

Table 1. United States and Canadian sea scallop landings (metric tons, meats) from the Northwest Atlantic (Northwest Atlantic Fisheries Organization Subarea 5 and Statistical Area 6), 1887-1981.

| Year | USA ¹ | Year | USA | Canada ² | Total |
|-------|------------------|-------------------|--------|---------------------|--------|
| 1887 | 112 | 1943 | 2,508 | | 2,508 |
| *1888 | 91 | 1944 | 2,209 | | 2,209 |
| 1889 | 141 | 1945 | 2,590 | | 2,590 |
| 1892 | 53 | 1946 | 5,236 | | 5,236 |
| 1897 | 435 | 1947 | 6,647 | | 6,647 |
| 1898 | 156 | 1948 | 7,546 | | 7,546 |
| *1899 | 24 | 1949 | 8,299 | | 8,299 |
| *1900 | 79 | 1950 | 9,063 | | 9,063 |
| 1901 | 296 | 1951 | 8,503 | 91 | 8,594 |
| 1902 | 61 | 1952 | 8,451 | 91 | 8,542 |
| *1903 | 62 | 1953 | 10,713 | 136 | 10,849 |
| 1904 | 216 | 1954 | 7,997 | 91 | 8,088 |
| 1905 | 200 | 1955 | 10,036 | 136 | 10,172 |
| *1906 | 255 | 1956 | 9,102 | 317 | 9,419 |
| *1907 | 236 | 1957 | 9,523 | 771 | 10,294 |
| 1908 | 834 | 1958 | 8,608 | 1,470 | 10,078 |
| *1909 | 843 | 1959 | 11,178 | 2,721 | 13,899 |
| *1910 | 919 | 1960 | 12,065 | 3,590 | 15,455 |
| *1911 | 663 | 1961 | 12,456 | 4,549 | 17,005 |
| *1912 | 842 | 1962 | 11,174 | 5,694 | 16,868 |
| *1913 | 353 | 1963 | 9,038 | 5,377 | 14,915 |
| *1914 | 386 | 1964 | 7,704 | 5,901 | 13,605 |
| *1916 | 266 | 1965 | 9,105 | 7,027 | 16,132 |
| 1919 | 39 | 1966 | 7,237 | 7,641 | 14,878 |
| 1921 | 58 | 1967 | 4,646 | 5,007 | 9,653 |
| 1924 | 154 | 1968 | 5,473 | 5,227 | 10,700 |
| 1926 | 506 | 1969 | 3,362 | 4,304 | 7,666 |
| 1928 | 216 | 1970 | 2,613 | 4,082 | 6,695 |
| 1929 | 1,130 | 1971 | 2,593 | 3,894 | 6,487 |
| 1930 | 1,111 | 1972 | 2,655 | 4,162 | 6,817 |
| 1931 | 1,058 | 1973 | 2,401 | 4,208 | 6,609 |
| 1932 | 1,517 | 1974 | 2,721 | 6,115 | 8,836 |
| 1933 | 2,009 | 1975 | 4,421 | 7,387 | 11,808 |
| 1934 | 54 | 1976 | 8,712 | 9,745 | 18,457 |
| 1935 | 1,955 | 1977 | 11,104 | 13,044 | 24,148 |
| 1937 | 3,989 | 1978 | 14,483 | 12,189 | 26,672 |
| 1938 | 4,041 | 1979 | 14,256 | 9,208 | 23,464 |
| 1939 | 4,440 | 1980 ³ | 12,566 | 5,239 | 17,805 |
| 1940 | 3,467 | 1981 ⁴ | 11,475 | 8,000 | 19,475 |
| *1941 | 3,567 | | | | |
| 1942 | 3,258 | | | | |

¹ USA landings from 1887-1960 taken from Lyles (1969); USA landings from 1961-1975 taken from Fishery Statistics of the United States and from 1963-1978 from ICNAF Statistical Bulletins; 1979 landings from NAFO SCS Doc. 80/IX/27; 1980 landings from NAFO SCS Doc. 81/VI/1S. For 1964-1980, USA landings statistics were validated against New England Detailed Weightout Data, Northeast Fisheries Center, Woods Hole, Mass.

² Canadian landings from 1951-1978 taken from ICNAF Statistical Bulletins and Hare (1977); 1979 landings from NAFO SCS Doc. 80/IX/27; 1980 landings from NAFO SCS Doc. 81/VI/1S.

³ Provisional

⁴ Estimated yearly totals projected from January-September landings.

*Maine landings only - from Baird (1956).

*Total USA landings for 1941 taken from Premetz and Snow (1953).

Table 2. Historical trends in USA and Canadian sea scallop landings (metric tons, meats) from Georges Bank (NAFO Subdivision 5Ze), 1944-1981.

| Year | USA | % of Total | Canada | % of Total | Total |
|-------------------|--------|------------|--------|------------|--------|
| 1944 | 1,814 | 100 | - | 0 | 1,814 |
| 1945 | 1,769 | 100 | - | 0 | 1,769 |
| 1946 | 4,036 | 100 | - | 0 | 4,036 |
| 1947 | 4,853 | 100 | - | 0 | 4,853 |
| 1948 | 4,580 | 100 | - | 0 | 4,580 |
| 1949 | 5,306 | 100 | - | 0 | 5,306 |
| 1950 | 5,442 | 100 | - | 0 | 5,442 |
| 1951 | 5,714 | 98 | 91 | 2 | 5,805 |
| 1952 | 5,488 | 98 | 91 | 2 | 5,579 |
| 1953 | 7,392 | 98 | 136 | 2 | 7,528 |
| 1954 | 7,029 | 99 | 91 | 1 | 7,120 |
| 1955 | 8,299 | 98 | 136 | 2 | 8,435 |
| 1956 | 7,937 | 96 | 317 | 4 | 8,254 |
| 1957 | 7,846 | 91 | 771 | 9 | 8,617 |
| 1958 | 6,531 | 85 | 1,470 | 15 | 8,001 |
| 1959 | 8,481 | 76 | 2,721 | 24 | 11,202 |
| 1960 | 9,932 | 75 | 3,390 | 25 | 13,322 |
| 1961 | 10,660 | 70 | 4,549 | 30 | 15,209 |
| 1962 | 9,690 | 63 | 5,694 | 37 | 15,384 |
| 1963 | 7,910 | 57 | 5,877 | 43 | 13,787 |
| 1964 | 6,241 | 51 | 5,901 | 49 | 12,142 |
| 1965 | 1,483 | 25 | 4,418 | 75 | 5,901 |
| 1966 | 884 | 15 | 4,861 | 85 | 5,745 |
| 1967 | 1,221 | 20 | 5,001 | 80 | 6,222 |
| 1968 | 1,025 | 18 | 4,805 | 82 | 5,830 |
| 1969 | 1,325 | 24 | 4,302 | 76 | 5,627 |
| 1970 | 1,415 | 26 | 4,082 | 74 | 5,497 |
| 1971 | 1,329 | 25 | 3,894 | 75 | 5,223 |
| 1972 | 821 | 17 | 4,146 | 83 | 4,967 |
| 1973 | 1,080 | 20 | 4,208 | 80 | 5,288 |
| 1974 | 925 | 13 | 6,115 | 87 | 7,040 |
| 1975 | 857 | 10 | 7,387 | 90 | 8,244 |
| 1976 | 1,761 | 15 | 9,726 | 85 | 11,487 |
| 1977 | 4,805 | 27 | 13,044 | 73 | 17,849 |
| 1978 | 5,569 | 31 | 12,189 | 69 | 17,758 |
| 1979 | 6,573 | 42 | 9,208 | 58 | 15,781 |
| 1980 | 5,620 | 52 | 5,239 | 48 | 10,859 |
| 1981 ³ | 8,200 | 51 | 8,000 | 49 | 16,200 |

¹ Source of Data: 1944-1957, Caddy (1975); 1958-1978, ICNAF Statistical Bulletins; 1979, NAFO SCS Doc. 80/IX/27; 1980, NAFO SCS Doc. 81/VI/15.

² Landings during 1944-1963 represent landings from NAFO Division 5Z (Subdivisions 5Ze and 5Zw).

³ Estimated yearly totals projected from January-September landings.

Table 3. USA commercial sea scallop landings (metric tons, meats) from the Northwest Atlantic (NAFO Subarea 5 and Statistical Area 6), by NAFO Statistical Region, 1961-1981.^{1,2}

| Year | NAFO Statistical Region | | | | | | Total | Grand Total | | | | | |
|-------------------|-------------------------|-------|-----|-----|------------------|--------|--------|-------------|----|------------------|-------|--------|-------------|
| | 5Y | 5Z8 | 5ZW | 5Z | 5NK ³ | Total | | | | | | | |
| | | | | | | | 6A | 6B | 6C | 6NK ³ | Total | 6 | Grand Total |
| 1961 | 120 | | | | | 10,660 | 10,780 | | | | 1,676 | 12,456 | |
| 1962 | 103 | | | | | 9,690 | 3 | 9,796 | | | 1,378 | 11,174 | |
| 1963. | 127 | | | | | 7,910 | | 8,037 | | | 1,001 | 9,038 | |
| 1964 | 192 | 6,241 | | 55 | | 6,296 | | 6,488 | | | 1,216 | 7,704 | |
| 1965 | 115 | 1,483 | | 27 | | 1,510 | | 1,625 | | | 7,480 | 9,105 | |
| 1966 | 93 | 884 | | 8 | | 892 | | 985 | | | 6,252 | 7,237 | |
| 1967 | 80 | 1,221 | | 8 | | 1,229 | | 1,309 | | | 3,337 | 4,646 | |
| 1968 | 113 | 1,025 | | 24 | | 1,049 | | 1,162 | | | 4,311 | 5,473 | |
| 1969 | 123 | 1,325 | | 19 | | 1,344 | | 1,467 | | | 1,045 | 1,895 | |
| 1970 | 132 | 1,415 | | 6 | | 1,421 | | 1,553 | | | 587 | 1,060 | |
| 1971 | 362 | 1,329 | | 7 | | 1,336 | | 1,698 | | | 621 | 895 | |
| 1972 | 525 | 821 | | 2 | | 823 | | 1,348 | | | 388 | 648 | |
| 1973 | 460 | 1,080 | | 3 | | 1,083 | | 1,543 | | | 143 | 95 | |
| 1974 | 223 | 925 | | 5 | | 930 | | 1,153 | | | 11 | 609 | |
| 1975 | 746 | 857 | | 50 | | 907 | | 1,653 | | | 4,494 | 357 | |
| 1976 | 366 | 1,761 | | 9 | | 1,770 | | 2,136 | | | 3,537 | 2,233 | |
| 1977 | 258 | 4,805 | | 11 | | 4,816 | | 125 | | | 869 | 628 | |
| 1978 | 243 | 5,569 | | 29 | | 5,598 | | 5,841 | | | 1,641 | 899 | |
| 1979 | 434 | 6,573 | | 93 | | 6,666 | | 7,100 | | | 4,494 | 1,725 | |
| 1980 ⁴ | 1,637 | 5,620 | | 219 | | 5,839 | | 7,476 | | | 3,198 | 1,836 | |
| 1981 ⁵ | 1,100 | 8,200 | | 75 | | 8,275 | | 9,375 | | | 2,100 | 11,475 | |

¹ See Figure 1 for geographical location of NAFO Statistical Regions.

² Source of Data: 1961-1975, Fishery Statistics of the United States; 1963-1978, ICNAF Statistical Bulletins; 1979, NAFO SCS Doc. 80/IX/27; 1980, NAFO SCS Doc. 81/VI/15, and NMFS Detailed Weightout Files.

³ NK: Specific area of landings not known.

⁴ Provisional.

⁵ Estimated yearly totals projected from January-September landings.

Table 4. USA and Canadian landings (mt, meats), effort (days fished), and catch per unit of effort (CPUE) (mt landed of meats per day fished) from the Georges Bank sea scallop fishery, 1944-1980.

| Year | Landings (mt, meats) | | | Effort (Days Fished, Unadjusted) | | | Nominal CPUE (mt/day fished) | |
|------|----------------------|--------|-------|----------------------------------|---------------------|--------------------|------------------------------|--------|
| | USA | Canada | Total | USA ¹ | Canada ² | Total ³ | USA | Canada |
| 1944 | 1814 | -- | 1814 | 2223 | -- | 2233 | .816 | -- |
| 1945 | 1769 | -- | 1769 | 2391 | -- | 2391 | .740 | -- |
| 1946 | 4036 | -- | 4036 | 4934 | -- | 4934 | .818 | -- |
| 1947 | 4853 | -- | 4853 | 6434 | -- | 6434 | .754 | -- |
| 1948 | 4580 | -- | 4580 | 7613 | -- | 7613 | .602 | -- |
| 1949 | 5306 | -- | 5306 | 8428 | -- | 8428 | .630 | -- |
| 1950 | 5442 | -- | 5442 | 7349 | -- | 7349 | .741 | -- |
| 1951 | 5714 | 91 | 5805 | 7626 | 123 ⁴ | 7749 | .749 | .740 |
| 1952 | 5488 | 91 | 5579 | 7742 | 128 ⁴ | 7870 | .709 | .711 |
| 1953 | 7392 | 156 | 7528 | 10031 | 185 ⁴ | 10216 | .737 | .735 |
| 1954 | 7029 | 91 | 7120 | 9343 | 121 ⁴ | 9464 | .752 | .752 |
| 1955 | 8299 | 136 | 8435 | 11619 | 190 ⁴ | 11809 | .714 | .716 |
| 1956 | 7937 | 317 | 8254 | 12246 | 490 ⁴ | 12736 | .648 | .647 |
| 1957 | 7346 | 771 | 8617 | 10500 | 1197 | 11697 | .747 | .644 |
| 1958 | 6531 | 1470 | 8001 | 8775 | 1598 | 10373 | .744 | .920 |
| 1959 | 8481 | 2721 | 11202 | 8556 | 2098 | 10654 | .991 | 1.297 |
| 1960 | 9932 | 3390 | 13322 | 8039 | 2601 | 10640 | 1.235 | 1.303 |
| 1961 | 10660 | 4549 | 15209 | 8671 | 3147 | 11818 | 1.229 | 1.446 |
| 1962 | 9690 | 5694 | 15384 | 8959 | 4642 | 13601 | 1.082 | 1.227 |
| 1963 | 7910 | 5877 | 13787 | 7718 | 5905 | 13623 | 1.025 | .995 |
| 1964 | 6241 | 5901 | 12142 | 6662 | 6723 | 13385 | .937 | .878 |
| 1965 | 1483 | 4418 | 5901 | 2095 | 5749 | 7844 | .708 | .768 |
| 1966 | 884 | 4861 | 5745 | 1056 | 5524 | 6580 | .837 | .880 |
| 1967 | 1221 | 5001 | 6222 | 1870 | 6785 | 3655 | .633 | .737 |
| 1968 | 1025 | 4805 | 5830 | 1854 | 6972 | 8826 | .553 | .689 |
| 1969 | 1325 | 4302 | 5627 | 2715 | 6684 | 9399 | .488 | .644 |
| 1970 | 1415 | 4082 | 5497 | 2563 | 7615 | 10173 | .552 | .536 |
| 1971 | 1329 | 5894 | 5223 | 2443 | 7688 | 10131 | .544 | .518 |
| 1972 | 821 | 4146 | 4967 | 1804 | 8264 | 10068 | .455 | .502 |
| 1973 | 1080 | 4208 | 5288 | 1872 | 8082 | 9954 | .577 | .521 |
| 1974 | 925 | 6115 | 7040 | 1404 | 8185 | 9989 | .659 | .747 |
| 1975 | 857 | 7387 | 8244 | 1110 | 8415 | 9525 | .772 | .878 |
| 1976 | 1761 | 9725 | 11487 | 1766 | 7324 | 9090 | .997 | 1.328 |
| 1977 | 4805 | 13044 | 17849 | 4514 | 9601 | 13115 | 1.064 | 1.517 |
| 1978 | 5569 | 12189 | 17758 | 5862 | 8556 | 14418 | .950 | 1.425 |
| 1979 | 6573 | 9208 | 15781 | 9245 | 8823 | 13068 | .711 | 1.044 |
| 1980 | 5620 | 5239 | 10859 | 11263 | 6838 | 18101 | .499 | .766 |

¹ USA effort for 1944-1964 taken from Caddy (1975); USA effort for 1965-1980 derived from NMFS Detailed Weightout Files by calculating annual mean catch rates, weighted by the percentage of USA Georges Bank landings accounted for within each of three vessel classes (5-50 GRT; 51-150 GRT; 151-500 GRT) in relation to vessel class CPUE, and dividing the derived annual mean catch rate into the total USA Georges Bank sea scallop annual landings.

²Canadian effort for 1944-1974 taken from Caddy (1975); Canadian effort for 1975-1980 derived from effort data provided to NMFS by Canadian scientists.

³Not standardized for differences in fishing power between USA and Canadian sea scallop fleets.

⁴Estimated from USA catch per unit of effort.

Table 5. Distribution of USA and Canadian sea scallop landings (mt, meat) in the three principal sea scallop fishing regions on Georges Bank, 1957-1981.¹

| Year | USA | | | | Canada | | | | Total | | | | | | |
|-------------------|---------------|---------|----------------|-----------------|--------|---------------|---------|----------------|-----------------|-------|---------------|---------|----------------|-----------------|-------|
| | South Channel | | Southeast Part | No. Edge & Peak | Total | South Channel | | Southeast Part | No. Edge & Peak | Total | South Channel | | Southeast Part | No. Edge & Peak | Total |
| | South | Channel | Part | | | South | Channel | Part | | | South | Channel | Part | | |
| 1957 | 1491 | 628 | 5727 | 7846 | 8 | -- | 763 | 771 | -- | 1499 | 628 | 6490 | 8617 | 8617 | |
| 1958 | 1241 | 457 | 4833 | 6531 | -- | -- | 1470 | 1470 | -- | 1241 | 457 | 6303 | 8001 | 8001 | |
| 1959 | 1951 | 2799 | 3731 | 8481 | -- | -- | 2721 | 2721 | -- | 1951 | 2799 | 6452 | 11202 | 11202 | |
| 1960 | 1788 | 4469 | 3675 | 9932 | -- | -- | 3390 | 3390 | -- | 1788 | 4469 | 7065 | 13322 | 13322 | |
| 1961 | 2132 | 1812 | 6716 | 10660 | -- | -- | 4549 | 4549 | -- | 2132 | 1812 | 11265 | 15209 | 15209 | |
| 1962 | 1744 | 1841 | 6105 | 9690 | -- | -- | 5694 | 5694 | -- | 1744 | 1841 | 11799 | 15384 | 15384 | |
| 1963 | 2057 | 2215 | 3638 | 7910 | -- | -- | 470 | 5407 | -- | 2057 | 2685 | 9045 | 13787 | 13787 | |
| 1964 | 2569 | 1969 | 1763 | 6241 | -- | -- | 118 | 5783 | -- | 2569 | 2027 | 7546 | 12142 | 12142 | |
| 1965 | 677 | 390 | 416 | 1483 | -- | -- | 177 | 4241 | -- | 677 | 567 | 4657 | 5901 | 5901 | |
| 1966 | 716 | 24 | 144 | 884 | -- | -- | 4861 | 4861 | -- | 716 | 24 | 5005 | 5745 | 5745 | |
| 1967 | 641 | 311 | 269 | 1221 | -- | -- | 5001 | 5001 | -- | 641 | 311 | 5270 | 6222 | 6222 | |
| 1968 | 713 | 149 | 163 | 1025 | -- | -- | 4805 | 4805 | -- | 713 | 149 | 4963 | 5630 | 5630 | |
| 1969 | 576 | 227 | 522 | 1325 | -- | -- | 4302 | 4302 | -- | 576 | 227 | 4824 | 5627 | 5627 | |
| 1970 | 1069 | 159 | 187 | 1415 | 41 | -- | 4041 | 4041 | -- | 1110 | 159 | 4228 | 5497 | 5497 | |
| 1971 | 1094 | 214 | 24 | 1329 | 545 | -- | 3349 | 3349 | -- | 1636 | 214 | 3373 | 5223 | 5223 | |
| 1972 | 623 | 64 | 134 | 821 | 415 | -- | 3731 | 3731 | -- | 1038 | 64 | 3865 | 4967 | 4967 | |
| 1973 | 890 | 173 | 17 | 1080 | 1136 | -- | 3072 | 4208 | -- | 2026 | 173 | 3089 | 5288 | 5288 | |
| 1974 | 783 | 121 | 21 | 925 | 550 | 306 | 5259 | 6115 | -- | 1333 | 427 | 5280 | 7040 | 7040 | |
| 1975 | 566 | 175 | 116 | 857 | 591 | 74 | 6722 | 7387 | -- | 1157 | 249 | 6838 | 8244 | 8244 | |
| 1976 | 1575 | 141 | 45 | 1761 | 776 | -- | 8948 | 9726 | -- | 2353 | 141 | 8993 | 11487 | 11487 | |
| 1977 | 4124 | 277 | 407 | 4805 | 261 | -- | 12783 | 13044 | -- | 4382 | 277 | 13190 | 17849 | 17849 | |
| 1978 | 3918 | 366 | 1285 | 5569 | -- | -- | 12189 | 12189 | -- | 3918 | 366 | 13474 | 17758 | 17758 | |
| 1979 | 3996 | 758 | 1819 | 6573 | -- | -- | 9208 | 9208 | -- | 3996 | 758 | 11077 | 15781 | 15781 | |
| 1980 | 2994 | 685 | 5620 | 5239 | -- | -- | 5239 | 5239 | -- | 2994 | 685 | 7180 | 10859 | 10859 | |
| 1981 ² | 2292 | 346 | 4306 | 6944 | -- | -- | 6586 | 6586 | -- | 2292 | 346 | 10892 | 13530 | 13530 | |

1 South Channel: Statistical Areas 521, 522, and 526.

Southeast Part: Statistical Area 525.

Northern Edge and Peak: Statistical Areas 523 and 524.

2 1981 landings statistics only include January-September landings and represent provisional values.

Table 6. Percentage distribution of USA and Canadian sea scallop landings (mt. meat) in three principal sea scallop fishing regions on Georges Bank, 1957-1981.

| Year | USA | | | | Canada | | | | Total | | | |
|-------------------|---------------|-------|----------------|-----------|---------------|------|----------------|-----------|---------------|-------|----------------|-----------|
| | South Channel | | Southeast Part | No. Edge† | South Channel | | Southeast Part | No. Edge‡ | South Channel | | Southeast Part | No. Edge§ |
| | Total | Total | Peak | Total | Channel | Part | Peak | Total | Channel | Part | Peak | Total |
| 1957 | 19.0 | 8.0 | 73.0 | 100.0 | 1.0 | -- | -- | 99.0 | 100.0 | 17.4 | 7.3 | 75.3 |
| 1958 | 19.0 | 7.0 | 74.0 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 15.5 | 5.7 | 78.8 |
| 1959 | 23.0 | 33.0 | 44.0 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 17.4 | 25.0 | 57.6 |
| 1960 | 18.0 | 45.0 | 37.0 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 13.4 | 33.5 | 53.0 |
| 1961 | 20.0 | 17.0 | 63.0 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 14.0 | 11.9 | 74.1 |
| 1962 | 18.0 | 19.0 | 63.0 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 11.3 | 12.0 | 76.7 |
| 1963 | 26.0 | 28.0 | 46.0 | 100.0 | -- | -- | -- | 8.0 | 92.0 | 100.0 | 14.9 | 19.5 |
| 1964 | 41.2 | 30.6 | 28.2 | 100.0 | -- | -- | -- | 2.0 | 98.0 | 100.0 | 21.2 | 16.7 |
| 1965 | 45.7 | 26.3 | 28.1 | 100.1 | -- | -- | -- | 4.0 | 96.0 | 100.0 | 11.5 | 9.6 |
| 1966 | 81.0 | 2.7 | 16.5 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 12.5 | 0.4 | 87.1 |
| 1967 | 52.5 | 25.5 | 22.0 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 10.3 | 5.0 | 84.7 |
| 1968 | 69.6 | 14.5 | 15.9 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 12.2 | 2.6 | 85.2 |
| 1969 | 43.5 | 17.1 | 39.4 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 10.2 | 4.0 | 85.7 |
| 1970 | 75.5 | 11.2 | 13.2 | 99.9 | 1.0 | -- | -- | 99.0 | 100.0 | 20.2 | 2.9 | 76.9 |
| 1971 | 82.1 | 16.1 | 1.8 | 100.0 | 14.0 | -- | -- | 86.0 | 100.0 | 31.3 | 4.1 | 64.6 |
| 1972 | 75.9 | 7.8 | 16.3 | 100.0 | 10.0 | -- | -- | 90.0 | 100.0 | 20.9 | 1.3 | 77.8 |
| 1973 | 82.4 | 16.0 | 1.6 | 100.0 | 27.0 | -- | -- | 73.0 | 100.0 | 38.3 | 3.3 | 58.4 |
| 1974 | 84.6 | 13.1 | 2.3 | 100.0 | 9.0 | 5.0 | -- | 86.0 | 100.0 | 18.9 | 6.1 | 75.0 |
| 1975 | 66.0 | 20.4 | 13.5 | 99.9 | 8.0 | 1.0 | -- | 91.0 | 100.0 | 14.0 | 3.0 | 82.9 |
| 1976 | 89.4 | 8.0 | 2.6 | 100.0 | 6.0 | -- | -- | 92.0 | 100.0 | 20.5 | 1.2 | 78.3 |
| 1977 | 85.8 | 5.0 | 6.5 | 100.1 | 2.0 | -- | -- | 98.0 | 100.0 | 24.6 | 1.6 | 73.9 |
| 1978 | 70.4 | 6.6 | 23.1 | 100.1 | -- | -- | -- | 100.0 | 100.0 | 22.1 | 2.1 | 75.9 |
| 1979 | 60.8 | 11.5 | 27.7 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 25.3 | 4.8 | 69.9 |
| 1980 | 53.3 | 12.2 | 34.5 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 27.6 | 6.3 | 66.1 |
| 1981 ² | 33.0 | 5.0 | 62.0 | 100.0 | -- | -- | -- | 100.0 | 100.0 | 16.9 | 2.6 | 80.5 |

† South Channel: Statistical Areas 521, 522, and 526.
 ‡ Southeast Part: Statistical Area 525.
 § Northern Edge and Peak: Statistical Areas 523 and 524.

²1981 landing statistics only include January-September landings and represent provisional values.

Table 7. Geographical distribution of USA commercial sea scallop landings (metric tons, meats) from the Northwest Atlantic (NAFO Subarea 5 and Statistical Area 6).

| Year | USA Landings (mt., meats) | | | | | Percent of USA Annual Landings | | | | |
|-------------------|---------------------------|--------------|---------------|--------------------|--------|--------------------------------|--------------|---------------|--------------------|-------|
| | Georges Bank | Mid Atlantic | Gulf of Maine | Other ¹ | Total | Georges Bank | Mid Atlantic | Gulf of Maine | Other ¹ | Total |
| 1961 | 10,660 | 1,676 | 120 | 0 | 12,456 | 85.6 | 13.5 | 1.0 | - | 100.1 |
| 1962 | 9,690 | 1,378 | 103 | 3 | 11,174 | 86.7 | 12.3 | 0.9 | <0.1 | 100.0 |
| 1963 | 7,910 | 1,001 | 127 | 0 | 9,038 | 87.5 | 11.1 | 1.4 | - | 100.0 |
| 1964 | 6,241 | 1,216 | 192 | 55 | 7,704 | 81.0 | 15.8 | 2.5 | 0.7 | 100.0 |
| 1965 | 1,483 | 7,480 | 115 | 27 | 9,105 | 16.3 | 82.2 | 1.3 | 0.3 | 100.1 |
| 1966 | 884 | 6,252 | 93 | 8 | 7,237 | 12.2 | 86.4 | 1.3 | 0.1 | 100.0 |
| 1967 | 1,221 | 3,337 | 80 | 8 | 4,646 | 26.3 | 71.8 | 1.7 | 0.2 | 100.0 |
| 1968 | 1,025 | 4,311 | 113 | 24 | 5,474 | 18.7 | 78.8 | 2.1 | 0.4 | 100.0 |
| 1969 | 1,325 | 1,896 | 123 | 19 | 3,362 | 39.4 | 56.4 | 3.7 | 0.6 | 100.1 |
| 1970 | 1,415 | 1,060 | 132 | 6 | 2,613 | 54.2 | 40.6 | 5.1 | 0.2 | 100.1 |
| 1971 | 1,329 | 895 | 362 | 7 | 2,593 | 51.3 | 34.5 | 14.0 | 0.3 | 100.1 |
| 1972 | 821 | 1,307 | 525 | 2 | 2,655 | 30.9 | 49.2 | 19.8 | 0.1 | 100.0 |
| 1973 | 1,080 | 857 | 460 | 4 | 2,401 | 45.0 | 35.7 | 19.2 | 0.2 | 100.1 |
| 1974 | 925 | 1,569 | 223 | 5 | 2,722 | 34.0 | 57.6 | 8.2 | 0.2 | 100.0 |
| 1975 | 857 | 2,769 | 746 | 50 | 4,422 | 19.4 | 62.6 | 16.9 | 1.1 | 100.0 |
| 1976 | 1,761 | 6,576 | 366 | 9 | 8,712 | 20.2 | 75.5 | 4.2 | 0.1 | 100.0 |
| 1977 | 4,805 | 5,904 | 258 | 136 | 11,102 | 43.3 | 53.2 | 2.3 | 1.2 | 100.0 |
| 1978 | 5,569 | 8,641 | 243 | 29 | 14,482 | 38.5 | 59.7 | 1.7 | 0.2 | 100.1 |
| 1979 | 6,573 | 7,156 | 434 | 93 | 14,256 | 46.1 | 50.2 | 3.0 | 0.7 | 100.0 |
| 1980 | 5,620 | 5,090 | 1,637 | 219 | 12,566 | 44.7 | 40.5 | 13.0 | 1.7 | 99.9 |
| 1981 ² | 8,200 | 2,100 | 1,100 | 0 | 11,400 | 71.9 | 18.4 | 9.6 | - | 99.9 |

¹ Includes 5ZW (Southern New England) and SNK (Area 5, specific subarea unknown) landings

² Estimated

Table 8. USA commercial sea scallop landings (metric tons, meats) from the Gulf of Maine (NAFO Division 5Y), 1899-1981¹.

| Year | Inshore | Offshore | Total | Year | Inshore | Offshore ² | Total |
|------|---------|----------|-------|-------------------|---------|-----------------------|-------|
| 1899 | 24 | - | 24 | 1950 | 232 | 6 | 238 |
| 1900 | 79 | - | 79 | 1951 | 171 | 136 | 307 |
| 1901 | 99 | - | 99 | 1952 | 142 | 536 | 678 |
| 1902 | 57 | - | 57 | 1953 | 110 | 660 | 770 |
| 1903 | 62 | - | 62 | 1954 | 65 | 256 | 321 |
| 1904 | 64 | - | 64 | 1955 | 99 | 406 | 505 |
| 1905 | 285 | - | 285 | 1956 | 148 | 292 | 440 |
| 1906 | 255 | - | 255 | 1957 | 111 | 227 | 338 |
| 1907 | 236 | - | 236 | 1958 | 49 | 130 | 179 |
| 1908 | 432 | - | 432 | 1959 | 49 | 465 | 514 |
| 1909 | 843 | - | 843 | 1960 | 33 | 817 | 850 |
| 1910 | 919 | - | 919 | 1961 | 63 | 57 | 120 |
| 1911 | 663 | - | 663 | 1962 | 70 | 33 | 103 |
| 1912 | 842 | - | 842 | 1963 | 80 | 47 | 127 |
| 1913 | 353 | - | 353 | 1964 | 106 | 86 | 192 |
| 1914 | 386 | - | 386 | 1965 | N/A | N/A | 115 |
| 1916 | 266 | - | 266 | 1966 | N/A | N/A | 93 |
| 1919 | 33 | - | 33 | 1967 | N/A | N/A | 80 |
| 1924 | 134 | - | 134 | 1968 | N/A | N/A | 113 |
| 1928 | 148 | - | 148 | 1969 | N/A | N/A | 123 |
| 1929 | 163 | - | 163 | 1970 | N/A | N/A | 132 |
| 1930 | 198 | - | 198 | 1971 | 234 | 128 | 362 |
| 1931 | 266 | - | 266 | 1972 | 436 | 89 | 525 |
| 1932 | 276 | - | 276 | 1973 | 368 | 92 | 460 |
| 1933 | 487 | - | 487 | 1974 | 198 | 25 | 223 |
| 1935 | 337 | - | 337 | 1975 | 728 | 18 | 746 |
| 1938 | 360 | - | 360 | 1976 | 334 | 32 | 366 |
| 1939 | 179 | - | 179 | 1977 | 206 | 52 | 258 |
| 1940 | 207 | - | 207 | 1978 | 228 | 15 | 243 |
| 1941 | 144 | - | 144 | 1979 | 299 | 135 | 434 |
| 1942 | 59 | - | 59 | 1980 | 492 | 1145 | 1637 |
| 1943 | 103 | - | 103 | 1981 ³ | N/A | N/A | 1100 |
| 1944 | 46 | - | 46 | | | | |
| 1945 | 48 | - | 48 | | | | |
| 1946 | 62 | - | 62 | | | | |
| 1947 | 230 | - | 230 | | | | |
| 1948 | 206 | - | 206 | | | | |
| 1949 | 231 | - | 231 | | | | |

¹Landings from 1899-1955 taken from Baird (1956); inshore landings from 1950-1964 taken from Dow (1969, 1977); total landings from 1956-1960 were taken from Lyles (1969) and represent landings in the State of Maine but not necessarily landings from the Gulf of Maine; total landings 1961-1980 taken from ICNAF and NAFO Statistical Bulletins; inshore landings 1971-1980 taken from NMFS Weightout Data; 1981 total landings are projections based on January-September 1981 landings.

²Offshore landings 1950-1970 include all landings outside of state territorial waters and may include offshore Georges Bank landings.

³Estimated yearly total from January-September landings.

Table 9. USA commercial sea scallop landings (metric tons, meat weight) from the Gulf of Maine, by USA statistical area, 1964-1981.

| Year | USA Statistical Area | | | | | Total ¹ |
|-------------------|----------------------|-----|-----|-----|-----|--------------------|
| | 511 | 512 | 513 | 514 | 515 | |
| 1964 | 14 | 60 | 3 | 102 | 13 | 192 |
| 1965 | 11 | 76 | 1 | 27 | - | 115 |
| 1966 | 13 | 79 | - | 1 | - | 93 |
| 1967 | 16 | 60 | - | 4 | - | 80 |
| 1968 | 21 | 77 | 1 | 14 | - | 113 |
| 1969 | 13 | 56 | - | 54 | - | 125 |
| 1970 | 8 | 74 | - | 50 | - | 132 |
| 1971 | 22 | 154 | - | 186 | - | 362 |
| 1972 | 127 | 296 | 16 | 86 | - | 525 |
| 1973 | 98 | 232 | 35 | 95 | - | 460 |
| 1974 | 44 | 149 | 9 | 21 | - | 223 |
| 1975 | 38 | 625 | 10 | 23 | - | 746 |
| 1976 | 46 | 234 | 5 | 81 | - | 366 |
| 1977 | 56 | 121 | 3 | 78 | - | 258 |
| 1978 | 49 | 172 | 3 | 19 | - | 243 |
| 1979 | 62 | 240 | 60 | 52 | 40 | 434 |
| 1980 | 155 | 402 | 547 | 75 | 458 | 1637 |
| 1981 ¹ | 382 | 338 | 106 | 26 | 63 | 915 |

¹January-September only.

Table 10. Percent distribution of USA commercial landings (metric tons, meat) of sea scallops, by gear type, within the principal sea scallop areas off the Northeast Coast of the United States (WFO Subareas 5 and Statistical Area 6), 1964-1980. For 1964-1973, data only reflect landings in New England states (Maine, Massachusetts, and Rhode Island). For 1974-1980, data reflect landings in both New England and Mid-Atlantic states (Maine to North Carolina). Only landings identified by gear type were analyzed.

| Year | Gulf of Maine | | | Georges Bank | | | So. New England | | | Mid-Atlantic | | | All Areas | | |
|--------------------------|----------------|-------------------|-------------------|----------------|-------------------|-------------------|-----------------|-------------------|-------------------|----------------|-------------------|-------------------|----------------|-------------------|-------------------|
| | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge | |
| | | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge | | Otter Trawl | Scallop Dredge |
| 1964 | <0.1 | 99.9 | 0.8 | 99.2 | — | — | — | — | — | 0.0 | 100.0 | 0.8 | 99.2 | 0.8 | 99.9 |
| 1965 | 0.0 | 100.0 | 0.3 | 99.7 | — | — | — | — | — | 0.0 | 100.0 | 0.1 | 99.9 | 0.1 | 99.9 |
| 1966 | 0.2 | 99.8 | <0.1 | 99.9 | — | — | — | — | — | 0.0 | 100.0 | <0.1 | 99.9 | 0.1 | 99.9 |
| 1967 | 0.4 | 99.6 | 0.3 | 99.7 | — | — | — | — | — | 0.0 | 100.0 | 0.1 | 99.9 | 0.1 | 99.9 |
| 1968 | 0.4 | 99.6 | 0.0 | 100.0 | 0.0 | 0.0 | — | — | — | 0.0 | 100.0 | <0.1 | 99.9 | 0.1 | 99.9 |
| 1969 | 0.6 | 99.4 | 0.6 | 99.4 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.6 | 99.4 | 0.6 | 99.4 | 0.6 | 99.4 |
| 1970 | 0.2 | 99.8 | 0.4 | 99.6 | <0.1 | 0.1 | 99.9 | 3.0 | 3.0 | 97.0 | 97.0 | 0.9 | 99.1 | 0.9 | 99.1 |
| 1971 | 1.1 | 98.9 | 1.3 | 98.7 | 3.0 | 3.0 | 97.0 | <0.1 | <0.1 | 99.0 | 99.0 | 1.1 | 98.9 | 1.1 | 98.9 |
| 1972 | 0.1 | 99.3 | 0.6 | 99.4 | 4.3 | 4.3 | 95.7 | 0.8 | 0.8 | 99.2 | 99.2 | 0.6 | 99.4 | 0.6 | 99.4 |
| 1973 | <0.1 | 99.0 | 1.4 | 98.6 | 3.3 | 3.3 | 96.7 | 1.4 | 1.4 | 98.6 | 98.6 | 1.1 | 98.9 | 1.1 | 98.9 |
| 1974 | 0.2 | 99.8 | 1.6 | 98.4 | 2.3 | 2.3 | 97.7 | 1.2 | 1.2 | 98.8 | 98.8 | 1.3 | 98.7 | 1.3 | 98.7 |
| 1975 | 0.8 | 99.2 | 1.6 | 98.4 | 15.9 | 84.1 | 20.9 | — | — | 79.1 | 79.1 | 13.7 | 86.1 | 13.7 | 86.1 |
| 1976 | 0.8 | 99.2 | 2.2 | 97.8 | 38.5 | 61.5 | 31.8 | 68.2 | 68.2 | 24.5 | 24.5 | 75.5 | 75.5 | 75.5 | 75.5 |
| 1977 | 1.5 | 98.5 | 0.6 | 99.4 | 7.5 | 92.5 | 12.8 | 87.2 | 87.2 | 7.1 | 7.1 | 92.9 | 92.9 | 92.9 | 92.9 |
| 1978 | 0.4 | 99.6 | 0.7 | 99.3 | 11.8 | 88.2 | 6.6 | 93.4 | 93.4 | 4.2 | 4.2 | 95.8 | 95.8 | 95.8 | 95.8 |
| 1979 | 1.1 | 98.9 | 0.4 | 99.6 | 5.6 | 94.4 | 7.2 | 92.8 | 92.8 | 3.8 | 3.8 | 96.2 | 96.2 | 96.2 | 96.2 |
| 1980 | 7.6 | 92.4 | 0.6 | 99.4 | 1.4 | 98.6 | 0.3 | 99.7 | 99.7 | 1.4 | 1.4 | 98.6 | 1.4 | 98.6 | 1.4 |
| 1964-1980: | | | | | | | | | | | | | | | |
| NE Landings ¹ | 2.1 | 97.6 | 0.7 | 99.3 | 5.0 | 95.0 | 1.6 | 98.4 | 98.4 | 1.2 | 98.8 | | | | |
| WA Landings ² | — | — | 0.9 | 100.0 | 0.0 | 100.0 | 15.9 | 84.1 | 84.1 | 15.6 | 15.6 | 84.4 | | | |
| Total | 2.1 | 97.6 | 0.7 | 99.3 | 4.8 | 95.2 | 8.7 | 91.3 | 91.3 | 4.9 | 4.9 | 95.4 | | | |

NE Landings: Landings of scallops in New England states (Maine, Massachusetts, and Rhode Island).

WA Landings: Landings of scallops in Mid-Atlantic states (New York, New Jersey, Maryland, Virginia, and North Carolina).

Table II. Canadian commercial sea scallop landings (metric tons, meats), effort (days fished), and catch per unit of effort (CPUE; landings of scallops per day fished) from Georges Bank (NAFO Area 5Ze), by vessel tonnage class and year, 1965-1979.^{1,2}

| Year | Vessel Tonnage Class | | | | | | | | | | | |
|-------------|----------------------|------|----------|--------|---------|----------|---------|-------|----------|--------|------|------|
| | Class 2 | | Class 3 | | Class 4 | | Class 5 | | | | | |
| Landings | Effort | CPUE | Landings | Effort | CPUE | Landings | Effort | CPUE | Landings | Effort | CPUE | |
| 1965 | - | - | - | - | - | 1581 | 2015 | 0.78 | 2853 | 3801 | 0.75 | - |
| 1966 | - | - | - | - | - | 1251 | 1429 | 0.88 | 3628 | 4234 | 0.86 | - |
| 1967 | - | - | - | - | - | 883 | 1242 | 0.71 | 4136 | 5597 | 0.74 | - |
| 1968 | - | - | - | - | - | 692 | 950 | 0.73 | 4118 | 5759 | 0.72 | - |
| 1969 | - | - | - | - | - | 650 | 1091 | 0.60 | 3659 | 6553 | 0.56 | - |
| 1970 | - | - | - | - | - | 661 | 1299 | 0.51 | 3400 | 6401 | 0.53 | - |
| 1971 | - | - | - | - | - | 590 | 1158 | 0.51 | 3255 | 6664 | 0.49 | - |
| 1972 | - | - | - | - | - | 570 | 1127 | 0.51 | 3590 | 7192 | 0.50 | - |
| 1973 | - | - | - | - | - | 557 | 997 | 0.56 | 3621 | 7054 | 0.51 | 50 |
| 1974 | - | - | - | - | - | 681 | 1010 | 0.67 | 5455 | 7268 | 0.75 | - |
| 1975 | - | - | - | - | - | 824 | 990 | 0.83 | 6591 | 7397 | 0.89 | - |
| 1976 | - | - | - | - | - | 1065 | 950 | 1.12 | 8696 | 6584 | 1.32 | - |
| 1977 | 225 | 204 | 1.10 | 1831 | - | 1306 | 1.40 | 1.40 | 10974 | 7249 | 1.51 | - |
| 1978 | 90 | 216 | 0.42 | 1608 | - | 1251 | 1.29 | 1.29 | 10491 | 7332 | 1.43 | - |
| 1979 | 3 | 3 | 1.00 | 1002 | - | 994 | 1.01 | 1.01 | 8203 | 7586 | 1.08 | - |
| 1965-1979 | 318 | 423 | 0.75 | 14446 | - | 17809 | 0.81 | 82670 | 96671 | 0.86 | 50 | 98 |
| % of Totals | 0.3 | 0.4 | 14.8 | 15.5 | - | - | - | 84.8 | 84.1 | 0.1 | 0.1 | 0.54 |

¹Vessel tonnage classes: Class 2 (25-50 GRT); Class 3 (51-150 GRT); Class 4 (151-500 GRT); Class 5 (501-900 GRT)

²Data derived from ICNAF and NAFO Statistical Bulletin for 1965-1979. Landings weight, listed in Statistical Bulletins as live weight, was converted to meat weight by dividing by 8.30.

Table 12. USA commercial sea scallop landings (metric tons, wettons) from Georges Bank (Subdivision 52e), the Mid-Atlantic (Statistical Area 6), and the Gulf of Maine (Division 5Y), by vessel tonnage class (gross registered tons), 1965-1980. Data derived from vessels using scallop dredges and landing in New England and New Jersey ports.

| Area | Tonnage Class | Year | | | | | | | | | | | | | | |
|---|------------------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|
| | | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
| Georges Bank (Subdivision 52e) | | | | | | | | | | | | | | | | |
| 5-50 | 16.9 | 2.2 | 5.6 | 1.5 | 1.5 | 9.4 | 0.4 | 2.0 | 261.2 | 891.9 | 370.3 | 188.8 | 73.0 | | | |
| 51-150 | 1203.6 | 740.3 | 925.2 | 819.3 | 917.2 | 993.1 | 766.1 | 467.3 | 557.3 | 491.4 | 2545.3 | 2975.0 | 2612.7 | 1954.5 | | |
| 151-500 | 193.5 | 149.0 | 291.7 | 177.6 | 399.1 | 416.7 | 544.9 | 338.9 | 386.5 | 353.2 | 350.0 | 1271.4 | 2168.5 | 3458.2 | 3355.3 | |
| Total | 1504.0 | 891.5 | 1225.5 | 993.4 | 1316.3 | 1409.8 | 1311.0 | 845.6 | 1064.6 | 910.6 | 843.8 | 1722.6 | 4708.6 | 5531.8 | 6259.7 | 5382.8 |
| Mid-Atlantic (Area 6) | | | | | | | | | | | | | | | | |
| 5-50 | 20.5 | 0.7 | 0.8 | 7.8 | 1.5 | 1.5 | 72.2 | 289.2 | 42.5 | 397.1 | 659.7 | 1042.4 | 34.2 | 39.4 | 101.9 | 10.0 |
| 51-150 | 3608.1 | 3530.3 | 1547.5 | 1601.3 | 981.7 | 189.9 | 201.7 | 363.5 | 202.7 | 540.3 | 845.2 | 1910.8 | 1600.3 | 1381.4 | 1202.5 | 1023.3 |
| 151-500 | 345.5 | 540.5 | 124.2 | 827.9 | 362.6 | 269.9 | 201.7 | 363.5 | 202.7 | 540.3 | 845.2 | 1910.8 | 1600.3 | 1381.4 | 1202.5 | 1023.3 |
| Total | 3974.1 | 4061.5 | 1874.5 | 2437.0 | 845.7 | 458.8 | 273.9 | 652.7 | 245.2 | 937.4 | 1505.8 | 2971.7 | 2564.2 | 2067.2 | 2857.0 | 1965.9 |
| Gulf of Maine (Division 5Y) | | | | | | | | | | | | | | | | |
| 5-50 | 99.5 | 92.6 | 77.5 | 103.5 | 107.8 | 114.6 | 222.8 | 487.0 | 393.8 | 210.6 | 734.1 | 349.0 | 249.0 | 238.3 | 313.2 | 587.4 |
| 51-150 | 15.1 | - | 2.1 | 4.3 | 14.1 | 17.0 | 108.3 | 32.3 | 47.2 | 12.1 | 6.5 | 14.4 | 4.6 | 3.3 | 34.5 | 430.5 |
| 151-500 | - | - | - | - | - | - | 26.6 | 4.9 | 18.6 | - | - | - | - | - | 53.5 | 453.6 |
| Total | 114.6 | 92.6 | 79.6 | 112.8 | 121.9 | 131.6 | 357.7 | 524.2 | 459.6 | 222.7 | 740.6 | 363.4 | 253.6 | 241.6 | 401.2 | 1471.5 |

Source: NEFC detailed weight records for vessels using scallop dredges. New Jersey weight data are only included from 1978 onward.

Table 13. USA commercial sea scallop effort (days fished) on Georges Bank (Subdivision 5e), in the Mid-Atlantic (Statistical Area 6), and in the Gulf of Maine (Division 5V), by vessel tonnage class (gross registered tons), 1965-1980. Data derived from vessels using scallop dredges and landing in New England and New Jersey ports.

| Area | Tonnage Class | Year | | | | | | | | | | | | | | |
|--|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| | | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
| Georges Bank (Subdivision 5e) | | | | | | | | | | | | | | | | |
| 5-50 | 11.2 | 11.4 | 17.3 | 5.5 | - | - | - | 20.4 | 0.2 | 10.5 | 308.1 | 1028.4 | 718.4 | 445.0 | 301.1 | |
| 51-150 | 1921.3 | 893.9 | 1474.9 | 1500.0 | 1953.8 | 1755.3 | 1424.2 | 965.0 | 1102.7 | 811.8 | 594.4 | 914.2 | 2313.5 | 3196.9 | 4056.6 | 4641.8 |
| 151-500 | 216.4 | 168.9 | 401.9 | 304.2 | 759.5 | 822.9 | 988.7 | 805.9 | 739.6 | 576.3 | 494.9 | 516.8 | 1120.7 | 2088.6 | 4405.4 | 6132.8 |
| Total | 2148.9 | 1074.2 | 1894.1 | 1809.7 | 2713.3 | 2578.2 | 2412.9 | 1791.3 | 1842.3 | 1388.3 | 1099.8 | 1739.1 | 4462.6 | 6003.9 | 8907.0 | 11075.7 |
| Mid-Atlantic (Area 6) | | | | | | | | | | | | | | | | |
| 5-50 | 48.1 | 3.0 | 5.0 | 38.9 | 3.5 | - | - | - | - | - | 3.3 | 59.8 | 70.7 | 82.5 | 144.0 | 28.0 |
| 51-150 | 3621.5 | 3784.4 | 2224.2 | 2561.4 | 1142.4 | 476.7 | 239.9 | 717.9 | 128.0 | 523.6 | 819.3 | 991.3 | 818.3 | 677.8 | 2566.1 | 2363.8 |
| 151-500 | 312.8 | 524.7 | 452.0 | 1196.2 | 700.4 | 516.0 | 479.5 | 688.5 | 428.0 | 700.9 | 923.8 | 1625.9 | 1216.1 | 1060.1 | 1564.3 | 1993.0 |
| Total | 3982.4 | 4312.1 | 2681.2 | 3796.5 | 1846.3 | 992.7 | 719.4 | 1406.4 | 556.0 | 1224.5 | 1746.4 | 2677.0 | 2105.1 | 1820.4 | 4274.4 | 4384.8 |
| Gulf of Maine (Division 5V) | | | | | | | | | | | | | | | | |
| 5-50 | 261.0 | 270.3 | 239.4 | 423.9 | 510.9 | 584.1 | 1062.7 | 1998.7 | 2364.5 | 1545.7 | 2392.8 | 2257.5 | 1371.4 | 1606.2 | 1853.6 | 2827.0 |
| 51-150 | 20.4 | - | 2.7 | 12.8 | 51.7 | 49.7 | 116.1 | 90.5 | 128.8 | 33.9 | 14.0 | 32.0 | 4.1 | 5.9 | 79.1 | 346.5 |
| 151-500 | - | - | - | - | - | - | 37.3 | 10.0 | 30.7 | - | - | - | - | - | 44.5 | 249.0 |
| Total | 281.4 | 270.3 | 242.1 | 436.7 | 564.6 | 633.8 | 1216.1 | 2099.2 | 2524.0 | 1579.6 | 2406.8 | 2289.5 | 1375.5 | 1612.1 | 1977.2 | 3422.5 |

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Source: NEFC Detailed Weightout Records for vessels using scallop dredges. New Jersey weightout data are only included from 1978 onward.

Table 14. USA commercial sea scallop catch rates (metric tons of meats per day fished) from Georges Bank (Subdivision 5e), the Mid-Atlantic (Statistical Area 6), and the Gulf of Maine (Division 5Y), by vessel tonnage class (gross registered tons), 1965-1980. Data derived from vessels using scallop dredges and landing in New England and New Jersey ports.

| Area | Tonnage Class | Year | | | | | | | | | | | | | | | | |
|--|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 1965 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | | |
| Georges Bank (Subdivision 5e) | | | | | | | | | | | | | | | | | | |
| 5-50 | 1.51 | 0.20 | 0.32 | 0.27 | - | - | 0.46 | 0.61 | 0.15 | 0.19 | 0.85 | 0.87 | 0.52 | 0.42 | 0.24 | | | |
| 51-150 | 0.67 | 0.83 | 0.63 | 0.55 | 0.47 | 0.57 | 0.54 | 0.48 | 0.61 | 0.69 | 0.83 | 1.02 | 1.10 | 0.93 | 0.64 | 0.42 | | |
| 151-500 | 0.89 | 0.88 | 0.73 | 0.57 | 0.53 | 0.51 | 0.55 | 0.42 | 0.52 | 0.61 | 0.71 | 1.03 | 1.13 | 1.05 | 0.78 | 0.55 | | |
| Annual Mean ¹ | 0.71 | 0.84 | 0.65 | 0.55 | 0.49 | 0.55 | 0.54 | 0.46 | 0.58 | 0.66 | 0.78 | 1.00 | 1.06 | 0.95 | 0.71 | 0.50 | | |
| Mid-Atlantic (Area 6) | | | | | | | | | | | | | | | | | | |
| 5-50 | 0.43 | 0.22 | 0.16 | 0.20 | 0.43 | - | - | 0.40 | 0.30 | 0.33 | 0.76 | 0.28 | 0.31 | 0.48 | 0.48 | 0.71 | 0.36 | |
| 51-150 | 1.00 | 0.93 | 0.70 | 0.63 | 0.42 | 0.40 | - | - | 0.42 | 0.53 | 0.47 | 0.77 | 0.81 | 1.05 | 1.14 | 0.95 | 0.60 | 0.39 |
| 151-500 | 1.10 | 1.01 | 0.72 | 0.69 | 0.52 | 0.52 | - | 0.42 | 0.53 | 0.47 | 0.77 | 0.91 | 1.18 | 1.32 | 1.30 | 0.77 | 0.51 | |
| Annual Mean ¹ | 1.00 | 0.94 | 0.70 | 0.65 | 0.46 | 0.47 | 0.39 | 0.47 | 0.45 | 0.77 | 0.87 | 1.13 | 1.24 | 1.18 | 0.68 | 0.45 | | |
| Gulf of Maine (Division 5Y) | | | | | | | | | | | | | | | | | | |
| 5-50 | 0.38 | 0.34 | 0.32 | 0.26 | 0.21 | 0.20 | 0.21 | 0.24 | 0.17 | 0.14 | 0.31 | 0.15 | 0.18 | 0.15 | 0.17 | 0.21 | | |
| 51-150 | 0.74 | - | 0.77 | 0.34 | 0.26 | 0.34 | 0.93 | 0.36 | 0.37 | 0.36 | 0.46 | 0.45 | 1.12 | 0.55 | 0.44 | 1.24 | | |
| 151-500 | - | - | - | - | - | - | 0.71 | 0.49 | 0.60 | - | - | - | - | - | 1.20 | 1.82 | | |
| Annual Mean ¹ | 0.43 | 0.34 | 0.33 | 0.26 | 0.22 | 0.22 | 0.47 | 0.25 | 0.21 | 0.15 | 0.31 | 0.16 | 0.20 | 0.16 | 0.33 | 1.01 | | |

Source: NEFC detailed weightout records for vessels using scallop dredges. New Jersey weightout data are only included from 1978 onward.

¹Annual mean catch rates, for each area, were derived by weighting individual tonnage class annual catch rates by the percentage of total annual landings accounted for by each vessel class and summing the weighted catch rates over all three vessel class categories.

Table 15. USA ex-vessel prices (dollars per pound of meat, unadjusted for inflation) of sea scallops, 1947-1980.

| Year | Ex-vessel Price | Annual Percent Change |
|------|--------------------|-----------------------------|
| 1947 | 0.49 | |
| 1948 | 0.52 | +6.1 |
| 1949 | 0.37 | -28.8 |
| 1950 | 0.46 | +24.3 |
| 1951 | 0.44 | -4.3 |
| 1952 | 0.58 | +31.8 |
| 1953 | 0.44 | -24.1 |
| 1954 | 0.45 | +2.3 |
| 1955 | 0.52 | +15.6 |
| 1956 | 0.54 | +3.8 |
| 1957 | 0.48 | -11.1 |
| 1958 | 0.48 | 0.0 |
| 1959 | 0.48 | 0.0 |
| 1960 | 0.35 | -27.1 |
| 1961 | 0.38 | +8.6 |
| 1962 | 0.41 | +7.9 |
| 1963 | 0.46 | +12.2 |
| 1964 | 0.55 | +19.6 |
| 1965 | 0.66 | +20.0 |
| 1966 | 0.48 | -27.3 |
| 1967 | 0.76 | +58.3 |
| 1968 | 1.08 | +42.1 |
| 1969 | 1.04 | -3.7 |
| 1970 | 1.28 | +23.1 |
| 1971 | 1.42 | +10.9 |
| 1972 | 1.83 | +28.9 |
| 1973 | 1.69 | -7.7 |
| 1974 | 1.54 | -8.9 |
| 1975 | 1.82 | +18.2 |
| 1976 | 1.77 | -2.7 |
| 1977 | 1.62 | -8.5 |
| 1978 | 2.46 | +51.9 |
| 1979 | 3.28 | +33.5 |
| 1980 | 3.84 | +17.1 |

Source: US Department of Commerce, Current Fisheries Statistics No. 6127, Basic Economic Indicators, Scallops 1930-1972 (issued June 1973); Fishery Statistics of the United States, 1970-1975 (issued annually); Fisheries of the United States, 1976-1980 (issued annually).

Table 16. Number of USA commercial size-frequency (shell height) sea scallop samples, total number of scallops measured, mean shell height (mm), mean meat weight (g), and average meat count (number of scallop meats per pound) for commercial sea scallop samples from the three principal scallop regions on Georges Bank, 1965-1974.

| Area | Year | Number of Samples | Number of Scallop Measured | Mean Shell Height | Mean ¹ Meat Weight | Average ² Meat Count |
|---|-------------------|-------------------|----------------------------|-------------------|-------------------------------|---------------------------------|
| South Channel (SA 521, 522, 526) | 1965 ⁴ | 22 | 4,225 | 124.5 | 35.1 | 12.9 |
| | 1966 | 29 | 8,373 | 106.2 | 21.9 | 20.7 |
| | 1967 | 29 | 6,928 | 115.6 | 27.6 | 16.4 |
| | 1968 | 26 | 5,257 | 122.1 | 32.6 | 13.9 |
| | 1969 | 20 | 4,309 | 122.2 | 33.0 | 13.8 |
| | 1970 | 34 | 12,367 | 98.7 | 17.4 | 26.1 |
| | 1971 | 40 | 12,608 | 106.3 | 21.7 | 20.9 |
| | 1972 | 31 | 9,353 | 105.9 | 21.8 | 20.8 |
| | 1973 | 32 | 9,683 | 105.1 | 21.3 | 21.3 |
| | 1974 | 24 | 6,499 | 106.4 | 21.5 | 21.5 |
| Southeast Part (SA 525) | 1965 ⁴ | 13 | 2,415 | 133.5 | 41.5 | 10.9 |
| | 1966 | 1 | 171 | 120.5 | 31.3 | 14.5 |
| | 1967 | 12 | 2,628 | 129.8 | 38.5 | 11.9 |
| | 1968 | 6 | 1,290 | 131.6 | 39.8 | 11.4 |
| | 1969 | 16 | 3,404 | 127.2 | 36.1 | 12.6 |
| | 1970 | 8 | 1,532 | 128.4 | 37.7 | 12.0 |
| | 1971 | 16 | 3,711 | 122.2 | 32.4 | 14.0 |
| | 1972 | 6 | 1,157 | 124.9 | 34.4 | 13.2 |
| | 1973 | 8 | 3,079 | 107.8 | 22.8 | 19.9 |
| | 1974 | 8 | 2,893 | 103.3 | 20.4 | 22.3 |
| Northern Edge and Peak (SA 523, 524) | 1965 ⁴ | 8 | 1,242 | 124.5 | 34.7 | 13.1 |
| | 1966 | 4 | 1,269 | 107.5 | 22.1 | 20.5 |
| | 1967 | 10 | 2,085 | 125.0 | 34.2 | 13.2 |
| | 1968 | 11 | 2,441 | 127.2 | 36.6 | 12.4 |
| | 1969 | 24 | 6,463 | 116.8 | 28.6 | 15.8 |
| | 1970 | 3 | 875 | 116.9 | 23.1 | 16.1 |
| | 1971 | 0 | 0 | - | - | - |
| | 1972 | 11 | 2,459 | 123.5 | 34.3 | 13.2 |
| | 1973 | 0 | 0 | - | - | - |
| | 1974 | 0 | 0 | - | - | - |
| Georges Bank ⁵ (Total) | 1965 ⁴ | 43 | 7,882 | 126.8 | 36.7 | 12.4 |
| | 1966 | 54 | 10,313 | 106.8 | 22.2 | 20.5 |
| | 1967 | 51 | 11,641 | 121.3 | 31.8 | 14.5 |
| | 1968 | 43 | 8,988 | 124.5 | 34.5 | 13.2 |
| | 1969 | 60 | 14,176 | 120.9 | 31.8 | 14.5 |
| | 1970 | 45 | 14,774 | 104.4 | 21.1 | 21.5 |
| | 1971 | 56 | 16,319 | 109.0 | 23.5 | 19.5 |
| | 1972 | 48 | 12,969 | 110.2 | 24.9 | 18.2 |
| | 1973 | 40 | 12,762 | 105.5 | 21.5 | 21.1 |
| | 1974 | 32 | 9,392 | 106.0 | 21.2 | 21.4 |

¹Mean meat weight derived by applying the 1978-1981 USA Georges Bank research survey sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 7.24854 \times 10^{-6} \text{ Shell Height (mm)}^{3.1748} \quad (n = 3036, r = 0.97)$$

to each shell height in the yearly frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops represented in the yearly frequency distribution.

²Average meat count derived by dividing the calculated mean meat weight into 433.6 grams (1 pound).

³Mean shell height and mean meat weight derived from "weighting" the shell height frequency distributions from each of the three principal scallop regions by the reported annual USA sea scallop landings from each region.

⁴During 1965-1971, scallops larger than 149 mm shell height appearing in the USA commercial samples were grouped in the 145-149 mm size frequency interval. Hence, in these samples, mean shell height and mean meat weight will be higher and average meat count lower than values calculated and presented in this table.

Table 17. Number of USA commercial size-frequency (shell height) sea scallop samples, total number of scallops measured, mean shell height (mm), mean meat weight (g), and average meat count (number of scallop meats per pound) for commercial sea scallop samples from the three principal scallop regions on Georges Bank, 1975-1981.

| Area | Year | Number of Samples | Number of Scallop Measured | Mean Shell Height | Mean Meat Weight | Average ² Meat Count |
|---|-------------------|-------------------|----------------------------|-------------------|------------------|---------------------------------|
| South Channel (SA 521, 522, 526) | 1975 | 9 | 2,246 | 112.3 | 25.1 | 18.1 |
| | 1976 | 16 | 5,098 | 99.9 | 17.5 | 26.0 |
| | 1977 | 35 | 10,475 | 98.6 | 16.5 | 27.4 |
| | 1978 | 38 | 8,807 | 110.8 | 24.2 | 18.8 |
| | 1979 | 54 | 13,338 | 110.4 | 24.5 | 18.5 |
| | 1980 | 36 | 8,021 | 113.5 | 27.0 | 16.8 |
| | 1981 ⁴ | 19 | 5,589 | 92.3 | 15.5 | 29.2 |
| Southeast Part (SA 525) | 1975 | 4 | 1,599 | 105.9 | 20.1 | 22.6 |
| | 1976 | 0 | 0 | -- | -- | -- |
| | 1977 | 1 | 287 | 116.7 | 27.8 | 16.3 |
| | 1978 | 8 | 1,487 | 126.0 | 35.5 | 12.9 |
| | 1979 | 8 | 1,369 | 129.6 | 38.8 | 11.7 |
| | 1980 | 12 | 3,009 | 110.3 | 25.4 | 17.9 |
| | 1981 ⁴ | 3 | 749 | 107.0 | 22.9 | 19.3 |
| Northern Edge and Peak (SA 523, 524) | 1975 | 1 | 198 | 123.7 | 32.4 | 14.0 |
| | 1976 | 0 | 0 | -- | -- | -- |
| | 1977 | 7 | 1,533 | 111.0 | 24.4 | 18.6 |
| | 1978 | 14 | 3,440 | 117.0 | 28.8 | 15.7 |
| | 1979 | 29 | 6,375 | 119.2 | 29.9 | 15.2 |
| | 1980 | 26 | 5,796 | 110.3 | 24.5 | 18.5 |
| | 1981 ⁴ | 32 | 10,170 | 96.7 | 11.9 | 38.1 |
| Georges Bank ³ (Total) | 1975 | 14 | 4,044 | 112.6 | 25.1 | 18.1 |
| | 1976 | 16 | 5,098 | 99.9 | 17.5 | 26.0 |
| | 1977 | 43 | 12,295 | 100.7 | 17.9 | 25.4 |
| | 1978 | 60 | 13,734 | 113.2 | 25.9 | 17.5 |
| | 1979 | 91 | 21,082 | 115.0 | 27.6 | 16.4 |
| | 1980 | 74 | 16,826 | 112.0 | 25.9 | 17.5 |
| | 1981 ⁴ | 54 | 16,508 | 89.7 | 15.6 | 33.3 |

¹ Mean meat weight derived by applying the 1978-1981 USA Georges Bank research survey sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 7.24854 \times 10^{-6} \text{ Shell Height}^{3.1748} \text{ (mm)} \quad (n = 5036, r = 0.97)$$

to each shell height in the yearly frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops represented in the yearly frequency distribution.

² Average meat counts derived by dividing the calculated mean meat weight into 453.6 grams (1 pound).

³ Mean shell height and mean meat weight derived from "weighting" the shell height frequency distributions from each of the three principal scallop regions by the reported annual USA sea scallop landings from each region.

⁴ January-September only.

Table 18. Percent frequency distributions of sample meat counts (number of scallop meats per pound) derived from USA commercial size-frequency (shell height) sea scallop samples from the three principal scallop regions on Georges Bank, 1965-1971. For each year and region, the percent of samples within each 5-unit meat count interval is indicated. The total Georges Bank frequency distributions were derived by "weighting" the sample meat count frequency distributions in each region by the reported annual USA sea scallop landings from that region, and hence represent annual meat count frequency distributions of USA Georges Bank sea scallop landings.

| Area | Year | Meat Count Intervals ² | | | | | | | | | | Total | |
|--|------|-----------------------------------|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
| | | Number of Samples | 5.0- 9.9 | 10.0- 14.9 | 15.0- 19.9 | 20.0- 24.9 | 25.0- 29.9 | 30.0- 34.9 | 35.0- 39.9 | 40.0- 44.9 | 45.0- 49.9 | 55.0- 59.9 | |
| South Channel (SA 521, 522, 526) | 1965 | 22 | 27.3 | 50.0 | 9.1 | 5.6 | | | | | | | 100.0 |
| | 1966 | 29 | 10.3 | 27.6 | 10.3 | 20.7 | 6.9 | 24.1 | | | | | 99.9 |
| | 1967 | 29 | 3.4 | 55.2 | 17.2 | 13.8 | 6.9 | 3.4 | | | | | 99.9 |
| | 1968 | 26 | 7.7 | 57.7 | 23.1 | 3.8 | 7.7 | | | | | | 100.0 |
| | 1969 | 20 | 15.0 | 70.0 | 10.0 | 5.0 | | | | | | | 100.0 |
| | 1970 | 34 | | 14.7 | 20.6 | 5.9 | 20.6 | 11.8 | 23.5 | 2.9 | | | 100.0 |
| | 1971 | 40 | | 22.5 | 25.0 | 10.0 | 10.0 | 5.0 | | 2.5 | | | 100.0 |
| Southeast Part (SA 525) | 1965 | 13 | 23.1 | 69.2 | 7.7 | | | | | | | | 100.0 |
| | 1966 | 1 | | 100.0 | | | | | | | | | 100.0 |
| | 1967 | 12 | 25.0 | 58.3 | 16.7 | | | | | | | | 100.0 |
| | 1968 | 6 | | 100.0 | | | | | | | | | 100.0 |
| | 1969 | 16 | 18.8 | 75.0 | 6.3 | | | | | | | | 100.1 |
| | 1970 | 8 | | 75.0 | 25.0 | | | | | | | | 100.0 |
| | 1971 | 16 | | 61.3 | 16.8 | | | | | | | | 100.1 |
| Northern Edge and Peak (SA 523, 524) | 1965 | 8 | 25.0 | 25.0 | 50.0 | 25.0 | 25.0 | | | | | | 100.0 |
| | 1966 | 4 | | | 50.0 | | | | | | | | 100.0 |
| | 1967 | 10 | 10.0 | 70.0 | 20.0 | | | | | | | | 100.0 |
| | 1968 | 11 | 18.2 | 54.5 | 27.3 | | | | | | | | 100.0 |
| | 1969 | 24 | | 58.3 | 16.7 | 25.0 | | | | | | | 100.0 |
| | 1970 | 3 | | 33.3 | 66.7 | | | | | | | | 100.0 |
| | 1971 | 0 | | | | | | | | | | | |
| Georges Bank (Total) | 1965 | 43 | 25.6 | 48.0 | 20.2 | 4.2 | 2.1 | | | | | | 100.1 |
| | 1966 | 34 | 8.4 | 25.1 | 16.5 | 20.8 | 9.7 | 19.5 | | | | | 100.0 |
| | 1967 | 51 | 10.4 | 59.3 | 17.7 | 7.2 | 3.6 | 1.8 | | | | | 100.0 |
| | 1968 | 43 | 8.2 | 63.4 | 20.4 | 2.6 | 5.4 | | | | | | 100.0 |
| | 1969 | 60 | 9.7 | 66.2 | 7.7 | 14.2 | 2.2 | | | | | | 100.0 |
| | 1970 | 45 | | 23.9 | 27.2 | 4.5 | 15.6 | 8.9 | 17.7 | 2.2 | | | 100.0 |
| | 1971 | 56 | | 32.2 | 24.7 | 20.5 | 8.2 | 8.2 | 4.1 | 2.1 | | | 100.0 |

¹Meat count for each sample was derived by calculating the average meat weight per scallop in each sample and dividing this value into 453.6 grams (1 pound). The average meat weight per scallop was calculated by applying the 1978-1981 USA Georges Bank research survey sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 7.24854 \times 10^{-6} \text{ Shell Height (mm)}$$

$$(n = 3036, r = 0.97)$$

²During 1965-1971, individual scallops larger than 149 mm shell height that occurred in the USA commercial samples were grouped in the 145-149 mm size frequency interval. Hence, for those samples, the true meat counts are lower than those calculated and presented in this table.

Table 19. Percent frequency distributions of sample meat counts (number of scallop meats per pound) derived from USA commercial size-frequency (shell height) sea scallop samples from the three principal scallop regions on Georges Bank, 1972-1981. For each year and region, the percent of samples within each 5-unit meat count interval is indicated. The total Georges Bank frequency distributions were derived by "weighting" the sample meat count frequency distributions in each region by the reported annual USA sea scallop landings from that region, and hence represent annual meat count frequency distributions of USA Georges Bank sea scallop landings.

| Area | Year | Number of Samples | Heat Count Intervals | | | | | | | | | | Total | |
|---|-------------------|-------------------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
| | | | 5.0- 9.9 | 10.0- 14.9 | 15.0- 19.9 | 20.0- 24.9 | 25.0- 29.9 | 30.0- 34.9 | 35.0- 39.9 | 40.0- 44.9 | 45.0- 49.9 | 50.0- 54.9 | 55.0- 59.9 | |
| South Channel (SA 521, 522, 526) | 1972 | 31 | 22.6 | 35.5 | 25.8 | 3.2 | - | 6.5 | 6.5 | - | - | - | - | 100.1 |
| | 1973 | 32 | 21.9 | 31.3 | 15.6 | 12.5 | 6.3 | 6.3 | 6.3 | - | - | - | - | 100.2 |
| | 1974 | 24 | 8.3 | 25.0 | 50.0 | 12.5 | - | 4.2 | - | - | - | - | - | 100.0 |
| | 1975 | 9 | 33.3 | 33.3 | 22.2 | 10.1 | - | - | - | - | - | - | - | 99.9 |
| | 1976 | 16 | 25.0 | 12.5 | 6.3 | 25.0 | 6.3 | - | - | - | - | - | - | 100.1 |
| | 1977 | 35 | 14.3 | 11.4 | 5.7 | 22.9 | 20.0 | 14.3 | 11.4 | - | - | - | - | 100.0 |
| | 1978 | 38 | 2.6 | 26.3 | 26.3 | 15.8 | - | 2.6 | - | - | - | - | - | 99.9 |
| | 1979 | 54 | 9.3 | 31.5 | 27.8 | 16.7 | 11.1 | - | 1.9 | - | - | - | - | 100.2 |
| | 1980 | 36 | 13.9 | 33.3 | 27.6 | 13.9 | 8.3 | - | - | - | - | - | - | 100.0 |
| | 1981 ² | 19 | 15.8 | 10.5 | 10.5 | 10.5 | 5.3 | 10.5 | - | 10.5 | - | - | - | 99.9 |
| Southeast Part (SA 525) | 1972 | 6 | 16.7 | 66.7 | 16.7 | - | - | - | - | - | - | - | - | 100.1 |
| | 1973 | 8 | 12.5 | 25.0 | - | 37.5 | 25.0 | - | - | - | - | - | - | 100.0 |
| | 1974 | 6 | 12.5 | - | - | 37.5 | 12.5 | - | - | - | - | - | - | 100.0 |
| | 1975 | 4 | - | - | - | 50.0 | 50.0 | - | - | - | - | - | - | 100.0 |
| | 1976 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1977 | 1 | - | - | - | 100.0 | - | - | - | - | - | - | - | 100.0 |
| | 1978 | 8 | - | - | - | 12.5 | - | - | - | - | - | - | - | 100.0 |
| | 1979 | 8 | 87.5 | - | - | 82.5 | - | - | - | - | - | - | - | 100.0 |
| | 1980 | 12 | 12.5 | 75.0 | 82.5 | 16.7 | - | 8.3 | - | - | - | - | - | 99.9 |
| | 1981 ² | 3 | - | 31.3 | 41.7 | 33.3 | - | 33.3 | - | - | - | - | - | 100.0 |
| Northern Edge and Peak (SA 523, 524) | 1972 | 11 | 9.1 | 54.5 | 36.4 | - | - | - | - | - | - | - | - | - |
| | 1973 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1974 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1975 | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1976 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1977 | 7 | 28.6 | 42.9 | - | 10.3 | 14.3 | - | - | - | - | - | - | 100.1 |
| | 1978 | 14 | 57.1 | 21.4 | 7.1 | 7.1 | 7.1 | - | - | - | - | - | - | 99.8 |
| | 1979 | 29 | 51.7 | 37.9 | 6.9 | 3.4 | - | - | - | - | - | - | - | 99.9 |
| | 1980 | 26 | 3.8 | 34.6 | 15.4 | 23.1 | 19.2 | 3.8 | - | - | - | - | - | 99.9 |
| | 1981 ² | 32 | 12.5 | 9.4 | 6.3 | 6.3 | 6.3 | 3.1 | - | 3.1 | 21.9 | 9.4 | 21.9 | 100.2 |
| Georges Bank (Total) | 1972 | 48 | 2.8 | 31.2 | 34.2 | 19.6 | 2.4 | - | 4.9 | 4.9 | - | - | - | 100.0 |
| | 1973 | 40 | - | 20.4 | 30.3 | 19.2 | 14.5 | 5.3 | 5.3 | 5.3 | - | - | - | 100.3 |
| | 1974 | 32 | - | 6.9 | 21.7 | 48.3 | 12.5 | 3.3 | 3.6 | - | 1.7 | - | - | 99.9 |
| | 1975 | 14 | 28.8 | 32.2 | 31.6 | 7.3 | - | - | - | - | - | - | - | 99.9 |
| | 1976 | 16 | 25.0 | 12.5 | 6.3 | 25.0 | - | 6.3 | - | - | - | - | - | 100.1 |
| | 1977 | 43 | 14.7 | 19.3 | 4.9 | 20.8 | 18.3 | 12.2 | 9.8 | - | - | - | - | 100.0 |
| | 1978 | 60 | 1.8 | 37.4 | 23.4 | 21.0 | 42.8 | 1.6 | 1.8 | - | - | - | - | 99.8 |
| | 1979 | 91 | 7.1 | 42.4 | 28.8 | 12.1 | 7.7 | - | 1.2 | - | - | - | - | 100.2 |
| | 1980 | 74 | 8.7 | 33.7 | 25.2 | 17.4 | 8.1 | 6.7 | - | - | - | - | - | 99.8 |
| | 1981 ² | 54 | 5.2 | 12.9 | 9.3 | 9.0 | 5.7 | 7.1 | - | 5.4 | 13.6 | 9.3 | 13.6 | 100.1 |

1. Meat count for each sample was derived by calculating the average meat weight per scallop in each sample and dividing this value into 453.6 grams (1 pound). The average meat weight per scallop was calculated by applying the 1978-1981 USA Georges Bank research survey sea scallop shell height-weight equations.

$$\text{Meat Weight (g)} = 7.24854 \times 10^{-6} \text{ Shell Height (mm)}^3 \quad (n = 3036, r = 0.97)$$

2. January-September only.
to each shell height in the sample frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops in the sample.

Table 20. Mean size (height and meat weight) at age for sea scallops (*Placopecten magellanicus*) from the Gulf of Maine, Georges Bank, and Mid-Atlantic populations. Number of meats per pound for all three areas is also presented.*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|----|
| <u>Gulf of Maine</u> | | | | | | | | | | | | |
| height (mm) ¹ | 26.92 | 56.05 | 79.43 | 98.18 | 113.23 | 125.30 | 134.99 | 142.76 | 149.00 | 154.00 | 158.02 | |
| meat weight (g) ² | 0.13 | 1.62 | 5.44 | 11.39 | 18.71 | 26.62 | 34.50 | 41.92 | 48.65 | 54.58 | 59.70 | |
| meat count/pound | 3,489 | 280 | 83 | 40 | 24 | 17 | 13 | 11 | 9 | 8 | 8 | |
| <u>Georges Bank</u> | | | | | | | | | | | | |
| height (mm) ³ | 25.63 | 61.95 | 87.87 | 106.37 | 119.57 | 128.99 | 135.71 | 140.51 | 143.93 | 146.37 | 148.12 | |
| meat weight (g) ⁴ | 0.22 | 3.55 | 10.75 | 19.72 | 28.59 | 36.38 | 42.74 | 47.73 | 51.52 | 54.34 | 56.43 | |
| meat count/pound | 2,062 | 128 | 42 | 23 | 16 | 12 | 11 | 10 | 9 | 8 | 8 | |
| <u>Mid-Atlantic</u> | | | | | | | | | | | | |
| height (mm) ⁵ | 35.00 | 65.26 | 87.68 | 104.30 | 116.61 | 125.73 | 132.49 | 137.50 | 141.22 | 143.97 | 146.01 | |
| meat weight (g) ⁶ | 0.58 | 4.37 | 11.36 | 19.91 | 28.56 | 36.44 | 43.16 | 48.67 | 53.05 | 56.46 | 59.09 | |
| meat count/pound | 782 | 104 | 40 | 23 | 16 | 12 | 11 | 9 | 9 | 8 | 8 | |

¹Derived from von Bertalanffy growth equation: $l_t = 174.32(1-e^{-2202(t-1.2383)})$.

²Derived from age-weight relationship: $w_t = 84.017(1-e^{-2202(t-1.2383)})^{3.4813}$.

³Derived from von Bertalanffy growth equation: $l_t = 152.46(1-e^{-3374(t-1.4544)})$.

⁴Derived from age-weight relationship: $w_t = 61.850(1-e^{-3374(t-1.4544)})^{3.1748}$.

⁵Derived from von Bertalanffy growth equation: $l_t = 151.84(1-e^{-2997(t-1.1256)})$.

⁶Derived from age-weight relationship: $w_t = 67.068(1-e^{-2997(t-1.1256)})^{3.2335}$.

*Sea scallops are spawned in the late summer-early autumn. An arbitrary birthdate of 1 October has been assigned to the date of spawning (Posgay and Norman, 1958). Hence, age in the above table refers to age as of 1 October.

Table 21. Number of USA commercial size-frequency (shell height) sea scallop samples, total number of scallops measured, mean shell height (mm), mean meat weight (g), and average meat count (number of scallop meats per pound) for commercial sea scallop samples from the three principal scallop regions in the Mid-Atlantic, 1965-1974.

| Area | Year | Number of Samples | Number of Scallops Measured | Mean Shell Height | Mean ¹ Meat Weight | Average ² Meat Count |
|--------------------------------------|-------------------|-------------------|-----------------------------|-------------------|-------------------------------|---------------------------------|
| New York Bight (SA 6A) | 1965 ⁴ | 52 | 19,258 | 106.9 | 23.4 | 19.4 |
| | 1966 | 41 | 14,578 | 102.4 | 20.3 | 22.3 |
| | 1967 | 27 | 7,239 | 114.8 | 28.9 | 15.7 |
| | 1968 | 64 | 21,134 | 107.5 | 24.1 | 18.9 |
| | 1969 | 32 | 11,056 | 107.7 | 23.7 | 19.1 |
| | 1970 | 15 | 4,842 | 111.9 | 25.7 | 17.7 |
| | 1971 | 16 | 3,699 | 120.5 | 33.3 | 13.6 |
| | 1972 | 21 | 5,471 | 114.4 | 28.4 | 15.9 |
| | 1973 | 11 | 3,465 | 110.3 | 26.8 | 16.9 |
| | 1974 | 17 | 7,300 | 98.4 | 17.8 | 25.5 |
| Delmarva (SA 6B) | 1965 ⁴ | 19 | 7,847 | 95.4 | 15.5 | 29.2 |
| | 1966 | 47 | 17,732 | 98.7 | 17.5 | 25.9 |
| | 1967 | 35 | 13,805 | 100.9 | 18.5 | 24.5 |
| | 1968 | 13 | 3,912 | 113.7 | 28.0 | 16.2 |
| | 1969 | 18 | 6,329 | 107.2 | 23.8 | 19.1 |
| | 1970 | 1 | 455 | 106.1 | 22.5 | 20.2 |
| | 1971 | 0 | 0 | - | - | - |
| | 1972 | 21 | 8,746 | 94.9 | 17.5 | 26.0 |
| | 1973 | 6 | 2,364 | 99.6 | 19.3 | 23.5 |
| | 1974 | 3 | 1,916 | 94.4 | 15.2 | 29.8 |
| Virginia-North Carolina (SA 6C) | 1965 ⁴ | 12 | 5,346 | 99.8 | 18.0 | 25.2 |
| | 1966 | 2 | 589 | 109.0 | 23.6 | 19.2 |
| | 1967 | 0 | 0 | - | - | - |
| | 1968 | 0 | 0 | - | - | - |
| | 1969 | 0 | 0 | - | - | - |
| | 1970 | 0 | 0 | - | - | - |
| | 1971 | 0 | 0 | - | - | - |
| | 1972 | 1 | 154 | 138.5 | 51.4 | 8.3 |
| | 1973 | 2 | 877 | 105.2 | 23.1 | 19.6 |
| | 1974 | 0 | 0 | - | - | - |
| Mid-Atlantic ⁵ (Total) | 1965 ⁴ | 83 | 32,451 | 101.5 | 19.5 | 23.2 |
| | 1966 | 90 | 32,899 | 100.7 | 19.0 | 23.9 |
| | 1967 | 62 | 21,044 | 107.4 | 23.4 | 19.4 |
| | 1968 | 77 | 25,046 | 108.7 | 24.8 | 18.3 |
| | 1969 | 50 | 17,385 | 107.5 | 23.8 | 19.1 |
| | 1970 | 16 | 5,297 | 111.0 | 25.4 | 17.9 |
| | 1971 | 16 | 3,699 | 120.5 | 33.3 | 13.6 |
| | 1972 | 45 | 14,351 | 103.1 | 22.2 | 20.5 |
| | 1973 | 19 | 6,706 | 106.3 | 23.7 | 19.1 |
| | 1974 | 20 | 9,216 | 96.7 | 16.7 | 27.2 |

¹Mean meat weight derived by applying the 1977-1981 USA Mid-Atlantic research survey sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 5.92915 \times 10^{-6} \text{ Shell Height}^{3.2335} \quad (n = 3992, r = 0.98)$$

to each shell height in the yearly frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops represented in the yearly frequency distribution.

²Average meat count derived by dividing the calculated mean meat weight into 453.6 grams (1 pound).

³Mean shell height and mean meat weight derived from "weighting" the shell height frequency distribution from each of the three principal scallop regions by the reported annual USA sea scallop landings from each region.

⁴During 1965-1971, scallops larger than 149 mm shell height appearing in the USA commercial samples were grouped in the 145-149 mm size frequency interval. Hence, in these samples, mean shell height and mean meat weight will be higher and average meat count lower than values calculated and presented in this table.

Table 22. Number of USA commercial size-frequency (shell height) sea scallop samples, total number of scallops measured, mean shell height (mm), mean meat weight (g), and average meat count (number of scallop meats per pound) for commercial sea scallop samples from the three principal scallop regions in the Mid-Atlantic, 1975-1981.

| Area | Year | Number of Samples | Number of Scallops Measured | Mean Shell Height | Mean ¹ Meat Weight | Average ² Meat Count |
|--------------------------------------|-------------------|-------------------|-----------------------------|-------------------|-------------------------------|---------------------------------|
| New York Bight (SA 6A) | 1975 | 50 | 11,048 | 104.3 | 21.4 | 21.2 |
| | 1976 | 42 | 18,597 | 96.6 | 16.9 | 26.9 |
| | 1977 | 29 | 11,058 | 103.1 | 20.0 | 22.7 |
| | 1978 | 18 | 6,110 | 107.5 | 22.9 | 19.8 |
| | 1979 | 8 | 1,860 | 117.7 | 31.2 | 14.5 |
| | 1980 | 24 | 5,546 | 113.4 | 28.5 | 15.9 |
| | 1981 ⁴ | 8 | 1,213 | 119.2 | 33.4 | 13.6 |
| Delmarva (SA 6B) | 1975 | 2 | 743 | 104.1 | 21.1 | 21.6 |
| | 1976 | 2 | 787 | 97.2 | 16.6 | 27.4 |
| | 1977 | 7 | 1,446 | 113.4 | 27.3 | 16.6 |
| | 1978 | 17 | 3,651 | 122.5 | 35.3 | 12.3 |
| | 1979 | 11 | 2,691 | 110.9 | 26.7 | 17.0 |
| | 1980 ⁴ | 42 | 9,879 | 117.1 | 31.2 | 14.6 |
| | 1981 | 8 | 1,350 | 116.5 | 30.3 | 14.7 |
| Virginia-North Carolina (SA 6C) | 1975 | 0 | 0 | -- | -- | -- |
| | 1976 | 0 | 0 | -- | -- | -- |
| | 1977 | 0 | 0 | -- | -- | -- |
| | 1978 | 7 | 1,218 | 121.4 | 34.2 | 13.5 |
| | 1979 | 5 | 2,185 | 100.3 | 19.8 | 22.9 |
| | 1980 | 5 | 1,365 | 105.4 | 22.4 | 20.2 |
| | 1981 ⁴ | 2 | 554 | 116.7 | 31.0 | 14.6 |
| Mid-Atlantic ³ (Total) | 1975 | 32 | 11,791 | 104.6 | 21.3 | 21.3 |
| | 1976 | 44 | 19,384 | 96.8 | 16.8 | 27.0 |
| | 1977 | 36 | 12,504 | 107.1 | 22.8 | 19.9 |
| | 1978 | 42 | 10,979 | 117.9 | 31.5 | 14.4 |
| | 1979 | 24 | 6,736 | 114.9 | 29.4 | 15.4 |
| | 1980 ⁴ | 71 | 16,790 | 114.6 | 29.4 | 15.5 |
| | 1981 | 18 | 3,117 | | | |

¹Mean meat weight derived by applying the 1977-1981 USA Mid-Atlantic research survey sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 5.92915 \times 10^{-6} \text{ Shell Height } 3.1335 \text{ (mm)} \quad (n = 8992, r = 0.98)$$

to each shell height in the yearly frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops represented in the yearly frequency distribution.

²Average meat count derived by dividing the calculated mean meat weight into 453.6 grams (1 pound).

³Mean shell height and mean meat weight derived from "weighting" the shell height frequency distributions from each of the three principal scallop regions by the reported annual USA sea scallop landings from each region.

⁴January-September only.

Table 23. Percent frequency distribution of sample meat counts (number of scallop meats per pound) derived from USA commercial size-frequency (shell height) sea scallop samples from the three principal scallop regions in the Mid-Atlantic, 1965-1971. For each year and region, the percent of samples within each 5-unit meat count interval is indicated. The total Mid-Atlantic frequency distributions were derived by "weighting" the sample meat count frequency distributions in each region by the reported annual USA sea scallop landings from that region, and hence represent annual meat count frequency distributions of USA Mid-Atlantic sea scallop landings.

| Area | Year | Meat Count Intervals ² | | | | | | | | | | Total | | |
|---------------------------------------|------|-----------------------------------|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | Number of Samples | 5.0- 9.9 | 10.0- 14.9 | 15.0- 19.9 | 20.0- 24.9 | 25.0- 29.9 | 30.0- 34.9 | 35.0- 39.9 | 40.0- 44.9 | 45.0- 49.9 | 50.0- 54.9 | 55.0- 59.9 | 60.0- 64.9 |
| New York Bight (SA 6A) | 1965 | 52 | 1.9 | 32.7 | 25.0 | 15.4 | 19.2 | 3.8 | - | 1.9 | - | - | - | 99.9 |
| | 1966 | 43 | 2.4 | 17.1 | 19.5 | 14.6 | 31.7 | 14.6 | - | - | - | - | - | 99.9 |
| | 1967 | 27 | 51.9 | 25.9 | 14.8 | 7.4 | - | - | - | - | - | - | - | 100.0 |
| | 1968 | 64 | 25.0 | 34.4 | 29.7 | 9.4 | - | - | - | - | - | - | - | 100.1 |
| | 1969 | 32 | 31.3 | 31.3 | 26.1 | 6.3 | - | - | - | - | - | - | - | 100.1 |
| | 1970 | 15 | 20.0 | 46.7 | 35.3 | - | - | - | - | - | - | - | - | 100.0 |
| | 1971 | 16 | 68.8 | 31.3 | - | - | - | - | - | - | - | - | - | 100.1 |
| Delmarva (SA 6B) | 1965 | 19 | - | - | 5.3 | 15.8 | 21.0 | 47.4 | 10.5 | - | - | - | - | 100.1 |
| | 1966 | 47 | 4.3 | 6.4 | 4.3 | 17.0 | 29.8 | 36.2 | 2.1 | - | - | - | - | 100.1 |
| | 1967 | 35 | - | - | 14.3 | 37.1 | 37.1 | 8.6 | 2.9 | - | - | - | - | 100.0 |
| | 1968 | 13 | - | - | 38.5 | 46.2 | 15.4 | - | - | - | - | - | - | 100.1 |
| | 1969 | 18 | 11.1 | 11.1 | 38.9 | 16.7 | 22.2 | - | - | - | - | - | - | 100.0 |
| | 1970 | 1 | - | - | 100.0 | - | - | - | - | - | - | - | - | 100.0 |
| | 1971 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| Virginia-North Carolina (SA 6C) | 1965 | 12 | - | - | 25.0 | 25.0 | 33.3 | 8.3 | 8.3 | - | - | - | - | 99.9 |
| | 1966 | 2 | - | - | 50.0 | 50.0 | - | - | - | - | - | - | - | 100.0 |
| | 1967 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1968 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1969 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1970 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 1971 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| Mid-Atlantic (Total) | 1965 | 93 | 0.8 | 13.5 | 19.4 | 16.4 | 24.0 | 17.5 | 5.5 | 0.8 | - | - | - | 99.9 |
| | 1966 | 90 | 3.3 | 31.8 | 12.5 | 16.1 | 30.5 | 24.9 | 8.0 | - | - | - | - | 100.1 |
| | 1967 | 62 | - | 24.3 | 19.7 | 26.7 | 23.3 | 4.6 | 1.5 | - | - | - | - | 100.0 |
| | 1968 | 77 | - | 27.7 | 36.8 | 7.5 | - | - | 1.3 | - | - | - | - | 100.1 |
| | 1969 | 50 | 4.0 | 24.1 | 34.0 | 24.0 | 12.0 | - | 2.0 | - | - | - | - | 100.1 |
| | 1970 | 16 | - | 16.2 | 42.6 | 39.2 | - | - | - | - | - | - | - | 100.0 |
| | 1971 | 16 | - | 68.8 | 31.3 | - | - | - | - | - | - | - | - | 100.1 |

Meat count for each sample was derived by calculating the average meat weight per scallop in each sample and dividing this value into 453.6 grams (1 pound). The average meat weight per scallop was calculated by applying the 1977-1981 USA Mid-Atlantic research survey sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 5.92915 \times 10^{-6} \text{ Shell height (mm)}^3 \cdot 2.3335 \quad (n = 8992, r = 0.98)$$

to each shell height in the sample frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops in the sample.

²During 1965-1971, individual scallops larger than 849 mm shell height that occurred in the USA commercial samples were grouped in the 145-149 mm size frequency interval. Hence, for these samples, the true meat counts are lower than those calculated and presented in this table.

Table 24. Percent frequency distribution of sample meat counts (number of scallop meats per pound) derived from USA commercial size-frequency (shell height) sea scallop samples from the three principal scallop regions in the Mid-Atlantic, 1972-1981. For each year and region, the percent of samples within each 5-unit meat count interval is indicated.¹ The total Mid-Atlantic frequency distributions were derived by "weighting" the sample meat count frequency distributions in each region by the reported annual USA sea scallop landings from that region, and hence represent annual meat count frequency distributions of USA Mid-Atlantic sea scallop landings.

| Area | Year | Number of Samples | Meat Count Intervals | | | | | | | | | Total | |
|--|-------------------|-------------------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
| | | | 5.0- 9.9 | 10.0- 14.9 | 15.0- 19.9 | 20.0- 24.9 | 25.0- 29.9 | 30.0- 34.9 | 35.0- 39.9 | 40.0- 44.9 | 45.0- 49.9 | 55.0- 59.9 | |
| New York Bight (SA 6B) | 1972 | 21 | 42.9 | 47.6 | 9.5 | 9.1 | 9.1 | - | - | - | - | - | 100.0 |
| | 1973 | 11 | 9.1 | 48.2 | 45.5 | 9.1 | - | - | - | - | - | - | 100.0 |
| | 1974 | 17 | 5.9 | 17.6 | 23.5 | 11.8 | 23.5 | 11.8 | - | - | - | - | 100.0 |
| | 1975 | 30 | 3.3 | 46.7 | 26.7 | 13.3 | 10.0 | - | - | - | - | - | 100.0 |
| | 1976 | 42 | 2.4 | 16.7 | 28.6 | 9.5 | 35.7 | 4.8 | 2.4 | - | - | - | 99.9 |
| | 1977 | 29 | 3.4 | 20.7 | 51.7 | 20.7 | 3.4 | - | - | - | - | - | 100.0 |
| | 1978 | 18 | 55.6 | 38.9 | 5.6 | - | - | - | - | - | - | - | 100.0 |
| | 1979 | 8 | 12.5 | 37.5 | 37.5 | 12.5 | - | - | - | - | - | - | 100.0 |
| | 1980 ² | 24 | 8.3 | 45.8 | 25.0 | 16.7 | - | - | - | - | - | - | 100.0 |
| | 1981 ² | 8 | 12.5 | 62.5 | - | 12.5 | - | - | - | - | - | - | 100.0 |
| Delaware (SA 6B) | 1972 | 21 | 4.8 | 19.0 | 4.8 | 4.8 | 14.3 | 28.6 | 9.5 | 14.3 | - | - | 100.1 |
| | 1973 | 6 | - | 33.3 | - | 10.7 | 16.7 | 33.3 | 33.3 | - | - | - | 100.0 |
| | 1974 | 3 | - | - | - | - | - | - | - | - | - | - | 99.9 |
| | 1975 | 2 | - | - | 50.0 | - | 50.0 | - | - | - | - | - | 100.0 |
| | 1976 | 2 | - | - | - | - | - | - | - | - | - | - | 100.0 |
| | 1977 | 7 | - | 14.3 | 71.4 | - | 14.3 | - | - | - | - | - | 100.0 |
| | 1978 | 17 | 17.6 | 52.9 | 23.5 | 5.9 | - | - | - | - | - | - | 99.9 |
| | 1979 | 11 | 9.1 | 45.5 | 18.2 | 9.1 | - | - | - | - | - | - | 100.1 |
| | 1980 | 42 | 9.5 | 42.9 | 40.5 | 7.4 | - | - | - | - | - | - | 100.0 |
| | 1981 ² | 8 | 12.5 | 62.5 | 12.5 | - | 12.5 | - | - | - | - | - | 100.0 |
| Virginia-North Carolina (SA 6C) | 1972 | 1 | 100.0 | - | - | - | - | - | - | - | - | - | 100.0 |
| | 1973 | 2 | - | - | - | - | - | - | - | - | - | - | 100.0 |
| | 1974 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| | 1975 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| | 1976 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| | 1977 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| | 1978 | 7 | 71.4 | 28.6 | 20.0 | 60.0 | 20.0 | - | - | - | - | - | - |
| | 1979 | 5 | - | 20.0 | 40.0 | 20.0 | - | - | - | - | - | - | - |
| | 1980 | 5 | - | 50.0 | 50.0 | - | - | - | - | - | - | - | - |
| | 1981 ² | 2 | - | - | - | - | - | - | - | - | - | - | - |
| Mid-Atlantic (Total) | 1972 | 43 | 3.7 | 28.4 | 22.0 | 6.6 | 8.4 | 16.8 | 5.6 | 8.4 | - | - | 99.9 |
| | 1973 | 19 | 5.2 | 23.2 | 28.3 | 13.8 | 11.6 | 17.9 | - | - | - | - | 100.0 |
| | 1974 | 20 | - | 3.4 | 10.2 | 13.6 | 20.8 | 27.6 | 20.8 | - | - | - | 99.8 |
| | 1975 | 32 | - | 2.1 | 47.9 | 17.2 | 26.3 | 6.5 | - | - | - | - | 100.0 |
| | 1976 | 44 | - | 1.7 | 12.1 | 34.5 | 6.9 | 39.7 | 3.5 | 1.7 | - | - | 100.1 |
| | 1977 | 36 | - | 40.3 | 31.7 | 18.2 | 2.1 | - | - | - | - | - | 99.9 |
| | 1978 | 42 | 11.3 | 38.0 | 33.4 | 15.5 | 1.7 | - | - | - | - | - | 99.9 |
| | 1979 | 24 | 11.0 | 38.8 | 30.8 | 15.0 | 6.4 | - | - | - | - | - | 100.0 |
| | 1980 | 71 | 8.6 | 44.5 | 30.8 | 13.3 | 0.2 | 2.6 | - | - | - | - | 100.0 |
| | 1981 | - | - | - | - | - | - | - | - | - | - | - | - |

¹ Meat count for each sample was derived by calculating the average meat weight per scallop in each sample and dividing this value into 453.6 grams (1 pound). The average meat weight per scallop was calculated by applying the 1977-1981 USA Mid-Atlantic research survey sea scallop shell height-weight equation,

$$3.2335'$$

² Meat Weight (g) = 5.92915×10^{-6} Shell height (mm) ($n = 6992$, $r = 0.98$)

to each shell height in the sample frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops in the sample.
2. January-September only.

Table 25. Number of USA commercial size-frequency (shell height) sea scallop samples, total number of scallops measured, mean shell height (mm), mean meat weight (g) and average meat count (number of scallop meats per pound) for commercial sea scallop samples from the Gulf of Maine, 1965-1981.

| Area | Year | Number of Samples | Number of Scallops Measured | Mean Shell Height | Mean ¹ Meat Weight | Average ² Meat Count |
|---------------|-------------------|-------------------|-----------------------------|-------------------|-------------------------------|---------------------------------|
| Gulf of Maine | 1965 ³ | 1 | 131 | 143.7 | 43.5 | 10.4 |
| | 1966 | 0 | 0 | - | - | - |
| | 1967 | 0 | 0 | - | - | - |
| | 1968 | 0 | 0 | - | - | - |
| | 1969 | 2 | 504 | 123.2 | 26.7 | 17.0 |
| | 1970 | 1 | 281 | 128.2 | 30.4 | 14.9 |
| | 1971 | 3 | 706 | 128.0 | 30.1 | 15.1 |
| | 1972 | 5 | 2100 | 105.0 | 16.5 | 27.4 |
| | 1973 | 8 | 3453 | 103.1 | 16.1 | 28.2 |
| | 1974 | 4 | 1693 | 102.3 | 15.0 | 30.3 |
| | 1975 | 1 | 335 | 137.1 | 37.7 | 12.0 |
| | 1976 | 4 | 1323 | 109.7 | 19.3 | 23.5 |
| | 1977 | 5 | 1109 | 106.1 | 17.6 | 25.8 |
| | 1978 | 1 | 337 | 97.5 | 11.6 | 31.1 |
| | 1979 | 0 | 0 | - | - | - |
| | 1980 ⁴ | 30 | 6058 | 90.0 | 9.3 | 48.6 |
| | 1981 ⁴ | 3 | 649 | 119.1 | 25.4 | 17.9 |

¹Mean meat weight derived by applying the 1980 NMFS offshore Gulf of Maine commercial sample sea scallop shell height-meat weight equation,

5.4813

$$\text{Meat Weight (g)} = 1.32248 \times 10^{-6} \text{ Shell Height (mm)} \quad (n = 1726, r = 0.93)$$

to each shell height in the yearly frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops represented in the yearly frequency distribution.

²Average meat count derived by dividing the calculated mean meat weight into 453.6 grams (1 pound).

³During 1965-1971, scallops larger than 149 mm shell height appearing in the USA commercial samples were grouped in the 145-149 size frequency interval. Hence, in these samples, mean shell height and mean meat weight will be higher and average meat count lower than values calculated and presented in this table.

⁴January-September only.

Table 26. Percent frequency distribution of sample meat counts (number of scallop meats per pound) derived from USA commercial-size frequency (shell height) sea scallop samples from the Gulf of Maine, 1965-1981. For each year, the percent of samples within each 5-unit meat count interval is indicated.

| Area | Year | Number of Samples | Meat Count Intervals ³ | | | | | | | | | | Total | | | |
|---------------------------|-------------------|-------------------------|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | 5.0- 9.9 | 10.0- 14.9 | 15.0- 19.9 | 20.0- 24.9 | 25.0- 29.9 | 30.0- 34.9 | 35.0- 39.9 | 40.0- 44.9 | 45.0- 49.9 | 50.0- 54.9 | 55.0- 59.9 | 60.0- 64.9 | 65.0- 69.9 | 70.0- 74.9 |
| Gulf of Maine (USA SY) | 1965 | 1 | 100.0 | | | | | | | | | | | | | 100.0 |
| | 1966 | 0 | | | | | | | | | | | | | | 100.0 |
| | 1967 | 0 | | | | | | | | | | | | | | 100.0 |
| | 1968 | 0 | | | | | | | | | | | | | | 100.0 |
| | 1969 | 2 | 50.0 | | | | | | | | | | | | | 100.0 |
| | 1970 | 1 | 100.0 | | | | | | | | | | | | | 100.0 |
| | 1971 | 3 | 33.3 | 66.7 | | | | | | | | | | | | 100.0 |
| | 1972 | 5 | 20.0 | 20.0 | 40.0 | | | | | | | | | | | 100.0 |
| | 1973 | 8 | 42.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 100.0 |
| | 1974 | 4 | | 50.0 | | | | | | | | | | | | 100.0 |
| | 1975 | 1 | 100.0 | | | | | | | | | | | | | 100.0 |
| | 1976 | 4 | 25.0 | 25.0 | 50.0 | | | | | | | | | | | 100.0 |
| | 1977 | 5 | 20.0 | 20.0 | | | | | | | | | | | | 100.0 |
| | 1978 | 1 | | | | | | | | | | | | | | 100.0 |
| | 1979 | 0 | | | | | | | | | | | | | | 100.0 |
| | 1980 | 30 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 6.7 | 20.0 | 16.7 | 13.3 | 10.0 | 6.7 | 3.3 | 99.9 |
| | 1981 ² | 3 | 66.7 | 33.3 | | | | | | | | | | | | 100.0 |

¹ Meat count for each sample was derived by calculating the average meat weight per scallop in each sample and dividing this value into 453.6 grams (¹ kilogram). The average meat weight per scallop was calculated by applying the 1980 NMFS offshore Gulf of Maine commercial sample sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 1.32248 \times 10^{-6} \text{ Shell Height (mm)}^{3.4813} \quad (n = 1726, r = 0.93)$$

² Meat height in the sample frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops in the sample.

Additionally, average meat weight per scallop was calculated by applying the inshore (Penobscot Bay) Gulf of Maine sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 5.88847 \times 10^{-7} \text{ Shell Height (mm)}^{3.664} \quad (n = 1107, \text{ from Haynes, 1966})$$

to the data as described above. The distribution of sample meat counts derived from using the inshore equation closely agreed (85% agreement: 58 out of 68 samples) with that derived using the 1980 NMFS offshore equation. When differences occurred (i.e., ten samples) these were by only 1 meat count interval (≤ 5 units). In those cases, the calculated meat counts from using the inshore equation were lower than those derived using the offshore equation. Because of the overall similarity of results, only the meat count distributions calculated from the 1980 NMFS offshore equation are presented in the table.

² Only includes samples collected during January through September.

³ During 1965-1971, individual scallops larger than 149 mm shell height that occurred in the USA commercial samples were grouped in the 145-149 size frequency interval. Hence, for these samples, the true meat counts are lower than those calculated and presented in this table.

Table 27. Sea scallop research vessel survey cruises on Georges Bank, in Southern New England, and in the Mid-Atlantic, 1975-1981. Only cruises for which sea scallop relative abundance data (catch per tow) are presented in this report are listed. For each survey, gear and tow durations are provided as well as the number of tows accomplished in NEFC sea scallop sampling strata (Strata 1-66; 71-74).

| Year | Country | Research Vessel | Dredge Size | Tow Duration | Number of Tows Accomplished | | | | | | | | |
|------|---------|-----------------|---------------|--------------|-----------------------------|-------------------|---------------|-----|----------------|-----------------|----------------|-----------------------|-------------|
| | | | | | Georges Bank | | | | Mid-Atlantic | | | | |
| | | | | | No. Edge and Peak | Southeast Part | South Channel | Tow | No. Edge Total | So. New England | New York Bight | Delmarva No. Carolina | Grand Total |
| 1975 | USA | ALBATROSS IV | 10' - unlined | 15 min | 64 | 21 | 53 | 138 | 6 | 38 | 28 | 13 | 79 |
| 1977 | USA | ALBATROSS IV | 10' - unlined | 15 min | 37 | 24 | 71 | 132 | 24 | 130 | 27 | 11 | 168 |
| 1978 | USA | ALBATROSS IV | 10' - unlined | 15 min | 51 | 22 | - | 73 | 34 | 927 | 66 | 23 | 324 |
| 1978 | CAN | E.E. PRINCE | 8' - lined | 0.5 mi | (18) ¹ | - | 76 | 94 | - | - | - | - | 323 |
| 1979 | USA | ALBATROSS IV | 8' - lined | 15 min | 54 | 21 | - | 75 | 24 | - | 330 | 64 | 202 |
| 1979 | CAN | E.E. PRINCE | 8' - lined | 0.5 mi | - | (5) ¹ | 155 | - | - | - | - | - | 301 |
| 1980 | USA | ALBATROSS IV | 8' - lined | 15 min | 45 | 21 | - | 66 | 6 | 131 | 65 | 13 | 160 |
| 1980 | CAN | E.E. PRINCE | 8' - lined | 0.5 mi | - | (25) ¹ | 320 | 345 | - | - | - | - | 281 |
| 1981 | USA | ALBATROSS IV | 8' - lined | 15 min | 63 | 20 | - | 83 | 22 | 132 | 64 | 14 | 345 |
| 1981 | CAN | E.E. PRINCE | 8' - lined | 0.5 mi | - | - | 101 | - | - | - | - | - | 210 |
| | | | | | | | | | | | | | 315 |
| | | | | | | | | | | | | | 101 |

¹ Catch data from these tows were not used in deriving relative abundance indices since USA data were available

Table 28. Derivation of sea scallop adjustment factors (standardization coefficients), by shell height category, used to standardize the 1975, 1977, and 1978 NEFC research survey sea scallop catch per tow data (obtained with a 10-foot, unlined sea scallop dredge) to those obtained in the 1979-1981 NEFC sea scallop research surveys (obtained with an 8-foot, lined sea scallop dredge).

| Shell Height (mm) | Unlined Dredge/Lined Dredge Smoothed Retention Ratio (ICES C.M. 1980/K24, p. 19) | Selectivity Adjustment Factor (1/A) | (C) | | (D) Overall Selectivity and Gear Adjustment Factor (B x C) |
|-------------------|--|-------------------------------------|--|------|---|
| | | | Linear Gear Width Adjustment Factor (8 ft dredge/10 ft dredge) | (C) | |
| 2 | 0.119 | 8.40 | 0.80 | 0.80 | 6.72 |
| 7 | 0.119 | 8.40 | 0.80 | 0.80 | 6.72 |
| 12 | 0.119 | 8.40 | 0.80 | 0.80 | 6.72 |
| 17 | 0.119 | 8.40 | 0.80 | 0.80 | 6.72 |
| 22 | 0.119 | 8.40 | 0.80 | 0.80 | 6.72 |
| 27 | 0.119 | 8.40 | 0.80 | 0.80 | 6.72 |
| 32 | 0.189 | 5.29 | 0.80 | 0.80 | 4.23 |
| 37 | 0.259 | 3.86 | 0.80 | 0.80 | 3.09 |
| 42 | 0.320 | 3.13 | 0.80 | 0.80 | 2.50 |
| 47 | 0.411 | 2.43 | 0.80 | 0.80 | 1.94 |
| 52 | 0.552 | 1.81 | 0.80 | 0.80 | 1.45 |
| 57 | 0.727 | 1.38 | 0.80 | 0.80 | 1.10 |
| 62 | 0.875 | 1.14 | 0.80 | 0.80 | 0.91 |
| 67 | 0.992 | 1.01 | 0.80 | 0.80 | 0.81 |
| 72 | 1.156 | 0.87 | 0.80 | 0.80 | 0.70 |
| 77 | 1.180 | 0.85 | 0.80 | 0.80 | 0.68 |
| 82 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 87 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 92 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 97 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 102 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 107 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 112 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 117 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 122 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 127 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 132 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 137 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 142 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 147 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |
| 152 | 1.332 | 0.75 | 0.80 | 0.80 | 0.60 |

Table 29. USA sea scallop research survey relative abundance indices (standardized stratified mean number per tow), mean shell height (mm) of scallops sampled, mean meat weight (g) per scallop sampled, and average meat count (number of scallop meats per pound) of scallops sampled from sea scallop research surveys on Georges Bank, 1975, 1977-1981. Data are presented by principal scallop regions on Georges Bank. Survey indices are presented for pre-recruit (<70 mm shell height), recruit (>70 mm shell height), and total scallops per tow.¹

| Area | Year | Standardized Stratified Mean Number Per Tow | | | | | |
|-----------------------------|------|--|-----------------------------|----------------------------|-------------------------|-------------------------------------|---------------------------------------|
| | | Number <70 mm Per Tow | Number >70 mm Per Tow | Total Number Per Tow | Mean Shell Height | Mean ² Meat Weight | Average ³ Meat Count |
| South Channel | 1975 | 30.2 | 25.9 | 56.1 | 81.6 | 14.1 | 32.2 |
| | 1977 | 4.0 | 52.5 | 56.5 | 100.9 | 19.5 | 23.3 |
| | 1978 | 5.1 | 32.9 | 38.0 | 101.1 | 19.5 | 23.3 |
| | 1979 | 4.5 | 56.5 | 61.0 | 93.1 | 15.5 | 29.2 |
| | 1980 | 51.2 | 19.3 | 70.5 | 58.2 | 5.8 | 78.0 |
| | 1981 | 9.9 | 24.0 | 33.9 | 81.2 | 12.8 | 35.6 |
| Southeast Part | 1975 | 1.8 | 38.2 | 40.0 | 110.5 | 24.5 | 18.5 |
| | 1977 | 2.8 | 24.3 | 27.1 | 104.1 | 22.0 | 20.6 |
| | 1978 | 2.1 | 23.9 | 26.0 | 117.2 | 30.7 | 14.8 |
| | 1979 | 6.9 | 19.2 | 26.1 | 99.4 | 23.8 | 19.0 |
| | 1980 | 19.4 | 37.4 | 56.8 | 78.2 | 11.2 | 40.5 |
| | 1981 | 1.3 | 17.4 | 18.7 | 102.5 | 21.2 | 21.4 |
| Northern Edge and Peak | 1975 | 86.9 | 120.2 | 207.1 | 76.9 | 9.4 | 48.4 |
| | 1977 | 66.2 | 384.7 | 450.9 | 85.2 | 11.2 | 40.4 |
| | 1978 | 177.5 | 372.6 | 550.1 | 85.1 | 13.8 | 33.8 |
| | 1979 | 63.9 | 232.9 | 296.8 | 87.1 | 13.4 | 33.8 |
| | 1980 | 599.3 | 128.2 | 727.5 | 52.3 | 3.5 | 131.0 |
| | 1981 | 277.0 | 404.9 | 681.9 | 68.8 | 6.2 | 73.6 |
| Georges Bank (all areas) | 1975 | 46.3 | 62.4 | 108.7 | 80.1 | 11.4 | 39.7 |
| | 1977 | 27.9 | 176.1 | 204.0 | 87.6 | 12.5 | 36.4 |
| | 1978 | 66.0 | 152.4 | 218.4 | 87.1 | 14.6 | 31.1 |
| | 1979 | 28.7 | 120.9 | 149.6 | 88.5 | 14.1 | 32.2 |
| | 1980 | 305.6 | 74.2 | 379.8 | 53.4 | 3.8 | 118.8 |
| | 1981 | 76.3 | 119.9 | 196.2 | 70.6 | 7.1 | 64.1 |

¹Relative abundance indices from the Northern Edge and Peak, 1978-81, derived from Canadian research vessel survey data standardized to USA tow distance.

²Mean meat weight derived by applying the 1978-1981 USA Georges Bank research survey sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 7.24854 \times 10^{-6} \text{ Shell Height (mm)} \quad (n = 3036, r = 0.97)$$

3.1748

to each shell height in the survey frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops represented in the survey frequency distribution.

³Average meat count derived by dividing the calculated mean meat weight into 453.6 grams (1 pound).

Table 30. USA sea scallop research survey relative abundance indices (standardized stratified mean number per tow), mean shell height (mm) of scallops sampled, mean meat weight (g) per scallop sampled, and average meat count (number of scallop meats per pound) of scallops sampled from sea scallop research surveys in the Mid-Atlantic, 1975, 1977-1981. Data are presented by principal scallop regions in the Mid-Atlantic. Survey indices are presented for pre-recruit (<70 mm shell height), recruit (>70 mm shell height), and total scallops per tow.

| Area | Year | Standardized Stratified Mean Number Per Tow | | | | Mean Shell Height | Mean ¹ Meat Weight | Average ² Meat Count |
|-----------------------------|------|--|-----------------------------|----------------------------|-------|-------------------------|-------------------------------------|---------------------------------------|
| | | Number <70 mm Per Tow | Number >70 mm Per Tow | Total Number Per Tow | | | | |
| New York Bight | 1975 | 27.3 | 23.5 | 50.8 | 75.0 | 9.8 | 46.1 | |
| | 1977 | 1.1 | 39.4 | 40.5 | 98.4 | 18.2 | 25.0 | |
| | 1978 | 2.5 | 36.1 | 38.6 | 102.5 | 21.2 | 21.4 | |
| | 1979 | 3.9 | 13.7 | 17.6 | 95.3 | 20.9 | 21.8 | |
| | 1980 | 10.7 | 10.8 | 21.5 | 75.6 | 12.8 | 35.5 | |
| | 1981 | 13.1 | 13.5 | 26.6 | 68.2 | 8.9 | 50.8 | |
| Delmarva | 1975 | 25.2 | 15.6 | 40.8 | 71.8 | 8.0 | 56.7 | |
| | 1977 | 3.3 | 24.0 | 27.3 | 103.0 | 25.0 | 19.7 | |
| | 1978 | 8.3 | 26.0 | 34.3 | 95.7 | 19.4 | 23.3 | |
| | 1979 | 30.8 | 39.3 | 70.1 | 73.7 | 9.6 | 47.3 | |
| | 1980 | 23.4 | 13.3 | 36.7 | 66.8 | 8.6 | 52.5 | |
| | 1981 | 2.8 | 5.9 | 8.7 | 90.1 | 18.6 | 24.4 | |
| Virginia - No. Carolina | 1975 | 47.7 | 10.9 | 58.6 | 66.0 | 5.5 | 83.1 | |
| | 1977 | 0.2 | 0.2 | 0.4 | 84.7 | 13.2 | 34.4 | |
| | 1978 | 15.4 | 7.1 | 22.5 | 68.6 | 6.5 | 69.7 | |
| | 1979 | 4.6 | 6.5 | 11.1 | 75.3 | 10.2 | 44.4 | |
| | 1980 | 0.8 | 4.6 | 5.4 | 87.9 | 13.9 | 32.6 | |
| | 1981 | 0.4 | 0.8 | 1.2 | 95.2 | 19.1 | 23.8 | |
| Mid-Atlantic (all areas) | 1975 | 28.9 | 19.4 | 48.3 | 72.8 | 8.7 | 52.2 | |
| | 1977 | 1.7 | 30.1 | 31.8 | 99.7 | 19.5 | 23.2 | |
| | 1978 | 6.0 | 29.2 | 35.2 | 97.7 | 19.5 | 23.3 | |
| | 1979 | 13.9 | 22.9 | 36.8 | 79.9 | 12.8 | 35.4 | |
| | 1980 | 14.8 | 11.3 | 26.1 | 71.3 | 10.7 | 42.5 | |
| | 1981 | 8.6 | 10.0 | 18.6 | 72.0 | 10.6 | 42.7 | |

¹Mean meat weight derived by applying the 1977-1981 USA Mid-Atlantic research survey sea scallop shell height-meat weight equation.

$$\text{Meat Weight (g)} = 5.92915 \times 10^{-6} \text{ Shell Height (mm)}^{3.2335} \quad (n = 8992, r = 0.98)$$

to each shell height in the survey frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops represented in the survey frequency distribution.

²Average meat count derived by dividing the calculated mean meat weight into 453.6 grams (1 pound).

Table 31. Gulf of Maine sea scallop relative abundance indices (stratified mean number per tow), mean shell height (mm) of scallops sampled, mean meat weight (g) per scallop sampled, and average meat count (number of meats per pound) of scallops sampled, by depth zone (31-60 fathoms and 61-100 fathoms), from USA spring and autumn bottom trawl surveys, 1974-1981.

| Depth Zone (fms) | Year | Spring | | | | | | Autumn | | | | | |
|------------------|------|--------------------------------|-----------------------|----------------------|--------------------------------|------------------|--------------------|--------------------------------|-----------------------|----------------------|--------------------------------|------------------|--------------------|
| | | Stratified Mean Number Per Tow | | | Stratified Mean Number Per Tow | | | Stratified Mean Number Per Tow | | | Stratified Mean Number Per Tow | | |
| | | Number <70 mm Per Tow | Number >70 mm Per Tow | Total Number Per Tow | Mean Shell Height | Mean Meat Weight | Average Meat Count | Number <70 mm Per Tow | Number >70 mm Per Tow | Total Number Per Tow | Mean Shell Height | Mean Meat Weight | Average Meat Count |
| 31-60 | 1974 | 0.4 | 3.7 | 4.1 | 64.0 | 7.5 | 60.5 | 0.2 | 1.4 | 1.6 | 86.7 | 7.7 | 59.1 |
| | 1975 | 1.2 | 1.4 | 2.6 | 72.6 | 5.2 | 68.0 | 0.2 | 0.8 | 1.0 | 75.9 | 5.3 | 66.0 |
| | 1976 | 0.4 | 1.4 | 1.8 | 77.5 | 5.7 | 79.0 | 0.0 | 1.3 | 1.3 | 90.6 | 9.2 | 49.2 |
| | 1977 | 0.4 | 1.5 | 1.9 | 82.5 | 7.2 | 63.4 | 0.7 | 15.6 | 16.3 | 84.8 | 8.8 | 59.8 |
| | 1978 | 2.2 | 1.7 | 3.9 | 65.6 | 3.3 | 136.1 | 0.2 | 1.0 | 1.2 | 77.4 | 7.6 | 82.9 |
| | 1979 | 0.7 | 3.7 | 73.9 | 4.6 | 99.2 | 0.1 | 0.3 | 0.4 | 76.7 | 5.4 | 84.7 | |
| | 1980 | 0.0 | 2.1 | 2.1 | 102.8 | 17.4 | 26.1 | 0.2 | 0.2 | 0.4 | 75.0 | 7.7 | 59.2 |
| | 1981 | 0.5 | 1.2 | 1.7 | 78.0 | 7.2 | 62.9 | 0.1 | 0.3 | 0.4 | 81.4 | 6.9 | 65.3 |
| 61-100 | 1974 | 0.1 | 0.0 | 0.1 | 50.0 | 3.4 | 417.5 | 0.0 | 0.0 | 0.0 | - | - | - |
| | 1975 | 0.0 | 0.1 | 0.1 | 70.0 | 3.5 | 129.4 | 0.0 | 0.0 | 0.0 | - | - | - |
| | 1976 | <0.1 | 0.1 | 0.1 | 65.0 | 2.8 | 16.3 | 0.1 | 0.1 | 0.2 | 66.8 | 3.5 | 328.6 |
| | 1977 | 1.1 | 0.6 | 1.7 | 60.7 | 3.6 | 173.0 | 12.0 | 3.4 | 15.4 | 56.4 | 2.3 | 198.4 |
| | 1978 | 0.1 | 0.7 | 0.8 | 56.7 | 2.0 | 225.6 | 4.0 | 11.2 | 15.2 | 70.9 | 4.0 | 313.5 |
| | 1979 | 2.1 | 6.2 | 8.3 | 71.3 | 4.1 | 110.4 | 1.7 | 9.4 | 11.1 | 72.6 | 4.2 | 107.6 |
| | 1980 | 0.1 | 33.0 | 33.1 | 86.2 | 7.5 | 60.1 | 1.7 | 33.2 | 34.9 | 81.3 | 6.3 | 72.0 |
| | 1981 | 5.3 | 92.2 | 97.5 | 92.9 | 10.4 | 43.8 | 0.3 | 6.6 | 6.9 | 87.4 | 6.2 | 55.0 |

¹ Mean meat weight derived by applying the 1980 NMFS offshore Gulf of Maine commercial sample sea scallop shell height-meat weight equation,

$$\text{Meat Weight (g)} = 1.32248 \times 10^{-6} \text{ Shell Height (mm)}^3 \quad (n = 1726, r = 0.93)$$

to each shell height in the survey frequency distribution, multiplying by the frequency at each height, summing the products, and dividing by the total number of scallops in the survey frequency distribution.

² Average meat count derived by dividing the calculated mean meat weight into 453.6 grams (1 pound).

Table 32. Standardized stratified mean catch (number) per tow of sea scallops from USA sea scallop research vessel surveys on Georges Bank, 1975-1981. Standard deviation of the mean (S.D.), coefficient of variation (C.V.: 100 S.D./Mean), and 95% confidence limits are provided as indices of variability. Data are summarized by the three principal sea scallop regions on Georges Bank and for the entire Georges Bank area.

| Region | Year | Linear | | | | ln (x + 1) | | | | Re-Transformed | | | |
|----------------------------|-------------------|--------|-------|------|-------------------|------------|--------|------|-------------------|----------------|---------|--------|-------------------|
| | | Mean | S.D. | C.V. | Confidence limits | Mean | S.D. | C.V. | Confidence limits | Mean | S.D. | C.V. | Confidence limits |
| | | | | | | | | | | Re-Transformed | | | |
| South Channel ¹ | 1975 | 56.1 | 17.0 | 30.1 | 23.2- 89.9 | 2.5674 | 0.2183 | 8.5 | 2.1398-2.9950 | 52.9 | 34.1- | 81.6 | |
| | 1977 | 56.5 | 21.2 | 38.5 | 13.6- 96.6 | 1.4682 | 0.2473 | 16.8 | 0.9837-1.9527 | 30.4 | 16.3- | 49.9 | |
| | 1978 | 38.0 | 7.8 | 20.4 | 23.0- 53.8 | 1.4171 | 0.1689 | 11.9 | 1.0862-1.7480 | 25.4 | 18.0- | 35.8 | |
| | 1979 | 61.0 | 37.6 | 61.6 | -12.7-134.8 | 1.5418 | 0.1857 | 12.0 | 1.1777-1.9059 | 21.5 | 14.6- | 31.3 | |
| | 1980 | 70.5 | 29.9 | 42.4 | 12.0-129.0 | 1.5692 | 0.2096 | 13.4 | 1.4571-1.9813 | 25.7 | 16.7- | 39.3 | |
| | 1981 | 33.9 | 10.0 | 29.4 | 14.3- 53.5 | 1.6711 | 0.2366 | 14.2 | 1.2073-2.1349 | 26.5 | 16.3- | 42.8 | |
| Southeast Part | 1975 | 40.0 | 9.4 | 23.4 | 21.7- 58.6 | 2.9255 | 0.3011 | 10.3 | 2.3552-3.5158 | 53.2 | 29.0- | 96.8 | |
| | 1977 | 27.1 | 8.7 | 31.5 | 10.5- 44.6 | 1.9997 | 0.3155 | 15.8 | 1.3811-3.6183 | 35.4 | 18.6- | 66.6 | |
| | 1978 | 26.0 | 4.5 | 16.9 | 18.0- 35.8 | 2.7908 | 0.1762 | 6.3 | 2.4452-3.1364 | 29.1 | 20.3- | 41.5 | |
| | 1979 | 26.1 | 6.7 | 25.6 | 13.0- 39.2 | 2.4192 | 0.3009 | 12.4 | 1.8292-3.0092 | 34.3 | 18.6- | 62.7 | |
| | 1980 | 56.8 | 21.8 | 38.3 | 14.2- 99.5 | 2.2990 | 0.4307 | 18.7 | 1.4548-3.1432 | 84.4 | 35.7- | 197.7 | |
| | 1981 | 18.7 | 4.1 | 22.0 | 10.6- 26.8 | 2.2330 | 0.2278 | 10.2 | 1.7865-2.6795 | 23.6 | 14.8- | 37.5 | |
| Northern Edge and Peak | 1975 | 207.1 | 70.7 | 33.9 | 69.8-346.7 | 3.5373 | 0.3785 | 10.7 | 2.7956-4.2790 | 446.2 | 212.0- | 937.8 | |
| | 1977 | 450.9 | 91.2 | 20.2 | 272.2-629.7 | 3.8416 | 0.2272 | 5.9 | 3.3964-4.2868 | 1269.5 | 813.0- | 1922.1 | |
| | 1978 ¹ | 550.1 | 64.5 | 11.7 | 424.0-677.2 | 5.7736 | 0.1112 | 1.9 | 5.5553-5.9919 | 559.5 | 450.0- | 656.2 | |
| | 1979 ¹ | 296.8 | 27.6 | 9.2 | 245.0-353.4 | 4.8503 | 0.1853 | 3.8 | 4.4873-5.2133 | 418.8 | 291.0- | 602.5 | |
| | 1980 ¹ | 727.5 | 119.2 | 16.4 | 494.2-961.6 | 4.0011 | 0.1184 | 3.0 | 3.7692-4.2330 | 2201.5 | 1745.6- | 2776.4 | |
| | 1981 ¹ | 681.9 | 116.5 | 17.1 | 454.7-911.5 | 4.7078 | 0.2198 | 4.7 | 4.2770-5.1386 | 1906.7 | 1239.0- | 2933.8 | |
| Georges Bank (all areas) | 1975 | 108.7 | 27.1 | 24.9 | 56.0-162.3 | 2.9822 | 0.1796 | 6.0 | 2.6299-3.3345 | 124.3 | 87.1- | 177.3 | |
| | 1977 | 204.0 | 36.6 | 17.9 | 132.5-276.4 | 2.5088 | 0.1518 | 6.1 | 2.2116-2.8060 | 243.5 | 180.6- | 328.1 | |
| | 1978 | 218.4 | 23.3 | 10.7 | 173.2-264.7 | 3.2682 | 0.1113 | 3.4 | 3.0499-3.4865 | 626.9 | 503.8- | 780.0 | |
| | 1979 | 149.6 | 19.7 | 13.1 | 111.9-189.1 | 3.0133 | 0.1211 | 4.0 | 2.7757-3.2509 | 248.3 | 195.6- | 315.2 | |
| | 1980 | 379.8 | 57.7 | 15.2 | 267.0-493.0 | 2.8509 | 0.1194 | 4.2 | 2.6173-3.0845 | 487.0 | 385.4- | 615.4 | |
| | 1981 | 196.2 | 15.4 | 7.8 | 166.0-226.7 | 2.5633 | 0.1467 | 5.7 | 2.2759-2.8507 | 175.0 | 131.0- | 233.6 | |

¹ Stratified mean catch (number) per tow indices for the Northern Edge and Peak, 1978-1981, were derived from Canadian sea scallop research survey data post-stratified into USA sampling strata and standardized for differences in tow distance between USA and Canadian standard survey tows.

Table 33. Standardized stratified mean catch (number) per tow of sea scallops from USA sea scallop research vessel surveys in the Mid-Atlantic, 1975, 1977-1981. Standard deviation of the mean (S.D.), coefficient of variation (C.V.: 100 S.D./Mean), and 95% confidence limits are provided as indices of variability. Data are summarized by the three principal sea scallop regions in the Mid-Atlantic and for the entire Mid-Atlantic area.

| Region | Year | Linear | | | | ln (x + 1) | | | | Re-Transformed | | | |
|-------------------------------------|------|--------|------|------|----------------------|------------|--------|------|----------------------|----------------|-------|-------|----------------------|
| | | Mean | S.D. | C.V. | Confidence limits | Mean | S.D. | C.V. | Confidence limits | Mean | S.D. | C.V. | Confidence limits |
| | | | | | | | | | | | | | |
| New York Bight | 1975 | 50.8 | 10.0 | 19.5 | 31.6- 70.7 | 2.1907 | 0.2197 | 10.0 | 1.7599-2.6215 | 62.4 | 40.2- | 96.6 | |
| | 1977 | 40.5 | 3.5 | 8.7 | 33.8- 47.7 | 2.1368 | 0.1485 | 6.9 | 1.8661-2.4275 | 71.3 | 53.0- | 95.6 | |
| | 1978 | 38.6 | 3.6 | 8.8 | 32.4- 46.0 | 2.2003 | 0.1251 | 5.7 | 1.9547-2.4459 | 61.6 | 48.0- | 79.1 | |
| | 1979 | 17.6 | 2.1 | 11.8 | 13.5- 21.7 | 2.0713 | 0.1153 | 5.6 | 1.8453-2.2973 | 19.5 | 15.4- | 24.7 | |
| | 1980 | 21.5 | 2.6 | 11.9 | 16.4- 26.5 | 1.9366 | 0.1175 | 6.1 | 1.7064-2.1668 | 24.4 | 19.2- | 31.0 | |
| | 1981 | 26.6 | 4.9 | 18.5 | 17.0- 36.3 | 1.8141 | 0.1197 | 6.6 | 1.5797-2.0485 | 22.5 | 17.6- | 28.7 | |
| Pelagic | | | | | | | | | | | | | |
| | 1975 | 40.8 | 11.0 | 26.7 | 19.7- 62.9 | 2.7166 | 0.3022 | 11.1 | 2.1244-3.3088 | 50.2 | 27.3- | 91.6 | |
| | 1977 | 27.3 | 3.6 | 13.4 | 20.0- 34.2 | 2.6288 | 0.2540 | 9.7 | 2.1310-3.1266 | 39.9 | 23.8- | 66.2 | |
| | 1978 | 34.3 | 3.4 | 9.9 | 27.8- 41.2 | 2.0714 | 0.2233 | 10.9 | 1.6336-2.5092 | 50.1 | 32.0- | 78.2 | |
| | 1979 | 70.1 | 26.1 | 37.2 | 19.0- 121.2 | 2.2576 | 0.2585 | 15.9 | 1.5547-2.9605 | 110.5 | 54.2- | 224.1 | |
| | 1980 | 36.7 | 7.0 | 19.0 | 23.1- 50.4 | 2.0951 | 0.2377 | 11.3 | 1.6292-2.5610 | 38.9 | 24.0- | 62.6 | |
| | 1981 | 8.7 | 2.4 | 27.3 | 4.1- 13.4 | 1.3413 | 0.2161 | 16.1 | 0.9177-1.7649 | 8.5 | 5.2- | 13.5 | |
| Virginia-No. Caroline | | | | | | | | | | | | | |
| | 1975 | 58.6 | 0.7 | 1.2 | 57.5- 60.3 | 0.5630 | 0.1004 | 17.8 | 0.3660-0.7600 | 6.8 | 5.4- | 8.4 | |
| | 1977 | 0.4 | 0.2 | 36.1 | 0.1- 0.8 | 0.1935 | 0.0981 | 50.7 | 0.0015-0.3855 | 0.4 | 0.1- | 0.7 | |
| | 1978 | 22.5 | 14.0 | 60.8 | -4.4- 50.3 | 1.4280 | 0.5539 | 38.8 | 0.3424-2.5136 | 24.4 | 7.6- | 74.3 | |
| | 1979 | 11.1 | 2.3 | 20.9 | 6.5- 15.6 | 1.2907 | 0.3482 | 27.0 | 0.6081-1.9733 | 11.0 | 5.1- | 22.7 | |
| | 1980 | 5.4 | 0.4 | 7.5 | 4.6- 6.2 | 0.5469 | 0.0810 | 14.8 | 0.3877-0.7061 | 2.6 | 2.0- | 3.2 | |
| | 1981 | 1.2 | 0.4 | 36.4 | 0.4- 2.1 | 0.3542 | 0.1167 | 32.9 | 0.1256-0.5828 | 0.9 | 0.5- | 1.4 | |
| Mid-Atlantic (all areas) | | | | | | | | | | | | | |
| | 1975 | 48.3 | 6.6 | 13.5 | 35.8- 61.5 | 2.1812 | 0.1580 | 7.2 | 1.8713-2.4911 | 54.5 | 39.7- | 74.6 | |
| | 1977 | 31.8 | 2.3 | 7.3 | 27.3- 36.4 | 2.0851 | 0.1184 | 5.7 | 1.8532-2.3170 | 48.1 | 38.0- | 60.9 | |
| | 1978 | 35.2 | 2.8 | 7.7 | 30.3- 41.1 | 2.0661 | 0.1210 | 5.9 | 1.8293-2.3029 | 52.0 | 40.8- | 66.1 | |
| | 1979 | 36.8 | 9.7 | 26.4 | 17.7- 55.8 | 2.1101 | 0.1496 | 7.1 | 1.8168-2.4034 | 36.5 | 27.0- | 49.3 | |
| | 1980 | 26.1 | 2.9 | 11.3 | 20.4- 31.9 | 1.9168 | 0.1101 | 5.7 | 1.7012-2.1324 | 27.2 | 21.7- | 34.0 | |
| | 1981 | 16.6 | 3.0 | 16.0 | 12.8- 24.4 | 1.5529 | 0.1044 | 6.7 | 1.3483-1.7575 | 14.5 | 11.6- | 18.0 | |

Table 34. Summary statistics of sea scallop shell height-meat weight data, by area caught and year.

| Area | Year | n | Shell Height (mm) | | | | | Meat Weight (g) | | | | |
|-----------------------------|------|------|-------------------|-------|------|-------|-----|-----------------|-----------|-------|------|--------|
| | | | \bar{X} | S.D. | S.E. | C.V. | Min | Max | \bar{X} | S.D. | S.E. | C.V. |
| Georges Bank | 1978 | 316 | 109.29 | 14.29 | 0.80 | 13.07 | 80 | 145 | 21.51 | 9.60 | 0.54 | 44.62 |
| | 1979 | 543 | 112.20 | 27.30 | 1.17 | 24.33 | 23 | 169 | 27.13 | 16.78 | 0.72 | 61.84 |
| | 1980 | 868 | 77.90 | 28.67 | 0.97 | 36.81 | 32 | 163 | 11.87 | 13.67 | 0.46 | 115.22 |
| | 1981 | 1309 | 102.97 | 25.92 | 0.72 | 25.18 | 44 | 168 | 22.12 | 16.66 | 0.46 | 75.32 |
| | All | 3036 | 98.11 | 29.23 | 0.53 | 29.79 | 23 | 169 | 20.02 | 16.19 | 0.29 | 80.86 |
| Mid-Atlantic | 1977 | 784 | 99.71 | 18.15 | 0.65 | 18.20 | 40 | 152 | 15.75 | 8.96 | 0.32 | 56.90 |
| | 1978 | 1196 | 110.26 | 12.41 | 0.36 | 11.25 | 67 | 149 | 22.99 | 8.99 | 0.26 | 39.10 |
| | 1979 | 1546 | 102.21 | 21.92 | 0.56 | 21.44 | 29 | 156 | 21.61 | 13.80 | 0.35 | 63.86 |
| | 1980 | 2980 | 85.72 | 31.98 | 0.59 | 37.30 | 25 | 156 | 17.77 | 17.10 | 0.31 | 96.26 |
| | 1981 | 2486 | 97.28 | 26.03 | 0.52 | 26.75 | 46 | 162 | 21.43 | 17.85 | 0.36 | 83.29 |
| All | | 8992 | 96.23 | 26.98 | 0.28 | 28.04 | 25 | 162 | 19.96 | 15.52 | 0.16 | 77.75 |
| Gulf of Maine (offshore) | 1980 | 1726 | 89.45 | 11.39 | 0.27 | 12.78 | 36 | 123 | 8.84 | 3.98 | 0.10 | 44.97 |

Table 35. Regression parameters and statistics for shell height (mm) - meat weight (g) regressions for Northwest Atlantic sea scallops, by area and year. Regressions are of the form: $\ln \text{meat weight (g)} = a + b (\ln \text{shell height (mm)})$.

| Area | Year | N | Intercept (a) | Slope (b) | Regression Statistics | | | | | |
|-----------------------------|-----------|------|------------------|--------------|-----------------------|---------------|-----------|-----------|-----------------------------------|----------------------------------|
| | | | | | $\ln \bar{x}$ | $\ln \bar{y}$ | $\ln s_x$ | $\ln s_y$ | Correlation Coefficient (r) | Residual Mean Square Error |
| Georges Bank | 1978 | 316 | -11.4122 | 3.0700 | 4.6855 | 2.9723 | 0.13047 | 0.44139 | 0.907 | 0.03449 |
| | 1979 | 543 | -11.5638 | 3.1100 | 4.6823 | 2.9982 | 0.29751 | 0.94710 | 0.977 | 0.06099 |
| | 1980 | 868 | -12.6358 | 3.3640 | 4.2903 | 1.7968 | 0.35857 | 1.23480 | 0.977 | 0.06993 |
| | 1981 | 1309 | -11.2338 | 3.0491 | 4.6016 | 2.7969 | 0.28285 | 0.82285 | 0.957 | 0.05690 |
| All Years | 1978-1981 | 3036 | -11.8347 | 3.1748 | 4.5356 | 2.5651 | 0.33933 | 1.07275 | 0.974 | 0.05827 |
| Mid-Atlantic | 1977 | 784 | -12.9111 | 3.3764 | 4.5840 | 2.5663 | 0.49626 | 0.68125 | 0.973 | 0.02501 |
| | 1978 | 1196 | -11.1600 | 3.0284 | 4.6962 | 3.0620 | 0.11420 | 0.38758 | 0.892 | 0.03064 |
| | 1979 | 1546 | -12.2628 | 3.2788 | 4.6007 | 2.8221 | 0.28229 | 0.80429 | 0.971 | 0.03646 |
| | 1980 | 2980 | -12.3302 | 3.3166 | 4.3703 | 2.1640 | 0.46690 | 1.40150 | 0.987 | 0.05248 |
| | 1981 | 2486 | -12.3379 | 3.3078 | 4.5398 | 2.6787 | 0.27674 | 0.93357 | 0.981 | 0.03363 |
| All Years | 1977-1981 | 8992 | -12.0356 | 3.2335 | 4.5179 | 2.5732 | 0.32703 | 1.07915 | 0.980 | 0.04634 |
| Gulf of Maine (offshore) | 1980 | 1726 | -13.5356 | 3.4813 | 4.4810 | 2.0642 | 0.13791 | 0.51368 | 0.935 | 0.03338 |

Table 36. Regression parameters and statistics for meat weight (g) - shell height (mm) regressions for Northwest Atlantic sea scallops, by area and year.
Regressions are of the form: $\ln \text{shell height (mm)} = a + b (\ln \text{meat weight (g)})$.

| Area | Year | N | Intercept (a) | Slope (b) | Regression Statistics | | | |
|-----------------------------|------|--------|------------------|--------------|-----------------------|---------------|-----------|-----------|
| | | | | | $\ln \bar{x}$ | $\ln \bar{y}$ | $\ln s_x$ | $\ln s_y$ |
| Georges Bank | 1978 | 316 | 3.8882 | 0.26825 | 2.9723 | 4.6855 | 0.44139 | 0.13047 |
| | 1979 | 543 | 3.7622 | 0.30688 | 2.9982 | 4.6923 | 0.94710 | 0.29751 |
| | 1980 | 868 | 3.7807 | 0.23365 | 1.7968 | 4.2903 | 1.23480 | 0.35857 |
| | 1981 | 1309 | 3.7613 | 0.30043 | 2.7969 | 4.6016 | 0.82285 | 0.25829 |
| All Years 1978-1981 | 3046 | 3.7686 | 0.29904 | 2.5651 | 4.5356 | 1.07275 | 0.32923 | 0.974 |
| Mld-Atlantic | 1977 | 784 | 3.8648 | 0.28023 | 2.5663 | 4.5840 | 0.68125 | 0.19626 |
| | 1978 | 1196 | 3.8912 | 0.26291 | 3.0620 | 4.6362 | 0.38758 | 0.11420 |
| | 1979 | 1546 | 3.7884 | 0.28781 | 2.8221 | 4.6007 | 0.80429 | 0.23829 |
| | 1980 | 2980 | 3.7352 | 0.29346 | 2.1640 | 4.3703 | 1.40150 | 0.41690 |
| | 1981 | 2486 | 3.7612 | 0.29066 | 2.6787 | 4.5398 | 0.93357 | 0.27674 |
| All Years 1977-1981 | 8992 | 3.7538 | 0.26966 | 2.5732 | 4.5179 | 1.07915 | 0.32703 | 0.980 |
| Gulf of Maine (offshore) | 1980 | 1726 | 3.9630 | 0.25093 | 2.0642 | 4.4810 | 0.51368 | 0.13791 |
| | | | | | | | 0.935 | 0.00241 |

Table 37. Calculated meats weights (g) at shell height (mm) for sea scallops from Georges Bank, the Mid-Atlantic area, offshore Gulf of Maine, and inshore Gulf of Maine.

| Shell Height (mm) | Calculated Meat Weight (g) | | | |
|-------------------|----------------------------|---------------------------|-------------------------------------|------------------------------------|
| | Georges ¹ Bank | Mid ² Atlantic | Offshore ³ Gulf of Maine | Inshore ⁴ Gulf of Maine |
| 40 | 0.88 | 0.90 | 0.50 | 0.44 |
| 50 | 1.80 | 1.85 | 1.09 | 0.99 |
| 60 | 3.20 | 3.33 | 2.05 | 1.93 |
| 70 | 5.22 | 5.48 | 3.51 | 3.39 |
| 80 | 7.98 | 8.45 | 5.58 | 5.53 |
| 90 | 11.60 | 12.36 | 8.41 | 8.52 |
| 100 | 16.21 | 17.38 | 12.13 | 12.53 |
| 110 | 21.94 | 23.65 | 16.91 | 17.77 |
| 120 | 28.92 | 31.33 | 22.89 | 24.44 |
| 130 | 37.29 | 40.59 | 30.25 | 32.77 |
| 140 | 47.18 | 51.58 | 39.15 | 42.99 |
| 150 | 58.74 | 64.47 | 49.78 | 55.36 |
| 160 | 72.09 | 79.44 | 62.32 | 70.13 |
| 170 | 87.39 | 96.64 | 76.96 | 87.57 |
| 180 | 104.78 | 116.26 | 93.90 | 107.97 |

¹Calculated from NMFS 1978-1981 Georges Bank research survey shell height-meat weight equation,

$$\text{Meat Weight (g)} = 7.24854 \times 10^{-6} \text{ Shell Height}^{\frac{3.1748}{(\text{mm})}} \quad (N = 3036, r = 0.97)$$

²Calculated from NMFS 1977-1981 Mid-Atlantic research survey shell height-meat weight equation,

$$\text{Meat Weight (g)} = 5.92915 \times 10^{-6} \text{ Shell Height}^{\frac{3.2335}{(\text{mm})}} \quad (N = 8992, r = 0.98)$$

³Calculated from NMFS 1980 offshore Gulf of Maine commercial sample shell height-meat weight equation,

$$\text{Meat Weight (g)} = 1.32248 \times 10^{-6} \text{ Shell Height}^{\frac{3.4813}{(\text{mm})}} \quad (N = 1726, r = 0.93)$$

⁴Calculated from inshore Gulf of Maine (Penobscot Bay) commercial sample shell height-meat weight equation,

$$\text{Meat Weight (g)} = 5.88847 \times 10^{-7} \text{ Shell Height}^{\frac{3.6664}{(\text{mm})}} \quad (N = 1107, \text{from Haynes, 1966}).$$

Table 38. Calculated shell heights (mm) at meat weight (g) for sea scallops from Georges Bank, the Mid-Atlantic area, offshore Gulf of Maine, and inshore Gulf of Maine.

| Meat Weight (g) | Meat Count | Calculated Shell Height (mm) | | | | Largest % Difference in Shell Height Between Two Most Extreme Values |
|-----------------|------------|------------------------------|---------------------------|-------------------------------------|------------------------------------|--|
| | | Georges Bank | Mid ² Atlantic | Offshore ³ Gulf of Maine | Inshore ⁴ Gulf of Maine | |
| 7.56 | 60 | 79.3 | 77.8 | 87.4 | 87.1 | 12.0% |
| 8.25 | 55 | 81.4 | 79.9 | 89.3 | 89.2 | 11.8 |
| 9.07 | 50 | 83.8 | 82.2 | 91.5 | 91.6 | 11.4 |
| 10.08 | 45 | 86.4 | 84.8 | 94.0 | 94.2 | 11.1 |
| 11.34 | 40 | 89.5 | 87.8 | 96.8 | 97.3 | 10.8 |
| 12.96 | 35 | 93.2 | 91.3 | 100.1 | 100.9 | 10.5 |
| 15.12 | 30 | 97.6 | 95.6 | 104.0 | 105.3 | 10.1 |
| 18.14 | 25 | 103.1 | 100.9 | 108.9 | 110.6 | 9.6 |
| 22.68 | 20 | 110.2 | 107.9 | 115.2 | 117.6 | 9.0 |

¹ Calculated from NMFS 1978-1981 Georges Bank research survey sea scallop meat weight-shell height equation,

Shell Height (mm) = 43.3194 Meat Weight (g) 0.29904 ($N = 3036$, $r = 0.97$).

² Calculated from NMFS 1977-1981 Mid-Atlantic research survey sea scallop meat weight-shell height equation,

Shell Height (mm) = 42.6830 Meat Weight (g) 0.29696 ($N = 8992$, $r = 0.98$)

³ Calculated from NMFS 1980 offshore Gulf of Maine commercial sample sea scallop meat weight - shell height equation,

Shell Height (mm) = 52.6149 Meat Weight (g) 0.25093 ($N = 1726$, $r = 0.93$).

⁴ Calculated by inverse prediction from inshore Gulf of Maine (Penobscot Bay) commercial sample sea scallop meat weight - shell height equation,

Shell Height (mm) = (169.8234×10^4) Meat Weight (g) 0.27293 ($N = 1107$, from Haynes, 1966).

Table 39. Summary statistics of sea scallop shell height, meat weight, and ovary weight data used in deriving shell height-ovary weight and meat weight-ovary weight relationships. All data collected from the 1981 USA sea scallop research vessel survey.

| Area | Shell Height (mm) | | | | | | Meat Weight (g) | | | | | | Ovary Weight (g) | | | | | | |
|------------------------------|-------------------|-----------|-------|------|-------|-----|-----------------|-----------|-------|------|-------|-------|------------------|-----------|-------|------|-------|------|-------|
| | N | \bar{x} | S.D. | S.E. | C.V. | Min | Max | \bar{x} | S.D. | S.E. | C.V. | Min | Max | \bar{x} | S.D. | S.E. | C.V. | Min | Max |
| <u>Georges Bank</u> | 647 | 106.38 | 24.45 | 0.96 | 22.98 | 46 | 168 | 24.38 | 17.02 | 0.67 | 69.79 | 1.27 | 89.53 | 11.15 | 9.64 | 0.38 | 86.45 | 0.13 | 68.63 |
| <u>South Channel</u> | 475 | 104.77 | 24.80 | 1.14 | 23.67 | 46 | 166 | 23.85 | 17.58 | 0.81 | 73.74 | 1.27 | 89.53 | 12.08 | 10.46 | 0.48 | 86.62 | 0.13 | 68.63 |
| <u>Southeast Part</u> | 172 | 110.81 | 22.92 | 1.75 | 20.68 | 74 | 168 | 25.86 | 15.29 | 1.17 | 59.14 | 4.45 | 74.60 | 8.60 | 6.24 | 0.48 | 72.52 | 1.01 | 34.43 |
| <u>Mid-Atlantic</u> | 1123 | 103.98 | 24.53 | 0.73 | 23.59 | 50 | 162 | 25.41 | 18.53 | 0.55 | 72.92 | 1.69 | 117.73 | 6.51 | 5.76 | 0.17 | 88.51 | 0.08 | 52.94 |
| <u>New York Bight</u> | 749 | 101.41 | 24.76 | 0.90 | 24.41 | 50 | 162 | 23.57 | 17.93 | 0.66 | 76.08 | 1.69 | 111.75 | 5.80 | 4.87 | 0.18 | 84.07 | 0.08 | 49.40 |
| <u>Delaware</u> | 366 | 108.98 | 23.45 | 1.23 | 21.52 | 52 | 154 | 29.00 | 19.29 | 1.01 | 66.51 | 2.05 | 117.73 | 7.87 | 6.94 | 0.36 | 88.19 | 0.28 | 52.94 |
| <u>Virginia-No. Carolina</u> | 8 | 116.00 | 9.87 | 3.49 | 8.51 | 105 | 137 | 32.96 | 12.07 | 4.27 | 36.61 | 18.92 | 60.30 | 11.56 | 9.80 | 3.47 | 84.77 | 3.22 | 29.71 |
| <u>All Areas</u> | 1770 | 104.85 | 24.52 | 0.58 | 23.38 | 46 | 168 | 25.03 | 17.99 | 0.43 | 71.87 | 1.27 | 117.73 | 8.21 | 7.75 | 0.18 | 94.38 | 0.08 | 68.63 |

Table 40. Statistics describing regression equation between shell height (mm) and ovary weight (g) for Northwest Atlantic sea scallops, by area. Regressions are of the form: $\ln \text{ovary weight (g)} = \ln a + b (\ln \text{shell height})$.

| Area | N | Regression Statistics | | | | | | Correlation Coefficient (r) | Residual Mean Square Error |
|-----------------------|------|-----------------------|--------------|-------------------|-----------------------|-----------------------|-------------------|-----------------------------|----------------------------|
| | | Intercept (a) | Slope (b) | $\ln \frac{x}{y}$ | $\ln \frac{s_x}{s_y}$ | $\ln \frac{s_y}{s_x}$ | $\ln \frac{y}{x}$ | | |
| Georges Bank | 647 | -14.7635 | 3.6171 | 4.6404 | 2.0213 | 0.23091 | 0.95486 | 0.875 | 0.21449 |
| South Channel | 475 | -16.1495 | 3.9402 | 4.6237 | 2.0688 | 0.23788 | 1.01660 | 0.922 | 0.15534 |
| Southeast Part | 172 | -11.4974 | 2.8564 | 4.6869 | 1.8903 | 0.20400 | 0.74569 | 0.781 | 0.21780 |
| Mid-Atlantic | 1123 | -15.1163 | 3.5895 | 4.6147 | 1.4482 | 0.24521 | 1.02600 | 0.858 | 0.27827 |
| New York Bight | 749 | -14.9297 | 3.5438 | 4.5880 | 1.3293 | 0.25185 | 1.05230 | 0.848 | 0.31126 |
| Delmarva | 366 | -15.2204 | 3.6207 | 4.6668 | 1.6767 | 0.22401 | 0.92838 | 0.874 | 0.20462 |
| Virginia-No. Carolina | 8 | -25.2334 | 5.7627 | 4.7506 | 2.1429 | 0.08196 | 0.82802 | 0.570 | 0.53962 |
| All Areas | 1770 | -15.2127 | 3.6484 | 4.6240 | 1.6575 | 0.24034 | 1.0378 | 0.845 | 0.30824 |

Table 41. Statistics describing regression equations between goat weight (g) and ovary weight (g) for Northwest Atlantic sea scallops, by area. Regressions are of the form: $\ln \text{ovary weight (g)} = a + b (\ln \text{meat weight})$.

| Area | N | Regression Statistics | | | | | | Residual Mean Square Error | |
|-----------------------|------|-----------------------|-----------|---------|---------|-----------|-----------|----------------------------|---------|
| | | Intercept (a) | Slope (b) | $\ln x$ | $\ln y$ | $\ln s_x$ | $\ln s_y$ | | |
| Georges Bank | 647 | -1.3743 | 1.1532 | 2.9446 | 2.0213 | 0.73509 | 0.95486 | 0.888 | 0.19348 |
| South Channel | 475 | -1.4255 | 1.2061 | 2.8971 | 2.0688 | 0.77120 | 1.01660 | 0.915 | 0.16873 |
| Southeast Part | 472 | -1.3526 | 1.0543 | 3.0759 | 1.8903 | 0.60768 | 0.74569 | 0.859 | 0.14646 |
| Middle-Atlantic | 1123 | -1.6646 | 1.0618 | 2.9316 | 1.4482 | 0.82691 | 1.02600 | 0.856 | 0.28210 |
| New York Bight | 749 | -1.6305 | 1.0447 | 2.8333 | 1.3293 | 0.85296 | 1.05230 | 0.847 | 0.31387 |
| Pelmarva | 366 | -1.7288 | 1.0909 | 3.1218 | 1.6767 | 0.73975 | 0.92838 | 0.869 | 0.21129 |
| Virginia-No. Carolina | 8 | -1.6150 | 1.0904 | 3.4463 | 2.1429 | 0.32333 | 0.82802 | 0.426 | 0.65486 |
| All Areas | 1770 | -1.5521 | 1.0931 | 2.9361 | 1.6575 | 0.79437 | 1.03780 | 0.837 | 0.32310 |

Table 42. Calculated ovary weight (g) at shell height (mm), by area, for sea scallops from Georges Bank and the Mid-Atlantic.

| Shell height (mm) | Area | | | | | | Georges Bank | Mid Atlantic | All Areas |
|-------------------------|------------------|-------------------|-------------------|----------|---------------------------|-------|-----------------|-----------------|--------------|
| | South Channel | Southeast Part | New York Bight | Delaware | Virginia- No. Carolina | | | | |
| 50 | 0.48 | 0.72 | 0.34 | 0.35 | 0.07 | 0.54 | 0.34 | 0.39 | 0.39 |
| 60 | 0.98 | 1.22 | 0.66 | 0.67 | 0.19 | 1.05 | 0.66 | 0.76 | 0.76 |
| 70 | 1.80 | 1.89 | 1.13 | 1.18 | 0.47 | 1.83 | 1.14 | 1.33 | |
| 80 | 3.05 | 2.77 | 1.82 | 1.91 | 1.02 | 2.96 | 1.85 | 2.17 | |
| 90 | 4.86 | 3.88 | 2.76 | 2.92 | 2.01 | 4.54 | 2.82 | 3.33 | |
| 100 | 7.36 | 5.24 | 4.02 | 4.28 | 3.69 | 6.64 | 4.11 | 4.90 | |
| 110 | 10.71 | 6.88 | 5.63 | 6.04 | 6.39 | 9.38 | 5.79 | 6.93 | |
| 120 | 15.09 | 8.83 | 7.66 | 8.28 | 10.54 | 12.85 | 7.91 | 9.53 | |
| 130 | 20.69 | 11.09 | 10.17 | 11.06 | 16.72 | 17.16 | 10.55 | 12.76 | |
| 140 | 27.70 | 13.71 | 13.23 | 14.47 | 25.63 | 22.44 | 13.76 | 16.72 | |
| 150 | 36.36 | 16.79 | 16.89 | 18.57 | 38.14 | 28.80 | 17.63 | 21.50 | |
| 160 | 46.89 | 20.07 | 21.24 | 23.46 | 55.33 | 36.38 | 22.22 | 27.21 | |
| 170 | 59.54 | 23.87 | 26.33 | 29.22 | 78.47 | 45.29 | 27.62 | 33.95 | |

Table 43. Calculated ovary weight (g) at selected meat weight sizes (g), by area, for sea scallops from Georges Bank and the Mid-Atlantic.

| Meat Weight (g) | Meat Count | Area | | | | | | All Areas |
|-----------------------|---------------|------------------|-------------------|-------------------|----------|-----------------|-----------------|--------------|
| | | South Channel | Southeast Part | New York Bight | Delmarva | Georges Bank | Mid Atlantic | |
| 7.56 | 60 | 2.76 | 2.18 | 1.62 | 1.61 | 1.81 | 2.61 | 1.93 |
| 8.25 | 55 | 3.06 | 2.39 | 1.78 | 1.77 | 1.99 | 2.88 | 1.78 |
| 9.07 | 50 | 3.43 | 2.64 | 1.96 | 1.97 | 2.20 | 3.22 | 1.97 |
| 10.08 | 45 | 3.90 | 2.95 | 2.19 | 2.21 | 2.47 | 3.63 | 2.20 |
| 11.34 | 40 | 4.50 | 3.35 | 2.48 | 2.51 | 2.81 | 4.16 | 2.49 |
| 12.96 | 35 | 5.28 | 3.85 | 2.85 | 2.90 | 3.25 | 4.86 | 2.87 |
| 15.42 | 30 | 6.36 | 4.53 | 3.34 | 3.44 | 3.84 | 5.80 | 3.38 |
| 18.14 | 25 | 7.92 | 5.49 | 4.04 | 4.19 | 4.69 | 7.15 | 4.11 |
| 22.68 | 20 | 10.37 | 6.95 | 5.11 | 5.35 | 5.98 | 9.26 | 5.21 |

Table 44. Yield (grams, meat weight) per recruit for Georges Bank sea scallops as a function of fishing mortality rate (F) and age at first capture (t_c).
 Natural mortality (M) = 0.1, and age at recruitment (t_p) = 2.0 years.

| Age at first capture (t_c , years) and corresponding shell height (mm) and meat weight (g) ¹ | | | | | | | | | | | | | | | | | | | |
|--|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| Fishing Mortality | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 10.5 | 11.0 |
| (25.6) | (45.3) | (62.0) | (76.0) | (87.9) | (97.9) | (106.4) | (113.5) | (119.6) | (124.7) | (129.0) | (132.6) | (135.7) | (138.3) | (140.5) | (142.4) | (143.9) | (145.3) | (146.4) | |
| (F) | (0.2) | (1.3) | (3.6) | (6.8) | (10.8) | (15.2) | (19.7) | (24.2) | (28.6) | (32.7) | (36.4) | (39.7) | (42.7) | (45.4) | (47.7) | (49.8) | (51.5) | (53.1) | (54.4) |
| 0.1 | 12.7 | 13.4 | 13.9 | 14.4 | 14.8 | 15.0 | 15.1 | 15.1 | 14.9 | 14.6 | 14.3 | 13.9 | 13.4 | 12.9 | 12.3 | 11.7 | 11.1 | 10.5 | 9.9 |
| 0.2 | 13.0 | 14.3 | 15.6 | 16.8 | 17.8 | 18.6 | 19.1 | 19.5 | 19.6 | 19.4 | 19.0 | 18.6 | 18.1 | 17.5 | 16.8 | 16.1 | 15.4 | 14.7 | |
| 0.3 | 13.0 | 14.7 | 16.4 | 17.4 | 17.9 | 19.1 | 20.1 | 20.7 | 21.2 | 21.4 | 21.3 | 21.1 | 20.8 | 20.4 | 19.8 | 19.2 | 18.5 | 17.8 | |
| 0.4 | 9.5 | 11.4 | 13.5 | 15.5 | 17.3 | 18.8 | 20.1 | 21.0 | 21.7 | 22.1 | 22.2 | 21.9 | 21.5 | 21.0 | 20.5 | 19.8 | 19.1 | 18.4 | |
| 0.5 | 8.0 | 10.0 | 12.3 | 14.5 | 16.6 | 18.4 | 19.9 | 21.0 | 21.8 | 22.4 | 22.6 | 22.5 | 22.2 | 21.7 | 21.2 | 20.6 | 19.9 | 19.2 | |
| 0.6 | 6.8 | 8.9 | 11.3 | 13.7 | 15.9 | 17.9 | 19.6 | 20.9 | 21.8 | 22.5 | 22.8 | 22.9 | 22.6 | 22.2 | 21.7 | 21.1 | 20.4 | 19.7 | |
| 0.7 | 5.8 | 8.0 | 10.4 | 12.9 | 15.3 | 17.4 | 19.2 | 19.2 | 20.7 | 21.7 | 22.5 | 22.9 | 23.1 | 22.8 | 22.5 | 22.0 | 21.4 | 20.8 | |
| 0.8 | 5.0 | 7.2 | 9.7 | 12.3 | 14.8 | 17.0 | 18.9 | 20.5 | 21.6 | 22.5 | 23.0 | 23.2 | 23.0 | 22.7 | 22.2 | 21.7 | 21.0 | 20.3 | |
| 0.9 | 4.4 | 6.5 | 9.1 | 11.7 | 14.3 | 16.7 | 18.7 | 20.3 | 21.5 | 22.4 | 23.0 | 23.3 | 23.2 | 22.8 | 22.4 | 21.8 | 21.2 | 20.6 | |
| 1.0 | 3.9 | 6.0 | 8.6 | 11.3 | 13.9 | 16.3 | 18.4 | 20.1 | 21.4 | 22.4 | 23.0 | 23.3 | 23.4 | 23.3 | 22.5 | 22.0 | 21.4 | 20.7 | |
| 1.1 | 3.5 | 5.6 | 8.1 | 10.9 | 13.6 | 16.0 | 18.2 | 19.9 | 21.3 | 22.3 | 23.0 | 23.3 | 23.4 | 23.3 | 22.6 | 22.1 | 21.5 | 20.9 | |
| 1.2 | 3.1 | 5.2 | 7.7 | 10.5 | 13.2 | 15.8 | 18.0 | 19.8 | 21.2 | 22.3 | 23.0 | 23.4 | 23.5 | 23.4 | 23.1 | 22.7 | 22.2 | 21.6 | |
| 1.3 | 2.8 | 4.8 | 7.4 | 10.2 | 13.0 | 15.5 | 17.8 | 19.7 | 21.1 | 22.2 | 22.9 | 23.4 | 23.5 | 23.4 | 23.2 | 22.8 | 22.3 | 21.7 | |
| 1.4 | 2.6 | 4.6 | 7.1 | 9.9 | 12.7 | 15.3 | 17.6 | 19.5 | 21.0 | 22.2 | 22.9 | 23.4 | 23.5 | 23.5 | 22.9 | 22.4 | 21.8 | 21.1 | |
| 1.5 | 2.3 | 4.3 | 6.8 | 9.7 | 12.5 | 15.1 | 17.5 | 19.4 | 21.0 | 22.1 | 22.9 | 23.4 | 23.6 | 23.5 | 23.3 | 22.9 | 22.4 | 21.2 | |

¹ Shell height derived from Von Bertalanffy growth equation: $l_t = 152.46 (1-e^{-0.3374(t-1.4544)})$.

Meat weight derived from shell height-meat weight equation: Meat Weight (g) = 7.24854×10^{-6} Shell height (mm).

3.1748

Table 45. Yield (grams, meat weight) per recruit for Mid-Atlantic sea scallops as a function of fishing mortality rate (F) and age at first capture (t_c). Natural mortality (M) = 0.1, and age at recruitment (t_p) = 2.0 years.

| Age at first capture (t_c , years) and corresponding shell height (mm) and meat weight (g) ¹ | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|
| Fishing Mortality Rate (F) | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 |
| 0.1 | 13.2 | 13.8 | 14.4 | 14.9 | 15.2 | 15.4 | 15.5 | 15.4 | 15.1 | 14.4 | 14.0 |
| 0.2 | 13.5 | 14.9 | 16.0 | 17.2 | 18.2 | 18.9 | 19.5 | 19.9 | 20.1 | 19.9 | 19.7 |
| 0.3 | 11.7 | 13.4 | 15.1 | 16.7 | 18.2 | 19.4 | 20.4 | 21.1 | 21.6 | 21.8 | 21.5 |
| 0.4 | 9.9 | 11.9 | 13.9 | 15.8 | 17.5 | 19.1 | 20.3 | 21.3 | 22.0 | 22.5 | 22.7 |
| 0.5 | 8.4 | 10.5 | 12.7 | 14.8 | 16.8 | 18.6 | 20.0 | 21.2 | 22.1 | 22.7 | 23.0 |
| 0.6 | 7.3 | 9.4 | 11.7 | 14.0 | 16.1 | 18.0 | 19.7 | 21.0 | 22.0 | 22.7 | 23.2 |
| 0.7 | 6.3 | 8.5 | 10.8 | 13.2 | 15.5 | 17.6 | 19.3 | 20.8 | 21.9 | 22.7 | 23.2 |
| 0.8 | 5.6 | 7.7 | 10.2 | 12.6 | 15.0 | 17.2 | 19.0 | 20.6 | 21.8 | 22.7 | 23.5 |
| 0.9 | 4.9 | 7.1 | 9.6 | 12.1 | 14.5 | 16.8 | 18.7 | 20.3 | 21.6 | 22.6 | 23.2 |
| 1.0 | 4.4 | 6.6 | 9.1 | 11.6 | 14.1 | 16.4 | 18.5 | 20.2 | 21.5 | 22.5 | 23.7 |
| 1.1 | 4.0 | 6.2 | 8.6 | 11.2 | 13.8 | 16.2 | 18.2 | 20.0 | 21.4 | 22.4 | 23.2 |
| 1.2 | 3.7 | 5.8 | 8.3 | 10.9 | 13.5 | 15.9 | 18.0 | 19.8 | 21.3 | 22.4 | 23.2 |
| 1.3 | 3.4 | 5.5 | 8.0 | 10.6 | 13.2 | 15.7 | 17.8 | 19.7 | 21.2 | 22.3 | 23.1 |
| 1.4 | 3.1 | 5.2 | 7.7 | 10.3 | 13.0 | 15.5 | 17.7 | 19.5 | 21.1 | 22.2 | 23.1 |
| 1.5 | 2.9 | 5.0 | 7.4 | 10.1 | 12.8 | 15.3 | 17.5 | 19.4 | 21.0 | 22.2 | 23.1 |

¹Shell height derived from von Bertalanffy growth equation: $t_c = 151.84 (1 - e^{-0.2997(t-1.1256)})$.

Heat weight derived from shell height-meat weight equation: Meat Weight_(g) = 5.92915×10^{-6} Shell Height_(mm)³.
3.2335

Table 46. Yield (grams, meat weight) per recruit for Gulf of Maine sea scallops as a function of fishing mortality rate (F) and age at first capture (t_c). Natural mortality (M) = 0.1, and age at recruitment (t_p) = 2.0 years.

| Age at first capture (t_c , years) and corresponding shell height (mm) and meat weight (g) ¹ | | | | | | | | | | | |
|--|---------------|---------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Fishing Mortality | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 |
| Rate F | (26.9) (42.3) | (56.1) (68.4) | (79.4) (89.3) | (98.2) (106.1) | (113.2) (119.6) | (125.3) (130.4) | (135.0) (139.1) | (139.1) (142.8) | (142.8) (146.1) | (146.1) (149.0) | (149.0) (151.6) |
| t_c | (0.1) (0.6) | (1.6) (3.2) | (3.4) (5.4) | (8.2) (11.4) | (14.9) (18.7) | (22.6) (30.6) | (34.5) (38.3) | (38.3) (41.9) | (45.4) (48.7) | (48.7) (51.7) | (51.7) (54.6) |
| | | | | | | | | | | | |
| 0.1 | 11.1 | 11.6 | 12.2 | 12.7 | 13.2 | 13.6 | 13.9 | 14.1 | 14.2 | 14.3 | 14.1 |
| 0.2 | 10.2 | 11.3 | 12.4 | 13.5 | 14.5 | 15.5 | 16.3 | 17.0 | 17.6 | 18.0 | 18.3 |
| 0.3 | 8.1 | 9.4 | 10.8 | 12.2 | 13.6 | 14.9 | 16.1 | 17.2 | 18.1 | 18.8 | 19.4 |
| 0.4 | 6.4 | 7.7 | 9.2 | 10.8 | 12.4 | 13.9 | 15.4 | 16.7 | 17.8 | 18.8 | 19.6 |
| 0.5 | 5.0 | 6.4 | 7.9 | 9.6 | 11.3 | 13.0 | 14.6 | 16.1 | 17.4 | 18.5 | 19.5 |
| 0.6 | 4.1 | 5.4 | 7.0 | 8.7 | 10.5 | 12.3 | 14.0 | 15.6 | 17.0 | 18.2 | 19.3 |
| 0.7 | 3.4 | 4.6 | 6.2 | 7.9 | 9.8 | 11.6 | 13.4 | 15.1 | 16.6 | 17.9 | 19.1 |
| 0.8 | 2.8 | 4.1 | 5.6 | 7.3 | 9.2 | 11.1 | 12.9 | 14.7 | 16.3 | 17.7 | 18.9 |
| 0.9 | 2.4 | 3.6 | 5.1 | 6.8 | 8.7 | 10.7 | 12.6 | 14.3 | 16.0 | 17.4 | 18.7 |
| 1.0 | 2.1 | 3.2 | 4.7 | 6.4 | 8.3 | 10.3 | 12.2 | 14.0 | 15.7 | 17.2 | 18.5 |
| 1.1 | 1.8 | 2.9 | 4.4 | 6.1 | 8.0 | 10.0 | 11.9 | 13.8 | 15.5 | 17.0 | 18.4 |
| 1.2 | 1.6 | 2.7 | 4.1 | 5.8 | 7.7 | 9.7 | 11.7 | 13.6 | 15.3 | 16.9 | 18.2 |
| 1.3 | 1.4 | 2.5 | 3.9 | 5.6 | 7.5 | 9.5 | 11.5 | 13.4 | 15.1 | 16.7 | 18.1 |
| 1.4 | 1.3 | 2.3 | 3.7 | 5.4 | 7.3 | 9.3 | 11.3 | 13.2 | 15.0 | 16.6 | 18.0 |
| 1.5 | 1.2 | 2.1 | 3.5 | 5.2 | 7.1 | 9.1 | 11.1 | 13.0 | 14.8 | 16.5 | 17.9 |

¹ Shell height derived from Von Bertalanffy growth equation: $t_c = 174.32 (1 - e^{-0.2202(t-1.2383)})$.

Heat Weight derived from shell height-meat weight equation: $\text{Heat Weight (g)} = 1.32248 \times 10^{-6} \text{ Shell Height (mm)}$

3.4813

Table 47. Yield (grams, meat weight) per recruit for sea scallops from Georges Bank, the Mid-Atlantic, and the Gulf of Maine as a function of fishing mortality rate (F) for age at first capture (t_c) corresponding to 25, 30, 40, and 60 meat counts (number of meats per pound). Shell heights (mm) for each meat count and t_c values are also provided. F_{max} and $F_{0.1}$ values for each yield per recruit curve are also presented. All analyses performed with natural mortality rate (M) = 0.1 and age at recruitment (t_p) = 2.0 years.

| Region | Meat Count | Shell Height | t_c | Fishing Mortality Rate (F) | | | | | | | | | | | | F_{max} | $F_{0.1}$ | | | |
|---------------|------------|--------------|-------|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|-----------|-----------|------|------|------|
| | | | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | | |
| Georges Bank | 25 | 103.1 | 4.797 | 15.1 | 18.9 | 19.7 | 19.6 | 19.3 | 18.9 | 18.5 | 18.2 | 17.9 | 17.4 | 17.1 | 16.9 | 16.7 | 16.6 | 0.33 | 0.17 | |
| | 30 | 97.6 | 4.484 | 15.0 | 18.5 | 19.1 | 18.8 | 18.3 | 17.8 | 17.4 | 17.0 | 16.6 | 16.3 | 16.0 | 15.7 | 15.5 | 15.3 | 15.1 | 0.29 | 0.16 |
| | 40 | 89.5 | 4.076 | 14.8 | 17.9 | 18.1 | 17.6 | 16.9 | 16.2 | 15.7 | 15.1 | 14.7 | 14.3 | 13.9 | 13.6 | 13.4 | 13.1 | 12.9 | 0.26 | 0.15 |
| | 60 | 79.3 | 7.631 | 14.5 | 17.1 | 16.8 | 16.0 | 15.1 | 14.3 | 13.6 | 13.0 | 12.4 | 12.0 | 11.6 | 11.2 | 10.9 | 10.7 | 10.4 | 0.23 | 0.14 |
| Mid-Atlantic | 25 | 100.9 | 4.770 | 15.5 | 19.3 | 20.0 | 19.8 | 19.4 | 19.0 | 18.6 | 18.2 | 17.9 | 17.3 | 17.1 | 16.9 | 16.7 | 16.5 | 0.31 | 0.16 | |
| | 30 | 95.6 | 4.440 | 15.4 | 18.9 | 19.3 | 18.9 | 18.4 | 17.8 | 17.3 | 16.9 | 16.5 | 16.2 | 15.9 | 15.6 | 15.4 | 15.2 | 15.0 | 0.28 | 0.15 |
| | 40 | 87.8 | 4.006 | 15.2 | 18.2 | 18.2 | 17.6 | 16.8 | 16.2 | 15.5 | 15.0 | 14.6 | 14.2 | 13.8 | 13.5 | 13.3 | 13.0 | 12.8 | 0.25 | 0.14 |
| | 60 | 77.8 | 3.522 | 14.9 | 17.2 | 16.8 | 15.9 | 14.9 | 14.1 | 13.4 | 12.7 | 12.2 | 11.8 | 11.4 | 11.0 | 10.7 | 10.5 | 10.2 | 0.22 | 0.13 |
| Gulf of Maine | 25 | 108.9 | 5.689 | 14.2 | 17.3 | 17.6 | 17.2 | 16.6 | 16.1 | 15.7 | 15.3 | 15.0 | 14.7 | 14.5 | 14.2 | 14.1 | 13.9 | 13.7 | 0.27 | 0.15 |
| | 30 | 104.0 | 5.361 | 14.0 | 16.9 | 16.9 | 16.3 | 15.7 | 15.1 | 14.6 | 14.2 | 13.9 | 13.6 | 13.3 | 13.1 | 12.8 | 12.7 | 12.5 | 0.25 | 0.15 |
| | 40 | 96.8 | 4.918 | 13.8 | 16.2 | 15.9 | 15.2 | 14.4 | 13.7 | 13.1 | 12.7 | 12.2 | 11.9 | 11.6 | 11.4 | 11.1 | 10.9 | 10.8 | 0.22 | 0.14 |
| | 60 | 87.4 | 4.399 | 13.5 | 15.3 | 14.6 | 13.6 | 12.7 | 11.9 | 11.3 | 10.7 | 10.3 | 9.9 | 9.6 | 9.3 | 9.1 | 8.9 | 8.7 | 0.20 | 0.13 |

[†]Shell height corresponding to the average meat weight per scallop for each meat count (60 count: 7.56 g; 30 count: 14.34 g; 30 count: 15.12 g; 25 count: 16.14 g) was derived from the following meat weight-shell height equations:

Georges Bank: Shell Height (mm) = 43.3194 Meat Weight (g)

$$0.29904$$

Mid-Atlantic: Shell Height (mm) = 42.6830 Meat Weight (g)

$$0.29696$$

Gulf of Maine: Shell Height (mm) = 52.6149 Meat Weight (g)

$$0.25093$$

Table 46. Current status and recruitment prospects for sea scallop resources off New England and in the Mid-Atlantic.

| Resource Area | USA Commercial Age Class Frequency ³ | Survey Year | Relative Abundance Indices ^{1,2} | | | Recruitment Prospects |
|------------------------|---|-------------|---|----------------|-------|---|
| | | | Pre-Recruit <70 mm | Recruit ≥70 mm | Total | |
| <u>Gulf of Maine</u> | | | | | | |
| Offshore: 30-60 fms | 1980: '75 and '74 year classes dominant | 1975 | 1.2 | 1.4 | 2.6 | Poor recruitment from the 1977 year class. |
| | | 1976 | 0.4 | 1.4 | 1.8 | |
| | | 1977 | 0.4 | 1.5 | 1.9 | Low level recruitment from the 1978 year class. |
| | 1981: Mixed year classes, '76 year class and older | 1978 | 2.2 | 1.7 | 3.9 | |
| | | 1979 | 0.7 | 3.0 | 3.7 | |
| | | 1980 | 0.0 | 2.1 | 2.1 | |
| | | 1981 | 0.5 | 1.2 | 1.7 | |
| Offshore: 61-100 fms | 1980-1981: Little, if any, commercial exploitation | 1975 | 0.0 | 0.1 | 0.1 | Very good recruitment from the 1976 year class. |
| | | 1976 | <0.1 | <0.1 | 0.1 | |
| | | 1977 | 1.1 | 0.6 | 1.7 | |
| | | 1978 | 4.1 | 0.7 | 4.8 | |
| | | 1979 | 2.1 | 6.2 | 8.3 | |
| | | 1980 | 0.1 | 33.0 | 33.1 | |
| | | 1981 | 5.3 | 92.2 | 97.5 | |
| <u>Georges Bank</u> | | | | | | |
| South Channel | 1980: Mixed year classes, '76 year class and older | 1975 | 30.2 | 25.9 | 56.1 | Very good recruitment from the 1977 year class. Low level recruitment from the 1978 year class. |
| | | 1977 | 4.0 | 52.5 | 56.5 | |
| | | 1978 | 5.1 | 32.9 | 38.0 | |
| | 1981: '77 year class predominant | 1979 | 4.5 | 56.5 | 61.0 | |
| | | 1980 | 31.2 | 19.3 | 70.5 | |
| | | 1981 | 9.9 | 24.0 | 33.9 | |
| Southeast Part | 1980: Mixed year classes, '76 year class and older | 1975 | 1.8 | 38.2 | 40.0 | Good recruitment from the 1977 year class. Low level recruitment from the 1978 year class. |
| | | 1977 | 2.8 | 24.3 | 27.1 | |
| | | 1978 | 2.1 | 23.9 | 26.0 | |
| | 1981: Mixed year classes '76 and older | 1979 | 6.9 | 19.2 | 26.1 | |
| | | 1980 | 19.4 | 37.4 | 56.8 | |
| | | 1981 | 1.3 | 17.4 | 18.7 | |
| Northern Edge and Peak | 1980: Mixed year classes, '75 year class and '72 year class predominant | 1975 | 86.9 | 120.2 | 207.1 | Exceptional recruitment from the 1977 year class. Very good recruitment from the 1978 year class. |
| | | 1977 | 66.2 | 384.7 | 450.9 | |
| | | 1978 | 177.5 | 372.6 | 550.1 | |
| | | 1979 | 63.9 | 232.9 | 296.8 | |
| | 1981: '77 year class predominant | 1980 | 599.5 | 128.2 | 727.5 | |
| | | 1981 | 277.0 | 404.9 | 681.9 | |
| <u>Mid-Atlantic</u> | | | | | | |
| New York Bight | 1980: Mixed year classes none predominant | 1975 | 27.3 | 23.5 | 50.8 | Low level recruitment from the 1977 and 1978 year classes. |
| | | 1977 | 1.1 | 39.4 | 40.5 | |
| | 1981: Mixed year classes '76 and '74 year classes most predominant | 1978 | 2.5 | 36.1 | 38.6 | |
| | | 1979 | 3.9 | 15.7 | 17.6 | |
| | | 1980 | 10.7 | 10.8 | 21.5 | |
| | | 1981 | 13.1 | 13.5 | 26.6 | |
| Delmarva | 1980: Mixed year classes, '75 and '74 year classes most predominant | 1975 | 25.2 | 15.6 | 40.8 | Low level recruitment from the 1977 and 1978 year classes. |
| | | 1977 | 3.3 | 24.0 | 27.3 | |
| | | 1978 | 8.3 | 26.0 | 34.3 | |
| | | 1979 | 30.8 | 39.3 | 70.1 | |
| | 1981: Mixed year classes, '77 year class and older | 1980 | 23.4 | 13.3 | 36.7 | |
| | | 1981 | 2.8 | 5.9 | 8.7 | |
| Virginia-No. Carolina | 1980: '76 and '75 year classes predominant | 1975 | 47.7 | 10.9 | 58.6 | Poor recruitment from the 1977 and 1978 year classes. |
| | | 1977 | 0.2 | 0.2 | 0.4 | |
| | 1981: Mixed year classes, '76 year class and older | 1978 | 15.4 | 7.1 | 22.5 | |
| | | 1979 | 4.6 | 6.5 | 11.1 | |
| | | 1980 | 0.8 | 4.6 | 5.4 | |
| | | 1981 | 0.4 | 0.8 | 1.2 | |

¹ Relative abundance indices for Georges Bank and the Mid-Atlantic areas represent standardized mean number per tow from sea scallop research vessel surveys. For all areas on Georges Bank, except the Northern Edge and Peak during 1978-1981, and for all areas in the Mid-Atlantic, the indices are derived from NMFS research vessel sea scallop surveys. The 1978-1981 Northern Edge and Peak indices are derived from Canadian research vessel sea scallop survey data standardized for dredge size and type, and for distance towed.

² Relative abundance indices for offshore Gulf of Maine represent stratified mean number per tow from NMFS spring offshore research vessel bottom trawl surveys.

³ 1981 data derived from January-September commercial size-frequency samples only.