Resource Survey Report

Bottom Trawl Survey

Cape Hatteras – Gulf of Maine

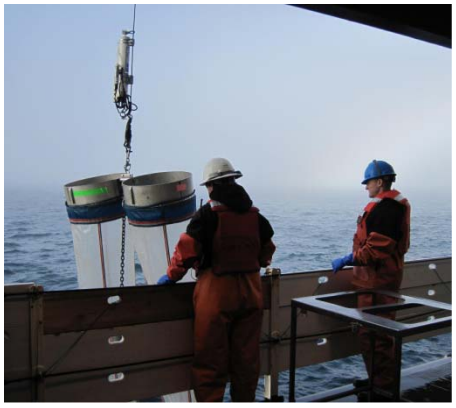
February 27 – May 3, 2010

NOAA FSV *Henry B. Bigelow*

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

Two Atlantic halibut caught in the mouth of the Bay of Fundy.

A close-up of Atlantic herring on the sorting conveyor belt.



Retrieving the bongo on a foggy Georges Bank morning.

Sand tiger sharks and Atlantic angel sharks in the checker from a tow off Cape Hatteras.

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 (March), 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 April – early May). 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 Spring 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
27 February – 3 May 2010

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 2010 spring bottom trawl survey aboard the NOAA FSV *Henry B. Bigelow*. Tows were made with a 400 x 12, 3-bridle bottom trawl rigged with a rockhopper sweep, 550 kg (1200lbs) 2.2 m Polyice oval 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, 3-bridle 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:

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  - Available RSR
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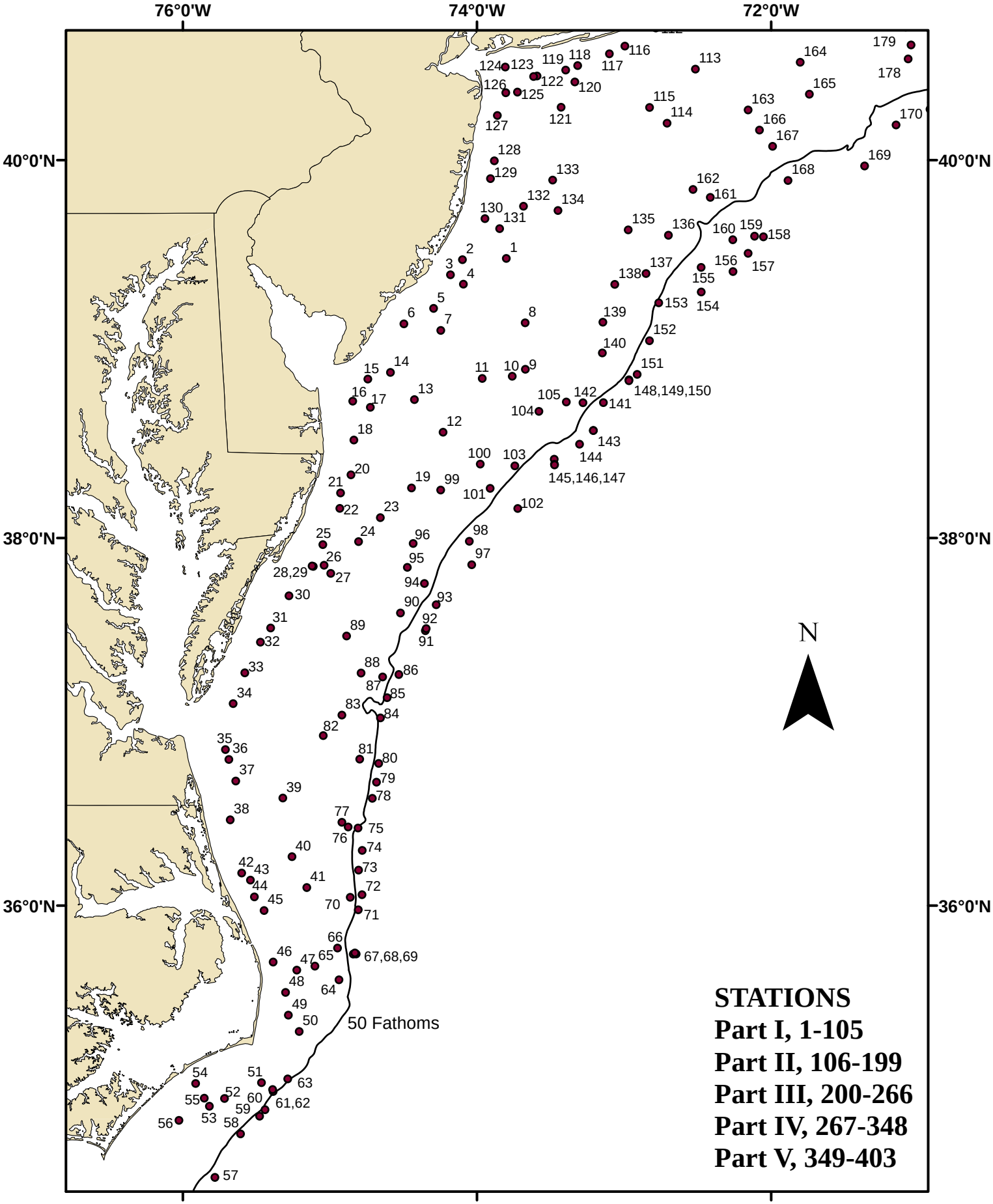


Figure 1. Trawl hauls made from NOAA FSV Henry B. Bigelow (10-02), during NOAA Fisheries Service, Northeast Fisheries Science Center spring bottom trawl survey, 27 February - 3 May 2010.

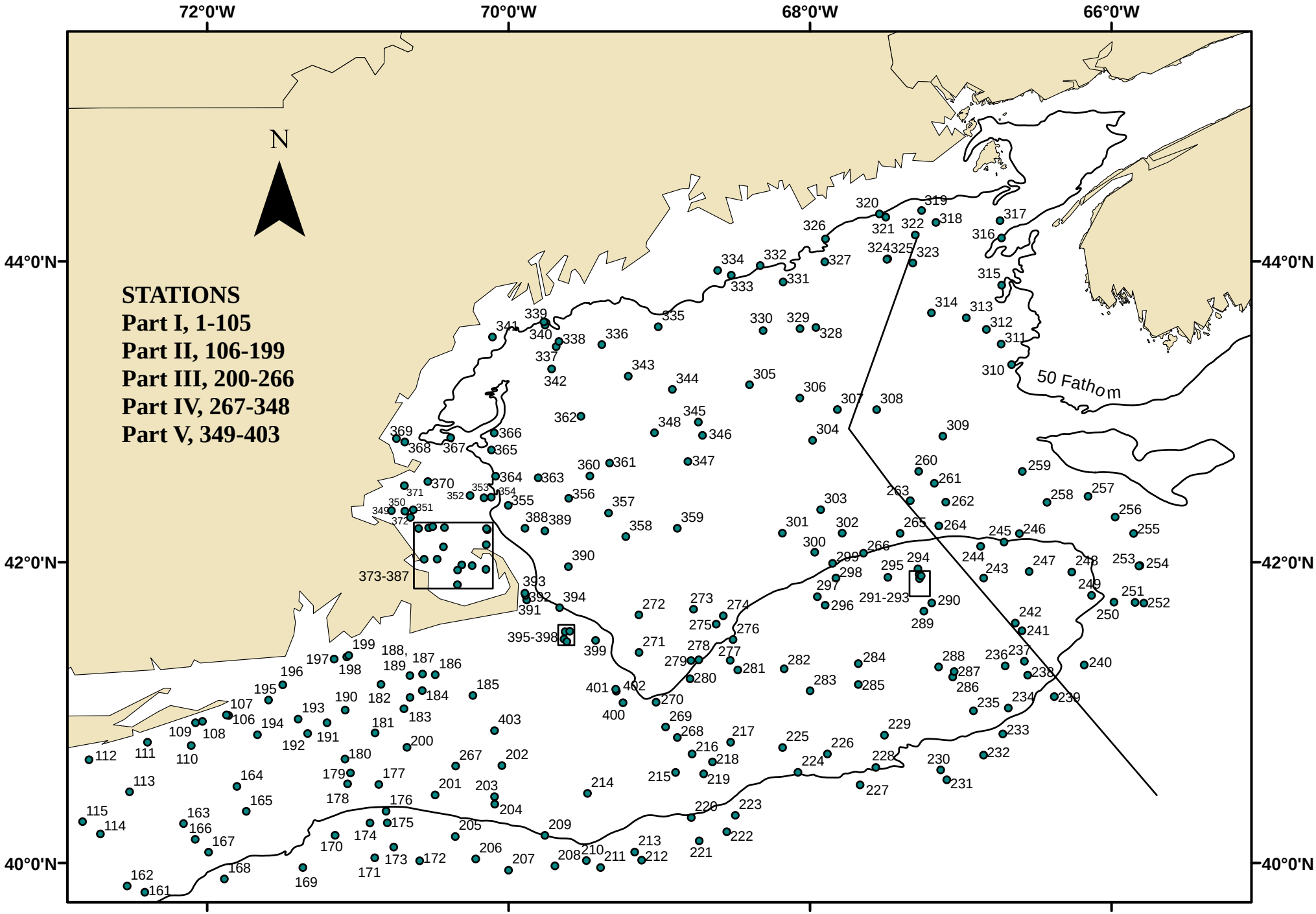


Figure 2. Trawl hauls made from NOAA FSV Henry B. Bigelow (10-02), during NOAA Fisheries Service, Northeast Fisheries Science Center spring bottom trawl survey, 27 February - 3 May 2010.

Field Notes

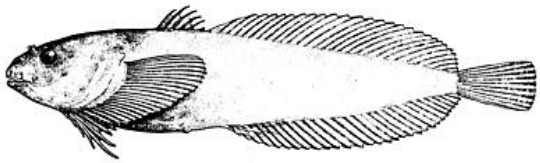
In an effort to share some of the natural history observations made during the bottom trawl survey, we have requested that the Chief Scientists on each part of the cruise comment on some of the more interesting catches that were brought aboard NOAA FSV *Henry B. Bigelow*.

Unseasonable catches

On the first leg of the survey, Atlantic herring, Atlantic mackerel, butterfish and skates (three species) dominated the catch in terms of numbers of fish captured. It appeared that several species were distributed further south than normal due to a relatively cold winter. At one point, we were measuring roughly twice the number of fish offshore than on the adjacent inshore stations. In addition, the inshore areas were not very diverse, although this is to be expected early in the spring season. Striped bass were encountered in the extreme southern portion of the survey area, whereas in some years they are found outside the mouths of all the major estuarine areas as far north as the Hudson River.

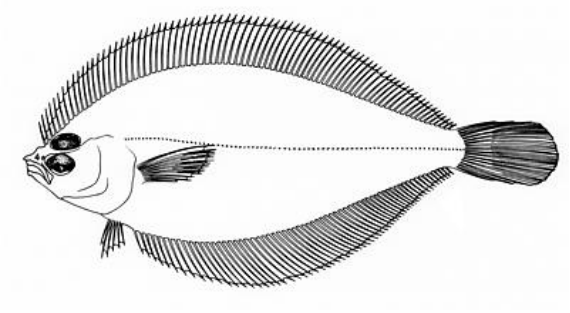
Snailfish and scallops

An interesting catch this year on leg II was free-living liparids or snailfish off the coast of Long Island. These fishes are most often associated with scallops, actually living inside the shells of live scallops.

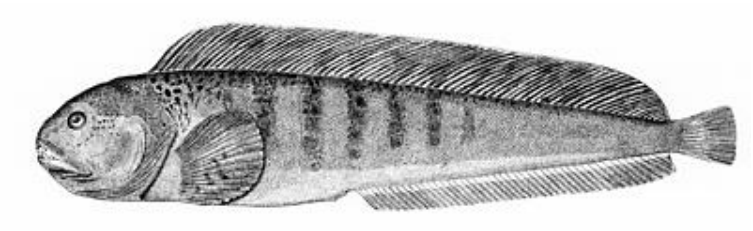


Large catches of small fish species

As on the first leg, butterfish continued to show up in large numbers (relative to other species). Near the Hudson Canyon area, we encountered a few impressive scup tows, with the maximum size of fish on one station as large as15 inches. In stratum 7, we captured a total of 51 pounds of gulfstream flounder, which is a surprising amount of this diminutive flatfish species.



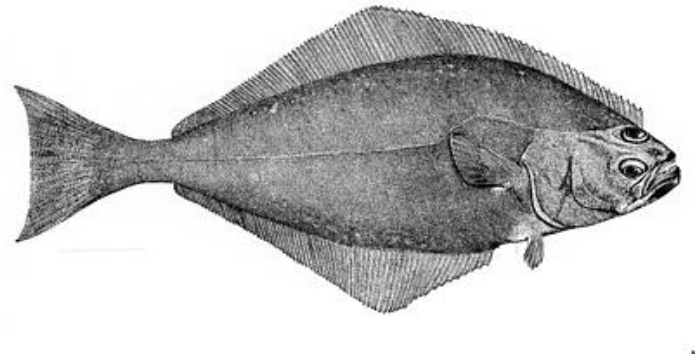
Groundfish on Georges Bank
During Leg III we observed decent numbers and sizes of winter flounder along the southern edge of Georges Bank and more yellowtail flounder as we progressed east towards Canadian waters. Similar to last fall, we did not see the very large catches of haddock, but did see good numbers of cod on the northeast peak. We also had one nice tow of pollock in stratum 22 along the northern edge and caught three wolffish in one tow in stratum 21.



Unusually Calm Weather
Leg IV of the Spring Bottom Trawl Survey covered northwestern Georges Bank and the northeastern two-thirds of the Gulf of Maine. The high level of productivity for station coverage was attributable to the unusual tranquil weather for this time of year. Nearly every day of the 11 day cruise was sunny and clear with very little wind.

Small Silver Hake
During Leg IV over 86,000 silver hake were caught ranging in size from 3 to 24 inches with 79,466 or 92.3% ranging in size from 4 to 7 inches. Approximately 75% of the Silver hake catch occurred in the northern Gulf of Maine and were often accompanied by catches of large *Pandalid* shrimp.

Atlantic Halibut
Twenty-nine of the thirty-two Atlantic halibut caught on the survey were located in the northern and eastern stratums of the Gulf of Maine. They ranged in size from 12 to 41 inches with almost two-thirds of them over 20 inches. Of the three outliers, one was caught on the northeast peak of Georges Bank and the other two were caught in the western Gulf of Maine near Cape Ann.



Fluke in Cape Cod Bay

Leg V this year saw some interesting numbers of small cod off the backside of Cape Cod. The most surprising catch however, was two juvenile fluke captured in Cape Cod Bay which, in my opinion, couldn't possibly have recently migrated into the area - they almost certainly had to have wintered over in the Bay. The first capture happened while I was off watch, and upon reviewing the data, I was immediately suspicious that this might have been a halibut, but at the same time that I went to question the watch staff, another bonafide juvenile fluke came aboard. I can't ever remember seeing this before.

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NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2010 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0001	Feb-28	0500	3929.1	7348.0	X26769.3	Y43107.1	263	19.1	40.0
0002	Feb-28	0808	3928.7	7405.9	X26888.2	Y43104.9	204	12.3	37.9
0003	Feb-28	0931	3923.9	7410.8	X26910.1	Y43054.1	219	11.2	37.7
0004	Feb-28	1101	3921.0	7405.5	X26869.9	Y43022.9	163	13.9	38.0
0005	Feb-28	1258	3913.3	7417.7	X26931.8	Y42939.6	241	13.4	38.1
0006	Feb-28	1435	3908.4	7429.8	X26996.3	Y42883.4	193	11.8	37.5
0007	Feb-28	1634	3906.3	7414.8	X26899.3	Y42865.2	052	15.9	38.4
0008	Feb-28	2017	3908.8	7340.3	X26686.4	Y42898.3	075	21.1	41.9
0009	Feb-28	2241	3854.0	7340.2	X26666.1	Y42746.8	224	25.2	41.3
0010	Mar-01	0004	3851.8	7345.6	X26696.1	Y42722.0	279	24.1	41.1
0011	Mar-01	0202	3851.0	7357.9	X26769.4	Y42709.0	319	22.4	40.5
0012	Mar-01	0450	3833.9	7413.8	X26836.5	Y42517.9	004	26.5	40.5
0013	Mar-01	0646	3844.3	7425.5	X26921.6	Y42622.5	309	20.2	38.9
0014	Mar-01	0858	3853.0	7435.3	X26996.0	Y42711.6	216	10.1	36.9
0015	Mar-01	1104	3850.9	7444.5	X27044.6	Y42683.2	212	9.0	37.3
0016	Mar-01	1247	3843.8	7450.7	X27064.0	Y42600.9	332	9.3	37.8
0017	Mar-01	1426	3841.9	7443.5	X27019.5	Y42583.9	036	9.3	37.4
0018	Mar-01	1630	3831.4	7450.2	X27034.9	Y42462.1	318	12.8	38.4
0019	Mar-01	1939	3816.1	7426.7	X26879.5	Y42314.9	339	22.7	40.0
0020	Mar-01	2217	3820.3	7451.4	X27019.1	Y42336.7	026	12.8	38.1
0021	Mar-02	0000	3814.4	7455.7	X27029.9	Y42267.1	241	11.8	38.2
0022	Mar-02	0109	3809.5	7455.9	X27021.9	Y42211.3	168	12.6	38.3
0023	Mar-02	0317	3806.5	7439.5	X26931.4	Y42197.0	201	19.4	40.1
0024	Mar-02	0459	3758.8	7448.3	X26963.8	Y42101.8	338	15.3	39.4
0025	Mar-02	0701	3757.8	7502.9	X27035.1	Y42072.6	229	12.3	38.5
0026	Mar-02	0841	3751.2	7502.4	X27020.4	Y41998.8	273	12.8	38.8
0027	Mar-02	0954	3750.8	7506.8	X27041.3	Y41988.6	222	13.7	
0028	Mar-02	1126	3751.0	7507.2	X27043.8	Y41989.7	055	13.1	38.6
0029	Mar-02	1257	3748.6	7459.7	X27002.6	Y41973.4	209	18.3	39.0
0030	Mar-02	1450	3741.3	7516.7	X27071.1	Y41867.5	216	13.1	38.8
0031	Mar-02	1640	3730.9	7524.1	X27086.6	Y41738.4	045	13.4	39.4
0032	Mar-02	1820	3726.3	7528.3	X27097.2	Y41679.7	037	12.3	39.7
0033	Mar-02	2022	3716.3	7534.7	X27107.4	Y41555.6	239	11.5	39.8
0034	Mar-02	2233	3706.3	7539.5	X27110.2	Y41433.1	052	10.7	40.0
0035	Mar-03	2132	3651.3	7542.6	X27097.9	Y41257.4	028	13.1	39.9
0036	Mar-03	2315	3648.1	7541.2	X27086.8	Y41223.9	042	12.0	39.8
0037	Mar-04	0110	3641.0	7538.4	X27064.3	Y41151.1	008	12.0	39.9
0038	Mar-04	0401	3628.2	7540.6	X27054.0	Y41005.1	345	12.3	39.8
0039	Mar-04	0700	3635.4	7519.2	X26977.9	Y41134.0	068	18.6	40.9
0040	Mar-04	0947	3616.1	7515.4	X26937.9	Y40939.3	097	17.0	43.6
0041	Mar-04	1207	3605.9	7509.4	X26902.3	Y40851.4	062	17.5	44.1
0042	Mar-04	1506	3610.7	7536.0	X27011.2	Y40826.9	000	13.7	40.1
0043	Mar-04	1621	3608.4	7532.4	X26994.4	Y40812.0	046	14.2	40.3
0044	Mar-04	1749	3602.9	7530.8	X26981.3	Y40758.7	054	14.5	40.3
0045	Mar-04	1920	3558.3	7526.8	X26960.5	Y40723.2	103	12.6	40.8
0046	Mar-04	2138	3541.2	7523.1	X26927.1	Y40562.5	127	15.3	40.7
0047	Mar-04	2307	3538.6	7513.5	X26888.8	Y40568.5	046	20.0	41.6
0048	Mar-05	0105	3531.1	7518.1	X26898.0	Y40482.0	035	13.9	41.4
0049	Mar-05	0237	3523.6	7516.9	X26886.3	Y40415.1	039	15.0	41.8
0050	Mar-05	0406	3518.1	7512.5	X26865.3	Y40381.0	053	15.3	42.7
0051	Mar-05	0708	3501.0	7527.9	X26903.2	Y40170.9	069	26.8	54.4

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2010 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0052	Mar-05	0936	3455.7	7543.0	X26949.2	Y40064.0	086	17.8	55.0
0053	Mar-05	1104	3453.1	7549.1	X26967.1	Y40016.2	306	14.2	52.8
0054	Mar-05	1242	3500.8	7554.7	X26994.1	Y40061.9	032	13.4	55.0
0055	Mar-05	1410	3455.8	7551.2	X26977.0	Y40031.4	049	13.7	54.9
0056	Mar-05	1610	3448.4	7601.6	X27003.4	Y39922.7	029	17.5	58.8
0057	Mar-05	1944	3429.2	7546.9	X26936.1	Y39831.1	275	90.5	64.5
0058	Mar-05	2230	3443.8	7536.4	X26915.7	Y39991.4	249	50.0	66.7
0059	Mar-06	0048	3449.8	7528.7	X26895.3	Y40072.8	252	77.1	64.0
0060	Mar-06	0253	3452.0	7526.4	X26889.7	Y40100.1	240	75.2	60.9
0061	Mar-06	0445	3458.0	7523.1	X26884.0	Y40164.6	064	45.7	
0062	Mar-06	0632	3458.7	7523.4	X26885.3	Y40169.2	046	41.3	59.4
0063	Mar-06	0830	3502.3	7517.2	X26867.3	Y40224.0	034	48.7	44.2
0064	Mar-06	1317	3535.3	7456.3	X26821.8	Y40595.1	029	27.6	44.4
0065	Mar-06	1526	3539.9	7506.1	X26862.6	Y40605.3	030	21.9	43.6
0066	Mar-06	1706	3545.9	7456.9	X26833.6	Y40692.3	340	31.7	43.6
0067	Mar-06	1928	3543.9	7450.5	X26807.4	Y40693.9	332	64.0	46.0
0068	Mar-06	2302	3543.9	7449.3	X26802.9	Y40698.0	321	152.6	
0069	Mar-07	0141	3544.3	7449.8	X26805.2	Y40699.5	353	109.9	
0070	Mar-07	0457	3603.6	7446.9	X26811.5	Y40892.9	058	138.6	49.3
0071	Mar-07	0818	3558.6	7448.4	X26812.8	Y40839.7	002	87.5	47.7
0072	Mar-07	1124	3602.7	7451.7	X26829.5	Y40870.5	009	51.4	45.3
0073	Mar-07	1319	3611.7	7448.3	X26824.8	Y40968.2	012	61.0	46.7
0074	Mar-07	1438	3618.2	7446.8	X26825.1	Y41037.1	346	112.6	50.1
0075	Mar-07	1704	3625.6	7448.5	X26839.8	Y41107.1	016	45.9	45.0
0076	Mar-07	1839	3625.9	7452.6	X26856.7	Y41100.1	020	27.1	43.2
0077	Mar-07	2005	3627.5	7455.1	X26868.8	Y41109.6	004	20.2	43.0
0078	Mar-08	0030	3635.3	7442.7	X26825.7	Y41220.3	022	136.2	50.6
0079	Mar-08	0313	3640.6	7441.0	X26824.1	Y41278.8	037	132.6	50.4
0080	Mar-08	0556	3646.8	7440.1	X26826.8	Y41343.9	345	59.9	48.6
0081	Mar-08	0830	3648.2	7447.8	X26861.9	Y41341.3	011	32.5	42.1
0082	Mar-08	1038	3655.8	7502.7	X26935.9	Y41390.3	041	20.8	41.0
0083	Mar-08	1216	3702.6	7455.1	X26911.6	Y41478.1	047	26.2	41.3
0084	Mar-08	1510	3701.6	7439.4	X26840.4	Y41500.1	346	70.8	47.6
0085	Mar-08	1759	3708.2	7436.7	X26835.8	Y41574.5	013	53.3	47.9
0086	Mar-08	1954	3715.8	7431.9	X26822.8	Y41663.0	012	74.9	48.5
0087	Mar-08	2144	3715.0	7438.5	X26852.4	Y41642.8	017	51.1	47.2
0088	Mar-08	2332	3716.3	7447.3	X26894.6	Y41640.0	348	28.7	41.5
0089	Mar-09	0129	3728.3	7453.2	X26938.9	Y41759.7	058	16.7	40.9
0090	Mar-09	0414	3735.8	7431.2	X26844.2	Y41875.5	032	34.7	46.1
0091	Mar-09	0613	3730.0	7421.0	X26787.9	Y41831.1	222	116.2	
0092	Mar-09	0809	3730.7	7420.7	X26787.1	Y41838.6	029	103.9	
0093	Mar-09	1022	3738.4	7416.6	X26776.1	Y41926.1	023	69.7	51.5
0094	Mar-09	1224	3745.3	7421.4	X26808.3	Y41991.2	033	39.1	48.0
0095	Mar-09	1440	3750.5	7428.4	X26850.3	Y42037.5	020	33.1	43.7
0096	Mar-09	1625	3758.2	7426.0	X26849.0	Y42123.2	030	29.8	42.1
0097	Mar-09	1910	3751.4	7402.1	X26717.4	Y42081.2	305	146.3	53.4
0098	Mar-09	2152	3758.9	7403.1	X26730.7	Y42158.7	080	66.2	50.3
0099	Mar-10	0034	3815.4	7414.8	X26814.0	Y42319.2	001	28.7	43.4
0100	Mar-10	0238	3823.7	7358.7	X26736.3	Y42422.0	064	33.9	44.9

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2010 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0101	Mar-10	0421	3815.9	7354.6	X26704.5	Y42344.7	075	42.1	47.4
0102	Mar-10	0622	3809.5	7343.4	X26636.3	Y42289.1	055	120.0	53.3
0103	Mar-10	0917	3823.1	7344.5	X26656.3	Y42427.9	226	47.6	46.7
0104	Mar-10	1153	3840.6	7334.8	X26617.8	Y42612.9	035	34.7	44.2
0105	Mar-10	1419	3843.6	7323.6	X26554.0	Y42648.9	047	42.9	43.2
0106	Mar-16	1831	4058.8	7151.5	X25986.9	Y43824.9	041	15.9	37.7
0107	Mar-16	1944	4059.0	7152.3	X25994.7	Y43827.4	255	14.5	37.7
0108	Mar-16	2102	4056.5	7201.9	X26074.3	Y43820.6	253	15.3	38.0
0109	Mar-16	2159	4055.9	7204.7	X26097.8	Y43820.4	247	14.2	38.2
0110	Mar-16	2342	4046.8	7206.3	X26099.0	Y43749.7	120	23.8	37.5
0111	Mar-17	0145	4048.2	7223.7	X26249.8	Y43783.3	273	14.8	38.0
0112	Mar-17	0401	4041.2	7247.0	X26434.5	Y43753.9	261	15.3	38.4
0113	Mar-17	0637	4028.4	7230.9	X26281.1	Y43624.0	131	25.4	37.7
0114	Mar-17	0914	4011.6	7242.5	X26353.7	Y43486.0	315	31.2	38.8
0115	Mar-17	1049	4016.5	7249.6	X26415.7	Y43536.8	324	26.8	38.4
0116	Mar-17	1336	4035.6	7259.7	X26528.7	Y43719.8	286	12.8	38.4
0117	Mar-17	1451	4033.2	7306.0	X26575.8	Y43705.6	269	14.5	38.6
0118	Mar-17	1644	4029.5	7318.9	X26672.8	Y43686.2	253	14.2	39.0
0119	Mar-17	1758	4028.1	7323.8	X26708.8	Y43678.6	245	15.0	39.2
0120	Mar-17	1929	4024.4	7320.1	X26671.2	Y43639.7	271	17.8	38.7
0121	Mar-17	2125	4016.5	7325.7	X26698.7	Y43570.0	304	18.9	39.4
0122	Mar-17	2324	4026.3	7335.5	X26797.4	Y43673.3	298	12.0	39.5
0123	Mar-18	0001	4026.1	7336.9	X26807.9	Y43673.1	254	11.5	
0124	Mar-18	0139	4029.0	7348.5	X26906.3	Y43713.8	314	12.3	39.8
0125	Mar-18	0336	4021.2	7343.5	X26847.2	Y43632.1	168	14.2	39.2
0126	Mar-18	0505	4021.1	7348.3	X26883.7	Y43635.0	179	23.0	39.2
0127	Mar-18	0635	4014.0	7351.7	X26891.9	Y43566.9	174	13.4	39.6
0128	Mar-18	0832	3959.8	7352.9	X26866.7	Y43423.7	190	13.9	39.8
0129	Mar-18	0948	3954.2	7354.5	X26865.2	Y43367.8	181	13.9	39.9
0130	Mar-18	1140	3941.6	7356.8	X26853.5	Y43238.6	123	13.7	39.6
0131	Mar-18	1302	3938.5	7350.8	X26805.6	Y43204.3	087	16.1	39.6
0132	Mar-18	1449	3945.5	7341.0	X26751.1	Y43273.4	028	15.6	39.8
0133	Mar-18	1650	3953.8	7329.1	X26680.5	Y43350.0	145	21.9	39.8
0134	Mar-18	1820	3944.2	7327.0	X26648.9	Y43254.3	143	18.6	40.5
0135	Mar-18	2121	3938.1	7258.3	X26437.5	Y43184.7	002	35.0	40.6
0136	Mar-18	2320	3936.4	7241.9	X26321.0	Y43163.6	139	39.4	42.0
0137	Mar-19	0123	3924.4	7251.0	X26376.7	Y43052.5	196	37.7	42.5
0138	Mar-19	0308	3920.9	7303.8	X26460.1	Y43020.9	273	32.8	41.1
0139	Mar-19	0459	3908.9	7308.7	X26482.5	Y42904.5	202	36.4	41.6
0140	Mar-19	0648	3859.2	7308.9	X26476.1	Y42809.0	143	44.3	41.9
0141	Mar-19	1007	3843.4	7308.5	X26463.2	Y42654.5	068	68.9	52.9
0142	Mar-19	1157	3843.3	7316.8	X26513.0	Y42650.1	039	44.3	43.3
0143	Mar-19	1502	3830.1	7318.2	X26511.8	Y42517.8	058	107.4	53.9
0144	Mar-19	1719	3825.3	7328.5	X26567.4	Y42462.6	337	60.1	53.1
0145	Mar-19	1841	3823.7	7328.4	X26565.6	Y42446.2	317	61.2	
0146	Mar-19	2025	3823.5	7328.4	X26565.2	Y42444.2	331	64.2	53.2
0147	Mar-19	2325	3834.5	7312.5	X26481.9	Y42564.9	031	129.6	
0148	Mar-20	0027	3834.5	7312.6	X26482.2	Y42564.6	011	128.2	53.1
0149	Mar-20	0451	3850.6	7258.0	X26403.7	Y42729.2	045	68.4	52.8
0150	Mar-20	0641	3850.4	7258.0	X26403.7	Y42726.6	054	74.9	

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0151	Mar-20	0848	3852.3	7254.6	X26383.9	Y42746.8	028	113.2	53.6
0152	Mar-20	1139	3903.1	7249.6	X26357.0	Y42850.5	028	63.7	52.7
0153	Mar-20	1343	3915.1	7245.9	X26337.6	Y42964.7	032	53.0	46.9
0154	Mar-20	1557	3918.5	7228.5	X26224.6	Y42995.8	039	76.3	54.2
0155	Mar-20	1814	3926.3	7228.5	X26225.6	Y43066.8	056	66.7	51.0
0156	Mar-20	2030	3925.0	7215.6	X26138.7	Y43052.8	350	116.7	54.3
0157	Mar-20	2238	3930.7	7209.4	X26096.5	Y43102.9	039	122.2	54.1
0158	Mar-21	0049	3935.9	7203.2	X26052.8	Y43146.8	042	117.0	54.7
0159	Mar-21	0258	3936.1	7206.8	X26077.2	Y43149.5	202	82.8	54.7
0160	Mar-21	0445	3935.0	7215.7	X26138.3	Y43142.6	016	64.8	54.6
0161	Mar-21	0653	3948.3	7224.8	X26204.6	Y43265.4	276	43.2	47.4
0162	Mar-21	0837	3950.8	7231.9	X26256.7	Y43291.2	297	37.5	40.9
0163	Mar-21	1152	4015.7	7209.4	X26098.3	Y43494.3	050	34.7	40.8
0164	Mar-21	1438	4030.5	7148.2	X25933.9	Y43597.0	041	36.6	44.5
0165	Mar-21	1653	4020.6	7144.4	X25903.2	Y43513.0	344	40.7	50.5
0166	Mar-21	1931	4009.4	7204.8	X26060.3	Y43436.9	159	36.1	41.7
0167	Mar-21	2054	4004.3	7159.4	X26019.7	Y43389.5	129	44.6	42.2
0168	Mar-21	2311	3953.6	7153.1	X25976.1	Y43294.9	044	70.3	51.0
0169	Mar-22	0228	3958.2	7121.9	X25752.9	Y43314.6	067	115.1	52.9
0170	Mar-22	0450	4011.0	7109.1	X25646.8	Y43407.8	077	68.6	53.5
0171	Mar-22	0700	4002.0	7053.3	X25557.3	Y43327.9	103	121.9	53.0
0172	Mar-22	0926	4000.9	7035.4	X25452.4	Y43308.4	064	114.6	53.5
0173	Mar-22	1212	4006.3	7045.7	X25500.7	Y43355.9	311	73.8	54.0
0174	Mar-22	1417	4015.9	7055.2	X25542.6	Y43435.3	045	64.8	50.6
0175	Mar-22	1551	4016.0	7048.2	X25495.9	Y43430.6	103	65.1	52.8
0176	Mar-22	1722	4020.7	7048.7	X25489.6	Y43465.9	090	53.6	50.0
0177	Mar-22	1913	4031.3	7051.7	X25490.2	Y43547.8	293	40.7	42.0
0178	Mar-22	2056	4031.6	7104.1	X25583.4	Y43561.4	279	41.0	41.6
0179	Mar-22	2249	4035.9	7102.9	X25569.6	Y43592.8	052	38.5	42.0
0180	Mar-23	0035	4041.5	7105.2	X25582.6	Y43636.5	159	34.4	41.8
0181	Mar-23	0250	4051.9	7053.1	X25477.7	Y43699.3	109	30.1	42.3
0182	Mar-23	0450	4101.5	7041.7	X25377.3	Y43753.9	116	25.4	41.3
0183	Mar-23	0647	4106.0	7039.2	X25357.1	Y43782.0	139	24.1	41.0
0184	Mar-23	0839	4108.8	7034.4	X25315.6	Y43794.7	147	21.3	40.9
0185	Mar-23	1051	4106.8	7014.2	X25140.7	Y43756.8	147	15.0	42.7
0186	Mar-23	1303	4115.1	7029.2	X25276.9	Y43830.4	302	16.4	
0187	Mar-23	1844	4115.4	7034.2	X25323.4	Y43838.9	251	15.0	41.4
0188	Mar-23	2052	4111.2	7050.8	X25465.8	Y43832.8	284	13.1	
0189	Mar-23	2232	4114.8	7039.3	X25367.9	Y43841.6	225	15.6	41.2
0190	Mar-24	0201	4101.0	7105.1	X25581.3	Y43779.2	266	25.2	41.1
0191	Mar-24	0400	4055.9	7112.3	X25641.1	Y43751.6	194	28.2	41.6
0192	Mar-24	0549	4051.7	7120.0	X25705.4	Y43729.4	242	30.6	41.7
0193	Mar-24	0736	4057.4	7123.8	X25742.4	Y43776.7	267	24.9	41.1
0194	Mar-24	1002	4051.2	7139.9	X25877.0	Y43750.4	305	30.9	41.4
0195	Mar-24	1226	4105.0	7135.6	X25856.4	Y43849.2	308	20.0	40.4
0196	Mar-24	1427	4111.1	7129.9	X25816.9	Y43886.0	315	21.3	39.7
0197	Mar-24	1741	4121.3	7109.5	X25656.5	Y43928.8	087	17.0	40.1
0198	Mar-24	1920	4122.2	7104.4	X25613.5	Y43927.3	242	14.2	
0199	Mar-24	2026	4122.8	7103.6	X25608.1	Y43930.1	255	13.7	41.3
0200	Mar-31	1640	4046.1	7040.5	X25381.8	Y43644.2	159	32.3	42.7

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0201	Mar-31	1926	4027.1	7029.2	X25346.7	Y43497.4	121	41.3	45.7
0202	Mar-31	2246	4038.9	7002.6	X25161.1	Y43556.6	112	27.9	42.4
0203	Apr-01	0049	4026.4	7005.6	X25218.5	Y43473.3	135	39.9	44.6
0204	Apr-01	0214	4023.5	7005.5	X25228.0	Y43452.6	137	42.9	45.2
0205	Apr-01	0511	4010.6	7021.2	X25347.8	Y43371.4	130	62.9	51.3
0206	Apr-01	0732	4001.6	7013.1	X25333.1	Y43301.5	051	118.4	53.7
0207	Apr-01	1120	3957.1	7000.0	X25288.3	Y43262.6	304	132.9	53.4
0208	Apr-01	1511	3958.8	6941.5	W14138.9	Y43266.0	326	71.9	54.0
0209	Apr-01	1716	4011.0	6945.5	W14120.9	Y43352.3	020	49.8	50.1
0210	Apr-01	1958	4000.9	6929.0	W14070.4	Y43274.5	061	57.7	54.8
0211	Apr-01	2129	3958.2	6923.4	W14051.5	Y43253.0	075	60.7	54.8
0212	Apr-01	2321	4001.1	6907.0	W13963.1	Y43265.5	100	124.4	53.2
0213	Apr-02	0128	4004.3	6909.8	W13965.8	Y43288.2	037	77.4	54.9
0214	Apr-02	0453	4027.8	6928.6	W13978.6	Y43454.5	000	35.3	42.7
0215	Apr-02	0844	4036.1	6853.5	W13773.6	Y43482.8	352	35.8	43.3
0216	Apr-02	1033	4043.5	6847.0	W13713.1	Y43523.6	155	35.0	42.9
0217	Apr-02	1319	4048.2	6831.6	W13620.8	Y43540.3	271	30.6	43.1
0218	Apr-02	1502	4040.3	6838.8	W13686.6	Y43498.1	313	34.7	43.4
0219	Apr-02	1647	4035.5	6842.3	W13722.0	Y43471.2	331	33.4	43.6
0220	Apr-02	1937	4018.1	6847.3	W13810.5	Y43365.4	073	53.6	47.3
0221	Apr-02	2151	4008.8	6844.2	W13828.7	Y43304.7	076	88.3	54.7
0222	Apr-02	2328	4012.4	6833.2	W13764.8	Y43322.2	353	121.1	54.8
0223	Apr-03	0210	4019.0	6829.8	W13725.2	Y43361.3	060	62.3	53.7
0224	Apr-03	0528	4036.2	6804.8	W13545.7	Y43450.2	002	49.8	45.5
0225	Apr-03	0720	4046.0	6810.9	W13533.4	Y43512.2	052	33.6	43.3
0226	Apr-03	0927	4043.5	6753.1	W13463.7	Y43485.1	093	41.3	43.2
0227	Apr-03	1200	4031.2	6740.1	W13457.3	Y43406.6	075	72.7	53.2
0228	Apr-03	1334	4038.1	6733.8	W13402.5	Y43442.6	027	49.2	48.7
0229	Apr-03	1541	4051.0	6730.4	W13334.3	Y43512.3	120	43.5	43.0
0230	Apr-03	1835	4037.1	6708.0	W13299.8	Y43422.4	027	80.7	53.8
0231	Apr-03	2022	4033.2	6705.6	W13306.1	Y43399.8	047	126.0	53.9
0232	Apr-03	2301	4043.0	6650.9	W13207.6	Y43445.2	041	106.1	54.5
0233	Apr-04	0144	4051.5	6643.3	W13142.1	Y43485.7	059	60.7	54.1
0234	Apr-04	0333	4101.8	6641.1	W13088.7	Y43538.2	257	41.0	46.5
0235	Apr-04	0523	4100.7	6654.9	W13147.3	Y43541.4	297	39.4	42.7
0236	Apr-04	0814	4118.6	6642.3	W13017.5	Y43625.2	012	43.2	41.7
0237	Apr-04	0958	4120.5	6634.7	W12979.9	Y43629.1	119	48.1	42.1
0238	Apr-04	1124	4114.9	6633.3	W13000.5	Y43600.1	193	48.4	43.4
0239	Apr-04	1329	4106.4	6622.8	W12999.9	Y43550.0	048	94.1	54.1
0240	Apr-04	1622	4119.0	6610.9	W12900.1	Y43604.9	177	102.3	51.5
0241	Apr-04	1938	4132.6	6635.6	W12926.1	Y43690.5	152	45.4	41.1
0242	Apr-04	2136	4135.7	6638.3	W12921.4	Y43707.8	323	42.9	40.9
0243	Apr-05	0005	4153.6	6650.9	W12880.5	Y43806.9	013	33.6	42.4
0244	Apr-05	0158	4206.3	6652.1	W12819.7	Y43869.0	040	37.5	42.4
0245	Apr-05	0321	4208.0	6642.8	W12775.4	Y43868.1	109	44.8	42.4
0246	Apr-05	0439	4211.4	6636.7	W12735.1	Y43877.8	105	113.7	48.0
0247	Apr-05	0740	4156.2	6632.8	W12799.0	Y43802.9	107	43.5	42.1
0248	Apr-05	1005	4156.0	6615.8	W12739.2	Y43787.1	080	44.6	42.3
0249	Apr-05	1230	4146.7	6607.9	W12757.9	Y43736.8	118	48.7	42.0
0250	Apr-05	1630	4144.1	6559.0	W12740.3	Y43717.2	076	57.7	41.5
0251	Apr-05	1756	4143.9	6550.6	W12713.3	Y43710.1	048	70.5	49.0

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0252	Apr-05	1930	4143.7	6547.1	W12702.7	Y43706.4	024	96.0	49.4
0253	Apr-05	2208	4158.6	6548.7	W12635.0	Y43776.4	307	111.8	
0254	Apr-05	2309	4158.5	6549.1	W12637.1	Y43776.0	318	106.4	48.4
0255	Apr-06	0219	4211.4	6551.2	W12578.6	Y43836.3	333	132.6	49.4
0256	Apr-06	0502	4218.0	6558.5	W12568.3	Y43872.2	346	130.1	51.3
0257	Apr-06	0731	4226.3	6609.3	W12560.2	Y43919.1	245	131.5	50.7
0258	Apr-06	1045	4223.8	6625.7	W12629.1	Y43924.3	308	149.6	52.1
0259	Apr-06	1343	4236.1	6635.5	W12596.6	Y43989.5	299	96.5	49.1
0260	Apr-06	1343	4236.2	6716.8	W12754.1	Y44035.7	142	150.1	47.5
0261	Apr-06	1939	4231.4	6710.5	W12755.9	Y44006.6	150	179.1	47.0
0262	Apr-06	2212	4223.9	6706.0	W12779.3	Y43966.7	266	196.9	47.0
0263	Apr-07	0059	4224.5	6720.1	W12833.7	Y43985.1	174	184.3	47.1
0264	Apr-07	0348	4214.4	6708.8	W12842.2	Y43924.9	243	118.9	47.5
0265	Apr-07	0649	4211.5	6724.1	W12921.2	Y43927.3	252	124.9	47.4
0266	Apr-07	0934	4203.6	6738.7	W13025.8	Y43904.2	235	74.9	42.3
0267	Apr-13	1915	4038.7	7021.1	X25262.8	Y43572.3	069	30.3	42.7
0268	Apr-14	0212	4050.1	6852.8	W13715.6	Y43568.7	017	37.2	43.4
0269	Apr-14	0409	4054.2	6857.5	W13721.8	Y43598.3	043	40.7	43.2
0270	Apr-14	0709	4104.1	6901.3	W13700.2	Y43662.0	036	48.9	41.2
0271	Apr-14	0939	4124.0	6908.1	W13649.1	Y43788.2	329	83.1	41.5
0272	Apr-14	1245	4138.9	6908.2	W13581.1	Y43875.7	095	90.5	42.8
0273	Apr-14	1521	4141.2	6846.4	W13458.0	Y43862.6	099	86.7	42.8
0274	Apr-14	1715	4138.6	6834.6	W13411.9	Y43834.3	183	83.1	45.2
0275	Apr-14	2108	4135.2	6837.4	W13441.5	Y43818.9	199	75.5	42.1
0276	Apr-14	2254	4129.1	6830.7	W13437.7	Y43777.2	212	51.9	42.3
0277	Apr-15	0027	4120.8	6831.8	W13481.2	Y43731.5	250	39.4	42.7
0278	Apr-15	0210	4121.0	6844.3	W13541.6	Y43745.3	217	55.0	41.5
0279	Apr-15	0340	4120.8	6847.4	W13558.2	Y43747.0	047	62.3	41.6
0280	Apr-15	0517	4113.5	6847.7	W13592.3	Y43704.8	191	45.1	41.6
0281	Apr-15	0742	4117.0	6828.8	W13484.0	Y43706.5	143	32.0	42.9
0282	Apr-15	1017	4117.5	6810.3	W13394.8	Y43691.8	185	25.2	44.3
0283	Apr-15	1251	4108.7	6760.0	W13386.9	Y43633.5	266	25.2	44.5
0284	Apr-15	1601	4119.5	6740.8	W13252.4	Y43676.8	095	21.6	45.1
0285	Apr-15	1746	4111.2	6740.8	W13290.3	Y43631.6	039	27.9	44.9
0286	Apr-15	2110	4114.2	6703.2	W13119.6	Y43618.0	145	36.1	43.7
0287	Apr-15	2232	4116.4	6702.6	W13107.2	Y43629.0	182	36.1	43.5
0288	Apr-16	0002	4118.2	6708.8	W13123.9	Y43643.3	327	31.2	44.1
0289	Apr-16	0324	4140.4	6714.7	W13041.7	Y43763.2	001	30.3	44.2
0290	Apr-16	0447	4143.8	6711.5	W13012.3	Y43777.1	017	30.1	44.0
0291	Apr-16	0649	4153.5	6716.5	W12983.6	Y43830.4	066	28.4	43.4
0292	Apr-16	0736	4155.1	6716.6	W12975.8	Y43838.9	053	28.4	
0293	Apr-16	0822	4154.5	6715.8	W12975.4	Y43835.0	152	29.3	
0294	Apr-16	0948	4157.3	6717.0	W12966.1	Y43850.4	142	30.3	42.7
0295	Apr-16	1150	4153.9	6729.0	W13033.9	Y43845.5	181	29.3	43.7
0296	Apr-16	1512	4142.8	6754.0	W13199.4	Y43813.8	005	17.0	44.4
0297	Apr-16	1656	4146.2	6757.1	W13196.6	Y43834.9	074	18.9	43.8
0298	Apr-16	1954	4153.7	6749.7	W13125.7	Y43865.8	055	23.8	43.0
0299	Apr-16	2153	4159.5	6751.0	W13101.3	Y43897.3	240	63.7	42.4
0300	Apr-16	2353	4203.9	6758.1	W13110.7	Y43927.7	301	108.3	47.5
0301	Apr-17	0233	4211.5	6811.0	W13130.4	Y43981.7	016	92.1	45.7
0302	Apr-17	0541	4211.6	6747.2	W13020.8	Y43953.5	046	119.8	48.2

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2010 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0303	Apr-17	0820	4220.9	6755.8	W13008.6	Y44009.7	326	97.6	45.3
0304	Apr-17	1150	4248.6	6759.0	W12864.6	Y44145.4	174	107.4	45.2
0305	Apr-17	1646	4310.8	6824.1	W12848.2	Y44280.8	204	100.6	44.6
0306	Apr-17	2051	4305.4	6804.1	W12785.7	Y44228.5	260	97.6	44.7
0307	Apr-18	0046	4300.8	6749.1	W12746.1	Y44187.7	279	104.4	45.3
0308	Apr-18	0351	4300.8	6733.5	W12678.3	Y44167.0	007	105.8	47.1
0309	Apr-18	0642	4250.2	6707.1	W12634.4	Y44087.6	050	119.8	47.8
0310	Apr-18	1137	4318.8	6639.8	W12362.1	Y44176.2	241	55.8	42.1
0311	Apr-18	1417	4327.0	6643.9	W12326.0	Y44214.3	013	85.8	44.1
0312	Apr-18	1604	4332.8	6649.8	W12309.4	Y44244.8	336	82.3	45.6
0313	Apr-18	1834	4337.4	6657.8	W12307.8	Y44273.2	044	90.5	45.2
0314	Apr-18	2029	4339.4	6711.7	W12345.8	Y44299.1	096	79.8	45.6
0315	Apr-19	0020	4350.5	6643.7	W12175.3	Y44305.5	188	72.7	41.1
0316	Apr-19	0358	4409.3	6643.8	W12050.9	Y44374.9	226	64.2	43.0
0317	Apr-19	0629	4416.2	6644.4	W12006.0	Y44400.4	314	99.8	44.6
0318	Apr-19	0938	4415.5	6709.9	W12094.2	Y44431.9	045	86.1	45.4
0319	Apr-19	1201	4420.2	6715.6	W12080.7	Y44456.4	242	81.5	44.6
0320	Apr-19	1413	4418.9	6732.4	W12153.0	Y44475.2	070	54.1	42.0
0321	Apr-19	1552	4417.6	6729.8	W12152.2	Y44467.1	235	68.6	41.0
0322	Apr-19	1825	4410.5	6718.1	W12158.7	Y44425.2	041	99.8	46.1
0323	Apr-19	2034	4359.3	6719.1	W12240.1	Y44385.4	021	116.5	46.7
0324	Apr-19	2258	4401.0	6729.1	W12267.1	Y44405.5	047	115.9	47.1
0325	Apr-20	0116	4400.8	6729.4	W12269.6	Y44405.2	329	118.1	
0326	Apr-20	0426	4408.9	6753.8	W12313.6	Y44470.4	043	54.1	40.5
0327	Apr-20	0742	4359.8	6754.1	W12379.9	Y44436.7	289	71.9	42.2
0328	Apr-20	1058	4333.6	6757.7	W12574.9	Y44339.3	080	124.7	47.0
0329	Apr-20	1330	4333.1	6804.0	W12606.9	Y44346.6	053	103.3	46.1
0330	Apr-20	1650	4332.4	6818.7	W12681.5	Y44365.1	053	107.2	44.9
0331	Apr-20	2036	4351.8	6810.7	W12511.6	Y44430.9	028	96.8	44.3
0332	Apr-20	2321	4358.3	6819.8	W12509.3	Y44469.7	230	53.3	40.4
0333	Apr-21	0131	4354.4	6831.4	W12593.5	Y44472.8	024	54.1	40.1
0334	Apr-21	0337	4356.3	6836.8	W12607.8	Y44488.7	191	50.0	39.5
0335	Apr-21	0724	4333.9	6900.4	W12887.0	Y44436.8	007	66.2	40.3
0336	Apr-21	1235	4326.8	6922.9	W13060.2	Y44444.1	015	91.3	40.8
0337	Apr-21	1530	4325.9	6941.1	W13172.5	Y44472.1	020	56.3	
0338	Apr-21	1641	4328.0	6940.0	W13152.4	Y44479.0	212	53.3	40.0
0339	Apr-21	1926	4334.6	6945.5	W13143.2	Y44516.8	077	59.1	39.6
0340	Apr-21	2201	4335.8	6945.9	W13137.5	Y44522.9	196	54.7	39.5
0341	Apr-22	0123	4329.8	7006.4	X25954.3	Y44534.7	183	51.1	39.8
0342	Apr-22	0501	4317.1	6942.9	W13239.3	Y44435.9	174	84.2	41.8
0343	Apr-22	0754	4314.2	6912.4	W13080.7	Y44371.2	182	96.8	43.1
0344	Apr-22	1130	4308.9	6854.8	W13017.6	Y44319.3	330	98.2	44.8
0345	Apr-22	1429	4255.8	6844.5	W13043.4	Y44243.5	326	110.2	45.5
0346	Apr-22	1555	4250.5	6842.8	W13066.6	Y44216.2	197	115.4	45.7
0347	Apr-22	1946	4240.1	6848.6	W13158.1	Y44174.5	117	88.9	43.3
0348	Apr-22	2234	4251.6	6901.9	W13161.4	Y44250.0	164	104.7	43.9
0349	Apr-26	1522	4220.5	7046.6	X25765.9	Y44264.5	321	14.2	40.0
0350	Apr-26	1714	4220.3	7041.3	X25729.2	Y44253.7	330	24.3	40.1
0351	Apr-26	1849	4220.9	7038.0	X25710.7	Y44250.7	331	38.3	40.0
0352	Apr-26	2135	4226.5	7015.3	X25614.2	Y44242.5	148	38.0	40.1
0353	Apr-26	2317	4225.9	7006.9	X25566.5	Y44224.5	184	43.7	40.2

NOAA Fisheries Service SPRING BOTTOM TRAWL SURVEY
2010 STATION INFORMATION

Station	Date	Time	Lat	Lon	Loran TD's		Course	Bottom Depth (FM)	Temp (F)
0354	Apr-27	0023	4225.7	7009.8	X25579.7	Y44228.3	351	44.6	
0355	Apr-27	0243	4222.6	7000.1	X25512.0	Y44195.7	002	105.0	43.4
0356	Apr-27	0650	4225.5	6936.1	W13499.9	Y44172.1	152	133.4	44.7
0357	Apr-27	0940	4219.6	6920.2	W13442.2	Y44116.7	115	121.7	45.0
0358	Apr-27	1320	4210.2	6913.3	W13453.9	Y44056.6	028	106.1	43.5
0359	Apr-27	1645	4213.5	6852.8	W13327.5	Y44045.7	112	108.0	43.3
0360	Apr-27	2035	4234.4	6927.6	W13403.1	Y44205.0	131	133.4	44.6
0361	Apr-27	2319	4239.5	6919.8	W13330.0	Y44218.8	260	121.4	45.2
0362	Apr-28	0349	4258.2	6931.2	W13286.3	Y44328.4	225	85.8	43.2
0363	Apr-28	0719	4233.7	6948.2	W13525.7	Y44234.5	202	145.2	44.7
0364	Apr-28	1033	4234.2	7005.2	X25613.8	Y44266.2	228	57.7	40.3
0365	Apr-28	1341	4244.7	7006.8	X25689.7	Y44323.3	272	74.1	41.0
0366	Apr-28	1537	4251.5	7005.7	X25727.0	Y44355.5	196	63.7	40.1
0367	Apr-28	1813	4249.6	7023.0	X25803.9	Y44377.4	310	74.1	39.8
0368	Apr-28	2040	4247.9	7041.3	X25898.3	Y44403.1	347	24.9	40.1
0369	Apr-28	2218	4249.2	7044.6	X25926.4	Y44416.4	343	19.7	40.7
0370	Apr-29	0133	4232.2	7032.1	X25746.4	Y44302.8	255	35.5	40.2
0371	Apr-29	0425	4230.5	7041.5	X25793.8	Y44310.9	239	29.0	40.1
0372	Apr-29	0740	4217.8	7039.1	X25699.1	Y44235.6	324	25.7	40.0
0373	Apr-29	0941	4213.4	7035.8	X25649.5	Y44204.5	307	19.7	41.6
0374	Apr-29	1119	4213.7	7031.8	X25624.9	Y44198.9	323	31.4	39.8
0375	Apr-29	1235	4214.2	7030.2	X25618.3	Y44199.1	297	35.8	39.9
0376	Apr-29	1415	4213.8	7025.5	X25586.8	Y44188.8	319	40.2	39.7
0377	Apr-29	1638	4206.1	7025.9	X25537.5	Y44145.0	314	31.4	39.4
0378	Apr-29	1839	4201.1	7033.6	X25554.9	Y44128.5	011	17.5	45.5
0379	Apr-29	2005	4201.2	7028.4	X25520.3	Y44120.1	342	22.7	40.7
0380	Apr-29	2159	4158.9	7018.6	X25443.3	Y44091.0	239	25.4	40.8
0381	Apr-29	2341	4156.8	7020.3	X25438.8	Y44081.2	237	23.0	41.0
0382	Apr-30	0118	4151.0	7020.3	X25398.8	Y44046.4	269	16.1	44.5
0383	Apr-30	0339	4157.1	7009.0	X25375.5	Y44065.3	203	14.8	48.3
0384	Apr-30	0523	4158.6	7014.5	X25416.6	Y44082.6	215	20.2	47.1
0385	Apr-30	0753	4212.9	7008.5	X25485.2	Y44155.5	303	25.4	40.8
0386	Apr-30	0911	4213.3	7008.8	X25489.9	Y44158.3	259	25.7	
0387	Apr-30	1449	4207.0	7008.9	X25445.6	Y44122.4	264	25.2	41.8
0388	Apr-30	1711	4213.5	6953.5	W13663.1	Y44134.8	332	103.3	43.0
0389	Apr-30	1935	4212.5	6945.5	W13622.2	Y44116.7	320	126.0	44.5
0390	Apr-30	2301	4158.2	6936.2	W13640.7	Y44023.0	343	116.2	44.2
0391	May-01	0317	4144.9	6952.8	W13797.6	Y43969.1	344	13.7	44.1
0392	May-01	0416	4146.8	6953.2	W13791.6	Y43981.0	341	14.5	43.8
0393	May-01	0525	4147.6	6953.5	W13789.3	Y43986.1	338	13.9	44.3
0394	May-01	0741	4141.8	6939.7	W13738.3	Y43932.9	125	51.9	40.6
0395	May-01	0934	4132.2	6937.5	W13769.6	Y43872.7	157	19.1	43.6
0396	May-01	1029	4132.4	6935.7	W13758.6	Y43871.4	099	23.0	43.3
0397	May-01	1207	4129.3	6937.9	W13784.9	Y43855.3	154	17.0	44.4
0398	May-01	1247	4128.3	6936.8	W13783.4	Y43847.8	349	17.2	
0399	May-01	1433	4128.8	6925.4	W13719.1	Y43836.9	337	29.0	43.4
0400	May-01	1805	4108.6	6917.1	W13762.6	Y43704.9	359	26.2	44.2
0401	May-01	1843	4109.3	6917.4	W13760.9	Y43709.7	340	27.1	43.1
0402	May-01	2045	4103.9	6914.5	W13768.3	Y43673.6	331	30.9	44.1
0403	May-02	0437	4052.8	7005.6	X25124.8	Y43653.7	324	14.8	47.6

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2010
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	6	3	0	0	0	10	0	0	0	63	1	16	138	0	0	0	0	44	284
2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	16	0	0	0	0	1	18
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	1	14
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	5	18
5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	55	0	0	0	0	1	57
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	1	7
7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	12	0	0	0	0	1	14
8	0	0	0	0	1	0	0	84	0	0	0	0	7	2	0	0	0	1	28	44	0	0	0	0	20	187
9	0	0	0	0	1	0	0	197	0	0	0	0	0	14	0	0	16	1	12	50	0	0	0	0	41	332
10	0	0	0	0	1	0	0	65	0	0	0	0	0	11	0	0	17	10	74	64	0	0	0	0	30	272
11	0	0	0	0	4	0	0	21	0	0	0	0	3	5	0	0	0	0	16	87	0	0	0	0	40	176
12	0	0	0	0	3	0	0	59	0	0	0	0	1	8	0	0	1	1	6	80	0	0	0	0	102	261
13	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0	0	26	0	0	0	0	5	37
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	6	14
15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	11	14
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	7	0	0	0	0	5	13
17	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	301	0	0	4	0	0	0	0	1	307
18	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	7	0	0	0	0	5	17
19	0	0	0	0	2	0	0	56	0	0	0	0	2	4	0	0	13	16	6	177	0	0	0	0	7	283
20	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	3	19	0	0	0	0	1	28
21	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	44	0	0	0	0	1	48
22	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	10	0	0	10	0	0	0	0	1	22
23	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	230	290	0	16	0	0	0	0	7	548
24	0	0	0	0	0	0	0	8	0	0	0	0	2	0	0	0	9	5	9	12	0	0	0	0	2	47
25	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	7	26	0	0	0	0	5	40
26	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	12
27**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	3
28	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	12
29	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	14
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	311	0	0	3	0	0	0	0	1	315
31	9	0	0	0	0	0	0	12	0	0	0	0	0	2	0	0	149	0	0	2	0	0	0	0	0	174
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1081	0	0	1	0	0	0	0	1	1083
33	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	13	0	0	4	0	0	0	0	1	19
34	0	0	0	0	0	0	0	11	0	0	0	0	0	2	0	0	19	0	0	3	0	0	0	0	1	36
35	0	0	0	0	1	0	0	22	0	0	0	0	0	0	0	0	2	0	13	2	0	0	0	0	4	44
36	0	0	0	0	0	0	0	12	0	0	0	0	1	0	0	0	0	0	30	6	0	0	0	0	4	53
37	0	0	0	0	0	0	0	6	0	0	0	0	2	0	0	0	0	0	21	0	0	0	0	0	16	45
38	0	0	0	0	0	0	0	29	0	0	0	0	1	0	0	0	0	0	22	2	0	0	0	0	10	64
39	0	0	0	0	3	0	0	78	0	0	0	0	0	15	0	0	30	0	36	7	0	0	0	0	90	259
40	0	0	0	0	0	0	0	115	0	0	0	0	0	0	0	0	0	0	10	2	0	0	0	0	284	411
41	0	0	0	0	0	0	0	79	0	0	0	0	0	1	0	0	36	1	0	0	55	0	0	0	392	564
42	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	4	56
43	0	0	0	0	1	0	0	70	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	36	108
44	0	0	0	0	1	0	0	67	0	0	0	0	0	0	0	0	0	0	65	0	0	0	0	0	56	189
45	0	0	0	0	0	0	0	21	0	0	0	0	1	0	0	0	1	0	30	0	0	0	0	0	40	93

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2010
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
46	0	0	0	0	1	0	0	448	0	0	0	0	0	0	0	0	14	0	43	0	0	0	0	0	97	603
47	0	0	0	0	1	0	0	180	0	0	0	0	0	0	0	0	1	0	11	0	0	0	0	0	42	235
48	0	0	0	0	0	0	0	272	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	21	294
49	0	0	0	0	1	0	0	106	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	17	125
50	0	0	0	0	1	0	0	187	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	11	200
51	0	0	0	0	0	0	21	11	0	0	0	0	0	0	0	0	0	0	0	0	44	0	0	0	1716	1792
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	316	0	3	0	450	769
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221	0	9	0	43	273
54	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	251	0	4	0	28	303
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	538	0	9	0	21	568
56	0	0	0	0	0	0	0	0	0	0	0	0	0	5	58	0	0	0	0	0	2	0	22	0	384	471
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	231	0	20	0	77	328
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	31	0	396	432
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279	0	59	0	281	619
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	39	0	76	128
61**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	24	0	1185	1212
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	51	0	886	939
63	0	0	0	0	0	0	0	2221	0	0	0	0	0	0	0	0	0	1	0	0	8	0	56	0	82	2368
64	0	0	0	0	0	0	0	3143	0	0	0	0	0	1	1	0	0	0	0	0	74	0	2	0	42	3263
65	0	0	0	0	0	0	0	206	0	0	0	0	0	3	0	0	0	0	0	0	1	0	1	0	44	255
66	0	0	0	0	0	0	0	868	0	0	0	0	0	6	0	0	0	0	0	0	0	0	5	0	80	959
67	0	0	0	0	0	0	0	10344	0	0	0	0	0	0	1	0	0	0	0	0	7	0	54	0	53	10459
68**	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
69**	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
70	0	0	0	0	6	0	4	1459	0	0	0	0	0	0	0	0	0	0	0	0	23	0	16	0	73	1581
71	0	0	0	0	0	0	6	14152	0	0	0	0	0	3	1	0	0	0	0	0	35	0	42	0	61	14300
72	0	0	0	0	0	0	0	437	0	0	0	0	0	2	0	0	0	0	0	0	68	0	39	0	36	582
73	0	0	0	0	0	0	0	959	0	0	0	0	0	3	1	0	0	0	0	0	4	0	16	0	97	1080
74	0	0	0	0	3	0	0	4256	0	0	0	0	0	9	3	0	0	0	0	0	17	0	26	0	160	4474
75	0	0	0	0	0	0	0	894	0	0	0	0	0	9	0	0	0	0	0	0	28	0	9	0	112	1052
76	0	0	0	0	1	0	0	183	0	0	0	0	0	25	0	0	0	0	15	3	14	0	5	0	99	345
77	0	0	0	0	0	0	0	72	0	0	0	0	0	19	0	0	0	10	0	0	0	0	1	0	93	195
78	0	0	0	0	36	0	36	9644	0	0	0	2	0	12	14	0	0	0	0	0	114	3	31	1	220	10113
79	0	0	0	0	31	0	10	3895	0	0	0	0	0	10	7	0	0	0	0	0	226	0	23	1	220	4423
80	0	0	0	0	16	0	0	11803	0	0	0	0	0	14	87	9	0	0	0	0	17	0	81	0	88	12115
81	0	0	0	0	0	0	0	510	0	0	0	0	0	12	0	0	0	0	74	0	0	0	0	0	41	637
82	0	0	0	0	0	0	0	169	0	0	0	0	0	4	0	0	28	186	11	6	0	0	0	0	45	449
83	0	0	0	0	0	0	0	970	0	0	0	0	0	19	0	0	0	0	157	7	0	0	0	0	77	1230
84	0	0	0	0	35	0	0	6130	0	0	0	0	0	46	12	19	0	2	0	0	2687	1	86	0	140	9158
85	0	0	0	0	6	0	0	3022	0	0	0	0	0	12	0	45	0	17	0	0	9	0	14	0	46	3171
86	0	0	0	0	16	0	7	1849	0	0	0	0	0	5	15	3	0	1	0	0	54	0	29	0	59	2038
87	0	0	0	0	0	0	5	331	0	0	0	0	0	13	0	0	0	1	0	0	1	4	1	0	28	384
88	0	0	0	0	4	0	35	278	0	0	0	0	0	26	0	0	0	2	29	48	0	0	0	0	156	578
89	0	0	0	0	0	0	0	26	0	0	0	0	1	37	0	0	0	0	75	54	0	0	0	0	22	215
90	0	0	0	0	3	0	1	2674	0	0	0	0	0	47	0	0	8	83	27	18	0	0	0	0	109	2970
91**	0	0	0	0	41	0	12	1619	0	0	0	9	0	0	1	0	0	36	0	0	3	0	49	0	112	1882

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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
92**	0	0	0	0	20	0	7	2427	0	0	0	4	0	5	9	0	0	527	0	0	73	0	83	2	154	3311
93	0	0	0	0	2	0	18	2606	0	0	0	0	0	14	9	13	0	1718	0	0	52	0	49	0	144	4625
94	0	0	0	0	0	0	1	5217	0	0	0	0	0	21	0	2	0	26	0	0	12	0	12	0	419	5710
95	0	0	0	0	0	0	16	1810	0	0	0	0	0	15	0	0	322	78	0	84	0	0	0	0	33	2358
96	0	0	0	0	0	0	0	1242	0	0	0	0	0	16	0	0	24	21	0	42	0	0	0	0	14	1359
97	0	0	0	0	87	0	9	2579	0	0	0	2	0	0	0	0	0	1	0	7	0	0	4	1	98	2788
98	0	0	0	0	3	0	0	772	0	0	0	0	0	9	2	51	0	0	0	1	1	0	11	0	38	888
99	0	0	0	0	1	0	24	973	0	0	0	0	0	13	0	0	10	1	16	10	0	0	0	0	21	1069
100	0	0	0	0	4	0	1	491	0	0	0	0	0	21	0	0	4	4	8	112	0	0	4	0	36	685
101	0	0	0	0	7	0	20	434	0	0	0	1	0	26	0	5	3	1	0	16	3	0	10	0	75	601
102	0	0	0	0	134	0	3	604	0	0	0	2	0	3	0	0	0	1	0	0	19	0	22	1	83	872
103	0	0	0	0	3	0	2	43	0	0	0	1	0	52	35	17	0	1	0	3	1	0	9	0	87	254
104	0	0	0	0	4	0	8	6680	0	0	0	0	0	6	0	0	5	17	35	12	0	0	2	0	11	6780
105	0	0	0	0	3	0	17	1536	0	0	0	0	0	16	1	0	42	0	0	18	0	0	2	0	34	1669
106	0	0	0	0	0	0	0	0	0	8	0	0	2	0	0	0	0	0	0	63	0	0	0	0	1	74
107	0	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0	0	1	96	0	0	0	0	1	105
108	0	0	0	0	0	0	0	0	0	11	0	0	2	0	0	0	0	0	9	44	0	0	0	0	2	68
109	0	0	0	0	0	0	0	6	0	12	0	0	2	0	0	0	0	0	0	48	0	0	0	0	3	71
110	8	0	0	0	0	0	0	0	11	2	0	0	6	1	0	0	0	0	41	501	0	0	0	0	11	581
111	0	0	0	0	0	0	0	0	2	9	0	0	3	0	0	0	0	0	30	820	0	0	0	0	1	865
112	0	0	0	0	0	0	0	0	0	12	0	0	6	0	0	0	0	0	46	755	0	0	0	0	4	823
113	0	0	0	0	6	0	0	0	15	0	0	0	3	0	0	0	88	0	77	405	0	0	0	0	6	600
114	0	0	0	0	12	0	0	32	14	0	0	3	0	4	0	0	6	0	41	482	0	0	0	0	10	604
115	0	0	0	0	5	0	0	0	12	0	0	0	1	2	0	0	6	0	50	435	0	0	0	0	8	519
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	17	0	0	0	0	1	19
117	0	0	0	0	0	0	0	0	0	8	0	0	3	0	0	0	0	0	48	425	0	0	0	0	3	487
118	0	0	0	0	0	0	0	0	0	13	0	0	4	0	0	0	0	0	35	512	0	0	0	0	8	572
119	0	0	0	0	0	0	0	0	0	12	0	0	4	0	0	0	0	0	0	566	0	0	0	0	5	587
120	0	0	0	0	0	0	0	0	10	8	0	0	2	0	0	0	0	0	28	1681	0	2	0	0	8	1739
121	0	0	0	0	1	0	0	0	2	1	0	0	3	0	0	0	2	0	18	242	0	0	0	0	5	274
122**	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
123**	0	0	0	0	0	0	0	0	0	6	0	0	5	0	0	0	0	0	34	532	0	0	0	0	16	593
124	0	0	0	0	1	0	0	0	0	13	0	0	2	0	0	0	0	0	36	431	0	0	0	0	56	539
125	0	0	0	0	2	0	0	0	2	18	0	0	6	0	0	0	1	0	82	691	0	0	0	0	10	812
126	0	0	0	0	4	0	0	0	1	7	0	0	1	0	0	0	12	0	9	113	0	10	0	0	47	204
127	0	0	0	0	3	0	0	0	0	14	0	0	7	0	0	0	7	0	79	114	0	0	0	0	14	238
128	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	2	0	10	191	0	0	0	0	49	260
129	0	0	0	0	0	0	0	0	0	1	0	0	6	0	0	0	3	0	17	328	0	0	0	0	37	392
130	4	0	0	0	0	0	0	0	0	14	0	0	2	0	0	0	1	0	17	298	0	0	0	0	17	353
131	0	0	0	0	0	0	0	4	2	2	0	0	5	0	0	0	10	0	33	325	0	0	0	0	73	454
132	0	0	0	0	0	0	0	6	0	3	0	0	1	0	0	0	2	0	42	151	0	0	0	0	10	215
133	0	0	0	0	0	0	0	86	4	1	0	0	0	0	0	0	9	0	8	44	0	0	0	0	41	193
134	0	0	0	0	0	0	0	116	2	0	0	0	3	6	0	0	136	0	67	51	0	0	0	0	14	395
135	0	0	0	0	10	0	4	267	1	0	0	0	0	4	0	0	3	0	3	107	0	0	0	0	30	429
136	0	0	0	0	12	0	0	349	0	0	0	0	0	17	0	3	1	0	9	78	0	1	0	0	74	544
137	0	0	0	0	25	0	3	1108	0	0	0	0	0	20	0	0	6	1	25	48	0	0	0	0	111	1347

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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
138	0	0	0	0	5	0	1	317	0	0	0	1	0	22	0	0	1	0	176	104	0	0	0	0	73	700
139	0	0	0	0	1	0	6	543	0	0	0	0	0	4	0	0	3	3	12	116	0	0	0	0	36	724
140	0	0	0	0	1	0	2	892	0	0	0	3	0	7	0	0	97	64	0	22	0	0	1	0	41	1130
141	0	0	0	0	50	0	1	0	0	0	0	0	0	15	7	262	0	0	0	21	2	0	6	0	722	1086
142	0	0	0	0	1	0	0	12	0	0	0	1	0	6	0	1	0	0	0	4	0	0	4	0	11	40
143	0	0	0	0	71	0	0	219	0	0	0	10	0	42	0	0	0	0	0	0	961	0	78	0	324	1705
144	0	0	0	0	4	0	0	169	0	0	0	0	0	0	1	0	0	0	0	0	11	0	22	2	12	221
145**	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
146	0	0	0	0	9	0	0	411	0	0	0	0	0	0	16	0	0	0	0	0	79	0	79	1	58	653
147**	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
148	0	0	0	0	191	0	23	3433	0	0	0	4	0	14	0	0	0	5	0	0	0	0	6	0	47	3723
149**	0	0	0	0	93	0	12	20	0	0	0	1	0	150	510	206	0	0	0	0	1	0	8	0	1213	2214
150	0	0	0	0	115	0	2	26	0	0	0	1	0	168	1526	93	0	0	0	0	2	0	7	0	695	2635
151	0	0	0	0	108	0	21	926	0	0	0	2	0	4	0	1	0	0	0	0	29	0	53	3	227	1374
152	0	0	0	0	174	0	4	9	0	0	0	0	0	34	1201	258	0	0	0	0	5	0	5	0	314	2004
153	0	0	0	0	20	0	3	61	0	0	0	1	0	29	2	1	118	36	7	3	0	0	2	0	51	334
154	0	0	0	0	0	0	15	15	0	0	0	0	0	38	0	0	1	1	0	1	0	0	38	1	107	217
155	0	0	0	0	173	0	0	115	0	0	0	1	0	30	1457	15	0	0	0	0	9	0	0	0	133	1933
156	0	0	0	0	51	0	5	2443	0	0	0	0	0	8	2	0	0	4	0	0	1	3	6	0	79	2602
157	0	0	0	0	78	0	61	763	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	47	952
158	0	0	0	0	15	0	5	169	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	22	219
159	0	0	0	0	0	0	10	25	0	0	0	0	0	4	0	0	0	0	0	0	0	0	94	1	44	178
160	0	0	0	0	264	0	25	100	0	0	0	0	0	25	344	17	0	0	0	0	7	0	4	0	126	912
161	0	0	0	0	20	0	10	2474	0	0	0	0	0	58	1	0	63	164	6	17	0	0	1	0	116	2930
162	0	0	0	0	5	0	6	217	0	0	0	1	0	4	0	0	27	0	27	25	0	0	0	0	67	379
163	0	0	0	0	4	0	0	372	3	0	0	0	0	3	0	0	7	0	25	15	0	0	0	0	7	436
164	0	0	0	0	10	0	1	214	14	0	0	4	1	13	0	0	196	0	62	107	0	0	0	0	22	644
165	0	0	0	0	126	0	36	321	2	0	0	0	0	9	2	0	10	0	131	38	1	0	0	0	74	750
166	0	0	0	0	39	0	1	254	2	0	0	0	0	12	0	0	12	0	53	53	0	0	0	0	238	664
167	0	0	0	0	57	0	26	715	0	0	0	0	0	24	0	0	0	3	4	31	0	0	0	0	138	998
168	0	0	0	0	235	0	21	57	0	0	0	0	0	61	0	33	0	1	0	0	20	0	3	0	237	668
169	0	0	0	1	159	0	53	1442	0	0	0	0	0	2	0	0	0	0	0	0	13	1	23	0	56	1750
170	0	0	0	4	27	0	69	12	0	0	0	0	0	256	2	17	1	1	11	0	15	0	3	0	1004	1422
171	0	0	0	0	48	0	34	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0	27	2	65	182
172	0	0	0	0	9	0	20	1	0	0	0	1	0	19	0	0	0	0	0	0	41	0	84	4	46	225
173	0	0	0	0	0	0	4	1	0	0	0	0	0	48	0	1	0	0	0	0	19	0	113	1	64	251
174	0	0	0	4	49	0	110	57	0	0	0	1	0	88	0	0	93	4	386	0	5	0	1	0	416	1214
175	0	0	0	6	40	0	15	26	0	0	0	0	0	39	0	0	1	0	122	0	1	0	2	0	263	515
176	0	0	0	0	10	0	27	44	4	0	0	0	2	15	0	0	1	0	332	0	7	1	1	0	116	560
177	0	0	0	0	16	0	3	0	3	0	0	0	5	3	0	0	13	0	20	12	0	9	0	0	20	104
178	3	0	0	0	29	0	0	4	5	0	0	0	1	13	0	0	18	0	199	48	0	5	0	0	33	358
179	0	0	0	0	13	0	0	0	21	0	0	0	28	6	0	0	18	0	494	309	0	1	0	0	51	941
180	0	0	0	0	18	0	3	7	13	0	0	0	29	1	0	0	30	0	461	566	0	0	0	0	41	1169
181	0	0	0	0	11	0	0	4	8	0	0	0	12	1	0	0	16	1	74	432	0	0	0	0	18	577
182	0	0	0	0	64	0	0	0	3	1	0	0	2	0	0	0	76	0	5	208	0	0	0	0	16	375
183	2	0	0	0	2	0	0	0	0	6	0	0	0	0	0	0	671	0	3	25	0	0	0	0	47	756

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2010
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
184	0	0	0	0	0	0	0	0	3	11	0	0	0	0	0	0	105	0	2	4	0	1	0	0	57	183
185	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	19
186**	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
187	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	9	0	0	14	0	0	0	0	3	41
188**	0	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0	0	0	13	0	1	0	0	2	23
189	2	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	20	0	7	26	0	0	0	0	7	69
190	0	0	0	0	1	0	0	0	9	7	0	0	5	0	0	0	13	0	536	1051	0	2	0	0	13	1637
191	0	0	0	0	109	0	0	0	24	1	0	0	4	0	0	0	89	0	444	679	0	0	0	0	11	1361
192	4	0	0	0	32	0	0	0	13	1	0	0	8	1	0	0	10	0	169	127	0	0	0	0	43	408
193	18	0	0	0	10	0	0	0	28	3	0	0	8	0	0	0	175	0	45	34	0	0	0	0	13	334
194	2	0	0	0	30	0	0	0	9	0	0	0	0	0	0	0	426	1	62	160	0	0	0	0	30	720
195	0	0	0	0	0	0	0	0	0	25	0	0	1	0	0	0	9	0	14	140	0	0	0	0	5	194
196	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	2709	0	261	180	0	1	0	0	18	3176
197	0	0	0	0	0	0	0	0	2	7	0	0	0	0	0	0	256	0	0	23	0	0	0	0	4	292
198**	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	27	0	1	6	0	4	0	0	3	48
199	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	25	0	0	22	0	0	0	0	8	60
200	0	0	0	0	56	0	23	0	3	0	0	0	8	0	0	0	31	0	359	792	0	5	0	0	25	1302
201	0	0	0	0	2	0	1	2	2	0	0	0	4	3	0	0	57	26	134	97	0	0	0	0	74	402
202	1	0	0	0	17	0	0	0	2	0	0	0	2	0	0	0	170	0	21	170	0	0	0	0	7	390
203	0	0	0	0	7	0	0	5	1	0	0	1	2	0	0	0	56	4	23	181	0	0	0	0	63	343
204	0	0	0	0	3	0	0	15	2	0	0	0	3	1	0	0	56	260	160	372	0	0	0	0	108	980
205	0	0	0	2	4	0	14	7	0	0	0	0	0	25	0	0	0	3	22	12	150	0	14	0	74	327
206	0	0	0	0	21	0	40	25	0	0	0	1	0	0	0	0	0	0	49	0	43	1	9	0	127	316
207	0	0	0	0	43	0	4	26	0	0	0	6	0	7	0	0	0	1	136	0	2	0	18	1	270	514
208	0	0	0	0	55	0	0	12	0	0	0	0	0	57	0	2	0	0	64	3	39	0	29	1	97	359
209	0	0	0	0	1	0	0	10	0	0	0	0	0	1	0	0	4	33	8	1	51	0	0	0	20	129
210	0	0	0	0	12	0	0	0	1	0	0	0	0	4	0	0	0	0	83	1	82	0	3	0	28	214
211	0	0	0	0	22	0	4	7	0	0	0	0	0	15	0	0	0	0	46	9	88	0	17	0	59	267
212	0	0	0	4	37	0	0	35	0	0	0	1	0	0	0	0	0	0	4	1	2	4	0	0	30	118
213	0	0	0	0	72	0	7	2	0	0	0	0	0	17	0	0	0	1	74	3	40	0	6	1	139	362
214	2	0	0	0	10	0	0	6	1	0	0	0	3	0	0	0	19	0	8	23	1	0	0	0	27	100
215	0	0	0	0	3	0	0	0	4	1	0	0	3	0	0	0	104	1	0	39	0	0	0	0	11	166
216	3	0	0	0	2	0	0	0	1	0	0	0	2	0	0	0	24	1	0	10	0	0	0	0	4	47
217**	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	26	1	0	14	0	0	0	0	6	51
218	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0	2	16	0	0	0	0	21	46
219	4	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	139	2	2	4	0	0	0	0	5	164
220	0	0	0	2	6	0	0	4	9	0	0	0	16	2	0	0	10	1	447	19	2	0	0	0	27	545
221	0	0	0	0	78	0	0	0	0	0	0	0	0	8	0	1	0	0	10	1	3	0	3	0	64	168
222**	0	0	0	11	135	0	10	1	0	0	0	12	0	8	0	0	0	0	1297	0	2	11	0	0	280	1767
223	0	0	0	2	101	0	2	0	131	0	0	3	7	7	0	0	0	1	61	7	4	0	5	0	222	553
224	0	17	0	1	1	0	0	13	0	0	0	3	1	0	0	0	0	0	0	4	0	0	0	0	75	115
225	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	18	0	26	24	0	0	0	0	24	96
226	0	347	0	0	0	0	27	0	0	0	0	0	1	0	0	0	0	0	7	14	0	0	0	0	7	403
227	0	0	0	1	72	0	7	0	0	0	0	4	0	48	0	0	0	0	117	5	26	0	5	0	207	492
228	0	17	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	635	0	1	0	0	0	14	671
229	5	209	0	0	0	0	0	0	29	0	1	1	0	0	0	0	0	0	175	75	0	0	0	0	27	522

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	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
230	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	114	14	16	18	0	31	1	134	332
231	0	0	0	0	36	0	0	5	0	0	0	0	0	0	0	0	0	0	19	0	2	0	0	0	126	188
232	0	0	0	0	71	0	3	0	0	0	0	4	0	0	0	0	0	0	70	16	47	0	8	0	595	814
233	0	27	0	1	52	0	0	5	0	0	0	0	0	0	0	0	0	2	18	12	3	15	17	0	154	306
234	3	24	0	0	1	0	0	0	40	0	0	1	11	11	0	0	1	0	7	13	0	0	0	0	18	130
235	24	161	0	0	0	0	0	0	14	0	2	0	1	0	0	0	0	0	27	3	0	0	0	0	18	250
236	3	115	0	0	0	0	0	0	38	0	3	0	4	0	0	0	0	0	8	9	0	2	0	0	10	192
237	1	103	0	0	0	0	0	0	51	2	0	0	2	0	0	0	0	0	13	1	0	0	0	0	12	185
238	4	115	0	0	0	0	0	0	148	0	0	0	2	0	0	0	0	0	43	2	0	0	0	0	147	461
239	0	0	0	4	101	0	0	12	1	0	0	0	0	0	0	0	0	0	261	16	3	0	4	0	470	872
240	0	37	0	16	609	0	8	44	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	0	251	979
241	30	300	0	0	7	0	0	0	402	24	11	0	20	0	0	0	0	0	95	69	0	0	0	0	42	1000
242	8	117	0	0	0	0	0	0	35	17	21	0	4	0	0	0	0	0	35	53	0	0	0	0	9	299
243	42	144	0	0	0	0	0	0	25	5	7	0	1	0	0	0	0	0	15	26	0	0	0	0	3	268
244	43	182	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	31	0	1	0	0	81	345
245	169	441	14	0	0	0	0	0	1	4	2	0	0	0	0	0	1	0	14	2	0	22	0	0	194	864
246	35	19	112	15	49	3	33	0	0	0	2	4	0	0	0	0	0	1	817	3	0	66	0	0	116	1275
247	9	357	0	0	0	0	0	0	24	5	0	0	0	0	0	0	0	0	40	0	0	3	0	0	19	457
248	15	193	0	0	0	0	0	0	8	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	1	220
249	2	13	0	0	0	0	0	0	19	19	1	0	0	0	0	0	0	0	6	0	0	0	0	0	1	61
250	0	4	0	0	0	0	0	0	119	0	1	0	1	0	0	0	20	0	369	0	0	13	0	7	5	539
251	16	13	0	2	4	0	0	0	1	0	0	0	0	0	0	0	0	0	54	2	0	14	0	2	32	140
252	48	0	0	22	39	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	163	276
253**	10	7	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	4	36
254	43	14	18	5	4	2	0	0	0	0	0	0	0	0	0	0	0	0	23	27	0	2	0	0	94	232
255	3	0	6	0	21	0	12	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	53	101
256	8	0	0	0	22	0	0	1255	0	0	0	0	0	0	0	0	0	0	10	0	0	12	0	0	8	1315
257	0	2	5	0	7	0	0	144	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	14	182
258	7	3	5	90	28	49	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	1	140	450
259	104	9	12	3	73	0	0	0	0	0	0	1	0	0	0	0	1	1	17	6	0	0	0	0	23	250
260	0	0	0	60	57	0	60	5	0	0	3	7	0	0	0	0	0	4	0	1	0	13	0	0	15	225
261	0	0	0	108	244	0	21	0	0	0	3	3	0	0	0	0	0	1	0	0	0	15	0	0	210	605
262	0	7	0	280	39	0	120	1	0	0	1	0	0	0	0	0	0	1	152	0	0	44	0	0	329	974
263	0	0	0	493	1179	0	91	0	0	0	4	2	0	0	0	0	0	24	63	0	0	31	0	0	35	1922
264	29	14	0	56	100	0	14	5	0	0	2	15	0	0	0	0	0	1	0	0	0	18	0	0	81	335
265	20	7	0	24	92	0	8	8	0	0	3	30	0	0	0	0	1	3	238	0	0	25	0	0	119	578
266	266	385	0	0	122	0	0	0	1	0	43	0	0	0	0	0	2	0	57	1	0	6	0	0	64	947
267	0	0	0	0	42	0	0	16	0	1	0	0	6	0	0	0	10	0	273	430	0	0	0	0	41	819
268	0	0	0	0	1	0	0	0	9	6	0	0	2	0	0	0	8	27	13	63	0	2	0	0	11	142
269	0	2	0	0	4	0	0	0	3	1	0	0	2	0	0	0	9	8	2	88	0	0	0	0	18	137
270	1	1	0	0	0	0	0	0	3	8	0	0	0	0	0	0	8	0	1	36	0	0	0	0	43	101
271	16	20	0	0	3	1245	0	5	2	0	0	0	0	0	0	0	4	0	2	2	0	2	0	0	22	1323
272	81	7	0	2	6	180	0	5	0	0	1	0	0	0	0	0	13	1	0	0	0	20	0	0	43	359
273	10	116	9	16	37	1	20	17	0	0	21	9	0	0	0	0	1	0	5	0	0	20	0	0	103	385
274	35	771	24	3	31	11	4	0	0	0	26	0	0	0	0	0	1	0	0	0	0	55	0	0	151	1112
275	0	21	0	2	39	0	14	3	2	0	19	3	0	0	0	0	1	0	10	0	0	0	0	0	43	157

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276	4	0	0	4	11	0	0	0	1	0	12	0	0	0	0	0	2	7	11	186	0	0	0	0	61	299
277	0	0	0	0	3	0	0	0	4	0	1	0	1	0	0	0	19	1	0	112	0	1	0	0	27	169
278	0	21	0	1	5	0	0	0	6	0	0	0	0	0	0	0	0	0	19	111	0	0	0	0	39	202
279	2	19	0	0	11	0	0	0	1	0	2	0	0	0	0	0	1	0	12	76	0	41	0	0	34	199
280	0	23	0	0	2	0	0	0	3	0	0	0	1	0	0	0	31	45	4	25	0	0	0	0	16	150
281	0	0	0	0	0	0	0	3	2	0	1	0	0	0	0	0	38	1	10	9	0	0	0	0	5	69
282	0	4	0	0	0	0	0	0	0	10	0	0	0	0	0	0	18	0	2	17	0	1	0	0	37	89
283	4	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	3	14	0	0	0	0	12	36
284	0	2	0	0	0	0	0	0	0	1	3	0	0	0	0	0	55	0	0	19	0	0	0	0	14	94
285	10	316	0	0	1	0	0	0	18	5	0	0	111	0	0	0	3	0	29	74	0	0	0	0	31	598
286	9	278	0	0	0	0	0	0	80	1	2	0	11	0	0	0	0	0	143	80	0	0	0	0	17	621
287	14	415	0	0	0	0	0	0	69	5	1	0	11	0	0	0	0	0	71	95	0	0	0	0	22	703
288	13	388	0	0	0	0	0	0	24	13	3	0	9	0	0	0	1	0	71	132	0	0	0	0	47	701
289	4	23	0	0	0	0	0	0	18	5	0	0	7	0	0	0	0	1	22	29	0	4	0	0	22	135
290	7	427	0	0	0	0	0	0	68	20	2	0	10	0	0	0	0	0	22	22	0	2	0	0	29	609
291**	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
292**	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
293	30	200	0	0	0	0	0	0	51	56	0	0	1	0	0	0	2	0	8	6	0	1	0	0	46	401
294	44	148	0	0	0	0	0	0	3	25	0	0	0	0	0	0	7	0	0	2	0	3	0	0	36	268
295	17	233	0	0	0	0	0	0	1	39	0	0	0	0	0	0	0	0	0	32	0	1	2	0	70	395
296	5	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	3	0	0	1	0	0	0	0	15	39
297**	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	7
298	9	0	0	0	0	0	0	0	1	1	2	0	7	0	0	0	1	0	24	11	0	0	0	0	4	60
299	25	32	3	3	85	0	0	0	0	0	5	1	0	0	0	0	1	0	4	1	0	0	0	0	231	391
300	0	7	0	38	5	61	11	9	0	0	1	0	0	0	0	0	0	1	0	0	0	11	0	0	76	220
301	6	3	5	0	22	120	0	22	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	48	229
302	0	4	0	33	102	5	18	35	0	0	1	1	0	0	0	0	1	2	6	0	0	33	0	0	64	305
303	0	6	0	3	22	191	0	0	0	0	1	10	0	0	0	0	1	0	0	0	0	5	0	0	52	291
304	35	0	0	76	102	58	39	9	0	0	1	7	0	0	0	0	0	0	0	0	0	11	0	0	61	399
305	0	0	17	6	75	35	32	16	0	0	8	3	0	0	0	0	0	1	0	0	0	17	0	0	52	262
306	4	0	0	12	25	84	2	13	0	0	0	12	0	0	0	0	0	0	0	0	0	19	0	0	31	202
307	0	0	0	33	5	19	15	3	0	0	0	8	0	0	0	0	0	0	0	0	0	5	0	0	49	137
308	5	0	0	29	11	215	0	2243	0	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	29	2537
309	0	5	15	111	2	182	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	77	410
310	27	201	0	0	3	2	0	0	1	191	4	0	0	0	0	0	41	28	0	0	0	80	0	0	157	735
311	0	4	0	4	17	1	0	2	0	3	0	17	0	0	0	0	9	27	0	0	0	10	0	0	38	132
312	12	19	0	33	78	7	3	0	0	4	5	21	0	0	0	0	6	3	0	0	0	9	0	0	91	291
313	161	10	1	12	7	12	0	0	0	8	1	5	0	0	0	0	0	2	0	0	0	25	0	0	22	266
314	14	0	2	87	288	49	14	12	0	0	1	13	0	0	0	0	0	14	0	0	0	2	0	0	522	1018
315	3	21	0	2	10	0	0	0	0	197	3	0	0	0	0	0	45	1	0	10	0	34	0	0	82	408
316	3	0	0	2	18	10	0	0	0	16	0	1	0	0	0	0	2	0	0	0	0	12	0	0	198	262
317	10	3	0	17	81	15	0	7	0	0	0	0	0	0	0	0	2	0	0	0	0	22	0	0	40	197
318	0	0	0	1	41	17	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	19	0	0	23	110
319	6	0	0	5	76	1	0	0	0	16	1	5	0	0	0	0	1	0	0	0	0	25	0	0	75	211
320	0	0	0	2	32	0	0	0	0	16	4	1	0	0	0	0	3	0	0	0	0	24	0	0	74	156
321	0	0	0	0	122	0	1	0	0	3	9	5	0	0	0	0	2	0	7	3	0	3	0	0	27	182

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2010
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
322	0	0	0	3	19	2	2	1	0	1	1	5	0	0	0	0	1	0	0	0	0	19	0	0	8	62
323	0	4	0	8	64	9	4	2	0	0	0	10	0	0	0	0	0	0	0	0	0	23	0	0	67	191
324**	0	2	0	39	109	0	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0	27	0	0	23	209
325	0	0	0	22	99	0	0	6	0	0	2	7	0	0	0	0	0	2	0	1	0	6	0	0	10	155
326	0	0	0	1	70	0	0	0	0	1	2	1	1	0	0	0	43	0	0	0	0	18	0	0	88	225
327	0	0	0	2	34	0	0	0	0	0	5	3	0	0	0	0	6	0	3	0	0	4	0	0	100	157
328	0	0	0	10	66	2	20	4	0	0	9	4	0	0	0	0	0	2	0	0	0	0	0	0	31	148
329	0	0	8	18	96	31	3	1	0	0	5	4	0	0	0	0	2	2	0	0	0	53	0	0	73	296
330	0	0	9	3	534	1	3	9	0	0	5	1	0	0	0	0	1	0	0	0	0	3	0	0	64	633
331	0	0	0	5	191	0	0	0	0	0	5	4	0	0	0	0	1	0	0	0	0	2	0	0	28	236
332	0	0	0	2	299	0	9	0	1	2	8	0	2	0	0	0	49	0	0	0	0	13	0	0	78	463
333	0	0	0	0	37	0	0	0	0	1	8	1	1	0	0	0	22	0	0	0	0	41	0	0	61	172
334	0	0	0	2	7	1	0	0	1	2	8	0	0	0	0	0	21	0	0	0	0	85	0	0	47	174
335	0	0	0	1	148	1	0	0	1	0	5	1	0	0	0	0	1	0	0	0	0	25	0	0	140	323
336	0	0	0	1	90	22	12	0	0	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	149	290
337**	1	0	2	0	8	69	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0	14	0	0	100	199
338	8	0	7	0	7	107	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	25	0	0	151	308
339	0	0	1	2	50	0	0	0	5	0	20	0	0	0	0	0	0	0	0	2	0	9	0	0	90	179
340	0	0	0	1	31	0	1	0	4	1	27	0	0	0	0	0	0	0	0	0	0	7	0	0	77	149
341	1	0	0	2	73	0	0	0	12	3	44	0	1	0	0	0	0	0	0	10	0	45	0	0	87	278
342	0	0	0	2	101	80	1	53	0	0	8	3	0	0	0	0	3	0	0	0	0	25	0	0	124	400
343	0	0	0	15	58	357	55	43	0	0	5	19	0	0	0	0	2	0	0	0	0	0	0	0	79	633
344	13	0	0	19	83	24	48	83	0	0	5	4	0	0	0	0	0	0	0	0	0	6	0	0	77	362
345	0	0	0	13	83	722	28	63	0	0	0	7	0	0	0	0	0	0	0	0	0	3	0	0	44	963
346	0	0	0	31	94	204	31	85	0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	0	50	500
347	4	0	0	3	150	8	10	9	0	0	4	9	0	0	0	0	1	0	0	0	0	3	0	0	43	244
348	0	0	0	29	14	278	38	6	0	0	2	17	0	0	0	0	0	0	4	0	0	3	0	0	45	436
349	24	0	0	0	0	0	0	0	31	149	0	0	0	0	0	0	0	0	0	4	0	77	0	0	52	337
350	61	0	0	0	3	3	0	0	161	133	15	1	0	0	0	0	9	0	0	2	0	87	0	0	95	570
351	65	0	0	11	92	4	3	0	93	19	152	6	0	0	0	0	5	0	0	6	0	15	0	0	48	519
352	41	37	0	0	7	0	0	3	45	11	12	0	0	0	0	0	16	0	5	0	0	0	0	0	114	291
353**	40	14	5	0	0	3	0	41	0	7	3	0	0	0	0	0	1	0	3	0	0	3	0	0	19	139
354	9	59	0	0	5	1	0	8	1	1	4	0	0	0	0	0	5	0	0	0	0	11	0	0	48	152
355	339	10	17	10	50	79	15	65	0	0	16	48	0	0	0	0	2	0	45	0	0	13	0	0	109	818
356	0	10	8	38	45	12	3	75	0	0	9	0	0	0	0	0	3	0	0	0	0	0	0	0	38	241
357	0	0	0	60	54	11	16	46	0	0	18	4	0	0	0	0	19	0	0	0	0	3	0	0	71	302
358	0	0	0	7	34	27	34	56	0	0	7	2	0	0	0	0	18	0	10	0	0	8	0	0	73	276
359	0	0	0	5	22	20	0	165	0	0	3	1	0	0	0	0	3	0	3	0	0	0	0	0	60	282
360	0	0	9	23	104	1	0	6	0	0	6	1	0	0	0	0	7	0	10	0	0	0	0	0	17	184
361	0	0	0	11	83	8	4	15	0	0	4	3	0	0	0	0	3	1	12	0	0	0	0	0	66	210
362	0	0	27	0	111	14	24	57	0	0	5	3	0	0	0	0	4	0	0	0	0	0	0	0	130	375
363	0	7	8	143	47	2	11	109	0	0	15	0	0	0	0	0	3	0	0	0	0	5	0	0	37	387
364	22	9	0	3	6	27	0	13	0	0	6	2	0	0	0	0	0	0	9	0	0	2	0	0	26	125
365	57	0	0	2	143	11	4	80	1	0	28	8	0	0	0	0	1	0	0	0	0	28	0	0	80	443
366	3	4	0	0	14	126	4	6	1	0	25	2	0	0	0	0	3	0	0	0	0	1	0	0	23	212
367	49	0	0	4	57	26	2	0	14	1	19	6	0	0	0	0	0	0	10	0	0	17	0	0	107	312

NOAA FISHERIES SERVICE-NEFSC SPRING BOTTOM TRAWL SURVEY 2010
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
368	4	0	0	1	22	0	3	0	101	35	15	1	2	0	0	0	1	0	0	84	0	21	0	0	54	344
369	4	0	0	0	5	0	0	0	38	25	0	0	1	0	0	0	0	0	0	39	0	10	0	0	175	297
370	147	167	0	1	27	20	0	29	240	18	84	7	0	0	0	0	1	0	0	4	0	10	0	0	111	866
371**	145	9	11	0	29	4	0	0	338	22	79	4	1	0	0	0	9	1	0	4	0	27	0	0	120	803
372**	71	0	0	0	1	2	0	56	107	114	10	1	1	0	0	0	1	0	0	2	0	24	0	0	72	462
373	38	0	0	0	0	0	0	93	143	129	0	0	0	0	0	0	0	0	0	2	0	2	0	0	113	520
374**	43	4	0	0	2	0	0	10	54	52	23	1	0	0	0	0	195	0	0	0	0	6	0	0	30	420
375	16	0	0	1	30	3	0	61	52	11	111	0	1	0	0	0	226	0	0	0	0	6	0	0	255	773
376	0	0	0	0	58	0	0	6	11	11	115	0	1	0	0	0	118	0	19	0	0	18	0	0	35	392
377	0	0	0	0	70	1	0	25	13	26	59	0	0	0	0	0	7	0	0	27	0	52	0	0	258	538
378	80	0	0	0	1	0	0	11	19	103	2	0	0	0	0	0	3	0	0	32	0	32	0	0	155	438
379	10	0	0	0	39	0	0	0	10	54	2	0	0	0	0	0	3	0	0	67	0	30	0	0	78	293
380	0	0	0	0	45	0	0	26	5	7	5	0	1	0	0	0	15	0	0	4	0	20	0	0	36	164
381	0	0	0	0	39	0	0	0	4	13	4	0	2	0	0	0	11	0	0	12	0	93	0	0	120	298
382	0	0	0	0	64	0	0	328	6	21	0	0	3	0	0	0	1	0	0	23	0	3	0	0	419	868
383	0	0	0	0	27	0	0	0	0	39	0	0	0	0	0	0	2	0	0	65	0	7	0	0	287	427
384	0	0	0	0	3	0	0	10	2	42	1	0	2	0	0	0	762	4	0	1	0	13	0	0	35	875
385**	94	38	0	0	0	0	6	6	45	1	1	0	0	0	0	0	2	0	18	8	0	0	0	0	555	774
386	966	263	1	0	1	0	1	0	66	4	2	0	0	0	0	0	0	0	14	3	0	0	0	0	1021	2342
387	4	0	0	0	1	0	0	0	9	21	0	0	0	0	0	0	27	2	0	3	0	7	0	0	71	145
388	79	5	0	7	27	830	8	204	0	0	3	4	0	0	0	0	1	0	36	0	0	9	0	0	73	1286
389	0	0	48	125	87	7	20	38	0	0	1	1	0	0	0	0	2	0	15	0	0	3	0	0	49	396
390	5	0	15	15	27	4	11	3	0	0	6	7	0	0	0	0	5	0	30	0	0	2	0	0	84	214
391	425	0	0	0	2	0	8	0	4	8	1	0	0	0	0	0	0	0	9	55	0	6	0	0	49	567
392	456	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	2	7	0	11	0	0	0	0	19	503
393	369	0	0	0	0	0	0	0	2	20	0	0	0	0	0	0	0	0	1	5	0	7	0	0	41	445
394	4	2	0	0	4	0	15	0	0	0	1	0	0	0	0	0	34	0	1	0	0	10	0	0	39	110
395**	33	0	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	0	0	0	0	11	0	0	16	72
396	7	0	0	0	0	0	0	0	2	9	0	0	0	0	0	0	0	0	0	0	0	10	0	0	36	64
397**	1	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	2	0	2	0	0	11	27
398**	2	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	6	17
399**	13	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	16	40
400**	7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	23
401**	22	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	4	0	0	9	0	4	0	0	89	152
402	14	0	0	0	0	0	0	5	1	61	0	0	1	0	0	0	1	3	0	107	0	0	0	0	61	254
403**	0	0	0	0	0	0	0	0	0	7	0	0	1	6	0	1	99	0	20	70	0	0	0	0	14	218
TOTAL	5432	7797	428	2456	12416	5739	2044	136929	3389	2314	1320	524	535	2175	5332	1076	11300	4034	13507	21201	7354	2119	1913	35	35975	287344

* "Total other" in southern areas was comprised primarily of sharks and rays

** Excluded from stock assessment due to unacceptable tow evaluation code. See Catch Summary page for tow evaluation code explanation.

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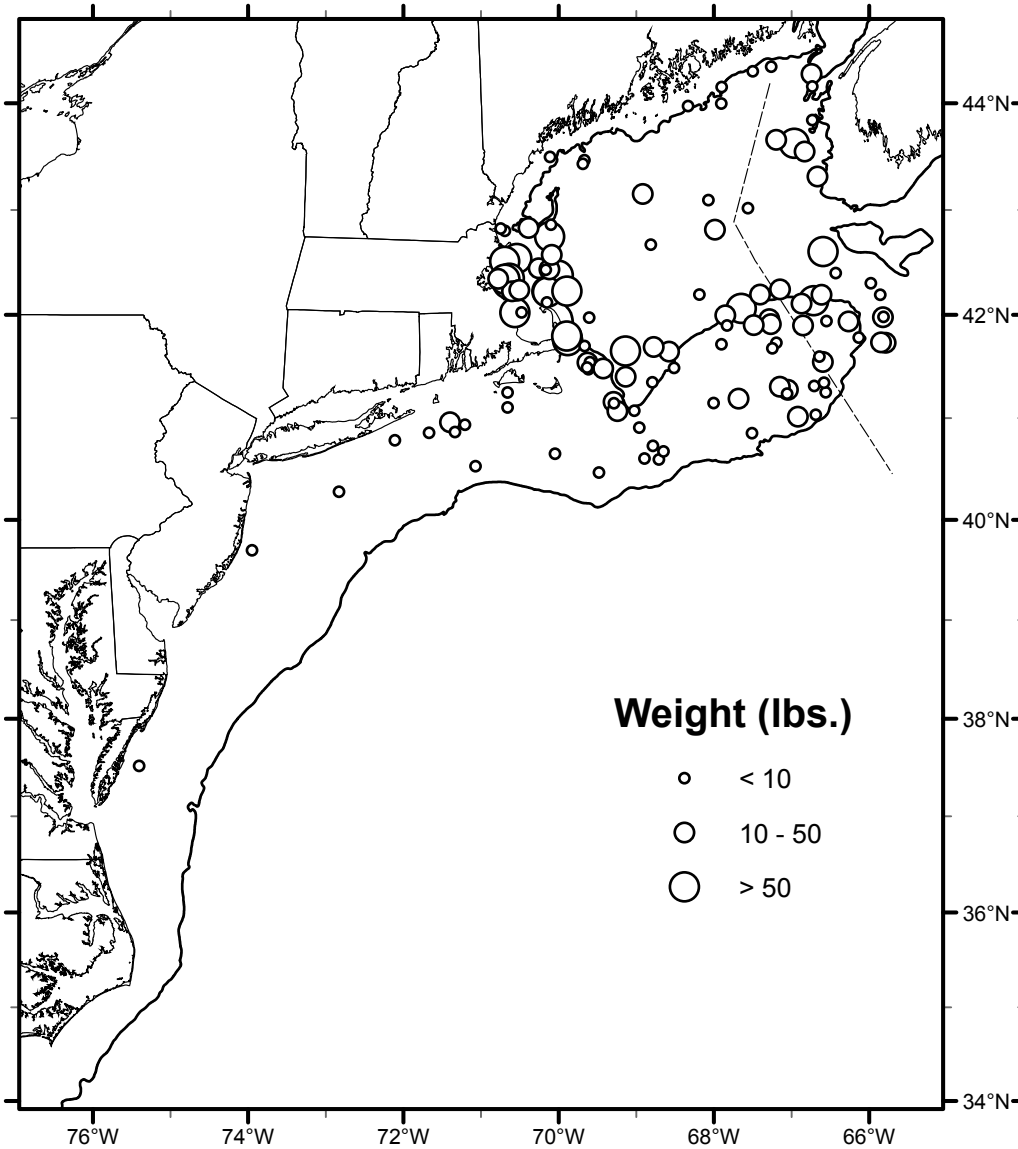
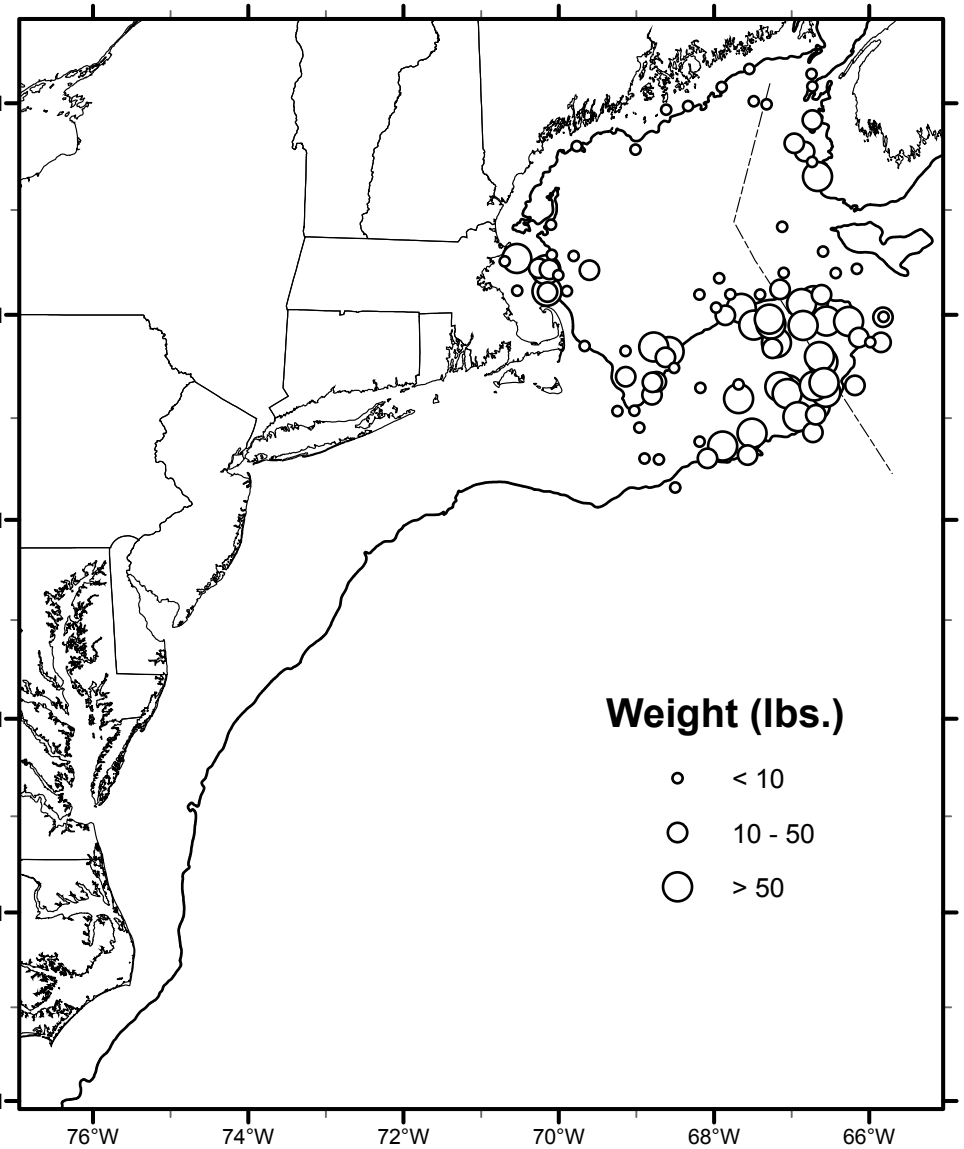
ATLANTIC COD



HADDOCK



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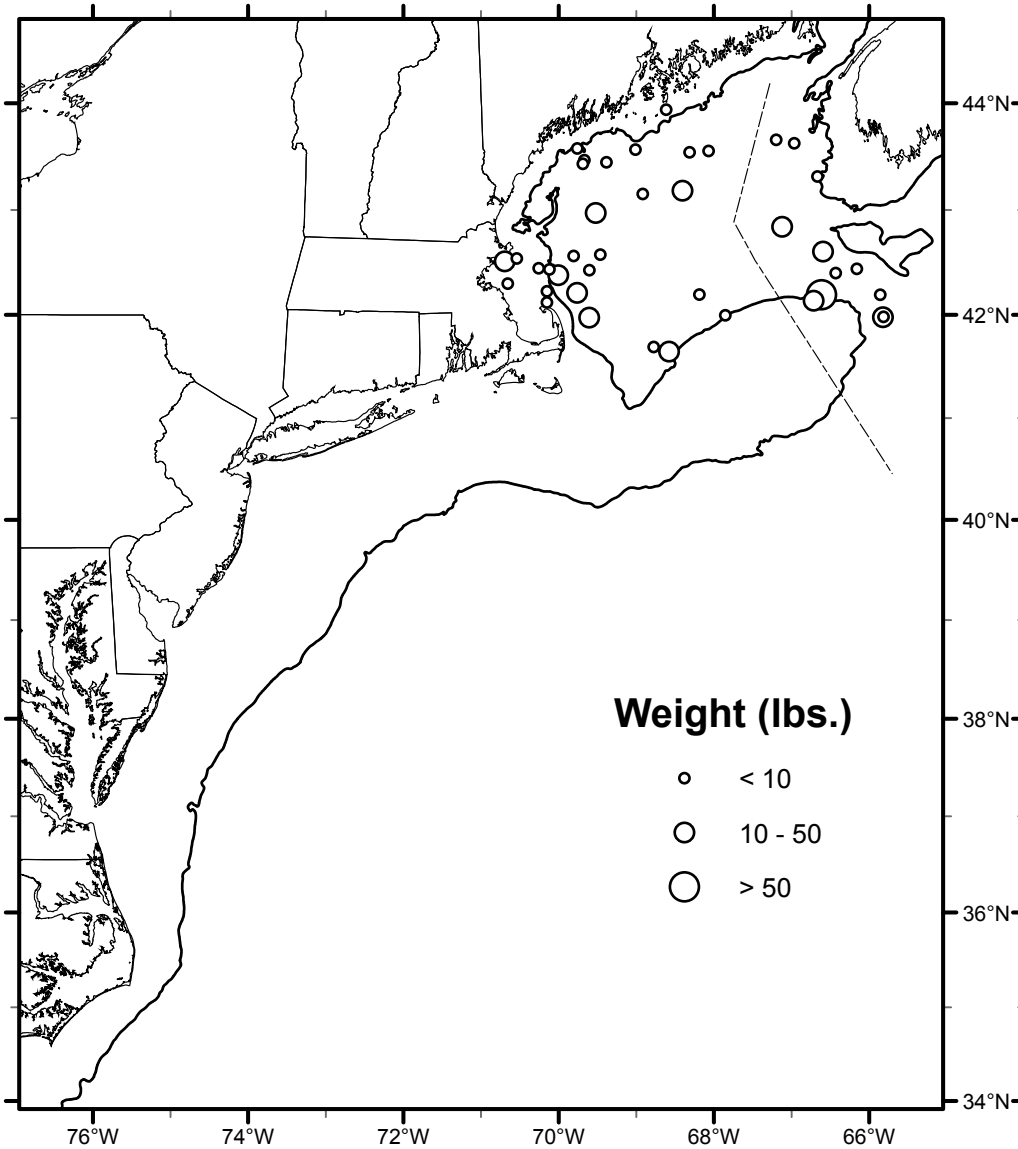
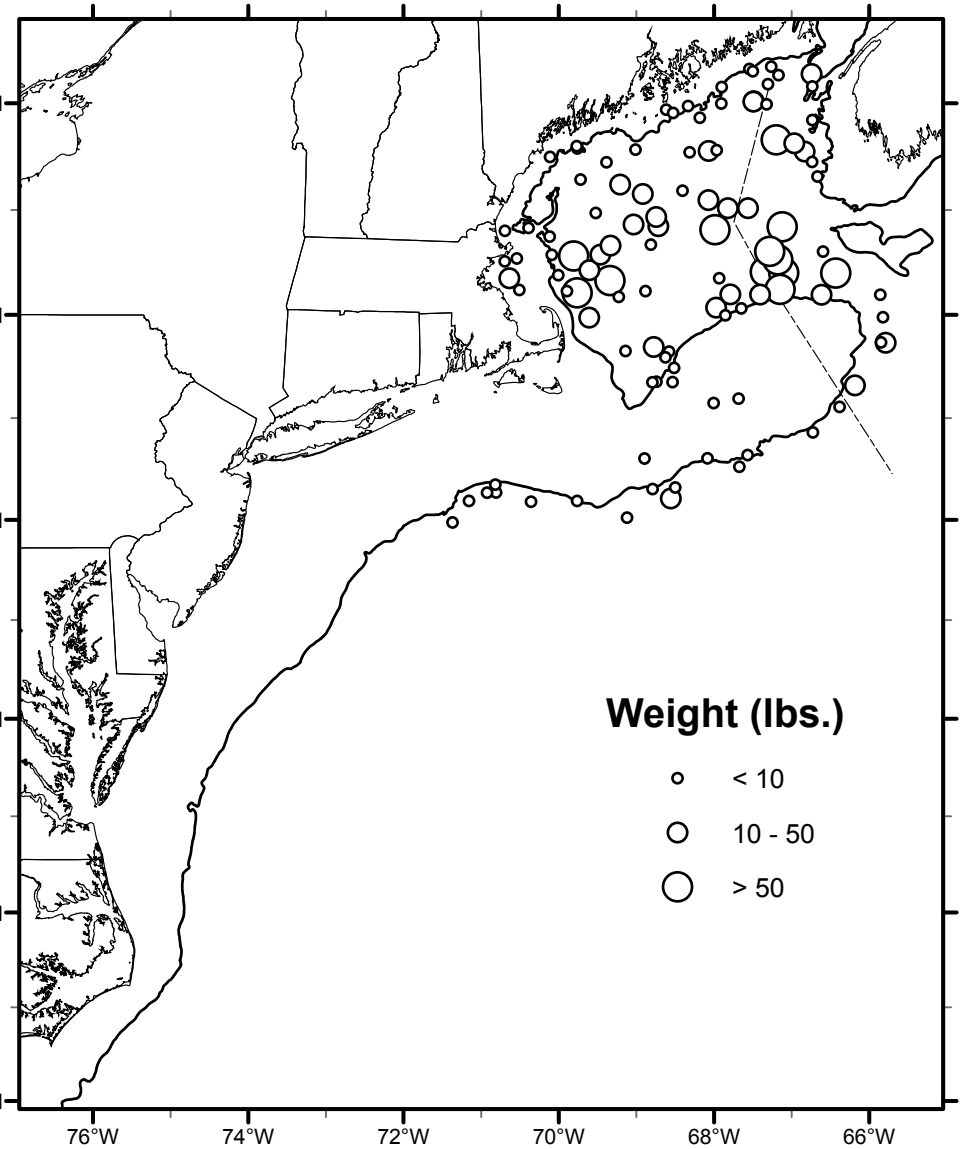
POLLOCK



WHITE HAKE



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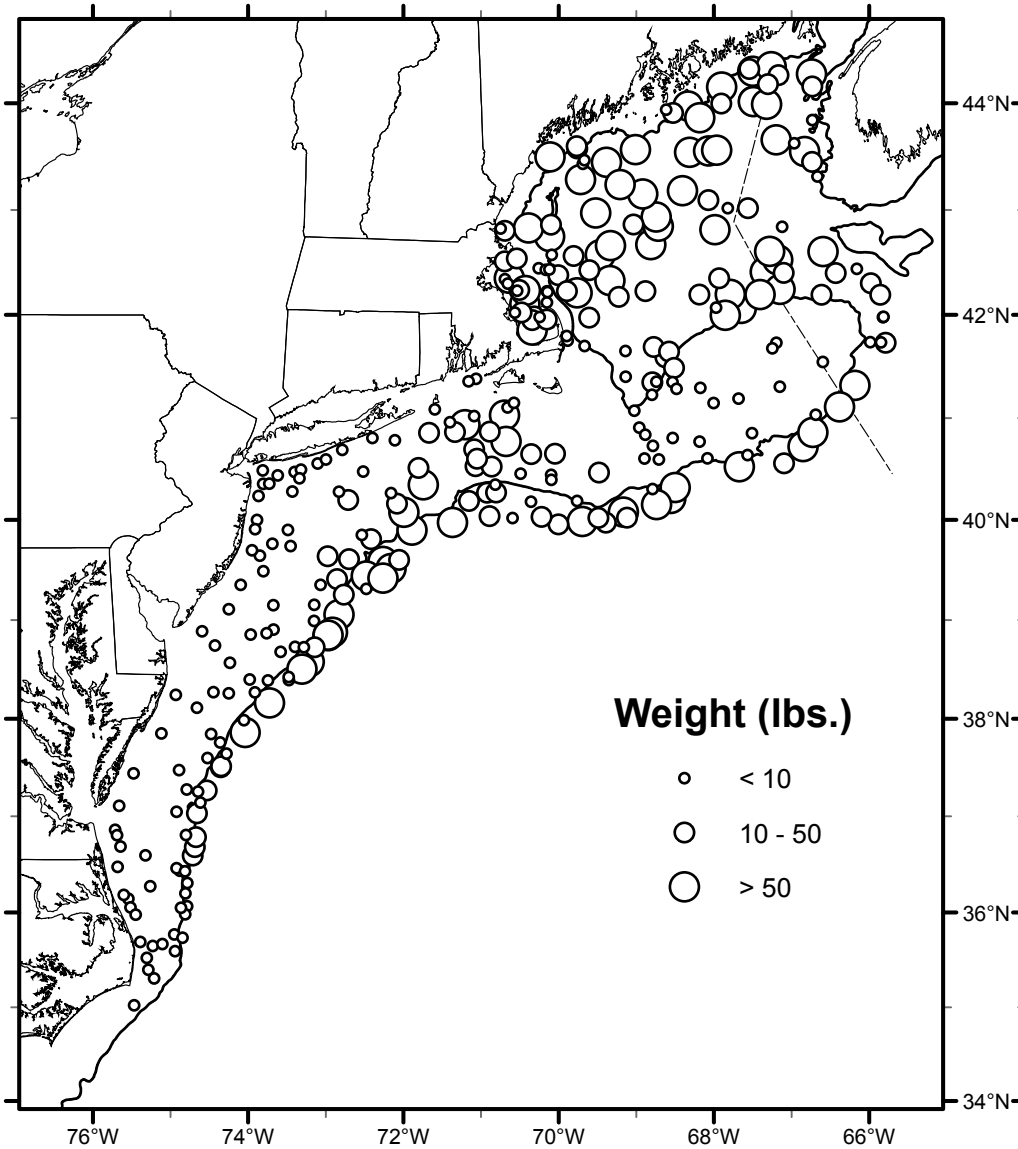
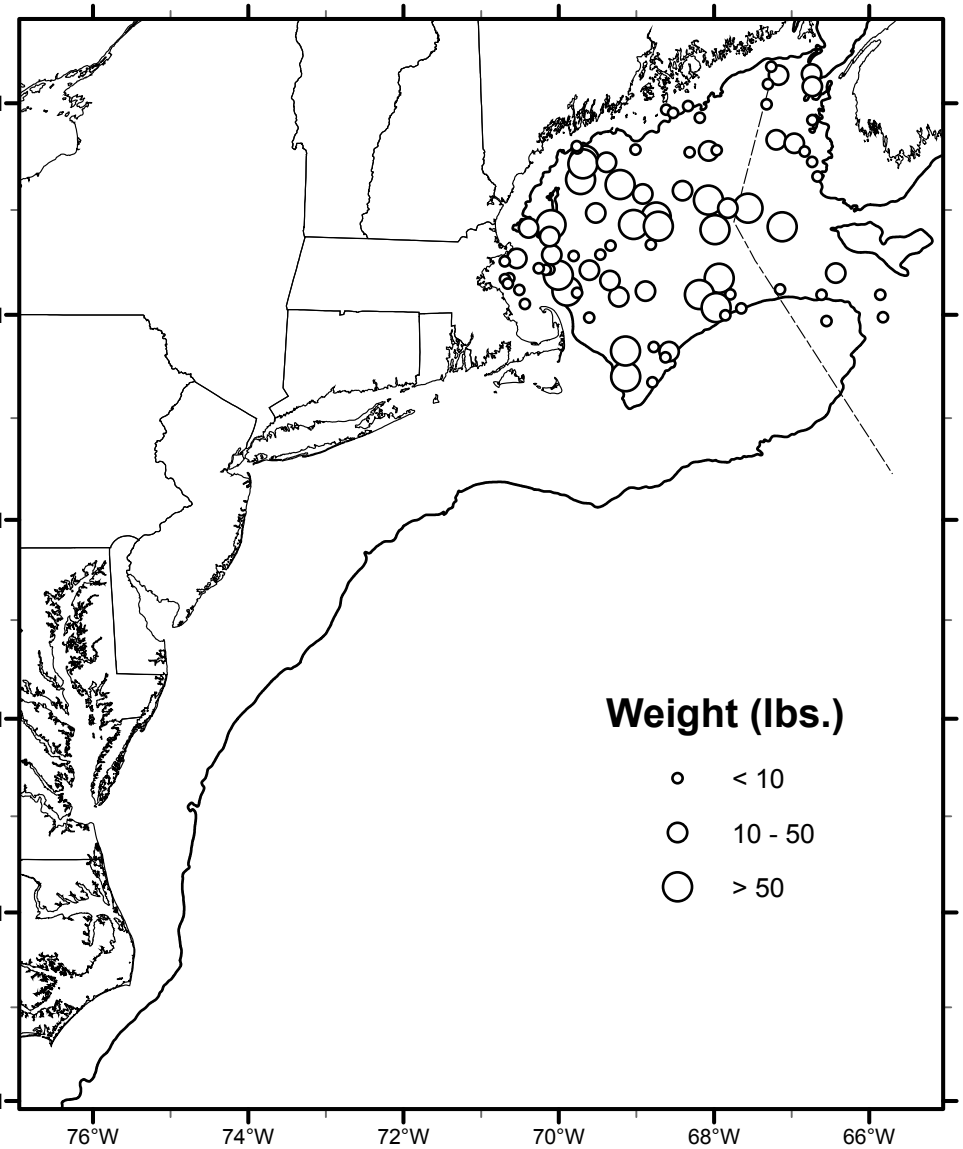
SILVER HAKE



ACADIAN REDFISH



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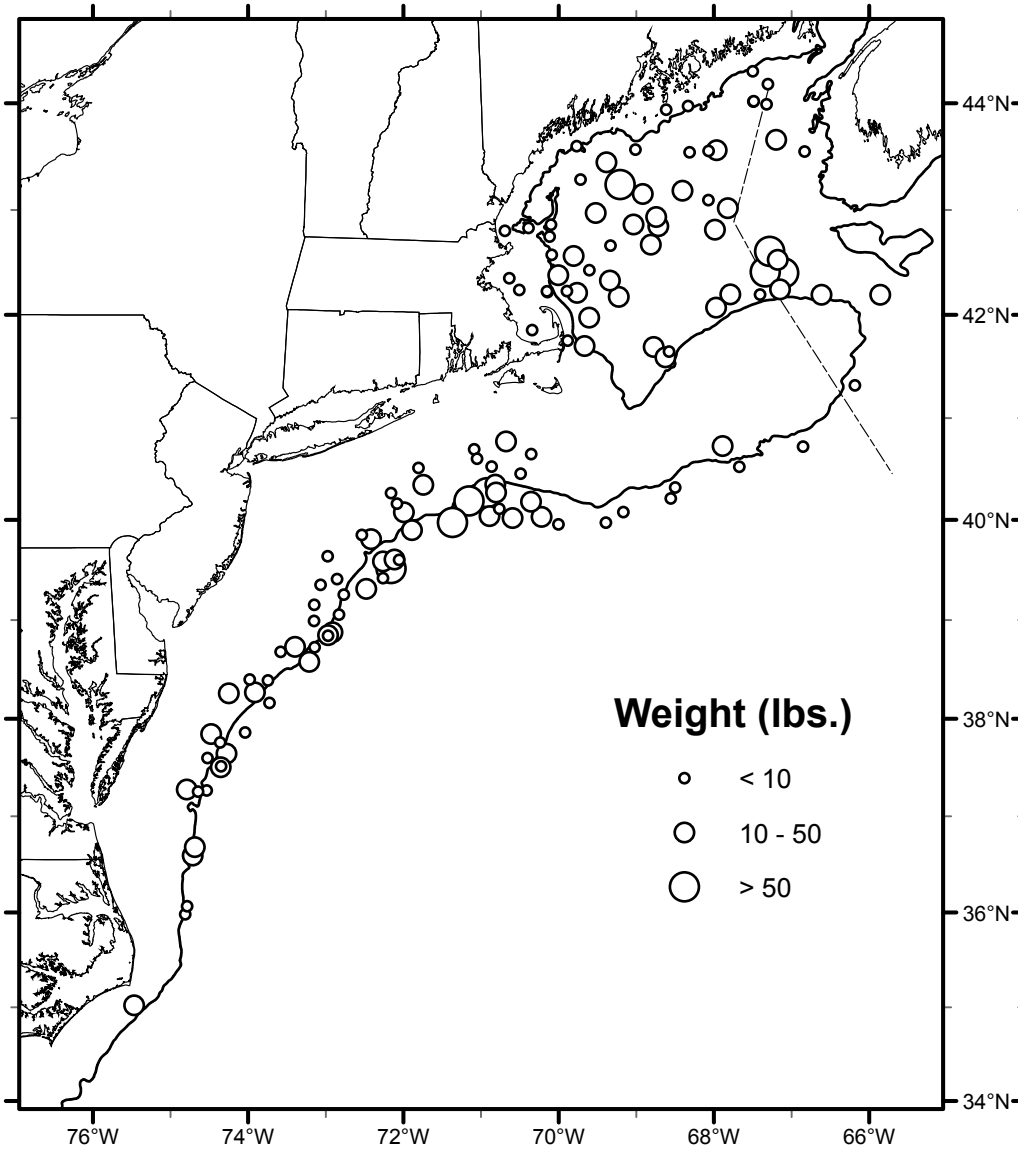
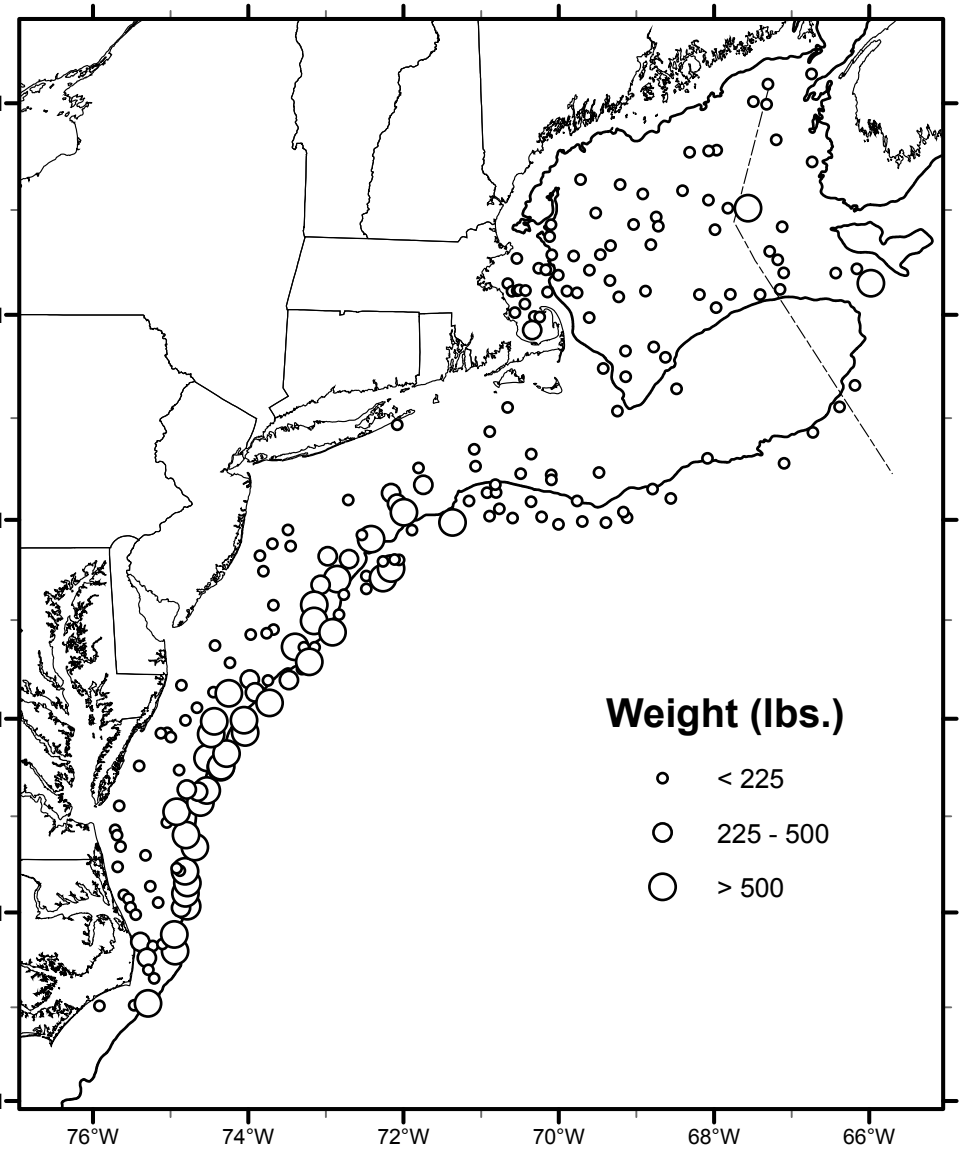
GOOSEFISH



SPINY DOGFISH



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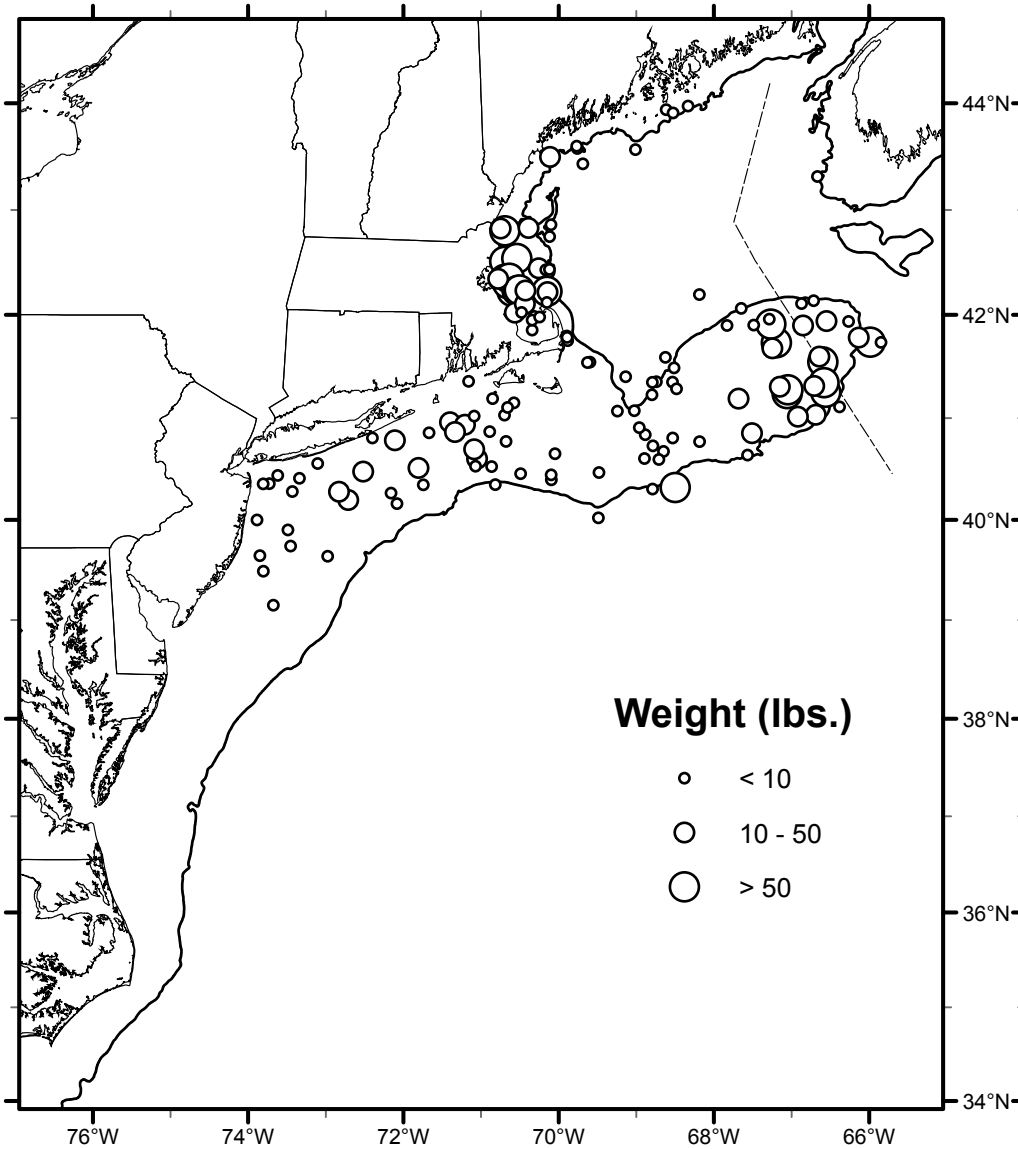
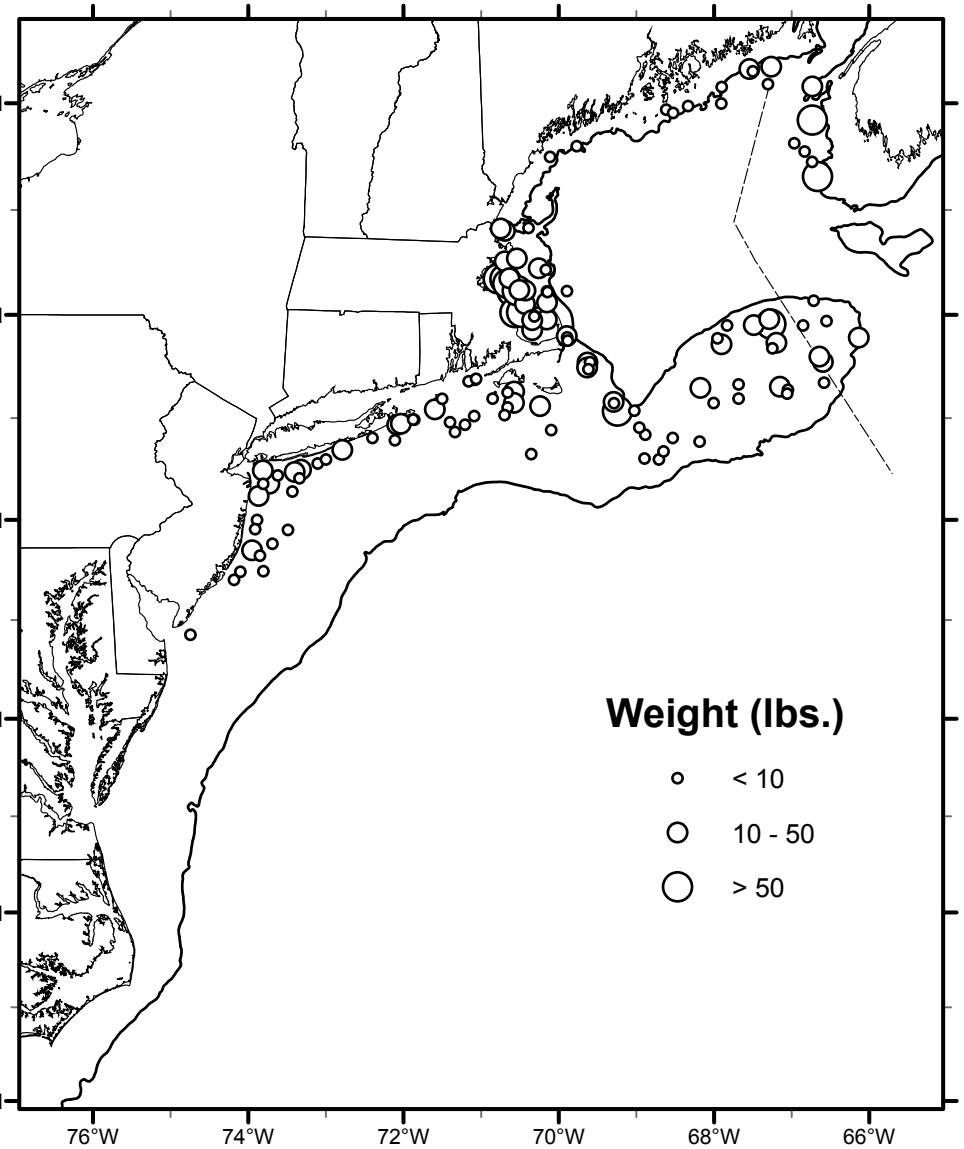
YELLOWTAIL FLOUNDER



WINTER FLOUNDER



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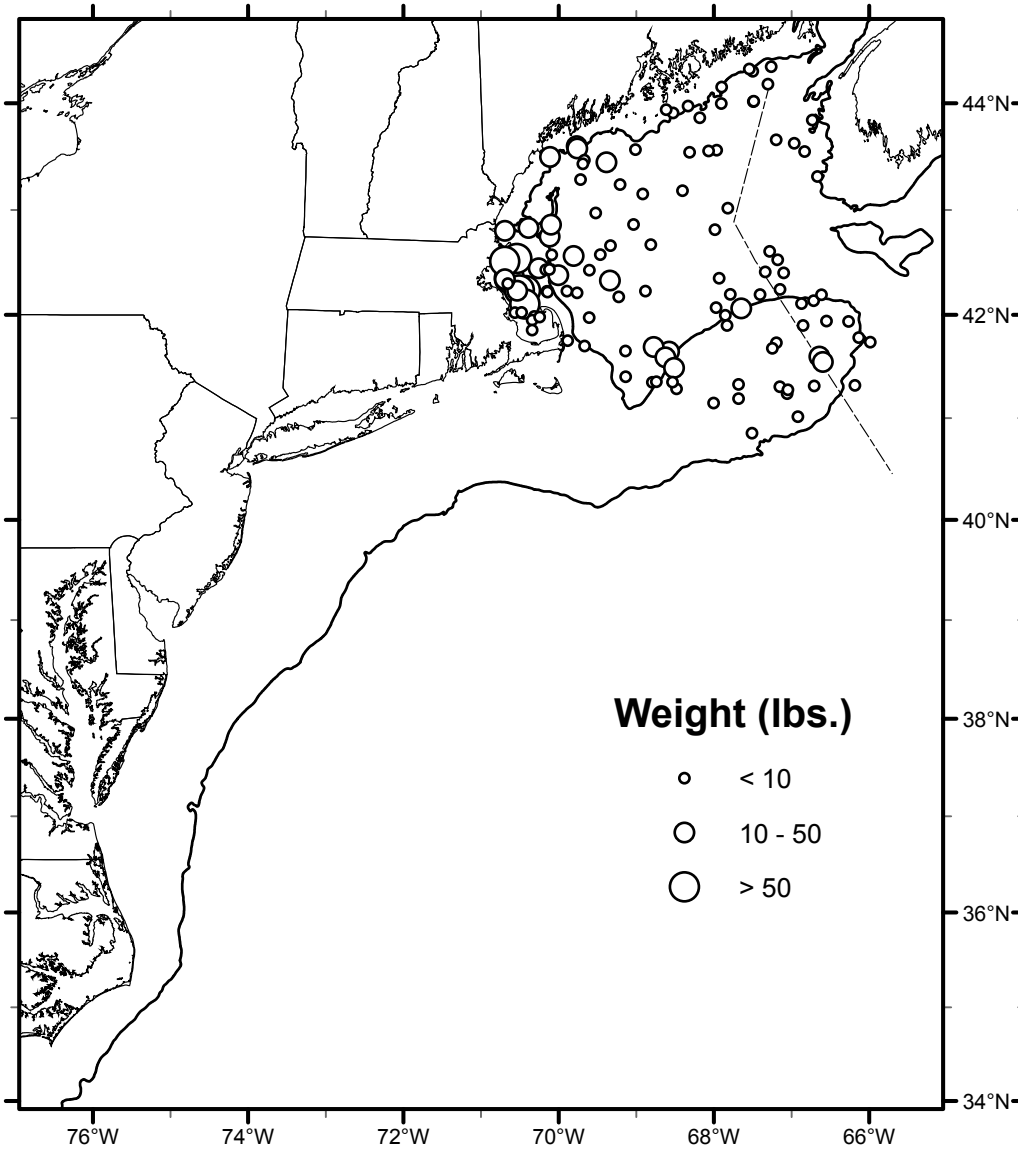
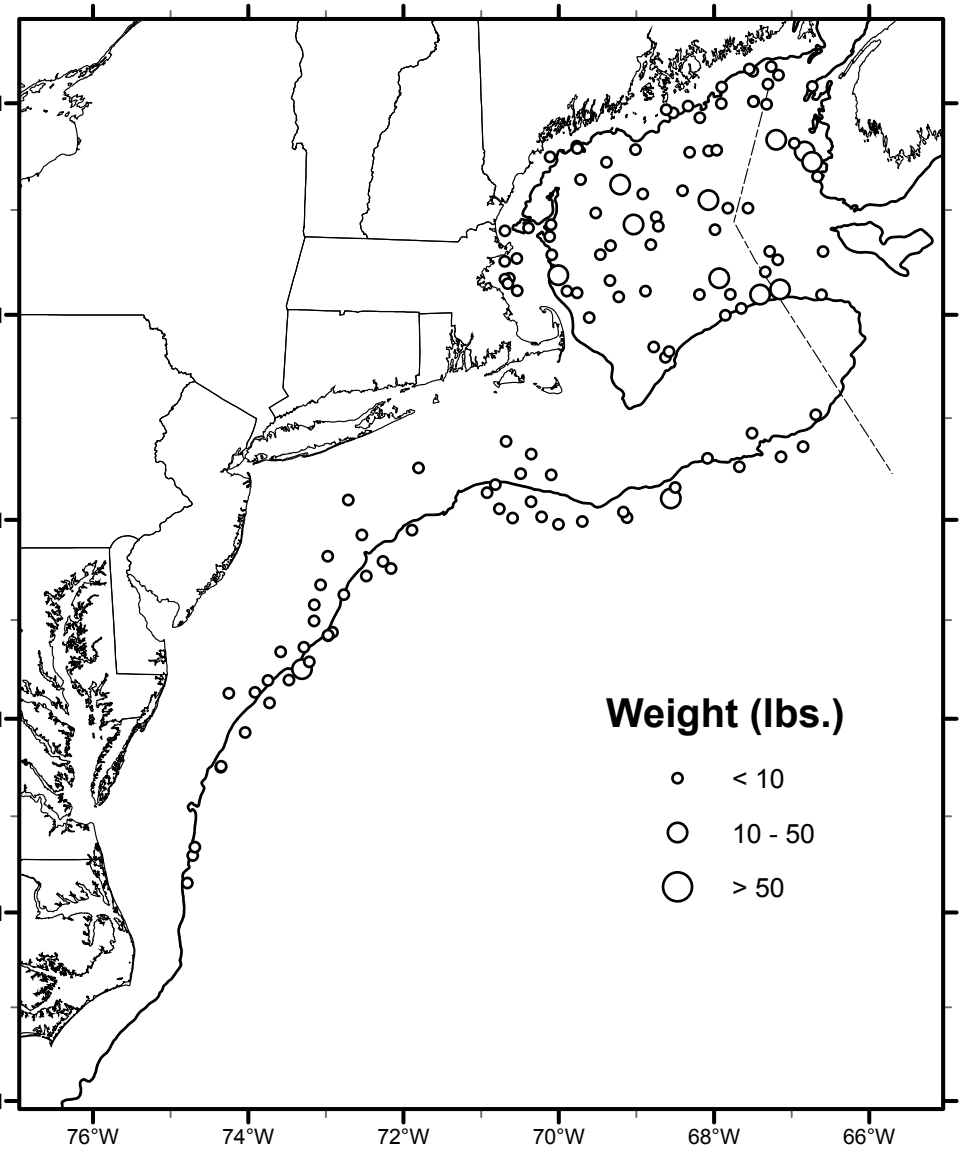
AMERICAN PLAICE



WITCH FLOUNDER



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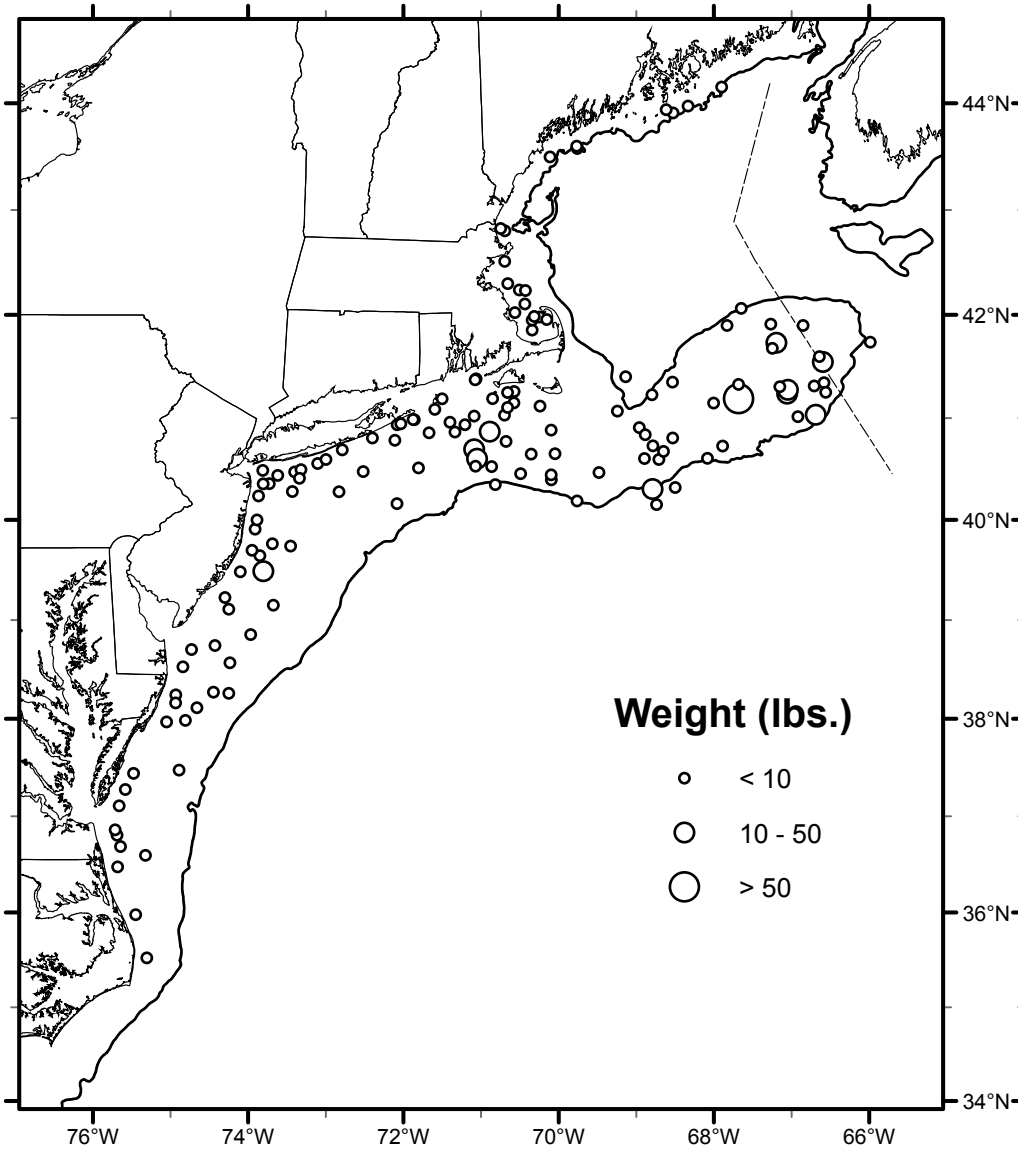
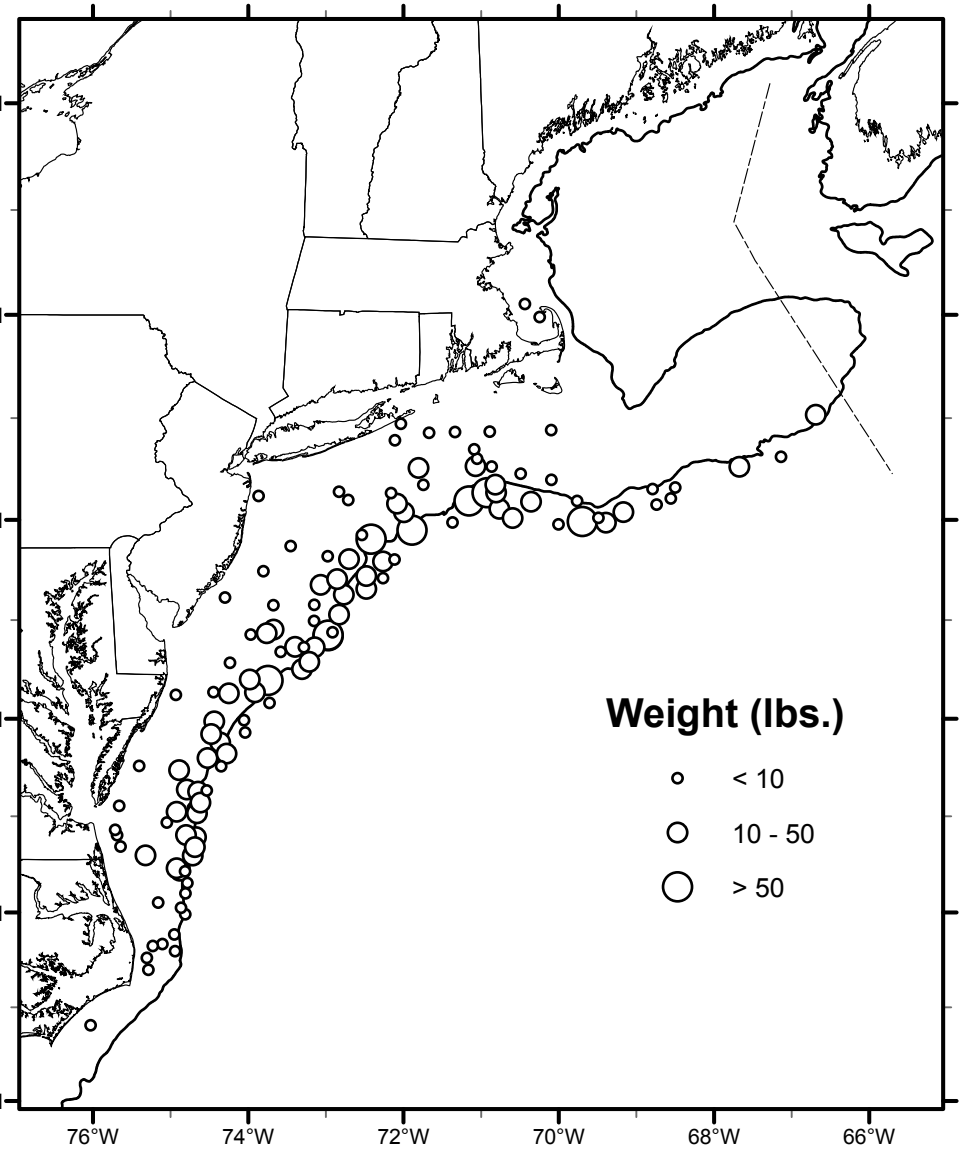
WINDOWPANE



SUMMER FLOUNDER



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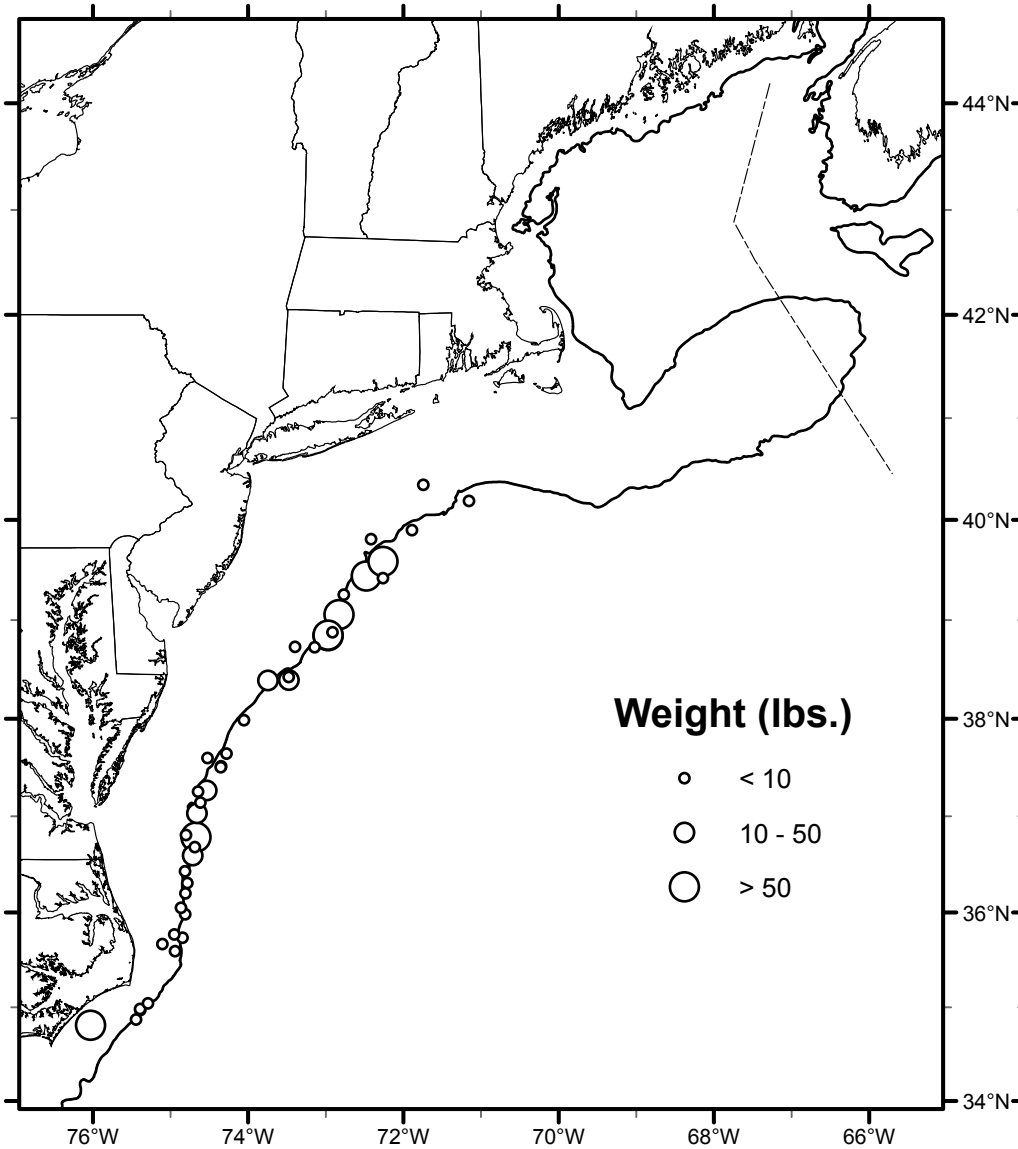
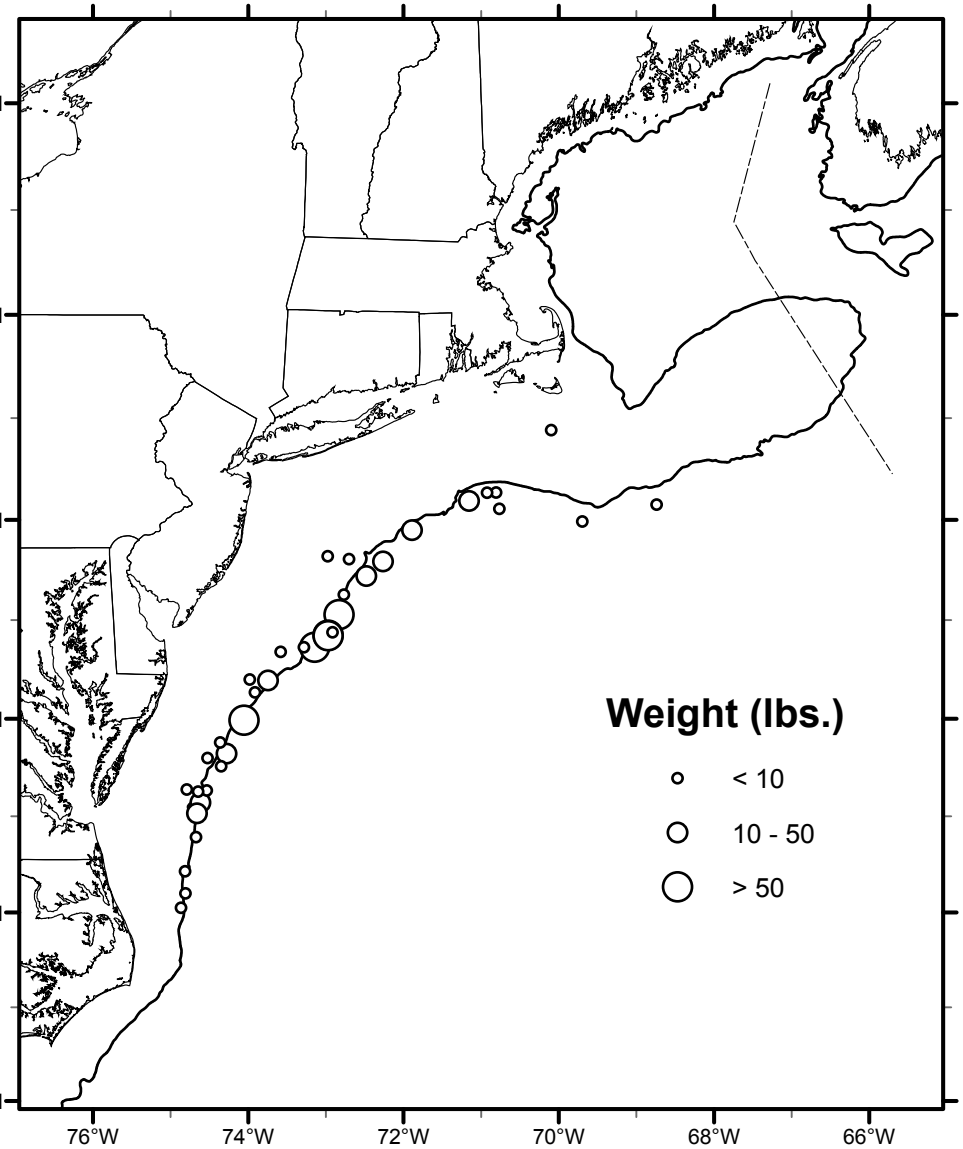
SCUP



BLACK SEA BASS



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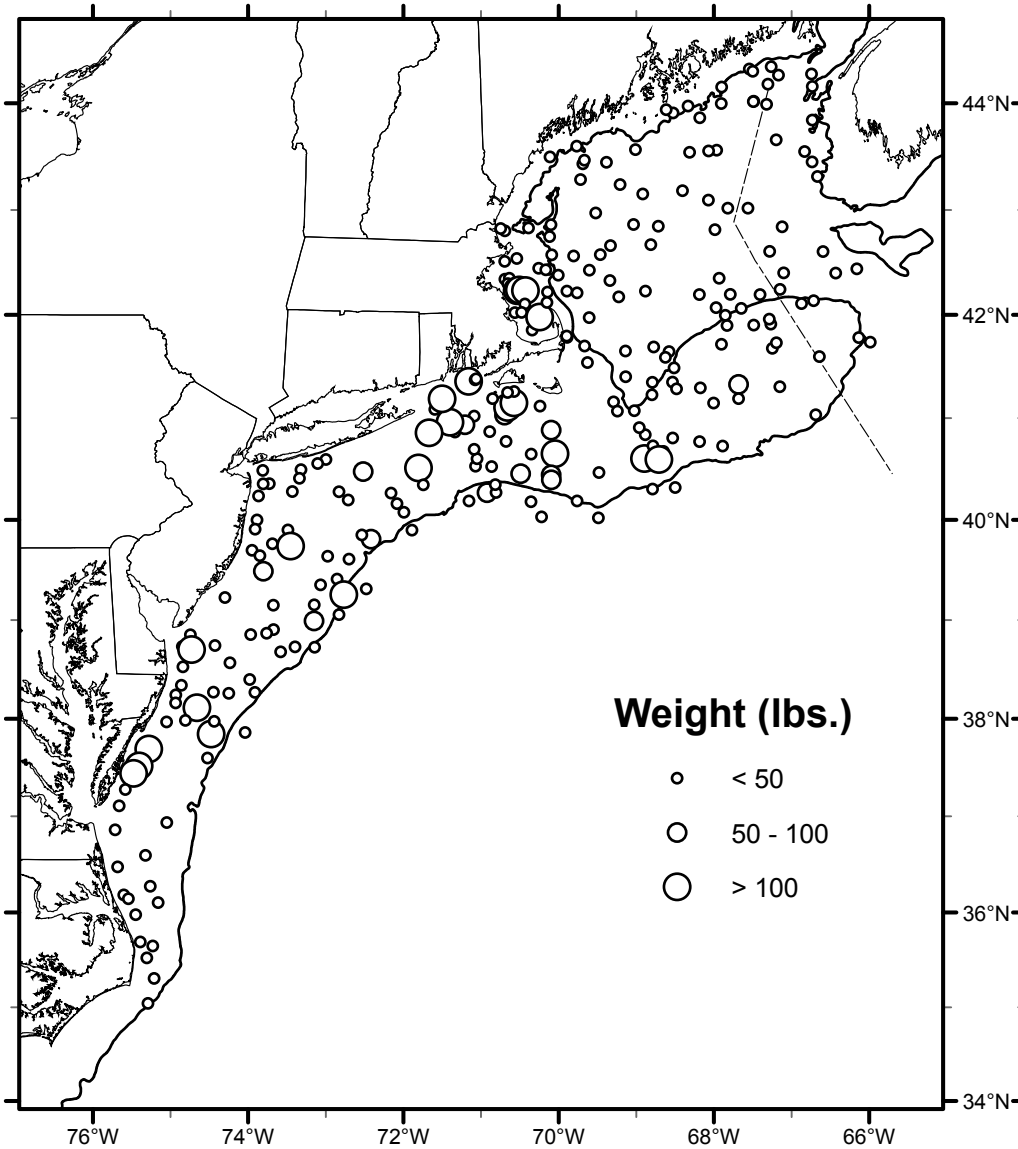
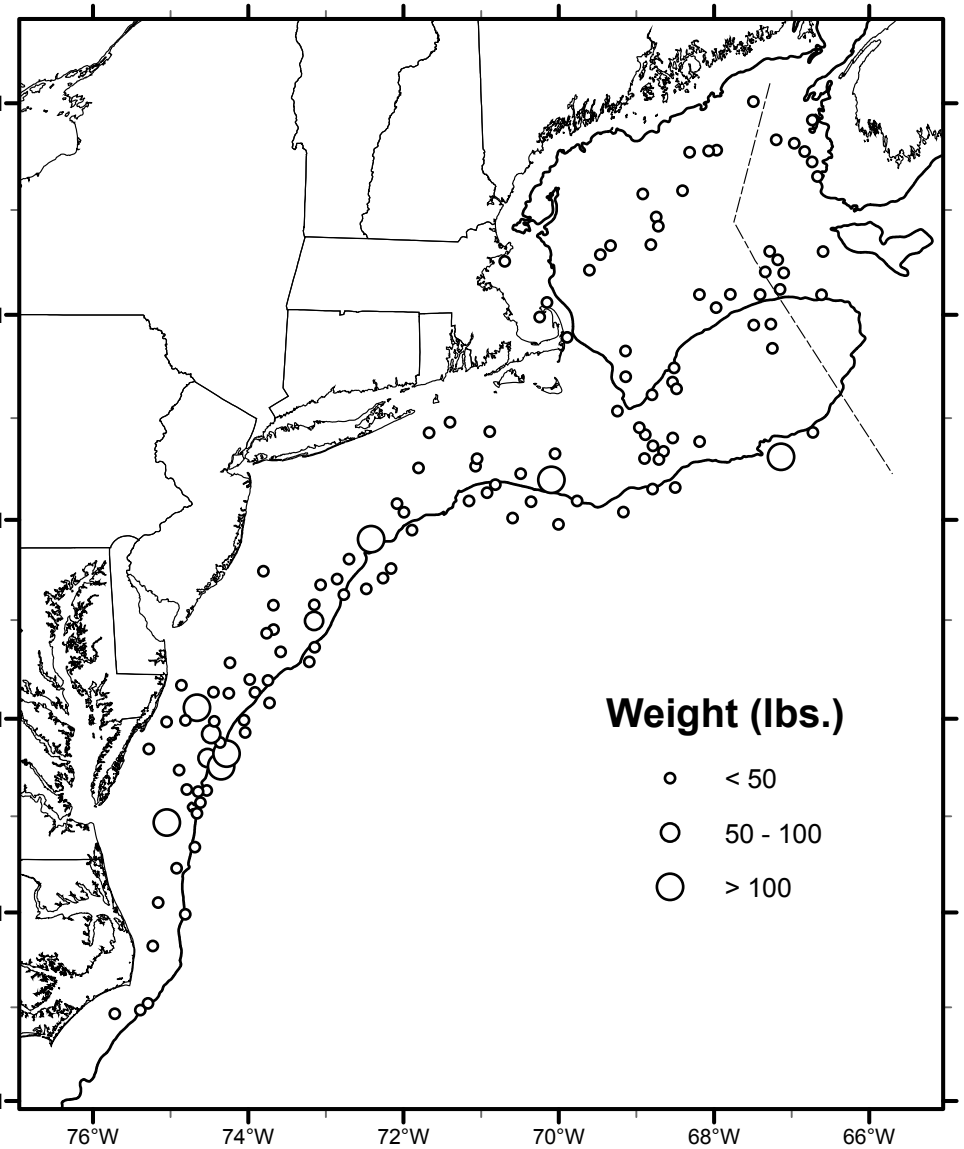
ATLANTIC HERRING



ATLANTIC MACKEREL



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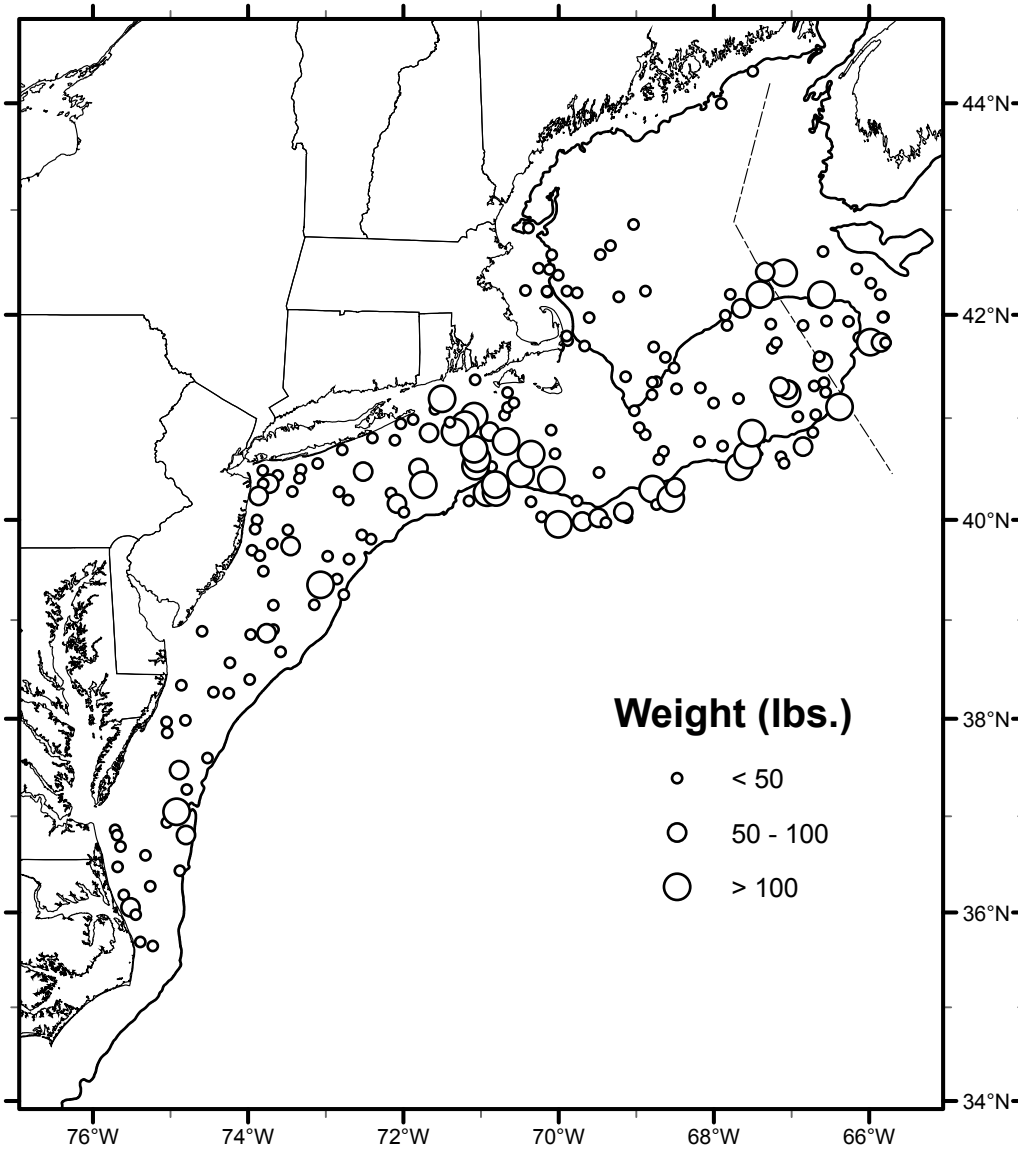
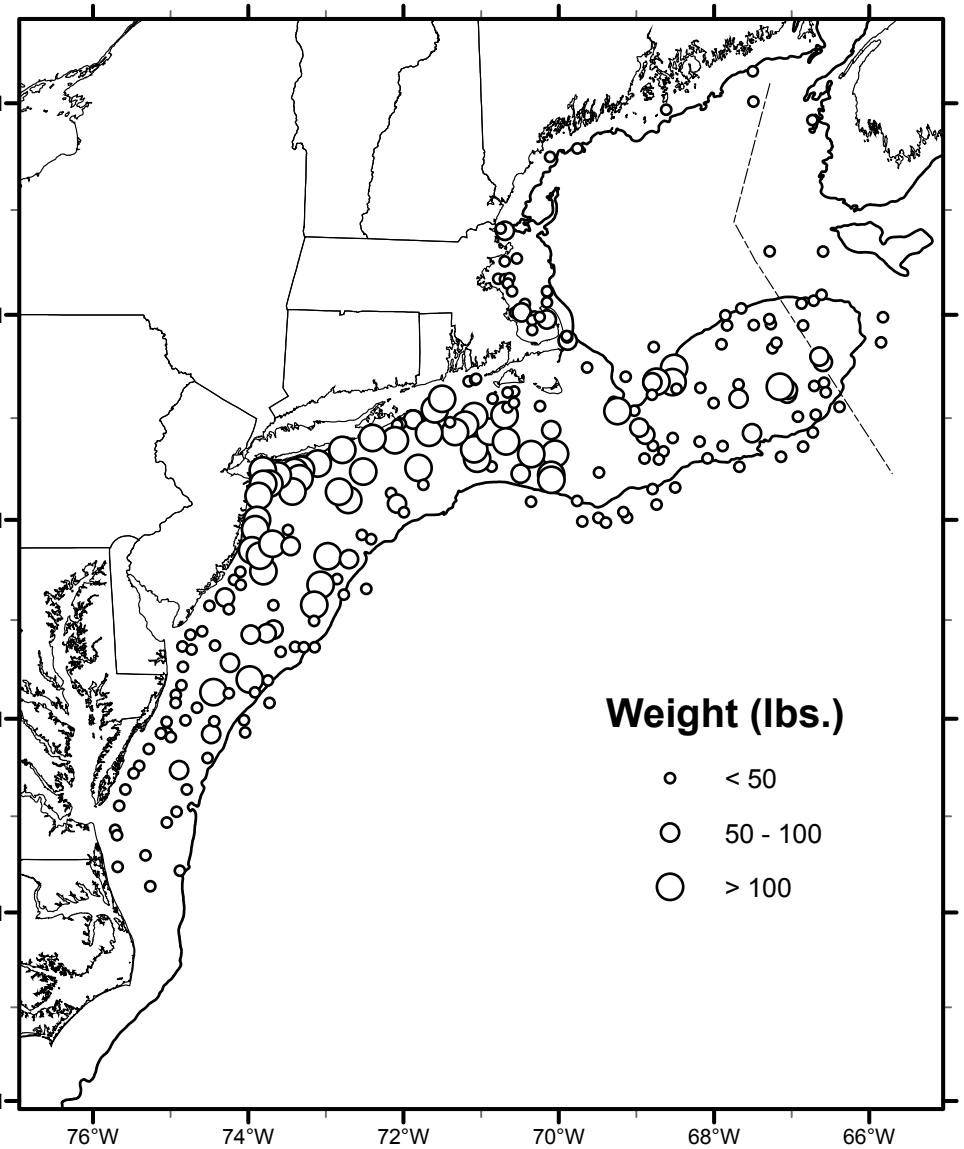
WINTER SKATE

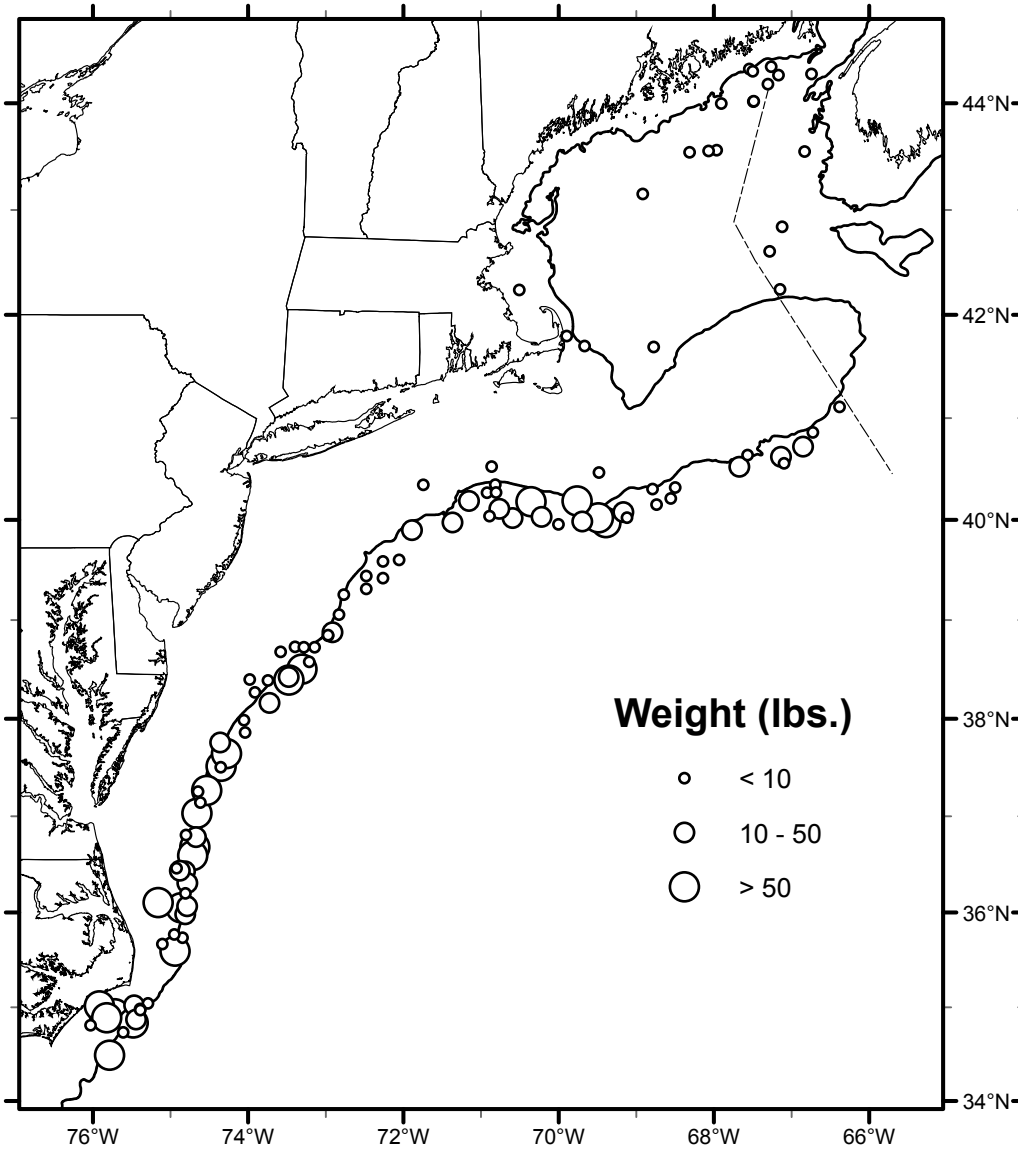


LITTLE SKATE

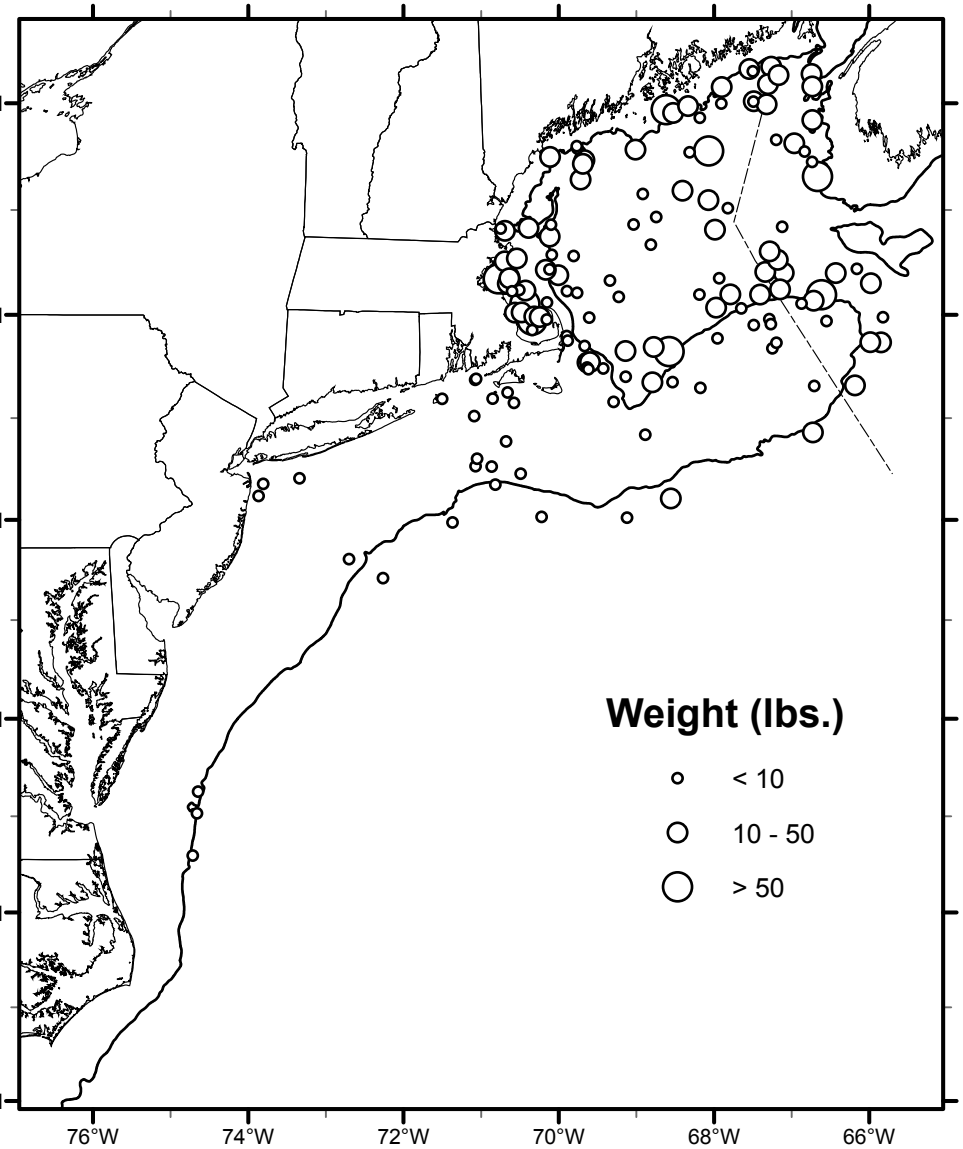


NOAA Fisheries Service
NEFSC Bottom Trawl Survey
27 February to 3 May 2010

BUTTERFISH



AMERICAN LOBSTER



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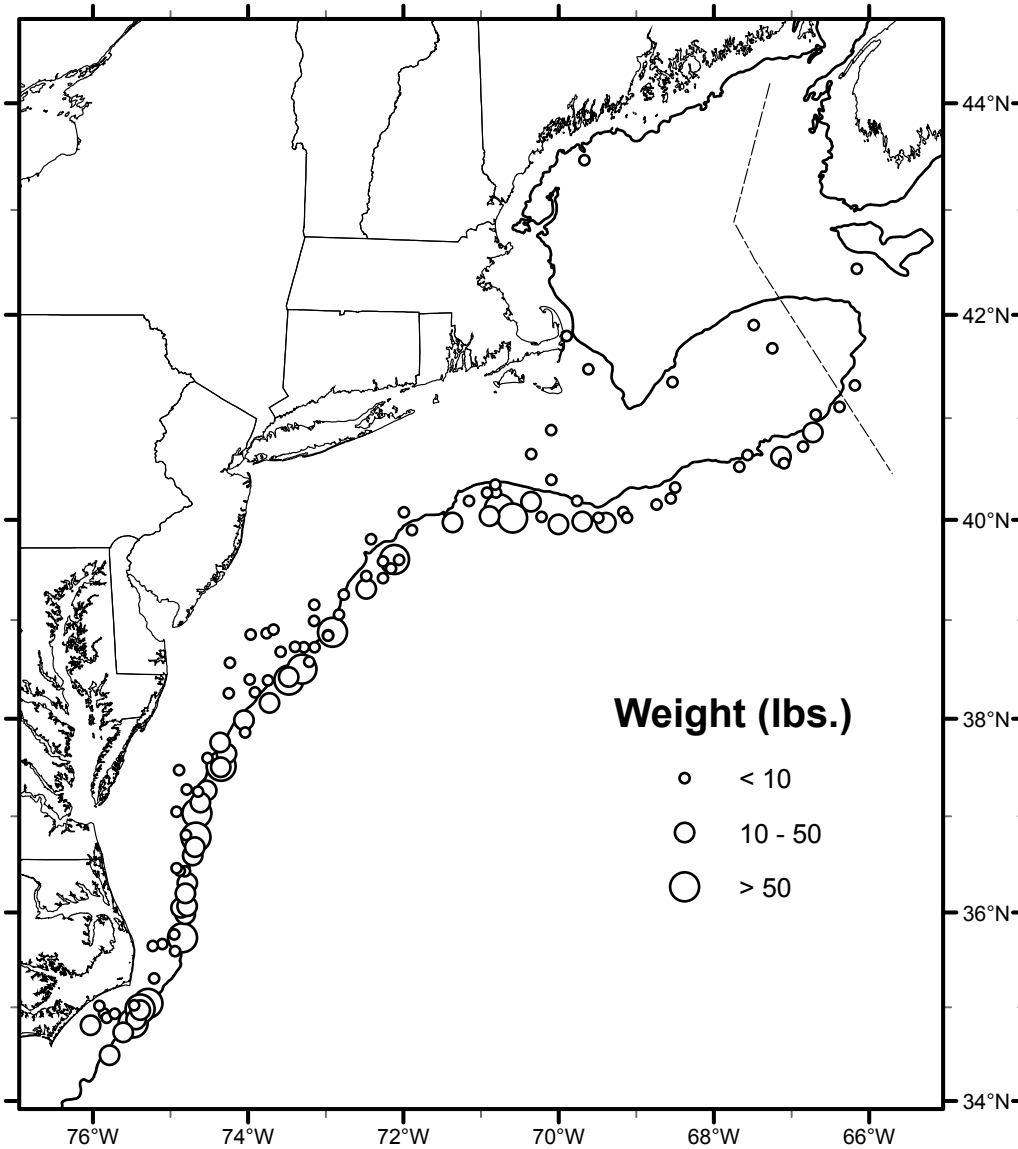
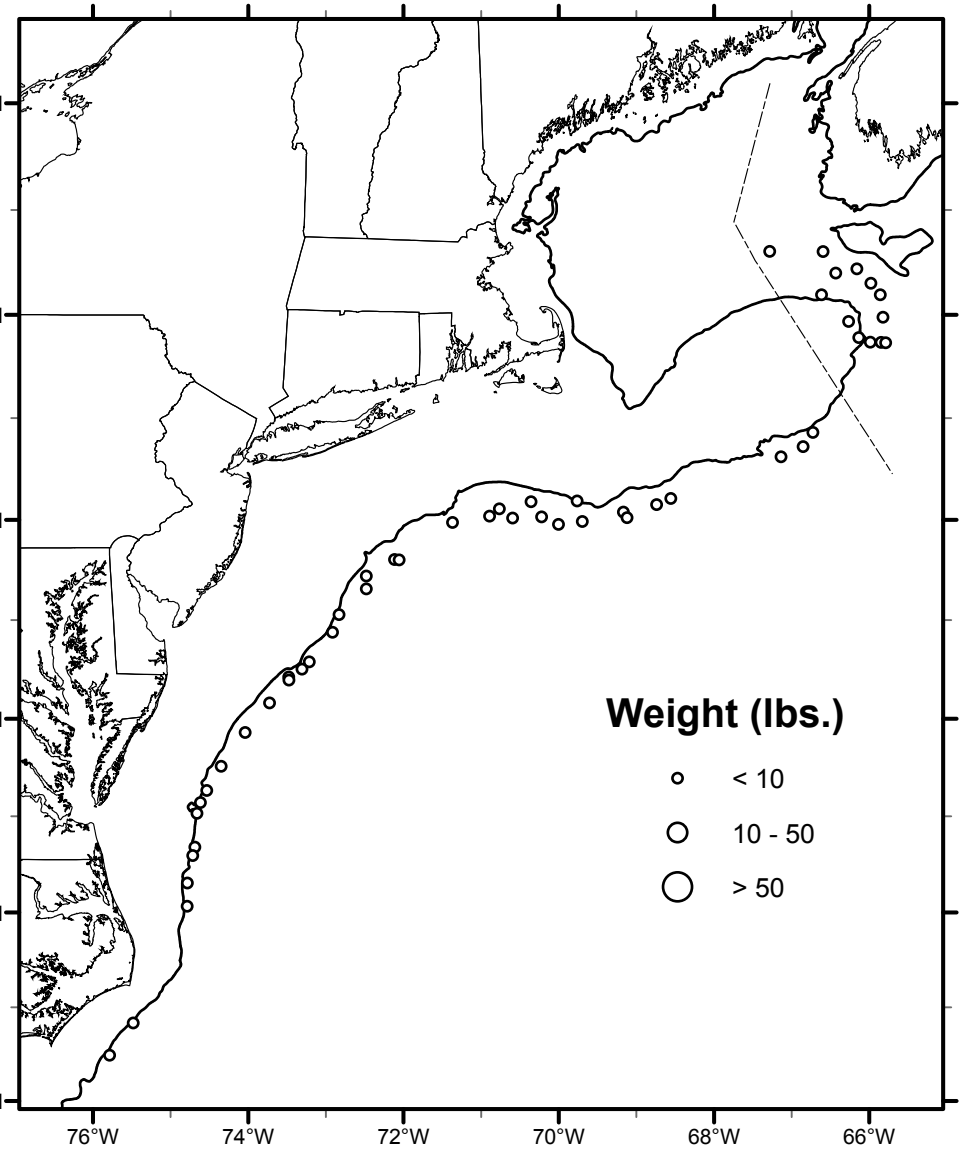
LOLIGO SQUID



ILLEX SQUID