RESOURCE SURVEY REPORT
Catch Summary
NOAA Fisheries Service
Northeast Fisheries Science Center
Spring Bottom Trawl Survey
Cape Hatteras - Gulf of Maine
1 March – 12 May 2011

Submitted to: NOAA, NEFSC

For further information contact Russell Brown (508-495-2380), National Marine Fisheries Service, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543.

Date: 2011

Resource Survey Report

Bottom Trawl Survey

Cape Hatteras – Gulf of Maine

March 1 – May 12, 2011

NOAA FSV *Henry B Bigelow*

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

Tagged Angel Shark
Squatina dumerili

Atlantic Fanfish
Pterycombus brama

Scientists sorting a catch during the Spring Bottom Trawl Survey

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 W. Brown, Chief
Ecosystem Surveys Branch

RESOURCE SURVEY REPORT
Catch Summary

NOAA Fisheries Service
Northeast Fisheries Science Center

Spring Bottom Trawl Survey
Cape Hatteras - Gulf of Maine
1 March – 12 May 2011

Attached are field notes, station and catch summaries and a series of geographical plots of commercially and recreationally important species caught during the Northeast Fisheries Science Center's 2011 spring bottom trawl survey aboard the NOAA FSV *Henry B. Bigelow*. Tows were made with a 400 x 12, 4-seam trawl rigged with a rockhopper sweep, 550 kg (1200lbs) 2.2-m Polyice oval trawl doors, and 36.6 m (20 fathom) bridles. The cod end was lined with one-inch mesh to retain juvenile 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).

A new tow evaluation system has been implemented to validate all standard survey tows. These codes are exclusively used with the 400 x 12, 4-seam bottom trawl rigged with the rockhopper sweep, towed by the NOAA FSV *Henry B. Bigelow*. Each standard survey tow is now validated based on four codes: Type, Operational, Gear and Acquisition (T.O.G.A.). T.O.G.A. provides a detailed analysis of survey trawl and vessel performance during each tow, utilizing available data from acoustic trawl mensuration equipment and vessel sensors not previously analyzed by the pre-2009 tow evaluation coding system.

These new NEFSC bottom trawl survey station validation codes serve as a guideline for qualifying a survey tow in a standardized manner and aid in the decision process for determining if a survey tow meets strict tolerance limits and optimal values that were originally calculated from data collected during the NEFSC calibration experiments. These tolerance limits are intended to promote consistency of trawl geometry and towing procedures to validate comparison of the collected trawl survey data with results from the calibration experiments.

For further information contact Russell Brown (508-495-2380), NOAA Fisheries Service, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543. To view a PDF of this report, go the Ecosystems Surveys Branch website at:
http://www.nefsc.noaa.gov/esb and choose:

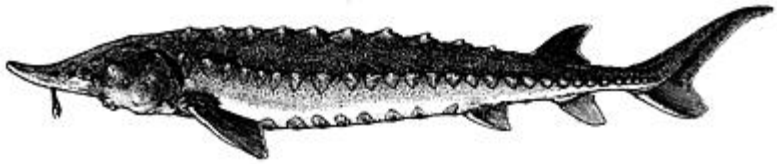
- Resource Survey Reports
  - Available RSR
    - Select season and year of interest

Field Notes

In an effort to share some of the natural history observations made during the bottom trawl 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 *FRV* Henry B. Bigelow.

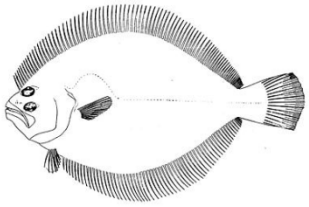
Sturgeon Surprise

Two Atlantic Sturgeon (44.5 and 72 inches) were caught between Cape Charles and Wachapreague Inlet. The smaller fish had been previously captured and tagged on October 25, 2005 in the Hudson River when it was 22.5 inches long. After its capture on March 10, 2011, its weight was 18 pounds. Both fish were tagged and released.

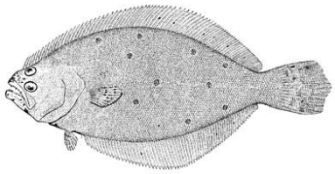


Broad Flounder

This year another broad flounder, *Paralichthys squamilentous* was captured. This flounder can easily be mistaken for a fluke, but a sharp eye will pick out a greater body width (hence the name), as well as a dusky underside (think witch flounder or barndoor skate



broad flounder



fluke

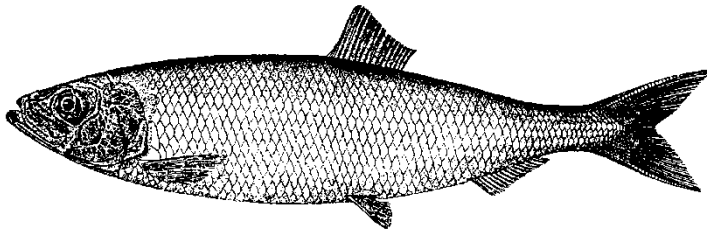
Memorable Fluke

During leg 1, a nice looking 27 inch fluke came aboard and weighed in at an impressive 8.6 pounds!

Herring, Herring Everywhere

On leg II, there were three stations where a large amount of *Clupea harengus* (Atlantic herring), in terms of number of individuals, were caught. The largest tow (station 197) was the 12th largest haul on record with more than 20,300 individuals caught. The previous station (station 196), our 45th largest haul, with 7,984 individuals, was brought on board. Finally, 5,063 individuals on station 166 were caught which was good for an 83rd ranking. These numbers pale in comparison to the 79,089 individuals that were

caught aboard the German research vessel *Walter Herwig* in 1974 with a mid-water net, but considering there are more than 19,000 station records in our database where *Clupea harengus* exist, these tows will be remembered.



Short Leg

Because of the short duration of leg III, we were only able to complete the US portion of Georges Bank. Catches were fairly typical for recent surveys of Georges. There appears to be another strong year class of haddock with large numbers averaging around 7 inches. Even with the large catches of haddock, the largest catches occurred along the southern flank of Georges Bank and were composed mostly of red and silver hake (>7,700 total pounds combined).

Hangs continued to be a problem as we attempted to work in the Great South Channel. Leg IV tested a new bathymetric package from Simrad which could significantly improve our performance relative to hangs in this area.

Floating Aviary?

Birdwatching is often a sideline activity for the seafarer. It is rare to be on a vessel that does not have a bird book handy, and the fact is that much of the bird life enjoyed at sea actually comprises terrestrial species. As is often the case during migratory periods, our vessel has once again become a floating aviary.

Taking the opportunity inside the vessel to use the reflection of windows, one can usually get very close, pull out a guide and identify the specimen. On this leg of the survey, however, things have taken a new twist.

Numerous songbirds have settled onto the vessel and actively hop around the net looking for scraps (I have seen at least 6 species but there are probably more). For the last few days however, a pair of merlins has staked out the vessel. For those unfamiliar with the merlin, these diminutive falcons are known for being fast on the wing, having great endurance, being fearless in the face of larger birds of prey, and of course, as you might have already guessed....eating songbirds.

One is very likely to have the subject snatched in front of their eyes at high speed by our resident merlins. A new and surprisingly effective way of identifying birds now involves examining the piles of feathers lying around the vessel from falcon meals. Yesterday the Commanding Officer identified a yellow-rumped warbler, which I was very excited to hear about, and he explained to me that "yeah, the feathers are one level up on the flying bridge". We witnessed what we thought was the same merlin eat six birds in the space of a few hours.

Multibeam Scanning

The Gulf of Maine is well known as the most challenging, both in terms of fixed gear concentrations, and especially hard bottom areas that can wreak havoc on the trawl. Scouting in this area is essential, and yet scouting takes significant time per station. If scouting time exceeds what down time from gear damage would have been, production (number of stations completed per day) goes negative. Catastrophic gear loss can mean the premature termination of a cruise. During one tow, a sizeable rock was in the towpath which was not visible on the echosounder, but which showed up in the wider-swath multibeam scan. With the location of the rock now apparent, the net was streamed past its position and then set down for the tow. There are difficult choices to make hourly, and hopefully the long term solution to these challenges lies with technology. More information may allow us to make better decisions quicker.

John Galbraith
Chief Scientist
Survey Legs I, IV & V
508-495-2392
John.Galbraith@noaa.gov

Kevin McIntosh
Chief Scientist
Survey Leg II
508-495-2293
Kevin.mcintosh@noaa.gov

Sean Lucey
Chief Scientist
Survey Leg III
508-495-2011
sean.lucey@noaa.gov

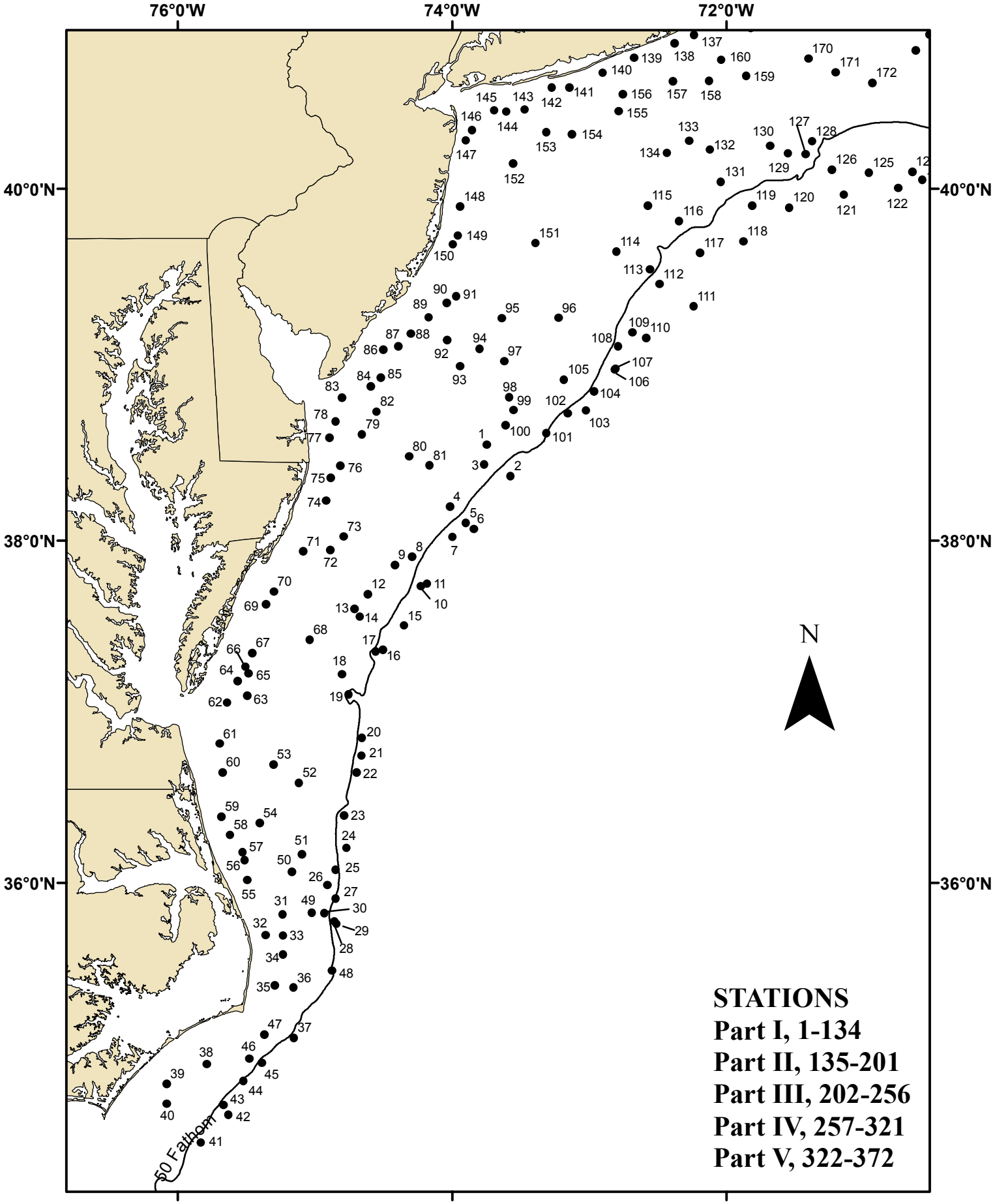


Figure 1. Trawl hauls made from NOAA FSV Henry B. Bigelow (11-02), during NOAA Fisheries Service, Northeast Fisheries Science Center spring bottom trawl survey, 1 March - 12 May 2011.

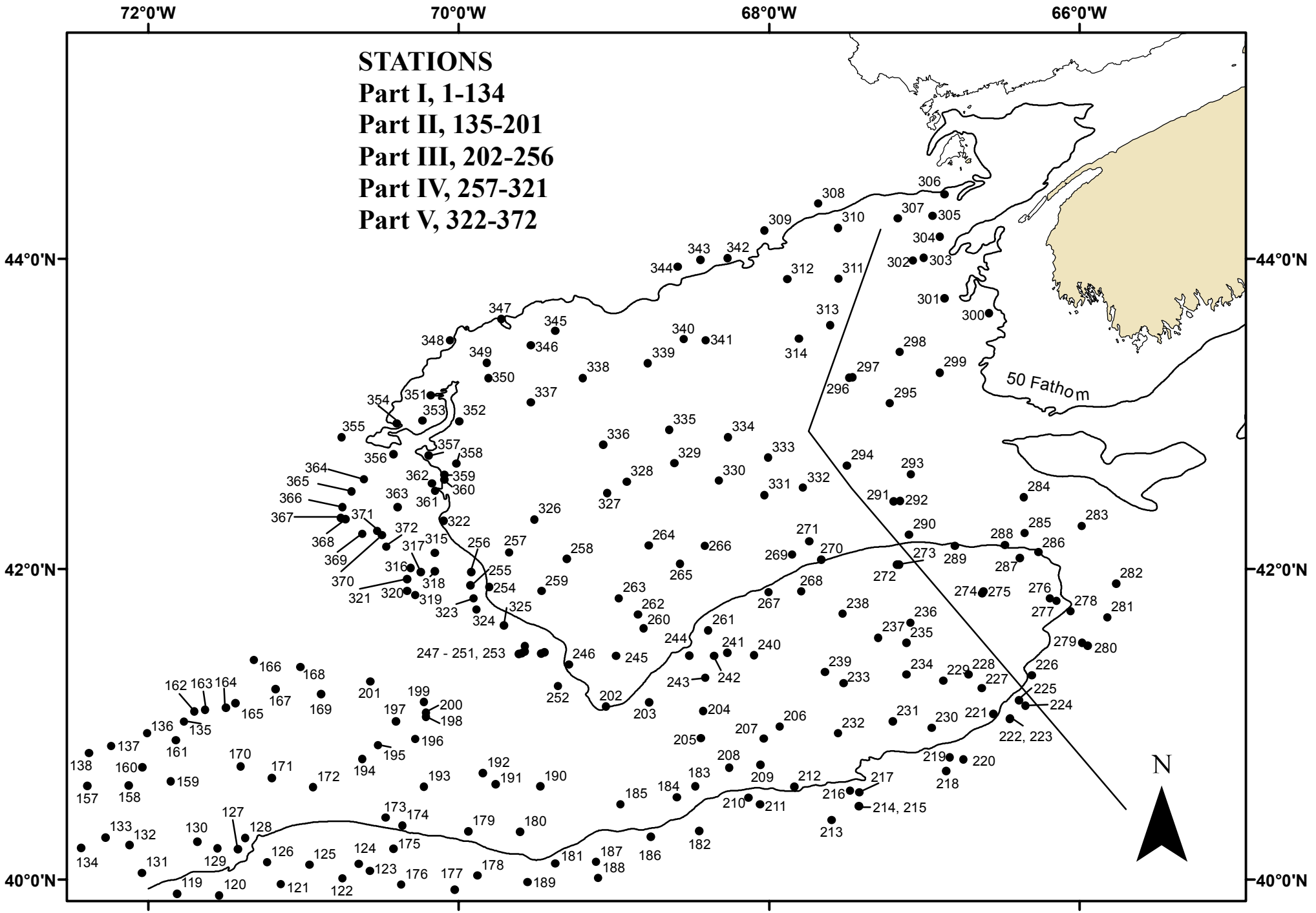


Figure 2. Trawl hauls made from NOAA FSV Henry B. Bigelow (11-02), during NOAA Fisheries Service, Northeast Fisheries Science Center fall bottom trawl survey, 1 March - 12 May 2011.

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0001	Mar-03	0622	3833.0	7344.7	X26667.8	Y42528.7	308	32.8	43.9
0002	Mar-03	1107	3822.2	7334.3	X26597.6	Y42426.4	332	150.4	55.7
0002	Mar-03	1107	3822.2	7334.3	X26597.6	Y42426.4	332	150.4	51.7
0003	Mar-03	1546	3826.2	7345.8	X26666.6	Y42458.0	036	36.4	44.9
0004	Mar-03	1834	3811.6	7400.9	X26733.6	Y42293.3	210	43.2	45.1
0005	Mar-03	2041	3806.1	7353.8	X26689.4	Y42243.1	191	67.5	55.5
0006	Mar-03	2241	3803.9	7350.4	X26668.9	Y42224.3	168	175.0	50.6
0006	Mar-03	2241	3803.9	7350.4	X26668.9	Y42224.3	168	175.0	55.1
0007	Mar-04	0205	3801.1	7359.8	X26715.7	Y42184.7	057	68.9	55.5
0008	Mar-04	0434	3754.3	7417.4	X26799.2	Y42092.1	250	40.2	45.2
0009	Mar-04	0620	3751.5	7425.0	X26834.3	Y42052.5	211	34.2	45.7
0010	Mar-04	0840	3744.1	7413.6	X26767.6	Y41989.8	204	68.4	54.8
0011	Mar-04	1018	3744.9	7410.9	X26754.9	Y42002.2	214	103.3	54.8
0012	Mar-04	1343	3741.3	7436.8	X26879.6	Y41926.8	237	30.9	46.4
0013	Mar-04	1521	3736.3	7442.7	X26900.8	Y41863.4	230	31.2	44.7
0014	Mar-04	1648	3733.5	7440.3	X26885.1	Y41837.2	181	29.8	46.4
0015	Mar-04	1947	3730.4	7420.9	X26787.6	Y41834.9	210	110.5	52.5
0016	Mar-04	2249	3722.0	7430.2	X26822.2	Y41731.0	020	64.2	52.7
0017	Mar-05	0019	3721.4	7433.4	X26836.4	Y41719.5	199	54.1	50.5
0018	Mar-05	0231	3713.4	7448.1	X26894.6	Y41607.8	234	29.8	46.4
0019	Mar-05	0513	3706.3	7445.2	X26871.9	Y41538.0	216	70.0	49.4
0020	Mar-05	0847	3651.1	7439.3	X26827.9	Y41390.7	232	70.0	53.2
0021	Mar-05	1115	3644.8	7439.6	X26822.4	Y41325.2	016	103.6	52.4
0022	Mar-05	1348	3639.0	7441.7	X26825.5	Y41260.3	034	161.3	49.2
0023	Mar-05	1822	3623.7	7447.1	X26832.1	Y41092.1	338	66.2	54.1
0024	Mar-05	2054	3612.2	7446.2	X26816.6	Y40979.6	009	162.1	50.7
0025	Mar-05	2337	3604.6	7450.9	X26828.0	Y40890.9	223	52.5	50.3
0026	Mar-06	0144	3559.0	7454.5	X26836.8	Y40825.8	190	42.9	51.9
0027	Mar-06	0432	3554.3	7450.8	X26818.1	Y40791.2	215	73.5	
0028	Mar-06	0921	3546.1	7451.4	X26813.0	Y40711.7	196	69.4	51.7
0029	Mar-06	1133	3545.2	7450.5	X26808.9	Y40706.5	178	104.2	
0030	Mar-06	1551	3549.0	7455.7	X26832.0	Y40725.6	134	39.4	49.3
0031	Mar-07	0315	3548.6	7514.1	X26901.2	Y40663.7	178	19.4	47.1
0032	Mar-07	0529	3541.2	7521.6	X26921.5	Y40566.9	037	14.5	44.7
0033	Mar-07	0656	3541.1	7513.9	X26892.7	Y40591.1	172	21.1	46.8
0034	Mar-07	0858	3534.3	7513.9	X26885.7	Y40525.9	182	18.3	45.4
0035	Mar-07	1059	3523.2	7517.5	X26888.0	Y40409.5	018	15.0	45.4
0036	Mar-07	1232	3522.5	7509.2	X26857.5	Y40432.2	013	17.5	57.7
0037	Mar-07	1637	3504.4	7509.1	X26841.1	Y40273.4	196	164.6	
0038	Mar-07	2036	3455.0	7547.2	X26962.6	Y40040.4	248	15.0	58.2
0039	Mar-07	2253	3447.8	7604.8	X27013.3	Y39904.0	053	16.4	56.9
0040	Mar-08	0041	3440.6	7604.9	X27005.6	Y39841.4	042	18.9	69.2
0041	Mar-08	0341	3426.5	7549.8	X26943.1	Y39797.9	024	85.8	
0042	Mar-08	0639	3436.6	7537.9	X26913.8	Y39927.9	035	149.3	
0043	Mar-08	0942	3440.1	7539.9	X26923.7	Y39946.6	057	56.9	
0044	Mar-08	1217	3448.9	7531.2	X26902.9	Y40054.8	048	58.5	
0045	Mar-08	1421	3455.4	7523.2	X26881.8	Y40141.7	245	73.3	
0046	Mar-08	1603	3456.9	7528.6	X26901.5	Y40132.8	043	33.1	

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0047	Mar-08	1804	3505.6	7522.1	X26887.5	Y40234.0	050	15.6	
0048	Mar-08	2140	3528.5	7452.5	X26802.0	Y40545.1	049	33.4	
0049	Mar-09	0059	3549.1	7501.2	X26853.0	Y40709.8	304	26.5	
0050	Mar-09	0306	3603.8	7510.0	X26902.2	Y40827.8	339	18.3	
0051	Mar-09	0440	3610.0	7505.7	X26892.2	Y40903.0	010	20.2	
0052	Mar-09	0747	3635.2	7507.0	X26927.3	Y41161.2	331	18.0	
0053	Mar-09	1013	3641.7	7518.1	X26982.1	Y41204.3	030	15.3	
0054	Mar-09	1400	3621.1	7524.1	X26978.5	Y40969.1	195	15.0	
0055	Mar-09	1624	3600.7	7529.6	X26974.1	Y40739.9	058	12.8	
0056	Mar-09	1801	3607.9	7530.6	X26987.0	Y40811.9	021	14.8	
0057	Mar-09	1916	3610.7	7531.6	X26994.2	Y40838.7	328	15.0	
0058	Mar-09	2053	3616.8	7537.0	X27023.5	Y40889.9	036	14.5	
0059	Mar-09	2224	3623.3	7541.0	X27048.1	Y40949.7	010	13.1	
0060	Mar-10	0024	3639.0	7540.4	X27069.3	Y41124.0	019	9.8	
0061	Mar-10	0219	3649.0	7541.7	X27090.4	Y41233.6	101	11.2	
0062	Mar-10	0430	3703.5	7538.3	X27100.5	Y41403.0	076	10.7	
0063	Mar-10	0607	3705.8	7529.6	X27067.4	Y41446.6	060	16.7	
0064	Mar-10	0747	3711.0	7533.8	X27094.2	Y41497.3	044	13.1	
0065	Mar-10	0909	3713.6	7529.0	X27077.6	Y41534.9	051	14.8	
0066	Mar-10	1015	3716.0	7530.3	X27087.5	Y41559.4	034	12.0	
0067	Mar-10	1123	3720.8	7527.5	X27083.5	Y41619.0	053	14.5	
0068	Mar-10	1359	3725.4	7502.1	X26976.2	Y41713.7	089	19.1	
0069	Mar-10	1643	3737.8	7521.3	X27086.3	Y41821.3	051	9.3	
0070	Mar-10	1825	3742.2	7517.8	X27078.2	Y41875.8	086	12.8	
0071	Mar-11	0118	3756.2	7505.1	X27042.9	Y42051.0	110	12.8	
0072	Mar-11	0257	3756.7	7453.3	X26985.1	Y42072.0	105	13.7	
0073	Mar-11	0442	3801.3	7447.4	X26963.5	Y42130.6	333	19.1	
0074	Mar-11	0633	3813.7	7455.1	X27025.5	Y42259.8	357	12.6	
0075	Mar-11	0811	3821.5	7453.1	X27030.2	Y42349.1	117	11.5	
0076	Mar-11	0922	3825.7	7448.9	X27016.1	Y42399.6	311	13.7	
0077	Mar-11	1051	3835.4	7453.7	X27062.1	Y42503.8	319	12.8	
0078	Mar-11	1204	3840.9	7450.9	X27059.0	Y42568.1	113	11.5	
0079	Mar-11	1527	3836.5	7439.3	X26985.2	Y42527.7	133	16.1	
0080	Mar-11	1802	3829.0	7418.8	X26856.6	Y42460.8	111	22.1	
0081	Mar-11	1934	3825.8	7409.7	X26801.0	Y42435.1	126	31.2	
0082	Mar-11	2247	3844.2	7433.0	X26964.9	Y42616.6	109	16.4	
0083	Mar-12	0102	3849.1	7448.2	X27061.6	Y42660.8	066	10.1	
0084	Mar-12	0250	3853.0	7435.5	X26997.0	Y42712.1	044	10.1	
0085	Mar-12	0404	3855.9	7431.0	X26977.0	Y42746.0	079	14.2	
0086	Mar-12	0552	3905.4	7430.0	X26991.0	Y42850.9	050	11.8	
0087	Mar-12	0745	3906.7	7423.4	X26953.5	Y42866.6	036	13.7	40.4
0088	Mar-12	0901	3910.9	7418.0	X26928.6	Y42913.7	070	12.3	40.1
0089	Mar-12	1029	3916.5	7410.1	X26890.1	Y42974.6	060	16.1	40.0
0090	Mar-12	1144	3921.4	7402.3	X26849.7	Y43027.2	055	13.4	40.1
0091	Mar-12	1305	3923.7	7358.0	X26826.2	Y43052.0	226	15.6	40.6
0092	Mar-12	1509	3908.7	7402.1	X26824.5	Y42893.8	186	19.7	41.2
0093	Mar-12	1648	3859.8	7356.5	X26774.5	Y42801.8	205	20.5	42.0
0094	Mar-12	1843	3905.8	7347.9	X26730.2	Y42866.3	226	18.9	42.3

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0095	Mar-12	2052	3916.1	7338.2	X26683.2	Y42973.9	072	26.0	42.8
0096	Mar-12	2317	3916.2	7313.4	X26519.6	Y42975.8	224	34.7	41.8
0097	Mar-13	0210	3901.6	7337.2	X26656.7	Y42825.8	216	27.3	43.0
0098	Mar-13	0419	3849.3	7334.9	X26628.0	Y42701.0	208	31.2	43.1
0099	Mar-13	0543	3844.8	7333.0	X26611.7	Y42656.2	180	35.8	42.9
0100	Mar-13	0702	3839.7	7336.5	X26627.4	Y42603.1	185	33.4	43.5
0101	Mar-13	0914	3837.0	7318.7	X26519.8	Y42585.9	217	53.0	43.8
0102	Mar-13	1112	3843.6	7309.4	X26468.9	Y42656.3	054	65.6	51.3
0103	Mar-13	1312	3844.6	7301.3	X26420.8	Y42669.8	326	177.2	49.9
0104	Mar-13	1538	3851.2	7257.9	X26403.4	Y42734.9	209	67.3	53.8
0105	Mar-13	1804	3855.3	7310.9	X26486.1	Y42770.1	013	45.1	43.5
0106	Mar-13	2116	3858.7	7248.7	X26349.8	Y42809.4	192	167.0	48.5
0107	Mar-14	0055	3859.0	7248.3	X26347.4	Y42811.6	185	185.6	47.0
0108	Mar-14	0333	3906.7	7247.3	X26343.3	Y42885.0	006	64.8	54.4
0109	Mar-14	0525	3911.4	7241.0	X26304.6	Y42929.6	335	70.8	54.1
0110	Mar-14	0757	3909.5	7235.0	X26265.4	Y42912.4	038	167.3	52.3
0111	Mar-14	1116	3920.3	7214.2	X26130.9	Y43011.0	210	164.0	50.4
0112	Mar-14	1401	3927.8	7229.1	X26229.7	Y43080.8	005	64.5	49.7
0113	Mar-14	1523	3932.8	7233.4	X26260.4	Y43127.4	347	47.6	45.5
0114	Mar-14	1747	3938.8	7248.0	X26365.4	Y43188.2	311	38.0	40.8
0115	Mar-14	2021	3954.4	7234.2	X26276.1	Y43325.0	054	32.8	40.6
0116	Mar-14	2222	3949.2	7220.5	X26173.9	Y43270.9	209	45.9	45.1
0117	Mar-15	0042	3938.4	7211.4	X26108.8	Y43171.4	138	69.2	53.2
0118	Mar-15	0310	3942.2	7152.4	X25976.5	Y43197.5	236	199.6	46.6
0119	Mar-15	0620	3954.3	7148.7	X25944.1	Y43298.3	060	74.4	52.2
0120	Mar-15	0926	3953.7	7132.3	X25829.4	Y43283.9	080	161.9	48.8
0121	Mar-15	1248	3958.0	7108.4	X25662.6	Y43305.4	259	196.9	47.8
0122	Mar-15	1753	4000.2	7044.7	X25508.4	Y43308.8	102	149.0	51.5
0123	Mar-15	1943	4003.0	7034.1	X25439.3	Y43324.1	064	85.3	54.0
0124	Mar-15	2111	4005.7	7038.5	X25458.5	Y43346.8	326	69.7	53.8
0125	Mar-15	2321	4005.4	7057.5	X25577.8	Y43356.6	282	88.9	55.5
0126	Mar-16	0121	4006.4	7113.8	X25686.0	Y43375.2	233	77.6	54.6
0127	Mar-16	0311	4011.6	7125.2	X25761.9	Y43424.7	007	48.4	43.5
0128	Mar-16	0445	4015.9	7122.4	X25737.0	Y43456.5	059	47.8	42.0
0129	Mar-16	0639	4011.8	7133.0	X25819.2	Y43432.4	244	47.8	43.6
0130	Mar-16	0832	4014.4	7140.8	X25877.1	Y43459.1	219	45.9	42.3
0131	Mar-16	1112	4002.3	7202.3	X26040.9	Y43374.8	154	44.8	41.7
0132	Mar-16	1324	4013.1	7207.1	X26079.0	Y43470.4	167	36.9	39.9
0133	Mar-16	1515	4016.1	7216.3	X26152.6	Y43503.7	171	33.4	39.1
0134	Mar-16	1652	4012.0	7225.8	X26224.5	Y43476.6	189	36.6	39.4
0135	Mar-21	1810	4100.9	7146.0	X25941.8	Y43832.9	028	15.9	39.3
0136	Mar-21	2021	4056.4	7200.1	X26058.7	Y43817.5	237	14.8	39.1
0137	Mar-21	2204	4051.4	7214.1	X26172.0	Y43796.7	258	17.5	38.8
0138	Mar-21	2321	4048.7	7222.7	X26241.4	Y43786.5	251	15.9	39.4
0139	Mar-22	0113	4043.8	7240.2	X26382.1	Y43767.9	242	14.8	39.8
0140	Mar-22	0252	4038.8	7254.0	X26488.0	Y43742.0	235	14.2	39.4
0141	Mar-22	0436	4033.9	7308.6	X26598.5	Y43715.6	256	13.9	40.2
0142	Mar-22	0646	4034.0	7316.3	X26661.4	Y43725.0	285	12.6	40.7

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0143	Mar-22	0829	4026.6	7328.2	X26739.9	Y43668.5	252	13.7	40.5
0144	Mar-22	0941	4025.8	7336.2	X26801.6	Y43669.4	268	12.8	40.8
0145	Mar-22	1045	4026.3	7341.5	X26844.2	Y43679.8	305	15.0	40.5
0146	Mar-22	1232	4019.7	7351.2	X26902.7	Y43623.8	203	14.2	39.5
0147	Mar-22	1340	4016.3	7353.9	X26914.0	Y43591.8	190	12.3	39.9
0148	Mar-22	1650	3954.0	7356.4	X26878.2	Y43366.9	232	12.0	40.7
0149	Mar-22	1848	3944.1	7357.3	X26862.5	Y43264.6	283	13.1	41.3
0150	Mar-22	2005	3941.2	7359.6	X26871.9	Y43234.8	081	13.4	41.2
0151	Mar-22	2315	3941.7	7323.4	X26619.7	Y43228.0	007	20.0	41.7
0152	Mar-23	0224	4008.5	7333.2	X26739.7	Y43497.7	322	20.8	39.9
0153	Mar-23	0459	4019.0	7318.7	X26649.2	Y43587.1	091	18.9	40.2
0154	Mar-23	0655	4018.3	7307.4	X26559.1	Y43569.7	092	22.4	39.9
0155	Mar-23	0914	4026.0	7247.1	X26409.1	Y43619.8	039	24.1	39.9
0156	Mar-23	1042	4031.6	7245.2	X26403.1	Y43668.2	077	23.5	39.5
0157	Mar-23	1251	4036.0	7223.3	X26228.1	Y43681.1	060	25.4	38.8
0158	Mar-23	1445	4036.2	7207.4	X26096.1	Y43664.4	101	29.0	38.4
0159	Mar-23	1657	4037.8	7151.1	X25961.4	Y43658.6	039	31.2	38.5
0160	Mar-23	1856	4043.2	7202.2	X26059.1	Y43714.9	300	26.2	38.4
0161	Mar-23	2120	4053.6	7149.2	X25959.8	Y43781.4	022	24.1	38.2
0162	Mar-23	2352	4104.8	7141.9	X25912.5	Y43857.1	087	20.0	38.5
0163	Mar-24	0059	4105.4	7137.7	X25876.1	Y43855.5	098	20.2	38.0
0164	Mar-24	0248	4106.2	7129.7	X25806.3	Y43850.1	186	14.5	38.1
0165	Mar-24	0443	4108.0	7126.2	X25777.7	Y43858.6	030	16.1	38.6
0166	Mar-24	0731	4124.7	7119.0	X25751.4	Y43966.4	199	18.3	37.7
0167	Mar-24	0959	4113.4	7110.6	X25648.1	Y43874.9	337	24.1	38.4
0168	Mar-24	1210	4121.9	7101.0	X25581.9	Y43920.1	183	16.1	39.6
0169	Mar-24	1423	4111.5	7053.1	X25486.4	Y43837.4	329		40.2
0170	Mar-26	1655	4043.6	7124.0	X25737.2	Y43673.2	295	33.4	41.3
0171	Mar-26	1929	4039.0	7112.0	X25639.6	Y43625.4	296	34.7	41.5
0172	Mar-26	2154	4035.5	7056.1	X25517.0	Y43582.9	293	38.8	41.9
0173	Mar-27	0111	4023.7	7028.1	X25349.3	Y43471.9	273	45.4	42.1
0174	Mar-27	0307	4020.7	7021.5	X25319.2	Y43445.0	289	48.1	42.2
0175	Mar-27	0516	4011.6	7025.0	X25364.9	Y43381.9	305	63.4	48.7
0176	Mar-27	0819	3957.8	7022.0	X25388.1	Y43278.6	299	193.6	45.7
0177	Mar-27	1215	3955.9	7001.3	X25297.5	Y43254.3	218	192.7	44.2
0178	Mar-27	1529	4001.3	6952.6	W14186.5	Y43288.8	291	76.6	52.4
0179	Mar-27	1812	4018.5	6956.2	W14151.4	Y43411.0	275	46.5	43.8
0180	Mar-27	2051	4018.2	6936.1	W14049.6	Y43395.8	279	40.7	41.9
0181	Mar-27	2340	4006.0	6922.5	W14022.2	Y43305.3	302	52.8	49.8
0182	Mar-28	1708	4018.5	6826.9	W13713.6	Y43357.0	305	69.2	52.2
0183	Mar-28	2021	4035.9	6828.3	W13654.1	Y43463.8	270	40.2	41.2
0184	Mar-28	2200	4031.6	6835.5	W13704.8	Y43442.3	245	41.3	41.2
0185	Mar-29	0116	4028.9	6857.2	W13818.4	Y43440.0	266	41.3	42.9
0186	Mar-29	0413	4016.4	6845.6	W13808.5	Y43353.9	283	56.3	47.8
0187	Mar-29	0717	4006.6	6906.7	W13943.1	Y43301.3	321	72.7	53.8
0188	Mar-29	0952	4000.3	6905.8	W13959.9	Y43259.7	242	170.1	51.9
0189	Mar-29	1348	3958.7	6933.3	W14098.3	Y43261.3	322	78.5	53.4
0190	Mar-29	1750	4035.8	6928.3	W13948.1	Y43507.4	299	30.1	41.5

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0191	Mar-29	2003	4036.7	6945.5	W14034.2	Y43526.8	247	32.3	41.7
0192	Mar-29	2136	4041.0	6950.4	W14044.9	Y43560.0	266	27.9	41.4
0193	Mar-30	0016	4035.7	7013.2	X25226.0	Y43544.2	270	30.9	41.8
0194	Mar-30	0308	4046.4	7037.0	X25354.6	Y43642.2	314	31.4	41.7
0195	Mar-30	0501	4051.6	7030.9	X25299.1	Y43672.8	306	29.8	40.6
0196	Mar-30	0708	4054.1	7016.6	X25188.7	Y43674.0	333	22.4	40.8
0197	Mar-30	0848	4100.9	7024.1	X25229.7	Y43729.0	312	22.4	40.4
0198	Mar-30	1101	4102.8	7012.5	X25135.5	Y43728.0	343	15.3	40.9
0199	Mar-30	1236	4108.4	7013.2	X25130.2	Y43766.6	181	14.8	40.8
0200	Mar-30	1331	4104.3	7012.3	X25130.6	Y43738.4	193	15.0	40.6
0201	Mar-30	1651	4116.3	7033.9	X25322.3	Y43844.5	250	14.5	
0202	Apr-07	0310	4106.8	6902.9	W13697.3	Y43679.7	264	54.1	41.5
0203	Apr-07	0602	4108.4	6846.3	W13607.3	Y43673.1	142	41.0	41.7
0204	Apr-07	0848	4105.0	6825.3	W13520.5	Y43634.3	337	28.7	42.4
0205	Apr-07	1159	4054.4	6826.2	W13569.4	Y43573.0	357	28.4	42.5
0206	Apr-07	1502	4059.0	6755.6	W13409.9	Y43575.2	206	31.2	42.4
0207	Apr-07	1659	4054.3	6801.9	W13457.9	Y43553.4	063	26.2	42.5
0208	Apr-07	1937	4043.1	6815.2	W13564.9	Y43498.2	046	36.9	42.5
0209	Apr-07	2142	4044.2	6803.2	W13505.8	Y43495.8	256	41.6	42.0
0210	Apr-08	0029	4031.4	6807.9	W13578.3	Y43423.9	099	59.6	48.3
0211	Apr-08	0152	4028.8	6803.4	W13568.4	Y43406.1	095	70.5	49.8
0212	Apr-08	0412	4035.6	6750.1	W13482.6	Y43438.0	081	47.8	43.8
0213	Apr-08	0705	4022.7	6735.7	W13472.0	Y43355.5	079	132.9	48.4
0214	Apr-08	1013	4028.1	6725.2	W13406.9	Y43381.1	007	150.4	44.9
0215	Apr-08	1153	4028.2	6725.2	W13406.2	Y43382.0	006	147.9	51.6
0216	Apr-08	1423	4034.2	6728.5	W13396.4	Y43417.2	073	58.2	52.1
0217	Apr-08	1540	4033.5	6724.9	W13383.7	Y43411.7	075	61.5	53.6
0218	Apr-08	1915	4041.8	6651.4	W13214.8	Y43438.7	031	112.6	52.5
0219	Apr-08	2143	4047.1	6649.9	W13186.4	Y43466.5	218	63.4	
0220	Apr-08	2346	4046.2	6644.7	W13170.0	Y43458.6	206	158.8	46.4
0221	Apr-09	0308	4103.8	6633.2	W13050.2	Y43543.5	044	49.5	43.0
0222	Apr-09	0502	4102.0	6626.7	W13033.5	Y43530.5	031	101.7	51.2
0223	Apr-09	0604	4101.9	6626.8	W13034.6	Y43529.8	209	101.7	
0224	Apr-09	0918	4107.0	6620.7	W12989.5	Y43552.1	181	153.1	46.8
0224	Apr-09	0918	4107.0	6620.7	W12989.5	Y43552.1	181	153.1	49.4
0225	Apr-09	1234	4109.1	6623.2	W12989.6	Y43563.9	231	62.3	52.2
0226	Apr-09	1439	4118.7	6618.3	W12927.5	Y43609.0	003	55.8	51.2
0227	Apr-09	1708	4113.7	6637.7	W13022.3	Y43597.1	328	45.1	41.4
0228	Apr-09	1844	4119.0	6642.8	W13017.4	Y43627.8	199	42.7	41.3
0229	Apr-09	2029	4116.6	6652.5	W13066.1	Y43622.5	204	38.8	42.1
0230	Apr-09	2255	4058.5	6657.0	W13165.1	Y43530.9	286	40.7	41.4
0231	Apr-10	0059	4101.0	6712.0	W13214.6	Y43554.4	267	40.2	41.9
0232	Apr-10	0325	4056.3	6733.2	W13323.3	Y43543.9	260	38.8	41.9
0233	Apr-10	0751	4115.6	6731.1	W13228.4	Y43647.6	178	25.4	42.5
0234	Apr-10	1039	4119.0	6706.7	W13111.4	Y43645.9	292	32.0	42.2
0235	Apr-10	1251	4131.3	6706.7	W13053.3	Y43709.6	279	31.4	42.2
0236	Apr-10	1443	4139.1	6705.1	W13009.4	Y43747.6	214	32.8	42.2
0237	Apr-10	1658	4133.3	6717.7	W13088.6	Y43729.6	212	26.5	42.4

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0238	Apr-10	1923	4142.5	6731.4	W13101.8	Y43789.5	320	26.5	42.5
0239	Apr-11	0015	4120.0	6738.2	W13239.1	Y43677.0	263	22.4	42.7
0240	Apr-11	0314	4126.5	6805.6	W13331.1	Y43737.7	256	26.5	42.9
0241	Apr-11	0645	4127.5	6816.0	W13375.2	Y43753.0	252	26.8	42.4
0242	Apr-11	0819	4126.3	6821.1	W13404.9	Y43751.6	175	30.9	42.3
0243	Apr-11	1048	4117.8	6824.5	W13459.8	Y43706.9	332	31.7	42.4
0244	Apr-11	1306	4126.4	6830.6	W13450.3	Y43761.8	231	47.6	41.8
0245	Apr-11	1712	4126.2	6859.0	W13592.2	Y43791.3	232	81.2	42.6
0246	Apr-11	2040	4122.9	6917.2	W13701.7	Y43791.8	186	59.1	42.1
0247	Apr-12	0704	4127.6	6926.6	W13730.9	Y43831.7	159	24.6	40.8
0248	Apr-12	1019	4127.1	6928.0	W13740.4	Y43830.3	187	22.4	40.8
0249	Apr-12	1208	4128.1	6934.2	W13770.2	Y43843.4	185	18.0	41.1
0250	Apr-12	1310	4130.1	6934.2	W13761.1	Y43855.6	186	19.7	
0251	Apr-12	1433	4127.0	6936.6	W13787.6	Y43840.0	172	16.7	
0252	Apr-12	1738	4114.6	6921.5	W13760.1	Y43746.5	130	31.4	41.7
0253	Apr-12	2047	4127.3	6935.2	W13778.9	Y43839.9	177	17.5	41.2
0254	Apr-13	0340	4153.0	6947.9	W13732.3	Y44009.5	199	59.1	41.6
0255	Apr-13	0542	4153.6	6955.2	W13771.3	Y44023.8	088	17.0	41.0
0256	Apr-13	0825	4158.7	6954.9	W13744.8	Y44053.2	152	27.3	
0257	Apr-20	0109	4206.2	6940.3	W13623.8	Y44074.1	065	120.8	47.3
0258	Apr-20	0437	4203.8	6918.1	W13512.7	Y44028.6	270	114.3	47.4
0259	Apr-20	0805	4151.3	6927.8	W13627.6	Y43971.8	146	106.1	47.3
0260	Apr-20	1325	4137.0	6848.3	W13488.0	Y43841.0	035	84.2	44.2
0261	Apr-20	1703	4136.2	6823.3	W13368.6	Y43808.6	191	13.9	44.2
0262	Apr-20	2109	4142.2	6850.6	W13474.7	Y43872.9	262	89.4	44.4
0263	Apr-20	2335	4148.5	6857.8	W13481.1	Y43917.1	254	83.7	45.0
0264	Apr-21	0342	4208.9	6846.3	W13318.6	Y44012.6	297	100.9	47.2
0265	Apr-21	0726	4201.8	6834.3	W13294.6	Y43960.0	161	92.7	45.8
0266	Apr-21	1005	4208.8	6824.6	W13210.6	Y43984.4	177	102.8	46.5
0267	Apr-21	1354	4150.8	6800.0	W13187.2	Y43862.0	245	36.4	43.1
0268	Apr-21	1649	4151.2	6747.3	W13127.5	Y43850.7	269	21.3	43.4
0269	Apr-21	1951	4205.5	6750.9	W13069.8	Y43927.4	342	111.5	47.2
0270	Apr-21	2235	4203.5	6739.8	W13030.9	Y43904.8	246	83.9	43.8
0271	Apr-22	0044	4210.5	6744.3	W13013.5	Y43945.1	335	111.3	47.7
0272	Apr-22	0923	4201.6	6710.4	W12916.5	Y43864.9	298	28.4	42.8
0273	Apr-22	1020	4201.6	6709.4	W12912.7	Y43863.7	034	29.5	42.6
0274	Apr-22	1350	4151.2	6637.1	W12840.6	Y43782.4	156	39.1	42.7
0275	Apr-22	1501	4150.4	6637.4	W12845.6	Y43779.2	172	38.5	
0276	Apr-22	1751	4148.4	6611.3	W12761.3	Y43747.4	321	44.8	
0277	Apr-22	2021	4147.5	6608.7	W12756.8	Y43741.1	334	47.0	42.7
0278	Apr-22	2233	4143.5	6603.3	W12757.9	Y43717.8	013	53.6	43.6
0279	Apr-23	0114	4131.3	6558.8	W12800.7	Y43656.6	028	79.8	50.6
0280	Apr-23	0326	4130.2	6556.7	W12799.1	Y43649.6	029	118.4	48.7
0281	Apr-23	0707	4141.0	6549.0	W12721.9	Y43695.4	032	100.1	51.5
0282	Apr-23	0954	4154.1	6545.7	W12647.4	Y43753.5	331	103.6	46.5
0283	Apr-23	1320	4216.5	6559.0	W12577.7	Y43866.0	128	130.1	48.3
0283	Apr-23	1320	4216.5	6559.0	W12577.7	Y43866.0	128	130.1	48.4
0284	Apr-23	1712	4227.7	6621.3	W12593.1	Y43937.3	143	137.2	

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0285	Apr-24	0657	4213.7	6621.0	W12666.7	Y43873.7	092	118.7	47.4
0286	Apr-24	0858	4206.3	6615.7	W12686.4	Y43835.0	160	52.2	43.2
0287	Apr-24	1102	4204.2	6622.9	W12722.9	Y43831.4	200	47.0	43.1
0288	Apr-24	1238	4209.1	6628.6	W12718.0	Y43859.5	286	81.2	45.7
0289	Apr-24	1543	4208.8	6648.1	W12791.7	Y43876.9	044	52.8	42.5
0290	Apr-24	1843	4213.1	6705.7	W12837.2	Y43915.4	261	111.3	47.7
0291	Apr-24	2157	4226.1	6709.2	W12780.0	Y43980.5	289	195.5	46.2
0292	Apr-24	2358	4226.0	6711.7	W12791.0	Y43982.8	271	193.8	46.2
0293	Apr-25	0324	4236.4	6705.0	W12705.9	Y44023.0	086	163.8	46.9
0294	Apr-25	0708	4239.9	6729.7	W12786.9	Y44068.0	017	114.0	47.2
0295	Apr-25	1037	4303.9	6713.1	W12576.3	Y44154.4	261	124.1	47.6
0296	Apr-25	1404	4313.8	6728.8	W12578.5	Y44216.8	194	106.6	
0297	Apr-25	1523	4314.0	6727.5	W12571.9	Y44215.9	228	105.0	47.1
0298	Apr-25	1857	4323.7	6709.3	W12438.2	Y44233.0	160	130.4	47.1
0298	Apr-25	1857	4323.7	6709.3	W12438.2	Y44233.0	160	130.4	47.0
0299	Apr-25	2205	4315.8	6653.8	W12429.9	Y44180.9	030	110.2	46.7
0300	Apr-26	0150	4338.8	6634.8	W12221.3	Y44249.7	208	57.4	42.7
0301	Apr-26	0425	4344.6	6652.0	W12241.5	Y44293.6	180	85.8	44.4
0302	Apr-26	0736	4359.2	6704.2	W12187.1	Y44364.8	036	84.5	46.7
0303	Apr-26	0911	4400.2	6700.1	W12165.4	Y44363.3	033	91.0	46.5
0304	Apr-26	1107	4408.3	6653.8	W12089.2	Y44384.6	023	95.7	46.3
0305	Apr-26	1315	4416.4	6656.6	W12043.4	Y44417.1	030	90.5	45.4
0306	Apr-26	1504	4424.7	6652.0	W11971.0	Y44440.0	234	60.4	42.9
0307	Apr-26	1834	4415.3	6710.1	W12095.9	Y44431.7	229	91.0	46.9
0308	Apr-26	2137	4421.1	6740.9	W12170.6	Y44495.3	221	38.3	40.4
0309	Apr-27	0041	4410.7	6801.5	W12334.5	Y44488.5	021	46.2	40.8
0310	Apr-27	0407	4411.8	6733.1	W12206.9	Y44450.9	224	100.3	48.0
0311	Apr-27	0740	4352.1	6733.0	W12344.3	Y44377.4	209	111.5	47.6
0312	Apr-27	1110	4351.9	6752.8	W12429.3	Y44404.7	262	95.4	48.3
0313	Apr-27	1400	4334.2	6736.1	W12477.6	Y44311.2	227	128.2	48.4
0314	Apr-27	1656	4328.9	6748.3	W12564.6	Y44306.7	210	136.2	48.7
0315	Apr-28	0539	4206.1	7009.0	X25440.1	Y44117.6	093	19.4	43.3
0316	Apr-28	0817	4200.4	7018.4	X25451.7	Y44099.1	232	27.1	39.6
0317	Apr-28	1020	4158.7	7014.4	X25417.3	Y44083.2	251	21.3	41.1
0318	Apr-28	1204	4159.0	7009.1	X25389.2	Y44076.3	216	15.9	47.2
0319	Apr-28	1352	4149.8	7016.6	X25366.7	Y44033.2	217	12.8	43.2
0320	Apr-28	1519	4151.3	7019.8	X25397.3	Y44047.2	212	15.0	41.1
0321	Apr-28	1708	4155.9	7019.7	X25428.8	Y44074.8	188	20.0	40.0
0322	May-04	0940	4218.6	7005.6	X25510.0	Y44182.3	080	69.2	43.9
0323	May-04	1346	4148.4	6954.0	W13788.6	Y43991.7	334	13.9	42.7
0324	May-04	1526	4144.2	6952.9	W13801.6	Y43965.0	355	12.0	42.9
0325	May-04	1750	4138.0	6942.3	W13770.3	Y43913.6	148	26.8	41.4
0326	May-04	2342	4219.1	6930.5	W13502.6	Y44129.5	223	128.2	47.4
0327	May-05	0421	4229.3	6902.4	W13292.1	Y44140.9	297	119.5	47.0
0327	May-05	0421	4229.3	6902.4	W13292.1	Y44140.9	297	119.5	47.0
0328	May-05	0847	4233.6	6854.8	W13227.7	Y44151.6	086	115.1	47.0
0329	May-05	1131	4240.8	6836.5	W13092.1	Y44160.3	253	108.3	47.1
0330	May-05	1503	4234.0	6819.2	W13045.5	Y44103.6	240	104.2	47.1

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2011 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0331	May-05	1746	4228.5	6801.6	W12993.2	Y44054.1	304	102.8	47.2
0332	May-05	2025	4231.2	6746.7	W12909.7	Y44048.5	339	127.4	47.8
0332	May-05	2025	4231.2	6746.7	W12909.7	Y44048.5	339	127.4	47.9
0333	May-06	0035	4242.9	6800.2	W12903.8	Y44120.9	081	95.4	47.1
0334	May-06	0318	4250.8	6815.6	W12929.9	Y44178.3	186	109.6	47.0
0335	May-06	1210	4253.6	6838.4	W13025.9	Y44224.2	173	107.7	46.8
0336	May-06	1606	4248.0	6903.9	W13193.8	Y44235.7	321	97.1	45.4
0337	May-06	1934	4304.2	6932.0	W13254.3	Y44358.3	030	80.1	45.5
0338	May-06	2216	4313.7	6911.8	W13080.2	Y44368.3	097	96.2	46.0
0339	May-07	0116	4319.4	6846.6	W12907.7	Y44353.0	021	68.1	43.3
0340	May-07	0342	4328.7	6832.8	W12776.0	Y44371.2	013	91.3	47.2
0341	May-07	0547	4328.2	6824.3	W12736.8	Y44356.3	057	106.4	47.9
0342	May-07	1016	4360.0	6815.9	W12478.2	Y44470.2	189	55.0	42.0
0343	May-07	1222	4359.5	6826.5	W12533.2	Y44484.6	218	48.4	41.2
0344	May-07	1357	4356.7	6835.2	W12597.0	Y44487.8	266	49.8	41.6
0345	May-07	2006	4331.9	6922.4	W13023.8	Y44465.4	359	71.9	45.0
0346	May-07	2211	4326.3	6932.0	W13116.1	Y44457.6	202	90.8	45.6
0347	May-08	0057	4336.6	6943.2	W13116.3	Y44521.3	182	56.6	40.1
0348	May-08	0354	4328.2	7003.1	X25930.0	Y44521.6	070	64.0	40.6
0349	May-08	0714	4319.6	6948.8	W13259.5	Y44457.8	041	93.0	47.2
0350	May-08	0847	4313.8	6948.3	W13292.3	Y44430.5	216	93.5	47.0
0351	May-08	1203	4307.0	7010.6	X25844.9	Y44439.6	080	85.8	43.6
0352	May-08	1421	4256.9	6959.6	W13462.3	Y44371.4	161	80.9	44.5
0353	May-08	1649	4257.1	7013.8	X25801.7	Y44398.0	118	80.4	43.3
0354	May-08	2035	4256.1	7023.7	X25847.1	Y44411.2	314	65.3	41.5
0355	May-08	2259	4250.8	7045.1	X25938.2	Y44425.1	169	18.3	40.3
0356	May-09	0115	4244.3	7025.0	X25781.7	Y44353.9	106	47.3	40.1
0357	May-09	0312	4243.9	7011.4	X25706.7	Y44327.0	139	60.1	40.8
0358	May-09	0540	4240.6	7000.7	X25633.9	Y44291.4	343	73.8	44.0
0359	May-09	0810	4236.3	7005.3	X25627.7	Y44277.1	318	58.5	41.3
0360	May-09	0925	4234.4	7005.3	X25615.5	Y44267.3	012	58.0	
0361	May-09	1158	4230.0	7008.9	X25604.0	Y44250.1	299	51.7	40.6
0362	May-09	1339	4232.9	7010.2	X25630.0	Y44268.0	327	44.8	40.3
0363	May-09	1650	4223.9	7023.4	X25641.3	Y44241.8	300	18.0	39.9
0364	May-09	1941	4234.6	7036.4	X25787.1	Y44323.5	038	27.3	39.8
0365	May-09	2140	4229.8	7041.2	X25787.9	Y44306.7	096	31.7	42.0
0366	May-10	0045	4223.7	7044.7	X25772.6	Y44279.0	350	26.0	
0367	May-10	0825	4219.2	7043.6	X25737.8	Y44251.6	021	21.9	
0368	May-10	1133	4219.6	7045.3	X25751.5	Y44257.1	031	18.6	42.6
0369	May-10	1403	4213.4	7037.0	X25656.7	Y44206.3	334	20.2	
0370	May-10	1534	4214.5	7031.3	X25627.1	Y44202.9	024	36.6	40.2
0371	May-10	1723	4212.9	7029.5	X25605.4	Y44190.7	019	35.8	40.2
0372	May-10	2024	4208.4	7027.8	X25565.0	Y44161.8	016	32.3	40.3

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
1	0	0	0	0	3	0	0	3318	0	0	0	0	0	25	26	0	342	321	8	3	1	0	4	0	16	4067
2	0	0	0	0	27	0	120	640	0	0	0	32	0	11	0	0	2	0	0	0	1	0	27	2	74	936
3	0	0	0	0	2	0	0	2405	0	0	0	1	0	9	2	0	268	140	0	8	0	1	4	0	4	2844
4	0	0	0	0	1	0	0	640	0	0	0	0	0	21	0	3	13	186	0	19	0	1	2	0	12	898
5	0	0	0	0	71	0	16	52	0	0	0	0	0	10	39	48	0	1	0	0	147	0	42	0	136	562
6	0	0	0	0	2	0	118	582	0	0	0	20	0	0	0	1	0	0	0	0	0	3	1	0	91	818
7	0	0	0	0	3	0	0	107	0	0	0	0	0	10	7	16	0	0	0	0	170	0	17	0	129	459
8	0	0	0	0	1	0	0	1150	0	0	0	1	0	13	0	0	3	0	0	108	1	0	12	0	17	1306
9	0	0	0	0	0	0	7	2975	0	0	0	0	0	14	0	0	57	455	0	113	2	0	13	0	64	3700
10	0	0	0	0	0	0	9	508	0	0	0	0	0	25	2	1	0	1	0	2	122	0	109	0	61	840
11	0	0	0	0	10	0	20	1810	0	0	0	0	0	128	0	0	0	0	0	0	172	0	245	18	272	2675
12	0	0	0	0	0	0	0	4367	0	0	0	0	0	13	0	0	0	4	12	85	9	0	24	0	57	4571
13	0	0	0	0	1	0	0	2203	0	0	0	0	0	47	0	0	118	3	5	45	2	0	6	0	29	2459
14	0	0	0	0	0	0	7	3711	0	0	0	0	0	22	0	0	195	559	0	3	24	0	16	0	12	4549
15	0	0	0	0	9	0	19	2560	0	0	0	0	0	9	0	0	0	1	0	0	10	0	7	0	74	2689
16	0	0	0	0	2	0	3	844	0	0	0	0	0	3	1	0	0	0	0	0	2	0	30	5	25	915
17	0	0	0	0	0	0	0	332	0	0	0	0	0	1	0	1	0	0	0	0	1	0	14	1	45	395
18	0	0	0	0	1	0	0	1068	0	0	0	0	0	35	0	0	17	50	0	60	2	0	4	0	241	1478
19	0	0	0	0	1	0	6	836	0	0	0	0	0	56	0	1	0	1	0	1	12	0	11	0	58	983
20	0	0	0	0	0	0	0	756	0	0	0	0	0	4	1	1	0	0	0	0	0	0	310	15	253	1340
21	0	0	0	0	0	0	6	820	0	0	0	0	0	33	0	0	0	0	0	0	1	0	17	1	1108	1986
22	0	0	0	0	8	0	118	2003	0	0	0	2	0	12	0	0	0	0	0	0	0	18	16	1	142	2320
23	0	0	0	0	0	0	5	269	0	0	0	0	0	27	0	2	0	0	0	0	9	0	65	0	176	553
24	0	0	0	1	54	0	107	2692	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	366	3223
25	0	0	0	0	0	0	0	5800	0	0	0	0	0	5	0	0	0	0	0	0	0	0	15	0	81	5901
26	0	0	0	0	0	0	6	8872	0	0	0	0	0	12	0	0	0	0	0	0	0	0	10	0	203	9103
27	0	0	0	0	0	0	0	3957	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	3983
28	0	0	0	0	0	0	0	12400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216	0	611	13227

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
29	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	
30	0	0	0	0	0	0	0	2668	0	0	0	0	0	2	0	0	0	0	0	0	0	0	41	0	161	2872
31	0	0	0	0	1	0	0	242	0	0	0	0	2	6	0	0	1	0	0	0	0	0	1	0	86	339
32	0	0	0	0	9	0	0	608	0	0	0	0	0	0	0	0	105	0	71	0	0	0	1	0	93	887
33	0	0	0	0	0	0	0	369	0	0	0	0	0	0	0	0	18	0	0	0	0	0	1	0	80	468
34	0	0	0	0	0	0	16	230	0	0	0	0	0	1	0	0	0	0	11	0	0	0	1	0	40	299
35	0	0	0	0	0	0	17	177	0	0	0	0	0	0	0	0	725	0	9	0	0	0	0	0	1	929
36	0	0	0	0	0	0	0	511	0	0	0	0	0	1	0	0	28	0	0	0	3	0	2	0	537	1082
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	64	65
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	238	272
39	0	0	0	0	0	0	0	0	0	0	0	0	0	24	3	0	0	0	0	0	0	0	27	0	201	255
40	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	98	0	314	415
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	6	0	64	77
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	53	22	45	123
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	16	21
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	45
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	0	57	136
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	6	0	139	150
47	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	342	0	6	0	293	643
48	0	0	0	0	0	0	3	532	0	0	0	0	0	0	0	0	0	0	0	0	2	0	44	0	327	908
49	0	0	0	0	3	0	0	542	0	0	0	0	0	2	0	0	0	0	0	0	0	0	10	0	156	713
50	0	0	0	0	0	0	0	289	0	0	0	0	0	6	0	0	109	0	11	0	0	0	1	0	26	442
51	0	0	0	0	1	0	0	3999	0	0	0	0	0	7	0	0	4	0	6	0	0	0	0	0	75	4092
52	0	0	0	0	0	0	0	805	0	0	0	0	0	2	0	0	164	28	10	4	0	0	0	0	1959	2972
53	0	0	0	0	0	0	0	389	0	0	0	0	0	4	0	0	0	2	23	0	0	0	0	0	53	471
54	0	0	0	0	0	0	0	502	0	0	0	0	0	2	0	0	0	0	9	0	0	0	0	0	2355	2868
55	0	0	0	0	0	0	0	208	0	0	0	0	0	0	0	0	30	0	11	0	0	0	0	0	4	253
56	4	0	0	0	0	0	20	822	0	0	0	0	0	0	0	0	12	0	32	0	0	0	0	0	25	915
57	0	0	0	0	1	0	0	156	0	0	0	0	0	0	0	0	41	0	23	0	0	3	0	0	40	264

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
58	0	0	0	0	1	0	0	51	0	0	0	0	0	0	0	0	49	0	0	1	0	0	0	0	12	114
59	0	0	0	0	0	0	0	90	0	0	0	0	0	0	0	0	242	0	0	0	0	0	0	0	22	354
60	0	0	0	0	0	0	0	78	0	0	0	0	2	0	0	0	1	0	39	0	0	0	0	0	14	134
61	0	0	0	0	0	0	0	70	0	0	0	0	0	3	0	0	2	0	54	0	0	0	0	0	8	137
62	0	0	0	0	0	0	0	48	0	0	0	0	0	2	0	0	16	0	0	2	0	0	0	0	5	73
63	0	0	0	0	0	0	0	130	0	0	0	0	1	0	0	0	4	0	13	1	0	0	0	0	2	151
64	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	92	1	0	0	0	2	0	0	38	176
65	0	0	0	0	0	0	0	104	0	0	0	0	0	0	0	0	572	2	0	0	0	0	0	0	21	699
66	0	0	0	0	0	0	0	78	0	0	0	0	0	0	0	0	67	5	21	0	0	0	0	0	81	252
67	0	0	0	0	0	0	0	107	0	0	0	0	0	0	0	0	556	4	0	0	0	0	0	0	3	670
68	7	0	0	0	0	0	0	2723	0	0	0	0	0	7	0	0	12	1	35	7	0	0	1	0	14	2807
69	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	222	0	0	3	0	0	1	0	28	258
70	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	3	0	19	10	0	0	0	0	8	52
71	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	3	0	59	74	0	0	0	0	4	144
72	0	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	4	1	14	30	0	0	0	0	8	64
73	0	0	0	0	4	0	0	7	0	0	0	0	3	0	0	0	2	1	19	57	0	5	0	0	13	111
74	0	0	0	0	0	0	0	10	0	0	0	0	1	0	0	0	29	1	8	42	0	0	0	0	5	96
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	6	0	0	0	0	1	39
76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	9	4	0	0	0	0	2	49
77	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	80	0	0	0	0	2	87
78	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	64	0	0	0	0	1	70
79	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	50	0	21	16	0	0	0	0	2	90
80	0	0	0	0	1	0	10	48	0	0	0	0	3	3	0	0	104	3	12	56	0	0	0	0	4	244
81	0	0	0	0	2	0	0	261	0	0	0	1	0	9	0	0	29	40	9	57	1	0	2	0	22	433
82	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	13	93	0	0	0	0	11	119
83	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	62	0	0	0	0	8	75
84	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	26	0	0	0	0	2	31
85	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	0	89	0	0	0	0	8	109
86	0	0	0	0	0	0	0	0	0	2	0	0	3	0	0	0	7	0	26	69	0	0	0	0	2	109

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
87	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	12	0	0	0	0	4	17
88	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4	0	0	0	0	0	6	12
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	1	10
90	0	0	0	0	0	0	0	6	0	2	0	0	1	0	0	0	3	0	0	6	0	0	0	0	2	20
91	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	205	0	0	11	0	0	0	0	3	220
92	0	0	0	0	0	0	0	22	0	2	0	0	1	0	0	0	2	0	11	10	0	4	0	0	5	57
93	0	0	0	0	0	0	0	63	0	0	0	0	1	0	0	0	39	0	30	11	0	0	0	0	9	153
94	0	0	0	0	1	0	0	100	0	0	0	0	4	1	0	0	38	6	76	53	0	0	0	0	11	290
95	0	0	0	0	6	0	0	266	0	0	0	0	1	9	0	0	9	1	3	135	0	0	0	0	39	469
96	0	2	0	0	13	0	2	334	0	0	0	0	0	5	0	0	12	1	0	86	0	0	0	0	33	488
97	0	0	0	0	4	0	8	238	0	0	0	0	3	6	0	0	8	12	4	180	0	0	0	0	34	497
98	0	0	0	0	2	0	12	399	0	0	0	0	0	3	0	0	31	13	0	21	0	0	0	0	28	509
99	0	0	0	0	7	0	4	803	0	0	0	1	0	28	0	0	76	90	5	32	0	0	4	0	41	1091
100	0	0	0	0	3	0	0	1996	0	0	0	0	0	22	5	0	3	30	25	10	1	0	3	0	11	2109
101	0	0	0	0	3	0	7	139	0	0	0	1	0	2	1	2	82	0	0	6	0	0	26	0	12	281
102	0	0	0	0	2	0	10	102	0	0	0	1	0	10	1	6	26	2	0	0	4	0	37	0	22	223
103	0	0	0	15	10	0	43	1147	0	0	0	18	0	0	0	0	0	0	0	0	0	2	6	1	98	1340
104	0	0	0	0	43	0	8	14	0	0	0	0	0	34	768	109	0	0	0	0	16	0	102	0	124	1218
105	0	0	0	0	13	0	6	1765	0	0	0	0	0	10	0	9	189	274	0	29	0	0	3	0	44	2342
106	0	0	0	6	106	0	83	1089	0	0	0	25	0	0	0	0	0	2	0	0	0	0	14	0	232	1557
107	0	0	0	9	6	0	27	623	0	0	0	3	0	0	0	0	0	0	0	0	0	3	1	0	58	730
108	0	0	0	0	89	0	7	126	0	0	0	0	0	27	2	11	0	0	0	0	8	0	9	0	349	628
109	0	0	0	0	102	0	28	53	0	0	0	1	0	64	27	16	0	0	7	0	9	0	3	0	784	1094
110	0	0	0	3	26	0	122	1354	0	0	0	53	0	0	0	0	0	0	0	0	0	0	0	1	178	1737
111	0	0	0	2	7	0	34	655	0	0	0	6	0	0	0	0	0	0	0	0	0	3	0	0	86	793
112	0	0	0	0	71	0	9	759	0	0	0	0	0	27	49	8	65	0	0	0	12	0	12	0	117	1129
113	0	4	0	0	10	0	2	1585	0	0	0	0	0	16	0	0	163	154	0	2	0	0	5	0	34	1975
114	0	8	0	0	15	0	0	1759	0	0	0	0	0	10	0	0	19	8	0	22	0	0	0	0	41	1882
115	0	0	0	0	4	0	24	799	4	0	0	0	0	5	0	0	1	0	85	213	0	0	0	0	13	1148

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
116	0	1	0	0	106	0	29	3664	0	0	0	1	0	74	0	1	274	398	37	44	0	0	1	0	183	4813
117	0	0	0	0	133	0	4	51	0	0	0	0	0	49	4	4	0	0	0	1	17	0	4	0	88	355
118	0	0	0	10	90	0	86	1021	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	281	1502
119	0	0	0	0	262	0	24	63	0	0	0	0	0	136	1	5	0	0	0	0	38	0	19	0	161	709
120	1	0	0	7	320	0	68	154	0	0	0	17	0	0	0	0	0	0	0	0	0	1	2	2	187	759
121	0	0	0	7	112	0	98	5	0	0	0	7	0	0	0	0	0	0	0	0	0	12	0	1	41	283
122	0	0	0	0	182	0	35	12	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	45	276
123	0	0	0	0	94	0	26	3	0	0	0	1	0	21	0	1	0	0	30	0	336	0	101	1	129	743
124	0	0	0	0	121	0	69	10	0	0	0	0	0	42	0	1	0	0	0	0	11	0	2	0	77	333
125	0	0	0	0	86	0	58	19	0	0	0	0	0	50	0	0	0	2	0	0	37	0	5	1	50	308
126	0	0	0	3	220	0	193	579	0	0	0	0	0	125	0	1	0	1	0	0	128	0	4	0	1387	2641
127	0	0	0	0	45	0	23	80	1	0	0	1	0	8	0	0	124	159	34	1	0	0	0	0	149	625
128	4	0	0	0	46	0	25	89	1	0	0	0	5	3	0	0	5	7	23	0	0	0	0	0	83	291
129	0	1	0	0	54	0	62	168	0	0	0	0	0	37	0	0	11	1	3	2	0	0	0	0	184	523
130	0	0	0	0	19	0	16	247	3	0	0	0	0	12	0	0	126	67	16	11	0	0	0	0	212	729
131	0	0	0	0	8	0	16	889	0	0	0	0	0	66	0	0	4	37	28	3	0	0	0	0	118	1169
132	0	0	0	0	0	0	0	312	5	0	0	0	0	2	0	0	82	1	18	36	0	0	0	0	8	464
133	0	0	0	0	0	0	0	259	11	0	0	0	0	10	0	0	17	0	20	29	0	0	0	0	8	354
134	0	0	0	0	2	0	23	275	2	0	0	0	0	18	0	0	72	1	17	128	0	0	0	0	32	570
135	0	0	0	0	0	0	0	0	0	15	0	0	1	0	0	0	74	0	0	23	0	0	0	0	1	114
136	0	0	0	0	0	0	0	0	0	12	0	0	2	1	0	0	1	0	19	188	0	0	0	0	7	230
137	0	0	0	0	0	0	0	0	1	11	0	0	2	0	0	0	1	0	29	133	0	0	0	0	7	184
138	0	0	0	0	0	0	0	0	0	20	0	0	2	0	0	0	0	0	15	141	0	0	0	0	7	185
139	0	0	0	0	0	0	0	0	0	9	0	0	3	0	0	0	2	0	4	73	0	0	0	0	13	104
140	0	0	0	0	0	0	0	0	0	14	0	0	1	0	0	0	4	0	43	321	0	0	0	0	6	389
141	0	0	0	0	0	0	0	0	0	8	0	0	2	0	0	0	0	0	4	30	0	0	0	0	7	51
142	0	0	0	0	0	0	0	0	1	9	0	0	0	1	0	0	0	0	2	29	0	0	0	0	8	50
143	6	0	0	0	0	0	0	9	5	12	0	0	0	0	0	0	3	0	2	46	0	0	0	0	4	87
144	0	0	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	8	29	0	1	0	0	14	57

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
145	0	0	0	0	0	0	0	5	0	10	0	0	2	0	0	0	122	0	1	42	0	0	0	0	14	196
146	0	0	0	0	0	0	0	10	0	34	0	0	2	0	0	0	0	0	89	20	0	0	0	0	13	168
147	0	0	0	0	0	0	0	19	0	23	0	0	0	0	0	0	0	0	15	7	0	0	0	0	8	72
148	0	0	0	0	0	0	0	24	0	6	0	0	1	0	0	0	0	0	0	47	0	0	0	0	11	89
149	3	0	0	0	0	0	0	19	0	6	0	0	9	0	0	0	2	0	8	126	0	0	0	0	22	195
150	2	0	0	0	0	0	0	23	0	6	0	0	4	0	0	0	2	0	6	235	0	0	0	0	7	285
151	0	0	0	0	2	0	0	273	1	0	0	0	4	8	0	0	3	1	0	76	0	0	0	0	12	380
152	8	0	0	0	16	0	0	57	8	1	0	0	23	3	0	0	84	0	7	37	0	0	0	0	83	327
153	13	0	0	0	0	0	0	30	5	4	0	0	7	0	0	0	4	0	4	111	0	0	0	0	24	202
154	2	0	0	0	0	0	0	32	7	0	0	0	1	1	0	0	0	0	9	13	0	0	0	0	10	75
155	0	0	0	0	0	0	0	228	7	1	0	0	0	1	0	0	1	0	15	19	0	0	0	0	13	285
156	0	0	0	0	0	0	0	77	14	10	0	0	2	2	0	0	39	0	8	45	0	0	0	0	12	209
157	0	0	0	0	0	0	0	207	14	5	0	0	1	0	0	0	6	0	26	47	0	0	0	0	14	320
158	0	0	0	0	1	0	0	120	11	1	0	0	0	1	0	0	143	0	12	35	0	0	0	0	8	332
159	4	2	0	0	0	0	0	181	28	0	0	1	4	14	0	0	350	0	0	53	0	0	0	0	21	658
160	1	0	0	0	1	0	0	103	10	1	0	0	3	0	0	0	3	0	27	275	0	0	0	0	10	434
161	5	0	0	0	0	0	0	4	16	16	0	0	1	0	0	0	93	0	39	465	0	0	0	0	6	645
162	0	0	0	0	0	0	0	0	2	19	0	0	1	0	0	0	2	0	13	157	0	0	0	0	5	199
163	0	0	0	0	0	0	0	0	3	14	0	0	0	0	0	0	10	0	97	587	0	0	0	0	13	724
164	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0	0	0	0	5	24	0	0	0	0	13	48
165	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	3	41	0	0	0	0	9	74
166	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	360	0	0	4	0	1	0	0	1	370
167	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	291	0	14	26	0	1	0	0	12	346
168	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	5	13
169	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
170	0	0	0	0	13	0	0	225	3	0	0	0	2	4	0	0	141	0	57	102	0	0	0	0	32	579
171	1	0	0	0	50	0	14	56	6	0	0	0	23	11	0	0	115	0 1	296	1809	0	0	0	0	74	3455
172	0	0	0	0	31	0	2	32	7	0	0	0	13	6	0	0	43	7	232	122	0	2	0	0	48	545
173	0	0	0	0	34	0	28	8	0	0	0	0	2	3	0	0	19	2	17	7	0	0	0	0	31	151

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
174	0	0	0	0	18	0	14	0	0	0	0	0	3	1	0	0	4	0	24	32	0	2	0	0	28	126
175	0	0	0	6	50	0	0	4	0	0	0	2	0	41	0	0	1	0	65	3	4	0	1	0	83	260
176	0	0	0	4	3	0	104	3	0	0	0	7	0	0	0	0	0	0	3	0	0	11	0	1	165	301
177	0	0	0	4	54	0	83	7	0	0	0	15	0	0	0	0	0	0	0	0	0	6	0	7	547	723
178	0	0	0	0	77	0	12	5	0	0	0	1	0	26	0	0	0	0	17	0	82	0	16	6	134	376
179	0	0	0	0	13	0	2	2	1	0	0	0	3	3	0	0	32	33	49	115	1	0	0	0	26	280
180	1	1	0	0	70	0	2	0	2	0	0	1	0	0	0	0	9	82	22	90	0	0	0	0	13	293
181	0	0	0	0	16	0	0	1	1	0	0	2	6	5	0	0	1	1	2	13	0	0	0	0	22	70
182	0	0	0	2	47	0	14	1	13	0	0	2	1	14	0	0	0	1	94	1	74	0	1	0	55	320
183	0	0	0	0	33	0	0	0	3	0	0	0	4	1	0	0	2	0	33	110	0	0	0	0	22	208
184	0	0	0	0	15	0	0	0	1	0	0	0	4	0	0	0	4	0	46	75	0	0	0	0	26	171
185	1	4	0	0	66	0	0	0	3	1	0	0	8	0	0	0	6	0	39	235	0	0	0	0	17	380
186	0	0	0	0	9	0	0	27	5	0	0	1	25	2	0	0	0	0	66	12	3	0	1	0	17	168
187	0	0	0	0	146	0	60	3	37	0	0	1	0	43	0	0	0	0	555	3	132	0	9	0	152	1141
188	0	0	0	8	195	0	0	26	0	0	0	2	0	0	0	0	0	0	29	0	1	69	0	0	135	465
189	0	0	0	0	182	0	22	41	0	0	0	4	0	61	0	1	0	0	61	6	0	0	38	0	311	727
190	0	0	0	0	9	0	0	3	5	0	0	0	2	0	0	0	70	0	34	30	0	0	0	0	16	169
191	0	0	0	0	20	0	0	0	3	0	0	0	3	0	0	0	32	0	18	165	0	0	0	0	23	264
192	0	0	0	0	38	0	0	0	14	5	0	0	2	0	0	0	38	0	58	196	0	0	0	0	19	370
193	0	0	0	0	79	0	1	0	1	0	0	0	7	0	0	0	566	0	820	817	0	1	0	0	36	2328
194	0	0	0	0	100	0	0	0	9	0	0	1	7	1	0	0	65	0	121	311	0	0	0	0	44	659
195	4	0	0	0	11	0	0	0	5	0	0	0	1	0	0	0	254	0	17	67	0	1	0	0	25	385
196	0	0	0	0	3	0	0	6	1	1	0	0	0	0	0	0	694	0	3	10	0	0	0	0	73	791
197	0	0	0	0	1	0	0	0	3	1	0	0	1	0	0	0	1764	0	0	1	0	1	0	0	91	1863
198	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0	10	17
199	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	22
200	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	15
201	0	0	0	0	0	0	0	0	0	10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	15
202	0	7	0	0	0	0	0	0	2	0	0	0	1	1	0	0	0	0	11	22	0	0	0	0	31	75

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
203	3	16	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	3	15	0	0	0	0	69	110
204	0	1	0	0	0	0	0	2	0	18	0	0	0	0	0	0	18	1	0	33	0	0	0	0	26	99
205	0	1	0	0	0	0	0	0	1	8	0	0	0	1	0	0	1	0	8	39	0	0	0	0	3	62
206	0	4	0	0	5	0	0	0	13	2	1	0	5	1	0	0	42	0	34	20	0	0	0	0	42	169
207	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	17	0	12	23	0	0	0	0	10	69
208	0	401	0	0	13	0	0	0	2	3	2	0	3	0	0	0	0	0	50	184	0	0	0	0	14	672
209	17	337	0	1	24	0	2	0	37	2	2	0	3	0	0	0	13	0	156	298	0	0	0	0	32	924
210	0	15	0	1	34	0	5	9	8	0	0	4	4	4	0	0	1	1	112	38	5	0	1	0	96	338
211	0	0	0	1	18	0	0	10	1	0	0	4	0	1	0	0	0	0	242	44	13	0	5	0	123	462
212	0	42	0	0	14	0	0	0	22	0	0	2	5	1	0	0	4	1	48	30	0	0	0	0	59	228
213	0	0	0	0	39	0	3	677	0	0	0	0	0	0	0	0	0	0	7	0	0	0	25	1	54	806
214	0	0	0	0	17	0	15	0	0	0	0	2	0	0	0	0	0	0	17	0	0	16	0	1	152	220
215	0	0	0	3	77	0	53	4	0	0	0	9	0	0	0	0	0	0	187	0	0	30	1	5	738	1107
216	0	1	0	1	2	0	20	0	106	0	0	2	0	4	0	0	0	15	176	2	5	0	8	0	59	401
217	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	92	35	0	1	0	19	0	19	170
218	0	0	0	2	639	0	0	27	0	0	0	1	0	0	0	0	0	1	9	0	0	9	9	0	648	1345
219	0	0	0	0	530	0	2	0	0	0	0	1	0	0	0	0	0	0	45	10	8	1	15	0	263	875
220	0	0	0	5	23	0	54	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	99	192
221	0	44	0	0	27	0	0	0	21	0	0	3	1	0	0	0	3	0	36	6	0	0	1	0	32	174
222	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	18	55
223	0	0	0	0	102	0	0	39	0	0	0	39	0	4	0	0	0	0	834	0	28	5	17	3	2155	3226
224	0	0	0	29	1630	11	76	0	0	0	0	14	0	0	0	0	0	0	8	0	0	144	0	1	1009	2922
225	0	10	0	0	6	0	0	5	4	0	0	1	0	0	0	0	0	1	184	0	0	0	1	1	32	245
226	13	94	0	2	5	0	0	0	12	0	0	0	1	0	0	0	0	0	105	4	0	10	0	12	35	293
227	2	95	0	0	0	0	0	0	23	0	0	0	3	0	0	0	557	0	85	5	0	0	0	3	12	785
228	19	77	0	0	0	0	0	0	28	0	3	1	17	0	0	0	7	0	421	116	0	0	0	0	19	708
229	7	108	0	0	0	0	0	0	66	2	2	0	18	0	0	0	0	0	327	131	0	0	0	0	19	680
230	8	36	0	0	4	0	0	0	11	0	1	0	12	0	0	0	1	0	359	72	0	0	0	0	22	526
231	8	200	0	0	1	0	0	0	36	0	5	0	15	0	0	0	4	0	327	134	0	0	0	0	25	755

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
232	27	272	0	0	0	0	0	0	80	4	5	0	7	0	0	0	7	0	325	173	0	0	0	0	26	926
233	1	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	34	0	22	14	0	0	0	0	17	92
234	8	176	0	0	0	0	0	0	47	5	1	0	4	0	0	0	22	0	74	7	0	0	0	0	14	358
235	2	41	0	0	0	0	0	0	8	3	5	0	3	0	0	0	32	0	13	11	0	0	0	0	23	141
236	6	41	0	0	0	0	0	0	3	5	4	0	3	0	0	0	26	0	12	5	0	0	0	0	6	111
237	0	8	0	0	0	0	0	0	1	19	0	0	1	0	0	0	6	0	8	15	0	0	0	0	9	67
238	1	0	0	0	0	0	0	0	2	45	0	0	13	0	0	0	0	0	80	65	0	0	0	0	25	231
239	2	3	0	0	0	0	0	0	1	4	0	0	7	0	0	0	0	0	51	74	0	0	0	0	19	161
240	4	1	0	0	1	0	0	0	2	11	0	0	3	0	0	0	6	0	48	57	0	0	0	0	9	142
241	9	1	0	0	0	0	0	0	0	9	2	0	3	0	0	0	5	0	13	15	0	0	0	0	28	85
242	2	5	0	0	1	0	0	0	0	13	1	0	1	0	0	0	8	0	22	24	0	0	0	0	23	100
243	0	8	0	0	0	0	0	0	5	7	0	0	0	0	0	0	4	0	4	38	0	0	0	0	59	125
244	0	3	0	0	1	0	0	0	2	0	5	0	0	0	0	0	4	0	12	4	0	0	0	0	14	45
245	6	114	0	1	6	102	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	8	0	0	42	280
246	24	14	0	0	5	1	13	0	1	7	0	0	1	0	0	0	0	0	27	12	0	2	0	0	76	183
247	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
248	143	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	2	0	0	20	170
249	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	11	16
250	43	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2	0	0	30	77
251	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	20	25
252	8	0	0	0	0	0	0	0	1	18	0	0	0	0	0	0	1	0	1	11	0	1	0	0	87	128
253	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
254	2	3	0	1	171	0	1	0	21	1	5	1	0	0	0	0	0	0	14	2	0	2	0	0	141	365
255	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
256	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
257	0	0	23	62	22	16	4	6	0	0	7	12	0	0	0	0	1	0	29	0	0	1	0	0	42	225
258	0	0	0	22	4	19	30	39	0	0	4	8	0	0	0	0	2	0	10	0	0	0	0	0	34	172
259	9	0	0	8	6	0	4	68	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	50	152
260	0	27	0	8	101	5	3	6	0	0	7	3	0	0	0	0	13	0	2	0	0	11	0	0	41	227

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
261	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4	3	0	0	0	0	4	13
262	0	0	0	6	43	1	8	0	0	0	5	7	0	0	0	0	1	0	0	0	0	4	0	0	77	152
263	13	0	0	3	20	22	14	7	0	0	4	1	0	0	0	0	1	0	5	0	0	0	0	0	77	167
264	0	0	0	1	46	7	21	47	0	0	1	6	0	0	0	0	0	0	0	0	0	11	0	0	29	169
265	0	0	0	2	64	122	1	0	0	0	9	5	0	0	0	0	2	0	9	0	0	2	0	0	50	266
266	0	0	0	14	34	0	21	8	0	0	6	3	0	0	0	0	4	0	0	0	0	0	0	0	49	139
267	0	16	0	0	38	0	0	0	1	0	4	0	1	0	0	0	127	12	126	11	0	0	0	0	35	371
268	0	35	0	0	0	0	0	0	0	30	0	0	0	0	0	0	68	1	10	3	0	2	0	0	32	181
269	0	3	0	11	40	0	24	0	0	1	0	4	0	0	0	0	3	0	0	0	0	4	0	0	40	130
270	0	103	0	0	12	0	0	0	0	0	6	2	0	0	0	0	1	0	78	0	0	0	0	0	20	222
271	29	12	0	48	19	258	0	0	0	0	1	1	0	0	0	0	1	0	11	0	0	0	0	0	60	440
272	25	31	0	0	0	0	0	0	11	5	0	0	0	0	0	0	2	0	83	21	0	0	0	0	32	210
273	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	7	10	0	0	0	0	106	129
274	9	10	0	0	0	0	0	0	1	3	1	0	1	0	0	0	29	0	37	2	0	0	0	0	13	106
275	3	28	0	0	1	0	0	0	3	12	3	0	3	0	0	0	18	0	82	8	0	0	0	0	8	169
276	0	17	0	0	1	0	0	0	6	1	2	0	1	0	0	0	7	0	153	4	0	0	0	0	3	195
277	1	42	0	0	0	0	0	0	1	0	3	0	2	0	0	0	1	0	368	31	0	0	0	1	18	468
278	10	24	0	0	0	0	0	0	2	10	1	0	0	0	0	0	0	0 1	814	35	0	10	0	1	29	1936
279	13	133	1	1	362	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	46	0	0	45	606
280	10	54	33	5	403	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	30	555
281	8	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	8	34	62
282	16	0	42	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	58	0	1	40	177
283	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	4	0	10	21
284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	6
285	42	16	6	12	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	50	135
286	26	204	10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	108	0	0	34	386
287	84	299	1	0	0	0	0	0	1	12	0	0	0	0	0	0	0	0	10	9	0	0	0	0	40	456
288	44	254	19	2	1	0	0	0	1	0	7	1	0	0	0	0	3	0	172	2	0	29	0	5	45	585
289	71	351	8	0	0	0	0	0	0	0	1	0	0	0	0	0	7	0	50	0	0	10	0	1	111	610

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
290	25	7	0	51	35	0	13	0	0	0	4	4	0	0	0	0	2	0	0	0	0	88	0	0	32	261
291	0	0	0	90	99	0	85	0	0	0	0	1	0	0	0	0	0	1	0	0	0	17	0	0	230	523
292	0	3	0	54	90	0	19	0	0	0	0	1	0	0	0	0	1	3	0	0	0	33	0	0	621	825
293	0	0	0	94	308	0	228	0	0	0	0	2	0	0	0	0	0	1	0	0	0	32	0	0	76	741
294	0	0	0	50	3	3	15	0	0	0	5	7	0	0	0	0	2	1	0	0	0	0	0	0	28	114
295	0	0	0	64	16	0	37	60	0	0	0	2	0	0	0	0	1	1	0	0	0	5	0	0	24	210
296	0	4	0	38	9	15	25	1	0	0	0	11	0	0	0	0	1	0	0	0	0	2	0	0	21	127
297	0	0	0	43	35	70	20	7	0	0	0	18	0	0	0	0	1	0	0	0	0	0	0	0	22	216
298	0	0	8	80	28	0	36	0	0	0	0	3	0	0	0	0	1	1	0	0	0	5	0	0	12	174
299	0	0	0	2	15	3	2	0	0	0	0	12	0	0	0	0	1	1	0	0	0	35	0	0	27	98
300	0	11	0	0	3	0	0	0	0	35	1	1	0	0	0	0	2	7	0	0	0	13	0	0	60	133
301	0	14	0	1	94	31	0	0	0	4	0	2	0	0	0	0	2	8	0	0	0	20	0	0	24	200
302	0	0	0	8	13	2	10	16	0	0	0	0	0	0	0	0	0	15	0	0	0	3	0	0	10	77
303	0	3	0	8	15	1013	0	23	0	0	0	2	0	0	0	0	0	25	0	0	0	11	0	0	16	1116
304	7	2	1	14	37	593	0	10	0	0	1	5	0	0	0	0	0	15	0	0	0	10	0	0	22	717
305	2	3	1	21	12	1558	0	0	0	1	0	3	0	0	0	0	0	2	0	0	0	23	0	0	48	1674
306	0	64	1	0	7	4	0	0	0	8	0	0	0	0	0	0	7	0	0	0	0	165	0	0	83	339
307	0	0	0	11	15	18	7	14	0	0	0	3	0	0	0	0	0	1	0	0	0	65	0	0	10	144
308	0	1	0	2	6	0	0	0	0	6	4	0	0	0	0	0	18	0	0	0	0	257	0	0	32	326
309	0	1	0	0	10	0	0	0	0	1	5	0	0	0	0	0	27	0	0	0	0	206	0	0	25	275
310	0	0	0	16	33	0	0	5	0	0	1	2	0	0	0	0	1	5	0	0	0	1	0	0	7	71
311	0	0	0	77	65	162	54	38	0	0	0	7	0	0	0	0	0	1	0	0	0	28	0	0	27	459
312	0	0	0	9	61	2	5	10	0	0	10	2	0	0	0	0	0	9	0	0	0	12	0	0	29	149
313	0	0	0	78	52	0	4	16	0	0	1	3	0	0	0	0	0	1	0	0	0	8	0	0	11	174
314	0	4	0	113	187	0	17	26	0	0	2	1	0	0	0	0	1	1	0	0	0	2	0	0	31	385
315	4127	0	0	0	1	0	5	0	7	45	0	0	0	0	0	0	0	2	17	1	0	16	0	0	84	4305
316	0	0	0	0	7	0	0	0	2	9	1	0	1	0	0	0	30	0	0	5	0	26	0	0	122	203
317	0	0	0	0	0	0	0	0	0	15	0	0	1	0	0	0	380	0	0	7	0	17	0	0	26	446
318	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	3	0	0	5	0	15	0	0	8	37

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
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	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
319	0	0	0	0	0	0	0	4	0	40	0	0	3	0	0	0	630	0	0	21	0	7	0	0	1219	1924
320	0	0	0	0	0	0	0	0	0	13	0	0	1	0	0	0	846	0	0	18	0	3	0	0	1090	1971
321	0	0	0	0	0	0	0	0	0	9	0	0	1	0	0	0	102	0	0	1	0	48	0	0	35	196
322	49	75	12	4	94	0	2	75	0	0	8	3	0	0	0	0	31	0	13	0	0	0	0	0	238	604
323	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	32
324	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	10	13
325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	65
326	4	0	0	138	14	3	31	72	0	0	8	1	0	0	0	0	7	5	29	0	0	0	0	0	86	398
327	0	0	0	50	71	13	6	40	0	0	27	0	0	0	0	0	11	1	0	0	0	0	0	0	49	268
328	0	0	0	55	69	260	6	38	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	20	457
329	0	0	4	33	21	17	60	100	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	29	268
330	0	0	0	1	35	174	3	3	0	0	0	3	0	0	0	0	6	0	0	0	0	11	0	0	19	255
331	0	0	0	18	80	427	14	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	13	556
332	0	0	0	81	149	11	43	2	0	0	1	0	0	0	0	0	5	0	0	0	0	7	0	0	19	318
333	0	0	0	20	5	355	0	3	0	0	0	2	0	0	0	0	11	0	0	0	0	3	0	0	29	428
334	4	6	12	21	16	664	21	213	0	0	0	4	0	0	0	0	16	0	0	0	0	4	0	0	28	1009
335	0	0	7	12	44	643	16	75	0	0	1	3	0	0	0	0	3	2	0	0	0	0	0	0	27	833
336	9	2	23	14	106	938	23	334	0	0	5	7	0	0	0	0	14	0	0	0	0	0	0	0	42	1517
337	0	3	0	0	280	110	89	22	0	0	6	17	0	0	0	0	1	0	5	0	0	13	0	0	55	601
338	0	0	10	6	71	13	11	0	0	0	2	10	0	0	0	0	0	0	0	0	0	0	0	0	48	171
339	0	7	0	4	255	6	4	0	0	0	10	11	0	0	0	0	5	0	0	0	0	4	0	0	171	477
340	0	0	0	7	64	2	1	0	0	0	19	7	0	0	0	0	7	0	0	0	0	13	1	0	64	185
341	0	0	0	7	771	56	19	56	0	0	11	2	0	0	0	0	13	0	0	0	0	9	0	0	82	1026
342	0	0	0	0	8	0	0	0	0	2	3	0	0	0	0	0	9	0	0	0	0	38	0	0	96	156
343	0	0	0	0	2	5	0	0	0	3	1	0	0	0	0	0	25	0	0	0	0	215	0	0	57	308
344	0	0	0	0	5	2	0	0	0	5	5	0	0	0	0	0	47	0	0	0	0	201	0	0	48	313
345	5	0	0	3	635	6	18	0	0	0	5	3	0	0	0	0	7	0	0	0	0	23	0	0	63	768
346	1	0	0	3	140	18	7	0	0	0	4	8	0	0	0	0	7	0	0	0	0	0	0	0	64	252
347	0	0	0	2	8	1	0	0	0	0	32	0	0	0	0	0	1	0	0	0	0	24	0	0	160	228

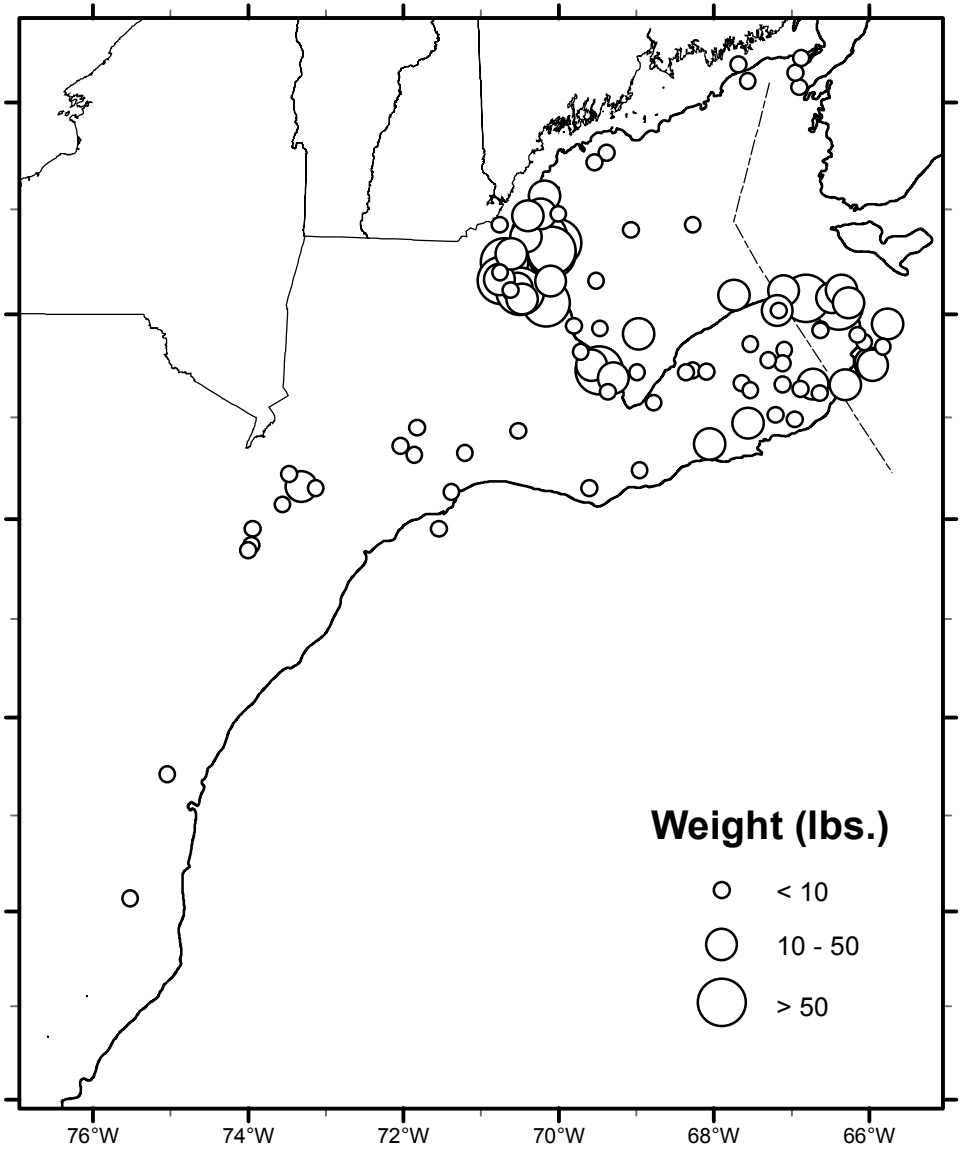
NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2011
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

	ATLANTIC COD	HADDOCK	POLLOCK	WHITE HAKE	SILVER HAKE	REDFISH	GOOSEFISH	SPINY DOGFISH	YELLOWTAIL FLOUNDER	WINTER FLOUNDER	AMERICAN PLAICE	WITCH FLOUNDER	WINDOWPANE FLDR	SUMMER FLOUNDER	SCUP	BLACK SEA BASS	ATLANTIC HERRING	ATLANTIC MACKEREL	WINTER SKATE	LITTLE SKATE	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL
348	0	0	0	2	63	0	0	0	3	1	49	2	1	0	0	0	2	0	0	15	0	15	0	0	210	363
349	0	0	0	3	123	35	1	75	0	0	2	21	0	0	0	0	2	0	0	0	0	15	0	0	76	353
350	0	0	21	7	51	273	5	2685	0	0	7	4	0	0	0	0	6	0	0	0	0	17	0	0	60	3136
351	40	0	0	4	151	17	2	16	1	0	11	5	0	0	0	0	2	0	0	0	0	12	0	0	201	462
352	2	12	153	0	52	853	3	182	0	0	9	2	0	0	0	0	1	0	0	0	0	40	0	0	55	1364
353	23	0	62	0	92	117	3	4	0	0	21	3	0	0	0	0	7	0	0	0	0	9	0	0	287	628
354	13	2	0	2	54	5	3	0	2	0	37	8	0	0	0	0	95	0	0	0	0	12	0	0	45	278
355	2	0	0	0	1	0	0	0	22	14	3	0	0	0	0	0	0	0	9	17	0	32	0	0	56	156
356	25	8	0	2	16	13	1	0	7	0	72	1	0	0	0	0	1	0	0	0	0	32	0	0	39	217
357	75	5	0	1	90	6	32	16	0	0	56	5	0	0	0	0	1	0	16	2	0	10	0	0	53	368
358	100	4	1487	0	110	379	9	108	0	0	8	3	0	0	0	0	1	0	0	0	0	24	0	0	27	2260
359	70	6	1	0	2	12	0	59	0	0	3	0	0	0	0	0	0	0	0	0	0	4	0	0	8	165
360	81	14	0	0	4	19	5	68	0	0	7	4	0	0	0	0	3	0	7	0	0	2	0	0	27	241
361	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	18
362	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	17
363	121	0	77	0	0	0	0	4	38	16	1	0	0	0	0	0	0	0	25	0	0	1	0	0	784	1067
364	19	0	0	0	23	1	0	0	495	54	134	0	3	0	0	0	0	0	31	40	0	20	0	0	21	841
365	75	1	0	0	7	5	0	0	233	94	62	13	0	0	0	0	0	0	0	10	0	89	0	0	82	671
366	2	0	0	0	0	2	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	10	0	0	4	23
367	61	0	0	0	2	0	40	0	103	65	8	3	0	0	0	0	0	0	3	0	0	72	0	0	70	427
368	26	0	0	0	1	0	52	39	57	68	3	0	0	0	0	0	1	0	4	3	0	151	0	0	91	496
369	4	0	0	0	0	0	0	7	2	4	0	0	0	0	0	0	0	0	1	0	0	4	0	0	3	25
370	49	0	0	0	9	0	0	9	57	8	56	0	0	0	0	0	54	0	0	0	0	19	0	0	37	298
371	57	20	0	0	30	0	0	16	58	6	71	3	0	0	0	0	1	0	0	0	0	6	0	0	45	313
372	23	0	0	0	51	0	0	20	50	2	85	6	0	0	0	0	7	0	0	3	0	29	0	0	85	361
TOTAL	5946	4147	2023	1763	13857	9505	3768	116100	2019	1165	1019	664	421	1838	944	249	15136	3439	11196	12289	2021	3090	2193	134	36802	253728

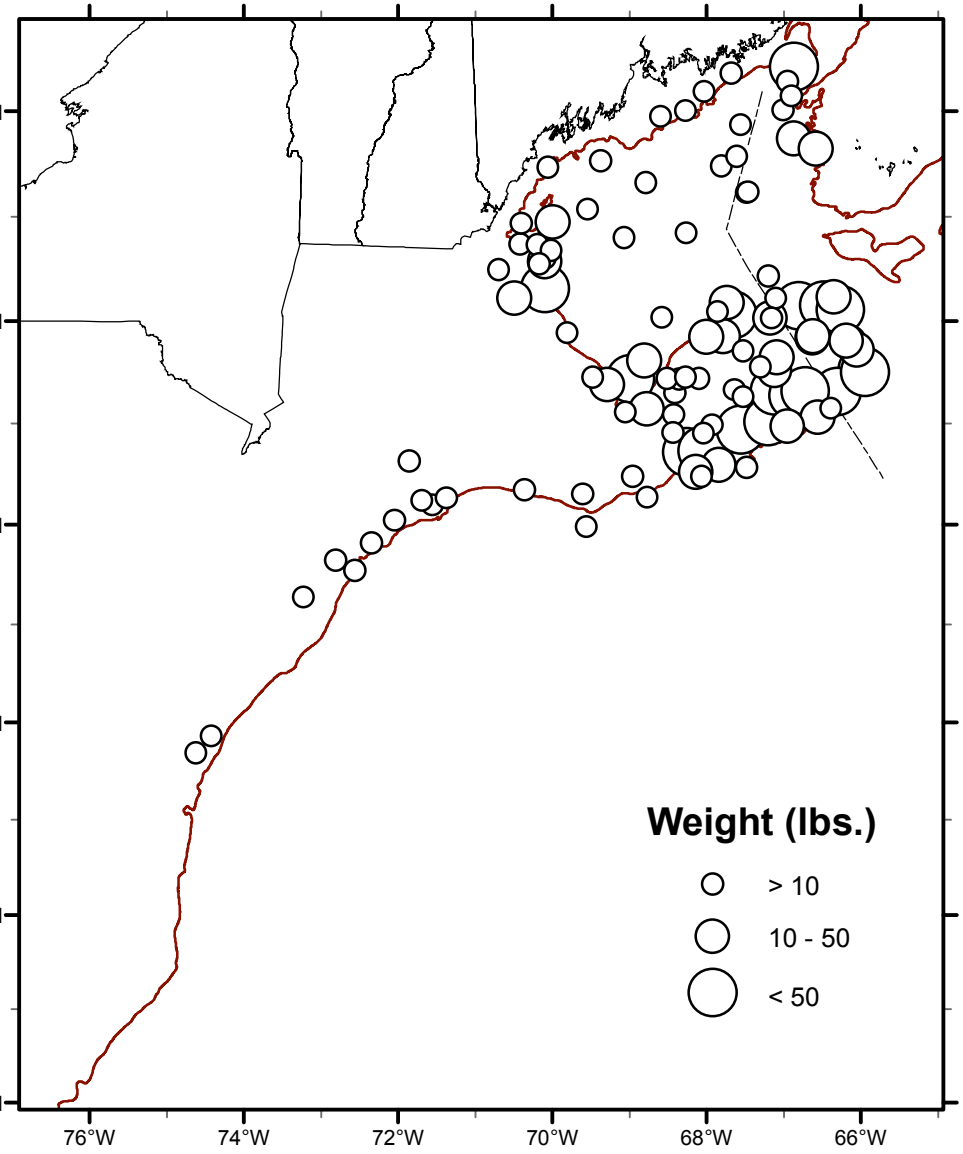
* "Total other" in southern areas are comprised primarily of rays, large sharks and spotted hake.

NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

ATLANTIC COD

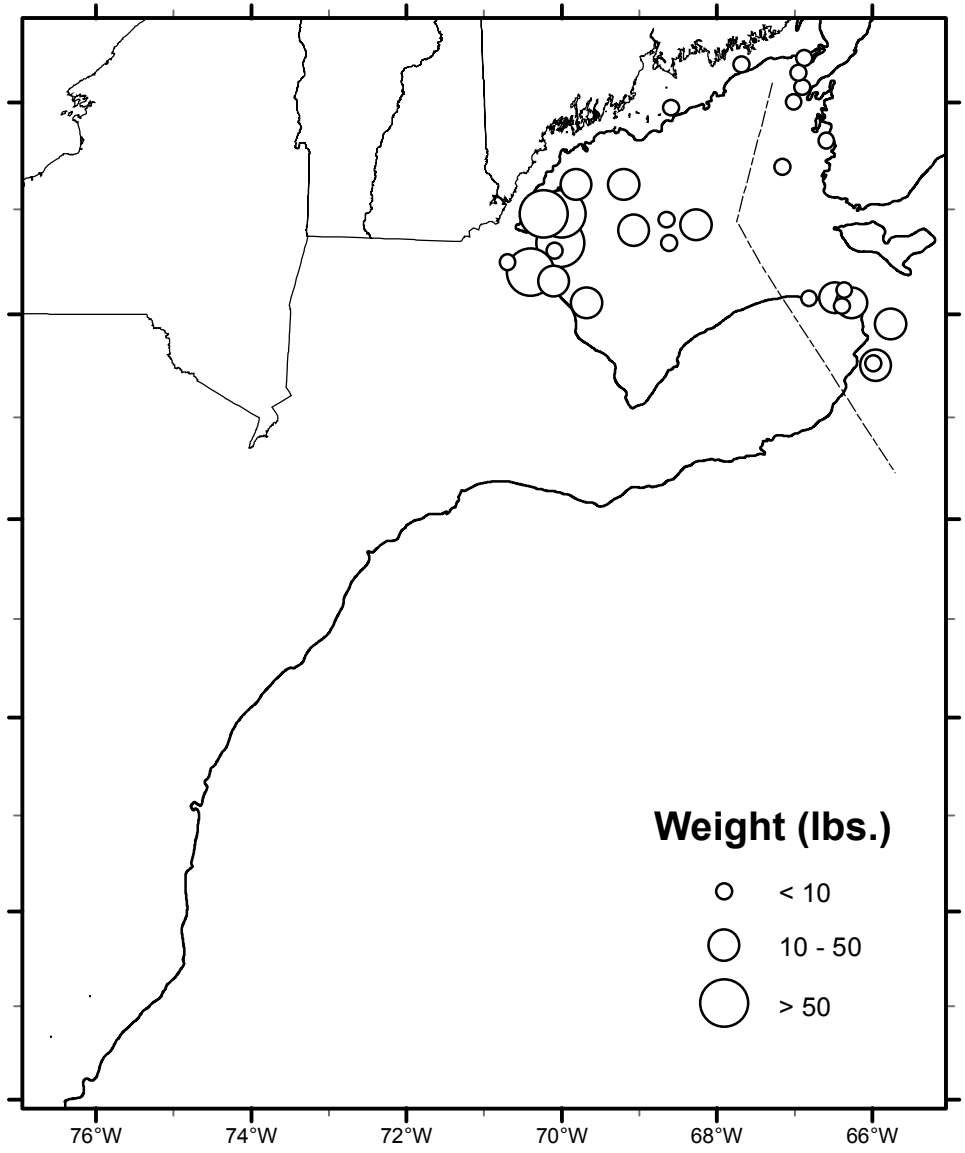


HADDOCK

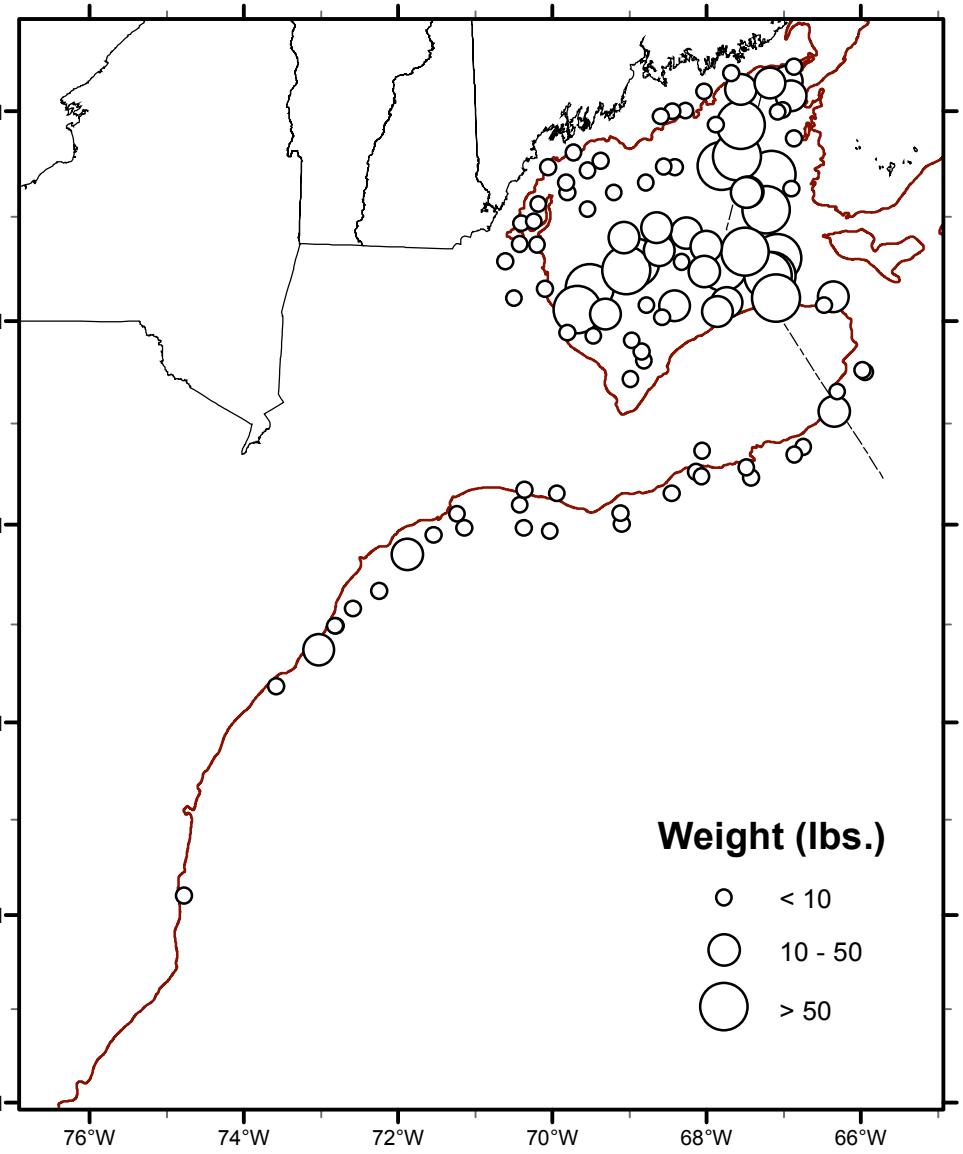


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

POLLOCK

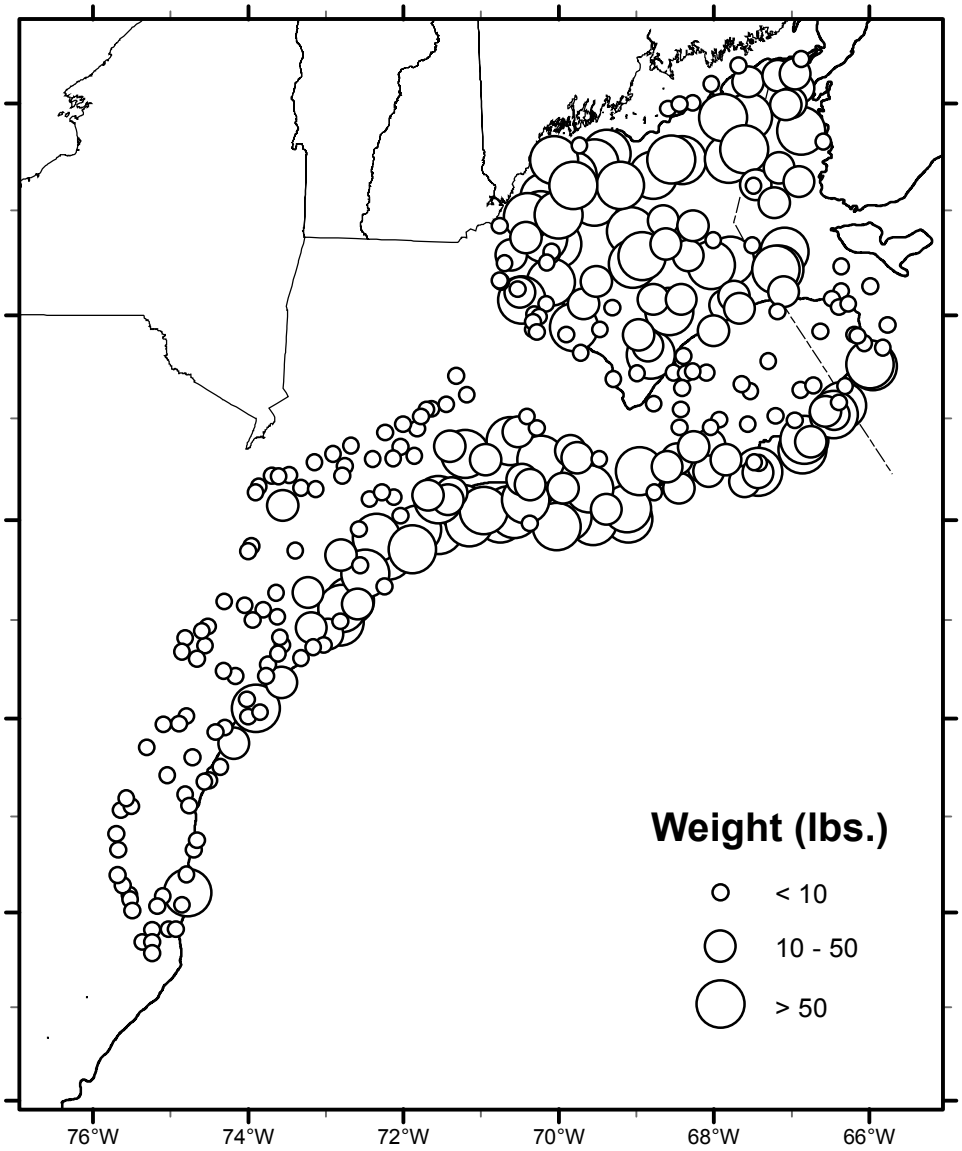


WHITE HAKE

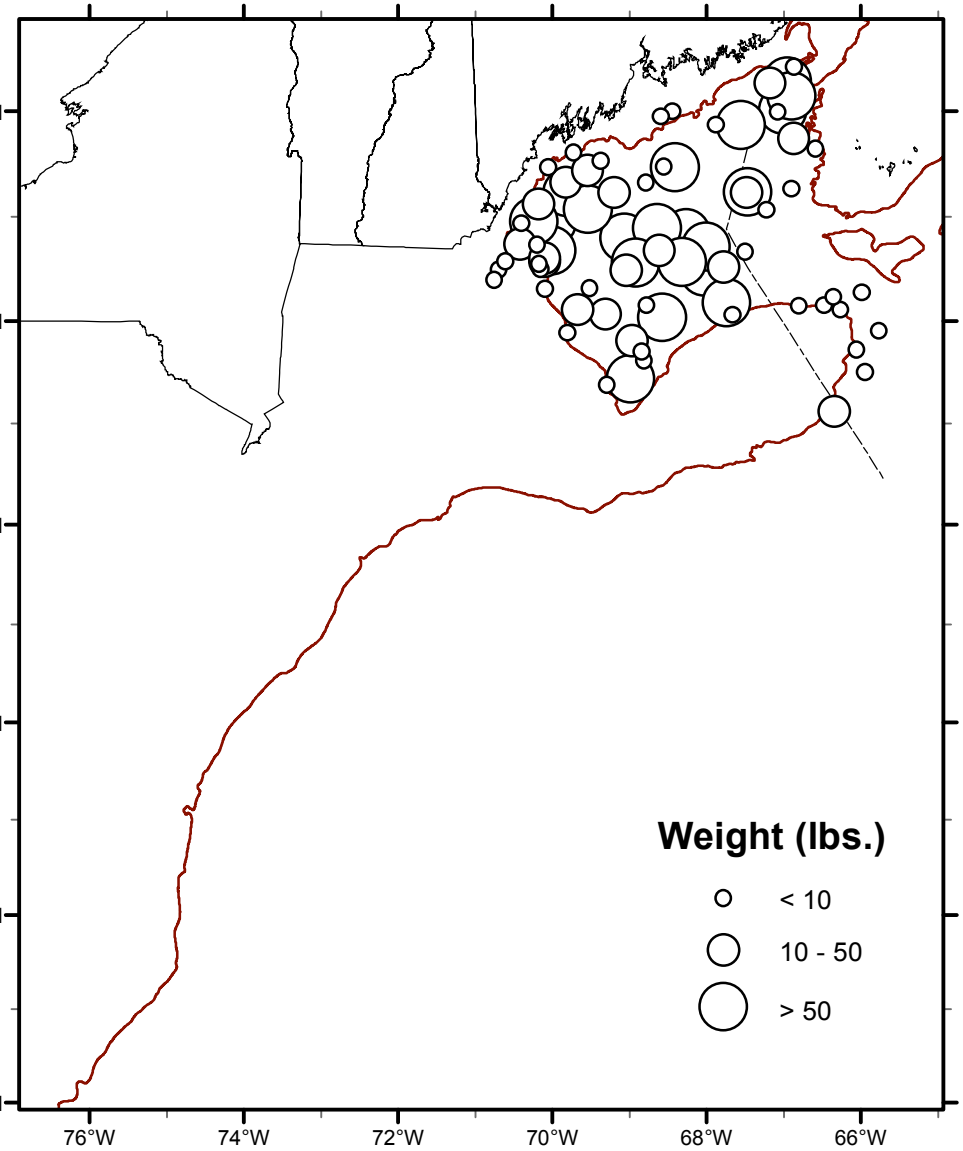


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

SILVER HAKE

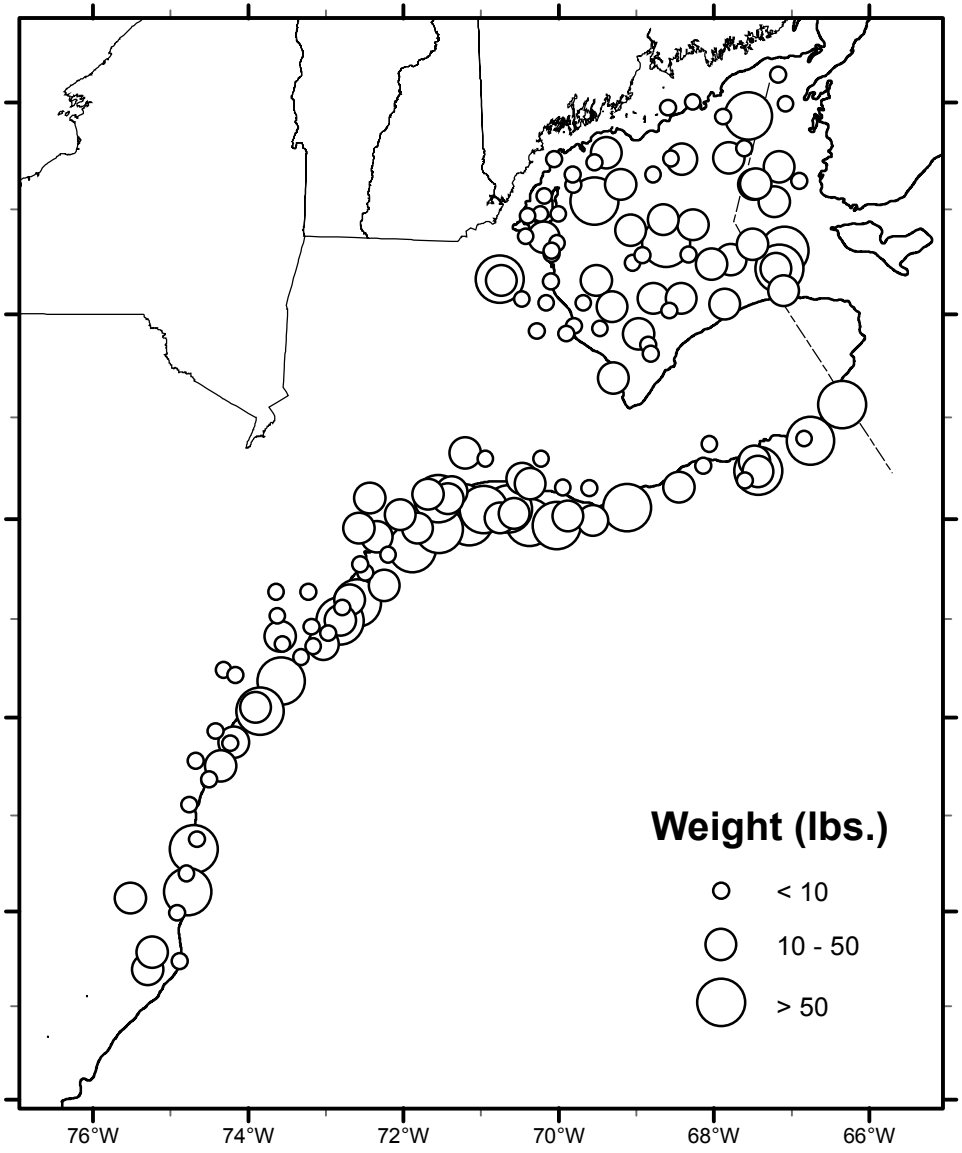


ACADIAN REDFISH

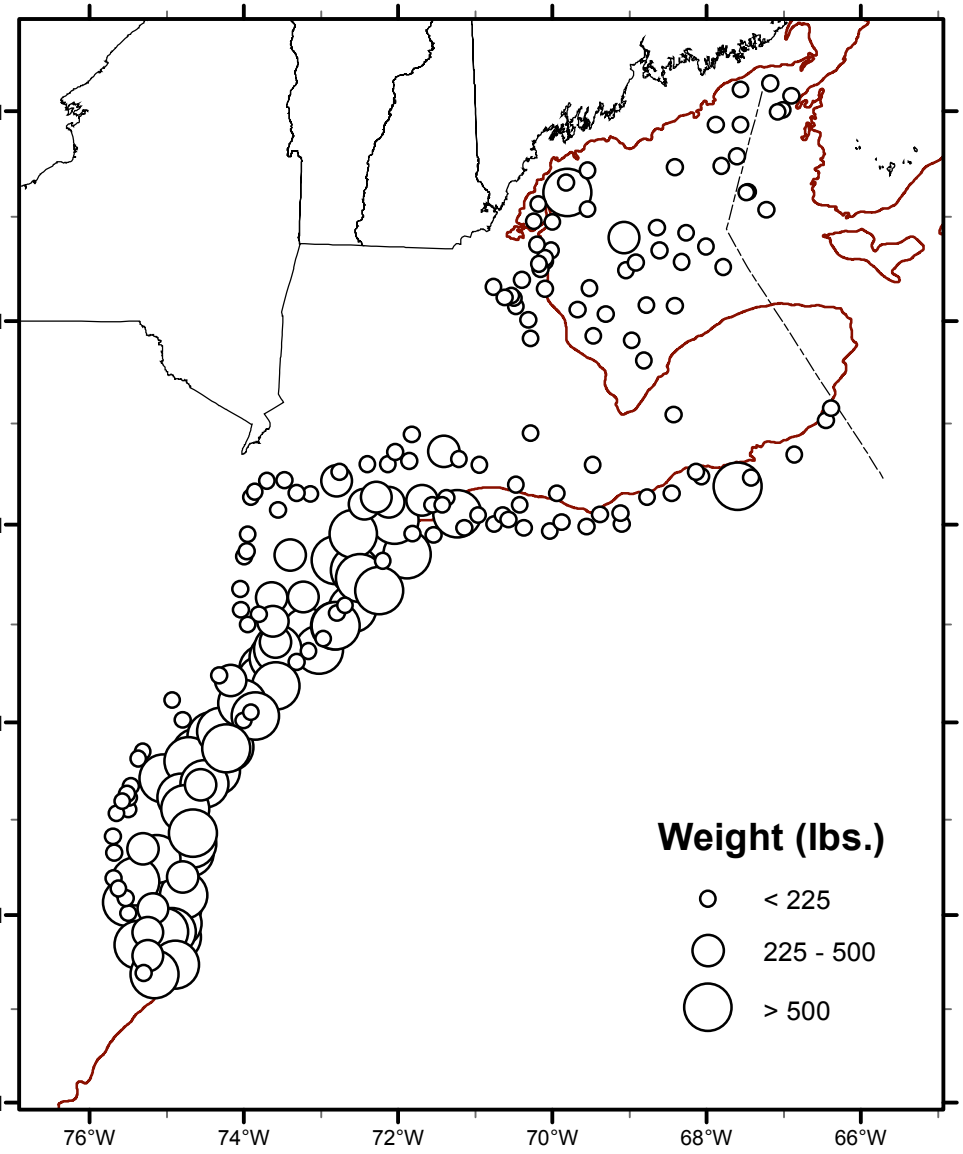


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

GOOSEFISH

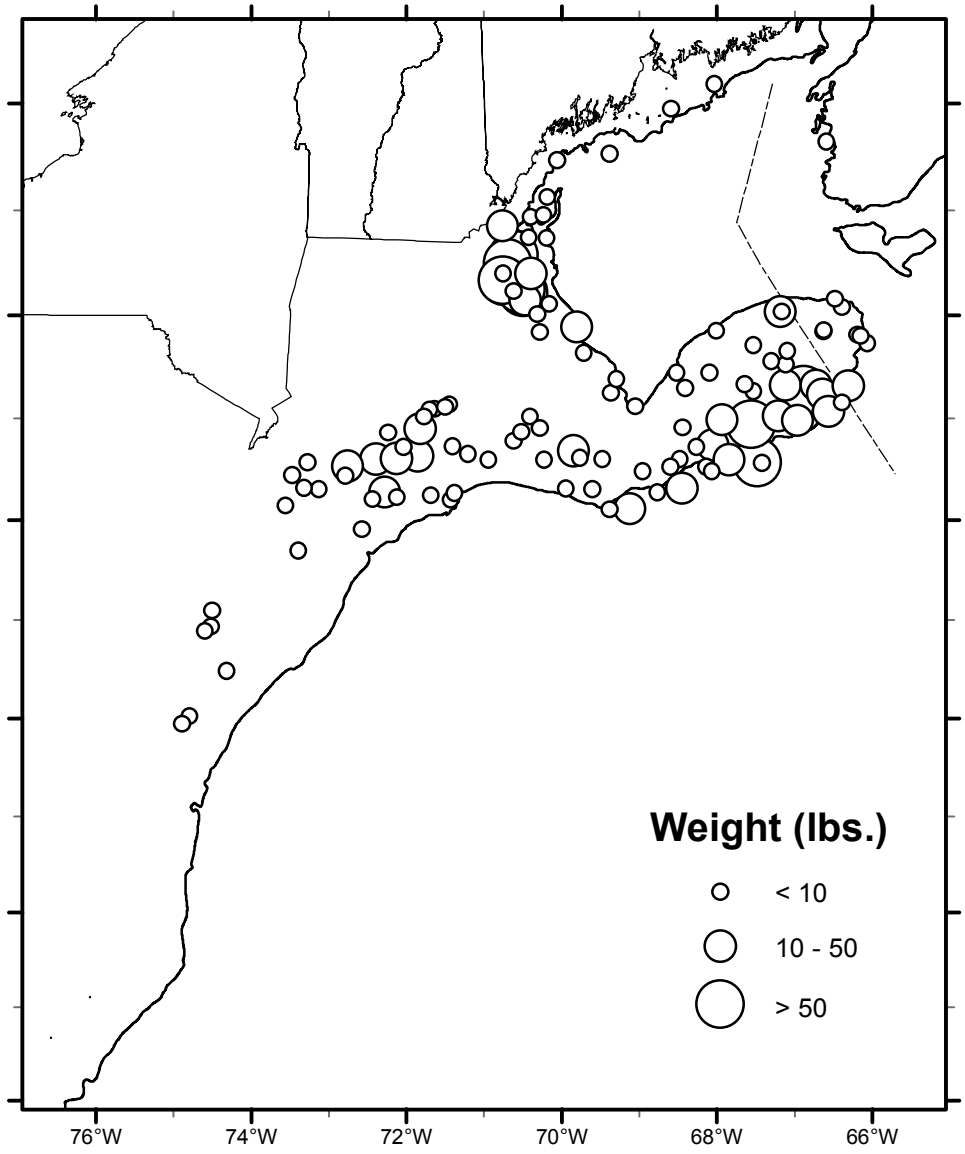


SPINY DOGFISH

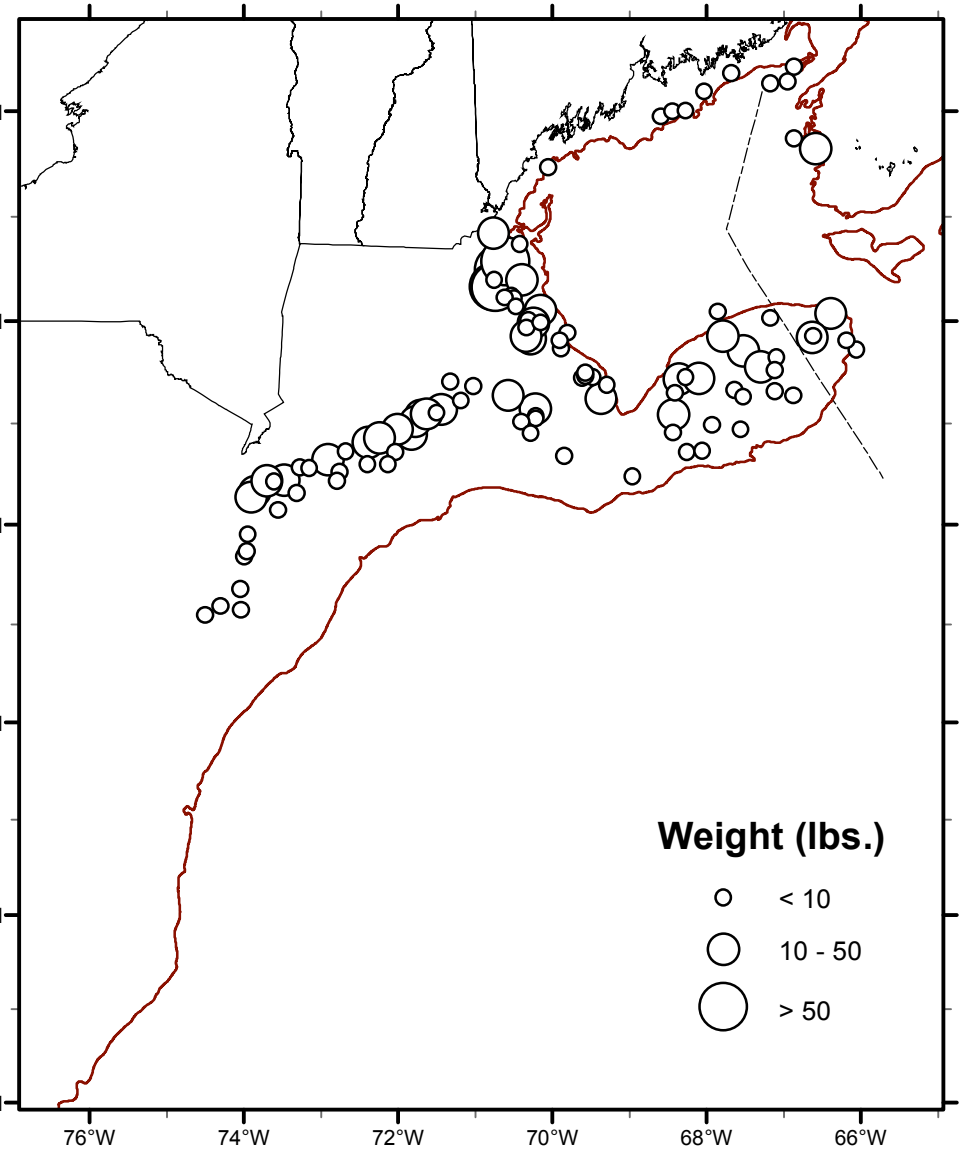


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

YELLOWTAIL FLOUNDER

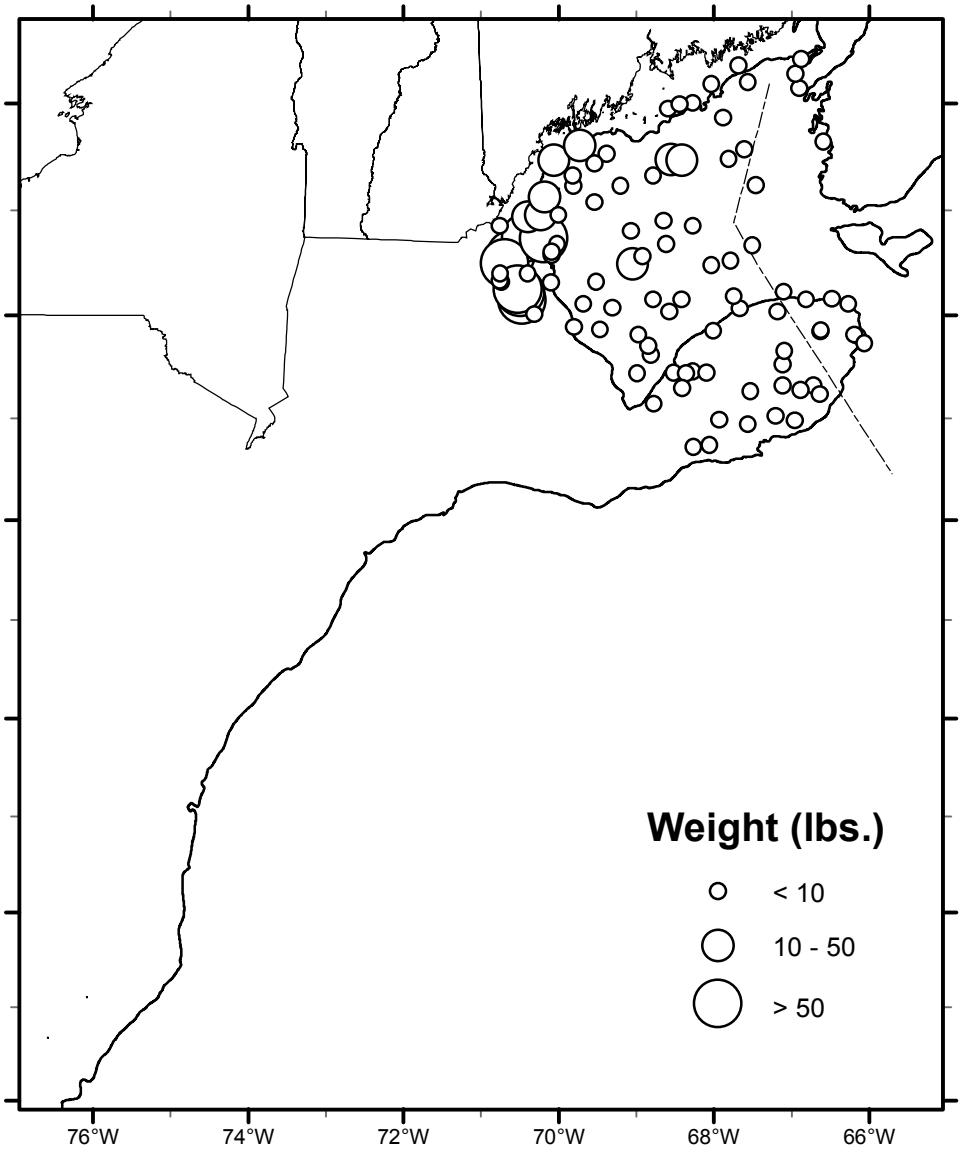


WINTER FLOUNDER

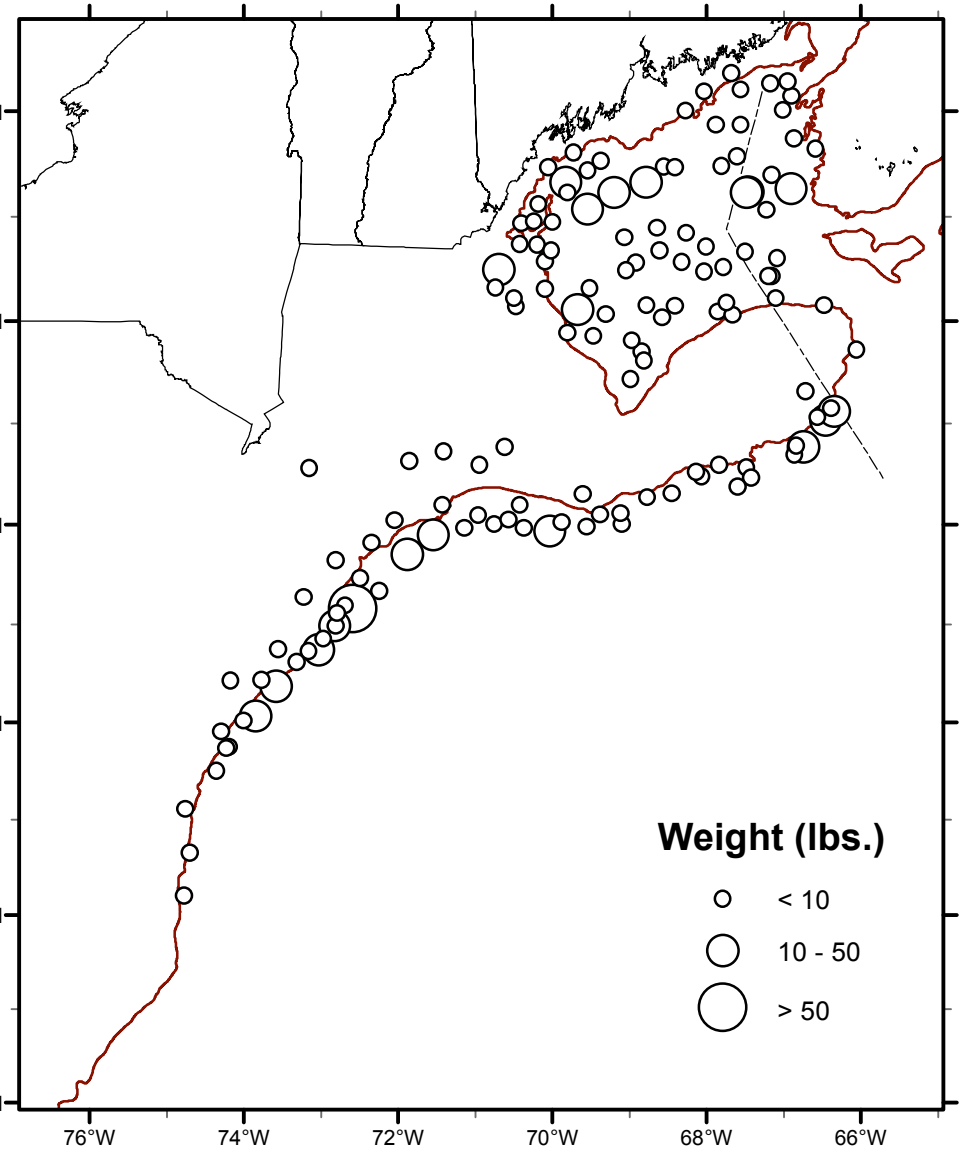


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

AMERICAN PLAICE

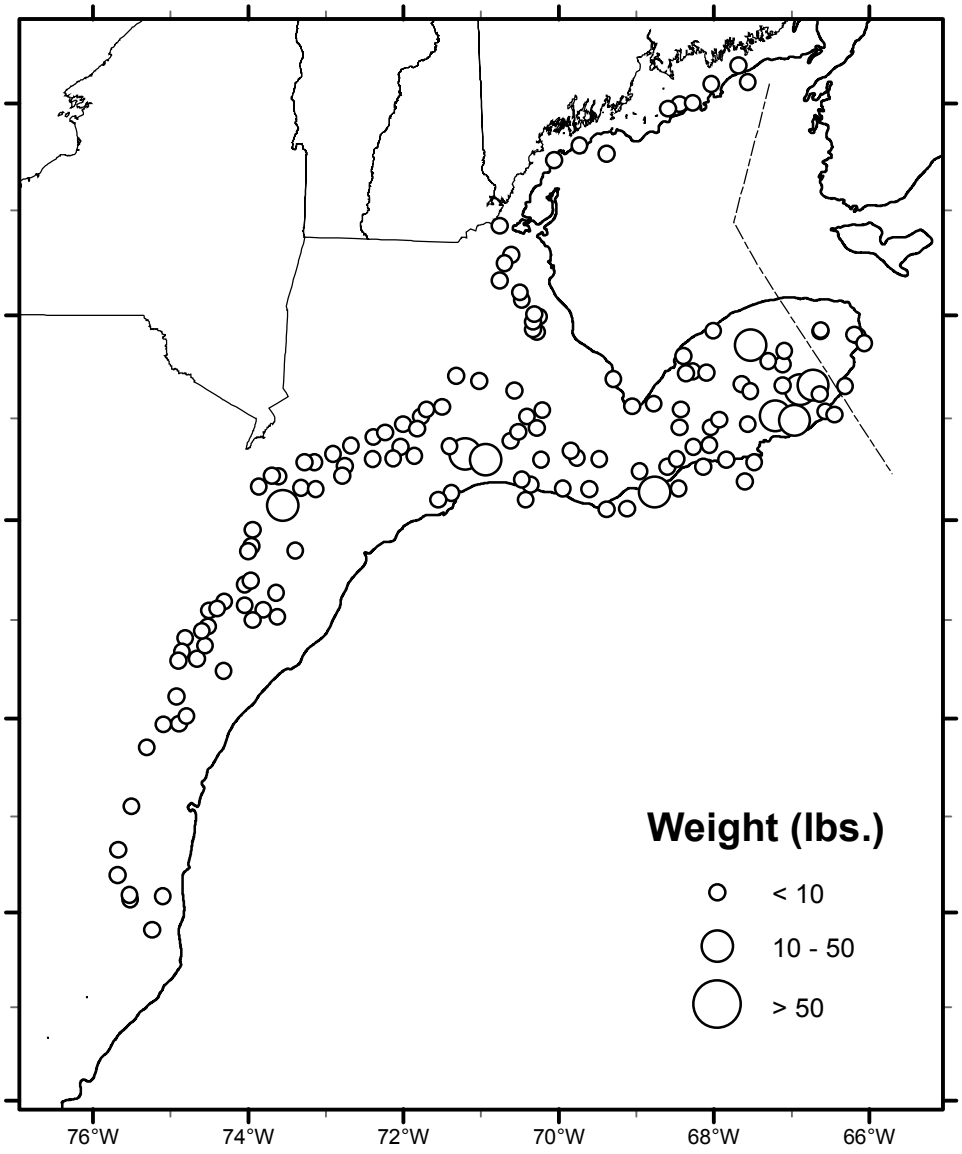


WITCH FLOUNDER

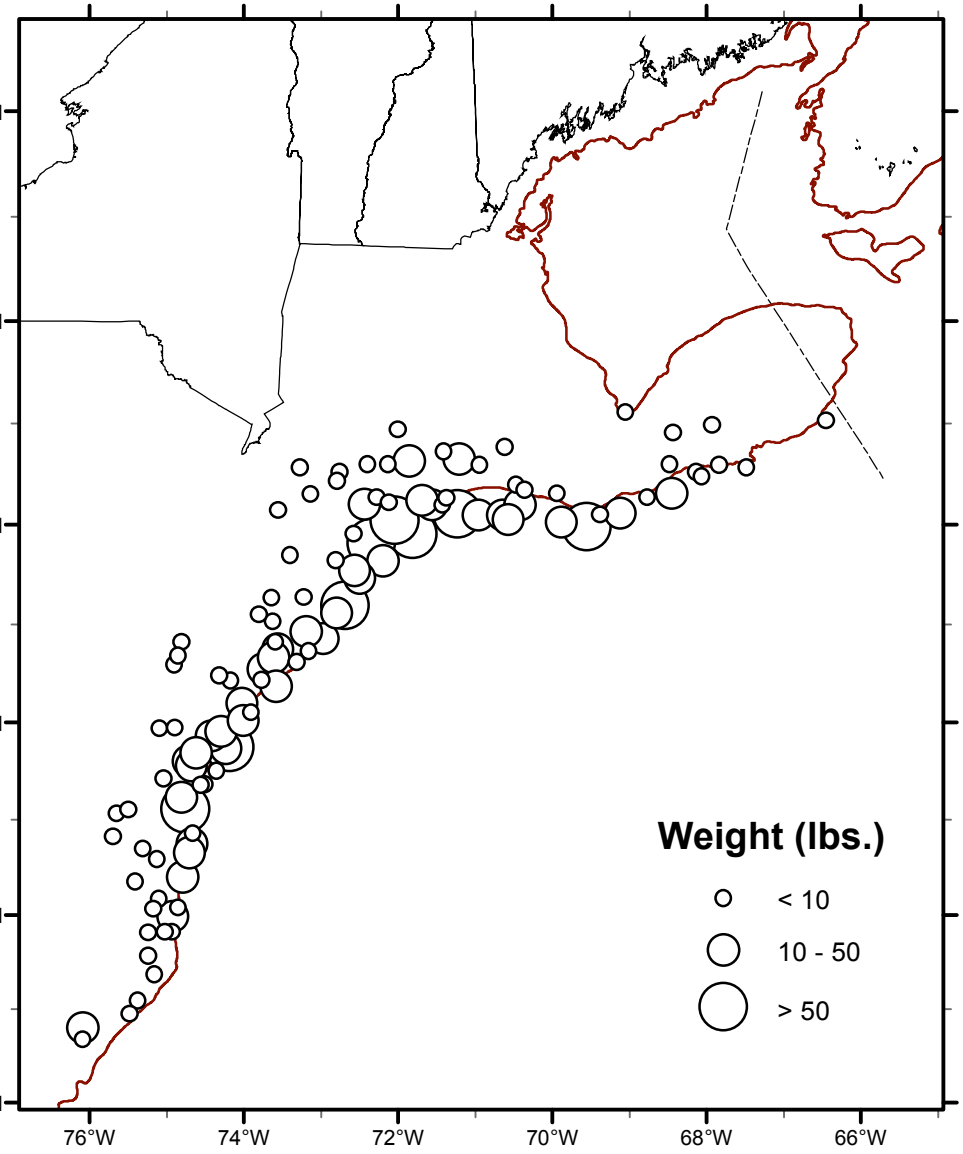


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

WINDOWPANE

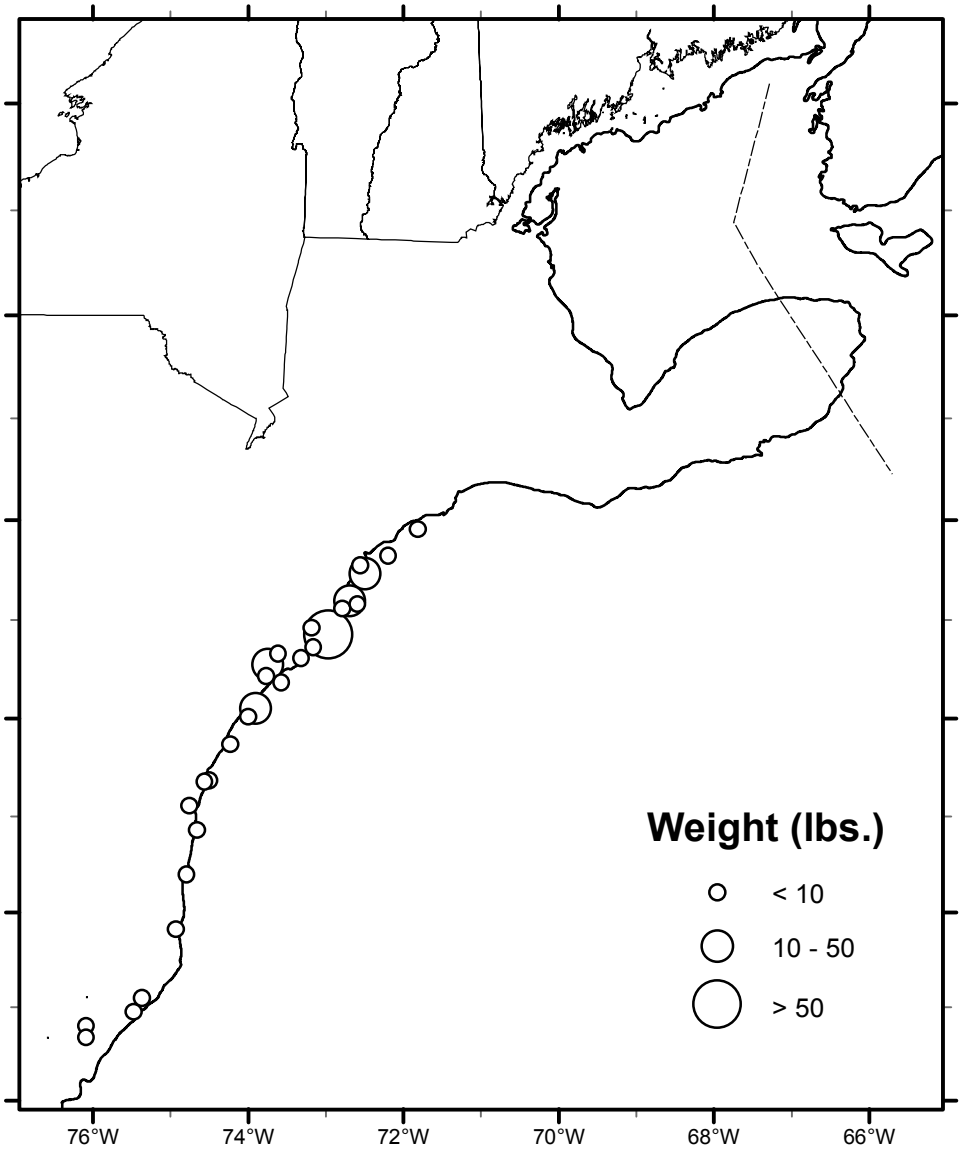


SUMMER FLOUNDER

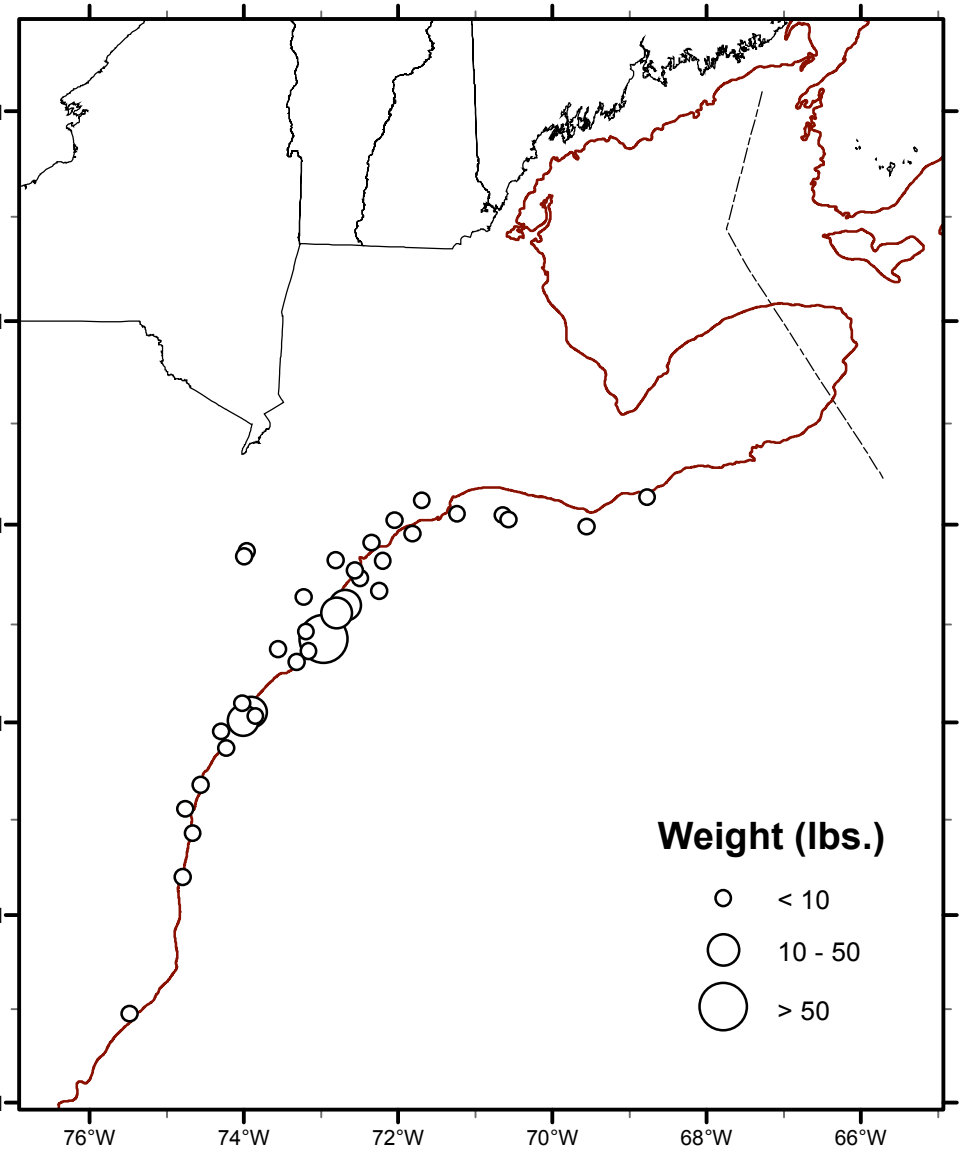


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

SCUP

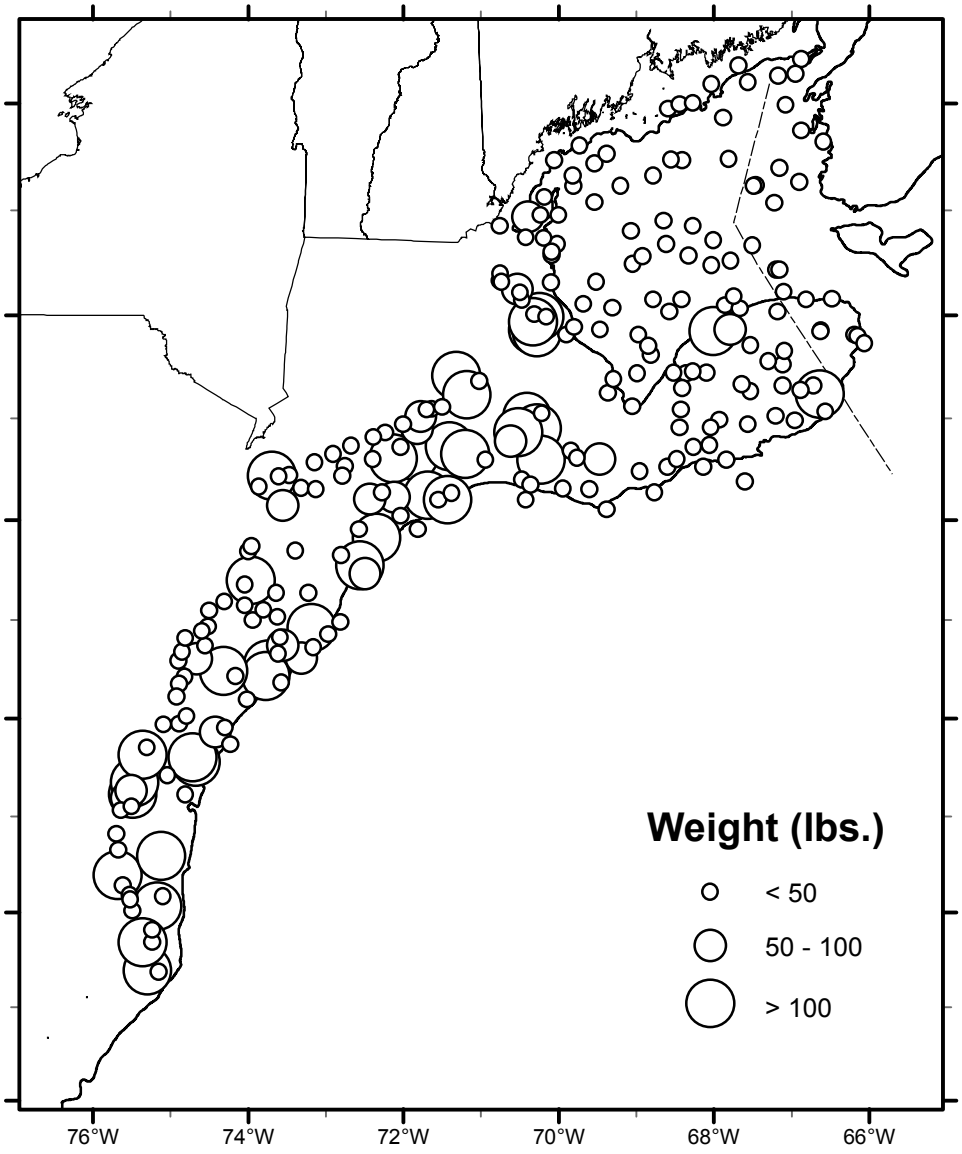


BLACK SEA BASS

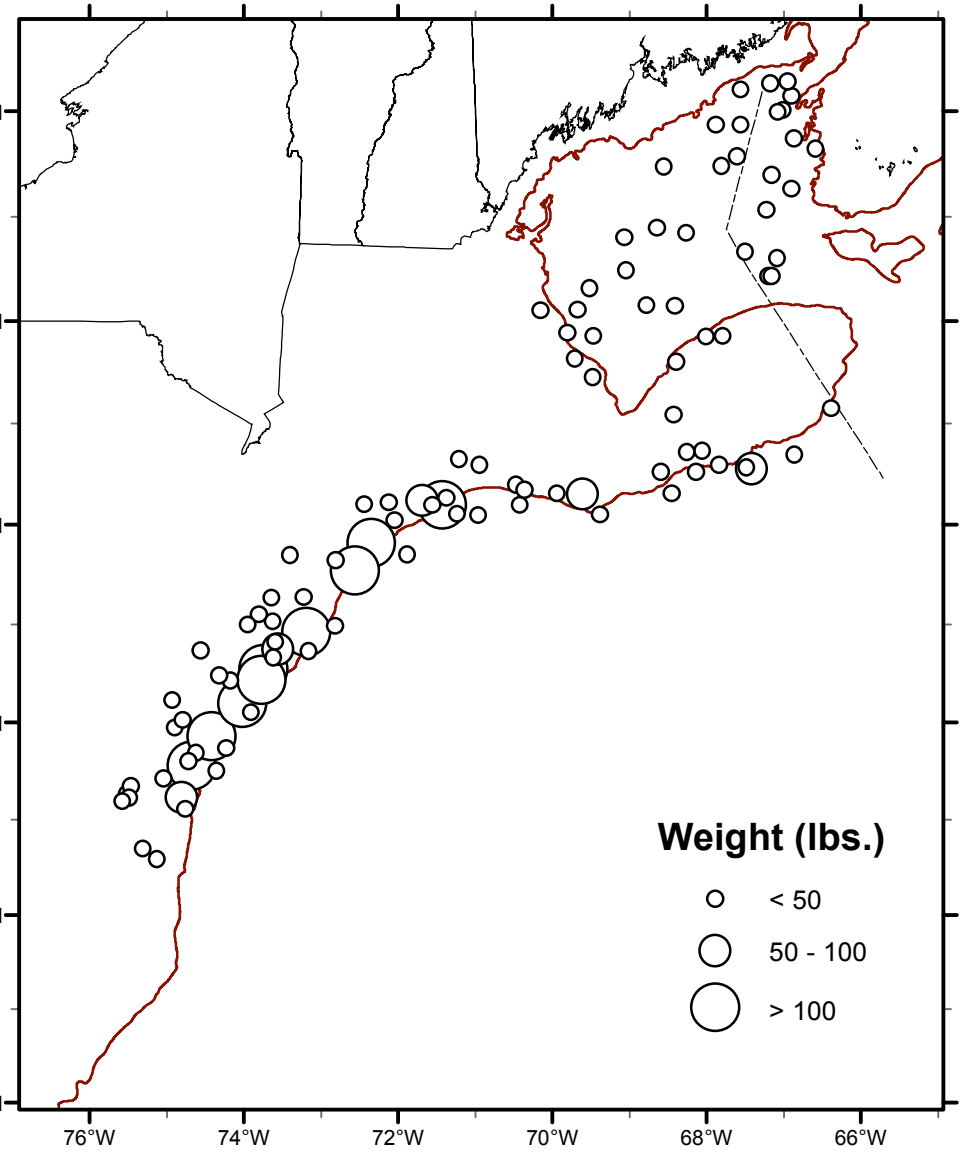


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

ATLANTIC HERRING

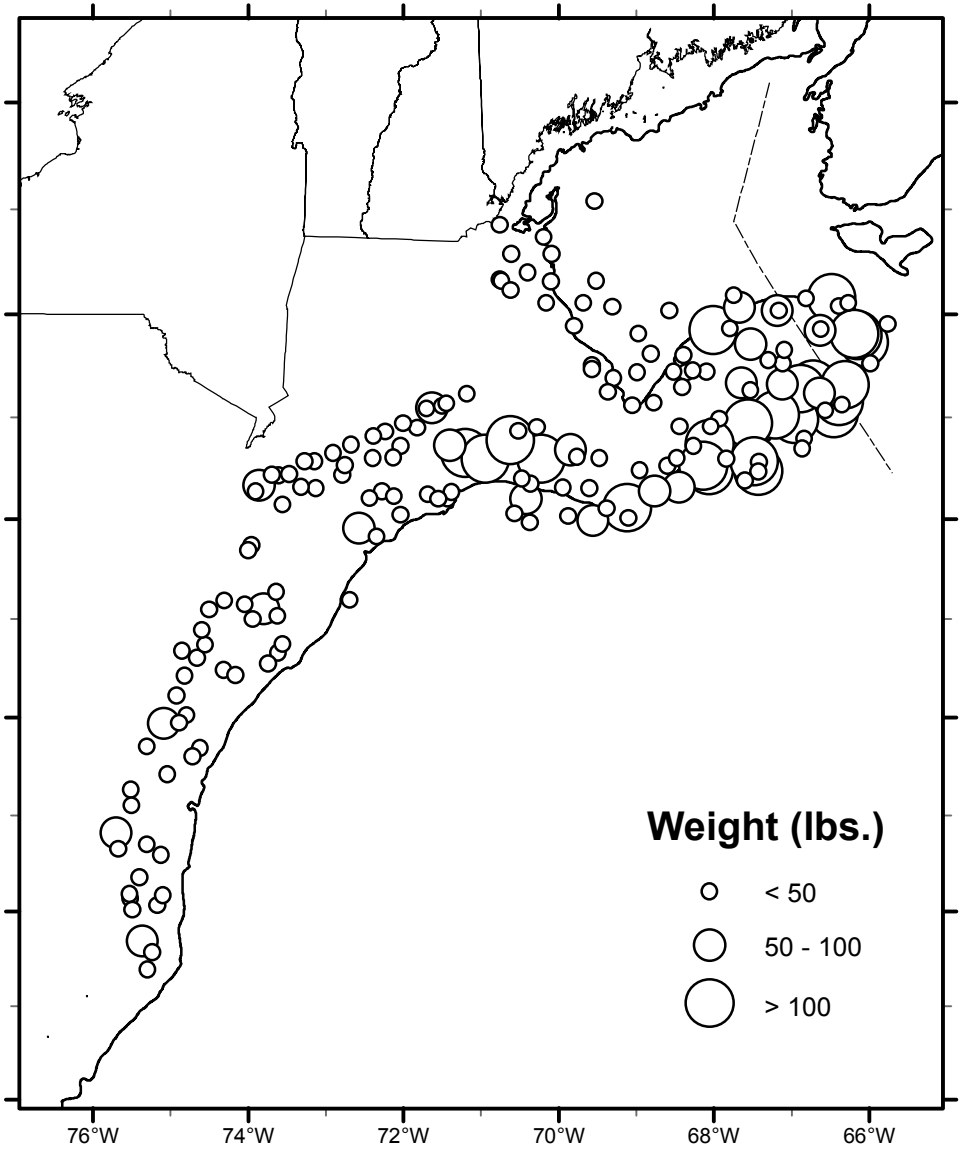


ATLANTIC MACKEREL

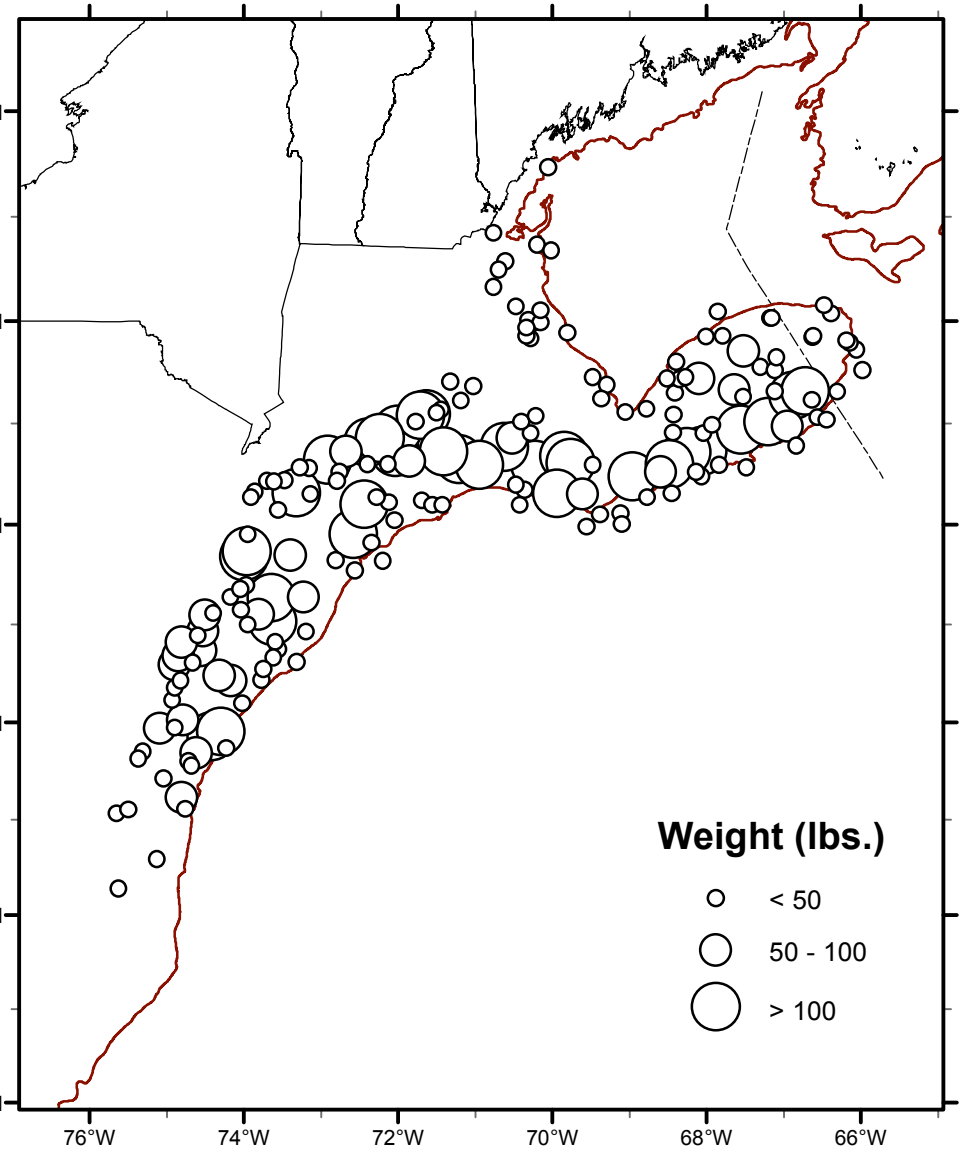


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

WINTER SKATE

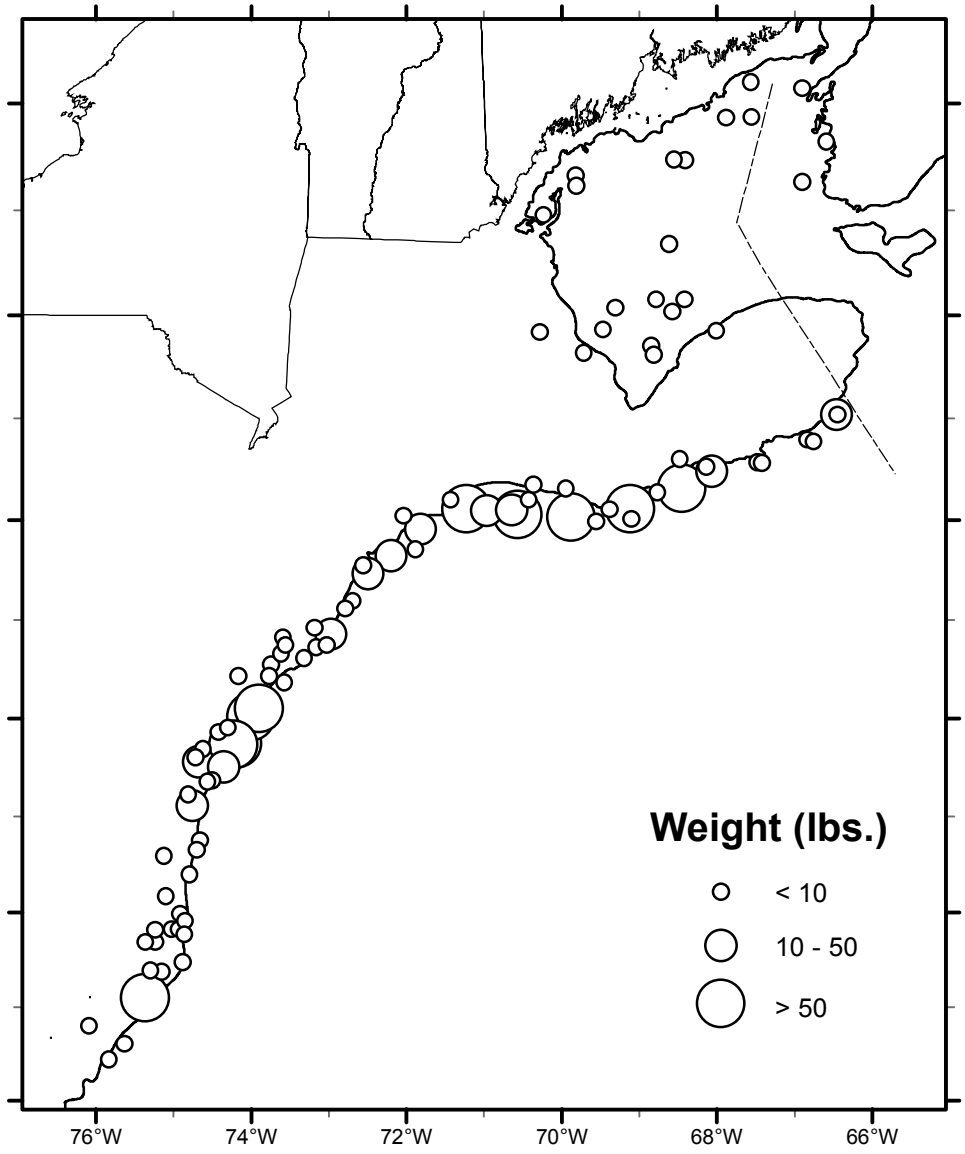


LITTLE SKATE

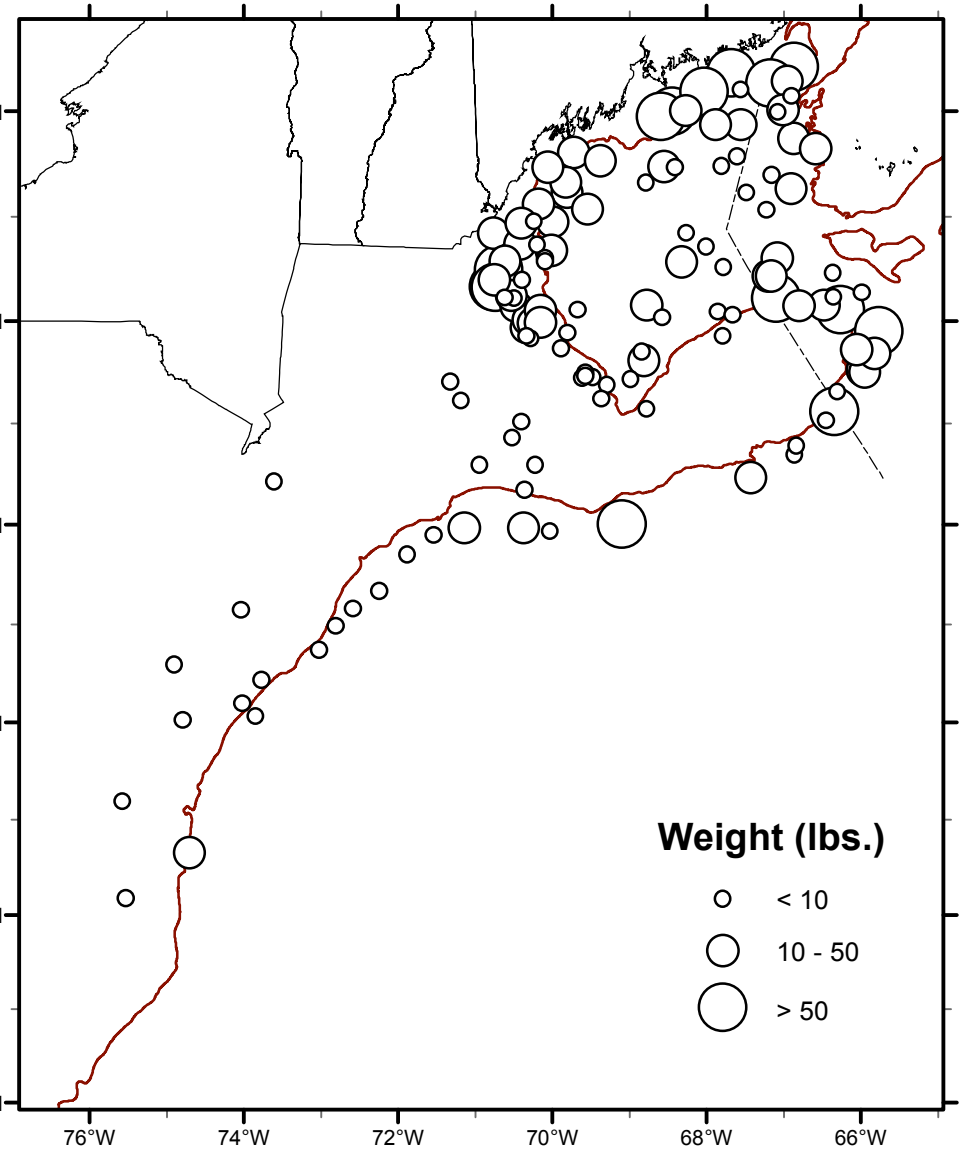


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

BUTTERFISH

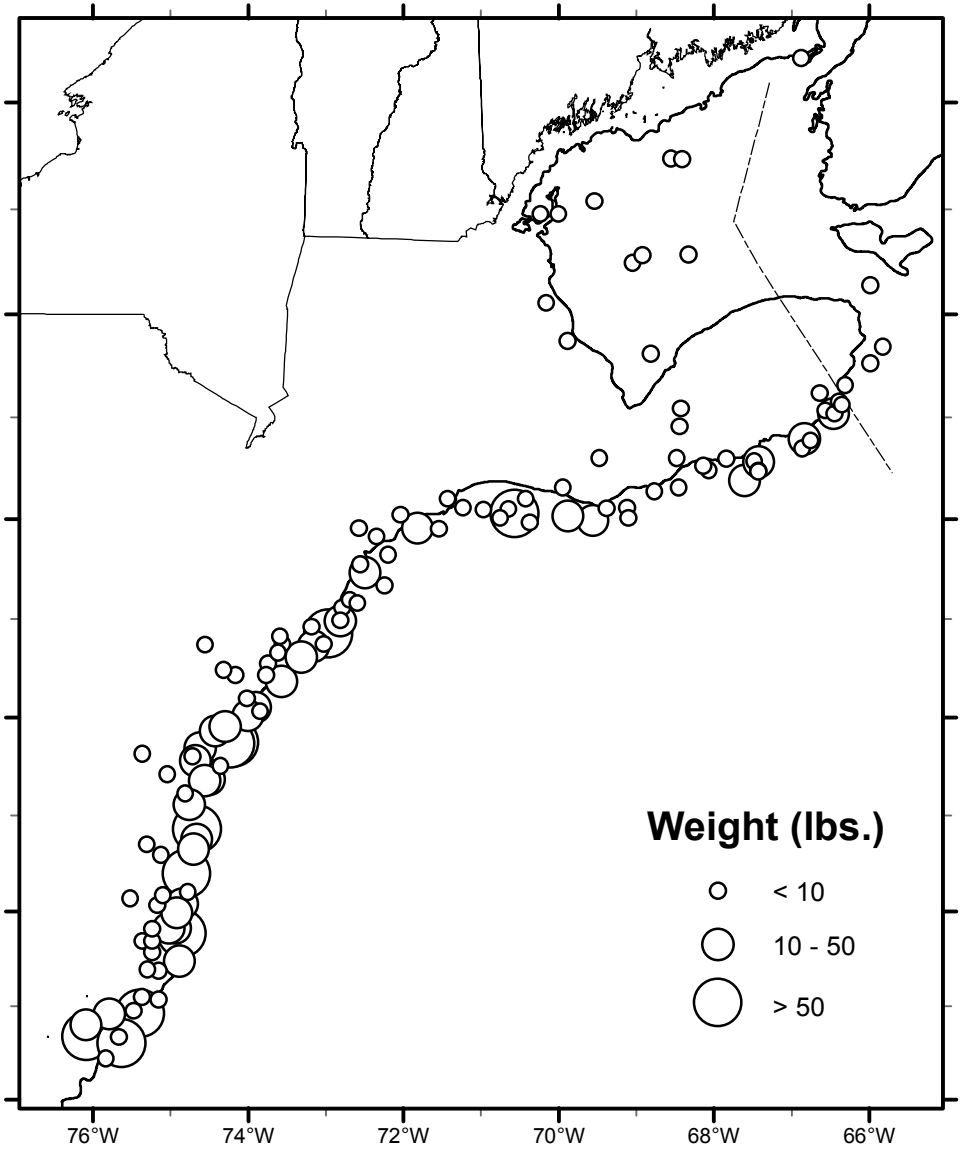


AMERICAN LOBSTER



NOAA Fisheries Service
NEFSC Bottom Trawl Survey
1 March to 12 May 2011

LOLIGO SQUID



ILLEX SQUID