

RESOURCE SURVEY REPORT
Catch Summary
NOAA Fisheries Service
Northeast Fisheries Science Center
Sea Scallop Survey
Cape Hatteras - Georges Bank
July 13 - August 11, 2006

Submitted to: NOAA, NEFSC

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Date: 2006

Resource Survey Report

Sea Scallop Survey

Cape Hatteras – Georges Bank

July 13 – August 11, 2006

R/V Albatross IV



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



Tow of Sea Scallops
from the *Elephant
Trunk* area

Scientists sorting a
catch



RESOURCE SURVEY REPORT

Catch Summary

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The following field notes, charts, and station data indicate the distribution of sea scallops during the 2006 summer Scallop Survey conducted aboard the *R/V ALBATROSS IV*. Fifteen-minute tows were made at a speed of 3.8 knots using a standard 8-foot New Bedford type scallop dredge. The dredge was equipped with a 2-inch ring chain bag and lined with 1-1/2 inch mesh webbing to retain small scallops. For statistical purposes, stations were randomly selected and therefore were not always on or near scallop concentrations.

In this report, scallop catch is reported in numbers and by-catch is recorded in liters, depth in fathoms and bottom temperature in degrees Fahrenheit. Bottom temperature is included at selected stations because it is an environmental factor which influences sea scallop growth rates and spawning time. Catches are reported in three categories of shell height: less than or equal to 90 mm (greater than 40 count), greater than 90 mm (less than 40 count), and greater than or equal to 100 mm (less than 30 count). The percent composition of by-catch is also given.

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

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http://www.nefsc.noaa.gov/esb/Resource_Survey_Reports.htm

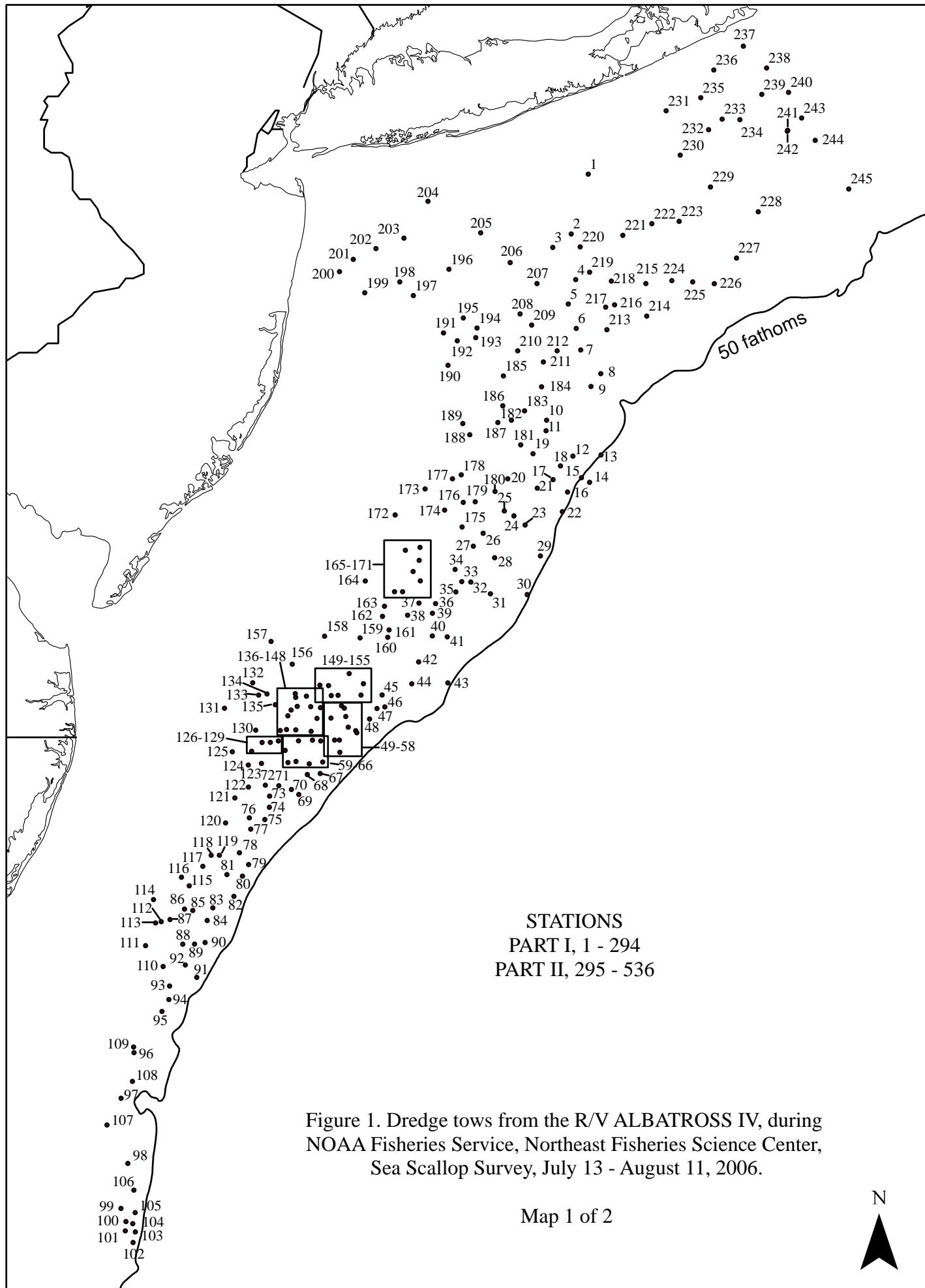


Figure 1. Dredge tows from the R/V ALBATROSS IV, during NOAA Fisheries Service, Northeast Fisheries Science Center, Sea Scallop Survey, July 13 - August 11, 2006.

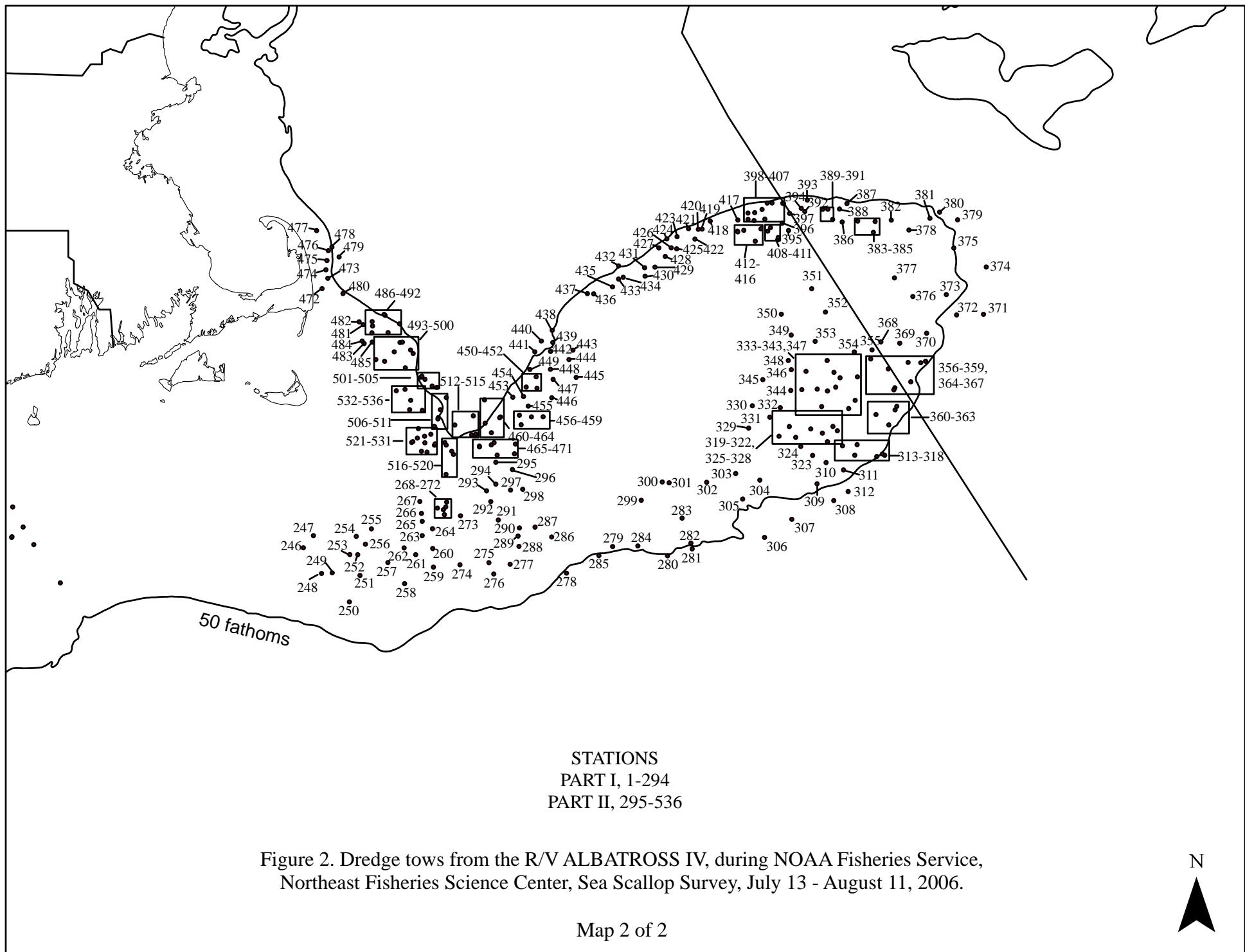


Figure 2. Dredge tows from the R/V ALBATROSS IV, during NOAA Fisheries Service, Northeast Fisheries Science Center, Sea Scallop Survey, July 13 - August 11, 2006.

Field Notes

In an effort to share some of the natural history observations made during the Scallop dredge 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*.

Unexpected visitor

While surveying offshore stations off the coast of Delaware Bay, an osprey landed on the upper deck. It rested overnight and dined on a fish that came up in the dredge before continuing on with its journey the following morning.

Beryl booms by

Tropical Storm Beryl passed approximately 60 miles from the vessel about half way through the first part of the survey. We were lucky to be on the western side of the storm where the effects were minimal, requiring us to stop operations for less than 12 hours.

Cooperative work

At stations 253 and 254 in the Nantucket Lightship Closed Area we paired up with the *F/V Kathy Marie* for cooperative video imaging work. Scientists from the Woods Hole Oceanographic Institute's Center for Image Analysis and Multi-Scale Visualization surveyed the area with their Habitat Mapping Camera System (HabCam) before and immediately after our dredge tows. Their system provides real-time images of the sea floor, allowing them to see and count scallops resting on the bottom. They surveyed our exact tow path and catch data to make comparisons between their new method of scallop monitoring and the current dredge survey.

Rock chain work completed

The second leg of the survey is considered the most demanding in terms of physical labor due to the large amount of rocks and substrate that come up with the scallops. Lately, scallop catches have been high, particularly in the closed areas. This year marked the completion of a four year project to collect data and implement the use of the rock chains deployed in specific strata in the South Channel in order to minimize the large rock and substrate catches. Using rock chains will save time, money, and physical effort on our part. There were many people involved in this project who should feel proud of the results and rock chain implementation. Thanks go especially to the crew and officers on the *R/V Albatross IV*, the support from the Population Dynamics Branch and specifically to Dr. Devorah Hart, the myriad of volunteers who assisted, and to the team members from the Ecosystems Surveys Branch.

Sand lance comeback?

On a few stations in the South Channel area, we loaded up with very sandy tows that were full of small sand lance. This was the first time in a while that so many sand lance had been seen in the scallop survey dredge.

Icelandic scallops

Icelandic scallops were caught on only two tows in the Great South Channel. They have a beautiful ridged shell (like a bay scallop) and are more curved than a sea scallop. Their small meats are very flavorful.

Elephant Trunk Area

For the past several years, results from the previous survey have been used to allocate more stations to areas (strata) with high variability and high abundance. This approach results in improved estimates of scallops in areas of high abundance. Implementation of this approach resulted in a large number of stations in the Elephant Trunk closed area, providing accurate estimates of scallop abundance in advance of a projected 2007 opening of this area for commercial harvest.

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ALBATROSS IV 2006 SEA SCALLOP SURVEY
 July 13 - August 11

Station	Station Data					Number of Scallops					By-Catch							
	Position		Loran	TD's	heading	Bottom		Total No.	>90mm >40ct			>100mm <30ct			Shell (Percentage)	Stone	Inverts	Total Vol.(lt)
	Lat.	Long.				Depth (FM)	Temp (F)		<90mm <40ct	>90mm <40ct	>100mm <30ct							
0521	4103.5	6912.6	W13760.4	Y43669.3	1	31.7	46.8	486	287	199	153	60	15	25	207			
0522	4103.8	6912.3	W13757.6	Y43670.8	14	31.2		267	181	86	69	20	40	40	253			
0523	4101.6	6915.2	W13781.5	Y43660.1	140	30.1		2359	1820	539	308	30	40	30	437			
0524	4104.1	6916.0	W13775.4	Y43676.3	292	31.2		1389	960	429	294	20	40	40	437			
0525	4101.9	6917.2	W13790.6	Y43663.9	146	30.6		1968	1533	435	228	30	40	30	598			
0526	4104.3	6920.7	W13799.0	Y43682.3	199	22.4	52.3	1	1	0	0	98	0	2	184			
0527	4104.4	6920.3	W13796.5	Y43682.5	218	19.7		6	5	1	1	80	5	15	46			
0528	4106.4	6913.9	W13755.1	Y43688.4	265	28.4		681	244	437	392	35	60	5	414			
0529	4105.9	6916.1	W13768.5	Y43687.6	286	30.6	52.7	3440	3104	336	240	60	30	10	368			
0530	4105.4	6918.7	W13784.1	Y43687.1	344	27.9		1246	634	612	465	10	80	10	874			
0531	4108.0	6918.3	W13771.2	Y43702.8	12	29.5		4400	4136	264	128	75	20	5	506			
0532	4112.9	6916.9	W13743.3	Y43731.3	358	32.3	44.8	8	8	0	0	45	5	50	92			
0533	4113.1	6921.4	W13766.0	Y43737.4	13	27.3		140	3	137	118	10	75	15	161			
0534	4115.6	6921.0	W13753.3	Y43752.2	20	31.2		21	11	10	8	65	20	15	138			
0535	4118.5	6923.0	W13751.4	Y43772.1	29	25.2	46.8	17	1	16	15	75	5	20	58			
0536	4118.2	6926.2	W13769.7	Y43773.9	317	21.9		20	18	2	2	60	15	25	161			

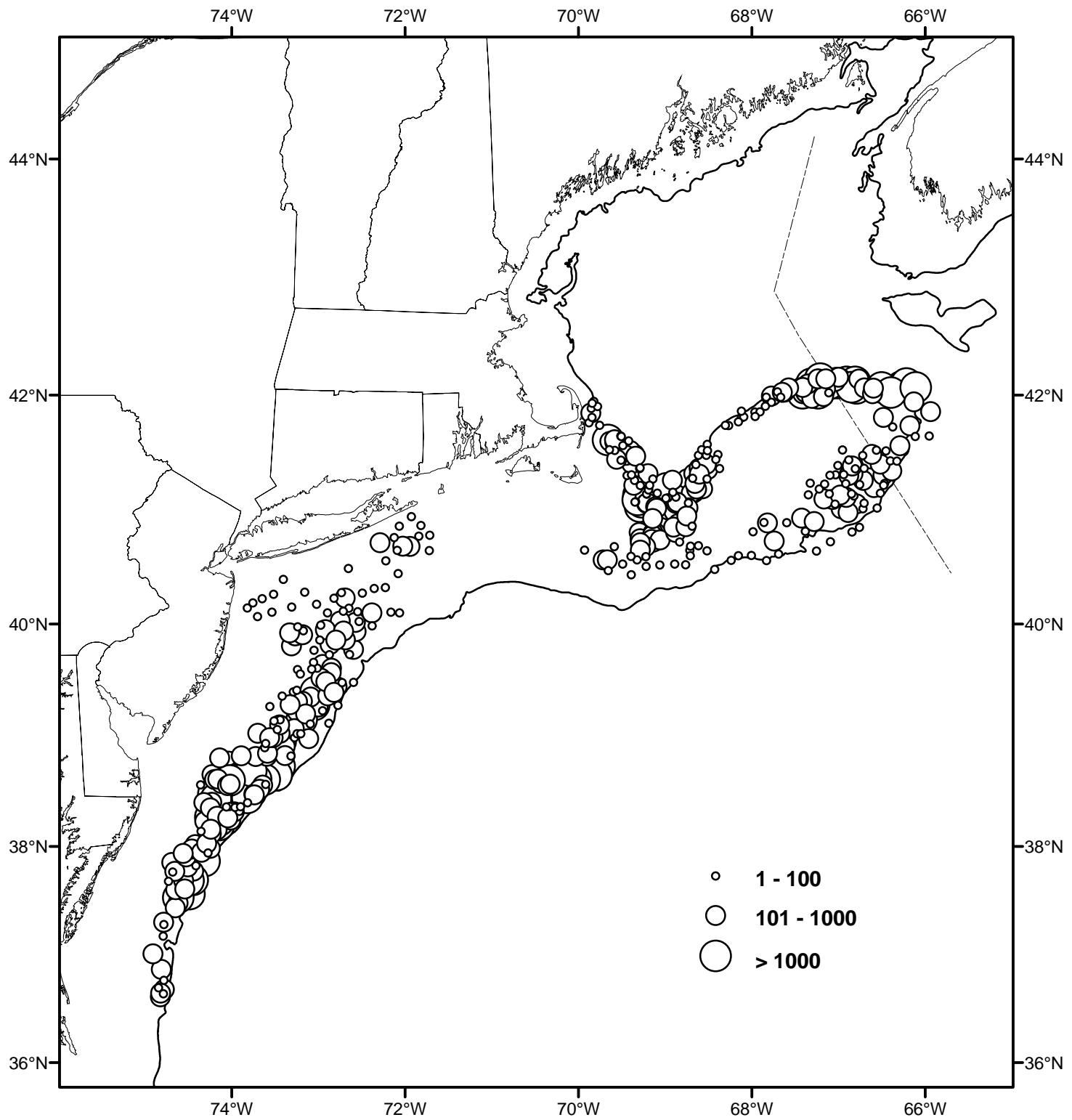
Total 285880 112052 171839 128964

* Non-Random Station

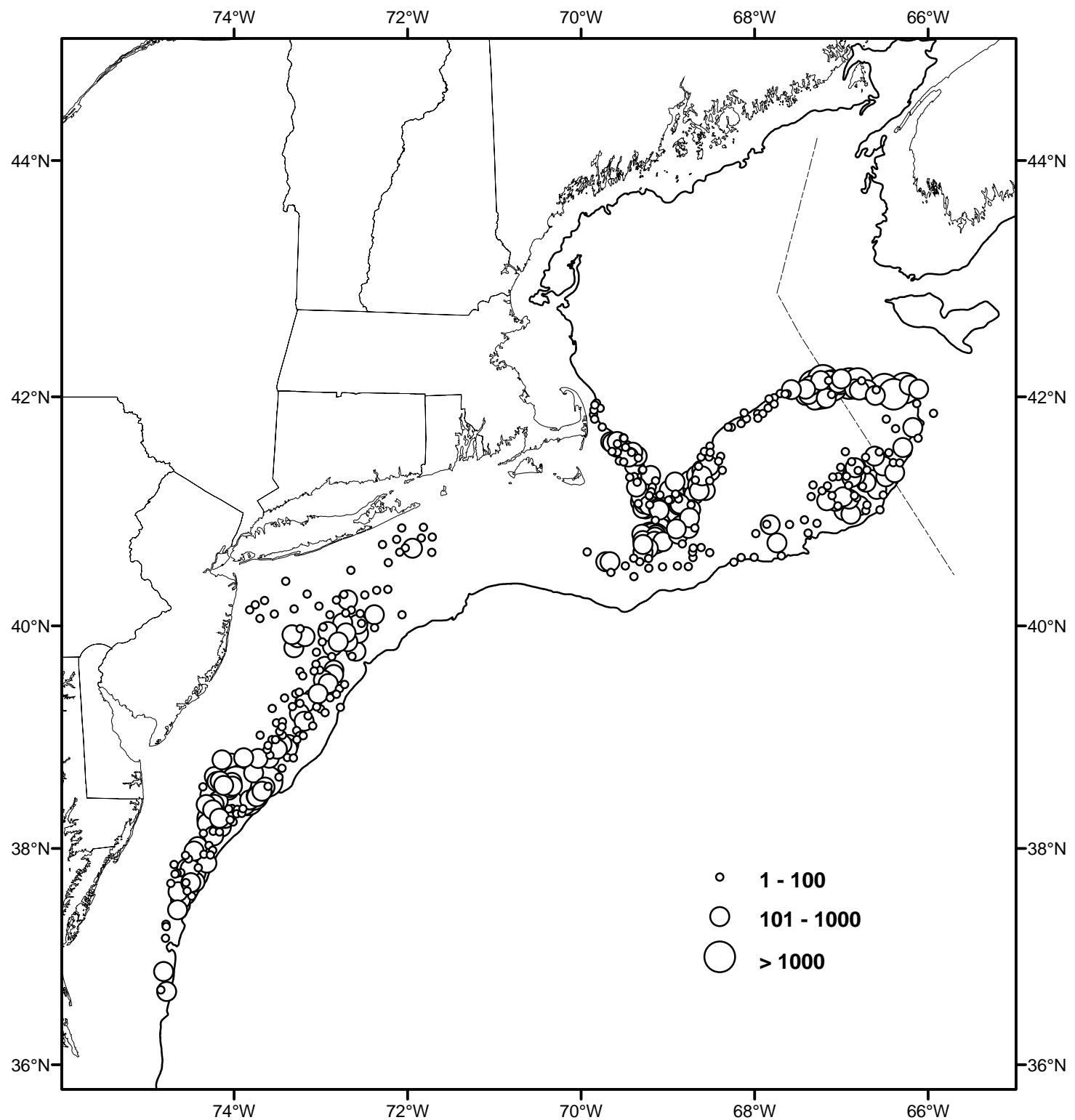
Stations with no scallop or by-catch data indicate a flipped or hung-up dredge.

Lorans are estimated from recorded latitude and longitude readings.

NEFSC SEA SCALLOP SURVEY 2006
NOAA Fisheries Service
SEA SCALLOPS - Number/Tow
Total Number



NEFSC SEA SCALLOP SURVEY 2006
NOAA Fisheries Service
SEA SCALLOPS - Number/Tow
Greater Than or Equal To 90 mm



NEFSC SEA SCALLOP SURVEY 2006
NOAA Fisheries Service
SEA SCALLOPS - Number/Tow
Less Than 90 mm

