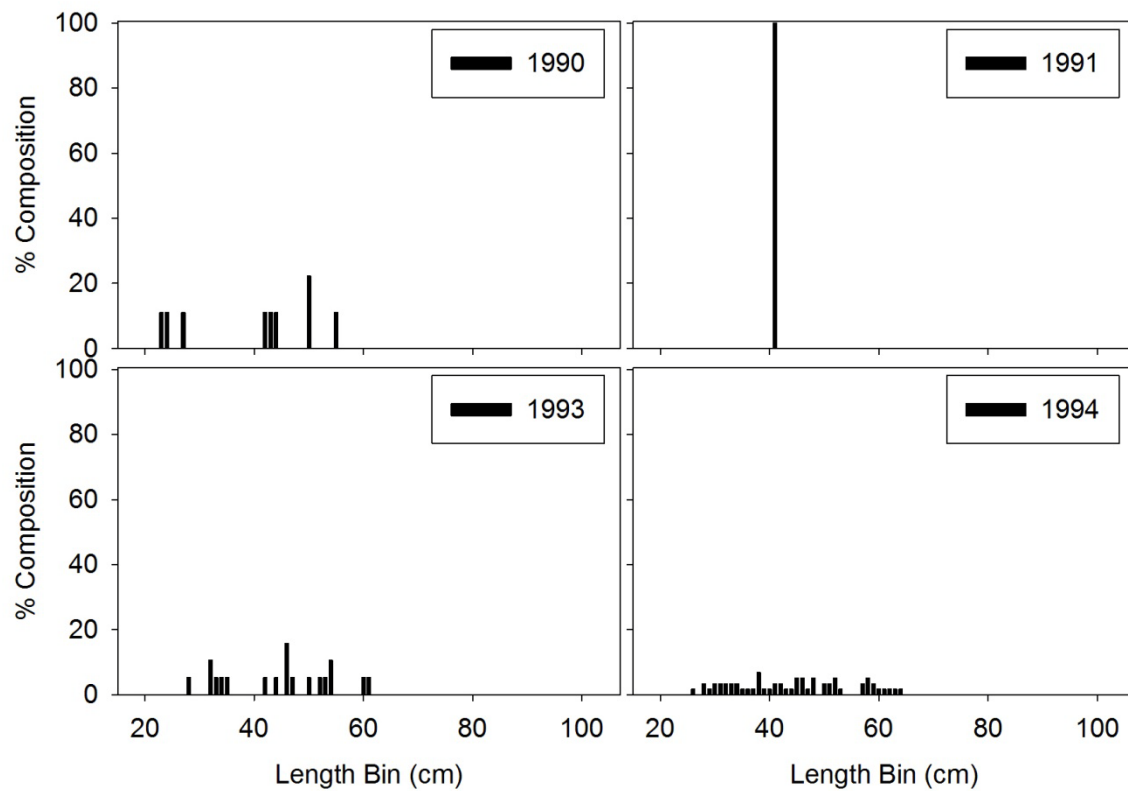


Figure 6. Age percent compositions of snowy grouper collected by chevron trap from 1990 to 1994. No fish were age in 1991, 1992 or 1995.

