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# Greenland Halibut *(Reinhardtius hippoglossoides)* in NAFO Subarea 2 and Divisions 3KLMNO: Stock Trends Based on Annual Canadian Research Vessel Survey Results During 1978-2004

by

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## Abstract

Greenland halibut are widely distributed throughout the Labrador-eastern Newfoundland area. During the late 1970s and most of the 1980s they were found in relatively high abundance along the deep slopes of the continental shelf, particularly in Div. 2G. They were similarly plentiful in the deep channels running between the fishing banks especially in Div. 2H, 2J and 3K. By 1991 distribution in the northern areas was greatly reduced and most of the resource was located in Division 3K; however since 1999 the biomass has declined by 50% in Div. 3K. In Div. 2J and 3K where most of the Greenland halibut resource presently resides, the stock biomass was relatively stable until the mid-1980s after which it declined substantially to reach an all time low in the early 1990s largely precipitated by the disappearance of older fish from the population. From about 1995 the stock began to increase and continued to improve to 1999 based upon several strong, successive year-classes particularly those of 1993-95. However, since 1999, the stock declined again and by 2002, it reached its lowest point since the early 1990s. Since then, although there has been variation of stock size within Divisions, the overall stock has not increased, remaining at a low level. Strong recruitment predicted in the 1990s has been overestimated, overexploited or both, and has not contributed growth to the stock as older, larger fish. Although estimates of spawning stock biomass are largely unknown, the annual biomass estimates of Greenland halibut >70 cm in Div. 2J+3K have been near zero for more than a decade. This paper updates the Canadian research vessel survey results for 2004, and compares these results to prior observations. Despite reduced coverage in the 2004 survey, it is still obvious that this stock is showing no signs of improvement.

## Introduction

Abundance and biomass estimates for Greenland halibut (NAFO Subarea 2 and Div. 3KLMNO) from Canadian annual research vessel (RV) surveys are updated for 2004, and as well, stratified mean numbers and weights per tow with associated confidence intervals are updated for division and age.

## Materials and Methods

### Canadian Research Vessel Surveys

*Divisions 2GH*

Research vessel surveys have been conducted occasionally in NAFO Div. 2G and 2H since 1978 usually during late summer or early fall. During 1978, 1979 and 1981 surveys were conducted according to fixed station design, which were later post stratified in order to provide estimates of biomass and abundance. Surveys in these divisions were again conducted in both 1987 and 1988 using true stratified random (SR) design. All surveys were carried out by

the research vessel ***Gadus Atlantica*** using an *Engel 145'* High Rise otter trawl. In 1991, a survey (SR) covering mainly Div. 2H was conducted with the research vessel ***Alfred Needler*** also using an *Engel 145'* High Rise otter trawl but with some variation from the one used above. Depths fished generally ranged from <200-1 000 meters although it varied from survey to survey depending on fishing days available, weather conditions, and bottom topography.

Surveys also were carried out annually from 1996-99 in Div. 2GH. By this time the ***Gadus Atlantica*** had been replaced by the research vessel ***Teleost*** and a new standard survey trawl was introduced, a *Campelen 1800* Shrimp trawl, which is much more effective in capturing very small fish. With the introduction of the ***Teleost*** the depth range of the surveys also were extended where possible to 1500 meters. Since 1999, Div 2G has not been surveyed but Div. 2H was surveyed in 2001 and 2004.

*Divisions 2J and 3K*

Stratified random fall surveys generally within a depth range of 100-1000 meters have been conducted annually in Div. 2J and 3K from 1977-94 and 1978-94, respectively using the research vessel ***Gadus Atlantica*** with its *Engel 145'* High Rise otter trawl. From 1995-2004 the surveys were conducted primarily using the research vessel ***Teleost*** that was sometimes supported by the research vessels ***Wilfred Templeman*** (sister ship of the ***Alfred Needler***) and the ***Alfred Needler,*** usually covering a depth range of 100-1 500 meters. All vessels used the *Campelen 1800* Shrimp trawl with identical construction. Because the operation of the gear was monitored by electronic sensors during these surveys in order to maintain consistency from tow to tow, catchability was assumed to be the same for all vessels. Beginning in 1996, inshore strata were sampled in Div. 3K (and Div. 3L) and were surveyed in all years since except for 1999.

Divisions 3L, 3M, 3N and 3O

Surveys have been conducted by Canada in Div. 3LNO and occasionally Div. 3M for many years, however, prior to 1996 the maximum depth usually did not exceed 400 meters. Therefore, data collected on Greenland halibut were considered too minimal to adequately describe its distribution and abundance and were not used in the assessments of the resource. From 1996-2003 (not completed in 2004), attempts were made to extend the surveys to depths of at least 730 meters and where possible to 1 500 meters. Beginning in 1996, inshore strata were sampled in Div. 3L (and Div. 3K) and were surveyed in all years since except for 1999. Surveys were carried out in both spring and fall by a combination of the research vessels ***Teleost***, ***Wilfred Templeman*** and ***Alfred Needler*** using the *Campelen 1800* Shrimp trawl.

*Problems with Fall Survey 2004*

The annual Canadian fall survey for 2004 was not fully completed, leaving several areas without coverage (see Brodie, 2005). In addition to missed strata, an additional problem is the timing of the survey as the duration of the survey has lengthened in recent years. The 2004 survey continued well beyond the usual completion date, running into February 2005. This likely affects Greenland halibut stock size as estimated by the survey as it has been shown that the highest catch rates in the fishery have been in the early winter period (Power, 2004).

**Comparative Fishing Exercises**

In order to maintain consistency in the data time series with the introduction of the new research vessel ***Teleost*** (which replaced the ***Gadus Atlantica***) and replacement of the standard *Engel 145'* High Rise survey trawls by the *Campelen 1800* Shrimp trawl, comparative-fishing trials were conducted.

In 1995, comparative-fishing trials were carried out between the ***Gadus Atlantica*** using the *Engel 145'* High Rise trawl and the ***Teleost*** using the *Campelen 1800* shrimp trawl. Data analysis and results of these exercises are presented in Warren (1996) including the associated length frequency conversion factors for the major species including Greenland halibut.

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As a result of these analyses, all length frequency data on Greenland halibut collected during the above surveys carried out in NAFO Subarea 2 and Div. 3K from 1977-94 were converted to *Campelen 1800* trawl catch equivalents to allow for direct comparison of the old data series with the results of surveys from 1995 onwards (Bowering *et al.*, 1996). Data conversions for the *Engel 145'* trawl used in surveys in Div. 3LMNO have not been conducted due to poor coverage of the depth zones where most Greenland halibut are encountered.

To allow for comparison of the biomass estimates between the converted data series and the true *Campelen 1800* estimates, the converted abundance at length was transformed to biomass at length using length-weight relationships applied annually to the entire converted data set.

As a result of the above data analyses, all data presented in this paper are in *Campelen 1800* trawl catch equivalents.

Fall survey coverage by NAFO Division and depth zone for the true *Campelen 1800* surveys from 1996-2004 is presented in Table A and spring survey coverage in Table B.

**Geographic Distribution**

To demonstrate the changing distribution patterns throughout the period 1978-2001, data from the autumn surveys in 1978, 1988, 1991, 2000 and 2001 were presented for illustration purposes in a previous review (Bowering 2002). As an update on distribution patterns only 2003 and 2004 autumn data are presented herein (Figures 1 and 2).

**Trends in Stock Size**

Biomass and abundance indices by stratum are updated for 2004 in Tables 1 and 2, respectively, for Div. 2G; Tables 3 and 4 for Div. 2H; Tables 5 and 6 for Div. 2J; Tables 7 and 8 for Div. 3K; Tables 9 and 10 for Div. 3L fall; Tables 11 and 12 for Div. 3M; Tables 13 and 14 for Div. 3N fall; Tables 15 and 16 for Div. 3O fall; Table17 for Div. 3L spring; Table 18 for Div. 3N spring; and Table 19 for Div. 3O spring.

For purposes of consistency, otolith numbers for age-length keys for Div. 2GH combined, Div. 2J+3KL combined, Div. 3MNO combined were applied to the respective individual divisions (Table C), in order to obtain estimates at age. This was done except in cases where more than one division was used (eg. Div. 2J+3K combined – otoliths were only used from Div. 2J and 3K) or when spring samples were used (see Table D).

**Stratified Number and Weight (kg) Per Tow**

Estimated confidence intervals (95%) were used as the measure of variation in estimates of stratified mean number and weight per tow.

Figure 5 was updated with estimates of mean biomass per tow, by converting mean numbers at length per tow and transforming to biomass at length per tow using annual length-weight (L/W) equations (sexes combined) available for 1990-2004. These annual equations were calculated using a power model of weight against length. These equations are shown in Table E. For the years 1978-89, the 1990 L/W equation was applied. The $R^2$ value was high for each relationship (Table E), but the equation in most years tended to underestimate weight for the longer fish in the population, indicating that the biomass is underestimated slightly in the very longest fish in the population.

## Results and Discussion

**Geographic Distribution**

The survey in 2003 (Fig. 1) did not cover Div. 2G. The fall survey of 2004, however, covered Div. 2H. Figure A shows the area covered by this survey and also the labels of some of the Greenland halibut fishing areas. Distribution plots for fall RV surveys in both 2003 and 2004 indicate that areas of density were similar. Concentrations of Greenland halibut in Div. 2H were found in the Hopedale Channel, similar to the distribution in 2001 (Bowering, 2002). There were some large catches in Hawke Channel and Cartwright Channel in both years, but few larger catches otherwise, except in some of the deeper channels in Div. 3K. However, abundance in the Flemish Pass (Div. 3LM deepwater) is relatively low, despite the concentration of fishing effort in this area.

**Trends in Stock Size**

The biomass index for Division 2G declined by nearly half from an average of about 50 000 tons during 1978, 1979 and 1981 to 23 000 tons during 1987-88 (Table 1). It subsequently declined by another 50% to an average of 13 000 tons during 1996-99. The 1999 value of 10 000 tons is among the lowest observed despite being one of the more complete years of survey coverage (Table 1). A similar trend was measured in Div. 2H (Table 3). The biomass index declined from an average of about 52 000 tons (excluding 1979 which was considered to be an anomaly) during 1978-81 to around 40 000 tons in 1987-88 and 34 000 tons during 1996-99. Both 2001 and 2004 (the two most recent surveys) indicate a slightly higher biomass in recent years, with an estimated 48 000 tons for 2001 (Table 3). There are so many years throughout the series with no survey that it is difficult to determine when the various declining trends actually began. No survey was conducted in Div. 2GH during 2000 and only Div. 2H was surveyed in 2001 and again in 2004.

Unlike Div. 2G and 2H, the annual survey series is continuous over 1978-2004 for both Div. 2J and 3K. In Div. 2J the biomass index was relatively stable from 1978-84 at an average level of about 115 000 tons (Table 5a and b). It then began to decline to reach a minimum in 1992 at about 18 000 tons and only increased marginally until 1995 after which it began to increase more rapidly. By 1999 it had reached a level of around 87 000 tons, the highest since 1986 but declined again in 2000 to 55 000 tons, the lowest since 1995 (Table 5a and b). Although the estimate rose slightly in 2001, it remained at a low level of 60 000 tons in 2004.

In Div. 3K there was a long period of apparent stability from 1978-89 at an average annual biomass estimate of 130 000 tons (Table 7a and b). It then declined to a low of 44 000 tons in 1992 with an average of 63 000 tons between 1991-94. After 1994 the biomass index increased rapidly and steadily until by 1999 it reached an estimate of 176 000 tons, the highest in the time series (Table 7a and b). Since 2000, the biomass index has been declining. In 2004, numbers have shown a slight increase; this may be due to the survey continuing into February 2005. Analyses of commercial data have shown that catch rates have been highest in early winter (e.g. Power, 2004). It is worth noting that the estimates from 1995-2004 represent actual *Campelen 1800* Shrimp trawl surveys and therefore any trends are not affected by data conversions.

The fall survey biomass indices for Div. 3L, 3M, 3N and 3O are shown in Tables 9, 11, 13 and 15, respectively. Until 2004, survey coverage in Div. 3L has been fairly comprehensive for the period examined. In 2004, Div. 3M was not surveyed. The biomass index has declined over the past 4 years with the 2004 value the lowest in the previous 7 years (again, note that the 2004 survey in Div. 3L was incomplete). The current biomass estimate is the lowest in the time series, continuing a declining trend that has been occurring since 1998. Survey coverage has varied from year to year in Div. 3MNO (Tables 11, 13 and 15, respectively; see also Brodie (2005)). Nevertheless, stock estimates for these Divisions have been declining over the past number of years. It is difficult to compare the survey results from these divisions in 2004 fall because of the interannual variability in both survey timing and survey coverage. These issues discussed more fully in Healey and Dwyer (2005a). The overall combined biomass estimates in these divisions are low in proportion to the total (Subarea 2 + Div. 3) ranging from about 12-25%, but only about 6% in 2004 (Table 20).

Stock size estimates for the Div. 3L, 3N and 3O spring survey series are shown in Tables 17, 18 and 19, respectively. The time series of biomass indices are highly variable for these Divisions; each index reached a minimum in 2002. Values remained low through 2004.

**Stratified Mean Number and Weight (kg) Per Tow by Division**

Mean weights and numbers per tow by division are presented in Tables 21a-g and 22a-g, respectively. The respective trends in mean weight per tow by division are presented for ease of illustration in Fig. 2, along with the corresponding values and confidence limits shown in Table 21. The mean weights per tow show similar trends to the annual swept area biomass series for all Divisions. Estimates were highest in the late 1970s for Div. 2G and 2H (Table 21a and 22a; Fig. 2a) then declined to the lowest value in the time series in 1991. Some improvement was observed in more recent surveys but still well below values of the early period.

For Div. 2J and 3K, mean weights per tow are shown in Table 21 and 22b, as well as Fig. 2a. The mean weight per tow index (Table 21b; Fig. 2a) declined from relatively high estimates of the early 1980s to reach an all time low in 1992. Over the next several years it increased to a peak in 1999 approaching the levels recorded in the early 1980s for Div. 3K compared to about 50% of that level for Div. 2J. Since then, however, it declined substantially between 2001 and 2002 for Div. 3K. Mean weight per tow for Div. 2J+3K seem to have stabilized in recent years however.

A comparison of mean weight per tow estimates between spring and fall surveys in Div. 3LNO during 1996-2004 (1995 for Div. 3L) is presented in Table 21c-e and Figure 2b (mean number per tow found in Table 22 c-e). All series indicate an overall declining trend since the late 1990s. As noted by Healey and Dwyer (2005a), the mean number/weight per tow estimates from Div. 3LNO for 2004 are biased due to incomplete coverage.

Table 21 g and Fig. 2c shows a comparison of mean weight per tow in Div. 2J+3K and Div. 2J+3KL from 1995-2004 (for 2J+3KL, we re-iterate the proviso that the 2004 estimate is biased due to incomplete coverage). These indices have declined; however each shows a slight increase since 2002. Div. 3L contributes little to the 2J+3KL index due to its lower proportion abundance compared to Div. 2J and 3K.

Similarly, Table 21 and 22g and Fig. 3 shows the mean weight and number per tow for Div. 2J and 3K combined for the entire time series. Mean weight per tow trends (Table 21g and Fig. 4) are similar to the separate Div. 2J and 3K series but because more of the stock is in 3K, trends resemble trends from that Division more closely. For mean number per tow (Table 22h and Fig. 3), there was little trend in mean number per tow up until the early 1990's, after which, there was an increase in the index peaking with the highest level observed by 1996. The index subsequently declined, but has been stable since 2002.

**Trends in Mean Biomass Per Tow by Size Category**

Most of the stock biomass resides in Div. 2J and 3K combined (Table 23) and these divisions comprise the longest time series of annual survey data throughout the stock area. In order to illustrate the mean biomass per tow trends for important size categories from 1978-2004, the data were combined for Div. 2J and 3K (Fig. 4). Figure 4 shows the trends in percent mean biomass per tow for Greenland halibut <30 cm, between 31-69 cm and >=70 cm. The value of 30 cm was chosen because it represents the minimum allowable size of Greenland halibut that can be retained in the commercial fishery. The value of 70 cm was chosen because it is considered to be an approximate knife-edge median size of Greenland halibut at maturity ($M_{50}$).

The results presented in Figure 4 indicate that the total stock (as represented by the Div. 2J+3K index) began to rebuild after 1995 and by 1999 approached near historic highs of the early 1980s. It declined again since then and by 2002 and 2003 was near the low level that it was during the early 1990s. At that time, the stock was largely comprised of Greenland halibut >= 30 cm in length with the >=30 cm and <30 cm lines intersecting for the first time in 1992 (Fig. 4). The lines crossed again in 1997 and grew apart since then. Since then it is clear that any improvement in the stock has not come from the spawning stock biomass. It was anticipated that as these recruits add growth the contributions to the stock biomass should shift back to the more usual size compositions assuming normal recruitment patterns. However, this is clearly not the case, suggesting that either the strong recruitment was overestimated, overexploited or both before contributing growth to the stock as older, larger fish.

During the late 1970s and early 1980s Greenland halibut greater than 70 cm contributed about 20% to the estimated trawlable stock biomass. However, after 1982 this size category declined to the point that by 1991 virtually no Greenland halibut in this size range contributed to the estimates of stock biomass. Since 1991, this value continues to be at or near zero.

**Age Composition**

Annual stratified mean number per tow at age compositions from the Div. 2J and 3K combined time series from 1978-2003 are presented in Table 23 and Fig. 5. Although Greenland halibut were caught as old as 19 years, very few were ever caught older than 12 years with the age structure fairly consistent from about 1978-88 (Table 23). Since then the older ages began to disappear from the survey catches entirely and by 1995 none were caught older than 11 years. After 1995 some older fish again began to appear in the surveys at least up to 13 years old which continued into 2004 (Table 23). The population abundance has increased considerably during the mid-1990s but is almost entirely driven by recruitment to the surveys of the 1993-95 year-classes (Table 23; Fig. 5). The mean number of fish per tow peaked in 1996 then declined to 1993-95 levels by 1998-99. The trend since then has been a gradual decline but has stablilized somewhat in recent years. The abundance of ages 5+ (upon which most commercial fishing takes place) remained very low in 2004 (Table 23). These trends are similar to the trends seen in mean biomass per tow by size category (Fig. 4).

The mean number per tow estimate from the fall surveys of Div. 2J+3KL is shown in Table 24, and again, the 2004 mean number per tow is the amongst the lowest in the time series of 1996-2004 only about 30% of the peak value in

1999. As with the mean weight and number per set, the 2004 at-age composition of these indices for Div. 3LMNO are biased due to the missed survey coverage.

Age compositions (mean numbers per tow) of Greenland halibut by division from actual Campelen 1800 Shrimp trawl surveys during 1996-2004 are shown in Table 25. The data are combined for Div. 2GH, Div. 2J+3K, Div. 3LM, and Div. 3NO as abundance at age (Fig. 6) to illustrate the dominance of Div. 2J+3K with respect to the overall stock size and percent at age (Fig. 7) to highlight the importance of the various year-classes to stock abundance. The 1993-95 year-classes are clearly dominant throughout the area over several years. The 2000, 2001 and 2002 year-classes appear to be near average or above-average, at least at very young ages. However, these ages are not considered reliable indicators of strong year-classes that will become part of the exploitable biomass (Healey and Dwyer, 2005b).

Age compositions are also shown for the Div. 3LNO combined spring series (Fig. 8). The 1995 year-class is strong, as are the 1993 and 1994 year-classes. None of the subsequent year-classes appear as strong at similar ages.

A comparison of age distributions of the spring and fall surveys in Div. 3LNO during 1996-2004 is shown in Fig. 9. Few fish older than age 8 are caught. The distributions are largely similar for surveys with similar coverage (1997 and 1999). However, in 1998, and 2000 to 2003 when fall survey coverage included depths to 1 500 m, the data are dominated proportionately by older fish than the shallower spring surveys (Fig. 9). Because the 2004 fall survey covered only the shallow depths, the age compositions are similar to the age composition from the spring survey and there are few older fish present.

**Mean Length and Weight at Age**

Both mean length and weight at age over time are shown in Fig. 10. Weight at age was calculated by applying the length/weight relationship for each year to the average length. Length at age seems stable over time, but weight at age may be declining slightly for older ages.

## Conclusions

The results from most Canadian surveys indicate that stock size has been declining since 1999, with a significant drop between 2001 and 2002. Stock size estimates from 2004 are somewhat variable among Divisions and surveys although they remained relatively low. The strong year-classes of 1993-95 appear to be depleted and are not expected to contribute to the spawning stock size in the future. Results indicate that year-classes of the late 1990s are generally low. The most recent year-classes are higher in abundance but well below the strengths of the 1993-1995 year-classes at similar ages. However, it is important to note that by the time year-classes reach age 5 and are recruited to the fishery, their apparent strength at earlier ages has greatly diminished. Despite reduced coverage in the 2004 survey, it is still obvious that this stock is showing no signs of improvement.

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Table A. Summary of successful sets in fall surveys in SA 2+3 in 1995 - 2004. Depth range is given in meters, numbers of sets appear in parentheses. Dates of the survey are also listed.

| Year | Division | Ship | | | | Year | Division | Ship | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *Teleost* | *W.Templeman* | *A.Needler* | ***Total*** | | | *Teleost* | *W.Templeman* | *A.Needler* | ***Total*** |
| | | Sept 25-Jan 25 (1996) | | | | | | Oct 17 - Dec 18 | | | |
| 1995 | 2G | Not surveyed in 1995 | | | | 2000 | 2G | **Not surveyed in 2000** | | | |
| | 2H | | | | | | 2H | **Not surveyed in 2000** | | | |
| | 2J | 145-948 (84) | | | 84 | | 2J | 127-1400 (117) | | | 117 |
| | 3K | 166-1444 (31) | 162-494 (100) | | 131 | | 3K | 113-1379 (159) | | | 159 |
| | 3L | 733-1210 (5) | 63-640 (161) | | 166 | | 3L | 152-1430 (74) | 42-447 (102) | | 176 |
| | 3M | Not surveyed in 1995 | | | | | 3M | 764-1401 (26) | | | 26 |
| | 3N | | 40-650 (90) | | 90 | | 3N | 747-1419 (24) | 46-642 (70) | | 94 |
| | 3O | | 63-730 (81) | | 81 | | 3O | 752-1424 (24) | 62-654 (76) | | 100 |
| | | | | | **552** | | | | | | **672** |
| | | Sept 18 - Dec. 17 | | | | | | Sept 22 - Dec 18 | | | |
| 1996 | 2G | 127 - 1436 (47) | | | 47 | 2001 | 2G | **Not surveyed in 2001** | | | 57 |
| | 2H | 122 - 1415 (77) | | | 77 | | 2H | 999-1466(8) | | 117-655(49) | 120 |
| | 2J | 126 - 1410 (117) | | | 117 | | 2J | 120-1389(49) | | 105-574(71) | 165 |
| | 3K | 111 - 1368 (115) | 126 - 472 (60) | | 175 | | 3K | 146-1479(106) | 128-439(55) | 170-252(4) | 205 |
| | 3L | 805 - 1433 (31) | 51 - 671 (180) | | 211 | | 3L | 146-1457(34) | 38-702(169) | 187-203(2) | 26 |
| | 3M | 784 - 1400 (18) | 127 - 707 (68) | | 86 | | 3M | 763-1407(26) | | | 94 |
| | 3N | 390 - 1147 (13) | | 37 - 309 (54) | 67 | | 3N | 739-1410(24) | 45-660(70) | | 97 |
| | 3O | 68 - 690 (24) | 65 - 139 (19) | 63 - 304 (15) | 58 | | 3O | 803-1391(22) | 67-703(75) | | **764** |
| | | 1996 survey of Div 3M covered all strata | | | **838** | | | | | | |
| | | Sept 26-Dec 17 | | | | | | Oct 5 - Jan 14 (2003) | | | |
| 1997 | 2G | 201-1209 (69) | | | 69 | 2002 | 2G | **Not surveyed in 2002** | | | |
| | 2H | 220-1382 (71) | | | 71 | | 2H | **Not surveyed in 2002** | | | 117 |
| | 2J | 123-1488 (117) | | | 117 | | 2J | 102-1372 (98) | 136-572 (19) | | 175 |
| | 3K | 143-1431 (155) | 117-421 (20) | | 175 | | 3K | 156-1395 (64) | 121-481 (111) | | 206 |
| | 3L | 161-1436 (71) | 35-714 (134) | | 205 | | 3L | 763-1431 (30) | 35-670 (176) | | 26 |
| | 3M | 799-1379 (26) | | | 26 | | 3M | 818-1403 (26) | | | 94 |
| | 3N | | 41-769 (74) | | 74 | | 3N | 811-1429 (24) | 44-675 (70) | | 99 |
| | 3O | | 62-611 (73) | | 73 | | 3O | 775-1504 (24) | 65-696 (75) | | **717** |
| | | | | | **810** | | | | | | |
| | | Oct 1 - Dec 16 | | | | | | Sept 23 - Jan 20 (2004) | | | |
| 1998 | 2G | 143-1488 (34) | | | 34 | 2003 | 2G | **Not surveyed in 2003** | | | |
| | 2H | 98-1473 (83) | | | 83 | | 2H | **Not surveyed in 2003** | | | 116 |
| | 2J | 126-1398 (118) | | | 118 | | 2J | 123-1404 (116) | | | 168 |
| | 3K | 122-1415 (154) | 121-346 (17) | | 171 | | 3K | 151-1474 (118) | 115-489 (50) | | 205 |
| | 3L | 691-1437 (32) | 34-675 (172) | | 204 | | 3L | 753-1446 (30) | 32-702 (175) | | 26 |
| | 3M | 768-1436 (26) | | | 26 | | 3M | 795-1455 (26) | | | 70 |
| | 3N | 834-1447 (12) | 37-1079 (78) | | 90 | | 3N | | 43-727 (70) | | 75 |
| | 3O | | 82-1076 (87) | | 87 | | 3O | | 63-650 (75) | | **660** |
| | | | | | **813** | | | 2003 excludes 8 sets done in Div. 3O > 731 m | | | |
| | | Oct 12 - Dec 12 | | | | | | Oct 8 - Feb 1 (2004) | | | |
| 1999 | 2G | 142-1415(69) | | | 69 | 2004 | 2G | **Not surveyed in 2004** | | | |
| | 2H | 104-1454(81) | | | 81 | | 2H | 109-1415 (87) | | | 87 |
| | 2J | 109-1375(115) | | | 115 | | 2J | 127-1365 (115) | | | 115 |
| | 3K | 146-1477(154) | | | 154 | | 3K | 112-1412 (135) | 212-549 (16) | | 151 |
| | 3L | 1366(1) | 63-1407 (169) | | 170 | | 3L | 151-522 (4) | 44-653 (143) | | 147 |
| | 3M | 853-1403(12) | | | 12 | | 3M | **Not surveyed in 2004** | | | |
| | 3N | | 39-664(68) | | 68 | | 3N | | 40-659 (69) | | 69 |
| | 3O | | 58-692(75) | | 75 | | 3O | | 63-634 (76) | | 76 |
| | | | | | **744** | | | | | | **645** |

Table B. Summary of successful sets in spring surveys in SA 2+3 in 1996 - 2004. Depth range is given in metres, numbers of sets appear in parentheses.

| Year | Division | Ship | | Year | Division | Ship | |
|---|---|---|---|---|---|---|---|
| | | *W. Templeman* | ***Total*** | | | *W. Templeman* | ***Total*** |
| 1996 | 3L | 91-731(188) | 188 | 2001 | 3L | 55-731(154) | 154 |
| | 3N | 55-731(82) | 82 | | 3N | 55-731(79) | 79 |
| | 3O | 91-731(86) | 86 | | 3O | 55-731(79) | 79 |
| | | | **356** | | | | **312** |
| 1997 | 3L | 91-731(158) | 158 | 2002 | 3L | 55-731(146) | 146 |
| | 3N | 55-731(71) | 71 | | 3N | 55-731(79) | 79 |
| | 3O | 91-731(81) | 81 | | 3O | 91-731(79) | 79 |
| | | | **310** | | | | **304** |
| 1998 | 3L | 55-731(163) | 163 | 2003 | 3L | 55-731 (156) | 156 |
| | 3N | 55-731(88) | 88 | | 3N | 55-731 (79) | 79 |
| | 3O | 91-731(93) | 93 | | 3O | 55-731 (79) | 79 |
| | | | **344** | | | | **314** |
| 1999 | 3L | 55-731(177) | 177 | 2004 | 3L | 55-731 (151) | 151 |
| | 3N | 55-731(82) | 82 | | 3N | 55-731 (79) | 79 |
| | 3O | 91-731(86) | 86 | | 3O | 91-731 (79) | 79 |
| | | | **345** | | | | **309** |
| 2000 | 3L | 91-731(134) | 134 | | | | |
| | 3N | 55-731(81) | 81 | | | | |
| | 3O | 91-731(83) | 83 | | | | |
| | | | **298** | | | | |

Table C. Number of age samples available per division combinations used to develop fall age-length keys. Age-length keys for 2GH combined, Div. 2J3KL combined and Div. 3MNO combined were applied to the respective individual divisions.

| | Div. 2GH | | | Div. 2J3KL | | | | Div. 3MNO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 2G | 2H | **Total** | 2J | 3K | 3L | **Total** | 3M | 3N | 3O | **Total** |
| 1978 | 1220 | 1134 | **2354** | 766 | 1616 | - | **2382** | - | - | - | - |
| 1979 | 756 | 841 | **1597** | 1192 | 1367 | - | **2559** | - | - | - | - |
| 1980 | - | - | - | 1561 | 1065 | - | **2626** | - | - | - | - |
| 1981 | 756 | 758 | **1514** | 1619 | 1356 | - | **2975** | - | - | - | - |
| 1982 | - | - | - | 1699 | 1349 | - | **3048** | - | - | - | - |
| 1983 | - | - | - | 1325 | 1240 | - | **2565** | - | - | - | - |
| 1984 | - | - | - | 1159 | 1341 | - | **2500** | - | - | - | - |
| 1985 | - | - | - | 1298 | 1457 | - | **2755** | - | - | - | - |
| 1986 | - | - | - | 1218 | 1114 | - | **2332** | - | - | - | - |
| 1987 | 783 | 1227 | **2010** | 1211 | 1192 | - | **2403** | - | - | - | - |
| 1988 | 680 | 1268 | **1948** | 1058 | 1053 | - | **2111** | - | - | - | - |
| 1989 | - | - | - | 667 | 533 | - | **1200** | - | - | - | - |
| 1990 | - | - | - | 575 | 513 | - | **1088** | - | - | - | - |
| 1991 | 65 | 377 | **442** | 514 | 564 | - | **1078** | - | - | - | - |
| 1992 | - | - | - | 505 | 498 | - | **1003** | - | - | - | - |
| 1993 | - | - | - | 476 | 505 | - | **981** | - | - | - | - |
| 1994 | - | - | - | 643 | 449 | - | **1092** | - | - | - | - |
| 1995 | - | - | - | 562 | 578 | - | **1140** | - | - | - | - |
| 1996 | 370 | 628 | **998** | 737 | 813 | 661 | **2211** | 354 | 315 | 134 | **803** |
| 1997 | 664 | 721 | **1385** | 850 | 950 | 897 | **2697** | 211 | 233 | 160 | **604** |
| 1998 | 311 | 635 | **946** | 970 | 870 | 743 | **2583** | 229 | 465 | 411 | **1105** |
| 1999 | 488 | 671 | **1159** | 797 | 802 | 516 | **2115** | 99 | 153 | 91 | **343** |
| 2000 | **NO SURVEY** | | - | 608 | 716 | 673 | **1997** | 204 | 413 | 210 | **827** |
| 2001 | **NO SURVEY** | 579 | **579** | 759 | 991 | 797 | **2547** | 292 | 395 | 287 | **974** |
| 2002 | **NO SURVEY** | | - | 1101 | 972 | 693 | **2766** | 107 | 339 | 268 | **714** |
| 2003 | **NO SURVEY** | | - | 757 | 622 | 538 | **1917** | 154 | 150 | 223 | **527** |
| 2004 | **NO SURVEY** | **848** | **848** | 777 | 614 | 311 | **1702** | **NO SURVEY** | 168 | 73 | **241** |

Table D. Number of age samples available per division combinations used to develop spring age-length keys. Age-length keys for Div. 3LNO combined were applied to the respective individual divisions.

| | Div. 3LNO | | | |
|---|---|---|---|---|
| Year | 3L | 3N | 3O | **Total** |
| 1996 | 724 | 377 | 475 | **1576** |
| 1997 | 637 | 369 | 375 | **1381** |
| 1998 | 668 | 306 | 334 | **1308** |
| 1999 | 413 | 334 | 172 | **919** |
| 2000 | 358 | 230 | 75 | **663** |
| 2001 | 730 | 328 | 126 | **1184** |
| 2002 | 320 | 140 | 49 | **509** |
| 2003 | 321 | 180 | 65 | **566** |
| 2004 | 322 | 141 | 70 | **533** |

Table E. Length-weight relationships for Greenland halibut, for Division 2J3K, 1990-2004. W = round weight (kg) and L = total length (cm). From 1978-1989, the 1990 annual L/W equations were applied.

| Year | Sex | Length-Weight Equations | N | $r^2$ |
|---|---|---|---|---|
| 1990 | All | $W = 5.765 * 10^{-6} L^{3.118}$ | 1067 | 0.978 |
| 1991 | All | $W = 1.088 * 10^{-5} L^{2.934}$ | 1073 | 0.985 |
| 1992 | All | $W = 9.204 * 10^{-6} L^{2.975}$ | 933 | 0.979 |
| 1993 | All | $W = 6.359 * 10^{-6} L^{3.077}$ | 975 | 0.987 |
| 1994 | All | $W = 1.238 * 10^{-5} L^{2.894}$ | 1088 | 0.981 |
| 1995 | All | $W = 8.677 * 10^{-6} L^{2.979}$ | 1068 | 0.983 |
| 1996 | All | $W = 3.968 * 10^{-6} L^{3.193}$ | 1421 | 0.989 |
| 1997 | All | $W = 5.390 * 10^{-6} L^{3.111}$ | 1755 | 0.989 |
| 1998 | All | $W = 5.518 * 10^{-6} L^{3.105}$ | 1796 | 0.988 |
| 1999 | All | $W = 5.004 * 10^{-6} L^{3.130}$ | 1535 | 0.990 |
| 2000 | All | $W = 4.260 * 10^{-6} L^{3.178}$ | 1283 | 0.988 |
| 2001 | All | $W = 5.062 * 10^{-6} L^{3.127}$ | 1714 | 0.983 |
| 2002 | All | $W = 5.545 * 10^{-6} L^{3.104}$ | 1916 | 0.990 |
| 2003 | All | $W = 5.485 * 10^{-6} L^{3.105}$ | 1351 | 0.989 |
| 2004 | All | $W = 5.526 * 10^{-6} L^{3.111}$ | 1374 | 0.991 |

Table 1 Biomass estimates (tons) by depth stratum of Greenland halibut from various Canadian surveys in Division 2G during the period 1978-99 (No survey since then). Estimates are expressed in Campelen units or Campelen equivalents.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1981 | 1987 | 1988 | 1991 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=200 | 2773 | 2773 | 909 | 7475 | 1547 | 2139 | . | . | 47 | 142 | . | 271 | 117 |
| | 2339 | 2339 | 910 | 11062 | 1788 | 1890 | . | . | 45 | 23 | . | 11 | 128 |
| | 1804 | 1804 | 925 | 10644 | 3064 | 2508 | . | . | . | 15 | . | . | 92 |
| 201 - 300 | 1213 | 1213 | 901 | 7714 | 7673 | 7143 | 2228 | 2823 | 623 | 517 | 853 | . | 1526 |
| | 585 | 585 | 908 | 607 | 1960 | 393 | 396 | 139 | 86 | 606 | 587 | 451 | 300 |
| | 692 | 692 | 911 | 599 | 879 | 585 | 456 | 29 | 110 | 241 | 975 | 525 | 209 |
| | 756 | 756 | 924 | 765 | 1197 | 1596 | 556 | 198 | . | 225 | 815 | . | 384 |
| | 433 | 433 | 926 | . | . | . | . | 592 | . | 426 | 443 | . | 301 |
| 301 - 400 | 120 | 120 | 902 | . | . | . | 287 | 41 | . | 312 | 253 | 67 | 106 |
| | 73 | 73 | 912 | . | . | . | 112 | 2 | . | . | 227 | 87 | 64 |
| | 186 | 186 | 923 | 5650 | . | 1357 | 97 | 317 | . | 200 | 195 | . | 77 |
| | 832 | 832 | 927 | . | . | . | 2694 | 864 | . | 6729 | 1623 | . | 3342 |
| 401 - 500 | 80 | 80 | 903 | . | 832 | 526 | 120 | 123 | 30 | . | 112 | 123 | 95 |
| | 62 | 62 | 913 | . | . | . | 181 | 170 | . | . | 34 | 37 | 19 |
| | 186 | 186 | 922 | 5085 | . | 1591 | . | . | . | . | 273 | . | 195 |
| | 783 | 783 | 928 | . | . | . | 4257 | 1061 | . | 6949 | 2957 | . | 1134 |
| 501 - 750 | 153 | 153 | 904 | . | 4025 | 1816 | 770 | 410 | . | . | 233 | 249 | 198 |
| | 113 | 113 | 914 | . | . | . | 377 | 891 | . | . | 88 | 211 | 63 |
| | 142 | 142 | 921 | . | 9314 | . | 209 | 260 | . | . | 470 | . | 127 |
| | 1261 | 1261 | 929 | . | 18966 | 26440 | 6809 | 5045 | . | 5891 | 2706 | . | . |
| 751 -1000 | 164 | 164 | 905 | . | . | . | . | 3038 | . | . | . | 688 | 481 |
| | 96 | 96 | 915 | . | . | . | . | 1835 | . | . | . | . | . |
| | 172 | 172 | 920 | . | . | . | 4428 | 3283 | . | . | . | . | . |
| 1001 -1250 | 229 | 229 | 906 | . | . | . | 40 | 538 | . | . | 776 | 699 | 795 |
| | 146 | 146 | 916 | . | . | . | . | 181 | . | . | . | 1092 | . |
| | 316 | 316 | 919 | . | . | . | . | 579 | . | . | 1883 | . | . |
| 1251 -1500 | 360 | 360 | 907 | . | . | . | . | . | . | . | . | . | 773 |
| | 165 | 165 | 917 | . | . | . | . | . | . | . | . | . | . |
| | 515 | 515 | 918 | . | . | . | . | . | . | . | . | . | . |
| Total Biomass (t) | | | | 49600 | 51244 | 47985 | 24016 | 22419 | 941 | 22275 | 15503 | 4511 | 10525 |

Table 2 Abundance estimates (000s) by depth stratum of Greenland halibut from various Canadian surveys in Division 2G during the period 1978-99 (No survey since then). Estimates are expressed in Campelen units or Campelen equivalents.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1981 | 1987 | 1988 | 1991 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=200 | 2773 | 2773 | 909 | 60505 | 13478 | 5054 | . | . | 496 | 6379 | . | 8774 | 1730 |
| | 2339 | 2339 | 910 | 34669 | 9371 | 4223 | . | . | 2413 | 804 | . | 572 | 2181 |
| | 1804 | 1804 | 925 | 17917 | 6080 | 4632 | . | . | . | 358 | . | . | 1551 |
| 201 - 300 | 1213 | 1213 | 901 | 56325 | 25196 | 50893 | 42883 | 15018 | 5435 | 14165 | 6213 | . | 13349 |
| | 585 | 585 | 908 | 724 | 30794 | 241 | 20376 | 1288 | 1100 | 9013 | 5195 | 3380 | 3139 |
| | 692 | 692 | 911 | 1690 | 2546 | 3395 | 20593 | 190 | 238 | 4760 | 12202 | 6886 | 2031 |
| | 756 | 756 | 924 | 624 | 1040 | 2444 | 9308 | 3682 | . | 4312 | 6397 | . | 6898 |
| | 433 | 433 | 926 | . | . | . | . | 1866 | . | 1387 | 1430 | . | 1162 |
| 301 - 400 | 120 | 120 | 902 | . | . | . | 435 | 66 | . | 2330 | 998 | 206 | 388 |
| | 73 | 73 | 912 | . | . | . | 110 | 10 | . | . | 899 | 241 | 176 |
| | 186 | 186 | 923 | 2699 | . | 793 | 90 | 563 | . | 870 | 915 | . | 409 |
| | 832 | 832 | 927 | . | . | . | 3411 | 7554 | . | 15176 | 5778 | . | 9557 |
| 401 - 500 | 80 | 80 | 903 | . | 820 | 259 | 138 | 171 | 99 | . | 619 | 314 | 286 |
| | 62 | 62 | 913 | . | . | . | 230 | 158 | . | . | 171 | 132 | 47 |
| | 186 | 186 | 922 | 2162 | . | 806 | . | . | . | . | 819 | . | 422 |
| | 783 | 783 | 928 | . | . | . | 2693 | 969 | . | 14756 | 7827 | . | 2908 |
| 501 - 750 | 153 | 153 | 904 | . | 2498 | 663 | 659 | 442 | . | . | 968 | 579 | 582 |
| | 113 | 113 | 914 | . | . | . | 326 | 847 | . | . | 315 | 567 | 241 |
| | 142 | 142 | 921 | . | 5792 | . | 166 | 244 | . | . | 1391 | . | 498 |
| | 1261 | 1261 | 929 | . | 7849 | 11391 | 4718 | 3556 | . | 23379 | 7056 | . | . |
| 751 -1000 | 164 | 164 | 905 | . | . | . | . | 2267 | . | . | . | 1027 | 699 |
| | 96 | 96 | 915 | . | . | . | . | 1373 | . | . | . | . | . |
| | 172 | 172 | 920 | . | . | . | 2904 | 3005 | . | . | . | . | . |
| 1001 -1250 | 229 | 229 | 906 | . | . | . | 63 | 252 | . | . | 973 | 630 | 740 |
| | 146 | 146 | 916 | . | . | . | . | 40 | . | . | . | 1306 | . |
| | 316 | 316 | 919 | . | . | . | . | 283 | . | . | 2360 | . | . |
| 1251 -1500 | 360 | 360 | 907 | . | . | . | . | . | . | . | . | . | 371 |
| | 165 | 165 | 917 | . | . | . | . | . | . | . | . | . | . |
| | 515 | 515 | 918 | . | . | . | . | . | . | . | . | . | . |
| Abundance (000s) | | | | 177315 | 105464 | 84795 | 109103 | 43844 | 9781 | 97689 | 62525 | 24612 | 49365 |

Table 3 Biomass estimates (tons) by depth stratum of Greenland halibut from various Canadian surveys in Division 2H during the period 1978-2004 (No survey in 2000, 2002 and 2003). Estimates are expressed in Campelen units or Campelen equivalents.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1981 | 1987 | 1988 | 1991 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=200 | 1028 | 1028 | 930 | 315 | 263 | 707 | 50 | 96 | 343 | 152 | . | 97 | 168 | | 1 | | | 798 |
| | 971 | 971 | 954 | 583 | 804 | 265 | 103 | 348 | 6 | 91 | . | 34 | 127 | | 42 | | | 361 |
| | 1051 | 1051 | 956 | 1020 | 332 | 562 | 135 | 457 | 57 | 12 | . | 102 | 48 | | 17 | | | 600 |
| | 1371 | 1371 | 957 | 3183 | 693 | 1274 | 374 | 578 | 86 | 15 | . | 29 | 43 | | 22 | | | 151 |
| 201 - 300 | 276 | 276 | 931 | 560 | 68 | 1113 | 94 | 107 | 200 | 180 | 71 | 171 | 150 | | . | | | 211 |
| | 354 | 354 | 943 | 822 | 18 | 1371 | 242 | 626 | 19 | 338 | 212 | 442 | 234 | | . | | | 452 |
| | 261 | 261 | 950 | . | . | . | . | . | . | 283 | 1402 | . | 211 | | 465 | | | 4065 |
| | 291 | 291 | 953 | 11257 | 940 | 2984 | 1115 | 530 | 1347 | 179 | 659 | 594 | 258 | | 224 | | | 473 |
| | 389 | 389 | 955 | 630 | 1062 | 311 | 243 | 387 | 47 | 1475 | 363 | 363 | 271 | | 127 | | | 462 |
| | 294 | 294 | 958 | . | 487 | 158 | 63 | 253 | 103 | 178 | 391 | 270 | 277 | | 202 | | | 612 |
| 301 - 400 | 55 | 55 | 932 | . | . | . | 28 | 39 | 35 | 131 | 166 | 97 | 105 | No Survey | . | No Survey | No Survey | 100 |
| | 860 | 860 | 944 | 4747 | 5420 | 8446 | 761 | 995 | 242 | 500 | 5918 | 2276 | 3205 | | . | | | 1825 |
| | 206 | 206 | 949 | . | . | . | . | . | . | 3985 | 839 | . | . | | 783 | | | 2653 |
| | 177 | 177 | 952 | . | 4345 | 1697 | 875 | 3187 | 171 | 337 | 1227 | 2596 | 3017 | | 2045 | | | 1568 |
| | 178 | 178 | 959 | . | 1817 | 948 | 298 | 747 | 84 | 151 | 684 | 664 | 175 | | 543 | | | 345 |
| 401 - 500 | 50 | 50 | 933 | . | . | . | . | 25 | 17 | 105 | 310 | 104 | 84 | | . | | | 55 |
| | 55 | 55 | 942 | . | 1562 | 1002 | 61 | 47 | 36 | 61 | 135 | 104 | 85 | | 187 | | | 120 |
| | 461 | 461 | 945 | . | 14164 | 6684 | 2583 | 5095 | 1265 | 1302 | 2019 | 1310 | 2892 | | 7920 | | | 4498 |
| | 246 | 246 | 948 | . | . | . | . | . | . | 3234 | 3605 | 10034 | . | | 4112 | | | . |
| | 234 | 234 | 951 | 2027 | 8478 | 2253 | 1999 | 1692 | 865 | 1629 | 2571 | 1396 | 2449 | | 1462 | | | 1951 |
| | 107 | 107 | 960 | . | 4767 | 569 | 506 | 119 | 23 | 97 | 332 | 375 | 184 | | 232 | | | 221 |
| 501 - 750 | 78 | 78 | 934 | . | 5019 | . | 504 | 102 | . | 303 | 191 | 166 | 272 | | . | | | 149 |
| | 89 | 89 | 941 | . | . | . | 379 | 713 | . | 81 | 507 | 178 | 356 | | 666 | | | 443 |
| | 721 | 721 | 946 | 31158 | 57014 | 13063 | 18281 | 11105 | . | 4680 | 7045 | 7813 | 6231 | | 9549 | | | 16806 |
| | 227 | 227 | 947 | . | 16477 | 2539 | 6266 | 6206 | . | 2002 | 2770 | 3999 | 2255 | | 4532 | | | 3372 |
| | 211 | 211 | 961 | . | 6300 | 1888 | 666 | 880 | . | 285 | 223 | 270 | 275 | | 1321 | | | 474 |
| 751 -1000 | 96 | 96 | 935 | . | . | . | 457 | 481 | . | . | 478 | 519 | 713 | | . | | | 597 |
| | 97 | 97 | 940 | . | . | . | 400 | 360 | . | 268 | 658 | 492 | 644 | | . | | | 586 |
| | 242 | 242 | 962 | . | . | . | 1243 | 1812 | . | 884 | 922 | 1119 | 1852 | | . | | | 993 |
| 1001 -1250 | 78 | 78 | 936 | . | . | . | 85 | 1810 | . | . | 486 | 883 | . | | 1383 | | | 320 |
| | 130 | 130 | 939 | . | . | . | 284 | 651 | . | 832 | 603 | . | 692 | | . | | | 497 |
| | 265 | 265 | 963 | . | . | . | 1443 | 2248 | . | 1023 | 1909 | 541 | 1258 | | . | | | 1122 |
| 1251 -1500 | 94 | 94 | 937 | . | . | . | . | . | . | . | 389 | 195 | . | | 677 | | | 292 |
| | 191 | 191 | 938 | . | . | . | . | . | . | 447 | 731 | 624 | 837 | | 1170 | | | 582 |
| | 342 | 342 | 964 | . | . | . | . | . | . | 826 | 815 | 1131 | 1362 | | . | | | 466 |
| Total Biomass (t) | | | | 56300 | 130030 | 47835 | 39539 | 41694 | 4946 | 26062 | 38628 | 38988 | 30730 | | 37682 | | | 48222 |

Table 4 Abundance estimates (000s) by depth stratum of Greenland halibut from various Canadian surveys in Division 2H during the period 1978-2004 (No survey in 2000, 2002 or 2003). Estimates are expressed in Campelen units or Campelen equivalents.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1981 | 1987 | 1988 | 1991 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=200 | 1028 | 1028 | 930 | 7813 | 4949 | 2811 | 3708 | 1966 | 3300 | 5374 | . | 368 | 672 | | 47 | 13683 |
| | 971 | 971 | 954 | 11300 | 19528 | 846 | 12361 | 39684 | 2137 | 1985 | . | 267 | 4308 | | 445 | 4702 |
| | 1051 | 1051 | 956 | 18988 | 16795 | 4735 | 10771 | 18014 | 1157 | 723 | . | 1475 | 1121 | | 713 | 9030 |
| | 1371 | 1371 | 957 | 35154 | 17225 | 9304 | 6361 | 25231 | 3018 | 566 | . | 219 | 1590 | | 571 | 2402 |
| 201 - 300 | 276 | 276 | 931 | 3113 | 456 | 937 | 3389 | 2493 | 1822 | 6341 | 683 | 1029 | 1177 | | . | 2525 |
| | 354 | 354 | 943 | 2654 | 1339 | 3725 | 8534 | 9959 | 536 | 5235 | 2237 | 1777 | 2292 | | . | 12724 |
| | 261 | 261 | 950 | . | . | . | . | . | . | 2082 | 9856 | . | 1167 | | 2844 | 36645 |
| | 291 | 291 | 953 | 100676 | 4310 | 13410 | 74723 | 17613 | 6345 | 1301 | 12727 | 2962 | 1521 | | 3009 | 4824 |
| | 389 | 389 | 955 | 1231 | 25043 | 178 | 7478 | 7759 | 1391 | 49950 | 5048 | 1357 | 1686 | | 1403 | 7950 |
| | 294 | 294 | 958 | . | 8999 | 61 | 5514 | 7806 | 5986 | 2002 | 8345 | 3155 | 4894 | | 6006 | 8811 |
| 301 - 400 | 55 | 55 | 932 | . | . | . | 49 | 102 | 238 | 2474 | 1313 | 804 | 688 | No Survey | . | 348 |
| | 860 | 860 | 944 | 13151 | 25369 | 5744 | 13628 | 9050 | 2514 | 6656 | 53118 | 10151 | 24991 | | . | 16372 |
| | 206 | 206 | 949 | . | . | . | . | . | . | 29457 | 7391 | . | . | | 4846 | 23175 |
| | 177 | 177 | 952 | . | 17519 | 3555 | 8352 | 46002 | 2642 | 6014 | 6708 | 14938 | 17708 | | 14098 | 12515 |
| | 178 | 178 | 959 | . | 1730 | 392 | 547 | 1739 | 502 | 1146 | 3783 | 2204 | 673 | | 5539 | 1301 |
| 401 - 500 | 50 | 50 | 933 | . | . | . | . | 45 | 65 | 898 | 2253 | 474 | 259 | | . | 138 |
| | 55 | 55 | 942 | . | 810 | 367 | 103 | 64 | 95 | 250 | 885 | 431 | 269 | | 602 | 356 |
| | 461 | 461 | 945 | . | 36739 | 19617 | 22348 | 55983 | 6817 | 10051 | 19595 | 5454 | 17312 | | 56925 | 21434 |
| | 246 | 246 | 948 | . | . | . | . | . | . | 25826 | 23100 | 56810 | . | | 27958 | . |
| | 234 | 234 | 951 | 6712 | 27506 | 3702 | 5569 | 11991 | 3718 | 11105 | 20202 | 7033 | 12008 | | 6364 | 7806 |
| | 107 | 107 | 960 | . | 2569 | 199 | 594 | 152 | 110 | 206 | 1253 | 1188 | 515 | | 1348 | 597 |
| 501 - 750 | 78 | 78 | 934 | . | 1540 | . | 628 | 111 | . | 783 | 789 | 569 | 714 | | . | 274 |
| | 89 | 89 | 941 | . | . | . | 441 | 643 | . | 269 | 1181 | 465 | 1096 | | 2007 | 1075 |
| | 721 | 721 | 946 | 32110 | 117728 | 17768 | 118795 | 83445 | . | 30614 | 35062 | 32182 | 26459 | | 39331 | 64865 |
| | 227 | 227 | 947 | . | 33053 | 5574 | 14957 | 27870 | . | 10492 | 13622 | 15379 | 8447 | | 19229 | 20313 |
| | 211 | 211 | 961 | . | 3261 | 677 | 697 | 1180 | . | 653 | 839 | 755 | 726 | | 6815 | 1095 |
| 751 -1000 | 96 | 96 | 935 | . | . | . | 390 | 178 | . | . | 767 | 1281 | 1181 | | . | 983 |
| | 97 | 97 | 940 | . | . | . | 434 | 314 | . | 427 | 1334 | 1061 | 941 | | . | 827 |
| | 242 | 242 | 962 | . | . | . | 877 | 1565 | . | 1548 | 2367 | 1598 | 2264 | | . | 1282 |
| 1001 -1250 | 78 | 78 | 936 | . | . | . | 97 | 724 | . | . | 542 | 939 | . | | 1813 | 256 |
| | 130 | 130 | 939 | . | . | . | 215 | 206 | . | 742 | 519 | . | 787 | | . | 514 |
| | 265 | 265 | 963 | . | . | . | 638 | 1276 | . | 1167 | 2098 | 635 | 1258 | | . | 1042 |
| 1251 -1500 | 94 | 94 | 937 | . | . | . | . | . | . | . | 401 | 149 | . | | 606 | 267 |
| | 191 | 191 | 938 | . | . | . | . | . | . | 263 | 488 | 355 | 749 | | 1337 | 452 |
| | 342 | 342 | 964 | . | . | . | . | . | . | 428 | 565 | 1186 | 941 | | . | 343 |
| Abundance (000s) | | | | 232902 | 366466 | 93601 | 322194 | 373163 | 42392 | 217026 | 239069 | 168649 | 140410 | | 203855 | 280924 |

Table 5a Biomass (tons) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 2J from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | 1427 | 633 | 201 | 257 | 91 | 486 | 439 | 1620 | 524 | 913 | 91 | 206 | 42 | 21 | 171 | 103 | 34 | 0 |
| | 1823 | 1594 | 205 | 1753 | 2385 | 1007 | 2591 | 4878 | 2748 | 1521 | 502 | 283 | 113 | 168 | 126 | 87 | 104 | 16 |
| | 2582 | 1870 | 206 | 3384 | 2279 | 3315 | 9691 | 5703 | 2647 | 3370 | 1545 | 1399 | 250 | 590 | 217 | 335 | 99 | 75 |
| | 2246 | 2264 | 207 | 6538 | 2707 | 2153 | 4177 | 2601 | 1921 | 1526 | 627 | 352 | 93 | 58 | 14 | 0 | 0 | 0 |
| | . | 733 | 237 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 778 | 238 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 201 - 300 | 440 | 621 | 202 | 1007 | 1437 | 1673 | 1778 | 1915 | 1307 | 4167 | 563 | 448 | 867 | . | 32 | 246 | 164 | 79 |
| | 1608 | 680 | 209 | 4481 | 15830 | 15100 | 8547 | 19662 | 8897 | 5183 | 6062 | 2398 | 1491 | 1997 | 2003 | 1488 | 574 | 454 |
| | 774 | 1035 | 210 | 956 | 782 | 960 | 549 | 1845 | 3694 | 2268 | 566 | 374 | 281 | 786 | 654 | 908 | 266 | 373 |
| | 1725 | 1583 | 213 | 2686 | 1921 | 4701 | 5070 | 6550 | 4853 | 3547 | 6427 | 3754 | 1918 | 1146 | 494 | 609 | 84 | 301 |
| | 1171 | 1341 | 214 | 5954 | 2893 | 1904 | 6928 | 9277 | 5862 | 7527 | 7489 | 1398 | 1923 | 2598 | 862 | 883 | 176 | 425 |
| | 1270 | 1302 | 215 | 3247 | 1181 | 2407 | 1842 | 5350 | 1967 | 5528 | 2829 | 2056 | 1920 | 1265 | 896 | 1445 | 750 | 869 |
| | 1428 | 2196 | 228 | 528 | 1406 | 3057 | 1289 | 1643 | 1817 | 2615 | 1119 | 1392 | 889 | 330 | 1034 | 1517 | 475 | 424 |
| | 508 | 530 | 234 | 7009 | 4357 | 3916 | 3492 | 5306 | 2665 | 4868 | 1143 | 922 | 454 | 1426 | 853 | 386 | 226 | 141 |
| 301 - 400 | 480 | 487 | 203 | 2311 | 4188 | 1296 | 2925 | 3502 | 11077 | 12390 | 1400 | 6043 | 1586 | 2104 | 4732 | 2108 | 2424 | 587 |
| | 448 | 588 | 208 | 7045 | 4799 | 6542 | 10304 | 15563 | 5125 | 19043 | 17885 | 8229 | 4397 | 3640 | 9245 | 8660 | 2572 | 2006 |
| | 330 | 251 | 211 | 3152 | 1736 | 2734 | 1256 | 1821 | 4216 | 1912 | 5424 | 3300 | 1992 | 3049 | 1016 | 6051 | 922 | 352 |
| | 384 | 360 | 216 | 2832 | 6574 | 6969 | 2551 | 7456 | 4258 | 6788 | 3213 | 1460 | 2197 | 170 | 487 | 447 | 166 | 167 |
| | 441 | 450 | 222 | 3064 | 3243 | 3729 | 2527 | 7887 | 5835 | 2964 | 1850 | 128 | 1506 | 1847 | 407 | 865 | 70 | 154 |
| | 567 | 536 | 229 | 1024 | 1412 | 1464 | 2017 | 1261 | 2235 | 681 | 1021 | 985 | 371 | 208 | 233 | 152 | 545 | 783 |
| 401 - 500 | 354 | 288 | 204 | 21544 | 12476 | . | 9195 | 11739 | 9016 | 8750 | 728 | 8930 | 6466 | 6227 | 20968 | 5584 | 3045 | 2276 |
| | 268 | 241 | 217 | 4717 | 1845 | 3767 | 1192 | 1694 | 1595 | . | 3480 | 2589 | 1325 | 1349 | 181 | 1012 | 164 | 100 |
| | 180 | 158 | 223 | 1711 | 1208 | 2623 | 1635 | 1622 | 1106 | 1893 | 1358 | 2065 | 462 | 1134 | 306 | 574 | 72 | 75 |
| | 686 | 598 | 227 | 6618 | 2186 | 5935 | 3056 | 3822 | 2768 | 2565 | 2912 | 1652 | 3068 | 2352 | 4044 | 3232 | 1101 | 1937 |
| | 420 | 414 | 235 | 5146 | 4006 | 5923 | 2000 | 4265 | 10840 | 3224 | 3269 | 7547 | 4825 | 2789 | 6721 | 8779 | 661 | 609 |
| | . | 133 | 240 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 501 - 750 | 664 | 557 | 212 | 11338 | 15580 | 7520 | 9579 | 9423 | 3113 | 4609 | 7201 | 23242 | 21891 | 4953 | 2937 | 5488 | 1658 | 2331 |
| | 420 | 362 | 218 | 11403 | . | 5223 | 6388 | 1767 | 1695 | . | 1461 | 3151 | 2308 | 2513 | 859 | 2077 | 1096 | 174 |
| | 270 | 228 | 224 | 2250 | 3012 | 1067 | 2825 | 1182 | 1438 | 1167 | 847 | 5782 | 1554 | 1661 | 89 | 374 | 248 | 191 |
| | 237 | 185 | 230 | 2124 | . | 4016 | 1823 | 769 | 2452 | 629 | 766 | 2386 | 1369 | 1273 | 1063 | 1268 | 903 | 1647 |
| | . | 120 | 239 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 751 -1000 | 213 | 283 | 219 | . | . | . | 1005 | . | 2120 | . | 1664 | 6187 | 1872 | 1104 | 791 | 2015 | 293 | 253 |
| | 182 | 186 | 231 | 2634 | . | 3261 | . | 1805 | 1117 | 1842 | 2372 | 580 | 791 | 2975 | . | 2131 | 574 | 730 |
| | 122 | 193 | 236 | . | . | . | 640 | 946 | 1287 | 718 | 1113 | 2478 | 1199 | 182 | . | 1390 | 1501 | 593 |
| 1001 -1250 | 324 | 303 | 220 | 1571 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 177 | 195 | 225 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 236 | 228 | 232 | 870 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 1251 -1500 | 286 | 330 | 221 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 180 | 201 | 226 | 99 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 180 | 237 | 233 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Total Biomass (t) | | | | 129254 | 99533 | 102747 | 107311 | 142873 | 110193 | 112208 | 86927 | 101716 | 69422 | 49917 | 61433 | 60215 | 20968 | 18121 |

Table 5b Biomass (tons) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 2J from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | 1427 | 633 | 201 | 6 | 27 | . | 82 | 26 | 91 | 0 | 65 | 27 | 133 | 11 | 135 |
| | 1823 | 1594 | 205 | 6 | 14 | . | 514 | 35 | 502 | 532 | 281 | 863 | 754 | 706 | 1055 |
| | 2582 | 1870 | 206 | 28 | 132 | 399 | 1120 | 404 | 349 | 403 | 357 | 1367 | 1586 | 890 | 813 |
| | 2246 | 2264 | 207 | 0 | 33 | 1 | 56 | 51 | 74 | 192 | 16 | 208 | 35 | 192 | 118 |
| | . | 733 | 237 | 0 | 0 | 0 | 1 | 4 | 19 | 320 | 0 | 5 | 42 | 3 | 0 |
| | . | 778 | 238 | . | 7 | . | 15 | 0 | 79 | 0 | 53 | 27 | 6 | 54 | 81 |
| 201 - 300 | 440 | 621 | 202 | 8 | 307 | 95 | 89 | 157 | 593 | 1685 | 574 | 2215 | 491 | 871 | 2260 |
| | 1608 | 680 | 209 | 384 | 123 | 360 | 1059 | 424 | 282 | 2204 | 694 | 291 | 1061 | 1475 | 811 |
| | 774 | 1035 | 210 | 589 | 121 | 2708 | 3904 | 893 | 1047 | 613 | 661 | 1140 | 3314 | 1861 | 626 |
| | 1725 | 1583 | 213 | 302 | 422 | 236 | 1338 | 1146 | 1962 | 1426 | 893 | 2332 | 1336 | 1950 | 1163 |
| | 1171 | 1341 | 214 | 1064 | 507 | 327 | 4057 | 1258 | 1502 | 1883 | 1204 | 1930 | 485 | 1337 | 2500 |
| | 1270 | 1302 | 215 | 1349 | 855 | 1370 | 1247 | 1448 | 1889 | 1986 | 1139 | 1967 | 3499 | 1360 | 1592 |
| | 1428 | 2196 | 228 | 967 | 2749 | 2219 | 5478 | 3666 | 4356 | 2566 | 2870 | 2803 | 1850 | 1175 | 2858 |
| | 508 | 530 | 234 | 895 | 129 | . | 163 | 753 | 352 | 311 | 122 | 349 | 75 | 1237 | 54 |
| 301 - 400 | 480 | 487 | 203 | 1856 | 1404 | 387 | 946 | 2233 | 3303 | 2553 | 2200 | 4090 | 1134 | 2846 | 6523 |
| | 448 | 588 | 208 | 1025 | 4820 | 4799 | 3707 | 12593 | 6479 | 11101 | 9423 | 5230 | 7812 | 2894 | 8453 |
| | 330 | 251 | 211 | 1628 | 871 | 1400 | 1343 | 1875 | 870 | 3541 | 640 | 2964 | 2336 | 2016 | 2414 |
| | 384 | 360 | 216 | 331 | 392 | 64 | 506 | 1090 | 1631 | 881 | 1103 | 1076 | 397 | 957 | 697 |
| | 441 | 450 | 222 | 170 | 535 | 122 | 1672 | 930 | 382 | 751 | 995 | 1151 | 1086 | 322 | 371 |
| | 567 | 536 | 229 | 246 | 1202 | 1799 | 3900 | 1940 | 2514 | 1206 | 1639 | 1591 | 1123 | 2336 | 439 |
| 401 - 500 | 354 | 288 | 204 | 2512 | 3442 | 1437 | 3823 | 7941 | 6171 | 3707 | 4652 | 5240 | 1762 | 7283 | 8250 |
| | 268 | 241 | 217 | 270 | 226 | 131 | 932 | 676 | 621 | 704 | 628 | 1983 | 458 | 395 | 433 |
| | 180 | 158 | 223 | 130 | 168 | 162 | 438 | 425 | 598 | 505 | . | 346 | 419 | 179 | 699 |
| | 686 | 598 | 227 | 1648 | 2009 | 909 | 5850 | 9244 | 1793 | 13071 | 3628 | 4226 | 1316 | 6852 | 1325 |
| | 420 | 414 | 235 | 810 | 1042 | 3895 | 4373 | 8365 | 3256 | 4183 | 3929 | 4170 | 4733 | 5739 | 1990 |
| | . | 133 | 240 | 85 | 118 | 632 | 537 | 501 | 251 | 643 | 204 | 413 | 552 | 178 | 194 |
| 501 - 750 | 664 | 557 | 212 | 5048 | 1485 | 5499 | 4940 | 10735 | 4375 | 14447 | 4366 | 3802 | 7126 | 4898 | 3595 |
| | 420 | 362 | 218 | 248 | 136 | 693 | 1783 | 1207 | 1319 | 1019 | 690 | 1413 | 732 | 456 | 844 |
| | 270 | 228 | 224 | 85 | 309 | 214 | 702 | 625 | 401 | 293 | 701 | 360 | 130 | 205 | 356 |
| | 237 | 185 | 230 | 135 | 379 | 652 | 1350 | 1589 | 547 | 2230 | 786 | 569 | 560 | 383 | 356 |
| | . | 120 | 239 | 1917 | 1411 | 1676 | 2586 | 2725 | 4867 | 4064 | 1959 | 1945 | 867 | 3470 | 3389 |
| 751 -1000 | 213 | 283 | 219 | 639 | 1579 | 2021 | 405 | 1727 | 2249 | 1402 | 1731 | 1297 | 621 | 1248 | 1156 |
| | 182 | 186 | 231 | 613 | 604 | 376 | 1013 | 651 | 1635 | 1744 | 2828 | 2820 | 1603 | 432 | 720 |
| | 122 | 193 | 236 | 886 | 230 | 1007 | 698 | 381 | 725 | 1107 | 592 | 937 | 881 | 533 | 344 |
| 1001 -1250 | 324 | 303 | 220 | . | . | . | 1296 | 503 | 1196 | . | 568 | 786 | 749 | 1480 | 1116 |
| | 177 | 195 | 225 | . | . | . | 835 | 693 | 655 | 478 | 175 | 1219 | 65 | 171 | 112 |
| | 236 | 228 | 232 | . | . | . | 717 | 935 | 627 | 1787 | 1063 | 1146 | 626 | 56 | 714 |
| 1251 -1500 | 286 | 330 | 221 | . | . | . | 131 | 1246 | 692 | 567 | 401 | 268 | 654 | 124 | 166 |
| | 180 | 201 | 226 | . | . | . | 277 | 407 | 1313 | 626 | 400 | 368 | 243 | 756 | 217 |
| | 180 | 237 | 233 | . | . | . | 889 | 596 | 542 | 418 | 628 | 844 | 938 | 438 | 195 |
| Total Biomass (t) | | | | 25880 | 27786 | 35591 | 64772 | 82095 | 62111 | 87147 | 54858 | 65777 | 53591 | 59769 | 59135 |

Table 6a Abundance (000s) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 2J from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | 1427 | 633 | 201 | 654 | 1669 | 1570 | 4515 | 1865 | 523 | 2487 | 1832 | 118 | 196 | 1080 | 2895 | 393 | 916 | 0 |
| | 1823 | 1594 | 205 | 8777 | 7147 | 6457 | 11159 | 23615 | 2981 | 2382 | 18275 | 1505 | 1304 | 418 | 2784 | 658 | 752 | 63 |
| | 2582 | 1870 | 206 | 21666 | 20201 | 9184 | 71327 | 9314 | 4186 | 4133 | 23036 | 4295 | 4262 | 4212 | 1694 | 1808 | 6097 | 3694 |
| | 2246 | 2264 | 207 | 16838 | 6921 | 4202 | 5287 | 4820 | 4109 | 1324 | 7011 | 1545 | 225 | 2692 | 649 | 0 | 0 | 0 |
| | . | 733 | 237 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 778 | 238 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 201 - 300 | 440 | 621 | 202 | 3768 | 8353 | 5947 | 6446 | 10774 | 1604 | 6567 | 6234 | 817 | 3934 | . | 182 | 2088 | 3813 | 444 |
| | 1608 | 680 | 209 | 13530 | 45061 | 22673 | 10396 | 19405 | 11660 | 5246 | 12166 | 6383 | 1797 | 5397 | 10175 | 4830 | 2654 | 2654 |
| | 774 | 1035 | 210 | 5491 | 1012 | 1022 | 3230 | 2200 | 3780 | 2502 | 2209 | 1171 | 772 | 1952 | 1544 | 1562 | 852 | 5704 |
| | 1725 | 1583 | 213 | 5254 | 1017 | 2877 | 4944 | 9658 | 3109 | 3607 | 26577 | 5352 | 1977 | 4271 | 1345 | 3352 | 712 | 8792 |
| | 1171 | 1341 | 214 | 9274 | 1101 | 3286 | 14755 | 5739 | 3947 | 5638 | 20807 | 2524 | 4618 | 2175 | 1638 | 4382 | 3383 | 12323 |
| | 1270 | 1302 | 215 | 17317 | 4542 | 15592 | 8491 | 6639 | 2621 | 10366 | 32058 | 16422 | 2920 | 5341 | 9288 | 9725 | 6383 | 16212 |
| | 1428 | 2196 | 228 | 917 | 1604 | 1807 | 1637 | 864 | 1244 | 2301 | 1740 | 1801 | 2133 | 1061 | 4395 | 4715 | 2619 | 4440 |
| | 508 | 530 | 234 | 28190 | 22799 | 14518 | 28267 | 12695 | 4589 | 7687 | 4449 | 3075 | 6662 | 6918 | 5556 | 2341 | 1468 | 4216 |
| 301 - 400 | 480 | 487 | 203 | 8716 | 20491 | 4226 | 19710 | 11313 | 22142 | 70783 | 4380 | 21856 | 5547 | 12810 | 16683 | 14725 | 16463 | 6119 |
| | 448 | 588 | 208 | 10637 | 12926 | 8119 | 14791 | 31163 | 6933 | 16455 | 32827 | 15314 | 15746 | 6255 | 22525 | 22925 | 14072 | 24610 |
| | 330 | 251 | 211 | 4903 | 3632 | 4058 | 2542 | 3110 | 5311 | 2678 | 6144 | 6106 | 12824 | 10214 | 3881 | 16388 | 4984 | 3125 |
| | 384 | 360 | 216 | 1726 | 3024 | 3249 | 2932 | 2747 | 1074 | 3486 | 1770 | 1796 | 2404 | 792 | 1400 | 1875 | 370 | 599 |
| | 441 | 450 | 222 | 1626 | 1031 | 1320 | 971 | 3074 | 1557 | 1193 | 1062 | 243 | 1486 | 910 | 607 | 3337 | 324 | 586 |
| | 567 | 536 | 229 | 507 | 1190 | 799 | 585 | 585 | 1034 | 286 | 858 | 2002 | 286 | 78 | 520 | 273 | 1430 | 3900 |
| 401 - 500 | 354 | 288 | 204 | 133064 | 82687 | . | 80982 | 35662 | 22254 | 17093 | 3068 | 15169 | 30825 | 14658 | 52836 | 20867 | 24933 | 19284 |
| | 268 | 241 | 217 | 1696 | 645 | 866 | 387 | 553 | 369 | . | 1843 | 1677 | 774 | 774 | 258 | 1807 | 406 | 221 |
| | 180 | 158 | 223 | 570 | 322 | 582 | 458 | 483 | 310 | 669 | 631 | 1350 | 248 | 681 | 483 | 1770 | 190 | 239 |
| | 686 | 598 | 227 | 5143 | 944 | 5426 | 3067 | 2397 | 1203 | 1416 | 2548 | 1887 | 7903 | 3271 | 12386 | 6323 | 3130 | 7455 |
| | 420 | 414 | 235 | 7511 | 6355 | 7453 | 8291 | 9841 | 20106 | 3486 | 3149 | 12740 | 10313 | 5287 | 15599 | 24439 | 1521 | 4410 |
| | . | 133 | 240 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 501 - 750 | 664 | 557 | 212 | 17446 | 21648 | 8632 | 4978 | 6376 | 1736 | 4110 | 7627 | 25088 | 20894 | 7307 | 3928 | 8586 | 3014 | 6303 |
| | 420 | 362 | 218 | 3958 | . | 1156 | 1271 | 404 | 433 | . | 664 | 1156 | 1531 | 1184 | 867 | 3987 | 1473 | 404 |
| | 270 | 228 | 224 | 650 | 817 | 279 | 799 | 371 | 576 | 371 | 390 | 1857 | 761 | 854 | 149 | 594 | 557 | 316 |
| | 237 | 185 | 230 | 636 | . | 1369 | 489 | 261 | 1157 | 196 | 424 | 913 | 864 | 864 | 815 | 1206 | 1744 | 3912 |
| | . | 120 | 239 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 751 -1000 | 213 | 283 | 219 | . | . | . | 234 | . | 659 | . | 440 | 5538 | 967 | 557 | 674 | 1494 | 542 | 1392 |
| | 182 | 186 | 231 | 964 | . | 1527 | . | 789 | 325 | 1239 | 1452 | 351 | 588 | 2153 | . | 1377 | 951 | 1252 |
| | 122 | 193 | 236 | . | . | . | 227 | 344 | 646 | 260 | 638 | 1418 | 613 | 76 | . | 1393 | 1636 | 1133 |
| 1001 -1250 | 324 | 303 | 220 | 513 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 177 | 195 | 225 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 236 | 228 | 232 | 325 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 1251 -1500 | 286 | 330 | 221 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 180 | 201 | 226 | 50 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 180 | 237 | 233 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Total No. (000s) | | | | 332313 | 277137 | 138197 | 313166 | 217059 | 132178 | 177961 | 226308 | 161466 | 145374 | 104242 | 175753 | 169218 | 107390 | 143801 |

Table 6b. Abundance (000s) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 2J from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | 1427 | 633 | 201 | 87 | 131 | . | 2235 | 218 | 740 | 0 | 958 | 305 | 392 | 218 | 1350 |
| | 1823 | 1594 | 205 | 157 | 146 | . | 16190 | 767 | 4105 | 4276 | 1759 | 10624 | 16205 | 9622 | 7528 |
| | 2582 | 1870 | 206 | 161 | 2315 | 22586 | 42257 | 5071 | 4336 | 5549 | 15413 | 29015 | 37704 | 16515 | 9801 |
| | 2246 | 2264 | 207 | 0 | 208 | 78 | 1142 | 519 | 727 | 857 | 381 | 1077 | 379 | 1458 | 1285 |
| | . | 733 | 237 | 0 | 0 | 0 | 101 | 34 | 202 | 2790 | 0 | 50 | 192 | 38 | 0 |
| | . | 778 | 238 | . | 2569 | . | 321 | 0 | 603 | 0 | 759 | 71 | 245 | 107 | 617 |
| 201 - 300 | 440 | 621 | 202 | 214 | 4328 | 732 | 1068 | 2772 | 4046 | 22296 | 3930 | 22424 | 5894 | 14711 | 28105 |
| | 1608 | 680 | 209 | 2557 | 6501 | 3555 | 17149 | 4116 | 1666 | 41034 | 8419 | 1608 | 13277 | 17060 | 5238 |
| | 774 | 1035 | 210 | 5944 | 641 | 17946 | 49120 | 5232 | 9966 | 9682 | 3915 | 8839 | 55598 | 21550 | 9824 |
| | 1725 | 1583 | 213 | 8347 | 10090 | 4609 | 33785 | 17703 | 16223 | 18872 | 15316 | 31344 | 19448 | 25177 | 11469 |
| | 1171 | 1341 | 214 | 21657 | 17678 | 17525 | 102676 | 13946 | 9703 | 22210 | 18927 | 18652 | 3616 | 12913 | 23465 |
| | 1270 | 1302 | 215 | 13146 | 7988 | 18080 | 14129 | 22364 | 13051 | 13433 | 10961 | 33998 | 40295 | 15536 | 13110 |
| | 1428 | 2196 | 228 | 10909 | 51858 | 42618 | 112816 | 40114 | 34324 | 20882 | 33305 | 35242 | 21339 | 12472 | 21977 |
| | 508 | 530 | 234 | 8640 | 802 | . | 2625 | 5209 | 1786 | 1005 | 620 | 1094 | 401 | 8603 | 365 |
| 301 - 400 | 480 | 487 | 203 | 13633 | 11690 | 3153 | 5862 | 19093 | 27969 | 19320 | 13164 | 37956 | 8953 | 37650 | 82434 |
| | 448 | 588 | 208 | 10111 | 40470 | 43881 | 75750 | 122273 | 32031 | 67095 | 50294 | 45512 | 43569 | 25277 | 50149 |
| | 330 | 251 | 211 | 17540 | 8908 | 12534 | 16642 | 16470 | 3930 | 22424 | 4713 | 18264 | 22157 | 17592 | 11688 |
| | 384 | 360 | 216 | 1510 | 1808 | 300 | 2284 | 4209 | 5401 | 3032 | 6983 | 4581 | 1560 | 4266 | 2625 |
| | 441 | 450 | 222 | 867 | 18777 | 1238 | 11620 | 5076 | 1802 | 2259 | 5571 | 4640 | 9237 | 3064 | 3621 |
| | 567 | 536 | 229 | 1180 | 14157 | 24774 | 14857 | 6890 | 13972 | 3281 | 7189 | 5510 | 12498 | 17843 | 1512 |
| 401 - 500 | 354 | 288 | 204 | 24682 | 28327 | 21397 | 26841 | 62076 | 51107 | 20444 | 50711 | 43690 | 11073 | 95691 | 67614 |
| | 268 | 241 | 217 | 1061 | 751 | 583 | 3599 | 2254 | 1936 | 2105 | 2188 | 8789 | 1828 | 1250 | 928 |
| | 180 | 158 | 223 | 283 | 942 | 1695 | 1883 | 1043 | 1720 | 1272 | . | 815 | 1363 | 685 | 1511 |
| | 686 | 598 | 227 | 6773 | 11039 | 3743 | 34184 | 35002 | 7486 | 46025 | 16946 | 16740 | 6299 | 36401 | 4748 |
| | 420 | 414 | 235 | 5999 | 6378 | 19335 | 25337 | 41431 | 13753 | 17414 | 14260 | 19161 | 24375 | 36961 | 7774 |
| | . | 133 | 240 | 320 | 427 | 3061 | 1601 | 1336 | 672 | 1491 | 448 | 1088 | 1976 | 924 | 357 |
| 501 - 750 | 664 | 557 | 212 | 22412 | 5670 | 20151 | 25042 | 44440 | 11915 | 49344 | 13485 | 13366 | 30998 | 20228 | 12681 |
| | 420 | 362 | 218 | 573 | 373 | 3818 | 5951 | 3205 | 3231 | 2238 | 1369 | 2589 | 1942 | 1455 | 1818 |
| | 270 | 228 | 224 | 188 | 1077 | 889 | 2023 | 1286 | 934 | 608 | 1506 | 800 | 641 | 502 | 627 |
| | 237 | 185 | 230 | 305 | 1120 | 2799 | 3084 | 3932 | 1400 | 4428 | 1552 | 1377 | 2065 | 865 | 611 |
| | . | 120 | 239 | 22953 | 10367 | 11193 | 18970 | 21936 | 36305 | 34310 | 8955 | 15341 | 4284 | 30415 | 33980 |
| 751 -1000 | 213 | 283 | 219 | 915 | 2063 | 5586 | 547 | 2180 | 3523 | 2219 | 2745 | 1995 | 1505 | 1875 | 1732 |
| | 182 | 186 | 231 | 832 | 1254 | 760 | 1663 | 1151 | 3425 | 2815 | 4618 | 3915 | 2738 | 572 | 996 |
| | 122 | 193 | 236 | 1208 | 195 | 3270 | 850 | 504 | 1043 | 1513 | 982 | 1412 | 1128 | 916 | 491 |
| 1001 -1250 | 324 | 303 | 220 | . | . | . | 1751 | 646 | 1005 | . | 688 | 634 | 1227 | 1646 | 1096 |
| | 177 | 195 | 225 | . | . | . | 845 | 563 | 590 | 644 | 228 | 1419 | 104 | 151 | 161 |
| | 236 | 228 | 232 | . | . | . | 643 | 737 | 748 | 2371 | 1349 | 1354 | 688 | 128 | 725 |
| 1251 -1500 | 286 | 330 | 221 | . | . | . | 78 | 931 | 402 | 318 | 363 | 141 | 636 | 136 | 182 |
| | 180 | 201 | 226 | . | . | . | 140 | 221 | 1078 | 512 | 415 | 401 | 269 | 1009 | 290 |
| | 180 | 237 | 233 | . | . | . | 359 | 342 | 560 | 538 | 717 | 880 | 994 | 391 | 261 |
| Total No. (000s) | | | | 205162 | 271047 | 311890 | 678016 | 517293 | 329415 | 470904 | 326101 | 446712 | 409089 | 493875 | 424743 |

Table 7a Biomass (tons) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 3K from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | . | 798 | 608 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 445 | 612 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 250 | 616 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 1455 | 1347 | 618 | . | . | . | . | . | . | 263 | 874 | 49 | 17 | 31 | 70 | 0 | 0 | 0 |
| | 1588 | 1753 | 619 | . | . | . | . | . | . | 685 | 401 | 108 | 41 | 26 | 78 | 0 | 0 | 0 |
| 201 - 300 | . | 342 | 609 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 573 | 611 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 251 | 615 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2709 | 2545 | 620 | 18712 | 9129 | 9090 | 9404 | 7175 | 6302 | 4074 | 5095 | 4164 | 2108 | 3737 | 583 | 451 | 899 | 152 |
| | 2859 | 2537 | 621 | 41597 | 36475 | 15203 | 11844 | 6287 | 12035 | 6600 | 12389 | 2323 | 4458 | 3166 | 4278 | 485 | 1151 | 2264 |
| | 668 | 1105 | 624 | 837 | 878 | 491 | 305 | 467 | 232 | 527 | 434 | 298 | 445 | 196 | 310 | 288 | 335 | 413 |
| | 447 | . | 632 | 204 | 147 | 620 | 344 | 426 | 187 | . | 394 | 133 | 86 | 49 | 81 | 384 | 111 | 267 |
| | 1618 | 1555 | 634 | 1482 | 1819 | 1196 | 1233 | 3348 | 1410 | 1293 | 1157 | 877 | 1919 | 776 | 587 | 707 | 526 | 296 |
| | 1274 | 1274 | 635 | 1548 | 960 | 3092 | 2074 | 3013 | 1388 | 1668 | 773 | 1924 | 1932 | 910 | 1335 | 307 | 46 | 88 |
| | 1455 | 1455 | 636 | 1650 | 872 | 2155 | 2163 | 3642 | 792 | 1299 | 861 | 806 | 353 | 852 | 701 | 401 | 240 | 282 |
| | 1132 | 1132 | 637 | 723 | 575 | 907 | 1180 | 1366 | 2275 | 662 | 1780 | 1441 | 1349 | 700 | 466 | 818 | 293 | 144 |
| 301 - 400 | . | 256 | 610 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 263 | 614 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 593 | 617 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 1027 | 494 | 623 | 16992 | 3898 | 9646 | 10319 | 16038 | 24364 | 29298 | 8090 | 18912 | 14251 | 17661 | 11384 | 4603 | 5417 | 2598 |
| | 850 | 888 | 625 | 1915 | 1387 | 1530 | 3242 | 822 | 5794 | 3856 | 4936 | 3449 | 5773 | 3204 | 847 | 3881 | 2176 | 484 |
| | 919 | 1113 | 626 | 7394 | 4470 | 14225 | 6023 | 11576 | 11302 | 20810 | 13944 | 16278 | 8319 | 12970 | 11682 | 3365 | 3698 | 5003 |
| | 1085 | 1085 | 628 | 4700 | 4183 | 8400 | 2305 | 1867 | 5126 | 4652 | 9824 | 9477 | 5858 | 6368 | 4150 | 2513 | 902 | 590 |
| | 499 | 495 | 629 | 532 | 834 | 1790 | 2004 | 4063 | 3706 | 1779 | 1335 | 2978 | 5191 | 7176 | 4634 | 1053 | 385 | 1058 |
| | 544 | 332 | 630 | 2056 | 800 | 1368 | 7048 | . | 4258 | 485 | 2244 | 1861 | 4436 | 4313 | 3075 | 2065 | 2188 | 917 |
| | 2179 | 2067 | 633 | 2393 | 2472 | 4271 | 2834 | 2296 | 3115 | 3219 | 3432 | 4445 | 5532 | 3380 | 5842 | 5285 | 3440 | 2813 |
| | 2059 | 2059 | 638 | 4198 | 3427 | 2615 | 4854 | 4801 | 4371 | 2922 | 7321 | 5983 | 4382 | 3057 | 2972 | 6809 | 1993 | 2625 |
| | 1463 | 1463 | 639 | 1031 | 1254 | 1385 | 1266 | 3321 | 2174 | 436 | 872 | 1288 | 703 | 653 | 511 | 854 | 766 | 1175 |
| 401 - 500 | . | 30 | 613 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 632 | 691 | 622 | 16724 | 8517 | 3448 | 10766 | 7914 | 14953 | 8922 | 4742 | 36448 | 12755 | 17950 | 13695 | 30531 | 6256 | 4326 |
| | 1184 | 1255 | 627 | 11452 | 5878 | 9820 | 24040 | 16903 | 27637 | 38222 | 18219 | 33516 | 21372 | 21502 | 37862 | 18637 | 10870 | 4355 |
| | 1202 | 1321 | 631 | 8523 | 3909 | 4910 | 8787 | 5115 | 8693 | 12698 | 9456 | 8334 | 15010 | 11317 | 17190 | 4993 | 16791 | 3570 |
| | 198 | 69 | 640 | 835 | . | 1177 | 756 | 531 | . | 344 | 398 | 204 | 417 | 163 | 225 | 367 | 310 | 130 |
| | 204 | 216 | 645 | 462 | . | 336 | 534 | 434 | 97 | 1157 | 1055 | . | 613 | 351 | 81 | 460 | 103 | 213 |
| | . | 134 | 650 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 501 - 750 | 584 | 230 | 641 | 776 | 1647 | 2245 | 1521 | 1622 | 3609 | 3924 | 1384 | . | 1367 | . | . | 2661 | 651 | 440 |
| | 333 | 325 | 646 | 2231 | 3156 | 1852 | 2656 | 590 | 2959 | 3167 | 2337 | . | 1143 | . | . | 449 | 1083 | 375 |
| | . | 359 | 651 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 751 -1000 | 931 | 418 | 642 | 2417 | . | 3824 | 1134 | 3305 | . | 8496 | 3279 | . | 2722 | . | . | 4475 | 4484 | 9225 |
| | 409 | 360 | 647 | 7096 | 2019 | 3855 | 3634 | 1817 | . | . | 4473 | . | . | . | . | 3857 | 1197 | 655 |
| | . | 516 | 652 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 1001 -1250 | 1266 | 733 | 643 | 1254 | 1364 | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 232 | 228 | 648 | 406 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 531 | 653 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 1251 -1500 | 954 | 474 | 644 | 1890 | 783 | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 263 | 212 | 649 | 366 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 479 | 654 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Total biomass (t) | | | | 162396 | 100851 | 109450 | 122269 | 108737 | 146777 | 160510 | 120223 | 155137 | 122493 | 120451 | 122490 | 100699 | 66310 | 44458 |

Table 7b Biomass (tons) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 3K from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | . | 798 | 608 | . | . | . | 0 | 44 | 37 | . | 0 | 8 | 4 | 0 | 5 |
| | . | 445 | 612 | . | . | . | 0 | 135 | 0 | . | 1 | 0 | 38 | 0 | 0 |
| | . | 250 | 616 | . | . | . | 0 | 4 | 23 | . | 0 | 0 | 0 | 0 | 0 |
| | 1455 | 1347 | 618 | 0 | 8 | 286 | 19 | 11 | 15 | 1 | 59 | 0 | 49 | 109 | 55 |
| | 1588 | 1753 | 619 | 0 | 0 | 18 | 29 | 57 | 0 | 0 | 13 | 0 | 30 | 109 | 62 |
| 201 - 300 | . | 342 | 609 | . | . | . | 117 | 386 | 202 | . | 177 | 8 | 8 | 86 | 96 |
| | . | 573 | 611 | . | . | . | 113 | 265 | 162 | . | 41 | 43 | 164 | 465 | 144 |
| | . | 251 | 615 | . | . | . | 39 | 67 | 176 | . | 23 | 20 | 0 | 37 | 1 |
| | 2709 | 2545 | 620 | 53 | 1113 | 790 | 4213 | 1275 | 1171 | 1367 | 3389 | 992 | 1280 | 594 | 1012 |
| | 2859 | 2537 | 621 | 972 | 1021 | 1068 | 3967 | 1320 | 2524 | 858 | 1495 | 113 | 1149 | 1870 | 1856 |
| | 668 | 1105 | 624 | 1017 | 754 | 508 | 2516 | 1610 | 1752 | 1805 | 1186 | 2358 | 1027 | 258 | 1950 |
| | 447 | . | 632 | . | . | . | . | . | . | . | . | . | . | . | |
| | 1618 | 1555 | 634 | 990 | 962 | 727 | 2370 | 2144 | 1321 | 1933 | 1197 | 2195 | 1493 | 455 | 497 |
| | 1274 | 1274 | 635 | 99 | 41 | 128 | 1344 | 1545 | 1266 | 971 | 491 | 215 | 125 | 167 | 0 |
| | 1455 | 1455 | 636 | 829 | 398 | 1393 | 2336 | 1171 | 1054 | 1002 | 1015 | 641 | 699 | 303 | 747 |
| | 1132 | 1132 | 637 | 435 | 119 | 179 | 1722 | 869 | 2008 | 1145 | . | 526 | 393 | 403 | 1095 |
| 301 - 400 | . | 256 | 610 | . | . | . | 344 | 630 | 1638 | . | 1000 | 1924 | 183 | 796 | 483 |
| | . | 263 | 614 | . | . | . | 154 | 399 | 184 | . | 164 | 16 | 12 | 120 | 683 |
| | . | 593 | 617 | 5604 | 2993 | 3844 | 2464 | 4941 | 3865 | 2919 | 2227 | 7873 | 1476 | 3044 | 3603 |
| | 1027 | 494 | 623 | 1672 | 1931 | 308 | 3588 | 1938 | 6167 | 3346 | 4322 | 5040 | 3698 | 1732 | 4159 |
| | 850 | 888 | 625 | 3229 | 2385 | 1437 | 4381 | 3075 | 3944 | 6783 | 3649 | 6294 | 917 | 649 | 6723 |
| | 919 | 1113 | 626 | 3469 | 4263 | 1962 | 5453 | 10283 | 9604 | 18305 | 3890 | 2111 | 3683 | 4768 | 6046 |
| | 1085 | 1085 | 628 | 1438 | 1372 | 529 | 1799 | 2685 | 3116 | 10764 | 5142 | 2763 | 719 | 1366 | 2837 |
| | 499 | 495 | 629 | 1324 | 1337 | 2682 | 6569 | 2179 | 6214 | 5900 | 4291 | 1429 | 622 | 354 | 518 |
| | 544 | 332 | 630 | 1274 | 1331 | 858 | 4800 | 3261 | 1561 | 5114 | 3821 | 4474 | 1429 | 1226 | 1100 |
| | 2179 | 2067 | 633 | 4511 | 2868 | 4649 | 3487 | 6739 | 4178 | 7634 | 3474 | 6544 | 3178 | 3528 | 2288 |
| | 2059 | 2059 | 638 | 2804 | 1908 | 1750 | 3952 | 7031 | 8115 | 2400 | 4792 | 2535 | 1686 | 2512 | 3399 |
| | 1463 | 1463 | 639 | 1718 | 872 | 1520 | 1381 | 1556 | 1266 | 1183 | 2362 | 2114 | 1330 | 1120 | 1667 |
| 401 - 500 | . | 30 | 613 | . | . | . | 51 | 192 | 92 | . | 64 | 6 | 6 | 47 | 511 |
| | 632 | 691 | 622 | 6993 | 3921 | 2638 | 6896 | 11901 | 10364 | 13165 | 10064 | 11830 | 4285 | 5965 | 12425 |
| | 1184 | 1255 | 627 | 31882 | 7308 | 18946 | 15576 | 22176 | 25568 | 45497 | 42775 | 11732 | 11721 | 12754 | 18257 |
| | 1202 | 1321 | 631 | 9779 | 9453 | 10094 | 25499 | 14500 | 13683 | 18514 | 23958 | 20494 | 15856 | 13580 | 8550 |
| | 198 | 69 | 640 | 77 | 111 | 179 | 105 | 59 | 37 | 39 | 144 | 103 | 44 | 96 | 39 |
| | 204 | 216 | 645 | 110 | 108 | 357 | 192 | 162 | 75 | 114 | 446 | 253 | 242 | 140 | 180 |
| | . | 134 | 650 | 193 | 338 | 252 | 147 | 242 | 224 | 39 | . | 18 | 109 | 162 | 20 |
| 501 - 750 | 584 | 230 | 641 | 411 | 109 | 227 | 394 | 197 | 369 | 1020 | . | 558 | 62 | 602 | 192 |
| | 333 | 325 | 646 | 105 | 463 | 327 | 564 | 1180 | 158 | 84 | 436 | 811 | 205 | 323 | 239 |
| | . | 359 | 651 | 704 | 894 | 1222 | 321 | 1361 | 1016 | 734 | . | 2603 | 899 | 754 | 199 |
| 751 -1000 | 931 | 418 | 642 | 1541 | 2336 | 1741 | 760 | 2036 | 2513 | 3081 | 2134 | 2677 | 892 | 1074 | 942 |
| | 409 | 360 | 647 | 2413 | 1829 | 1087 | 749 | 2025 | 2961 | 2191 | 2465 | 3228 | 1301 | 1503 | 819 |
| | . | 516 | 652 | 2242 | 1445 | 2366 | 3585 | 2575 | 4843 | 3246 | 2591 | 6162 | 1366 | 2990 | 2034 |
| 1001 -1250 | 1266 | 733 | 643 | . | . | 1487 | 2121 | 6830 | 5453 | 3480 | 1537 | 4660 | 2815 | 890 | 1865 |
| | 232 | 228 | 648 | . | . | . | 1641 | 1118 | 1687 | 1552 | 624 | 2891 | 763 | 475 | 376 |
| | . | 531 | 653 | 1718 | . | 1583 | 2306 | 1643 | 3660 | 3927 | 3045 | 2514 | 477 | 933 | 668 |
| 1251 -1500 | 954 | 474 | 644 | . | . | 688 | 870 | 2036 | 2845 | 1480 | 1917 | 2084 | 137 | 998 | 760 |
| | 263 | 212 | 649 | . | . | . | 387 | 1083 | 282 | 681 | 622 | 908 | 174 | 1125 | 427 |
| | . | 479 | 654 | . | . | 1376 | 1016 | 3612 | 4808 | 3358 | 2287 | 4953 | 252 | 973 | 981 |
| Total biomass (t) | | | | 89603 | 53988 | 69206 | 120336 | 130547 | 142196 | 175632 | 143329 | 128721 | 67000 | 71453 | 90509 |

Table 8a Abundance (000s) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 3K from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | . | 798 | 608 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 445 | 612 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 250 | 616 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 1455 | 1347 | 618 | . | . | . | . | . | . | 1451 | 5437 | 560 | 114 | 1134 | 1426 | 0 | 0 | 0 |
| | 1588 | 1753 | 619 | . | . | . | . | . | . | 18849 | 28835 | 7471 | 1311 | 1623 | 3195 | 0 | 0 | 0 |
| 201 - 300 | . | 342 | 609 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 573 | 611 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 251 | 615 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2709 | 2545 | 620 | 79313 | 26011 | 22483 | 45352 | 21324 | 19900 | 10750 | 22838 | 22690 | 14773 | 32669 | 5143 | 2691 | 6734 | 870 |
| | 2859 | 2537 | 621 | 163739 | 93030 | 31584 | 74868 | 31379 | 45130 | 23738 | 93419 | 30733 | 41918 | 22142 | 41850 | 5435 | 8102 | 39198 |
| | 668 | 1105 | 624 | 2704 | 1424 | 1999 | 781 | 391 | 758 | 1080 | 1723 | 459 | 1378 | 1409 | 1562 | 735 | 1470 | 6065 |
| | 447 | . | 632 | 228 | 261 | 307 | 154 | 307 | 512 | . | 389 | 154 | 307 | 31 | 123 | 2552 | 498 | 3008 |
| | 1618 | 1555 | 634 | 5911 | 2281 | 2798 | 3180 | 13334 | 2048 | 1812 | 3809 | 5564 | 8964 | 3079 | 3466 | 3021 | 2822 | 5475 |
| | 1274 | 1274 | 635 | 9561 | 2256 | 6630 | 6239 | 9674 | 4352 | 4009 | 2479 | 10077 | 12852 | 7150 | 7035 | 1227 | 307 | 818 |
| | 1455 | 1455 | 636 | 11409 | 1544 | 3374 | 5071 | 9267 | 2102 | 1651 | 1451 | 6355 | 2488 | 3603 | 2522 | 1658 | 1401 | 7939 |
| | 1132 | 1132 | 637 | 3841 | 3070 | 2492 | 3140 | 3404 | 5357 | 1220 | 2558 | 8409 | 3659 | 6443 | 1308 | 2336 | 2388 | 1038 |
| 301 - 400 | . | 256 | 610 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 263 | 614 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 593 | 617 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 1027 | 494 | 623 | 62444 | 10278 | 18366 | 40758 | 31561 | 51095 | 62359 | 26654 | 56934 | 33624 | 79255 | 55309 | 18620 | 33247 | 34895 |
| | 850 | 888 | 625 | 3079 | 6595 | 3410 | 7308 | 877 | 8692 | 4888 | 11482 | 10835 | 27390 | 14996 | 4151 | 16077 | 16643 | 7912 |
| | 919 | 1113 | 626 | 37167 | 10366 | 35220 | 15903 | 19924 | 35302 | 45005 | 47205 | 67065 | 46497 | 58431 | 48166 | 20891 | 21491 | 58068 |
| | 1085 | 1085 | 628 | 13497 | 7582 | 15672 | 5572 | 4702 | 14851 | 10426 | 30622 | 30448 | 19493 | 30328 | 12649 | 7731 | 4826 | 7562 |
| | 499 | 495 | 629 | 2826 | 2025 | 3062 | 5858 | 9644 | 8763 | 3569 | 4256 | 9930 | 19586 | 42181 | 27663 | 3398 | 1853 | 6384 |
| | 544 | 332 | 630 | 10514 | 2114 | 3405 | 12684 | . | 9429 | 798 | 6511 | 6960 | 21053 | 17311 | 14143 | 8905 | 11000 | 6486 |
| | 2179 | 2067 | 633 | 2864 | 4167 | 4286 | 4871 | 5824 | 3122 | 3717 | 3322 | 14238 | 25233 | 5733 | 18794 | 19347 | 13644 | 18848 |
| | 2059 | 2059 | 638 | 9099 | 5161 | 4123 | 9772 | 9800 | 11124 | 4504 | 16531 | 12958 | 9234 | 5877 | 6669 | 16365 | 4724 | 22625 |
| | 1463 | 1463 | 639 | 1096 | 956 | 1174 | 1409 | 6118 | 1294 | 453 | 1258 | 6876 | 1093 | 973 | 1509 | 2300 | 2147 | 10739 |
| 401 - 500 | . | 30 | 613 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 632 | 691 | 622 | 146318 | 18866 | 6781 | 41426 | 10201 | 19822 | 17431 | 22691 | 126974 | 33182 | 74999 | 78998 | 126018 | 44426 | 65813 |
| | 1184 | 1255 | 627 | 64905 | 20088 | 26874 | 44410 | 46628 | 47016 | 75267 | 48629 | 106258 | 115015 | 63455 | 166401 | 77527 | 55702 | 68189 |
| | 1202 | 1321 | 631 | 60931 | 15102 | 11574 | 15311 | 6945 | 14881 | 13459 | 32503 | 21537 | 62006 | 34558 | 74737 | 17747 | 65120 | 23920 |
| | 198 | 69 | 640 | 912 | . | 586 | 272 | 300 | . | 150 | 254 | 123 | 381 | 95 | 259 | 558 | 763 | 436 |
| | 204 | 216 | 645 | 225 | . | 112 | 196 | 131 | 182 | 449 | 318 | . | 463 | 225 | 126 | 814 | 206 | 767 |
| | . | 134 | 650 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 501 - 750 | 584 | 230 | 641 | 362 | 1125 | 1366 | 803 | 964 | 2116 | 2330 | 864 | . | 1044 | . | . | 3615 | 924 | 924 |
| | 333 | 325 | 646 | 527 | 1031 | 618 | 962 | 137 | 802 | 1145 | 1619 | . | 321 | . | . | 321 | 2046 | 687 |
| | . | 359 | 651 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 751 -1000 | 931 | 418 | 642 | 1217 | . | 1921 | 768 | 2412 | . | 4120 | 2433 | . | 1614 | . | . | 4184 | 5635 | 16265 |
| | 409 | 360 | 647 | 3516 | 703 | 1688 | 1210 | 816 | . | . | 2082 | . | . | . | . | 3207 | 1500 | 1107 |
| | . | 516 | 652 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 1001 -1250 | 1266 | 733 | 643 | 522 | 348 | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 232 | 228 | 648 | 96 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 531 | 653 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 1251 -1500 | 954 | 474 | 644 | 394 | 328 | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 263 | 212 | 649 | 145 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | . | 479 | 654 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Total No. (000s) | | | | 699361 | 236713 | 211905 | 348277 | 246062 | 308649 | 314629 | 422171 | 563608 | 504993 | 507699 | 577204 | 367279 | 309619 | 416037 |

Table 8b Abundance (000s) by stratum (converted to Campelen units from 1978-94) from Canadian fall surveys in Division 3K from 1978-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 - 200 | . | 798 | 608 | . | . | . | 0 | 293 | 110 | . | 0 | 63 | 37 | 0 | 37 |
| | . | 445 | 612 | . | . | . | 0 | 857 | 0 | . | 31 | 0 | 92 | 0 | 0 |
| | . | 250 | 616 | . | . | . | 0 | 34 | 120 | . | 17 | 0 | 0 | 0 | 0 |
| | 1455 | 1347 | 618 | 0 | 53 | 3330 | 226 | 93 | 139 | 124 | 62 | 0 | 803 | 1805 | 834 |
| | 1588 | 1753 | 619 | 0 | 0 | 841 | 425 | 448 | 0 | 121 | 95 | 34 | 208 | 1160 | 543 |
| 201 - 300 | . | 342 | 609 | . | . | . | 839 | 1506 | 602 | . | 349 | 47 | 47 | 528 | 753 |
| | . | 573 | 611 | . | . | . | 465 | 1340 | 586 | . | 90 | 109 | 709 | 2102 | 828 |
| | . | 251 | 615 | . | . | . | 236 | 432 | 784 | . | 138 | 200 | 0 | 104 | 17 |
| | 2709 | 2545 | 620 | 233 | 7702 | 8286 | 50340 | 10662 | 8370 | 8816 | 36955 | 7433 | 15989 | 9484 | 10722 |
| | 2859 | 2537 | 621 | 8531 | 12044 | 17351 | 40571 | 14182 | 14778 | 3966 | 10239 | 2169 | 9935 | 16293 | 19500 |
| | 668 | 1105 | 624 | 14571 | 20622 | 9987 | 41839 | 15930 | 17967 | 14677 | 10519 | 34688 | 14508 | 3557 | 13984 |
| | 447 | . | 632 | . | . | . | . | . | . | . | . | . | . | . | |
| | 1618 | 1555 | 634 | 10642 | 10321 | 12468 | 28382 | 18641 | 11979 | 10390 | 6369 | 26367 | 12868 | 3893 | 3102 |
| | 1274 | 1274 | 635 | 643 | 131 | 1057 | 11407 | 17490 | 11602 | 6975 | 4431 | 846 | 779 | 1297 | 0 |
| | 1455 | 1455 | 636 | 13810 | 8406 | 19987 | 26446 | 9607 | 5504 | 5504 | 6829 | 5296 | 6635 | 2273 | 5204 |
| | 1132 | 1132 | 637 | 3737 | 8743 | 3512 | 11087 | 6167 | 10713 | 5025 | . | 5853 | 2685 | 2647 | 7762 |
| 301 - 400 | . | 256 | 610 | . | . | . | 2195 | 4560 | 7343 | . | 9191 | 11171 | 1461 | 6061 | 4349 |
| | . | 263 | 614 | . | . | . | 1369 | 3021 | 923 | . | 1318 | 326 | 247 | 724 | 2098 |
| | . | 593 | 617 | 60446 | 45722 | 64933 | 45872 | 39808 | 22113 | 17998 | 14955 | 52343 | 15541 | 23140 | 28823 |
| | 1027 | 494 | 623 | 21321 | 19594 | 3228 | 51938 | 23445 | 32102 | 22561 | 28065 | 38176 | 67140 | 49177 | 37036 |
| | 850 | 888 | 625 | 41573 | 41980 | 18861 | 69363 | 28279 | 37542 | 28615 | 22904 | 43640 | 9725 | 4611 | 50480 |
| | 919 | 1113 | 626 | 36745 | 39756 | 15421 | 61923 | 132559 | 64794 | 84650 | 35409 | 34372 | 41059 | 71470 | 32497 |
| | 1085 | 1085 | 628 | 13980 | 8557 | 3974 | 11330 | 26358 | 12955 | 30657 | 32507 | 15530 | 5048 | 8969 | 20482 |
| | 499 | 495 | 629 | 9964 | 9976 | 23208 | 55189 | 18794 | 37008 | 35306 | 25834 | 8677 | 3329 | 2928 | 3419 |
| | 544 | 332 | 630 | 14310 | 9286 | 9215 | 31901 | 32380 | 12240 | 25141 | 29679 | 27676 | 12240 | 8837 | 4362 |
| | 2179 | 2067 | 633 | 53772 | 35827 | 54535 | 31687 | 47011 | 16523 | 37329 | 13147 | 39049 | 22404 | 27928 | 16270 |
| | 2059 | 2059 | 638 | 24967 | 33314 | 26066 | 44481 | 46671 | 38835 | 9072 | 14615 | 16777 | 12103 | 20505 | 16218 |
| | 1463 | 1463 | 639 | 17173 | 16628 | 22428 | 9276 | 9224 | 4595 | 3815 | 11347 | 10546 | 11770 | 6105 | 9258 |
| 401 - 500 | . | 30 | 613 | . | . | . | 448 | 1577 | 549 | . | 586 | 66 | 49 | 279 | 2795 |
| | 632 | 691 | 622 | 56296 | 72546 | 39289 | 132742 | 104560 | 64289 | 73410 | 52914 | 69929 | 41540 | 44447 | 66633 |
| | 1184 | 1255 | 627 | 358859 | 96592 | 225916 | 116359 | 206365 | 158172 | 160052 | 151814 | 69006 | 78084 | 70512 | 98534 |
| | 1202 | 1321 | 631 | 103337 | 111802 | 128176 | 162295 | 96509 | 65419 | 78684 | 100559 | 84520 | 82638 | 65215 | 43794 |
| | 198 | 69 | 640 | 326 | 494 | 1429 | 377 | 142 | 104 | 66 | 242 | 218 | 152 | 380 | 89 |
| | 204 | 216 | 645 | 436 | 396 | 1590 | 624 | 393 | 211 | 178 | 1040 | 465 | 475 | 461 | 267 |
| | . | 134 | 650 | 1057 | 2258 | 2120 | 654 | 691 | 479 | 100 | . | 28 | 344 | 544 | 37 |
| 501 - 750 | 584 | 230 | 641 | 1371 | 475 | 886 | 1076 | 348 | 902 | 1951 | . | 1076 | 199 | 1535 | 316 |
| | 333 | 325 | 646 | 343 | 1371 | 1185 | 1321 | 2347 | 335 | 201 | 700 | 1140 | 492 | 827 | 536 |
| | . | 359 | 651 | 2799 | 4309 | 5778 | 840 | 2609 | 2692 | 1449 | . | 4628 | 1834 | 2321 | 321 |
| 751 -1000 | 931 | 418 | 642 | 3872 | 6383 | 3364 | 1179 | 3179 | 4284 | 4773 | 3092 | 3524 | 1294 | 1827 | 1179 |
| | 409 | 360 | 647 | 2806 | 3797 | 2649 | 1411 | 3417 | 5497 | 3615 | 2894 | 4383 | 1931 | 2674 | 1358 |
| | . | 516 | 652 | 6246 | 4277 | 4969 | 6637 | 4969 | 10470 | 4933 | 3336 | 8239 | 1810 | 5324 | 2910 |
| 1001 -1250 | 1266 | 733 | 643 | . | . | 2252 | 2252 | 9109 | 8470 | 4403 | 1888 | 5411 | 4045 | 1255 | 1837 |
| | 232 | 228 | 648 | . | . | . | 1786 | 1555 | 2368 | 2478 | 737 | 3595 | 958 | 596 | 470 |
| | . | 531 | 653 | 1437 | . | 2264 | 2849 | 2131 | 6063 | 5750 | 4325 | 2854 | 621 | 986 | 840 |
| 1251 -1500 | 954 | 474 | 644 | . | . | 565 | 587 | 1891 | 2706 | 1695 | 2013 | 2237 | 163 | 1369 | 685 |
| | 263 | 212 | 649 | . | . | . | 160 | 1094 | 204 | 619 | 617 | 802 | 167 | 1183 | 423 |
| | . | 479 | 654 | . | . | 1120 | 988 | 4159 | 6109 | 3594 | 2519 | 5727 | 297 | 937 | 1167 |
| Total No. (000s) | | | | 885602 | 633361 | 742239 | 1063373 | 956834 | 709549 | 698691 | 644371 | 649233 | 484453 | 478268 | 512769 |

Table 9 Biomass estimates (t) of Greenland halibut from Canadian fall surveys in Div. 3L using a Campelen trawl during 1995-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 - 56 | . | 268 | 784 | . | 0 | 0 | 0 | . | 0 | 0 | 0 | 0 | 0 |
| 57 - 92 | 2071 | 2071 | 350 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 1780 | 1780 | 363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1121 | 1121 | 371 | 0 | 3 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 |
| | 2460 | 2460 | 372 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1120 | 1120 | 384 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | . | 465 | 785 | . | 0 | 0 | 0 | . | 0 | 0 | 0 | 0 | 0 |
| 93 - 183 | 1519 | 1519 | 328 | 0 | 1 | 6 | 1 | 11 | 18 | 0 | 1 | 0 | 0 |
| | 1574 | 1574 | 341 | 0 | 2 | 249 | 184 | 0 | 6 | 0 | 13 | 0 | 22 |
| | 585 | 585 | 342 | 0 | 1 | 85 | 16 | 0 | 6 | 0 | 0 | 0 | 4 |
| | 525 | 525 | 343 | 0 | 0 | 34 | 45 | 0 | 1 | 0 | 0 | 0 | 43 |
| | 2120 | 2120 | 348 | 0 | 2 | 129 | 177 | 216 | 22 | 2 | 23 | 0 | 162 |
| | 2114 | 2114 | 349 | 4 | 2 | 60 | 252 | 416 | 0 | 0 | 0 | 2 | 47 |
| | 2817 | 2817 | 364 | 1 | 0 | 103 | 414 | 30 | 0 | 1 | 6 | 0 | 56 |
| | 1041 | 1041 | 365 | 17 | 0 | 169 | 140 | 55 | . | 0 | 0 | 0 | . |
| | 1320 | 1320 | 370 | 0 | 14 | 48 | 871 | 555 | 19 | 1 | 55 | 23 | . |
| | 2356 | 2356 | 385 | 73 | 64 | 502 | 334 | 253 | 29 | 47 | 190 | 69 | 348 |
| | 1481 | 1481 | 390 | 43 | 67 | 200 | 625 | 310 | 69 | 497 | 222 | 13 | 193 |
| | . | 84 | 786 | . | 67 | 2 | 4 | . | 0 | 0 | 0 | 0 | 0 |
| | . | 613 | 787 | . | 1 | 86 | 0 | . | 0 | 0 | 0 | 0 | 59 |
| | . | 261 | 788 | . | 0 | 45 | 31 | . | 0 | 0 | 0 | 0 | 0 |
| | . | 89 | 790 | . | 0 | 6 | 6 | . | 25 | 0 | 0 | 0 | 29 |
| | . | 72 | 793 | . | 0 | 4 | 4 | . | 0 | 0 | 5 | 0 | 0 |
| | . | 216 | 794 | . | 0 | 15 | 4 | . | . | 0 | 0 | 0 | 0 |
| | . | 98 | 797 | . | 0 | 3 | 14 | . | 0 | 0 | 0 | 0 | 23 |
| | . | 72 | 799 | . | 0 | 0 | 4 | . | 0 | 0 | 0 | 0 | 0 |
| 184 - 274 | 1494 | 1582 | 344 | 16 | 11 | 96 | 885 | 181 | 42 | 0 | 7 | 17 | 918 |
| | 983 | 983 | 347 | 2 | 0 | 37 | 1021 | 297 | 160 | 88 | 28 | 0 | 476 |
| | 1394 | 1394 | 366 | 204 | 338 | 878 | 2172 | 2108 | 62 | 265 | 689 | 119 | . |
| | 961 | 961 | 369 | 72 | 108 | 888 | 2347 | 719 | 85 | 296 | 55 | 278 | . |
| | 983 | 983 | 386 | 126 | 447 | 1010 | 1683 | 1129 | 473 | 337 | 998 | 453 | . |
| | 821 | 821 | 389 | 71 | 900 | 875 | 474 | 673 | 727 | 1143 | 531 | 563 | 706 |
| | 282 | 282 | 391 | 177 | 344 | 892 | 257 | 135 | 379 | 89 | 135 | 448 | 144 |
| | . | 164 | 795 | . | 5 | 35 | 6 | . | 11 | 8 | 0 | 0 | 664 |
| | . | 72 | 789 | . | 0 | 14 | 10 | . | 12 | 1 | 0 | 1 | 67 |
| | . | 227 | 791 | . | 66 | 193 | 151 | . | 201 | 2 | 10 | 12 | 81 |
| | . | 100 | 798 | . | 76 | 108 | 152 | . | 226 | 19 | 50 | 38 | 806 |
| 275 - 366 | 1432 | 1432 | 345 | 937 | 3747 | 1775 | 4359 | 1665 | 2659 | 1249 | 2344 | 2052 | 3998 |
| | 865 | 865 | 346 | 2237 | 5483 | 2378 | 2062 | 1312 | 1021 | 1224 | 1045 | 4602 | 3555 |
| | 334 | 334 | 368 | 385 | 690 | 338 | 2272 | 860 | 857 | 871 | 1829 | 1059 | . |
| | 718 | 718 | 387 | 1546 | 1765 | 1614 | 1609 | 5284 | 4897 | 4503 | 661 | 1147 | . |
| | 361 | 361 | 388 | 310 | 711 | 814 | 380 | 270 | 704 | 993 | 309 | 554 | 431 |
| | 145 | 145 | 392 | 69 | 500 | 618 | 215 | 170 | 234 | 116 | 53 | 266 | 165 |
| | . | 175 | 796 | . | 37 | 355 | 289 | . | 154 | 96 | 41 | 2 | 318 |
| | . | 81 | 800 | . | . | 313 | 517 | . | 233 | 191 | 215 | 52 | 636 |
| 367 - 549 | 186 | 186 | 729 | 215 | 648 | 496 | 242 | 239 | 1002 | 438 | 100 | 218 | 139 |
| | 216 | 216 | 731 | 242 | . | 713 | 305 | 1795 | 891 | 407 | 318 | 306 | 262 |
| | 468 | 468 | 733 | 501 | 706 | 752 | 2535 | 1511 | 1321 | 906 | 312 | 949 | 364 |
| | 272 | 272 | 735 | 526 | 1111 | 938 | 2093 | 2465 | 728 | 1504 | 1177 | 412 | . |
| | . | 50 | 792 | . | 186 | 349 | 608 | . | 316 | 69 | 31 | 200 | 1021 |
| 550 - 731 | 170 | 170 | 730 | 140 | 37 | 330 | 44 | 224 | 125 | 627 | 200 | 183 | 74 |
| | 231 | 231 | 732 | 83 | 463 | 590 | 705 | 519 | 858 | 319 | 152 | 430 | 130 |
| | 228 | 228 | 734 | 280 | 642 | 604 | 515 | 184 | 554 | 671 | 214 | 124 | . |
| | 175 | 175 | 736 | 271 | 1117 | 951 | 1285 | 498 | 4028 | 1038 | 910 | 214 | . |
| 732 - 914 | . | 227 | 737 | 1244 | 2198 | 1981 | 4765 | 1472 | 1522 | 1689 | 1433 | 1041 | . |
| | . | 223 | 741 | . | 867 | 3224 | 5059 | 961 | 444 | 1653 | 1337 | 661 | . |
| | . | 348 | 745 | . | 1075 | 1722 | 1299 | 358 | 364 | 680 | 267 | 971 | . |
| | . | 159 | 748 | . | 429 | 287 | 166 | 255 | 390 | 458 | 26 | 74 | . |
| 915 -1097 | . | 221 | 738 | 1490 | 1906 | 1439 | 769 | 548 | 903 | 857 | 571 | 750 | . |
| | . | 206 | 742 | . | 567 | 901 | 918 | 628 | 451 | 579 | 982 | 2183 | . |
| | . | 392 | 746 | . | 783 | 992 | 531 | 1231 | 363 | 1126 | 132 | 39 | . |
| | . | 126 | 749 | . | 125 | 377 | 135 | . | 185 | 17 | 50 | 6 | . |
| 1098 -1280 | . | 254 | 739 | . | 1227 | 2248 | 1784 | 245 | 515 | 329 | 227 | 918 | . |
| | . | 211 | 743 | . | 931 | 2820 | 472 | 2427 | 861 | 671 | 1527 | 358 | . |
| | . | 724 | 747 | . | 438 | 1446 | 570 | 284 | 622 | 37 | 204 | 110 | . |
| | . | 556 | 750 | . | 586 | 3947 | 1750 | 1100 | 1872 | 348 | 581 | 119 | . |
| 1281 -1463 | . | 264 | 740 | . | 981 | 2604 | 1013 | 337 | 1109 | 1068 | 946 | 456 | . |
| | . | 280 | 744 | . | 2961 | 1101 | 1746 | . | 698 | 1295 | 957 | 3571 | . |
| | . | 229 | 751 | . | 1207 | 2810 | 2633 | . | 711 | 1061 | 206 | 59 | . |
| Total Biomass (t) | | | | 11282 | 36642 | 48596 | 55927 | 33955 | 34161 | 29886 | 22377 | 26123 | 15940 |

Table 10 Abundance estimates (000s) of Greenland halibut from Canadian fall surveys in Div. 3L using a Campelen trawl during 1995-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 - 56 | . | 268 | 784 | . | 0 | 0 | 0 | . | 0 | 0 | 0 | 0 | 0 |
| 57 - 92 | 2071 | 2071 | 350 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 0 |
| | 1780 | 1780 | 363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| | 1121 | 1121 | 371 | 0 | 39 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 |
| | 2460 | 2460 | 372 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1120 | 1120 | 384 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | . | 465 | 785 | . | 0 | 0 | 0 | . | 0 | 0 | 0 | 0 | 0 |
| 93 - 183 | 1519 | 1519 | 328 | 0 | 42 | 42 | 42 | 125 | 84 | 0 | 42 | 0 | 48 |
| | 1574 | 1574 | 341 | 0 | 72 | 595 | 650 | 43 | 173 | 0 | 38 | 0 | 62 |
| | 585 | 585 | 342 | 0 | 40 | 201 | 80 | 0 | 201 | 0 | 0 | 0 | 40 |
| | 525 | 525 | 343 | 0 | 0 | 96 | 132 | 0 | 36 | 0 | 0 | 0 | 72 |
| | 2120 | 2120 | 348 | 0 | 83 | 458 | 622 | 311 | 73 | 83 | 79 | 0 | 357 |
| | 2114 | 2114 | 349 | 144 | 125 | 208 | 686 | 914 | 0 | 0 | 0 | 42 | 184 |
| | 2817 | 2817 | 364 | 86 | 0 | 517 | 1287 | 43 | 0 | 172 | 43 | 0 | 129 |
| | 1041 | 1041 | 365 | 179 | 0 | 668 | 382 | 143 | . | 95 | 0 | 48 | . |
| | 1320 | 1320 | 370 | 73 | 227 | 227 | 2623 | 986 | 171 | 227 | 136 | 52 | . |
| | 2356 | 2356 | 385 | 1577 | 540 | 3110 | 1058 | 770 | 36 | 203 | 648 | 243 | 1273 |
| | 1481 | 1481 | 390 | 272 | 204 | 815 | 1892 | 693 | 149 | 1580 | 1100 | 81 | 477 |
| | . | 84 | 786 | . | 331 | 12 | 12 | . | 0 | 0 | 0 | 6 | 0 |
| | . | 613 | 787 | . | 42 | 295 | 0 | . | 0 | 0 | 0 | 0 | 126 |
| | . | 261 | 788 | . | 0 | 180 | 90 | . | 0 | 0 | 0 | 0 | 0 |
| | . | 89 | 790 | . | 0 | 6 | 18 | . | 37 | 0 | 0 | 0 | 41 |
| | . | 72 | 793 | . | 0 | 5 | 10 | . | 0 | 5 | 10 | 0 | 0 |
| | . | 216 | 794 | . | 0 | 40 | 15 | . | . | 0 | 0 | 0 | 0 |
| | . | 98 | 797 | . | 0 | 13 | 34 | . | 0 | 0 | 0 | 0 | 31 |
| | . | 72 | 799 | . | 0 | 0 | 9 | . | 0 | 0 | 0 | 0 | 0 |
| 184 - 274 | 1494 | 1582 | 344 | 73 | 69 | 696 | 3096 | 392 | 64 | 0 | 44 | 87 | 2497 |
| | 983 | 983 | 347 | 120 | 0 | 180 | 3200 | 541 | 456 | 45 | 90 | 45 | 1871 |
| | 1394 | 1394 | 366 | 2246 | 2732 | 6673 | 7278 | 4913 | 192 | 2923 | 6286 | 682 | . |
| | 961 | 961 | 369 | 338 | 1124 | 4451 | 7193 | 1880 | 595 | 2071 | 813 | 1807 | . |
| | 983 | 983 | 386 | 1758 | 2524 | 7437 | 5980 | 4958 | 1037 | 1017 | 6641 | 3316 | . |
| | 821 | 821 | 389 | 753 | 8019 | 7680 | 2146 | 3338 | 2485 | 7943 | 3179 | 3802 | 4480 |
| | 282 | 282 | 391 | 886 | 3369 | 6459 | 969 | 601 | 3491 | 369 | 1410 | 2289 | 834 |
| | . | 164 | 795 | . | 21 | 104 | 23 | . | 20 | 34 | 0 | 15 | 1523 |
| | . | 72 | 789 | . | 0 | 50 | 25 | . | 35 | 15 | 5 | 15 | 144 |
| | . | 227 | 791 | . | 127 | 487 | 375 | . | 283 | 28 | 21 | 16 | 250 |
| | . | 100 | 798 | . | 261 | 281 | 468 | . | 309 | 55 | 78 | 99 | 1842 |
| 275 - 366 | 1432 | 1432 | 345 | 4671 | 18723 | 12712 | 22231 | 6457 | 24864 | 7192 | 10703 | 10046 | 20558 |
| | 865 | 865 | 346 | 23203 | 40360 | 16064 | 7913 | 3490 | 5421 | 9162 | 7972 | 25821 | 16698 |
| | 334 | 334 | 368 | 3630 | 8664 | 1815 | 7305 | 1940 | 1447 | 3045 | 4411 | 4847 | . |
| | 718 | 718 | 387 | 16297 | 13169 | 8214 | 5004 | 10310 | 11803 | 12922 | 1778 | 8758 | . |
| | 361 | 361 | 388 | 1639 | 2657 | 6605 | 894 | 472 | 1788 | 4569 | 1018 | 2226 | 1539 |
| | 145 | 145 | 392 | 537 | 4317 | 4149 | 568 | 459 | 559 | 436 | 239 | 1116 | 973 |
| | . | 175 | 796 | . | 72 | 1071 | 975 | . | 1061 | 542 | 235 | 36 | 746 |
| | . | 81 | 800 | . | . | 1839 | 1821 | . | . | 936 | 584 | 145 | 1788 |
| 367 - 549 | 186 | 186 | 729 | 587 | 1797 | 1241 | 461 | 486 | 1689 | 819 | 273 | 537 | 316 |
| | 216 | 216 | 731 | 604 | . | 2333 | 517 | 2791 | 1501 | 728 | 700 | 782 | 458 |
| | 468 | 468 | 733 | 1610 | 2694 | 3058 | 5991 | 2414 | 2437 | 2015 | 601 | 2439 | 554 |
| | 272 | 272 | 735 | 2301 | 3511 | 3592 | 4808 | 4457 | 1154 | 3031 | 2611 | 1310 | |
| | . | 50 | 792 | . | 1494 | 1510 | 1861 | . | 517 | 277 | 137 | 957 | 2486 |
| 550 - 731 | 170 | 170 | 730 | 342 | 84 | 503 | 52 | 366 | 164 | 1050 | 412 | 322 | 104 |
| | 231 | 231 | 732 | 374 | 607 | 1414 | 1176 | 763 | 1128 | 632 | 234 | 1198 | 226 |
| | 228 | 228 | 734 | 668 | 1854 | 1812 | 929 | 298 | 795 | 1129 | 394 | 248 | . |
| | 175 | 175 | 736 | 706 | 2848 | 2696 | 3045 | 867 | 6644 | 2195 | 1626 | 535 | . |
| 732 - 914 | . | 227 | 737 | 3170 | 4965 | 4216 | 9306 | 2014 | 1936 | 2264 | 2123 | 2077 | . |
| | . | 223 | 741 | . | 1917 | 8083 | 10239 | 1363 | 506 | 1810 | 2163 | 1210 | . |
| | . | 348 | 745 | . | 1891 | 3064 | 1987 | 404 | 438 | 814 | 407 | 1963 | . |
| | . | 159 | 748 | . | 853 | 711 | 264 | 400 | 427 | 667 | 25 | 55 | . |
| 915 -1097 | . | 221 | 738 | 2919 | 3283 | 2003 | 1176 | 725 | 1094 | 1125 | 775 | 1094 | . |
| | . | 206 | 742 | . | 808 | 2706 | 1204 | 867 | 468 | 652 | 1474 | 3245 | . |
| | . | 392 | 746 | . | 1267 | 1845 | 674 | 770 | 351 | 1159 | 129 | 67 | . |
| | . | 126 | 749 | . | 121 | 841 | 186 | . | 121 | 19 | 61 | 9 | . |
| 1098 -1280 | . | 254 | 739 | . | 1655 | 3127 | 2568 | 349 | 472 | 360 | 332 | 1136 | . |
| | . | 211 | 743 | . | 1205 | 2245 | 493 | 3316 | 1055 | 697 | 1901 | 566 | . |
| | . | 724 | 747 | . | 498 | 1029 | 498 | 299 | 697 | 50 | 199 | 199 | . |
| | . | 556 | 750 | . | 841 | 4245 | 1874 | 814 | 2027 | 153 | 497 | 191 | . |
| 1281 -1463 | . | 264 | 740 | . | 1543 | 2978 | 1217 | 436 | 1180 | 908 | 946 | 617 | . |
| | . | 280 | 744 | . | 2773 | 1213 | 2140 | . | 757 | 1266 | 770 | 4452 | . |
| | . | 229 | 751 | . | 1040 | 2991 | 3103 | . | 929 | 971 | 221 | 54 | . |
| Abundance (000s) | | | | 71863 | 147500 | 153954 | 142871 | 68018 | 85354 | 80458 | 66613 | 90941 | 62770 |

Table 11 Biomass estimates (t) of Greenland halibut from Canadian fall surveys in Div. 3M using a Campelen trawl during 1996-2003. There was no survey in 2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 128 - 146 | 342 | 342 | 501 | 0 | . | . | . | . | . | . | . | |
| 147 - 184 | 838 | 838 | 502 | 0 | . | . | . | . | . | . | . | |
| 185 - 256 | 628 | 628 | 503 | 91 | . | . | . | . | . | . | . | |
| | 348 | 348 | 504 | 0 | . | . | . | . | . | . | . | |
| | 703 | 703 | 505 | 12 | . | . | . | . | . | . | . | |
| | 496 | 496 | 506 | 33 | . | . | . | . | . | . | . | |
| 257 - 366 | 822 | 822 | 507 | 380 | . | . | . | . | . | . | . | |
| | 646 | 646 | 508 | 230 | . | . | . | . | . | . | . | |
| | 314 | 314 | 509 | 56 | . | . | . | . | . | . | . | |
| | 951 | 951 | 510 | 271 | . | . | . | . | . | . | . | |
| | 806 | 806 | 511 | 316 | . | . | . | . | . | . | . | |
| 367 - 549 | 670 | 670 | 512 | 261 | . | . | . | . | . | . | . | |
| | 249 | 249 | 513 | 64 | . | . | . | . | . | . | . | |
| | 602 | 602 | 514 | 171 | . | . | . | . | . | . | . | |
| | 666 | 666 | 515 | 434 | . | . | . | . | . | . | . | |
| | . | 102 | 537 | . | . | . | . | . | . | . | . | |
| 550 - 731 | 634 | 634 | 516 | 342 | . | . | . | . | . | . | . | |
| | 216 | 216 | 517 | 77 | . | . | . | . | . | . | . | No Survey |
| | 210 | 210 | 518 | 143 | . | . | . | . | . | . | . | |
| | 414 | 414 | 519 | 581 | . | . | . | . | . | . | . | |
| | . | 194 | 538 | . | . | . | . | . | . | . | . | |
| 732 - 914 | . | 525 | 520 | . | . | . | . | . | . | . | . | |
| | . | 253 | 524 | . | . | . | . | . | . | . | . | |
| | . | 530 | 528 | 279 | 1580 | 2297 | . | 950 | 1142 | 922 | 639 | |
| | . | 98 | 533 | 59 | 270 | 77 | . | 119 | 78 | 56 | 185 | |
| | . | 133 | 539 | . | . | . | . | . | . | . | . | |
| 915 -1097 | . | 517 | 521 | . | . | . | . | . | . | . | . | |
| | . | 226 | 525 | . | . | . | . | . | . | . | . | |
| | . | 488 | 529 | 72 | 218 | 667 | 562 | 508 | 1233 | 602 | 821 | |
| | . | 238 | 532 | 938 | 466 | 524 | 398 | 124 | 278 | 114 | 256 | |
| | . | 486 | 534 | 814 | 2026 | 1466 | . | 1437 | 1020 | 471 | 576 | |
| 1098 -1280 | . | 533 | 522 | . | . | . | . | . | . | . | . | |
| | . | 177 | 526 | . | . | . | . | . | . | . | . | |
| | . | 1134 | 530 | 3769 | 1587 | 1506 | 1111 | 1285 | 958 | 162 | 1127 | |
| | . | 92 | 535 | 235 | 218 | 434 | . | 720 | 30 | 165 | 119 | |
| 1281 -1463 | . | 284 | 523 | . | . | . | . | . | . | . | . | |
| | . | 171 | 527 | . | . | . | . | . | . | . | . | |
| | . | 203 | 531 | 346 | 216 | 508 | 337 | 149 | 302 | 0 | 381 | |
| | . | 112 | 536 | 202 | 385 | 296 | . | 219 | 218 | 34 | 202 | |
| Total Biomass (t) | | | | 10175 | 6966 | 7776 | 2408 | 5511 | 5260 | 2525 | 4306 | |

Table 12 Abundance estimates (000s) of Greenland halibut from Canadian fall surveys in Div. 3M using a Campelen trawl during 1996-2004. There was no survey in 2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 128 - 146 | 342 | 342 | 501 | 0 | . | . | . | . | . | . | . | |
| 147 - 184 | 838 | 838 | 502 | 0 | . | . | . | . | . | . | . | |
| 185 - 256 | 628 | 628 | 503 | 199 | . | . | . | . | . | . | . | |
| | 348 | 348 | 504 | 0 | . | . | . | . | . | . | . | |
| | 703 | 703 | 505 | 58 | . | . | . | . | . | . | . | |
| | 496 | 496 | 506 | 184 | . | . | . | . | . | . | . | |
| 257 - 366 | 822 | 822 | 507 | 1427 | . | . | . | . | . | . | . | |
| | 646 | 646 | 508 | 1595 | . | . | . | . | . | . | . | |
| | 314 | 314 | 509 | 65 | . | . | . | . | . | . | . | |
| | 951 | 951 | 510 | 884 | . | . | . | . | . | . | . | |
| | 806 | 806 | 511 | 1360 | . | . | . | . | . | . | . | |
| 367 - 549 | 670 | 670 | 512 | 315 | . | . | . | . | . | . | . | |
| | 249 | 249 | 513 | 84 | . | . | . | . | . | . | . | |
| | 602 | 602 | 514 | 180 | . | . | . | . | . | . | . | |
| | 666 | 666 | 515 | 489 | . | . | . | . | . | . | . | |
| | . | 102 | 537 | . | . | . | . | . | . | . | . | |
| 550 - 731 | 634 | 634 | 516 | 358 | . | . | . | . | . | . | . | |
| | 216 | 216 | 517 | 131 | . | . | . | . | . | . | . | No Survey |
| | 210 | 210 | 518 | 176 | . | . | . | . | . | . | . | |
| | 414 | 414 | 519 | 658 | . | . | . | . | . | . | . | |
| | . | 194 | 538 | . | . | . | . | . | . | . | . | |
| 732 - 914 | . | 525 | 520 | . | . | . | . | . | . | . | . | |
| | . | 253 | 524 | . | . | . | . | . | . | . | . | |
| | . | 530 | 528 | 292 | 1977 | 3297 | . | 1094 | 1361 | 923 | 778 | |
| | . | 98 | 533 | 94 | 351 | 120 | . | 173 | 74 | 61 | 94 | |
| | . | 133 | 539 | . | . | . | . | . | . | . | . | |
| 915 -1097 | . | 517 | 521 | . | . | . | . | . | . | . | . | |
| | . | 226 | 525 | . | . | . | . | . | . | . | . | |
| | . | 488 | 529 | 110 | 224 | 614 | 537 | 470 | 1188 | 470 | 962 | |
| | . | 238 | 532 | 1408 | 557 | 688 | 557 | 141 | 327 | 126 | 405 | |
| | . | 486 | 534 | 735 | 2674 | 1790 | . | 1872 | 938 | 532 | 557 | |
| 1098 -1280 | . | 533 | 522 | . | . | . | . | . | . | . | . | |
| | . | 177 | 526 | . | . | . | . | . | . | . | . | |
| | . | 1134 | 530 | 4619 | 1524 | 1595 | 1248 | 1181 | 884 | 201 | 1025 | |
| | . | 92 | 535 | 165 | 247 | 373 | . | 386 | 34 | 104 | 70 | |
| 1281 -1463 | . | 284 | 523 | . | . | . | . | . | . | . | . | |
| | . | 171 | 527 | . | . | . | . | . | . | . | . | |
| | . | 203 | 531 | 182 | 73 | 517 | 293 | 140 | 115 | 0 | 307 | |
| | . | 112 | 536 | 74 | 216 | 265 | . | 216 | 123 | 35 | 69 | |
| Abundance (000s) | | | | 15841 | 7841 | 9258 | 2635 | 5672 | 5045 | 2452 | 4267 | |

Table 13 Biomass estimates (t) of Greenland halibut from Canadian fall surveys in Div. 3N using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=56 | 1593 | 1593 | 375 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 1499 | 1499 | 376 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 - 92 | 2992 | 2992 | 360 | 447 | 880 | 974 | 144 | 165 | 0 | 0 | 32 | 0 |
| | 1853 | 1853 | 361 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 362 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 12 |
| | 2520 | 2520 | 373 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 931 | 931 | 374 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 674 | 674 | 383 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 93 - 183 | 421 | 421 | 359 | 0 | 160 | 724 | 67 | 28 | 81 | 0 | 0 | 2 |
| | 100 | 100 | 377 | 4 | 166 | 30 | 21 | 30 | 1 | 0 | 10 | 7 |
| | 647 | 647 | 382 | 0 | 24 | 111 | 0 | 0 | 0 | 96 | 0 | 1 |
| 184 - 274 | 225 | 225 | 358 | 140 | 94 | 42 | 13 | 5 | 488 | 1 | 8 | 4 |
| | 139 | 139 | 378 | 112 | 262 | 2198 | 257 | 5 | 237 | 206 | 20 | 135 |
| | 182 | 182 | 381 | 802 | 615 | 1622 | 590 | 253 | 138 | 73 | 67 | 114 |
| 275 - 366 | 164 | 164 | 357 | 40 | 58 | 7 | . | 6 | 8 | 20 | 21 | 8 |
| | 106 | 106 | 379 | 581 | 41 | 31 | 22 | 36 | 404 | 98 | 59 | 629 |
| | 116 | 116 | 380 | 178 | 516 | 794 | 330 | 151 | 141 | 95 | 130 | 362 |
| 367 - 549 | 155 | 155 | 723 | 115 | 109 | 336 | 14 | 48 | 70 | 8 | 31 | 11 |
| | 105 | 105 | 725 | 165 | 1646 | 65 | 95 | 171 | 59 | 54 | 42 | . |
| | 160 | 160 | 727 | 1006 | 371 | 509 | 494 | 391 | 570 | 211 | 209 | 342 |
| 550 - 731 | 124 | 124 | 724 | 160 | 589 | 374 | 126 | 67 | 62 | 154 | . | 122 |
| | 72 | 72 | 726 | 296 | 448 | 765 | 55 | 30 | 517 | 214 | 136 | 52 |
| | 156 | 156 | 728 | 1035 | 455 | 675 | 511 | 201 | 299 | 510 | 291 | 1084 |
| 732 - 914 | . | 134 | 752 | . | . | 563 | . | 664 | 68 | 97 | . | . |
| | . | 106 | 756 | . | . | 242 | . | 243 | 230 | 211 | . | . |
| | . | 154 | 760 | . | . | 352 | . | 183 | 283 | 786 | . | . |
| 915 -1097 | . | 138 | 753 | . | . | 224 | . | 109 | 55 | 75 | . | . |
| | . | 102 | 757 | . | . | 643 | . | 455 | 454 | 175 | . | . |
| | . | 171 | 761 | . | . | 687 | . | 778 | 402 | 315 | . | . |
| 1098 -1280 | . | 180 | 754 | . | . | 1554 | . | 179 | 83 | 103 | . | . |
| | . | 99 | 758 | . | . | 443 | . | 427 | 274 | 78 | . | . |
| | . | 212 | 762 | . | . | . | . | 1096 | 772 | 339 | . | . |
| 1281 -1463 | . | 385 | 755 | . | . | 658 | . | 965 | 571 | 454 | . | . |
| | . | 127 | 759 | . | . | 165 | . | 509 | 378 | 217 | . | . |
| | . | 261 | 763 | . | . | . | . | 2135 | 509 | 1111 | . | . |
| Total Biomass (t) | | | | 5079 | 6448 | 14788 | 2738 | 9330 | 7155 | 5705 | 1057 | 2885 |

Table 14 Abundance estimates (000s) of Greenland halibut from Canadian fall surveys in Div. 3N using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=56 | 1593 | 1593 | 375 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 55 | 0 |
| | 1499 | 1499 | 376 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 - 92 | 2992 | 2992 | 360 | 3293 | 4961 | 3293 | 257 | 257 | 0 | 0 | 463 | 0 |
| | 1853 | 1853 | 361 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 362 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 50 |
| | 2520 | 2520 | 373 | 0 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 931 | 931 | 374 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 674 | 674 | 383 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 93 - 183 | 421 | 421 | 359 | 0 | 1419 | 1853 | 87 | 29 | 290 | 0 | 0 | 29 |
| | 100 | 100 | 377 | 31 | 571 | 76 | 55 | 69 | 16 | 10 | 110 | 28 |
| | 647 | 647 | 382 | 0 | 45 | 223 | 0 | 0 | 0 | 401 | 0 | 51 |
| 184 - 274 | 225 | 225 | 358 | 959 | 696 | 232 | 77 | 14 | 2132 | 15 | 90 | 46 |
| | 139 | 139 | 378 | 1027 | 1589 | 7276 | 1013 | 34 | 417 | 676 | 76 | 1080 |
| | 182 | 182 | 381 | 19548 | 3693 | 6534 | 2353 | 739 | 663 | 613 | 310 | 688 |
| 275 - 366 | 164 | 164 | 357 | 370 | 481 | 45 | . | 21 | 66 | 60 | 113 | 23 |
| | 106 | 106 | 379 | 4511 | 132 | 169 | 69 | 80 | 710 | 416 | 305 | 1999 |
| | 116 | 116 | 380 | 2525 | 1779 | 2278 | 846 | 339 | 412 | 465 | 606 | 2066 |
| 367 - 549 | 155 | 155 | 723 | 320 | 591 | 1002 | 53 | 95 | 113 | 38 | 84 | 64 |
| | 105 | 105 | 725 | 701 | 12676 | 231 | 217 | 372 | 318 | 213 | 193 | . |
| | 160 | 160 | 727 | 10334 | 1123 | 1868 | 1079 | 658 | 884 | 649 | 698 | 757 |
| 550 - 731 | 124 | 124 | 724 | 644 | 2789 | 1421 | 213 | 159 | 94 | 468 | . | 415 |
| | 72 | 72 | 726 | 1124 | 1406 | 2665 | 122 | 53 | 1033 | 1074 | 584 | 168 |
| | 156 | 156 | 728 | 3573 | 1356 | 2060 | 1094 | 377 | 807 | 2361 | 975 | 2997 |
| 732 - 914 | . | 134 | 752 | . | . | 995 | . | 959 | 74 | 184 | . | . |
| | . | 106 | 756 | . | . | 525 | . | 396 | 314 | 343 | . | . |
| | . | 154 | 760 | . | . | 821 | . | 354 | 478 | 1727 | . | . |
| 915 -1097 | . | 138 | 753 | . | . | 351 | . | 142 | 66 | 129 | . | . |
| | . | 102 | 757 | . | . | 1143 | . | 687 | 645 | 247 | . | . |
| | . | 171 | 761 | . | . | 958 | . | 1264 | 524 | 470 | . | . |
| 1098 -1280 | . | 180 | 754 | . | . | 2392 | . | 173 | 66 | 99 | . | . |
| | . | 99 | 758 | . | . | 536 | . | 586 | 302 | 86 | . | . |
| | . | 212 | 762 | . | . | . | . | 1448 | 864 | 525 | . | . |
| 1281 -1463 | . | 385 | 755 | . | . | 871 | . | 1074 | 556 | 424 | . | . |
| | . | 127 | 759 | . | . | 183 | . | 580 | 376 | 132 | . | . |
| | . | 261 | 763 | . | . | . | . | 2805 | 521 | 1364 | . | . |
| Abundance (000s) | | | | 48959 | 35487 | 40002 | 7536 | 13763 | 12740 | 13237 | 4663 | 10461 |

Table 15 Biomass estimates (t) of Greenland halibut from Canadian fall surveys in Div. 3O using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 57 - 92 | 2089 | 2089 | 330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 456 | 456 | 331 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1898 | 1898 | 338 | 39 | 195 | 38 | 39 | 0 | 0 | 0 | 26 | 16 |
| | 1716 | 1716 | 340 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2580 | 2580 | 352 | 56 | 9 | 28 | 0 | 0 | 4 | 0 | 0 | 0 |
| | 1282 | 1282 | 353 | 472 | 769 | 544 | 108 | 0 | 0 | 3 | 0 | 180 |
| 93 - 183 | 1721 | 1721 | 329 | 28 | 57 | 11 | 50 | 46 | 3 | 0 | 0 | 0 |
| | 1047 | 1047 | 332 | 25 | 81 | 74 | 0 | 0 | 0 | 0 | 16 | 26 |
| | 948 | 948 | 337 | 48 | 30 | 21 | 67 | 0 | 0 | 0 | 7 | 0 |
| | 585 | 585 | 339 | 0 | 103 | 8 | . | 46 | 16 | 0 | 1 | 0 |
| | 474 | 474 | 354 | 5 | 59 | 15 | 1094 | 95 | 71 | 24 | 84 | 39 |
| 184 - 274 | 151 | 147 | 333 | . | 10 | 0 | 0 | 3 | 0 | 0 | 0 | 5 |
| | 121 | 121 | 336 | 3 | 7 | 5 | 0 | 0 | 0 | 0 | 12 | 5 |
| | 103 | 103 | 355 | 39 | 22 | 3 | 1 | 0 | 1 | 5 | 3 | 25 |
| 275 - 366 | 92 | 96 | 334 | . | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 58 | 58 | 335 | 7 | 2 | 0 | 3 | 3 | 0 | 0 | 5 | 0 |
| | 61 | 61 | 356 | 8 | 6 | 8 | 8 | 9 | 6 | 7 | 0 | 2 |
| 367 - 549 | 93 | 166 | 717 | . | 42 | 27 | 6 | 0 | 72 | 0 | 27 | 1 |
| | 76 | 76 | 719 | 11 | 4 | 14 | 36 | 18 | 10 | 1 | 0 | 31 |
| | 76 | 76 | 721 | 50 | 35 | 47 | 26 | 23 | 42 | 5 | 25 | 0 |
| 550 - 731 | 111 | 134 | 718 | . | 131 | 158 | 186 | 20 | 26 | 107 | 355 | 35 |
| | 105 | 105 | 720 | 82 | . | 92 | 105 | 181 | 141 | 152 | 131 | 17 |
| | 93 | 93 | 722 | 153 | 490 | 124 | 160 | 73 | 106 | 40 | 437 | 23 |
| 732 - 914 | . | 105 | 764 | . | . | 620 | . | 437 | 239 | 324 | . | . |
| | . | 99 | 768 | . | . | 1070 | . | 403 | 274 | 460 | . | . |
| | . | 135 | 772 | . | . | 1334 | . | 360 | . | 194 | 164 | . |
| 915 -1097 | . | 124 | 765 | . | . | 175 | . | 665 | 155 | 127 | . | . |
| | . | 138 | 769 | . | . | 409 | . | 405 | 438 | 374 | . | . |
| | . | 128 | 773 | . | . | 560 | . | 386 | 340 | 632 | 526 | . |
| 1098 -1280 | . | 144 | 766 | . | . | . | . | 322 | 238 | 267 | . | . |
| | . | 128 | 770 | . | . | . | . | 172 | 1116 | 379 | . | . |
| | . | 135 | 774 | . | . | . | . | 186 | 259 | 174 | 480 | . |
| 1281 -1463 | . | 158 | 767 | . | . | . | . | 101 | 257 | 60 | . | . |
| | . | 175 | 771 | . | . | . | . | 171 | 604 | 254 | . | . |
| | . | 155 | 775 | . | . | . | . | 96 | 130 | 488 | 290 | . |
| Total Biomass (t) | | | | 1026 | 2058 | 5402 | 1905 | 4222 | 4546 | 4077 | 2589 | 407 |

Table 16 Abundance estimates (000s) of Greenland halibut from Canadian fall surveys in Div. 3O using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 57 - 92 | 2089 | 2089 | 330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 456 | 456 | 331 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1898 | 1898 | 338 | 131 | 940 | 261 | 104 | 0 | 0 | 0 | 209 | 209 |
| | 1716 | 1716 | 340 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2580 | 2580 | 352 | 659 | 25 | 111 | 0 | 0 | 101 | 0 | 0 | 0 |
| | 1282 | 1282 | 353 | 4321 | 4453 | 2293 | 397 | 0 | 0 | 88 | 0 | 750 |
| 93 - 183 | 1721 | 1721 | 329 | 47 | 1657 | 47 | 95 | 84 | 47 | 0 | 0 | 47 |
| | 1047 | 1047 | 332 | 1224 | 864 | 624 | 0 | 0 | 0 | 0 | 384 | 192 |
| | 948 | 948 | 337 | 717 | 522 | 169 | 261 | 0 | 0 | 0 | 174 | 0 |
| | 585 | 585 | 339 | 0 | 1086 | 138 | . | 201 | 80 | 0 | 40 | 0 |
| | 474 | 474 | 354 | 87 | 619 | 65 | 3097 | 130 | 174 | 333 | 652 | 531 |
| 184 - 274 | 151 | 147 | 333 | . | 121 | 0 | 0 | 20 | 0 | 9 | 0 | 71 |
| | 121 | 121 | 336 | 25 | 75 | 31 | 0 | 8 | 0 | 0 | 50 | 42 |
| | 103 | 103 | 355 | 418 | 241 | 21 | 7 | 0 | 13 | 92 | 14 | 305 |
| 275 - 366 | 92 | 96 | 334 | . | 53 | 33 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 58 | 58 | 335 | 12 | 28 | 0 | 8 | 8 | 0 | 0 | 16 | 4 |
| | 61 | 61 | 356 | 57 | 55 | 8 | 22 | 17 | 4 | 29 | 0 | 17 |
| 367 - 549 | 93 | 166 | 717 | . | 34 | 57 | 11 | 0 | 57 | 0 | 46 | 13 |
| | 76 | 76 | 719 | 52 | 37 | 31 | 42 | 12 | 16 | 5 | 0 | 18 |
| | 76 | 76 | 721 | 329 | 182 | 125 | 88 | 37 | 31 | 16 | 105 | 0 |
| 550 - 731 | 111 | 134 | 718 | . | 590 | 553 | 120 | 28 | 46 | 116 | 524 | 53 |
| | 105 | 105 | 720 | 461 | . | 274 | 173 | 276 | 207 | 255 | 231 | 25 |
| | 93 | 93 | 722 | 768 | 2900 | 385 | 294 | 180 | 203 | 108 | 1478 | 80 |
| 732 - 914 | . | 105 | 764 | . | . | 1760 | . | 758 | 383 | 708 | . | . |
| | . | 99 | 768 | . | . | 2997 | . | 763 | 429 | 624 | . | . |
| | . | 135 | 772 | . | . | 3714 | . | 592 | . | 259 | 248 | . |
| 915 -1097 | . | 124 | 765 | . | . | 210 | . | 1032 | 273 | 184 | . | . |
| | . | 138 | 769 | . | . | 854 | . | 494 | 484 | 427 | . | . |
| | . | 128 | 773 | . | . | 778 | . | 518 | 376 | 634 | 537 | . |
| 1098 -1280 | . | 144 | 766 | . | . | . | . | 205 | 283 | 271 | . | . |
| | . | 128 | 770 | . | . | . | . | 170 | 1039 | 324 | . | . |
| | . | 135 | 774 | . | . | . | . | 186 | 195 | 72 | 244 | . |
| 1281 -1463 | . | 158 | 767 | . | . | . | . | 116 | 261 | 76 | . | . |
| | . | 175 | 771 | . | . | . | . | 179 | 481 | 193 | . | . |
| | . | 155 | 775 | . | . | . | . | 77 | 107 | 146 | 192 | . |
| Abundance (000s) | | | | 9309 | 14482 | 15604 | 4754 | 6092 | 5291 | 4967 | 5144 | 2362 |

Table 17a Biomass estimates (t) of Greenland halibut from Canadian spring surveys in Div. 3L using a Campelen trawl during 1995-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 - 56 | . | 268 | 784 | . | . | . | 0 | 0 | . | 0 | 0 | . | 0 |
| 57 - 92 | 2071 | 2071 | 350 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1780 | 1780 | 363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1121 | 1121 | 371 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2460 | 2460 | 372 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1120 | 1120 | 384 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | . | 465 | 785 | . | . | . | 0 | 0 | . | 0 | 0 | . | 0 |
| 93 - 183 | 1519 | 1519 | 328 | 2 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 1 |
| | 1574 | 1574 | 341 | 0 | 2 | 0 | 14 | 0 | 26 | 0 | 0 | 0 | 0 |
| | 585 | 585 | 342 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 525 | 525 | 343 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2120 | 2120 | 348 | 0 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2114 | 2114 | 349 | 0 | 1 | 0 | 11 | 0 | 14 | 2 | 0 | 0 | 0 |
| | 2817 | 2817 | 364 | 0 | 0 | 6 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | 1041 | 1041 | 365 | 0 | 1 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 |
| | 1320 | 1320 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2356 | 2356 | 385 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | 1481 | 1481 | 390 | 0 | 0 | 24 | 0 | 0 | 6 | 0 | 0 | 0 | 0 |
| | . | 84 | 786 | . | . | . | 0 | 0 | . | 0 | . | . | 0 |
| | . | 613 | 787 | . | . | . | 0 | 0 | . | 0 | . | . | 0 |
| | . | 261 | 788 | . | . | . | . | 0 | . | . | . | . | |
| | . | 89 | 790 | . | . | . | . | 10 | . | . | . | . | |
| | . | 72 | 793 | . | . | . | . | 3 | . | . | . | . | |
| | . | 216 | 794 | . | . | . | . | 0 | . | . | . | 0 | |
| | . | 98 | 797 | . | . | . | . | 0 | . | . | . | 0 | |
| | . | 72 | 799 | . | . | . | . | . | . | . | . | . | 0 |
| 184 - 274 | 1494 | 1582 | 344 | 0 | 3 | 59 | 0 | 21 | 24 | 3 | 0 | 31 | 34 |
| | 983 | 983 | 347 | 0 | 1 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1394 | 1394 | 366 | 90 | 6 | 169 | 10 | 30 | 0 | 1 | 48 | 148 | 255 |
| | 961 | 961 | 369 | 0 | 1 | 2 | 79 | 17 | 0 | 1 | 0 | 464 | 0 |
| | 983 | 983 | 386 | 10 | 1 | 84 | 11 | 633 | 0 | 0 | 0 | 0 | 115 |
| | 821 | 821 | 389 | 142 | 38 | 435 | 122 | 435 | 1070 | 143 | 3 | 2 | 36 |
| | 282 | 282 | 391 | 54 | 9 | 3 | 43 | 0 | 4 | 3 | 16 | 58 | 0 |
| | . | 164 | 795 | . | . | . | . | 0 | . | . | . | 0 | |
| | . | 72 | 789 | . | . | . | . | 18 | . | . | . | . | 0 |
| | . | 227 | 791 | . | . | . | . | 113 | . | . | . | . | |
| | . | 100 | 798 | . | . | . | . | 23 | . | . | . | 0 | |
| 275 - 366 | 1432 | 1432 | 345 | 122 | 335 | 892 | 302 | 926 | 891 | 495 | 566 | 441 | 1953 |
| | 865 | 865 | 346 | 123 | 354 | 1372 | 639 | 338 | 366 | 513 | 245 | 307 | 469 |
| | 334 | 334 | 368 | 30 | 137 | 216 | 263 | 228 | 456 | 311 | 327 | 703 | 241 |
| | 718 | 718 | 387 | 391 | 208 | 2514 | 2585 | 2026 | 4356 | 439 | 97 | 359 | 724 |
| | 361 | 361 | 388 | 163 | 304 | 382 | 1404 | 464 | 482 | 220 | 223 | 608 | 989 |
| | 145 | 145 | 392 | 51 | 288 | 117 | 464 | 100 | 143 | 85 | 74 | 248 | 111 |
| | . | 175 | 796 | . | . | . | . | 7 | . | . | . | 0 | |
| | . | 81 | 800 | . | . | . | . | 210 | . | . | . | . | |
| 367 - 549 | 186 | 186 | 729 | 136 | 803 | 236 | 3921 | 1351 | 1286 | 555 | 407 | 589 | 724 |
| | 216 | 216 | 731 | 456 | 897 | 299 | 3531 | 1284 | 1725 | 664 | 217 | 1336 | 496 |
| | 468 | 468 | 733 | 582 | 3016 | 3003 | 7556 | 3311 | 2290 | 1139 | 847 | 3444 | 1138 |
| | 272 | 272 | 735 | 1063 | 302 | 4063 | 5100 | 4332 | 4656 | 2186 | 939 | 598 | 1207 |
| | . | 50 | 792 | . | . | . | . | 533 | . | 903 | . | 148 | |
| 550 - 731 | 170 | 170 | 730 | 86 | 245 | 0 | 1693 | 292 | 745 | 772 | 177 | 53 | 54 |
| | 231 | 231 | 732 | 291 | 462 | 1420 | 3220 | 1219 | 996 | 1173 | 533 | 465 | 560 |
| | 228 | 228 | 734 | 583 | 1327 | 1361 | 4169 | 1324 | 2887 | 621 | 362 | 367 | 592 |
| | 175 | 175 | 736 | 449 | 791 | 1793 | 5037 | 3463 | 4372 | 2804 | 1378 | 1747 | 259 |
| 732 - 914 | . | 227 | 737 | . | . | . | . | . | . | . | . | . | . |
| | . | 223 | 741 | . | . | . | . | . | . | . | . | . | . |
| | . | 348 | 745 | . | . | . | . | . | . | . | . | . | . |
| | . | 159 | 748 | . | . | . | . | . | . | . | . | . | . |
| 915 -1097 | . | 221 | 738 | . | . | . | . | . | . | . | . | . | . |
| | . | 206 | 742 | . | . | . | . | . | . | . | . | . | . |
| | . | 392 | 746 | . | . | . | . | . | . | . | . | . | . |
| | . | 126 | 749 | . | . | . | . | . | . | . | . | . | . |
| 1098 -1280 | . | 254 | 739 | . | . | . | . | . | . | . | . | . | . |
| | . | 211 | 743 | . | . | . | . | . | . | . | . | . | . |
| | . | 724 | 747 | . | . | . | . | . | . | . | . | . | . |
| | . | 556 | 750 | . | . | . | . | . | . | . | . | . | . |
| 1281 -1463 | . | 264 | 740 | . | . | . | . | . | . | . | . | . | . |
| | . | 280 | 744 | . | . | . | . | . | . | . | . | . | . |
| | . | 229 | 751 | . | . | . | . | . | . | . | . | . | . |
| Total Biomass (t) | | | | 4826 | 9533 | 18467 | 40182 | 22724 | 26815 | 13035 | 6459 | 12118 | 9973 |

Table 17b Abundance estimates (000s) of Greenland halibut from Canadian spring surveys in Div. 3L using a Campelen trawl during 1995-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 - 56 | . | 268 | 784 | . | . | . | 0 | 0 | . | 0 | 0 | . | 0 |
| 57 - 92 | 2071 | 2071 | 350 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1780 | 1780 | 363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| | 1121 | 1121 | 371 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2460 | 2460 | 372 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1120 | 1120 | 384 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | . | 465 | 785 | . | . | . | 0 | 0 | . | 0 | 0 | . | 0 |
| 93 - 183 | 1519 | 1519 | 328 | 15 | 30 | 0 | 0 | 0 | 84 | 42 | 0 | 0 | 42 |
| | 1574 | 1574 | 341 | 0 | 31 | 0 | 87 | 0 | 130 | 0 | 0 | 0 | 0 |
| | 585 | 585 | 342 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 525 | 525 | 343 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2120 | 2120 | 348 | 0 | 29 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2114 | 2114 | 349 | 0 | 65 | 0 | 73 | 0 | 36 | 42 | 0 | 0 | 0 |
| | 2817 | 2817 | 364 | 0 | 30 | 43 | 0 | 0 | 39 | 86 | 0 | 129 | 0 |
| | 1041 | 1041 | 365 | 0 | 29 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 |
| | 1320 | 1320 | 370 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2356 | 2356 | 385 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| | 1481 | 1481 | 390 | 0 | 0 | 102 | 0 | 0 | 407 | 0 | 0 | 41 | 0 |
| | . | 84 | 786 | . | . | . | 0 | 7 | . | 6 | . | . | 0 |
| | . | 613 | 787 | . | . | . | 0 | 0 | . | 0 | . | . | 0 |
| | . | 261 | 788 | . | . | . | . | 0 | . | . | . | . | . |
| | . | 89 | 790 | . | . | . | . | 24 | . | . | . | . | . |
| | . | 72 | 793 | . | . | . | . | 5 | . | . | . | . | . |
| | . | 216 | 794 | . | . | . | . | 0 | . | . | . | 0 | . |
| | . | 98 | 797 | . | . | . | . | 0 | . | . | . | 0 | . |
| | . | 72 | 799 | . | . | . | . | . | . | . | . | . | 0 |
| 184 - 274 | 1494 | 1582 | 344 | 0 | 62 | 261 | 36 | 39 | 163 | 87 | 0 | 44 | 435 |
| | 983 | 983 | 347 | 0 | 34 | 68 | 0 | 0 | 85 | 0 | 0 | 0 | 0 |
| | 1394 | 1394 | 366 | 341 | 38 | 1406 | 146 | 170 | 0 | 38 | 1364 | 1304 | 1283 |
| | 961 | 961 | 369 | 0 | 33 | 59 | 397 | 78 | 0 | 44 | 0 | 3746 | 0 |
| | 983 | 983 | 386 | 30 | 68 | 781 | 68 | 2710 | 0 | 0 | 0 | 0 | 481 |
| | 821 | 821 | 389 | 715 | 791 | 5141 | 979 | 1694 | 4574 | 866 | 142 | 75 | 264 |
| | 282 | 282 | 391 | 414 | 388 | 52 | 282 | 0 | 188 | 155 | 116 | 407 | 0 |
| | . | 164 | 795 | . | . | . | . | 0 | . | . | . | 0 | . |
| | . | 72 | 789 | . | . | . | . | 65 | . | . | . | . | 0 |
| | . | 227 | 791 | . | . | . | . | 208 | . | . | . | . | . |
| | . | 100 | 798 | . | . | . | . | 61 | . | . | . | 0 | . |
| 275 - 366 | 1432 | 1432 | 345 | 834 | 4268 | 7958 | 3400 | 4062 | 3758 | 4478 | 2872 | 3034 | 13951 |
| | 865 | 865 | 346 | 582 | 8673 | 16262 | 3094 | 1728 | 1988 | 4447 | 3587 | 3512 | 3411 |
| | 334 | 334 | 368 | 204 | 1501 | 2413 | 1718 | 1066 | 1437 | 791 | 1362 | 4628 | 1133 |
| | 718 | 718 | 387 | 1844 | 5461 | 24347 | 13689 | 8520 | 17334 | 1800 | 658 | 2321 | 2853 |
| | 361 | 361 | 388 | 607 | 4247 | 1962 | 7824 | 1837 | 2008 | 1192 | 1363 | 3327 | 3487 |
| | 145 | 145 | 392 | 253 | 3551 | 1127 | 2753 | 509 | 355 | 509 | 329 | 1935 | 888 |
| | . | 175 | 796 | . | . | . | . | 43 | . | . | . | 36 | . |
| | . | 81 | 800 | . | . | . | . | 456 | . | . | . | . | . |
| 367 - 549 | 186 | 186 | 729 | 637 | 3774 | 1076 | 20763 | 3416 | 2890 | 1621 | 1720 | 2887 | 2623 |
| | 216 | 216 | 731 | 1301 | 4958 | 1530 | 13617 | 4115 | 4558 | 1598 | 1000 | 4632 | 1638 |
| | 468 | 468 | 733 | 2361 | 18551 | 13680 | 23219 | 10880 | 6152 | 4178 | 3122 | 17443 | 3813 |
| | 272 | 272 | 735 | 3210 | 1949 | 18286 | 17174 | 11726 | 10063 | 5355 | 3645 | 2736 | 4141 |
| | . | 50 | 792 | . | . | . | . | 1220 | . | 1401 | . | 404 | |
| 550 - 731 | 170 | 170 | 730 | 208 | 531 | 0 | 4022 | 608 | 1668 | 1287 | 608 | 118 | 159 |
| | 231 | 231 | 732 | 713 | 1657 | 4435 | 9612 | 2955 | 1729 | 2599 | 1624 | 1321 | 1285 |
| | 228 | 228 | 734 | 1763 | 5504 | 3980 | 11277 | 3288 | 4767 | 1469 | 1267 | 937 | 2107 |
| | 175 | 175 | 736 | 1134 | 2846 | 5862 | 13325 | 6795 | 6668 | 4696 | 2749 | 5903 | 824 |
| 732 - 914 | . | 227 | 737 | . | . | . | . | . | . | . | . | . | . |
| | . | 223 | 741 | . | . | . | . | . | . | . | . | . | . |
| | . | 348 | 745 | . | . | . | . | . | . | . | . | . | . |
| | . | 159 | 748 | . | . | . | . | . | . | . | . | . | . |
| 915 -1097 | . | 221 | 738 | . | . | . | . | . | . | . | . | . | . |
| | . | 206 | 742 | . | . | . | . | . | . | . | . | . | . |
| | . | 392 | 746 | . | . | . | . | . | . | . | . | . | . |
| | . | 126 | 749 | . | . | . | . | . | . | . | . | . | . |
| 1098 -1280 | . | 254 | 739 | . | . | . | . | . | . | . | . | . | . |
| | . | 211 | 743 | . | . | . | . | . | . | . | . | . | . |
| | . | 724 | 747 | . | . | . | . | . | . | . | . | . | . |
| | . | 556 | 750 | . | . | . | . | . | . | . | . | . | . |
| 1281 -1463 | . | 264 | 740 | . | . | . | . | . | . | . | . | . | . |
| | . | 280 | 744 | . | . | . | . | . | . | . | . | . | . |
| | . | 229 | 751 | . | . | . | . | . | . | . | . | . | . |
| Total Biomass (t) | | | | 17165 | 69126 | 110862 | 147631 | 68316 | 71080 | 38783 | 27530 | 60919 | 44896 |

Table 18a Biomass estimates (t) of Greenland halibut from Canadian spring surveys in Div. 3N using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=56 | 1593 | 1593 | 375 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 1499 | 1499 | 376 | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 57 - 92 | 2992 | 2992 | 360 | 19 | 349 | 130 | 471 | 183 | 23 | 0 | 0 | 71 |
| | 1853 | 1853 | 361 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 |
| | 2520 | 2520 | 362 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 373 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 931 | 931 | 374 | 9 | 0 | 0 | 0 | 0 | 0 | 73 | 0 | 0 |
| | 674 | 674 | 383 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 93 - 183 | 421 | 421 | 359 | 145 | 133 | 31 | 165 | 96 | 19 | 0 | 2 | 4 |
| | 100 | 100 | 377 | 6 | 4 | 0 | 321 | 0 | 0 | 0 | 0 | 0 |
| | 647 | 647 | 382 | 0 | 0 | 76 | 0 | 20 | 0 | 0 | 0 | 1 |
| 184 - 274 | 225 | 225 | 358 | 259 | 677 | 413 | 458 | 46 | 17 | 29 | 118 | 51 |
| | 139 | 139 | 378 | 48 | 37 | 49 | 719 | 4 | 14 | 6 | 82 | 7 |
| | 182 | 182 | 381 | 178 | 90 | 10 | 217 | 33 | 7 | 0 | 41 | 0 |
| 275 - 366 | 164 | 164 | 357 | 57 | 82 | 375 | 17 | 4 | 43 | 0 | 13 | 134 |
| | 106 | 106 | 379 | 85 | 183 | 170 | 1047 | 312 | 28 | 88 | 736 | 16 |
| | 116 | 116 | 380 | 117 | 162 | 58 | 43 | 53 | 28 | 19 | 287 | 72 |
| 367 - 549 | 155 | 155 | 723 | 333 | 134 | 300 | 68 | 173 | 71 | 24 | 60 | 27 |
| | 105 | 105 | 725 | 242 | 952 | 130 | 37 | 289 | 150 | 68 | 153 | 15 |
| | 160 | 160 | 727 | 389 | 1482 | 1499 | 328 | 843 | 358 | 22 | 315 | 219 |
| 550 - 731 | 124 | 124 | 724 | 196 | 142 | 368 | 575 | 114 | 95 | 201 | 142 | 72 |
| | 72 | 72 | 726 | 93 | 254 | 1463 | 63 | 257 | 139 | 52 | 125 | 91 |
| | 156 | 156 | 728 | 1226 | . | 576 | 1475 | 1804 | 1088 | 222 | 686 | 642 |
| 732 - 914 | . | 134 | 752 | . | . | . | . | . | . | . | . | . |
| | . | 106 | 756 | . | . | . | . | . | . | . | . | . |
| | . | 154 | 760 | . | . | . | . | . | . | . | . | . |
| 915 -1097 | . | 138 | 753 | . | . | . | . | . | . | . | . | . |
| | . | 102 | 757 | . | . | . | . | . | . | . | . | . |
| | . | 171 | 761 | . | . | . | . | . | . | . | . | . |
| 1098 -1280 | . | 180 | 754 | . | . | . | . | . | . | . | . | . |
| | . | 99 | 758 | . | . | . | . | . | . | . | . | . |
| | . | 212 | 762 | . | . | . | . | . | . | . | . | . |
| 1281 -1463 | . | 385 | 755 | . | . | . | . | . | . | . | . | . |
| | . | 127 | 759 | . | . | . | . | . | . | . | . | . |
| | . | 261 | 763 | . | . | . | . | . | . | . | . | . |
| Total Biomass (t) | | | | 3415 | 4681 | 5647 | 6003 | 4228 | 2084 | 805 | 2761 | 1422 |

Table 18b Abundance estimates (000s) of Greenland halibut from Canadian spring surveys in Div. 3N using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=56 | 1593 | 1593 | 375 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 | 0 |
| | 1499 | 1499 | 376 | 41 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 |
| 57 - 92 | 2992 | 2992 | 360 | 225 | 2190 | 1098 | 2507 | 453 | 41 | 0 | 0 | 329 |
| | 1853 | 1853 | 361 | 0 | 0 | 32 | 0 | 0 | 85 | 0 | 0 | 0 |
| | 2520 | 2520 | 362 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 373 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 931 | 931 | 374 | 85 | 0 | 0 | 0 | 0 | 0 | 299 | 43 | 0 |
| | 674 | 674 | 383 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 93 - 183 | 421 | 421 | 359 | 852 | 1390 | 129 | 550 | 347 | 203 | 0 | 91 | 29 |
| | 100 | 100 | 377 | 14 | 21 | 0 | 935 | 0 | 7 | 7 | 14 | 7 |
| | 647 | 647 | 382 | 0 | 0 | 178 | 0 | 89 | 0 | 0 | 0 | 51 |
| 184 - 274 | 225 | 225 | 358 | 3853 | 6782 | 1871 | 1594 | 138 | 232 | 74 | 327 | 495 |
| | 139 | 139 | 378 | 660 | 229 | 220 | 1673 | 223 | 102 | 31 | 429 | 60 |
| | 182 | 182 | 381 | 2189 | 490 | 200 | 613 | 2754 | 206 | 11 | 601 | 0 |
| 275 - 366 | 164 | 164 | 357 | 471 | 180 | 1636 | 66 | 20 | 144 | 11 | 80 | 514 |
| | 106 | 106 | 379 | 853 | 938 | 890 | 5009 | 7945 | 97 | 2318 | 6517 | 109 |
| | 116 | 116 | 380 | 1763 | 1548 | 559 | 247 | 756 | 121 | 291 | 1125 | 431 |
| 367 - 549 | 155 | 155 | 723 | 1773 | 853 | 1386 | 192 | 341 | 126 | 47 | 152 | 64 |
| | 105 | 105 | 725 | 2035 | 5545 | 712 | 100 | 650 | 571 | 356 | 718 | 70 |
| | 160 | 160 | 727 | 3363 | 7545 | 7538 | 1101 | 2348 | 1487 | 204 | 1436 | 942 |
| 550 - 731 | 124 | 124 | 724 | 1002 | 687 | 1008 | 2167 | 212 | 159 | 350 | 337 | 179 |
| | 72 | 72 | 726 | 293 | 763 | 5477 | 178 | 525 | 228 | 105 | 393 | 256 |
| | 156 | 156 | 728 | 6532 | . | 2154 | 4496 | 4286 | 2457 | 707 | 2384 | 2382 |
| 732 - 914 | . | 134 | 752 | . | . | . | . | . | . | . | . | . |
| | . | 106 | 756 | . | . | . | . | . | . | . | . | . |
| | . | 154 | 760 | . | . | . | . | . | . | . | . | . |
| 915 -1097 | . | 138 | 753 | . | . | . | . | . | . | . | . | . |
| | . | 102 | 757 | . | . | . | . | . | . | . | . | . |
| | . | 171 | 761 | . | . | . | . | . | . | . | . | . |
| 1098 -1280 | . | 180 | 754 | . | . | . | . | . | . | . | . | . |
| | . | 99 | 758 | . | . | . | . | . | . | . | . | . |
| | . | 212 | 762 | . | . | . | . | . | . | . | . | . |
| 1281 -1463 | . | 385 | 755 | . | . | . | . | . | . | . | . | . |
| | . | 127 | 759 | . | . | . | . | . | . | . | . | . |
| | . | 261 | 763 | . | . | . | . | . | . | . | . | . |
| Abundance (000s) | | | | 26004 | 29159 | 25088 | 21429 | 21086 | 6307 | 4811 | 14735 | 5918 |

Table 19a Biomass estimates (t) of Greenland halibut from Canadian spring surveys in Div. 3O using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 57 - 92 | 2089 | 2089 | 330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 456 | 456 | 331 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1898 | 1898 | 338 | 478 | 40 | 62 | 0 | 0 | 0 | 2 | 0 | 13 |
| | 1716 | 1716 | 340 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2580 | 2580 | 352 | 114 | 48 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| | 1282 | 1282 | 353 | 119 | 146 | 331 | 2 | 25 | 0 | 3 | 0 | 1 |
| 93 - 183 | 1721 | 1721 | 329 | 1 | 13 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| | 1047 | 1047 | 332 | 148 | 376 | 475 | 0 | 4 | 0 | 1 | 6 | 24 |
| | 948 | 948 | 337 | 179 | 139 | 4 | 0 | 3 | 31 | 1 | 91 | 17 |
| | 585 | 585 | 339 | 0 | 2 | 8 | 0 | 0 | 33 | 0 | 0 | 0 |
| | 474 | 474 | 354 | 807 | 122 | 330 | 3 | 0 | 11 | 22 | 8 | 25 |
| 184 - 274 | 151 | 147 | 333 | 5 | 62 | 23 | 0 | 9 | 0 | 8 | 0 | 2 |
| | 121 | 121 | 336 | 100 | 168 | 11 | 0 | 7 | 3 | 8 | 11 | 6 |
| | 103 | 103 | 355 | 249 | 168 | 20 | 0 | 3 | 84 | 5 | 46 | 42 |
| 275 - 366 | 92 | 96 | 334 | 20 | 39 | 6 | 2 | 1 | 0 | 1 | 0 | 0 |
| | 58 | 58 | 335 | 9 | 92 | 15 | 0 | 2 | 0 | 0 | 0 | 1 |
| | 61 | 61 | 356 | 161 | 68 | 47 | 1 | 0 | 3 | 1 | 7 | 1 |
| 367 - 549 | 93 | 166 | 717 | 42 | 165 | 55 | 0 | 0 | 1 | 0 | 0 | 6 |
| | 76 | 76 | 719 | 9 | 24 | 29 | 1 | 8 | 0 | 21 | 0 | 23 |
| | 76 | 76 | 721 | 161 | 59 | 112 | 5 | 30 | 1 | 8 | 2 | 7 |
| 550 - 731 | 111 | 134 | 718 | 70 | 116 | 154 | 11 | 26 | 8 | 41 | 60 | 73 |
| | 105 | 105 | 720 | 29 | 61 | 111 | 4 | 45 | 23 | 3 | 12 | 63 |
| | 93 | 93 | 722 | 57 | 176 | 203 | 23 | 120 | 23 | 43 | 3 | 86 |
| 732 - 914 | . | 105 | 764 | . | . | . | . | . | . | . | . | . |
| | . | 99 | 768 | . | . | . | . | . | . | . | . | . |
| | . | 135 | 772 | . | . | . | . | . | . | . | . | . |
| 915 -1097 | . | 124 | 765 | . | . | . | . | . | . | . | . | . |
| | . | 138 | 769 | . | . | . | . | . | . | . | . | . |
| | . | 128 | 773 | . | . | . | . | . | . | . | . | . |
| 1098 -1280 | . | 144 | 766 | . | . | . | . | . | . | . | . | . |
| | . | 128 | 770 | . | . | . | . | . | . | . | . | . |
| | . | 135 | 774 | . | . | . | . | . | . | . | . | . |
| 1281 -1463 | . | 158 | 767 | . | . | . | . | . | . | . | . | . |
| | . | 175 | 771 | . | . | . | . | . | . | . | . | . |
| | . | 155 | 775 | . | . | . | . | . | . | . | . | . |
| Total Biomass (t) | | | | 2757 | 2084 | 2010 | 1328 | 284 | 224 | 173 | 245 | 391 |

Table 19b Abundance estimates (000s) of Greenland halibut from Canadian spring surveys in Div. 3O using a Campelen trawl during 1996-2004.

| Depth Range (m) | V1 Area | V4 Area | Stratum | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 57 - 92 | 2089 | 2089 | 330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 456 | 456 | 331 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1898 | 1898 | 338 | 5035 | 459 | 298 | 0 | 0 | 0 | 87 | 0 | 186 |
| | 1716 | 1716 | 340 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2520 | 2520 | 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2580 | 2580 | 352 | 907 | 592 | 0 | 0 | 0 | 0 | 89 | 0 | 0 |
| | 1282 | 1282 | 353 | 1340 | 1195 | 1905 | 8 | 141 | 44 | 176 | 0 | 44 |
| 93 - 183 | 1721 | 1721 | 329 | 79 | 250 | 0 | 0 | 47 | 47 | 0 | 0 | 0 |
| | 1047 | 1047 | 332 | 1914 | 5425 | 3909 | 1 | 144 | 0 | 48 | 144 | 432 |
| | 948 | 948 | 337 | 1739 | 1415 | 98 | 0 | 33 | 391 | 43 | 2521 | 360 |
| | 585 | 585 | 339 | 0 | 72 | 40 | 0 | 0 | 161 | 0 | 0 | 0 |
| | 474 | 474 | 354 | 20278 | 1467 | 2289 | 8 | 0 | 186 | 685 | 98 | 359 |
| 184 - 274 | 151 | 147 | 333 | 111 | 600 | 233 | 1 | 131 | 0 | 131 | 0 | 22 |
| | 121 | 121 | 336 | 1987 | 1680 | 141 | 0 | 105 | 92 | 75 | 100 | 50 |
| | 103 | 103 | 355 | 8005 | 1467 | 88 | 0 | 6 | 1155 | 54 | 484 | 681 |
| 275 - 366 | 92 | 96 | 334 | 343 | 252 | 125 | 6 | 26 | 0 | 33 | 0 | 0 |
| | 58 | 58 | 335 | 126 | 794 | 156 | 2 | 36 | 8 | 4 | 0 | 9 |
| | 61 | 61 | 356 | 2031 | 369 | 183 | 3 | 0 | 30 | 26 | 34 | 38 |
| 367 - 549 | 93 | 166 | 717 | 544 | 1060 | 396 | 1 | 0 | 10 | 34 | 0 | 11 |
| | 76 | 76 | 719 | 97 | 177 | 90 | 1 | 5 | 5 | 54 | 0 | 25 |
| | 76 | 76 | 721 | 1673 | 391 | 350 | 12 | 37 | 5 | 28 | 14 | 58 |
| 550 - 731 | 111 | 134 | 718 | 325 | 664 | 828 | 30 | 28 | 18 | 37 | 147 | 74 |
| | 105 | 105 | 720 | 182 | 331 | 575 | 7 | 77 | 54 | 17 | 14 | 126 |
| | 93 | 93 | 722 | 381 | 1086 | 886 | 70 | 199 | 56 | 30 | 18 | 121 |
| 732 - 914 | . | 105 | 764 | . | . | . | . | . | . | . | . | . |
| | . | 99 | 768 | . | . | . | . | . | . | . | . | . |
| | . | 135 | 772 | . | . | . | . | . | . | . | . | . |
| 915 -1097 | . | 124 | 765 | . | . | . | . | . | . | . | . | . |
| | . | 138 | 769 | . | . | . | . | . | . | . | . | . |
| | . | 128 | 773 | . | . | . | . | . | . | . | . | . |
| 1098 -1280 | . | 144 | 766 | . | . | . | . | . | . | . | . | . |
| | . | 128 | 770 | . | . | . | . | . | . | . | . | . |
| | . | 135 | 774 | . | . | . | . | . | . | . | . | . |
| 1281 -1463 | . | 158 | 767 | . | . | . | . | . | . | . | . | . |
| | . | 175 | 771 | . | . | . | . | . | . | . | . | . |
| | . | 155 | 775 | . | . | . | . | . | . | . | . | . |
| Abundance (000s) | | | | 47095 | 19746 | 12652 | 4013 | 1017 | 2262 | 1651 | 3573 | 2595 |

Table 20a. Greenland halibut biomass estimates (000 t), by division, from Canadian fall surveys during 1995-2004.

| | DIVISION | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 2G | 2H | 2J | 3K | **SA2+3K** | 3L | **2J3KL** | 3M | 3N | 3O | **3LMNO** | **TOTAL** |
| 1995 | **NO SURVEY** | | 35.6 | 69.2 | - | 11.3 | **116.1** | **NO SURVEY** | | | - | |
| 1996 | 22.3 | 26.1 | 64.8 | 120.3 | **233.5** | 36.6 | **221.7** | 10.2 | 5.1 | 1.0 | **52.9** | **286.4** |
| 1997 | 15.5 | 38.6 | 82.1 | 130.5 | **266.7** | 48.6 | **261.2** | 7.0 | 6.4 | 2.1 | **64.1** | **330.8** |
| 1998 | 4.5 | 39.0 | 62.1 | 142.2 | **247.8** | 55.9 | **260.2** | 7.8 | 14.8 | 5.4 | **83.9** | **331.7** |
| 1999 | 10.5 | 30.7 | 87.1 | 175.6 | **303.9** | 34.0 | **296.7** | 2.4 | 2.7 | 1.9 | **41.0** | **344.9** |
| 2000 | **NO SURVEY** | | 54.9 | 143.3 | **198.2** | 34.1 | **232.3** | 5.5 | 9.3 | 4.2 | **53.1** | **251.3** |
| 2001 | **NO SURVEY** | 37.7 | 65.8 | 128.7 | **232.2** | 29.9 | **224.4** | 5.3 | 7.2 | 4.5 | **46.9** | **279.1** |
| 2002 | **NO SURVEY** | | 53.6 | 67.0 | **120.6** | 22.4 | **143.0** | 2.5 | 5.7 | 4.1 | **34.7** | **155.3** |
| 2003 | **NO SURVEY** | | 59.8 | 71.5 | **131.3** | 26.1 | **157.4** | 4.3 | 1.1 | 2.6 | **34.1** | **165.4** |
| 2004 | **NO SURVEY** | 48.2 | 59.1 | 90.5 | **197.8** | 15.9 | **213.7** | **NO SURVEY** | 2.9 | 0.4 | **19.2** | **217.0** |

Table 20b. Abundance and biomass estimates of Greenland halibut, by Division, from Canadian fall 2004 survey. Upper and lower indicate approximate 95% confidence limits.

| Area | Total | Upper | Lower | | Mean | Upper | Lower |
|---|---|---|---|---|---|---|---|
| **Division 2G** | | | | | | | |
| Abundance | | | **NO SURVEY** | | | | |
| Biomass (kg) | | | | | | | |
| | | | | | | | |
| **Division 2H** | | | | | | | |
| Abundance | 280,923,614 | 397,407,879 | 164,439,349 | No/Tow | 177.1 | 250.6 | 103.7 |
| Biomass (kg) | 48,221,677 | 59,645,780 | 36,797,574 | Kg/Tow | 30.4 | 37.6 | 23.2 |
| | | | | | | | |
| **Division 2J** | | | | | | | |
| Abundance | 424,742,634 | 646,530,151 | 202,955,117 | No/Tow | 122.2 | 186.0 | 58.4 |
| Biomass (kg) | 59,134,655 | 99,963,813 | 18,305,497 | Kg/Tow | 17.0 | 28.8 | 5.3 |
| | | | | | | | |
| **Division 3K** | | | | | | | |
| Abundance | 512,769,197 | 602,022,229 | 423,516,166 | No/Tow | 100.6 | 118.1 | 83.1 |
| Biomass (kg) | 90,509,495 | 106,982,472 | 74,036,518 | Kg/Tow | 17.8 | 21.0 | 14.5 |
| | | | | | | | |
| **Division 3L** | | | | | | | |
| Abundance | 62,769,554 | 78,327,102 | 47,212,005 | No/Tow | 13.2 | 16.5 | 10.0 |
| Biomass (kg) | 15,940,133 | 18,348,993 | 13,531,273 | Kg/Tow | 3.4 | 3.9 | 2.9 |
| | | | | | | | |
| **Division 3M** | | | | | | | |
| Abundance | | **Not surveyed** | | No/Tow | | **Not surveyed** | |
| Biomass (kg) | | | | Kg/Tow | | | |
| | | | | | | | |
| **Division 3N** | | | | | | | |
| Abundance | 10,461,022 | 50,175,509 | -29,253,466 | No/Tow | 4.4 | 21.0 | -12.3 |
| Biomass (kg) | 2,884,553 | 15,152,564 | -9,383,459 | Kg/Tow | 1.2 | 6.3 | -3.9 |
| | | | | | | | |
| **Division 3O** | | | | | | | |
| Abundance | 2,362,019 | 3,912,039 | 811,999 | No/Tow | 0.9 | 1.5 | 0.3 |
| Biomass (kg) | 407,456 | 806,899 | 8,012 | Kg/Tow | 0.2 | 0.3 | 0.0 |
| | | | | | | | |
| **Combined SA2+Div. 3KLMNO** | | | | | | | |
| Abundance | 1,294,028,040 | 1,505,018,547 | 1,083,037,532 | No/Tow | 65.2 | 75.8 | 54.6 |
| Biomass (kg) | 217,097,968 | 249,008,322 | 185,187,614 | Kg/Tow | 10.9 | 12.5 | 9.3 |

Table 21a. Mean weight (kg) per tow and associated CI for Greenland halibut in Div. 2G and 2H for 1978 - 2004 in years when surveys were done.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 2G | | | 2H | | |
| Year | Mean wt/tow | Upper Limit | Lower Limit | Mean wt/tow | Upper Limit | Lower Limit |
| 1978 | 34.2 | 45.9 | 22.6 | 54.2 | 77.1 | 31.4 |
| 1979 | 31.6 | 42.2 | 21.0 | 101.3 | 132.6 | 70.0 |
| 1981 | 29.0 | 63.2 | -5.2 | 37.6 | 47.7 | 27.4 |
| 1987 | 23.4 | 31.3 | 15.5 | 27.7 | 35.5 | 19.8 |
| 1988 | 18.9 | 33.0 | 4.8 | 29.0 | 36.4 | 21.6 |
| 1991 | 0.9 | 1.6 | 0.2 | 4.4 | 8.0 | 0.8 |
| 1996 | 11.8 | 23.4 | 0.1 | 16.5 | 19.6 | 13.3 |
| 1997 | 13.7 | 17.2 | 10.3 | 38.2 | 49.0 | 27.4 |
| 1998 | 4.4 | 8.1 | 0.6 | 25.4 | 43.0 | 7.7 |
| 1999 | 5.4 | 7.6 | 3.2 | 20.0 | 24.8 | 15.2 |
| 2001 | | **NO SURVEY** | | 30.7 | 44.0 | 17.3 |
| 2004 | | **NO SURVEY** | | 30.4 | 37.6 | 23.2 |

Table 21b. Mean weight (kg) per tow for Greenland halibut in Division 2J and 3K for 1978-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 2J | | | 3K | | |
| Year | Mean wt/tow | Upper Limit | Lower Limit | Mean wt/tow | Upper Limit | Lower Limit |
| 1978 | 39.0 | 50.2 | 27.8 | 37.9 | 49.1 | 26.6 |
| 1979 | 32.2 | 38.1 | 26.2 | 25.0 | 30.9 | 19.1 |
| 1980 | 32.5 | 40.0 | 25.0 | 28.0 | 33.3 | 22.6 |
| 1981 | 33.2 | 43.6 | 22.8 | 31.2 | 36.3 | 26.2 |
| 1982 | 44.3 | 52.3 | 36.2 | 28.3 | 33.7 | 22.9 |
| 1983 | 33.8 | 40.1 | 27.6 | 39.6 | 47.5 | 31.8 |
| 1984 | 35.8 | 45.2 | 26.5 | 38.3 | 46.7 | 29.9 |
| 1985 | 26.7 | 33.2 | 20.2 | 28.0 | 33.1 | 23.0 |
| 1986 | 31.2 | 42.6 | 19.8 | 38.9 | 48.0 | 29.7 |
| 1987 | 21.3 | 29.8 | 12.8 | 28.6 | 34.5 | 22.8 |
| 1988 | 15.6 | 19.1 | 12.2 | 29.9 | 37.1 | 22.8 |
| 1989 | 19.1 | 34.5 | 3.7 | 30.5 | 36.8 | 24.2 |
| 1990 | 18.5 | 23.2 | 13.8 | 23.2 | 31.0 | 15.4 |
| 1991 | 6.4 | 7.7 | 5.2 | 15.3 | 18.5 | 12.1 |
| 1992 | 5.6 | 7.4 | 3.8 | 10.3 | 13.1 | 7.5 |
| 1993 | 8.2 | 10.0 | 6.4 | 20.4 | 24.1 | 16.7 |
| 1994 | 8.5 | 11.1 | 5.8 | 12.5 | 14.3 | 10.7 |
| 1995 | 12.8 | 15.4 | 10.1 | 15.0 | 17.9 | 12.1 |
| 1996 | 18.6 | 23.6 | 13.7 | 23.6 | 27.7 | 19.5 |
| 1997 | 23.6 | 54.2 | -7.0 | 25.6 | 29.2 | 22.0 |
| 1998 | 17.9 | 20.5 | 15.2 | 27.9 | 32.1 | 23.7 |
| 1999 | 25.4 | 29.1 | 21.6 | 37.7 | 46.7 | 28.7 |
| 2000 | 15.9 | 19.8 | 11.9 | 29.6 | 41.0 | 18.2 |
| 2001 | 18.9 | 24.9 | 12.9 | 25.3 | 28.8 | 21.7 |
| 2002 | 15.4 | 19.2 | 11.7 | 13.1 | 16.6 | 9.7 |
| 2003 | 17.2 | 21.4 | 13.0 | 14.0 | 16.0 | 12.0 |
| 2004 | 17.0 | 28.8 | 5.3 | 17.8 | 21.0 | 14.5 |

Table 21c. Mean weight (kg) per tow for Greenland halibut in Division 3L Fall and Spring for 1995-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 3L - Fall | | | 3L - Spring | | |
| Year | Mean wt/tow | Upper Limit | Lower Limit | Mean wt/tow | Upper Limit | Lower Limit |
| 1995 | 2.1 | 2.7 | 1.5 | 0.9 | 1.8 | 0.0 |
| 1996 | 5.8 | 7.0 | 4.6 | 1.8 | 3.0 | 0.6 |
| 1997 | 7.6 | 16.9 | -1.7 | 3.5 | 4.7 | 2.2 |
| 1998 | 8.8 | 11.3 | 6.2 | 7.3 | 11.4 | 3.1 |
| 1999 | 5.8 | 7.4 | 4.1 | 4.0 | 9.4 | -1.5 |
| 2000 | 5.5 | 7.8 | 3.2 | 5.0 | 6.1 | 3.9 |
| 2001 | 4.7 | 5.7 | 3.7 | 2.4 | 2.4 | 2.3 |
| 2002 | 3.5 | 4.4 | 2.6 | 1.2 | 1.7 | 0.7 |
| 2003 | 4.1 | 6.9 | 1.3 | 2.2 | 3.3 | 1.2 |
| 2004 | 3.4 | 3.9 | 2.9 | 1.8 | 2.3 | 1.3 |

Table 21d. Mean weight (kg) per tow for Greenland halibut in Division 3N Spring and Fall for 1996-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 3N - Fall | | | 3N - Spring | | |
| Year | Mean wt/tow | Upper Limit | Lower Limit | Mean wt/tow | Upper Limit | Lower Limit |
| 1996 | 2.1 | 3.8 | 0.4 | 1.4 | 4.0 | -1.2 |
| 1997 | 2.7 | 11.8 | -6.4 | 2.0 | 3.8 | 0.1 |
| 1998 | 5.6 | 9.4 | 1.9 | 2.4 | 10.0 | -5.3 |
| 1999 | 1.2 | 2.1 | 0.2 | 2.5 | 4.5 | 0.5 |
| 2000 | 3.5 | 13.7 | -6.7 | 1.8 | 2.9 | 0.6 |
| 2001 | 2.7 | 3.7 | 1.6 | 0.9 | 3.6 | -1.9 |
| 2002 | 2.1 | 2.8 | 1.4 | 0.3 | 0.6 | 0.1 |
| 2003 | 0.4 | 0.7 | 0.2 | 1.1 | 2.7 | -0.4 |
| 2004 | 1.2 | 6.3 | -3.9 | 0.6 | 1.0 | 0.2 |

Table 21e. Mean weight (kg) per tow for Greenland halibut in Division 3O Spring and Fall for 1996-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 3O - Fall | | | 3O - Spring | | |
| Year | Mean wt/tow | Upper Limit | Lower Limit | Mean wt/tow | Upper Limit | Lower Limit |
| 1996 | 0.4 | 0.6 | 0.2 | 1.1 | 2.0 | 0.2 |
| 1997 | 0.8 | 1.3 | 0.3 | 0.8 | 1.0 | 0.6 |
| 1998 | 2.0 | 4.4 | -0.4 | 0.8 | 1.3 | 0.3 |
| 1999 | 0.8 | 6.3 | -4.8 | 0.5 | 0.9 | 0.2 |
| 2000 | 1.5 | 2.3 | 0.7 | 0.1 | 0.2 | 0.0 |
| 2001 | 1.6 | 7.4 | -4.1 | 0.1 | 0.6 | -0.4 |
| 2002 | 1.5 | 2.1 | 0.8 | 0.1 | 0.1 | 0.0 |
| 2003 | 1.0 | 1.8 | 0.2 | 0.1 | 0.2 | 0.0 |
| 2004 | 0.2 | 0.3 | 0.0 | 0.2 | 0.3 | 0.0 |

Table 21f. Mean weight (kg) per tow for Greenland halibut in Division 3M for 1996-2004.

| | Division | | | Division | | |
|---|---|---|---|---|---|---|
| | 3M - Fall | | | 3M - Fall Strata 528-536 only | | |
| Year | Mean wt/tow | Upper Limit | Lower Limit | Mean wt/tow | Upper Limit | Lower Limit |
| 1996 | 5.3 | 12.8 | -2.2 | 14.4 | 42.4 | -13.5 |
| 1997 | 15.0 | 23.2 | 6.8 | 15.0 | 23.2 | 6.8 |
| 1998 | 16.7 | 24.3 | 9.1 | 16.7 | 24.4 | 9.1 |
| 1999 | 8.5 | 13.5 | 3.5 | 8.5 | 13.5 | 3.5 |
| 2000 | 11.8 | 16.9 | 6.8 | 11.9 | 16.9 | 6.8 |
| 2001 | 11.3 | 15.1 | 7.5 | 11.3 | 15.1 | 7.5 |
| 2002 | 5.4 | 7.3 | 3.5 | 5.4 | 7.4 | 3.5 |
| 2003 | 9.3 | 13.3 | 5.2 | 9.3 | 13.3 | 5.2 |
| 2004 | **Not surveyed** | | | **Not surveyed** | | |

Table 21g. Mean weight (kg) per tow and associated confidence intervals for Greenland halibut in Div. 2J3K for 1978-2004 and Div. 2J3KL for 1995-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 2J3K | | | 2J3KL | | |
| Year | Mean wt/tow | Upper Limit | Lower Limit | Mean wt/tow | Upper Limit | Lower Limit |
| 1978 | 38.4 | 45.7 | 31.1 | - | - | - |
| 1979 | 28.1 | 32.2 | 24.0 | - | - | - |
| 1980 | 30.0 | 34.2 | 25.7 | - | - | - |
| 1981 | 32.1 | 37.2 | 27.1 | - | - | - |
| 1982 | 35.6 | 40.1 | 31.1 | - | - | - |
| 1983 | 36.9 | 41.8 | 32.1 | - | - | - |
| 1984 | 37.2 | 43.0 | 31.5 | - | - | - |
| 1985 | 27.5 | 31.1 | 23.8 | - | - | - |
| 1986 | 35.4 | 41.8 | 29.1 | - | - | - |
| 1987 | 25.5 | 30.0 | 20.9 | - | - | - |
| 1988 | 23.6 | 27.8 | 19.5 | - | - | - |
| 1989 | 25.4 | 30.7 | 20.2 | - | - | - |
| 1990 | 21.2 | 25.8 | 16.6 | - | - | - |
| 1991 | 11.5 | 13.4 | 9.6 | - | - | - |
| 1992 | 8.2 | 9.9 | 6.6 | - | - | - |
| 1993 | 15.3 | 17.5 | 13.1 | - | - | - |
| 1994 | 10.8 | 12.1 | 9.4 | - | - | - |
| 1995 | 14.1 | 16.1 | 12.2 | 9.1 | 10.2 | 8.0 |
| 1996 | 21.6 | 24.5 | 18.7 | 14.9 | 16.6 | 13.2 |
| 1997 | 24.8 | 28.3 | 21.3 | 17.5 | 19.5 | 15.5 |
| 1998 | 23.8 | 26.4 | 21.2 | 17.4 | 19.0 | 15.8 |
| 1999 | 32.5 | 37.8 | 27.2 | 21.3 | 24.4 | 18.2 |
| 2000 | 23.9 | 30.2 | 17.5 | 16.0 | 19.7 | 12.3 |
| 2001 | 22.7 | 25.5 | 19.9 | 15.0 | 16.7 | 13.4 |
| 2002 | 14.1 | 16.3 | 11.8 | 9.6 | 10.9 | 8.2 |
| 2003 | 15.3 | 17.2 | 13.4 | 10.5 | 11.7 | 9.3 |
| 2004 | 17.5 | 21.1 | 13.8 | 12.4 | 14.8 | 10.1 |

Table 22a. Mean numbers per tow and associated CI for Greenland halibut in Div. 2G and 2H for 1978 - 2004 in years when surveys were done

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 2G | | | 2H | | |
| Year | Mean no/tow | Upper Limit | Lower Limit | Mean no/tow | Upper Limit | Lower Limit |
| 1978 | 122.4 | 171.0 | 73.7 | 224.4 | 670.5 | -221.7 |
| 1979 | 65.0 | 95.0 | 35.0 | 285.4 | 381.5 | 189.3 |
| 1981 | 51.2 | 68.3 | 34.2 | 73.5 | 97.8 | 49.2 |
| 1987 | 106.4 | 159.4 | 53.4 | 225.5 | 393.5 | 57.6 |
| 1988 | 37.0 | 53.6 | 20.5 | 259.9 | 361.1 | 158.8 |
| 1991 | 9.3 | 19.3 | -0.8 | 37.6 | 49.1 | 26.0 |
| 1996 | 51.5 | 72.7 | 30.4 | 137.1 | 166.9 | 107.3 |
| 1997 | 55.3 | 66.0 | 44.6 | 236.3 | 323.2 | 149.3 |
| 1998 | 23.8 | 134.2 | -86.6 | 109.7 | 186.9 | 32.4 |
| 1999 | 25.5 | 34.3 | 16.7 | 91.5 | 116.6 | 66.5 |
| 2001 | | **NO SURVEY** | | 165.9 | 226.6 | 105.2 |
| 2004 | | **NO SURVEY** | | 177.1 | 250.6 | 103.7 |

Table 22b. Mean numbers per tow for Greenland halibut in Division 2J and 3K for 1978-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 2J | | | 3K | | |
| Year | Mean no/tow | Upper Limit | Lower Limit | Mean no/tow | Upper Limit | Lower Limit |
| 1978 | 100.4 | 419.4 | -218.7 | 163.1 | 230.8 | 95.3 |
| 1979 | 89.6 | 109.0 | 70.2 | 58.6 | 73.4 | 43.8 |
| 1980 | 43.7 | 57.8 | 29.6 | 54.1 | 67.9 | 40.3 |
| 1981 | 96.9 | 140.3 | 53.6 | 88.9 | 105.6 | 72.3 |
| 1982 | 67.3 | 79.8 | 54.8 | 64.1 | 74.7 | 53.4 |
| 1983 | 40.6 | 51.8 | 29.4 | 83.3 | 100.6 | 66.1 |
| 1984 | 56.8 | 83.3 | 30.4 | 74.6 | 92.0 | 57.3 |
| 1985 | 69.5 | 90.7 | 48.3 | 97.4 | 115.9 | 78.9 |
| 1986 | 49.6 | 72.4 | 26.8 | 141.1 | 168.3 | 113.8 |
| 1987 | 44.7 | 67.0 | 22.3 | 118.0 | 141.4 | 94.7 |
| 1988 | 32.6 | 48.2 | 17.1 | 126.2 | 153.2 | 99.2 |
| 1989 | 54.7 | 84.9 | 24.4 | 143.5 | 172.2 | 114.7 |
| 1990 | 52.0 | 66.3 | 37.6 | 84.7 | 133.3 | 36.2 |
| 1991 | 33.0 | 43.4 | 22.5 | 71.4 | 89.2 | 53.7 |
| 1992 | 44.2 | 62.1 | 26.2 | 96.0 | 145.4 | 46.6 |
| 1993 | 64.8 | 86.1 | 43.6 | 201.7 | 254.3 | 149.1 |
| 1994 | 82.9 | 109.5 | 56.2 | 146.7 | 164.0 | 129.4 |
| 1995 | 112.0 | 140.4 | 83.6 | 160.6 | 201.2 | 120.0 |
| 1996 | 195.0 | 255.8 | 134.3 | 208.5 | 244.8 | 172.2 |
| 1997 | 148.8 | 450.9 | -153.3 | 187.7 | 225.8 | 149.7 |
| 1998 | 94.8 | 127.7 | 61.8 | 139.2 | 164.5 | 113.9 |
| 1999 | 137.1 | 164.2 | 110.0 | 150.1 | 181.9 | 118.2 |
| 2000 | 94.4 | 110.9 | 77.9 | 133.1 | 162.1 | 104.1 |
| 2001 | 128.5 | 184.9 | 72.1 | 127.4 | 146.3 | 108.5 |
| 2002 | 117.7 | 139.8 | 95.6 | 95.1 | 116.3 | 73.8 |
| 2003 | 142.1 | 188.8 | 95.3 | 93.8 | 121.9 | 65.8 |
| 2004 | 122.2 | 186.0 | 58.4 | 100.6 | 118.1 | 83.1 |

Table 22c. Mean numbers per tow for Greenland halibut in Division 3L Spring and Fall for 1995-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 3L - Fall | | | 3L - Spring | | |
| Year | Mean no/tow | Upper Limit | Lower Limit | Mean no/tow | Upper Limit | Lower Limit |
| 1995 | 13.3 | 20.1 | 6.6 | 3.2 | 5.8 | 0.6 |
| 1996 | 23.3 | 28.1 | 18.4 | 13.0 | 18.0 | 8.0 |
| 1997 | 24.2 | 28.6 | 19.8 | 20.8 | 35.4 | 6.2 |
| 1998 | 22.4 | 27.5 | 17.4 | 26.7 | 40.0 | 13.4 |
| 1999 | 11.6 | 14.7 | 8.5 | 11.9 | 13.7 | 10.1 |
| 2000 | 13.9 | 17.1 | 10.6 | 13.3 | 16.1 | 10.5 |
| 2001 | 12.6 | 16.1 | 9.2 | 7.0 | 9.3 | 4.7 |
| 2002 | 10.5 | 13.2 | 7.7 | 5.1 | 6.6 | 3.6 |
| 2003 | 14.3 | 19.2 | 9.4 | 11.2 | 38.7 | -16.3 |
| 2004 | 13.2 | 16.5 | 10.0 | 8.1 | 10.1 | 6.1 |

Table 22d. Mean numbers per tow for Greenland halibut in Division 3N Spring and Fall for 1996-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 3N - Fall | | | 3N - Spring | | |
| Year | Mean no/tow | Upper Limit | Lower Limit | Mean no/tow | Upper Limit | Lower Limit |
| 1996 | 20.4 | 136.4 | -95.7 | 10.8 | 14.8 | 6.8 |
| 1997 | 14.8 | 83.4 | -53.8 | 12.3 | 25.7 | -1.2 |
| 1998 | 15.3 | 30.9 | -0.3 | 10.4 | 46.2 | -25.3 |
| 1999 | 3.2 | 13.8 | -7.5 | 8.9 | 19.8 | -1.9 |
| 2000 | 5.1 | 18.9 | -8.7 | 8.8 | 55.4 | -37.8 |
| 2001 | 4.7 | 8.9 | 0.6 | 2.6 | 4.9 | 0.4 |
| 2002 | 4.9 | 9.1 | 0.8 | 2.0 | 13.8 | -9.8 |
| 2003 | 2.0 | 3.0 | 0.9 | 6.1 | 41.1 | -28.9 |
| 2004 | 4.4 | 21.0 | -12.3 | 2.5 | 3.6 | 1.3 |

Table 22e. Mean numbers per tow for Greenland halibut in Division 3O Spring and Fall for 1996-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 3O - Fall | | | 3O - Spring | | |
| Year | Mean no/tow | Upper Limit | Lower Limit | Mean no/tow | Upper Limit | Lower Limit |
| 1996 | 3.8 | 4.8 | 2.7 | 18.5 | 117.2 | -80.3 |
| 1997 | 5.7 | 8.4 | 3.0 | 7.7 | 11.7 | 3.7 |
| 1998 | 5.9 | 6.9 | 4.9 | 5.0 | 8.3 | 1.6 |
| 1999 | 1.9 | 14.6 | -10.8 | 1.6 | 2.8 | 0.3 |
| 2000 | 2.2 | 3.5 | 0.9 | 0.4 | 0.6 | 0.2 |
| 2001 | 1.9 | 3.7 | 0.1 | 0.9 | 6.6 | -4.8 |
| 2002 | 1.8 | 2.4 | 1.2 | 0.6 | 0.8 | 0.5 |
| 2003 | 2.0 | 2.7 | 1.2 | 1.4 | 4.2 | -1.4 |
| 2004 | 0.9 | 1.5 | 0.3 | 1.0 | 1.5 | 0.5 |

Table 22f. Mean numbers per tow for Greenland halibut in Division 3M for 1996-2004.

| | Division | | | Division | | |
|---|---|---|---|---|---|---|
| | 3M - Fall | | | 3M - Fall Strata 528-536 only | | |
| Year | Mean no/tow | Upper Limit | Lower Limit | Mean no/tow | Upper Limit | Lower Limit |
| 1996 | 8.3 | 25.7 | -9.2 | 16.5 | 82.7 | -49.7 |
| 1997 | 16.9 | 26.4 | 7.3 | 16.9 | 26.4 | 7.3 |
| 1998 | 19.9 | 32.4 | 7.4 | 19.9 | 32.4 | 7.4 |
| 1999 | 9.3 | 15.0 | 3.6 | 9.3 | 15.0 | 3.6 |
| 2000 | 12.2 | 19.1 | 5.3 | 12.2 | 19.1 | 5.3 |
| 2001 | 10.8 | 14.3 | 7.4 | 10.9 | 14.3 | 7.4 |
| 2002 | 5.3 | 6.6 | 3.9 | 5.3 | 6.6 | 3.9 |
| 2003 | 9.2 | 12.9 | 5.4 | 9.2 | 12.9 | 5.4 |
| 2004 | **Not surveyed** | | | **Not surveyed** | | |

Table 22g. Mean numbers per tow and associated confidence intervals for Greenland halibut in Div. 2J3K for 1978-2004 and Div. 2J3KL for 1995-2004.

| | Division | | | | | |
|---|---|---|---|---|---|---|
| | 2J3K | | | 2J3KL | | |
| Year | Mean no/tow | Upper Limit | Lower Limit | Mean no/tow | Upper Limit | Lower Limit |
| 1978 | 135.7 | 180.9 | 90.6 | - | - | - |
| 1979 | 72.1 | 83.3 | 60.8 | - | - | - |
| 1980 | 49.5 | 58.9 | 40.1 | - | - | - |
| 1981 | 92.6 | 113.4 | 71.7 | - | - | - |
| 1982 | 65.5 | 73.4 | 57.7 | - | - | - |
| 1983 | 63.3 | 73.4 | 53.3 | - | - | - |
| 1984 | 67.0 | 79.5 | 54.5 | - | - | - |
| 1985 | 85.4 | 99.0 | 71.9 | - | - | - |
| 1986 | 100.0 | 116.2 | 83.8 | - | - | - |
| 1987 | 86.3 | 101.4 | 71.3 | - | - | - |
| 1988 | 84.8 | 100.3 | 69.2 | - | - | - |
| 1989 | 104.0 | 121.2 | 86.9 | - | - | - |
| 1990 | 70.7 | 92.5 | 48.8 | - | - | - |
| 1991 | 54.9 | 65.4 | 44.5 | - | - | - |
| 1992 | 73.8 | 99.8 | 47.8 | - | - | - |
| 1993 | 144.4 | 174.5 | 114.2 | - | - | - |
| 1994 | 119.2 | 133.4 | 104.9 | - | - | - |
| 1995 | 142.3 | 168.1 | 116.6 | 88.0 | 102.9 | 73.1 |
| 1996 | 203.0 | 234.0 | 172.1 | 126.6 | 144.5 | 108.7 |
| 1997 | 172.0 | 208.8 | 135.1 | 108.9 | 130.2 | 87.7 |
| 1998 | 121.2 | 138.4 | 104.0 | 79.1 | 89.0 | 69.1 |
| 1999 | 144.6 | 165.0 | 124.1 | 88.7 | 100.6 | 76.8 |
| 2000 | 117.0 | 134.7 | 99.3 | 72.9 | 83.1 | 62.7 |
| 2001 | 127.8 | 148.4 | 107.3 | 78.7 | 90.6 | 66.8 |
| 2002 | 104.2 | 119.1 | 89.4 | 64.2 | 72.8 | 55.7 |
| 2003 | 113.4 | 133.7 | 93.0 | 71.1 | 82.6 | 59.6 |
| 2004 | 109.4 | 133.7 | 85.1 | 75.1 | 90.8 | 59.4 |

Table 23a Greenland halibut stratified mean number per set at age from Canadian fall surveys conducted in Divisions 2J and 3K combined during 1978-1992. Only otoliths collected in Div. 2J or 3K are used in the analysis. Numbers expressed in Campelen 1800 catch units.

| Age (yrs) | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.20 | 1.06 | 0.00 | 2.17 | 0.66 | 0.00 | 0.00 | 0.92 |
| 1 | 9.61 | 10.81 | 6.78 | 19.39 | 4.75 | 1.66 | 4.47 | 24.59 | 17.21 | 5.04 | 8.82 | 7.10 | 1.34 | 13.80 | 5.69 |
| 2 | 40.24 | 18.07 | 6.53 | 22.99 | 5.10 | 4.45 | 7.11 | 14.67 | 13.96 | 11.21 | 10.54 | 12.54 | 5.26 | 5.59 | 23.78 |
| 3 | 33.37 | 13.47 | 6.20 | 15.42 | 12.78 | 10.56 | 9.56 | 8.71 | 16.62 | 29.44 | 15.04 | 23.84 | 9.95 | 6.08 | 20.40 |
| 4 | 19.52 | 7.15 | 5.58 | 6.01 | 10.81 | 11.41 | 10.29 | 6.87 | 14.64 | 12.17 | 17.03 | 25.22 | 23.39 | 13.32 | 13.59 |
| 5 | 12.50 | 7.47 | 7.07 | 6.58 | 8.09 | 10.45 | 15.34 | 9.50 | 9.49 | 9.62 | 14.90 | 17.40 | 15.38 | 9.05 | 4.84 |
| 6 | 8.34 | 7.21 | 7.56 | 7.25 | 5.76 | 7.45 | 7.74 | 8.86 | 11.04 | 6.89 | 7.82 | 9.95 | 9.21 | 5.41 | 3.11 |
| 7 | 5.15 | 3.50 | 4.72 | 5.15 | 6.06 | 7.56 | 5.44 | 5.98 | 9.54 | 6.39 | 5.65 | 5.34 | 4.81 | 1.29 | 1.27 |
| 8 | 2.26 | 1.41 | 1.59 | 2.21 | 6.29 | 5.67 | 3.50 | 2.26 | 3.19 | 3.27 | 1.65 | 1.36 | 0.83 | 0.26 | 0.12 |
| 9 | 1.27 | 0.67 | 0.71 | 1.02 | 2.65 | 2.19 | 1.70 | 1.03 | 1.00 | 1.25 | 0.43 | 0.40 | 0.21 | 0.08 | 0.02 |
| 10 | 0.96 | 0.64 | 0.56 | 0.59 | 1.02 | 0.65 | 0.74 | 0.75 | 0.34 | 0.37 | 0.16 | 0.11 | 0.10 | 0.05 | 0.01 |
| 11 | 0.81 | 0.42 | 0.63 | 0.48 | 0.60 | 0.46 | 0.35 | 0.30 | 0.26 | 0.19 | 0.10 | 0.08 | 0.09 | 0.02 | 0.00 |
| 12 | 0.49 | 0.37 | 0.41 | 0.22 | 0.38 | 0.33 | 0.24 | 0.27 | 0.23 | 0.19 | 0.06 | 0.02 | 0.05 | 0.01 | 0.00 |
| 13 | 0.32 | 0.31 | 0.27 | 0.12 | 0.27 | 0.24 | 0.20 | 0.12 | 0.12 | 0.10 | 0.05 | 0.00 | 0.03 | 0.00 | 0.00 |
| 14 | 0.10 | 0.15 | 0.15 | 0.06 | 0.28 | 0.16 | 0.18 | 0.13 | 0.07 | 0.08 | 0.04 | 0.01 | 0.02 | 0.00 | 0.00 |
| 15 | 0.07 | 0.10 | 0.06 | 0.04 | 0.18 | 0.07 | 0.09 | 0.08 | 0.08 | 0.05 | 0.03 | 0.01 | 0.01 | 0.00 | 0.00 |
| 16 | 0.05 | 0.09 | 0.03 | 0.00 | 0.09 | 0.02 | 0.06 | 0.04 | 0.04 | 0.03 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | 0.03 | 0.03 | 0.01 | 0.00 | 0.01 | 0.00 | 0.03 | 0.04 | 0.01 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 0.00 | 0.02 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Ages 0-20 | 135.55 | 71.89 | 48.87 | 87.52 | 65.12 | 63.33 | 67.04 | 85.44 | 98.91 | 86.32 | 84.53 | 104.03 | 70.69 | 54.94 | 73.76 |
| Ages 1-4 | 102.74 | 49.50 | 25.09 | 63.81 | 33.44 | 28.08 | 31.43 | 54.84 | 62.43 | 57.86 | 51.43 | 68.70 | 39.94 | 38.79 | 63.46 |
| Ages 5+ | 32.33 | 22.39 | 23.78 | 23.71 | 31.68 | 35.25 | 35.61 | 29.40 | 35.42 | 28.46 | 30.93 | 34.68 | 30.74 | 16.16 | 9.37 |
| Ages 1-10 | 133.20 | 70.39 | 47.29 | 86.60 | 63.30 | 62.04 | 65.89 | 83.23 | 97.03 | 85.65 | 82.03 | 103.24 | 70.48 | 54.91 | 72.83 |

Table 23b Greenland halibut stratified mean number per set at age from Canadian fall surveys conducted in Divisions 2J and 3K combined during 1993-2004. Only otoliths collected in Div. 2J or 3K are used in the analysis. Numbers expressed in Campelen 1800 catch units.

| Age (yrs) | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.05 | 16.90 | 10.95 | 4.92 | 2.18 | 1.52 | 6.46 | 3.09 | 8.49 | 8.30 | 9.94 | 4.15 |
| 1 | 8.08 | 29.79 | 49.93 | 98.68 | 28.05 | 23.35 | 15.99 | 38.57 | 43.90 | 40.67 | 45.70 | 32.49 |
| 2 | 43.64 | 21.62 | 51.10 | 47.82 | 58.62 | 25.07 | 34.42 | 21.94 | 22.72 | 24.08 | 26.67 | 32.93 |
| 3 | 64.00 | 22.61 | 15.13 | 32.01 | 43.61 | 31.19 | 24.07 | 16.43 | 17.00 | 12.50 | 11.69 | 13.89 |
| 4 | 19.28 | 18.90 | 6.03 | 9.54 | 21.13 | 21.87 | 28.28 | 13.20 | 14.07 | 9.68 | 9.49 | 12.31 |
| 5 | 5.56 | 7.22 | 6.63 | 6.28 | 10.37 | 10.86 | 20.04 | 13.76 | 9.77 | 6.03 | 6.39 | 9.21 |
| 6 | 1.76 | 1.32 | 1.99 | 2.47 | 5.01 | 4.45 | 10.53 | 7.21 | 7.59 | 1.97 | 2.27 | 2.68 |
| 7 | 0.74 | 0.61 | 0.39 | 0.84 | 2.00 | 2.07 | 3.81 | 2.16 | 3.40 | 0.72 | 0.89 | 1.20 |
| 8 | 0.23 | 0.19 | 0.12 | 0.19 | 0.64 | 0.57 | 0.70 | 0.50 | 0.69 | 0.19 | 0.27 | 0.36 |
| 9 | 0.03 | 0.03 | 0.02 | 0.18 | 0.20 | 0.13 | 0.14 | 0.06 | 0.11 | 0.04 | 0.04 | 0.08 |
| 10 | 0.00 | 0.01 | 0.01 | 0.04 | 0.06 | 0.06 | 0.07 | 0.03 | 0.02 | 0.01 | 0.02 | 0.03 |
| 11 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.01 | 0.00 | 0.01 | 0.01 |
| 12 | 0.02 | 0.00 | 0.00 | 0.01 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| 13 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.01 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 |
| 14 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Ages 0-20 | 144.39 | 119.19 | 142.30 | 203.02 | 171.93 | 121.20 | 144.57 | 116.98 | 127.80 | 104.20 | 113.38 | 109.36 |
| Ages 1-4 | 135.00 | 92.92 | 122.19 | 188.05 | 151.41 | 101.48 | 102.76 | 90.14 | 97.69 | 86.93 | 93.55 | 91.62 |
| Ages 5+ | 8.34 | 9.37 | 9.16 | 10.05 | 18.34 | 18.20 | 35.35 | 23.75 | 21.62 | 8.97 | 9.90 | 13.58 |
| Ages 1-10 | 143.32 | 102.29 | 131.34 | 198.04 | 169.68 | 119.61 | 138.06 | 113.86 | 119.28 | 95.89 | 103.43 | 105.18 |

Table 24 Greenland halibut stratified mean number per set at age from Canadian fall surveys conducted in Divisions 2J3KL combined during 1995-2004. Only otoliths collected in Div. 2J, 3K or 3L are used in the analysis. Numbers expressed in Campelen 1800 catch units.

| Age (yrs) | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 6.73 | 2.87 | 1.44 | 0.90 | 3.89 | 1.84 | 5.23 | 4.85 | 5.72 | 2.71 |
| 1 | 30.32 | 59.31 | 17.10 | 13.19 | 8.65 | 23.21 | 25.96 | 23.87 | 27.44 | 22.10 |
| 2 | 31.18 | 29.08 | 34.25 | 15.50 | 20.62 | 13.91 | 12.85 | 14.56 | 15.88 | 20.96 |
| 3 | 9.69 | 20.85 | 26.66 | 18.82 | 15.96 | 9.74 | 10.05 | 7.64 | 8.13 | 10.39 |
| 4 | 3.62 | 6.59 | 15.30 | 14.01 | 15.87 | 7.68 | 9.75 | 6.29 | 6.81 | 9.06 |
| 5 | 4.53 | 4.62 | 7.78 | 10.16 | 12.83 | 8.75 | 6.11 | 4.37 | 4.49 | 6.82 |
| 6 | 1.55 | 2.03 | 3.75 | 4.00 | 7.76 | 5.45 | 5.61 | 1.63 | 1.68 | 1.94 |
| 7 | 0.29 | 0.83 | 1.75 | 1.78 | 2.50 | 1.83 | 2.49 | 0.73 | 0.71 | 0.80 |
| 8 | 0.07 | 0.18 | 0.60 | 0.47 | 0.48 | 0.35 | 0.49 | 0.23 | 0.19 | 0.24 |
| 9 | 0.01 | 0.13 | 0.17 | 0.13 | 0.09 | 0.06 | 0.09 | 0.03 | 0.03 | 0.05 |
| 10 | 0.01 | 0.04 | 0.05 | 0.04 | 0.04 | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 |
| 11 | 0.00 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 |
| 12 | 0.00 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 13 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 |
| 14 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Ages 0-20 | 88.00 | 126.58 | 108.91 | 79.07 | 88.72 | 72.86 | 78.68 | 64.22 | 71.10 | 75.10 |
| Ages 1-4 | 74.82 | 115.83 | 93.31 | 61.52 | 61.10 | 54.54 | 58.61 | 52.36 | 58.25 | 62.51 |
| Ages 5+ | 6.46 | 7.88 | 14.17 | 16.65 | 23.74 | 16.49 | 14.84 | 7.01 | 7.13 | 9.89 |
| Ages 1-10 | 81.27 | 123.66 | 107.40 | 78.11 | 84.79 | 71.00 | 73.42 | 59.36 | 65.37 | 72.39 |

Table 25a Stratified mean number per tow, at age, by division, from 1996 -1999 Canadian fall surveys. See Table B for explanation of otoliths used.

**1996**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.79 | 0.32 | 10.52 | 1.10 | 0.11 | 0.02 | 0.24 | 0.70 | 1.88 |
| 1 | 19.51 | 56.79 | 103.40 | 96.48 | 5.26 | 0.14 | 8.63 | 0.54 | 39.42 |
| 2 | 9.81 | 43.74 | 42.63 | 50.34 | 4.57 | 0.93 | 6.42 | 1.33 | 22.81 |
| 3 | 6.34 | 16.75 | 18.88 | 40.79 | 5.89 | 0.78 | 2.46 | 0.59 | 13.94 |
| 4 | 5.28 | 8.62 | 8.98 | 10.07 | 2.48 | 0.81 | 1.33 | 0.33 | 5.56 |
| 5 | 4.24 | 5.41 | 6.48 | 6.22 | 2.31 | 1.26 | 0.89 | 0.16 | 3.68 |
| 6 | 2.78 | 3.04 | 2.68 | 2.26 | 1.50 | 2.15 | 0.36 | 0.06 | 1.85 |
| 7 | 1.13 | 1.23 | 0.84 | 0.88 | 0.79 | 1.17 | 0.03 | 0.01 | 0.75 |
| 8 | 0.60 | 0.55 | 0.19 | 0.18 | 0.18 | 0.69 | 0.01 | 0.00 | 0.24 |
| 9 | 0.58 | 0.37 | 0.23 | 0.09 | 0.11 | 0.17 | 0.00 | 0.01 | 0.16 |
| 10 | 0.16 | 0.08 | 0.04 | 0.05 | 0.04 | 0.04 | 0.00 | 0.00 | 0.04 |
| 11 | 0.08 | 0.04 | 0.02 | 0.03 | 0.01 | 0.03 | 0.00 | 0.00 | 0.02 |
| 12 | 0.05 | 0.05 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.02 |
| 13 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.01 |
| 14 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 |
| 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unk | 0.22 | 0.10 | 0.04 | 0.00 | 0.01 | 0.02 | 0.02 | 0.04 | 0.02 |
| **5+** | **9.84** | **10.87** | **10.58** | **9.72** | **4.95** | **5.59** | **1.32** | **0.27** | **6.80** |
| **9+** | **1.08** | **0.63** | **0.38** | **0.19** | **0.18** | **0.33** | **0.03** | **0.04** | **0.28** |
| **Total** | **51.55** | **137.10** | **194.99** | **208.49** | **23.26** | **8.26** | **20.39** | **3.76** | **90.40** |

**1997**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.73 | 5.91 | 3.32 | 1.51 | 0.35 | 0.00 | 0.04 | 0.00 | 1.54 |
| 1 | 7.44 | 33.09 | 16.35 | 36.69 | 1.86 | 0.00 | 0.23 | 0.65 | 14.81 |
| 2 | 8.66 | 57.91 | 52.29 | 60.18 | 3.68 | 0.00 | 3.57 | 1.57 | 30.82 |
| 3 | 10.60 | 61.60 | 33.87 | 49.10 | 4.78 | 0.03 | 6.44 | 2.06 | 27.05 |
| 4 | 13.63 | 45.16 | 25.07 | 21.96 | 4.65 | 0.18 | 2.12 | 0.90 | 14.77 |
| 5 | 6.57 | 16.76 | 9.27 | 11.11 | 4.31 | 2.50 | 1.61 | 0.39 | 7.18 |
| 6 | 3.93 | 9.06 | 5.70 | 4.11 | 2.39 | 5.28 | 0.54 | 0.10 | 3.53 |
| 7 | 2.37 | 4.60 | 2.14 | 2.02 | 1.33 | 4.88 | 0.16 | 0.02 | 1.80 |
| 8 | 0.84 | 1.43 | 0.45 | 0.77 | 0.55 | 3.06 | 0.05 | 0.03 | 0.67 |
| 9 | 0.23 | 0.44 | 0.17 | 0.19 | 0.15 | 0.41 | 0.01 | 0.00 | 0.18 |
| 10 | 0.21 | 0.12 | 0.06 | 0.05 | 0.04 | 0.12 | 0.00 | 0.00 | 0.07 |
| 11 | 0.11 | 0.09 | 0.07 | 0.01 | 0.03 | 0.15 | 0.00 | 0.00 | 0.04 |
| 12 | 0.02 | 0.03 | 0.03 | 0.01 | 0.02 | 0.06 | 0.00 | 0.00 | 0.02 |
| 13 | 0.00 | 0.05 | 0.02 | 0.00 | 0.02 | 0.14 | 0.00 | 0.00 | 0.02 |
| 14 | 0.00 | 0.06 | 0.01 | 0.01 | 0.02 | 0.05 | 0.00 | 0.00 | 0.02 |
| 15 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unk | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **5+** | **14.28** | **32.64** | **17.92** | **18.28** | **8.84** | **16.65** | **2.37** | **0.53** | **13.53** |
| **9+** | **0.57** | **0.79** | **0.36** | **0.27** | **0.27** | **0.93** | **0.01** | **0.01** | **0.35** |
| **Total** | **55.34** | **236.31** | **148.81** | **187.72** | **24.15** | **16.86** | **14.78** | **5.71** | **102.52** |

**1998**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.08 | 0.61 | 2.76 | 0.67 | 0.07 | 0.05 | 0.02 | 0.03 | 0.64 |
| 1 | 13.28 | 8.86 | 15.80 | 26.43 | 1.18 | 0.00 | 0.49 | 0.08 | 8.94 |
| 2 | 2.82 | 20.01 | 18.22 | 30.35 | 2.14 | 0.00 | 1.32 | 0.37 | 12.16 |
| 3 | 1.52 | 37.54 | 27.02 | 33.41 | 2.69 | 0.04 | 2.72 | 0.88 | 14.82 |
| 4 | 1.67 | 22.64 | 16.18 | 23.61 | 5.15 | 0.67 | 3.50 | 1.64 | 11.46 |
| 5 | 1.52 | 10.72 | 9.15 | 15.81 | 6.19 | 3.30 | 3.42 | 1.64 | 8.01 |
| 6 | 1.18 | 5.26 | 3.31 | 5.62 | 3.07 | 6.54 | 2.25 | 0.79 | 3.56 |
| 7 | 0.91 | 2.68 | 1.61 | 2.48 | 1.31 | 5.94 | 1.06 | 0.27 | 1.61 |
| 8 | 0.55 | 1.05 | 0.45 | 0.58 | 0.40 | 2.12 | 0.30 | 0.12 | 0.50 |
| 9 | 0.04 | 0.19 | 0.12 | 0.15 | 0.13 | 0.48 | 0.07 | 0.03 | 0.12 |
| 10 | 0.04 | 0.04 | 0.04 | 0.06 | 0.03 | 0.29 | 0.04 | 0.01 | 0.05 |
| 11 | 0.02 | 0.04 | 0.04 | 0.02 | 0.02 | 0.20 | 0.02 | 0.02 | 0.03 |
| 12 | 0.00 | 0.02 | 0.03 | 0.02 | 0.01 | 0.18 | 0.01 | 0.00 | 0.02 |
| 13 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.01 |
| 14 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 |
| 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unk | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| **5+** | **4.40** | **20.01** | **14.77** | **24.75** | **11.18** | **19.14** | **7.23** | **2.88** | **1.07** |
| **9+** | **0.23** | **0.30** | **0.26** | **0.26** | **0.20** | **1.25** | **0.20** | **0.06** | **0.02** |
| **Total** | **23.76** | **109.68** | **94.75** | **139.23** | **22.41** | **19.91** | **15.27** | **5.89** | **53.86** |

**1999**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.29 | 3.60 | 11.43 | 2.77 | 0.36 | 0.00 | 0.02 | 0.06 | 2.77 |
| 1 | 6.56 | 12.09 | 23.79 | 8.23 | 0.11 | 0.00 | 0.02 | 0.02 | 5.94 |
| 2 | 5.47 | 26.09 | 31.64 | 37.30 | 0.90 | 0.00 | 0.20 | 0.17 | 15.11 |
| 3 | 1.74 | 10.55 | 19.49 | 32.61 | 0.66 | 0.00 | 0.49 | 0.32 | 10.82 |
| 4 | 4.21 | 16.17 | 21.88 | 29.54 | 1.49 | 0.11 | 0.70 | 0.34 | 11.96 |
| 5 | 3.42 | 12.89 | 19.19 | 20.23 | 3.23 | 0.82 | 1.02 | 0.46 | 9.35 |
| 6 | 1.47 | 5.44 | 6.81 | 14.00 | 3.36 | 2.58 | 0.51 | 0.30 | 5.44 |
| 7 | 0.74 | 2.88 | 2.16 | 4.37 | 1.21 | 3.48 | 0.17 | 0.13 | 1.95 |
| 8 | 0.40 | 1.02 | 0.53 | 0.77 | 0.22 | 1.26 | 0.03 | 0.05 | 0.42 |
| 9 | 0.09 | 0.51 | 0.11 | 0.14 | 0.04 | 0.51 | 0.02 | 0.01 | 0.11 |
| 10 | 0.04 | 0.13 | 0.04 | 0.08 | 0.02 | 0.46 | 0.00 | 0.01 | 0.04 |
| 11 | 0.03 | 0.07 | 0.02 | 0.02 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 |
| 12 | 0.01 | 0.03 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 |
| 13 | 0.01 | 0.05 | 0.03 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 | 0.02 |
| 14 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unk | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.05 | 0.00 |
| **5+** | **6.21** | **23.05** | **28.88** | **39.64** | **8.10** | **9.18** | **1.75** | **1.02** | **17.36** |
| **9+** | **0.19** | **0.82** | **0.20** | **0.27** | **0.10** | **1.04** | **0.02** | **0.09** | **0.20** |
| **Total** | **25.48** | **91.54** | **137.11** | **150.08** | **11.61** | **9.29** | **3.17** | **1.92** | **63.95** |

Table 25b Stratified mean number per tow, at age, by division, from 2000-2004 Canadian fall surveys. See Table B for explanation of otoliths used.

**2000**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | 6.14 | 0.86 | 0.20 | 0.00 | 0.00 | 0.00 | 1.31 |
| 1 | | | 28.36 | 45.12 | 3.23 | 0.00 | 0.01 | 0.00 | 15.33 |
| 2 | | | 23.35 | 22.61 | 1.85 | 0.00 | 0.13 | 0.05 | 10.39 |
| 3 | | | 12.27 | 19.48 | 0.72 | 0.00 | 0.04 | 0.02 | 6.39 |
| 4 | | | 8.53 | 15.24 | 1.31 | 0.03 | 0.21 | 0.17 | 6.10 |
| 5 | | | 8.71 | 17.13 | 2.23 | 0.76 | 0.82 | 0.48 | 6.51 |
| 6 | | | 5.16 | 9.18 | 2.70 | 4.04 | 1.99 | 0.76 | 4.64 |
| 7 | | | 1.46 | 2.83 | 1.26 | 4.44 | 1.40 | 0.46 | 1.80 |
| 8 | | | 0.29 | 0.52 | 0.26 | 1.64 | 0.36 | 0.15 | 0.37 |
| 9 | | | 0.07 | 0.06 | 0.04 | 0.70 | 0.11 | 0.06 | 0.08 |
| 10 | | | 0.03 | 0.03 | 0.02 | 0.20 | 0.02 | 0.01 | 0.03 |
| 11 | | | 0.02 | 0.02 | 0.01 | 0.20 | 0.01 | 0.02 | 0.02 |
| 12 | | | 0.01 | 0.00 | 0.01 | 0.10 | 0.02 | 0.01 | 0.01 |
| 13 | | | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |
| 14 | | | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| 15 | | | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| 16 | | | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 |
| Unk | | | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **5+** | **0.00** | **0.00** | **15.76** | **29.78** | **6.53** | **12.17** | **4.73** | **1.96** | **13.47** |
| **9+** | **0.00** | **0.00** | **0.15** | **0.12** | **0.09** | **1.29** | **0.17** | **0.11** | **0.15** |
| **Total** | **0.00** | **0.00** | **94.40** | **133.09** | **13.85** | **12.20** | **5.12** | **2.20** | **52.97** |

No Survey

**2001**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | 7.84 | 12.11 | 6.03 | 0.83 | 0.00 | 0.00 | 0.00 | 3.98 |
| 1 | | 43.08 | 43.39 | 43.11 | 2.75 | 0.01 | 0.09 | 0.04 | 19.46 |
| 2 | | 42.01 | 25.43 | 19.33 | 0.80 | 0.00 | 0.22 | 0.05 | 11.03 |
| 3 | | 24.85 | 15.11 | 17.72 | 1.16 | 0.00 | 0.71 | 0.06 | 8.68 |
| 4 | | 22.33 | 14.41 | 16.46 | 1.85 | 0.01 | 0.32 | 0.03 | 7.89 |
| 5 | | 11.47 | 8.72 | 10.01 | 1.57 | 0.45 | 0.53 | 0.22 | 5.00 |
| 6 | | 9.37 | 6.37 | 9.55 | 2.05 | 2.97 | 1.35 | 0.63 | 4.66 |
| 7 | | 4.02 | 2.40 | 4.18 | 1.20 | 4.21 | 0.86 | 0.56 | 2.19 |
| 8 | | 0.49 | 0.33 | 0.83 | 0.32 | 2.09 | 0.26 | 0.20 | 0.48 |
| 9 | | 0.24 | 0.09 | 0.11 | 0.07 | 0.52 | 0.05 | 0.06 | 0.09 |
| 10 | | 0.13 | 0.03 | 0.01 | 0.02 | 0.16 | 0.02 | 0.03 | 0.03 |
| 11 | | 0.02 | 0.02 | 0.01 | 0.01 | 0.26 | 0.02 | 0.03 | 0.02 |
| 12 | | 0.02 | 0.01 | 0.00 | 0.01 | 0.08 | 0.02 | 0.02 | 0.01 |
| 13 | | 0.02 | 0.01 | 0.02 | 0.01 | 0.03 | 0.00 | 0.01 | 0.01 |
| 14 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.01 | 0.00 | 0.00 |
| 15 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unk | | 0.03 | 0.07 | 0.01 | 0.00 | 0.00 | 0.28 | 0.00 | 0.01 |
| **5+** | **0.00** | **25.81** | **18.05** | **24.72** | **5.24** | **10.82** | **3.40** | **1.75** | **12.51** |
| **9+** | **0.00** | **0.46** | **0.22** | **0.16** | **0.11** | **1.10** | **0.41** | **0.15** | **0.18** |
| **Total** | **0.00** | **165.92** | **128.50** | **127.37** | **12.62** | **10.85** | **4.74** | **1.92** | **63.55** |

No Survey

**2002**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | 14.85 | 3.80 | 0.23 | 0.00 | 0.00 | 0.00 | 3.47 |
| 1 | | | 44.05 | 36.95 | 2.40 | 0.00 | 0.35 | 0.12 | 16.64 |
| 2 | | | 24.64 | 24.35 | 1.24 | 0.00 | 0.27 | 0.04 | 10.66 |
| 3 | | | 12.12 | 12.53 | 1.28 | 0.00 | 1.14 | 0.09 | 5.86 |
| 4 | | | 11.25 | 8.84 | 1.55 | 0.01 | 0.83 | 0.09 | 4.62 |
| 5 | | | 6.89 | 5.82 | 1.83 | 0.36 | 0.70 | 0.21 | 3.26 |
| 6 | | | 2.45 | 1.87 | 0.98 | 1.41 | 0.69 | 0.41 | 1.41 |
| 7 | | | 1.00 | 0.69 | 0.61 | 1.57 | 0.65 | 0.47 | 0.72 |
| 8 | | | 0.31 | 0.18 | 0.24 | 1.18 | 0.21 | 0.23 | 0.25 |
| 9 | | | 0.04 | 0.02 | 0.04 | 0.54 | 0.04 | 0.06 | 0.05 |
| 10 | | | 0.02 | 0.01 | 0.01 | 0.15 | 0.02 | 0.02 | 0.02 |
| 11 | | | 0.01 | 0.00 | 0.01 | 0.04 | 0.01 | 0.03 | 0.01 |
| 12 | | | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 |
| 13 | | | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |
| 14 | | | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| 15 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| 16 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unk | | | 0.05 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 |
| **5+** | **0.00** | **0.00** | **10.77** | **8.59** | **3.73** | **5.26** | **2.34** | **1.44** | **5.74** |
| **9+** | **0.00** | **0.00** | **0.13** | **0.03** | **0.07** | **0.74** | **0.08** | **0.13** | **0.10** |
| **Total** | **0.00** | **0.00** | **117.68** | **95.06** | **10.44** | **5.27** | **4.93** | **1.79** | **46.99** |

No Survey

**2003**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | 5.67 | 12.51 | 0.32 | 0.00 | 0.04 | 0.02 | 4.17 |
| 1 | | | 65.67 | 31.78 | 3.13 | 0.00 | 0.22 | 0.31 | 19.51 |
| 2 | | | 37.73 | 18.60 | 1.80 | 0.00 | 0.25 | 0.21 | 11.81 |
| 3 | | | 13.06 | 11.78 | 2.51 | 0.00 | 0.54 | 0.15 | 6.22 |
| 4 | | | 10.13 | 9.61 | 2.76 | 0.26 | 0.50 | 0.29 | 5.32 |
| 5 | | | 6.10 | 6.50 | 2.00 | 1.75 | 0.31 | 0.30 | 3.50 |
| 6 | | | 2.33 | 2.04 | 1.03 | 2.68 | 0.08 | 0.28 | 1.35 |
| 7 | | | 1.06 | 0.74 | 0.51 | 2.08 | 0.02 | 0.18 | 0.59 |
| 8 | | | 0.23 | 0.21 | 0.15 | 1.46 | 0.01 | 0.11 | 0.19 |
| 9 | | | 0.03 | 0.04 | 0.03 | 0.53 | 0.01 | 0.03 | 0.04 |
| 10 | | | 0.02 | 0.01 | 0.01 | 0.21 | 0.00 | 0.02 | 0.02 |
| 11 | | | 0.02 | 0.01 | 0.00 | 0.02 | 0.00 | 0.02 | 0.01 |
| 12 | | | 0.01 | 0.00 | 0.00 | 0.06 | 0.00 | 0.01 | 0.01 |
| 13 | | | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14 | | | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| 15 | | | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.00 | 0.00 |
| 16 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unk | | | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 |
| **5+** | **0.00** | **0.00** | **9.79** | **9.55** | **3.74** | **8.91** | **0.42** | **0.98** | **5.71** |
| **9+** | **0.00** | **0.00** | **0.08** | **0.07** | **0.05** | **0.95** | **0.01** | **0.11** | **0.08** |
| **Total** | **0.00** | **0.00** | **142.05** | **93.83** | **14.26** | **9.18** | **1.96** | **1.96** | **52.74** |

No Survey

**2004**

| Age (yrs) | Div. 2G | Div. 2H | Div. 2J | Div. 3K | Div. 3L | Div. 3M | Div. 3N | Div. 3O | Total |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | 10.68 | 6.48 | 2.56 | 0.09 | | 0.03 | 0.02 | 2.92 |
| 1 | | 44.81 | 38.71 | 29.43 | 2.04 | | 0.53 | 0.23 | 19.23 |
| 2 | | 47.15 | 38.89 | 26.11 | 2.31 | | 0.62 | 0.31 | 21.30 |
| 3 | | 18.88 | 15.01 | 14.84 | 2.23 | | 0.80 | 0.17 | 9.90 |
| 4 | | 22.90 | 12.32 | 12.35 | 3.16 | | 0.84 | 0.08 | 9.04 |
| 5 | | 19.11 | 6.51 | 11.11 | 2.42 | | 1.19 | 0.09 | 6.76 |
| 6 | | 8.52 | 2.39 | 2.74 | 0.76 | | 0.25 | 0.01 | 2.29 |
| 7 | | 3.38 | 1.32 | 1.01 | 0.20 | | 0.09 | 0.02 | 0.90 |
| 8 | | 1.22 | 0.41 | 0.32 | 0.02 | | 0.01 | 0.00 | 0.29 |
| 9 | | 0.26 | 0.09 | 0.08 | 0.00 | | 0.00 | 0.00 | 0.07 |
| 10 | | 0.08 | 0.04 | 0.03 | 0.00 | | 0.00 | 0.00 | 0.02 |
| 11 | | 0.00 | 0.01 | 0.00 | 0.00 | | 0.01 | 0.00 | 0.00 |
| 12 | | 0.05 | 0.01 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.01 |
| 13 | | 0.01 | 0.00 | 0.01 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 14 | | 0.02 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 15 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| 16 | | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Unk | | 0.05 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| **5+** | **0.00** | **13.59** | **10.77** | **15.31** | **3.40** | **0.00** | **1.55** | **0.11** | **10.34** |
| **9+** | **0.00** | **0.21** | **0.15** | **0.13** | **0.00** | **0.00** | **0.01** | **0.00** | **0.11** |
| **Total** | **0.00** | **166.44** | **122.18** | **100.61** | **13.23** | **0.00** | **4.38** | **0.92** | **72.73** |

No Survey

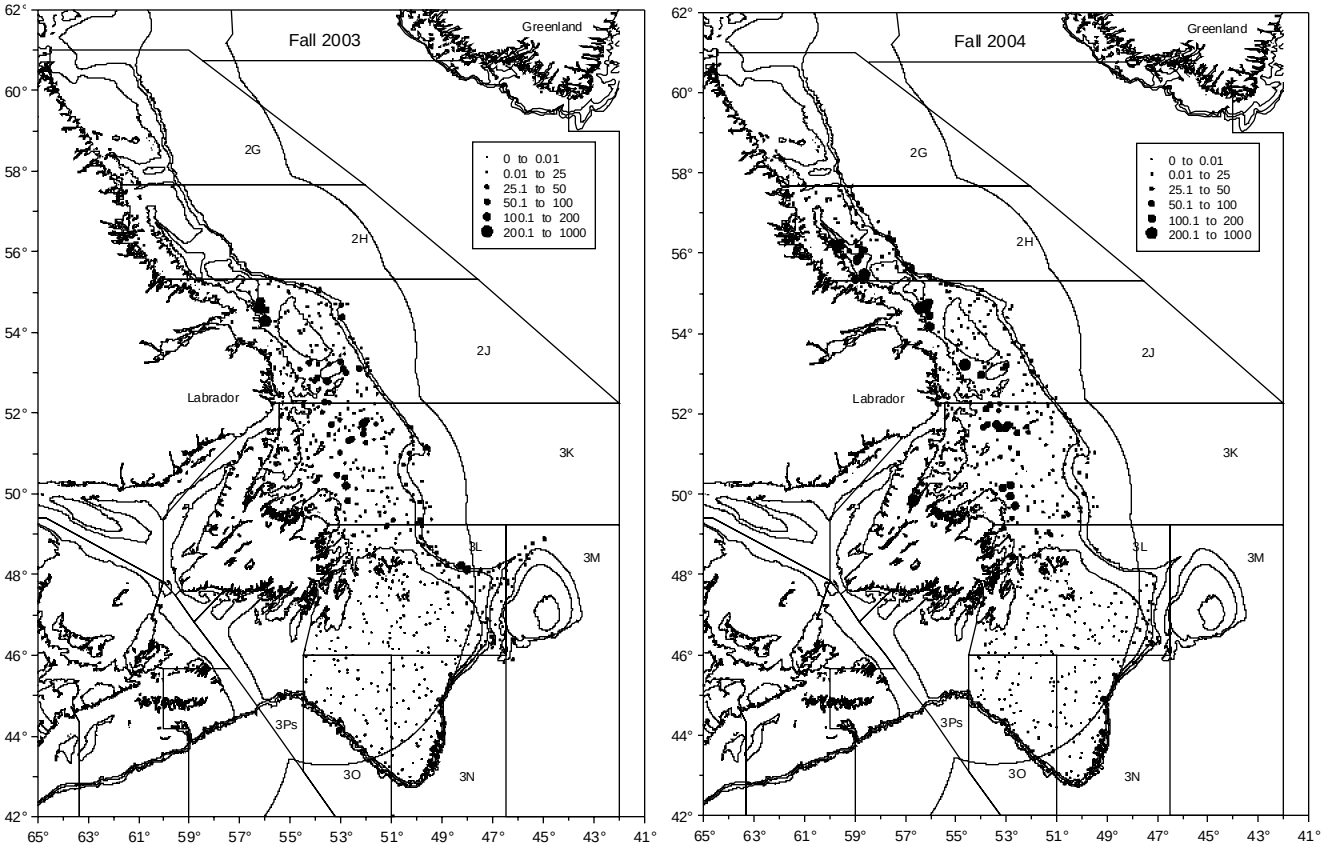



Fig. 1. Distribution (kg per set) of Greenland halibut from Canadian fall surveys during 2003 (left) and 2004 (right).

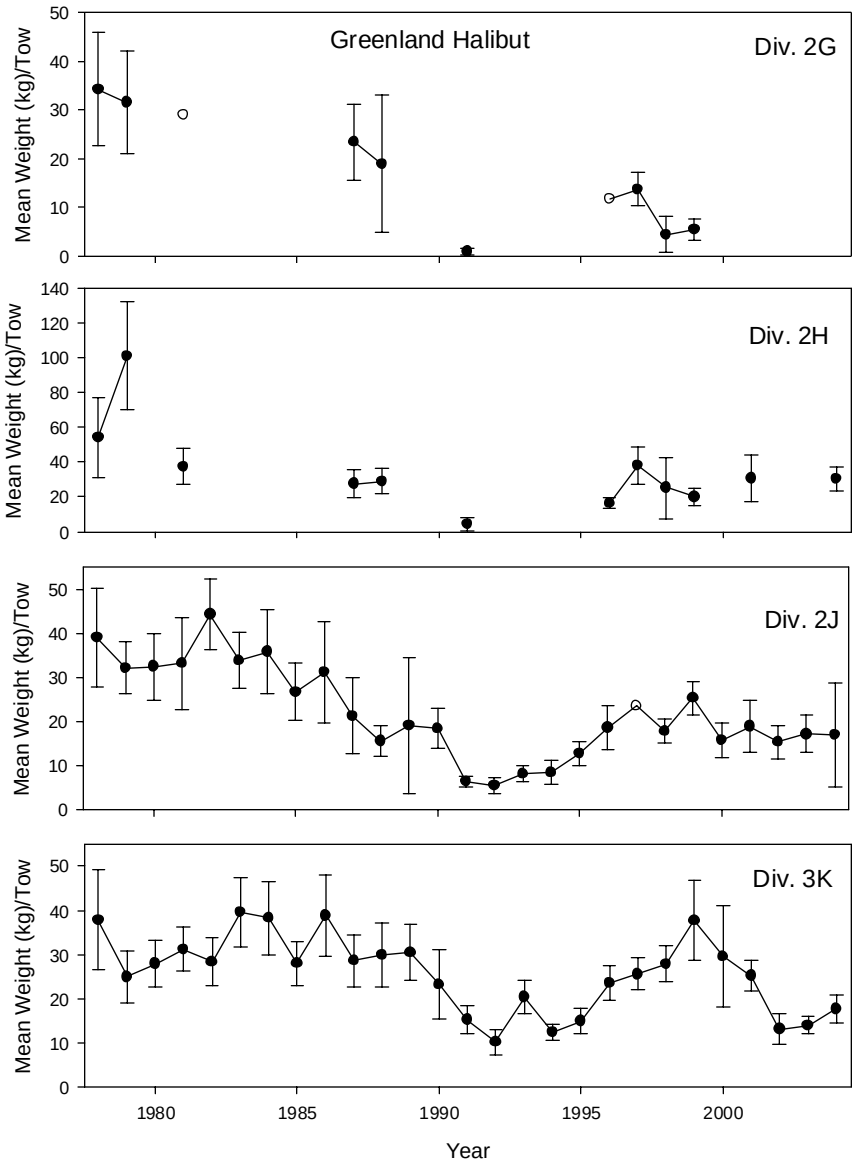



Fig. 2a. Campelen stratified mean weight per tow estimates by NAFO Div. from Canadian surveys during 1978-2004. Surveys were completed in the fall, unless otherwise indicated. Open symbols indicate estimates with confidence limits that are negative.

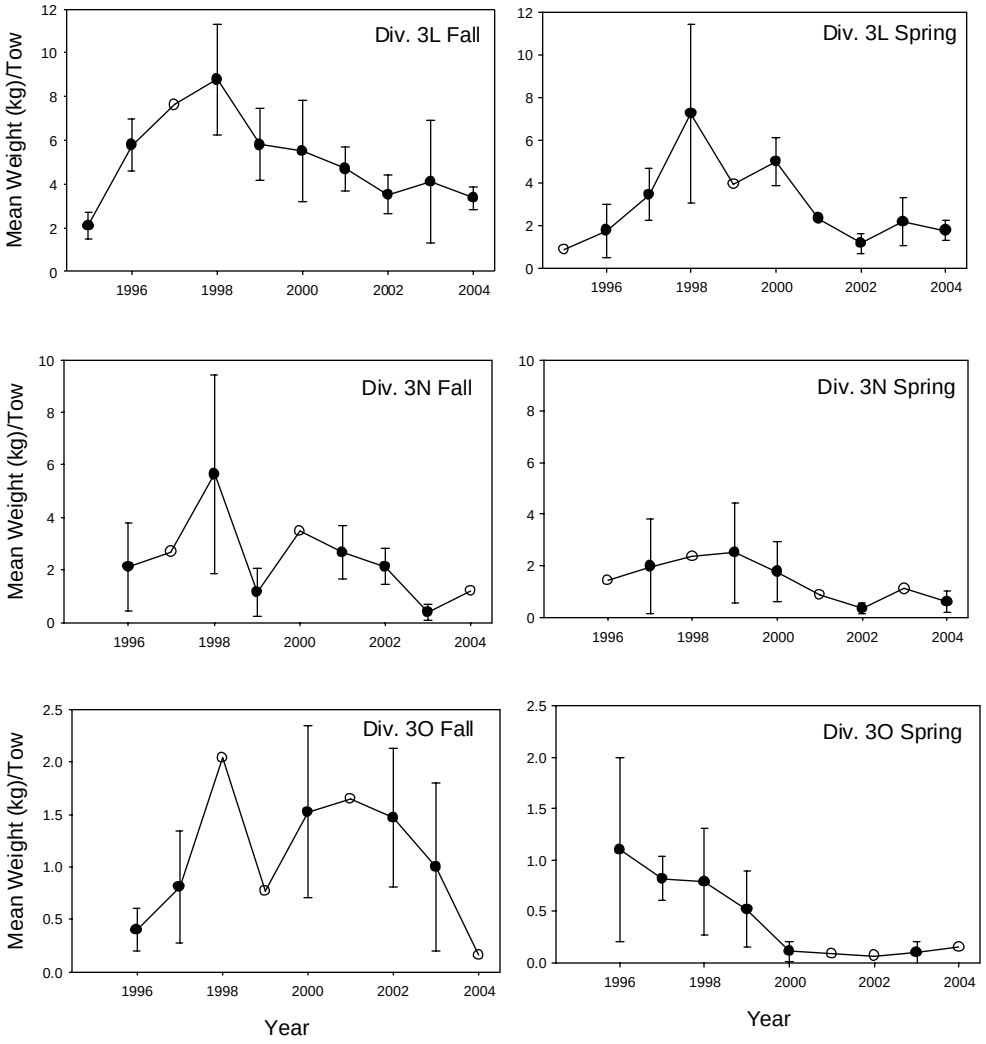
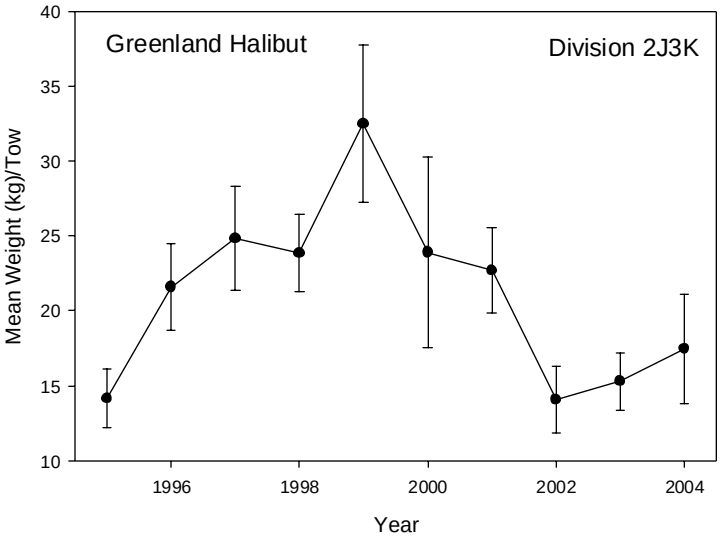
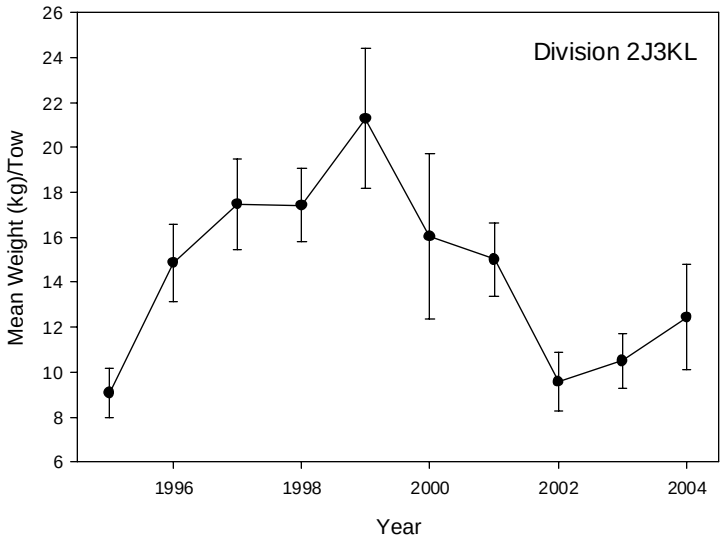



Fig. 2b. Continued.




Fig, 2c. Continued.

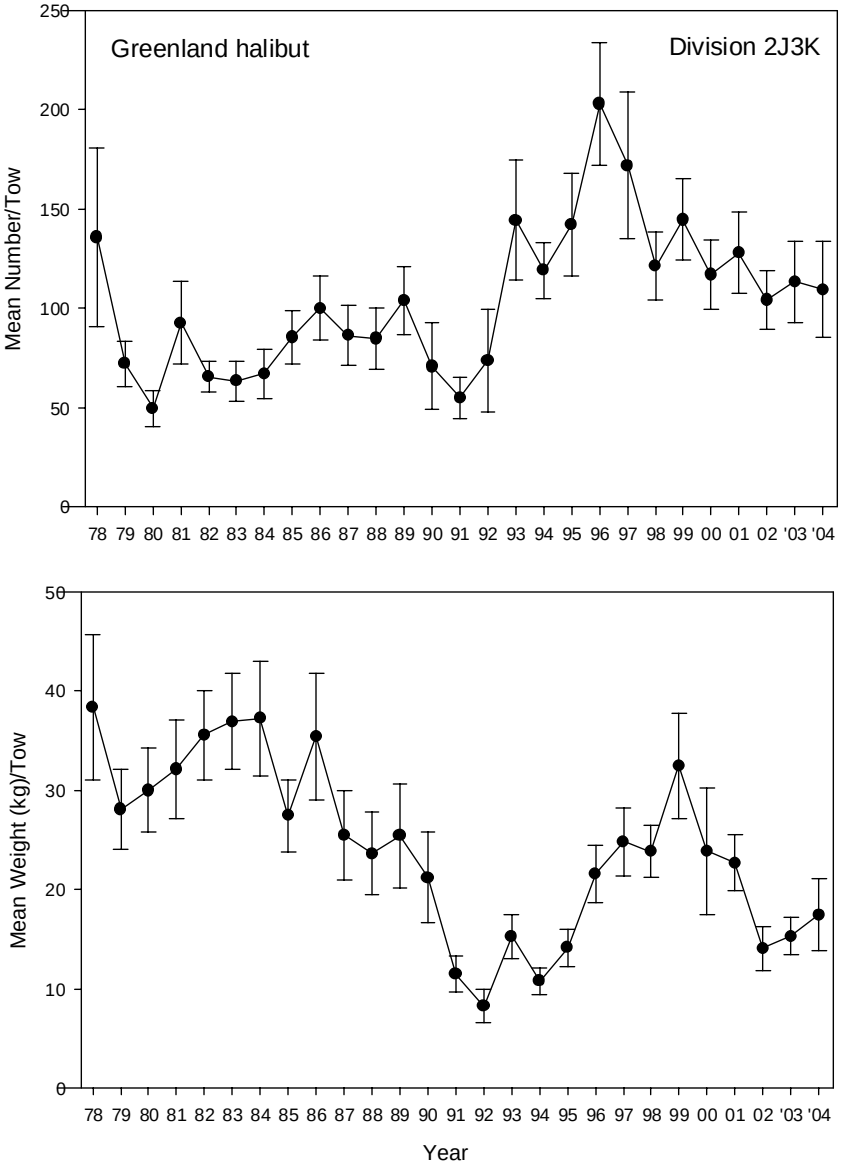



Fig. 3. Campelen stratified mean number and weight (kg) per tow estimates of NAFO Div. 2J+3K combined during 1978-2004. Surveys were completed in the fall.

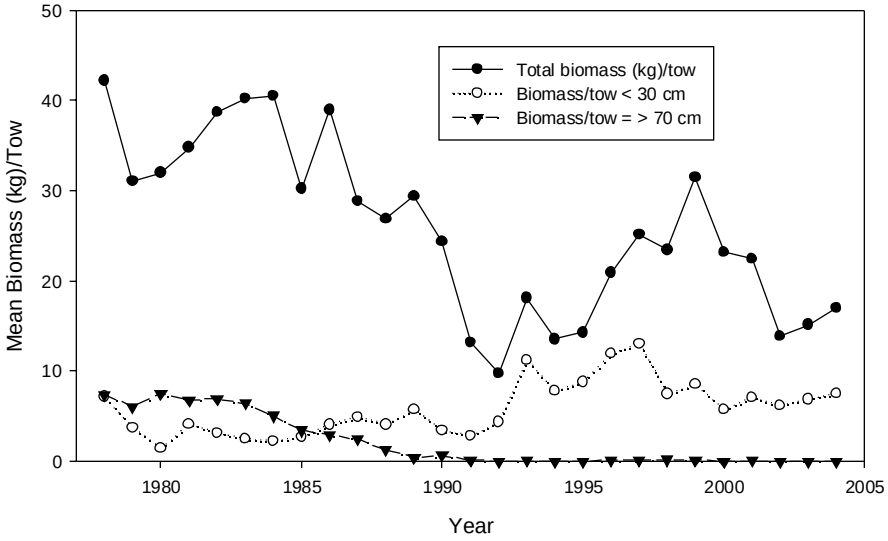



Fig. 4. Upper panel shows mean biomass (kg) per tow of Greenland halibut by length grouping from Canadian fall surveys conducted in Div 2J+3K during 1978-2004. Biomass was calculated using the at-sea length weight (L/W) equations as applied to Campelen or Campelen-equivalent abundance indices. Annual length-weight equations can be found in Table C Lower panel shows the proportion biomass of length groupings by total biomass.

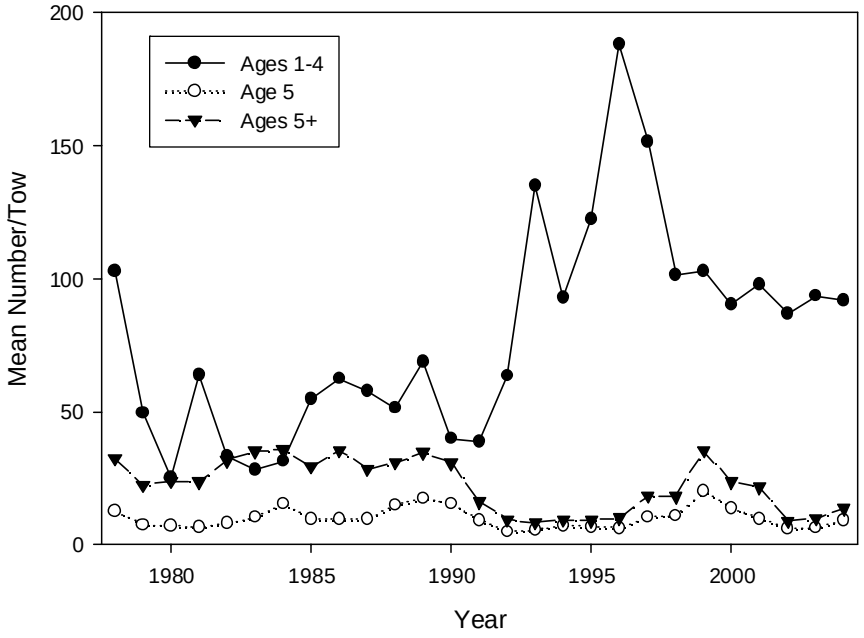



Fig. 5. Trends in mean number per tow estimates by age category from Canadian fall surveys in Div. 2J and 3K combined during 1978-2004. Ages 1-4 represent recruitment, age 5 represent recruitment to the fishery and ages 5+ represent exploitable biomass.

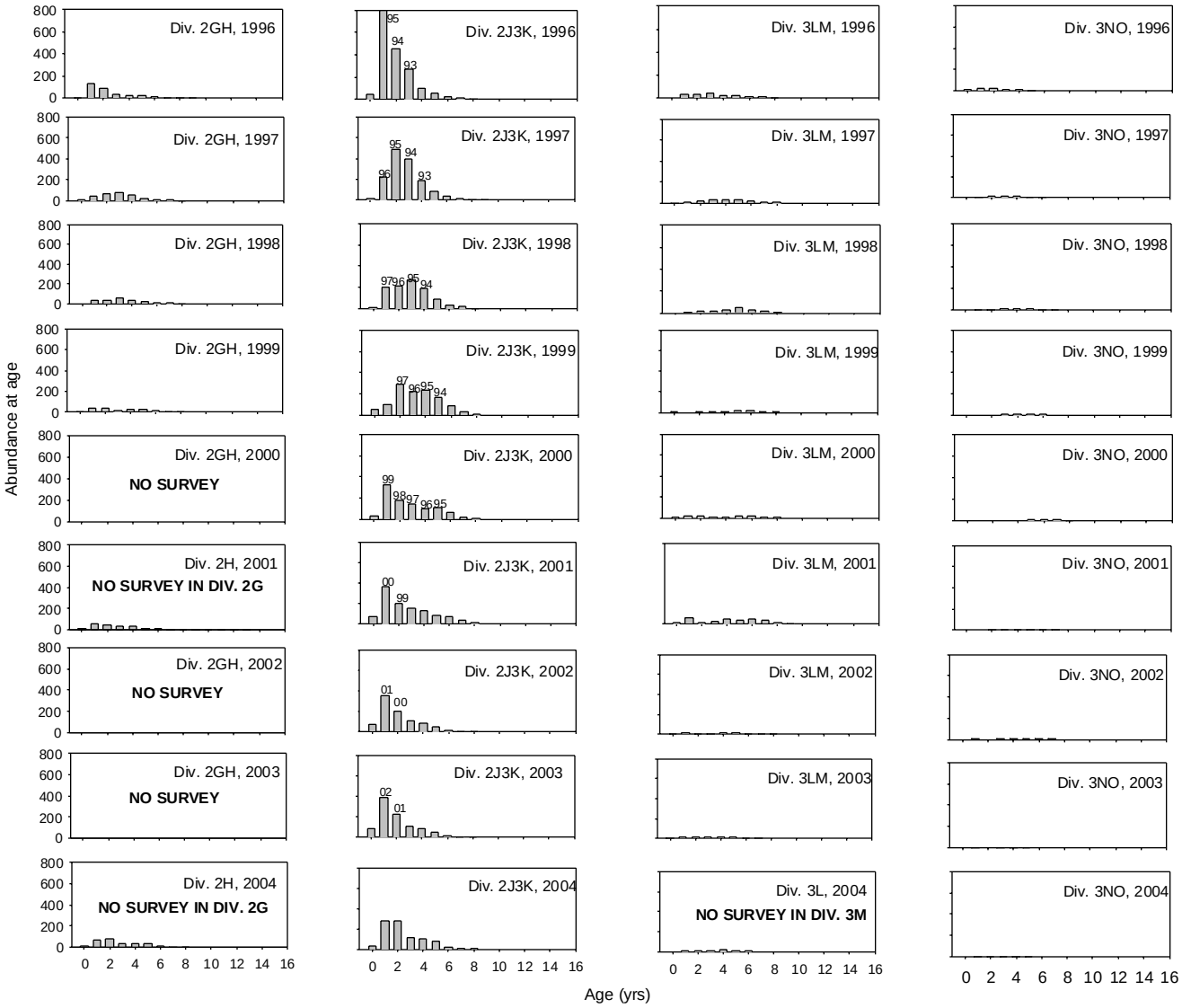



Fig. 6. Greenland halibut abundance at age (millions) by year and NAFO Div. groupings from Canadian spring surveys from Div. 3LNO during 1996-2004. Numbers on graphs represent year-classes. Otoliths used to develop age length keys for 2004 were composed of the otoliths from each separate Division.

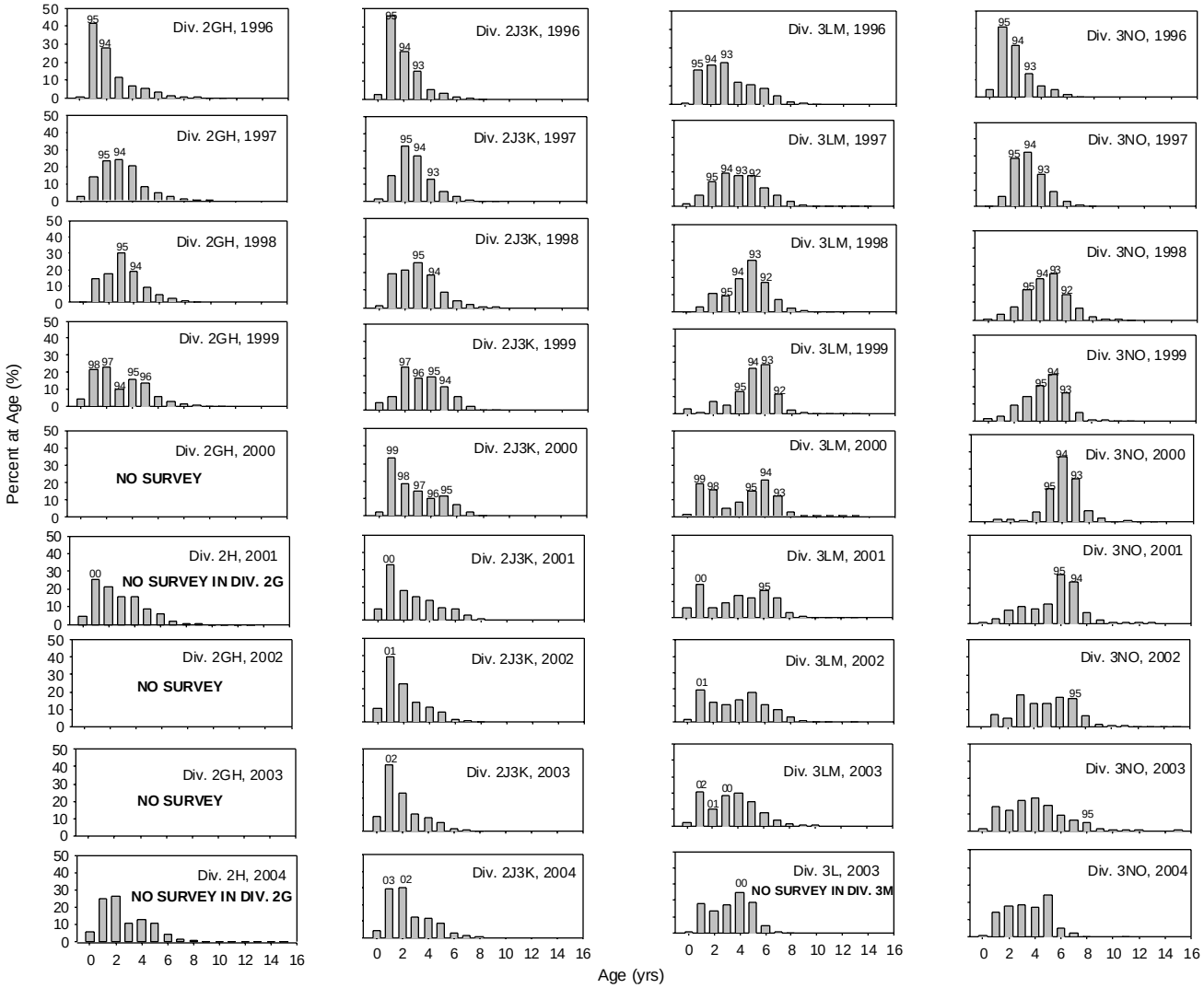



Fig. 7. Greenland halibut percent at age by year and NAFO Div. groupings from Canadian spring surveys from Div. 3LNO during 1996-2004. Numbers on graphs represent year-classes. Otoliths used to develop age length keys for 2004 were composed of the otoliths from each separate Division.

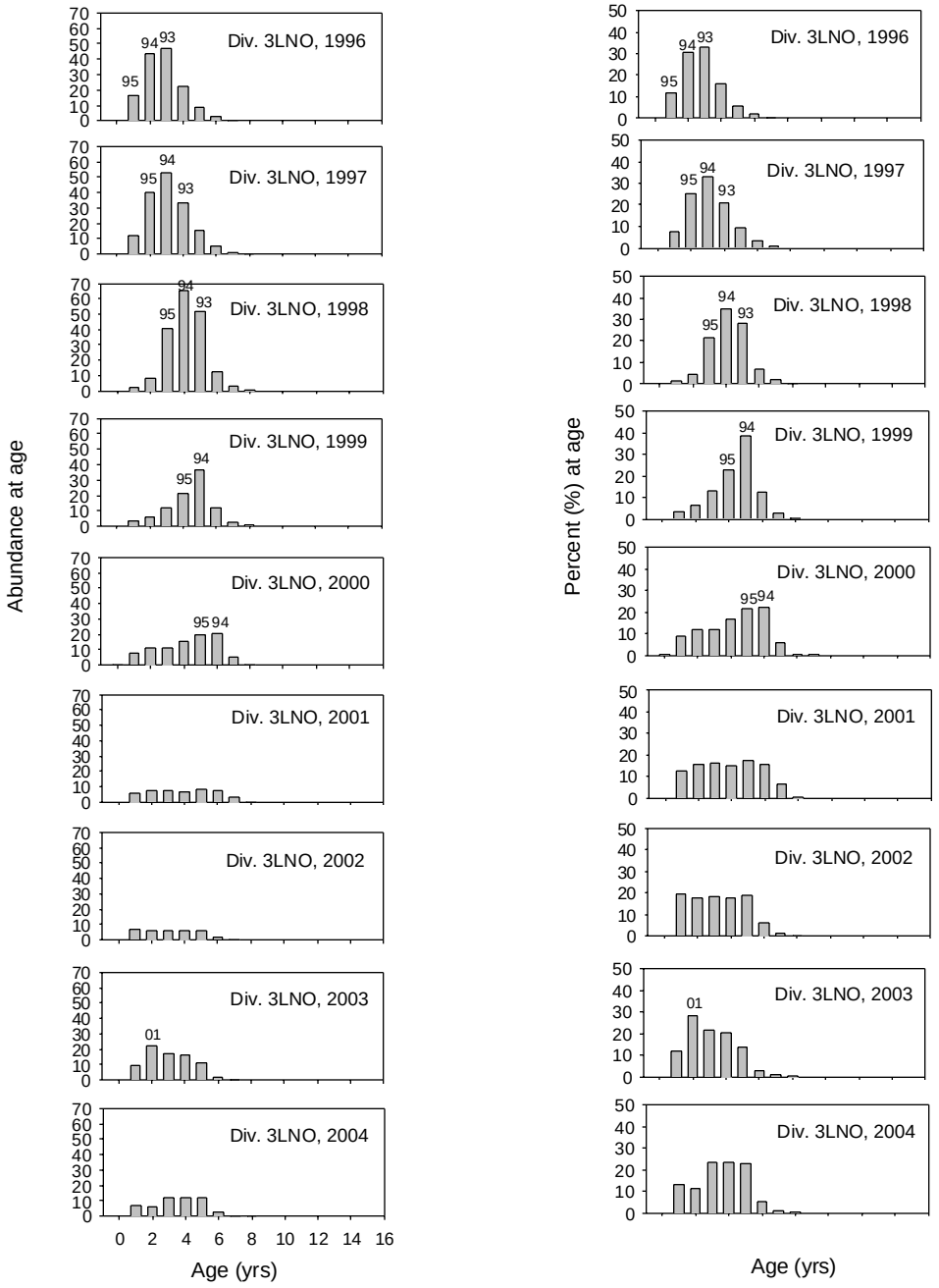



Fig. 8. Greenland halibut abundance at age (millions) and percent at age by year and NAFO Div. groupings from Canadian spring surveys from Div. 3LNO during 1996-2004. Numbers on graphs represent year-classes. Otoliths used to develop age length keys for 2004 were composed of the otoliths from each separate Division.

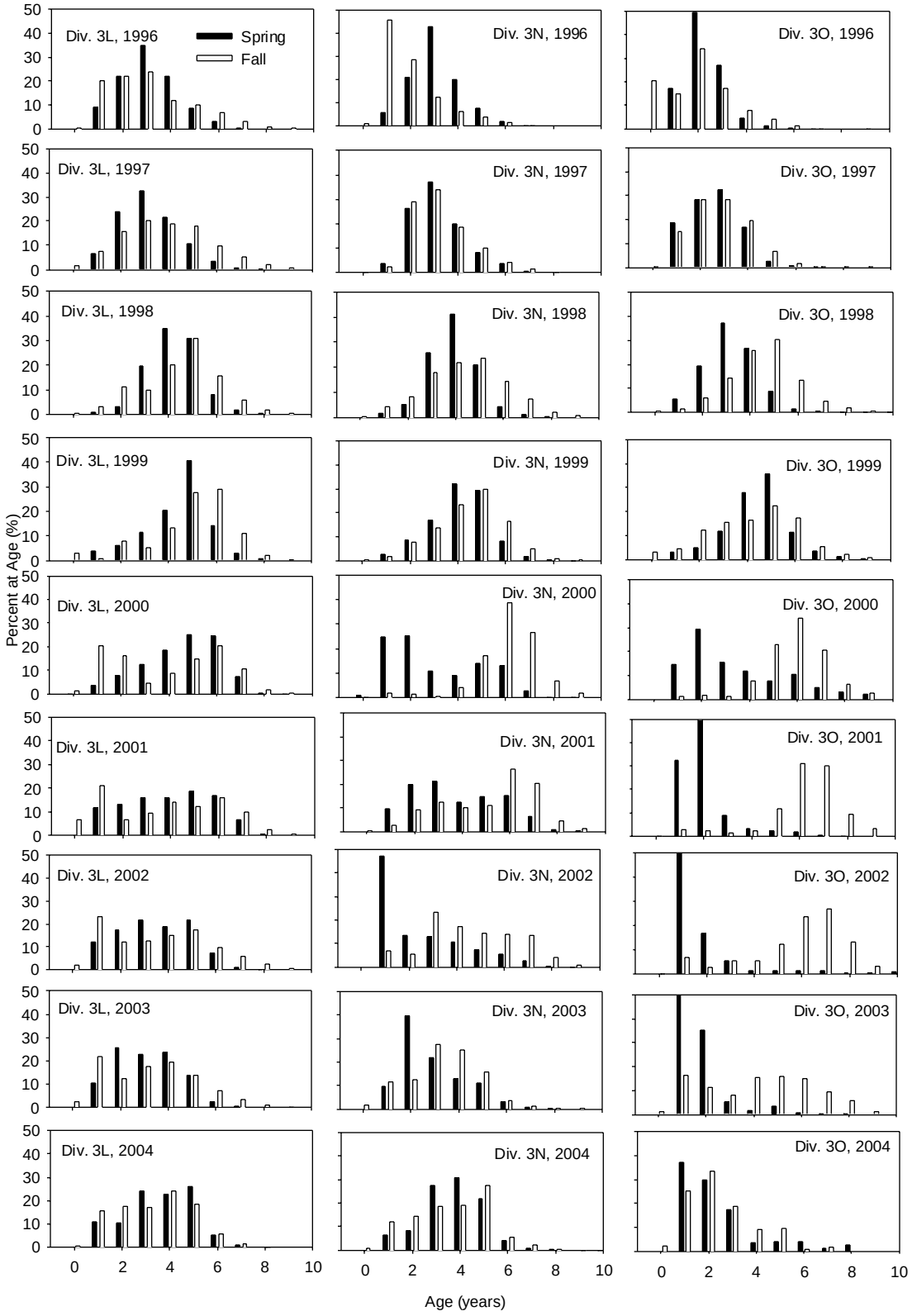



Fig. 9. A comparison of percent population size at age by Greenland halibut from Canadian spring and fall surveys in NAFO Div. 3L, 3N and 3O during 1996-2004 using a Campelen 1800 shrimp trawl.

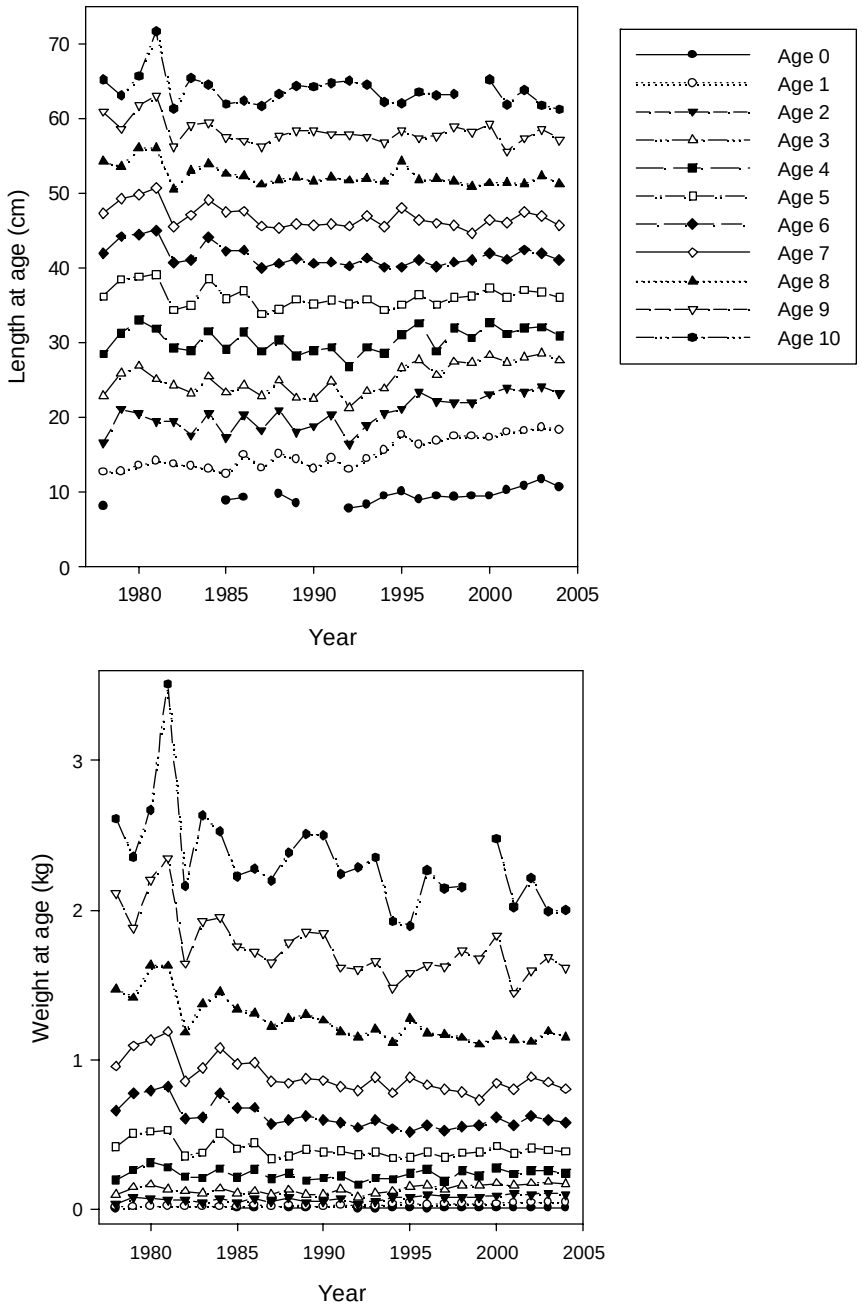



Fig. 10. Length at age (cm) and weight at age (kg) for Greenland halibut in Div. 2J+3K Ages 0-10 from 1978-2004.