

A Report of the 23rd Northeast Regional Stock Assessment Workshop

**Current Resource Conditions
in Georges Bank and Mid-Atlantic
Sea Scallop Populations**

Results of the 1996 NEFSC Sea Scallop Research Vessel Survey

by

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Current resource conditions in Georges Bank and Mid-Atlantic sea scallop populations: results of the 1996 NEFSC sea scallop research vessel survey

Report of the 23rd Northeast Regional Stock Assessment Workshop (23rd SAW): Public Review Workshop

Report of the 23rd Northeast Regional Stock Assessment Workshop (23rd SAW): Stock Assessment Review Committee (SARC) consensus summary of assessments

ABSTRACT

The 1996 Northeast Fisheries Science Center sea scallop survey was conducted during July 29 - August 9 and August 15-26 using the *R/V ALBATROSS IV*. The purpose of the survey was to monitor trends in abundance, population composition, and recruitment of sea scallop (*Placopecten magellanicus*) resources in the Mid-Atlantic and Georges Bank regions in depths between 28-110 meters (15 to 60 fm). A total of 429 sampling tows were conducted during the 1996 survey.

Survey indices of relative abundance (stratified mean number per tow) and biomass (stratified mean meat weight per tow) were calculated for the principal scallop areas within the Mid-Atlantic and USA Georges Bank regions. Indices were derived for: 1) pre-recruits [<70 mm shell height; >80 meat count]; 2) recruits or harvestable-sized scallops [≥ 70 mm shell height; ≤ 80 meat count]; and 3) total scallops [all sizes]. In addition, percentage distributions of the number of scallops within five meat count intervals were calculated for each stratum, area, and region. Meat count refers to the number of scallop meats per pound.

Results of the 1996 survey indicate that the indices of relative abundance and biomass in the Mid-Atlantic region decreased substantially from the relatively high levels observed in 1995. In the USA Georges Bank region, the indices of relative abundance and biomass increased substantially from the 1995 value. The most substantial increases of abundance and biomass indices occurred in the Northern Edge and Peak area; however, the indices decreased in the Southeast Part area between 1995 and 1996.

The Mid-Atlantic scallop resource had a high proportion of small scallops in 1996: 17% of the scallops caught were >80 count and 56% were in the 80-40 count category. Of the harvestable biomass (<80 count), 50% of the Mid-Atlantic resource was comprised of scallops between 80-40 count, while larger-sized scallops (<30 count) accounted for only 26%.

In contrast to the Mid-Atlantic region, large scallops (<30 count) have been well represented in the harvestable biomass of scallops from the USA portion of Georges Bank in recent years. In 1996, 49% by weight and 21% by number of the harvestable scallops were in <30 count category. The scallops in the 80-40 count category have exceeded half of the number of scallops in the harvestable resource in the USA Georges Bank Region from 1987 to 1995, but fell below 50% in 1996, the first time since 1987.

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INTRODUCTION

Research vessel surveys for sea scallop (*Placopecten magellanicus*) have been conducted by the Northeast Fisheries Science Center (NEFSC) in 1975 and annually since 1977 to monitor trends in abundance, population composition, and recruitment of USA offshore (3-200 n mi. from the USA coastline) sea scallop resources. Together with commercial fisheries data, the survey results are used to evaluate stock and fishery status and to forecast future resource conditions (Serchuk and Wigley 1988, Serchuk and Wigley 1989a, 1989b, 1991, Wigley and Serchuk 1991, 1996, Richards 1996). This document presents the results of the 1996 NEFSC sea scallop research vessel survey and provides an evaluation of current resource conditions, recruitment prospects, and abundance levels in the Mid-Atlantic and USA Georges Bank sea scallop populations.

METHODS

The NEFSC sea scallop survey is conducted according to a stratified random sampling design. Offshore regions are stratified into geographical zones [strata] based on water depth and latitude (Figure 1). The number of sampling stations in each stratum is proportional to the size of the stratum. Within each stratum, station locations are assigned randomly. For selected strata in which either commercial fishing activity or sea scallop concentrations are known to occur, additional randomly-selected stations are added to the sampling plan to increase precision of the survey abundance indices. Sampling stations occupied in the 1996 survey are depicted in Appendix Figure 1. The catch and LORAN-C location of each individual tow are provided in the 1996 NEFSC Sea Scallop Fishermen's Report (NEFSC 1996).

The 1996 sea scallop research vessel survey was conducted during July 29 - August 9 and August 15-26 using the *R/V ALBATROSS IV*. Areas sampled included the Mid-Atlantic and Georges Bank regions in depths between 28-110 meters [15 to 60 fm] (Figure 1). Revised strata sets developed in 1989 (see Serchuk and Wigley 1989a) for assessing resource conditions continued to be used for 1996 analyses. These strata sets are as follows:

Region	Strata Set
Virginia - No. Carolina:	Strata 6-7
Delmarva:	Strata 10-11, 14-15, 18-19
New York Bight:	Strata 22-31, 33-35
South Channel:	Strata 46-47, 49-55
Southeast Part:	Strata 58-60
USA No. Edge & Peak:	Strata 61, 621, 631, 651, 661, 71, 72, 74
CAN No. Edge & Peak:	Strata 622, 632, 64, 652, 662

Survey sampling procedures in 1996 were identical to those used in USA scallop surveys since 1979. Sampling was performed using a 2.44 m [8 ft] wide commercial sea scallop dredge equipped with a 5.1 cm [2 in] ring bag and a 3.8 cm [1.5 in] polypropylene mesh liner to retain small scallops. Detailed

specifications of this gear are provided in Serchuk and Smolowitz (1980). Details of the survey methods used prior to 1979 are given in Serchuk et al. (1979, 1982). Survey data prior to 1979 have been standardized to the current gear specifications.

At each station, the survey dredge is towed for 15 minutes at 3.5 knots with a 3:1 wire scope. After each tow, the catch is sorted into biological and non-biological (e.g., substrate, rocks) components. All live scallops are counted and shell height measurements taken to the nearest 5 mm on all individuals. Occasionally, subsampling is necessary when large quantities of scallops are caught. By-catch of finfish and invertebrates is also enumerated and some species measured. Non-biological components are measured by volume, and substrate type and composition noted. Hydrographic and navigational data (e.g., distance towed over bottom) are recorded at each station. The survey dredge and liner are routinely inspected for damage and repaired or replaced as appropriate.

RESULTS

Sampling Intensity and Overall Catch

A total of 429 valid sampling tows were conducted during the 1996 NEFSC sea scallop survey. Of these, 211 tows were taken in the Mid-Atlantic region, 189 on the USA portion of Georges Bank, and 29 on the Canadian portion of Georges Bank (Tables 1-3, Appendix Tables 1 and 2). Sampling intensity (tows per sq. n mi.) averaged 1.40 in the Mid-Atlantic, 1.39 on USA Georges Bank, and 1.59 on Canadian Georges Bank (Appendix Tables 1 and 2). Sampling intensity within individual strata varied from 1:988 (Stratum 64 on Georges Bank) to 1:6 (Stratum 652 on Georges Bank).

The geographical distribution of sea scallop numbers per tow is presented in Figures 2-4. Sea scallop catches ranged from 2 scallops/tow in Stratum 7 of the Mid-Atlantic region to 3,104.8 scallops/tow in stratum 662 of the Canadian portion of Georges Bank (Table 1).

Abundance Indices

Survey indices of relative abundance (mean number per tow) and biomass (mean meat weight per tow) were calculated for each sampling stratum (Table 1), and for sets of strata comprising the principal scallop regions within the Mid-Atlantic and the USA Georges Bank regions (Tables 1-3; Figures 5 and 6). Variance estimates for the stratified mean number per tow for the principal scallop regions are presented in Table 4. Survey indices were estimated for pre-recruits (<70 mm shell height; >80 meat count), recruits (harvestable-sized scallops, ≥ 70 mm shell height; ≤ 80 meat count), and total scallops (all sizes).

Mean shell height and average meat count (number of scallop meats per pound) were also calculated for each stratum, area and region (Table 1). In addition, percentage distributions of the number of scallops within five meat count intervals (>80 meat count; 80-40 meat count; 40-35 meat count; 35-30 meat count; and <30 meat count) were calculated (Table 1). Meat count distributions of harvestable-sized scallops were derived for both biomass and numbers (Tables 5-13; Figures 7-9).

MID-ATLANTIC REGION

In the Mid-Atlantic region, the relative abundance of total scallops increased between 1992 and 1995, but decreased substantially from 1995 to 1996 (Table 2; Figure 5). The relative abundance of 56.9 scallops/tow in 1996 was 67% lower than in 1995 and was the second lowest since 1985. The mean weight per tow of total scallops in 1996 of 0.57 kg/tow decreased 49% from the 1995 value. The relative abundance of pre-recruits (9.6 scallops/tow) decreased 86% from 1995 and is the third lowest value since the survey started in 1975. The indices of relative abundance of recruits in 1996 were less than half of the 1995 values.

The Mid-Atlantic scallop resource in 1996 was dominated by recruits (≥ 70 mm, harvestable sized scallops). Table 1 and Figure 10 show that 83% of the scallops caught in the Mid-Atlantic region were harvestable sized. Of these harvestable-sized scallops, 50% in biomass (Table 6, Figure 7) or 67% by number (Table 8) were in the 80-40 count category. Large scallops (<30 count) accounted for 26% of the harvestable biomass (Tables 6 and 13) or 13% by number (Table 8).

New York Bight (Strata 22-31, 33-35) - In 1996, the indices of relative abundance and biomass in the New York Bight decreased substantially from the 1995 value. The mean number per tow of total scallops in 1996 was 55.2, a decrease of 66% from the 1995 value of 163.8 (Table 2, Figure 5). The mean weight per tow of total scallops in 1996 was 0.56 kg/tow, a decrease of 51% from the 1995 value of 1.15 kg/tow (Table 2, Figure 5). In 1996, the indices of relative abundance for pre-recruits and recruits also decreased. The relative abundance of pre-recruits in 1996 (5.7 scallops/tow) was less than 10% of that in 1995 (57.7 scallops/tow). The relative abundance of recruits (49.5 scallops/tow) was 47% of that in 1995 (106.1 scallops/tow). Table 2 also shows that the index of biomass of pre-recruits in 1996 (0.01 kg/tow) was 5% of that in 1995 (0.19 kg/tow) and recruits in 1996 (0.55 kg/tow) was 57% of that in 1995 (0.97 kg/tow).

The shell height frequency distribution in 1996 was primarily dominated by recruits (Figure 11). Table 1 shows that the scallop resource in the New York Bight in 1996 was dominated (64%) by scallops in the 80-40 count category. Less than 10% of the resource consisted of large scallops (<30 count). Table 5 shows that 98% of the total biomass in 1996 were harvestable-sized scallops (<80 count). Of this amount of harvestable biomass, 55% was in the 80-40 count category and 23% in the <30 count category (Tables 6 and 13; Figure 7). In terms of numbers, 71% of the harvestable-sized scallops were in the 80-40 count category, but only 11% were in the <30 count category (Table 8).

Delmarva (Strata 10-11, 14-15, 18-19) - The mean number per tow of total scallops in Delmarva decreased sharply from 1993 to 1996 (Table 2, Figure 5). The relative abundance of total scallops decreased from 204.7 scallops/tow in 1995 to 66.1 scallops/tow in 1996. In 1996, the relative abundance of pre-recruits was only 24% and recruits was 41% of that in 1995 (Tables 2 and 7).

Of the harvestable biomass in 1996, 30% by weight (Tables 6 and 13) and 46% by number (Table 8) was in the 80-40 count category; however, 42% by weight and 24% by number were the large scallops (<30 count).

Virginia - North Carolina (Strata 6-7) - The Virginia-North Carolina area is at the southernmost extreme of the geographic range of sea scallops. The estimated relative abundance in this area is highly variable (Table 4). The strong 1990 year class observed in Delmarva in 1993 was also evident in this area (Table 2, Figure 5 and 13). However, this year class had already passed through the fishery in 1995 and did not make a contribution to the harvestable stock in 1996 (Table 2, Figure 13).

The total scallops in 1996 were 46% by number and 31% by weight of that in 1995 (Table 2). In 1996, the pre-recruit indices, in number and weight, decreased 46 % from the 1995 values (Table 2). Table 2 also shows that the relative abundance of recruits decreased from 11.7 scallops/tow in 1995 to 1.0 scallop/tow in 1996, a decrease of 92%. Similarly, the biomass index decreased 87% from 1995 to 1996.

Of harvestable-sized scallops, 5% by weight and 12% by number were in the 80-40 count category, none in the 40-35 count category, and 64% by weight and 53% by number were in the <30 count category (Tables 6 and 8). Low proportions of harvestable-sized scallops in the 80-40 and 40-35 count categories suggest weak recruitment in recent years.

USA GEORGES BANK REGION

In the **USA portion of Georges Bank** in 1996, the indices of relative abundance and biomass for pre-recruits and recruits rebounded to median levels after declining to their lowest values in 1993 for the post-1984 time series (Table 3, Figure 6). The increases were primarily due to the increases in the recruit abundance (from 25.1 scallops/tow in 1995 to 69.2 scallops/tow in 1996). The increase of recruits was attributed to the moderate pre-recruits observed in 1995. The relative abundance of pre-recruits in 1996 was 67.6 scallops/tow, a decrease of 19% from the 1995 value (82.4 scallops/tow).

In contrast to the Mid-Atlantic region, large scallops (<30 count) have been well represented in the harvestable biomass of scallops from the USA portion of Georges Bank in recent years. In 1996, 49% by weight (Table 10, Figure 8) or 28% by number (Table 12) were in the <30 count category. However, the proportion of harvestable scallops, both in number and weight, in the 80-40 count interval has continued to decrease since 1992.

Survey size-frequency distributions indicate that recruitment has been poor throughout the region since the appearance of the 1988 year class. However in 1995, a mode suggestive of an above-average 1992 year class appeared in the survey shell height frequency distributions for all areas included in the USA Georges Bank region (Figure 14). The 1988 year class (Figures 14-17) has passed through the fishery and vanished in the Georges Bank population.

South Channel (Strata 46-47, 49-55) - In the South Channel area of Georges Bank, the indices of abundance and biomass for recruits in 1996 were 87.3 scallops/tow and 1.26 kg/tow, respectively (Table 3). They were more than 2 times higher than in 1995 and were the third highest levels for the time series (Table 3, Figure 6). The increase in recruit scallops is due to the moderate 1992 year class which represented the pre-recruits in 1995. The total abundance index for 1996, although above the 75th percentile of all of the historical observations, decreased slightly from the 1995 value due to the decrease in pre-recruits in 1996. The pre-recruit scallops per tow decreased 50% from that of 1995. The 1987-89 cohorts, which were the strongest produced in this area during the time series, are no

longer detectable in the survey shell height frequency distributions (Figure 15).

Scallops pre-recruits comprised 41% of the 1996 survey catch in number or 12% by weight (Table 3). The scallops in the 80-40 count category accounted for 31% of the total scallops caught in 1996, and the <30 count category accounted for 19% (Table 1). The harvestable resource consisted mainly of <30 count scallops (56% by weight, 32% by number) and 80-40 count scallops (29% by weight, 53% by number) (Tables 10 and 12, Figure 8).

Southeast Part (Strata 58-60) - Scallop abundance in this area is low relative to the other areas on Georges Bank. The indices of relative abundance and biomass in 1996 were about average over the years (Table 3, Figure 6). The relative abundance of pre-recruits in 1996 increased 49% from the value of 1995, while recruits decreased slightly. The relative abundance of total scallops in 1996 increased 20% from the 1995 value. Only 3.6% of the Southeast Part is in the closed area; in both 1995 and 1996, only one tow was sampled in the closed area of the Southeast Part. The comparison of open and closed areas thus has not been possible.

Moderate 1991-1993 year classes appeared in survey catches in 1994-1996 and were observable in the shell height frequency distributions of the following year (Figure 16). Small scallops (>80 count) comprised 63% of the total scallops in the Southeast Part in 1996 (Table 1). Of harvestable-sized scallops, large scallops (<30 count) comprised 45% of the total scallops in number (Table 12) or 70% of the harvestable biomass (Tables 10, Figure 8).

USA Northern Edge & Peak (Strata 61, 621, 631, 651, 661, 71, 72, 74) - In 1996, the indices of relative abundance and biomass for the total scallops, pre-recruits, and recruits increased to the second highest level in the time series (Table 3). Pre-recruits in 1996 (likely the 1993 year class) comprised 55% by number of the USA Northern Edge and Peak resource (Table 3, Figure 17). Of the harvestable biomass, scallops in the <30 count category accounted for 38% by weight (Table 10, Figure 8) or 21% by number (Table 12) of the resource. In contrast to 1995, the proportions of harvestable-sized scallops, by number and weight, in the 40-35 and 35-30 count intervals increased in 1996 (Tables 10 and 12) probably due to the influx of the 1993 year class present as pre-recruits in 1995 (Table 3).

SUMMARY

Results of the 1996 NEFSC sea scallop research vessel survey indicate that resource abundance in the Mid-Atlantic region decreased to a relatively low level, especially for the pre-recruits. The resource conditions in the USA Georges Bank region in 1996 improved with the appearance of moderately strong year classes in recent years.

The relative abundance of total scallops in the Mid-Atlantic region (56.9 scallops/tow) was 42% less than that in the USA Georges Bank region (136.8 scallops/tow) in 1996; however, it was 58% greater in 1995 (170.0 in Mid-Atlantic versus 107.5 in USA Georges Bank). The abundance of recruits in the Mid-Atlantic region (47.3) was 32% less than that the USA Georges Bank region (69.2) in 1996, but it is more than 3 times greater in 1995 (103.5 in Mid-Atlantic versus 25.1 in USA Georges Bank). In

1996, the relative abundance of pre-recruits in the Mid-Atlantic region (9.6) was 14% of that in the USA Georges Bank region (67.6); however, in 1995, it was 81% (66.4 in Mid-Atlantic versus 82.4 in USA Georges Bank).

The Mid-Atlantic scallop resource had a high proportion of small scallops: 17% of the scallops caught were >80 count and 56% were in the 80-40 count range (Table 1). Of the harvestable biomass (scallops <80 count), 50% of the Mid-Atlantic resource was comprised of scallops in 80-40 count category, while larger-sized scallops (<30 count) accounted for only 26% (Table 13 and Figure 9).

In the USA Georges Bank region, total scallop abundance and biomass increased in 1996 from the record lows in 1993 and 1994. The increase resulted primarily from a moderate 1992 year class which was presented as pre-recruits in 1995. Size-frequency distributions for all areas in the USA Georges Bank region show that the strength of the 1992 year class was above average. The index for pre-recruits in 1996 decreased 18% from 1995 (from 82.4 to 67.6 scallops/tow). However, large scallops (<30 count) continued to be well represented in the harvestable biomass on the USA portion of Georges Bank (49% by weight were <30 count).

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LITERATURE CITED

- NEFSC (Northeast Fisheries Science Center). 1996. Fishermen's Report. Sea Scallop Survey. Northeast Fisheries Science Center, Woods Hole, MA, 19p.
- Richards, R.A. 1996. Current resource conditions in USA Georges Bank and Mid-Atlantic sea scallop populations: Results of the 1996 NMFS sea scallop research vessel survey. NMFS, NEFC, Woods Hole Lab. Ref. Doc. No. 96-12: 75p.
- Serchuk, F.M., P.W. Woods, Jr., J.A. Posgay, and B. E. Brown. 1979. Assessment and status of sea scallop (*Placopecten magellanicus*) populations off the northeast coast of the United States. Proc. Nat. Shellf. Assoc. 69:161-191.
- Serchuk, F.M., and R.J. Smolowitz. 1980. Size selection of sea scallops by an offshore scallop survey dredge. ICES C.M. 1980/K:26, 22p.
- Serchuk, F.M., P.W. Woods, Jr., and R.S. Rak. 1982. Review and Assessment of the Georges Bank, Mid-Atlantic and Gulf of Maine sea scallop (*Placopecten magellanicus*) resources. Woods Hole Laboratory Reference Document 82-06. 131p.

- Serchuk, F.M., and S.E. Wigley. 1988. Status of the sea scallop resources off the Northeastern United States, 1988. NMFS, NEFC, Woods Hole Lab. Ref. Doc. No. 88-03: 30p.
- Serchuk, F.M., and S.E. Wigley. 1989a. Current resource conditions in USA Georges Bank and Mid-Atlantic sea scallop populations: Results of the 1989 NMFS sea scallop research vessel survey. Ninth NEFC SAW, Working Paper No. 9, 52p.
- Serchuk, F.M., and S.E. Wigley. 1989b. Status of the sea scallop fisheries off the Northeastern United States, 1989. Ninth NEFC SAW, Working Paper No. 10, 24p.
- Serchuk, F.M., and S.E. Wigley. 1991. Status of the sea scallop fisheries off the Northeastern United States, 1990. Twelfth NEFC SAW, Working Paper No. 10, 24p.
- Wigley, S.E., and F.M. Serchuk. 1991. Current resource conditions in USA Georges Bank and Mid-Atlantic sea scallop populations: Results of the 1990 NMFS sea scallop research vessel survey. Research Document SAW 12/3, 52p.
- Wigley, S.E., and F.M. Serchuk. 1996. Current resource conditions in USA Georges Bank and Mid-Atlantic sea scallop populations: Results of the 1994 NMFS sea scallop research vessel survey. NMFS, NEFC, Woods Hole Lab. Ref. Doc. No. 96-03: 67p.

Table 1. Summary of 1996 NEFSC sea scallop research vessel survey data for sea scallops, by sampling stratum. Shell height data are in mm (25.4 mm = 1 inch); meat weight data are in grams (453.6 g = 1 pound); meat count refers to numbers of meats per number and mean weight per tow values represent stratified means weighted by stratum area.

Stratum Area	Depth Range (fathoms)	No. of Tows	Mean Number Per Tow			All Scallops		Mean Meat Weight (g) Per Tow ¹	Percent Distribution of Catch in Numbers				
			Pre-recruit	Recruit	Total	Average Shell Height	Calcd Meat Count ¹		>80	80-40	40-35	35-30	<30
									Count	Count	Count	Count	Count
1	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
2	25-30	N/S	-	-	-	-	-	-	-	-	-	-	-
3	30-40	N/S	-	-	-	-	-	-	-	-	-	-	-
4	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
5	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
6	25-30	5	52.4	0.2	52.6	52.2	215.6	110.6	99.6	0.4	0.0	0.0	0.0
7	30-40	5	0.0	2.0	2.0	102.5	24.6	36.9	0.0	0.0	0.0	40.0	60.0
8	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
Virginia - No. Carolina (6-7)	30-60	10	30.1	1.0	31.0	53.6	177.7	79.2	96.9	0.4	0.0	1.1	1.6
9	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
10	25-30	8	44.1	55.3	99.4	73.5	56.8	793.9	44.4	28.6	13.2	7.5	6.3
11	30-40	8	49.4	39.4	88.8	70.5	60.1	670.0	55.6	20.3	5.9	4.2	13.9
12	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
13	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
14	25-30	12	47.9	38.6	86.5	70.9	57.9	678.0	55.4	21.9	9.5	3.6	9.6
15	30-40	12	16.8	50.7	67.4	81.6	43.0	711.5	24.8	34.1	13.6	12.7	14.8
16	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
17	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
18	25-30	8	2.1	12.0	14.1	95.1	24.8	258.1	15.0	33.6	8.0	1.8	41.6
19	30-40	10	10.7	46.8	57.5	86.0	37.2	701.3	18.6	36.3	10.6	9.6	24.9
20	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
Delmarva (10-11; 14-15; 18-19)	25-40	58	25.4	40.6	66.1	77.3	47.4	632.4	38.5	28.5	10.5	7.6	14.8
21	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
22	25-30	8	2.1	12.3	14.4	95.8	25.8	252.8	14.8	7.8	13.0	14.8	49.6
23	30-40	16	6.1	96.1	102.2	84.7	43.3	1070.5	5.9	66.1	12.9	6.4	8.6
24	40-60	6	11.5	182.0	193.5	79.8	54.2	1619.8	5.9	87.6	4.1	1.4	1.0
25	15-25	4	3.8	4.5	8.3	86.5	27.4	136.5	45.5	12.1	0.0	0.0	42.4
26	25-30	13	12.2	28.2	40.3	80.4	41.0	445.5	30.2	25.0	16.4	8.6	19.9
27	30-40	19	9.8	135.8	145.6	82.6	47.6	1386.9	6.7	74.3	11.6	3.3	3.9
28	40-60	10	4.6	126.5	131.1	80.1	54.4	1092.2	3.5	91.2	4.5	0.7	0.2
29	15-25	6	7.7	11.8	19.5	76.7	47.6	185.7	39.3	32.5	8.5	4.3	15.4
30	25-30	15	3.3	24.4	27.7	87.8	36.5	345.1	12.0	33.7	14.4	15.9	24.1
31	30-40	20	4.3	38.7	43.0	84.1	42.9	454.4	9.9	52.0	15.0	13.0	10.0
32	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
33	15-25	8	3.9	16.6	20.5	87.0	34.9	266.8	18.9	18.3	11.6	15.2	36.0
34	25-30	10	6.2	38.6	44.8	88.7	33.8	601.9	13.8	24.8	15.6	21.7	24.1
35	30-40	8	2.5	16.6	19.1	88.9	31.6	274.7	13.1	25.5	17.6	13.1	30.7
36	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
New York Bight (22-31; 33-35)	15-60	143	5.7	49.5	55.2	82.9	44.6	561.1	10.4	63.6	10.2	6.2	9.5
Mid-Atlantic (6-35)	15-60	211	9.6	47.3	56.9	81.5	45.4	567.8	16.9	55.8	10.2	6.5	10.7

Table 1. (Continued).

Stratum Area	Depth Range (fathoms)	No. of Tows	Mean Number Per Tow			All Scallops		Mean Meat Weight (g) Per Tow ¹	Percent Distribution of Catch in Numbers				
			Pre-recruit	Recruit	Total	Average Shell Height	Calcd Meat Count ¹		>80	80-40	40-35	35-30	<30
Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count
45	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
46	25-30	6	1.3	43.2	44.5	113.7	16.9	1192.5	3.0	1.9	1.9	3.4	89.9
47	30-40	12	82.3	66.6	148.8	71.2	50.0	1349.1	55.3	15.5	2.9	4.6	21.6
48	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
49	15-25	5	66.8	109.0	175.8	70.6	64.4	1238.3	38.0	48.2	4.7	3.1	6.0
50	25-30	16	168.1	372.9	541.1	71.5	64.4	3808.5	31.1	61.0	5.1	1.2	1.6
51	30-40	12	177.9	287.0	464.9	69.3	72.3	2916.7	38.3	56.3	2.9	1.2	1.4
52	40-60	11	90.4	108.6	199.0	80.4	40.6	2222.0	45.4	10.8	7.5	7.1	29.1
53	40-60	7	10.4	49.3	59.7	94.0	27.7	978.0	17.5	7.4	10.0	14.6	50.5
54	30-40	7	51.0	68.4	119.4	83.2	37.1	1461.6	42.7	17.0	4.7	8.7	26.9
55	30-40	10	1.5	3.2	4.7	94.7	23.1	92.3	31.9	10.6	4.3	6.4	46.8
56	40-60	N/S	-	-	-	-	-	-	-	-	-	-	-
South Channel													
(46-47; 49-55)	15-60	86	60.5	87.3	147.8	75.7	47.0	1427.1	40.9	31.3	4.4	4.3	18.9
57	30-40	N/S	-	-	-	-	-	-	-	-	-	-	-
58	40-60	8	5.3	5.3	10.5	73.1	39.5	120.4	50.0	22.6	1.2	0.0	26.2
59	30-40	12	11.3	21.8	33.1	90.4	27.6	543.8	34.3	7.3	9.1	11.3	38.1
60	40-60	12	32.0	8.2	40.2	57.3	101.3	179.9	79.7	11.8	3.1	1.0	4.4
So. East Part													
(58-60)	30-60	32	20.4	12.1	32.5	69.2	51.2	287.5	62.9	11.0	5.0	4.4	16.8
61	30-40	8	4.3	30.0	34.3	105.5	20.1	772.9	12.4	3.3	0.4	4.0	79.9
62 ¹	40-60	12	107.1	55.4	162.5	61.2	85.9	858.4	65.9	22.9	4.1	2.7	4.3
63 ¹	30-40	7	0.0	5.9	5.9	103.7	20.5	129.8	0.0	29.3	4.9	4.9	61.0
65 ¹	30-40	12	753.3	915.7	1669.0	77.5	49.4	15327.7	45.1	13.4	17.5	16.1	7.8
66 ¹	40-60	12	1031.6	356.1	1387.7	60.1	96.8	6505.1	74.3	11.6	7.3	4.7	2.1
71	25-30	6	47.3	122.8	170.2	81.4	39.3	1962.4	27.8	45.2	5.3	4.7	16.9
72	15-25	6	6.8	18.7	25.5	82.0	40.0	289.0	26.8	39.9	9.8	3.3	20.2
73	15-25	N/S	-	-	-	-	-	-	-	-	-	-	-
74	25-30	8	9.8	15.6	25.4	85.9	31.3	367.4	38.4	23.6	4.9	5.9	27.1
USA No. Edge & Peak													
(61-66 ¹ , 71, 74)	15-60	71	103.3	83.3	186.7	70.7	57.5	1472.2	55.4	16.5	10.2	8.5	9.5
USA Georges Bank													
15-60	15-60	189	67.6	69.2	136.8	72.8	52.1	1192.1	49.4	22.7	7.4	6.5	14.0
USA Georges Bank & Mid-Atlantic													
15-60	15-60	400	36.9	57.6	94.5	75.6	50.0	861.4	14.5	23.3	11.0	11.1	40.1
622	40-60	6	38.2	56.3	94.5	79.8	34.4	1245.3	40.4	25.4	2.1	2.8	29.3
632	30-40	8	2.6	28.9	31.5	106.3	18.6	769.8	8.3	16.3	6.3	9.5	59.5
64 ²	40-60	1	1.0	46.0	47.0	119.0	14.1	1508.7	2.1	6.4	10.6	4.3	76.6
652	30-40	10	1492.8	1217.2	2710.0	72.0	62.3	19719.5	55.1	21.9	12.1	6.9	4.0
662 ²	40-60	4	2163.5	941.3	3104.8	59.2	94.1	14968.1	69.7	20.3	4.1	2.3	3.6
CAN No. Edge & Peak ²													
(622-662, 64)	30-60	29	271.2	172.7	443.9	66.6	61.1	3296.9	61.1	19.8	6.2	3.5	9.4

1 Derived by applying NEFSC survey shell height - meat weight equations to mean shell height.

2 Incomplete survey coverage, the estimates are based on the existing samples.

N/S = Not sampled in 1996 survey.

Table 2. USA sea scallop research survey relative abundance indices (standardized stratified mean number and mean weight per tow), (meat only, Kg.), mean shell height (mm), mean meat weight (g) per scallop, and average meat count (number of scallop meats per pound) of sea scallops from NEFSC surveys in the Mid-Atlantic, 1975, 1977-1995. Data are presented by principal scallop areas in the Mid-Atlantic¹. Survey indices are presented for pre-recruit (<70 mm shell height), recruit (≥70 mm shell height) and total scallops per tow.

Area	Year	No. of Tows	Standardized Stratified Mean Number per Tow			Standardized Stratified Mean Weight (Kg) per Tow ²			Mean Shell Height	Average Meat Count
			Pre-recruit	Recruit	Total	Pre-recruit	Recruit	Total		
Virginia-North Carolina	1975	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1977	1	0.0	10.0	10.0	0.00	0.23	0.23	108.0	20.0
	1978	3	15.3	50.3	65.6	0.06	1.10	1.16	91.8	25.7
	1979	3	23.7	22.7	46.4	0.04	0.37	0.41	71.7	51.3
	1980	3	6.6	39.0	45.6	0.02	0.59	0.61	87.6	34.1
	1981	3	0.9	7.6	8.5	<0.01	0.20	0.20	107.7	18.8
	1982	7	0.4	3.7	4.1	<0.01	0.12	0.12	111.5	15.8
	1983	8	25.8	11.7	37.5	0.10	0.36	0.46	78.1	37.2
	1984	9	0.2	14.6	14.8	<0.01	0.27	0.27	98.7	25.3
	1985	10	1.7	7.3	9.0	<0.01	0.23	0.23	104.8	17.8
	1986	10	5.6	1.8	7.4	<0.02	0.04	0.06	69.1	55.9
	1987	10	0.1	2.1	2.2	<0.01	0.04	0.04	93.4	28.3
	1988	10	3.1	11.0	14.1	0.01	0.21	0.22	89.8	28.9
	1989	10	35.7	5.9	41.6	0.07	0.13	0.20	57.9	92.9
	1990	6	36.5	93.1	129.6	0.07	0.88	0.95	73.2	61.7
	1991	10	37.2	32.0	69.2	0.10	0.45	0.55	71.6	57.5
	1992	10	4.1	29.2	33.3	0.01	0.39	0.40	85.9	37.7
	1993	10	245.3	59.1	304.4	0.83	0.54	1.37	64.3	100.5
	1994	10	13.3	145.5	158.8	0.05	1.30	1.35	79.8	53.5
	1995	10	55.8	11.7	67.5	0.11	0.15	0.26	57.1	118.4
	1996	10	30.1	1.0	31.0	0.06	0.02	0.08	53.6	177.7
Delmarva	1975	15	36.2	24.0	60.2	0.11	0.44	0.55	75.2	49.3
	1977	10	10.7	47.5	58.2	0.03	0.91	0.94	92.2	28.1
	1978	45	27.3	75.8	103.2	0.09	1.58	1.67	91.6	28.0
	1979	43	25.4	64.6	90.0	0.04	0.95	0.99	78.8	41.2
	1980	43	81.1	35.9	117.0	0.13	0.68	0.81	63.3	65.7
	1981	41	4.7	14.3	19.0	0.01	0.32	0.33	90.3	26.2
	1982	44	10.0	18.6	28.6	0.04	0.43	0.47	89.8	27.8
	1983	49	25.7	16.5	42.2	0.09	0.37	0.46	77.0	41.7
	1984	52	19.8	19.3	39.1	0.03	0.38	0.41	69.8	43.7
	1985	54	70.4	35.8	106.2	0.15	0.43	0.58	58.9	82.5
	1986	62	123.5	83.5	207.0	0.37	0.93	1.30	68.5	72.3
	1987	61	52.9	59.5	112.4	0.16	0.74	0.90	74.1	56.7
	1988	62	75.9	39.1	115.0	0.15	0.62	0.77	64.6	67.9
	1989	62	113.1	97.2	210.3	0.24	1.09	1.33	67.5	71.6
	1990	62	27.7	80.9	108.6	0.06	0.87	0.93	76.9	53.0
	1991	61	53.5	29.3	82.8	0.16	0.47	0.63	71.3	59.4
	1992	62	20.9	18.8	39.8	0.04	0.33	0.37	71.9	49.0
	1993	58	384.1	20.1	404.1	1.00	0.28	1.28	57.3	143.0
	1994	62	73.4	171.0	244.4	0.12	1.45	1.57	69.5	70.5
	1995	62	106.0	98.7	204.7	0.31	1.03	1.33	70.2	73.0
	1996	58	25.4	40.6	66.1	0.05	0.58	0.63	77.3	47.4

¹ New York Bight: Strata 22-31, 33-35; Delmarva: Strata 10-11, 14-15, 18-19; VA-NC: Strata 6-7.

² Mean meat weight derived by applying the 1977-1982 USA Mid-Atlantic research survey sea scallop shell height meat weight equation, $\ln[\text{Meat Weight (g)}] = -12.1628 + 3.2539 \ln[\text{Shell Height (mm)}]$, ($n = 11943$, $r = 0.98$) to the survey shell height frequency distributions.

Table 2. (Continued).

Area	Year	No. of Tows	Standardized Stratified Mean Number per Tow			Standardized Stratified Mean Weight (Kg) per Tow ²			Mean	Average
			Pre-recruit	Recruit	Total	Pre-recruit	Recruit	Total	Shell	Meat
									Height	Count
New York Bight	1975	28	39.4	34.7	74.1	0.10	0.62	0.72	75.3	46.9
	1977	101	1.4	56.7	58.1	<0.01	1.03	1.03	98.6	25.6
	1978	116	3.3	52.7	56.0	0.01	1.15	1.16	102.8	21.9
	1979	120	5.3	17.6	22.9	0.01	0.43	0.44	93.6	23.7
	1980	121	15.4	15.2	30.6	0.02	0.36	0.38	75.5	35.7
	1981	117	18.8	19.0	37.8	0.03	0.29	0.32	67.7	53.5
	1982	134	10.9	20.9	31.8	0.02	0.33	0.35	78.4	41.2
	1983	136	11.5	14.0	25.5	0.03	0.29	0.32	80.3	36.6
	1984	142	17.4	18.4	35.8	0.03	0.29	0.32	69.2	51.0
	1985	137	47.4	30.9	78.3	0.10	0.43	0.53	65.6	67.1
	1986	152	53.2	49.3	102.5	0.13	0.65	0.78	69.6	59.9
	1987	154	94.5	46.0	140.5	0.18	0.58	0.76	61.7	83.7
	1988	154	75.9	100.5	176.4	0.11	1.25	1.36	68.6	58.9
	1989	157	168.6	81.8	250.4	0.25	0.90	1.15	56.4	99.1
	1990	148	121.1	92.8	213.9	0.35	0.88	1.23	67.2	78.7
	1991	157	22.2	53.7	75.9	0.06	0.67	0.73	78.3	47.3
	1992	157	17.7	25.3	43.0	0.04	0.37	0.41	75.5	47.4
	1993	146	46.6	24.0	70.6	0.10	0.31	0.41	64.9	77.9
	1994	155	102.1	45.8	147.9	0.12	0.49	0.61	55.6	109.1
	1995	155	57.7	106.1	163.8	0.19	0.97	1.15	73.1	67.0
	1996	143	5.7	49.5	55.2	0.01	0.55	0.56	82.9	44.6
Mid-Atlantic (All Areas)	1975	43	38.8	32.6	71.4	0.10	0.59	0.69	75.3	47.2
	1977	112	2.8	55.1	57.9	0.01	1.00	1.01	97.7	25.9
	1978	164	7.8	56.8	64.6	0.02	1.23	1.25	99.4	23.4
	1979	166	9.1	26.2	35.3	0.02	0.52	0.54	86.5	29.8
	1980	167	27.1	19.2	46.3	0.04	0.42	0.46	70.1	45.8
	1981	161	16.1	18.0	34.1	0.02	0.30	0.32	70.1	48.2
	1982	185	10.6	20.3	30.9	0.03	0.34	0.37	80.4	38.1
	1983	193	14.3	14.4	28.7	0.04	0.30	0.34	79.4	37.8
	1984	203	17.6	18.5	36.1	0.02	0.31	0.33	69.5	49.2
	1985	201	51.0	31.5	82.5	0.11	0.43	0.54	64.1	69.8
	1986	224	65.2	54.8	120.0	0.17	0.69	0.86	69.3	63.3
	1987	225	85.7	47.9	133.6	0.17	0.61	0.78	63.6	78.0
	1988	226	74.9	88.3	163.2	0.12	1.12	1.24	68.1	59.9
	1989	229	156.9	83.6	240.5	0.24	0.93	1.17	58.1	93.5
	1990	216	103.2	90.6	193.8	0.29	0.88	1.17	68.2	74.9
	1991	228	28.0	49.0	77.0	0.08	0.63	0.71	76.8	49.4
	1992	229	18.1	24.2	42.3	0.03	0.37	0.40	75.0	47.5
	1993	214	109.9	23.8	133.6	0.28	0.30	0.58	60.7	104.5
	1994	227	95.8	69.6	165.4	0.11	0.67	0.80	59.6	94.2
	1995	227	66.4	103.5	170.0	0.21	0.97	1.17	72.4	97.8
	1996	211	9.6	47.3	56.9	0.02	0.55	0.57	81.5	45.4

¹ New York Bight: Strata 22-31, 33-35; Delmarva: Strata 10-11, 14-15, 18-19; VA-NC: Strata 6-7.

² Mean meat weight derived by applying the 1977-1982 USA Mid-Atlantic research survey sea scallop shell height meat weight equation, $\ln[\text{Meat Weight (g)}] = -12.1628 + 3.2539 \ln[\text{Shell Height (mm)}]$, ($n = 11943$, $r = 0.98$) to the survey shell height frequency distributions.

Table 3. USA sea scallop research survey relative abundance indices (standardized stratified mean number and mean weight per tow), [meat only, Kg.], mean shell height (mm), mean meat weight (g) per scallop, and average meat count (number of scallop meats per pound) of sea scallops from NEFSC surveys on Georges Bank, 1975, 1977-1995. Data are presented by principal scallop areas in the Georges Bank¹. Survey indices are presented for pre-recruit (<70 mm shell height), recruit (≥70 mm shell height) and total scallops per tow.

Area	Year	No. of Tows	Standardized Stratified			Standardized Stratified			Mean	Average
			Mean Number per Tow			Mean Weight (Kg) per Tow ²			Shell	Meat
			Pre-recruit	Recruit	Total	Pre-recruit	Recruit	Total	Height	Count
South Channel	1975	58	45.1	29.9	75.0	0.11	0.81	0.92	76.4	37.0
	1977	30	6.3	89.1	95.4	0.02	1.94	1.96	101.3	22.1
	1978	46	7.7	49.7	57.4	0.02	1.15	1.17	101.2	22.2
	1979	47	6.8	88.2	95.0	0.01	1.53	1.54	93.2	28.0
	1980	40	79.7	30.2	109.9	0.12	0.55	0.67	58.2	74.6
	1981	56	15.5	36.5	52.0	0.03	0.65	0.68	80.5	34.8
	1982	61	213.8	53.0	266.8	0.49	0.67	1.16	58.6	103.9
	1983	69	19.0	55.8	74.8	0.06	0.77	0.83	81.4	41.0
	1984	69	13.6	17.7	31.3	0.03	0.36	0.39	77.3	36.7
	1985	77	40.3	47.3	87.6	0.11	0.76	0.87	75.0	45.7
	1986	68	115.3	37.0	152.3	0.24	0.58	0.82	59.5	84.2
	1987	86	84.6	56.1	140.7	0.17	0.72	0.89	63.6	71.6
	1988	91	32.5	36.0	68.5	0.08	0.46	0.54	70.6	57.7
	1989	88	21.7	15.1	36.8	0.06	0.27	0.33	72.0	50.5
	1990	76	258.8	49.9	308.7	0.54	0.60	1.14	55.9	122.5
	1991	86	432.1	64.2	496.3	0.80	0.71	1.51	52.8	149.5
	1992	85	222.8	171.8	394.6	0.78	1.38	2.16	67.5	82.8
	1993	77	30.6	24.5	55.1	0.11	0.28	0.39	71.7	63.3
	1994	88	18.7	37.6	56.3	0.04	0.44	0.48	74.2	53.4
	1995	90	120.7	41.2	161.9	0.31	0.55	0.87	62.7	97.8
	1996	86	60.5	87.3	147.8	0.17	1.26	1.43	75.7	47.0
Southeast Part	1975	21	1.8	38.4	40.2	<0.01	1.02	1.02	110.3	17.8
	1977	21	3.2	27.2	30.4	0.01	0.68	0.69	103.6	20.0
	1978	18	2.2	27.1	29.3	<0.01	0.93	0.93	117.2	14.2
	1979	20	7.7	21.2	28.9	0.01	0.71	0.72	99.4	18.2
	1980	20	21.5	41.7	63.2	0.03	0.71	0.74	78.2	38.8
	1981	19	1.4	19.4	20.8	<0.01	0.46	0.46	102.5	20.5
	1982	22	0.8	9.8	10.6	<0.01	0.32	0.32	113.5	15.2
	1983	20	11.3	9.2	20.5	0.02	0.25	0.27	78.1	34.0
	1984	20	4.6	12.9	17.5	0.01	0.23	0.24	85.7	33.0
	1985	28	9.1	11.8	20.9	0.02	0.22	0.24	75.3	39.9
	1986	32	28.9	20.6	49.5	0.05	0.41	0.46	66.2	48.5
	1987	32	23.1	39.6	62.7	0.06	0.60	0.66	79.0	42.8
	1988	32	1.4	16.1	17.5	<0.01	0.32	0.32	96.9	24.6
	1989	31	23.6	11.8	35.4	0.07	0.23	0.30	70.2	54.4
	1990	32	1.6	8.4	10.0	<0.01	0.15	0.15	88.7	30.3
	1991	32	18.5	14.1	32.6	0.04	0.21	0.25	65.2	60.2
	1992	32	10.3	20.5	30.8	0.03	0.34	0.37	83.3	37.7
	1993	32	2.4	9.5	11.8	0.01	0.23	0.24	97.5	22.8
	1994	32	19.6	8.9	28.5	0.03	0.25	0.28	66.9	46.2
	1995	32	13.7	13.5	27.1	0.04	0.28	0.32	79.1	67.6
	1996	32	20.4	12.1	32.5	0.04	0.24	0.29	69.2	51.2

¹ South Channel: Strata 46-47, 49-55; Southeast Part: Strata 58-60; No. Edge & Peak: Strata 61-662, 71-72, 74.

² Mean meat weight derived by applying the 1977-1982 USA Mid-Atlantic research survey sea scallop shell height meat weight equation, $\ln(\text{Meat Weight (g)}) = -11.7656 + 3.1693 \ln(\text{Shell Height (mm)})$, ($n = 5863$, $r = 0.98$) to the survey shell height frequency distributions.

³ Not sampled.

⁴ Not calculated due to incomplete survey coverage.

⁵ Stratum 72 not sampled, excluded from analyses.

Table 3. (Continued).

Area	Year	No. of Tows	Standardized Stratified			Standardized Stratified			Mean	Average
			Mean Number per Tow			Mean Weight (Kg) per Tow ²			Shell	Meat
			Pre-recruit	Recruit	Total	Pre-recruit	Recruit	Total	Height	Count
USA Northern Edge and Peak	1985	67	21.8	26.6	48.4	0.06	0.39	0.45	72.2	48.9
	1986	70	45.6	28.6	74.2	0.13	0.48	0.61	70.4	55.2
	1987	71	62.0	54.6	116.6	0.12	0.73	0.85	67.1	62.1
	1988	71	65.8	60.9	126.7	0.15	0.77	0.92	66.4	62.6
	1989 ³	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1990 ⁴	65	66.9	196.8	263.7	0.22	1.83	2.05	75.8	58.3
	1991	71	118.7	66.9	185.6	0.31	0.85	1.16	66.1	72.4
	1992	69	26.1	45.0	71.1	0.08	0.60	0.68	77.6	47.3
	1993	67	2.7	15.6	18.3	0.01	0.25	0.26	88.6	32.4
	1994	70	14.9	10.4	25.3	0.02	0.22	0.24	69.4	47.7
	1995	71	81.6	14.3	95.9	0.21	0.25	0.46	59.1	119.1
1996	71	103.3	83.3	186.7	0.25	1.22	1.47	70.7	57.5	
USA Georges Bank	1985	172	26.5	31.8	58.3	0.07	0.50	0.57	74.2	46.4
	1986	170	61.3	28.9	90.2	0.14	0.49	0.63	64.4	64.9
	1987	189	62.6	51.9	114.5	0.12	0.70	0.82	66.8	63.0
	1988	194	38.0	40.8	78.8	0.09	0.54	0.63	69.4	56.6
	1989 ⁵	-	-	-	-	-	-	-	-	-
	1990 ⁴	173	135.2	87.8	223.0	0.31	0.89	1.20	63.9	84.1
	1991	189	224.1	51.4	278.2	0.45	0.65	1.10	56.4	114.8
	1992	186	102.7	91.2	193.9	0.36	0.86	1.22	69.4	72.3
	1993	176	14.0	17.8	31.8	0.05	0.26	0.31	77.5	46.9
	1994	190	17.5	21.1	38.6	0.04	0.31	0.35	71.8	50.6
	1995	193	82.4	25.1	107.5	0.21	0.38	0.60	65.0	99.0
1996	189	67.6	69.2	136.8	0.17	1.02	1.19	72.8	52.1	
Canada Northern Edge and Peak	1985	41	186.0	460.3	646.3	0.58	4.20	4.78	74.1	61.3
	1986	146	379.6	466.0	845.6	0.80	6.01	6.81	72.3	56.3
	1987	47	293.0	231.7	524.7	0.59	3.04	3.63	66.9	65.6
	1988	48	153.7	227.1	380.8	0.36	2.77	3.13	72.8	55.3
	1989 ³	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1990	41	431.7	287.9	719.6	0.68	3.80	4.48	61.9	72.9
	1991	14	206.4	98.3	304.7	0.53	1.62	2.15	66.7	64.3
	1992 ³	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1993	48	19.5	199.2	218.7	0.06	3.25	3.31	92.8	30.0
	1994	47	110.6	237.2	347.8	0.19	3.54	3.73	78.5	42.3
	1995	48	185.4	444.0	629.4	0.48	4.85	5.33	75.4	60.1
1996 ⁴	-	-	-	-	-	-	-	-	-	

¹ South Channel: Strata 46-47, 49-55; Southeast Part: Strata 58-60; No. Edge & Peak: Strata 61-662, 71-72, 74.

² Mean meat weight derived by applying the 1977-1982 USA Mid-Atlantic research survey sea scallop shell height meat weight equation, $\ln[\text{Meat Weight (g)}] = -11.7656 + 3.1693 \ln[\text{Shell Height (mm)}]$, ($n = 5863$, $r = 0.98$) to the survey shell height frequency distributions.

³ Not sampled.

⁴ Not calculated due to incomplete survey coverage.

⁵ Stratum 72 not sampled, excluded from analyses.

Table 3. (Continued).

Area	Year	No. of Tows	Standardized Stratified Mean Number per Tow			Standardized Stratified Mean Weight (Kg) per Tow ²			Mean Shell Height	Average Meat Count
			Pre-recruit	Recruit	Total	Pre-recruit	Recruit	Total		
Georges Bank	1975	130	51.7	74.6	126.3	0.13	1.34	1.47	79.9	39.0
(All Areas)	1977	122	34.3	218.3	252.6	0.12	3.18	3.30	87.6	34.7
	1978	140	79.7	184.0	263.7	0.14	3.88	4.02	87.1	29.8
	1979	220	36.6	152.3	188.9	0.10	2.70	2.80	88.6	30.6
	1980	371	377.4	92.3	469.7	0.52	1.37	1.89	53.4	112.6
	1981	176	97.2	152.4	249.6	0.22	1.62	1.84	70.6	61.5
	1982	163	91.0	51.2	142.2	0.22	0.74	0.96	66.5	66.9
	1983	171	31.9	38.2	70.1	0.08	0.63	0.69	73.4	46.3
	1984	171	148.7	34.6	183.3	0.15	0.57	0.72	49.1	114.9
	1985	213	56.3	111.6	167.9	0.17	1.19	1.36	74.1	56.2
	1986	316	129.9	123.0	252.9	0.28	1.68	1.96	70.1	58.5
	1987	236	105.5	85.4	190.9	0.21	1.14	1.35	66.9	64.3
	1988	242	59.5	75.6	135.1	0.14	0.96	1.10	71.2	55.9
	1989 ⁴	-	-	-	-	-	-	-	-	-
	1990 ⁵	214	193.6	127.3	320.9	0.38	1.47	1.85	63.0	78.7
	1991	203	220.8	62.3	283.1	0.46	0.83	1.29	58.5	99.2
	1992 ⁴	-	-	-	-	-	-	-	-	-
	1993	224	15.0	51.6	66.6	0.05	0.82	0.87	86.8	34.9
	1994	237	51.4	97.0	148.4	0.08	1.48	1.56	77.6	42.8
	1995	238	101.6	103.0	204.5	0.26	0.37	0.57	66.9	91.8
	1996 ⁶	-	-	-	-	-	-	-	-	-

¹ South Channel: Strata 46-47, 49-55; Southeast Part: Strata 58-60; No, Edge & Peak: Strata 61-662, 71-72, 74.

² Mean meat weight derived by applying the 1977-1982 USA Mid-Atlantic research survey sea scallop shell height meat weight equation, $\ln[\text{Meat Weight (g)}] = -11.7656 + 3.1693 \ln[\text{Shell Height (mm)}]$, ($n = 5863$, $r = 0.98$) to the survey shell height frequency distributions.

³ Not sampled.

⁴ Not calculated due to incomplete survey coverage.

⁵ Stratum 72 not sampled, excluded from analyses.

⁶ Not calculated due to incomplete survey coverage in Canadian Northern Edge and Peak.

Table 4. Standardized mean catch (number) per tow of sea scallops from 1996 USA sea scallop research vessel survey in the Mid-Atlantic and Georges Bank regions. Standard deviation of the mean (S.E.), coefficient of variation [C.V.: $100 \times (\text{S.E.}/\text{Mean})$], and 95% confidence limits are provided as indices of variability. Data are summarized by principal sea scallop areas in the Mid-Atlantic and Georges Bank regions.

Region	Mean	S.E.	C.V.	Confidence Limits		
Virginia-NC	31.0	25.1	80.8	-18.1	-	80.2
Delmarva	66.1	7.9	12.0	50.6	-	81.5
New York Bight	55.2	6.9	12.5	41.7	-	68.7
Mid-Atlantic	56.9	7.0	12.2	43.2	-	70.5
South Channel	147.8	43.5	29.5	62.5	-	233.1
Southeast Part	32.5	7.2	22.3	18.3	-	46.7
USA Northern Edge & Peak	186.7	73.6	39.4	42.5	-	330.9
CAN Northern Edge & Peak ¹	443.9	216.2	48.7	20.1	-	867.7
USA Georges Bank	136.8	55.0	40.2	29.0	-	244.7

1 Incomplete survey coverage. The estimates are based on the existing samples.

Table 5. Distribution of standardized stratified mean weight (g, meat) per tow among various meat count intervals for sea scallops from NEFSC sea scallop research vessel surveys in the Mid- Atlantic, 1975, 1977-1996.

Area	Year	Total Biomass Per Tow(g)	Harvestable ² Biomass Per Tow (g)	Meat Weight (g, meat) Per Tow ¹				
				Meat Count Interval ³				
				80-40	40-35	35-30	30-25	<25
Virginia- North Carolina	1975	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1977	227	227	11	13	15	18	170
	1978	1159	1097	177	7	15	18	880
	1979	411	372	111	49	46	26	140
	1980	608	592	174	35	24	55	304
	1981	204	201	4	4	9	15	169
	1982	119	118	1	4	4	3	106
	1983	458	361	26	7	3	4	321
	1984	265	265	35	49	48	28	105
	1985	231	228	1	-	5	18	204
	1986	60	44	4	-	1	3	36
	1987	35	35	10	2	3	3	17
	1988	222	215	16	12	26	30	131
	1989	203	134	10	11	7	10	96
	1990	952	880	591	123	82	23	61
	1991	546	452	149	42	26	28	207
	1992	401	390	127	52	72	47	92
	1993	1374	536	283	31	43	68	111
	1994	1347	1303	1066	143	37	17	40
	1995	259	149	42	40	31	24	11
	1996	79	17	1	0	5	5	6
Delmarva	1975	555	444	48	42	51	63	240
	1977	941	911	162	72	63	69	545
	1978	1672	1584	186	74	78	108	1138
	1979	991	951	327	62	50	53	459
	1980	808	678	104	17	33	73	451
	1981	329	320	47	8	6	10	249
	1982	467	431	38	12	19	25	337
	1983	459	371	42	18	14	11	286
	1984	406	374	61	38	42	28	205
	1985	584	430	176	19	18	27	190
	1986	1299	925	416	115	110	91	193
	1987	899	739	244	148	139	91	117
	1988	768	621	109	77	86	88	261
	1989	1332	1090	582	138	93	69	208
	1990	930	867	493	116	75	66	117
	1991	633	470	80	50	59	59	222
	1992	368	326	66	17	19	24	200
	1993	1282	276	98	14	14	7	143
	1994	1572	1451	1262	33	10	9	137
	1995	1334	1025	572	100	80	86	188
	1996	632	578	173	89	77	54	186

Table 5. (continued).

Area	Year	Total Biomass Per Tow(g)	Harvestable ² Biomass Per Tow (g)	Meat Weight (g, meat) Per Tow ¹				
				Meat Count Interval ³				
				80-40	40-35	35-30	30-25	<25
New York Bight	1975	717	622	94	53	63	65	347
	1977	1029	1025	165	68	95	142	555
	1978	1158	1151	58	45	92	142	814
	1979	439	430	28	7	15	22	358
	1980	378	356	33	12	16	15	280
	1981	321	292	86	16	14	13	163
	1982	350	327	93	24	22	24	164
	1983	317	289	34	18	20	24	193
	1984	318	294	89	30	18	13	144
	1985	530	427	140	40	40	41	166
	1986	776	651	268	60	51	43	229
	1987	761	582	239	85	59	46	153
	1988	1357	1249	568	137	89	84	371
	1989	1146	901	452	100	76	58	215
	1990	1232	882	553	80	55	36	158
	1991	727	671	300	63	47	44	217
	1992	411	373	105	40	40	33	154
	1993	411	305	118	28	28	19	112
	1994	615	491	289	40	27	22	113
	1995	1152	965	642	88	70	57	109
	1996	561	547	298	72	52	33	91
Mid-Atlantic (All Areas)	1975	686	588	85	51	61	64	327
	1977	1012	1005	163	69	91	131	551
	1978	1251	1228	82	50	89	134	873
	1979	538	523	83	18	22	27	373
	1980	458	417	48	13	19	26	311
	1981	321	296	78	14	12	13	179
	1982	368	343	82	21	21	24	195
	1983	344	305	36	18	19	21	211
	1984	333	308	83	31	23	16	155
	1985	536	425	144	36	36	38	171
	1986	861	693	291	70	61	51	220
	1987	777	604	236	96	73	54	145
	1988	1237	1123	478	125	88	84	348
	1989	1167	925	470	105	79	59	212
	1990	1174	880	543	87	59	41	150
	1991	708	632	258	60	49	47	218
	1992	403	365	99	36	36	32	162
	1993	580	303	116	26	26	18	117
	1994	796	673	474	40	24	19	116
	1995	1173	965	622	90	71	62	122
	1996	568	546	271	74	56	36	107

¹ Meat weight values derived from shell height values using 1977-1982 USA research survey equation,
 $\ln \text{ Meat Weight (g)} = -12.1628 + 3.2539 \ln \text{ Shell Height (mm)}$ ($n = 11943$, $r = 0.98$).

² Stratified mean weight (g, meat) per tow for sea scallops ≥ 70 mm; ≤ 80 count.

³ Meat count is expressed as number of meats per pound.

Table 6. Percent distribution of harvestable biomass (meat weight) of sea scallops in the Mid-Atlantic region, within various meat count intervals. Harvestable biomass is defined as all sea scallops > 70 mm shell height. Data derived from distribution of standardized stratified mean meat weight per tow in NEFSC sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1996.

Area	Year	Percent of Harvestable Biomass by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
Virginia- North Carolina	1975	N/S	N/S	N/S	N/S	N/S	N/S
	1977	4.8	5.7	6.6	7.9	82.8	74.9
	1978	16.1	0.6	1.4	1.6	81.9	80.2
	1979	29.8	13.2	12.4	7.0	44.6	37.6
	1980	29.4	5.9	4.1	9.3	60.6	51.4
	1981	2.0	2.0	4.5	7.5	91.5	84.1
	1982	0.8	3.4	3.4	2.5	92.4	89.8
	1983	7.2	1.9	0.8	1.1	90.0	88.9
	1984	13.2	18.5	18.1	10.6	50.2	39.6
	1985	0.4	-	2.2	7.9	97.4	89.5
	1986	9.1	-	2.3	6.8	88.6	81.8
	1987	28.6	5.7	8.6	8.6	57.1	48.6
	1988	7.4	5.6	12.1	14.0	74.9	60.9
	1989	7.5	8.2	5.2	7.5	79.1	71.6
	1990	67.2	14.0	9.3	2.6	9.5	6.9
	1991	33.0	9.3	5.8	6.2	52.0	45.8
	1992	32.6	13.3	18.5	12.1	35.6	23.6
	1993	52.8	5.8	8.0	12.7	33.4	20.7
	1994	81.8	11.0	2.8	1.3	4.4	3.1
	1995	28.2	26.8	20.8	16.1	23.5	7.4
	1996	5.0	0.0	31.3	27.7	63.7	36.0
Delmarva	1975	10.8	9.5	11.5	14.2	68.2	54.1
	1977	17.8	7.9	6.9	7.6	67.4	59.8
	1978	11.7	4.7	4.9	6.8	78.7	71.8
	1979	34.4	6.5	5.3	5.6	53.8	48.3
	1980	15.3	2.5	4.9	10.8	77.3	66.5
	1981	14.7	2.5	1.9	3.1	80.9	77.8
	1982	8.8	2.8	4.4	5.8	84.0	78.2
	1983	11.3	4.9	3.8	3.0	80.1	77.1
	1984	16.3	10.2	11.2	7.5	62.3	54.8
	1985	40.9	4.4	4.2	6.3	50.5	44.2
	1986	45.0	12.4	11.9	9.8	30.7	20.9
	1987	33.0	20.0	18.8	12.3	28.1	15.8
	1988	17.6	12.4	13.8	14.2	56.2	42.0
	1989	53.4	12.7	8.5	6.3	25.4	19.1
	1990	56.9	13.4	8.7	7.6	21.1	13.5
	1991	17.0	10.6	12.6	12.6	59.8	47.2
	1992	20.2	5.2	5.8	7.4	68.7	61.3
	1993	35.5	5.1	5.1	2.5	54.3	51.8
	1994	87.0	2.3	0.7	0.6	10.1	9.4
	1995	55.8	9.8	7.8	8.4	26.7	18.3
	1996	29.8	15.4	13.2	9.3	41.5	32.2

Table 6. (continued).

Area	Year	Percent of Harvestable Biomass by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
New York Bight	1975	15.1	8.5	10.1	10.5	66.2	55.8
	1977	16.1	6.6	9.3	13.9	68.0	54.1
	1978	5.0	3.9	8.0	12.3	83.1	70.7
	1979	6.5	1.6	3.5	5.1	88.4	83.3
	1980	9.3	3.4	4.5	4.2	82.9	78.7
	1981	29.5	5.5	4.8	4.5	60.3	55.8
	1982	28.4	7.3	6.7	7.3	57.5	50.2
	1983	11.8	6.2	6.9	8.3	75.1	66.8
	1984	30.3	10.2	6.1	4.4	53.4	49.0
	1985	32.8	9.4	9.4	9.6	48.5	38.9
	1986	41.2	9.2	7.8	6.6	41.8	35.2
	1987	41.1	14.6	10.1	7.9	34.2	26.3
	1988	45.5	11.0	7.1	6.7	36.4	29.7
	1989	50.2	11.1	8.4	6.4	30.3	23.9
	1990	62.7	9.1	6.2	4.1	22.0	17.9
	1991	44.7	9.4	7.0	6.6	38.9	32.3
	1992	28.2	10.7	10.7	8.8	50.1	41.3
	1993	38.7	9.2	9.2	6.2	43.0	36.7
	1994	58.9	8.1	5.5	4.5	27.5	23.0
	1995	66.5	9.1	7.3	5.9	17.2	11.3
	1996	54.5	13.2	9.5	6.0	22.8	16.7
Mid-Atlantic (All Areas)	1975	14.5	8.7	10.4	10.9	66.5	55.6
	1977	16.2	6.9	9.1	13.0	67.9	54.8
	1978	6.7	4.1	7.2	10.9	82.0	71.1
	1979	15.9	3.4	4.2	5.2	76.5	71.3
	1980	11.5	3.1	4.6	6.2	80.8	74.6
	1981	26.4	4.7	4.1	4.4	64.9	60.5
	1982	23.9	6.1	6.1	7.0	63.8	56.9
	1983	11.8	5.9	6.2	6.9	76.1	69.2
	1984	26.9	10.1	7.5	5.2	55.5	50.3
	1985	33.9	8.5	8.5	8.9	49.2	40.2
	1986	42.0	10.1	8.8	7.4	39.1	31.7
	1987	39.1	15.9	12.1	8.9	32.9	24.0
	1988	42.6	11.1	7.8	7.5	38.5	31.0
	1989	50.8	11.4	8.5	6.4	29.3	22.9
	1990	61.7	9.9	6.7	4.7	21.7	17.0
	1991	40.8	9.5	7.8	7.4	41.9	34.5
	1992	27.1	9.9	9.9	8.8	53.2	44.4
	1993	38.3	8.6	8.6	5.9	44.6	38.6
	1994	70.4	5.9	3.6	2.8	20.1	17.2
	1995	64.5	9.3	7.4	6.4	19.1	12.6
	1996	49.8	13.7	10.2	6.7	26.3	19.7

¹ Meat weight values derived from shell height values using the equation derived from 1977-1982 USA research survey data:

$$\ln \text{ Meat Weight (g)} = -12.1628 + 3.2539 \ln \text{ Shell Height (mm)} \quad (n = 11943, r = 0.98).$$

² Stratified mean weight (g, meat) per tow for sea scallops ≥ 70 mm or ≤ 80 count.

³ Meat count is expressed as number of meats per pound.

Table 7. Distribution of standardized mean number per tow among various meat count intervals for sea scallops from NEFSC sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1996.

Area	Year	Total Number Per Tow	Harvestable Number Per Tow	Stratified Mean Number of Scallops per Tow				
				Meat Count Interval				
				80-40	40-35	35-30	30-25	<25
Virginia- North Carolina	1975	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1977	10.0	10.0	1.0	1.0	1.0	1.0	6.0
	1978	65.6	50.3	26.2	0.6	1.0	1.0	21.5
	1979	46.4	22.7	11.0	3.9	3.0	1.4	3.4
	1980	45.6	39.0	20.7	2.7	1.6	3.1	10.9
	1981	8.5	7.6	0.4	0.3	0.6	0.9	5.4
	1982	4.1	3.7	0.1	0.3	0.3	0.1	2.9
	1983	37.5	11.7	4.1	0.6	0.2	0.2	6.6
	1984	14.8	14.6	3.4	3.8	3.2	1.5	2.7
	1985	9.0	7.3	0.1	-	0.3	1.0	5.9
	1986	7.4	1.8	0.5	-	0.1	0.2	1.0
	1987	2.2	2.1	1.2	0.1	0.2	0.2	0.4
	1988	14.1	11.0	1.9	1.0	1.7	1.7	4.7
	1989	41.6	5.9	1.3	0.9	0.4	0.6	2.7
	1990	129.6	93.1	75.2	9.6	5.4	1.3	1.6
	1991	69.2	32.0	18.0	3.3	1.7	1.6	7.4
	1992	33.3	29.2	14.8	4.0	4.7	2.6	3.1
	1993	304.4	59.1	45.5	2.4	2.8	3.8	4.6
	1994	158.7	145.5	129.5	11.1	2.4	1.0	1.5
	1995	67.5	11.7	4.6	3.2	2.0	1.4	0.5
	1996	31.0	1.0	0.1	0.0	0.3	0.3	0.3
Delmarva	1975	60.2	24.0	5.7	3.2	3.4	3.5	8.2
	1977	58.2	47.5	17.7	5.7	4.1	3.8	16.2
	1978	103.2	75.8	22.0	5.8	5.1	6.0	36.9
	1979	90.0	64.6	38.9	4.8	3.3	3.0	14.6
	1980	117.0	35.9	12.8	1.3	2.2	4.1	15.5
	1981	19.0	14.3	5.4	0.7	0.4	0.5	7.3
	1982	28.6	18.6	5.3	0.9	1.3	1.4	9.7
	1983	42.2	16.5	6.3	1.4	0.9	0.6	7.3
	1984	39.1	19.3	6.7	2.9	2.8	1.6	5.3
	1985	106.2	35.8	25.9	1.5	1.2	1.5	5.7
	1986	207.0	83.5	55.9	8.9	7.2	5.1	6.4
	1987	112.4	59.5	29.1	11.5	9.2	5.1	4.6
	1988	115.0	39.1	12.8	6.0	5.7	4.9	9.7
	1989	210.3	97.2	69.1	10.7	6.1	3.9	7.4
	1990	108.6	80.9	58.7	9.1	5.0	3.7	4.4
	1991	82.8	29.3	10.1	3.9	3.9	3.3	8.1
	1992	39.8	18.8	7.8	1.3	1.2	1.4	7.1
	1993	404.1	20.1	13.0	1.1	0.9	0.4	4.7
	1994	244.4	171.0	162.9	2.6	0.6	0.5	4.4
	1995	204.7	98.7	73.5	7.8	5.3	4.8	7.3
	1996	66.1	40.6	18.8	7.0	5.0	3.0	6.8

Table 7. (Continued).

Area	Year	Total Number Per Tow	Harvestable Number Per Tow	Stratified Mean Number of Scallops per Tow				
				Meat Count Interval				
				80-40	40-35	35-30	30-25	<25
New York Bight	1975	74.1	34.7	10.7	4.1	4.2	3.6	12.1
	1977	58.1	56.7	17.4	5.4	6.3	7.9	19.7
	1978	56.0	52.7	6.7	3.5	6.1	7.9	28.5
	1979	22.9	17.6	3.6	0.6	1.0	1.2	11.2
	1980	30.6	15.2	3.9	0.9	1.1	0.8	8.5
	1981	37.8	19.0	11.2	1.2	0.9	0.8	4.9
	1982	31.8	20.9	11.4	1.9	1.4	1.3	4.9
	1983	25.5	14.0	4.1	1.4	1.3	1.4	5.8
	1984	35.8	18.4	9.9	2.3	1.2	0.7	4.3
	1985	78.3	30.9	17.5	3.1	2.7	2.3	5.3
	1986	102.5	49.3	31.4	4.7	3.3	2.4	7.5
	1987	140.5	46.0	27.5	6.7	3.9	2.6	5.3
	1988	176.4	100.5	67.6	10.7	5.9	4.6	11.7
	1989	250.4	81.8	59.0	7.8	5.0	3.2	6.8
	1990	213.9	92.8	75.8	6.3	3.6	2.0	5.1
	1991	75.9	53.7	36.4	4.9	3.1	2.4	6.9
	1992	43.0	25.3	12.7	3.2	2.6	1.9	4.9
	1993	70.6	24.0	15.1	2.2	1.9	1.0	3.8
	1994	147.9	45.8	35.9	3.1	1.8	1.2	3.8
	1995	163.8	106.1	87.4	6.9	4.6	3.2	4.1
	1996	55.2	49.5	35.1	5.6	3.4	1.8	3.4
Mid-Atlantic (All Areas)	1975	71.4	32.6	9.7	4.0	4.0	3.6	11.3
	1977	57.9	55.1	17.3	5.4	5.9	7.3	19.2
	1978	64.6	56.8	9.7	3.9	5.8	7.5	29.9
	1979	35.3	26.2	10.1	1.4	1.4	1.5	11.8
	1980	46.3	19.2	5.7	1.0	1.3	1.4	9.8
	1981	34.1	18.0	10.1	1.1	0.8	0.7	5.3
	1982	30.9	20.3	10.1	1.7	1.4	1.3	5.8
	1983	28.7	14.4	4.5	1.4	1.2	1.2	6.1
	1984	36.1	18.5	9.2	2.4	1.5	0.9	4.5
	1985	82.5	31.5	18.8	2.8	2.4	2.1	5.4
	1986	120.0	54.8	35.4	5.4	4.0	2.8	7.2
	1987	133.6	47.9	27.5	7.4	4.8	3.0	5.2
	1988	163.2	88.3	56.9	9.7	5.8	4.7	11.2
	1989	240.5	83.6	60.1	8.2	5.2	3.3	6.8
	1990	193.8	90.6	72.7	6.8	3.9	2.3	4.9
	1991	77.0	49.0	31.4	4.7	3.2	2.6	7.1
	1992	42.3	24.2	11.9	2.8	2.4	1.8	5.3
	1993	133.6	23.8	15.1	2.1	1.7	1.0	3.9
	1994	165.4	69.6	60.0	3.1	1.6	1.1	3.8
	1995	169.9	103.5	83.8	7.0	4.7	3.5	4.6
	1996	56.9	47.3	31.7	5.8	3.7	2.0	4.0

Table 8. Percent distribution of harvestable numbers of sea scallops in the Mid-Atlantic region, within various meat count intervals. Harvestable scallops are defined as all scallops ≥ 70 mm shell height. Data derived from distribution of standardized stratified mean number per tow of scallops from NEFSC sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1996.

Area	Year	Percent of Harvestable Scallops by Meat Count Interval					
		80-40	40-35	35-30	30-25	<30	<25
Virginia- North Carolina	1975	N/S	N/S	N/S	N/S	N/S	N/S
	1977	10.0	10.0	10.0	10.0	70.0	60.0
	1978	52.1	1.2	2.0	2.0	44.7	42.7
	1979	48.5	17.2	13.2	6.2	21.1	15.0
	1980	53.1	6.9	4.1	7.9	35.9	27.9
	1981	5.3	3.9	7.9	11.8	82.9	71.1
	1982	2.7	8.1	8.1	2.7	81.1	78.4
	1983	35.0	5.1	1.7	1.7	58.1	56.4
	1984	23.3	26.0	21.9	10.3	28.8	18.5
	1985	1.4	-	4.1	13.7	94.5	80.8
	1986	27.8	-	5.6	11.1	66.7	55.6
	1987	57.1	4.8	9.5	9.5	28.6	19.0
	1988	17.3	9.1	15.5	15.5	58.2	42.7
	1989	22.0	15.3	6.8	10.2	55.9	45.8
	1990	80.8	10.3	5.8	1.4	3.1	1.7
	1991	56.3	10.3	5.3	5.0	28.1	23.1
	1992	50.7	13.7	16.1	8.9	19.5	10.6
	1993	77.0	4.1	4.7	6.4	14.2	7.8
	1994	89.0	7.6	1.6	0.7	1.7	1.0
	1995	39.3	27.4	17.1	12.0	16.2	4.3
	1996	11.9	0.0	35.2	26.4	52.9	26.4
Delmarva	1975	23.8	13.3	14.2	14.6	48.8	34.2
	1977	37.3	12.0	8.6	8.0	42.1	34.1
	1978	29.0	7.7	6.7	7.9	56.6	48.7
	1979	60.2	7.4	5.1	4.6	27.2	22.6
	1980	35.7	3.6	6.1	11.4	54.6	43.2
	1981	37.8	4.9	2.8	3.5	54.5	51.0
	1982	28.5	4.8	7.0	7.5	59.7	52.2
	1983	38.2	8.5	5.5	3.6	47.9	44.2
	1984	34.7	15.0	14.5	8.3	35.8	27.5
	1985	72.3	4.2	3.4	4.2	20.1	15.9
	1986	66.9	10.7	8.6	6.1	13.8	7.7
	1987	48.9	19.3	15.5	8.6	16.3	7.7
	1988	32.7	15.3	14.6	12.5	37.3	24.8
	1989	71.1	11.0	6.3	4.0	11.6	7.6
	1990	72.6	11.2	6.2	4.6	10.0	5.4
	1991	34.5	13.3	13.3	11.3	38.9	27.6
	1992	41.5	6.9	6.4	7.4	45.2	37.8
	1993	64.7	5.5	4.5	2.0	25.4	23.4
	1994	95.3	1.5	0.4	0.3	2.9	2.6
	1995	74.5	7.9	5.4	4.9	12.3	7.4
	1996	46.3	17.1	12.4	7.4	24.2	16.8

Table 8. (Continued).

Area	Year	Percent of Harvestable Scallops by Meat Count Interval					
		80-40	40-35	35-30	30-25	<30	<25
New York Bight	1975	30.8	11.8	12.1	10.4	45.2	34.9
	1977	30.7	9.5	11.1	13.9	48.7	34.7
	1978	12.7	6.6	11.6	15.0	69.1	54.1
	1979	20.5	3.4	5.7	6.8	70.5	63.6
	1980	25.7	5.9	7.2	5.3	61.2	55.9
	1981	58.9	6.3	4.7	4.2	30.0	25.8
	1982	54.5	9.1	6.7	6.2	29.7	23.4
	1983	29.3	10.0	9.3	10.0	51.4	41.4
	1984	53.8	12.5	6.5	3.8	27.2	23.4
	1985	56.6	10.0	8.7	7.4	24.6	17.2
	1986	63.7	9.5	6.7	4.9	20.1	15.2
	1987	59.8	14.6	8.5	5.7	17.2	11.5
	1988	67.3	10.6	5.9	4.6	16.2	11.6
	1989	72.1	9.5	6.1	3.9	12.2	8.3
	1990	81.7	6.8	3.9	2.2	7.7	5.5
	1991	67.8	9.1	5.8	4.5	17.3	12.8
	1992	50.2	12.6	10.3	7.5	26.9	19.4
	1993	62.9	9.2	7.9	4.2	20.0	15.8
	1994	78.4	6.8	3.9	2.6	10.9	8.3
	1995	82.4	6.5	4.3	3.0	6.9	3.9
	1996	71.0	11.4	6.9	3.7	10.7	7.0
Mid-Atlantic (All Areas)	1975	29.8	12.3	12.3	11.0	45.7	34.7
	1977	31.4	9.8	10.7	13.2	48.1	34.8
	1978	17.1	6.9	10.2	13.2	65.8	52.6
	1979	38.5	5.3	5.3	5.7	50.8	45.0
	1980	29.7	5.2	6.8	7.3	58.3	51.0
	1981	56.1	6.1	4.4	3.9	33.3	29.4
	1982	49.8	8.4	6.9	6.4	35.0	28.6
	1983	31.3	9.7	8.3	8.3	50.7	42.4
	1984	49.7	13.0	8.1	4.9	29.2	24.3
	1985	59.7	8.9	7.6	6.7	23.8	17.1
	1986	64.6	9.9	7.3	5.1	18.2	13.1
	1987	57.4	15.4	10.0	6.3	17.1	10.9
	1988	64.4	11.0	6.6	5.3	18.0	12.7
	1989	71.9	9.8	6.2	3.9	12.1	8.1
	1990	80.2	7.5	4.3	2.5	7.9	5.4
	1991	64.1	9.6	6.5	5.3	19.8	14.5
	1992	49.2	11.6	9.9	7.4	29.3	21.9
	1993	63.4	8.8	7.1	4.2	20.6	16.4
	1994	86.2	4.5	2.3	1.6	7.0	5.5
	1995	81.0	6.8	4.5	3.4	7.8	4.4
	1996	67.2	12.3	7.8	4.3	12.8	8.5

Table 9. Distribution of standardized stratified mean weight (g, meat) per tow among various meat count intervals for sea scallops from NEFSC sea scallop research vessel surveys in the Mid- Atlantic, 1975, 1977-1996.

Area	Year	Total	Harvestable ²	Meat Weight (g, meat) Per Tow ¹				
		Biomass	Biomass	Meat Count Interval ³				
		Per Tow(g)	Per Tow (g)	80-40	40-35	35-30	30-25	<25
South Channel	1975	918	812	39	26	34	43	670
	1977	1957	1938	156	102	218	220	1242
	1978	1173	1149	51	45	74	118	861
	1979	1541	1529	475	141	45	38	830
	1980	668	552	127	15	13	21	376
	1981	677	652	165	39	32	27	389
	1982	1165	671	296	34	22	21	298
	1983	827	773	313	67	55	53	285
	1984	387	360	59	20	22	26	233
	1985	869	763	174	56	100	117	316
	1986	820	577	153	42	41	38	303
	1987	891	724	281	77	69	59	238
	1988	539	459	188	37	36	34	164
	1989	331	271	57	14	17	17	166
	1990	1143	603	259	68	65	53	158
	1991	1505	707	376	49	34	29	219
	1992	2162	1377	1081	67	59	40	130
	1993	394	281	137	16	13	13	102
	1994	478	438	237	57	34	26	84
	1995	866	553	173	39	43	52	246
	1996	1427	1259	367	85	98	139	568
Southeast Part	1975	1023	1018	16	20	36	67	879
	1977	687	679	57	30	29	24	539
	1978	934	928	19	10	15	14	870
	1979	720	710	34	6	14	13	643
	1980	739	707	245	52	25	12	373
	1981	461	458	55	30	25	16	332
	1982	316	315	9	9	11	7	279
	1983	273	248	14	4	12	19	199
	1984	240	228	63	28	12	10	115
	1985	238	219	46	15	14	19	125
	1986	463	407	78	19	18	13	279
	1987	664	604	153	116	73	35	227
	1988	323	319	46	22	28	36	187
	1989	296	233	25	17	19	26	146
	1990	150	146	41	9	11	5	80
	1991	245	210	65	9	8	5	123
	1992	371	337	65	38	38	48	148
	1993	235	229	15	7	10	15	182
	1994	280	248	9	8	14	12	205
	1995	320	278	50	25	16	7	180
	1996	287	243	29	21	22	15	156

Table 9. (Continued).

Area	Year	Total Biomass Per Tow(g)	Harvestable ² Biomass Per Tow (g)	Meat Weight (g, meat) Per Tow ¹				
				Meat Count Interval ³				
				80-40	40-35	35-30	30-25	<25
USA Northern Edge & Peak	1985	450	393	125	30	26	17	195
	1986	610	481	103	38	43	33	264
	1987	852	735	286	59	62	62	266
	1988	918	772	302	104	74	65	227
	1989 ⁴	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1990 ⁵	2052	1832	1457	159	58	40	118
	1991	1163	848	344	92	71	76	265
	1992	682	605	214	73	60	51	207
	1993	256	250	61	28	19	22	120
	1994	241	218	26	13	12	13	154
	1995	456	250	47	12	16	22	154
	1996	1472	1223	270	246	244	97	365
USA Georges Bank (All Areas)	1985	574	505	127	37	54	58	229
	1986	632	489	111	34	36	29	279
	1987	826	701	254	79	67	55	246
	1988	632	544	199	59	48	46	192
	1989 ⁶	-	-	-	-	-	-	-
	1990 ⁵	1202	894	597	84	50	37	126
	1991	1099	649	295	56	42	41	215
	1992	1216	860	534	63	54	46	163
	1993	308	258	81	19	15	17	126
	1994	346	314	108	30	21	19	136
	1995	593	380	99	26	27	31	197
	1996	1192	1021	256	131	136	96	401
Total Northern Edge & Peak	1975	2228	2015	538	285	207	162	823
	1977	5299	5064	1826	522	621	531	1564
	1978	7910	7804	632	468	746	818	4940
	1979	4666	4461	1009	261	233	256	2702
	1980	2963	2052	623	236	227	164	802
	1981	4417	3788	2565	244	221	157	601
	1982	1068	950	294	94	98	104	360
	1983	746	669	128	56	66	65	354
	1984	1133	837	227	74	65	65	406
	1985	2104	1846	1287	130	104	92	233
	1986	2676	2592	754	510	498	351	479
	1987	1913	1613	549	168	178	181	537
	1988	1760	1533	635	176	164	141	417
	1989 ⁴	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1990 ⁵	3097	2679	1382	278	204	201	614
	1991	1539	1143	353	103	93	102	492
	1992 ⁸	-	-	-	-	-	-	-
	1993	1422	1395	275	141	152	171	656
	1994	1573	1485	399	169	137	131	649
	1995	2317	2009	1196	117	83	69	544
	1996 ⁶	-	-	-	-	-	-	-

Table 9. (Continued).

Area	Year	Total Biomass Per Tow(g)	Harvestable ² Biomass Per Tow (g)	Meat Weight (g, meat) Per Tow ¹				
				Meat Count Interval ³				
				80-40	40-35	35-30	30-25	<25
Total	1975	1471	1343	236	130	105	96	776
Georges	1977	3298	3178	938	289	372	329	1250
Bank	1978	4020	3879	295	220	351	398	2615
(All Areas)	1979	2801	2702	633	169	124	132	1644
	1980	1892	1373	412	139	128	94	600
	1981	1841	1625	919	103	92	66	445
	1982	964	743	243	59	57	59	325
	1983	688	627	168	51	53	52	303
	1984	725	569	142	48	41	42	296
	1985	1358	1193	694	85	86	87	241
	1986	1961	1678	477	301	294	209	397
	1987	1348	1136	388	129	123	114	382
	1988	1096	958	381	102	97	86	292
	1989 ⁶	-	-	-	-	-	-	-
	1990 ⁵	1848	1467	732	153	118	112	352
	1991	1294	830	308	68	59	60	335
	1992 ⁵	-	-	-	-	-	-	-
	1993	867	815	182	76	80	90	387
	1994	977	915	275	103	81	75	381
	1995	1473	1212	649	74	57	52	379
	1996 ⁶	-	-	-	-	-	-	-

¹ Meat weight values derived from shell height values using the equation derived from 1977-1982 USA research survey data:

$$\ln \text{Meat Weight (g)} = -11.7656 + 3.1693 \ln \text{Shell Height (mm)} \quad (n = 5863, r = 0.98).$$

² Stratified mean weight (g, meat) per tow for sea scallops ≥ 70 mm or ≤ 80 count.

³ Meat count is expressed as number of meats per pound.

⁴ Not sampled.

⁵ Stratum 72 not sampled.

⁶ Not calculated due to incomplete survey coverage.

Table 10. Percent distribution of harvestable biomass (meat weight) of sea scallops on Georges Bank region, within various meat count intervals. Harvestable biomass is defined as all sea scallops > 70 mm shell height. Data derived from distribution of standardized stratified mean meat weight per tow in NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 1977-1996.

Area	Year	Percent of Harvestable Biomass by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
South Channel	1975	4.8	3.2	4.2	5.3	87.8	82.5
	1977	8.0	5.3	11.2	11.4	75.4	64.1
	1978	4.4	3.9	6.4	10.3	85.2	74.9
	1979	31.1	9.2	2.9	2.5	56.8	54.3
	1980	23.0	2.7	2.4	3.8	71.9	68.1
	1981	25.3	6.0	4.9	4.1	63.8	59.7
	1982	44.1	5.1	3.3	3.1	47.5	44.4
	1983	40.5	8.7	7.1	6.9	43.7	36.9
	1984	16.4	5.6	6.1	7.2	71.9	64.7
	1985	22.8	7.3	13.1	15.3	56.7	41.4
	1986	26.5	7.3	7.1	6.6	59.1	52.5
	1987	38.8	10.6	9.5	8.1	41.0	32.9
	1988	41.0	8.1	7.8	7.4	43.1	35.7
	1989	21.0	5.2	6.3	6.3	67.5	61.3
	1990	43.0	11.3	10.8	8.8	35.0	26.2
	1991	53.2	6.9	4.8	4.1	35.1	31.0
	1992	78.5	4.9	4.3	2.9	12.3	9.4
	1993	48.8	5.7	4.6	4.6	40.9	36.3
	1994	54.1	13.0	7.8	5.9	25.1	19.2
	1995	31.3	7.1	7.8	9.4	53.9	44.5
	1996	29.2	6.8	7.8	11.1	56.2	45.2
Southeast Part	1975	1.6	2.0	3.5	6.6	92.9	86.3
	1977	8.4	4.4	4.3	3.5	82.9	79.4
	1978	2.0	1.1	1.6	1.5	95.3	93.8
	1979	4.8	0.8	2.0	1.8	92.4	90.6
	1980	34.7	7.4	3.5	1.7	54.5	52.8
	1981	12.0	6.6	5.5	3.5	76.0	72.5
	1982	2.9	2.9	3.5	2.2	90.8	88.6
	1983	5.6	1.6	4.8	7.7	87.9	80.2
	1984	27.6	12.3	5.3	4.4	54.8	50.4
	1985	21.0	6.8	6.4	8.7	65.8	57.1
	1986	19.2	4.7	4.4	3.2	71.7	68.6
	1987	25.3	19.2	12.1	5.8	43.4	37.6
	1988	14.4	6.9	8.8	11.3	69.9	58.6
	1989	10.7	7.3	8.2	11.2	73.8	62.7
	1990	28.1	6.2	7.5	3.4	58.2	54.8
	1991	31.0	4.3	3.8	2.4	61.0	58.6
	1992	19.3	11.3	11.3	14.2	58.2	43.9
	1993	6.6	3.1	4.4	6.6	86.0	79.5
	1994	3.6	3.2	5.6	4.8	87.5	82.7
	1995	18.0	9.0	5.8	2.5	67.3	64.7
	1996	12.1	8.6	9.0	6.0	70.3	64.2

Table 10. (Continued).

Area	Year	Percent of Harvestable Biomass by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
USA Northern Edge & Peak	1985	31.8	7.6	6.6	4.3	53.9	49.6
	1986	21.4	7.9	8.9	6.9	61.7	54.9
	1987	38.9	8.0	8.4	8.4	44.6	36.2
	1988	39.1	13.5	9.6	8.4	37.8	29.4
	1989 ²	N/S	N/S	N/S	N/S	N/S	N/S
	1990 ³	79.5	8.7	3.2	2.2	8.6	6.4
	1991	40.6	10.8	8.4	9.0	40.2	31.3
	1992	35.4	12.1	9.9	8.4	42.6	34.2
	1993	24.4	11.2	7.6	8.8	56.8	48.0
	1994	11.9	6.0	5.5	6.0	76.6	70.6
	1995	18.8	4.8	6.4	8.8	70.4	61.6
	1996	22.1	20.2	20.0	7.9	37.7	29.8
USA Georges Bank (All Areas)	1985	25.1	7.3	10.7	11.5	56.8	45.3
	1986	22.7	7.0	7.4	5.9	63.0	57.1
	1987	36.2	11.3	9.6	7.8	42.9	35.1
	1988	36.6	10.8	8.8	8.5	43.8	35.3
	1989 ⁴	-	-	-	-	-	-
	1990 ³	66.8	9.4	5.6	4.1	18.2	14.1
	1991	45.5	8.6	6.5	6.3	39.4	33.1
	1992	62.1	7.3	6.3	5.3	24.3	19.0
	1993	31.4	7.4	5.8	6.6	55.4	48.8
	1994	34.4	9.6	6.7	6.1	49.4	43.3
	1995	26.1	6.8	7.1	8.2	60.0	51.8
	1996	25.1	12.9	13.3	9.4	48.7	39.3
Total Northern Edge & Peak	1975	26.7	14.1	10.3	8.0	48.9	40.8
	1977	36.1	10.3	12.3	10.5	41.4	30.9
	1978	8.3	6.2	9.8	10.8	75.7	65.0
	1979	22.6	5.9	5.2	5.7	66.3	60.6
	1980	30.4	11.5	11.1	8.0	47.1	39.1
	1981	67.7	6.4	5.8	4.1	20.0	15.9
	1982	30.9	9.9	10.3	10.9	48.8	37.9
	1983	19.1	8.4	9.9	9.7	62.6	52.9
	1984	27.1	8.8	7.8	7.8	56.3	48.5
	1985	69.7	7.0	5.6	5.0	17.6	12.6
	1986	29.1	19.7	19.2	13.5	32.0	18.5
	1987	34.0	10.4	11.0	11.2	44.5	33.3
	1988	41.4	11.5	10.7	9.2	36.4	27.2
	1989 ⁴	-	-	-	-	-	-
	1990 ³	51.6	10.4	7.6	7.5	30.4	22.9
	1991	30.9	9.0	8.1	8.9	52.0	43.0
	1992 ⁴	-	-	-	-	-	-
	1993	19.7	10.1	10.9	12.3	59.3	47.0
	1994	26.9	11.4	9.2	8.8	52.5	43.7
	1995	59.5	5.8	4.1	3.4	30.5	27.1
	1996 ⁴	-	-	-	-	-	-

Table 10. (Continued).

Area	Year	Percent of Harvestable Biomass by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
Total	1975	17.6	9.7	7.8	7.1	64.9	57.8
Georges	1977	29.5	9.1	11.7	10.4	49.7	39.3
Bank	1978	7.6	5.7	9.0	10.3	77.7	67.4
(All Areas)	1979	23.4	6.3	4.6	4.9	65.7	60.8
	1980	30.0	10.1	9.3	6.8	50.5	43.7
	1981	56.6	6.3	5.7	4.1	31.4	27.4
	1982	32.7	7.9	7.7	7.9	51.7	43.7
	1983	26.8	8.1	8.5	8.3	56.6	48.3
	1984	25.0	8.4	7.2	7.4	59.4	52.0
	1985	58.2	7.1	7.2	7.3	27.5	20.2
	1986	28.4	17.9	17.5	12.5	36.1	23.7
	1987	34.2	11.4	10.8	10.0	43.7	33.6
	1988	39.8	10.6	10.1	9.0	39.5	30.5
	1989 ⁴	-	-	-	-	-	-
	1990 ³	49.9	10.4	8.0	7.6	31.6	24.0
	1991	37.1	8.2	7.1	7.2	47.6	40.4
	1992 ⁴	-	-	-	-	-	-
	1993	22.3	9.3	9.8	11.0	58.5	47.5
	1994	30.1	11.3	8.9	8.2	49.8	41.6
	1995	53.5	6.1	4.7	4.3	35.6	31.3
	1996 ⁴	-	-	-	-	-	-

¹ Meat count is expressed as number of meats per pound.

² Not sampled.

³ Stratum 72 not sampled.

⁴ Not calculated due to incomplete survey coverage.

Table 11. Distribution of standardized mean number per tow among various meat count intervals for sea scallops from NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 10.7-1996.

Area	Year	Total Number Per Tow	Harvestable Number Per Tow	Stratified Mean Number of Scallops per Tow				
				Meat Count Interval				
				80-40	40-35	35-30	30-25	<25
South Channel	1975	75	29.9	4.6	2	2.2	2.3	18.8
	1977	95.4	89.1	18.6	7.9	14.2	12.2	36.2
	1978	57.4	49.7	5.4	3.5	4.8	6.5	29.5
	1979	95	88.2	47.9	10.8	2.9	2.1	24.5
	1980	109.9	30.2	15.9	1.1	0.8	1.2	11.2
	1981	52	36.5	19	3	2.1	1.5	10.9
	1982	266.8	53	39.7	2.6	1.4	1.2	8.1
	1983	74.8	55.8	36.3	5.2	3.6	2.9	7.8
	1984	31.3	17.7	6.9	1.5	1.4	1.5	6.4
	1985	87.6	47.3	21.1	4.3	6.5	6.5	8.9
	1986	152.3	37	19.9	3.3	2.7	2.1	9
	1987	140.7	56.1	35	5.9	4.5	3.3	7.4
	1988	68.5	36	23.9	2.9	2.3	1.8	5.1
	1989	36.8	15.1	7.1	1.1	1.1	0.9	4.9
	1990	308.7	49.9	32.3	5.2	4.2	2.9	5.3
	1991	496.3	64.2	50.5	3.7	2.2	1.6	6.2
	1992	394.6	171.8	156.4	5.2	3.8	2.2	4.2
	1993	55.1	24.5	18.3	1.2	0.9	0.7	3.4
	1994	56.3	37.6	26.9	4.4	2.2	1.5	2.6
	1995	161.9	41.2	23.4	3	2.8	2.9	9.1
	1996	147.8	87.3	46.3	6.6	6.4	7.7	20.3
Southeast Part	1975	40.2	38.4	1.9	1.5	2.3	3.8	28.9
	1977	30.4	27.2	6.2	2.3	1.9	1.3	15.5
	1978	29.3	27.1	2	0.8	1	0.8	22.5
	1979	28.9	21.2	4	0.4	0.9	0.7	15.2
	1980	63.2	41.7	25.8	4	1.6	0.7	9.6
	1981	20.8	19.4	5.8	2.3	1.6	0.9	8.8
	1982	10.6	9.8	0.9	0.7	0.7	0.4	7.1
	1983	20.5	9.2	1.6	0.3	0.8	1.1	5.4
	1984	17.5	12.9	6.4	2.2	0.8	0.5	3
	1985	20.9	11.8	5.3	1.1	0.9	1.1	3.4
	1986	49.5	20.6	9.2	1.5	1.2	0.7	8
	1987	62.7	39.6	16.7	9	4.7	1.9	7.3
	1988	17.5	16.1	5.2	1.7	1.8	2	5.4
	1989	35.4	11.8	3	1.3	1.2	1.4	4.9
	1990	10	8.4	4.5	0.7	0.7	0.3	2.2
	1991	32.6	14.1	9	0.7	0.5	0.3	3.6
	1992	30.8	20.5	7.6	2.9	2.5	2.7	4.8
	1993	11.8	9.5	1.8	0.5	0.6	0.8	5.8
	1994	28.5	8.9	1	0.6	0.9	0.7	5.7
	1995	27.1	13.5	5.3	1.9	1.1	0.4	4.8
	1996	32.5	12.1	3.6	1.6	1.4	0.8	4.6

Table 11. (Continued).

Area	Year	Total Number Per Tow	Harvestable Number Per Tow	Stratified Mean Number of Scallops per Tow				
				Meat Count Interval				
				80-40	40-35	35-30	30-25	<25
USA Northern Edge & Peak	1985	48.4	26.6	16.2	2.3	1.7	0.9	5.5
	1986	74.2	28.6	13	2.9	2.8	1.8	8.1
	1987	116.6	54.6	34.3	4.5	4.1	3.4	8.3
	1988	126.7	60.9	31.3	6.7	4.1	3.1	6.5
	1989 ²	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	1990 ³	263.7	196.8	174.4	12.3	3.8	2.2	4.1
	1991	185.6	66.9	42.4	7.1	4.6	4.2	8.6
	1992	71.1	45	25.7	5.6	3.9	2.8	7
	1993	18.3	15.6	6.8	2.2	1.3	1.2	4.1
	1994	25.3	10.4	3	1	0.7	0.7	5
	1995	95.9	14.3	5.9	1	1	1.2	5.3
	1996	186.7	83.3	30.8	19.0	15.9	5.4	12.3
USA Georges Bank (All Areas)	1985	58.3	31.8	15.8	2.9	3.5	3.2	6.4
	1986	90.2	28.9	14	2.7	2.3	1.6	8.3
	1987	114.5	51.9	30.7	6.1	4.4	3	7.7
	1988	78.8	40.8	24.5	4.5	3.2	2.5	6.1
	1989 ⁴	-	-	-	-	-	-	-
	1990 ³	233	87.8	71.9	6.4	3.2	2.1	4.2
	1991	278.2	54.1	38.3	4.3	2.7	2.3	6.5
	1992	193.9	91.2	74.9	4.8	3.6	2.5	5.4
	1993	31.8	17.8	10.4	1.4	1	0.9	4.1
	1994	38.6	21.1	12.3	2.3	1.4	1	4.1
	1995	107.5	25.1	12.9	2	1.8	1.7	6.7
	1996	136.8	69.2	31.1	10.1	8.8	5.3	13.9
Total Northern Edge & Peak	1975	219.7	135.9	61.9	21.9	13.4	9	29.7
	1977	450.9	384.8	220.5	40.1	40.3	29.5	54.4
	1978	550.6	372.9	71.1	35.9	48.5	45.4	172
	1979	329.9	257.9	122.4	20	15.1	14.2	86.2
	1980	809.4	143.7	75.4	18.2	14.8	9	26.3
	1981	683.1	405.7	343.4	18.7	14.4	8.7	20.5
	1982	106.2	65.3	34.1	7.3	6.3	5.7	11.9
	1983	85.3	37.1	14.1	4.3	4.3	3.6	10.8
	1984	347.8	54	28.3	5.7	4.2	3.6	12.2
	1985	276.7	192.2	162.8	10	6.8	5.1	7.5
	1986	368.6	195.6	86.5	39.2	32.4	19.5	18
	1987	272.4	122.2	67.5	13	11.6	10	20.1
	1988	223.7	124.4	77.3	13.6	10.7	7.8	15
	1989 ⁴	-	-	-	-	-	-	-
	1990 ³	459.8	236	166.1	21.3	13.3	11.2	24.1
	1991	231.1	78.9	43.5	7.9	6.1	5.7	15.7
	1992 ⁴	-	-	-	-	-	-	-
	1993	94.8	85.7	31	10.9	9.9	9.5	24.4
	1994	148.4	97	44.7	13	8.9	7.3	23.1
	1995	299.7	178.5	141.6	9.1	5.4	3.8	18.8
	1996 ⁴	-	-	-	-	-	-	-

Table 11. (Continued).

Area	Year	Total Number Per Tow	Harvestable Number Per Tow	Stratified Mean Number of Scallops per Tow				
				Meat Count Interval				
				80-40	40-35	35-30	30-25	<25
Total	1975	126.3	74.6	27.2	10	6.8	5.3	25.3
Georges	1977	252.6	218.3	113	22.2	24.2	18.2	40.7
Bank	1978	263.7	184	32.9	16.9	22.8	22.1	89.3
(All Areas)	1979	188.9	152.3	73.2	13	8.1	7.3	50.7
	1980	469.7	92.3	49.2	10.7	8.4	5.2	18.8
	1981	249.6	152.4	121.3	7.9	6	3.7	13.5
	1982	142.2	51.2	29.9	4.5	3.7	3.3	9.8
	1983	70.1	38.2	19.1	3.9	3.4	2.9	8.9
	1984	183.3	34.6	17.3	3.7	2.7	2.3	8.6
	1985	167.9	111.6	87.4	6.5	5.6	4.8	7.3
	1986	252.9	123	55.3	23.2	19.1	11.6	13.8
	1987	190.9	85.4	47.6	9.9	8	6.3	13.6
	1988	135.1	75.6	46.6	7.9	6.3	4.8	10
	1989 ⁴	-	-	-	-	-	-	-
	1990 ³	320.9	127.3	88.3	11.8	7.7	6.2	13.3
	1991	283.1	62.3	39.6	5.2	3.8	3.3	10.4
	1992 ⁴	-	-	-	-	-	-	-
	1993	66.6	51.6	21.5	5.8	5.2	5	14.1
	1994	96.2	61.4	30.9	7.9	5.2	4.2	13.2
	1995	204.5	103	77.6	5.8	3.7	2.9	13
	1996 ⁴	-	-	-	-	-	-	-

¹ Meat count is expressed as number of meats per pound.

² Not sampled.

³ Stratum 72 not sampled.

⁴ Not calculated due to incomplete survey coverage.

Table 12. Percent distribution of harvestable number of sea scallops on Georges Bank, within various meat count intervals. Harvestable scallops are defined as all sea scallops ≥ 70 mm shell height. Data derived from distribution of standardized stratified mean number per tow of scallops in NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 1977-1996.

Area	Year	Percent of Harvestable scallops by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
South Channel	1975	15.4	6.7	7.4	7.7	70.6	62.9
	1977	20.9	8.9	15.9	13.7	54.3	40.6
	1978	10.9	7.0	9.7	13.1	72.4	59.4
	1979	54.3	12.2	3.3	2.4	30.2	27.8
	1980	52.6	3.6	2.6	4.0	41.1	37.1
	1981	52.1	8.2	5.8	4.1	34.0	29.9
	1982	74.9	4.9	2.6	2.3	17.5	15.3
	1983	65.1	9.3	6.5	5.2	19.2	14.0
	1984	39.0	8.5	7.9	8.5	44.6	36.2
	1985	44.6	9.1	13.7	13.7	32.6	18.8
	1986	53.8	8.9	7.3	5.7	30.0	24.3
	1987	62.4	10.5	8.0	5.9	19.1	13.2
	1988	66.4	8.1	6.4	5.0	19.2	14.2
	1989	47.0	7.3	7.3	6.0	38.4	32.5
	1990	64.7	10.4	8.4	5.8	16.4	10.6
	1991	78.7	5.8	3.4	2.5	12.1	9.7
	1992	91.0	3.0	2.2	1.3	3.7	2.4
	1993	74.7	4.9	3.7	2.9	16.7	13.9
	1994	71.5	11.7	5.9	4.0	10.9	6.9
	1995	56.8	7.3	6.8	7.0	29.1	22.1
	1996	53.1	7.5	7.3	8.8	32.1	23.3
Southeast Part	1975	4.9	3.9	6.0	9.9	85.2	75.3
	1977	22.8	8.5	7.0	4.8	61.8	57.0
	1978	7.4	3.0	3.7	3.0	86.0	83.0
	1979	18.9	1.9	4.2	3.3	75.0	71.7
	1980	61.9	9.6	3.8	1.7	24.7	23.0
	1981	29.9	11.9	8.2	4.6	50.0	45.4
	1982	9.2	7.1	7.1	4.1	76.5	72.4
	1983	17.4	3.3	8.7	12.0	70.7	58.7
	1984	49.6	17.1	6.2	3.9	27.1	23.3
	1985	44.9	9.3	7.6	9.3	38.1	28.8
	1986	44.7	7.3	5.8	3.4	42.2	38.8
	1987	42.2	22.7	11.9	4.8	23.2	18.4
	1988	32.3	10.6	11.2	12.4	46.0	33.5
	1989	25.4	11.0	10.2	11.9	53.4	41.5
	1990	53.6	8.3	8.3	3.6	29.8	26.2
	1991	63.8	5.0	3.5	2.1	27.7	25.5
	1992	37.1	14.1	12.2	13.2	36.6	23.4
	1993	18.9	5.3	6.3	8.4	69.5	61.1
	1994	11.2	6.7	10.1	7.9	71.9	64.0
	1995	39.3	14.1	8.1	3.0	38.5	35.6
	1996	29.5	13.4	11.8	6.7	45.2	38.5

Table 12. (Continued).

Area	Year	Percent of Harvestable scallops by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
USA	1985	60.9	8.6	6.4	3.4	24.1	20.7
Northern	1986	45.5	10.1	9.8	6.3	34.6	28.3
Edge &	1987	62.8	8.2	7.5	6.2	21.4	15.2
Peak	1988	51.4	11.0	6.7	5.1	15.8	10.7
	1989 ²	-	-	-	-	-	-
	1990 ³	88.6	6.3	1.9	1.1	3.2	2.1
	1991	63.4	10.6	6.9	6.3	19.1	12.9
	1992	57.1	12.4	8.7	6.2	21.8	15.6
	1993	43.6	14.1	8.3	7.7	34.0	26.3
	1994	28.8	9.6	6.7	6.7	54.8	48.1
	1995	41.3	7.0	7.0	8.4	45.5	37.1
	1996	37.0	22.7	19.1	6.4	21.2	14.8
USA	1985	49.7	9.1	11.0	10.1	30.2	20.1
Georges	1986	48.4	9.3	8.0	5.5	34.3	28.7
Bank	1987	59.2	11.8	8.5	5.8	20.6	14.8
(All Areas)	1988	60.0	11.0	7.8	6.1	21.1	15.0
	1989 ⁴	-	-	-	-	-	-
	1990 ³	81.9	7.3	3.6	2.4	7.2	4.8
	1991	70.8	7.9	5.0	4.3	16.3	12.0
	1992	82.1	5.3	3.9	2.7	8.7	5.9
	1993	58.4	7.9	5.6	5.1	28.1	23.0
	1994	58.3	10.9	6.6	4.7	24.2	19.4
	1995	51.4	8.0	7.2	6.8	33.5	26.7
	1996	44.9	14.6	12.8	7.7	27.7	20.0
Total	1975	45.5	16.1	9.9	6.6	28.5	21.9
Northern	1977	57.3	10.4	10.5	7.7	21.8	14.1
Edge &	1978	19.1	9.6	13.0	12.2	58.3	46.1
Peak	1979	47.5	7.8	5.9	5.5	38.9	33.4
	1980	52.5	12.7	10.3	6.3	24.6	18.3
	1981	84.6	4.6	3.5	2.1	7.2	5.1
	1982	52.2	11.2	9.6	8.7	27.0	18.2
	1983	38.0	11.6	11.6	9.7	38.8	29.1
	1984	52.4	10.6	7.8	6.7	29.3	22.6
	1985	84.7	5.2	3.5	2.7	6.6	3.9
	1986	44.2	20.0	16.6	10.0	19.2	9.2
	1987	55.2	10.6	9.5	8.2	24.6	16.4
	1988	62.1	10.9	8.6	6.3	18.3	12.1
	1989 ⁴	-	-	-	-	-	-
	1990 ³	70.4	9.0	5.6	4.7	15.0	10.2
	1991	55.1	10.0	7.7	7.2	27.1	19.9
	1992 ⁴	-	-	-	-	-	-
	1993	36.2	12.7	11.6	11.1	39.6	28.5
	1994	46.1	13.4	9.2	7.5	31.3	23.8
	1995	79.3	5.1	3.0	2.1	12.7	10.5
	1996 ⁴	-	-	-	-	-	-

Table 12. (Continued).

Area	Year	Percent of Harvestable scallops by Meat Count Interval ¹					
		80-40	40-35	35-30	30-25	<30	<25
Total	1975	36.5	13.4	9.1	7.1	41.0	33.9
Georges	1977	51.8	10.2	11.1	8.3	27.0	18.6
Bank	1978	17.9	9.2	12.4	12.0	60.5	48.5
(All Areas)	1979	48.1	8.5	5.3	4.8	38.1	33.3
	1980	53.3	11.6	9.1	5.6	26.0	20.4
	1981	79.6	5.2	3.9	2.4	11.3	8.9
	1982	58.4	8.8	7.2	6.4	25.6	19.1
	1983	50.0	10.2	8.9	7.6	30.9	23.3
	1984	50.0	10.7	7.8	6.6	31.5	24.9
	1985	78.3	5.8	5.0	4.3	10.8	6.5
	1986	45.0	18.9	15.5	9.4	20.7	11.2
	1987	55.7	11.6	9.4	7.4	23.3	15.9
	1988	61.6	10.4	8.3	6.3	19.6	13.2
	1989 ⁴	-	-	-	-	-	-
	1990 ³	69.4	9.3	6.0	4.9	15.3	10.4
	1991	63.6	8.3	6.1	5.3	22.0	16.7
	1992 ⁴	-	-	-	-	-	-
	1993	41.7	11.2	10.1	9.7	37.0	27.3
	1994	50.3	12.9	8.5	6.8	28.3	21.5
	1995	75.3	5.6	3.6	2.8	15.4	12.6
	1996 ⁴	-	-	-	-	-	-

¹ Meat count is expressed as number of meats per pound.

² Not sampled.

³ Stratum 72 not sampled.

⁴ Not calculated due to incomplete survey coverage.

Table 13. Percent distribution of harvestable biomass (meat weight) of sea scallops in the USA Georges Bank and Mid-Atlantic regions, within various meat count intervals. Harvestable biomass are defined as all sea scallops ≥ 70 mm shell height (≤ 80 count). Data derived from distribution of standardized stratified mean number of scallops per tow in NEFSC 1996 research vessel sea scallop survey.

Area	Percent Harvestable Biomass by Meat Count Interval			
	80-40	40-35	35-30	<30
Virginia-No. Carolina	5.0	0.0	31.3	63.7
Delmarva	29.8	15.4	13.2	41.5
New York Bight	54.5	13.2	9.5	22.8
Mid-Atlantic	49.8	13.7	10.2	26.3
South Channel	29.2	6.8	7.8	56.2
Southeast Part	12.1	8.6	9.0	70.3
USA No. Edge & Peak	22.1	20.2	20.0	37.7
USA Georges Bank	25.1	12.9	13.3	48.7
Total USA Georges Bank and Mid-Atlantic Regions	34.4	13.2	12.2	40.3

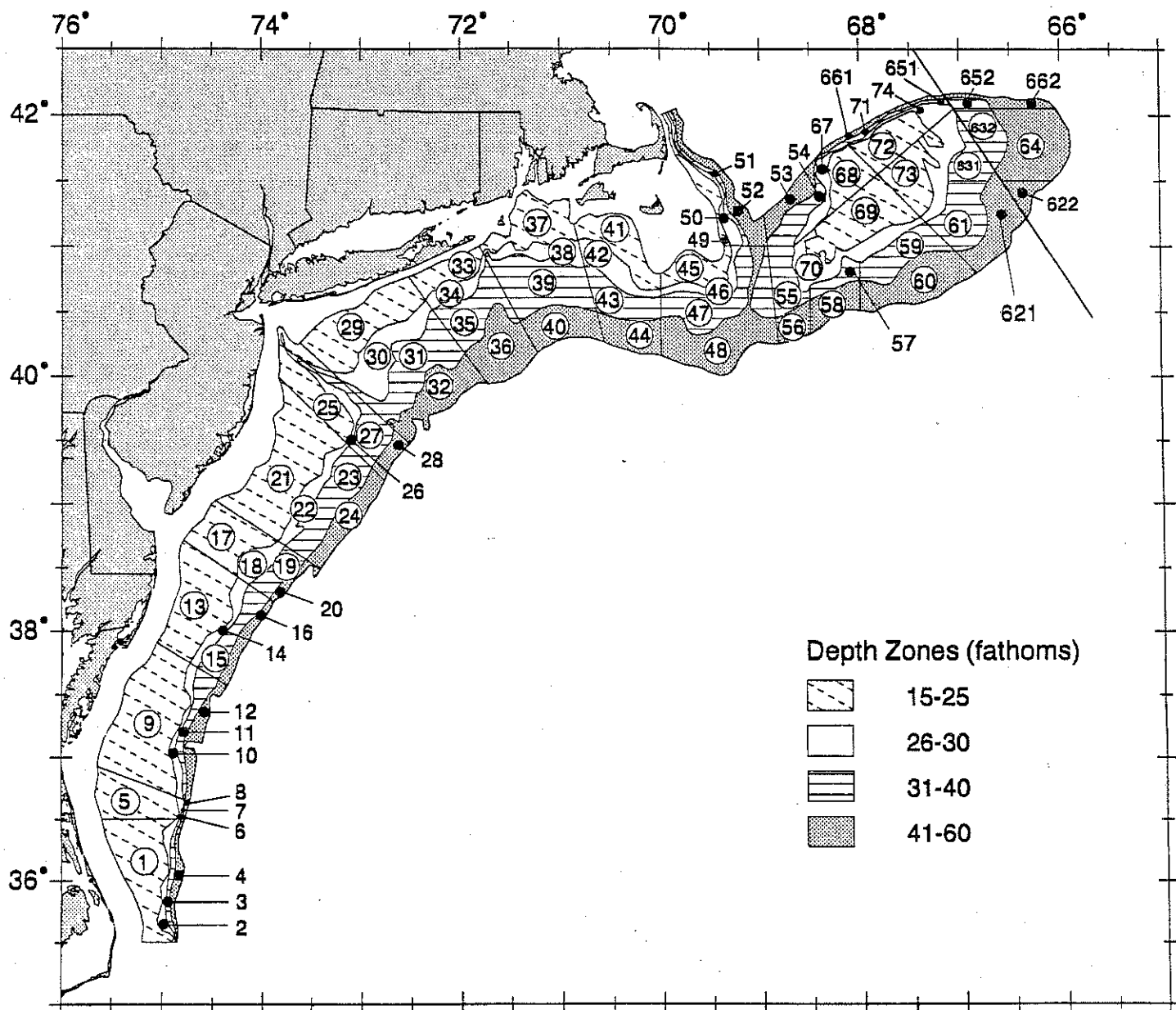


Figure 1. Strata sampled during NEFSC sea scallop research vessel survey.

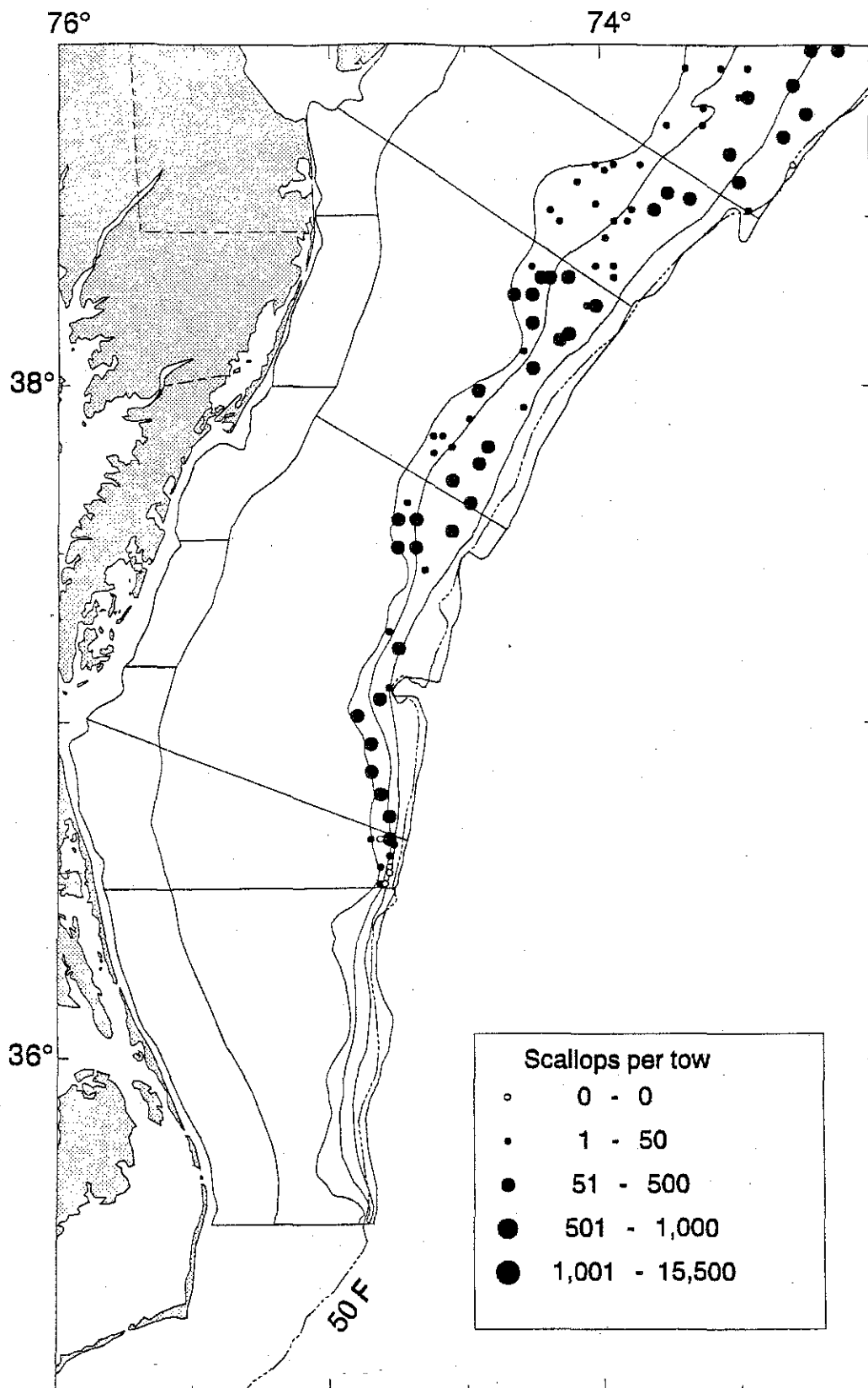


Figure 2. Distribution of sea scallops (number per tow) observed in the NEFSC sea scallop research vessel survey in the Virginia-North Carolina and Delmarva areas of the Mid-Atlantic region, 1996.

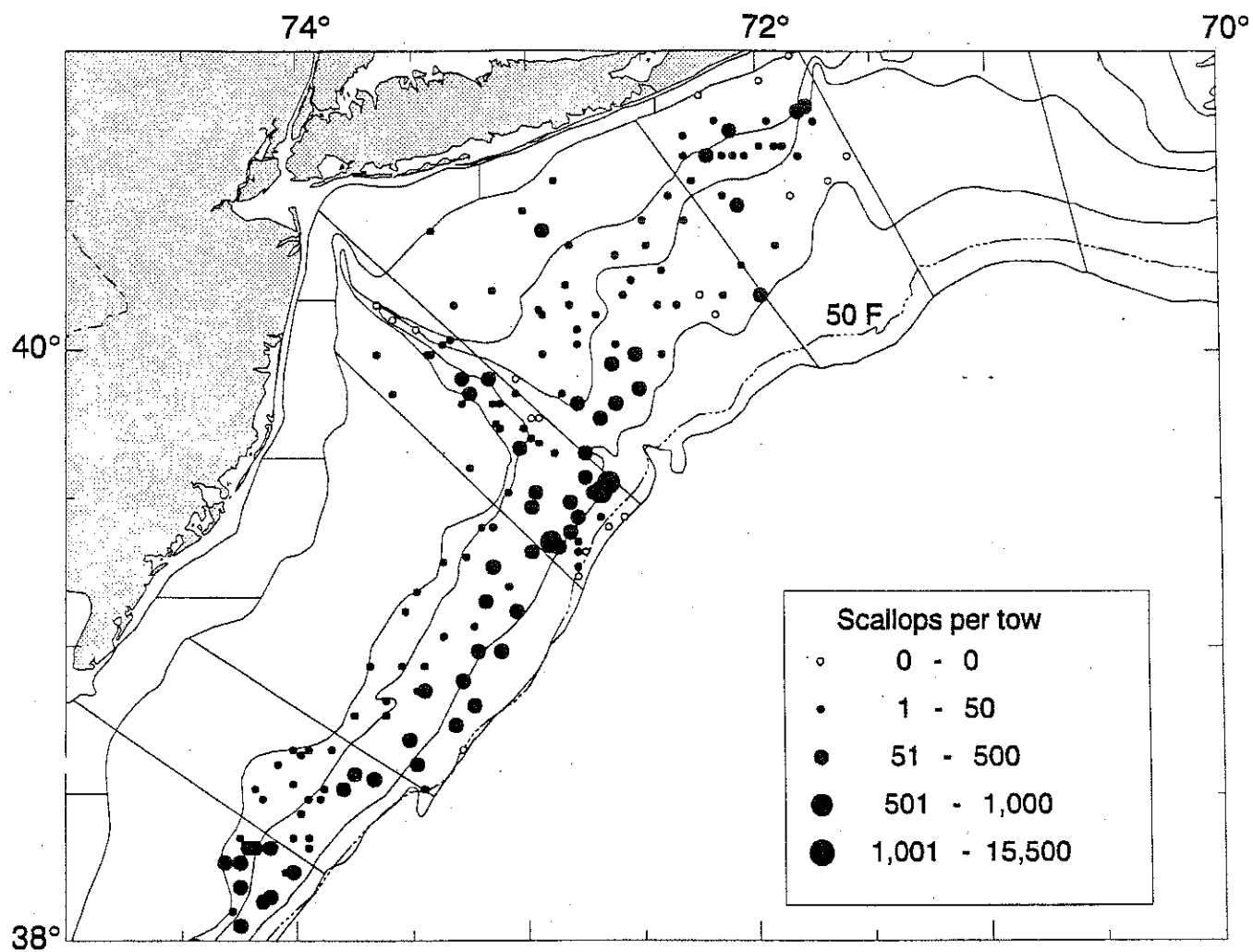


Figure 3. Distribution of sea scallops (number per tow) observed in the NEFSC sea scallop research vessel survey in the New York Bight area of the Mid-Atlantic region, 1996.

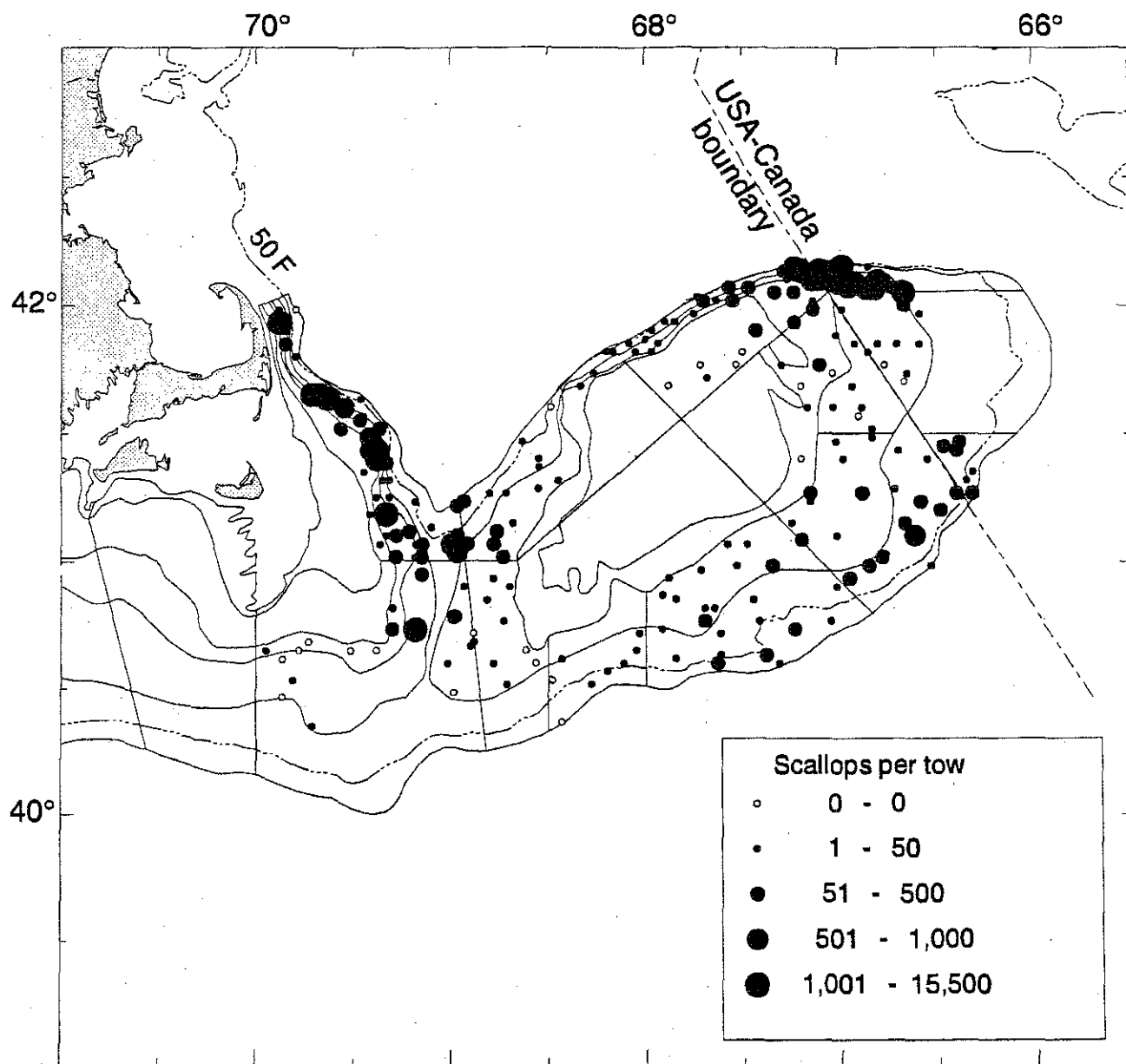


Figure 4. Distribution of sea scallops (number per tow) observed in the NEFSC sea scallop research vessel survey in the South Channel, Southeast Part, and USA and Canadian Northern Edge and Peak areas of the Georges Bank region, 1996.

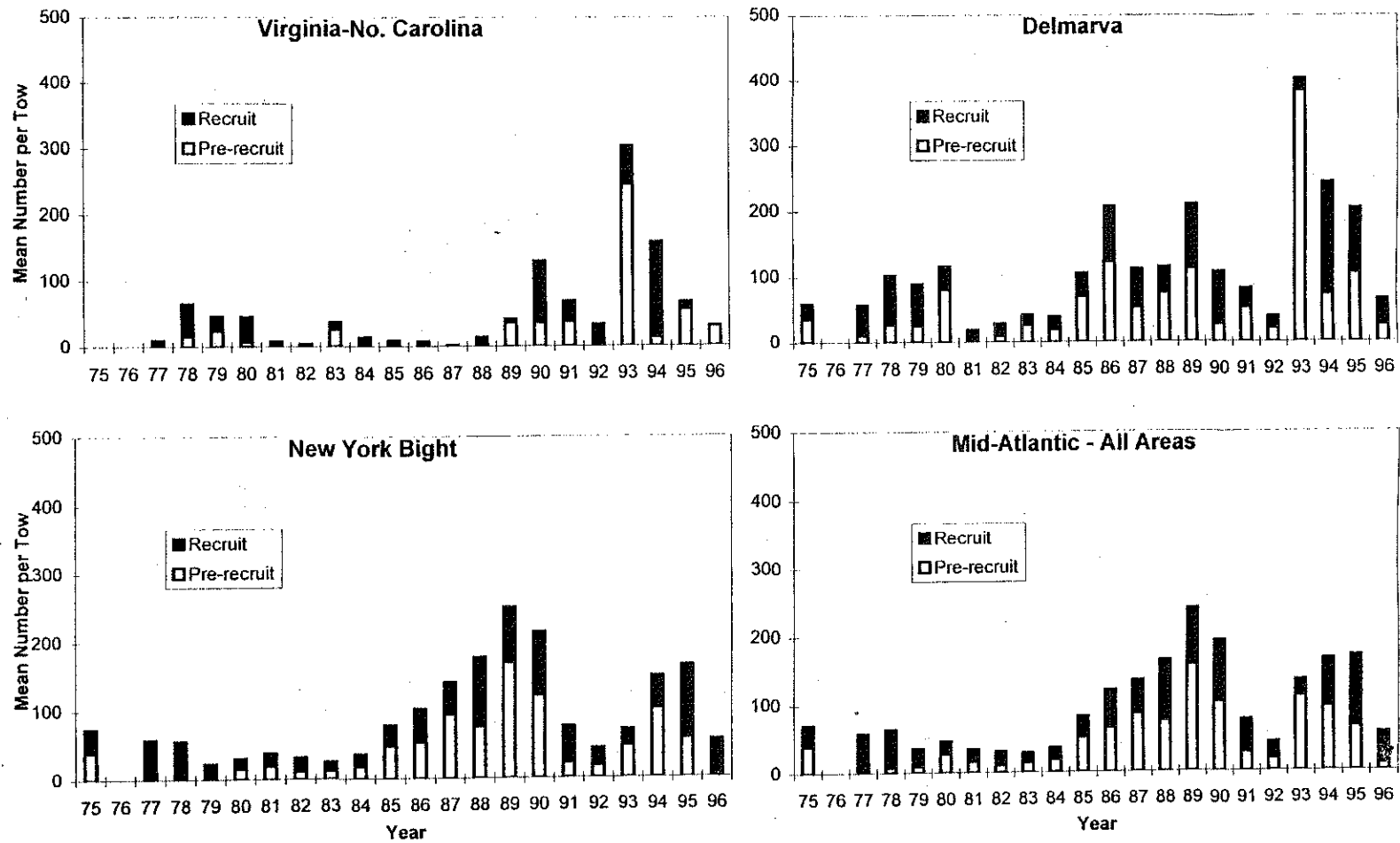


Figure 5. USA sea scallop relative abundance indices in the Mid-Atlantic Region, 1996.

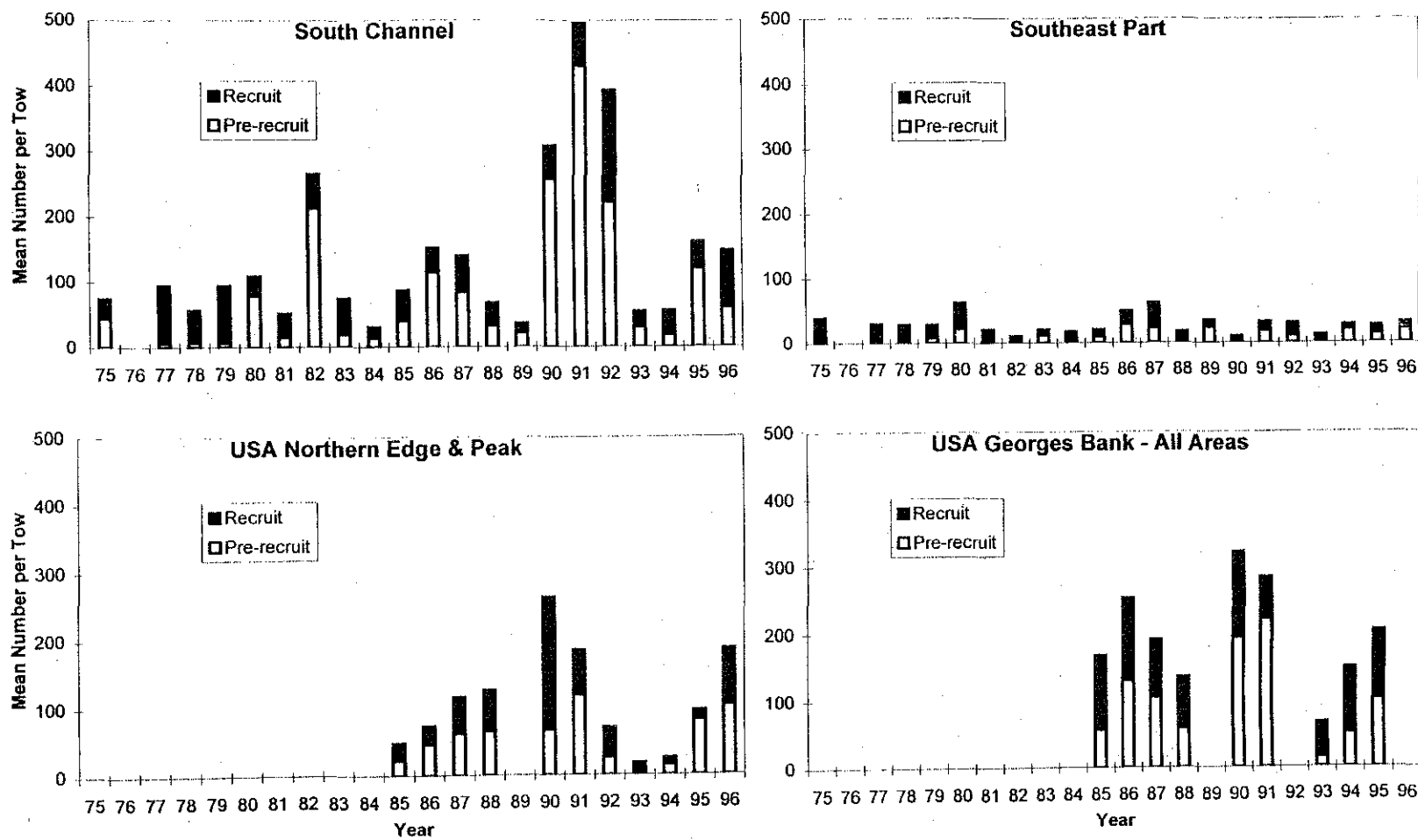


Figure 6. USA sea scallop relative abundance indices in the Georges Bank Region, 1996.

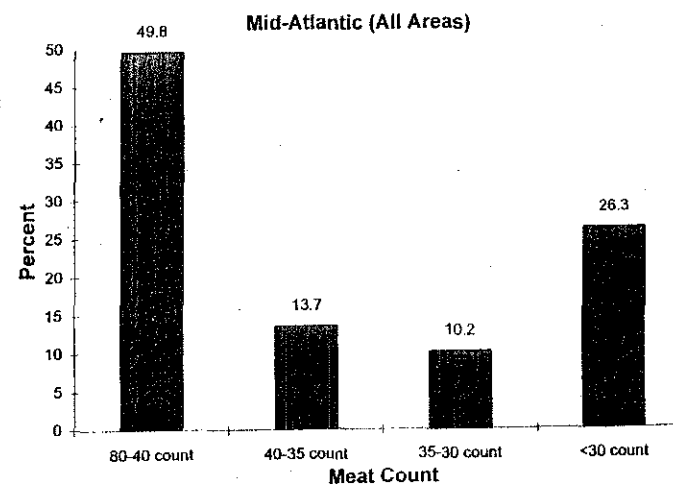
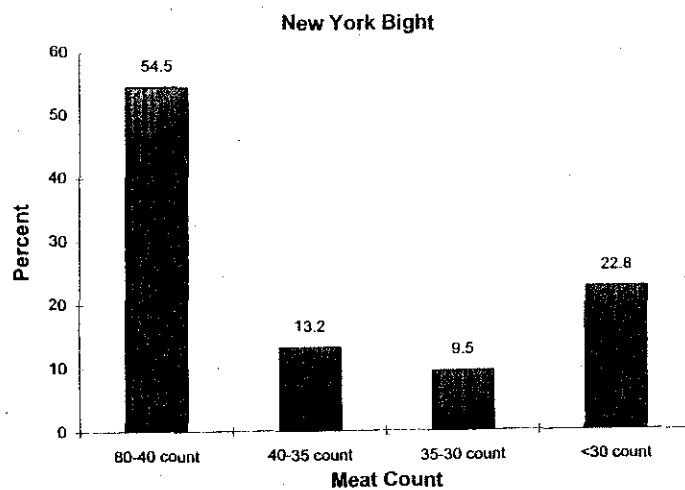
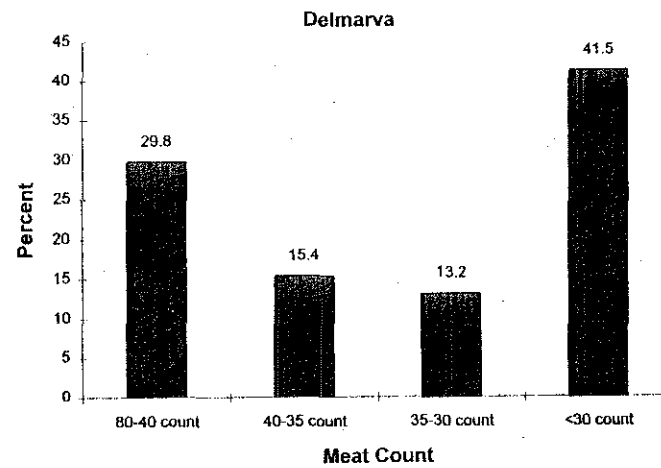
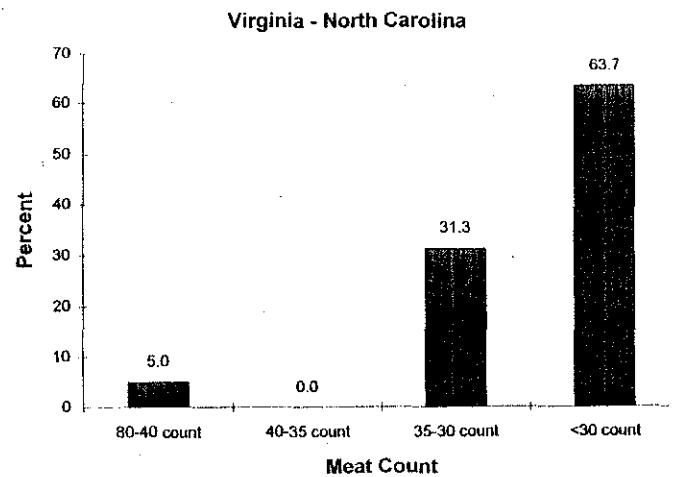


Figure 7. Percent distribution of harvestable biomass (meat weight) of sea scallops by meat count interval in the Mid-Atlantic region, 1996.

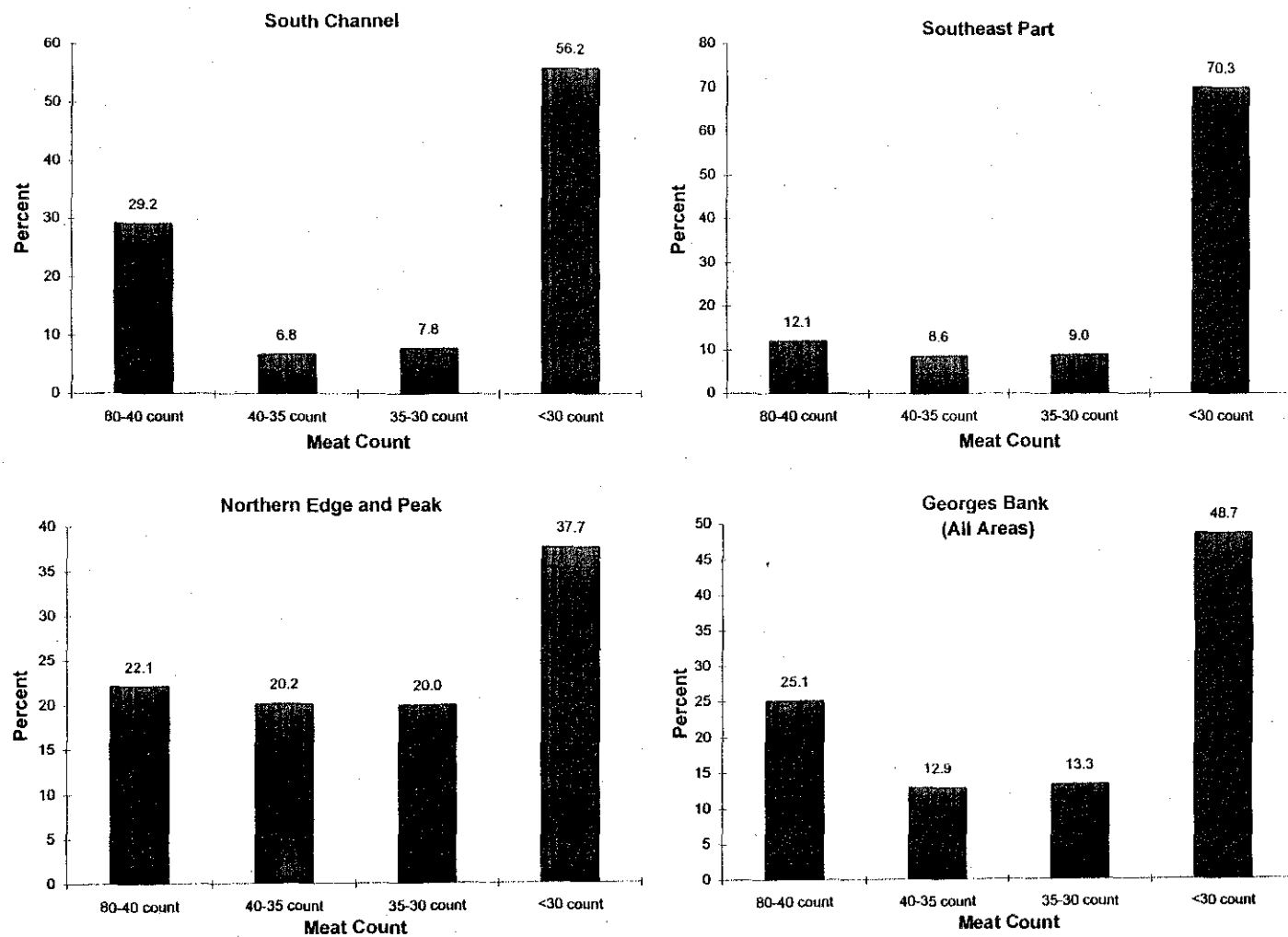


Figure 8. Percent distribution of harvestable biomass (meat weight) of sea scallops by meat count interval in the Georges Bank region, 1996.

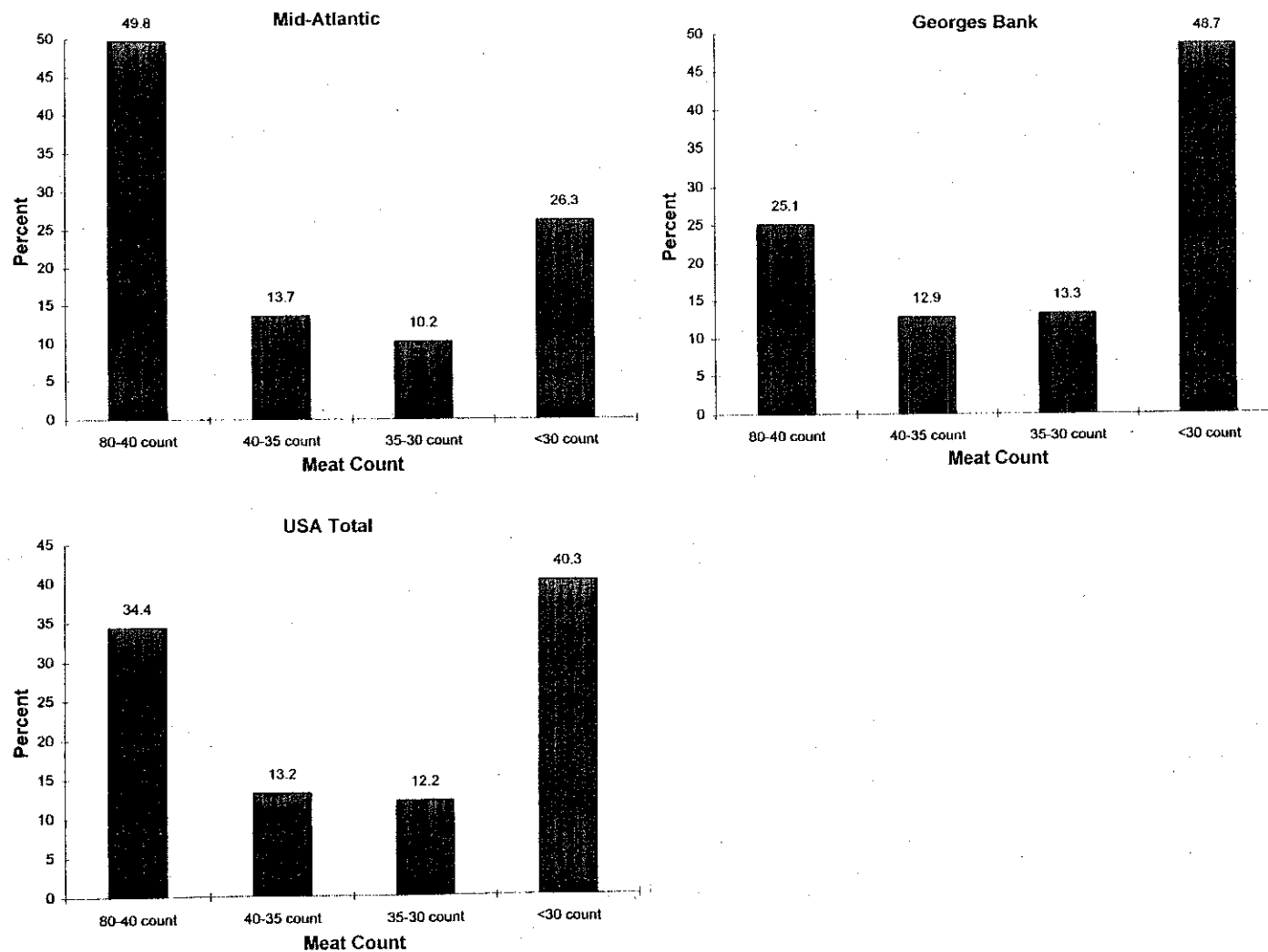


Figure 9. Percent distribution of harvestable biomass (meat weight) of sea scallops by meat count interval in the USA Georges Bank and Mid-Atlantic regions, 1996.

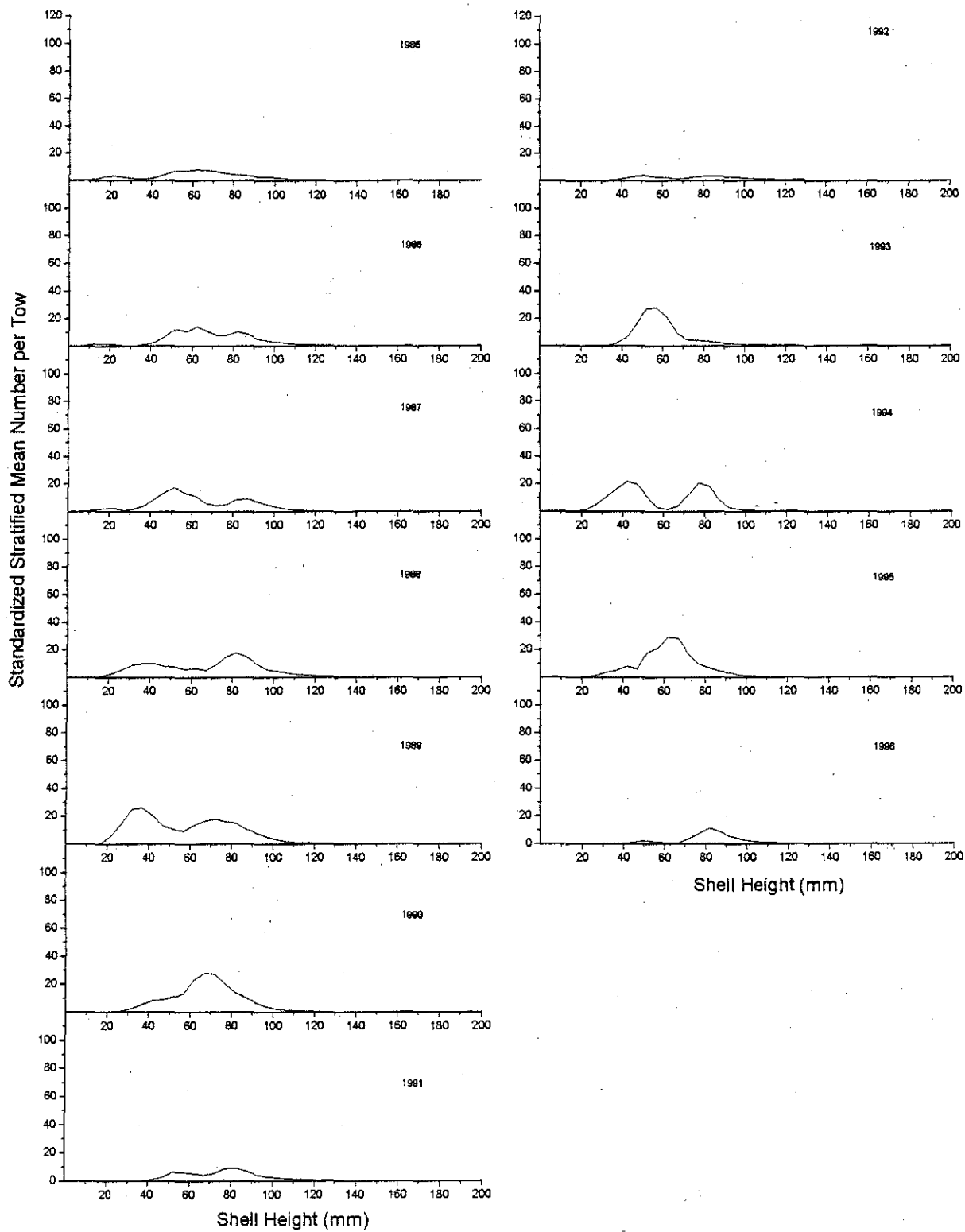


Figure 10. Shell height frequency distributions for sea scallop from the Mid-Atlantic region, 1985-1996. Data from USA sea scallop research surveys.

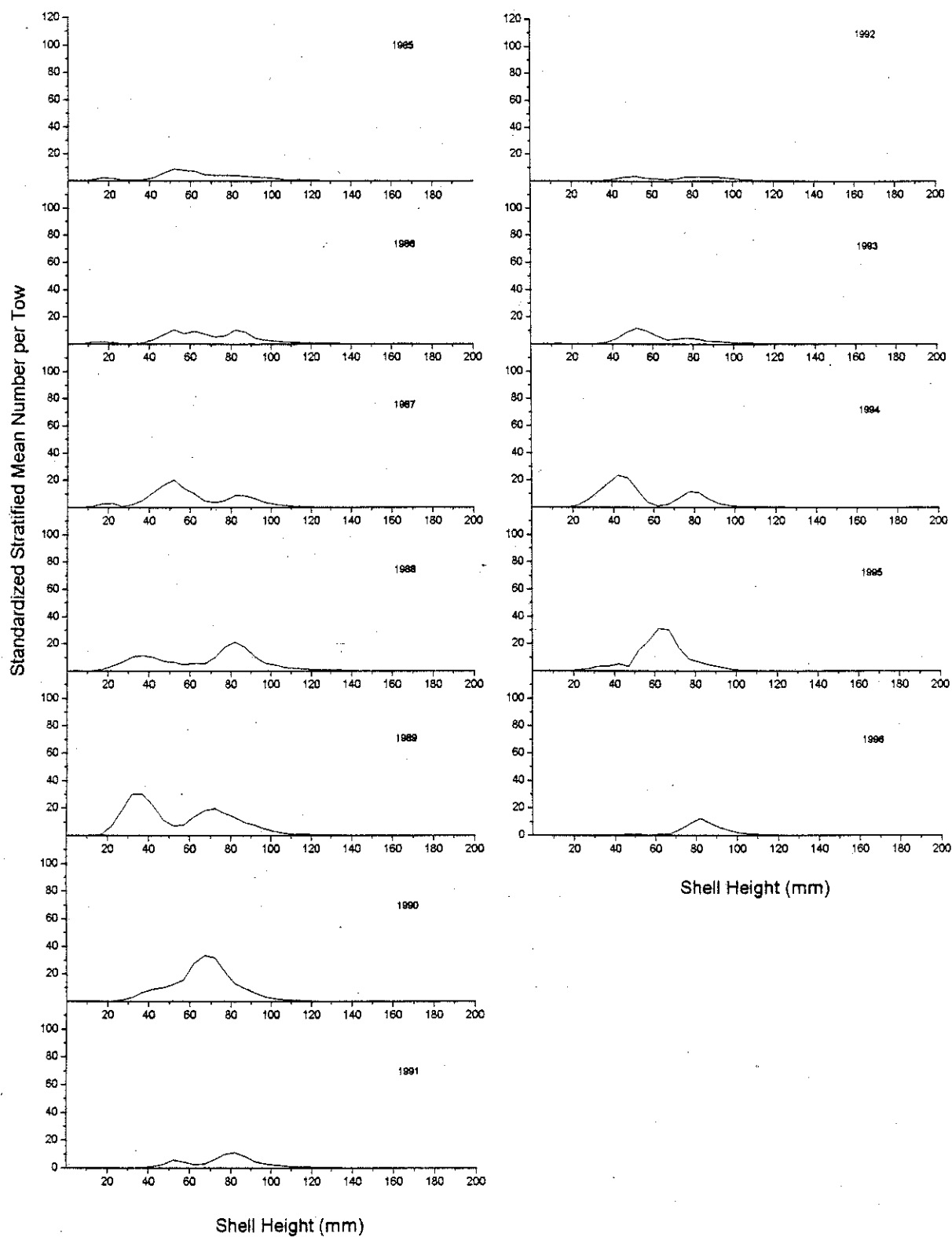


Figure 11. Shell height frequency distributions for sea scallop from the New York Bight region, 1985-1996. Data from USA sea scallop research surveys.

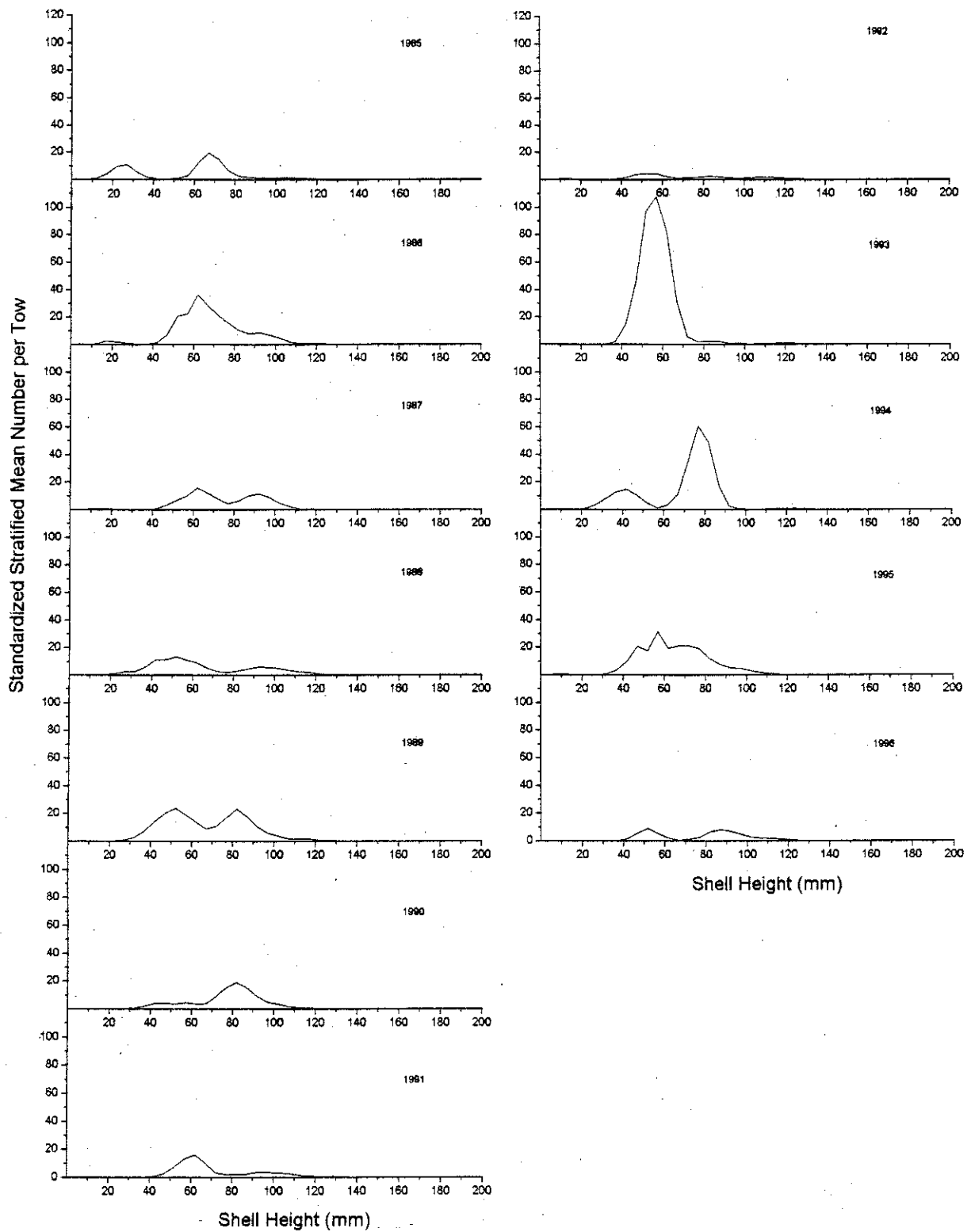


Figure 12. Shell height frequency distributions for sea scallop from the Delmarva region, 1985-1996. Data from USA sea scallop research surveys.

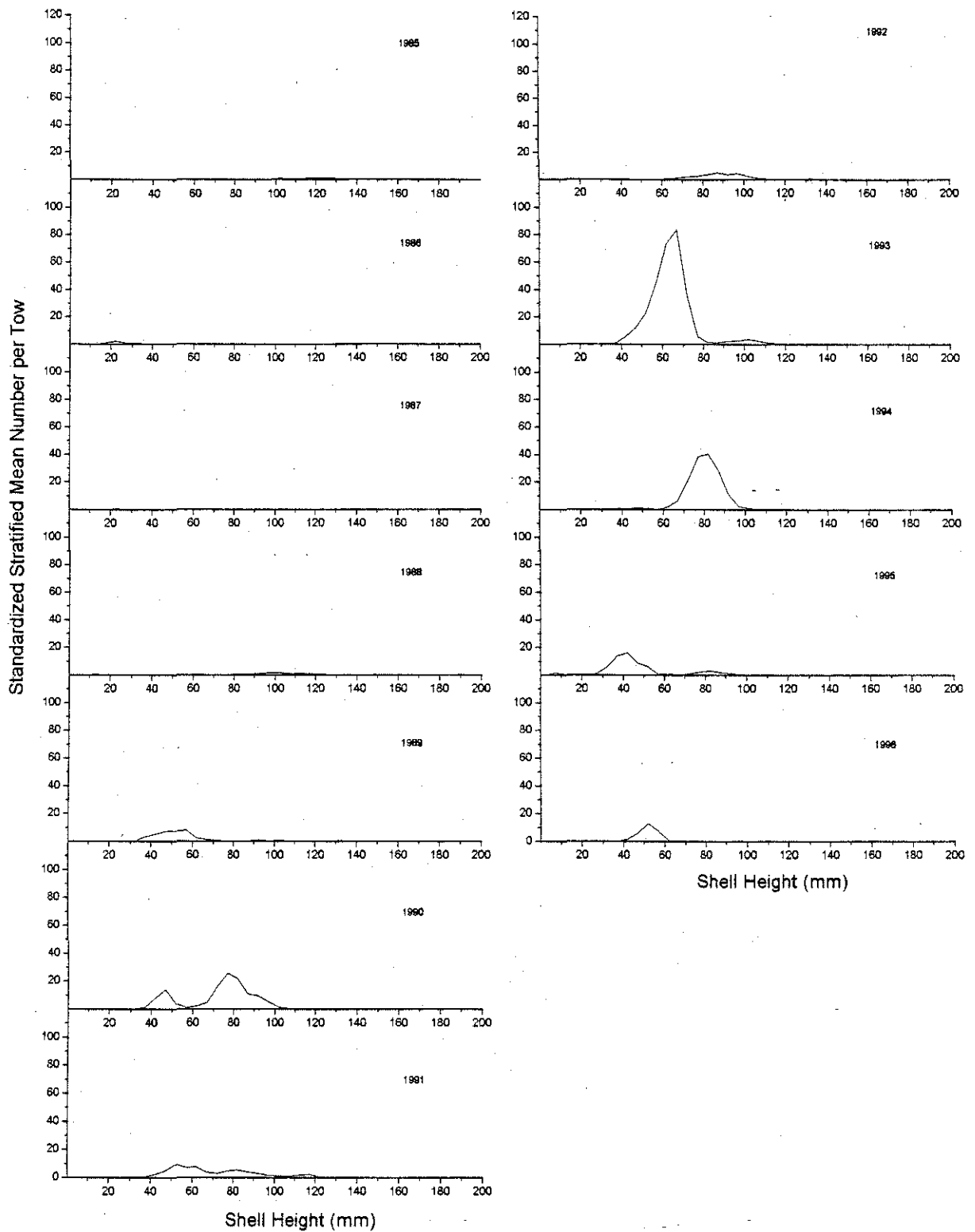


Figure 13. Shell height frequency distributions for sea scallop from the Virginia-North Carolina region, 1985-1996. Data from USA sea scallop research surveys.

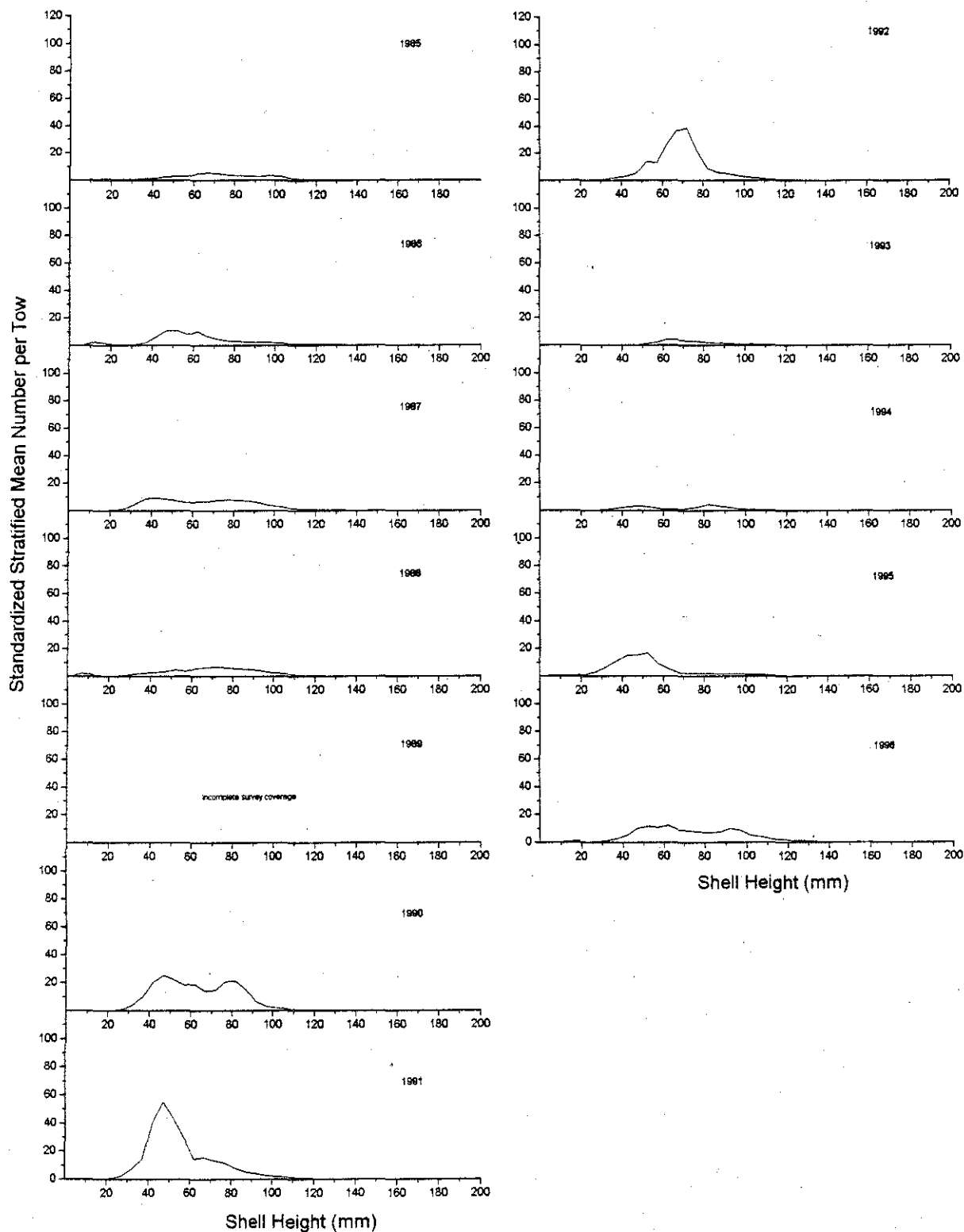


Figure 14. Shell height frequency distributions for sea scallop from the USA portion of Georges Bank, 1985-1996. Data from USA sea scallop research surveys.

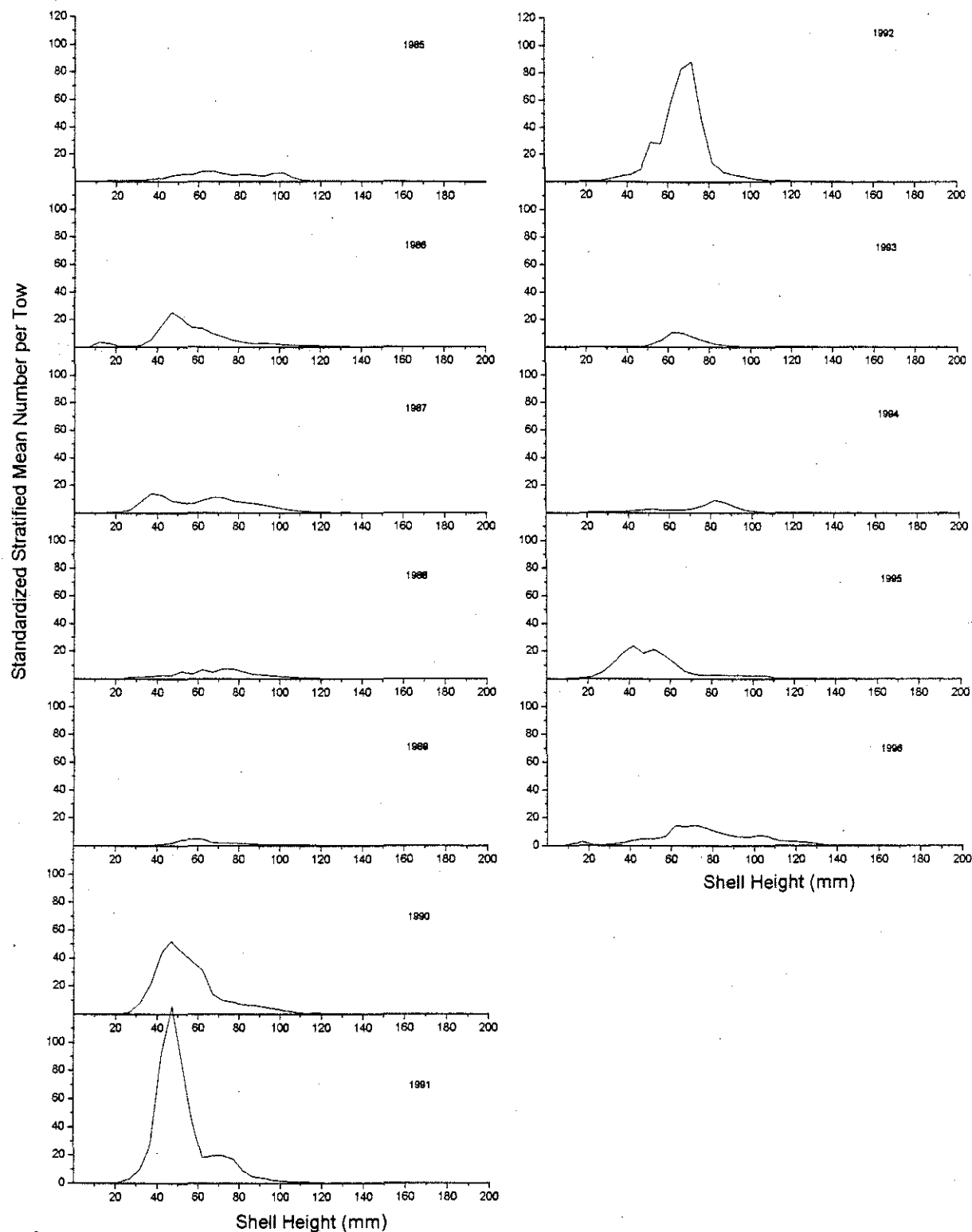


Figure 15. Shell height frequency distributions for sea scallop from the South Channel Region, 1985-1996. Data from USA sea scallop research surveys.

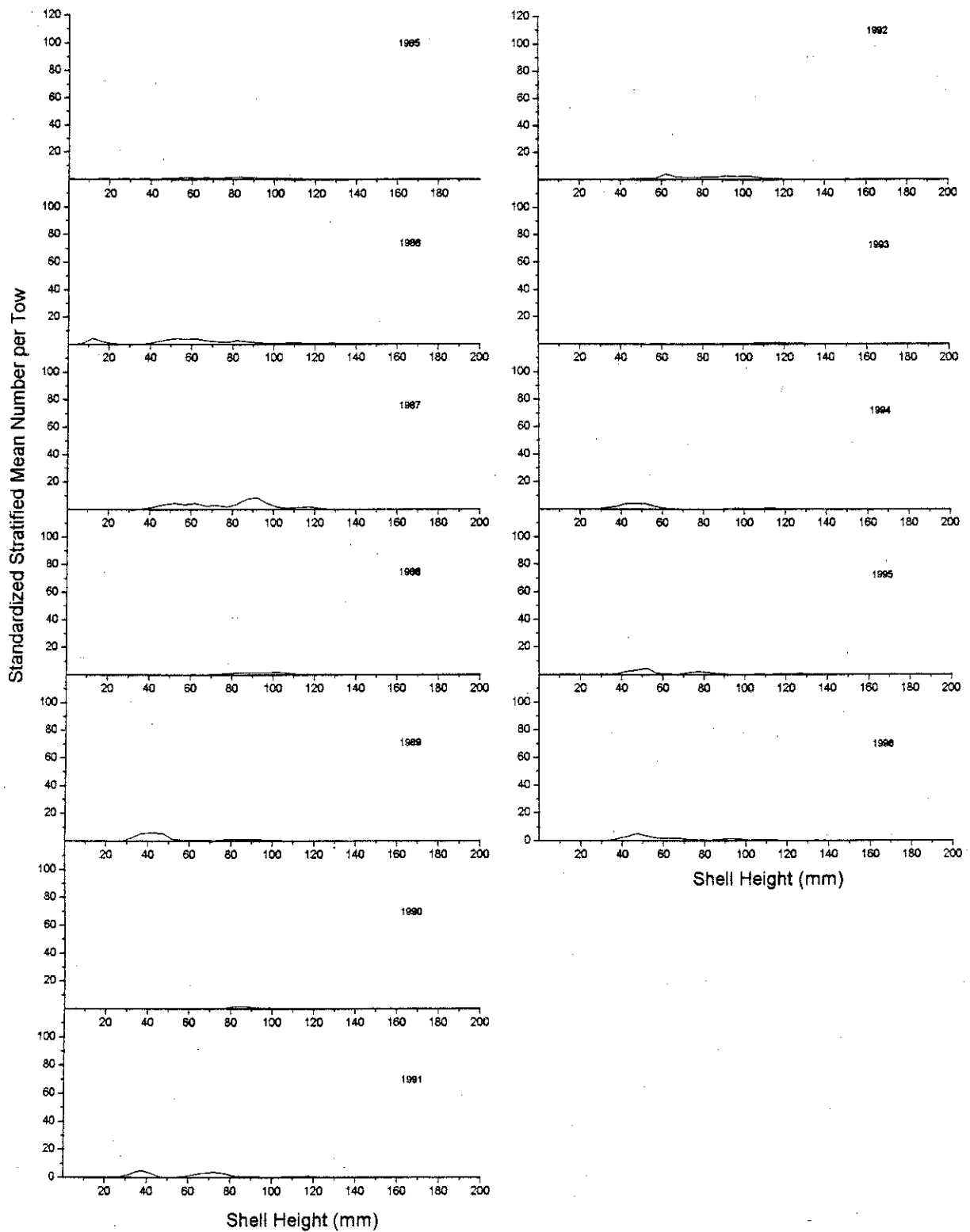


Figure 16. Shell height frequency distributions for sea scallop from the Southeast Part Region, 1985-1996. Data from USA sea scallop research surveys.

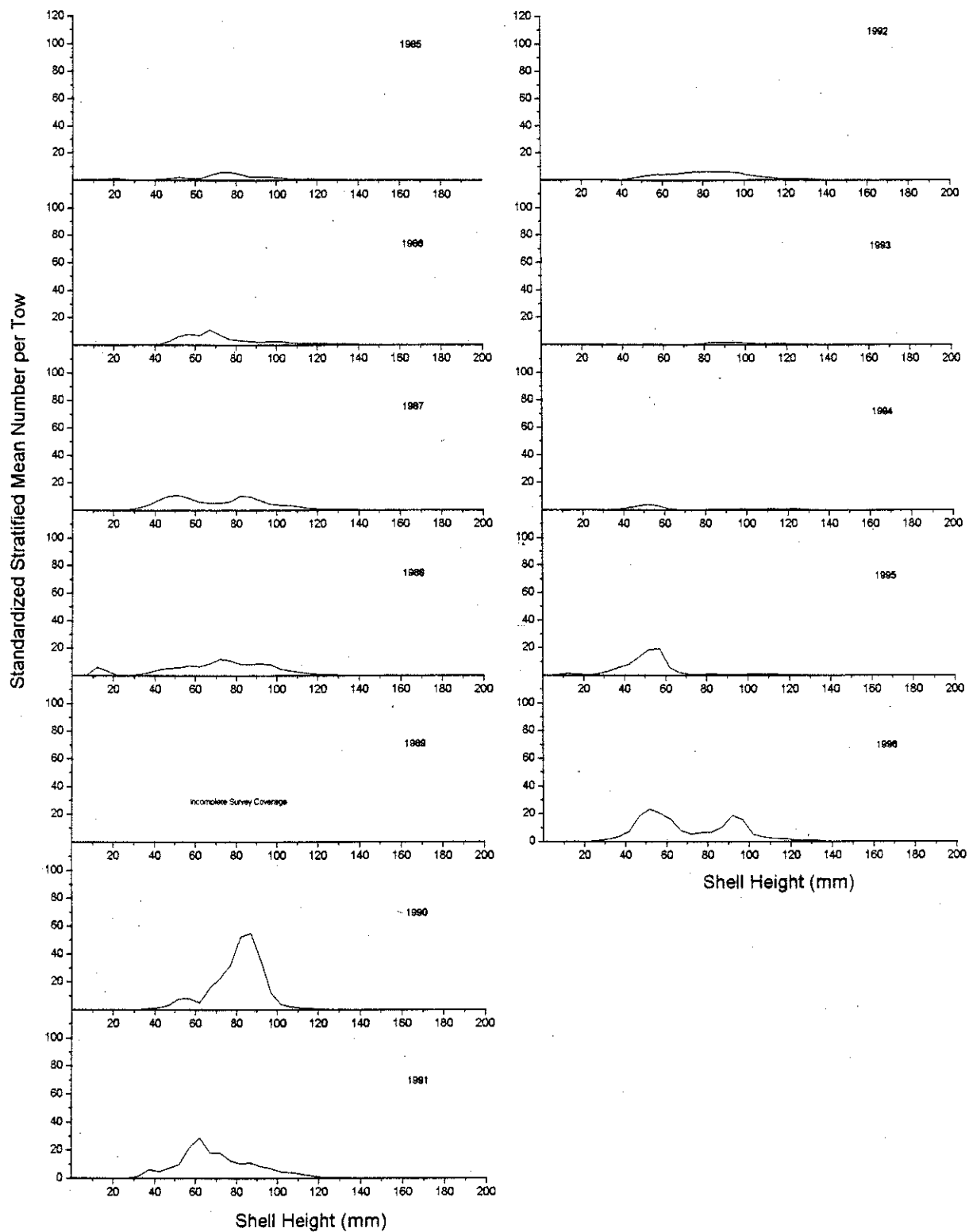


Figure 17. Shell height frequency distributions for sea scallop from the Northern Edge & Peak Region, 1985-1996. Data from USA sea scallop research surveys.

Appendix Table 1. Number of tows accomplished in the NEFSC sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR										
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
1	1163	5	5	5	N/S	N/S	N/S	2	2	4	3	3
2	175	2	N/S	5	N/S	2	2	2	2	4	3	3
3	126	1	2	4	N/S	2	2	2	2	3	3	3
4	117	4	1	2	N/S	N/S	2	2	2	2	3	3
5	453	1	2	4	4	4	4	3	3	3	3	3
6	62	N/S	N/S	2	2	1	2	4	4	5	5	5
7	46	N/S	1	1	1	2	1	3	4	4	5	5
8	74	N/S	N/S	N/S	1	2	1	2	2	2	3	3
Virginia - North Carolina (6-7)	108	N/S	1	3	3	3	3	7	8	9	10	10
9	2171	5	6	8	8	8	8	8	6	6	4	4
10	152	2	N/S	5	5	5	5	8	8	8	8	8
11	229	3	3	7	7	7	6	6	8	8	8	8
12	204	1	4	2	2	2	3	3	3	4	4	4
13	1127	4	2	5	5	5	4	4	4	4	4	4
14	219	1	1	7	7	7	6	6	8	10	10	12
15	394	5	2	12	12	12	12	12	12	12	12	12
16	211	1	1	2	2	2	3	3	7	7	8	8
17	749	2	3	4	3	4	4	4	4	4	3	3
18	249	2		8	7	7	7	7	6	6	8	10
19	274	2	4	6	5	5	5	5	7	8	8	12
20	120	N/S	1	N/S	1	1	3	3	3	3	3	3
Delmarva (10-11, 14-15, 18-19)	1517	15	10	45	43	43	41	44	49	52	54	62
21	1650	4	16	7	6	6	4	4	4	4	4	4
22	312	1	5	15	12	12	12	12	8	8	8	8
23	714	3	27	16	20	20	2	20	16	16	16	16
24	476	3	19	3	3	3	6	6	6	6	6	6
25	648	2	4	5	4	4	7	7	6	7	4	4
26	188	N/S	2	7	8	9	9	9	13	13	14	14
27	451	1	9	12	12	11	12	12	10	10	12	20
28	149	1	2	2	2	2	3	3	7	6	6	10
29	1096	6	4	5	8	8	8	8	6	8	6	6
30	669	1	6	14	14	14	14	14	15	15	15	15
31	932	7	15	24	24	24	25	24	24	24	24	24
32	627	3	12	2	2	2	5	5	4	3	4	4
33	363	1	4	2	2	4	7	7	10	10	10	7
34	203	N/S	3	4	4	4	7	7	10	14	10	13
35	601	2	1	7	7	6	5	5	5	5	6	9
36	694	3	1	2	2	2	2	2	2	2	2	2
New York Bight (22-31, 33-35)	6802	28	101	116	120	121	117	134	136	142	137	152
Mid-Atlantic	8427	43	112	164	166	167	161	185	193	203	201	224

Appendix Table 1. (Continued).

Stratum	Area (sq mi)	YEAR										1996 Sampling Ratio
		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
1	1163	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
2	175	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
3	126	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
4	117	3	4	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
5	453	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
6	62	5	6	5	3	5	5	5	5	5	5	12
7	46	5	4	5	3	5	5	5	5	5	5	9
8	74	3	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Virginia - North Carolina (6-7)	108	10	10	10	6	10	10	10	10	10	10	11
9	2171	4	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
10	152	8	8	8	8	8	8	8	8	8	8	19
11	229	8	8	8	8	8	8	8	8	8	8	29
12	204	4	4	4	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
13	1127	3	4	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
14	219	12	12	12	12	12	12	12	12	12	12	18
15	394	11	12	12	12	12	12	12	12	12	12	33
16	211	7	8	8	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
17	749	1	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
18	249	10	10	10	10	10	10	8	10	10	8	31
19	274	12	12	12	12	11	12	10	12	12	10	27
20	120	3	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Delmarva (10-11 14-15, 18-19)	1517	61	62	62	62	61	62	58	62	62	58	26
21	1650	2	4	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
22	312	8	8	8	8	8	8	8	8	8	8	39
23	714	16	16	16	16	16	16	16	16	16	16	45
24	476	4	6	6	5	6	6	6	5	6	6	79
25	648	4	4	4	3	4	4	4	4	4	4	162
26	188	14	13	14	12	14	14	14	14	12	13	14
27	451	19	19	20	17	20	20	20	20	20	19	24
28	149	10	10	10	10	10	10	10	10	10	10	15
29	1096	6	6	6	5	6	6	6	6	6	6	183
30	669	15	15	15	14	15	15	15	15	15	15	45
31	932	24	23	24	24	24	24	22	23	24	20	47
32	627	4	4	4	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
33	363	10	10	10	10	10	10	7	10	10	8	45
34	203	14	14	14	14	14	14	10	14	14	10	20
35	601	10	10	10	10	10	10	8	10	10	8	75
36	694	2	2	2	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
New York Bight (22-31 33-35)	6802	154	154	157	148	157	157	146	155	155	143	48
Mid-Atlantic	8427	225	226	229	216	228	229	214	227	227	211	40

N/S = not sampled.

Appendix Table 2. Number of tows accomplished in the NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR										
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
45	392	3	3	2	2	N/S	2	2	2	3	3	3
46	416	3	N/S	4	4	N/S	5	6	6	6	6	6
47	871	13	4	9	9	4	9	9	9	9	10	N/S
48	1109	2	3	3	3	3	3	3	4	4	9	N/S
49	244	3	8	7	5	5	5	6	6	7	9	9
50	150	5	4	4	4	5	5	8	12	12	12	15
51	139	4	N/S	7	7	7	7	8	12	12	12	12
52	307	4	6	3	3	5	5	6	6	6	7	12
53	268	5	4	1	3	N/S	5	6	6	6	7	7
54	278	7	2	7	5	4	6	6	6	6	7	7
55	364	14	2	4	7	10	9	6	6	5	7	N/S
56	209	1	1	N/S	2	2	2	3	3	3	3	N/S
South Channel (46-47, 49-55)	3037	58	30	46	47	40	56	61	69	69	77	68
57	184	N/S	3	4	1	1	1	3	3	3	3	3
58	300	3	2	2	2	2	2	4	4	4	4	8
59	538	8	9	13	10	10	9	10	8	8	12	12
60	816	10	10	3	8	8	8	8	8	8	12	12
Southeast Part (58-60)	1654	21	21	18	20	20	19	22	20	20	28	32
61	576	N/S	6	3	N/S	18	N/S	7	7	7	8	8
62	701	N/S	11	10	13	20	N/S	9	9	9	-	-
621	547	-	-	-	-	-	-	-	-	-	12	12
63	694	15	15	12	37	44	15	10	10	10	-	-
631	340	-	-	-	-	-	-	-	-	-	7	7
65	164	8	3	8	16	16	12	12	15	14	-	-
651	102	-	-	-	-	-	-	-	-	-	10	12
66	266	6	12	4	11	12	15	14	14	14	-	-
661	117	-	-	-	-	-	-	-	-	-	10	12
71	146	4	N/S	3	21	4	3	4	4	5	6	6
72	504	4	N/S	N/S	3	8	N/S	5	4	4	6	6
73	501	2	N/S	N/S	2	9	N/S	5	4	4	5	6
74	433	7	2	N/S	16	15	N/S	5	5	5	8	7
USA N. Edge & Peak*	2765	-	-	-	-	-	-	-	-	-	67	70
USA Georges Bank**	7456	-	-	-	-	-	-	-	-	-	172	170
622	154	-	-	-	-	-	-	-	-	-	4	5
632	354	-	-	-	-	-	-	-	-	-	7	12
64	988	7	22	36	36	174	56	14	14	14	16	107
652	62	-	-	-	-	-	-	-	-	-	6	5
662	149	-	-	-	-	-	-	-	-	-	8	17
CANADA N. Edge & Peak*	1707	-	-	-	-	-	-	-	-	-	41	146
TOTAL N. Edge & Peak	4472	51	71	76	153	311	101	80	82	82	108	216
TOTAL Georges Bank	9163	130	122	140	220	371	176	163	171	171	213	316

Appendix Table 2. (Continued).

Stratum	Area (sq mi)	YEAR										1996 Sampling Ratio
		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
45	392	3	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
46	416	6	6	6	6	6	6	5	6	6	6	69
47	871	12	12	12	12	12	12	12	12	12	12	73
48	1109	9	9	9	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
49	244	7	9	8	6	7	8	6	7	9	5	49
50	150	16	16	15	9	15	15	11	15	16	16	9
51	139	11	12	12	10	10	10	9	12	11	12	12
52	307	11	12	12	7	12	10	10	12	12	11	28
53	268	7	7	7	7	7	7	7	7	7	7	38
54	278	7	7	6	10	7	7	6	7	7	7	40
55	364	9	10	10	10	10	10	10	10	10	10	36
56	209	3	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
South Channel (46-47, 49-55)	3037	86	91	88	76	86	85	76	88	90	86	35
57	184	3	3	3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
58	300	8	8	8	8	8	8	8	8	8	8	38
59	538	12	12	12	12	12	12	12	12	12	12	45
60	816	12	12	11	12	12	12	12	12	12	12	68
Southeast Part (58-60)	1654	32	32	31	32	32	32	32	32	32	32	52
61	576	8	8	N/S	8	8	8	8	8	8	8	72
62	701	-	-	-	-	-	-	-	-	-	-	-
621	547	12	12	N/S	12	12	12	12	12	12	12	46
63	694	-	-	-	-	-	-	-	-	-	-	-
631	340	7	7	N/S	7	7	7	7	7	7	7	49
65	164	-	-	-	-	-	-	-	-	-	-	-
651	102	12	12	N/S	12	12	11	9	11	12	12	9
66	266	-	-	-	-	-	-	-	-	-	-	-
661	117	12	12	N/S	12	12	12	9	12	12	12	10
71	146	6	6	N/S	6	6	5	6	6	6	6	24
72	504	6	6	N/S	N/S	6	6	6	6	6	6	84
73	501	6	6	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
74	433	9	8	N/S	8	8	8	8	8	8	8	54
USA N. Edge & Peak*	2765	71	71	N/S	65	71	69	65	70	71	71	39
USA Georges Bank**	7456	189	194	-	173	189	186	173	190	193	189	39
622	154	6	6	N/S	6	1	N/S	6	6	6	6	26
632	354	8	8	N/S	7	2	N/S	8	8	8	8	44
64	988	16	16	N/S	16	N/S	N/S	16	15	16	1	\$ 988
652	62	10	10	N/S	9	10	N/S	11	10	10	10	6
662	149	7	8	N/S	3	1	N/S	7	8	8	4	\$ 37
CANADA N. Edge & Peak*	1707	47	48	N/S	41	14	N/S	48	47	48	29	\$ 59
TOTAL N. Edge & Peak	4472	118	119	-	106	85	-	113	117	119	100	\$ 45
TOTAL Georges Bank	9163	236	242	-	214	203	-	223	237	241	218	\$ 42

* USA N. Edge & Peak: Strata 61, 621, 631, 651, 661, 71, 72, 74; Canada N. Edge & Peak: Strata 622, 632, 64, 652, 662.

** USA Georges Bank: Combined South Channel, SE Part, and USA Edge & Peak regions.

\$ Incomplete survey coverage and based on the existing samples

N/S = not sampled.

- = not calculated.

Appendix Table 3. Standardized mean number of sea scallops per tow by stratum, and standardized stratified mean number of sea scallops per tow by area and region, from the NEFSC sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
1	1163	0.0	0.0	25.4	N/S	N/S	N/S	1.0	0.0	0.0	8.7	0.0	0.7
2	175	3.0	N/S	9.8	N/S	0.5	0.0	5.5	40.0	0.0	0.3	0.0	1.0
3	126	933.0	2.0	5.3	N/S	0.5	2.5	0.0	1.5	1.0	1.0	0.0	0.0
4	117	11.5	0.0	0.0	N/S	N/S	0.5	1.5	0.0	0.5	0.0	0.0	0.0
5	453	0.0	0.5	22.5	1.5	0.0	0.0	0.0	7.7	0.0	0.7	0.0	0.0
6	62	N/S	N/S	92.0	72.0	58.0	12.5	4.5	34.0	10.4	12.2	10.6	0.4
7	46	N/S	10.0	30.0	12.0	29.0	3.0	3.7	42.3	20.8	4.8	3.0	4.6
8	74	N/S	N/S	N/S	18.0	0.0	0.0	1.5	2.0	3.5	0.0	0.0	0.0
Virginia - North Carolina (6-7)	108	N/S	10.0	65.6	46.4	45.6	8.5	4.1	37.5	14.8	9.0	7.4	2.2
9	2171	24.4	12.0	4.3	130.0	11.4	9.1	7.0	5.5	4.8	23.5	7.8	14.0
10	152	80.5	N/S	134.6	165.0	148.0	26.2	18.0	47.4	14.9	36.6	228.1	132.8
11	229	41.7	55.3	113.0	64.9	78.1	14.8	16.5	44.6	12.6	42.4	246.8	105.8
12	204	0.0	2.0	0.5	0.0	0.5	3.0	5.3	5.3	5.0	0.8	1.5	1.5
13	1127	82.3	45.0	34.8	4.4	5.6	0.8	0.3	0.0	0.8	0.8	0.3	1.0
14	219	72.0	48.0	68.9	53.7	61.7	13.7	23.8	33.1	18.2	159.7	267.8	195.8
15	394	113.0	60.5	127.0	113.4	97.9	21.7	40.4	57.8	53.3	62.6	194.6	88.9
16	211	1.0	13.0	0.0	0.0	23.0	1.5	97.0	15.1	8.0	5.9	5.0	3.4
17	749	13.0	12.7	1.5	4.7	6.3	2.3	1.3	0.8	1.8	1.3	11.7	19.0
18	249	22.5	N/S	108.0	48.7	40.7	10.9	10.7	7.7	42.2	84.6	127.2	91.7
19	274	13.5	65.5	66.2	102.2	273.0	26.2	47.8	53.4	68.0	237.5	203.5	92.3
20	120	N/S	0.0	N/S	3.0	50.0	10.0	8.0	0.0	2.0	5.7	6.0	4.3
Delmarva (10-11, 14-15, 18-19)	1517	60.2	58.2	103.1	90.0	117.0	19.0	28.6	42.2	39.1	106.2	206.9	112.4
21	1650	2.8	0.9	0.4	9.3	0.8	1.3	4.0	0.5	6.8	9.3	0.3	5.0
22	312	11.0	73.2	21.1	16.8	10.2	3.1	4.7	4.9	10.4	21.3	25.9	118.1
23	714	99.0	99.9	106.4	66.2	77.4	63.8	32.8	25.9	64.5	96.0	185.6	199.1
24	476	88.3	2.4	8.0	6.3	9.7	3.7	20.2	7.5	29.8	8.0	1.3	0.8
25	648	41.0	19.0	9.2	17.0	8.5	39.6	14.3	6.2	9.3	19.0	14.8	71.0
26	188	N/S	60.0	42.6	19.0	42.1	89.8	104.0	25.4	64.8	72.2	65.9	423.7
27	451	22.0	164.4	94.5	32.3	35.3	35.0	38.2	21.2	63.5	232.1	266.0	372.6
28	149	0.0	30.0	34.0	2.5	0.5	18.5	118.3	10.6	39.5	107.5	19.0	37.1
29	1096	8.8	29.0	17.4	14.9	24.0	6.0	2.3	19.7	23.4	16.3	50.2	22.5
30	669	23.0	106.0	106.4	16.9	35.6	37.3	30.0	31.2	21.9	52.1	84.1	196.8
31	932	222.9	70.1	95.4	20.0	33.0	53.3	46.3	30.0	34.0	157.8	195.1	190.4
32	627	0.0	2.1	2.5	1.5	1.0	1.0	1.8	0.8	13.0	0.8	2.3	0.0
33	363	240.0	25.3	88.5	25.5	40.3	126.0	61.3	47.3	23.8	67.2	56.6	241.5
34	203	N/S	102.3	73.0	44.0	70.5	93.3	123.1	210.0	150.1	74.8	205.5	159.2
35	601	4.0	0.0	11.3	10.7	9.3	3.8	9.0	0.0	27.2	112.8	92.6	38.3
36	694	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York Bight (22-31, 33-35)	6802	74.1	58.1	56.0	22.9	30.6	37.8	31.8	25.5	35.8	78.3	102.5	140.5
Mid-Atlantic	8427	71.4	57.9	64.6	35.3	46.3	34.1	30.9	28.7	36.1	82.5	120.0	133.6

N/S = not sampled.

- = not calculated.

Appendix Table 3. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
1	1163	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	25.4
2	175	1.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	40.0
3	126	0.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	933.0
4	117	4.8	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	11.5
5	453	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	22.5
6	62	4.5	71.4	35.3	92.6	51.4	440.0	161.4	40.4	52.6	4.5	440.0
7	46	27.0	1.4	256.7	37.6	9.0	121.6	155.2	104.0	2.0	1.4	256.7
8	74	3.3	0.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	18.0
Virginia - North Carolina												
(6-7)	108	14.1	41.6	129.6	69.2	33.3	304.4	158.8	67.5	31.0	4.1	304.4
9	2171	7.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	4.3	130.0
10	152	73.4	177.0	39.6	196.9	79.8	549.9	184.8	189.6	99.4	14.9	549.9
11	229	62.3	89.5	54.3	127.5	81.9	804.1	422.9	256.6	88.8	12.6	804.1
12	204	8.8	0.8	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	8.8
13	1127	21.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	82.3
14	219	142.1	148.2	135.0	28.8	15.8	137.8	53.0	147.7	86.5	13.7	267.8
15	394	114.3	311.8	87.3	90.6	35.4	559.3	422.3	348.8	67.4	21.7	559.3
16	211	5.4	3.6	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	97.0
17	749	0.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.7	13.0
18	249	149.6	224.7	98.1	14.6	16.0	35.6	39.4	29.5	14.1	7.7	224.7
19	274	129.8	220.3	211.6	76.2	29.4	313.7	212.0	167.0	57.5	13.5	313.7
20	120	1.0	1.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	50.0
Delmarva												
(10-11, 14-15, 18-19)	1517	115.0	210.3	108.6	82.8	39.7	404.1	244.4	204.7	66.1	19.0	404.1
21	1650	5.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.3	9.3
22	312	136.9	102.4	35.0	15.4	10.3	62.8	53.4	49.5	14.4	3.1	136.9
23	714	357.9	574.3	698.9	129.6	70.4	120.3	336.4	485.3	102.2	25.9	698.9
24	476	23.8	26.7	6.8	13.3	2.0	82.7	583.0	498.8	193.5	1.3	583.0
25	648	54.5	54.8	4.0	6.8	45.0	27.3	11.8	17.5	8.3	4.0	54.8
26	188	186.6	256.2	24.8	116.1	286.0	53.2	54.4	83.2	40.3	19.0	286.0
27	451	611.6	1350.7	903.9	275.9	81.9	200.6	360.5	238.2	145.6	21.2	1350.7
28	149	52.4	87.9	101.3	80.7	11.8	187.2	271.9	434.2	131.1	0.0	434.2
29	1096	19.8	22.3	46.4	34.0	2.5	21.8	13.8	12.2	19.5	2.3	50.2
30	669	240.5	192.2	89.2	39.2	34.5	78.2	67.9	97.6	27.7	16.9	240.5
31	932	291.7	329.1	392.2	175.2	78.1	109.1	167.8	196.0	43.0	20.0	392.2
32	627	8.0	8.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	13.0
33	363	63.2	14.6	35.2	30.1	8.1	10.7	39.7	64.5	20.5	8.1	240.0
34	203	202.6	138.8	78.6	43.9	27.7	11.2	51.0	58.7	44.8	11.2	210.0
35	601	28.8	81.8	11.2	5.2	14.9	8.6	14.6	31.6	19.1	0.0	112.8
36	694	0.5	0.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	0.5
New York Bight												
(22-31, 33-35)	6802	176.4	250.4	213.9	75.9	43.0	70.6	147.9	163.8	55.2	22.9	250.4
Mid-Atlantic												
	8427	163.2	240.5	193.8	77.0	42.3	133.6	165.4	169.9	56.9	28.7	240.5

N/S = not sampled.

- = not calculated.

Appendix Table 4. Standardized mean number of pre-recruit [<70 mm shell height] sea scallop per tow by stratum, and standardized stratified mean number of per-recruit scallops per tow by area and region from the NEFSC sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
1	1163	0.0	0.0	20.6	N/S	N/S	N/S	1.0	0.0	0.0	5.3	0.0	0.7
2	175	2.5	N/S	8.6	N/S	0.5	0.0	5.0	34.5	0.0	0.3	0.0	1.0
3	126	756.0	0.5	4.0	N/S	0.0	2.0	0.0	1.5	1.0	0.0	0.0	0.0
4	117	11.5	0.0	0.0	N/S	N/S	0.5	1.5	0.0	0.5	0.0	0.0	0.0
5	453	0.0	0.5	13.3	0.8	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
6	62	N/S	N/S	20.0	40.5	3.0	1.5	0.3	19.5	0.0	2.2	9.2	0.0
7	46	N/S	0.0	9.0	1.0	11.5	0.0	0.7	34.3	0.5	1.0	0.8	0.2
8	74	N/S	N/S	N/S	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Virginia - North Carolina													
(6-7)	108	N/S	0.0	15.3	23.7	6.6	0.9	0.4	25.8	0.2	1.7	5.6	0.1
9	2171	16.0	1.7	3.3	67.6	3.0	3.8	0.6	3.5	0.5	17.8	5.8	7.3
10	152	69.0	N/S	39.0	79.6	68.0	5.4	4.6	32.1	2.6	22.6	181.1	42.8
11	229	34.0	4.3	52.6	4.9	36.0	1.0	3.0	34.3	3.0	24.4	225.6	47.3
12	204	0.0	0.0	0.0	0.0	0.0	0.5	1.7	1.3	0.3	0.0	0.8	1.0
13	1127	49.8	0.0	1.0	0.6	2.0	0.2	0.0	0.0	0.5	0.0	0.3	0.3
14	219	33.0	6.0	9.4	12.7	36.4	3.4	4.5	19.4	2.7	131.7	128.7	112.3
15	394	65.0	19.5	29.9	28.3	68.2	4.7	20.4	36.7	28.6	35.5	101.4	47.8
16	211	1.0	0.0	0.0	0.0	22.5	0.5	75.3	3.6	3.7	3.5	1.1	0.6
17	749	6.5	1.3	0.0	2.0	0.3	1.0	0.3	0.3	0.0	0.0	9.0	9.0
18	249	13.5	N/S	22.6	5.6	25.7	1.4	0.9	1.7	17.2	68.9	61.7	51.2
19	274	1.5	7.0	14.3	36.8	230.8	11.6	16.6	26.3	47.0	137.9	89.8	24.7
20	120	N/S	0.0	N/S	0.0	49.0	9.0	6.3	0.0	0.7	3.0	1.0	0.7
Delmarva													
(10-11, 14-15, 18-19)	1517	36.2	10.7	27.3	25.4	81.1	4.7	10.0	25.7	19.8	70.3	123.5	52.9
21	1650	2.0	0.4	0.4	1.5	0.0	0.2	1.5	0.0	3.0	5.5	0.0	4.5
22	312	9.0	0.4	1.5	9.7	4.7	0.3	0.8	0.3	6.3	13.8	17.1	95.1
23	714	64.0	4.2	5.8	18.2	54.6	29.1	20.8	15.1	49.2	72.1	109.0	109.6
24	476	21.3	0.5	0.7	4.3	7.0	1.3	11.3	2.5	19.7	0.7	0.3	0.3
25	648	32.5	0.3	0.2	0.5	2.5	29.0	4.0	2.5	3.9	5.3	4.8	60.8
26	188	N/S	0.0	0.7	5.6	17.2	70.0	24.0	10.5	25.8	48.7	17.2	390.6
27	451	8.0	2.9	1.7	5.6	14.6	17.8	17.7	6.5	45.1	165.3	124.6	286.6
28	149	0.0	1.5	6.5	2.5	0.0	8.5	81.3	1.9	26.8	70.8	2.0	13.5
29	1096	4.3	0.3	3.8	2.4	11.6	1.4	0.8	9.0	7.1	3.3	33.0	13.2
30	669	15.0	3.5	11.1	4.1	12.0	22.5	4.5	17.6	7.1	23.7	52.2	111.2
31	932	111.7	2.1	2.2	4.4	13.0	33.2	7.4	6.7	13.9	122.7	82.7	117.8
32	627	0.0	0.1	1.5	0.0	0.5	1.0	0.8	0.0	5.0	0.3	0.0	0.0
33	363	139.0	0.3	4.0	5.0	16.3	31.3	11.3	16.9	5.3	17.2	21.1	179.2
34	203	N/S	1.3	0.5	8.0	42.5	29.0	50.7	126.6	56.7	19.6	133.1	62.3
35	601	0.0	0.0	0.4	1.1	3.2	1.5	2.2	0.0	2.8	41.2	54.3	23.4
36	694	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York Bight													
(22-31, 33-35)	6802	39.4	1.5	3.3	5.3	15.4	18.9	10.9	11.6	17.5	47.4	53.2	94.4
Mid-Atlantic													
	8427	38.8	2.7	7.8	9.1	27.1	16.1	10.6	14.3	17.7	51.0	65.2	85.8

Appendix Table 4. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
1	1163	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	20.6
2	175	1.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	34.5
3	126	0.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	756.0
4	117	4.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	11.5
5	453	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	13.3
6	62	3.3	62.0	3.0	59.2	6.6	352.4	12.6	40.4	52.4	0.0	352.4
7	46	2.8	0.2	81.7	7.6	0.8	101.0	14.2	76.6	0.0	0.0	101.0
8	74	2.3	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	2.3
Virginia - North Carolina (6-7)	108	3.1	35.7	36.5	37.2	4.1	245.3	13.3	55.8	30.1	0.0	245.3
9	2171	3.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.5	67.6
10	152	38.0	122.6	10.5	150.5	45.4	522.4	17.5	150.9	44.1	2.6	522.4
11	229	31.6	44.5	20.8	111.9	55.9	777.5	88.5	136.6	49.4	1.0	777.5
12	204	7.3	0.8	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	7.3
13	1127	11.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	49.8
14	219	98.4	102.2	60.7	12.0	5.8	130.4	9.3	102.6	47.9	2.7	131.7
15	394	83.9	118.3	14.6	49.8	16.1	528.0	163.8	163.1	16.8	4.7	528.0
16	211	3.1	1.8	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	75.3
17	749	0.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	9.0
18	249	101.8	133.4	7.9	0.8	1.9	28.0	13.2	17.7	2.1	0.8	133.4
19	274	80.8	147.8	53.9	37.6	14.4	297.9	67.7	56.4	10.7	1.5	297.9
20	120	0.7	0.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	49.0
Delmarva (10-11 14-15, 18-19)	1517	75.9	113.1	27.7	53.5	20.9	384.1	73.4	106.0	25.4	4.7	384.1
21	1650	2.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	5.5
22	312	74.3	69.5	10.7	6.5	3.9	53.1	20.6	15.5	2.1	0.3	95.1
23	714	100.2	406.9	326.1	74.3	25.9	82.2	238.8	141.1	6.1	4.2	406.9
24	476	23.2	23.0	1.2	9.3	0.7	74.0	552.8	266.8	11.5	0.3	552.8
25	648	33.0	40.0	2.3	2.0	14.0	14.5	0.3	3.5	3.8	0.2	60.8
26	188	41.2	183.4	6.2	99.7	222.6	14.5	15.3	31.4	12.2	0.0	390.6
27	451	349.7	984.9	571.9	44.7	30.8	125.7	185.9	73.5	9.8	1.7	984.9
28	149	40.9	70.5	36.2	9.7	3.8	170.0	244.2	139.3	4.6	0.0	244.2
29	1096	3.5	10.3	30.2	2.7	0.5	12.2	6.3	7.2	7.7	0.3	33.0
30	669	101.5	97.9	43.4	19.5	10.0	56.1	17.9	20.0	3.3	3.3	111.2
31	932	127.1	210.9	261.0	34.8	27.0	62.4	93.0	68.0	4.3	2.1	261.0
32	627	7.8	6.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	7.8
33	363	16.5	2.0	21.7	1.7	1.4	4.4	33.0	5.6	3.9	0.3	179.2
34	203	55.7	37.8	30.7	1.5	5.8	1.6	35.7	12.4	6.2	0.5	133.1
35	601	16.6	44.7	2.6	0.2	1.5	2.1	10.6	14.5	2.5	0.0	54.3
36	694	0.5	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	0.5
New York Bight (22-31 33-35)	6802	75.9	168.6	121.1	22.2	17.7	46.6	102.1	57.7	5.7	1.5	168.6
Mid- Atlantic	8427	74.9	156.9	103.2	28.0	18.1	109.9	95.8	66.4	9.6	2.7	156.9

N/S = not sampled.

- = not calculated.

Appendix Table 5. Standardized mean number of harvestable-size (>70 mm shell height) sea scallops per tow by stratum, and standardized stratified mean number of harvestable-size sea scallops per tow by area and region, from the NEFSC sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
1	1163	0.0	0.0	4.8	N/S	N/S	N/S	0.0	0.0	0.0	3.3	0.0	0.0
2	175	0.5	N/S	1.2	N/S	0.0	0.0	0.5	5.5	0.0	0.0	0.0	0.0
3	126	177.0	1.5	1.3	N/S	0.5	0.5	0.0	0.0	0.0	1.0	0.0	0.0
4	117	0.0	0.0	0.0	N/S	N/S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	453	0.0	0.0	9.3	0.8	0.0	0.0	0.0	4.3	0.0	0.7	0.0	0.0
6	62	N/S	N/S	72.0	31.5	55.0	11.0	4.3	14.5	10.4	10.0	1.4	0.4
7	46	N/S	10.0	21.0	11.0	17.5	3.0	3.0	8.0	20.3	3.8	2.2	4.4
8	74	N/S	N/S	N/S	18.0	0.0	0.0	1.5	2.0	3.0	0.0	0.0	0.0
Virginia - North Carolina													
(6-7)	108	N/S	10.0	50.3	22.8	39.0	7.6	3.7	11.7	14.6	7.4	1.7	2.1
9	2171	8.4	10.3	1.0	62.4	8.4	5.4	6.4	2.0	4.3	5.8	2.0	6.8
10	152	11.5	N/S	95.6	85.4	80.0	20.8	13.4	15.3	12.3	14.0	47.0	90.0
11	229	7.7	51.0	60.4	60.0	42.1	13.8	13.5	10.4	9.6	18.0	21.1	58.5
12	204	0.0	2.0	0.5	0.0	0.5	2.5	3.7	4.0	4.8	0.8	0.8	0.5
13	1127	32.5	45.0	33.8	3.8	3.6	0.6	0.3	0.0	0.3	0.8	0.0	0.7
14	219	39.0	42.0	59.4	41.0	25.3	10.3	19.3	13.8	15.5	28.0	139.2	83.5
15	394	48.0	41.0	97.1	85.2	29.7	17.0	20.0	21.1	24.7	27.3	93.2	41.1
16	211	0.0	13.0	0.0	0.0	0.5	1.0	21.7	11.6	4.3	2.4	3.9	2.9
17	749	6.5	11.3	1.5	2.7	6.0	1.3	1.0	0.5	1.8	1.3	2.7	10.0
18	249	9.0	N/S	85.4	43.1	15.0	9.4	9.9	6.0	25.0	15.8	65.5	40.5
19	274	12.0	58.5	51.8	65.4	42.2	14.6	31.0	27.1	21.0	99.6	113.7	67.6
20	120	N/S	0.0	N/S	3.0	1.0	1.0	1.7	0.0	1.3	2.7	5.0	3.7
Delmarva													
(10-11	1517	24.1	47.5	75.9	64.5	35.8	14.3	18.6	16.4	19.2	35.8	83.5	59.4
14-15,													
18-19)													
21	1650	0.8	0.5	0.0	7.8	0.8	1.2	2.5	0.5	3.8	3.8	0.3	0.5
22	312	2.0	72.8	19.6	7.2	5.5	2.8	3.9	4.6	4.1	7.5	8.8	23.0
23	714	35.0	95.7	100.6	48.1	22.8	34.7	12.1	10.8	15.3	23.9	76.6	89.6
24	476	67.0	1.8	7.3	2.0	2.7	2.3	8.8	5.0	10.2	7.3	1.0	0.5
25	648	8.5	18.8	9.0	16.5	6.0	10.6	10.3	3.7	5.4	13.8	10.0	10.3
26	188	N/S	60.0	41.9	13.4	24.9	19.8	80.0	14.9	39.1	23.5	48.7	33.1
27	451	14.0	161.6	92.8	26.8	20.6	17.3	20.6	14.7	18.4	66.8	141.4	86.1
28	149	0.0	28.5	27.5	0.0	0.5	10.0	37.0	8.7	12.7	36.7	17.0	23.6
29	1096	4.5	28.8	13.6	12.5	12.4	4.6	1.5	10.7	16.3	13.0	17.2	9.3
30	669	8.0	102.5	95.2	12.7	23.6	14.8	25.5	13.6	14.8	28.3	31.9	85.6
31	932	111.1	68.0	93.2	15.6	20.0	20.0	39.0	23.2	20.2	35.1	112.4	72.7
32	627	0.0	2.0	1.0	1.5	0.5	0.0	1.0	0.8	8.0	0.5	2.3	0.0
33	363	101.0	25.0	84.5	20.5	24.0	94.8	50.0	30.4	18.5	50.0	35.4	62.3
34	203	N/S	101.0	72.5	36.0	28.0	64.3	72.4	83.4	93.4	55.2	72.4	96.9
35	601	4.0	0.0	10.9	9.6	6.2	2.3	6.8	0.0	24.4	71.7	38.2	14.9
36	694	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York Bight													
(22-31	6802	34.7	56.7	52.7	17.6	15.2	19.0	20.9	14.0	18.4	30.9	49.3	46.0
33-35)													
Mid-													
Atlantic	8427	32.6	55.1	56.8	26.2	19.2	18.0	20.3	14.4	18.5	31.5	54.8	47.9

N/S = not sampled.
- = not calculated.

Appendix Table 5. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
1	1163	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	4.8
2	175	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	5.5
3	126	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	177.0
4	117	0.5	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	0.5
5	453	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	9.3
6	62	1.2	9.4	32.3	33.4	44.8	87.6	148.8	0.0	0.2	0.0	148.8
7	46	24.3	1.2	175.0	30.0	8.2	20.6	141.0	27.4	2.0	1.2	175.0
8	74	1.0	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	18.0
Virginia - North Carolina												
(6-7)	108	11.0	5.9	93.1	32.0	29.2	59.1	145.5	11.7	1.0	1.0	145.5
9	2171	3.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	1.0	62.4
10	152	35.4	54.4	29.1	46.4	34.4	27.5	167.3	38.8	55.3	11.5	167.3
11	229	30.6	45.0	33.5	15.8	26.0	26.6	334.4	120.0	39.4	7.7	334.4
12	204	1.5	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	4.8
13	1127	9.8	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	45.0
14	219	43.7	46.0	74.3	16.8	9.9	7.3	43.8	45.1	38.6	7.3	139.2
15	394	30.4	193.4	72.7	40.8	19.3	31.3	258.5	185.8	50.7	17.0	258.5
16	211	2.3	1.9	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	21.7
17	749	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	11.3
18	249	47.8	91.3	90.2	13.8	14.1	7.6	26.2	11.8	12.0	6.0	91.3
19	274	49.1	72.6	157.7	38.6	15.0	15.8	144.3	110.6	46.8	12.0	157.7
20	120	0.3	0.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	5.0
Delmarva												
(10-11	1517	39.1	97.2	80.9	29.3	18.8	21.1	171.0	98.7	40.6	14.3	171.0
14-15,												
18-19)												
21	1650	3.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	7.8
22	312	62.6	32.9	24.3	8.9	6.4	9.6	32.8	34.0	12.3	2.0	72.8
23	714	257.7	167.4	372.8	55.3	44.4	38.1	97.7	344.3	96.1	10.8	372.8
24	476	0.7	3.7	5.6	4.0	1.3	8.7	30.2	232.0	182.0	0.5	232.0
25	648	21.5	14.8	1.7	4.8	31.0	12.8	11.5	14.0	4.5	1.7	31.0
26	188	145.4	72.9	18.6	16.4	63.4	38.7	39.1	51.8	28.2	13.4	145.4
27	451	261.9	365.8	332.0	231.2	51.1	74.9	174.7	164.7	135.8	14.0	365.8
28	149	11.5	17.4	65.1	71.0	8.0	17.2	27.7	294.9	126.5	0.0	294.9
29	1096	16.3	12.0	16.2	31.3	2.0	9.7	7.5	5.0	11.8	1.5	31.3
30	669	139.1	94.3	45.9	19.7	24.5	22.1	50.0	77.6	24.4	8.0	139.1
31	932	164.7	118.2	131.2	140.4	51.2	46.8	74.8	128.0	38.7	15.6	164.7
32	627	0.3	1.8	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	8.0
33	363	46.7	12.6	13.5	28.4	6.7	6.3	6.6	58.9	16.6	6.3	101.0
34	203	146.9	101.0	47.9	42.4	21.9	9.6	15.3	46.4	38.6	9.6	146.9
35	601	12.2	37.1	8.6	5.0	13.4	6.5	4.0	17.1	16.6	0.0	71.7
36	694	0.0	0.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	0.0
New York Bight												
(22-31	6802	100.5	81.8	92.8	53.7	25.3	24.0	45.8	106.1	49.5	14.0	106.1
33-35)												
Mid-												
Atlantic	8427	88.3	83.6	90.6	49.0	24.2	23.8	69.6	103.5	47.3	14.4	103.5

N/S = not sampled.

- = not calculated.

Appendix Table 6. Standardized mean meat weight [g] of sea scallops per tow by stratum, and stratified mean weight of sea scallops per tow by area and region, from the NEFSC sea scallop research vessel surveys in the Mid-Atlantic region, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
1	1163	0	0	100	N/S	N/S	N/S	4	0	0	40	0	2
2	175	12	N/S	39	N/S	1	0	16	146	0	0	0	4
3	126	4943	18	19	N/S	5	14	0	4	2	16	0	0
4	117	30	0	0	N/S	N/S	1	2	0	1	0	0	0
5	453	0	1	137	10	0	0	0	208	0	30	0	0
6	62	N/S	N/S	1530	554	932	309	131	538	206	333	70	16
7	46	N/S	227	660	218	171	61	102	349	345	93	46	61
8	74	N/S	N/S	N/S	278	0	0	21	46	86	0	0	0
Virginia - North Carolina (6-7)	108	N/S	227	1159	411	608	204	119	458	265	231	60	35
9	2171	145	266	19	1045	150	168	147	82	110	191	52	109
10	152	472	N/S	1634	1225	1127	448	331	456	347	380	1167	1186
11	229	203	856	1226	924	743	407	435	468	211	408	883	830
12	204	0	34	9	0	14	39	105	137	76	10	9	7
13	1127	467	1411	1142	142	116	24	7	0	3	11	1	15
14	219	767	1102	1634	888	700	205	446	490	325	444	1824	1372
15	394	1191	966	2178	1133	711	404	551	569	478	552	1376	636
16	211	5	279	0	0	39	13	455	188	76	46	38	31
17	749	346	288	27	40	230	72	48	17	87	35	47	190
18	249	169	N/S	1781	934	398	207	346	205	547	286	980	680
19	274	160	849	1158	845	1282	301	573	502	434	1271	1479	999
20	120	N/S	0	N/S	39	63	24	28	0	18	68	48	41
Delmarva (10-11 14-15, 18-19)	1517	555	941	1672	991	808	329	487	459	406	584	1299	899
21	1650	14	10	1	297	17	25	61	18	138	82	10	19
22	312	59	1404	506	194	137	72	109	130	177	165	212	583
23	714	632	1707	2269	1086	571	528	373	296	379	545	1100	1347
24	476	1282	19	72	23	39	25	105	85	178	121	9	10
25	648	342	501	233	566	176	269	210	75	144	294	324	348
26	188	N/S	1208	1017	350	630	494	908	302	641	410	756	1190
27	451	315	2425	1797	561	473	270	387	420	419	1163	1705	1407
28	149	0	547	249	2	3	107	541	110	237	574	174	286
29	1096	107	723	480	380	415	140	45	271	287	265	473	174
30	669	237	1812	2135	302	626	382	442	395	315	472	652	1286
31	932	1912	1206	1874	375	428	408	567	509	315	714	1493	1060
32	627	0	27	31	17	5	5	17	14	123	8	33	0
33	363	2751	533	2134	472	510	1100	865	611	245	646	595	1226
34	203	N/S	1401	1402	732	536	793	1134	1445	1192	780	1428	1286
35	601	163	0	192	271	149	27	87	0	279	936	700	268
36	694	0	0	0	0	0	0	0	0	0	0	0	0
New York Bight (22-31 33-35)	6802	717	1029	1158	439	378	321	350	317	318	530	776	761
Mid-Atlantic	8427	686	1012	1251	538	458	321	368	344	333	536	861	777

N/S = not sampled.

- = not calculated.

Appendix Table 6. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
1	1163	0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	100
2	175	6	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	146
3	126	2	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	4943
4	117	18	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	30
5	453	0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	208
6	62	33	344	459	714	630	1971	1430	92	111	16	1971
7	46	476	13	1617	319	92	494	1235	483	37	13	1617
8	74	23	0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	278
Virginia - North Carolina												
(6-7)	108	222	203	952	546	401	1342	1347	259	79	35	1347
9	2171	107	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	19	1045
10	152	766	967	424	1013	552	1722	1446	966	794	331	1834
11	229	637	718	412	627	388	1975	2822	1525	670	203	2822
12	204	38	1	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	137
13	1127	241	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	1411
14	219	887	917	990	390	246	463	488	1032	678	205	1824
15	394	615	2246	829	805	377	1859	2238	2208	712	377	2246
16	211	53	21	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	455
17	749	0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	346
18	249	911	1385	1028	325	353	250	479	332	258	169	1781
19	274	875	1016	1652	654	349	1039	1499	1275	701	160	1652
20	120	2	6	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	68
Delmarva												
(10-11	1517	768	1332	930	633	368	1249	1572	1334	632	329	1672
14-15,												
18-19)												
21	1650	63	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	1	297
22	312	1128	714	402	257	143	294	545	596	253	59	1404
23	714	3053	2347	4016	865	633	593	1275	3304	1071	296	4016
24	476	22	71	51	79	14	248	918	2702	1620	9	2702
25	648	419	367	50	114	629	223	290	347	137	50	629
26	188	1778	1208	334	593	1076	501	470	734	446	302	1778
27	451	3294	4301	4386	2333	670	938	1669	1704	1387	270	4386
28	149	227	347	677	717	109	544	502	2813	1092	0	2813
29	1096	572	343	521	679	94	190	138	91	186	45	723
30	669	1946	1402	751	446	432	561	597	928	345	237	2135
31	932	2007	1501	1886	1463	739	637	869	1294	454	315	2007
32	627	8	32	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	123
33	363	719	216	330	530	152	149	212	741	267	149	2751
34	203	1818	1268	790	723	489	210	316	592	602	210	1818
35	601	226	594	135	164	213	152	100	231	275	0	936
36	694	0	0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	0
New York Bight												
(22-31	6802	1357	1146	1232	727	411	403	615	1152	561	317	1357
33-35)												
Mid-												
Atlantic	842	1237	1167	1174	708	403	567	797	1173	568	321	1251

N/S = not sampled.

- = not calculated.

Appendix Table 7. Standardized mean number of sea scallops per tow by stratum, and standardized stratified mean number of sea scallops per tow by area and region, from the NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
45	392	34.3	0.0	0.0	0.0	N/S	0.0	0.0	17.0	0.0	11.3	0.0	0.0
46	416	41.0	N/S	20.3	9.0	N/S	84.4	12.7	0.5	19.7	27.8	29.2	21.0
47	871	41.8	20.8	16.7	50.2	27.3	43.9	33.7	48.7	35.0	87.3	N/S	53.3
48	1109	24.5	0.0	0.0	0.3	0.0	2.3	45.0	12.3	33.3	25.3	N/S	1.7
49	244	83.3	213.8	123.6	178.0	174.4	50.2	24.5	34.7	34.9	48.3	43.0	73.1
50	150	849.6	362.8	323.8	1171.3	1133.6	177.2	1787.4	259.9	127.5	318.4	870.1	1135.9
51	139	18.5	N/S	151.0	20.4	20.3	147.1	3158.0	673.6	63.1	82.4	481.3	610.6
52	307	8.8	3.8	4.7	4.0	4.0	28.2	90.2	34.0	4.8	243.3	43.4	117.1
53	268	3.0	141.3	173.0	32.7	N/S	35.6	27.2	33.7	20.0	35.1	57.7	114.7
54	278	65.3	262.0	12.9	31.2	50.0	24.7	94.0	52.2	20.2	32.1	92.0	106.6
55	364	6.3	0.5	0.8	1.4	12.1	0.3	4.0	26.2	20.8	39.9	N/S	7.1
56	209	0.0	9.0	N/S	3.5	0.5	3.0	0.0	2.3	6.7	6.7	N/S	0.0
South Channel (46-47, 49-55)	3037	75.0	95.4	57.4	95.0	109.9	52.0	266.8	74.8	31.3	87.6	152.3	140.7
57	184	N/S	2.3	6.0	1.0	0.0	0.0	0.0	1.7	5.7	3.0	3.0	1.0
58	300	5.7	0.5	9.5	11.5	6.0	2.5	1.5	6.3	1.5	18.5	35.2	20.9
59	538	59.0	63.9	58.9	30.3	108.0	33.8	11.8	38.1	29.1	18.7	40.5	27.2
60	816	40.4	19.3	17.0	34.4	54.6	19.0	13.1	14.1	15.6	23.3	60.6	101.5
Southeast Part (58-60)	1654	40.2	30.4	29.3	28.9	63.2	20.8	10.6	20.5	17.5	20.9	49.5	62.7
61	576	N/S	54.3	153.3	N/S	29.3	N/S	11.4	11.0	18.3	20.5	31.5	37.8
62	701	N/S	157.3	242.6	141.6	287.5	N/S	66.2	105.0	105.1	-	-	-
621	547	-	-	-	-	-	-	-	-	-	83.7	170.9	372.6
63	694	77.4	208.7	416.8	370.3	1605.5	62.5	63.0	39.8	39.4	-	-	-
631	340	-	-	-	-	-	-	-	-	-	15.7	45.6	2.9
65	164	452.3	2217.3	1001.4	739.1	6513.3	1030.8	236.4	245.0	301.4	-	-	-
651	102	-	-	-	-	-	-	-	-	-	355.3	309.8	285.3
66	266	259.8	1783.2	773.0	415.5	129.8	1214.1	297.8	219.9	332.9	-	-	-
661	117	-	-	-	-	-	-	-	-	-	198.0	194.7	190.2
71	146	129.0	N/S	1102.7	448.3	326.0	334.0	86.3	32.3	46.8	32.3	107.7	88.4
72	504	12.5	N/S	N/S	102.7	62.4	N/S	17.4	7.5	15.3	5.8	13.0	52.3
73	501	129.0	N/S	N/S	60.0	0.2	N/S	2.4	0.0	0.3	4.6	1.0	0.0
74	433	34.1	0.0	N/S	229.3	4.0	N/S	10.2	29.0	22.4	9.1	3.1	12.3
USA N. Edge & Peak*	2765	-	-	-	-	-	-	-	-	-	48.4	74.2	116.6
USA Georges Bank**	7456	-	-	-	-	-	-	-	-	-	58.3	90.2	114.5
622	154	-	-	-	-	-	-	-	-	-	222.0	194.6	345.7
632	354	-	-	-	-	-	-	-	-	-	269.6	80.1	328.9
64	988	470.6	606.4	878.4	486.8	1117.0	970.0	237.5	156.4	1297.3	844.9	1147.2	468.5
652	62	-	-	-	-	-	-	-	-	-	1574.8	511.4	1142.3
662	149	-	-	-	-	-	-	-	-	-	276.9	1475.8	1291.1
CANADA N. Edge & Peak*	1707	-	-	-	-	-	-	-	-	-	646.3	845.6	524.7
TOTAL N. Edge & Peak	4472	219.7	450.9	550.6	329.9	809.4	683.1	106.2	85.3	347.8	276.7	368.6	272.4
TOTAL Georges Bank	9163	126.3	252.6	263.7	188.9	469.7	249.6	142.2	70.1	183.3	167.9	252.9	190.9

Appendix Table 7. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
45	392	0.0	2.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	34.3
46	416	50.3	45.0	110.5	295.5	50.2	15.8	42.0	2.0	44.5	0.5	295.5
47	871	34.9	6.1	186.8	157.4	6.8	34.8	13.4	135.0	148.8	6.1	186.8
48	1109	0.6	6.3	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	45.0
49	244	6.7	5.1	900.2	3202.0	2398.1	34.8	65.0	148.8	175.8	5.1	3202.0
50	150	150.6	94.2	1519.3	888.2	836.3	84.6	111.3	960.4	541.1	84.6	1787.4
51	139	378.3	275.3	1032.2	1534.2	1204.9	93.6	68.5	1061.6	464.9	18.5	3158.0
52	307	99.5	40.0	248.9	140.8	867.4	259.0	200.1	71.5	199.0	3.8	867.4
53	268	30.6	26.4	21.1	66.0	25.7	36.3	121.4	5.1	59.7	3.0	173.0
54	278	31.1	50.3	159.9	186.3	43.7	12.6	11.7	66.1	119.4	11.7	262.0
55	364	89.4	1.2	31.4	18.3	22.3	5.4	6.7	9.9	4.7	0.3	89.4
56	209	13.0	8.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	13.0
South Channel												
(46-47, 49-55)	3037	68.5	36.8	308.7	496.3	394.6	54.6	56.3	161.9	147.8	31.3	496.3
57	184	7.3	2.7	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0.0	7.3
58	300	3.8	3.5	1.1	2.3	2.5	6.4	1.9	5.6	10.5	0.5	35.3
59	538	34.9	69.0	15.9	49.9	38.6	18.8	37.7	37.3	33.1	11.8	108.0
60	816	11.2	25.1	9.4	32.3	36.0	9.3	32.3	28.3	40.2	9.3	101.5
Southeast Part												
(58-60)	1654	17.5	35.5	10.0	32.6	30.8	11.8	28.5	27.1	32.5	10.0	63.2
61	576	33.6	N/S	243.8	120.6	24.5	9.4	41.9	25.0	34.3	9.4	243.8
62	701	-	-	-	-	-	-	-	-	-	66.2	287.5
621	547	304.3	N/S	747.8	430.1	112.7	34.8	57.6	178.5	162.5	34.8	747.8
63	694	-	-	-	-	-	-	-	-	-	39.4	1605.5
631	340	3.4	N/S	7.9	20.1	21.6	0.6	1.1	2.3	5.9	0.6	45.6
65	164	-	-	-	-	-	-	-	-	-	236.4	6513.3
651	102	393.2	N/S	87.4	273.6	148.6	45.2	17.0	963.7	1669.0	17.0	1669.0
66	266	-	-	-	-	-	-	-	-	-	129.8	1783.2
661	117	178.8	N/S	72.5	25.3	430.2	57.0	18.3	188.1	1387.7	18.3	1387.7
71	146	298.2	N/S	163.7	977.0	275.6	50.7	35.2	129.3	170.2	32.3	1102.7
72	504	14.8	N/S	N/S	11.0	13.0	11.7	8.7	1.8	25.5	1.8	102.7
73	501	1.5	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	129.0
74	433	118.5	N/S	6.4	52.0	3.0	5.5	1.4	4.4	25.4	0.0	229.3
USA N. Edge & Peak*												
2765	2765	126.7	N/S	263.7	185.6	71.1	18.7	25.3	95.9	186.7	18.7	263.7
USA Georges Bank**												
7456	7456	78.8	-	223.0	278.2	193.9	31.8	38.6	107.5	136.8	31.8	278.2
622	154	192.3	N/S	292.0	186.0	N/S	260.8	39.3	271.5	94.5	39.3	345.7
632	354	317.6	N/S	222.7	151.0	N/S	41.0	119.4	59.6	31.5	31.5	328.9
64	988	430.0	N/S	977.0	N/S	N/S	260.6	485.0	760.6	***	156.4	1297.3
652	62	725.4	N/S	1069.0	5697.9	N/S	303.7	378.4	2694.6	2710.0	303.7	5697.9
662	149	256.6	N/S	490.3	195.0	N/S	321.7	183.6	686.1	***	183.6	1475.8
CANADA N. Edge & Peak*												
1707	1707	380.8	N/S	719.6	304.7	N/S	218.7	347.8	629.4	***	218.7	845.6
TOTAL N. Edge & Peak												
4472	4472	223.7	-	459.8	231.1	-	94.8	148.4	299.7	***	85.3	809.4
TOTAL Georges Bank												
9163	9163	135.1	-	320.9	283.1	-	66.6	96.2	204.7	***	66.6	469.7

* USA N. Edge & Peak: Strata 61, 621, 631, 651, 661, 71, 72, 74; Canada N. Edge & Peak: Strata 622, 632, 64, 652, 662.

** USA Georges Bank: Combined South Channel, SE Part, and USA Edge & Peak areas.

*** Incomplete survey coverage, values are not estimated

N/S = not sampled.

- = not calculated.

Appendix Table 8. Standardized mean number of pre-recruit [<70 mm shell height] sea scallop per tow by stratum, and standardized stratified mean number of pre-recruit sea scallop per tow by area and region from the NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
45	392	16.7	0.0	0.0	0.0	N/S	0.0	0.0	5.0	0.0	9.7	0.0	0.0
46	416	8.7	N/S	7.3	2.0	N/S	11.8	5.2	0.3	5.0	15.0	20.2	10.5
47	871	2.2	0.0	0.7	16.4	11.0	13.6	16.0	27.0	16.9	53.7	N/S	29.5
48	1109	0.0	0.0	0.0	0.0	0.0	0.0	10.7	11.3	5.5	14.1	N/S	1.1
49	244	73.3	10.4	9.1	17.8	137.8	4.2	11.0	20.2	23.0	28.0	29.8	20.1
50	150	740.4	46.3	7.5	2.5	922.0	58.4	1429.9	96.0	77.7	217.3	721.1	658.6
51	139	2.5	N/S	110.3	1.7	4.7	120.0	2712.8	46.4	14.3	55.1	417.1	469.2
52	307	3.5	0.8	2.0	1.3	0.0	6.0	68.0	1.7	0.5	20.1	13.5	49.7
53	268	0.0	0.3	2.0	0.0	N/S	4.2	6.5	6.7	0.2	8.1	28.6	87.7
54	278	3.7	20.5	0.0	0.4	14.0	3.3	57.5	11.5	8.3	15.1	50.9	65.1
55	364	0.1	0.0	0.0	0.3	4.5	0.0	1.2	7.3	7.2	26.6	N/S	2.6
56	209	0.0	5.0	N/S	2.5	0.5	0.5	0.0	1.7	5.3	6.3	N/S	0.0
South Channel													
(46-47, 49-55)	3037	45.1	6.2	7.7	6.8	79.8	15.5	213.8	19.0	13.6	40.3	115.3	84.6
57	184	N/S	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.7	0.0
58	300	2.3	0.0	0.0	2.5	4.5	0.0	0.3	2.5	0.5	15.3	30.5	15.1
59	538	2.3	2.6	6.3	10.8	27.1	1.6	0.9	24.6	8.6	8.0	20.6	13.2
60	816	1.3	4.8	0.3	7.5	24.1	1.9	0.9	5.8	3.4	7.6	33.8	32.5
Southeast Part													
(58-60)	1654	1.8	3.2	2.2	7.7	21.5	1.4	0.8	11.3	4.6	9.1	28.9	23.1
61	576	N/S	0.2	1.3	N/S	9.4	N/S	0.1	1.3	5.3	2.1	17.9	25.1
62	701	N/S	7.4	55.1	31.1	205.4	N/S	7.9	60.4	75.2	-	-	-
621	547	-	-	-	-	-	-	-	-	-	46.9	97.2	199.5
63	694	13.0	46.9	133.2	43.6	1386.8	22.7	37.5	14.1	22.2	-	-	-
631	340	-	-	-	-	-	-	-	-	-	6.3	22.6	1.3
65	164	284.0	156.0	126.0	139.1	6032.4	294.8	122.3	197.3	179.8	-	-	-
651	102	-	-	-	-	-	-	-	-	-	168.4	259.8	138.2
66	266	39.3	347.6	74.3	49.6	51.4	862.2	167.1	114.3	211.0	-	-	-
661	117	-	-	-	-	-	-	-	-	-	97.7	133.8	123.8
71	146	59.8	N/S	592.7	43.2	106.5	110.0	24.3	14.8	13.6	13.8	71.3	49.0
72	504	0.5	N/S	N/S	11.7	6.1	N/S	9.4	0.3	0.3	0.8	4.5	16.8
73	501	105.5	N/S	N/S	4.5	0.2	N/S	1.8	0.0	0.0	0.4	0.7	0.0
74	433	6.9	0.0	N/S	5.8	0.1	N/S	2.8	11.2	7.4	0.8	0.0	7.6
USA N. Edge & Peak*													
2765	-	-	-	-	-	-	-	-	-	-	21.8	45.6	62.0
USA Georges Bank**													
7456	-	-	-	-	-	-	-	-	-	-	26.5	61.3	62.6
622	154	-	-	-	-	-	-	-	-	-	138.8	55.6	223.2
632	354	-	-	-	-	-	-	-	-	-	108.7	40.4	243.3
64	988	192.1	97.9	374.0	179.9	853.6	320.7	78.1	94.1	1165.9	193.9	433.7	303.8
652	62	-	-	-	-	-	-	-	-	-	664.0	364.6	254.6
662	149	-	-	-	-	-	-	-	-	-	167.1	1167.0	428.1
CANADA N. Edge & Peak*													
1707	-	-	-	-	-	-	-	-	-	-	186.0	379.5	293.0
TOTAL N. Edge & Peak*													
4472	83.8	66.1	177.8	72.0	665.7	277.4	40.9	48.3	293.8	84.5	173.0	150.2	
TOTAL Georges Bank													
9163	51.7	34.4	79.7	36.6	377.4	97.2	91.0	31.9	148.7	56.2	129.8	105.5	

Appendix Table 8. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
45	392	0.0	0.3	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	16.7
46	416	46.0	33.5	68.2	238.5	8.2	11.3	23.0	0.0	1.3	0.0	238.5
47	871	22.6	0.8	147.7	116.3	1.7	25.3	7.3	74.0	82.3	0.0	147.7
48	1109	0.3	3.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	14.1
49	244	2.6	1.9	824.4	3129.3	1198.8	5.3	45.1	98.0	66.8	1.9	3129.3
50	150	23.8	49.6	1462.7	836.0	384.9	29.8	54.0	793.4	168.1	2.5	1462.7
51	139	77.9	215.7	995.8	1150.3	821.4	24.3	14.8	989.5	177.9	1.7	2712.8
52	307	40.8	13.9	153.5	91.5	649.8	172.1	49.3	31.9	90.4	0.0	649.8
53	268	8.9	7.0	3.2	29.6	4.0	9.0	13.4	1.3	10.4	0.0	87.7
54	278	14.6	26.3	65.5	90.9	15.3	3.6	3.0	34.7	51.0	0.0	90.9
55	364	70.9	0.2	10.5	4.0	7.1	0.9	0.5	5.0	1.5	0.0	70.9
56	209	11.7	4.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	11.7
South Channel (46-47, 49-55)	3037	32.5	21.8	258.8	432.1	222.8	30.4	18.7	120.7	60.5	6.2	432.1
57	184	0.7	1.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	1.3
58	300	0.9	1.4	0.8	1.8	0.3	0.4	1.5	5.0	5.3	0.0	30.5
59	538	2.0	56.8	1.5	14.7	12.7	6.3	25.2	13.8	11.3	0.9	56.8
60	816	1.3	9.9	2.0	27.2	12.4	0.6	22.7	16.8	32.0	0.3	33.8
Southeast Part (58-60)	1654	1.4	23.6	1.6	18.5	10.3	2.4	19.6	13.7	20.4	0.8	28.9
61	576	15.0	N/S	22.9	35.1	2.5	2.4	29.8	11.8	4.3	0.1	35.1
62	701	-	-	-	-	-	-	-	-	-	7.4	205.4
621	547	146.9	N/S	231.7	257.5	14.3	1.7	41.4	156.4	107.1	1.7	257.5
63	694	-	-	-	-	-	-	-	-	-	13.0	1386.8
631	340	0.1	N/S	3.2	6.0	1.6	0.3	0.0	1.7	0.0	0.0	22.6
65	164	-	-	-	-	-	-	-	-	-	122.3	6032.4
651	102	238.0	N/S	26.1	252.3	77.5	16.4	2.1	895.2	753.3	2.1	895.2
66	266	-	-	-	-	-	-	-	-	-	39.3	862.2
661	117	101.5	N/S	6.7	8.1	342.8	12.4	1.7	160.4	1031.6	1.7	1031.6
71	146	202.5	N/S	43.4	858.7	94.0	9.8	5.7	78.8	47.3	5.7	858.7
72	504	6.8	N/S	N/S	3.7	1.2	0.7	0.2	0.2	6.8	0.2	16.8
73	501	0.5	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	105.5
74	433	54.9	N/S	1.0	25.9	0.6	1.5	0.0	0.4	9.8	0.0	54.9
USA N. Edge & Peak*	2765	65.8	N/S	66.9	118.7	26.1	3.1	14.9	81.6	103.3	3.1	118.7
USA Georges Bank**	7456	37.9	-	135.2	224.1	102.7	14.0	17.5	82.4	67.6	14.0	224.1
622	154	75.3	N/S	142.5	362.0	N/S	4.3	86.5	215.3	38.2	4.3	362.0
632	354	176.8	N/S	110.0	35.5	N/S	1.8	40.5	14.8	2.6	1.8	243.3
64	988	149.8	N/S	653.1	N/S	N/S	26.1	141.5	73.8	***	26.1	1165.9
652	62	246.0	N/S	469.3	4225.0	N/S	20.9	202.2	2160.3	1492.8	20.9	4225.0
662	149	167.3	N/S	11.3	24.0	N/S	37.4	59.3	474.9	***	11.3	1167.0
CANADA N. Edge & Peak*	1707	153.7	N/S	431.7	206.4	N/S	19.5	110.6	185.4	***	19.5	431.7
TOTAL N. Edge & Peak	4472	99.4	-	223.8	152.2	-	9.1	51.4	121.3	***	9.1	665.7
TOTAL Georges Bank	9163	59.5	-	193.6	220.8	-	15.0	34.8	101.6	***	15.0	377.4

* USA N. Edge & Peak: Strata 61, 621, 631, 651, 661, 71, 72, 74; Canada N. Edge & Peak: Strata 622, 632, 64, 652, 662.

** USA Georges Bank: Combined South Channel, SE Part, and USA Edge & Peak areas.

*** Incomplete survey coverage, values are not estimated

N/S = not sampled.

- = not calculated.

Appendix Table 9. Standardized mean number of harvestable-size (>70 mm shell height) sea scallops per tow by stratum, and from the NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
45	392	17.7	0.0	0.0	0.0	N/S	0.0	0.0	12.0	0.0	1.7	0.0	0.0
46	416	32.3	N/S	13.0	7.0	N/S	72.6	7.5	0.2	14.7	12.8	9.0	10.5
47	871	39.6	20.8	16.0	33.8	16.3	30.3	17.7	21.7	18.1	33.6	N/S	23.8
48	1109	24.5	0.0	0.0	0.3	0.0	2.3	34.3	1.0	27.8	11.2	N/S	0.6
49	244	10.0	203.4	114.4	160.2	36.6	46.0	13.5	14.5	11.9	20.3	13.2	53.0
50	150	109.2	316.5	316.3	1168.8	211.6	118.8	357.5	163.9	49.7	101.2	148.9	477.3
51	139	16.0	N/S	40.7	18.7	15.6	27.1	445.3	627.2	48.8	27.3	64.2	141.5
52	307	5.3	3.0	2.7	2.7	4.0	22.2	22.2	32.3	4.3	223.1	29.9	67.4
53	268	3.0	141.0	171.0	32.7	N/S	31.4	20.7	27.0	19.8	27.0	29.1	27.0
54	278	61.6	241.5	12.9	30.8	36.0	21.3	36.5	40.7	11.8	17.0	41.1	41.4
55	364	6.2	0.5	0.8	1.1	7.6	0.3	2.8	18.8	13.6	13.3	N/S	4.6
56	209	0.0	4.0	N/S	1.0	0.0	2.5	0.0	0.7	1.3	0.3	N/S	0.0
South Channel (46-47, 49-55)	3037	29.9	89.1	49.7	88.2	30.2	36.5	53.0	55.8	17.7	47.4	37.0	56.1
57	184	N/S	2.3	5.3	1.0	0.0	0.0	0.0	1.7	4.3	3.0	2.3	1.0
58	300	3.3	0.5	9.5	9.0	1.5	2.5	1.3	3.8	1.0	3.3	4.8	5.8
59	538	56.8	61.3	52.6	19.5	80.9	32.2	10.9	13.5	20.5	10.7	19.9	14.0
60	816	39.1	14.5	16.7	26.9	30.5	17.1	12.3	8.4	12.3	15.7	26.8	69.0
Southeast Part (58-60)	1654	38.4	27.2	27.1	21.2	41.6	19.4	9.8	9.2	12.9	11.8	20.6	39.6
61	576	N/S	54.2	152.0	N/S	19.9	N/S	11.3	9.7	13.0	18.4	13.6	12.6
62	701	N/S	149.9	187.5	110.5	82.1	N/S	58.3	44.6	29.9	-	-	-
621	547	-	-	-	-	-	-	-	-	-	36.8	73.8	173.1
63	694	64.4	161.7	283.6	326.7	218.7	39.7	25.5	25.5	17.2	-	-	-
631	340	-	-	-	-	-	-	-	-	-	9.4	23.0	1.6
65	164	168.3	2061.3	875.4	600.0	480.9	736.1	114.1	47.7	121.6	-	-	-
651	102	-	-	-	-	-	-	-	-	-	186.9	50.0	147.2
66	266	220.5	1435.6	698.8	365.9	78.3	351.9	130.7	105.6	121.9	-	-	-
661	117	-	-	-	-	-	-	-	-	-	100.3	60.8	66.5
71	146	69.3	N/S	510.0	405.0	219.5	224.0	62.0	17.5	33.2	18.5	36.3	39.4
72	504	12.0	N/S	N/S	91.0	56.3	N/S	8.0	7.3	15.0	5.0	8.5	35.5
73	501	23.5	N/S	N/S	55.5	0.0	N/S	0.6	0.0	0.3	4.2	0.3	0.0
74	433	27.3	0.0	N/S	223.5	3.9	N/S	7.4	17.8	15.0	8.4	3.1	4.8
USA N. Edge & Peak*	2765	-	-	-	-	-	-	-	-	-	26.6	28.6	54.6
USA Georges Bank**	7456	-	-	-	-	-	-	-	-	-	31.8	28.9	51.9
622	154	-	-	-	-	-	-	-	-	-	83.3	139.0	122.5
632	354	-	-	-	-	-	-	-	-	-	160.9	39.7	85.6
64	988	278.4	508.5	504.4	306.9	263.4	649.3	159.4	62.3	131.4	651.0	713.5	164.7
652	62	-	-	-	-	-	-	-	-	-	910.8	146.8	887.7
662	149	-	-	-	-	-	-	-	-	-	109.8	308.8	863.0
CANADA N. Edge & Peak*	1707	-	-	-	-	-	-	-	-	-	460.3	466.0	231.7
TOTAL N. Edge & Peak	4472	135.8	384.8	372.9	257.9	143.7	405.7	65.4	37.1	54.0	192.2	195.6	122.2
TOTAL Georges Bank	9163	74.6	218.3	184.0	152.3	92.3	152.4	51.2	38.3	34.6	111.6	123.0	85.4

Appendix Table 8. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
45	392	0.0	2.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	17.7
46	416	4.3	12.5	42.3	57.0	2.0	4.5	19.0	2.0	43.2	0.2	72.6
47	871	12.3	5.2	39.1	41.1	5.2	9.5	6.2	61.0	66.6	5.2	66.6
48	1109	0.2	3.3	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	34.3
49	244	4.1	3.3	75.8	72.7	1199.4	29.5	19.9	50.8	109.0	3.3	1199.4
50	150	126.8	44.6	56.6	52.2	451.4	54.8	57.3	166.9	372.9	44.6	1168.8
51	139	300.4	59.7	36.4	383.9	383.5	69.2	53.8	72.2	287.0	15.6	627.2
52	307	58.7	26.1	95.4	49.3	217.6	86.9	150.8	39.6	108.6	2.7	223.1
53	268	21.7	19.4	17.9	36.4	21.7	27.3	108.0	3.9	49.3	3.0	171.0
54	278	16.6	24.0	94.4	95.4	28.4	9.0	8.7	31.4	68.4	8.7	241.5
55	364	18.5	1.0	20.9	14.3	15.2	4.5	6.2	4.9	3.2	0.3	20.9
56	209	1.3	4.0	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	4.0
South Channel												
(46-47, 49-55)	3037	36.1	15.1	49.9	64.2	171.8	24.1	37.6	41.2	87.3	15.1	171.8
57	184	6.7	1.7	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	6.7
58	300	2.9	2.1	0.3	0.5	2.3	6.0	0.4	0.6	5.3	0.3	9.5
59	538	32.9	12.2	14.4	35.2	25.9	12.6	12.5	23.5	21.8	10.7	80.9
60	816	9.9	15.2	7.4	5.1	23.6	8.7	9.6	11.6	8.2	5.1	69.0
Southeast Part												
(58-60)	1654	16.1	11.8	8.4	14.1	20.5	9.5	8.9	13.5	12.1	8.4	41.6
61	576	18.6	N/S	220.9	85.5	22.0	7.0	12.1	13.3	30.0	7.0	220.9
62	701	-	-	-	-	-	-	-	-	-	29.9	187.5
621	547	157.4	N/S	516.1	172.6	98.5	33.2	16.2	22.1	55.4	16.2	516.1
63	694	-	-	-	-	-	-	-	-	-	17.2	326.7
631	340	3.3	N/S	4.7	14.1	20.0	0.3	1.1	0.6	5.9	0.3	23.0
65	164	-	-	-	-	-	-	-	-	-	47.7	2061.3
651	102	155.2	N/S	61.3	21.3	71.1	28.8	14.9	58.5	915.7	14.9	915.7
66	266	-	-	-	-	-	-	-	-	-	78.3	1435.6
661	117	77.3	N/S	65.8	17.2	87.4	44.6	16.6	27.7	356.1	16.6	356.1
71	146	95.7	N/S	120.3	118.3	181.6	40.8	29.5	50.5	122.8	17.5	510.0
72	504	8.0	N/S	N/S	7.3	11.8	11.0	8.5	1.7	18.7	1.7	91.0
73	501	1.0	N/S	N/S	N/S	N/S	N/S	N/S	N/S	-	0.0	55.5
74	433	63.6	N/S	5.4	26.1	2.4	4.0	1.4	4.0	15.6	0.0	223.5
USA N. Edge & Peak*												
	2765	60.9	N/S	196.8	66.9	45.0	15.6	10.4	14.3	83.3	10.4	196.8
USA Georges Bank**												
	7456	40.8	-	87.8	54.1	91.2	17.8	21.1	25.1	69.2	17.8	91.2
622	154	117.0	N/S	149.5	115.5	N/S	256.5	52.8	56.2	56.3	52.8	256.5
632	354	140.9	N/S	112.7	115.5	N/S	39.3	78.9	44.9	28.9	28.9	160.9
64	988	280.2	N/S	323.9	N/S	N/S	234.5	343.5	686.8	***	62.3	713.5
652	62	479.4	N/S	599.7	1172.9	N/S	282.8	176.2	534.3	1217.2	146.8	1217.2
662	149	89.4	N/S	479.0	171.0	N/S	284.3	124.4	211.3	***	89.4	863.0
CANADA N. Edge & Peak*												
	1707	227.2	N/S	287.9	98.3	N/S	199.2	237.2	444.0	***	98.3	466.0
TOTAL N. Edge & Peak												
	4472	124.4	-	236.0	78.9	-	85.7	97.0	178.4	***	37.1	405.7
TOTAL Georges Bank												
	9163	75.6	-	127.3	62.3	-	51.6	61.4	103.1	***	34.6	218.3

* USA N. Edge & Peak: Strata 61, 621, 631, 651, 661, 71, 72, 74; Canada N. Edge & Peak: Strata 622, 632, 64, 652, 662.

** USA Georges Bank: Combined South Channel, SE Part, and USA Edge & Peak areas.

*** Incomplete survey coverage, values are not estimated

N/S = not sampled.

- = not calculated.

Appendix Table 10. Standardized mean weight [g] of sea scallops per tow by stratum, and standardized stratified mean weight of sea scallops per tow by area and region, from the NEFSC sea scallop research vessel surveys on Georges Bank, 1975, 1977-1996.

Stratum	Area (sq mi)	YEAR											
		1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
45	392	556	0	0	0	N/S	0	0	289	0	46	0	0
46	416	1029	N/S	454	312	N/S	1283	208	10	363	190	183	288
47	871	1114	872	533	1045	450	469	482	597	416	750	N/S	581
48	1109	878	0	0	12	0	70	745	25	535	209	N/S	7
49	244	568	3293	2360	4162	1082	1440	206	365	254	383	355	490
50	150	3571	3945	5717	12907	3154	1380	6901	2084	778	1729	2964	5638
51	139	646	N/S	1043	558	454	663	9261	6177	709	562	1436	2326
52	307	163	102	59	38	159	516	491	693	109	3244	614	1033
53	268	100	4559	4277	959	N/S	599	727	617	608	709	821	820
54	278	1669	5188	563	1183	882	495	1015	699	315	499	945	777
55	364	235	20	27	36	239	20	84	428	278	417	N/S	103
56	209	0	53	N/S	10	0	61	0	27	31	12	N/S	0
South Channel (46-47, 49-55)	3037	918	1957	1173	1541	668	677	1165	827	387	869	820	891
57	184	N/S	96	282	13	0	0	0	84	189	123	71	54
58	300	113	5	424	161	16	51	55	136	25	139	99	86
59	538	1345	1557	1732	824	1396	786	418	506	433	249	616	287
60	816	1145	368	596	858	571	398	345	170	192	267	496	1125
Southeast Part (58-60)	1654	1023	689	934	720	739	481	316	273	240	238	463	664
61	576	N/S	1724	4864	N/S	794	N/S	396	347	528	401	406	423
621	547	N/S	3022	4303	2689	1933	N/S	953	870	670	610	1257	2360
631	340	1355	2343	5849	5003	5068	757	559	509	419	193	466	33
651	102	3658	22843	15856	7960	12587	7683	1632	1108	1546	2250	1633	1884
661	117	3230	16857	14687	8948	1327	5329	2195	1500	1833	1412	1183	949
71	146	1596	N/S	10007	6194	2732	2619	948	554	639	383	1030	603
72	504	348	N/S	N/S	1876	1408	N/S	176	158	365	101	216	763
73	501	820	N/S	N/S	677	1	N/S	7	0	2	99	4	0
74	433	740	0	N/S	3217	60	N/S	157	307	308	258	95	81
USA N. Edge & Peak*	2765	-	-	-	-	-	-	-	-	-	450	610	852
USA Georges Bank**	7456	-	-	-	-	-	-	-	-	-	574	632	826
622	154	-	-	-	-	-	-	-	-	-	1420	2392	1841
632	354	-	-	-	-	-	-	-	-	-	1918	913	1826
64	988	4038	7373	10240	5964	4421	6466	2373	1315	2885	6481	9976	3084
652	62	-	-	-	-	-	-	-	-	-	9178	3013	9670
662	149	-	-	-	-	-	-	-	-	-	1992	5960	10875
CANADA N. Edge & Peak*	1707	-	-	-	-	-	-	-	-	-	4784	6809	3630
TOTAL N. Edge & Peak	4472	2228	5299	7910	4666	2963	4417	1068	746	1133	2104	2976	1913
TOTAL Georges Bank	9163	1471	3298	4020	2801	1892	1841	964	688	725	1358	1962	1348

Appendix Table 10. (Continued).

Stratum	Area (sq mi)	YEAR									HISTORIC	
		1988	1989	1990	1991	1992	1993	1994	1995	1996	LOW	HIGH
45	392	0	21	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	556
46	416	171	289	632	1438	533	130	264	36	1193	10	1438
47	871	276	202	834	849	145	261	169	1100	1349	145	1349
48	1109	3	62	N/S	N/S	N/S	N/S	N/S	N/S	-	0	878
49	244	82	74	3032	5676	13243	285	346	829	1238	74	13243
50	150	1516	811	3089	2322	4847	624	736	3657	3809	624	12907
51	139	3017	1236	1448	4515	5980	733	577	3054	2917	454	9261
52	307	782	496	1446	738	3519	1375	1618	771	2222	38	3519
53	268	494	330	355	610	454	356	1144	97	978	97	4559
54	278	291	511	1519	1349	454	172	217	641	1462	172	5188
55	364	564	37	318	298	274	152	118	113	92	20	564
56	209	20	41	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	61
South Channel (46-47, 49-55)	3037	539	331	1143	1505	2162	384	478	866	1427	331	2162
57	184	117	101	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	282
58	300	33	41	8	14	38	132	20	26	120	5	424
59	538	689	433	232	551	539	322	383	462	544	232	1732
60	816	189	299	149	129	382	209	307	334	180	129	1145
Southeast Part (58-60)	1654	323	296	150	245	371	232	280	320	288	150	1023
61	576	337	N/S	2020	1250	444	180	386	266	773	180	4864
621	547	1959	N/S	5437	2503	1290	466	384	542	858	384	5437
631	340	86	N/S	139	402	449	11	20	29	130	11	5849
651	102	1985	N/S	777	992	963	386	299	3719	15328	299	22843
661	117	1566	N/S	944	343	1962	474	227	895	6505	227	16857
71	146	1794	N/S	1413	3439	2026	497	499	1424	1962	383	10007
72	504	161	N/S	N/S	200	243	280	167	55	289	55	1876
73	501	25	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	0	820
74	433	1186	N/S	134	566	63	78	29	92	367	0	3217
USA N. Edge & Peak*	2765	918	N/S	2052	1163	682	256	1573	456	1472	256	2052
USA Georges Bank**	7456	632	-	1202	1099	1216	308	977	593	1192	308	1216
622	154	1725	N/S	2000	3495	N/S	4102	1259	1484	1245	1245	4102
632	354	2097	N/S	1938	3247	N/S	945	1774	831	770	770	3247
64	988	3782	N/S	5213	N/S	N/S	3754	4981	7432	***	1315	10240
652	62	6083	N/S	8103	24834	N/S	4253	3609	12386	19720	3013	24834
662	149	1428	N/S	6719	2950	N/S	4708	2684	3753	***	1428	10875
CANADA N. Edge & Peak*	1707	3125	N/S	4480	2148	N/S	3310	3730	5327	***	2148	6809
TOTAL N. Edge & Peak	4472	1760	-	3097	1539	-	1422	1573	2317	***	746	7910
TOTAL Georges Bank	9163	1096	-	1849	1294	-	867	977	1267	***	688	4020

* USA N. Edge & Peak: Strata 61, 621, 631, 651, 661, 71, 72, 74; Canada N. Edge & Peak: Strata 622, 632, 64, 652, 662.

** USA Georges Bank: Combined South Channel, SE Part, and USA Edge & Peak areas.

*** Incomplete survey coverage, values are not estimated

N/S = not sampled.

- = not calculated.