

RESOURCE SURVEY REPORT
Catch Summary
NOAA Fisheries Service Northeast
Fisheries Science Center
Fall Bottom Trawl Survey
Cape Hatteras - Gulf of Maine
September 5 - October 26, 2006

Submitted to: NOAA, NEFSC

For further information contact Linda Despres, Ecosystems Surveys Branch,
National Marine Fisheries Service, Northeast Fisheries Science Center, 166
Water Street, Woods Hole, MA 02543-1097.

Date: 2006

Resource Survey Report

Bottom Trawl Survey



Cape Hatteras - Gulf of Maine
September 5 - October 26, 2006
R/V ALBATROSS IV

NOAA Fisheries
Northeast Fisheries Science Center
Woods Hole, MA 02543



Scientists working up a catch made up primarily of Wreckfish (*Polyprion americanus*) and Deepbody boarfish (*Antigonia capros*)



Large catch of Haddock (*Melanogrammus aeglefinus*) on northern Georges Bank



Large Atlantic cod (*Gadus morhua*) caught on Jeffreys Ledge



Deck crew changing trawl-nets between stations

RESOURCE SURVEY REPORT

Catch Summary

NOAA Fisheries Service
Northeast Fisheries Science Center

Fall Bottom Trawl Survey

Cape Hatteras - Gulf of Maine
September 5 - October 26, 2006

This report consists of 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 2006 fall bottom trawl survey conducted by the *R/V ALBATROSS IV*. Tows were made with a #36 Yankee otter trawl rigged with rollers, 5 fathom legs and 1000 pound polyvalent doors. The cod end and upper belly were lined with 1/2-inch mesh to retain young-of-the-year fish.

Because of the 30-minute tow duration, and random selection of station locations, catches can be light compared with commercial tows. Also, vessel operations are on a 24-hour basis and catches have not been adjusted for day/night differences. Nevertheless, these data can provide fishermen with useful information about the distribution and relative abundance of species inhabiting the survey area (Cape Hatteras to the Gulf of Maine).

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

For further information contact Russell Brown (508-495-2380) or Linda Despres (508-495-2356), NOAA Fisheries, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543.

To view this report in PDF format 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 Scientist on each part of the cruise comment on some of the more interesting catches that were brought aboard the *R/V ALBATROSS IV*.

No hurricanes

The first leg of the fall groundfish survey for 2006 was a welcome change in weather from the last few years. Although hurricanes threatened from the distance, there was no need to actually “play tag” in order to avoid uncomfortable seas. Mild swells in the Hatteras region were the only indication of the kind of conditions that every mariner wants to avoid.

Large shortfin squid

2006 proved to be an interesting year biologically. With each Autumn Survey there are changes, some subtle, some quite obvious, and this year was no exception. The first thing that stood out this season was the abundance of large Illex (or northern shortfin) squid, up to 11.4 inches mantle length. We have certainly captured large Illex in past years, but the average size was larger than normal. Illex larger than 11.8 inches have not been observed on the survey since 1990. We encountered more Illex squid in excess of 10.8 inches (27 cm) in the 2006 Autumn survey than during all autumn surveys conducted from 1991-2005 combined. Northern shortfin squid have a lifespan of less than one year. It would be interesting to investigate factors contributed to a more productive growth rate in 2006.

Southern shrimp in northern areas

The next major noticeable change was the abundance of penaeid shrimp. Mixed penaeid shrimp species, red, white and brown shrimp, were observed all the way up to Long Island. Many of them were quite large – perhaps not by southern standards, but certainly larger than the average northern pandalid shrimp.

Missing round herring

The other major change that caught our scientist’s attention was the lack of round herring, *Etrumeus teres*, in the offshore Mid-Atlantic Bight stations. In most years, the survey will capture large amounts of round herring in the outer three deeper water strata, but this year they were almost totally absent. They eventually started to appear inshore off the Long Island coast, but in small numbers.

Finally, there was one especially interesting capture off the Mid-Atlantic Bight, which was a first for our 40 + year time series. A perfect condition crimson rover, *Erythrocles monodi*, was captured in one of our offshore tows. It had managed to wedge itself into the mantle of a large Illex, and thus the Illex prevented the scale and fin damage that many fish encounter in a trawl. Oddly enough, fish entrapped in squid mantles are commonly observed. How they get there is a matter of speculation, but it happens quite often. The crimson rover is a member of the sea rover family, a little known family of fishes, or *Emmelichthyidae*, and it resembles a cross between a vermillion snapper and a wenchman, with the body shape of a round herring.

More supersized specimens

The largest specimens of two fish species ever taken during the history of the survey came across the deck during leg 2 of the survey. A 33.5 inch weakfish weighing a little over 14 pounds was caught on inshore station 165 (south of Pt Judith); the previous record for the largest weakfish was a 33.1 inch fish captured in the spring of 1987. This fish had a large volume of scup in its stomach. According to Bigelow and Schroeder, off southern Massachusetts, the largest fish run 6 - 10 pounds whereas most usually weigh 1 - 7 pounds and are between 14 - 28 inches long.

A 24.4 inch black sea bass weighed in at over 6 pounds and was taken on station 167 (south of Montauk). We have to go back to 1979 in order to find the next largest black sea bass caught during our surveys at 24 inches. This trophy fish had eaten crab and northern sea robin for its last meal. The all-tackle game fish record is a 10 pound fish caught at Virginia Beach, VA in January 2000 (IGFA 2001) which still stands to this day.

Species variety

The 4th leg of the fall survey was only four days long due to the progress made by the previous legs. The trip began in Cape Cod Bay and it is always interesting to see the high diversity in the bay at this time of year. We caught more than twenty different species at every station in the bay, including a few tropical strays. It is very common for spiny dogfish to school by sex, so that one gender or the other dominates the catch in an area. We also noticed that female dogfish were greatly outnumbering the males at most stations. We ended our leg with an unsuccessful attempt to grapple for the trawl door that was lost on the last station of leg 2 (our first such loss in almost a decade).

Extra Stations

Due to a scheduling opportunity and efficient operations, we were able to complete an additional 30 random stations (approximately a 9% increase in total survey effort) during the Autumn survey. These additional survey stations were allocated to specific areas to detect yellowtail flounder recruitment in Southern New England, yellowtail flounder distributions in general on the Northeast Peak of Georges Bank, and Atlantic cod distributions in the Gulf of Maine. Completion of these stations should improve the precision of survey indices for these three stocks, and provide a clearer picture of resource distribution. Since the additional tows were randomly selected within our sampling design, data can be readily incorporated into stock assessments for these stocks. We believe that reserving a portion of the total sampling effort to be adaptively allocated to answer short term assessment and management questions should be a key consideration in the design of future surveys.

John Galbraith
Chief Scientist
Survey Part I
508-495-2392
John.Galbraith@noaa.gov

Stacy Rowe
Chief Scientist
Survey Part III
508-495-2021
Stacy.Rowe@noaa.gov

Linda Despres
Chief Scientist
Survey Part II
508-495-2346
Linda.Despres@noaa.gov

Peter Chase
Chief Scientist
Survey Part IV
508-495-2348
Peter.Chase@noaa.gov

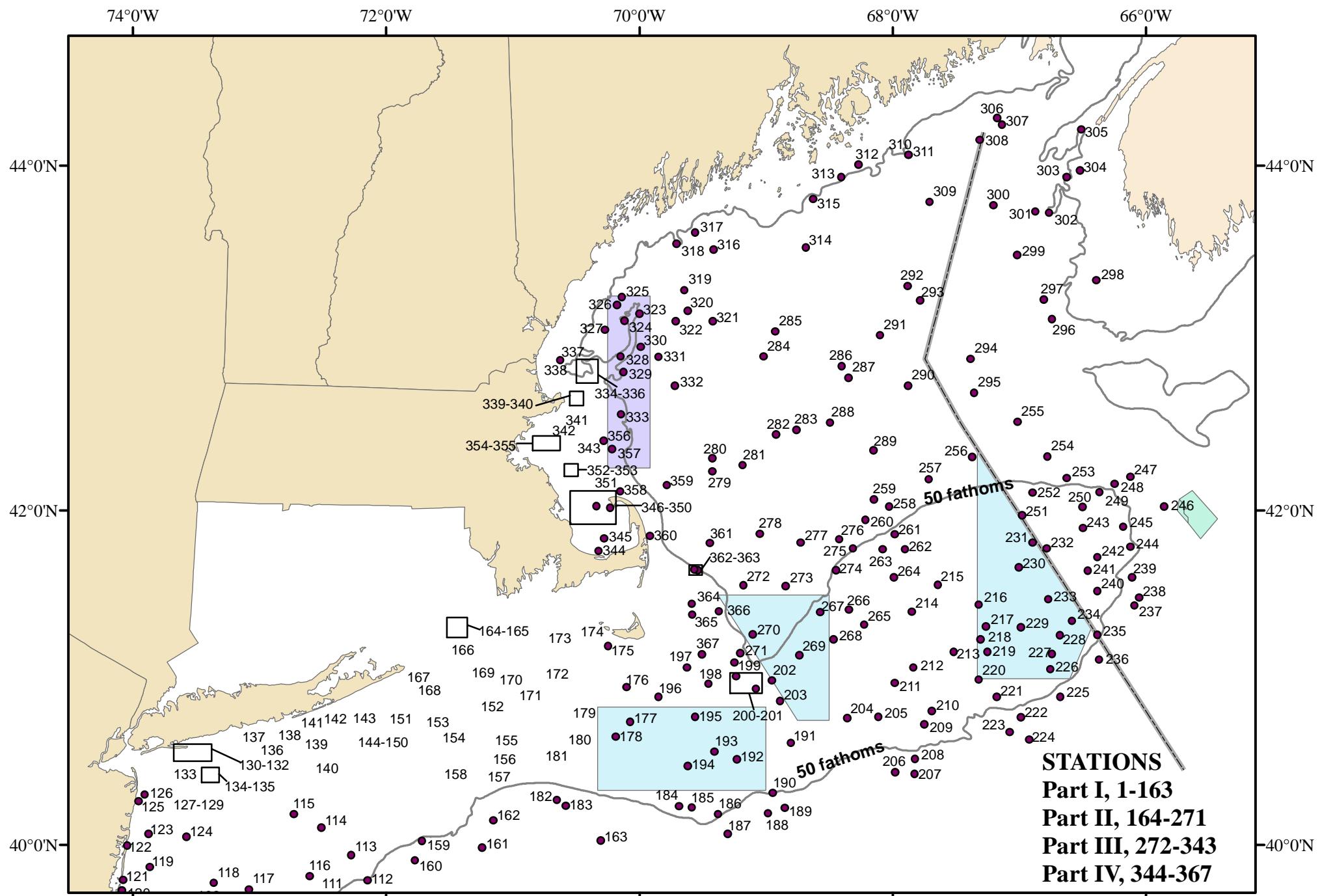


Figure 2. Trawl hauls made from NOAA Ship ALBATROSS IV (06 - 08), during NOAA Fisheries Service, Northeast Fisheries Science Center fall bottom trawl survey, September 5 - October 26, 2006.

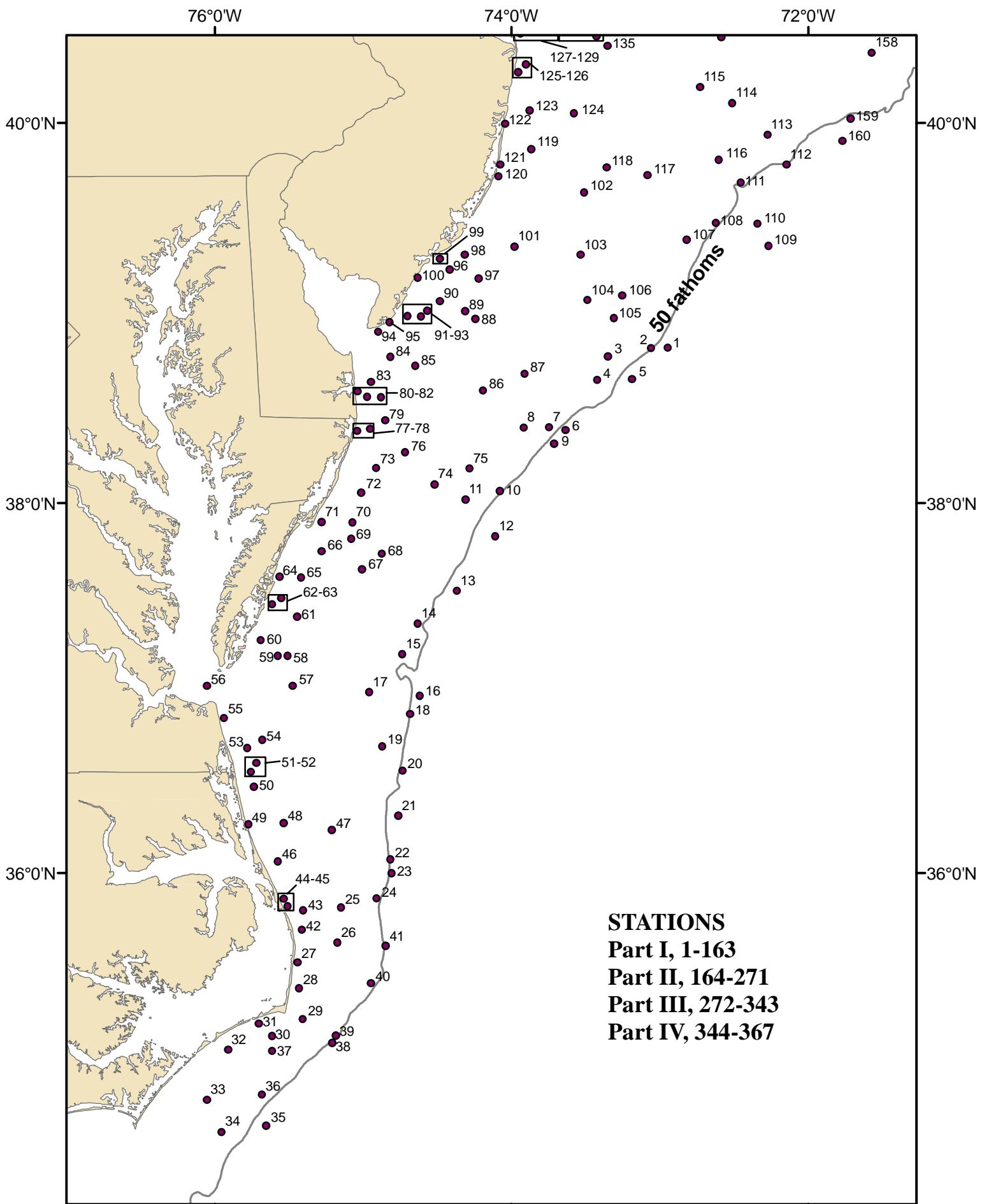


Figure 2. Trawl hauls made from NOAA Ship ALBATROSS IV (06 - 08), during NOAA Fisheries Service, Northeast Fisheries Science Center fall bottom trawl survey, September 5 - October 26, 2006.

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans		Course	Bottom	
					TD's	Depth (FM)		Temp (F)	
---	-----	-----	-----	-----	-----	-----	---	-----	-----
0001	Sep-06	1018	3849.3	7256.7	X26395.2	Y42716.8	039	155.0	52.0
0002	Sep-06	1210	3849.2	7303.6	X26437.0	Y42713.0	248	47.8	53.5
0003	Sep-06	1418	3846.6	7321.0	X26541.0	Y42680.7	140	40.5	51.7
0004	Sep-06	1616	3839.0	7325.2	X26560.0	Y42602.6	087	43.2	52.7
0005	Sep-06	1837	3839.4	7311.2	X26477.2	Y42614.2	232	71.1	56.6
0006	Sep-06	2208	3823.1	7338.2	X26620.2	Y42433.1	231	61.8	56.4
0007	Sep-06	2338	3824.0	7344.8	X26658.4	Y42436.5	208	44.6	51.6
0008	Sep-07	0119	3824.0	7355.0	X26716.2	Y42427.9	119	34.4	51.5
0009	Sep-07	0316	3818.8	7342.8	X26642.3	Y42385.3	214	61.8	57.4
0010	Sep-07	0621	3803.8	7404.6	X26744.4	Y42207.5	231	50.6	56.7
0011	Sep-07	0814	3801.0	7418.6	X26814.4	Y42162.4	142	33.1	48.9
0012	Sep-07	1057	3749.3	7406.5	X26737.6	Y42053.9	187	128.2	55.1
0013	Sep-07	1344	3731.6	7422.0	X26794.4	Y41846.7	216	58.5	56.4
0014	Sep-07	1613	3721.1	7437.9	X26857.3	Y41708.9	213	42.7	50.0
0015	Sep-07	1801	3711.2	7444.1	X26873.5	Y41592.3	172	47.0	49.4
0016	Sep-07	2049	3657.8	7437.1	X26825.8	Y41465.3	012	200.1	45.6
0017	Sep-07	2329	3658.9	7457.4	X26917.0	Y41434.6	129	24.6	52.3
0018	Sep-08	0137	3651.8	7441.0	X26836.2	Y41394.2	196	50.0	51.0
0019	Sep-08	0350	3641.4	7452.2	X26872.5	Y41260.4	182	25.4	56.1
0020	Sep-08	0548	3633.4	7444.0	X26829.2	Y41197.8	185	74.9	55.1
0021	Sep-08	0841	3618.7	7445.8	X26821.6	Y41044.6	352	196.9	43.6
0022	Sep-08	1123	3604.4	7448.9	X26819.9	Y40894.8	177	61.5	55.9
0023	Sep-08	1430	3559.8	7448.4	X26813.8	Y40852.2	186	79.8	56.3
0024	Sep-08	1627	3551.5	7454.5	X26829.7	Y40752.9	194	43.2	55.2
0025	Sep-08	1838	3548.6	7508.8	X26881.4	Y40680.2	188	18.3	62.3
0026	Sep-08	2035	3537.0	7510.3	X26875.3	Y40563.6	216	19.1	69.7
0027	Sep-08	2243	3530.4	7526.6	X26928.2	Y40445.7	191	6.8	76.0
0028	Sep-09	0028	3521.9	7525.9	X26916.8	Y40367.1	196	7.4	76.0
0029	Sep-09	0435	3511.6	7524.3	X26900.9	Y40278.2	159	8.2	75.2
0030	Sep-09	0650	3506.0	7536.8	X26938.7	Y40180.2	305	11.8	80.0
0031	Sep-09	0814	3510.1	7542.2	X26961.4	Y40196.8	230	9.0	76.4
0032	Sep-09	1002	3501.4	7554.7	X26994.6	Y40068.3	145	12.6	78.8
0033	Sep-09	1233	3444.7	7603.2	X27004.5	Y39883.8	152	17.0	79.8
0034	Sep-09	1423	3434.0	7557.2	X26974.1	Y39821.6	069	25.2	80.2
0035	Sep-09	1659	3436.2	7539.3	X26918.0	Y39918.3	027	111.8	61.1
0036	Sep-09	1849	3446.5	7540.8	X26932.9	Y39994.4	009	24.1	80.2
0037	Sep-09	2051	3501.0	7536.7	X26933.4	Y40135.6	079	17.5	80.1
0038	Sep-09	2330	3503.7	7512.6	X26852.5	Y40254.4	052	89.1	67.6
0039	Sep-10	0103	3506.1	7511.0	X26849.1	Y40281.1	233	47.3	66.8
0040	Sep-10	0404	3523.5	7456.9	X26813.9	Y40485.9	018	30.6	77.8
0041	Sep-10	0606	3535.9	7450.9	X26802.2	Y40618.4	332	40.5	50.7
0042	Sep-10	0945	3541.2	7524.8	X26933.2	Y40556.8	347	11.5	74.4
0043	Sep-10	1214	3547.6	7524.2	X26938.3	Y40621.9	330	10.7	74.9
0044	Sep-10	1353	3548.9	7530.5	X26963.0	Y40616.2	317	7.9	74.8
0045	Sep-10	1607	3551.4	7532.2	X26972.5	Y40635.7	334	9.0	75.7
0046	Sep-10	1851	3603.8	7534.5	X26996.5	Y40757.6	055	12.6	75.0
0047	Sep-10	2136	3614.1	7512.6	X26924.3	Y40925.8	280	16.1	61.7
0048	Sep-10	2352	3616.2	7532.2	X27003.8	Y40896.1	280	13.4	70.0
0049	Sep-11	0142	3615.9	7546.3	X27058.3	Y40856.3	334	6.0	76.0
0050	Sep-11	0347	3628.2	7544.3	X27068.3	Y40995.8	031	11.5	73.4
0051	Sep-11	0521	3633.0	7545.3	X27079.9	Y41046.9	282	9.0	75.8

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans			Course	Bottom	
					TD's		Depth (FM)		Temp (F)	
					---	---				
0052	Sep-11	0834	3635.8	7543.1	X27075.4	Y41083.2	034	10.1	74.5	
0053	Sep-11	1113	3640.8	7546.9	X27098.3	Y41130.6	031	8.7	74.8	
0054	Sep-11	1256	3643.4	7540.8	X27077.9	Y41172.8	017	11.8	75.3	
0055	Sep-11	1533	3650.6	7556.2	X27152.2	Y41221.6	326	4.4	75.4	
0056	Sep-11	1746	3700.9	7603.2	X27199.2	Y41328.1	144	7.7	75.1	
0057	Sep-11	2207	3700.9	7528.5	X27054.4	Y41393.8	040	15.0	71.8	
0058	Sep-12	0057	3710.7	7530.5	X27079.1	Y41499.5	022	12.6	72.7	
0059	Sep-12	0313	3710.8	7534.5	X27096.8	Y41492.7	356	10.4	73.1	
0060	Sep-12	0504	3715.8	7541.3	X27135.2	Y41537.6	024	6.0	72.4	
0061	Sep-12	0730	3723.4	7526.7	X27084.8	Y41649.8	056	14.5	72.9	
0062	Sep-12	1018	3729.3	7533.2	X27124.5	Y41705.5	213	8.7	72.2	
0063	Sep-12	1216	3727.3	7536.8	X27136.8	Y41677.7	003	6.0	72.4	
0064	Sep-12	1434	3736.3	7533.9	X27141.0	Y41784.7	357	5.7	71.6	
0065	Sep-12	1621	3736.1	7525.1	X27100.6	Y41795.7	028	8.2	71.2	
0066	Sep-12	1817	3744.4	7516.7	X27077.0	Y41902.5	114	11.2	71.2	
0067	Sep-12	2044	3738.6	7500.5	X26989.8	Y41861.4	050	16.7	70.1	
0068	Sep-12	2229	3743.6	7452.4	X26959.0	Y41928.7	289	15.9	70.4	
0069	Sep-13	0013	3748.5	7504.8	X27027.4	Y41965.5	332	13.9	71.4	
0070	Sep-13	0126	3753.7	7504.2	X27034.1	Y42024.7	319	9.3	71.2	
0071	Sep-13	0321	3753.8	7516.8	X27095.4	Y42009.4	017	7.1	71.4	
0072	Sep-13	0539	3803.3	7500.8	X27034.8	Y42136.0	010	10.9	71.3	
0073	Sep-13	0740	3811.1	7454.7	X27018.7	Y42230.4	056	12.3	70.7	
0074	Sep-13	1025	3805.9	7431.1	X26886.6	Y42199.7	056	25.2	64.8	
0075	Sep-13	1229	3810.9	7416.8	X26818.7	Y42269.0	346	24.9	55.4	
0076	Sep-13	1537	3816.1	7443.0	X26966.8	Y42299.1	274	13.7	67.6	
0077	Sep-13	1827	3822.9	7502.4	X27082.4	Y42354.8	019	6.8	71.0	
0078	Sep-13	2017	3823.6	7457.1	X27055.8	Y42368.3	006	10.9	71.0	
0079	Sep-13	2150	3826.2	7451.1	X27029.4	Y42403.4	347	10.9	71.1	
0080	Sep-13	2314	3833.7	7452.7	X27053.1	Y42485.2	301	10.9	70.8	
0081	Sep-14	0121	3833.8	7458.3	X27084.1	Y42482.1	255	7.7	71.0	
0082	Sep-14	0241	3835.5	7502.2	X27108.8	Y42497.6	349	6.0	70.9	
0083	Sep-14	0414	3838.5	7456.8	X27086.2	Y42536.3	005	9.8	71.0	
0084	Sep-14	0613	3846.5	7449.0	X27060.4	Y42631.2	084	9.6	70.7	
0085	Sep-14	0744	3843.6	7438.9	X26997.0	Y42605.6	104	16.1	68.5	
0086	Sep-14	1040	3835.8	7411.5	X26826.0	Y42539.5	058	27.9	52.5	
0087	Sep-14	1253	3841.1	7354.7	X26736.4	Y42606.2	352	24.9	50.7	
0088	Sep-14	1557	3858.4	7414.6	X26883.4	Y42780.3	303	17.0	67.3	
0089	Sep-14	1717	3900.9	7418.7	X26913.0	Y42805.4	309	15.9	67.9	
0090	Sep-14	1846	3904.0	7428.9	X26981.4	Y42835.3	222	10.9	69.1	
0091	Sep-14	2022	3901.0	7434.1	X27006.2	Y42800.9	202	9.6	69.5	
0092	Sep-14	2145	3859.3	7436.5	X27016.6	Y42780.3	290	7.9	69.6	
0093	Sep-14	2259	3859.4	7442.0	X27048.9	Y42778.9	240	7.4	70.0	
0094	Sep-15	0055	3854.3	7454.0	X27106.5	Y42716.1	073	6.6	70.3	
0095	Sep-15	0254	3857.4	7449.2	X27086.5	Y42753.5	051	6.0	69.6	
0096	Sep-15	0551	3914.0	7425.0	X26979.1	Y42946.0	107	9.8	69.0	
0097	Sep-15	0733	3911.1	7413.3	X26899.9	Y42917.0	325	12.0	68.0	
0098	Sep-15	0902	3918.6	7419.0	X26951.1	Y42996.3	334	9.0	69.2	
0099	Sep-15	1050	3917.4	7428.9	X27011.5	Y42982.0	222	6.6	69.1	
0100	Sep-15	1200	3911.4	7437.9	X27052.8	Y42914.5	046	6.6	69.4	
0101	Sep-15	1603	3921.2	7358.8	X26826.7	Y43025.8	041	15.3	68.6	
0102	Sep-15	1950	3938.2	7330.6	X26664.8	Y43196.2	205	20.5	59.9	

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans		Course	Bottom	
					TD's	Depth (FM)		Temp (F)	
---	-----	-----	-----	-----	-----	-----	---	-----	-----
0103	Sep-15	2227	3918.6	7332.1	X26646.2	Y42999.0	197	25.7	55.9
0104	Sep-16	0029	3904.3	7329.1	X26609.3	Y42855.6	146	30.1	51.4
0105	Sep-16	0217	3858.7	7318.5	X26536.5	Y42801.5	334	36.4	50.3
0106	Sep-16	0401	3905.8	7315.2	X26521.7	Y42872.4	309	34.4	50.9
0107	Sep-16	0756	3923.4	7249.1	X26363.4	Y43043.2	135	40.7	51.3
0108	Sep-16	1002	3928.6	7237.2	X26285.0	Y43089.9	127	51.4	52.6
0109	Sep-16	1347	3921.5	7215.9	X26141.5	Y43021.5	192	130.1	49.9
0110	Sep-16	1611	3928.4	7220.5	X26171.4	Y43084.4	305	77.6	57.7
0111	Sep-16	1840	3941.3	7227.2	X26219.7	Y43202.9	076	48.7	52.5
0112	Sep-16	2105	3946.8	7208.7	X26088.7	Y43244.1	331	51.9	57.0
0113	Sep-16	2249	3956.1	7216.4	X26145.1	Y43329.9	301	43.2	51.5
0114	Sep-17	0048	4006.1	7230.7	X26257.4	Y43427.7	300	31.4	50.1
0115	Sep-17	0246	4011.0	7243.7	X26362.4	Y43482.3	105	30.1	52.1
0116	Sep-17	0557	3948.4	7236.1	X26286.2	Y43271.8	298	31.2	49.9
0117	Sep-17	0847	3943.5	7305.0	X26490.9	Y43239.1	284	26.8	50.6
0118	Sep-17	1042	3945.9	7321.5	X26612.6	Y43269.1	322	21.1	61.3
0119	Sep-17	1339	3951.7	7351.9	X26841.1	Y43340.4	238	13.4	68.2
0120	Sep-17	1550	3943.2	7405.1	X26914.7	Y43257.4	028	6.3	69.2
0121	Sep-17	1800	3946.9	7404.6	X26919.6	Y43296.2	005	4.9	69.1
0122	Sep-17	1952	3959.5	7402.6	X26936.3	Y43426.8	002	9.3	68.7
0123	Sep-17	2154	4003.8	7352.6	X26873.7	Y43464.6	087	13.1	68.3
0124	Sep-17	2356	4002.8	7334.6	X26738.2	Y43443.1	315	20.5	66.6
0125	Sep-18	0236	4015.7	7357.3	X26938.8	Y43588.7	031	10.4	68.5
0126	Sep-18	0427	4018.1	7354.2	X26921.4	Y43610.7	348	11.8	68.2
0127	Sep-18	0620	4027.6	7356.2	X26962.9	Y43707.7	048	7.1	68.1
0128	Sep-18	0828	4029.5	7351.0	X26927.5	Y43721.8	272	8.5	68.2
0129	Sep-18	1004	4031.4	7344.5	X26881.5	Y43733.1	147	11.8	68.1
0130	Sep-18	1137	4031.4	7338.6	X26834.3	Y43726.3	104	10.1	68.1
0131	Sep-18	1319	4035.3	7326.7	X26748.9	Y43749.8	070	6.0	68.0
0132	Sep-18	1510	4032.6	7325.6	X26733.5	Y43722.8	275	9.6	68.0
0133	Sep-18	1634	4028.7	7331.2	X26769.3	Y43692.6	114	12.0	67.2
0134	Sep-18	1752	4026.8	7325.6	X26720.3	Y43667.9	117	15.0	67.2
0135	Sep-18	1907	4023.8	7321.2	X26678.5	Y43634.8	060	16.7	66.8
0136	Sep-18	2204	4038.3	7255.0	X26495.2	Y43738.9	001	13.7	66.1
0137	Sep-18	2345	4041.3	7255.7	X26507.4	Y43766.3	070	10.1	66.5
0138	Sep-19	0106	4043.5	7249.3	X26458.4	Y43777.4	064	9.3	68.1
0139	Sep-19	0311	4033.6	7239.2	X26356.6	Y43678.6	144	22.1	65.2
0140	Sep-19	0441	4026.3	7235.1	X26312.8	Y43610.5	066	24.3	56.9
0141	Sep-19	0738	4048.0	7235.3	X26347.9	Y43796.9	068	5.2	66.7
0142	Sep-19	0912	4048.9	7226.8	X26276.9	Y43793.3	169	14.2	65.8
0143	Sep-19	1055	4047.5	7216.9	X26190.3	Y43769.1	002	18.3	64.3
0144	Sep-19	1224	4053.1	7217.5	X26204.7	Y43815.5	057	9.3	65.8
0145	Sep-19	1401	4053.3	7214.0	X26174.4	Y43812.5	059	12.6	65.2
0146	Sep-19	1533	4055.8	7212.1	X26162.1	Y43829.3	058	7.4	65.7
0147	Sep-19	1715	4056.4	7208.9	X26135.6	Y43830.3	079	9.3	65.6
0148	Sep-19	1856	4053.4	7203.9	X26087.3	Y43799.4	053	17.2	65.0
0149	Sep-19	2016	4055.5	7201.5	X26069.5	Y43812.3	016	14.2	64.7
0150	Sep-19	2206	4057.8	7159.6	X26056.7	Y43828.2	118	14.2	65.1
0151	Sep-20	0002	4046.8	7159.8	X26043.3	Y43741.0	128	23.5	54.2
0152	Sep-20	1241	4046.7	7116.5	X25674.5	Y43688.2	175	32.5	51.6
0153	Sep-20	1538	4041.4	7142.9	X25894.8	Y43677.8	132	36.1	51.4

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans		Course	Bottom	
					TD's			Depth (FM)	Temp (F)
---	-----	-----	-----	-----	-----	-----	---	-----	-----
0154	Sep-20	1725	4036.3	7134.1	X25820.4	Y43628.2	080	38.0	51.3
0155	Sep-20	1957	4036.5	7110.7	X25630.1	Y43604.8	194	36.1	52.0
0156	Sep-20	2121	4031.4	7112.4	X25647.2	Y43568.2	177	39.4	51.4
0157	Sep-20	2302	4024.0	7113.8	X25665.4	Y43512.2	220	44.0	52.8
0158	Sep-21	0119	4021.6	7134.2	X25823.6	Y43512.2	207	43.7	51.8
0159	Sep-21	0410	4001.2	7142.9	X25898.5	Y43352.6	161	51.4	56.6
0160	Sep-21	0611	3954.2	7146.1	X25925.8	Y43295.8	062	81.2	54.0
0161	Sep-21	1053	3958.8	7114.4	X25700.7	Y43315.3	251	163.5	47.8
0162	Sep-21	1319	4008.8	7109.2	X25651.0	Y43390.4	093	75.7	56.3
0163	Sep-21	1839	4001.4	7018.2	X25358.9	Y43302.7	078	125.5	53.5
0164	Sep-25	1821	4119.8	7127.5	X25814.9	Y43945.6	162	10.9	64.7
0165	Sep-25	1946	4116.8	7124.8	X25783.5	Y43920.0	132	20.0	62.4
0166	Sep-25	2140	4107.1	7128.8	X25799.8	Y43855.6	172	14.5	63.1
0167	Sep-26	0018	4059.0	7150.6	X25979.6	Y43824.7	226	15.3	61.8
0168	Sep-26	0200	4053.8	7146.0	X25932.2	Y43778.6	083	28.4	52.7
0169	Sep-26	0519	4059.2	7118.5	X25697.7	Y43783.5	163	26.8	53.4
0170	Sep-26	0724	4056.3	7102.9	X25560.1	Y43742.9	133	29.0	54.4
0171	Sep-26	0856	4051.2	7056.9	X25509.4	Y43698.8	091	29.5	52.7
0172	Sep-26	1051	4058.3	7044.8	X25404.6	Y43734.9	021	26.8	55.2
0173	Sep-26	1246	4110.9	7039.9	X25367.0	Y43816.3	074	16.7	59.6
0174	Sep-26	1428	4113.8	7025.7	X25243.3	Y43817.7	097	16.7	61.5
0175	Sep-26	1614	4111.6	7014.6	X25141.1	Y43789.3	128	13.1	63.5
0176	Sep-26	1839	4056.8	7006.0	X25112.1	Y43681.4	167	11.8	62.7
0177	Sep-26	2136	4044.4	7004.2	X25148.3	Y43595.7	225	21.6	63.0
0178	Sep-26	2304	4039.1	7011.1	X25203.3	Y43565.8	288	26.0	63.4
0179	Sep-27	0053	4044.1	7026.2	X25281.3	Y43615.1	240	28.2	56.5
0180	Sep-27	0242	4041.8	7034.0	X25342.2	Y43606.5	215	31.4	54.8
0181	Sep-27	0447	4029.4	7045.5	X25449.9	Y43528.1	219	41.3	55.5
0182	Sep-27	0707	4016.2	7038.9	X25435.2	Y43424.8	105	61.0	57.2
0183	Sep-27	0825	4014.0	7034.8	X25415.7	Y43405.7	132	62.6	56.4
0184	Sep-27	1251	4013.9	6941.0	W14088.5	Y43369.7	100	44.3	53.6
0185	Sep-27	1406	4013.4	6935.0	W14059.9	Y43362.5	104	43.7	53.7
0186	Sep-27	1548	4011.0	6922.5	W14005.6	Y43339.3	158	48.9	54.8
0187	Sep-27	1723	4003.8	6918.0	W14007.3	Y43288.6	056	57.1	55.9
0188	Sep-27	1957	4011.2	6858.9	W13890.0	Y43327.7	064	70.8	54.9
0189	Sep-27	2123	4013.3	6850.9	W13844.6	Y43336.8	049	61.5	55.3
0190	Sep-27	2303	4018.7	6856.7	W13853.3	Y43374.8	008	49.2	52.1
0191	Sep-28	0132	4036.8	6848.1	W13744.6	Y43483.1	249	35.3	52.2
0192	Sep-28	0413	4031.0	6913.7	W13892.1	Y43464.7	280	36.9	55.9
0193	Sep-28	0550	4033.6	6924.2	W13935.8	Y43489.3	244	30.3	58.2
0194	Sep-28	0743	4028.5	6936.9	W14018.5	Y43465.1	356	36.9	53.5
0195	Sep-28	1002	4046.3	6933.4	W13936.0	Y43579.9	346	24.1	60.1
0196	Sep-28	1214	4053.4	6950.8	W14001.4	Y43643.2	005	16.7	61.2
0197	Sep-28	1414	4104.0	6937.3	W13887.6	Y43697.4	109	23.0	59.7
0198	Sep-28	1607	4058.1	6927.1	W13857.2	Y43649.9	079	22.1	58.8
0199	Sep-28	1847	4105.7	6914.9	W13763.3	Y43684.9	201	29.8	51.8
0200	Sep-28	2054	4100.7	6914.1	W13779.7	Y43653.6	012	32.8	55.5
0201	Sep-28	2305	4056.3	6904.5	W13748.4	Y43617.5	125	41.6	54.5
0202	Sep-29	0043	4059.2	6857.1	W13699.6	Y43628.5	150	43.2	53.5
0203	Sep-29	0229	4052.0	6853.1	W13709.4	Y43580.6	108	37.5	57.8
0204	Sep-29	0533	4045.8	6821.3	W13582.0	Y43518.5	064	30.1	56.4

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans		Course	Bottom	
					TD's			Depth (FM)	Temp (F)
---	-----	-----	-----	-----	-----	-----	---	-----	-----
0205	Sep-29	0727	4046.3	6806.6	W13512.5	Y43510.7	168	37.2	55.2
0206	Sep-29	1012	4026.3	6758.7	W13557.3	Y43388.4	091	89.4	52.1
0207	Sep-29	1201	4025.6	6749.3	W13519.1	Y43379.3	356	77.6	50.2
0208	Sep-29	1316	4031.1	6749.1	W13496.5	Y43411.1	030	55.0	50.3
0209	Sep-29	1733	4043.5	6745.0	W13428.1	Y43480.0	035	37.5	50.9
0210	Sep-29	1859	4048.3	6741.4	W13392.8	Y43504.8	320	38.0	51.2
0211	Sep-29	2129	4058.4	6758.9	W13427.1	Y43574.5	045	29.5	59.4
0212	Sep-29	2308	4103.8	6749.9	W13363.1	Y43598.3	105	27.6	58.9
0213	Sep-30	0134	4109.5	6730.8	W13254.9	Y43614.6	334	25.7	58.2
0214	Sep-30	0425	4123.9	6750.8	W13276.1	Y43709.5	041	21.6	63.8
0215	Sep-30	0646	4133.6	6738.3	W13175.1	Y43749.7	122	15.6	62.6
0216	Sep-30	0902	4126.4	6719.0	W13127.0	Y43694.8	161	25.2	61.5
0217	Sep-30	1041	4118.7	6715.6	W13149.2	Y43651.3	236	26.0	59.1
0218	Sep-30	1209	4114.1	6718.3	W13181.7	Y43629.1	239	27.6	58.0
0219	Sep-30	1341	4109.5	6714.9	W13188.2	Y43602.3	151	32.0	57.1
0220	Sep-30	1537	4059.6	6719.1	W13249.7	Y43551.9	139	40.5	54.0
0221	Sep-30	1711	4053.4	6710.5	W13241.2	Y43512.7	137	47.3	50.5
0222	Sep-30	1901	4046.1	6659.1	W13226.7	Y43466.2	216	57.7	51.9
0223	Sep-30	2032	4040.7	6704.4	W13270.5	Y43439.9	086	82.0	51.7
0224	Sep-30	2245	4038.0	6655.1	W13244.9	Y43420.2	053	149.0	50.4
0225	Oct-01	0128	4053.4	6640.4	W13122.6	Y43494.3	044	59.3	52.9
0226	Oct-01	0323	4103.3	6645.0	W13096.7	Y43548.8	347	41.8	47.9
0227	Oct-01	0447	4108.8	6644.3	W13069.7	Y43576.5	029	39.6	48.9
0228	Oct-01	0621	4115.5	6640.5	W13024.7	Y43608.4	270	41.6	48.6
0229	Oct-01	0855	4118.4	6659.1	W13083.7	Y43637.1	351	35.3	55.5
0230	Oct-01	1145	4139.7	6700.0	W12985.7	Y43746.4	202	32.5	59.4
0231	Oct-01	1412	4148.5	6653.6	W12917.1	Y43784.3	281	35.0	59.1
0232	Oct-01	1606	4146.4	6646.8	W12901.2	Y43767.7	178	36.1	58.9
0233	Oct-01	1846	4128.3	6646.0	W12985.9	Y43677.2	127	41.3	54.6
0234	Oct-01	2038	4120.7	6634.9	W12979.6	Y43630.3	116	46.8	49.8
0235	Oct-01	2234	4115.8	6622.8	W12957.7	Y43597.2	155	50.0	47.3
0236	Oct-02	0030	4106.8	6621.9	W12995.0	Y43551.4	041	119.2	52.3
0237	Oct-02	0338	4126.2	6605.2	W12846.8	Y43636.3	053	74.4	49.5
0238	Oct-02	0459	4128.9	6603.1	W12826.8	Y43647.9	327	67.5	49.4
0239	Oct-02	0638	4136.2	6606.5	W12804.0	Y43685.4	239	52.2	46.8
0240	Oct-02	0855	4131.3	6622.7	W12884.8	Y43674.0	338	48.7	50.2
0241	Oct-02	1039	4138.5	6627.3	W12866.8	Y43712.7	005	41.6	54.6
0242	Oct-02	1209	4143.3	6622.8	W12827.0	Y43732.4	332	41.8	51.7
0243	Oct-02	1426	4153.7	6629.7	W12800.9	Y43787.9	127	44.6	49.2
0244	Oct-02	1817	4146.9	6607.2	W12754.7	Y43737.1	326	47.6	47.0
0245	Oct-02	2055	4154.0	6610.5	W12730.8	Y43773.3	034	47.8	46.9
0246	Oct-03	0028	4201.4	6551.1	W12629.2	Y43790.8	305	120.0	46.6
0247	Oct-03	0324	4211.7	6607.3	W12629.8	Y43851.9	246	126.0	45.3
0248	Oct-03	0539	4209.2	6614.7	W12668.3	Y43847.2	248	95.4	48.1
0249	Oct-03	0714	4206.2	6621.8	W12708.3	Y43840.0	214	47.0	46.1
0250	Oct-03	0849	4201.2	6629.9	W12763.4	Y43823.8	245	44.0	49.0
0251	Oct-03	1205	4158.2	6658.5	W12886.9	Y43836.1	345	33.1	59.8
0252	Oct-03	1339	4206.1	6653.5	W12826.7	Y43869.4	070	36.1	47.1
0253	Oct-03	1628	4211.3	6637.3	W12737.7	Y43878.2	278	114.0	47.6
0254	Oct-03	1915	4218.9	6646.5	W12731.8	Y43922.6	319	165.1	47.8
0255	Oct-03	2157	4231.1	6700.6	W12718.7	Y43994.0	211	178.3	47.0

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans		Course	Bottom	
					TD's	Depth (FM)		Temp (F)	
---	-----	-----	-----	-----	-----	-----	---	-----	-----
0256	Oct-04	0059	4218.7	6722.2	W12874.2	Y43960.1	274	156.1	46.5
0257	Oct-04	0331	4210.8	6742.7	W13004.8	Y43944.4	218	108.3	47.0
0258	Oct-04	0553	4201.4	6801.5	W13139.8	Y43918.4	300	111.8	46.3
0259	Oct-04	0724	4203.9	6808.8	W13160.8	Y43939.8	177	122.2	47.1
0260	Oct-04	0912	4156.5	6812.6	W13216.7	Y43906.3	091	117.6	46.8
0261	Oct-04	1101	4151.4	6758.9	W13179.0	Y43863.8	189	32.3	46.2
0262	Oct-04	1225	4146.1	6754.0	W13183.3	Y43830.9	285	18.0	60.4
0263	Oct-04	1353	4146.1	6804.6	W13231.6	Y43842.5	151	20.0	55.1
0264	Oct-04	1547	4136.1	6759.3	W13256.3	Y43783.6	155	18.3	61.9
0265	Oct-04	1849	4119.3	6813.3	W13400.5	Y43704.8	304	27.1	62.7
0266	Oct-04	2021	4124.6	6820.5	W13409.8	Y43741.6	012	30.1	61.5
0267	Oct-04	2240	4123.6	6834.2	W13480.3	Y43750.1	143	43.5	48.5
0268	Oct-05	0019	4114.0	6828.0	W13493.2	Y43688.9	233	30.6	60.1
0269	Oct-05	0214	4108.4	6844.0	W13595.9	Y43671.4	296	34.2	56.9
0270	Oct-05	0515	4115.9	6906.2	W13675.1	Y43737.8	173	77.6	43.5
0271	Oct-05	0730	4109.1	6912.1	W13734.3	Y43702.9	342	38.3	49.3
0272	Oct-11	1600	4133.4	6910.5	W13619.3	Y43846.2	066	89.1	43.8
0273	Oct-11	1821	4133.1	6850.6	W13517.9	Y43821.4	085	85.3	43.5
0274	Oct-11	2154	4138.7	6826.7	W13373.1	Y43826.3	023	55.2	44.5
0275	Oct-12	0053	4146.3	6818.7	W13297.1	Y43858.9	061	54.4	45.2
0276	Oct-12	0325	4149.6	6825.1	W13311.4	Y43883.9	166	115.9	46.8
0277	Oct-12	0622	4148.5	6843.4	W13407.3	Y43899.5	258	89.1	44.4
0278	Oct-12	0844	4151.6	6902.9	W13492.4	Y43940.8	010	96.5	44.2
0279	Oct-12	1212	4213.6	6925.2	W13501.5	Y44092.4	063	111.5	45.4
0280	Oct-12	1404	4218.3	6925.3	W13477.3	Y44117.5	121	121.1	46.0
0281	Oct-12	1620	4215.8	6910.9	W13411.0	Y44083.3	050	112.4	45.6
0282	Oct-12	1905	4226.6	6855.0	W13268.1	Y44116.6	076	118.7	46.5
0283	Oct-12	2101	4228.2	6845.4	W13209.0	Y44111.2	106	101.7	45.7
0284	Oct-13	0123	4253.8	6901.0	W13143.3	Y44259.3	056	71.9	46.2
0285	Oct-13	0343	4302.7	6855.5	W13060.0	Y44291.9	143	77.6	45.7
0286	Oct-13	0742	4250.6	6824.0	W12971.7	Y44189.3	148	106.6	46.5
0287	Oct-13	0919	4246.5	6820.8	W12980.3	Y44165.2	227	115.9	46.6
0288	Oct-13	1206	4230.8	6829.5	W13114.3	Y44101.9	092	116.5	46.7
0289	Oct-13	1543	4221.0	6809.0	W13069.0	Y44026.8	300	102.5	46.1
0290	Oct-13	1936	4243.8	6752.6	W12864.2	Y44114.8	309	105.0	46.8
0291	Oct-13	2240	4301.2	6805.8	W12819.9	Y44212.2	057	112.1	47.1
0292	Oct-14	0155	4318.4	6752.8	W12652.4	Y44269.0	130	122.8	47.8
0293	Oct-14	0333	4313.4	6746.9	W12657.9	Y44239.6	169	118.7	47.8
0294	Oct-14	0700	4253.1	6722.9	W12680.8	Y44119.3	154	120.8	47.3
0295	Oct-14	0909	4241.2	6721.2	W12743.7	Y44064.0	005	112.9	47.7
0296	Oct-14	1314	4307.0	6644.3	W12449.6	Y44132.6	030	75.2	47.6
0297	Oct-14	1534	4313.7	6648.2	W12422.9	Y44165.5	019	80.9	51.0
0298	Oct-14	1844	4320.3	6623.3	W12298.5	Y44163.0	280	33.4	50.0
0299	Oct-14	2231	4329.1	6700.9	W12372.7	Y44244.1	322	117.0	53.3
0300	Oct-15	0126	4346.2	6712.1	W12302.4	Y44326.3	060	94.1	48.6
0301	Oct-15	0416	4344.1	6652.2	W12245.4	Y44291.9	351	83.9	49.1
0302	Oct-15	0632	4343.6	6645.6	W12226.1	Y44281.7	357	64.8	49.4
0303	Oct-15	0906	4356.0	6637.4	W12119.2	Y44318.1	215	53.3	50.3
0304	Oct-15	1115	4358.1	6631.0	W12085.7	Y44318.0	023	51.4	52.3
0305	Oct-15	1328	4412.2	6630.4	W11991.7	Y44368.2	219	45.9	52.7
0306	Oct-15	1748	4416.0	6710.3	W12091.9	Y44434.4	212	94.3	52.9

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans		Course	Bottom	
					TD's			Depth (FM)	Temp (F)
---	-----	-----	-----	-----	-----	-----	---	-----	-----
0307	Oct-15	1922	4413.9	6708.0	W12098.8	Y44423.5	215	72.2	48.1
0308	Oct-15	2104	4408.5	6718.6	W12174.2	Y44418.8	225	80.7	48.6
0309	Oct-16	0059	4347.4	6742.4	W12415.4	Y44372.3	347	120.8	48.2
0310	Oct-16	0513	4403.4	6752.4	W12346.9	Y44447.9	063	60.4	48.1
0311	Oct-16	0741	4410.8	6755.4	W12306.7	Y44479.6	235	46.5	48.0
0312	Oct-16	1010	4400.1	6816.0	W12477.9	Y44470.8	056	52.2	50.7
0313	Oct-16	1244	4355.8	6824.1	W12547.2	Y44466.9	221	57.7	51.9
0314	Oct-16	1631	4331.7	6840.8	W12797.2	Y44396.3	350	78.5	50.9
0315	Oct-16	2319	4348.3	6837.5	W12667.3	Y44458.4	256	61.8	51.6
0316	Oct-17	0617	4331.0	6924.7	W13042.9	Y44465.6	038	74.1	48.3
0317	Oct-17	0936	4336.9	6933.4	W13055.5	Y44505.3	179	73.3	50.1
0318	Oct-17	1227	4333.0	6942.3	W13133.8	Y44504.7	035	61.0	46.8
0319	Oct-17	1518	4317.0	6938.5	W13213.7	Y44427.7	052	87.5	50.6
0320	Oct-17	1745	4309.8	6937.0	W13249.4	Y44392.8	353	46.8	50.3
0321	Oct-17	2006	4306.2	6925.2	W13202.9	Y44356.0	271	91.3	44.8
0322	Oct-17	2200	4306.2	6942.7	W13304.8	Y44386.0	281	73.5	48.6
0323	Oct-18	0004	4308.8	6959.8	W13393.0	Y44428.3	196	55.8	45.2
0324	Oct-18	0137	4306.4	7006.8	X25822.9	Y44429.6	250	82.0	45.8
0325	Oct-18	0350	4314.5	7008.0	X25876.2	Y44469.7	258	73.8	47.0
0326	Oct-18	0731	4311.8	7010.5	X25872.4	Y44461.8	277	61.8	44.4
0327	Oct-18	1101	4303.2	7016.2	X25849.8	Y44431.5	310	82.0	44.9
0328	Oct-18	1327	4253.8	7008.8	X25756.4	Y44372.6	197	32.5	46.1
0329	Oct-18	1515	4248.6	7007.3	X25716.4	Y44343.7	032	67.8	43.4
0330	Oct-18	1719	4257.2	6959.3	W13459.1	Y44372.1	163	83.4	48.6
0331	Oct-18	1913	4253.7	6950.7	W13427.4	Y44339.9	167	134.8	48.9
0332	Oct-18	2151	4243.7	6943.0	W13439.0	Y44277.5	227	140.3	45.6
0333	Oct-19	0041	4233.7	7008.5	X25626.4	Y44269.0	340	43.7	46.4
0334	Oct-19	0252	4246.7	7021.3	X25776.3	Y44359.3	317	48.7	45.8
0335	Oct-19	0422	4250.7	7024.6	X25818.7	Y44385.6	263	71.1	46.5
0336	Oct-19	0510	4250.8	7026.6	X25830.5	Y44389.9	100	70.0	49.7
0337	Oct-19	0728	4252.5	7037.3	X25902.2	Y44419.2	034	42.1	47.3
0338	Oct-19	1000	4245.7	7040.0	X25877.7	Y44389.5	131	30.1	44.0
0339	Oct-19	1145	4238.4	7031.2	X25780.5	Y44334.6	222	40.2	46.8
0340	Oct-19	1247	4239.6	7028.0	X25769.1	Y44334.8	222	25.7	49.1
0341	Oct-19	1529	4231.4	7037.2	X25772.5	Y44307.9	239	33.9	46.4
0342	Oct-19	1714	4226.8	7042.9	X25780.4	Y44293.3	069	29.0	49.0
0343	Oct-19	1917	4222.3	7031.1	X25677.1	Y44246.8	360	49.2	48.5
0344	Oct-23	1904	4145.4	7019.2	X25352.8	Y44010.7	019	8.7	50.1
0345	Oct-23	2018	4150.0	7016.5	X25367.7	Y44034.4	007	14.5	46.7
0346	Oct-23	2215	4200.8	7013.6	X25427.3	Y44094.2	285	26.8	56.0
0347	Oct-23	2355	4201.5	7020.3	X25471.1	Y44108.7	231	28.2	55.8
0348	Oct-24	0137	4156.8	7029.2	X25496.0	Y44094.9	085	20.8	49.5
0349	Oct-24	0424	4159.0	7027.1	X25497.0	Y44105.0	264	21.6	48.8
0350	Oct-24	0614	4205.1	7027.7	X25542.0	Y44142.3	194	26.0	52.4
0351	Oct-24	0818	4208.7	7022.7	X25535.1	Y44154.6	307	33.9	49.9
0352	Oct-24	1009	4214.8	7033.0	X25639.8	Y44207.3	149	29.5	47.8
0353	Oct-24	1121	4213.7	7031.4	X25622.4	Y44198.2	143	32.8	50.7
0354	Oct-24	1541	4224.3	7047.7	X25796.5	Y44288.1	146	18.3	47.5
0355	Oct-24	1707	4222.5	7039.9	X25733.4	Y44263.3	122	36.1	50.9
0356	Oct-24	1934	4224.4	7016.9	X25608.6	Y44233.6	141	29.5	48.9
0357	Oct-24	2045	4221.6	7012.8	X25567.3	Y44210.9	167	31.2	50.5

NOAA Fisheries Service FALL BOTTOM TRAWL SURVEY
2006 STATION INFORMATION

Station	Date	Time	Lat	Lon	Lorans		Course	Bottom	
					TD's			Depth (FM)	Temp (F)
---	-----	-----	-----	-----	-----	---	-----	-----	
0358	Oct-24	2257	4206.5	7009.0	X25443.0	Y44120.0	092	21.9	49.1
0359	Oct-25	0125	4208.7	6946.8	W13648.6	Y44097.8	168	93.5	52.1
0360	Oct-25	0356	4150.9	6954.9	W13782.2	Y44007.6	170	13.4	45.6
0361	Oct-25	0732	4148.3	6926.5	W13635.0	Y43953.3	294	97.6	53.1
0362	Oct-25	1030	4138.7	6932.2	W13711.2	Y43904.6	089	48.7	44.8
0363	Oct-25	1213	4139.0	6933.8	W13718.6	Y43908.2	148	46.5	48.1
0364	Oct-25	1401	4126.7	6935.0	W13780.2	Y43836.0	140	16.4	54.2
0365	Oct-25	1531	4122.8	6934.9	W13796.7	Y43812.0	177	15.6	54.5
0366	Oct-25	1812	4124.0	6922.2	W13723.7	Y43804.3	178	28.7	52.7
0367	Oct-25	2342	4108.6	6930.2	W13830.9	Y43719.2	001	17.0	54.6

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
ALBATROSS IV SEP 05 - OCT 26, 2006
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
ALBATROSS IV SEP 05 - OCT 26, 2006
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
ALBATROSS IV SEP 05 - OCT 26, 2006
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
ALBATROSS IV SEP 05 - OCT 26, 2006
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
ALBATROSS IV SEP 05 - OCT 26, 2006
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
 ALBATROSS IV SEP 05 - OCT 26, 2006
 CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

		ATLANTIC COD	HADDOCK	POLLOCK	WHITE HAKE	SILVER HAKE	SPINY DOGFISH	YELLOWTAIL FLOUNDER	WINTER FLOUNDER	AMERICAN PLAICE	WITCH FLOORUNDER	WINDOWPANE FLDR	SUMMER FLOORUNDER	BLUEFISH	WEAKFISH	SCUP	SPOT	CROAKER	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL	
220	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	308	
221	0	0	5	0	0	0	3	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	254	367
222	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	32	77
223	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16	37
224	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12	47
225	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	60	
226	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	237	371
227	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	101	421
228	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	145
229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	29	60
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	237	371
231	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	101	421
232	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	145
233	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	29	60
234	3	239	0	0	0	0	15	0	0	82	0	0	0	0	0	0	0	0	0	0	0	0	1	237	371
235	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	107	207
236	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	38	85
237	0	77	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	3	16	65
238	0	53	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	45	63
239	0	7	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	9	34
240	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	7	33
241	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	30	52
242	0	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	57	146
243	3	416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	425	301
244	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	293	1264
245	233	761	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230	1264
246	0	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	117
247	0	184	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	198
248	0	417	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	434
249	2	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	207
250	17	1635	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	1782
251	0	0	0	0	0	0	0	31	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	51	161
252	38	769	0	0	0	0	0	0	7	12	0	0	0	0	0	0	0	0	0	0	0	0	0	32	859
253	0	2149	0	0	7	1	7	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	26	2223
254	12	96	0	2	0	12	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	53	176
255	0	24	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	40
256	0	40	0	6	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	66
257	0	323	0	5	3	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	428
258	12	66	0	5	22	58	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	107	271
259	0	319	0	8	9	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	423
260	0	313	0	11	18	157	0	3	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	26	539
261	1	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	578	
262	14	0	0	0	0	0	0	97	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	66	205
263	0	0	0	0	0	0	6	0	1	0	0	0	0	2	3	0	0	0	0	0	0	0	2	32	71

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
ALBATROSS IV SEP 05 - OCT 26, 2006
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

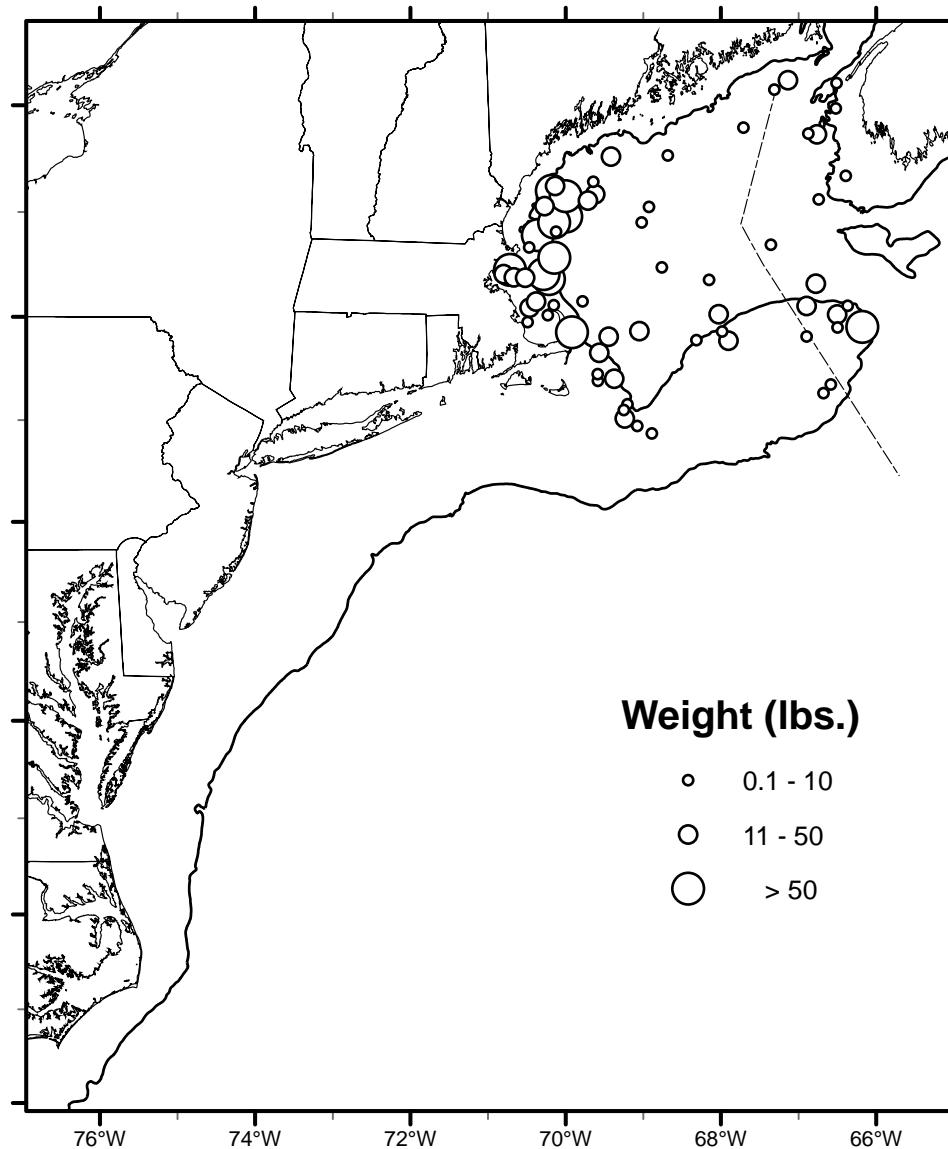
NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
ALBATROSS IV SEP 05 - OCT 26, 2006
CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

NOAA FISHERIES-NEFSC FALL BOTTOM TRAWL SURVEY
 ALBATROSS IV SEP 05 - OCT 26, 2006
 CATCH WEIGHTS (POUNDS) OF IMPORTANT SPECIES BY HAUL

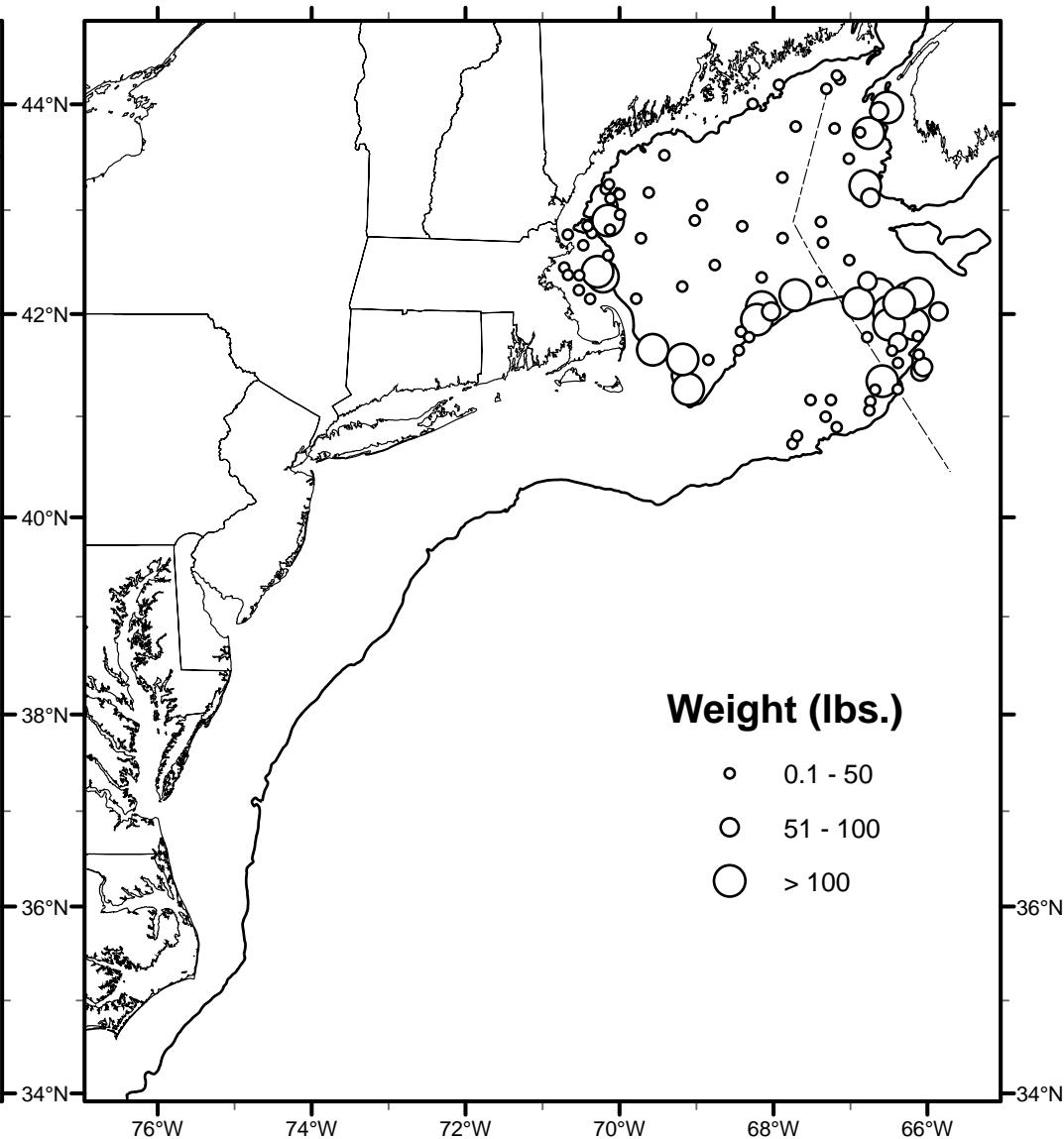
	ATLANTIC COD	HADDOCK	POLLOCK	WHITE HAKE	SILVER HAKE	REDFISH	GOOSEFISH	SPINY DOGFISH	YELLOWTAIL FLUNDER	WINTER FLUNDER	AMERICAN PLAICE	WITCH FLUNDER	WINDOWPANE FLDR	SUMMER FLUNDER	BLUEFISH	WEAKFISH	BLACK SEA BASS	SCUP	SPOT	CROAKER	BUTTERFISH	AMERICAN LOBSTER	LOLIGO	ILLEX	TOTAL * OTHER	TOTAL ALL	
352	0	0						249	2	21											727	3	3	0	1061	2068	
353	0	43	0	0	0	0	0	811	11	63	29	0	0	0	0	0	0	0	0	71	1	37	0	590	1656		
354	17	0	0	0	0	0	0	166	5	65	0	0	0	0	0	0	0	0	0	0	2	26	2	0	147	435	
355	16	3	0	0	11	0	1	45	0	8	60	1	0	0	0	0	0	0	0	0	0	0	1	0	63	233	
356	118	108	1	0	0	0	0	208	2	5	0	0	0	0	0	0	0	0	0	0	0	4	0	1	60	507	
357	155	109	9	12	0	0	0	82	1	18	0	0	0	0	0	0	0	0	0	0	0	5	1	0	54	446	
358	7	0	0	0	4	0	0	1061	22	112	0	0	0	2	0	0	0	0	0	0	0	0	13	1	0	113	1335
359	4	27	0	12	1	126	0	53	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	23	249	
360	61	0	3	0	0	0	0	119	14	2	0	0	0	0	0	0	0	0	0	0	0	0	14	46	0	63	326
361	13	0	0	10	0	396	0	425	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	5	22	871	
362	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	
363	42	197	0	0	0	0	0	275	0	8	0	0	0	0	0	0	0	0	0	0	0	0	2	3	24	551	
364	5	0	0	0	0	0	0	330	0	9	0	0	0	0	0	3	0	0	0	0	0	0	14	49	2	132	544
365	6	0	0	0	0	0	0	72	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	62	150
366	14	0	0	0	0	0	0	18446	1	4	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	503	18971
367	0	0	0	0	0	0	0	450	1	26	0	0	0	8	0	0	0	0	0	0	0	0	6	1	0	216	708
TOTAL	1831	10390	679	763	1269	6231	515	69031	860	1572	702	98	392	893	962	2711	2221	78	2233	12824	5151	1274	5577	1666	31311	161234	

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

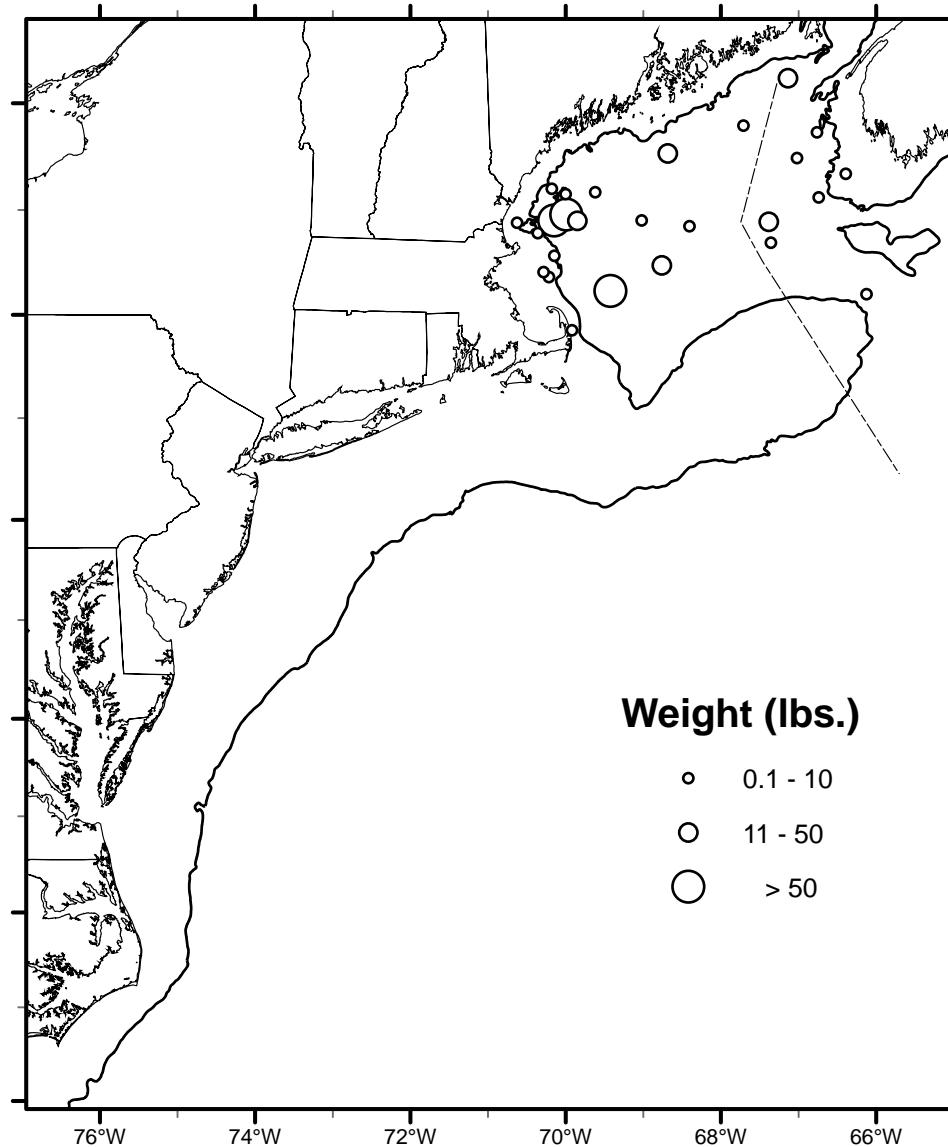
ATLANTIC COD
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



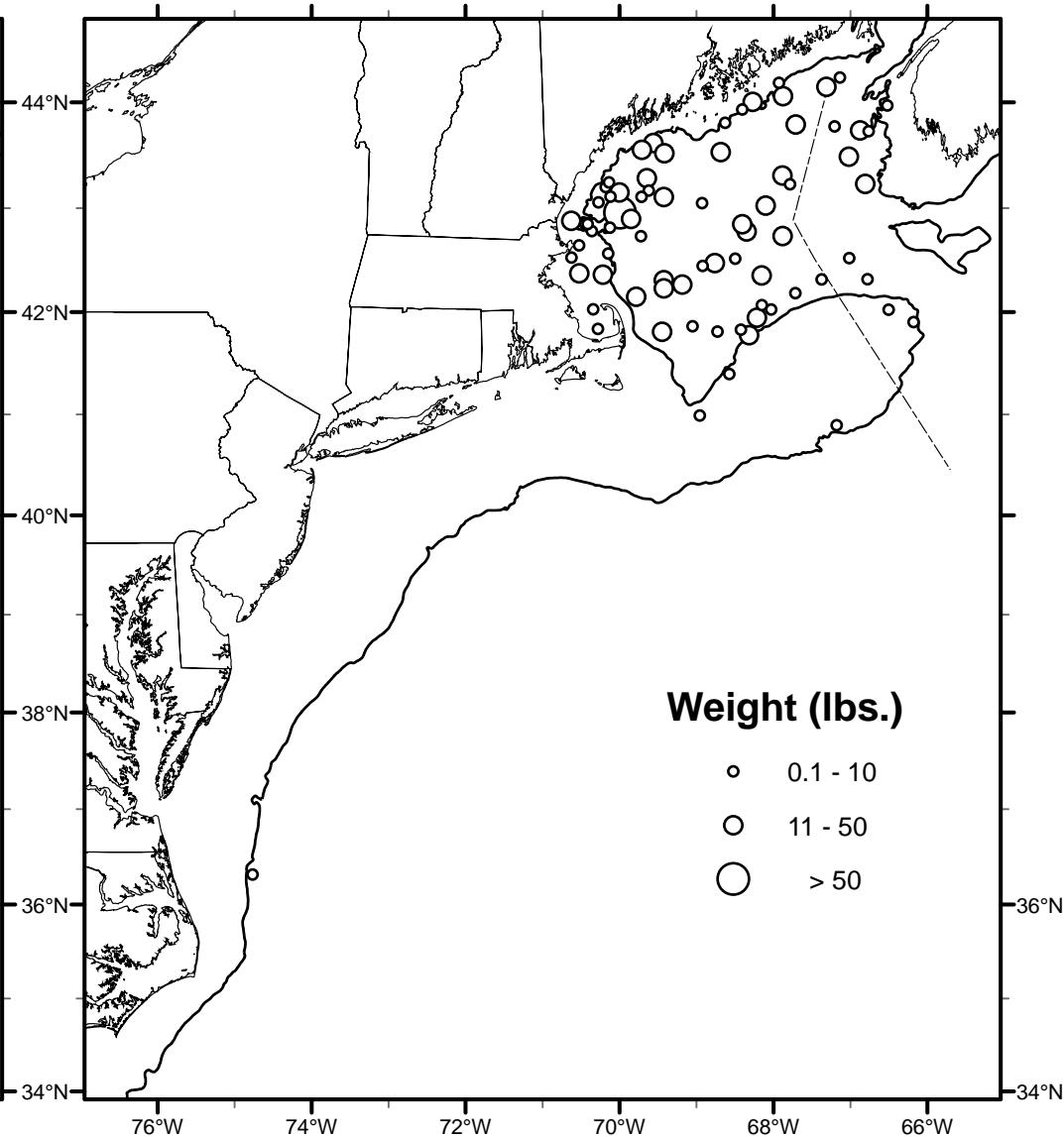
HADDOCK
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



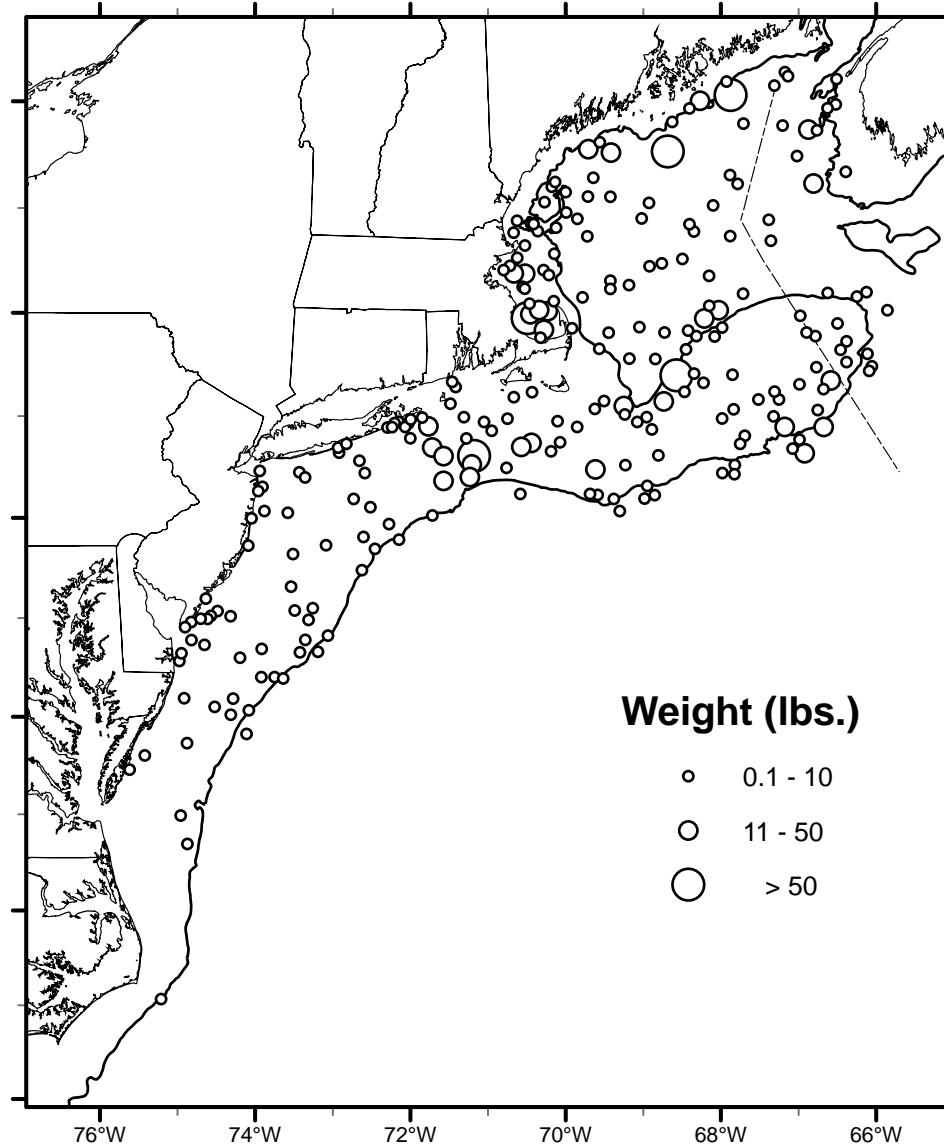
POLLOCK
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



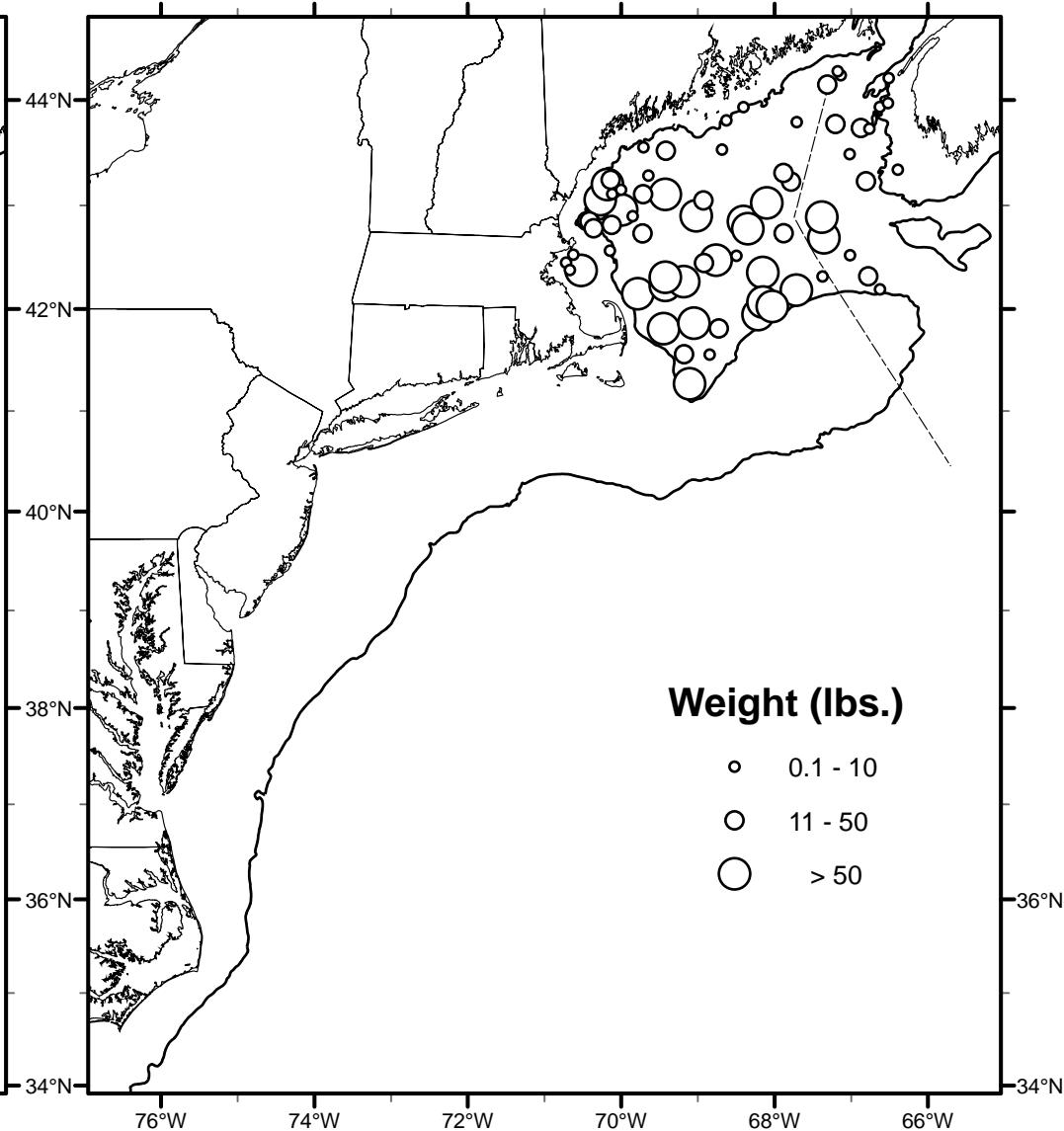
WHITE HAKE
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



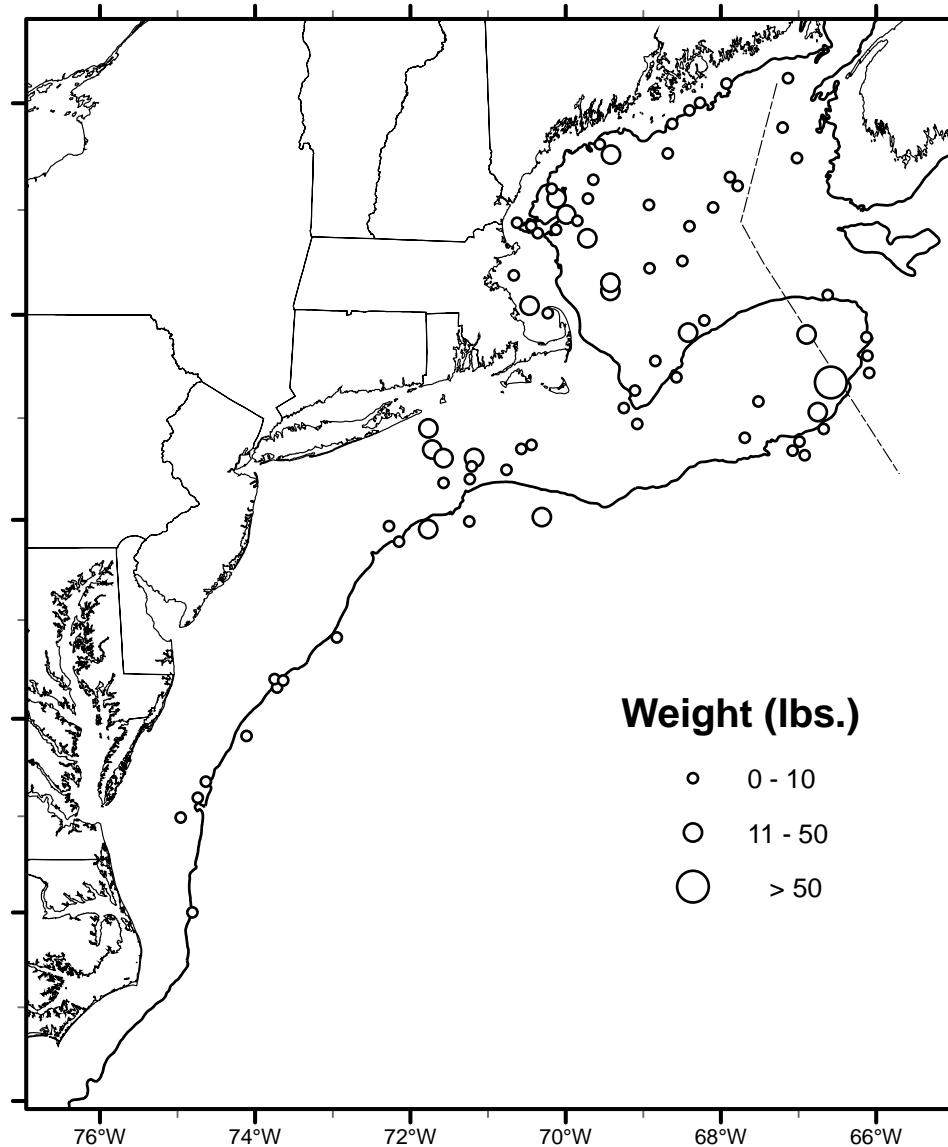
SILVER HAKE
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



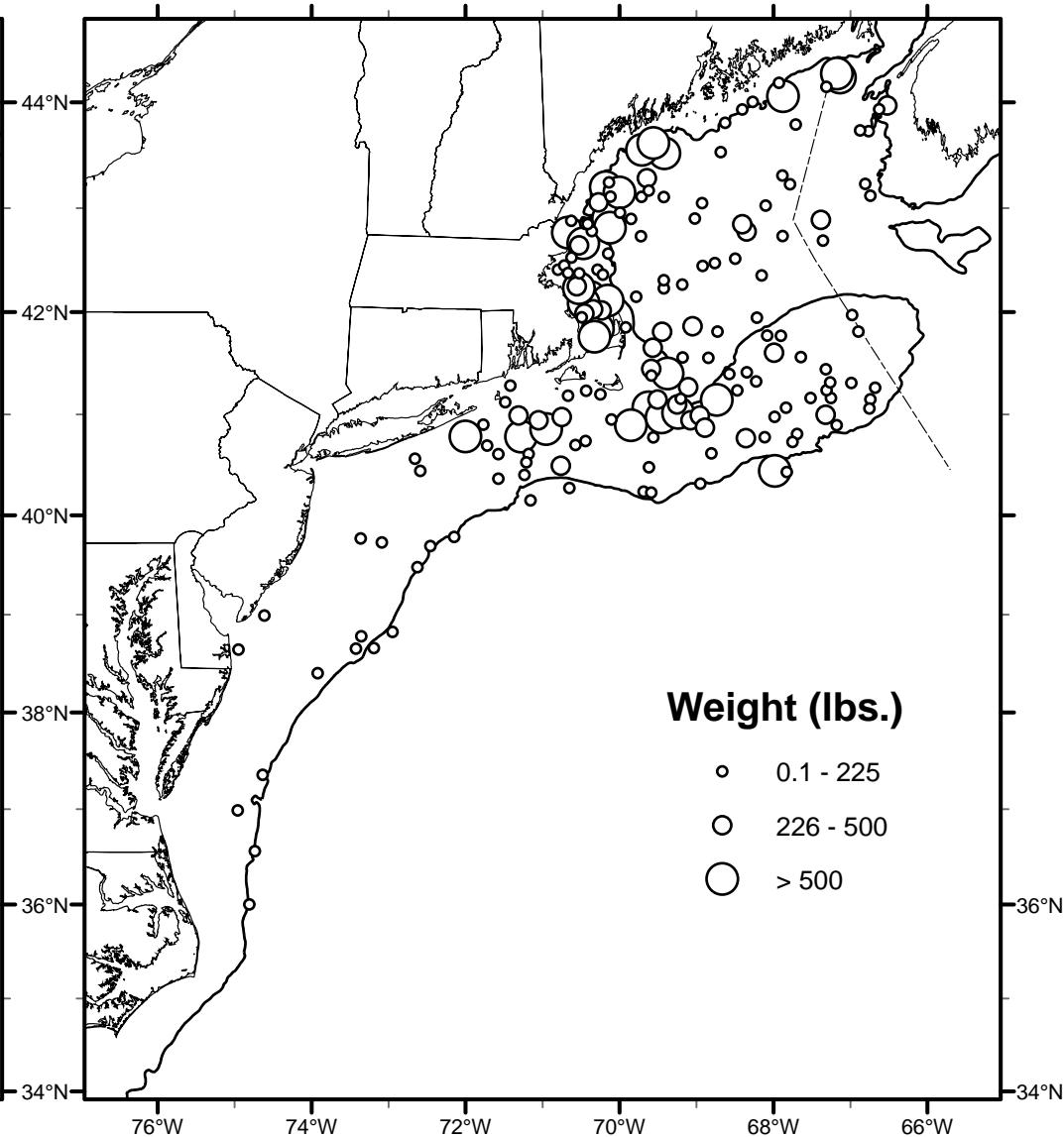
ACADIAN REDFISH
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



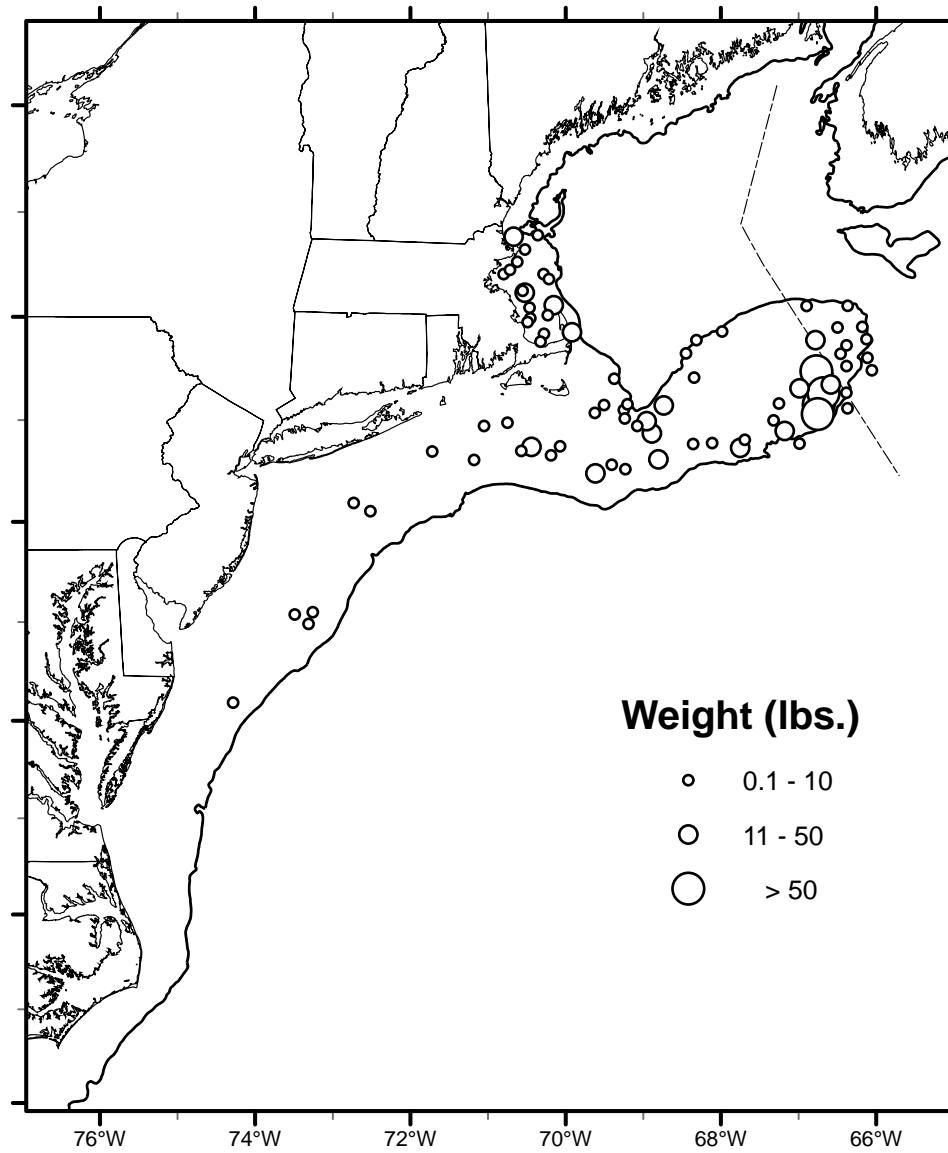
GOOSEFISH
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



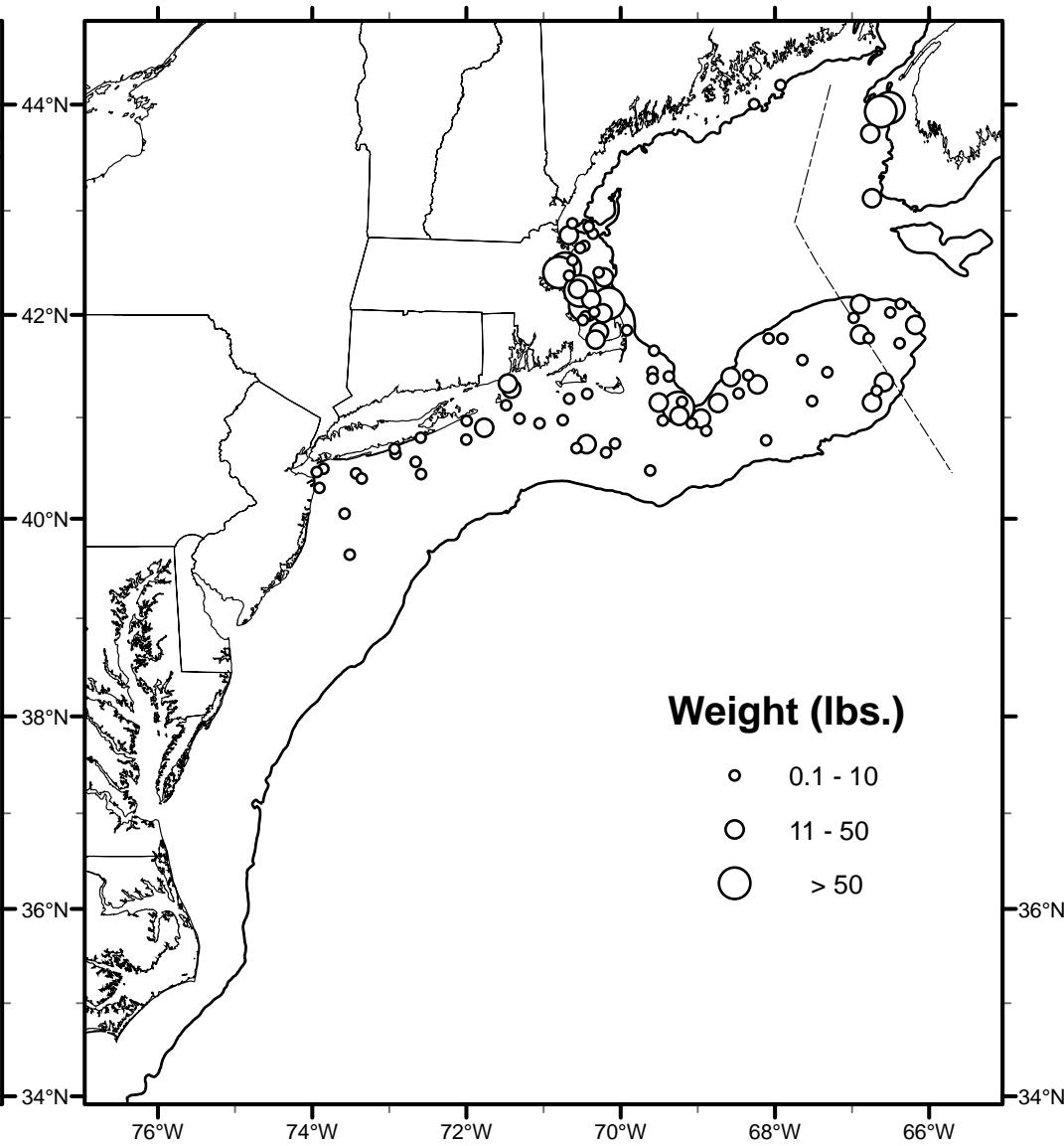
SPINY DOGFISH
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



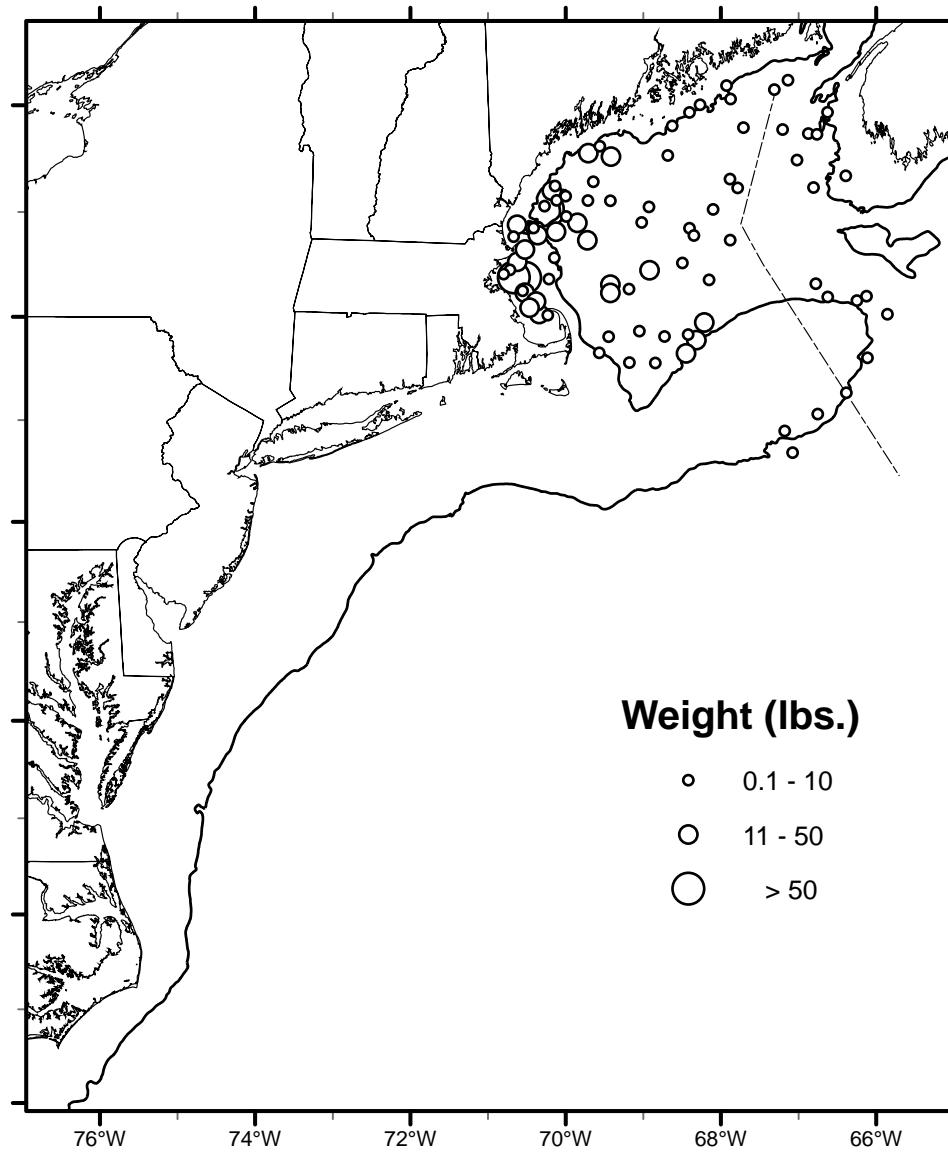
YELLOWTAIL FLOUNDER
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



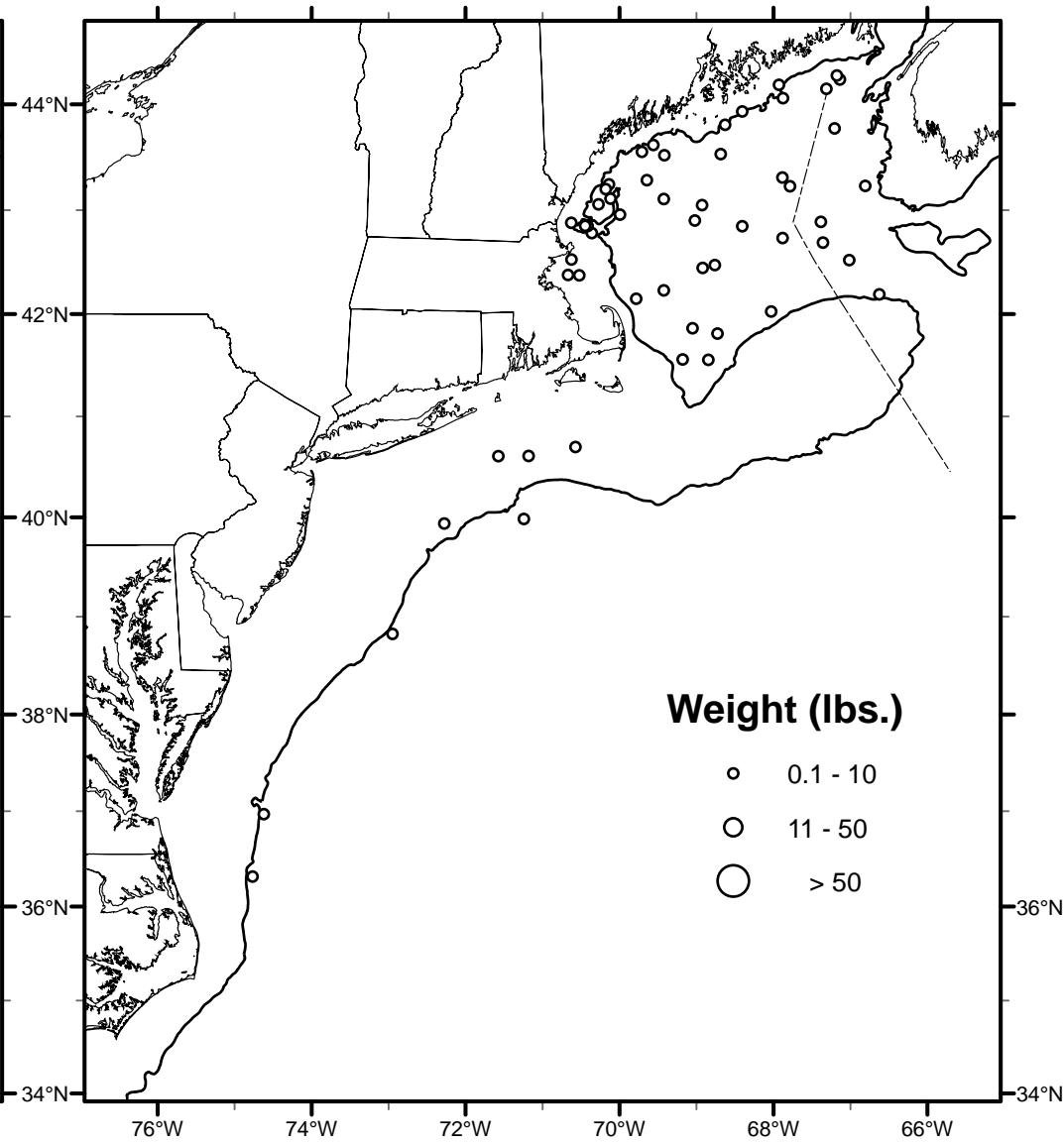
WINTER FLOUNDER
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



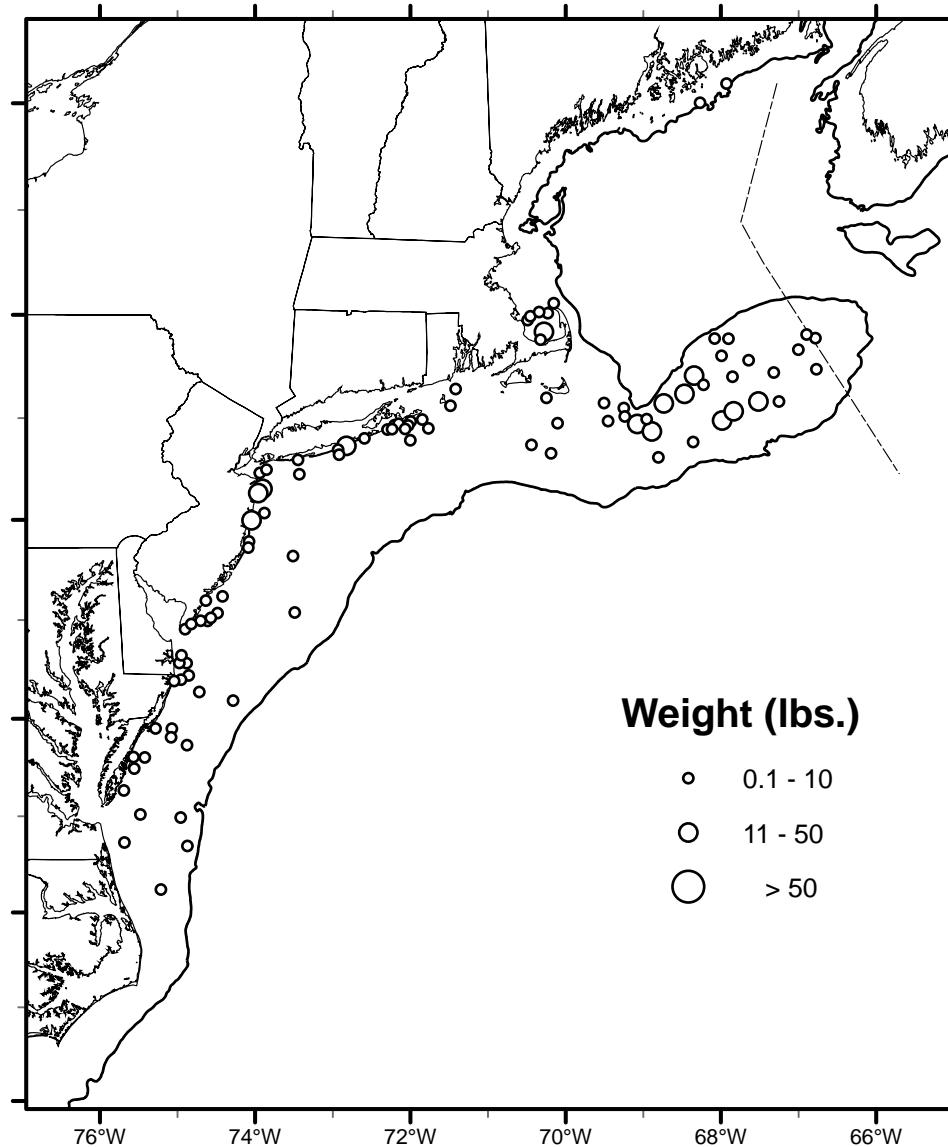
AMERICAN PLAICE
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



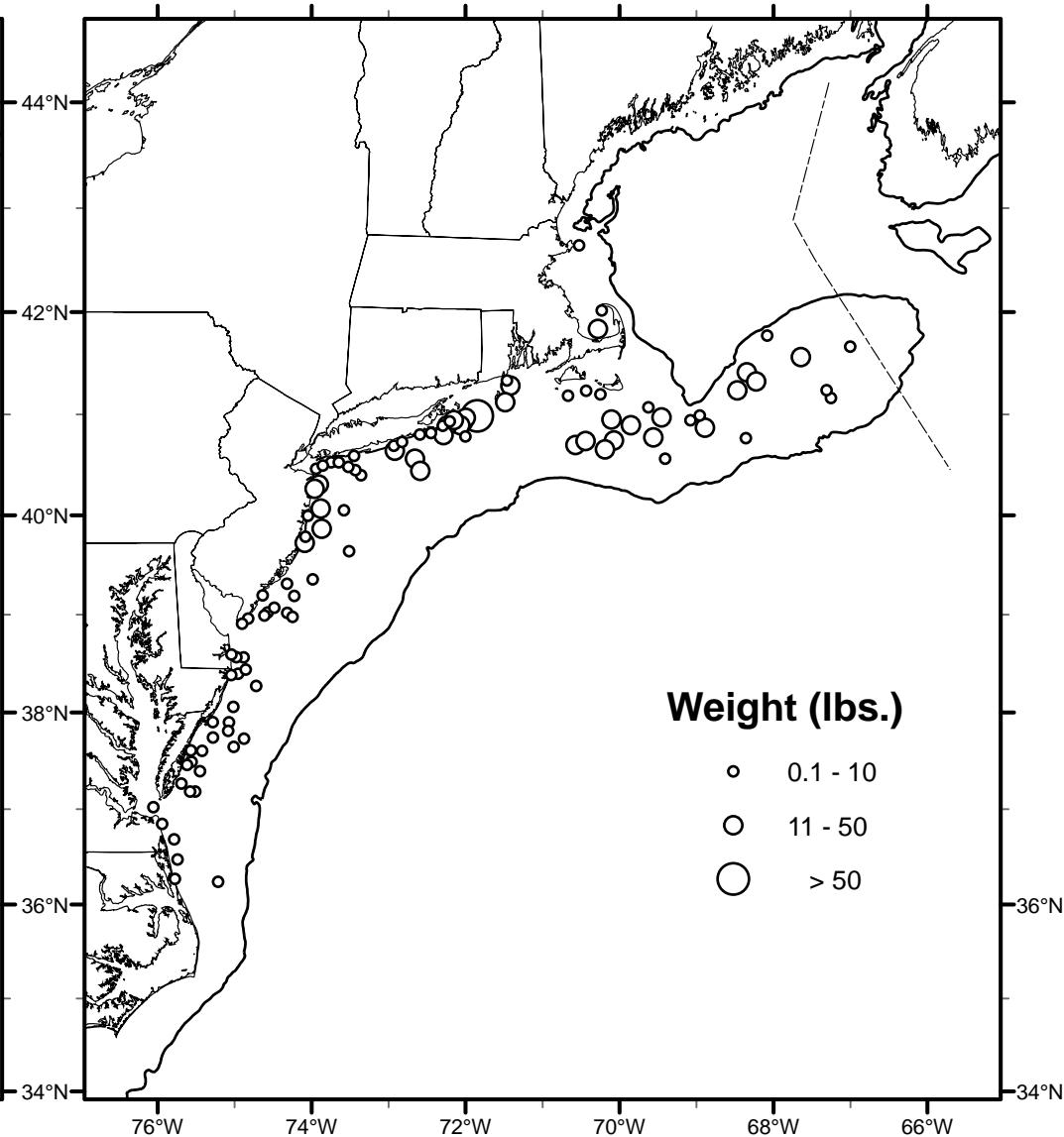
WITCH FLOUNDER
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



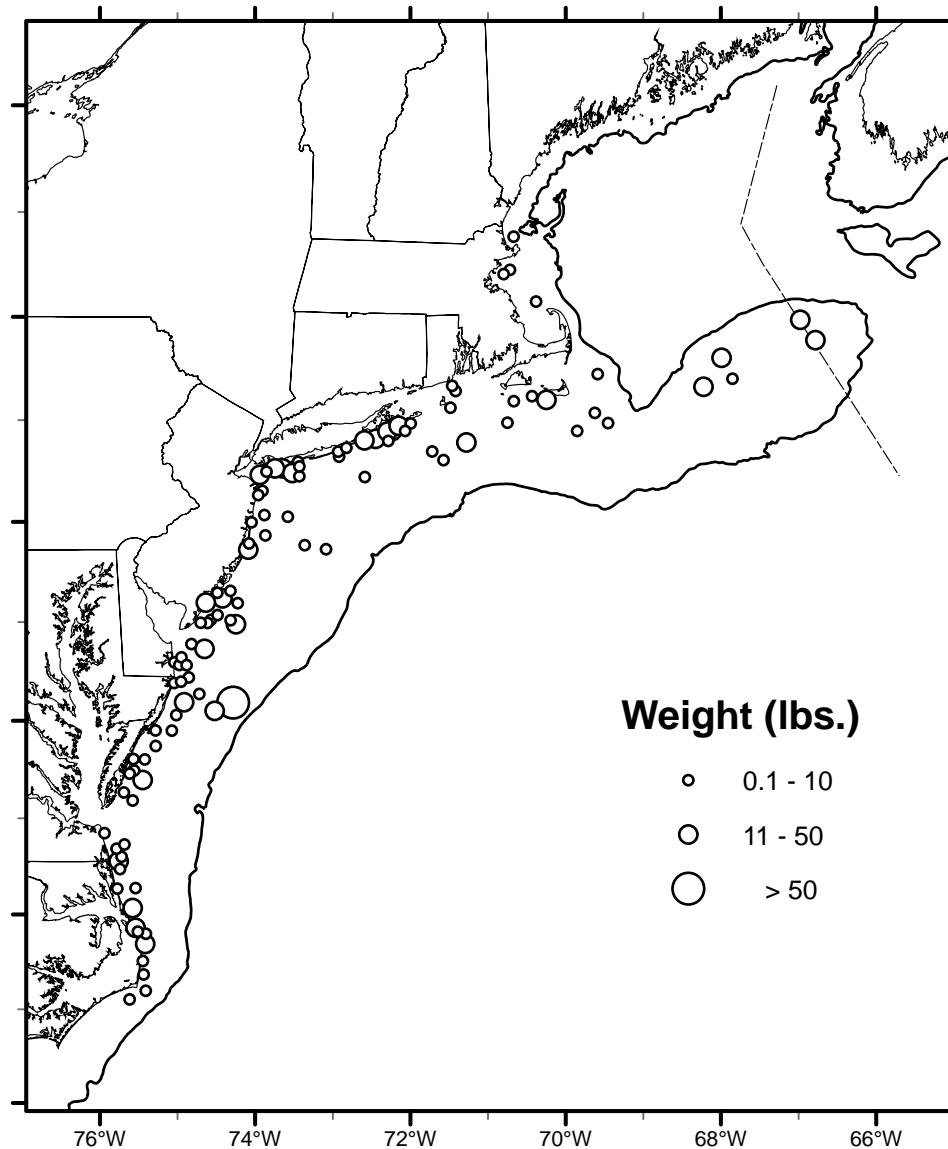
WINDOWPANE FLOUNDER
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



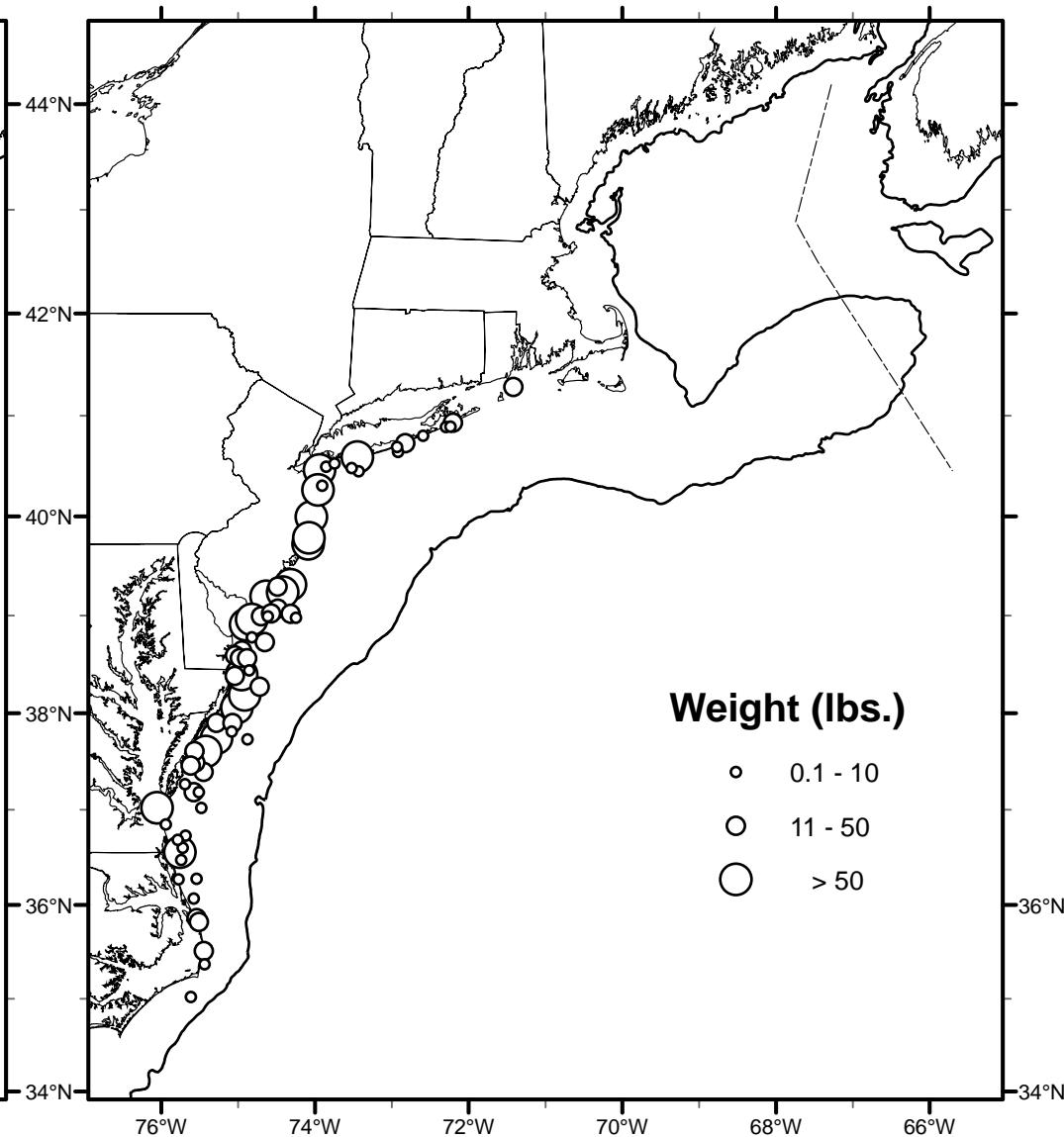
SUMMER FLOUNDER
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



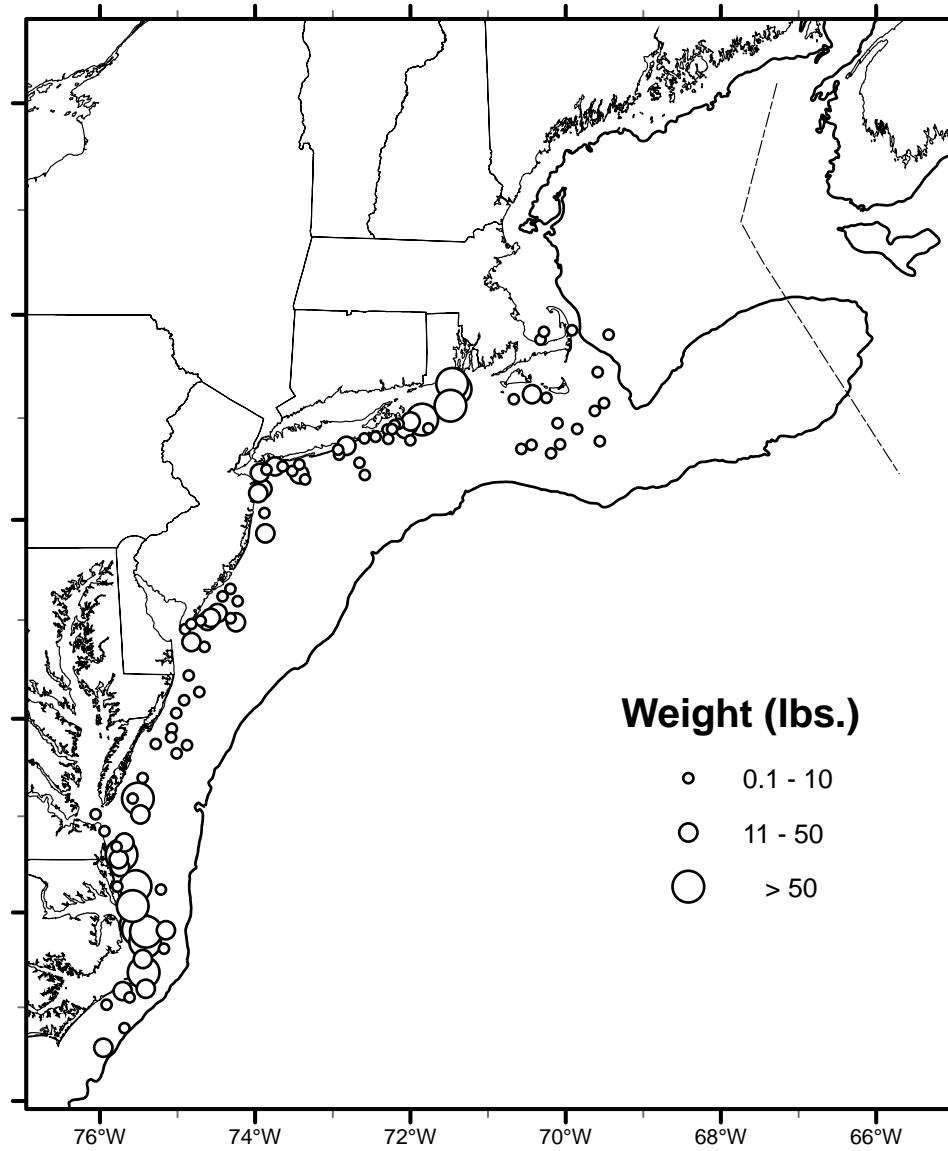
BLUEFISH
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



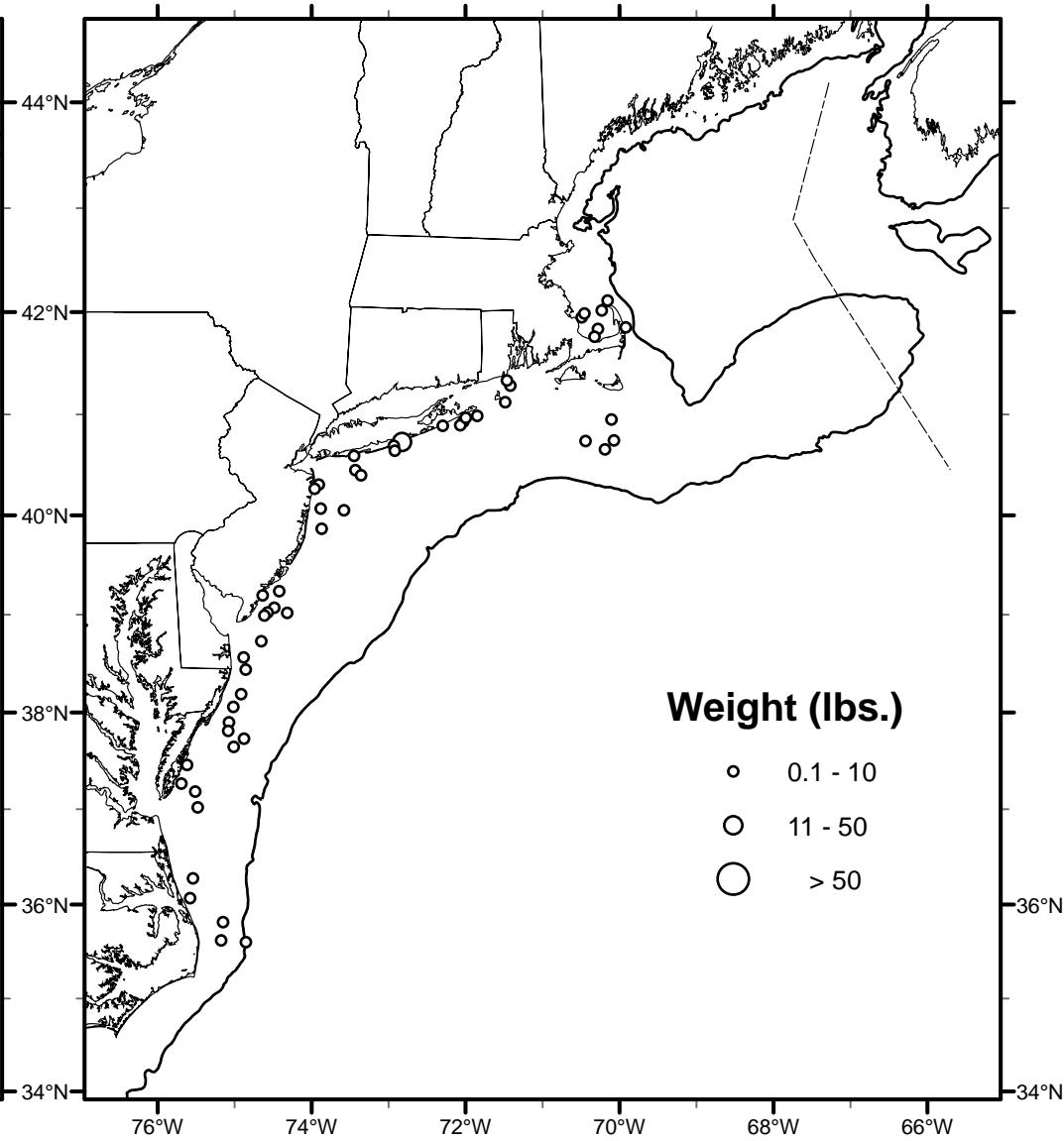
WEAKFISH
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



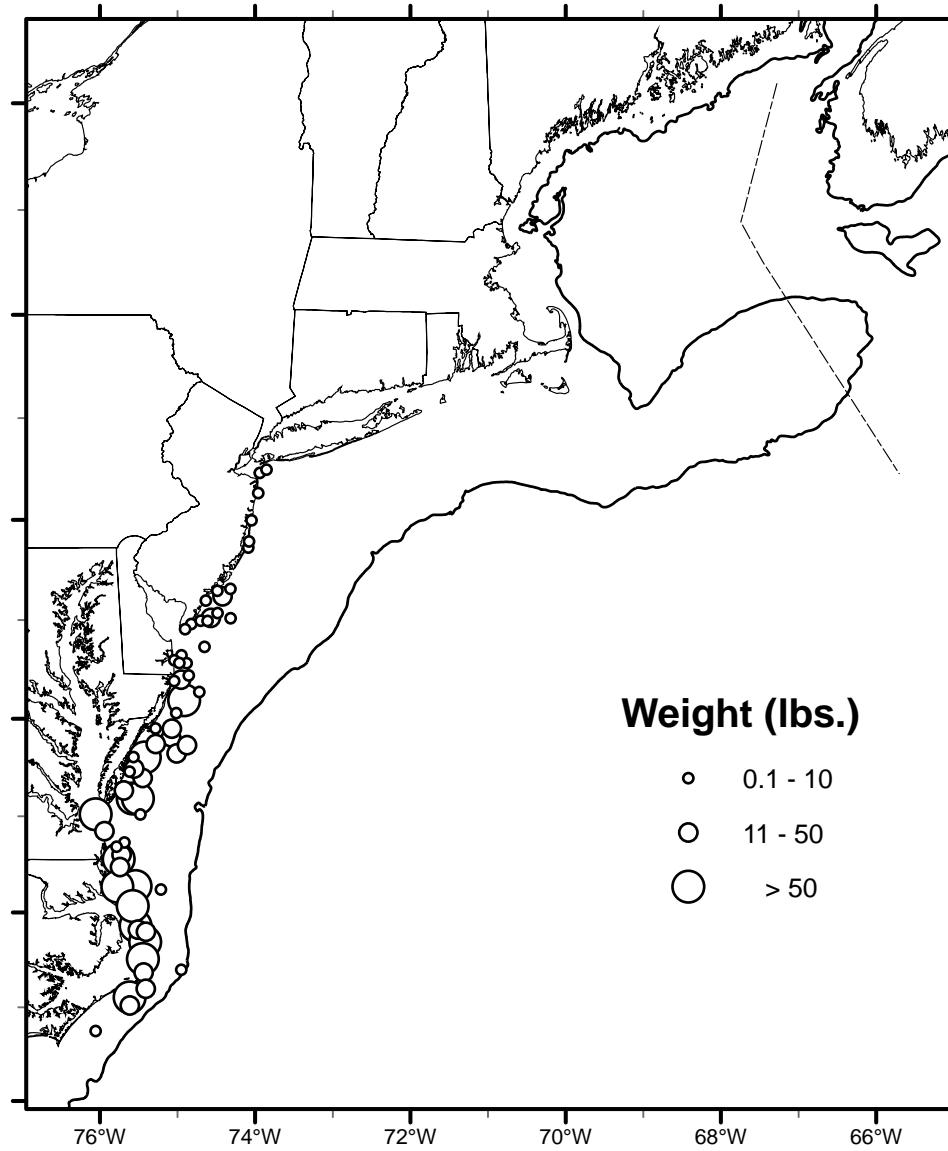
SCUP
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



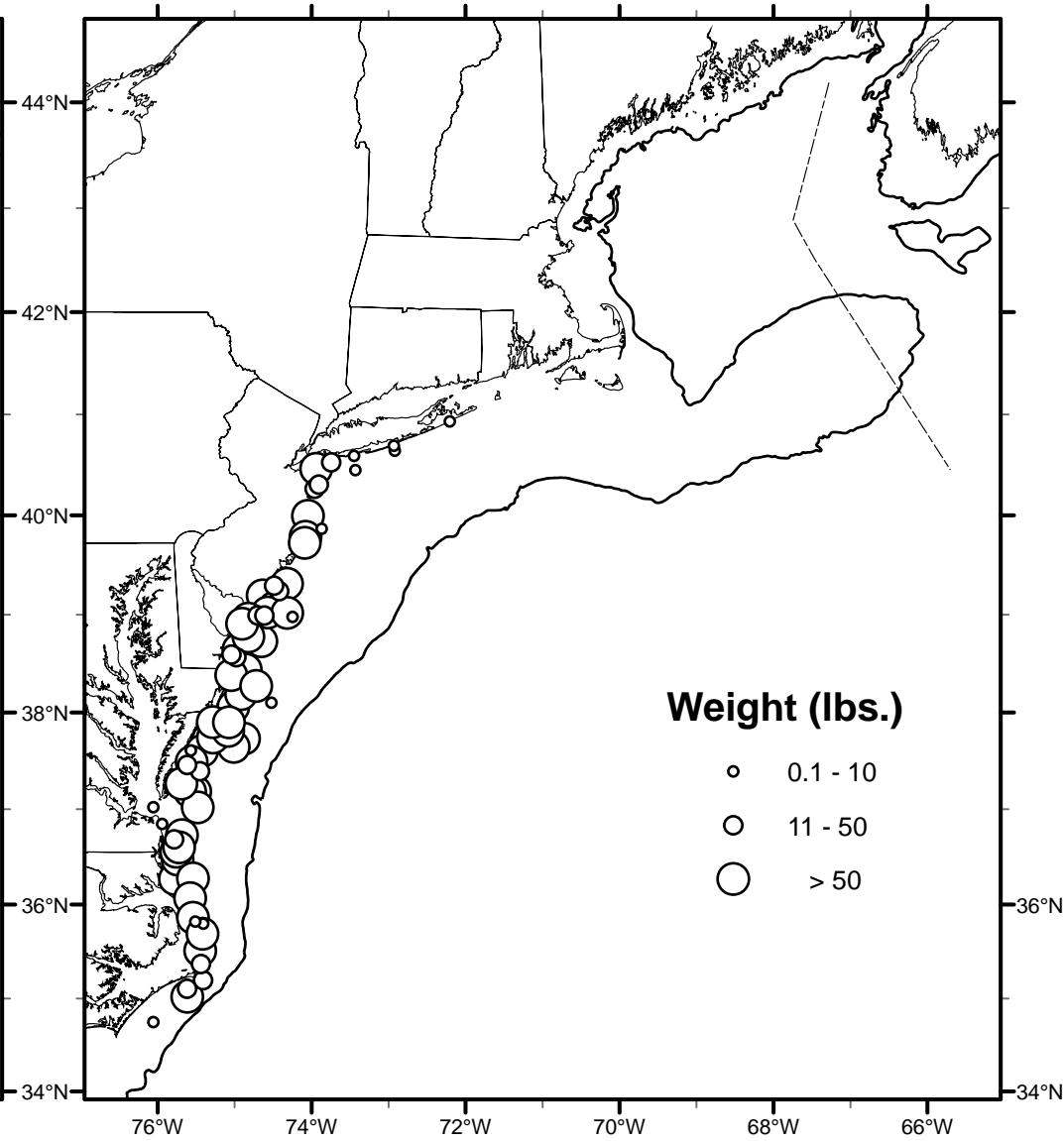
BLACK SEA BASS
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



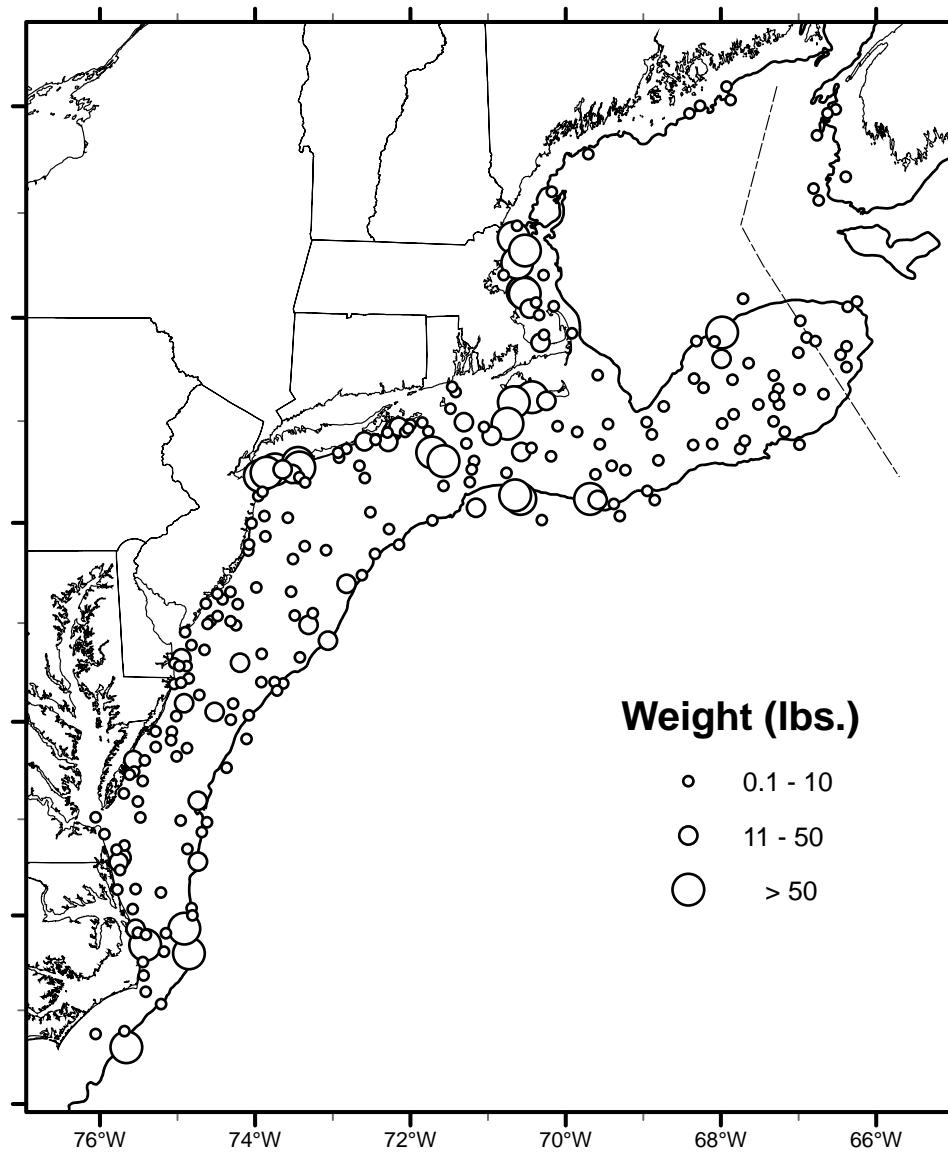
SPOT
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



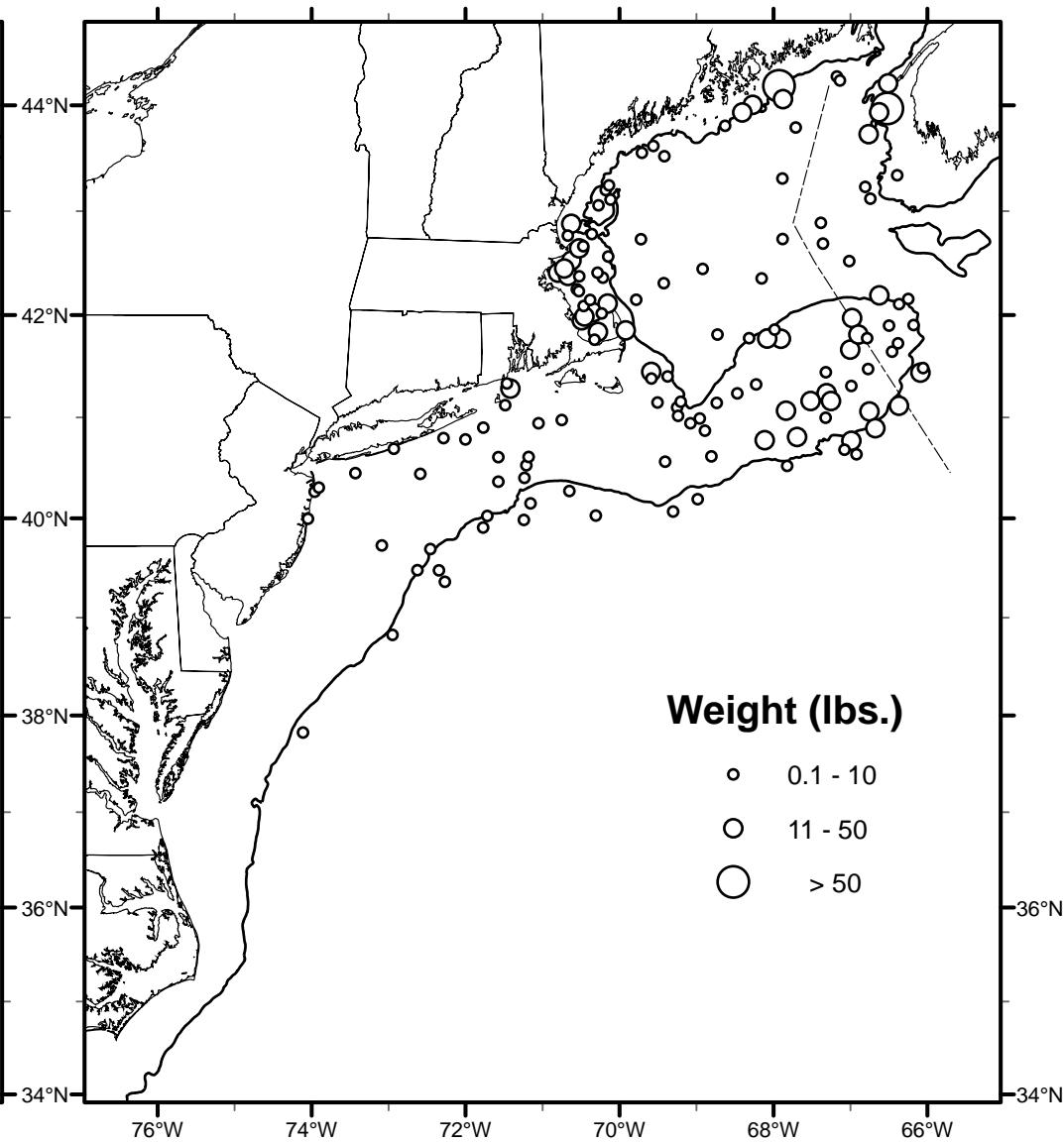
ATLANTIC CROAKER
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



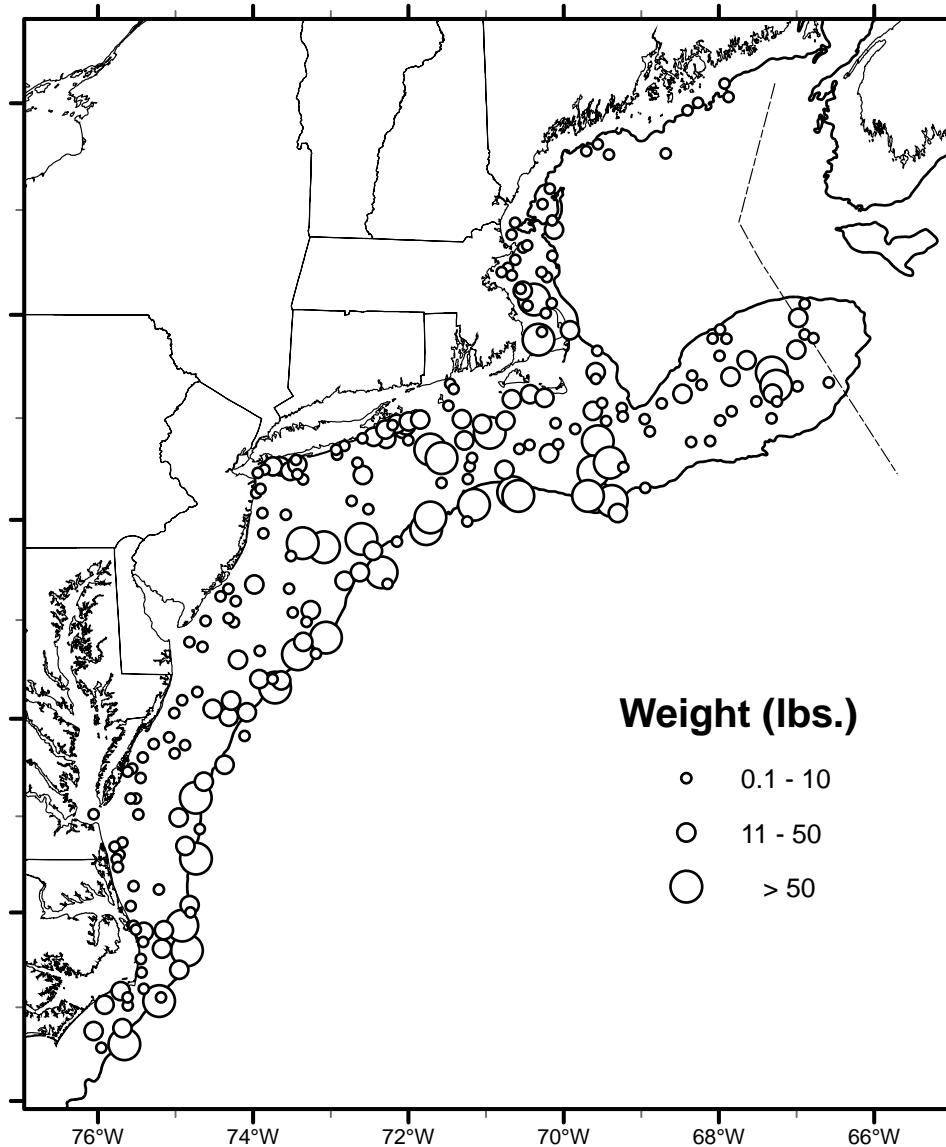
BUTTERFISH
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



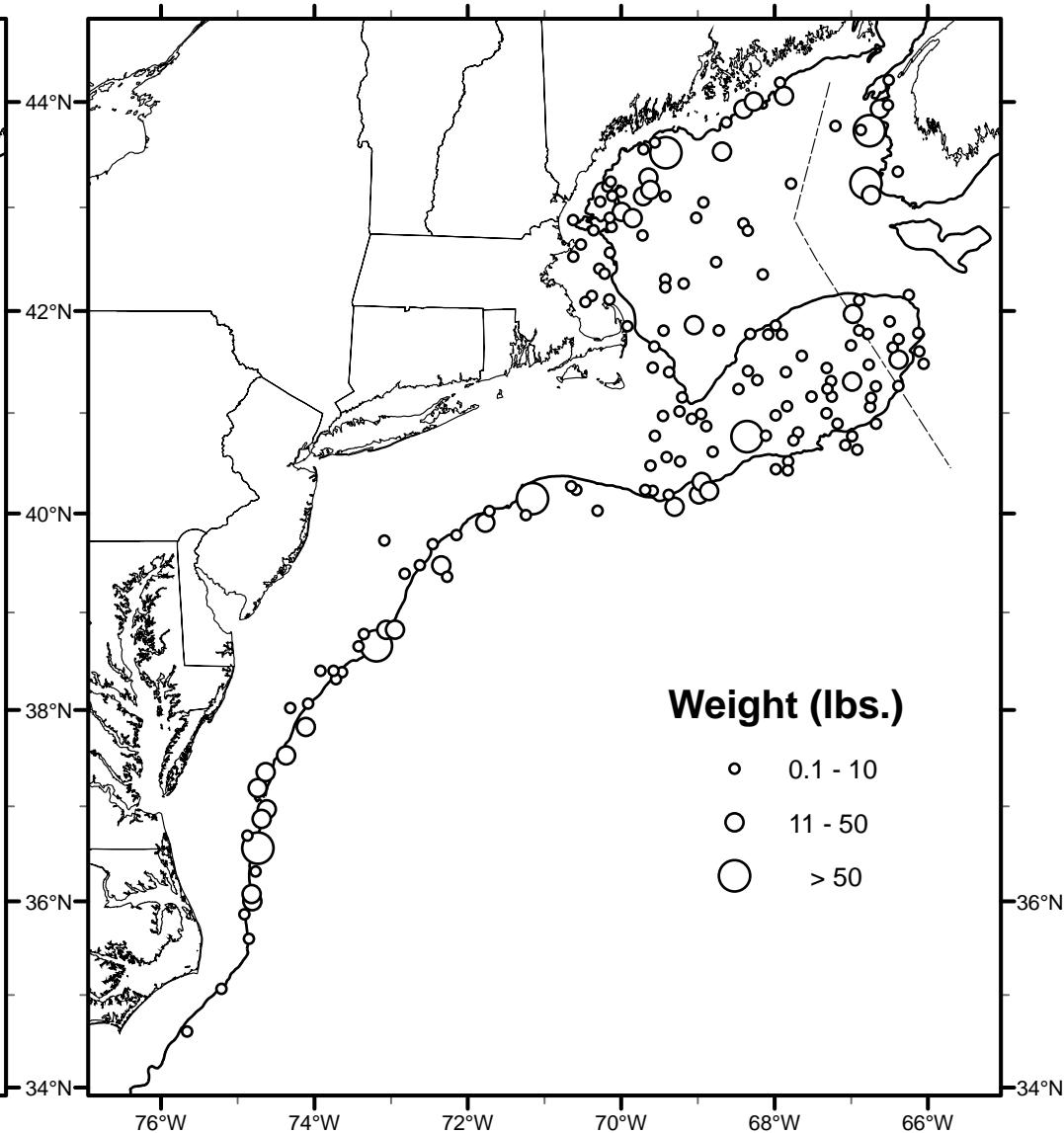
AMERICAN LOBSTER
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



LOLIGO
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



ILLEX
NOAA Fisheries Service
Bottom Trawl Survey
Sep. 5 - Oct. 26, 2006



ECOSYSTEMS SURVEYS BRANCH
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOAA FISHERIES SERVICE
NORTHEAST FISHERIES SCIENCE CENTER
166 WATER STREET
WOODS HOLE, MA 02543-1097

FIRST CLASS