

RESOURCE SURVEY REPORT
Catch Summary
NOAA Fisheries Northeast Fisheries Science Center
Sea Scallop Survey
Mid-Atlantic Bight - Georges Bank
08 June – 03 July 2021

Submitted to: NOAA, NEFSC
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Resource Survey Report

Sea Scallop Survey

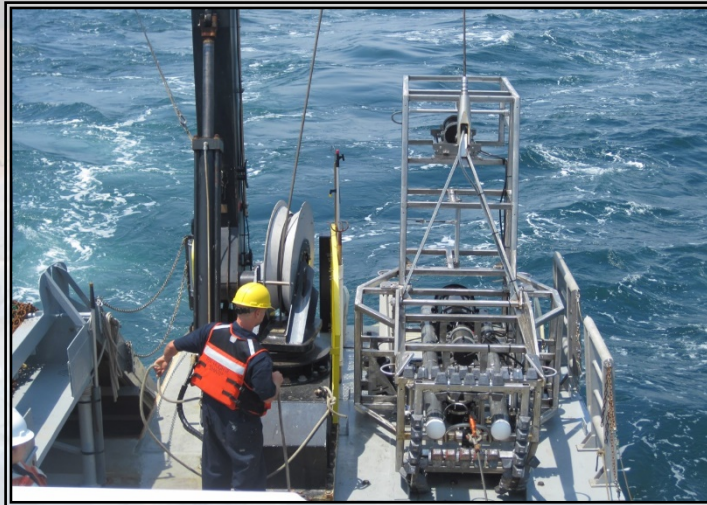


Georges Bank – Georges Bank

08 June – 03 July 2021

UNOLS R/V *Hugh R. Sharp*

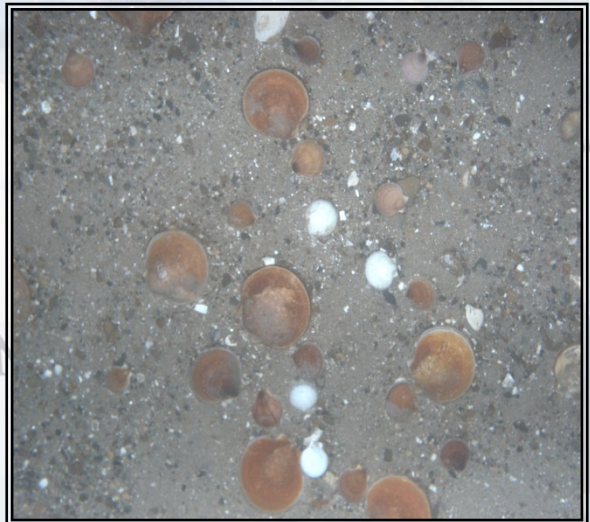
NOAA Fisheries Service
Northeast Fisheries Science Center
Woods Hole, MA 02543



Deck crew of the R/V *Hugh R. Sharp* prepare to launch HabCam off stern of the vessel.



Atlantic Wolffish (*Anarhichas lupus*) captured by habcam.



HabCam image of Atlantic sea scallops (*Placopectin Magellanicus*).

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Catch Summary

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Sea Scallop Survey
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The following charts and station data indicate the distribution of sea scallops during the 2021 Sea Scallop Survey conducted aboard the UNOLS R/V *Hugh R. Sharp*. Additionally, the included appendix describes a sampling system on the scallop cruise where the Northeast Fisheries Science Center, in collaboration with the Woods Hole Oceanographic Institution, deployed a fiber-optic towed vehicle fitted with stereo cameras in proximity to standard dredge hauls for the entire survey area. For the dredging portion of the survey, fifteen-minute tows were made at a speed of 3.8 knots using a modified 8-foot, New Bedford type scallop dredge. The dredge was equipped with a 5/8 inch, 69-link-long, case-hardened sweep chain and a 2-inch ring chain bag lined with 1-1/2 inch mesh webbing to retain small scallops. The dredge frame was outfitted with a set of roller wheels on the neck. In six, key rocky strata on Georges Bank, a set of rock chains was added to the dredge. For statistical purposes, stations were randomly selected and, therefore, were not always on or near scallop concentrations.

In this report, data are summarized from audited catch files generated from the Fisheries Scientific Computer System. Scallop catch is reported in numbers, bycatch is recorded in liters, and depth in fathoms. Catches are reported in three categories of shell height: less than 90 mm (greater than 40 count), greater than 90 mm (less than 40 count), and greater than or equal to 100 mm (less than 30 count). The percent composition of bycatch is also included. For further information, contact:

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To view this report online, go to the [NOAA Repository Library](#) and select the survey year of interest.

Appendix 1

The Northeast Fisheries Science Center collaborated with the Woods Hole Oceanographic Institution to integrate a stereo-optic towed vehicle (HabCam V4), which was designed to collect paired images of the sea floor for the purpose of enumerating sea scallops and other commercially important groundfish (yellowtail flounder, winter flounder, skates, etc.).

During the two survey legs, HabCam V4 was deployed throughout the scallop strata. Dredge tows would often be conducted in one direction through an area and then, after turning the vessel around, a HabCam V4 transect would be conducted through the same area. HabCam V4 imaged along a cruise track of approximately 708 nm throughout the Great South Channel and Georges Bank. In total, about 2,504,492 image pairs were acquired from both the Great South Channel and Georges Bank.

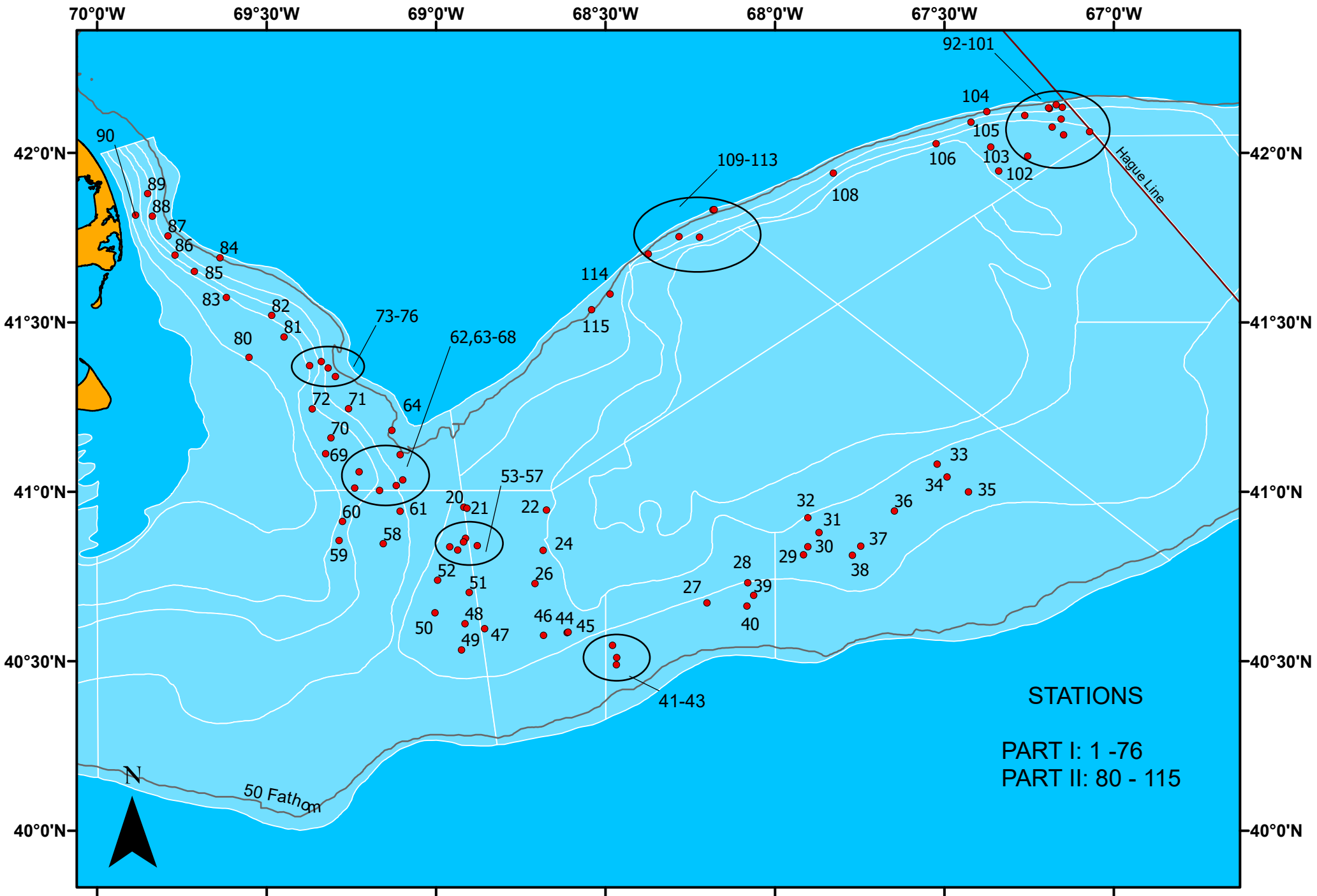


Figure 1. Dredge hauls made by UNOLS R/V *Hugh R Sharp* during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 08 June - 03 July 2021.

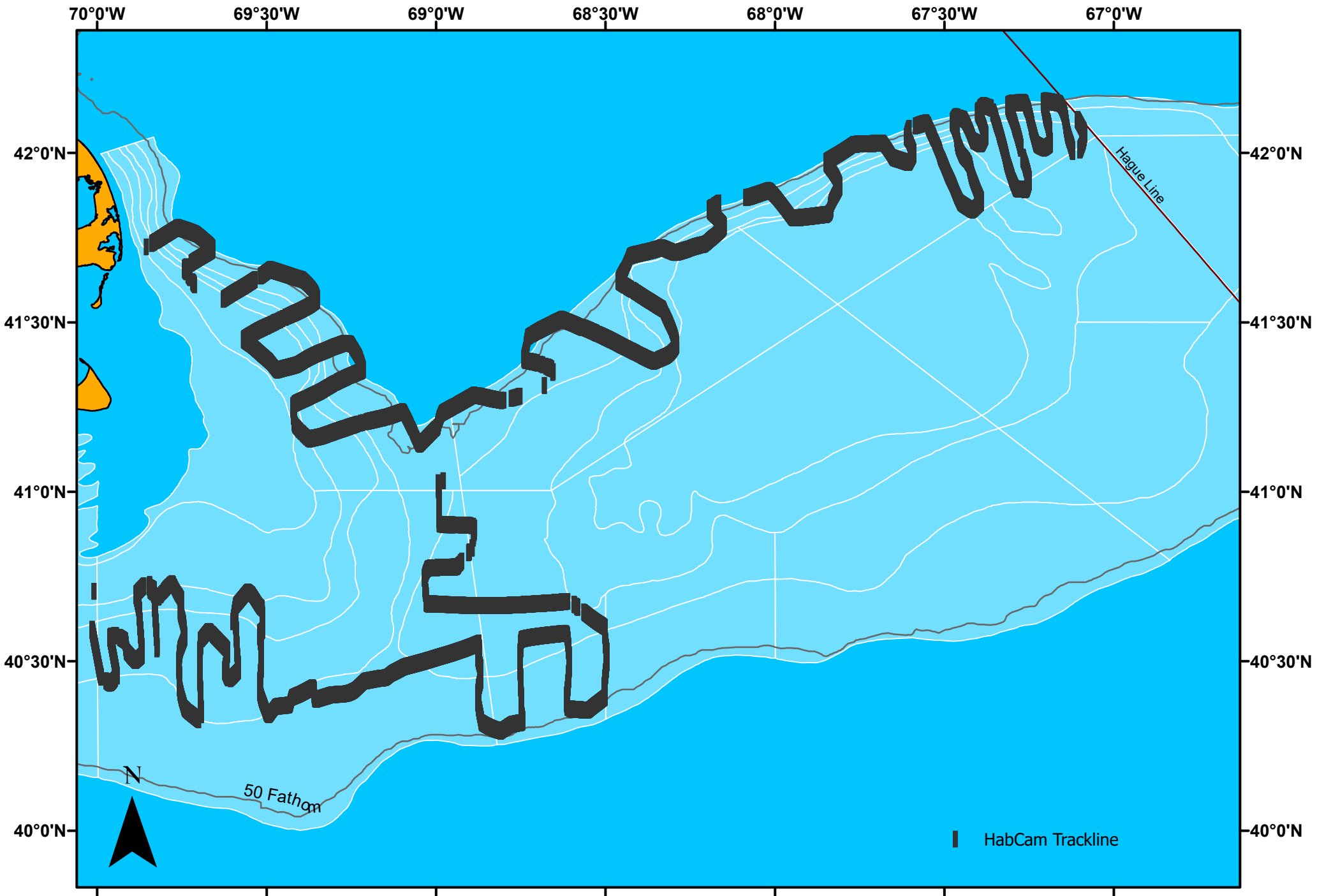


Figure 2. Approximate Georges Bank Habcam cruisetrack, as followed by UNOLS R/V *Hugh R Sharp* during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 08 June - 03 July 2021.

**Table 1: Catch summary report from NOAA National Marine Fisheries Service,
Northeast Fisheries Science Center's summer sea scallop survey, 08 June - 03 July 2021**

Station	Latitude	Longitude	Lorans TD 1	Lorans TD 2	Heading (Degrees)	Depth (Fathoms)	Total Number	Scallops <90mm	Scallops >90mm	Scallops ≥100mm	% Shell Bycatch	% Stone Bycatch	% Inverts Bycatch	Total Volume
20	4057.2	6855	W13697.4	Y43614.2	313	41	0	0	0	0	0	0	0	0
21	4057	6854.5	W13695.7	Y43612.5	118	41.6	81	32	49	37	25	5	70	281
22	4056.7	6840.4	W13627.8	Y43598.4	270	29.5	0	0	0	0	4	1	95	189
24	4049.6	6841	W13659.9	Y43556.2	274	32.8	0	0	0	0	2	0	98	1109
26	4043.7	6842.4	W13690.3	Y43521.4	273	36.6	3	0	3	3	2	0	98	1196
27	4040.3	6812	W13561.6	Y43479.2	104	43.7	38	8	30	23	4	0	96	465
28	4043.8	6804.8	W13514.7	Y43494.9	83	42.7	14	3	11	8	5	0	95	373
29	4048.8	6754.9	W13449.8	Y43516.9	101	39.4	9	0	9	8	2	0	98	1799
30	4050.2	6754.1	W13440.3	Y43524.3	130	37.2	0	0	0	0	0	0	0	0
31	4052.7	6752.2	W13421.4	Y43537.2	109	34.4	1	0	1	1	3	2	95	874
32	4055.4	6754.1	W13418.3	Y43553.9	104	33.4	1	1	0	0	3	2	95	879
33	4104.8	6731.2	W13277.6	Y43589.1	105	33.9	0	0	0	0	5	90	5	1518
34	4102.6	6729.5	W13280.1	Y43575.8	36	34.4	1	0	1	1	3	1	96	1523
35	4059.9	6725.7	W13276.0	Y43558.3	324	38.8	62	9	53	47	30	10	60	299
36	4056.6	6738.8	W13346.1	Y43549.5	198	37.7	60	8	52	44	30	5	65	225
37	4050.3	6744.8	W13399.1	Y43518.4	182	37.2	74	7	67	49	30	10	60	276
38	4048.7	6746.3	W13412.3	Y43510.4	98	38.3	84	2	82	62	5	0	95	428
39	4041.6	6803.7	W13518.8	Y43481.3	146	44.3	143	73	70	18	95	0	5	143
40	4039.7	6804.9	W13531.8	Y43471.0	151	47	138	68	70	23	98	0	2	414
41	4029.3	6828	W13678.3	Y43423.6	12	51.4	0	0	0	0	0	0	0	0
42	4030.6	6828	W13673.4	Y43431.5	176	50.9	559	243	316	185	80	1	19	189
43	4032.8	6828.7	W13668.1	Y43445.3	160	47	84	22	62	51	98	0	2	184
44	4035	6836.8	W13697.7	Y43464.1	146	37.2	0	0	0	0	0	0	0	0
45	4035.1	6836.6	W13696.3	Y43464.6	174	37.7	3	1	2	2	4	1	95	833
46	4034.5	6840.9	W13719.0	Y43463.9	164	36.6	1	0	1	1	5	3	92	925
47	4035.7	6851.4	W13764.9	Y43478.7	146	37.2	9	0	9	9	15	5	80	598
48	4036.6	6854.8	W13778.0	Y43486.8	142	37.2	7	0	7	7	10	5	85	235
49	4031.9	6855.5	W13799.1	Y43457.7	152	40.5	2	1	1	1	10	25	65	1109
50	4038.5	6900.1	W13796.7	Y43502.6	158	37.2	16	4	12	12	50	5	45	189
51	4042.1	6854.1	W13753.4	Y43520.5	152	38.3	3	0	3	3	2	0	98	649
52	4044.3	6859.7	W13772.3	Y43538.6	165	40.5	89	14	75	67	20	70	10	327
53	4050.2	6857.5	W13738.1	Y43573.4	116	40.5	0	0	0	0	0	0	0	0
54	4049.6	6856.1	W13733.6	Y43568.6	155	37.2	8	6	2	2	3	7	90	1339

**Table 1 (cont.): Catch summary report from NOAA National Marine Fisheries Service,
Northeast Fisheries Science Center's summer sea scallop survey, 08 June - 03 July 2021**

Station	Latitude	Longitude	Lorans TD 1	Lorans TD 2	Heading (Degrees)	Depth (Fathoms)	Total Number	Scallops <90mm	Scallops >90mm	Scallops ≥100mm	% Shell Bycatch	% Stone Bycatch	% Inverts Bycatch	Total Volume
55	4050.4	6852.7	W13713.6	Y43570.6	159	38.3	6	5	1	0	50	40	10	414
56	4051.7	6854.7	W13718.3	Y43580.3	170	40.5	0	0	0	0	0	0	0	0
57	4051.1	6855.1	W13722.7	Y43576.9	96	38.3	67	35	32	26	60	20	20	253
58	4050.8	6909.3	W13794.8	Y43587.3	292	37.7	123	78	45	41	15	70	15	465
59	4051.3	6917.1	W13832.5	Y43597.4	190	27.9	85	13	72	67	70	20	10	1104
60	4054.7	6916.5	W13816.0	Y43618.2	188	28.4	25	5	20	19	45	45	10	419
61	4056.5	6906.3	W13756.9	Y43620.1	268	41.6	133	39	94	77	50	30	20	235
62	4102.1	6905.9	W13731.9	Y43654.2	89	44.8	31	3	28	28	50	30	20	281
63	4106.5	6906.3	W13715.6	Y43681.4	99	54.1	116	68	48	36	10	30	60	281
64	4110.8	6907.8	W13705.1	Y43709.1	93	56.3	255	186	69	52	0	0	0	69
65	4101.1	6907	W13741.6	Y43649.1	179	39.9	77	17	60	44	10	60	30	235
66	4100.2	6910	W13760.6	Y43646.4	189	35.5	136	77	59	39	20	60	20	156
67	4100.6	6914.4	W13781.5	Y43653.1	189	33.4	73	2	71	65	50	40	10	741
68	4103.5	6913.6	W13765.5	Y43670.3	206	32.8	78	34	44	38	10	80	10	276
69	4106.7	6919.5	W13782.9	Y43696.0	76	29	221	62	159	108	10	80	10	1385
70	4109.5	6918.6	W13766.5	Y43712.3	153	25.7	1006	348	658	338	7	90	3	2070
71	4114.7	6915.5	W13728.3	Y43740.8	185	43.2	154	47	107	92	30	50	20	281
72	4114.6	6921.9	W13762.3	Y43747.1	168	28.4	117	31	86	65	40	50	10	373
73	4120.4	6917.8	W13715.7	Y43777.8	164	52.5	98	19	79	71	40	35	25	322
74	4121.9	6919.1	W13716.0	Y43788.3	161	48.1	27	4	23	17	5	5	90	1155
75	4122.3	6922.3	W13731.2	Y43794.4	169	29	327	140	187	124	15	80	5	1012
76	4123	6920.3	W13717.6	Y43796.3	3	35	97	23	74	41	10	80	10	373
80	4123.7	6933.1	W13783.0	Y43815.5	2	17	1	1	0	0	25	65	10	373
81	4127.4	6926.9	W13733.4	Y43830.5	358	43.7	41	5	36	34	30	40	30	281
82	4131.2	6929.1	W13728.3	Y43855.9	354	26.8	172	78	94	54	30	50	20	281
83	4134.4	6937.1	W13757.6	Y43885.2	188	25.7	45	25	20	18	0	0	0	419
84	4141.4	6938.2	W13731.8	Y43928.3	169	56.9	4	0	4	4	8	90	2	561
85	4139	6942.7	W13767.8	Y43920.0	162	31.7	730	546	184	69	5	75	20	975
86	4141.9	6946.2	W13774.2	Y43942.0	330	32.3	122	57	65	58	20	50	30	598
87	4145.3	6947.4	W13765.3	Y43963.9	340	43.7	9	5	4	3	70	10	20	97
88	4148.8	6950.2	W13764.9	Y43988.5	353	41.6	6	1	5	5	50	30	20	54
89	4152.8	6951	W13750.6	Y44013.1	196	32.8	166	158	8	6	70	10	20	97
90	4148.9	6953.2	W13781.5	Y43993.3	192	18	12	12	0	0	30	10	60	115

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Station	Latitude	Longitude	Lorans TD 1	Lorans TD 2	Heading (Degrees)	Depth (Fathoms)	Total Number	Scallops <90mm	Scallops >90mm	Scallops ≥100mm	% Shell Bycatch	% Stone Bycatch	% Inverts Bycatch	Total Volume
92	4203.7	6704.3	W12881.3	Y43868.7	238	31.2	609	488	121	52	40	20	40	2075
93	4203.1	6708.9	W12902.9	Y43870.4	239	30.1	208	201	7	2	80	10	10	1426
94	4204.5	6710.9	W12903.7	Y43879.3	240	27.9	75	68	7	6	70	15	15	925
95	4205.9	6709.3	W12889.9	Y43884.4	243	29	0	0	0	0	0	0	0	0
96	4208	6709.1	W12878.0	Y43894.4	231	44.3	0	0	0	0	0	0	0	0
97	4208.5	6710.2	W12879.8	Y43897.9	95	47.6	1572	291	1281	1260	80	10	10	465
98	4207.8	6711.4	W12888.4	Y43895.8	246	43.2	0	0	0	0	0	0	0	0
99	4207.9	6711.5	W12888.2	Y43896.4	249	44.8	2971	236	2735	2714	70	20	10	644
100	4206.6	6715.7	W12912.3	Y43894.5	242	35	384	13	371	356	35	30	35	1021
101	4159.4	6715.2	W12947.9	Y43858.7	88	26.2	103	83	20	12	50	35	15	465
102	4156.7	6720.3	W12983.0	Y43850.5	292	31.2	31	14	17	4	70	20	10	925
103	4201	6721.8	W12966.9	Y43873.3	238	28.4	1109	833	276	166	60	20	20	1104
104	4207.3	6722.4	W12936.4	Y43905.0	228	53	50	17	33	26	10	10	80	66
105	4205.4	6725.3	W12958.6	Y43898.7	213	37.7	452	180	272	86	40	30	30	115
106	4201.6	6731.4	W13004.5	Y43886.4	251	27.9	394	312	82	44	85	10	5	235
108	4156.4	6749.6	W13111.3	Y43879.7	229	36.1	7	1	6	6	75	5	20	741
109	4149.9	6810.9	W13242.2	Y43869.3	207	61.8	0	0	0	0	0	0	0	0
110	4149.9	6810.7	W13241.3	Y43869.1	208	60.7	19	6	13	11	7	3	90	193
111	4145	6813.3	W13278.0	Y43845.9	250	35	14	2	12	12	40	0	60	51
112	4145.1	6816.9	W13294.5	Y43850.4	239	43.2	41	14	27	23	85	1	14	607
113	4142.1	6822.4	W13335.6	Y43840.2	247	39.4	45	21	24	19	90	2	8	419
114	4135	6829.2	W13402.7	Y43808.6	206	51.9	186	163	23	22	80	5	15	138
115	4132.2	6832.4	W13431.6	Y43796.5	179	56.3	109	39	70	57	5	35	60	833

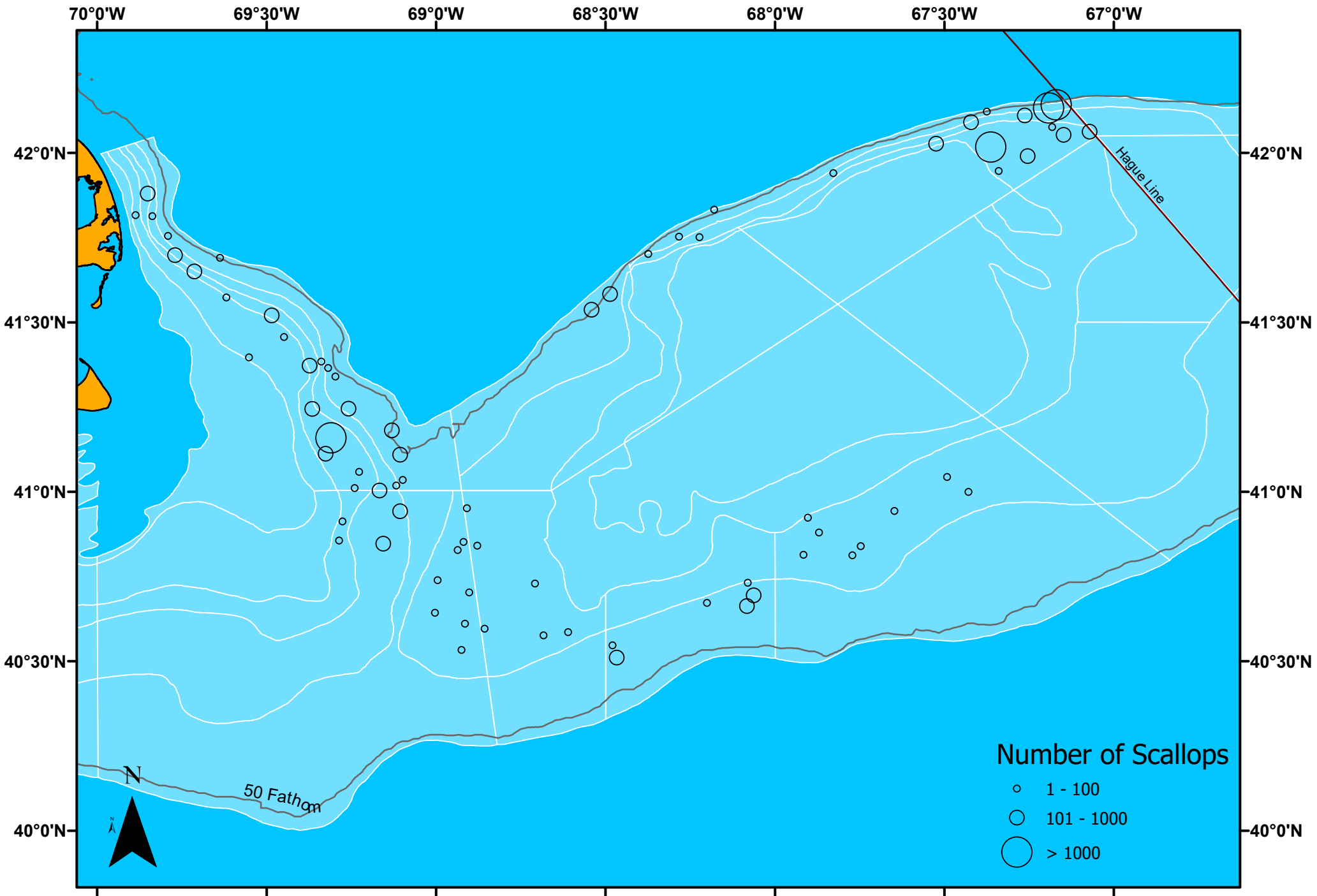


Figure 3. Total number of Atlantic sea scallops per tow during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 08 June - 03 July 2021.

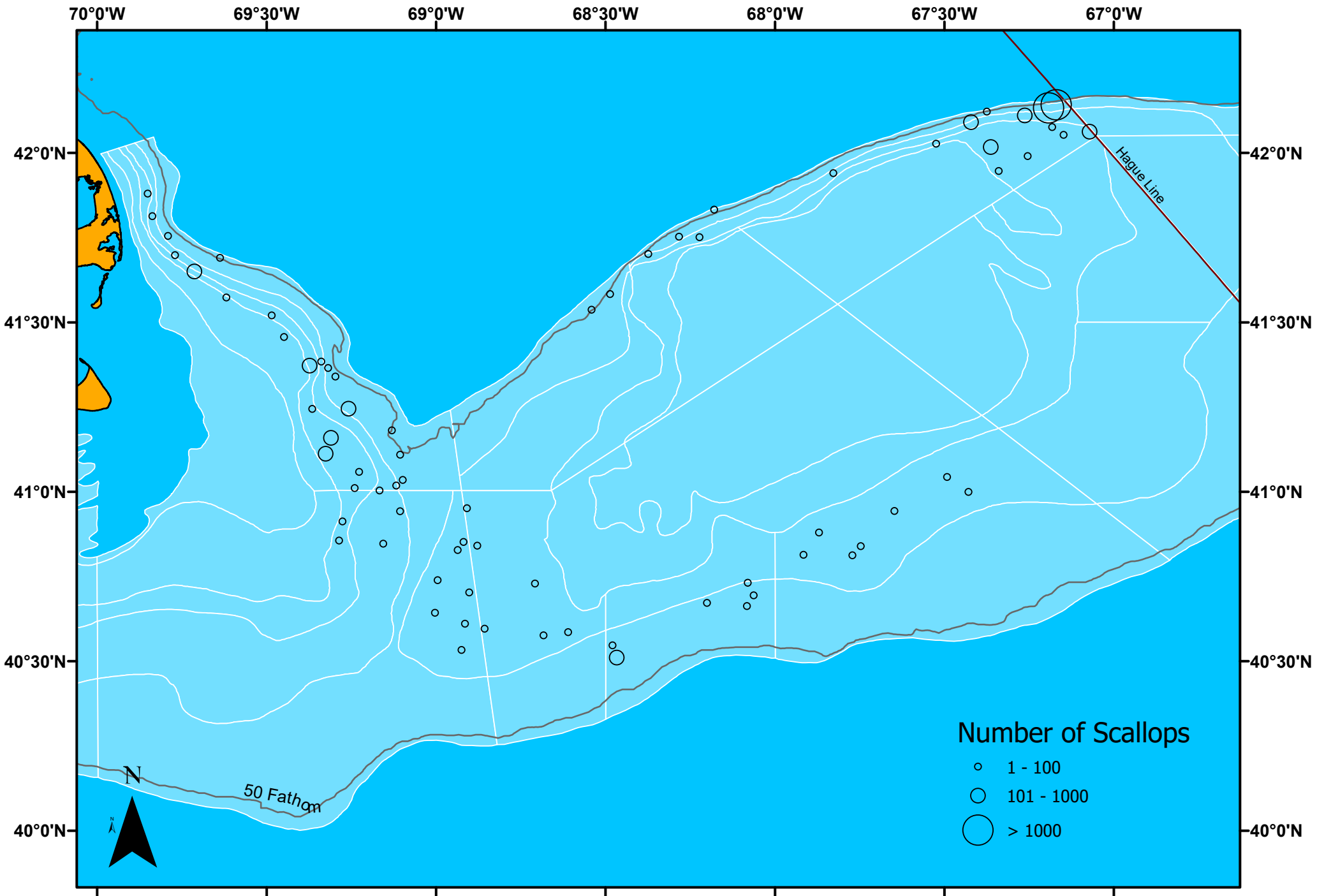


Figure 4. Total number of Atlantic sea scallops per tow that are greater than 90 mm during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 08 June - 03 July 2021.

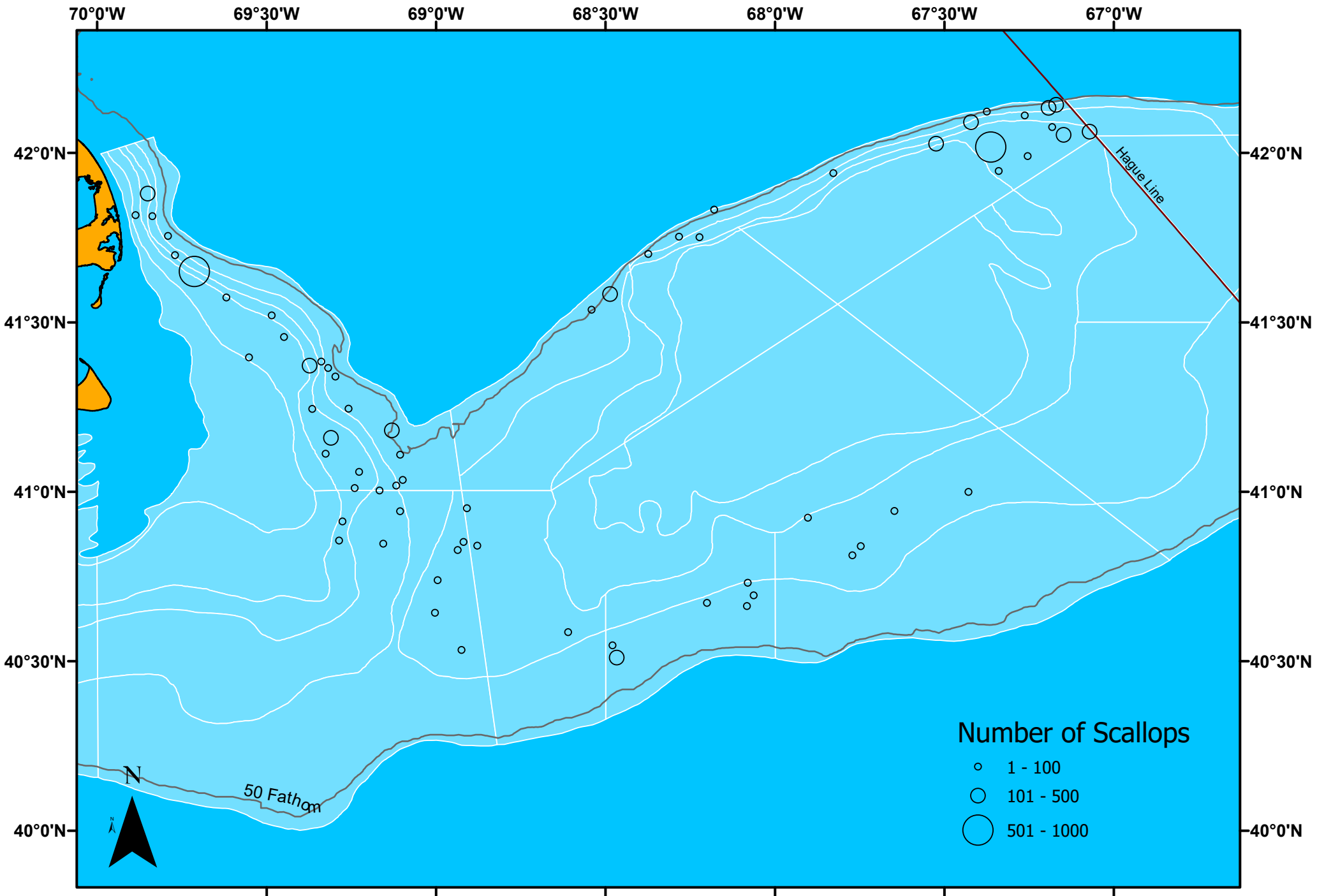


Figure 5. Total number of Atlantic sea scallops per tow that are less than 90 mm during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 08 June - 03 July 2021.

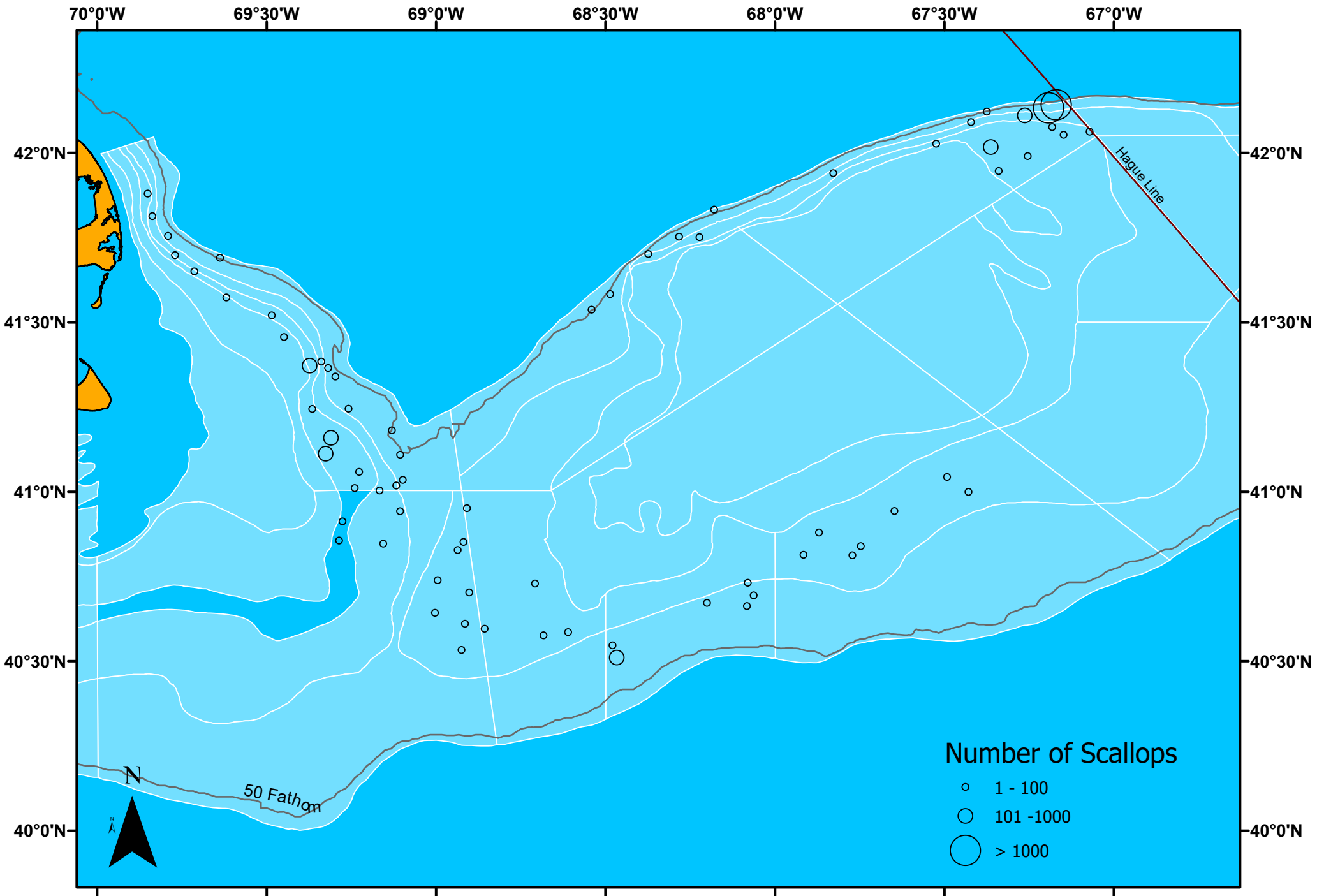


Figure 6. Total number of Atlantic sea scallops per tow that are greater than or equal to 100 mm during NOAA Fisheries Service, Northeast Fisheries Science Center's, summer sea scallop survey, 08 June - 03 July 2021.