

RESOURCE SURVEY REPORT
Catch Summary
NOAA Fisheries Service Northeast
Fisheries Science Center
Spring Bottom Trawl Survey
Cape Hatteras -Gulf of Maine
31 March – 31 May 2014

Submitted to: NOAA, NEFSC

For further information contact Robert Johnston
(508-495-2061), NOAA Fisheries Service, Northeast Fisheries
Science Center, 166 Water Street, Woods Hole, MA 02543.

Date: 2014

Resource Survey Report

Bottom Trawl Survey

Cape Hatteras – Gulf of Maine

31 March – 31 May 2014

NOAA FSV *Henry B. Bigelow* (FSV 225)



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



NOAA FSV *Henry B. Bigelow* (FSV 225) transiting between stations



A rare calico American lobster
(*Homarus americanus*)
caught in the Gulf of Maine



Scientists working up a
catch in the wet lab

Significant Changes to the NEFSC Bottom Trawl Survey

Many significant changes in survey methodology were implemented, beginning with the 2009 Spring Multispecies Bottom Trawl Survey, that have significant implications for the use of these data. Prior to 2009, multispecies bottom trawl surveys were conducted primarily on the NOAA FSV *Albatross IV* and occasionally on the NOAA FSV *Delaware II*. The 2009 survey was conducted using the NOAA FSV *Henry B. Bigelow*, which is equipped with an autotrawl system that balances warp tensions throughout the duration of survey tows.

The bottom trawl system used for sampling has also been changed. Prior to 2009, the survey was conducted with a Yankee 36 bottom trawl and 450-kg euronet polyvalent trawl doors. Beginning in 2009, the survey is being conducted using a 400 x 12, 4-seam bottom trawl designed and extensively tested with the fishing industry, fishery management, and academic stakeholders in conjunction with the Northeast Fisheries Science Center scientists through the mid-Atlantic and New England Trawl Survey Advisory Panel. The net was extensively tested on the FSV *Delaware II* and the FSV *Henry B. Bigelow* prior to being adopted as the standard survey gear. The bottom trawl is fished with 550-kg, 2.2-m Polyice oval trawl doors.

The survey towing speed was decreased from 3.8 knots prior to 2009 to 3.0 knots beginning in 2009. The new towing speed was selected after extensive scope and tow speed trials conducted on both the FSV *Delaware II* and the FSV *Henry B. Bigelow* and consideration of the range of species to be sampled. The tow duration was also changed from 30 minutes (timed from when the winches were locked until they were reengaged) to 20 minutes of actual bottom time (as determined by net monitoring systems). The adjustments to both tow speed and tow duration have resulted in a decrease of average tow distance from 1.9 nautical miles prior to 2009 to an average tow distance of 1.0 nautical miles beginning in 2009. The shorter tow distance allows us to conduct additional tows in areas that are constrained by fixed fishing gear, untrawlable bottom and steep contours along the edge of the continental shelf. While some commercial fishery stakeholders are likely to express concern about the reduction in tow duration, a preliminary analysis of the length frequency data from paired FSV *Albatross IV* and the FSV *Henry B. Bigelow* tows shows few differences in the largest sized fish of each species caught by the vessels.

Station allocation also changed significantly due to an increase in total available vessel time from 48 to 60 sea days and a reduction in inshore sampling by the FSV *Henry B. Bigelow*. At the time that inshore strata in the mid-Atlantic were historically sampled (September to early October), survey results indicate low densities of commercially and recreational species. These areas will continue to be sampled by the Northeast Area Monitoring and Assessment Program (NEAMAP) bottom trawl survey, although later in the year (late September through early October). As a result of station reallocation, station density was increased significantly in offshore strata that have historically

demonstrated higher densities of fish particularly in the mid-Atlantic and southern New England regions.

The Northeast Fisheries Science Center conducted an extensive comparison of the catchability of the FSV *Albatross IV* sampling with the Yankee 36 bottom trawl using historical protocols and the FSV *Henry B. Bigelow* sampling with the 400 x 12, 4-seam bottom trawl with revised protocols. The resulting dataset is one of the most comprehensive ever produced to study the catchability characteristics of a fisheries bottom trawl survey. A preliminary overall result is that the survey conducted by the FSV *Henry B. Bigelow* has significantly higher catch rates for nearly all species except those with very small total body size (e.g. anchovy species). The results of this study were peer reviewed in August 2009 and analytic approaches will be subsequently used to appropriately interpret pre-2009 survey results with 2009 and later results.

Given the changes in vessel, trawling gear, tow speed, tow duration, sample allocation and towing procedures, straight-forward comparisons of catches in this report with fall bottom trawl survey catches in previous Resource Survey Reports are not appropriate without employing statistical approaches that are reviewed and endorsed for stock assessment applications through peer review processes.

Russell Brown, Former Chief
Ecosystems Survey Branch

RESOURCE SURVEY REPORT

Catch Summary

NOAA Fisheries Service
Northeast Fisheries Science Center

Spring Bottom Trawl Survey

Cape Hatteras - Gulf of Maine
31 March – 31 May 2014

Attached are station and catch summaries and a series of geographical plots of commercially and recreationally important species caught during the Northeast Fisheries Science Center's 2014 spring bottom trawl survey aboard the NOAA FSV *Henry B. Bigelow*. Tows were made with a NEFSC standardized 4 seam, 3 bridle otter trawl rigged with a rockhopper sweep, 550kg (1200lbs) Poly Ice Oval doors, and 36.6m (20 fathoms) bridles. The cod end and upper belly were lined with 1/2-inch mesh to retain young-of-the-year fish.

Because of the 20-minute tow duration, and random selection of station locations, catches can be light compared with commercial tows. Also, vessel operations are on a 24-hour basis and catches have not been adjusted for day/night differences. Nevertheless, these data can provide fishermen with useful information about the distribution and relative abundance of species inhabiting the survey area (Cape Hatteras to the Gulf of Maine).

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/esb> and choose:

- Resource Survey Reports
 - Available RSR
 - Select season and year of interest

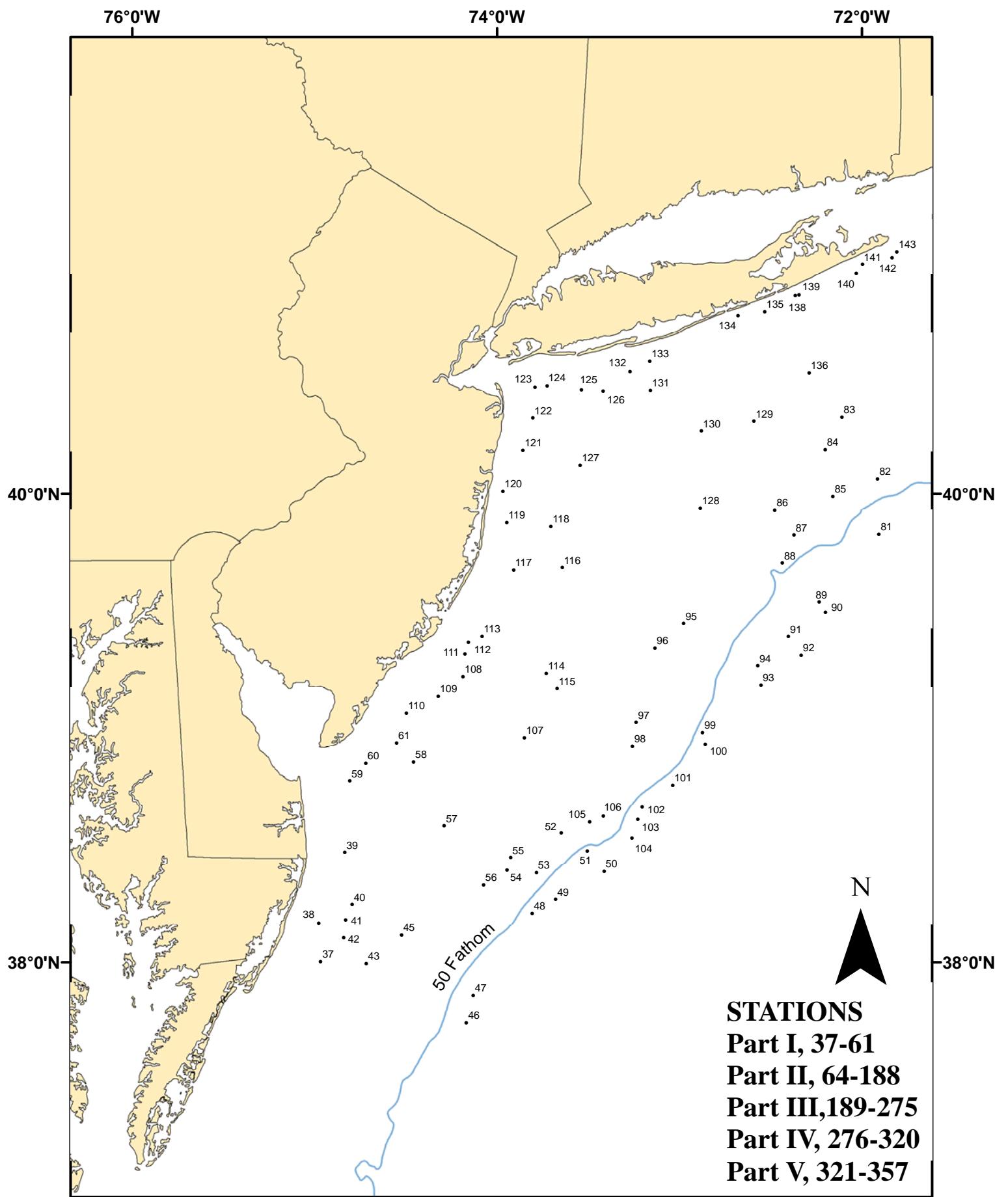


Figure 1. Trawl hauls made from NOAA FSV *Henry B. Bigelow* (14-01), during NOAA Fisheries Service, Northeast Fisheries Center's spring bottom trawl survey, 31 March - 31 May 2014

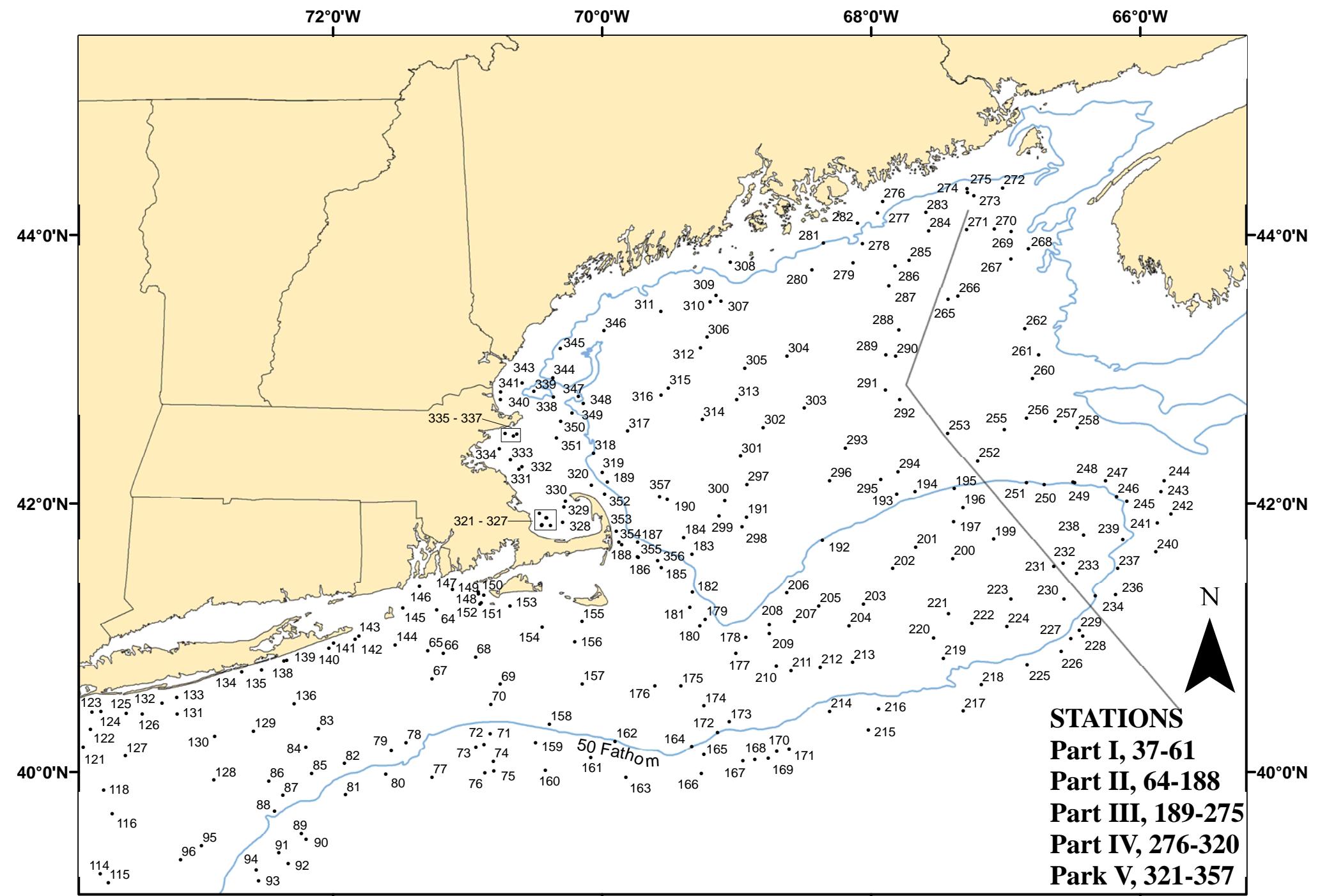


Figure 2. Trawl hauls made from NOAA FSV *Henry B. Bigelow* (14-01), during NOAA Fisheries Service, Northeast Fisheries Center's spring bottom trawl survey, 31 March - 31 May 2014

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2014 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran		Depth (FM)	Bottom Temp (F)
					TD's	Course		
0037	Mar-31	2343	3800.1	7458.0	X27015.1	Y42104.5	350	12.3
0038	Apr-01	0159	3810.1	7458.6	X27036.8	Y42215.3	178	10.9
0039	Apr-01	0455	3828.4	7450.1	X27028.1	Y42428.6	348	13.1
0040	Apr-01	0706	3815.0	7447.7	X26989.3	Y42281.3	228	12.8
0041	Apr-01	0818	3810.9	7449.8	X26992.8	Y42234.3	232	10.1
0042	Apr-01	0941	3806.5	7450.4	X26988.0	Y42184.2	218	17.2
0043	Apr-01	1204	3759.7	7443.0	X26938.4	Y42117.9	222	18.6
0045	Apr-01	1431	3807.2	7431.4	X26890.5	Y42213.4	044	22.7
0046	Apr-01	1834	3744.2	7410.1	X26750.2	Y41996.4	004	131.2
0047	Apr-01	2022	3751.5	7407.9	X26747.0	Y42074.7	039	82.3
0048	Apr-02	0002	3812.7	7348.5	X26667.3	Y42317.5	091	63.7
0049	Apr-02	0212	3816.3	7340.7	X26628.2	Y42361.2	030	73.3
0050	Apr-02	0512	3823.6	7324.8	X26545.0	Y42448.6	220	152.6
0051	Apr-02	0829	3828.8	7330.3	X26580.6	Y42496.4	170	156.9
0052	Apr-02	1037	3833.5	7338.8	X26634.4	Y42538.5	228	36.9
0053	Apr-02	1225	3823.3	7347.0	X26670.5	Y42427.2	207	42.1
0054	Apr-02	1420	3824.0	7356.8	X26725.9	Y42426.3	037	33.4
0055	Apr-02	1535	3827.1	7355.5	X26722.7	Y42459.6		32.3
0056	Apr-02	1740	3820.1	7404.4	X26763.7	Y42378.7	296	34.7
0057	Apr-02	2005	3835.3	7417.4	X26859.1	Y42529.8		24.1
0058	Apr-02	2242	3851.8	7427.5	X26947.3	Y42702.2	157	12.8
0059	Apr-03	0319	3846.9	7448.4	X27058.1	Y42636.0	302	9.6
0060	Apr-03	0505	3851.5	7443.2	X27038.2	Y42690.5	223	9.3
0061	Apr-03	0727	3856.7	7433.0	X26990.1	Y42753.1	039	10.9
0064	Apr-10	2306	4112.3	7113.8	X25674.2	Y43871.8	231	26.5
0065	Apr-11	0155	4054.2	7117.8	X25687.7	Y43746.0	176	31.4
0066	Apr-11	0335	4053.1	7110.8	X25627.6	Y43728.9	092	29.3
0067	Apr-11	0553	4041.6	7115.9	X25669.9	Y43648.8	170	33.6
0068	Apr-11	0904	4051.5	7056.4	X25505.2	Y43700.0	178	30.1
0069	Apr-11	1156	4039.2	7045.4	X25430.8	Y43599.8	132	35.3
0070	Apr-11	1410	4030.1	7049.6	X25477.6	Y43536.6	187	42.4
0071	Apr-11	1657	4017.0	7049.9	X25504.5	Y43439.5	267	64.2
0072	Apr-11	1830	4012.3	7052.6	X25532.5	Y43405.9	262	70.8
0073	Apr-11	2011	4010.9	7056.2	X25559.3	Y43397.6	244	74.1
0074	Apr-11	2243	4004.8	7048.5	X25521.4	Y43346.4	135	77.6
0075	Apr-12	0200	4000.3	7048.3	X25530.0	Y43311.8	302	152.3
0076	Apr-12	0443	3959.5	7052.3	X25556.4	Y43307.8		170.3
0077	Apr-12	0811	3957.6	7115.8	X25712.4	Y43306.3	228	189.7
0078	Apr-12	1213	4013.1	7127.4	X25776.9	Y43438.1	240	47.6
0079	Apr-12	1401	4009.6	7134.0	X25828.2	Y43415.3	200	47.3
0080	Apr-12	1651	3959.1	7136.5	X25853.9	Y43330.9	225	56.6
0081	Apr-12	1941	3949.8	7154.4	X25986.7	Y43262.6	063	82.3
0082	Apr-12	2211	4003.8	7154.8	X25985.6	Y43381.7	069	44.0
0083	Apr-13	0111	4019.4	7206.6	X26077.4	Y43523.1	261	35.0
0084	Apr-13	0257	4011.1	7212.1	X26117.2	Y43457.2	146	38.5
0085	Apr-13	0500	3959.4	7209.5	X26094.9	Y43354.1		46.2
0086	Apr-13	0731	3955.9	7228.6	X26235.6	Y43335.3	211	35.8

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2014 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran		Depth (FM)	Temp (F)
					TD's	Course		
0087	Apr-13	0917	3949.5	7222.3	X26186.9	Y43274.9 227	44.3	48.3
0088	Apr-13	1104	3942.5	7226.1	X26212.2	Y43213.7 177	49.5	47.2
0089	Apr-13	1330	3932.6	7214.1	X26127.5	Y43120.4 215	79.6	52.0
0090	Apr-13	1551	3930.0	7212.0	X26114.1	Y43097.3 294	135.9	52.4
0091	Apr-13	1807	3923.8	7224.2	X26196.3	Y43043.6 224	73.8	52.5
0092	Apr-13	2015	3919.0	7220.0	X26168.6	Y43000.0 253	104.7	50.6
0093	Apr-13	2305	3911.4	7233.2	X26254.3	Y42930.4 247	106.9	51.7
0094	Apr-14	0201	3916.3	7234.3	X26261.9	Y42976.1 310	76.0	52.8
0095	Apr-14	0500	3927.1	7258.6	X26430.4	Y43080.0 207	36.9	43.6
0096	Apr-14	0657	3920.9	7308.1	X26488.8	Y43021.2 207	34.7	43.6
0097	Apr-14	0930	3901.9	7314.2	X26512.1	Y42834.3 189	38.3	43.8
0098	Apr-14	1102	3855.7	7315.5	X26514.7	Y42772.8 213	45.1	44.0
0099	Apr-14	1400	3859.3	7252.4	X26373.0	Y42813.8 223	62.9	51.9
0100	Apr-14	1600	3856.3	7251.5	X26366.5	Y42785.8 232	110.5	51.3
0101	Apr-14	1805	3845.8	7302.2	X26427.1	Y42680.7 182	124.7	
0102	Apr-14	2109	3840.2	7312.2	X26483.7	Y42621.3 222	65.6	53.3
0103	Apr-14	2247	3837.0	7313.7	X26490.4	Y42589.2 192	85.6	52.8
0104	Apr-15	0112	3832.1	7315.6	X26498.4	Y42539.5 232	115.1	53.4
0105	Apr-15	0336	3836.4	7329.5	X26582.8	Y42573.4 263	41.3	45.0
0106	Apr-15	0524	3837.9	7325.0	X26557.6	Y42591.3 217	44.0	44.7
0107	Apr-15	0903	3858.0	7351.0	X26737.6	Y42784.4 180	21.9	45.5
0108	Apr-15	1254	3913.6	7411.2	X26891.7	Y42944.2 158	15.6	42.5
0109	Apr-15	1527	3908.6	7419.4	X26932.6	Y42888.6 180	13.9	42.7
0110	Apr-15	1839	3904.2	7429.8	X26987.3	Y42837.8 250	12.3	42.4
0111	Apr-16	0746	3919.3	7410.6	X26898.9	Y43005.2 024	16.1	43.5
0112	Apr-16	0855	3922.3	7409.4	X26897.7	Y43037.0 011	11.8	43.0
0113	Apr-16	1015	3923.9	7404.9	X26871.8	Y43053.8 038	12.3	43.1
0114	Apr-16	1300	3914.4	7343.8	X26716.8	Y42955.9 356	23.8	43.8
0115	Apr-16	1423	3910.5	7340.2	X26688.2	Y42916.5 343	21.9	
0116	Apr-16	1801	3941.3	7338.5	X26725.7	Y43229.9 017	19.1	44.4
0117	Apr-16	2012	3940.7	7354.5	X26836.2	Y43228.5 015	15.3	43.3
0118	Apr-16	2252	3951.8	7342.3	X26772.1	Y43336.8 040	18.0	43.8
0119	Apr-17	0059	3952.8	7356.8	X26878.3	Y43353.8 022	12.3	42.6
0120	Apr-17	0229	4000.7	7358.1	X26906.2	Y43436.3 359	12.3	42.4
0121	Apr-17	0424	4011.1	7351.5	X26882.9	Y43537.3 030	13.4	41.9
0122	Apr-17	0642	4019.1	7348.2	X26878.1	Y43615.2 344	24.6	42.9
0123	Apr-17	0825	4026.8	7347.5	X26892.5	Y43690.7 020	16.4	42.6
0124	Apr-17	0947	4027.1	7343.5	X26862.4	Y43690.2 125	15.6	
0125	Apr-17	1225	4026.2	7332.3	X26771.8	Y43669.8 093	13.7	41.6
0126	Apr-17	1341	4025.9	7325.1	X26714.0	Y43658.8 094	14.8	41.0
0127	Apr-17	1707	4007.2	7332.7	X26732.5	Y43484.9 002	22.4	42.3
0128	Apr-17	2143	3956.4	7253.2	X26418.5	Y43354.7 088	29.5	43.5
0129	Apr-18	0130	4018.3	7235.5	X26306.2	Y43540.2 062	27.9	41.8
0130	Apr-18	0657	4015.8	7252.8	X26440.0	Y43533.6 055	26.5	
0131	Apr-18	1328	4026.0	7309.6	X26590.6	Y43643.9 235	18.3	43.0
0132	Apr-18	1504	4030.8	7316.3	X26654.2	Y43695.1 059	13.9	41.9
0133	Apr-18	1640	4033.4	7309.8	X26606.9	Y43712.2 063	14.5	43.2

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2014 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran		Depth (FM)	Bottom Temp (F)
					TD's	Course		
----	-----	-----	-----	-----	-----	-----	-----	-----
0134	Apr-18	1940	4044.7	7240.7	X26388.2	Y43776.7 064	13.9	43.2
0135	Apr-18	2114	4045.7	7231.9	X26315.5	Y43773.7 260	15.6	42.7
0134	Apr-18	1940	4044.7	7240.7	X26388.2	Y43776.7 064	13.9	43.2
0135	Apr-18	2114	4045.7	7231.9	X26315.5	Y43773.7 260	15.6	42.7
0136	Apr-19	0015	4030.5	7217.4	X26172.6	Y43627.3 073	31.2	41.6
0138	Apr-19	0358	4049.7	7221.9	X26236.6	Y43793.5 247	13.9	41.9
0139	Apr-19	0510	4050.0	7220.7	X26226.6	Y43794.2 051	14.5	41.5
0140	Apr-19	0735	4055.3	7201.9	X26072.6	Y43812.0 063	15.6	41.5
0141	Apr-19	0838	4057.5	7159.8	X26058.0	Y43826.3 055	14.8	41.4
0142	Apr-19	1037	4059.2	7150.1	X25975.6	Y43825.9 059	15.9	
0143	Apr-19	1210	4100.6	7148.5	X25963.7	Y43834.7 064	14.8	41.5
0144	Apr-19	1445	4056.8	7132.3	X25816.2	Y43783.2 064	29.5	38.6
0145	Apr-19	1722	4113.4	7128.9	X25812.4	Y43901.8	20.5	40.0
0146	Apr-19	1926	4122.9	7121.4	X25768.8	Y43958.1 346	17.8	38.9
0147	Apr-19	2214	4121.6	7106.7	X25632.4	Y43926.5 039	13.7	41.2
0148	Apr-20	0010	4120.4	7055.3	X25526.1	Y43902.0 267	17.5	40.6
0149	Apr-20	0144	4119.7	7055.2	X25522.9	Y43896.7 178	18.3	41.1
0150	Apr-20	0316	4119.1	7052.8	X25500.3	Y43889.7 179	18.6	40.8
0151	Apr-20	0431	4115.5	7053.9	X25501.4	Y43866.5 013	18.0	
0152	Apr-20	0526	4115.0	7054.4	X25505.1	Y43863.6 016	17.5	40.9
0153	Apr-20	0831	4114.2	7041.0	X25382.6	Y43840.2 104	15.6	43.2
0154	Apr-20	1107	4104.7	7026.8	X25248.3	Y43757.6 138	23.0	41.3
0155	Apr-20	1348	4107.2	7009.0	X25098.6	Y43753.3 062	12.3	43.9
0156	Apr-20	1544	4058.1	7012.1	X25146.5	Y43696.2 207	15.9	43.2
0157	Apr-20	1816	4039.4	7008.8	X25189.7	Y43565.7 111	26.0	42.0
0158	Apr-20	2136	4021.3	7023.5	X25328.6	Y43450.9 114	10.4	40.4
0159	Apr-21	0011	4013.0	7029.7	X25387.9	Y43394.7 076	62.9	49.2
0160	Apr-21	0408	4000.6	7025.3	X25397.6	Y43301.0 093	133.4	
0161	Apr-21	0704	4006.6	7005.1	X25280.9	Y43332.6 101	73.8	53.7
0162	Apr-21	0906	4013.6	6954.3	W14157.3	Y43375.5 083	50.6	49.3
0163	Apr-21	1223	3957.5	6949.3	W14181.9	Y43260.2 100	79.8	53.7
0164	Apr-21	1537	4011.4	6920.0	W13992.2	Y43340.1 066	50.9	41.7
0165	Apr-21	1711	4008.0	6914.6	W13976.6	Y43314.9 030	56.0	45.7
0166	Apr-21	2000	3959.4	6915.8	W14010.7	Y43257.9 068	102.5	54.2
0167	Apr-21	2255	4004.9	6857.2	W13903.5	Y43285.9 080	95.4	53.3
0168	Apr-22	0110	4005.5	6851.9	W13876.4	Y43287.5 010	119.8	52.6
0169	Apr-22	0331	4006.2	6845.9	W13845.9	Y43289.0 068	104.2	
0170	Apr-22	0546	4009.4	6842.1	W13817.1	Y43307.3 057	88.0	53.4
0171	Apr-22	0756	4010.2	6836.5	W13788.2	Y43310.0 017	90.5	52.9
0172	Apr-22	1110	4017.5	6908.5	W13914.6	Y43373.8 323	50.3	42.0
0173	Apr-22	1303	4022.3	6903.3	W13872.2	Y43401.7 309	47.8	46.6
0174	Apr-22	1521	4029.5	6914.6	W13901.9	Y43455.9 307	39.4	42.3
0175	Apr-22	1740	4038.4	6924.9	W13921.5	Y43521.1 256	27.3	42.8
0176	Apr-22	1922	4038.6	6936.4	W13980.1	Y43532.0 293	28.4	42.4
0177	Apr-23	0014	4053.0	6900.2	W13740.8	Y43592.8 055	47.8	42.4
0178	Apr-23	0301	4100.0	6855.9	W13690.2	Y43632.1 197	39.4	42.6
0179	Apr-23	0550	4108.2	6914.0	W13748.0	Y43699.6 143	31.2	

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2014 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran		Depth (FM)	Temp (F)	Bottom
					TD's	Course			-----
0180	Apr-23	1153	4105.4	6916.4	W13771.8	Y43684.9	338	31.7	41.6
0181	Apr-23	1327	4113.6	6920.9	W13761.2	Y43739.6	347	29.8	41.0
0182	Apr-23	1521	4120.4	6919.7	W13725.9	Y43779.6	199	43.2	40.6
0183	Apr-23	1907	4137.3	6920.0	W13651.5	Y43880.6	302	89.4	
0184	Apr-23	2156	4144.8	6923.6	W13636.0	Y43928.9	340	93.8	
0185	Apr-24	0134	4131.4	6933.6	W13751.8	Y43862.9	344	23.2	
0186	Apr-24	0441	4136.1	6944.3	W13789.5	Y43904.9	335	20.0	
0187	Apr-24	0705	4142.7	6944.1	W13758.7	Y43943.9	303	44.6	40.4
0188	Apr-24	0932	4141.6	6951.2	W13803.9	Y43947.2	326	15.0	
0189	May-06	2004	4209.5	6957.7	W13708.3	Y44118.9	135	76.6	40.2
0190	May-07	0024	4201.9	6930.9	W13592.4	Y44036.3	108	116.5	42.4
0191	May-07	0452	4153.8	6855.6	W13443.5	Y43943.6	019	85.3	41.5
0192	May-07	0849	4143.7	6821.7	W13324.3	Y43848.2	059	47.0	41.7
0193	May-07	1320	4204.2	6748.6	W13066.0	Y43918.3	073	105.3	43.6
0194	May-07	1517	4205.1	6740.3	W13024.6	Y43913.8	296	97.1	41.9
0195	May-07	1759	4206.7	6722.9	W12941.7	Y43902.5	244	45.4	43.3
0196	May-07	2018	4158.1	6700.2	W12894.0	Y43837.5	320	29.8	44.3
0197	May-07	2307	4151.9	6723.1	W13019.5	Y43829.2	310	32.5	44.6
0199	May-08	0310	4144.1	6705.3	W12985.3	Y43773.0	201	32.8	44.1
0200	May-08	0553	4135.3	6723.6	W13103.6	Y43745.0		31.2	44.9
0201	May-08	0902	4140.5	6740.1	W13149.4	Y43787.4	338	21.3	45.8
0202	May-08	1241	4131.0	6750.4	W13240.9	Y43747.2	033	21.6	45.7
0203	May-08	1708	4115.1	6803.3	W13373.4	Y43672.2	242	23.5	45.8
0204	May-08	2016	4105.3	6809.8	W13446.5	Y43622.8	237	24.6	45.9
0205	May-08	2311	4114.3	6823.4	W13470.5	Y43685.9	086	30.1	45.6
0206	May-09	0141	4120.1	6837.6	W13512.8	Y43733.1	054	42.9	42.9
0207	May-09	0532	4107.2	6834.2	W13553.4	Y43655.1		31.7	
0208	May-09	0733	4106.0	6845.4	W13613.2	Y43658.2	261	38.0	
0209	May-09	0910	4101.8	6845.4	W13631.1	Y43633.2	010	33.9	44.1
0210	May-09	1204	4047.4	6842.2	W13674.7	Y43543.8	081	34.7	45.4
0211	May-09	1410	4045.3	6835.7	W13651.8	Y43526.2	092	32.8	45.4
0212	May-09	1646	4046.8	6822.7	W13584.4	Y43525.3	225	29.8	45.2
0213	May-09	1907	4048.9	6808.3	W13509.3	Y43527.2	231	32.8	45.1
0214	May-09	2217	4027.1	6818.5	W13643.1	Y43404.7	039	57.4	
0215	May-10	0127	4018.7	6801.2	W13597.4	Y43345.0	076	102.3	52.1
0216	May-10	0345	4028.2	6756.6	W13540.8	Y43398.3	197	68.9	54.7
0217	May-10	0823	4027.2	6718.9	W13384.4	Y43373.0	227	143.0	49.9
0218	May-10	1111	4038.9	6710.9	W13304.0	Y43433.9	202	59.9	52.3
0219	May-10	1353	4050.7	6727.7	W13324.0	Y43509.2	178	45.4	43.8
0220	May-10	1559	4059.8	6732.2	W13303.9	Y43562.2	179	36.9	43.8
0221	May-10	1810	4110.8	6725.4	W13226.4	Y43616.9	195	29.0	44.2
0222	May-10	2015	4106.4	6715.0	W13202.7	Y43585.8	222	33.9	43.6
0223	May-10	2256	4117.3	6657.6	W13083.0	Y43630.0	224	36.9	
0224	May-11	0102	4105.1	6659.4	W13145.3	Y43567.8	232	38.0	43.7
0225	May-11	0338	4048.0	6650.3	W13184.2	Y43471.5	230	60.4	48.2
0226	May-11	0645	4053.9	6635.2	W13100.6	Y43493.9	229	105.5	49.5
0227	May-11	0900	4059.5	6630.9	W13060.5	Y43520.0	229	63.7	53.2

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2014 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran		Depth (FM)	Temp (F)	Bottom
					TD's	Course			
0228	May-11	1128	4100.9	6625.6	W13034.6	Y43523.8	215	162.7	45.2
0229	May-11	1336	4103.3	6627.1	W13029.3	Y43537.3	182	76.3	52.5
0230	May-11	1603	4117.4	6634.0	W12991.5	Y43613.1	261	48.4	45.3
0231	May-11	1823	4131.8	6638.5	W12941.2	Y43688.6	175	43.5	42.6
0232	May-11	2009	4133.3	6634.3	W12917.8	Y43692.8	235	46.2	42.6
0233	May-11	2147	4128.7	6628.3	W12917.4	Y43665.6	164	51.4	42.9
0234	May-11	2340	4118.8	6619.9	W12933.1	Y43610.6	227	51.4	48.3
0236	May-12	0326	4119.4	6611.0	W12898.3	Y43607.3	345	104.4	49.3
0237	May-12	0554	4130.9	6610.0	W12841.1	Y43662.7	174	55.0	43.4
0238	May-12	0858	4146.0	6625.1	W12822.6	Y43747.2	209	43.2	41.4
0239	May-12	1123	4143.8	6607.7	W12771.6	Y43722.7	227	50.6	42.8
0240	May-12	1346	4138.3	6552.9	W12747.6	Y43685.7	229	77.6	52.1
0241	May-12	1703	4151.2	6552.2	W12683.0	Y43745.4	002	67.5	52.2
0242	May-12	1912	4155.4	6546.2	W12642.9	Y43759.7	141	109.4	
0243	May-12	2159	4205.2	6550.7	W12608.3	Y43808.1	128	141.6	
0244	May-13	0039	4210.2	6549.2	W12578.7	Y43829.0	007	136.7	47.8
0245	May-13	0504	4201.1	6605.9	W12679.5	Y43802.1	060	53.3	43.5
0246	May-13	0718	4203.0	6610.4	W12685.3	Y43814.9	095	52.2	43.5
0247	May-13	0939	4210.2	6615.4	W12665.7	Y43852.3	116	109.9	47.7
0248	May-13	1303	4209.5	6629.9	W12720.5	Y43862.6	278	82.0	
0249	May-13	1403	4209.3	6629.2	W12718.7	Y43861.3	283	82.3	48.4
0250	May-13	1604	4208.3	6642.8	W12774.1	Y43869.5	088	52.5	42.6
0251	May-13	1759	4209.4	6650.6	W12797.8	Y43882.5	090	62.6	42.6
0252	May-13	2114	4219.2	6712.4	W12831.5	Y43951.4	092	161.3	48.3
0253	May-14	0027	4231.3	6725.8	W12819.1	Y44023.8	077	163.8	48.7
0255	May-14	0342	4233.0	6700.5	W12707.5	Y44002.6	275	172.0	48.1
0256	May-14	0704	4238.1	6650.7	W12641.1	Y44014.8	122	121.4	48.5
0257	May-14	1015	4236.8	6637.9	W12601.6	Y43995.0	114	97.6	45.1
0258	May-14	1221	4233.8	6628.1	W12583.5	Y43971.3	276	115.4	
0260	May-14	1715	4255.8	6648.0	W12529.3	Y44089.6	020	106.1	45.8
0261	May-14	1919	4306.3	6645.3	W12457.0	Y44131.1	207	62.3	
0262	May-14	2211	4318.1	6651.5	W12407.2	Y44187.7	191	105.8	45.2
0265	May-15	0224	4331.3	6725.6	W12453.4	Y44285.4	039	121.9	47.2
0266	May-15	0446	4332.6	6721.3	W12427.5	Y44284.9	008	127.1	47.1
0267	May-15	0814	4349.2	6657.6	W12230.4	Y44318.4	237	107.2	45.4
0268	May-15	1029	4353.8	6649.8	W12173.3	Y44325.8	207	74.9	43.9
0269	May-15	1302	4401.5	6657.5	W12147.9	Y44364.5	062	94.9	45.7
0270	May-15	1518	4402.8	6705.0	W12164.7	Y44379.4	038	80.7	43.8
0271	May-15	1732	4402.4	6717.4	W12212.7	Y44394.5	045	109.6	46.5
0272	May-15	2114	4421.0	6701.3	W12026.5	Y44439.5	224	75.2	44.0
0273	May-16	0003	4417.6	6714.1	W12094.3	Y44445.0	073	98.4	46.1
0274	May-16	0203	4418.9	6717.0	W12095.3	Y44453.8	055	89.7	45.4
0275	May-16	0521	4420.7	6717.2	W12082.7	Y44460.4	105	78.5	42.5
0276	May-16	1703	4415.1	6754.8	W12273.4	Y44494.3	060	38.0	41.2
0277	May-16	2010	4409.9	6757.1	W12320.5	Y44478.9	208	48.1	41.6
0278	May-17	0008	4356.0	6803.9	W12450.2	Y44437.0	040	98.4	45.2
0279	May-17	0249	4347.6	6808.0	W12527.6	Y44410.5	020	96.5	46.0

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2014 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran		Depth (FM)	Temp (F)	Bottom
					TD's	Course			
0280	May-17	0649	4344.5	6826.4	W12637.1	Y44426.3	220	100.3	45.2
0281	May-17	1013	4356.5	6821.2	W12529.0	Y44464.9	235	59.6	42.6
0282	May-17	1318	4405.3	6806.0	W12393.9	Y44475.2	242	55.8	41.7
0283	May-17	1750	4410.1	6735.6	W12228.8	Y44448.2	198	100.3	46.6
0284	May-17	2045	4402.0	6734.3	W12281.1	Y44416.6	176	120.8	
0285	May-17	2357	4348.8	6743.1	W12408.6	Y44378.9	178	124.9	48.2
0286	May-18	0206	4346.3	6749.3	W12452.2	Y44378.0	172	120.3	47.9
0287	May-18	0543	4337.3	6752.1	W12525.1	Y44346.4	202	131.8	48.2
0288	May-18	0928	4317.6	6747.7	W12634.6	Y44258.7	212	135.9	47.3
0289	May-18	1230	4306.5	6753.4	W12730.2	Y44218.5	234	107.2	44.1
0290	May-18	1442	4305.7	6749.1	W12715.8	Y44209.1	220	106.9	43.9
0291	May-18	1814	4250.6	6753.6	W12828.1	Y44147.5	083	106.9	45.8
0292	May-18	2139	4246.4	6747.2	W12824.4	Y44120.2	083	110.7	46.7
0293	May-19	0146	4224.9	6811.5	W13059.7	Y44048.7	081	97.6	44.7
0294	May-19	0533	4214.3	6748.0	W13009.6	Y43967.8	258	128.8	47.8
0295	May-19	0729	4210.7	6755.7	W13063.7	Y43959.1	282	128.0	47.9
0296	May-19	1004	4210.3	6818.6	W13173.2	Y43984.5	199	105.0	46.1
0297	May-19	1449	4208.5	6855.4	W13367.6	Y44022.9	231	82.8	41.5
0298	May-19	1758	4149.5	6857.6	W13475.2	Y43922.2	310	86.9	41.5
0299	May-19	2008	4154.5	6907.8	W13503.9	Y43963.4	006	112.4	41.4
0300	May-19	2349	4201.3	6905.2	W13456.5	Y43997.2	354	103.3	41.6
0301	May-20	0436	4221.2	6858.3	W13314.5	Y44093.7	303	120.6	42.8
0302	May-20	0754	4233.8	6848.2	W13191.6	Y44143.0	067	108.8	44.2
0303	May-20	1144	4242.6	6829.8	W13047.9	Y44159.6	263	108.0	44.3
0304	May-20	1518	4306.0	6837.5	W12945.5	Y44279.4	140	105.3	42.2
0305	May-20	1758	4300.5	6856.3	W13077.9	Y44283.0	144	82.8	41.6
0306	May-20	2156	4314.4	6913.2	W13084.3	Y44373.4	285	92.7	41.8
0307	May-21	0107	4330.5	6906.9	W12945.4	Y44433.2	073	76.6	41.1
0308	May-21	0658	4347.7	6902.8	W12806.8	Y44497.3	020	43.5	41.2
0309	May-21	1138	4332.9	6909.2	W12942.3	Y44447.0	012	77.1	41.3
0310	May-21	1340	4330.1	6911.8	W12975.2	Y44439.9	340	80.1	41.2
0311	May-21	1704	4325.7	6933.8	W13130.4	Y44458.4	108	92.7	41.4
0312	May-21	2001	4309.7	6916.1	W13129.5	Y44357.1	222	109.1	42.2
0313	May-21	2333	4246.5	6859.9	W13180.2	Y44222.7	358	99.2	41.8
0314	May-22	0212	4237.5	6915.3	W13316.4	Y44201.5	139	117.8	43.9
0315	May-22	0544	4251.6	6930.4	W13320.3	Y44295.6	177	91.6	42.2
0316	May-22	0745	4248.4	6933.7	W13358.1	Y44285.2	129	101.4	42.1
0317	May-22	1122	4232.4	6948.6	W13535.3	Y44228.5	002	145.5	44.0
0318	May-22	1500	4222.6	7003.8	X25528.8	Y44201.3	211	47.6	39.7
0319	May-22	1710	4214.0	6959.9	W13698.7	Y44147.7	271	69.4	40.1
0320	May-22	1909	4208.1	7004.7	X25432.6	Y44122.4	302	30.9	39.9
0321	May-27	2049	4150.2	7027.0	X25438.2	Y44052.0	050	15.6	
0322	May-27	2138	4150.4	7026.8	X25437.8	Y44052.6	035	16.7	
0323	May-27	2256	4153.6	7000.2	X25305.6	Y44031.4		20.5	
0324	May-27	2356	4153.7	7024.7	X25445.3	Y44069.1	033	20.5	42.1
0325	May-28	0134	4155.5	7027.9	X25479.3	Y44085.3	000	19.1	42.1
0326	May-28	0330	4150.4	7026.9	X25438.1	Y44052.6	033	14.8	46.7

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2014 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran		Depth (FM)	Bottom Temp (F)
					TD's	Course		
0327	May-28	0509	4150.1	7023.0	X25410.2	Y44045.0 063	14.5	43.1
0328	May-28	0654	4151.5	7017.6	X25384.9	Y44045.1 090	15.6	43.0
0329	May-28	0904	4158.3	7017.0	X25429.3	Y44084.7 099	23.2	40.5
0330	May-28	1047	4201.0	7016.3	X25444.5	Y44099.7 073	29.0	40.0
0331	May-28	1415	4215.2	7037.0	X25668.7	Y44216.9 132	20.5	41.6
0332	May-28	1643	4216.6	7035.7	X25668.8	Y44222.3 118	29.0	41.4
0333	May-28	1826	4219.6	7040.8	X25721.9	Y44249.0 149	26.5	41.9
0334	May-28	2048	4224.3	7045.8	X25783.8	Y44284.5 153	24.9	41.6
0335	May-28	2320	4230.2	7039.5	X25779.3	Y44305.4 054	37.2	40.4
0336	May-29	0110	4231.3	7043.2	X25810.0	Y44318.5 033	24.9	40.5
0337	May-29	0327	4231.0	7038.0	X25775.2	Y44307.4 060	35.5	40.6
0338	May-29	0751	4247.7	7021.7	X25785.2	Y44365.5 279	59.1	39.2
0339	May-29	0947	4250.2	7030.4	X25848.3	Y44394.1 084	64.5	38.8
0340	May-29	1210	4246.5	7045.3	X25914.3	Y44403.4 343	15.3	47.7
0341	May-29	1318	4249.8	7045.2	X25933.0	Y44420.1 345	17.2	47.5
0343	May-29	1633	4253.9	7035.7	X25900.5	Y44422.8 052	42.9	40.8
0344	May-29	1838	4256.2	7022.0	X25838.6	Y44408.6 003	71.4	40.6
0345	May-29	2256	4309.3	7018.7	X25898.7	Y44465.4 033	65.6	40.1
0346	May-30	0158	4317.2	6959.1	W13337.6	Y44465.5 348	76.8	40.4
0347	May-30	0643	4247.8	7010.6	X25727.5	Y44345.5 123	40.7	40.9
0348	May-30	0910	4244.9	7008.4	X25698.2	Y44326.8 142	72.7	40.3
0349	May-30	1114	4240.5	7013.4	X25695.3	Y44313.1 124	49.8	40.2
0350	May-30	1324	4236.7	7018.4	X25697.5	Y44302.2 182	40.5	40.2
0351	May-30	1551	4229.2	7020.3	X25659.0	Y44265.5 097	83.9	39.7
0352	May-30	2230	4204.1	6958.9	W13741.7	Y44090.5 155	36.4	40.6
0353	May-31	0304	4147.7	6953.6	W13789.5	Y43986.7 167	14.8	42.9
0354	May-31	0554	4142.8	6952.5	W13806.0	Y43955.8 355	11.5	45.2
0355	May-31	0846	4136.0	6943.9	W13788.2	Y43903.3 323	18.6	
0356	May-31	1055	4134.6	6935.2	W13746.3	Y43883.7 285	29.3	41.1
0357	May-31	1649	4203.0	6934.3	W13606.3	Y44047.3 021	122.2	42.2

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

STATION	ATLANTIC COD	HADDOCK	POLLOCK	WHITE HAKE	SILVER HAKE	REDFISH	GOOSEFISH	SPINY DOGFISH	YELLOWTAIL FLOUNDER	WINTER FLOUNDER	AMERICAN PLAICE	WITCH FLOUNDER	WINDOW/PANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOUISO	ILLEX	TOTAL OTHER [2]	TOTAL ALL			
	37	0	0	0	0	0	0	7	0	0	0	0	0	4	1	0	0	11	0	24	24	0	0	0	0	0	7	78	
38	0	0	0	0	0	0	0	7	0	0	0	0	0	6	1	0	0	0	0	39	39	0	0	0	0	0	50	142	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	1	0	8	56	0	0	0	0	0	4	75	
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	18	3	0	0	0	0	0	6	29
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	7	17
42	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	26	39
43	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	32	14	0	0	0	0	0	14	100
45	0	0	0	0	0	0	13	136	0	0	0	0	0	0	8	0	0	2	0	0	36	4	0	0	0	0	0	20	219
46	0	0	0	0	8	0	13	706	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	81	840	
47	0	0	0	0	11	0	14	722	0	0	0	0	0	0	22	0	1	0	0	0	0	0	0	0	0	0	0	16	841
48	0	0	0	0	9	0	0	535	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	20	582
49	0	0	0	0	1	0	2	732	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	33	796
50	0	0	0	4	4	0	13	783	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	42	863	
51	0	0	0	5	2	0	25	1803	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	100	1971	
52	0	0	0	0	1	0	0	2141	0	0	0	0	0	0	3	0	3	0	0	0	0	15	0	0	0	0	0	113	2277
53	0	0	0	0	1	0	0	4305	0	0	0	0	0	0	4	0	19	0	0	0	0	6	1	0	0	0	0	470	4809
54	0	0	0	0	1	0	0	2005	0	0	0	0	0	0	14	2	0	0	0	10	0	8	3	0	0	0	0	47	2098
55	0	1	0	0	1	0	0	2388	0	0	0	0	0	0	0	79	1	0	0	0	0	4	1	0	0	0	0	30	2511
56	0	0	0	0	2	0	1	981	0	0	0	0	1	0	8	2	1	0	0	0	35	29	0	0	2	0	0	61	1123
57	0	0	0	0	3	0	0	40	0	0	0	0	0	0	16	0	0	11	0	4	119	0	0	0	0	0	0	16	214
58	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	1	40	73	0	0	0	0	0	3	123	
59	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	2	0	25	74	0	0	0	0	0	62	170	
60	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	37	158	0	0	0	0	0	54	251	
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	10	0	0	0	0	0	0	16	
64	0	0	0	0	7	0	0	0	5	2	0	0	0	1	2	0	0	0	12	0	191	227	0	3	0	0	0	16	466
65	2	9	0	0	20	0	6	0	28	0	0	0	0	7	6	0	0	24	0	386	358	0	0	0	0	0	29	875	
66	2	6	0	0	4	0	0	0	28	0	0	0	0	3	0	6	0	0	4	0	148	319	0	0	0	0	0	10	524
67	0	2	0	0	3	0	0	31	6	0	0	3	2	6	0	0	91	0	104	275	0	1	0	0	0	11	535		
68	0	386	0	0	7	0	0	0	17	0	0	0	2	7	0	0	43	0	111	107	0	0	0	0	0	14	694		
69	0	8	0	0	5	0	4	36	4	0	0	0	7	4	0	0	231	0	170	103	0	2	0	0	0	43	617		
70	0	10	0	0	4	0	17	611	1	0	0	0	1	6	0	0	8	8	74	13	0	1	1	0	0	97	852		
71	0	0	0	6	116	0	32	6	0	0	0	0	0	34	0	0	0	0	0	131	2	0	0	3	0	0	450	780	
72	0	0	0	0	7	0	20	317	0	0	0	0	0	0	54	0	0	0	0	7	0	0	16	0	43	0	55	519	
73	0	0	0	0	9	0	25	644	0	0	0	0	0	0	31	0	4	0	0	0	0	0	6	0	25	0	77	821	
74	0	0	0	0	20	0	0	2797	0	0	0	0	0	0	26	0	1	0	0	0	0	0	24	0	16	0	48	2932	
75	0	0	0	0	17	0	25	49	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	5	0	0	82	185	
76	0	0	0	4	19	0	12	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	25	0	0	109	174	

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

		ATLANTIC COD	HADDOCK	POLLOCK	WHITE HAKE	SILVER HAKE	REDFISH	GOOSEFISH	SPINY DOGFISH	YELLOWTAIL FLOUNDER	WINTER FLOUNDER	AMERICAN PLAICE	WITCH FLOUNDER	WINDOW/PANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOUISO	ILLEX	TOTAL OTHER ^[2]	TOTAL ALL	
153	0	0	0	0	1	0	0	0	0	10	0	0	0	1	0	0	0	0	0	8	0	0	0	0	0	127	190	
154	0	0	0	0	0	0	0	0	0	2	3	0	0	2	0	0	0	0	2	30	0	0	0	0	0	33	93	
155	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4	20	
156	0	0	0	0	0	0	0	0	1	14	0	0	0	1	0	0	0	0	0	7	14	0	0	0	0	0	20	168
157	0	0	0	0	121	0	0	0	1	0	0	0	0	0	2	0	0	0	0	11	0	0	0	0	0	0	31	828
158	0	5	0	6	23	0	16	0	0	0	0	0	0	0	1	2	0	0	0	104	431	0	0	0	0	0	156	325
159	0	0	0	1	13	0	9	5309	0	0	0	0	0	0	0	44	0	1	0	6	10	0	15	0	8	0	68	5484
160 ^[1]	0	0	0	0	11	0	12	15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	1	53	98	
161	0	0	0	0	13	0	40	272	0	0	0	0	0	0	0	221	0	4	0	0	0	0	192	0	53	0	58	853
162	0	1	0	0	8	0	10	2	0	0	0	0	0	0	0	1	0	0	0	0	11	0	0	0	4	0	75	112
163	0	0	0	0	11	0	11	11	0	0	0	0	0	0	0	3	0	1	0	0	12	0	155	0	112	2	98	416
164	0	3	0	1	9	0	8	2	0	0	0	0	0	0	0	5	0	0	0	60	16	2	0	0	0	66	172	
165	0	0	0	0	11	0	5	902	0	0	0	0	1	0	20	0	0	0	0	155	10	6	0	8	0	108	1226	
166	0	0	0	0	47	0	46	271	0	0	0	0	0	0	51	0	0	0	0	30	1	38	0	11	0	97	592	
167	0	0	0	0	14	0	26	1561	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	20	0	65	1690	
168	0	0	0	0	37	0	6	29	0	0	0	0	1	0	0	0	0	0	0	1	4	0	27	1	57	163		
169 ^[1]	0	0	0	0	144	0	6	137	0	0	0	0	1	0	0	0	0	0	0	16	0	0	0	10	0	93	407	
170	0	0	0	0	11	0	49	17	0	0	0	0	0	0	34	0	0	0	0	21	0	47	0	52	111	81	423	
171	0	0	0	0	14	0	0	6	0	0	0	0	0	0	17	0	0	0	0	30	0	65	0	33	1	54	220	
172	0	178	0	0	5	0	0	1	0	0	0	0	0	1	5	0	0	0	0	236	17	0	0	1	0	49	493	
173	0	111	0	2	14	0	9	1	0	0	0	0	3	0	0	0	0	0	3	89	25	3	0	1	0	78	339	
174	0	386	0	0	9	0	0	0	5	0	0	0	0	1	0	0	0	0	353	0	36	20	0	0	0	30	840	
175	0	0	0	0	25	0	11	0	1	1	0	0	0	4	2	0	0	4	0	253	81	0	0	0	0	15	397	
176	0	1	0	0	44	0	1	4	1	3	0	0	0	12	0	0	0	2	0	520	448	0	0	0	0	28	1064	
177	1	30	0	0	1	0	0	0	4	6	0	0	3	0	0	0	0	0	1	16	67	0	4	0	0	40	173	
178 ^[1]	0	2	0	0	3	0	0	0	1	2	0	0	0	0	0	0	0	0	2	13	42	0	0	0	0	35	100	
179 ^[1]	6	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	40	57	
180	6	0	1	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	64	5	0	0	0	1	0	57	149	
181	2	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	24	32	
182	0	0	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	12	5	1	0	0	0	0	8	32	
183	0	4	0	0	24	0	1	0	0	0	1	3	0	0	0	0	0	1	0	4	0	0	11	0	0	85	134	
184	0	0	0	0	45	4	0	0	0	0	4	1	0	0	0	0	0	1	0	2	0	0	7	0	0	79	143	
185 ^[1]	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	12	30	
186 ^[1]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
187	2	4	1	0	205	0	0	0	4	0	0	0	0	0	0	0	0	0	910	52	0	0	0	0	0	53	1231	
188 ^[1]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
189	3	0	0	3	139	6	1	12	0	0	8	4	0	0	0	0	0	11	0	0	0	0	11	0	0	112	310	

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2014
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

	ATLANTIC COD	HADDOCK	POLLOCK	WHITE HAKE	SILVER HAKE	REDFISH	GOOSEFISH	SPINY DOGFISH	YELLOWTAIL FLOUNDER	WINTER FLOUNDER	AMERICAN PLAICE	WITCH FLOUNDER	WINDOW/PANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOUIGO	ILLEX	TOTAL OTHER [2]	TOTAL ALL	
	346	0	15	0	59	5	40	0	0	0	31	7	0	0	0	0	0	1	1	0	0	0	10	0	0	85	254
347	16	122	3	0	1	2	0	0	0	6	3	0	0	0	0	0	0	0	0	0	0	8	0	0	37	198	
348	0	4	1	1	328	50	1	11	0	0	15	5	0	0	0	0	0	0	0	0	0	3	0	0	76	529	
349	61	185	7	0	23	82	0	0	0	3	1	1	0	0	0	0	0	0	1	0	0	11	0	0	34	409	
350	75	288	0	0	0	2	0	0	14	74	9	0	0	0	0	0	0	0	0	0	0	0	0	0	239	701	
351	0	22	0	0	54	113	1	0	4	2	519	6	0	0	0	0	0	0	0	0	0	10	0	0	118	849	
352	9	201	0	0	29	1	0	13	95	0	7	0	0	0	0	0	0	1	4	0	1	0	2	0	0	74	437
353	0	1	0	0	4	0	0	0	3	2	0	0	0	0	0	2	0	0	2	0	0	3	0	0	12	29	
354	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	9	14	
355	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	14	23	
356	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	6	0	0	70	78	
357	0	1	0	2	140	8	3	19	0	0	1	3	0	0	0	0	16	0	0	0	0	7	0	0	74	274	
TOTAL	1486	33027	876	1309	18564	8313	1796	74160	2296	2149	1562	561	307	1096	357	266	6338	351	7229	15258	2562	4004	1601	188	21115	212753	

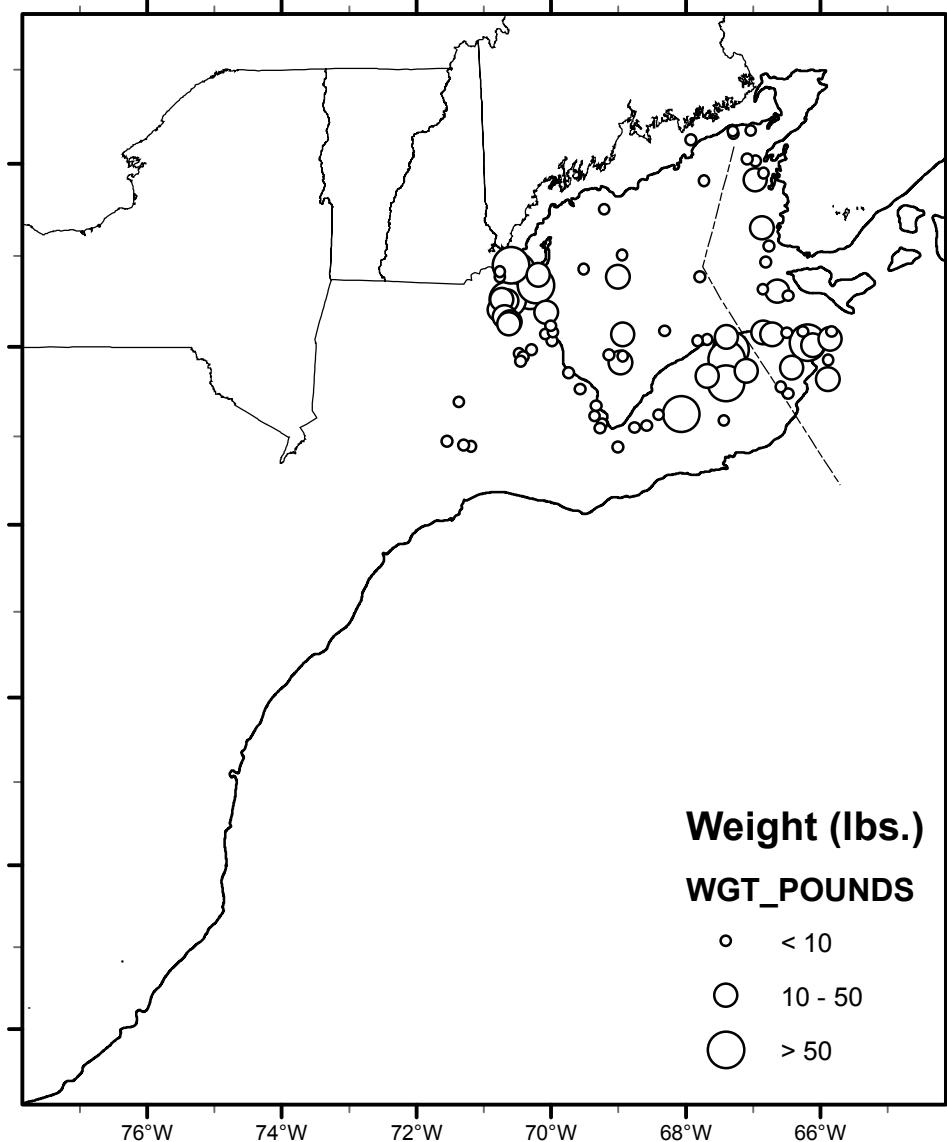
[1] Excluded from stock assessment due to an unacceptable tow evaluation code

[2] "Total other" in southern areas are primarily comprised of various rays, spot and Atlantic croaker

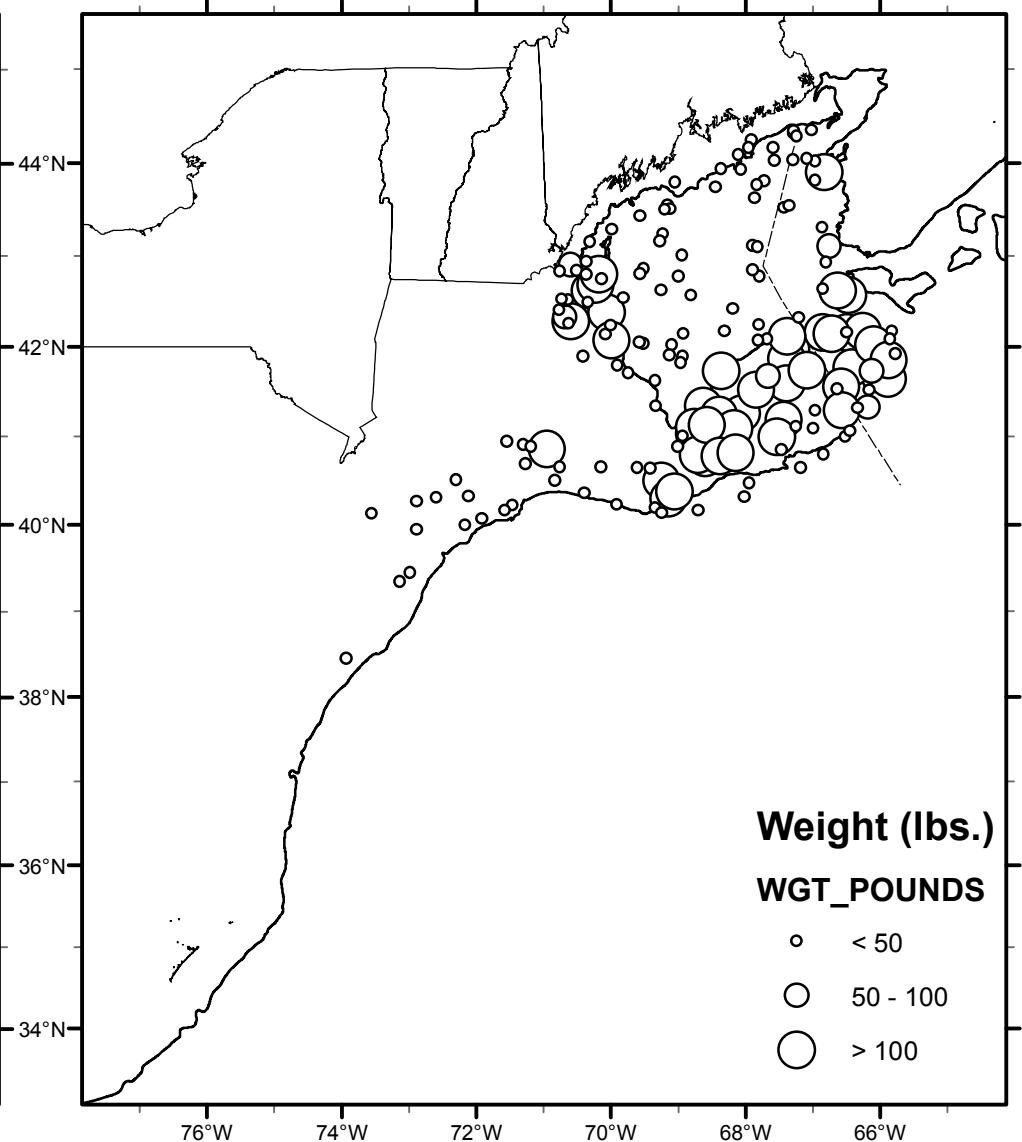
[3] Missing sequential numbers indicate either a test-tow or no-trawl was attempted

NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

ATLANTIC COD

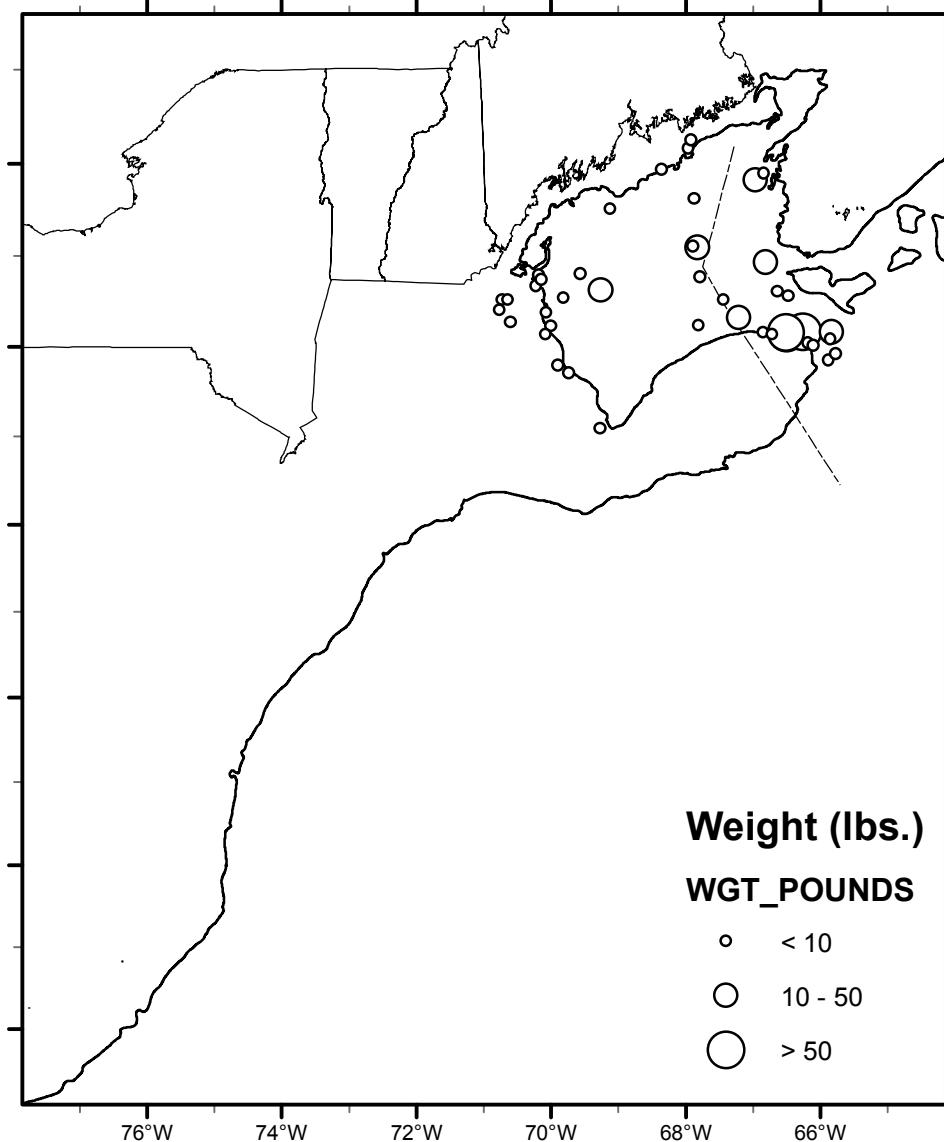


HADDOCK

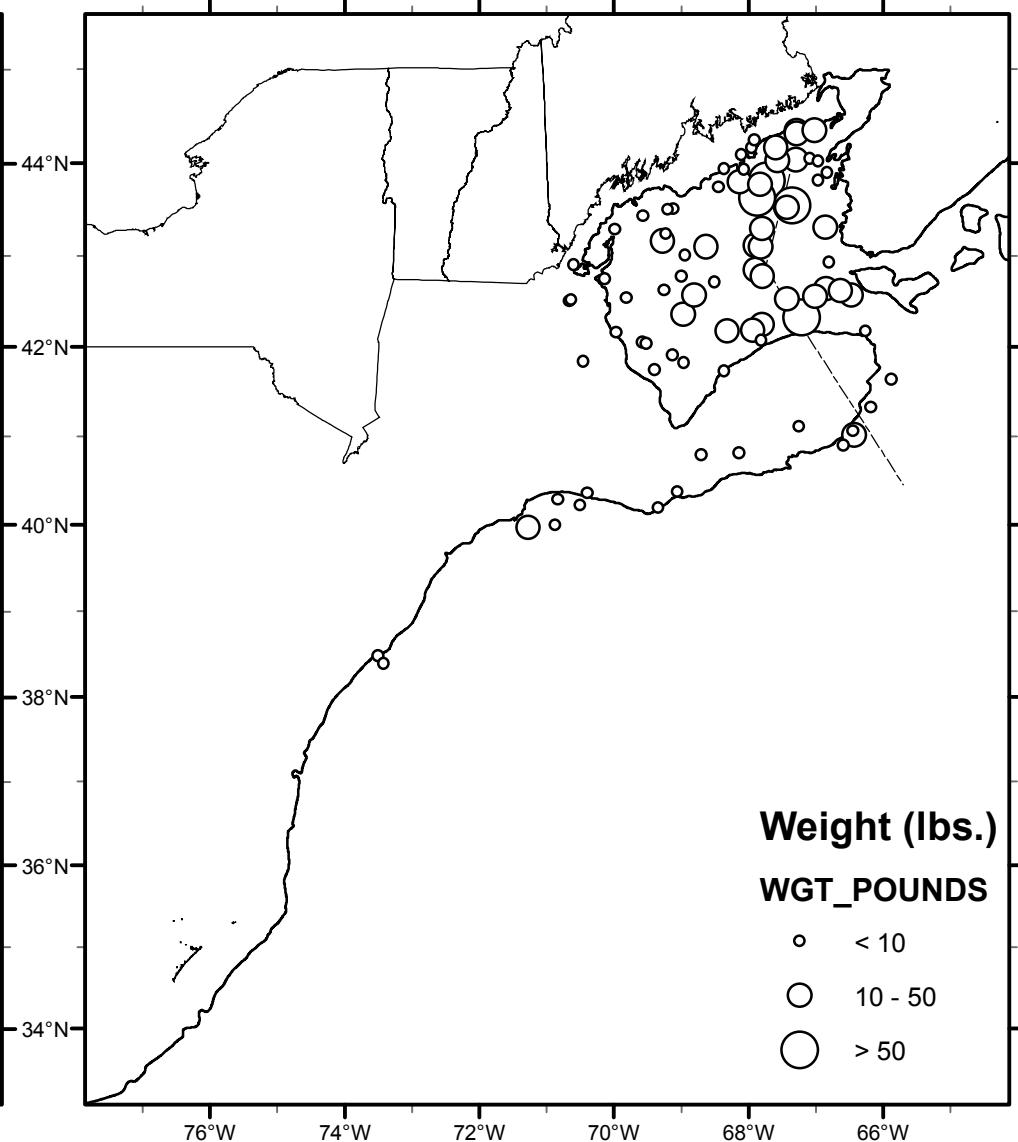


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

POLLOCK

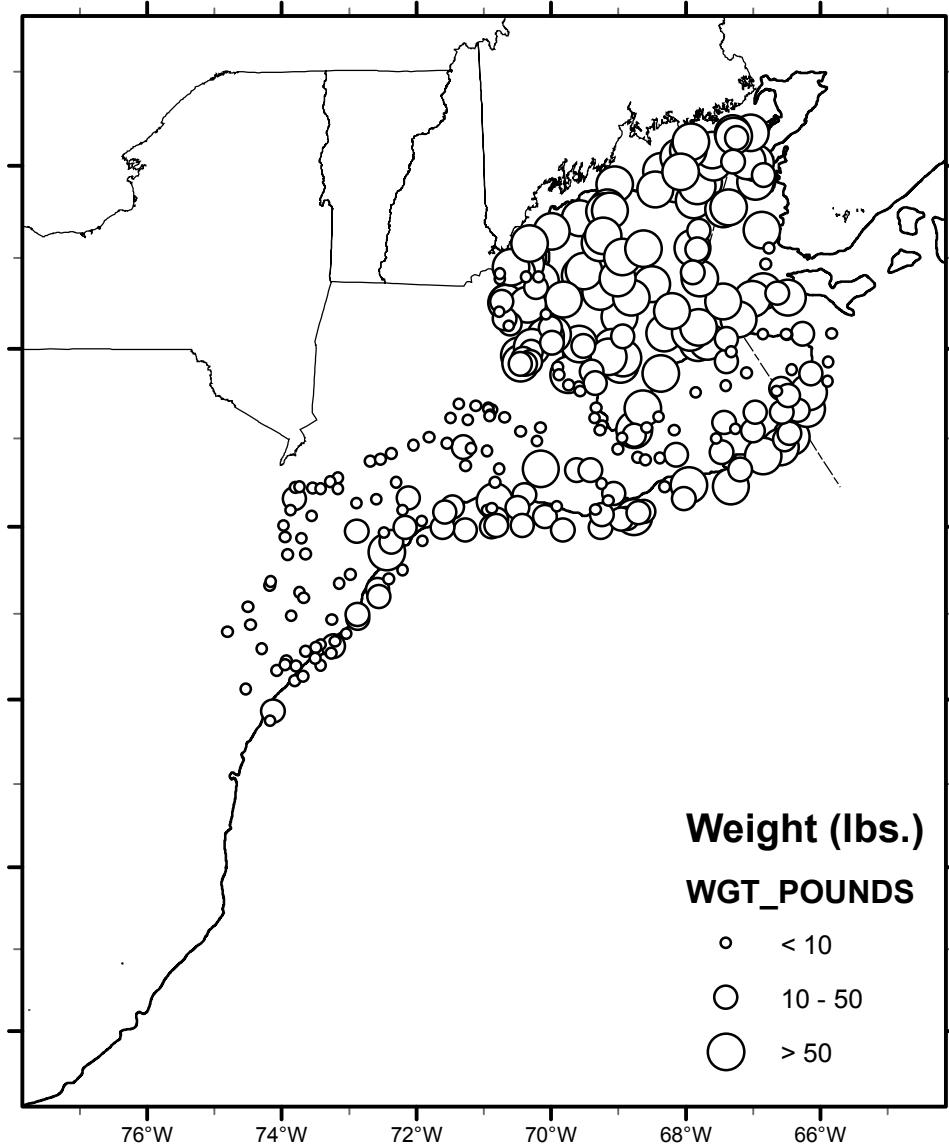


WHITE HAKE

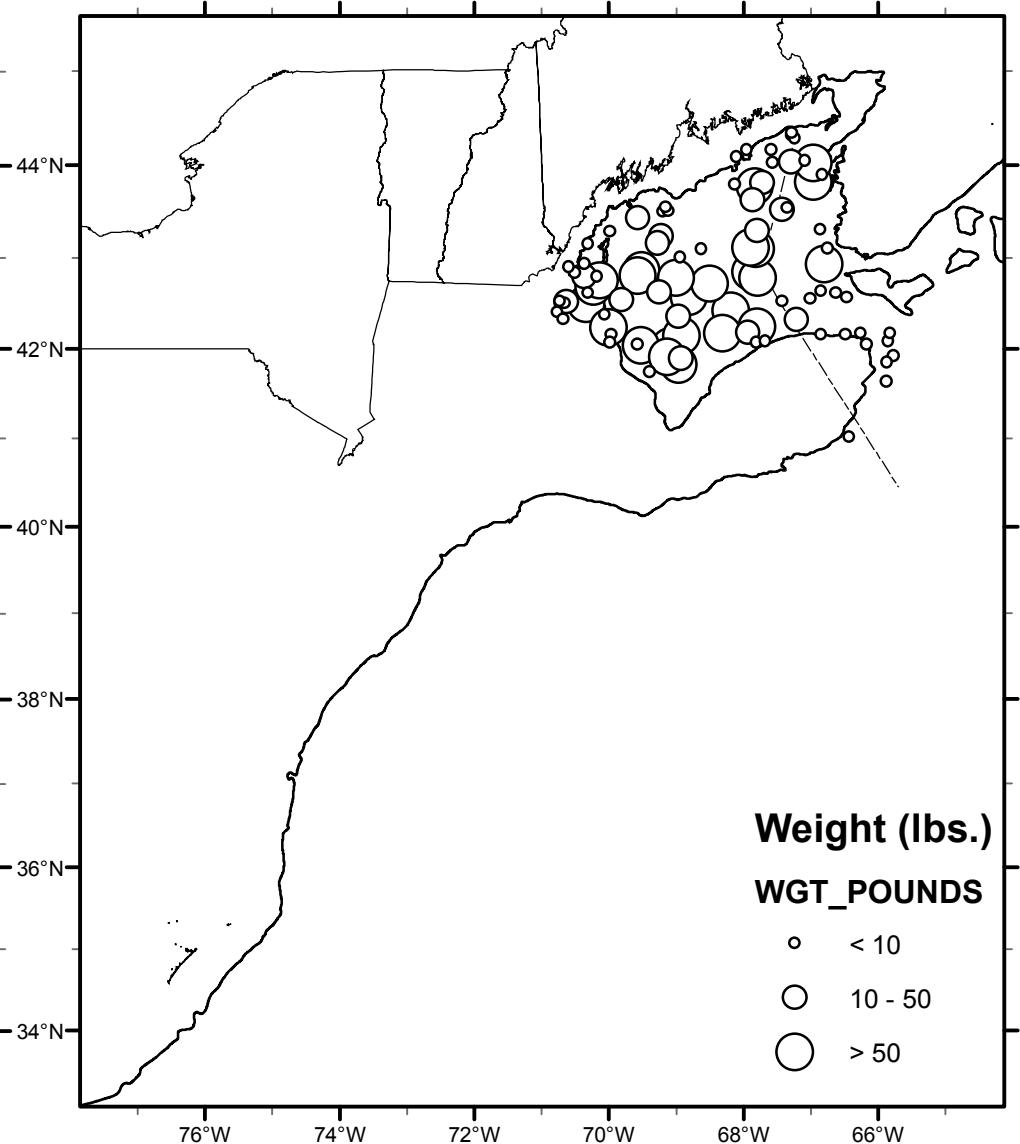


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

SILVER HAKE

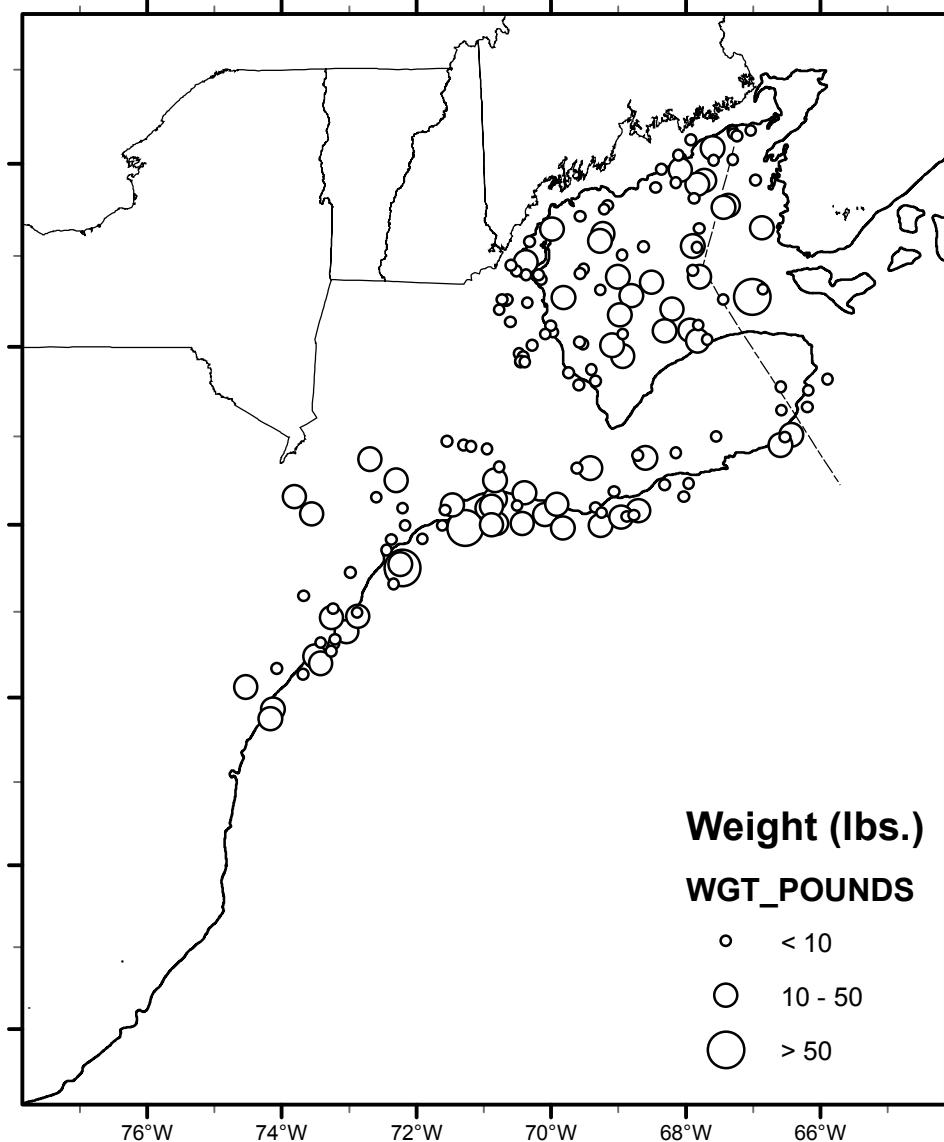


ACADIAN REDFISH

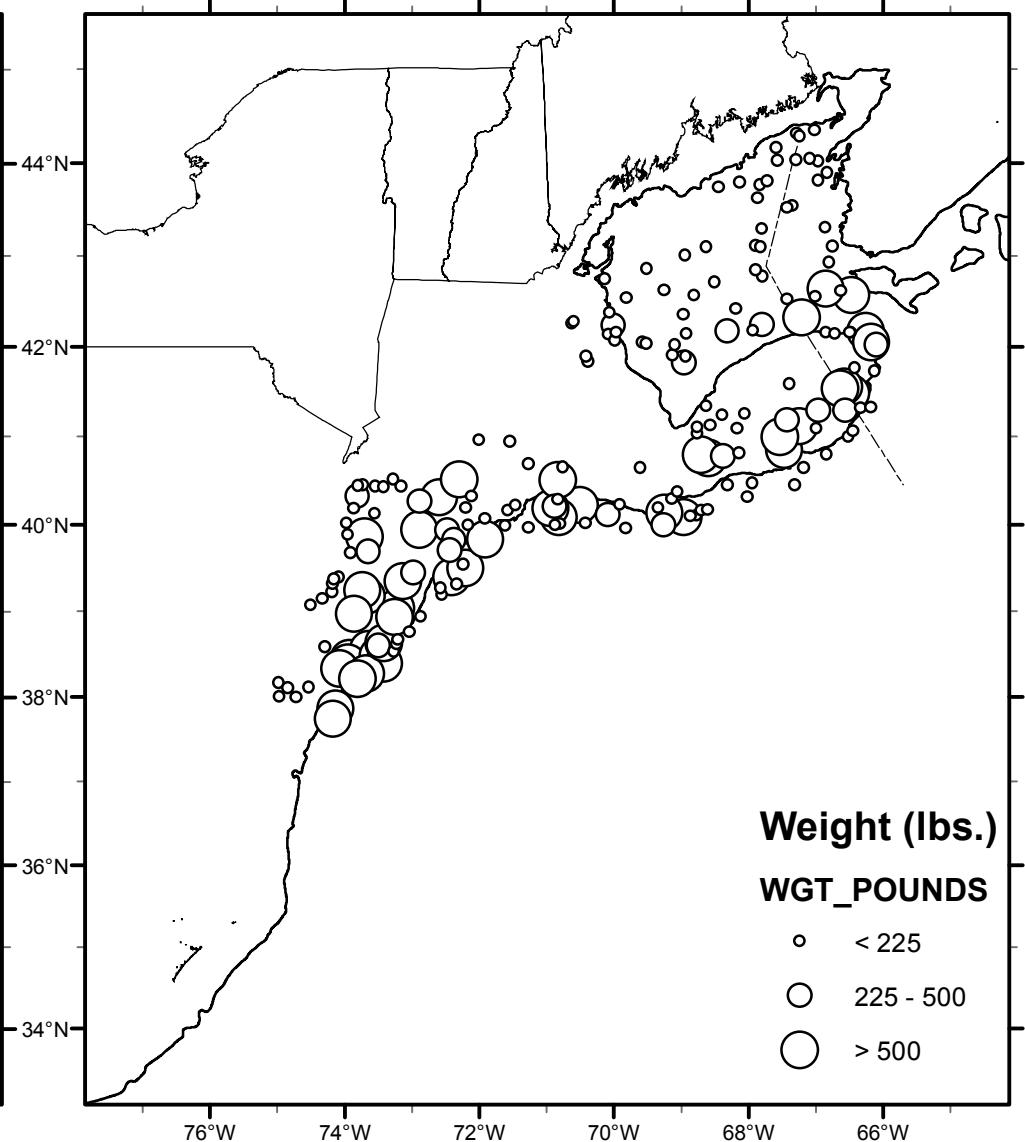


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

GOOSEFISH

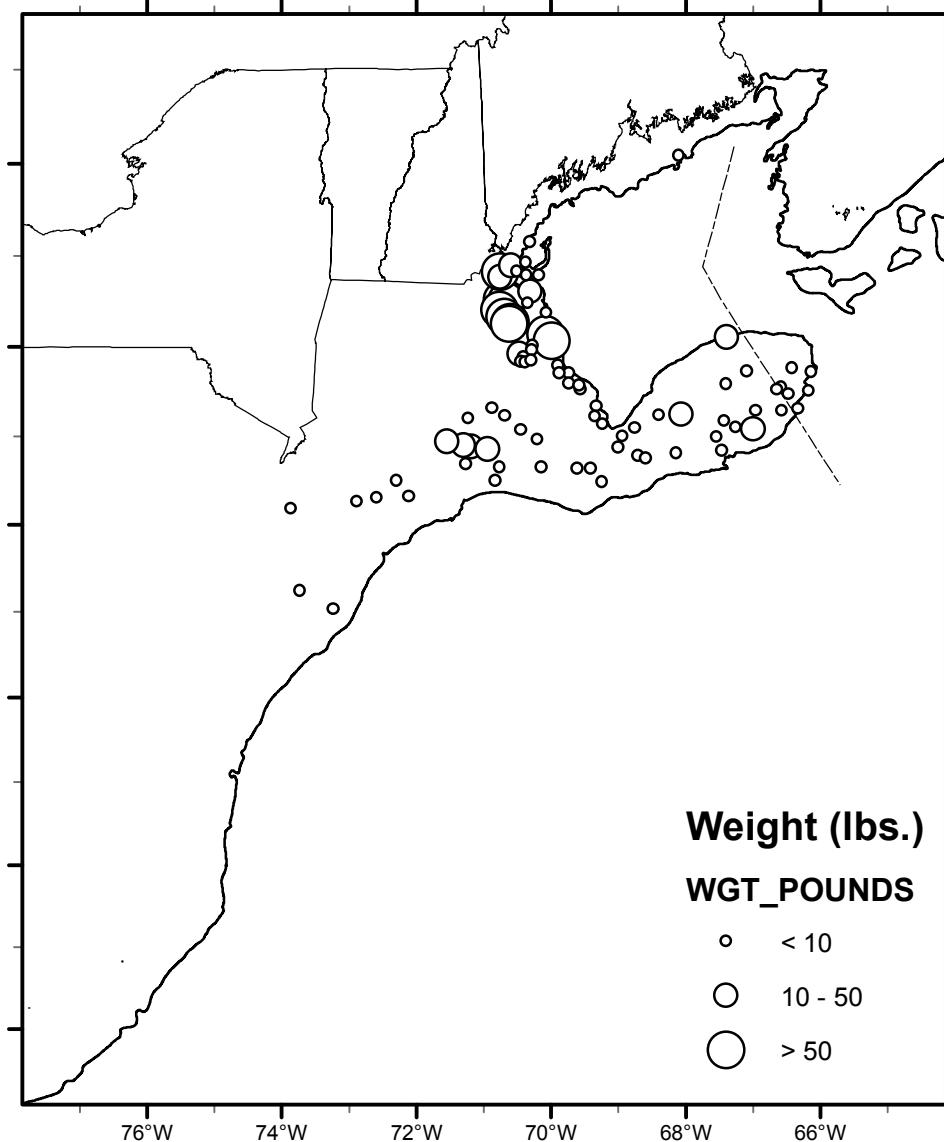


SPINY DOGFISH

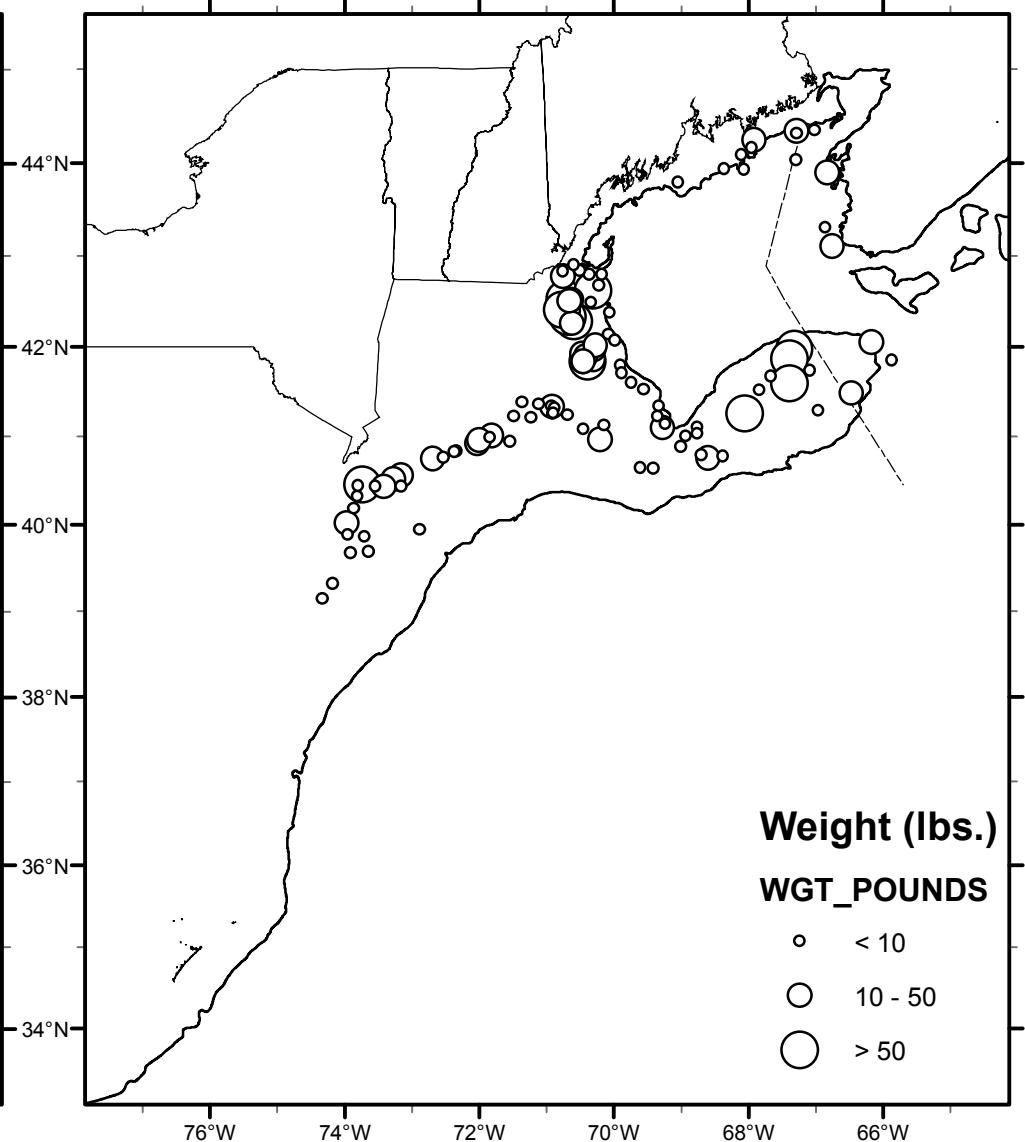


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

YELLOWTAIL FLOUNDER

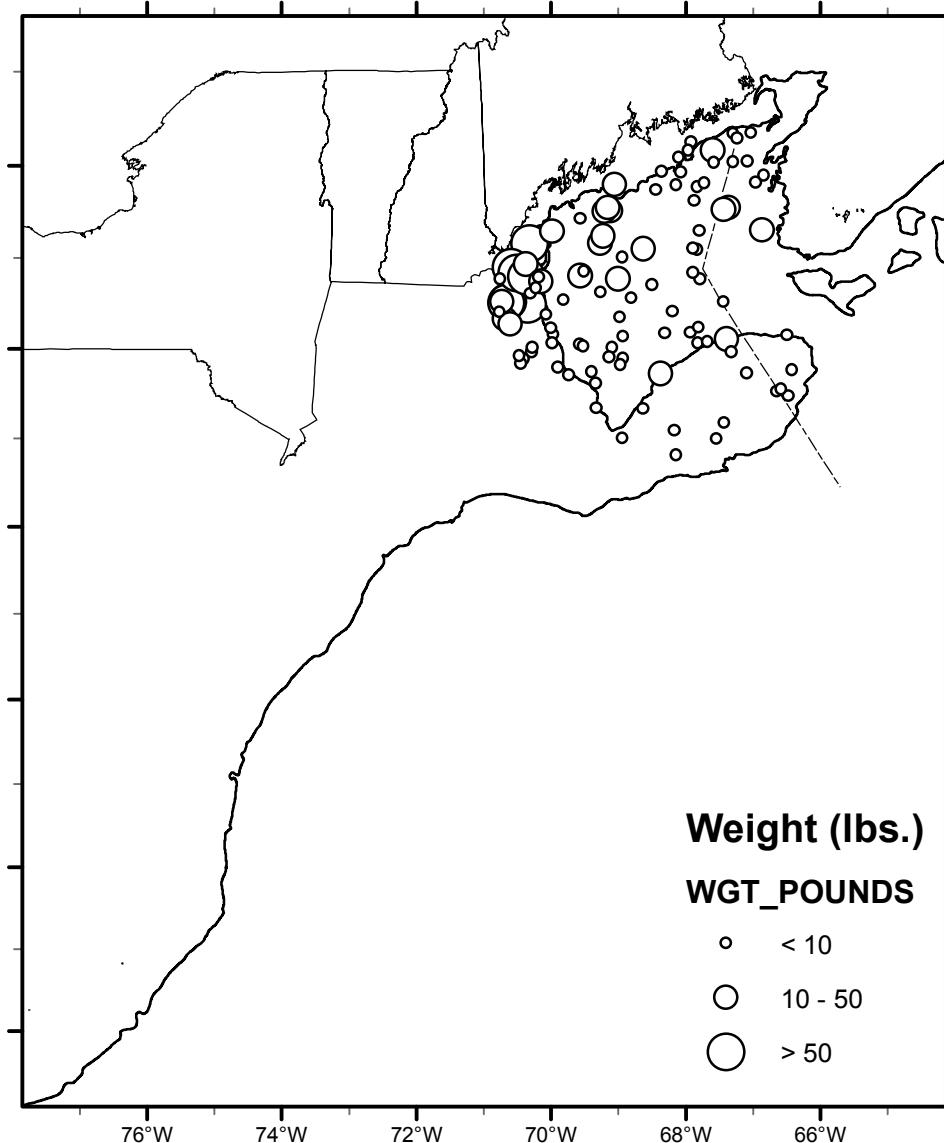


WINTER FLOUNDER

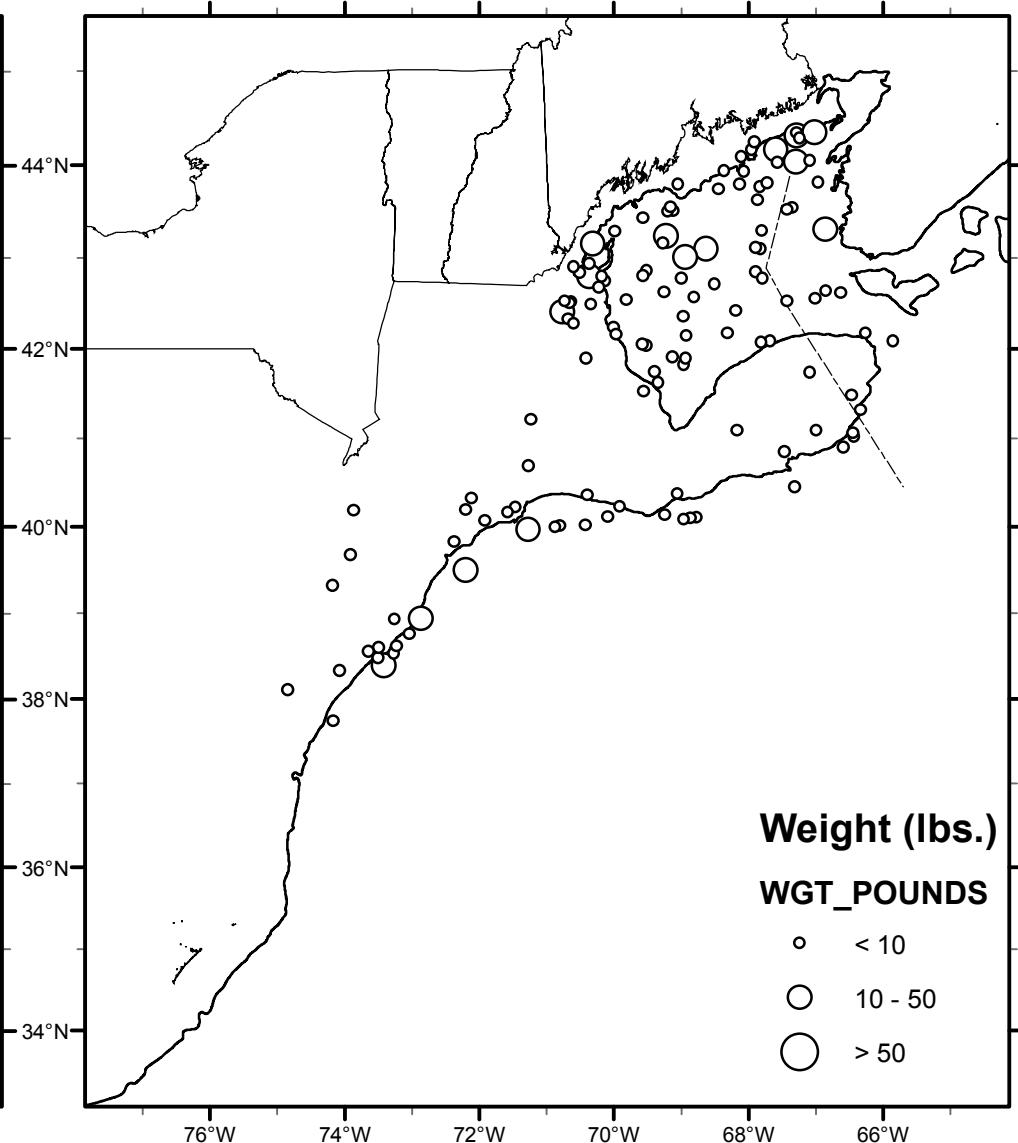


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

AMERICAN PLAICE

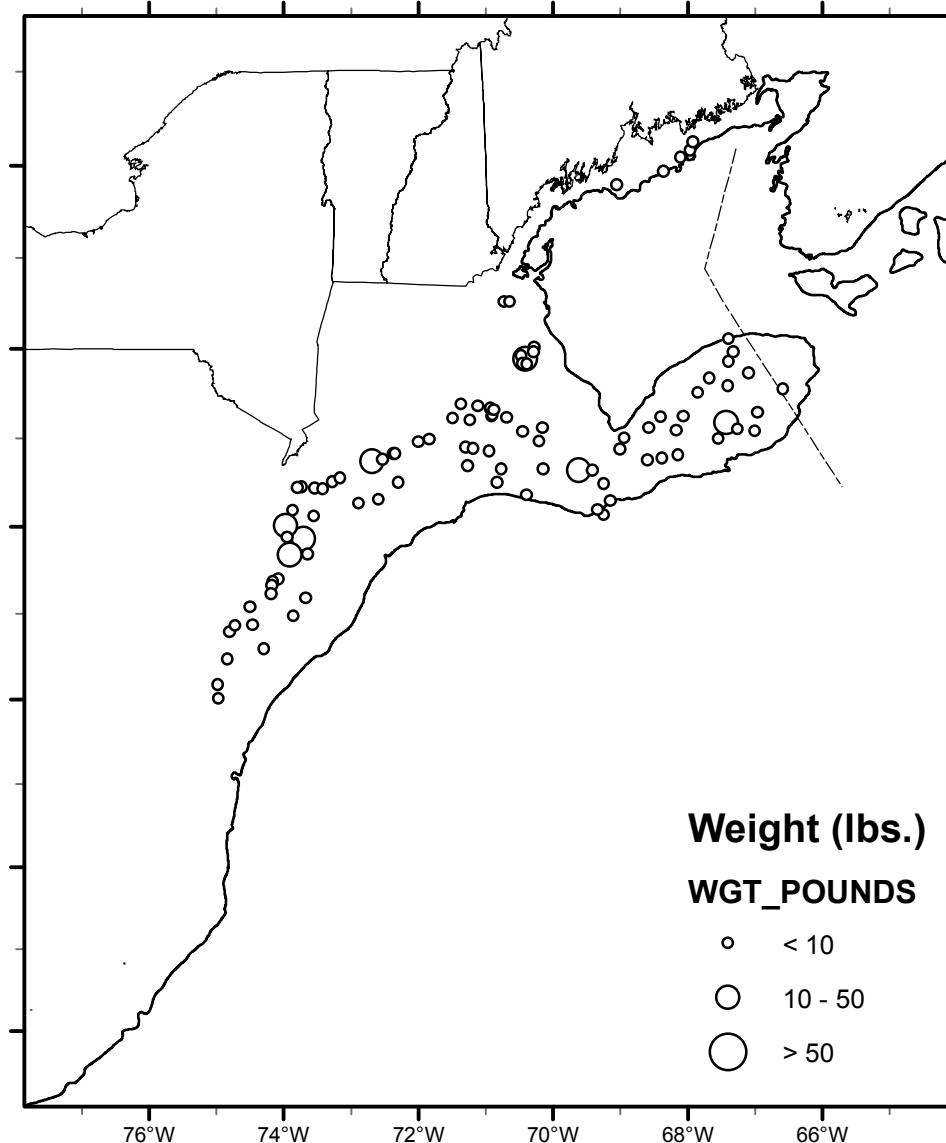


WITCH FLOUNDER

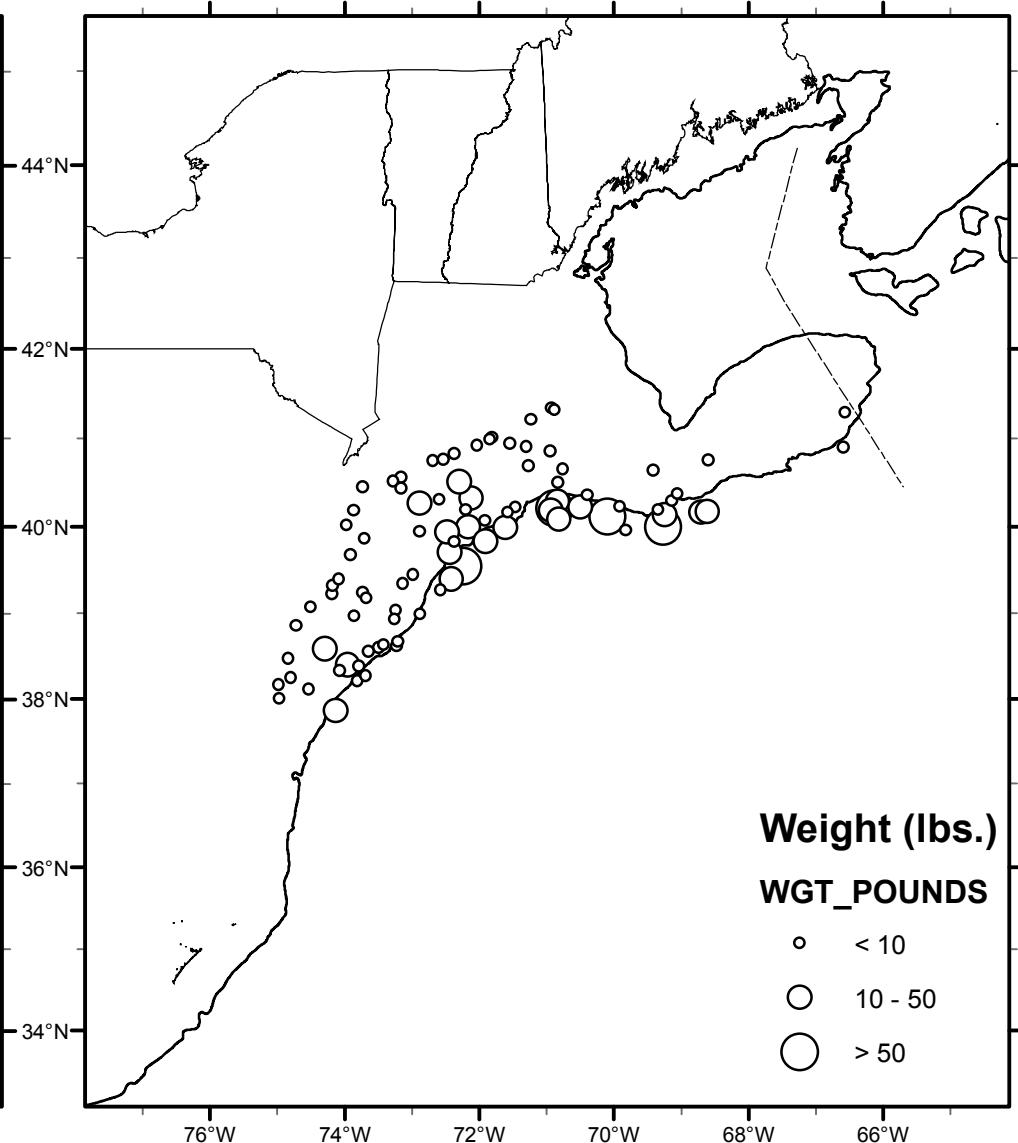


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

WINDOWPANE

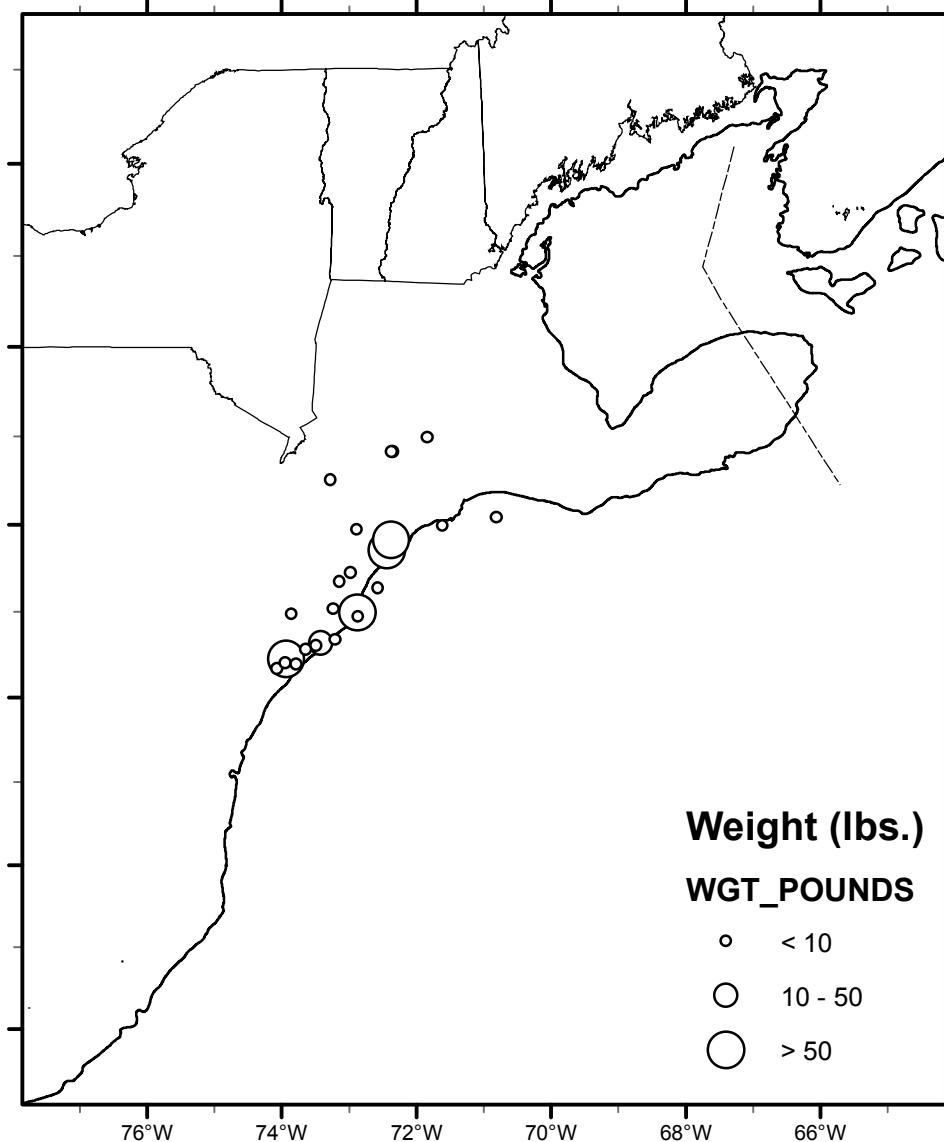


SUMMER FLOUNDER

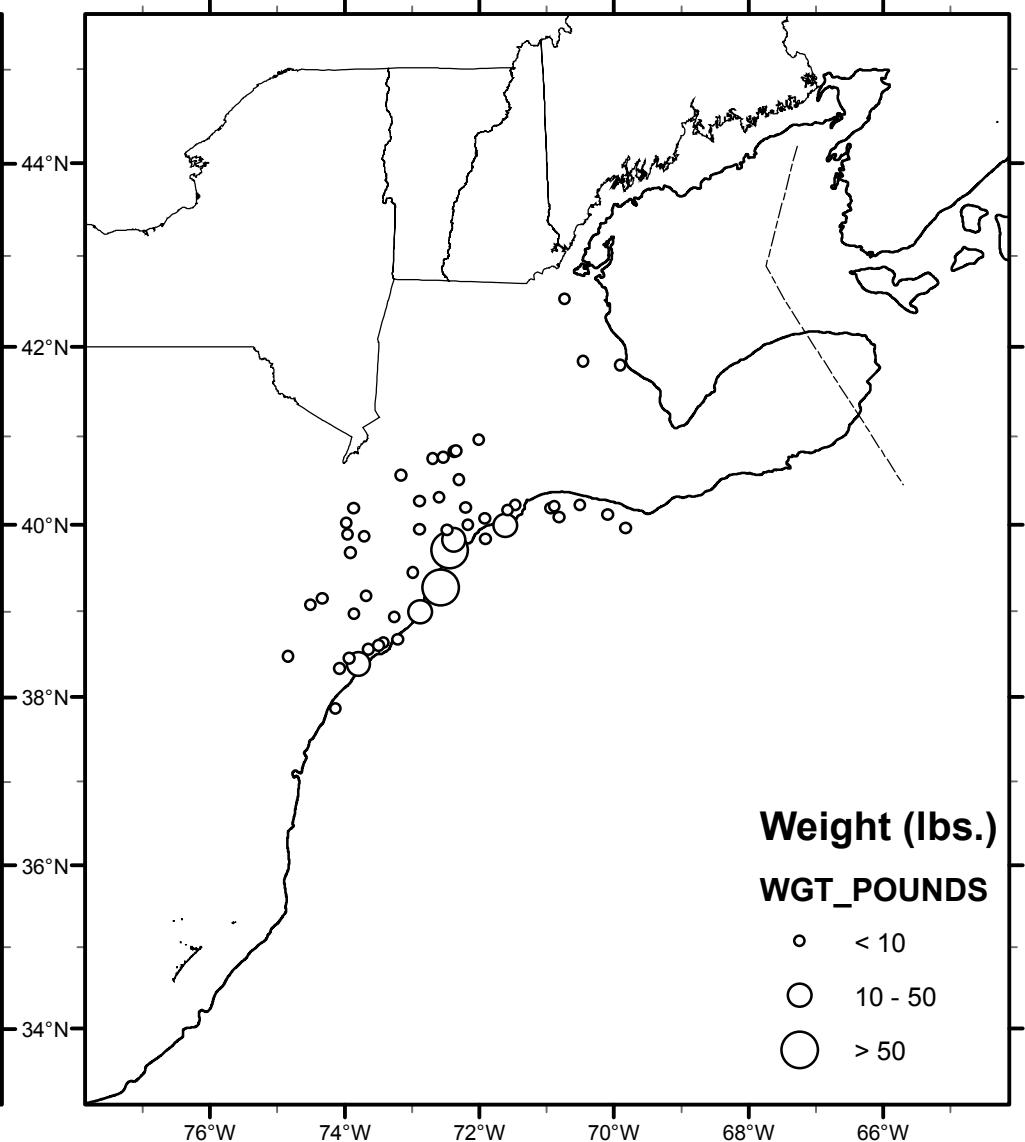


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

SCUP

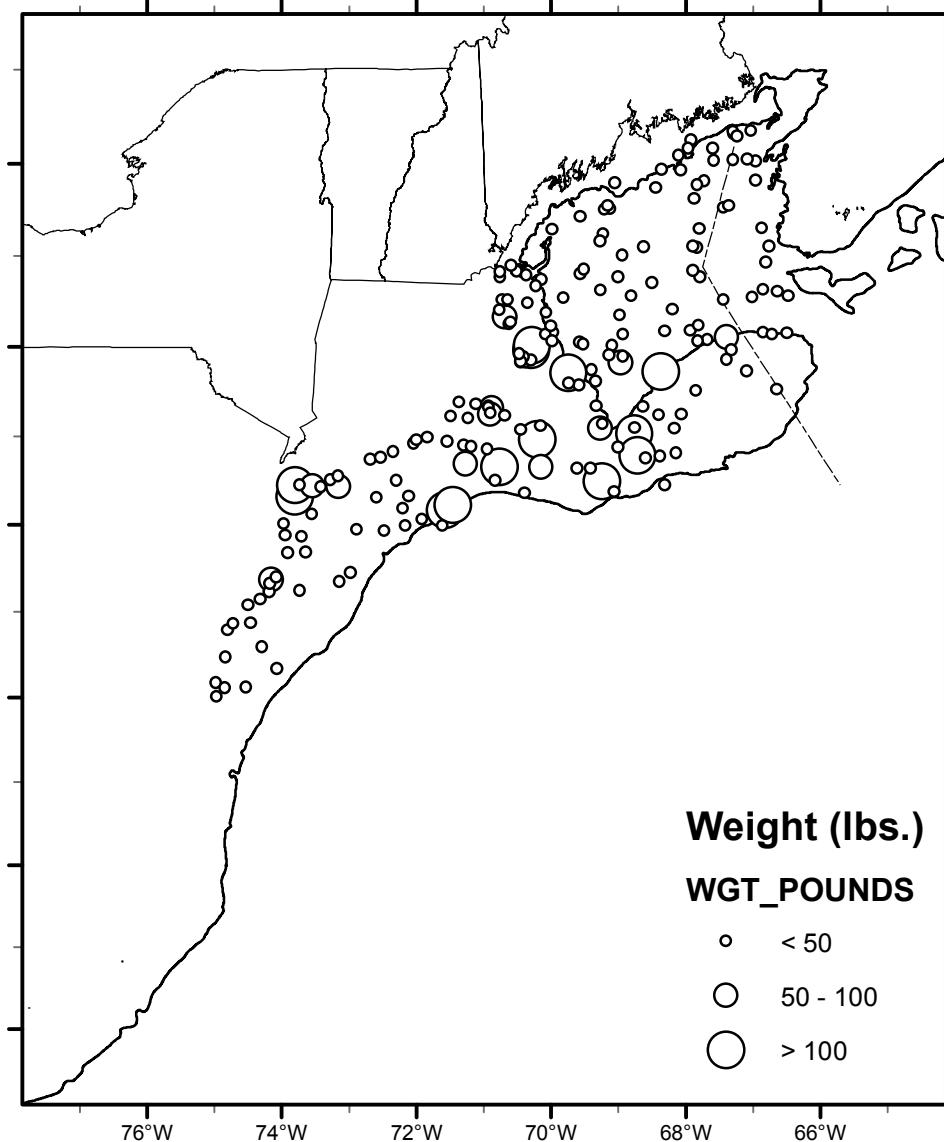


BLACK SEA BASS

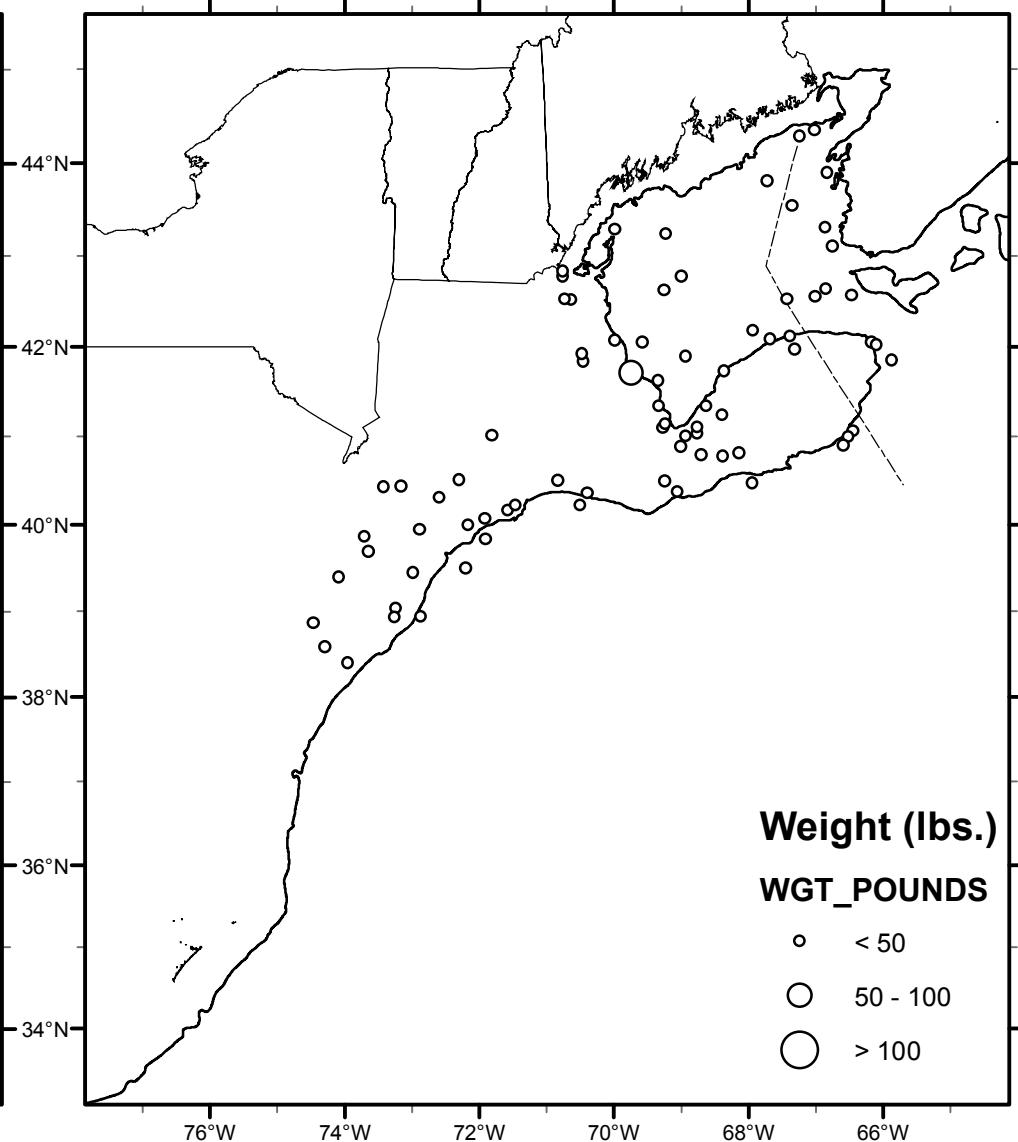


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

ATLANTIC HERRING

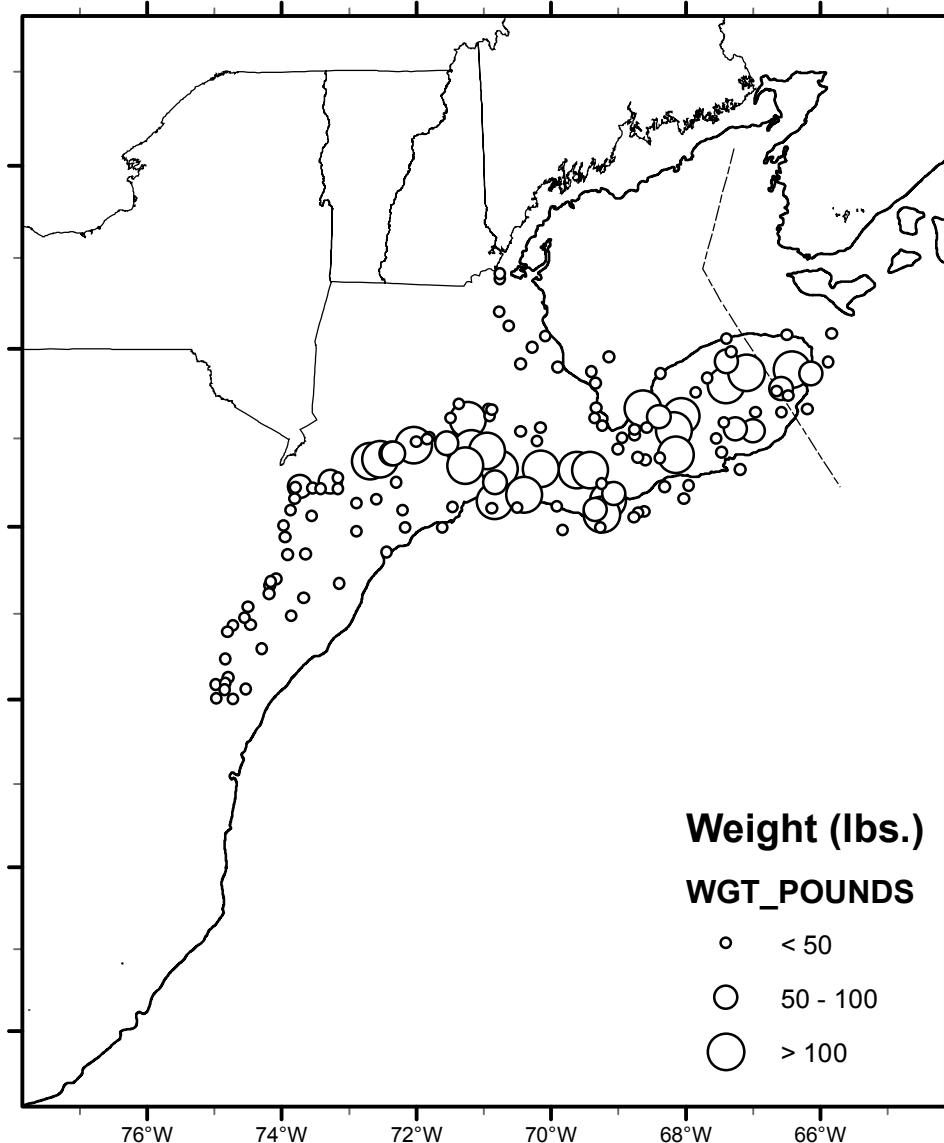


ATLANTIC MACKEREL

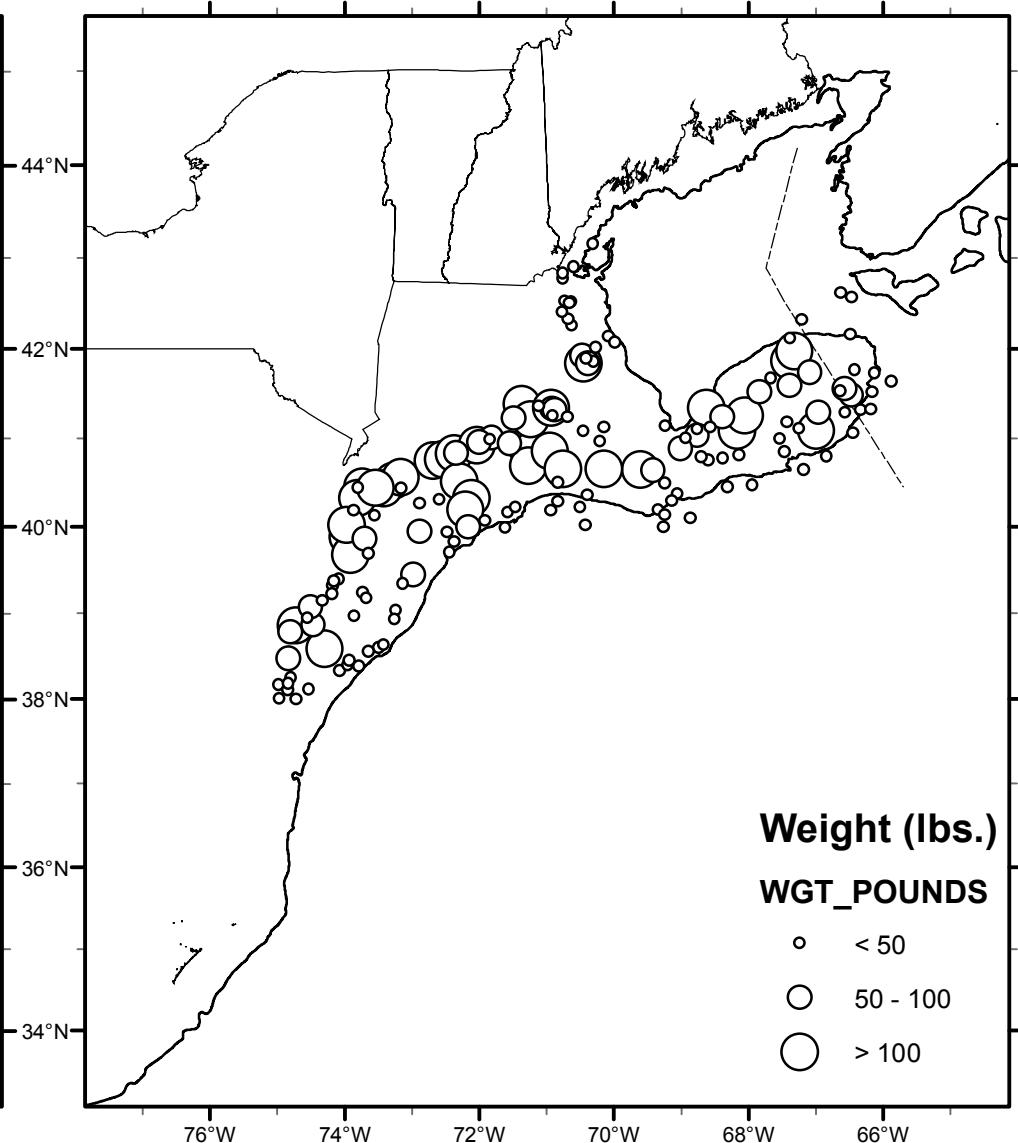


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

WINTER SKATE

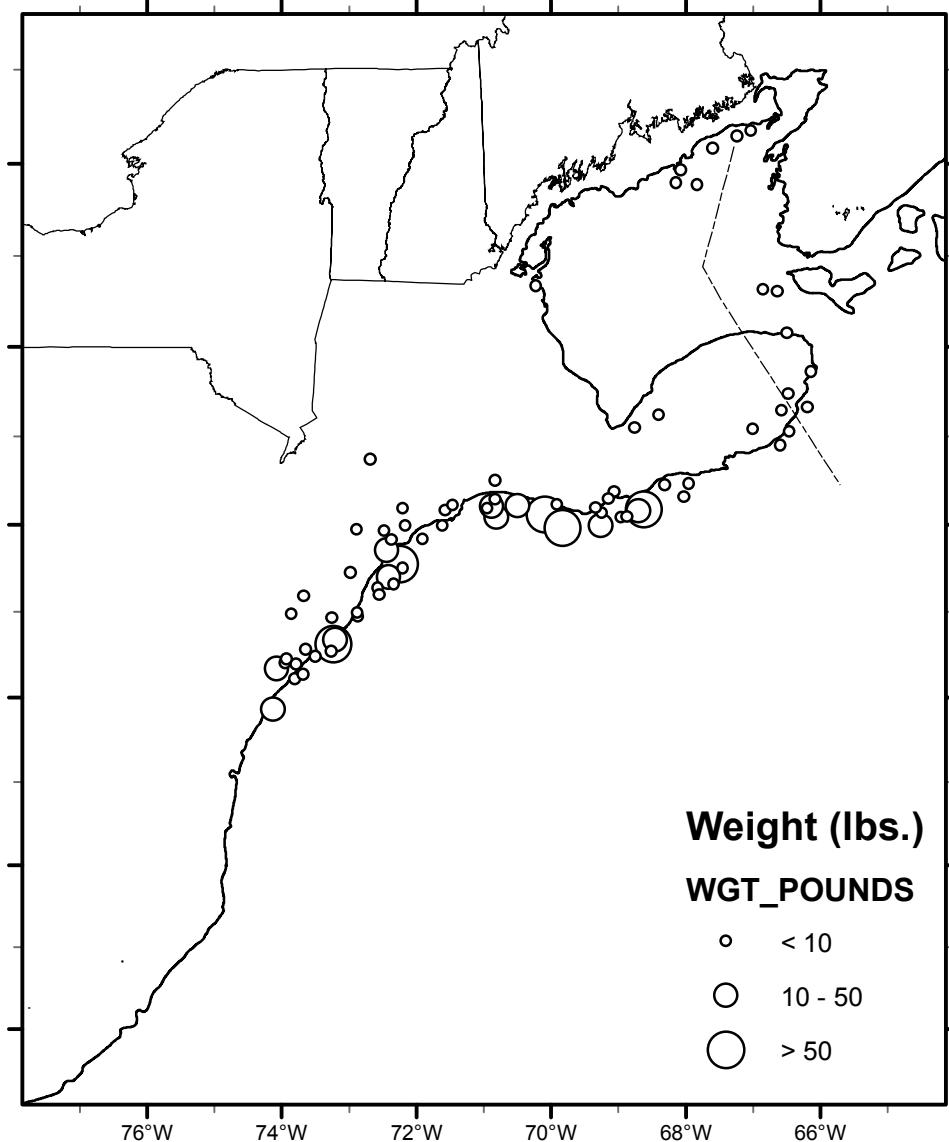


LITTLE SKATE

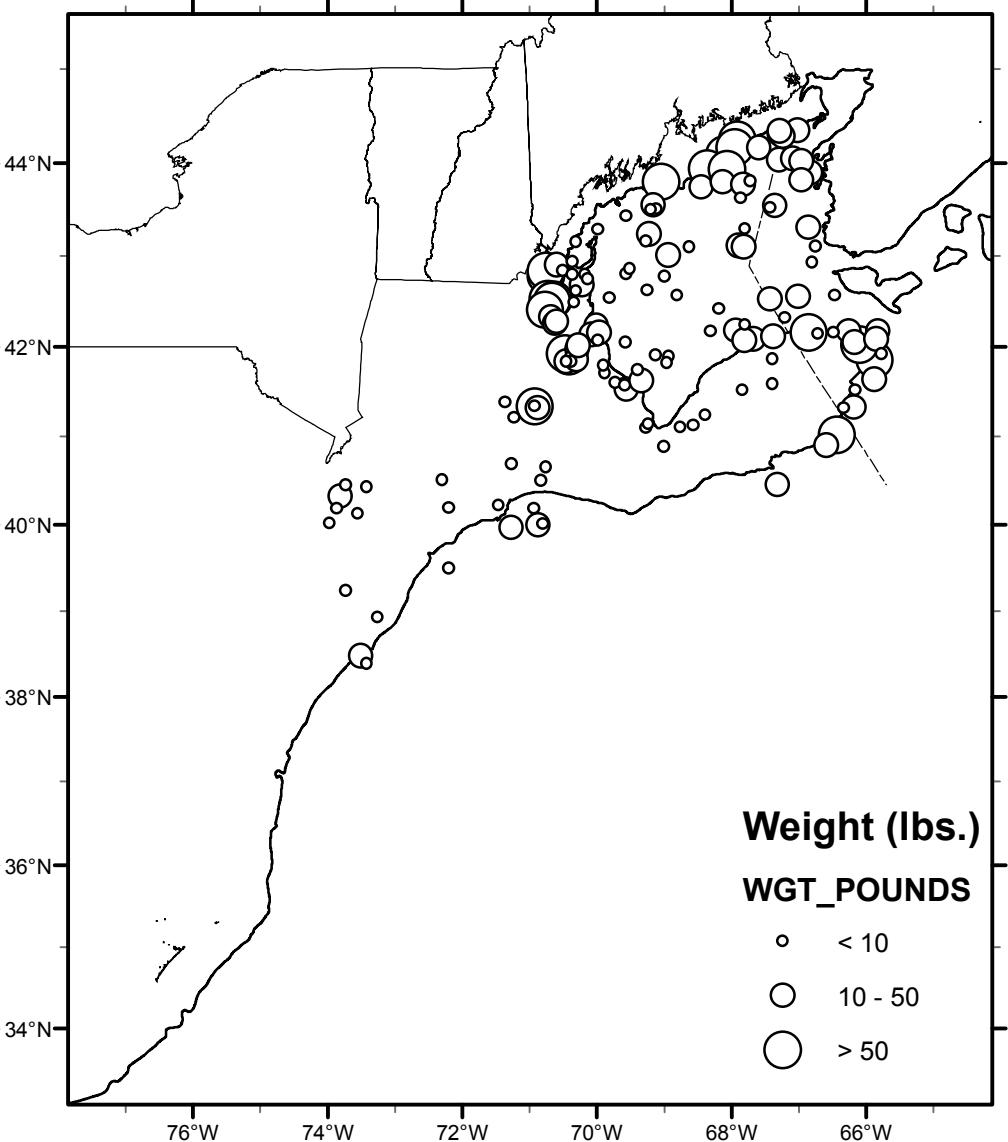


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

BUTTERFISH

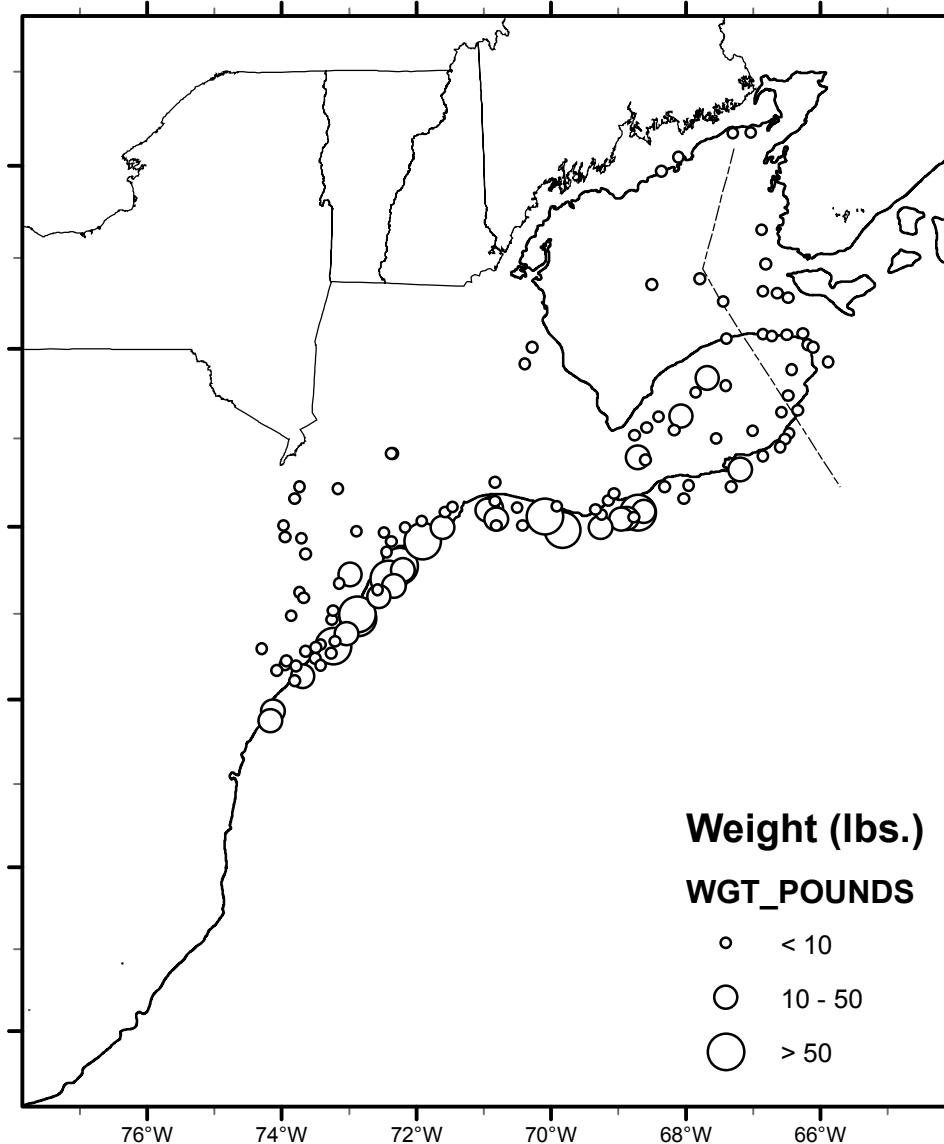


AMERICAN LOBSTER



NOAA Fisheries Service
NEFSC Bottom Trawl Survey
31 March to 31 May 2014

LOLIGO SQUID



ILLEX SQUID

