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# Stock Abundance Indices and Length Compositions of Demersal Redfish and Other Finfish in NAFO Subarea 1 and Near Bottom Water Temperature Derived from the German Bottom Trawl Survey, 1982-2004

by

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## Abstract

Survey abundance, biomass estimates and length compositions for golden and deep sea redfish >= 17 cm (*Sebastes marinus* and *S. mentella*), juvenile redfish <17 cm, American plaice (*Hippoglossoides platessoides*), Atlantic and spotted wolfish (*Anarhichas lupus* and *A. minor*) and thorny skate (*Raja radiata*) in Divisions 1B-1F are presented. In general, stocks sizes have declined significantly until the early 1990s and remained low. However, the stocks of American plaice, Atlantic and spotted wolfish indicate significant recovery potential due to increased recruitment. They are presently composed of small and mainly juvenile specimens. Good recruitment was also recorded in the cod stock off West and East Greenland and also juvenile haddock occurred in Greenland waters. In 2004, near bottom water temperature continued to be high (since 1996) close to its maximum of the time series in 2003.

## Introduction

This paper presents estimates of stock abundance and biomass indices disaggregated by length as derived from annual German groundfish surveys for golden and deep sea redfish >= 17 cm (*Sebastes marinus* and *S. mentella*), juvenile redfish <17 cm, American plaice (*Hippoglossoides platessoides*), Atlantic and spotted wolfish (*Anarhichas lupus* and *A. minor*) and thorny skate (*Raja radiata*). The surveys commenced in 1982 and represent the longest time series of quantitative information from the traditional fishing grounds off West Greenland south of 67° northern latitude. Environmental conditions are reflected as trends in near bottom water temperatures. The information is presented as an update of continued analyses of the survey results (Rätz, 1999; Rätz and Stransky, 2004.)

## Materials and Methods

Abundance, biomass estimates and length structures were derived from annual groundfish surveys covering shelf areas and the continental slope off West Greenland. Surveys commenced in 1982 and were primarily designed for the assessment of cod. Because of favourable weather and ice conditions and to avoid spawning concentrations, autumn was chosen for the time of the surveys. These were carried out by the research vessel (R/V) WALTHER HERWIG (II) throughout most of the time period. In 1984 R/V ANTON DOHRN was used and she was replaced by the new R/V WALTHER HERWIG III since 1994, respectively.

The fishing gear used was a standardized 140-feet bottom trawl, its net frame rigged with heavy ground gear because of the rough nature of the fishing grounds. A small mesh liner (10mm) was used inside the cod end. The horizontal distance between wing-ends was 25 m at 300 m depth, the vertical net opening being 4 m. In 1994, smaller Polyvalent doors (4.5 m2, 1,500 kg) were used for the first time to reduce net damages due to overspread caused by bigger doors (6 m2, 1,700 kg), which have been used earlier. All calculations of abundance and biomass

indices were based on the 'swept area' method using 22 m horizontal net opening as trawl parameter, i. e. the constructional width specified by the manufacturer. The towing time was normally 30 min. at a speed of 4.5 knots. Trawl parameters are listed in Table 1. Hauls, which received net damage or became hang-up after less than 15 minutes, were rejected. Some hauls of the 1987 and 1988 surveys were also included although their towing time had been intentionally reduced to 10 minutes because of the expected large cod catches as observed from echo sounder traces.

Fish were identified to species or lowest taxonomic level and the catch in number and weight was recorded. Total fish lengths were measured to cm below.

The surveys were primarily designed for the assessment of cod. In order to reduce the error of abundance estimates, the subdivision of shelf areas and the continental slope into different geographic and depth strata was required due to a pronounced heterogeneity of cod distribution. The survey area was thus split into four geographic strata. Each stratum was itself subdivided into two depth strata covering the 0-200 m and 201-400 m zones. Figure 1 and Table 2 indicate the names of the 8 strata, their geographic boundaries, depth ranges and areas in nautical square miles (nm2). All strata were limited at the 3 mile offshore line.

The applied strategy was to distribute the sampling effort according both to the stratum areas and to cod abundance. Consequently, fifty percent of the hauls were allocated proportionally to strata by stratum area while the other fifty percent were apportioned on the basis of a review of the historical mean cod abundance/$nm^2$, all hauls being randomly distributed within trawlable areas of the various strata. Non-trawlable areas were mainly located inshore. During 1982-2004, 1 800 successful sets were carried out, the numbers of valid sets by year and stratum being listed in Table 2. In 1995 and since 2001, the survey area off West Greenland was incompletely covered due to technical problems. In 2003, the entire survey area was covered. Figure 1 shows the positions of hauls conducted during the most recent survey.

Stratified abundance estimates were calculated from catch-per-tow data using the stratum areas as weighting factor (Cochran, 1953; Saville, 1977). Strata with less than five valid sets were rejected from the calculation. The coefficient of catchability was set arbitrarily at 1.0, implying that estimates are merely indices of abundance and biomass. Respective confidence intervals (CI) were set at the 95% level of significance of the stratified mean.

Near bottom water temperature was measured directly before or after a trawl haul be means of a CTD sonde. The annual stratified mean temperature was estimated in the same manner as applied for the fish abundance, i.e. through area weighting (Cochran, 1953; Saville, 1977).

## Results

Fig. 1 displays the coverage of the survey area by the geographical haul distribution in 2004. All abundance estimates in 1995 and 2002 must be considered significantly underestimated as a result of the incomplete coverage of the survey area.

The abundance and biomass indices by stratum of *S. marinus* >= 17 cm is given in Table 3 and illustrated in Fig. 2. The stock is indicated to be depleted since the early 1990s lacking any recovery signs. Recently, the stock is mainly composed of golden redfish varying among 25-40 cm in body length (Fig. 3 and Table 4).

Table 5 lists the abundance and biomass indices of *S. mentella* >= 17 cm by stratum, the values being presented in Figure 4. Since 1996, the survey abundance is increased but the stock consists mainly of juvenile fish below 25 cm length (Fig. 5 and Table 6). It must be noted, that the survey design hardly covers the distribution area of deep sea redfish, and the survey results should be carefully interpreted.

The abundance of juvenile redfish <17 cm *Sebastes spp.* has varied over a wide range since 1982. More recent indices since 2001 are among the lowest (Fig. 6 and Table 7). The length composition of the stock has reiterately revealed peaks at 6-7, 10-12 and 14-16 cm, an indication of sizes at ages 0, 1 and 2 years in autumn (Fig. 7 and Table 8).

Abundance and biomass of American plaice *Hippoglossoides platessoides* has been significantly reduced since the early 1990s (Fig. 8 and Table 9). The recently increased stock is predominantly composed of small fish below 20 cm as illustrated in Figure 9 and listed in Table 10. The catchability of flatfish by the survey gear is considered poor but the time series seems to represent the stock development. Consequently, the abundant juveniles imply a certain recovery potential.

Atlantic wolfish *Anarhichas lupus* does not show a decrease in survey abundance but in biomass estimates, which were significantly lower since the early 1990s (Fig. 10 and Table 11). That indicates that the stock is mainly composed of small fish with low body weights. This indication is confirmed by the length distributions given in Figure 11 and Table 12 as fish below 30 cm are recently dominating the size composition of the stock. The abundant recruiting sizes below 30 cm imply a certain recovery potential.

In accordance with lots of other finfish stocks, the abundance and biomass of spotted wolfish *Anarhichas minor* decreased significantly since 1992 and remained low until 2000 (Fig. 12 and Table 13). Since then, and especially in 2004, the stock indices increased significantly based on more frequent individuals below 60 cm. The size distribution is scattered as a result of low catch rates and high variation in body length (Fig. 13 and Table 14).

Both abundance and biomass indices of thorny skate *Raja radiata* are recently very low compared to the values estimated during the 1980s (Fig. 14 and Table 15). The size composition is dominated by small fish below 25 cm body length (Fig. 15 and Table 16).

In general, stocks sizes have declined significantly until the early 1990s and remained low. However, the stocks of American plaice, Atlantic and spotted wolfish indicate significant recovery potential due to increased recruitment. They are presently composed of small and mainly juvenile specimens. Good recruitment was also recorded in the cod stock off West and East Greenland (ICES CM, 2005) and juvenile haddock occurred in Greenland waters (Stein, 2004).

Trends in near bottom temperature means by stratum and stratified mean temperature are listed in Table 17 and shown in Figure 16. They reveal that the warm conditions off West Greenland continued since 1996. In 2004, near bottom water temperature were close to its maximum of the time series in 2003.The stratum mean temperatures show a significant depth effect, with the colder temperatures measured in the shallow strata (<200 m). Deeper strata are generally warmer by about 1-2°C.

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Table 1. Trawl parameters of the German bottom trawl survey off West Greenland.

| | German survey |
|---|---|
| Gear | 140-feet bottom trawl |
| Horizontal net opening | 22 m |
| Standard trawling speed | 4.5 kn |
| Towing time | 30 minutes |
| Variable to standard distance | |
| Coefficient of catchability | 1.0 |

Table 2. Survey areas and effort (hauls) of the German bottom trawl survey off West Greenland by stratum, 1982-2004.

| STRATUM | 1.1 | 1.2 | 2.1 | 2.2 | 3.1 | 3.2 | 4.1 | 4.2 | Sum |
|---|---|---|---|---|---|---|---|---|---|
| AREA nm² | 6805 | 1881 | 2350 | 1018 | 1938 | 742 | 2568 | 971 | 18273 |
| 1982 | 20 | 11 | 16 | 7 | 9 | 6 | 13 | 2 | 84 |
| 1983 | 26 | 11 | 25 | 11 | 17 | 5 | 18 | 4 | 117 |
| 1984 | 25 | 13 | 26 | 8 | 18 | 6 | 21 | 4 | 121 |
| 1985 | 10 | 8 | 26 | 10 | 17 | 5 | 21 | 4 | 101 |
| 1986 | 27 | 9 | 21 | 9 | 16 | 7 | 18 | 3 | 110 |
| 1987 | 25 | 11 | 21 | 4 | 18 | 3 | 21 | 3 | 106 |
| 1988 | 34 | 21 | 28 | 5 | 18 | 5 | 18 | 2 | 131 |
| 1989 | 26 | 14 | 30 | 9 | 8 | 3 | 25 | 3 | 118 |
| 1990 | 19 | 7 | 23 | 8 | 16 | 3 | 21 | 6 | 103 |
| 1991 | 19 | 11 | 23 | 7 | 12 | 6 | 14 | 5 | 97 |
| 1992 | 6 | 6 | 6 | 5 | 6 | 6 | 7 | 5 | 47 |
| 1993 | 9 | 6 | 9 | 6 | 10 | 8 | 7 | 0 | 55 |
| 1994 | 16 | 13 | 13 | 8 | 10 | 6 | 7 | 5 | 78 |
| 1995 | 0 | 0 | 3 | 0 | 10 | 7 | 10 | 5 | 35 |
| 1996 | 5 | 5 | 8 | 5 | 12 | 5 | 10 | 5 | 55 |
| 1997 | 5 | 6 | 5 | 5 | 6 | 5 | 8 | 5 | 45 |
| 1998 | 9 | 5 | 10 | 7 | 11 | 6 | 10 | 5 | 63 |
| 1999 | 8 | 6 | 14 | 8 | 13 | 6 | 9 | 3 | 67 |
| 2000 | 13 | 6 | 14 | 7 | 14 | 5 | 9 | 5 | 73 |
| 2001 | 0 | 0 | 15 | 7 | 15 | 5 | 11 | 6 | 59 |
| 2002 | 0 | 0 | 7 | 2 | 5 | 6 | 8 | 4 | 32 |
| 2003 | 0 | 0 | 7 | 6 | 7 | 7 | 6 | 5 | 38 |
| 2004 | 9 | 7 | 11 | 9 | 9 | 6 | 9 | 5 | 65 |

Table 3 *S. marinus* >= 17cm, abundance (1 000) and biomass (tons) for West Greenland by stratum and total, 1982-2004. Confidence intervals (CI) are given in per cent of the stratified mean at 95% level of significance.

Abundance

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 7016 | 6341 | 88792 | 5511 | 5736 | 14876 | 4088 | | 132360 | 55 |
| 1983 | 4022 | 3186 | 3356 | 6523 | 4043 | 5886 | 1697 | | 28713 | 53 |
| 1984 | 1327 | 3438 | 461 | 1209 | 10671 | 2776 | 4214 | | 24096 | 65 |
| 1985 | 4661 | 10451 | 6157 | 1569 | 3221 | 14442 | 4974 | | 45475 | 52 |
| 1986 | 6329 | 4324 | 2077 | 3483 | 21504 | 2883 | 2717 | | 43317 | 53 |
| 1987 | 905 | 653 | 1328 | | 9611 | | 660 | | 13157 | 39 |
| 1988 | 830 | 2238 | 343 | 2255 | 5938 | 1954 | 732 | | 14290 | 54 |
| 1989 | 422 | 421 | 776 | 690 | 6490 | | 362 | | 9161 | 60 |
| 1990 | 122 | 433 | 280 | 710 | 1037 | | 146 | 2270 | 4998 | 75 |
| 1991 | 225 | 256 | 96 | 691 | 236 | 528 | 21 | 1671 | 3724 | 51 |
| 1992 | 129 | 105 | 73 | 190 | 194 | 476 | 193 | 836 | 2196 | 151 |
| 1993 | 170 | 482 | 59 | 267 | 79 | 132 | 0 | | 1189 | 93 |
| 1994 | 109 | 325 | 155 | 167 | 66 | 46 | 152 | 247 | 1267 | 41 |
| 1995 | | | | | 50 | 68 | 39 | 146 | 303 | 97 |
| 1996 | 150 | 267 | 21 | 243 | 380 | 383 | 28 | 298 | 1770 | 47 |
| 1997 | 252 | 609 | 16 | 175 | 120 | 311 | 36 | 552 | 2071 | 40 |
| 1998 | 116 | 141 | 45 | 142 | 19 | 106 | 126 | 254 | 949 | 160 |
| 1999 | 225 | 293 | 132 | 219 | 72 | 213 | 10 | | 1164 | 70 |
| 2000 | 197 | 621 | 63 | 571 | 83 | 200 | 10 | 836 | 2581 | 59 |
| 2001 | | | 106 | 304 | 72 | 456 | 8 | 1557 | 2503 | 124 |
| 2002 | | | 101 | | 333 | 536 | 13 | | 983 | 93 |
| 2003 | | | 251 | 375 | 186 | 516 | 0 | 1998 | 3326 | 50 |
| 2004 | 143 | 331 | 56 | 373 | 209 | 453 | 64 | 2042 | 3671 | 63 |

Biomass

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 1797 | 1354 | 34439 | 2557 | 3205 | 9794 | 2532 | | 55678 | 54 |
| 1983 | 844 | 944 | 1572 | 3043 | 1874 | 4816 | 1084 | | 14177 | 61 |
| 1984 | 306 | 893 | 197 | 518 | 4934 | 2284 | 2088 | | 11220 | 55 |
| 1985 | 1021 | 1819 | 2968 | 472 | 1426 | 9210 | 2720 | | 19636 | 34 |
| 1986 | 1279 | 1215 | 752 | 1230 | 10122 | 1705 | 1762 | | 18065 | 38 |
| 1987 | 252 | 246 | 660 | | 4954 | | 439 | | 6551 | 38 |
| 1988 | 143 | 404 | 118 | 942 | 2570 | 1342 | 383 | | 5902 | 60 |
| 1989 | 184 | 137 | 273 | 249 | 2620 | | 208 | | 3671 | 47 |
| 1990 | 41 | 149 | 75 | 275 | 479 | | 80 | 1343 | 2442 | 45 |
| 1991 | 41 | 83 | 24 | 226 | 120 | 272 | 3 | 1007 | 1776 | 98 |
| 1992 | 20 | 36 | 21 | 61 | 52 | 241 | 69 | 447 | 947 | 130 |
| 1993 | 48 | 111 | 19 | 114 | 39 | 55 | 0 | | 386 | 68 |
| 1994 | 34 | 147 | 47 | 64 | 27 | 36 | 41 | 80 | 476 | 38 |
| 1995 | | | | | 19 | 19 | 21 | 43 | 102 | 38 |
| 1996 | 61 | 102 | 2 | 60 | 128 | 118 | 8 | 132 | 611 | 40 |
| 1997 | 41 | 261 | 5 | 61 | 35 | 188 | 10 | 246 | 847 | 58 |
| 1998 | 20 | 43 | 12 | 42 | 14 | 54 | 56 | 117 | 358 | 102 |
| 1999 | 54 | 71 | 35 | 68 | 17 | 82 | 8 | | 335 | 61 |
| 2000 | 68 | 173 | 31 | 215 | 21 | 76 | 3 | 388 | 975 | 96 |
| 2001 | | | 24 | 113 | 54 | 228 | 3 | 776 | 1198 | 67 |
| 2002 | | | 24 | | 157 | 230 | 13 | | 424 | 82 |
| 2003 | | | 96 | 174 | 83 | 284 | 0 | 966 | 1603 | 85 |
| 2004 | 61 | 171 | 24 | 181 | 91 | 262 | 41 | 1235 | 2066 | 61 |

Table 4. *S. marinus* >= 17 cm. Length composition by year (1 000), 1982-2004.

| Length | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.5 | 1003 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 39 | 50 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| 16.5 | 955 | 662 | 574 | 2381 | 1438 | 30 | 686 | 8 | 24 | 21 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17.5 | 1068 | 629 | 572 | 1918 | 1347 | 64 | 321 | 46 | 137 | 87 | 15 | 0 | 0 | 0 | 8 | 12 | 0 | 0 | 30 | 28 | 26 | 27 | 64 |
| 18.5 | 884 | 510 | 442 | 1372 | 1733 | 51 | 131 | 37 | 58 | 94 | 51 | 35 | 90 | 0 | 22 | 0 | 0 | 22 | 65 | 6 | 26 | 69 | 45 |
| 19.5 | 1170 | 435 | 397 | 1258 | 1241 | 76 | 351 | 90 | 45 | 53 | 5 | 95 | 89 | 33 | 16 | 30 | 6 | 31 | 95 | 85 | 44 | 51 | 77 |
| 20.5 | 1334 | 657 | 332 | 1434 | 1047 | 95 | 253 | 131 | 74 | 122 | 44 | 147 | 85 | 29 | 425 | 113 | 34 | 41 | 127 | 30 | 34 | 32 | 55 |
| 21.5 | 1701 | 614 | 378 | 1192 | 940 | 132 | 243 | 109 | 79 | 87 | 147 | 71 | 42 | 30 | 27 | 93 | 5 | 100 | 78 | 52 | 32 | 120 | 61 |
| 22.5 | 2031 | 770 | 418 | 1320 | 1155 | 187 | 303 | 140 | 143 | 135 | 80 | 22 | 48 | 15 | 34 | 81 | 68 | 51 | 113 | 97 | 96 | 93 | 88 |
| 23.5 | 3487 | 806 | 465 | 1285 | 1140 | 264 | 298 | 214 | 176 | 102 | 87 | 23 | 26 | 11 | 79 | 75 | 33 | 103 | 84 | 63 | 18 | 97 | 95 |
| 24.5 | 4690 | 808 | 532 | 1119 | 1787 | 449 | 464 | 320 | 187 | 131 | 148 | 45 | 70 | 11 | 27 | 158 | 76 | 51 | 150 | 74 | 68 | 109 | 153 |
| 25.5 | 6049 | 1231 | 690 | 1374 | 1611 | 381 | 640 | 343 | 251 | 160 | 106 | 110 | 68 | 4 | 63 | 143 | 71 | 64 | 179 | 134 | 31 | 95 | 207 |
| 26.5 | 9267 | 1408 | 833 | 1556 | 1717 | 631 | 765 | 561 | 218 | 186 | 140 | 41 | 91 | 7 | 152 | 124 | 121 | 109 | 199 | 166 | 22 | 85 | 202 |
| 27.5 | 11170 | 1509 | 994 | 2049 | 1879 | 647 | 798 | 679 | 255 | 171 | 94 | 86 | 70 | 29 | 43 | 155 | 103 | 86 | 115 | 175 | 74 | 160 | 266 |
| 28.5 | 10818 | 1690 | 1315 | 1781 | 2213 | 768 | 769 | 732 | 272 | 192 | 81 | 35 | 40 | 18 | 41 | 144 | 36 | 66 | 184 | 219 | 35 | 150 | 256 |
| 29.5 | 14994 | 1992 | 1490 | 2358 | 2549 | 937 | 914 | 871 | 221 | 273 | 140 | 16 | 65 | 14 | 34 | 83 | 66 | 75 | 142 | 143 | 32 | 280 | 124 |
| 30.5 | 11490 | 2524 | 2054 | 3193 | 3285 | 1024 | 1081 | 1071 | 410 | 141 | 144 | 75 | 44 | 15 | 39 | 120 | 53 | 91 | 138 | 143 | 54 | 199 | 189 |
| 31.5 | 10177 | 1941 | 1978 | 2321 | 3090 | 1155 | 947 | 709 | 327 | 192 | 107 | 41 | 45 | 8 | 23 | 113 | 19 | 109 | 124 | 145 | 13 | 227 | 127 |
| 32.5 | 8118 | 1797 | 1928 | 2873 | 3224 | 1028 | 826 | 715 | 268 | 193 | 132 | 49 | 49 | 25 | 8 | 150 | 16 | 10 | 86 | 137 | 60 | 244 | 103 |
| 33.5 | 7888 | 1422 | 1684 | 2080 | 2926 | 1235 | 720 | 625 | 204 | 236 | 150 | 35 | 19 | 0 | 148 | 33 | 10 | 21 | 115 | 129 | 47 | 199 | 179 |
| 34.5 | 6925 | 1188 | 1424 | 2144 | 2505 | 946 | 645 | 430 | 260 | 134 | 129 | 40 | 52 | 0 | 78 | 57 | 82 | 19 | 84 | 77 | 27 | 214 | 172 |
| 35.5 | 5731 | 1247 | 1250 | 1765 | 2199 | 901 | 721 | 397 | 259 | 185 | 106 | 27 | 53 | 11 | 29 | 78 | 14 | 26 | 95 | 107 | 31 | 107 | 112 |
| 36.5 | 3801 | 980 | 1052 | 1446 | 1321 | 650 | 562 | 329 | 214 | 134 | 61 | 43 | 49 | 31 | 56 | 40 | 5 | 25 | 84 | 107 | 47 | 144 | 181 |
| 37.5 | 2149 | 668 | 683 | 1211 | 945 | 485 | 467 | 219 | 169 | 156 | 57 | 44 | 0 | 0 | 137 | 17 | 43 | 5 | 76 | 63 | 32 | 96 | 153 |
| 38.5 | 1566 | 650 | 635 | 1289 | 631 | 251 | 364 | 115 | 130 | 81 | 21 | 20 | 37 | 0 | 0 | 22 | 11 | 5 | 60 | 94 | 36 | 75 | 114 |
| 39.5 | 995 | 453 | 379 | 1091 | 413 | 252 | 252 | 120 | 82 | 114 | 9 | 37 | 39 | 0 | 0 | 38 | 27 | 21 | 24 | 63 | 46 | 52 | 103 |
| 40.5 | 472 | 310 | 320 | 1107 | 415 | 201 | 234 | 51 | 127 | 102 | 62 | 4 | 5 | 0 | 127 | 60 | 7 | 0 | 37 | 24 | 4 | 132 | 129 |
| 41.5 | 598 | 259 | 236 | 537 | 222 | 128 | 127 | 27 | 118 | 25 | 5 | 4 | 11 | 0 | 0 | 45 | 6 | 0 | 32 | 52 | 4 | 86 | 64 |
| 42.5 | 234 | 231 | 179 | 572 | 84 | 56 | 64 | 11 | 82 | 65 | 17 | 24 | 29 | 15 | 0 | 40 | 0 | 5 | 29 | 40 | 13 | 30 | 127 |
| 43.5 | 152 | 222 | 197 | 430 | 94 | 39 | 65 | 22 | 54 | 28 | 14 | 0 | 16 | 0 | 0 | 30 | 5 | 0 | 27 | 18 | 13 | 37 | 57 |
| 44.5 | 133 | 101 | 110 | 243 | 40 | 42 | 53 | 15 | 0 | 27 | 0 | 10 | 23 | 0 | 0 | 6 | 5 | 0 | 0 | 18 | 9 | 34 | 91 |
| 45.5 | 23 | 106 | 120 | 221 | 22 | 22 | 45 | 0 | 42 | 19 | 0 | 12 | 14 | 0 | 127 | 6 | 15 | 0 | 0 | 6 | 0 | 6 | 7 |
| 46.5 | 42 | 119 | 92 | 185 | 25 | 13 | 53 | 0 | 24 | 5 | 0 | 0 | 5 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 27 | 31 |
| 47.5 | 41 | 48 | 65 | 94 | 17 | 5 | 16 | 0 | 18 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 14 | 7 |
| 48.5 | 37 | 85 | 64 | 94 | 0 | 0 | 4 | 0 | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 9 | 29 | 0 |
| 49.5 | 46 | 23 | 37 | 68 | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 17 |
| 50.5 | 41 | 73 | 48 | 22 | 9 | 0 | 0 | 4 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| 51.5 | 20 | 20 | 9 | 6 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52.5 | 9 | 71 | 14 | 11 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53.5 | 23 | 89 | 9 | 6 | 4 | 0 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 54.5 | 9 | 50 | 10 | 22 | 8 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 55.5 | 18 | 39 | 5 | 17 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56.5 | 11 | 47 | 5 | 4 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57.5 | 32 | 16 | 14 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 58.5 | 18 | 38 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59.5 | 5 | 28 | 5 | 6 | 5 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60.5 | 9 | 50 | 23 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 5 *S. mentella* >= 17cm, abundance (1 000) and biomass (tons) for West Greenland by stratum and total, 1982-2004. Confidence intervals (CI) are given in per cent of the stratified mean at 95% level of significance.

Abundance

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 0 | 389 | 16 | 348 | 0 | 2360 | 0 | | 3113 | 65 |
| 1983 | 41 | 1010 | 71 | 2528 | 0 | 5236 | 0 | | 8886 | 42 |
| 1984 | 41 | 2966 | 7 | 1276 | 0 | 1115 | 0 | | 5405 | 93 |
| 1985 | 0 | 369 | 31 | 26 | 56 | 327 | 0 | | 809 | 47 |
| 1986 | 2144 | 414 | 38 | 292 | 4 | 444 | 0 | | 3336 | 36 |
| 1987 | 987 | 13679 | 42 | | 56 | | 0 | | 14764 | 45 |
| 1988 | 150 | 3186 | 26 | 777 | 60 | 4620 | 0 | | 8819 | 58 |
| 1989 | 0 | 186 | 9 | 102 | 0 | | 8 | | 305 | 60 |
| 1990 | 0 | 9 | 5 | 704 | 50 | | 0 | 3881 | 4649 | 43 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 652 | 0 | 1773 | 2425 | 81 |
| 1992 | 0 | 36 | 0 | 15 | 0 | 106 | 0 | 0 | 157 | 165 |
| 1993 | 0 | 23 | 0 | 159 | 8 | 0 | 0 | | 190 | 86 |
| 1994 | 0 | 271 | 21 | 96 | 95 | 162 | 0 | 36 | 681 | 168 |
| 1995 | | | | | 29 | 234 | 95 | 1468 | 1826 | 55 |
| 1996 | 1524 | 619 | 0 | 236 | 0 | 1921 | 28 | 7135 | 11463 | 64 |
| 1997 | 252 | 1759 | 0 | 381 | 37 | 3204 | 144 | 30742 | 36519 | 62 |
| 1998 | 0 | 324 | 0 | 212 | 151 | 828 | 10 | 2543 | 4068 | 67 |
| 1999 | 34 | 235 | 7 | 281 | 39 | 1735 | 95 | | 2426 | 43 |
| 2000 | 0 | 94 | 7 | 768 | 31 | 1422 | 0 | 21187 | 23509 | 65 |
| 2001 | | | 24 | 636 | 116 | 5419 | 0 | 13939 | 20134 | 66 |
| 2002 | | | 0 | | 0 | 1351 | 23 | | 1374 | 95 |
| 2003 | | | 0 | 571 | 114 | 1554 | 0 | 9365 | 11604 | 116 |
| 2004 | 225 | 1206 | 40 | 1122 | 242 | 1115 | 139 | 5021 | 9110 | 89 |

Biomass

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 0 | 96 | 7 | 114 | 0 | 893 | 0 | | 1110 | 68 |
| 1983 | 14 | 213 | 26 | 1158 | 0 | 2857 | 0 | | 4268 | 47 |
| 1984 | 7 | 798 | 5 | 491 | 0 | 472 | 0 | | 1773 | 97 |
| 1985 | 0 | 96 | 14 | 11 | 27 | 110 | 0 | | 258 | 35 |
| 1986 | 225 | 38 | 19 | 110 | 4 | 180 | 0 | | 576 | 36 |
| 1987 | 82 | 1183 | 9 | | 31 | | 0 | | 1305 | 46 |
| 1988 | 20 | 425 | 21 | 159 | 45 | 1878 | 0 | | 2548 | 56 |
| 1989 | 0 | 23 | 7 | 15 | 0 | | 0 | | 45 | 63 |
| 1990 | 0 | 6 | 2 | 87 | 8 | | 0 | 542 | 645 | 44 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 153 | 0 | 445 | 598 | 80 |
| 1992 | 0 | 2 | 0 | 1 | 0 | 28 | 0 | 0 | 31 | 160 |
| 1993 | 0 | 4 | 0 | 22 | 2 | 0 | 0 | | 28 | 61 |
| 1994 | 0 | 32 | 2 | 10 | 12 | 24 | 0 | 3 | 83 | 128 |
| 1995 | | | | | 6 | 24 | 10 | 159 | 199 | 52 |
| 1996 | 7 | 55 | 0 | 19 | 0 | 235 | 3 | 689 | 1008 | 59 |
| 1997 | 20 | 141 | 0 | 38 | 2 | 320 | 18 | 2973 | 3512 | 59 |
| 1998 | 0 | 26 | 0 | 17 | 17 | 88 | 3 | 326 | 477 | 73 |
| 1999 | 7 | 21 | 5 | 36 | 6 | 188 | 21 | | 284 | 52 |
| 2000 | 0 | 9 | 0 | 65 | 2 | 122 | 0 | 1915 | 2113 | 57 |
| 2001 | | | 2 | 66 | 10 | 469 | 0 | 1468 | 2015 | 74 |
| 2002 | | | 0 | | 0 | 145 | 3 | | 148 | 102 |
| 2003 | | | 0 | 66 | 12 | 223 | 0 | 1557 | 1858 | 120 |
| 2004 | 34 | 117 | 7 | 122 | 50 | 149 | 23 | 1172 | 1674 | 74 |

Table 6. *S. mentella* >= 17 cm. Length composition by year (1 000), 1982-2004.

| Length | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.5 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16.5 | 0 | 23 | 95 | 29 | 0 | 5220 | 230 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17.5 | 9 | 58 | 140 | 6 | 1303 | 2178 | 217 | 14 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 6345 | 0 | 0 | 10530 | 5250 | 263 | 874 | 1286 |
| 18.5 | 29 | 51 | 102 | 9 | 442 | 2794 | 99 | 19 | 83 | 9 | 17 | 6 | 267 | 701 | 3188 | 9988 | 1341 | 987 | 4518 | 5763 | 157 | 1401 | 1232 |
| 19.5 | 6 | 79 | 164 | 41 | 199 | 1721 | 965 | 64 | 240 | 31 | 25 | 6 | 163 | 366 | 2675 | 11375 | 752 | 479 | 3353 | 3910 | 252 | 1104 | 771 |
| 20.5 | 28 | 89 | 149 | 26 | 117 | 1922 | 748 | 92 | 636 | 9 | 0 | 12 | 76 | 251 | 1853 | 4345 | 543 | 380 | 1903 | 1827 | 316 | 1003 | 552 |
| 21.5 | 40 | 96 | 155 | 26 | 54 | 272 | 532 | 30 | 1077 | 71 | 20 | 6 | 30 | 349 | 935 | 1446 | 408 | 114 | 635 | 655 | 207 | 891 | 683 |
| 22.5 | 18 | 143 | 130 | 13 | 98 | 131 | 722 | 25 | 1544 | 300 | 5 | 19 | 62 | 44 | 721 | 1034 | 364 | 95 | 733 | 713 | 78 | 1516 | 510 |
| 23.5 | 41 | 124 | 194 | 35 | 88 | 84 | 409 | 9 | 640 | 389 | 18 | 6 | 25 | 15 | 328 | 658 | 264 | 49 | 579 | 519 | 37 | 1613 | 343 |
| 24.5 | 38 | 184 | 160 | 85 | 106 | 137 | 346 | 0 | 191 | 649 | 28 | 13 | 22 | 39 | 168 | 721 | 120 | 85 | 413 | 498 | 23 | 1230 | 503 |
| 25.5 | 105 | 265 | 98 | 76 | 35 | 36 | 355 | 19 | 76 | 607 | 9 | 19 | 0 | 29 | 42 | 262 | 80 | 58 | 264 | 354 | 9 | 325 | 546 |
| 26.5 | 83 | 362 | 182 | 52 | 49 | 18 | 320 | 0 | 58 | 165 | 18 | 14 | 5 | 29 | 29 | 111 | 102 | 57 | 214 | 262 | 32 | 290 | 639 |
| 27.5 | 231 | 548 | 184 | 37 | 43 | 47 | 319 | 0 | 18 | 93 | 5 | 25 | 0 | 0 | 0 | 151 | 34 | 45 | 130 | 156 | 0 | 405 | 658 |
| 28.5 | 181 | 559 | 329 | 46 | 81 | 43 | 265 | 5 | 0 | 38 | 0 | 25 | 12 | 0 | 0 | 28 | 29 | 28 | 85 | 59 | 0 | 386 | 341 |
| 29.5 | 315 | 776 | 457 | 38 | 71 | 0 | 296 | 0 | 5 | 19 | 0 | 0 | 5 | 0 | 0 | 6 | 15 | 11 | 59 | 53 | 0 | 250 | 372 |
| 30.5 | 571 | 1452 | 742 | 55 | 81 | 52 | 454 | 0 | 0 | 29 | 0 | 12 | 0 | 7 | 0 | 6 | 20 | 9 | 29 | 35 | 0 | 142 | 276 |
| 31.5 | 391 | 1179 | 664 | 44 | 61 | 36 | 324 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 15 | 30 | 0 | 75 | 141 |
| 32.5 | 380 | 928 | 522 | 48 | 106 | 24 | 397 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 22 | 0 | 0 | 29 | 11 | 0 | 55 | 103 |
| 33.5 | 247 | 744 | 440 | 40 | 58 | 6 | 397 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 23 | 0 | 15 | 66 |
| 34.5 | 125 | 563 | 245 | 32 | 117 | 6 | 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 12 | 0 | 19 | 31 |
| 35.5 | 93 | 358 | 139 | 26 | 71 | 0 | 482 | 5 | 0 | 5 | 5 | 13 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 6 | 0 | 4 | 32 |
| 36.5 | 69 | 137 | 51 | 15 | 46 | 6 | 228 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 7 |
| 37.5 | 28 | 71 | 10 | 4 | 27 | 0 | 130 | 6 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 7 | 7 |
| 38.5 | 5 | 28 | 24 | 0 | 36 | 4 | 38 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 10 |
| 39.5 | 19 | 10 | 11 | 9 | 13 | 0 | 50 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40.5 | 19 | 6 | 8 | 7 | 0 | 7 | 18 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41.5 | 9 | 14 | 5 | 9 | 14 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42.5 | 14 | 0 | 0 | 0 | 0 | 4 | 17 | 8 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 43.5 | 9 | 6 | 0 | 0 | 9 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44.5 | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 45.5 | 0 | 0 | 5 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 46.5 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 47.5 | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 49.5 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 58.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 7. *Sebastes. spp.* < 17cm, abundance (1 000) and biomass (tons) for West Greenland by stratum and total, 1982-2004. Confidence intervals (CI) are given in per cent of the stratified mean at 95% level of significance.

Abundance

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 1055 | 357 | 120 | 27 | 8 | 42 | 23 | | 1632 | 44 |
| 1983 | 3954 | 506 | 14 | 138 | 8 | 16 | 21 | | 4657 | 56 |
| 1984 | 5022 | 3713 | 21 | 219 | 141 | 27 | 13 | | 9156 | 67 |
| 1985 | 4886 | 9616 | 54 | 2712 | 47 | 67 | 54 | | 17436 | 164 |
| 1986 | 10738 | 237636 | 113 | 1811 | 54 | 218 | 39 | | 250609 | 168 |
| 1987 | 12453 | 113990 | 5 | | 19 | | 18 | | 126485 | 87 |
| 1988 | 19680 | 42481 | 0 | 107 | 19 | 139 | 0 | | 62426 | 41 |
| 1989 | 7717 | 13159 | 3071 | 5370 | 17 | | 69 | | 29403 | 35 |
| 1990 | 11255 | 35933 | 15416 | 1538 | 72 | | 6199 | 848 | 71261 | 52 |
| 1991 | 51936 | 59846 | 34872 | 22668 | 13692 | 2508 | 891 | 1540 | 187953 | 38 |
| 1992 | 25716 | 19083 | 12690 | 17276 | 17463 | 13973 | 41 | 13718 | 119960 | 54 |
| 1993 | 5458 | 39035 | 665 | 11331 | 355 | 2773 | 13 | | 59630 | 111 |
| 1994 | 3403 | 12003 | 9828 | 4014 | 1190 | 1730 | 10842 | 9867 | 52877 | 95 |
| 1995 | | | | | 399 | 10236 | 855 | 34695 | 46185 | 106 |
| 1996 | 456 | 14356 | 5210 | 9377 | 26961 | 11571 | 2488 | 107236 | 177655 | 98 |
| 1997 | 6519 | 47117 | 0 | 15852 | 43421 | 20194 | 444 | 68931 | 202478 | 62 |
| 1998 | 1558 | 25350 | 50177 | 30834 | 55983 | 13090 | 37049 | 13318 | 227359 | 100 |
| 1999 | 3886 | 54143 | 1067 | 8617 | 1105 | 7643 | 758 | | 77219 | 48 |
| 2000 | 1293 | 9958 | 63 | 3052 | 393 | 8195 | 0 | 33103 | 56057 | 62 |
| 2001 | | | 1318 | 3559 | 110 | 2432 | 8 | 1484 | 8911 | 24 |
| 2002 | | | 1255 | | 145 | 1523 | 23 | | 2946 | 85 |
| 2003 | | | 390 | 7090 | 114 | 1674 | 15 | 1054 | 10337 | 79 |
| 2004 | 6676 | 12206 | 343 | 4706 | 112 | 1083 | 10 | 1089 | 26225 | 154 |

Biomass

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 34 | 13 | 7 | 1 | 0 | 1 | 0 | | 56 | 41 |
| 1983 | 102 | 21 | 0 | 6 | 0 | 1 | 0 | | 130 | 52 |
| 1984 | 88 | 105 | 0 | 5 | 6 | 1 | 0 | | 205 | 73 |
| 1985 | 82 | 367 | 2 | 58 | 2 | 3 | 0 | | 514 | 142 |
| 1986 | 456 | 6646 | 2 | 77 | 2 | 6 | 0 | | 7189 | 168 |
| 1987 | 265 | 5020 | 0 | | 0 | | 0 | | 5285 | 93 |
| 1988 | 218 | 1492 | 0 | 3 | 0 | 5 | 0 | | 1718 | 56 |
| 1989 | 109 | 271 | 21 | 49 | 0 | | 0 | | 450 | 42 |
| 1990 | 102 | 369 | 63 | 20 | 0 | | 10 | 2 | 566 | 58 |
| 1991 | 197 | 798 | 73 | 242 | 29 | 24 | 3 | 15 | 1381 | 46 |
| 1992 | 150 | 386 | 49 | 111 | 74 | 220 | 0 | 64 | 1054 | 54 |
| 1993 | 75 | 512 | 16 | 265 | 6 | 76 | 0 | | 950 | 90 |
| 1994 | 27 | 216 | 54 | 57 | 29 | 64 | 141 | 277 | 865 | 132 |
| 1995 | | | | | 6 | 330 | 10 | 348 | 694 | 97 |
| 1996 | 7 | 284 | 14 | 117 | 91 | 297 | 18 | 3300 | 4128 | 96 |
| 1997 | 61 | 344 | 0 | 214 | 163 | 544 | 15 | 2437 | 3778 | 81 |
| 1998 | 20 | 433 | 165 | 322 | 221 | 351 | 141 | 531 | 2184 | 120 |
| 1999 | 54 | 941 | 14 | 190 | 17 | 272 | 18 | | 1506 | 47 |
| 2000 | 27 | 252 | 2 | 106 | 14 | 284 | 0 | 1414 | 2099 | 61 |
| 2001 | | | 7 | 65 | 6 | 90 | 0 | 71 | 239 | 29 |
| 2002 | | | 12 | | 2 | 29 | 0 | | 43 | 83 |
| 2003 | | | 9 | 138 | 2 | 40 | 0 | 26 | 215 | 53 |
| 2004 | 54 | 348 | 9 | 140 | 4 | 70 | 0 | 22 | 647 | 160 |

Table 8. *Sebastes spp.* < 17 cm. Length composition by year (1 000), 1982-2004.

| Length | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.5 | 0 | 0 | 0 | 0 | 6 | 0 | 7 | 0 | 14 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 |
| 5.5 | 0 | 6 | 255 | 25 | 36 | 121 | 97 | 39 | 3468 | 15519 | 2396 | 0 | 2392 | 26 | 236 | 622 | 182 | 1235 | 186 | 146 | 65 | 243 | 329 |
| 6.5 | 6 | 78 | 584 | 111 | 97 | 850 | 486 | 1814 | 5708 | 59602 | 30723 | 117 | 9939 | 193 | 7127 | 32049 | 44724 | 3401 | 639 | 1202 | 699 | 1344 | 4039 |
| 7.5 | 0 | 219 | 179 | 185 | 460 | 1393 | 1940 | 2111 | 2758 | 11107 | 27896 | 200 | 1053 | 142 | 28816 | 54642 | 124965 | 232 | 411 | 1564 | 791 | 1115 | 7585 |
| 8.5 | 70 | 518 | 425 | 326 | 1913 | 902 | 9815 | 2176 | 8484 | 15958 | 5799 | 1935 | 4092 | 540 | 7089 | 2405 | 4670 | 126 | 87 | 58 | 97 | 60 | 1041 |
| 9.5 | 57 | 579 | 835 | 2161 | 4221 | 658 | 7404 | 4284 | 11835 | 23919 | 11346 | 9480 | 9035 | 616 | 7908 | 4589 | 3927 | 3177 | 1114 | 123 | 117 | 120 | 98 |
| 10.5 | 96 | 359 | 1432 | 4165 | 8595 | 941 | 3378 | 5703 | 6994 | 36922 | 8922 | 8916 | 5238 | 935 | 28169 | 13241 | 10533 | 27661 | 1800 | 502 | 308 | 1007 | 403 |
| 11.5 | 259 | 594 | 2151 | 1470 | 19713 | 2445 | 1453 | 4835 | 7050 | 16197 | 5788 | 5980 | 2909 | 5090 | 17615 | 11127 | 4294 | 23335 | 566 | 582 | 162 | 2030 | 1023 |
| 12.5 | 188 | 719 | 1284 | 508 | 106866 | 7017 | 1560 | 3156 | 7575 | 2388 | 7518 | 9527 | 6043 | 9656 | 12200 | 6785 | 2104 | 3134 | 4074 | 356 | 82 | 1614 | 612 |
| 13.5 | 114 | 511 | 679 | 1599 | 76491 | 8666 | 3244 | 2148 | 6284 | 1648 | 11461 | 5614 | 4357 | 4247 | 17440 | 20084 | 6322 | 4979 | 13437 | 729 | 105 | 628 | 476 |
| 14.5 | 384 | 464 | 681 | 2716 | 14063 | 18412 | 8866 | 1020 | 4611 | 1196 | 6078 | 6021 | 2686 | 7343 | 11415 | 26222 | 10205 | 4558 | 14810 | 824 | 214 | 802 | 2450 |
| 15.5 | 460 | 609 | 650 | 4173 | 4189 | 47210 | 13645 | 709 | 3556 | 1549 | 1220 | 5822 | 2401 | 8718 | 11658 | 16131 | 5645 | 1482 | 9324 | 955 | 188 | 780 | 5131 |
| 16.5 | 0 | 0 | 0 | 0 | 5121 | 31716 | 4826 | 572 | 944 | 1005 | 391 | 3914 | 1329 | 5090 | 16748 | 14577 | 5203 | 1764 | 9607 | 1864 | 124 | 593 | 3040 |
| 17.5 | 0 | 0 | 0 | 0 | 6513 | 6136 | 2998 | 505 | 654 | 591 | 379 | 2105 | 1241 | 3545 | 11162 | 0 | 4585 | 2139 | 0 | 0 | 0 | 0 | 0 |
| 18.5 | 0 | 0 | 0 | 0 | 1400 | 0 | 2514 | 307 | 824 | 218 | 46 | 0 | 68 | 44 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19.5 | 0 | 0 | 0 | 0 | 930 | 0 | 194 | 24 | 133 | 32 | 0 | 0 | 47 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 13 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 9. *Hippoglossoides platessoides*, abundance (1 000) and biomass (tons) for West Greenland by stratum and total, 1982-2004. Confidence intervals (CI) are given in per cent of the stratified mean at 95% level of significance.

Abundance

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 31582 | 5092 | 29598 | 5735 | 2843 | 2133 | 1043 | | 78026 | 30 |
| 1983 | 46601 | 6482 | 55493 | 2871 | 2725 | 461 | 811 | | 115444 | 49 |
| 1984 | 18251 | 6258 | 53766 | 4366 | 2928 | 2244 | 1792 | | 89605 | 43 |
| 1985 | 21388 | 5974 | 22819 | 6185 | 2632 | 239 | 3161 | | 62398 | 23 |
| 1986 | 22035 | 11393 | 58741 | 9556 | 2936 | 2388 | 4463 | | 111512 | 39 |
| 1987 | 23321 | 3314 | 26226 | | 2357 | | 1030 | | 56248 | 26 |
| 1988 | 10963 | 3476 | 8025 | 5698 | 3566 | 800 | 1035 | | 33563 | 18 |
| 1989 | 9370 | 4454 | 11362 | 3775 | 8764 | | 1446 | | 39171 | 28 |
| 1990 | 8615 | 6465 | 8227 | 2614 | 1083 | | 1492 | 606 | 29102 | 25 |
| 1991 | 7826 | 4537 | 5168 | 1899 | 1517 | 639 | 1248 | 952 | 23786 | 17 |
| 1992 | 8527 | 4996 | 3020 | 2704 | 1233 | 1707 | 1744 | 175 | 24106 | 28 |
| 1993 | 5859 | 3284 | 1201 | 1212 | 632 | 694 | 398 | | 13280 | 17 |
| 1994 | 2212 | 3525 | 1488 | 1514 | 624 | 282 | 1661 | 189 | 11495 | 21 |
| 1995 | | | | | 891 | 1189 | 1019 | 785 | 3884 | 18 |
| 1996 | 3716 | 1337 | 956 | 1424 | 1946 | 772 | 1566 | 472 | 12189 | 17 |
| 1997 | 8656 | 3262 | 2585 | 3543 | 2973 | 1288 | 2427 | 109 | 24843 | 21 |
| 1998 | 6254 | 3956 | 5654 | 2873 | 1767 | 865 | 2296 | 204 | 23869 | 17 |
| 1999 | 5410 | 2675 | 5013 | 2904 | 1835 | 389 | 1356 | | 19582 | 20 |
| 2000 | 2273 | 3929 | 1953 | 3302 | 1016 | 361 | 1197 | 36 | 14067 | 18 |
| 2001 | | | 11195 | 3831 | 1275 | 394 | 3616 | 182 | 20493 | 23 |
| 2002 | | | 6820 | | 1203 | 2138 | 1718 | | 11879 | 23 |
| 2003 | | | 20675 | 9700 | 1140 | 2170 | 1633 | 15 | 35333 | 34 |
| 2004 | 23681 | 7048 | 18111 | 6319 | 998 | 1120 | 1741 | 50 | 59068 | 24 |

Biomass

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 6050 | 946 | 7797 | 1151 | 919 | 376 | 157 | | 17396 | 32 |
| 1983 | 7451 | 1155 | 11771 | 607 | 1008 | 88 | 167 | | 22247 | 41 |
| 1984 | 1701 | 762 | 8662 | 807 | 607 | 387 | 365 | | 13291 | 45 |
| 1985 | 1939 | 600 | 3861 | 1062 | 519 | 49 | 321 | | 8351 | 22 |
| 1986 | 2150 | 1147 | 8429 | 1385 | 703 | 452 | 460 | | 14726 | 30 |
| 1987 | 3130 | 339 | 5471 | | 645 | | 229 | | 9814 | 30 |
| 1988 | 919 | 293 | 1699 | 807 | 814 | 137 | 236 | | 4905 | 19 |
| 1989 | 517 | 297 | 1476 | 371 | 2120 | | 288 | | 5069 | 40 |
| 1990 | 395 | 397 | 1220 | 314 | 213 | | 288 | 221 | 3048 | 22 |
| 1991 | 347 | 399 | 486 | 260 | 266 | 125 | 187 | 173 | 2243 | 18 |
| 1992 | 578 | 419 | 228 | 183 | 151 | 250 | 152 | 25 | 1986 | 26 |
| 1993 | 327 | 222 | 82 | 102 | 66 | 70 | 26 | | 895 | 17 |
| 1994 | 143 | 416 | 134 | 143 | 64 | 34 | 108 | 28 | 1070 | 25 |
| 1995 | | | | | 70 | 154 | 123 | 58 | 405 | 20 |
| 1996 | 211 | 100 | 66 | 164 | 159 | 78 | 149 | 38 | 965 | 22 |
| 1997 | 490 | 265 | 209 | 343 | 353 | 168 | 185 | 7 | 2020 | 27 |
| 1998 | 306 | 252 | 355 | 244 | 186 | 122 | 185 | 19 | 1669 | 20 |
| 1999 | 245 | 160 | 331 | 268 | 180 | 35 | 85 | | 1304 | 26 |
| 2000 | 122 | 331 | 136 | 309 | 105 | 38 | 49 | 6 | 1096 | 22 |
| 2001 | | | 637 | 297 | 109 | 45 | 149 | 12 | 1249 | 22 |
| 2002 | | | 390 | | 122 | 200 | 113 | | 825 | 22 |
| 2003 | | | 1462 | 922 | 124 | 258 | 126 | 3 | 2895 | 35 |
| 2004 | 1613 | 581 | 1629 | 753 | 136 | 175 | 221 | 4 | 5112 | 22 |

Table 10. *Hippoglossoides platessoides*. Length composition by year (1 000), 1982-2004.

| Length | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.5 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 73 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 4.5 | 0 | 0 | 0 | 0 | 0 | 10 | 7 | 0 | 5 | 10 | 0 | 0 | 7 | 0 | 0 | 108 | 14 | 87 | 5 | 44 | 17 | 0 | 198 |
| 5.5 | 0 | 0 | 0 | 127 | 19 | 0 | 22 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 6 | 0 | 0 | 141 |
| 6.5 | 0 | 0 | 0 | 9 | 19 | 41 | 33 | 10 | 0 | 87 | 14 | 0 | 0 | 0 | 0 | 0 | 51 | 94 | 71 | 0 | 13 | 0 | 0 |
| 7.5 | 13 | 0 | 10 | 74 | 9 | 58 | 52 | 19 | 32 | 251 | 68 | 0 | 14 | 0 | 21 | 20 | 506 | 546 | 182 | 134 | 52 | 0 | 28 |
| 8.5 | 7 | 20 | 36 | 57 | 43 | 84 | 103 | 43 | 44 | 170 | 123 | 7 | 93 | 0 | 29 | 20 | 353 | 336 | 146 | 196 | 50 | 0 | 36 |
| 9.5 | 20 | 14 | 53 | 142 | 64 | 90 | 181 | 36 | 161 | 253 | 163 | 136 | 34 | 9 | 39 | 71 | 194 | 435 | 146 | 234 | 99 | 107 | 194 |
| 10.5 | 20 | 29 | 86 | 403 | 154 | 359 | 235 | 212 | 370 | 273 | 505 | 251 | 57 | 27 | 318 | 155 | 139 | 635 | 177 | 525 | 200 | 151 | 203 |
| 11.5 | 59 | 46 | 148 | 364 | 333 | 367 | 473 | 514 | 569 | 620 | 618 | 430 | 74 | 19 | 115 | 189 | 278 | 1059 | 413 | 757 | 198 | 233 | 278 |
| 12.5 | 150 | 228 | 368 | 381 | 751 | 540 | 749 | 813 | 1060 | 1087 | 846 | 913 | 353 | 88 | 181 | 842 | 406 | 1226 | 602 | 979 | 290 | 315 | 1719 |
| 13.5 | 302 | 404 | 940 | 610 | 1187 | 668 | 873 | 1275 | 1875 | 1106 | 731 | 904 | 576 | 34 | 362 | 1238 | 757 | 798 | 919 | 1585 | 571 | 1352 | 3930 |
| 14.5 | 420 | 978 | 1283 | 1067 | 2197 | 1142 | 1060 | 1742 | 2629 | 1291 | 1024 | 654 | 835 | 31 | 606 | 1692 | 1163 | 1055 | 997 | 2027 | 768 | 1804 | 4533 |
| 15.5 | 793 | 1976 | 2023 | 1674 | 3597 | 1177 | 1130 | 2215 | 2556 | 1399 | 1627 | 977 | 1276 | 142 | 981 | 2604 | 2321 | 1275 | 1260 | 2161 | 1059 | 3389 | 4322 |
| 16.5 | 814 | 2232 | 2567 | 2443 | 6220 | 1047 | 1365 | 2093 | 2259 | 1863 | 1663 | 1110 | 1204 | 241 | 1481 | 2180 | 2527 | 1169 | 1205 | 2061 | 1394 | 4056 | 4679 |
| 17.5 | 1340 | 3336 | 3768 | 3631 | 7906 | 1625 | 1159 | 2007 | 1883 | 1771 | 1901 | 1109 | 882 | 287 | 996 | 1789 | 3035 | 1076 | 945 | 1690 | 1363 | 3488 | 4258 |
| 18.5 | 1661 | 3934 | 4833 | 4281 | 8122 | 2132 | 1715 | 1778 | 1658 | 1593 | 1788 | 1079 | 634 | 338 | 1078 | 1663 | 2205 | 1178 | 812 | 1647 | 1113 | 2658 | 4689 |
| 19.5 | 2054 | 5257 | 4170 | 3890 | 8619 | 2716 | 1658 | 1905 | 1407 | 1320 | 1851 | 705 | 488 | 360 | 715 | 1556 | 1794 | 1141 | 601 | 1042 | 867 | 2898 | 3564 |
| 20.5 | 2839 | 8731 | 5896 | 4259 | 9066 | 3088 | 1984 | 2012 | 1414 | 1317 | 1254 | 827 | 587 | 379 | 580 | 1572 | 1286 | 1250 | 636 | 1161 | 723 | 1867 | 3374 |
| 21.5 | 2737 | 8334 | 5740 | 3752 | 9715 | 3140 | 1802 | 1866 | 1008 | 1218 | 1292 | 593 | 463 | 308 | 712 | 1043 | 966 | 1329 | 488 | 878 | 607 | 2047 | 3086 |
| 22.5 | 3541 | 7697 | 5159 | 3992 | 9279 | 3253 | 1803 | 1537 | 937 | 942 | 1342 | 476 | 439 | 217 | 649 | 1112 | 798 | 783 | 541 | 416 | 284 | 1440 | 2106 |
| 23.5 | 2976 | 7502 | 7171 | 3398 | 7120 | 3593 | 1654 | 1685 | 900 | 1052 | 1217 | 442 | 428 | 290 | 654 | 932 | 692 | 643 | 625 | 423 | 330 | 1534 | 2354 |
| 24.5 | 3802 | 6773 | 4220 | 3281 | 6310 | 3085 | 1431 | 1878 | 807 | 934 | 857 | 409 | 415 | 110 | 451 | 1091 | 741 | 707 | 528 | 331 | 302 | 1301 | 2414 |
| 25.5 | 4532 | 6553 | 4913 | 3029 | 4428 | 2976 | 1711 | 2005 | 811 | 919 | 1086 | 481 | 566 | 119 | 434 | 785 | 665 | 429 | 562 | 209 | 360 | 1445 | 2548 |
| 26.5 | 4872 | 8563 | 4609 | 2408 | 3495 | 2580 | 1722 | 1886 | 889 | 735 | 1050 | 335 | 430 | 198 | 485 | 826 | 754 | 419 | 386 | 404 | 209 | 1060 | 2030 |
| 27.5 | 5366 | 7078 | 5200 | 2450 | 3485 | 3308 | 1233 | 2129 | 1035 | 687 | 552 | 324 | 367 | 117 | 217 | 668 | 526 | 538 | 353 | 347 | 163 | 1121 | 1770 |
| 28.5 | 5300 | 6700 | 6410 | 2546 | 2934 | 2547 | 1189 | 1386 | 914 | 600 | 671 | 335 | 247 | 70 | 394 | 770 | 521 | 367 | 365 | 380 | 86 | 648 | 1869 |
| 29.5 | 5035 | 4102 | 4824 | 2949 | 3145 | 2868 | 1342 | 1866 | 1238 | 454 | 597 | 206 | 259 | 119 | 221 | 502 | 348 | 232 | 198 | 257 | 143 | 926 | 1946 |
| 30.5 | 5532 | 5194 | 4645 | 2974 | 3235 | 3332 | 1687 | 1644 | 967 | 484 | 427 | 199 | 237 | 73 | 184 | 510 | 330 | 271 | 249 | 211 | 180 | 511 | 1081 |
| 31.5 | 4302 | 3381 | 2769 | 2243 | 2910 | 2714 | 1369 | 1251 | 479 | 365 | 215 | 113 | 231 | 106 | 83 | 379 | 206 | 132 | 177 | 114 | 91 | 401 | 433 |
| 32.5 | 3799 | 3120 | 2114 | 1580 | 2173 | 2298 | 1306 | 1042 | 285 | 312 | 337 | 141 | 133 | 87 | 34 | 156 | 118 | 152 | 223 | 118 | 100 | 241 | 460 |
| 33.5 | 2655 | 2328 | 2099 | 1669 | 1803 | 1993 | 841 | 770 | 447 | 182 | 119 | 9 | 60 | 44 | 97 | 116 | 58 | 50 | 81 | 77 | 78 | 141 | 180 |
| 34.5 | 2421 | 2278 | 1176 | 1093 | 1307 | 1158 | 592 | 628 | 202 | 167 | 67 | 77 | 60 | 19 | 31 | 65 | 44 | 49 | 76 | 50 | 77 | 61 | 297 |
| 35.5 | 2516 | 2012 | 749 | 552 | 781 | 851 | 410 | 325 | 121 | 144 | 86 | 17 | 32 | 31 | 20 | 23 | 10 | 40 | 25 | 22 | 32 | 34 | 139 |
| 36.5 | 2043 | 1818 | 500 | 355 | 358 | 637 | 318 | 200 | 67 | 57 | 21 | 12 | 11 | 11 | 12 | 47 | 24 | 30 | 39 | 0 | 32 | 73 | 69 |
| 37.5 | 1655 | 1352 | 375 | 244 | 264 | 351 | 198 | 195 | 32 | 19 | 0 | 12 | 5 | 7 | 0 | 0 | 27 | 9 | 24 | 0 | 5 | 8 | 62 |
| 38.5 | 1143 | 1051 | 291 | 135 | 184 | 135 | 67 | 77 | 37 | 31 | 5 | 0 | 5 | 4 | 0 | 51 | 5 | 0 | 0 | 0 | 5 | 13 | 63 |
| 39.5 | 915 | 512 | 210 | 128 | 101 | 132 | 61 | 46 | 5 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 5 | 13 | 0 | 9 |
| 40.5 | 940 | 754 | 84 | 79 | 55 | 73 | 4 | 49 | 4 | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |

Table 11. *Anarhichas lupus*, abundance (1 000) and biomass (tons) for West Greenland by stratum and total, 1982-2004. Confidence intervals (CI) are given in per cent of the stratified mean at 95% level of significance.

Abundance

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 11113 | 2955 | 3457 | 2313 | 1822 | 458 | 945 | | 23063 | 23 |
| 1983 | 7567 | 3186 | 1720 | 485 | 1471 | 211 | 786 | | 15426 | 24 |
| 1984 | 5777 | 1277 | 1542 | 185 | 1382 | 111 | 750 | | 11024 | 26 |
| 1985 | 5369 | 2718 | 1419 | 370 | 955 | 999 | 907 | | 12737 | 19 |
| 1986 | 4961 | 1704 | 1967 | 635 | 1500 | 511 | 811 | | 12089 | 19 |
| 1987 | 5328 | 1644 | 888 | | 1023 | | 691 | | 9574 | 15 |
| 1988 | 4927 | 1834 | 895 | 449 | 1136 | 555 | 758 | | 10554 | 21 |
| 1989 | 3675 | 673 | 1669 | 516 | 2901 | | 1130 | | 10564 | 21 |
| 1990 | 3511 | 1076 | 1981 | 295 | 1899 | | 1066 | 612 | 10440 | 17 |
| 1991 | 2838 | 1010 | 968 | 756 | 2593 | 639 | 562 | 494 | 9860 | 21 |
| 1992 | 3015 | 376 | 1509 | 937 | 3360 | 916 | 948 | 2107 | 13168 | 26 |
| 1993 | 4723 | 1712 | 703 | 426 | 574 | 326 | 385 | | 8849 | 28 |
| 1994 | 1545 | 1196 | 1725 | 567 | 1225 | 153 | 4515 | 1047 | 11973 | 48 |
| 1995 | | | | | 1349 | 563 | 529 | 705 | 3146 | 26 |
| 1996 | 715 | 942 | 254 | 381 | 2574 | 622 | 799 | 1075 | 7362 | 21 |
| 1997 | 3001 | 1279 | 1126 | 335 | 3771 | 1149 | 1538 | 2863 | 15062 | 30 |
| 1998 | 3083 | 957 | 783 | 653 | 1990 | 620 | 1009 | 1047 | 10142 | 21 |
| 1999 | 4457 | 1138 | 1941 | 653 | 6287 | 1337 | 801 | | 16614 | 29 |
| 2000 | 1980 | 1725 | 402 | 413 | 2072 | 1116 | 480 | 2652 | 10840 | 21 |
| 2001 | | | 973 | 1110 | 3800 | 1160 | 724 | 1774 | 9541 | 28 |
| 2002 | | | 3001 | | 3351 | 403 | 552 | | 7307 | 22 |
| 2003 | | | 1307 | 1714 | 7345 | 511 | 575 | 1468 | 12920 | 27 |
| 2004 | 8234 | 2071 | 1718 | 826 | 3238 | 953 | 1271 | 1744 | 20055 | 20 |

Biomass

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 9908 | 2974 | 5203 | 3926 | 2273 | 475 | 1240 | | 25999 | 31 |
| 1983 | 3661 | 3442 | 2084 | 471 | 1769 | 271 | 1086 | | 12784 | 31 |
| 1984 | 3089 | 673 | 1283 | 189 | 820 | 71 | 871 | | 6996 | 24 |
| 1985 | 1837 | 1134 | 1020 | 200 | 581 | 557 | 632 | | 5961 | 16 |
| 1986 | 1783 | 912 | 1441 | 434 | 973 | 458 | 768 | | 6769 | 16 |
| 1987 | 2191 | 521 | 573 | | 1048 | | 616 | | 4949 | 16 |
| 1988 | 1102 | 384 | 797 | 298 | 882 | 341 | 696 | | 4500 | 16 |
| 1989 | 687 | 222 | 620 | 246 | 1750 | | 1037 | | 4562 | 19 |
| 1990 | 708 | 177 | 496 | 111 | 655 | | 660 | 320 | 3127 | 16 |
| 1991 | 456 | 166 | 160 | 161 | 674 | 148 | 249 | 214 | 2228 | 20 |
| 1992 | 436 | 79 | 322 | 237 | 831 | 200 | 231 | 630 | 2966 | 27 |
| 1993 | 646 | 314 | 101 | 80 | 130 | 67 | 108 | | 1446 | 22 |
| 1994 | 218 | 209 | 376 | 97 | 285 | 26 | 865 | 171 | 2247 | 42 |
| 1995 | | | | | 248 | 68 | 131 | 114 | 561 | 25 |
| 1996 | 61 | 261 | 42 | 68 | 486 | 114 | 169 | 238 | 1439 | 19 |
| 1997 | 306 | 239 | 89 | 77 | 665 | 164 | 352 | 372 | 2264 | 24 |
| 1998 | 361 | 194 | 125 | 146 | 287 | 97 | 175 | 266 | 1651 | 16 |
| 1999 | 327 | 273 | 322 | 146 | 1039 | 230 | 136 | | 2473 | 23 |
| 2000 | 231 | 297 | 63 | 88 | 349 | 168 | 172 | 560 | 1928 | 22 |
| 2001 | | | 209 | 263 | 1006 | 218 | 185 | 579 | 2460 | 25 |
| 2002 | | | 578 | | 859 | 91 | 146 | | 1674 | 21 |
| 2003 | | | 486 | 438 | 2475 | 141 | 200 | 646 | 4386 | 26 |
| 2004 | 1327 | 389 | 550 | 242 | 971 | 299 | 758 | 652 | 5188 | 28 |

Table 12. *Anarhichas lupus*. Length composition by year (1 000), 1982-2004.

| Length | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| 6.5 | 0 | 0 | 0 | 0 | 19 | 10 | 3 | 0 | 33 | 86 | 0 | 29 | 20 | 0 | 0 | 0 | 85 | 134 | 0 | 0 | 88 | 0 | 104 |
| 7.5 | 0 | 0 | 0 | 76 | 19 | 92 | 7 | 22 | 74 | 241 | 8 | 61 | 37 | 0 | 77 | 330 | 186 | 567 | 25 | 44 | 241 | 23 | 164 |
| 8.5 | 13 | 0 | 3 | 32 | 39 | 26 | 52 | 31 | 62 | 214 | 75 | 0 | 14 | 0 | 81 | 180 | 186 | 389 | 36 | 89 | 179 | 43 | 112 |
| 9.5 | 0 | 0 | 0 | 4 | 20 | 70 | 120 | 45 | 35 | 245 | 97 | 20 | 28 | 0 | 81 | 223 | 201 | 480 | 105 | 70 | 38 | 18 | 128 |
| 10.5 | 0 | 0 | 15 | 34 | 50 | 102 | 134 | 64 | 159 | 199 | 112 | 251 | 43 | 15 | 15 | 388 | 231 | 475 | 110 | 39 | 115 | 68 | 205 |
| 11.5 | 0 | 6 | 0 | 26 | 125 | 186 | 103 | 97 | 173 | 112 | 194 | 267 | 163 | 51 | 91 | 242 | 110 | 432 | 96 | 58 | 156 | 13 | 258 |
| 12.5 | 18 | 0 | 3 | 46 | 138 | 69 | 199 | 100 | 241 | 212 | 252 | 172 | 28 | 82 | 69 | 405 | 280 | 396 | 177 | 129 | 253 | 60 | 220 |
| 13.5 | 0 | 0 | 4 | 36 | 59 | 96 | 134 | 71 | 325 | 231 | 346 | 271 | 245 | 88 | 153 | 561 | 435 | 670 | 124 | 145 | 212 | 87 | 433 |
| 14.5 | 52 | 29 | 55 | 34 | 49 | 226 | 243 | 187 | 321 | 188 | 396 | 305 | 322 | 70 | 130 | 716 | 517 | 666 | 146 | 108 | 132 | 214 | 550 |
| 15.5 | 41 | 14 | 44 | 71 | 239 | 179 | 190 | 237 | 289 | 292 | 333 | 659 | 404 | 24 | 143 | 583 | 350 | 623 | 143 | 112 | 192 | 164 | 475 |
| 16.5 | 50 | 41 | 71 | 22 | 195 | 247 | 199 | 300 | 448 | 286 | 243 | 522 | 631 | 116 | 140 | 543 | 343 | 671 | 410 | 163 | 170 | 107 | 561 |
| 17.5 | 88 | 97 | 85 | 89 | 299 | 404 | 273 | 313 | 426 | 376 | 512 | 492 | 867 | 158 | 252 | 638 | 410 | 595 | 584 | 275 | 124 | 171 | 574 |
| 18.5 | 72 | 146 | 154 | 92 | 312 | 255 | 324 | 257 | 480 | 278 | 770 | 631 | 656 | 188 | 429 | 834 | 543 | 855 | 584 | 447 | 186 | 268 | 647 |
| 19.5 | 84 | 156 | 261 | 167 | 199 | 221 | 566 | 371 | 367 | 339 | 556 | 345 | 678 | 171 | 419 | 827 | 435 | 808 | 766 | 340 | 266 | 355 | 758 |
| 20.5 | 202 | 306 | 252 | 110 | 200 | 259 | 545 | 388 | 498 | 559 | 659 | 408 | 889 | 216 | 444 | 771 | 712 | 842 | 780 | 414 | 172 | 401 | 886 |
| 21.5 | 134 | 273 | 251 | 231 | 151 | 309 | 616 | 396 | 420 | 604 | 566 | 462 | 714 | 198 | 316 | 701 | 462 | 879 | 775 | 380 | 251 | 435 | 1128 |
| 22.5 | 208 | 291 | 388 | 183 | 172 | 295 | 530 | 279 | 358 | 336 | 785 | 392 | 574 | 236 | 361 | 831 | 409 | 607 | 635 | 409 | 454 | 331 | 1167 |
| 23.5 | 151 | 321 | 384 | 244 | 126 | 131 | 315 | 334 | 247 | 407 | 650 | 232 | 532 | 295 | 402 | 787 | 386 | 708 | 778 | 530 | 304 | 643 | 1059 |
| 24.5 | 406 | 220 | 362 | 315 | 170 | 176 | 326 | 512 | 294 | 374 | 514 | 176 | 585 | 155 | 363 | 621 | 350 | 513 | 488 | 360 | 317 | 635 | 1144 |
| 25.5 | 348 | 318 | 436 | 367 | 232 | 144 | 336 | 470 | 416 | 413 | 950 | 317 | 714 | 98 | 379 | 557 | 438 | 580 | 509 | 472 | 383 | 620 | 872 |
| 26.5 | 311 | 375 | 362 | 335 | 289 | 253 | 257 | 438 | 251 | 352 | 563 | 345 | 375 | 137 | 311 | 345 | 329 | 588 | 474 | 442 | 205 | 363 | 874 |
| 27.5 | 357 | 416 | 336 | 408 | 275 | 142 | 182 | 317 | 295 | 338 | 496 | 155 | 270 | 55 | 305 | 321 | 338 | 465 | 419 | 458 | 196 | 590 | 714 |
| 28.5 | 382 | 519 | 354 | 441 | 359 | 90 | 107 | 343 | 282 | 370 | 457 | 198 | 450 | 157 | 302 | 409 | 168 | 436 | 346 | 373 | 312 | 528 | 778 |
| 29.5 | 404 | 381 | 291 | 494 | 386 | 157 | 166 | 330 | 300 | 253 | 469 | 271 | 272 | 37 | 248 | 405 | 200 | 461 | 251 | 391 | 288 | 390 | 515 |
| 30.5 | 343 | 553 | 283 | 549 | 371 | 247 | 197 | 210 | 364 | 267 | 332 | 302 | 348 | 62 | 286 | 377 | 277 | 379 | 242 | 310 | 214 | 527 | 432 |
| 31.5 | 381 | 361 | 382 | 525 | 457 | 218 | 103 | 147 | 311 | 207 | 338 | 268 | 212 | 48 | 181 | 312 | 162 | 272 | 163 | 325 | 159 | 411 | 452 |
| 32.5 | 396 | 513 | 277 | 518 | 431 | 294 | 173 | 323 | 187 | 258 | 270 | 150 | 208 | 108 | 134 | 375 | 109 | 282 | 131 | 329 | 113 | 480 | 547 |
| 33.5 | 404 | 499 | 269 | 716 | 499 | 244 | 127 | 110 | 189 | 165 | 191 | 208 | 141 | 15 | 167 | 344 | 230 | 240 | 195 | 307 | 208 | 507 | 291 |
| 34.5 | 454 | 333 | 326 | 496 | 439 | 274 | 125 | 141 | 108 | 228 | 261 | 187 | 188 | 33 | 152 | 258 | 64 | 200 | 158 | 286 | 161 | 559 | 469 |
| 35.5 | 449 | 452 | 354 | 531 | 475 | 287 | 137 | 262 | 201 | 200 | 339 | 88 | 280 | 29 | 73 | 96 | 209 | 178 | 64 | 197 | 171 | 425 | 499 |
| 36.5 | 335 | 447 | 321 | 505 | 394 | 170 | 210 | 174 | 140 | 64 | 183 | 107 | 192 | 28 | 103 | 155 | 166 | 176 | 147 | 158 | 92 | 343 | 288 |
| 37.5 | 453 | 314 | 319 | 443 | 411 | 305 | 134 | 216 | 165 | 138 | 142 | 75 | 111 | 22 | 113 | 74 | 94 | 107 | 131 | 181 | 121 | 413 | 254 |
| 38.5 | 307 | 245 | 295 | 609 | 388 | 173 | 145 | 230 | 134 | 189 | 184 | 61 | 142 | 29 | 99 | 113 | 85 | 116 | 128 | 155 | 95 | 300 | 294 |
| 39.5 | 447 | 310 | 163 | 402 | 403 | 201 | 190 | 135 | 139 | 65 | 91 | 128 | 138 | 14 | 82 | 170 | 133 | 145 | 91 | 144 | 84 | 372 | 316 |
| 40.5 | 377 | 507 | 302 | 467 | 405 | 210 | 254 | 218 | 224 | 155 | 181 | 22 | 111 | 33 | 113 | 90 | 58 | 133 | 69 | 127 | 101 | 396 | 301 |
| 41.5 | 398 | 306 | 174 | 448 | 403 | 239 | 300 | 161 | 177 | 78 | 79 | 22 | 64 | 52 | 77 | 103 | 87 | 115 | 44 | 122 | 54 | 224 | 132 |
| 42.5 | 480 | 321 | 192 | 373 | 338 | 280 | 271 | 163 | 131 | 82 | 147 | 0 | 27 | 7 | 53 | 67 | 40 | 84 | 64 | 147 | 51 | 393 | 133 |
| 43.5 | 442 | 263 | 215 | 178 | 296 | 214 | 152 | 212 | 143 | 82 | 86 | 72 | 62 | 33 | 76 | 73 | 23 | 34 | 81 | 76 | 28 | 250 | 178 |
| 44.5 | 444 | 295 | 158 | 265 | 290 | 166 | 224 | 275 | 104 | 70 | 70 | 41 | 31 | 15 | 36 | 79 | 27 | 63 | 86 | 59 | 57 | 228 | 290 |
| 45.5 | 562 | 365 | 248 | 292 | 312 | 207 | 249 | 236 | 155 | 57 | 70 | 66 | 67 | 15 | 21 | 18 | 57 | 80 | 33 | 69 | 28 | 176 | 143 |
| 46.5 | 527 | 275 | 229 | 190 | 316 | 206 | 296 | 195 | 131 | 6 | 61 | 23 | 38 | 0 | 22 | 25 | 62 | 26 | 42 | 63 | 41 | 63 | 82 |
| 47.5 | 569 | 299 | 143 | 149 | 221 | 290 | 169 | 166 | 80 | 53 | 33 | 3 | 34 | 25 | 15 | 19 | 7 | 11 | 20 | 25 | 37 | 127 | 170 |
| 48.5 | 645 | 295 | 189 | 220 | 166 | 213 | 189 | 143 | 159 | 45 | 41 | 9 | 16 | 0 | 0 | 25 | 24 | 12 | 61 | 22 | 37 | 76 | 110 |
| 49.5 | 680 | 263 | 178 | 110 | 107 | 198 | 196 | 131 | 61 | 19 | 0 | 6 | 20 | 0 | 16 | 0 | 35 | 64 | 33 | 47 | 32 | 15 | 58 |
| 50.5 | 864 | 320 | 190 | 154 | 158 | 165 | 189 | 107 | 95 | 33 | 0 | 0 | 7 | 24 | 6 | 27 | 12 | 6 | 17 | 55 | 28 | 7 | 59 |
| 51.5 | 830 | 380 | 208 | 101 | 108 | 97 | 153 | 63 | 62 | 14 | 32 | 0 | 0 | 0 | 0 | 30 | 0 | 11 | 39 | 30 | 42 | 12 | 59 |
| 52.5 | 855 | 338 | 173 | 78 | 133 | 107 | 54 | 198 | 27 | 19 | 25 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 12 | 26 | 42 | 65 | 18 |
| 53.5 | 580 | 362 | 118 | 97 | 87 | 115 | 95 | 111 | 41 | 33 | 12 | 17 | 28 | 0 | 21 | 12 | 14 | 17 | 0 | 5 | 28 | 0 | 56 |
| 54.5 | 662 | 383 | 125 | 66 | 75 | 64 | 56 | 41 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 12 | 11 | 17 | 4 | 0 | 13 |
| 55.5 | 846 | 347 | 141 | 77 | 21 | 66 | 65 | 56 | 23 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 9 | 0 | 11 | 15 | 0 | 41 |
| 56.5 | 712 | 343 | 144 | 39 | 34 | 31 | 52 | 35 | 11 | 0 | 0 | 7 | 0 | 7 | 15 | 0 | 0 | 6 | 21 | 0 | 13 | 31 | 7 |
| 57.5 | 818 | 289 | 71 | 39 | 55 | 22 | 15 | 68 | 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| 58.5 | 587 | 299 | 114 | 23 | 17 | 34 | 37 | 33 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 6 | 0 | 8 | 0 |
| 59.5 | 606 | 231 | 95 | 78 | 31 | 0 | 10 | 4 | 6 | 0 | 0 | 14 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 60.5 | 552 | 207 | 60 | 16 | 21 | 45 | 14 | 37 | 15 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 6 | 0 | 0 | 0 |

Table 13. *Anarhichas minor*, abundance (1 000) and biomass (tons) for West Greenland by stratum and total, 1982-2004. Confidence intervals (CI) are given in per cent of the stratified mean at 95% level of significance.

Abundance

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 381 | 154 | 353 | 153 | 130 | 14 | 326 | | 1511 | 29 |
| 1983 | 184 | 38 | 148 | 3 | 89 | 39 | 367 | | 868 | 32 |
| 1984 | 184 | 60 | 176 | 14 | 89 | 23 | 241 | | 787 | 30 |
| 1985 | 204 | 115 | 106 | 4 | 29 | 61 | 110 | | 629 | 33 |
| 1986 | 483 | 203 | 108 | 38 | 68 | 16 | 118 | | 1034 | 22 |
| 1987 | 306 | 211 | 63 | | 130 | | 239 | | 949 | 28 |
| 1988 | 231 | 150 | 45 | 15 | 145 | 33 | 316 | | 935 | 25 |
| 1989 | 245 | 130 | 49 | 25 | 281 | | 110 | | 840 | 34 |
| 1990 | 109 | 201 | 38 | 19 | 99 | | 152 | 6 | 624 | 27 |
| 1991 | 333 | 141 | 26 | 33 | 54 | 4 | 74 | 50 | 715 | 27 |
| 1992 | 41 | 47 | 14 | 107 | 37 | 23 | 13 | 29 | 311 | 63 |
| 1993 | 82 | 222 | 49 | 51 | 37 | 17 | 69 | | 527 | 35 |
| 1994 | 61 | 109 | 61 | 62 | 21 | 9 | 28 | 7 | 358 | 79 |
| 1995 | | | | | 14 | 4 | 18 | 0 | 36 | 73 |
| 1996 | 0 | 56 | 54 | 38 | 17 | 11 | 0 | 7 | 183 | 45 |
| 1997 | 102 | 58 | 16 | 38 | 60 | 16 | 49 | 73 | 412 | 46 |
| 1998 | 116 | 28 | 26 | 11 | 27 | 23 | 39 | 44 | 314 | 55 |
| 1999 | 34 | 83 | 56 | 38 | 50 | 19 | 21 | | 301 | 56 |
| 2000 | 218 | 164 | 26 | 88 | 37 | 11 | 44 | 44 | 632 | 28 |
| 2001 | | | 47 | 27 | 87 | 5 | 44 | 12 | 222 | 49 |
| 2002 | | | 101 | | 72 | 23 | 0 | | 196 | 32 |
| 2003 | | | 63 | 32 | 31 | 8 | 15 | 7 | 156 | 52 |
| 2004 | 143 | 60 | 63 | 80 | 64 | 23 | 108 | 80 | 621 | 32 |

Biomass

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 2198 | 470 | 1896 | 827 | 531 | 42 | 1988 | | 7952 | 43 |
| 1983 | 1674 | 256 | 656 | 5 | 562 | 183 | 2357 | | 5693 | 37 |
| 1984 | 851 | 196 | 1036 | 15 | 448 | 55 | 1358 | | 3959 | 34 |
| 1985 | 14 | 119 | 569 | 0 | 134 | 307 | 681 | | 1824 | 44 |
| 1986 | 1157 | 307 | 566 | 63 | 370 | 36 | 1004 | | 3503 | 27 |
| 1987 | 653 | 126 | 334 | | 1029 | | 2034 | | 4176 | 29 |
| 1988 | 136 | 85 | 195 | 87 | 1141 | 101 | 3010 | | 4755 | 38 |
| 1989 | 374 | 32 | 167 | 40 | 1382 | | 847 | | 2842 | 36 |
| 1990 | 82 | 83 | 200 | 7 | 667 | | 1217 | 3 | 2259 | 31 |
| 1991 | 27 | 30 | 2 | 9 | 252 | 5 | 724 | 179 | 1228 | 41 |
| 1992 | 7 | 6 | 0 | 7 | 29 | 4 | 36 | 35 | 124 | 104 |
| 1993 | 68 | 40 | 16 | 33 | 35 | 16 | 211 | | 419 | 42 |
| 1994 | 27 | 24 | 75 | 25 | 10 | 1 | 141 | 3 | 306 | 76 |
| 1995 | | | | | 66 | 40 | 218 | 0 | 324 | 64 |
| 1996 | 0 | 137 | 33 | 42 | 39 | 7 | 0 | 10 | 268 | 68 |
| 1997 | 75 | 9 | 26 | 38 | 37 | 2 | 23 | 57 | 267 | 69 |
| 1998 | 20 | 2 | 103 | 26 | 118 | 3 | 252 | 49 | 573 | 61 |
| 1999 | 34 | 43 | 141 | 30 | 109 | 13 | 113 | | 483 | 61 |
| 2000 | 218 | 96 | 108 | 167 | 225 | 86 | 198 | 177 | 1275 | 38 |
| 2001 | | | 157 | 65 | 516 | 38 | 229 | 56 | 1061 | 42 |
| 2002 | | | 197 | | 535 | 99 | 0 | | 831 | 55 |
| 2003 | | | 247 | 73 | 91 | 53 | 56 | 113 | 633 | 45 |
| 2004 | 116 | 40 | 289 | 186 | 455 | 188 | 557 | 539 | 2370 | 33 |

Table 14. *Anarhichas minor*. Length composition by year (1 000), 1982-2004.

| Length | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.5 | 0 | 0 | 0 | 0 | 0 | 13 | 22 | 0 | 5 | 32 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 |
| 11.5 | 0 | 0 | 0 | 26 | 9 | 0 | 3 | 4 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 12.5 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 10 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 |
| 13.5 | 0 | 0 | 0 | 29 | 0 | 10 | 22 | 0 | 24 | 61 | 0 | 57 | 5 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 14.5 | 0 | 0 | 10 | 66 | 19 | 0 | 7 | 12 | 0 | 82 | 14 | 23 | 20 | 0 | 0 | 0 | 43 | 0 | 69 | 0 | 0 | 0 | 0 |
| 15.5 | 0 | 0 | 0 | 21 | 54 | 10 | 15 | 0 | 10 | 67 | 8 | 17 | 37 | 0 | 0 | 0 | 0 | 12 | 20 | 0 | 0 | 0 | 0 |
| 16.5 | 0 | 0 | 0 | 0 | 19 | 10 | 7 | 33 | 0 | 6 | 20 | 32 | 12 | 0 | 0 | 19 | 0 | 0 | 12 | 0 | 0 | 0 | 0 |
| 17.5 | 0 | 0 | 0 | 40 | 4 | 16 | 14 | 3 | 0 | 19 | 27 | 36 | 12 | 0 | 11 | 26 | 0 | 0 | 27 | 0 | 5 | 0 | 0 |
| 18.5 | 0 | 0 | 10 | 26 | 0 | 6 | 14 | 9 | 18 | 33 | 20 | 28 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 19.5 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 10 | 4 | 0 | 12 | 12 | 0 | 0 | 12 | 5 | 6 | 0 | 0 | 0 | 0 | 0 |
| 20.5 | 0 | 0 | 0 | 26 | 17 | 6 | 7 | 0 | 10 | 0 | 5 | 15 | 7 | 0 | 0 | 24 | 11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21.5 | 0 | 0 | 0 | 0 | 0 | 13 | 15 | 13 | 24 | 14 | 0 | 12 | 11 | 0 | 0 | 0 | 7 | 5 | 0 | 0 | 13 | 0 | 29 |
| 22.5 | 19 | 0 | 0 | 40 | 19 | 13 | 14 | 23 | 40 | 20 | 12 | 35 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 23.5 | 0 | 0 | 5 | 4 | 27 | 6 | 10 | 4 | 0 | 6 | 0 | 25 | 26 | 0 | 0 | 7 | 5 | 0 | 6 | 0 | 0 | 6 | 0 |
| 24.5 | 0 | 0 | 4 | 0 | 40 | 6 | 3 | 33 | 4 | 6 | 49 | 12 | 26 | 0 | 14 | 5 | 12 | 0 | 0 | 9 | 0 | 0 | 0 |
| 25.5 | 0 | 0 | 0 | 0 | 44 | 6 | 22 | 0 | 0 | 20 | 0 | 0 | 5 | 0 | 0 | 5 | 7 | 0 | 35 | 0 | 0 | 0 | 39 |
| 26.5 | 6 | 0 | 0 | 0 | 73 | 0 | 7 | 13 | 0 | 0 | 27 | 6 | 0 | 0 | 0 | 7 | 0 | 0 | 11 | 5 | 13 | 0 | 7 |
| 27.5 | 0 | 0 | 0 | 7 | 28 | 10 | 0 | 0 | 5 | 4 | 8 | 12 | 0 | 0 | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 8 | 10 |
| 28.5 | 0 | 0 | 0 | 4 | 37 | 16 | 3 | 3 | 0 | 26 | 13 | 0 | 0 | 0 | 0 | 0 | 14 | 12 | 35 | 0 | 0 | 0 | 4 |
| 29.5 | 0 | 0 | 0 | 7 | 0 | 19 | 0 | 0 | 0 | 13 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 8 |
| 30.5 | 0 | 0 | 0 | 0 | 27 | 0 | 7 | 10 | 14 | 0 | 24 | 6 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 4 |
| 31.5 | 0 | 0 | 5 | 0 | 20 | 13 | 25 | 13 | 10 | 0 | 0 | 23 | 16 | 0 | 0 | 12 | 0 | 12 | 0 | 0 | 0 | 0 | 4 |
| 32.5 | 0 | 0 | 0 | 0 | 33 | 26 | 10 | 0 | 0 | 6 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 13 | 0 | 0 |
| 33.5 | 0 | 0 | 10 | 0 | 0 | 16 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 6 |
| 34.5 | 6 | 0 | 10 | 0 | 8 | 6 | 3 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.5 | 19 | 0 | 0 | 0 | 0 | 0 | 17 | 9 | 0 | 6 | 7 | 0 | 15 | 0 | 0 | 54 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| 36.5 | 0 | 0 | 5 | 0 | 0 | 6 | 3 | 9 | 10 | 13 | 19 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| 37.5 | 0 | 0 | 5 | 0 | 0 | 0 | 22 | 0 | 6 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 10 |
| 38.5 | 0 | 0 | 0 | 0 | 5 | 16 | 17 | 0 | 0 | 6 | 8 | 0 | 5 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39.5 | 6 | 0 | 21 | 0 | 0 | 13 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 0 | 0 | 0 |
| 40.5 | 0 | 0 | 0 | 7 | 19 | 10 | 9 | 24 | 0 | 14 | 0 | 0 | 5 | 0 | 6 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 18 |
| 41.5 | 0 | 1 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 12 | 0 | 12 | 0 | 0 | 0 | 0 | 33 |
| 42.5 | 25 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 10 | 0 | 0 | 0 | 12 | 0 | 11 | 0 | 15 | 0 | 0 | 5 | 13 | 0 | 4 |
| 43.5 | 13 | 0 | 14 | 0 | 17 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 22 | 29 | 0 | 6 | 0 | 0 | 0 | 0 |
| 44.5 | 6 | 0 | 10 | 4 | 13 | 0 | 0 | 4 | 10 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 |
| 45.5 | 25 | 0 | 0 | 7 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 24 | 0 | 14 | 64 | 0 | 0 | 0 | 0 | 0 | 6 | 4 |
| 46.5 | 0 | 0 | 11 | 7 | 0 | 20 | 0 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 29 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| 47.5 | 17 | 1 | 20 | 4 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| 48.5 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 41 | 10 | 0 | 0 | 3 | 0 | 0 | 25 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| 49.5 | 19 | 0 | 5 | 0 | 16 | 20 | 0 | 29 | 0 | 4 | 0 | 9 | 5 | 7 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 13 | 51 |
| 50.5 | 0 | 0 | 5 | 0 | 12 | 0 | 3 | 0 | 4 | 0 | 25 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 13 | 0 | 14 |
| 51.5 | 10 | 10 | 0 | 7 | 12 | 0 | 3 | 10 | 0 | 6 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 10 |
| 52.5 | 21 | 0 | 4 | 31 | 4 | 0 | 7 | 20 | 14 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 53.5 | 18 | 0 | 0 | 4 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 10 | 0 |
| 54.5 | 16 | 7 | 4 | 0 | 0 | 0 | 3 | 9 | 0 | 7 | 0 | 12 | 0 | 0 | 8 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55.5 | 28 | 1 | 13 | 0 | 16 | 4 | 14 | 18 | 5 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 |
| 56.5 | 10 | 1 | 0 | 4 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 12 | 6 | 0 | 0 | 0 | 44 |
| 57.5 | 11 | 0 | 19 | 10 | 8 | 0 | 11 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 0 | 10 | 8 |
| 58.5 | 44 | 3 | 12 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 5 | 0 | 5 | 0 | 0 | 4 |
| 59.5 | 19 | 25 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 15 | 10 | 6 | 0 | 12 | 0 | 0 | 6 |
| 60.5 | 19 | 6 | 8 | 0 | 13 | 4 | 10 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 7 | 0 | 0 | 12 | 0 | 0 | 0 |
| 61.5 | 22 | 25 | 20 | 6 | 16 | 24 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 8 |
| 62.5 | 30 | 17 | 16 | 4 | 4 | 20 | 4 | 3 | 5 | 7 | 0 | 6 | 0 | 0 | 0 | 0 | 7 | 5 | 6 | 0 | 0 | 13 | 8 |
| 63.5 | 13 | 1 | 15 | 4 | 4 | 20 | 14 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 8 |
| 64.5 | 29 | 21 | 4 | 0 | 4 | 0 | 14 | 9 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 65.5 | 59 | 26 | 13 | 8 | 0 | 4 | 0 | 20 | 9 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 9 | 0 | 0 | 6 | 0 | 0 | 0 |
| 66.5 | 35 | 12 | 23 | 4 | 4 | 6 | 0 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 6 | 0 | 13 | 0 |
| 67.5 | 14 | 5 | 12 | 0 | 0 | 6 | 0 | 3 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 68.5 | 40 | 25 | 14 | 0 | 8 | 5 | 4 | 0 | 15 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 11 | 0 | 0 | 0 |
| 69.5 | 18 | 21 | 13 | 4 | 5 | 0 | 11 | 0 | 10 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 12 | 6 | 14 | 0 | 0 |
| 70.5 | 21 | 8 | 22 | 10 | 4 | 24 | 3 | 13 | 5 | 0 | 7 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 |
| 71.5 | 37 | 21 | 7 | 8 | 15 | 9 | 6 | 0 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 15 | 11 |
| 72.5 | 25 | 31 | 32 | 4 | 14 | 20 | 4 | 7 | 9 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 29 | 0 | 0 | 0 | 0 |
| 73.5 | 39 | 20 | 25 | 6 | 17 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 |
| 74.5 | 28 | 20 | 8 | 4 | 21 | 0 | 11 | 77 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 9 | 9 | 0 | 4 |
| 75.5 | 17 | 18 | 9 | 8 | 9 | 5 | 8 | 31 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 6 | 0 | 10 | 4 |
| 76.5 | 19 | 7 | 4 | 8 | 4 | 10 | 3 | 27 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 |
| 77.5 | 17 | 27 | 36 | 7 | 5 | 0 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 42 | 9 | 13 | 0 | 15 |
| 78.5 | 24 | 25 | 27 | 4 | 0 | 28 | 0 | 22 | 10 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 13 | 21 |
| 79.5 | 13 | 40 | 5 | 4 | 14 | 9 | 4 | 0 | 9 | 7 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 80.5 | 40 | 15 | 14 | 31 | 10 | 9 | 4 | 0 | 10 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 6 | 6 | 0 | 6 | 0 | 0 | 7 |
| 81.5 | 26 | 15 | 14 | 4 | 13 | 13 | 4 | 8 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 11 |
| 82.5 | 24 | 10 | 9 | 8 | 5 | 9 | 4 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 83.5 | 31 | 14 | 15 | 4 | 9 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 26 | 0 | 0 | 0 | 19 |

Table 15. *Raja radiata*, abundance (1 000) and biomass (tons) for West Greenland by stratum and total, 1982-2004. Confidence intervals (CI) are given in per cent of the stratified mean at 95% level of significance.

Abundance

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 5383 | 1625 | 1412 | 473 | 556 | 83 | 162 | | 9694 | 38 |
| 1983 | 4798 | 589 | 815 | 360 | 349 | 27 | 59 | | 6997 | 87 |
| 1984 | 2742 | 1672 | 653 | 505 | 149 | 482 | 116 | | 6319 | 42 |
| 1985 | 2239 | 2393 | 1847 | 689 | 397 | 56 | 257 | | 7878 | 44 |
| 1986 | 2178 | 2806 | 766 | 326 | 295 | 131 | 203 | | 6705 | 46 |
| 1987 | 1790 | 538 | 653 | | 291 | | 64 | | 3336 | 30 |
| 1988 | 3879 | 1046 | 996 | 770 | 335 | 39 | 85 | | 7150 | 39 |
| 1989 | 11963 | 2141 | 3859 | 694 | 607 | | 149 | | 19413 | 38 |
| 1990 | 7145 | 1981 | 2489 | 548 | 271 | | 550 | 345 | 13329 | 51 |
| 1991 | 1967 | 480 | 1220 | 262 | 610 | 130 | 95 | 65 | 4829 | 26 |
| 1992 | 4457 | 598 | 2844 | 1531 | 496 | 523 | 205 | 58 | 10712 | 50 |
| 1993 | 2266 | 352 | 684 | 279 | 188 | 263 | 95 | | 4127 | 39 |
| 1994 | 2531 | 378 | 872 | 272 | 233 | 79 | 398 | 15 | 4778 | 43 |
| 1995 | | | | | 182 | 301 | 116 | 15 | 614 | 59 |
| 1996 | 1273 | 126 | 428 | 76 | 114 | 111 | 56 | 29 | 2213 | 29 |
| 1997 | 4886 | 493 | 879 | 46 | 120 | 122 | 180 | 0 | 6726 | 41 |
| 1998 | 1694 | 534 | 439 | 202 | 258 | 46 | 49 | 15 | 3237 | 31 |
| 1999 | 2164 | 235 | 684 | 195 | 297 | 194 | 213 | | 3982 | 36 |
| 2000 | 721 | 188 | 503 | 870 | 248 | 134 | 234 | 15 | 2913 | 37 |
| 2001 | | | 435 | 88 | 116 | 134 | 629 | 30 | 1432 | 41 |
| 2002 | | | 642 | | 116 | 194 | 121 | | 1073 | 35 |
| 2003 | | | 428 | 292 | 62 | 286 | 208 | 0 | 1276 | 40 |
| 2004 | 878 | 81 | 623 | 228 | 120 | 888 | 193 | 21 | 3032 | 46 |

Biomass

| Year | Str1.1 | Str1.2 | Str2.1 | Str2.2 | Str3.1 | Str3.2 | Str4.1 | Str4.2 | Total | CI |
|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 2994 | 811 | 1328 | 340 | 409 | 59 | 154 | | 6095 | 36 |
| 1983 | 966 | 192 | 703 | 132 | 331 | 27 | 56 | | 2407 | 34 |
| 1984 | 728 | 333 | 404 | 96 | 136 | 126 | 95 | | 1918 | 31 |
| 1985 | 497 | 427 | 804 | 181 | 159 | 46 | 56 | | 2170 | 22 |
| 1986 | 517 | 527 | 421 | 83 | 122 | 65 | 39 | | 1774 | 28 |
| 1987 | 415 | 149 | 306 | | 184 | | 13 | | 1067 | 29 |
| 1988 | 653 | 122 | 503 | 238 | 174 | 19 | 33 | | 1742 | 28 |
| 1989 | 2076 | 429 | 980 | 107 | 314 | | 90 | | 3996 | 31 |
| 1990 | 980 | 263 | 526 | 56 | 91 | | 113 | 201 | 2230 | 45 |
| 1991 | 279 | 81 | 181 | 36 | 246 | 42 | 10 | 33 | 908 | 28 |
| 1992 | 327 | 94 | 139 | 134 | 221 | 89 | 23 | 27 | 1054 | 49 |
| 1993 | 340 | 88 | 82 | 31 | 29 | 24 | 3 | | 597 | 28 |
| 1994 | 231 | 71 | 143 | 30 | 91 | 14 | 54 | 11 | 645 | 61 |
| 1995 | | | | | 70 | 37 | 41 | 0 | 148 | 75 |
| 1996 | 95 | 23 | 38 | 23 | 21 | 16 | 8 | 13 | 237 | 44 |
| 1997 | 354 | 96 | 181 | 6 | 16 | 29 | 33 | 0 | 715 | 35 |
| 1998 | 143 | 90 | 89 | 47 | 56 | 13 | 8 | 15 | 461 | 33 |
| 1999 | 150 | 68 | 143 | 65 | 68 | 26 | 54 | | 574 | 56 |
| 2000 | 116 | 47 | 141 | 298 | 103 | 12 | 28 | 13 | 758 | 42 |
| 2001 | | | 75 | 30 | 58 | 24 | 131 | 18 | 336 | 49 |
| 2002 | | | 136 | | 21 | 32 | 15 | | 204 | 35 |
| 2003 | | | 73 | 55 | 25 | 51 | 90 | 0 | 294 | 45 |
| 2004 | 82 | 17 | 143 | 47 | 39 | 152 | 33 | 10 | 523 | 42 |

Table 16. *Raja radiata.* Length composition by year (1 000), 1982-2004.

| Length | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.5 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 7.5 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8.5 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 16 | 0 | 51 | 0 | 0 | 38 | 12 | 0 | 0 | 0 | 0 |
| 9.5 | 0 | 10 | 11 | 12 | 5 | 0 | 11 | 5 | 87 | 18 | 0 | 41 | 31 | 0 | 62 | 162 | 82 | 364 | 89 | 9 | 13 | 0 | 61 |
| 10.5 | 64 | 127 | 100 | 177 | 487 | 94 | 158 | 271 | 630 | 143 | 350 | 121 | 300 | 12 | 136 | 660 | 435 | 681 | 62 | 84 | 93 | 63 | 155 |
| 11.5 | 89 | 394 | 422 | 416 | 70 | 188 | 279 | 602 | 741 | 216 | 881 | 376 | 418 | 4 | 187 | 684 | 225 | 369 | 124 | 82 | 80 | 49 | 179 |
| 12.5 | 128 | 526 | 317 | 492 | 117 | 204 | 450 | 704 | 860 | 357 | 1568 | 338 | 267 | 8 | 221 | 681 | 196 | 249 | 131 | 82 | 5 | 76 | 242 |
| 13.5 | 135 | 740 | 237 | 329 | 154 | 153 | 363 | 650 | 586 | 263 | 1180 | 272 | 179 | 34 | 192 | 343 | 121 | 277 | 93 | 81 | 36 | 50 | 116 |
| 14.5 | 164 | 373 | 271 | 502 | 269 | 195 | 404 | 855 | 583 | 252 | 1180 | 351 | 224 | 39 | 93 | 392 | 165 | 152 | 56 | 98 | 72 | 107 | 85 |
| 15.5 | 222 | 352 | 301 | 385 | 260 | 156 | 386 | 873 | 781 | 249 | 781 | 195 | 221 | 66 | 146 | 189 | 92 | 88 | 137 | 90 | 68 | 80 | 100 |
| 16.5 | 134 | 411 | 179 | 385 | 94 | 103 | 431 | 996 | 718 | 333 | 462 | 149 | 175 | 46 | 39 | 277 | 116 | 43 | 127 | 52 | 84 | 38 | 126 |
| 17.5 | 238 | 347 | 203 | 447 | 182 | 59 | 273 | 1221 | 779 | 257 | 479 | 146 | 123 | 26 | 104 | 201 | 162 | 125 | 96 | 72 | 9 | 91 | 249 |
| 18.5 | 247 | 244 | 302 | 323 | 166 | 104 | 232 | 1010 | 887 | 231 | 363 | 141 | 220 | 39 | 115 | 441 | 125 | 133 | 109 | 50 | 14 | 88 | 198 |
| 19.5 | 166 | 175 | 249 | 263 | 165 | 123 | 276 | 1025 | 989 | 211 | 406 | 81 | 139 | 23 | 22 | 213 | 93 | 40 | 63 | 41 | 22 | 26 | 69 |
| 20.5 | 213 | 127 | 255 | 269 | 159 | 117 | 419 | 1108 | 419 | 137 | 245 | 96 | 303 | 20 | 86 | 165 | 63 | 44 | 58 | 35 | 64 | 39 | 70 |
| 21.5 | 322 | 182 | 239 | 273 | 256 | 106 | 352 | 817 | 493 | 159 | 284 | 161 | 205 | 4 | 100 | 405 | 97 | 18 | 86 | 58 | 50 | 51 | 91 |
| 22.5 | 221 | 90 | 182 | 261 | 155 | 103 | 263 | 896 | 488 | 189 | 432 | 119 | 171 | 35 | 31 | 53 | 49 | 89 | 77 | 24 | 55 | 37 | 167 |
| 23.5 | 189 | 99 | 123 | 244 | 113 | 50 | 209 | 949 | 523 | 180 | 198 | 172 | 245 | 31 | 11 | 273 | 95 | 63 | 112 | 35 | 15 | 37 | 101 |
| 24.5 | 209 | 129 | 167 | 212 | 376 | 46 | 246 | 787 | 422 | 87 | 164 | 77 | 219 | 16 | 149 | 152 | 79 | 40 | 47 | 11 | 33 | 35 | 94 |
| 25.5 | 246 | 114 | 203 | 184 | 85 | 98 | 256 | 761 | 472 | 168 | 340 | 149 | 188 | 8 | 105 | 240 | 73 | 41 | 80 | 17 | 13 | 30 | 73 |
| 26.5 | 373 | 174 | 216 | 165 | 72 | 83 | 188 | 550 | 441 | 102 | 155 | 152 | 66 | 12 | 42 | 199 | 103 | 71 | 77 | 15 | 38 | 4 | 127 |
| 27.5 | 226 | 72 | 240 | 174 | 375 | 37 | 157 | 575 | 235 | 110 | 73 | 89 | 161 | 8 | 24 | 128 | 151 | 85 | 16 | 44 | 15 | 8 | 33 |
| 28.5 | 181 | 145 | 138 | 204 | 43 | 76 | 135 | 453 | 229 | 81 | 109 | 78 | 156 | 29 | 30 | 289 | 54 | 58 | 144 | 17 | 25 | 0 | 69 |
| 29.5 | 224 | 89 | 97 | 124 | 34 | 100 | 77 | 490 | 176 | 123 | 102 | 68 | 49 | 4 | 69 | 83 | 74 | 126 | 47 | 9 | 13 | 46 | 68 |
| 30.5 | 303 | 83 | 144 | 186 | 89 | 96 | 128 | 531 | 275 | 122 | 115 | 141 | 132 | 0 | 32 | 83 | 91 | 46 | 30 | 20 | 25 | 6 | 29 |
| 31.5 | 146 | 94 | 175 | 85 | 299 | 67 | 149 | 332 | 138 | 89 | 136 | 41 | 53 | 0 | 11 | 55 | 54 | 142 | 90 | 12 | 13 | 16 | 44 |
| 32.5 | 230 | 172 | 120 | 32 | 52 | 73 | 103 | 313 | 186 | 120 | 43 | 13 | 55 | 10 | 20 | 58 | 9 | 77 | 71 | 20 | 28 | 20 | 62 |
| 33.5 | 193 | 78 | 87 | 71 | 83 | 99 | 40 | 199 | 135 | 80 | 146 | 29 | 53 | 19 | 6 | 42 | 58 | 90 | 121 | 20 | 0 | 14 | 40 |
| 34.5 | 192 | 43 | 106 | 86 | 17 | 27 | 62 | 215 | 85 | 42 | 116 | 144 | 35 | 8 | 43 | 6 | 59 | 45 | 72 | 36 | 13 | 4 | 12 |
| 35.5 | 126 | 93 | 75 | 102 | 10 | 17 | 97 | 179 | 116 | 48 | 86 | 100 | 43 | 8 | 51 | 31 | 40 | 34 | 68 | 21 | 18 | 8 | 79 |
| 36.5 | 181 | 63 | 78 | 65 | 285 | 36 | 56 | 253 | 127 | 86 | 24 | 130 | 33 | 4 | 0 | 30 | 59 | 74 | 40 | 29 | 0 | 0 | 20 |
| 37.5 | 166 | 60 | 51 | 121 | 321 | 39 | 85 | 241 | 86 | 46 | 32 | 41 | 31 | 12 | 11 | 18 | 33 | 30 | 92 | 24 | 13 | 0 | 0 |
| 38.5 | 107 | 89 | 56 | 128 | 27 | 45 | 25 | 117 | 66 | 47 | 17 | 0 | 39 | 14 | 6 | 69 | 42 | 130 | 93 | 19 | 37 | 29 | 22 |
| 39.5 | 138 | 53 | 49 | 66 | 47 | 52 | 29 | 138 | 135 | 30 | 92 | 22 | 43 | 15 | 0 | 0 | 34 | 33 | 79 | 43 | 13 | 17 | 24 |
| 40.5 | 152 | 81 | 74 | 78 | 364 | 86 | 47 | 262 | 56 | 15 | 7 | 10 | 40 | 0 | 0 | 12 | 49 | 33 | 60 | 30 | 14 | 20 | 12 |
| 41.5 | 136 | 44 | 73 | 56 | 24 | 36 | 32 | 143 | 58 | 58 | 40 | 7 | 10 | 10 | 6 | 58 | 0 | 29 | 91 | 60 | 13 | 25 | 12 |
| 42.5 | 144 | 33 | 38 | 50 | 68 | 33 | 48 | 174 | 37 | 6 | 12 | 3 | 38 | 27 | 0 | 0 | 7 | 35 | 57 | 11 | 18 | 49 | 48 |
| 43.5 | 127 | 105 | 47 | 61 | 83 | 9 | 57 | 135 | 52 | 33 | 13 | 0 | 53 | 8 | 0 | 24 | 0 | 0 | 38 | 19 | 49 | 30 | 21 |
| 44.5 | 125 | 54 | 47 | 76 | 889 | 56 | 61 | 93 | 54 | 4 | 0 | 12 | 7 | 0 | 15 | 0 | 5 | 11 | 34 | 44 | 0 | 13 | 64 |
| 45.5 | 199 | 42 | 57 | 53 | 72 | 56 | 89 | 86 | 19 | 29 | 13 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 33 | 12 | 0 | 20 | 16 |
| 46.5 | 178 | 57 | 40 | 77 | 31 | 37 | 61 | 71 | 65 | 19 | 0 | 0 | 0 | 8 | 0 | 18 | 20 | 0 | 0 | 0 | 13 | 17 | 8 |
| 47.5 | 270 | 87 | 63 | 75 | 29 | 31 | 103 | 29 | 9 | 0 | 12 | 0 | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 9 | 0 | 18 | 9 |
| 48.5 | 277 | 50 | 47 | 38 | 29 | 31 | 76 | 39 | 19 | 11 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 49.5 | 253 | 55 | 47 | 56 | 32 | 73 | 56 | 61 | 10 | 12 | 24 | 0 | 36 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 4 |
| 50.5 | 369 | 154 | 66 | 78 | 50 | 33 | 44 | 77 | 15 | 19 | 24 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 13 |
| 51.5 | 276 | 71 | 58 | 42 | 53 | 0 | 32 | 27 | 15 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 52.5 | 292 | 86 | 93 | 110 | 58 | 24 | 17 | 30 | 19 | 0 | 5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53.5 | 254 | 54 | 33 | 63 | 11 | 0 | 7 | 29 | 0 | 11 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54.5 | 168 | 88 | 49 | 21 | 5 | 20 | 30 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55.5 | 286 | 37 | 28 | 44 | 10 | 14 | 3 | 20 | 13 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56.5 | 114 | 56 | 31 | 49 | 6 | 24 | 16 | 6 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57.5 | 130 | 23 | 16 | 18 | 18 | 14 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 58.5 | 54 | 41 | 3 | 11 | 6 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59.5 | 27 | 19 | 10 | 17 | 0 | 4 | 6 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60.5 | 45 | 0 | 7 | 3 | 0 | 4 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 17. Stratum means of near bottom temperature (°C) and stratified mean, 1982-2004.

| YEAR | 1.1 | 1.2 | 2.1 | 2.2 | 3.1 | 3.2 | 4.1 | 4.2 | Mean |
|---|---|---|---|---|---|---|---|---|---|
| 1982 | 2.540 | 3.627 | 1.953 | 3.100 | 3.256 | 3.633 | 2.623 | | 2.751 |
| 1983 | 2.028 | 3.713 | 1.420 | 3.819 | 2.139 | 4.808 | 2.160 | | 2.385 |
| 1984 | 1.365 | 2.790 | 1.617 | 3.886 | 2.462 | | 2.519 | | 2.025 |
| 1985 | 4.190 | 5.154 | 3.116 | 4.612 | 2.614 | 4.336 | 4.444 | | 4.041 |
| 1986 | 3.669 | 4.393 | 4.014 | 5.073 | 4.203 | 5.066 | 4.102 | | 4.061 |
| 1987 | 3.086 | 4.890 | 3.393 | | 3.504 | | 3.530 | | 3.476 |
| 1988 | 2.548 | 4.328 | 3.034 | 4.956 | 4.228 | 5.234 | 4.332 | | 3.517 |
| 1989 | 2.323 | 3.953 | 2.718 | 4.525 | | | 2.579 | | 2.794 |
| 1990 | 2.497 | 3.922 | 3.000 | 4.809 | 3.421 | | 2.516 | | 2.983 |
| 1991 | 3.533 | 4.726 | 3.477 | 4.204 | 3.016 | | 2.997 | | 3.558 |
| 1992 | 3.900 | 4.418 | 2.911 | 4.457 | 2.985 | 4.691 | 1.938 | | 3.495 |
| 1993 | 3.007 | 4.003 | 2.360 | 3.360 | 4.711 | 4.959 | 2.773 | | 3.288 |
| 1994 | 2.914 | 4.436 | 3.747 | 4.641 | 3.847 | 5.109 | 3.773 | | 3.620 |
| 1995 | | | | | 4.229 | 4.614 | 3.469 | 4.242 | 3.963 |
| 1996 | 4.614 | 5.506 | 4.414 | 5.688 | 5.610 | 5.700 | 5.057 | 5.732 | 5.011 |
| 1997 | 3.304 | 4.938 | 4.022 | 5.180 | 4.570 | 5.478 | 4.606 | 5.540 | 4.193 |
| 1998 | 4.059 | 5.336 | 4.686 | 5.840 | 6.400 | 6.382 | 5.359 | 5.978 | 4.998 |
| 1999 | 4.941 | 5.051 | 4.429 | 5.729 | 4.834 | 5.773 | 4.104 | | 4.829 |
| 2000 | 3.085 | 4.583 | 4.377 | 5.033 | 4.645 | | | | 3.861 |
| 2001 | | | 5.007 | 5.350 | 5.133 | 5.992 | 4.429 | | 4.988 |
| 2002 | | | 4.503 | | 5.832 | 5.961 | 4.906 | | 5.121 |
| 2003 | | | 6.948 | 6.515 | 6.529 | 6.633 | 5.406 | 6.539 | 6.338 |
| 2004 | 4.979 | 5.491 | 5.089 | 5.772 | 5.592 | 6.178 | 5.909 | 5.974 | 5.387 |

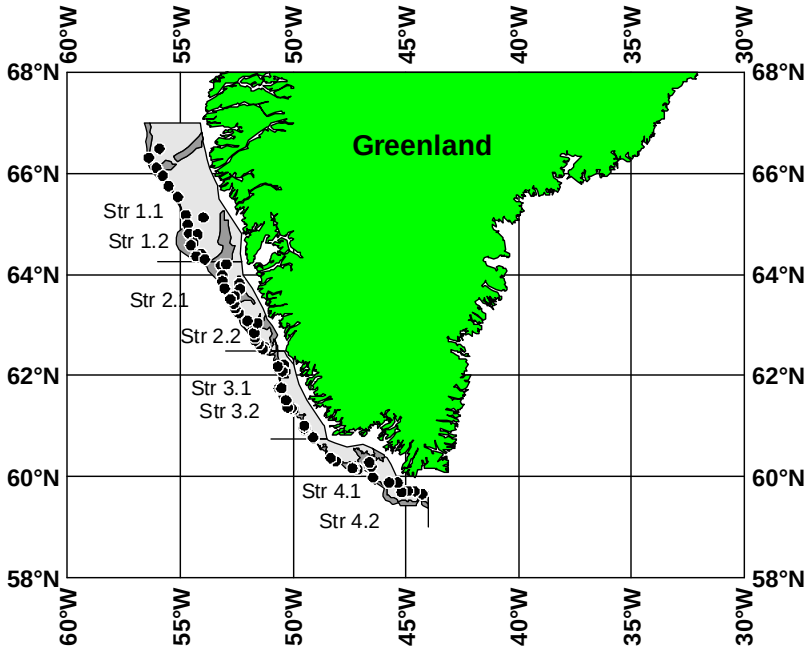


Fig. 1. Stratification of the survey area as specified in Table 2, positions of hauls carried out off West Greenland in 2004.

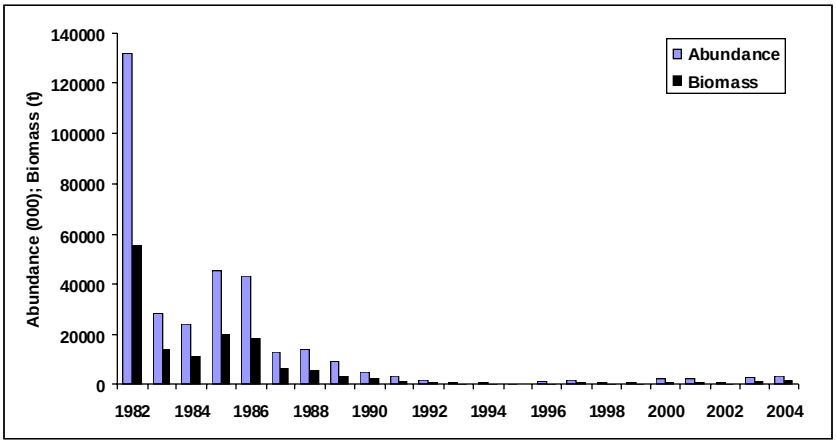


Fig. 2. Abundance and biomass indices for *S. marinus* >=17 cm off West Greenland, 1982-2004. Respective values are listed in Table 3.

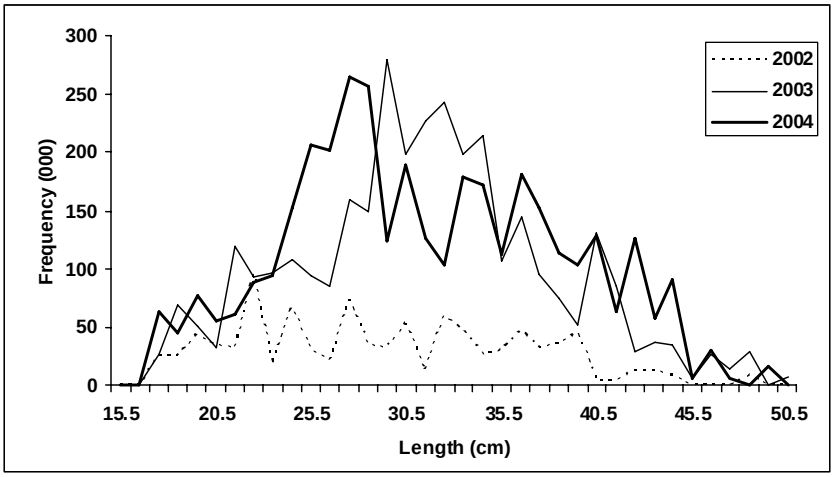


Fig. 3. Length disaggregated abundance indices for *S. marinus* >=17 cm off West Greenland, 2002-2004. Respective values are listed in Table 4.

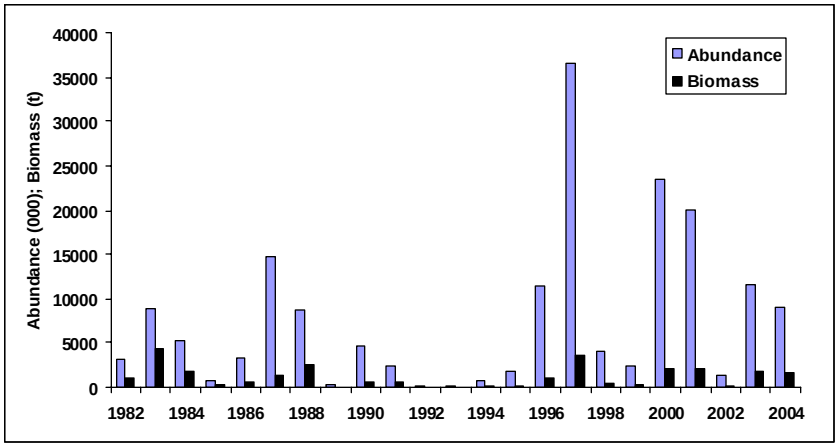


Fig. 4. Abundance and biomass indices for *S. mentella* >=17 cm off West Greenland, 1982-2004. Respective values are listed in Table 5.

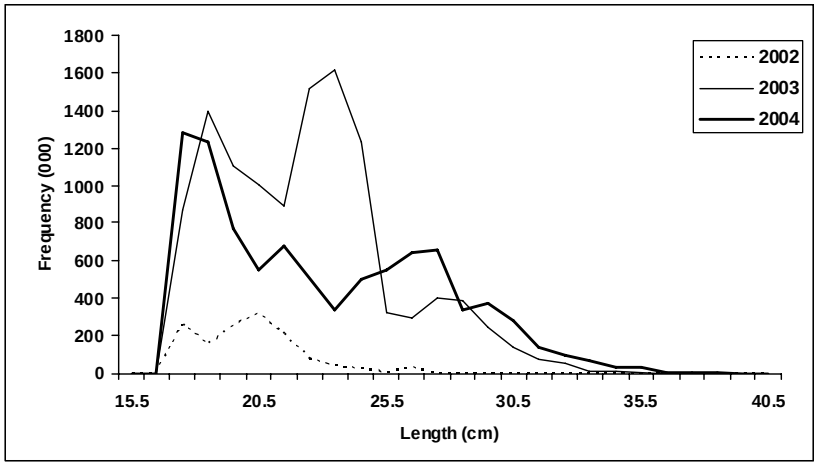


Fig. 5. Length disaggregated abundance indices for *S. mentella* >=17 cm off West Greenland, 2002-2004. Respective values are listed in Table 6.

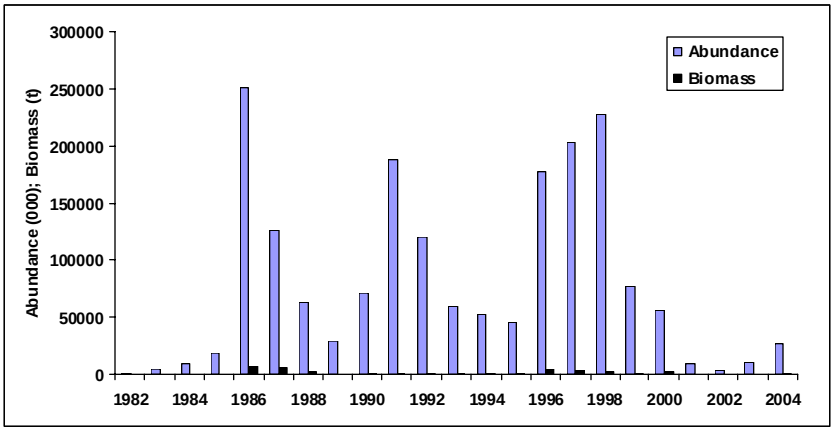


Fig. 6. Abundance and biomass indices for *Sebastes spp.* <17 cm off West Greenland, 1982-2004. Respective values are listed in Table 7.

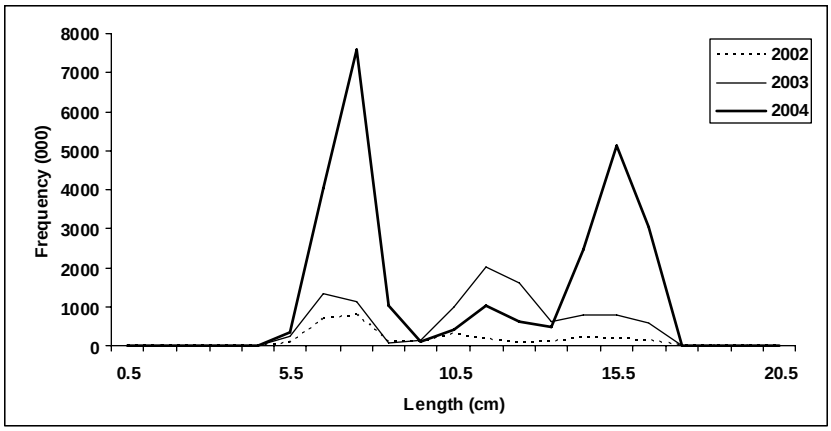


Fig. 7. Length disaggregated abundance indices for *Sebastes spp.* <17 cm off West Greenland, 2002-2004. Respective values are listed in Table 8.

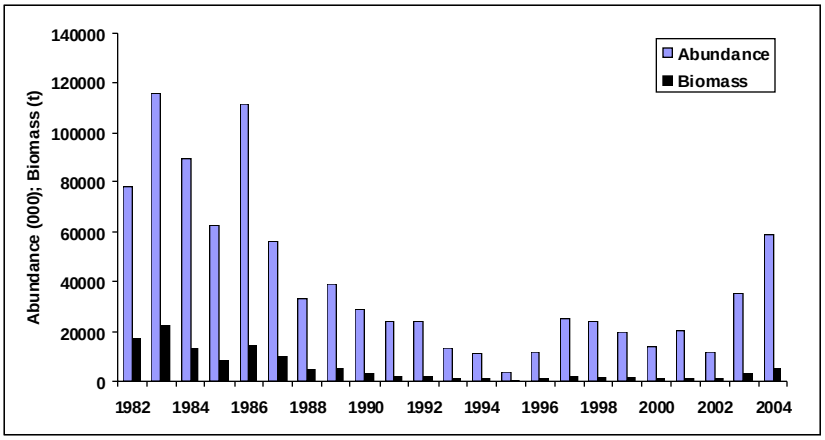


Fig. 8. Abundance and biomass indices for *Hippoglossoides platessoides* off West Greenland, 1982-2004. Respective values are listed in Table 9.

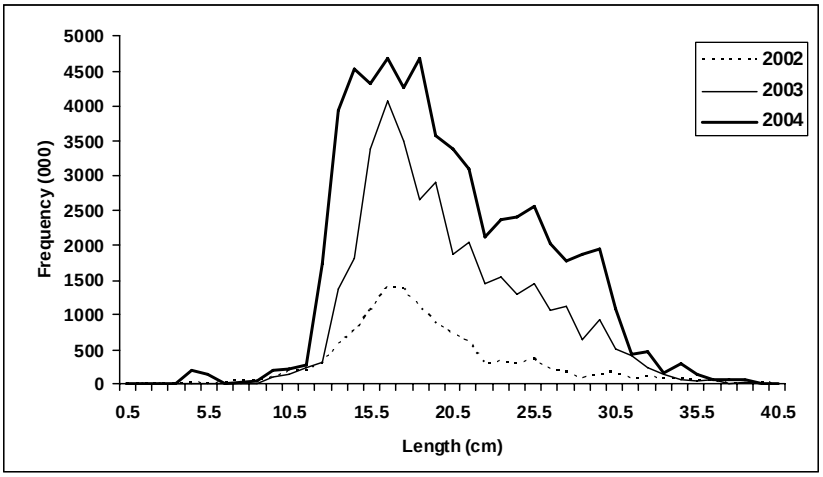


Fig. 9. Length disaggregated abundance indices for *Hippoglossoides platessoides* off West Greenland, 2002-2004. Respective values are listed in Table 10.

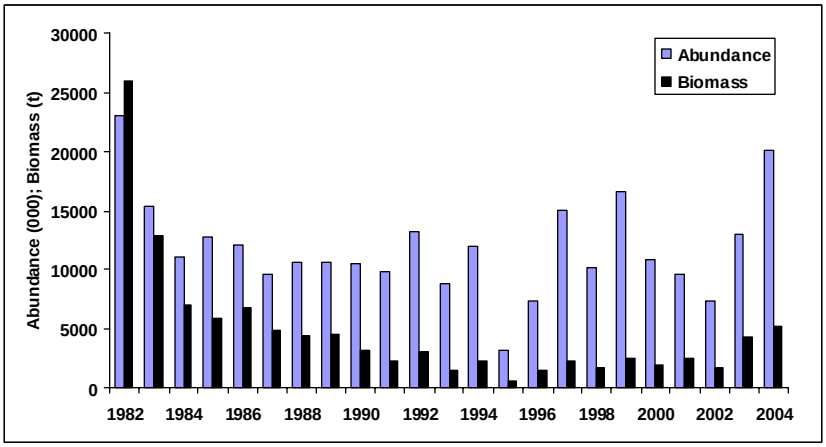


Fig. 10. Abundance and biomass indices for *Anarhichas lupus* off West Greenland, 1982-2004. Respective values are listed in Table 11.

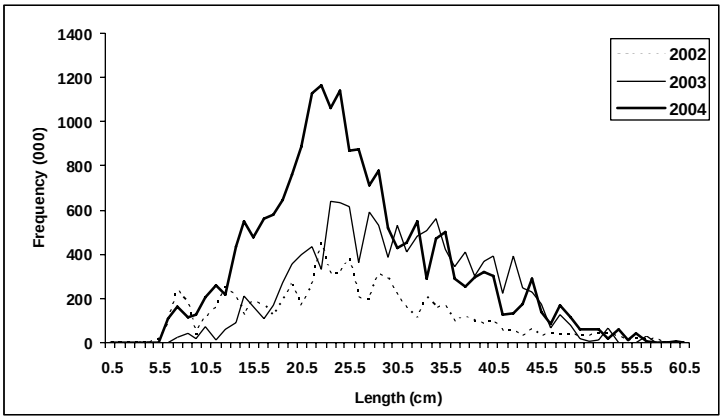


Fig. 11. Length disaggregated abundance indices for *Anarhichas lupus* off West Greenland, 2002-2004. Respective values are listed in Table 12.

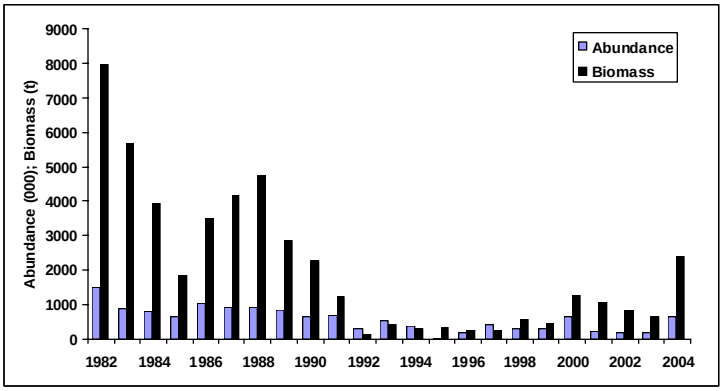


Fig. 12. Abundance and biomass indices for *Anarhichas minor* off West Greenland, 1982-2004. Respective values are listed in Table 13.

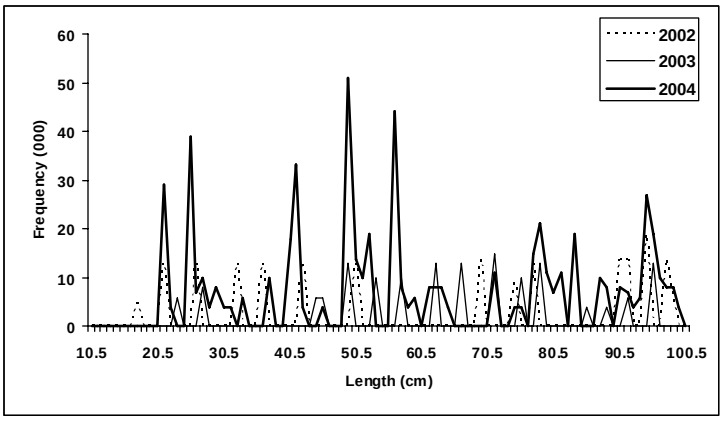


Fig. 13. Length disaggregated abundance indices for *Anarhichas minor* off West Greenland, 2002-2004. Respective values are listed in Table 14.

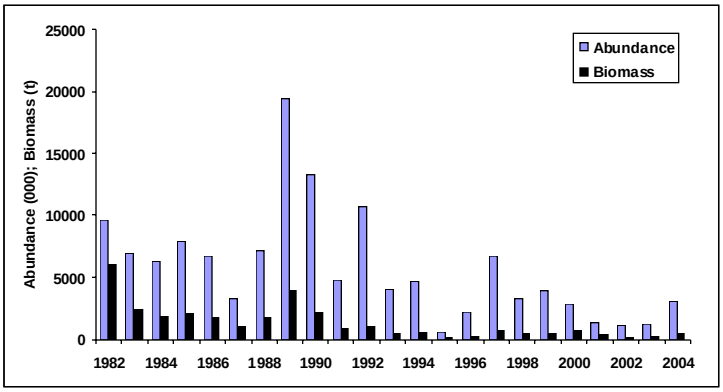


Fig. 14. Abundance and biomass indices for *Raja radiata* off West Greenland, 1982-2004. Respective values are listed in Table 15.

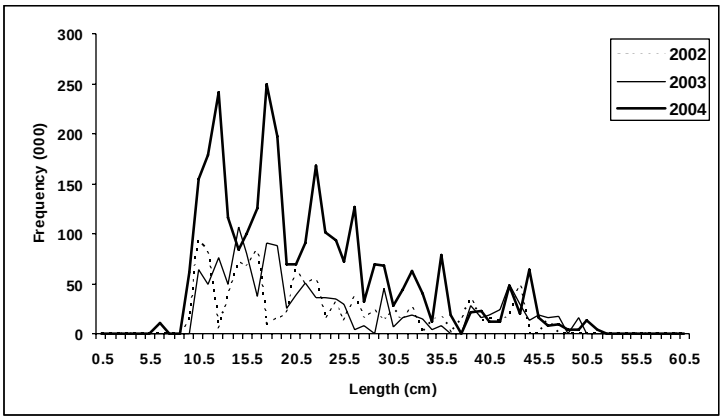


Fig. 15. Length disaggregated abundance indices for *Raja radiata* off West Greenland, 2002-2004. Respective values are listed in Table 16.

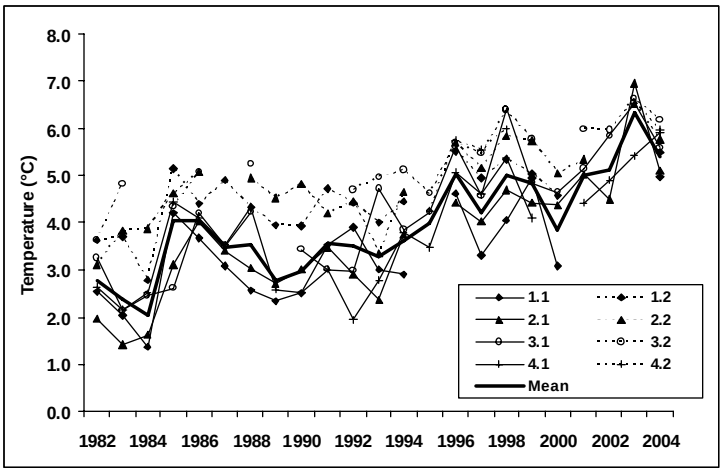


Fig. 16. Stratum means of near bottom temperature (°C) and stratified mean, 1982-2004. Respective values are listed in Table 17. Solid lines display trends in shallow strata (<200 m), dashed lines display trends in deep strata (>200 m),