

# Resource Survey Report

## Atlantic Surfclam/Ocean Quahog



Delmarva Peninsula – Georges Bank

29 July – 14 August 2015

F/V E.S.S. Pursuit

NOAA Fisheries Service

Northeast Fisheries Science Center

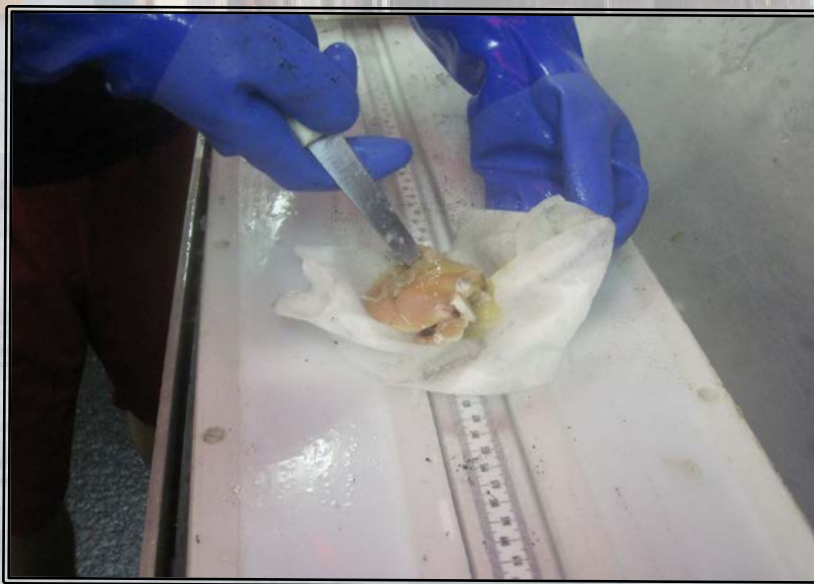
Woods Hole, MA 02543



Ocean quahogs (*Arctica islandica*)



Mixed catch of ocean quahogs (*Arctica islandica*) and Atlantic surf clams (*Spisula solidissima*)



Ocean quahog (*Arctica islandica*)  
shucked for meat weight sampling.

# RESOURCE SURVEY REPORT

## Catch Summary

NOAA Fisheries Service  
Northeast Fisheries Science Center

### **Atlantic Surfclam - Ocean Quahog Survey**

Delmarva Peninsula – Georges Bank

29 July – 14 August 2015

The 2015 region-wide survey for Atlantic surfclam, *Spisula solidissima*; and ocean quahog, *Arctica islandica*, was conducted in continental shelf waters from Delmarva Peninsula to Georges Bank aboard the F/V *E.S.S. Pursuit*. The survey, conducted by the Northeast Fisheries Science Center, provides indices of abundance and recruitment for both species.

The following charts and station data describe the distribution of surf clams and ocean quahogs during the survey. Five-minute tows were made at the speed of 3.0 knots, scope of 2:1, and with a commercial style hydraulic dredge equipped with a 13-foot wide cutting blade and a surface supplied manifold positioned on the forward end of the dredge. Survey stations were randomly selected to provide unbiased abundance measurements. Therefore, these stations were not always on or near known locations of clam concentrations.

In this report, catch quantity is recorded in numbers of clams, while depth is recorded in fathoms. Percent estimates of surf clams are also given by four categories of shell height: between 0" to 4.75", 4.76" to 5.00", 5.01" to 5.50", and greater than 5.50". Distribution plots indicate relative numbers of surf clams and ocean quahogs caught on each tow.

The data are now summarized from audited catch files generated from the Fisheries Scientific Computer System (FSCS).

For further information, contact Robert Johnston (508-495-2061), NOAA Fisheries Service, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543. To view this report in PDF, go to the Ecosystems Surveys Branch website at:

<http://www.nefsc.noaa.gov/femad/ecosurvey/mainpage/>

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- Year of interest

## Field Notes

In an effort to share some of the natural history observations made during the clam survey, we have requested that the Chief Scientists on each part of the cruise comment on some of the more interesting catches that were brought aboard the F/V *E.S.S. Pursuit*.

### **Legs I, II, and III: New Beginnings**

In 2014, the Northeast Fisheries Science Center completed the planned, three-region survey cycle from the Delmarva Peninsula to Georges Bank. The 2015 Clam Survey was the start of a new survey cycle, therefore, and began operations in the south. However, due to the excellent weather and combined diligence of Legs I, II, and III, we not only obtained excellent coverage of the Delmarva Peninsula, but all the way up the coast to Southern New England. Georges Bank will be completed in the two subsequent years.

As expected, clam catch numbers of both ocean quahogs and surfclams were low in the south, with several tows containing no clams. However, biomass certainly increased as we progressed northward. Our largest catch, which occurred at Station 126, yielded an impressive 714.35kg of ocean quahogs in one, five-minute tow; Station 65 was our second largest catch, with 671.616kg of Atlantic surfclams. We also executed two selectivity tows using the new, industry-built dredge, which we initially tested last year. Once again, the new dredge performed very well, allowing us to retain small clams while sorting through very little sediment; we look forward to utilizing this selectivity dredge again on Georges Bank, next year.

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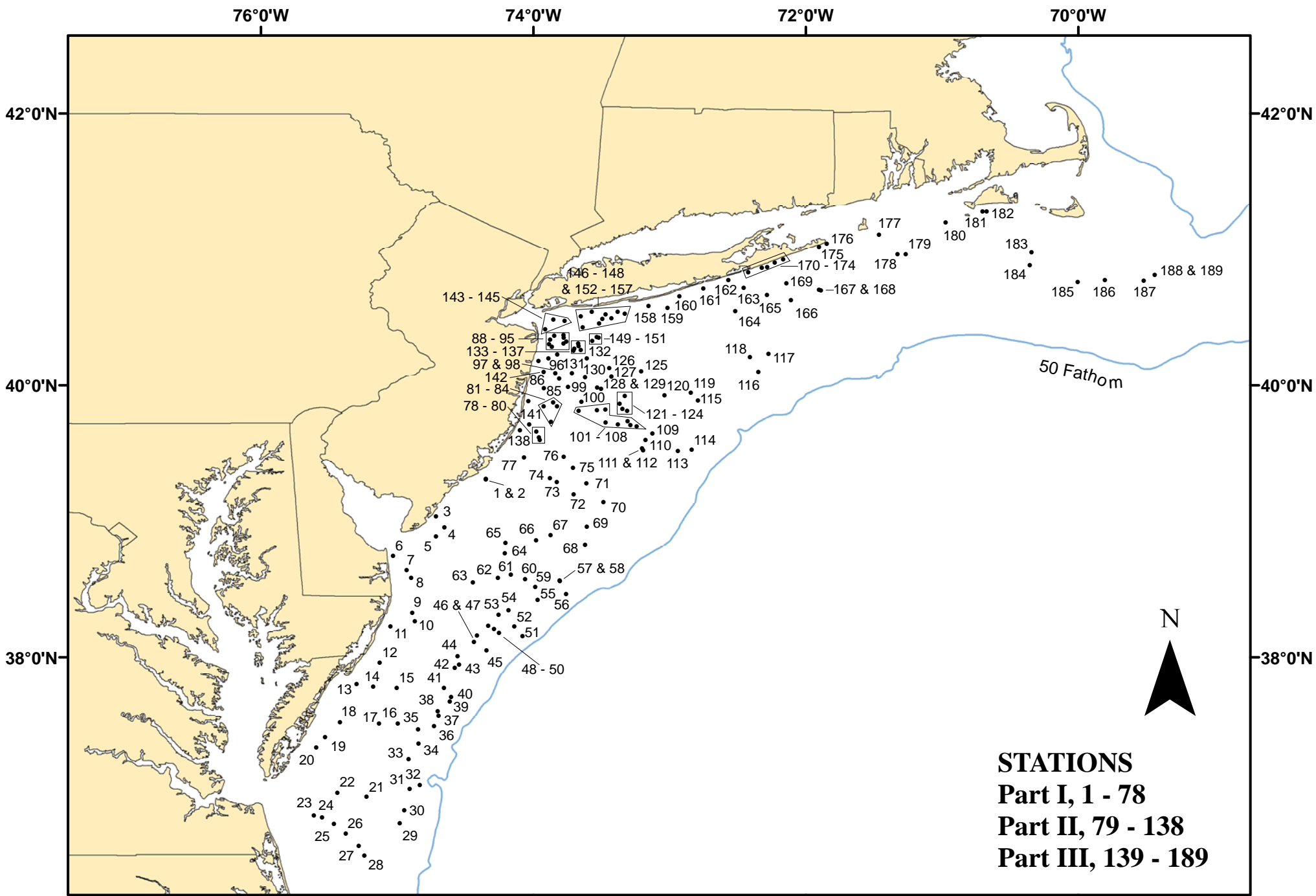


Figure 1. Dredge hauls made from F/V *E.S.S. Pursuit* during NOAA Fisheries Service, Northeast Fisheries Science Center's Surfclam / Ocean Quahog Survey, 29 July - 14 August 2015

2015 NOAA Fisheries Service Surf Clam -- Ocean Quahog Survey  
R/V ESS PURSUIT July 29 - August 14

Station Data								Surf Clams				Ocean Quahogs	
Survey Stratum	Station Number	Position		Loran		Depth (FM)	Catch Number	Percent of Survey Catch				Catch Number	
		Latitude	Longitude	Time	Delays			Heading	0-4.74"	4.76-5.00"	5.01-5.50"		>5.50"
05	0023	3650.2	7536.7	X27071.8	Y41257.3	0	9.3	15	100.0	0.0	0.0	0.0	0
05	0025	3649.3	7533.1	X27055.4	Y41254.8	0	12.0	12	100.0	0.0	0.0	0.0	0
05	0026	3646.4	7527.8	X27029.0	Y41234.1	0	12.0	38	100.0	0.0	0.0	0.0	0
05	0027	3642.0	7522.6	X27001.0	Y41197.5	0	10.4	225	100.0	0.0	0.0	0.0	0
05	0028	3636.8	7516.9	X26970.2	Y41154.4	0	14.2	43	100.0	0.0	0.0	0.0	0
05	0029	3632.5	7514.4	X26954.3	Y41114.4	0	14.8	60	96.7	3.3	0.0	0.0	0
09	0015	3746.5	7500.1	X27001.2	Y41949.8	0	14.2	6	100.0	0.0	0.0	0.0	0
09	0016	3730.8	7459.7	X26973.4	Y41776.7	0	14.2	297	5.4	14.8	53.5	26.3	0
09	0017	3730.6	7508.0	X27011.8	Y41761.0	0	17.0	0	0.0	0.0	0.0	0.0	0
09	0021	3658.4	7513.4	X26985.8	Y41396.1	0	18.0	3	100.0	0.0	0.0	0.0	0
09	0022	3700.3	7526.3	X27044.1	Y41391.0	0	12.0	0	0.0	0.0	0.0	0.0	0
09	0030	3646.6	7458.8	X26907.0	Y41300.4	0	17.5	184	100.0	0.0	0.0	0.0	0
09	0031	3652.6	7456.8	X26906.0	Y41368.4	0	18.6	51	100.0	0.0	0.0	0.0	0
09	0034	3714.9	7454.9	X26927.5	Y41611.4	0	22.4	120	86.7	9.2	4.2	0.0	1
09	0035	3721.9	7450.6	X26917.6	Y41694.8	0	23.0	0	0.0	0.0	0.0	0.0	0
09	0036	3728.2	7450.8	X26927.6	Y41762.8	0	23.5	16	31.2	18.8	25.0	25.0	0
10	0032	3701.8	7454.5	X26907.9	Y41471.2	0	25.2	11	100.0	0.0	0.0	0.0	0
10	0037	3729.6	7443.6	X26895.6	Y41789.8	0	28.4	45	93.3	6.7	0.0	0.0	33
10	0038	3734.2	7441.7	X26893.0	Y41842.5	0	26.8	72	93.1	6.9	0.0	0.0	216
10	0039	3736.2	7442.1	X26897.8	Y41863.4	0	29.5	13	76.9	15.4	7.7	0.0	996
11	0033	3703.7	7450.0	X26890.3	Y41500.5	0	29.5	0	0.0	0.0	0.0	0.0	67
11	0040	3740.6	7436.8	X26878.3	Y41919.0	0	31.2	0	0.0	0.0	0.0	0.0	834
13	0045	3800.4	7433.3	X26889.8	Y42137.7	0	22.4	530	65.3	12.1	16.2	6.4	23
13	0047	3806.7	7426.1	X26861.9	Y42214.2	0	23.0	834	80.6	11.2	7.9	0.4	62
13	0048	3809.6	7424.8	X26859.4	Y42246.8	0	23.5	296	79.4	10.5	9.5	0.7	66
13	0049	3813.8	7419.9	X26839.4	Y42297.1	0	25.2	1324	88.5	6.3	4.8	0.3	67
14	0042	3746.5	7439.4	X26899.6	Y41979.0	0	27.3	0	0.0	0.0	0.0	0.0	584
14	0043	3755.2	7434.7	X26889.1	Y42079.6	0	25.2	35	51.4	17.1	28.6	2.9	301
14	0044	3756.8	7432.7	X26881.3	Y42099.4	0	25.7	33	75.8	12.1	12.1	0.0	401
14	0046	3803.1	7420.6	X26827.8	Y42181.9	0	26.8	459	93.9	5.0	1.1	0.0	286
14	0050	3812.6	7417.2	X26823.1	Y42287.0	0	25.7	2196	74.6	17.6	6.6	1.2	864
14	0051	3810.7	7415.1	X26809.2	Y42269.0	0	23.5	936	84.6	7.4	7.4	0.6	22
14	0054	3818.8	7415.3	X26821.8	Y42355.1	0	30.6	4	100.0	0.0	0.0	0.0	915
14	0055	3820.9	7410.9	X26800.6	Y42381.5	0	27.9	402	96.5	3.0	0.5	0.0	184
15	0041	3742.4	7436.3	X26878.4	Y41939.1	0	29.5	0	0.0	0.0	0.0	0.0	584
15	0052	3809.3	7404.8	X26752.0	Y42265.1	0	34.4	37	86.5	10.8	2.7	0.0	20
15	0053	3813.5	7408.3	X26776.3	Y42305.7	0	36.1	2	100.0	0.0	0.0	0.0	43
17	0063	3835.1	7415.6	X26848.6	Y42529.3	0	0.0	4	100.0	0.0	0.0	0.0	752
17	0064	3833.0	7426.7	X26907.9	Y42498.4	0	22.4	16	75.0	12.5	12.5	0.0	133
17	0065	3846.0	7412.5	X26848.7	Y42648.1	0	23.5	3744	64.4	13.9	15.9	5.8	474
17	0066	3850.4	7412.3	X26855.0	Y42695.3	0	21.3	73	50.7	16.4	17.8	15.1	250
18	0060	3830.9	7359.1	X26748.1	Y42496.8	0	31.7	0	0.0	0.0	0.0	0.0	3340
18	0061	3834.5	7403.7	X26779.5	Y42531.4	0	29.5	0	0.0	0.0	0.0	0.0	1132
18	0062	3836.4	7409.9	X26818.0	Y42547.2	0	27.3	0	0.0	0.0	0.0	0.0	1180
19	0056	3825.4	7358.0	X26734.7	Y42440.1	0	31.2	19	100.0	0.0	0.0	0.0	178
19	0057	3828.0	7345.6	X26667.5	Y42476.9	0	36.1	3	100.0	0.0	0.0	0.0	2460
*	19	0058	3833.6	7348.3	X26689.4	Y42532.7	0	30.6	6	100.0	0.0	0.0	1170

2015 NOAA Fisheries Service Surf Clam -- Ocean Quahog Survey  
R/V ESS PURSUIT July 29 - August 14

Station Data								Surf Clams					Ocean Quahogs	
Survey Stratum	Station Number	Position		Loran		Depth (FM)	Catch Number	Percent of Survey Catch				Catch Number		
		Latitude	Longitude	Time	Delays			Heading	0-4.74"	4.76-5.00"	5.01-5.50"		>5.50"	
*	19	0059	3833.8	7348.4	X26690.2	Y42534.7	0	30.6	30	100.0	0.0	0.0	0.0	923
	21	0067	3851.6	7358.8	X26776.0	Y42714.4	0	21.9	860	57.7	14.9	20.5	7.0	669
	21	0068	3853.9	7352.4	X26740.6	Y42741.3	0	19.1	856	50.0	21.0	21.5	7.5	412
	21	0072	3916.7	7336.7	X26674.0	Y42979.7	0	24.6	37	70.3	16.2	13.5	0.0	129
	21	0073	3911.8	7342.2	X26702.7	Y42929.2	0	19.7	597	37.7	16.6	23.6	22.1	140
	21	0074	3917.4	7349.6	X26759.5	Y42986.2	0	19.1	263	35.0	9.9	28.5	26.6	24
	21	0075	3919.2	7352.7	X26782.8	Y43004.8	0	19.7	29	34.5	24.1	24.1	17.2	411
	21	0076	3923.7	7342.5	X26723.0	Y43051.2	0	17.5	388	20.6	8.2	21.1	50.0	7
	21	0077	3928.4	7346.5	X26757.8	Y43099.7	0	15.3	292	18.5	7.5	19.9	54.1	4
	21	0102	3948.8	7340.1	X26750.7	Y43305.8	0	14.2	482	12.9	5.0	18.3	63.9	7
	22	0069	3849.5	7337.2	X26642.2	Y42702.3	0	30.6	30	70.0	13.3	3.3	13.3	2448
	22	0070	3857.5	7336.5	X26647.4	Y42784.2	0	26.8	246	92.7	6.5	0.8	0.0	954
	22	0071	3908.5	7329.1	X26613.8	Y42897.4	0	26.8	97	96.9	3.1	0.0	0.0	970
	25	0094	4021.1	7346.6	X26871.0	Y43633.7	0	16.4	0	0.0	0.0	0.0	0.0	16
	25	0095	4019.3	7345.4	X26857.2	Y43614.8	0	14.8	1	100.0	0.0	0.0	0.0	208
	25	0099	4003.1	7348.6	X26842.6	Y43454.9	0	14.8	130	43.8	7.7	13.8	34.6	0
	25	0100	3959.2	7344.7	X26805.2	Y43413.1	0	15.9	328	39.0	5.5	19.5	36.0	0
	25	0101	3952.7	7338.8	X26748.9	Y43344.5	0	13.7	320	15.0	9.4	21.2	54.4	0
	25	0103	3949.1	7332.0	X26693.2	Y43305.2	0	17.5	650	46.5	20.0	21.8	11.7	36
	25	0104	3949.4	7328.2	X26666.3	Y43306.5	0	18.0	1228	49.2	17.9	23.8	9.1	122
	25	0106	3942.7	7322.8	X26616.9	Y43238.0	0	18.6	351	49.9	18.2	22.8	9.1	6
	25	0107	3944.1	7318.5	X26588.3	Y43250.1	0	21.3	1263	57.7	17.8	20.2	4.3	204
	25	0108	3942.4	7317.2	X26576.6	Y43233.0	0	21.3	806	65.0	14.1	15.6	5.2	118
	25	0109	3941.9	7314.4	X26556.0	Y43227.0	0	23.0	188	73.7	12.2	11.7	2.1	97
	25	0110	3938.6	7307.5	X26503.1	Y43192.6	0	21.9	374	41.7	16.0	24.1	18.2	73
	25	0111	3935.8	7310.6	X26521.7	Y43166.5	0	23.0	462	57.6	14.3	22.5	5.6	256
	25	0112	3932.1	7312.1	X26527.9	Y43130.9	0	21.3	430	42.3	14.4	20.9	22.3	252
*	25	0113	3931.2	7311.6	X26523.4	Y43122.0	0	21.9	414	68.8	7.5	16.4	7.2	295
	25	0122	3948.7	7318.7	X26596.4	Y43295.1	0	22.4	93	76.3	14.0	8.6	1.1	26
	25	0123	3949.6	7320.8	X26613.0	Y43304.9	0	23.5	0	0.0	0.0	0.0	0.0	6
	25	0124	3952.0	7322.0	X26625.6	Y43329.0	0	22.4	525	80.8	10.9	8.0	0.4	60
	25	0127	4007.6	7326.6	X26687.6	Y43484.2	0	22.4	0	0.0	0.0	0.0	0.0	2808
	25	0129	3958.5	7330.2	X26697.1	Y43397.5	0	22.4	813	80.1	12.5	7.4	0.0	338
	25	0130	3959.0	7331.9	X26710.6	Y43403.4	0	20.8	1148	54.9	21.3	19.5	4.3	370
	25	0131	4003.7	7337.1	X26758.6	Y43453.4	0	19.7	624	30.8	13.5	34.6	21.2	158
	25	0132	4005.3	7343.0	X26806.1	Y43473.3	0	17.5	400	8.5	3.5	39.0	49.0	109
	25	0133	4011.8	7336.5	X26771.5	Y43533.0	0	18.6	21	14.3	0.0	28.6	57.1	903
	25	0135	4015.4	7342.3	X26824.0	Y43573.4	0	15.3	2	0.0	50.0	50.0	0.0	427
	26	0096	4018.5	7346.7	X26865.2	Y43608.0	0	19.7	4	100.0	0.0	0.0	0.0	175
	26	0125	3955.4	7319.7	X26614.2	Y43360.9	0	26.8	3	100.0	0.0	0.0	0.0	1
	26	0128	4003.8	7325.6	X26672.8	Y43446.5	0	27.9	0	0.0	0.0	0.0	0.0	1375
	27	0114	3931.0	7256.3	X26417.5	Y43116.7	0	31.7	13	61.5	23.1	15.4	0.0	362
	27	0115	3931.5	7250.3	X26376.4	Y43120.0	0	34.4	5	100.0	0.0	0.0	0.0	462
	29	0126	4006.1	7312.4	X26576.9	Y43459.1	0	24.6	22	90.9	4.5	4.5	0.0	4032
	29	0165	4032.8	7231.0	X26287.7	Y43662.3	0	22.4	45	91.1	2.2	6.7	0.0	980
	30	0116	3953.4	7247.5	X26373.6	Y43323.6	0	29.5	8	87.5	0.0	12.5	0.0	3003
	30	0120	3956.6	7250.6	X26399.7	Y43355.1	0	28.4	2	100.0	0.0	0.0	0.0	1610

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		Latitude	Longitude	Time	Delays			Heading	0-4.74"	4.76-5.00"	5.01-5.50"		>5.50"
30	0121	3955.5	7302.3	X26485.5	Y43351.8	0	27.3	276	90.9	7.2	1.8	0.0	2170
31	0117	4005.9	7220.9	X26182.6	Y43418.8	0	37.7	2	50.0	0.0	50.0	0.0	39
31	0118	4013.9	7216.4	X26152.1	Y43484.9	0	32.8	0	0.0	0.0	0.0	0.0	4875
31	0119	4012.3	7224.6	X26215.1	Y43477.8	0	32.8	0	0.0	0.0	0.0	0.0	2331
33	0164	4043.1	7227.3	X26271.8	Y43745.5	0	17.0	24	37.5	8.3	4.2	50.0	105
33	0166	4039.8	7217.1	X26181.2	Y43705.3	0	25.2	0	0.0	0.0	0.0	0.0	2220
33	0170	4045.0	7208.5	X26115.0	Y43737.6	0	23.5	0	0.0	0.0	0.0	0.0	2790
34	0167	4037.6	7206.5	X26089.8	Y43674.7	0	26.8	0	0.0	0.0	0.0	0.0	1260
34	0168	4041.9	7153.3	X25982.9	Y43694.1	0	26.8	0	0.0	0.0	0.0	0.0	1215
34	0169	4042.0	7154.2	X25990.6	Y43696.0	0	26.2	0	0.0	0.0	0.0	0.0	729
37	0178	4106.5	7127.8	X25789.7	Y43849.6	0	13.7	67	38.8	6.0	23.9	31.3	66
37	0181	4111.8	7058.3	X25534.2	Y43846.8	0	18.0	0	0.0	0.0	0.0	0.0	1125
38	0179	4058.0	7119.6	X25706.5	Y43776.1	0	24.6	2	100.0	0.0	0.0	0.0	302
38	0180	4057.9	7115.9	X25674.1	Y43770.6	0	27.9	1	0.0	0.0	0.0	100.0	3204
41	0184	4058.6	7020.6	X25206.3	Y43709.2	0	21.9	0	0.0	0.0	0.0	0.0	197
41	0185	4053.1	7021.3	X25224.1	Y43672.5	0	23.5	1	0.0	0.0	0.0	100.0	2
41	0186	4045.6	7000.2	X25125.1	Y43600.1	0	17.5	58	5.2	0.0	6.9	87.9	7
45	0187	4046.3	6948.2	W14013.8	Y43593.5	0	20.2	0	0.0	0.0	0.0	0.0	0
45	0188	4046.1	6931.1	W13924.7	Y43576.6	0	21.9	0	0.0	0.0	0.0	0.0	0
45	0189	4048.8	6926.2	W13889.0	Y43589.6	0	24.6	0	0.0	0.0	0.0	0.0	0
50	0105	3943.6	7328.2	X26656.7	Y43248.9	0	18.0	452	48.7	22.6	20.4	8.4	4
83	0018	3731.4	7525.2	X27092.3	Y41742.5	0	11.5	26	15.4	11.5	34.6	38.5	0
83	0019	3724.8	7531.7	X27109.5	Y41657.1	0	9.8	1	100.0	0.0	0.0	0.0	0
83	0020	3720.2	7535.6	X27118.3	Y41598.1	0	7.7	0	0.0	0.0	0.0	0.0	0
84	0012	3757.7	7507.6	X27058.1	Y42065.1	0	7.7	15	100.0	0.0	0.0	0.0	0
84	0013	3748.1	7517.8	X27089.2	Y41943.0	0	6.6	2	100.0	0.0	0.0	0.0	0
84	0014	3747.1	7510.5	X27052.4	Y41941.9	0	9.8	234	100.0	0.0	0.0	0.0	0
85	0009	3819.7	7453.3	X27027.9	Y42328.3	0	8.7	0	0.0	0.0	0.0	0.0	0
85	0010	3815.8	7452.2	X27014.5	Y42285.8	0	10.9	0	0.0	0.0	0.0	0.0	0
85	0011	3813.7	7502.9	X27065.9	Y42251.0	0	8.7	0	0.0	0.0	0.0	0.0	0
86	0006	3844.8	7501.8	X27128.1	Y42604.0	0	8.2	0	0.0	0.0	0.0	0.0	0
86	0007	3838.5	7455.8	X27080.6	Y42537.1	0	9.3	0	0.0	0.0	0.0	0.0	0
86	0008	3835.1	7453.8	X27062.2	Y42500.4	0	10.9	0	0.0	0.0	0.0	0.0	0
87	0003	3902.1	7442.9	X27060.8	Y42809.0	0	7.7	0	0.0	0.0	0.0	0.0	0
87	0004	3857.3	7439.1	X27027.4	Y42757.4	0	4.9	8	100.0	0.0	0.0	0.0	0
87	0005	3853.3	7442.8	X27040.1	Y42711.2	0	8.2	14	100.0	0.0	0.0	0.0	0
88	0001	3918.6	7420.9	X26963.5	Y42996.1	0	7.1	0	0.0	0.0	0.0	0.0	0
88	0002	3918.7	7420.9	X26963.8	Y42997.2	0	7.7	0	0.0	0.0	0.0	0.0	0
88	0078	3928.3	7404.1	X26875.3	Y43100.3	0	11.5	168	20.8	8.3	6.0	64.9	1
88	0079	3935.8	7357.2	X26844.3	Y43178.0	0	13.1	489	17.8	6.1	16.6	59.5	0
88	0080	3936.9	7357.5	X26848.7	Y43189.5	0	12.0	191	32.5	8.9	16.2	42.4	0
89	0081	3939.5	7358.7	X26862.3	Y43216.9	0	11.5	298	14.1	4.7	10.1	71.1	0
89	0082	3943.8	7352.2	X26826.3	Y43259.5	0	14.2	246	16.3	8.9	17.9	56.9	0
89	0083	3950.7	7355.5	X26864.4	Y43331.9	0	12.0	75	13.3	6.7	14.7	65.3	0
89	0084	3950.7	7349.6	X26822.4	Y43329.3	0	12.6	419	16.5	7.6	21.7	54.2	0
89	0085	3952.5	7351.2	X26837.8	Y43348.5	0	12.6	178	47.8	10.7	6.7	34.8	0
89	0086	3958.9	7355.3	X26881.8	Y43416.2	0	12.0	285	57.5	1.8	4.9	35.8	1

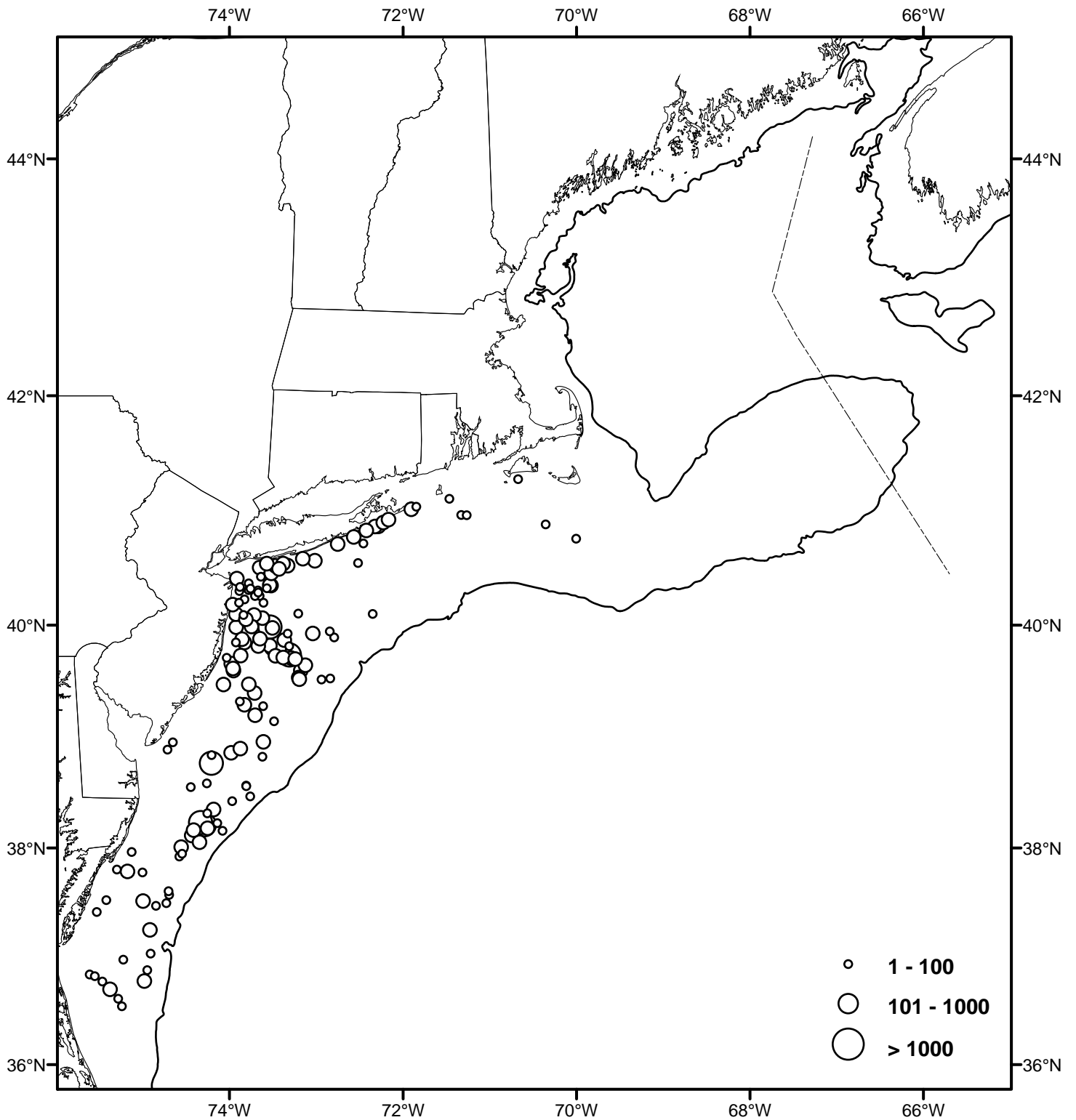
2015 NOAA Fisheries Service Surf Clam -- Ocean Quahog Survey  
R/V ESS PURSUIT July 29 - August 14

Station Data								Surf Clams				Ocean Quahogs	
Survey Stratum	Station Number	Position		Loran		Depth (FM)	Catch Number	Percent of Survey Catch				Catch Number	
		Latitude	Longitude	Time	Delays			Heading	0-4.74"	4.76-5.00"	5.01-5.50"		>5.50"
89	0087	4005.8	7355.4	X26899.1	Y43486.8	0	12.0	265	14.0	3.4	10.9	71.7	0
89	0098	4005.3	7350.3	X26860.2	Y43478.3	0	14.2	15	26.7	0.0	6.7	66.7	0
89	0139	3940.2	7405.9	X26913.2	Y43225.9	0	8.2	0	0.0	0.0	0.0	0.0	0
89	0140	3940.3	000.0	W11055.1	Y43993.9	0	8.7	0	0.0	0.0	0.0	0.0	0
89	0141	3942.6	7401.8	X26890.4	Y43250.0	0	8.7	20	100.0	0.0	0.0	0.0	0
89	0142	3953.1	7402.2	X26917.5	Y43359.7	0	9.3	0	0.0	0.0	0.0	0.0	0
90	0088	4011.8	7353.3	X26898.4	Y43546.3	0	9.3	39	74.4	5.1	5.1	15.4	0
90	0089	4016.9	7351.8	X26900.1	Y43596.5	0	11.5	0	0.0	0.0	0.0	0.0	0
90	0090	4018.0	7353.1	X26912.8	Y43608.6	0	10.9	27	92.6	0.0	0.0	7.4	1
90	0091	4020.2	7352.6	X26914.7	Y43630.3	0	10.9	26	100.0	0.0	0.0	0.0	0
90	0092	4021.8	7350.8	X26905.1	Y43644.6	0	12.0	0	0.0	0.0	0.0	0.0	0
90	0093	4022.1	7346.6	X26873.5	Y43643.6	0	18.0	1	100.0	0.0	0.0	0.0	1
90	0097	4013.6	7349.5	X26874.3	Y43561.4	0	13.7	95	48.4	1.1	5.3	45.3	2
90	0134	4015.5	7339.1	X26799.7	Y43571.6	0	14.2	4	0.0	0.0	25.0	75.0	504
90	0136	4016.1	7341.9	X26822.6	Y43580.0	0	14.2	0	0.0	0.0	0.0	0.0	367
90	0137	4017.2	7340.0	X26810.6	Y43589.2	0	0.0	1	0.0	0.0	0.0	100.0	317
90	0138	4018.4	7340.3	X26815.8	Y43601.2	0	13.1	2	50.0	0.0	0.0	50.0	113
90	0143	4010.8	7357.7	X26928.7	Y43539.5	0	9.3	128	15.6	3.1	9.4	71.9	0
90	0144	4024.6	7354.8	X26943.5	Y43676.4	0	9.8	171	53.2	28.1	17.0	1.8	0
91	0145	4028.9	7351.1	X26926.5	Y43715.5	0	9.3	0	0.0	0.0	0.0	0.0	0
91	0146	4028.4	7346.2	X26886.8	Y43705.3	0	14.2	0	0.0	0.0	0.0	0.0	106
91	0147	4030.4	7339.1	X26836.0	Y43717.2	0	9.3	498	17.3	4.4	22.9	55.4	23
91	0148	4032.5	7334.2	X26802.3	Y43731.9	0	7.7	214	3.7	1.4	16.8	78.0	13
91	0149	4025.6	7338.2	X26816.9	Y43669.6	0	11.5	74	66.2	8.1	4.1	21.6	1
91	0150	4019.5	7334.1	X26770.4	Y43606.3	0	14.2	6	33.3	0.0	33.3	33.3	380
91	0151	4021.0	7331.2	X26751.2	Y43618.1	0	13.7	618	20.7	4.9	12.9	61.5	1
91	0152	4021.2	7332.1	X26758.7	Y43620.9	0	13.1	294	34.7	5.4	16.7	43.2	0
91	0153	4027.4	7331.1	X26765.2	Y43679.6	0	12.0	229	21.4	7.0	13.5	58.1	1
91	0154	4029.2	7329.6	X26757.5	Y43695.2	0	11.5	402	12.7	2.0	10.4	74.9	0
91	0155	4031.3	7328.2	X26751.3	Y43713.6	0	8.7	229	1.7	0.9	7.4	90.0	0
91	0156	4029.7	7325.6	X26726.8	Y43695.6	0	10.9	154	22.7	3.9	9.1	64.3	0
91	0157	4032.5	7322.9	X26711.5	Y43718.9	0	8.7	170	23.5	4.7	5.9	65.9	0
91	0158	4031.4	7319.7	X26683.2	Y43705.0	0	12.6	338	24.9	3.6	12.4	59.2	8
92	0159	4035.0	7309.3	X26606.6	Y43726.2	0	12.6	222	9.0	5.0	14.9	71.2	7
92	0160	4034.0	7300.8	X26535.0	Y43707.1	0	13.1	305	26.2	11.1	18.4	44.3	0
92	0161	4039.4	7255.6	X26502.6	Y43749.1	0	12.6	0	0.0	0.0	0.0	0.0	0
92	0162	4042.8	7245.1	X26421.4	Y43765.7	0	12.0	103	6.8	6.8	16.5	69.9	1038
92	0163	4046.5	7234.0	X26334.3	Y43782.9	0	11.5	169	4.1	0.6	11.2	84.0	15
93	0171	4049.9	7225.4	X26266.9	Y43799.8	0	9.3	223	11.2	7.2	6.7	74.9	6
93	0172	4052.0	7219.3	X26218.1	Y43808.8	0	9.8	367	4.1	3.5	13.1	79.3	8
93	0173	4052.1	7217.0	X26198.4	Y43806.5	0	11.5	436	8.7	3.7	12.8	74.8	78
93	0174	4054.1	7213.6	X26172.4	Y43818.1	0	9.8	308	9.1	5.5	18.8	66.6	107
93	0175	4055.6	7210.0	X26143.7	Y43825.1	0	8.7	181	10.5	6.6	12.7	70.2	47
93	0176	4101.0	7154.2	X26014.5	Y43845.4	0	9.3	107	9.3	1.9	15.9	72.9	5
93	0177	4102.3	7150.8	X25986.8	Y43850.6	0	8.2	23	21.7	8.7	17.4	52.2	1
95	0182	4116.6	7042.2	X25398.2	Y43857.9	0	13.1	0	0.0	0.0	0.0	0.0	1477
95	0183	4116.7	7040.3	X25381.2	Y43856.0	0	13.1	5	0.0	0.0	0.0	100.0	585

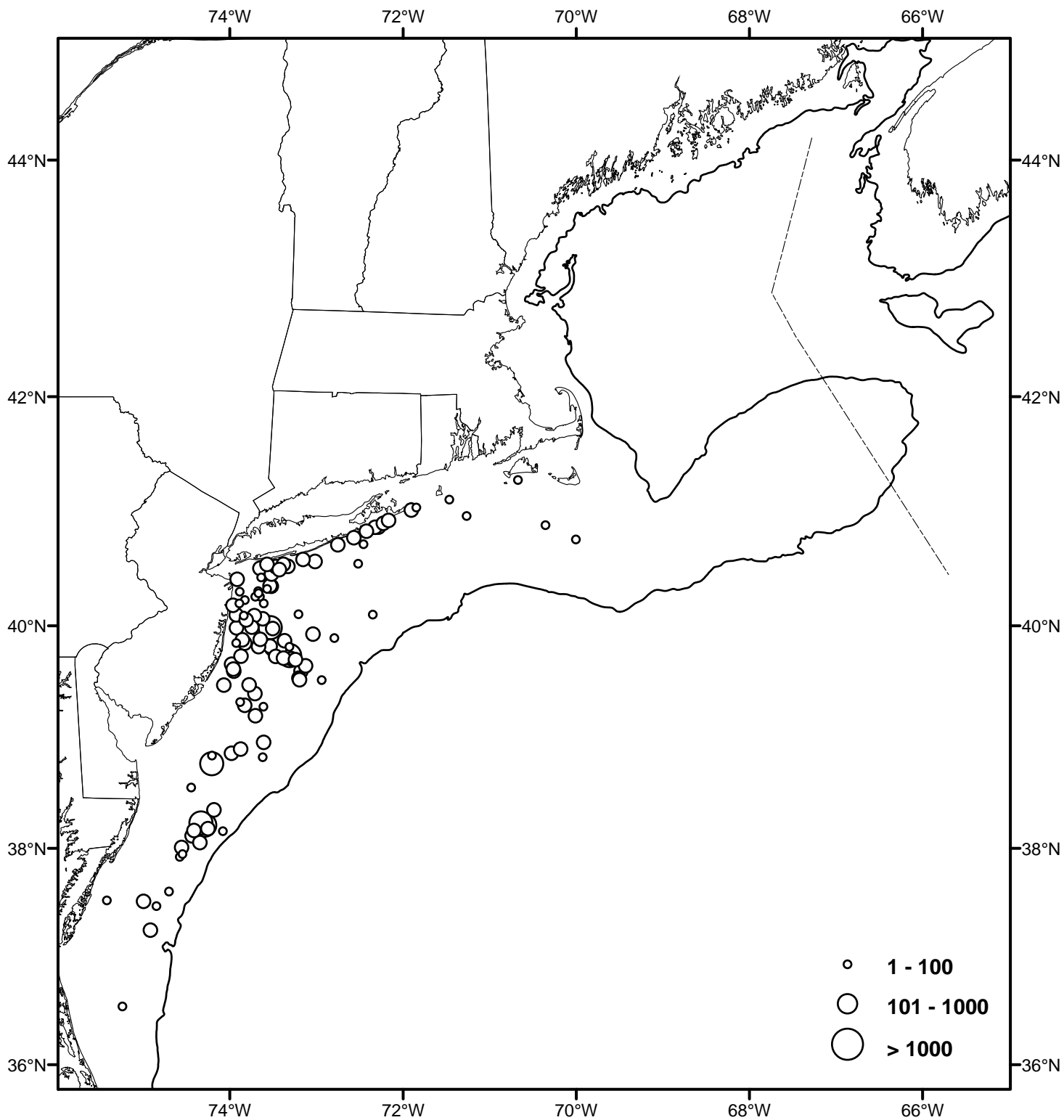
\* Denotes a non-random / selectivity station



**NEFSC SURFCLAM AND OCEAN QUAHOG SURVEY 2015**  
**NOAA Fisheries Service**  
**SURF CLAMS - Number/Tow**  
**Total Number**



**NEFSC SURFCLAM AND OCEAN QUAHOG SURVEY 2015**  
**NOAA Fisheries Service**  
**SURF CLAMS - Number/Tow**  
**Greater Than 5 Inches**



**NEFSC SURFCLAM AND OCEAN QUAHOG SURVEY 2015**  
**NOAA Fisheries Service**  
**QUAHOGS - Number/Tow**  
**Total Number**

