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The Distribution and Abundance of Yellowtail Flounder (*Limanda ferruginea*) from the Canadian Annual Bottom Trawl Surveys of the Grand Bank, in NAFO Divisions 3LNO, from 1984-2001.

by

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Abstract

Abundance and biomass indices of Grand Bank yellowtail flounder in NAFO Divisions 3LNO were derived from annual multi-species, random-stratified bottom trawl surveys conducted by Canada during the spring of 1984-2001 and during the fall from 1990 to 2001. After declining in stock size and geographical range from the mid 1980s to the mid 1990s, recent surveys have indicated that the stock size has increased dramatically and has again expanded its northward range to re-occupy habitats in the northern Grand Bank. Both the 2001 spring and fall surveys indicate the stock is at the highest point in the time series.

Introduction

Annual multi-species, stratified-random bottom trawl surveys have been conducted by the Newfoundland region of the Canadian Dept of Fisheries and Oceans on the Grand Bank, in Div. 3LNO, during the spring (April-June) of each year since 1971. Since 1990, a second series of surveys has been carried out on the Grand Bank during the fall period, from October to December. However, since 1971 there have been two changes in survey gears and only one set of conversion factors has been developed for the 1984-1995 time series. Consequently only data from 1984 to 2001will be presented here.

From both the spring and fall surveys, swept area abundance and biomass estimates are derived for yellowtail flounder (*Limanda ferruginea*) and serve as fishery-independent indices of stock size. Because catchability of the standard survey trawl is unknown and assumed to be <=1.0 (Walsh 1996), the indices are considered to be relative estimates of stock size.

The purpose of this paper is to describe the results of these annual surveys. Attention will be focused on monitoring annual changes in stock size and recent changes in temporal and spatial patterns of distribution.

Materials and Methods

Survey design: The stratification scheme is based on depth and shown in Fig. 1 (see Doubleday 1981 for a review of procedures). The 1984-2001 spring and the 1990-2001 fall surveys both covered depths from 45 to 731m. Beginning in the fall of 1994, the coverage of the fall surveys extended to 1500 m. Mechanical problems with the survey vessel did not permit these deepwater strata (Fig. 1) to be fished in 1995. Since 1996, there has been relatively good success at fishing these deep water sets in most years with the exception of 1999 (see summary table below). However, the deep

water fishing sets in the fall surveys have negligible effect on estimation of the relative abundance and biomass of yellowtail flounder because the stock is found almost exclusively in depths less than 100 m. Nevertheless, the inclusion of these deepwater sets does lower the overall mean catch per tow by Division in those years.

Summary of successful sets in fall surveys in SA 3 in 1996 - 2001.
Depth range is given in meters, numbers of sets appear in parentheses.

Year	Division	Ship				Year	Division	Ship			
		Teleost	*W.Templeman*	*A.Needler*	***Total***			*Teleost*	*W.Templeman*	*A.Needler*	***Total***
1996	**3L**	805 - 1433 (31)	51 - 671 (180)		211	**1999**	**3L**	1366(1)	63-1407 (169)		170
	3N	390 - 1147 (13)		37 - 309 (54)	67		**3N**		39-664(68)		68
	3O	68 - 690 (24)	65 - 139 (19)	63 - 304 (15)	58		**3O**		58-692(75)		75
					336						**313**
1997	**3L**	161-1436 (71)	35-714 (134)		205	**2000**	**3L**	152-1430 (74)	42-447 (102)		176
	3N		41-769 (74)		74		**3N**	747-1419 (24)	46-642 (70)		94
	3O		62-611 (73)		73		**3O**	752-1424 (24)	62-654 (76)		100
					352						**370**
1998	**3L**	691-1437 (32)	34-675 (172)		204	**2001**	**3L**	146-1457(34)	38-702(169)	187-203(2)	205
	3N	834-1447 (12)	37-1079 (78)		90		**3N**	739-1410(24)	45-660(70)		94
	3O		82-1076 (87)		87		**3O**	803-1391(22)	67-703(75)		97
					381						**396**

Survey gears and vessels: From 1971 to 1982 the surveys of the Grand Bank were conducted by the 54 m side trawler, the FRV *A. T. Cameron* (ATC) using a two bridle Yankee 41.5 otter trawl rigged with rubber disk footgear. In 1983, this trawl was replaced by the three bridle Engel 145 Hi-Lift otter trawl rigged with large steel bobbin footgear and, at the same time, the *A.T. Cameron* was replaced by the 50 m stern trawler, the *CCGS Wilfred Templeman* (WT). Occasionally the *W. Templeman's* sister ship, the *CCGS Alfred Needler* (AN) took part in the surveys. In 1995, the old standard Engel trawl was replaced by a three bridle Campelen 1800 shrimp trawl rigged with 35 cm diameter rockhopper footgear (see Figs. 2-4;Table 1). The Yankee and the Engel trawls were both towed at 3.5 kts, while the Campelen is towed at 3.0 kts (see McCallum and Walsh 1996 for details). The Campelen trawl surveys of the Grand Bank began in the fall of 1995 aboard the *CCGS Wilfred Templeman*. The Campelen trawl also replaced the Yankee 41 shrimp trawl used in the annual fall juvenile groundfish surveys from 1985-94 (McCallum and Walsh 1996). Beginning in the fall of 1996, the 63 m stern trawler, *CCGS Teleost*, began fishing mostly the deepwater survey sets of the annual fall surveys beyond 731 m in Div. 3LNO; however, shallower sets have been also been fished when necessary (see Summary Table above). In addition, the *CCGS Alfred Needler* has taken part in the fall surveys in 1996 and 2001. The Campelen trawl onboard the 2 other survey vessel is identical in construction and rigging as the one on the *Wilfred Templeman*. Since 1993, the geometry and performance of all bottom trawl surveys have been monitored by Scanmar trawl mounted acoustic instrumentation (Walsh and McCallum 1995; McCallum and Walsh 2001).

Time series: Conversion factors have been derived from comparative fishing trials to convert the 1984-95 spring and 1990-94 fall Engel trawl survey data into Campelen trawl units and were presented in Walsh et al. (1998a, 1998b). Survey data from 1971-82 time period has not been converted to Campelen trawl units and the unconverted time series can be found in the 1997 assessment paper (see Walsh et al. 1997). To-date, conversion factors for yellowtail flounder have also not been derived for the 1985-94 juvenile groundfish series and this data is found in the 1995 assessment paper (see Walsh et al. 1995). Consequently, only survey data from 1984 onward are reported here.

Fishing and catch protocols: The Campelen carries out 15 minute tows using a towing speed of 3.0 kts and covers an average tow distance of 0.75 nautical miles (see Table 1). The catches are standardized to distance towed. The average wingspread used in estimating swept area abundance indices is 18.23 m and the average swept area is estimated to be 0.00727m^2. After each set, all species in the catch are separated, counted and weighed. From each haul, the total catch or a sub-sample is taken to collect biological data on size, age, maturity and feeding for all commercial species.

Results

In all years and in both time series, the majority of yellowtail flounder were caught in depths less than 100 m on the Grand Bank; however, occasionally small catches have been taken in deep waters along the southwest slope in Div. 3O in the spring survey and along the southeastern slope in Div. 3N during the fall surveys.

A) Spring groundfish surveys 1984-2001

Tables 2 to 7 give the survey catch rates in the form of stratified mean number and weight-per-tow by stratum. Tables 8-15 show abundance and biomass per stratum, along with confidence limits, for stock size in Div. 3L, 3N, and 3O, respectively, and for a combined Div. 3LNO estimate for the time period 1984-2001. Figures 5 and 6 show plots of the abundance and biomass estimates from surveys during the 1984-2000 period. The high 1999 survey estimates point to a 'year effect' (Walsh et al. 2000; STACFIS 2001).

Abundance trends: Tables 8-10 and Figure 5 show the population abundance trends by Division from 1984-2001, with 95% confidence intervals, and the combined abundance index.

In Div. 3L, there was a continuous decline from a high of 50 million fish in 1985 to "0.0" fish abundance in 1995. Since 1996, the amount of yellowtail flounder has been increasing in this division. For the 1996-98 period the population size has fluctuated around an average value of 1.8 million fish; still much lower than the 1984-85 average of 48 million fish. However, in 1999, the abundance estimate of 55.4 million fish was the highest in the time series (Fig. 5; Table 8). In the 2000 survey, the abundance estimate decreased by 26% to 40.7 million fish and a further 72% decline was evident from 2000 to 2001. The abundance estimate in 2001 was 11.5 million fish.

In Div. 3N, for the period of 1984-88, the population size decreased from a high of 435 million fish in 1984 to 135 million fish in 1988, increased almost 4 times to a high of 478 million fish in 1989, mainly due to the strong 1985 and 1986 year-classes. From 1990 to 1994, the survey abundance again declined continuously to a low of 126 million fish. In 1995, there was a small increase in population size followed by a three-fold increase to 475 million fish in 1996. Since 1995, there has been a continuous increase in population size reaching a high of 965 million fish in 1999. Following a decrease by 28% to 695 million fish in the 2000 survey, the abundance estimate for the 2001 survey showed a 61% increase to 1.1 billion fish, the highest in the time series (Fig. 5; Table 9). The variability around this estimate is quite high and over ½ of the estimate comes from sets in strata 360, 376, and 373. Ten sets had catches greater than 1000 fish, in which one set caught 2400 and another caught 4800 yellowtail flounder.

In Div. 3O, the abundance showed an increasing trend from 1984 to 1987 reaching 91 million fish followed by a 37% decrease in 1988 to 57 million fish. From 1998 to 1991 the population fluctuated around an average level of 53 million fish before declining to 28 million fish in 1992. In 1993, the population estimate of 101 million was almost 4 times that of the 1992 estimate. This anomalous high estimate in 1993 may have been produced by the high catch rates in stratum 352 and is reflected in the high variability around the estimate (see Fig. 5). However, in 1994 and 1995, the population abundance again dropped back to an average level of 25 million fish in line with the 1992 estimate. In 1996 the population size again showed a dramatic increase of almost 6 times the average of 1994-95 estimate of 25 million fish. Between 1996 and 1998 the population fluctuated around an average size of 153 million fish and then in 1999, the estimate jumped by 76% to reach the highest estimate of 269 million fish (Table 10;Fig 5). In the 2000 survey, the abundance decrease by 31% to 186.5 million fish followed by, in 2001, a 6% increase in the estimate to 198.3 million fish.

Div. 3LNO: Table 11 and Fig 5 present the combined total population estimate for the Division 3LNO. In the time series 1984-2001, there appears to be three trend periods. The first trend occurs between 1984 and 1989 when the population size decreased by 63% from 544 million fish in 1984 to 203 million fish in 1988. The second trend saw the population size increase in size by 162% from 1988 to 1989 (inflated by large catches of the 1985 year class, in particular in stratum 360) followed by another gradual decline from 533 million fish (1989) to 148 million fish in 1994. The third trend began with an increase a 26% increase in population size from 1994 to 1995, followed by a 242% increase from 187 million fish in 1995 to 640 million in 1996. From 1996 to 1999 the abundance increased steadily to a high of 1.3 billion fish in 1999 before declining by 29% to 923 million fish in the 2000 survey. This

large increase in population abundance from 1996 to 1998 is partially explained by the high efficiency of the "new" survey trawl, introduced in the fall of 1995, in catching juveniles and young adults when compared to the "old" standard trawl. This efficiency is reflected in the size composition of the survey catches for those years. However, the sudden 77% increase in abundance from 1998 to 1999, the highest in the time series at 1.3 billion fish, may not be indicative of a natural increase in stock size. Catch rates were very high in many strata throughout all divisions in 1999 and STACFIS (2000) agreed in 2000 that there were 'year effects' in the 1999 survey (Tables 2-4). The 2000 survey abundance estimate of 923 million fish was more in line with and 26% higher than the 1998 estimate of 734 million fish (Fig. 5). The 2001 estimate of 1.3 billion fish, which was 44% higher than the 2000 estimate, may be inflated by several high catches in Div. 3N. The 2001 estimate was marked by the largest variability around any estimate in the time series.

Biomass trends: Tables 12-15 and Figure 6 show the trends in survey biomass and associated 95% confidence intervals for the time series, 1984-2001.

In Div. 3L, the biomass index declined steadily from a high of about 22,000 t in 1984 to "0.0" t in 1995. Biomass was also close to 0 in 1994. From 1996 to 1998, the stock has shown a marginal increase to stabilize at an average biomass level of 500 t. The 1999 biomass estimate of 28,000 t is over 5 times higher than the average size of the last three years (Table 12; Fig. 6A). In the 2000 survey, the biomass decreased by 39% to 18, 000 t and, again, decreased in 2001 by 75% to a low of 4,400 t. In the 1999 and 2000 surveys, most of the biomass was found in stratum 363 but in 2001, the catches in this stratum were small.

In Div. 3N, in general, the majority of the stock is distributed in and around the Southeast Shoal area (strata 375, 376, 360 and 361 in Fig. 1), although in recent surveys, the biomass has been increasing in strata to the north, in particular strata 362 and 373. The biomass index declined gradually from 168,000 t in 1984 to 46,000 tons 1994. After a 25% increase in 1995, the survey biomass jumped by 80% to 104 000 t and then continued increasing to a high of 144,000 t in 1998 (Table 13; Fig. 6A). In 1999, the biomass estimate again jumped dramatically to 238,000 t, a 66% increase over the 1998 estimate. By 2000, the survey biomass had shown a decrease of 17% to 197,000 t. However, in the 2001 survey, an upward trend was evident with a 51% increase in the biomass estimate to 298,000 t, the highest in the time series. The variability around this estimate was quite high and some of it may be due to the high catch of 1.6 t of yellowtail flounder in one fishing set in stratum 373, and another high catch of 493 kg in stratum 376.

In Div. 3O, the biomass index showed moderate fluctuations around an average value of 27,000 t for the period 1984-92, increasing to 42,000 t in 1993 and then declining to an average of 11,000 t during the 1994-95 period. In 1996, the survey biomass dramatically increased six-fold to 71,000 t and has since declined to an average value of 56,000 t for the 1997 and 1998 period (Table 14; Fig. 6A). Whether some of these fluctuations are related to movement between Div. 3N and 3O is unknown. From 1998 to 1999, the biomass increased by 70% to a high of 98,000 t. In the 2000 survey, the biomass decreased by 27% to 72,000 t and slid further to 64, 000 t in 2001, a further 11% decrease (Table 14, Fig. 6A). In this Division, most of the biomass is generally found in the two strata, 351 and 352 (see Fig.1) which border Div. 3N, however, in the 2001 survey, 22 % of the biomass came from stratum 338 to the west of stratum 352.

In Div. 3LNO, the majority of the survey biomass is found in Division 3N and since 1989 there has been negligible amounts in Division 3L until the 1999 survey. Table 15 and Figure 6B show the cumulative biomass of all divisions for the time period 1984 to 2001. Total stock biomass had been steadily declining from a high of 218,000 t in 1984 to 56,000 t in 1994. In 1995, the overall decline in biomass levels had ceased and stock size increased by 27 %. In 1996, the biomass suddenly jumped by 150%, coinciding with a change to a more efficient survey gear in the fall of 1995. Between 1996 and 1997, the stock remained stable at an average level of 175,000 t and then again increased in 1998 by 15% to a level of 202,000 t. The 81% jump in stock size in 1999 to a level of 365 000 t, together with the huge increase in abundance, is indicative of a change in catchability. STACFIS (2000) noted that increases in biomass were seen in many strata, indicative of an 'anomalous' year effect. In the 2000 survey, the biomass had decreased by 21% to 287,000 t, more in line with the 1998 estimate. The 2001 survey estimate again showed an upward trend with a 28% increase to 367, 000 t, however, unlike the 1999 estimate where many sets had large catches, there was only one large catch (1.6 t) evident in Div 3N which probably contributed to the high variability

around the estimate. Thus it is unlikely that this is a year effect as was seen in 1999. Noteworthy, is that 2001 biomass was very low in Div 3L and showed a small decline in Div 3O.

B) Fall groundfish surveys, 1990-2001

Tables 16-21 show the survey catch rates in the form of stratified mean number and weight-per -tow by stratum and division for the fall surveys, 1990-2001. Tables 22-29 show abundance and biomass per stratum, along with confidence intervals. Figures 7 and 8 shows plots of the abundance and biomass estimates by division from 1990-2001 and a combined Div. 3LNO estimate for the same time period.

Abundance trends: Tables 22-25 and Figure 7 show the abundance trends by Division from 1990- 2001, with 95% confidence intervals, and the combined abundance estimate for Div. 3LNO.In Div 3L, the population size decreased from 4 million fish in 1990 to 0.1 million in 1994. From 1995, the population size showed an increase from approximately 4 million fish to an average level of 6 million fish for the 1996-97 period and then doubled in size to 13 million fish in 1998 (Table 22; Fig. 7). In the 1998-2001 surveys, these fish were found in three strata (350, 363 and 372; see Fig. 1 for location), in depths less than 100 m, similar to the distribution occupied in the mid-1980s spring surveys. Since the 1998 survey, the abundance has shown a steady increase to 37.9 million fish in the 2000 survey, an 84% increase over the 1999 estimate. Unlike the 1999-2001 spring estimates which have shown a continuous decline, the fall estimates have been showing an upward trend since 1997. From 2000 to 2001, the survey estimate increased by 97% to 74.5 million fish. 95% of this estimate was found in two strata, 363 and 372.

In Div. 3N the survey abundance from 1990-94 fluctuated around an average size of 222 million fish. In 1995, survey abundance increased sharply by 96% over the 1994 survey estimate and continued to increase to a high of 860.3 million fish in 2000 (Table 23; Fig. 7). The wide confidence interval associated with the 2000 estimate probably reflects three high catches in stratum 376, which ranged from 1400 to 4000 fish. The stratum abundance showed a 183% increase from 1999-2000 and is largest in the time series for that stratum. This upward trend continued in 2001, in which there was a 53% jump in abundance to 1.3 billion fish to make it the largest in the time series. 60% of the 2001 abundance was found in stratum 376 on the Southeast Shoal where 3 fishing sets yielded catches in the range of 2000 to 4000 fish. In addition, 2 other sets are worth noting in the 2001 survey; one in stratum 361 and one in stratum 362 where the highest catches ranged from 1300-1400 fish.

In Div. 3O, there was no discernible trend in the data for the period 1990-96 and the population level fluctuated around an average size of 55 million fish (Table 24; Fig. 7). In 1997, the population size almost tripled to 159 million fish and in the 1998-1999 surveys, the population size fluctuated around an average level of 180 million fish. In the 2000 survey, the abundance increased by 44% to 254 million fish, of which 48% was found in stratum 352. The upward trend continued in 2001 with a small 3% increase in abundance to 263 million fish. Similar to the 2001 spring survey, most of the abundance was found in stratum 351, 352 (similar to most years in the time series) and 338 where a large catch of 1200 fish may have been responsible for the large variability around the 2001 fall estimate (Fig. 7).

In Div 3LNO, Table 25 and Fig. 7 present the total abundance estimates with confidence intervals for Div. 3LNO. The overall population size fluctuated around an average level of 273 million fish from 1990-94 then doubled in size in 1995 to 579 million fish. This coincided with the introduction of the new survey gear in the fall of 1995. Since then, the population has steadily increased to a record high of 1.2 billion fish in 2000 (Table 25). This represented a 19% increase over the 1999 estimate of 937 million fish. Fifty-five (55) percent of the 2000 estimate comes from the two strata (375 and 376) making up the Southeast Shoal (Fig. 1). In 2001 the upward trend continued with a 30 % increase in abundance, at 1.7 billion fish, over the 2000 estimate. Similar to the 2000 survey, the Southeast Shoal strata contributed a large proportion (40%) of the 2001 abundance estimate.

***Biomass trends*:** Tables 26 to 29 and Figure 8 show the trends in survey biomass from 1990-2001 by division and for the combined Div. 3LNO.

In Div. 3L, the biomass showed a decrease from 1990 level of 2,000 t to almost "0.0" t in 1994. Noteworthy is that a "0.0" t biomass was also estimated for the 1995 spring series. From 1995-97, the stock fluctuated around an average level of 1,700 t and then increases by a factor of 4 to 5 000t. In the 1999 survey, the biomass increased by 100% to

10,000 t and then by an additional 30% to 13,000 t in the 2000 survey (Table 26; Fig 8A). Unlike the spring survey, the 2001 fall survey showed the biomass index increasing by 104% to 26, 000 t since 2000. These increases in biomass in Div 3L are thought to be the result of an extension of the range of yellowtail flounder with increasing stock size (see spatial section below). There are obvious within year seasonal differences in the amount of yellowtail flounder caught in this Division.

In Div. 3N, the stock size, from 1990-92, fluctuated around an average value of 47,000 t before doubling in size in 1993. Since then the stock has shown an upward increasing trend to a high of 253,000 t in 2000, an increase of 32 % since 1999. (Table 27; Fig. 8A). Much of this increase comes from three large catches in stratum 376 ranging from 420 to 1150 kg and these 3 catches accounted for this stratum contributing 50% of the biomass in this division. Again in 2001, the upward trend continued with a 46% increase in biomass to 369, 000 t. Three large catches in stratum 376 ranging from 500-900 kg accounted for this stratum contributing 33% to the overall Division biomass. Similar to the 2001 spring survey, strata 360, 361, 362, 373 and 376 account for most of the biomass in this division.

In Div. 3O, the survey biomass index, in Table 28, showed no obvious trend from 1990-96, and fluctuated around an average level of 20,000 t. Then in 1997, the biomass almost tripled in size. In 1998 and 1999, the biomass decreased, which probably reflects movements between Div. 3N (Table 28; Fig 8A). Both estimates for 1997 and 1998 are close in agreement with the spring estimate for those years. In 2000, the biomass was estimated to be 70,000 t, 31% higher than the 1999 estimate of 48,000 t. The upward trend continued in 2001 with a 17% increase to 81,000 t. In 2000, 87% of the biomass was found in stratum 351 and 352, which borders the dividing line with Division 3N, similar to other years and to the spring time series. However, in the 2001 survey, these strata contributed only 55 % and stratum 338 to the west contributed 32% of the biomass. The later estimated was inflated by one large catch of 463 kg almost 4 times the next largest catch in the Division. A similar but smaller pulse in biomass was seen in the 2001 spring survey.

In Div. 3LNO, similar to the spring surveys, the majority of the stock is in Division 3N. Since 1993, when the survey biomass was estimated to be 113, 000 t, there has been an increasing upward trend to 2001. Most notable was 40% increase in biomass from 1996 to 1997. Between 1998-1999 there was only a small increase but between 1999 and 2000 the increase was 34% to 335,000 t (Table 29;Fig 8B). In the spring series, the upward trend began in 1995 while in the fall series it began in 1993. Fifty-five (55) percent of the biomass in the 2000 survey was found on the Southeast Shoals (strata 375 and 376). Deletion of the large 1150 kg tow in stratum 376 reduced the biomass to 276,000 t which is more in line with the 1999 estimate of 250,000 t. In the 2001 survey, the biomass estimate of 476, 000 t showed a 42% increase in size over the 2000 estimate. 34% of this biomass came from the Southeast Shoal strata where three large catches in stratum 376 ranged from 500-900 kg.

Summary

Since 1995, the surveys have shown that the stock has been increasing in size after the decline in the late 1980s and early 1990s. In the 1999 spring survey, but not the fall survey, a huge increase in abundance and biomass was evident and this survey is regarded as an estimate with 'year' effects (STACFIS 2000). In the 2000 surveys, both the spring and fall abundance estimates were lower than that estimated from the 1999 surveys, being more in line with the 1998 surveys. However, both the 2001 spring and fall estimates showed an increase since the 2000 survey. The 2001 fall estimate of 476, 000 t was 30% higher than the spring estimate of 367, 000 t. The trend in the stock component in Div 3N is upward in both 2001 spring and fall from the 2000 estimates, remained almost the same size in Div 3O in both years and showed a declining trend in the spring survey and an increasing trend in the fall surveys in Div. 3L.

Spatial analysis

Figures 9 and 11 show the standard number and weight from the catches of individual fishing sets plotted as point estimates using the spring and fall Campelen trawl data from the 1999-2001. In all surveys, yellowtail flounder were most abundant on the Southeast Shoal and the strata immediate to the west in Div. 3N (Fig. 1) most of which straddle the Canadian 200 mile limit and extend into the Regulatory Area. This description confirms earlier descriptions of distribution (Walsh 1992; Brodie et al. 1998; Walsh et al. 1999; 2000; 2001a,c). Yellowtail flounder appear to be more abundant in the Regulatory Area of Division 3N in the 1999 – 2001 surveys than in previous

years and the northward distribution of the stock has extended in Div. 3L, similar to historical times when the stock size was high. Brodie et al. (1998) noted that the northward range extension of yellowtail flounder on the Grand Bank contracted with decreasing stock size during the mid to late 1980s and early 1990s so that the bulk of the stock was south of the 45^0 N (Fig 12). Figure 12 shows a plot of the proportion of biomass north of 45^0 N from 1973 to 2001 and it is obvious that the range of the stock has recently been extending northward since 1995. There is a definite seasonal pattern in recent years in the proportion of biomass north 45^0 N with the stock, in the spring, being more dispersed northward than in the fall. However, it is not sensitive enough to track the changes in spatial location of the stock in Div. 3L which showed higher catch rates and an increasing trend in the fall biomass while the spring catch rates were lower and the trend was declining. Recent tag returns from the 1998-2000 fishery have also confirmed the northward extension of the stock in recent years (Walsh et al. 2001b).

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Table 1. Trawl design, rigging and geometry of Campelen 1800 shrimp trawl used in annual bottom trawl surveys (Adopted from McCallum and Walsh, 1996)

Parameter	Measurement
Rigging	
Doors	4.3m/1400 kg
Sweeps (m)	6.1
Bridles (m)	40
Buoyancy (kg)	226.5
Headline (m)	29.5
Fishing line (m)	19.5
Footgear	
Length (m)	35.6
Material	102 rubber disks (rockhopper)
Weight in air (kg)	501.3
Size (diameter cm)	35
Mesh Size (mm)	
Wings/square	80/60
Bellies	60/44
Codend	44
Liner	12.7
Material	Polyethelylene
Geometry	
Doorspread (m)	45 to 55
Wingspread (m)	15 to 17
Opening (m)	4 to 5
Towing speed (knots)	3.0
Swept Area Abundance Model	
Tow duration (min)	15
Tow distance (nm)	0.8
Average wingspread	18.23
Catchability coefficient	1.0
Swept area (m^2)	0.00727

Table 2. Mean Number per set of Yellowtail Flounder by stratum, Div 3L - Spring

Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 28*	*WT 28-30*	*WT 48*	*WT 58-60*	*WT 70,71*	*WT 82,83*	*WT 96*	*WT 106,107*	*WT 120-122*	*WT 137,138*	*WT 152-154*	*WT 169,170*	*WT 189-191*	*WT 205-208*	*WT221-24*	*WT240-41*	*WT317,318*	*WT368-70*
(m)		Units																		
30-56	784	36,866.4															0.0	0.0	.	0.0
57-92	350	284,889.0	3.2	7.4	4.4	1.3	2.8	1.4	0.3	1.5	0.1	0.0	0.1	0.0	1.6	0.0	0.0	33.2	21.5	4.5
	363	244,858.7	45.6	27.6	14.5	13.1	9.9	3.4	7.6	1.3	0.2	0.0	0.0	0.0	4.4	1.0	0.0	94.8	97.9	13.7
	371	154,206.0		0.7	0.7	0.0	0.8	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	2.5	0.0	0.0
	372	338,400.3	96.6	117.1	62.0	24.4	13.9	19.5	8.0	4.0	0.6	0.7	0.1	0.0	2.5	2.4	4.5	47.3	28.2	19.1
	384	154,068.4		7.7	2.5	1.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.5	0.8
	785	63,965.9															0.0	0.0	.	0.0
93-183	328	208,955.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	343	72,219.6		0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5		0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.2	0.1	2.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	18.0	2.6	0.0
	364	387,509.6	1.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.5	0.0
	365	143,201.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	390	203,728.0		0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1															0.0	0.0	.	0.0
	787	84,325.0															.	0.0	.	0.0
184-274	344	205,516.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1															0.0	.	.	0.0
550-731	730	23,385.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732-914	737	31,226.4											0.0				.	.	.	.
	741	30,676.1											0.0				.	.	.	.
	745	47,871.3											0.0				.	.	.	.
	748	21,872.2											0.0				.	.	.	.
Mean No. (sets)			**22.1(37)**	**9.4(221)**	**5.3(211)**	**2.4(181)**	**1.6(154)**	**1.6(205)**	**0.93(156)**	**0.45(143)**	**0.05(178)**	**0.05(181)**	**0.02(160)**	**0(151)**	**0.5(188)**	**0.2(158)**	**0.3(155)**	**9.6(175)**	**7.6(134)**	**2.1(153)**
Upper C.I.			**39.3**	**14.6**	**7.8**	**3.6**	**2.4**	**2.6**	**1.6**	**0.7**	**0.1**	**0.1**	**0.0**	**0.0**	**0.7**	**0.4**	**0.8**	**15.6**	**11.3**	**4.2**
Lower C.I.			**5.0**	**4.2**	**2.8**	**1.2**	**0.9**	**0.5**	**0.2**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.1**	**-0.2**	**3.6**	**3.9**	**0.0**

Table 3. Mean Number per set of Yellowtail Flounder by stratum, Div 3N - Spring

Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 27*	*AN 43*	*WT 47*	*WT 58,59*	*WT 70*	*WT 82*	*WT 95,96*	*WT 106*	*WT 119,120*	*WT 136,137*	*WT 152,153*	*WT 168,169*	*WT 189*	*WT 205,206*	*WT221-24*	WT238-40	WT316,317	WT367-69
(m)		Units		*WT 29*																
<=56	375	219,134.8	373.6	165.6	409.6	208.3	118.5	82.3	259.5	21.5	340.3	135.7	29.0	139.7	603.3	487.2	411.6	476.4	359.0	301.6
	376	206,204.1	91.5	220.3	162.3	719.6	125.7	977.0	521.3	764.1	183.7	35.0	2.3	10.8	67.8	1,029.8	524.8	911.0	349.5	1145.8
57-92	360	411,582.8	289.7	155.3	32.3	33.0	7.0	480.3	91.7	50.1	140.2	41.9	6.8	133.2	364.7	126.2	374.4	680.3	215.7	549.4
	361	254,900.7	338.6	171.0	101.4	130.1	166.6	142.3	293.3	242.9	63.6	237.9	451.0	276.7	453.6	427.2	455.7	586.7	544.0	639.2
	362	346,653.9	227.1	74.4	159.9	103.3	73.3	50.9	79.4	53.7	7.5	86.8	2.3	0.6	169.3	210.5	300.0	507.7	519.1	522.6
	373	346,653.9	122.0	58.1	28.2	38.7	34.6	20.8	2.5	13.4	0.1	0.1	3.0	0.0	7.8	1.9	11.1	103.1	311.8	680.9
	374	128,069.4	59.7	38.5	14.8	7.6	4.2	0.2	1.8	0.4	1.0	0.0	0.0	3.3	15.3	10.7	5.8	248.7	225.5	88.3
	383	92,716.2	3.7	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0
	377	13,756.1	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
275-366	357	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9								0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5								0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
732-914	752	18,433.2											0.0					.	.	.
	756	14,581.5											0.0					.	.	.
	760	21,184.4											0.0					.	.	.
Mean No. (sets)			**189.7(61)**	**104.6(85)**	**100.0(101)**	**128.1(91)**	**58.9(77)**	**208.4(94)**	**133.1(85)**	**111.7(93)**	**79.3(94)**	**60.4(85)**	**52.6(76)**	**66.1(89)**	**198.0(82)**	**233.2(71)**	**240.4(88)**	**402.1(82)**	**289.5(81)**	**466.4(79)**
Upper C.I.			**251.2**	**135.1**	**141.7**	**202.3**	**86.3**	**335.7**	**206.4**	**165.4**	**127.0**	**103.6**	**91.1**	**101.0**	**254.8**	**349.9**	**324.1**	**499.8**	**356.3**	**660.0**
Lower C.I.			**128.2**	**74.1**	**58.3**	**53.9**	**31.6**	**81.2**	**59.9**	**57.9**	**31.6**	**17.1**	**14.2**	**31.3**	**141.1**	**116.5**	**156.8**	**304.4**	**222.8**	**272.8**

Table 4. Mean Number per set of Yellowtail Flounder by stratum, Div 3O -Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43*	1986 *WT 47*	1987 *WT 58*	1988 *WT 70*	1989 *WT 82*	1990 *WT 94,95*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 *WT221-24*	1999 *WT238,39*	2000 *WT315-17*	2001 *WT367*
57-92	330	287,365.1	1.0	14.8	5.0	1.5	1.1	2.0	1.2	9.2	0.0	0.1	0.0	0.0	1.8	0.6	0.5	0.6	47.2	5.5
	331	62,727.9	50.0	62.3	5.3	26.5	9.0	25.0		1.0	0.0	2.0	5.5	0.5	1.5	5.3	1.0	69.8	43.5	30.0
	338	261,090.9	30.0	22.2	10.6	4.1	48.9	13.2	11.3	17.1	18.0	13.0	5.0	10.0	66.0	68.1	54.3	63.7	43.2	148.8
	340	236,054.8	6.0	13.6	16.3	40.8	10.0	6.4	17.7	5.4	3.2	2.8	0.0	0.2	0.0	9.0	1.6	8.8	44.0	11.4
	351	346,653.9	80.0	85.6	80.7	39.5	75.2	43.5	52.4	24.5	7.2	5.8	0.3	0.8	28.5	65.3	50.7	324.2	105.3	147.5
	352	354,907.6	63.7	55.6	73.0	103.4	47.2	50.7	77.9	78.4	50.8	226.1	55.6	36.0	312.6	177.4	246.3	279.7	268.4	217.9
	353	17.6353.31	2.0	98.5	32.1	148.5	3.0	9.6	20.7	26.7	10.0	66.5	1.8	70.2	122.2	175.0	190.6	188.2	92.4	124.9
93-183	329	236,742.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0
	332	144,026.5	0.0	0.6	14.2	9.2	0.3	30.4	1.8	1.3	1.0	13.3	0.3	1.5	6.5	1.3	7.5	4.8	0.0	4.3
	337	130,407.9	0.0	0.0	1.0	1.2	2.3	2.8	0.0	0.0	1.0	7.0	0.3	0.5	3.0	15.9	0.5	0.9	2.0	0.0
	339	80,473.2	1.0	0.3	0.3	0.3	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	27.0
	354	65,204.0	0.0	1.0	0.0	0.0	0.0	0.5	0.0	3.0	0.0	0.0	0.0	0.7	2.0	0.5	0.0	0.4	1.0	0.0
184-274	355	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	4.9	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	6.3	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
	719	10,454.6								0.0	0.0	0.0	0.0	0.0	0.8	3.5	0.0	0.0	0.0	0.0
	721	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2								0.0	0.0	0.0	0.0	6.5	0.0	4.9	0.0	0.0	0.0	0.0
732-914	764	14,443.9											0.0					.	.	.
	772	18,570.8											0.0					.	.	.
Mean No. (sets)			**25.8(52)**	**34.2(93)**	**28.5(95)**	**36.9(91)**	**24.2(77)**	**18.9(101)**	**23.9(84)**	**19.7(107)**	**11.0(91)**	**39.8(75)**	**8.6(76)**	**11.2(80)**	**70.663.3(70**	**54.6(75)**	**60.9(93)**	**105.4(86)**	**73.1(83)**	**77.3(79)**
Upper C.I.			**42.0**	**46.2**	**39.5**	**52.6**	**34.6**	**26.1**	**36.5**	**30.0**	**15.9**	**80.5**	**17.6**	**19.2**	**87.3**	**89.1**	**83.4**	**141.2**	**96.8**	**113.3**
Lower C.I.			**9.6**	**22.1**	**17.5**	**21.2**	**13.9**	**11.8**	**11.2**	**9.3**	**6.1**	**-0.9**	**-0.4**	**3.1**	**39.4**	**20.1**	**38.3**	**69.7**	**49.4**	**41.2**

Table 5. Mean Weight (Kg) per set of Yellowtail Flounder by stratum, Div 3L - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 28*	1985 *WT 28-30*	1986 *WT 48*	1987 *WT 58-60*	1988 *WT 70,71*	1989 *WT 82,83*	1990 *WT 96*	1991 *WT 106,107*	1992 *WT 120-122*	1993 *WT 137,138*	1994 *WT 152-154*	1995 *WT 169,170*	1996 *WT 189-191*	1997 *WT 205-208*	1998 *WT221-224*	1999 *WT240-41*	2000 *WT317,318*	2001 *WT368-70*
30-56	784	36,866.4															0.0	0.0	.	0.0
57-92	350	284,889.0	1.4	3.5	2.0	0.6	1.4	0.6	0.2	0.7	0.1	0.0	0.1	0.0	0.7	0.0	0.0	16.3	8.4	2.1
	363	244,858.7	22.2	12.6	6.9	6.3	4.5	1.6	3.4	0.6	0.1	0.0	0.0	0.0	2.2	0.5	0.0	51.6	43.6	5.3
	371	154,206.0		0.4	0.3	0.0	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.4	0.0	0.0
	372	338,400.3	46.5	48.2	28.7	11.2	6.2	9.9	4.0	2.0	0.3	0.4	0.1	0.0	1.1	0.7	1.4	24.2	12.0	7.0
	384	154,068.4		3.7	1.5	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.2	0.3
	785	63,965.9															0.0	0.0	.	0.0
93-183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	343	72,219.6		0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5		0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.1	0.0	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	7.9	1.0	0.0
	364	387,509.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.2	0.0
	365	143,201.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1															0.0	0.0	.	0.0
	787	84,325.0															.	0.0	.	0.0
184-274	344	205,516.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2		0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1															0.0	.	.	0.0
550-731	730	23,385.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732-914	737	31,226.4											0.0				.	.	.	.
	741	30,676.1											0.0				.	.	.	.
	745	47,871.3											0.0				.	.	.	.
	748	21,872.2											0.0				.	.	.	.
Mean Wt (No.sets)			**10.7(37)**	**4.0(221)**	**2.5(211)**	**1.1(181)**	**0.7(154)**	**0.8(205)**	**0.44(156)**	**0.22(143)**	**.03(178)**	**.02(181)**	**0.01(160)**	**0.0(151)**	**0.2(188)**	**0.1(158)**	**0.1(155)**	**5.0(175)**	**3.2(134)**	**0.8(153)**
Upper C.I.			**19.0**	**6.0**	**3.6**	**1.7**	**1.1**	**1.3**	**0.8**	**0.4**	**0.1**	**0.1**	**0.0**	**0.0**	**0.3**	**0.1**	**0.2**	**8.0**	**4.8**	**1.6**
Lower C.I.			**2.3**	**1.9**	**1.4**	**0.6**	**0.4**	**0.2**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**-0.1**	**1.9**	**1.7**	**0.0**

Table 6. Mean Weight (Kg) per set of Yellowtail Flounder by stratum, Div 3N - Spring

Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 27*	*AN 43*	*WT 47*	*WT 58,59*	*WT 70*	*WT 82*	*WT 95,96*	*WT 106*	*WT 119,120*	*WT 136,137*	*WT 152,153*	*WT 168,169*	*WT 189*	*WT 205,206*	*WT221-24*	*WT238-40*	WT316,317	WT367-69
(m)		Units		*WT 29*																
<=56	375	219,134.8	150.0	78.2	181.6	103.8	50.6	21.2	84.3	11.7	118.4	49.5	12.1	59.7	78.7	87.5	90.8	100.2	70.1	84.6
	376	206,204.1	30.0	66.8	66.8	78.7	12.6	121.7	70.9	143.7	22.4	5.1	0.6	2.8	5.4	123.6	99.6	150.2	72.8	253.6
57-92	360	411,582.8	106.6	46.3	11.2	7.4	2.5	61.0	12.2	12.1	25.3	8.8	2.5	39.6	68.1	39.1	77.8	186.0	63.5	146.3
	361	254,900.7	126.7	59.9	38.3	58.1	70.2	43.5	105.0	82.3	29.6	82.5	163.9	108.5	106.1	102.5	122.4	123.3	129.2	164.5
	362	346,653.9	86.8	32.1	61.2	40.3	35.1	24.6	30.3	24.4	29	40.9	1.3	0.3	83.5	97.1	111.8	166.3	162.4	123.6
	373	346,653.9	52.9	26.4	13.9	17.8	18.2	11.1	0.9	7.1	0.0	0.0	0.9	0.0	1.9	1.0	3.2	32.0	121.1	228.0
	374	128,069.4	30.1	21.1	8.9	4.3	2.3	0.1	0.6	0.2	0.6	0.0	0.0	1.1	7.1	3.0	1.2	69.0	74.3	23.9
	383	92,716.2	2.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
	377	13,756.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
275-366	357	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9								0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5								0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
732-914	752	18,433.2											0.0					.	.	.
	756	14,581.5											0.0					.	.	.
	760	21,184.4											0.0					.	.	.
Mean wt (No.sets)			**73.1(61)**	**38.4(85)**	**41.5(101)**	**34.1(91)**	**22.4(77)**	**34.1(94)**	**33.0(85)**	**28.8(93)**	**20.8(94)**	**21.1(85)**	**19.3(76)**	**24.1(89)**	**43.3(82)**	**51.0(71)**	**59.8(88)**	**99.3(82)**	**82.2(81)**	**124.1(79)**
Upper C.I.			**97.3**	**48.7**	**58.9**	**47.8**	**31.1**	**50.3**	**47.1**	**39.7**	**33.2**	**36.0**	**33.9**	**36.3**	**54.0**	**72.2**	**80.2**	**127.4**	**103.5**	**186.4**
Lower C.I.			**48.9**	**28.1**	**24.0**	**20.5**	**13.7**	**18.0**	**18.9**	**17.9**	**8.4**	**6.2**	**4.7**	**11.9**	**32.6**	**29.8**	**39.5**	**71.3**	**60.9**	**61.8**

Table 7. Mean Weight (Kg) per set of Yellowtail Flounder by stratum, Div 30 - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43*	1986 *WT 47*	1987 *WT 58*	1988 *WT 70*	1989 *WT 82*	1990 *WT 94,95*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 *WT221-24*	1999 *WT238-39*	2000 *WT315-317*	2001 *WT367*
57-92	330	287,365.1	0.6	6.7	2.6	0.7	0.6	1.1	0.7	4.0	0.0	0.1	0.0	0.0	0.9	0.2	0.2	0.3	23.7	2.3
	331	62,727.9	21.7	29.5	2.8	13.2	4.6	14.8		0.6	0.0	1.4	2.8	0.2	0.5	1.6	0.0	27.3	19.1	10.0
	338	261,090.9	12.7	10.6	5.4	1.9	19.6	6.4	5.6	5.1	8.1	5.3	2.7	4.9	30.8	24.8	21.2	27.6	18.1	53.9
	340	236,054.8	2.9	6.6	7.5	18.3	4.7	3.2	8.5	2.7	1.6	1.5	0.0	0.0	0.0	3.4	0.8	4.2	17.8	4.4
	351	346,653.9	35.8	37.5	33.8	17.3	32.4	20.0	24.2	11.6	3.2	2.4	0.1	0.3	13.6	26.6	18.0	89.7	34.9	44.3
	352	354,907.6	28.1	24.5	30.0	42.9	21.3	22.7	31.5	38.3	19.9	93.0	22.7	15.4	129.7	72.0	83.5	110.1	100.0	75.3
	353	17.6353.31	1.1	43.2	15.9	75.7	1.6	4.9	9.9	13.0	4.6	29.8	1.1	31.8	60.5	56.3	90.8	103.2	41.8	24.9
93-183	329	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
	332	144,026.5	0.0	0.3	7.7	5.0	0.1	11.9	0.8	0.7	0.5	6.2	0.2	0.9	3.5	0.5	2.3	1.8	0.0	2.2
	337	130,407.9	0.0	0.0	0.6	0.6	1.0	1.7	0.0	0.0	0.4	4.4	0.2	0.2	2.0	6.4	0.2	0.5	1.0	0.0
	339	80,473.2	0.6	0.2	0.1	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	11.7
	354	65,204.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	0.3	0.9	0.4	0.0	0.1	0.6	0.0
184-274	355	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	2.6	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	3.1	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
	719	10,454.6								0.0	0.0	0.0	0.0	0.0	0.5	2.0	0.0	0.0	0.0	0.0
	721	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2								0.0	0.0	0.0	0.0	3.9	0.0	2.3	0.0	0.0	0.0	0.0
732-914	764	14,443.9											0.0						.	.
	772	18,570.8											0.0						.	.
Mean wt (No.sets)			**11.4(52)**	**15.2(52)**	**12.4(95)**	**16.7(91)**	**10.5(77)**	**8.7(101)**	**10.5(84)**	**9.1(107)**	**4.6(86)**	**16.7(75)**	**3.7(76)**	**5.0(80)**	**27.6(80)**	**20.8(75)**	**22.9(93)**	**38.7(86)**	**28.3(83)**	**24.9(79)**
Upper C.I.			**18.5**	**20.6**	**16.8**	**23.9**	**14.7**	**11.6**	**15.8**	**14.3**	**6.7**	**33.3**	**7.1**	**8.7**	**37.7**	**32.5**	**31.6**	**51.3**	**36.8**	**36.0**
Lower C.I.			**4.4**	**9.9**	**7.9**	**9.5**	**6.3**	**5.9**	**5.2**	**4.1**	**2.4**	**0.1**	**0.2**	**1.3**	**17.6**	**9.2**	**14.1**	**26.1**	**19.7**	**13.9**

Table 8. Abundance (millions) of Yellowtail Flounder by stratum, Div 3L - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 28*	1985 *WT 28-30*	1986 *WT 48*	1987 *WT 58-60*	1988 *WT 70,71*	1989 *WT 82,83*	1990 *WT 96*	1991 *WT 106,107*	1992 *WT 120-122*	1993 *WT 137,138*	1994 *WT 152-154*	1995 *WT 169,170*	1996 *WT 189-191*	1997 *WT 205-208*	1998 *WT221-24*	1999 *WT240-41*	2000 *WT317,318*	2001 *WT368-70*
30-56	784	36866.37															0.0	0.0	.	0.0
57-92	350	284,889.0	0.9	2.1	1.2	0.4	0.8	0.4	0.1	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	9.4	6.1	1.3
	363	244,858.7	11.2	6.8	3.6	3.2	2.4	0.8	1.9	0.3	0.1	0.0	0.0	0.0	1.1	0.2	0.0	23.2	24.0	3.3
	371	154,206.0		0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.0
	372	338,400.3	32.7	39.6	21.0	8.3	4.7	6.6	2.7	1.4	0.2	0.2	0.0	0.0	0.8	0.8	1.5	16.0	9.6	6.5
	384	154,068.4		1.2	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
	785	63,965.9															0.0	0.0	.	0.0
93-183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343	72,219.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.8	0.0
	364	387,509.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.2	0.0
	365	143,201.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1															0.0	0.0	.	0.0
	787	84,325.0															0.0	0.0	0.0	0.0
184-274	344	205,516.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1															.	0.0	.	0.0
550-731	730	23,385.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732-914	737	31,226.4											0.0				.	.	.	.
	741	30,676.1											0.0				.	.	.	.
	745	47,871.3											0.0				.	.	.	.
	748	21,872.2											0.0				.	.	.	.
Abundance (millions)			**45.4**	**49.9**	**26.9**	**12.3**	**8.1**	**7.9**	**4.7**	**2.2**	**0.3**	**0.2**	**0.1**	**0.0**	**2.5**	**1.2**	**1.6**	**55.4**	**40.7**	**11.5**
Upper C.I.			**80.7**	**77.5**	**39.7**	**18.4**	**11.9**	**13.2**	**8.3**	**3.6**	**0.7**	**0.7**	**0.3**	**0.0**	**3.8**	**2.0**	**4.3**	**89.9**	**60.3**	**23.1**
Lower C.I.			**10.2**	**22.3**	**14.2**	**6.2**	**4.3**	**2.7**	**1.1**	**0.8**	**-0.1**	**-0.2**	**0.0**	**0.0**	**1.2**	**0.4**	**-1.1**	**20.9**	**21.0**	**-0.1**

Table 9. Abundance (millions) of Yellowtail Flounder by stratum, Div 3N - Spring																				
Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43 WT 29*	1986 *WT 47*	1987 *WT 58,59*	1988 *WT 70*	1989 *WT 82*	1990 *WT 95,96*	1991 *WT 106*	1992 *WT 119,120*	1993 *WT 136,137*	1994 *WT 152,153*	1995 *WT 168,169*	1996 *WT 189*	1997 *WT 205,206*	1998 *WT221-24*	1999 *WT238-40*	2000 WT316,317	2001 WT367-69
<=56	375	219,134.8	81.9	36.3	89.8	45.6	26.0	18.0	56.9	4.7	74.6	29.7	6.4	30.6	132.2	106.8	90.2	104.4	78.7	66.1
	376	206,204.1	18.9	45.4	33.5	148.4	25.9	201.5	107.5	157.6	37.9	7.2	0.5	2.2	14.0	212.3	108.2	187.9	72.1	236.3
57-92	360	411,582.8	119.2	63.9	13.3	13.6	2.9	197.7	37.7	20.6	57.7	17.2	2.8	54.8	150.1	51.9	154.1	280.0	88.8	226.1
	361	254,900.7	86.3	43.6	25.8	33.2	42.5	36.3	74.8	61.9	16.2	60.6	115.0	70.5	115.6	108.9	116.2	149.5	138.7	162.9
	362	346,653.9	78.7	25.8	55.4	35.8	25.4	17.7	27.5	18.6	2.6	30.1	0.8	0.2	58.7	73.0	104.0	176.1	180.0	181.1
	373	346,653.9	42.3	20.1	9.8	13.4	12.0	7.2	0.9	4.6	0.0	0.0	1.0	0.0	2.7	0.6	3.8	35.7	108.1	236.0
	374	128,069.4	7.6	4.9	1.9	1.0	0.5	0.0	0.2	0.1	0.1	0.0	0.0	0.4	2.0	1.4	0.7	31.8	28.9	11.3
	383	92,716.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	377	13,756.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	357	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9								0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5								0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
732-914	752	18,433.2											0.0					.	.	.
	756	14,581.5											0.0					.	.	.
	760	21,184.4											0.0					.	.	.
Abundance (millions)			**435.3**	**240.1**	**229.5**	**291.0**	**135.3**	**478.3**	**305.5**	**268.1**	**189.2**	**145.0**	**126.4**	**158.8**	**475.3**	**554.9**	**577.2**	**965.4**	**695.3**	**1,119.9**
Upper C.I.			**576.5**	**310.0**	**325.1**	**459.6**	**198.0**	**770.4**	**473.6**	**397.2**	**303.0**	**248.8**	**218.8**	**242.5**	**611.8**	**832.5**	**778.1**	**1,200.0**	**855.6**	**1,584.8**
Lower C.I.			**294.1**	**170.1**	**133.9**	**122.5**	**72.5**	**186.2**	**137.4**	**139.0**	**75.3**	**41.1**	**34.0**	**75.1**	**338.8**	**277.3**	**376.4**	**730.9**	**535.0**	**655.1**

Table 10. Abundance (millions) of Yellowtail Flounder by stratum, Div 30 - Spring																				
Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43*	1986 *WT 47*	1987 *WT 58*	1988 *WT 70*	1989 *WT 82*	1990 *WT 94,95*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 WT221-224	1999 WT238,239	2000 *WT315-317*	2001 *WT367*
57-92	330	287,365.1	0.3	4.3	1.4	0.4	0.3	0.6	0.3	2.6	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.2	13.6	1.6
	331	62,727.9	3.1	3.9	0.3	1.7	0.6	1.6		0.1	0.0	0.1	0.3	0.0	0.1	0.3	0.1	4.4	2.7	1.9
	338	261,090.9	7.8	5.8	2.8	1.1	12.8	3.4	2.9	4.5	4.7	3.4	1.3	2.6	17.2	17.8	14.2	16.6	11.3	38.9
	340	236,054.8	1.4	3.2	3.8	9.6	2.4	1.5	4.2	1.3	0.8	0.7	0.0	0.0	0.0	2.1	0.4	2.1	10.4	2.7
	351	346,653.9	27.7	29.7	28.0	13.7	26.1	15.1	18.2	8.5	2.5	2.0	0.1	0.3	9.9	22.7	17.6	112.4	36.5	51.1
	352	354,907.6	22.6	19.7	25.9	36.7	16.7	18.0	27.7	27.8	18.0	80.3	19.7	12.8	110.9	63.0	87.4	99.3	95.3	77.3
	353	17.6353.31	0.4	17.4	5.7	26.2	0.5	1.7	3.6	4.7	1.8	11.7	0.3	12.4	21.6	30.9	33.6	33.2	16.3	22.0
93-183	329	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	332	144,026.5	0.0	0.1	2.0	1.3	0.0	4.4	0.3	0.2	0.1	1.9	0.0	0.2	0.9	0.2	1.1	0.7	0.0	0.6
	337	130,407.9	0.0	0.0	0.1	0.2	0.3	0.4	0.0	0.0	0.1	0.9	0.0	0.1	0.4	2.1	0.1	0.1	0.3	0.0
	339	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	2.2
	354	65,204.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
184-274	355	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2								0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
732-914	764	14,443.9											0.0					.	.	.
	772	18,570.8											0.0					.	.	.
Abundance (millions)			**63.5**	**84.1**	**70.1**	**90.9**	**59.7**	**46.7**	**57.3**	**50.0**	**28.0**	**101.1**	**21.9**	**28.5**	**161.7**	**139.4**	**154.5**	**269.1**	**186.5**	**198.3**
Upper C.I.			**103.4**	**113.8**	**97.2**	**129.5**	**85.2**	**64.2**	**87.6**	**76.3**	**40.4**	**204.4**	**44.7**	**49.1**	**222.7**	**227.5**	**211.7**	**360.3**	**247.1**	**290.3**
Lower C.I.			**23.5**	**54.5**	**43.0**	**52.3**	**34.2**	**29.2**	**26.9**	**23.6**	**15.6**	**-2.2**	**-1.0**	**8.0**	**100.6**	**51.4**	**97.3**	**177.9**	**126.0**	**106.3**

Table 11. Abundance (millions) of Yellowtail Flounder by stratum, Div 3LN0 - Spring

Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 27,28*	*AN 43*	*WT 47,48*	*WT 58-60*	*WT 70,71*	*WT 82-83*	*WT 94-96*	*WT 105-107*	*WT 119-122*	*WT 136-138*	*WT152-154*	*WT 168-170*	*WT 188-191*	*WT 204-208*	*WT221-224*	*WT238-41*	*WT315-18*	*WT367-70*
(m)		Units		*WT 28-30*																
<=56	375-3N	219,134.8	81.9	36.3	89.8	45.6	26.0	18.0	56.9	4.7	74.6	29.7	6.4	30.6	132.2	106.8	90.2	104.4	78.7	66.1
	376-3N	206,204.1	18.9	45.4	33.5	148.4	25.9	201.5	107.5	157.6	37.9	7.2	0.5	2.2	14.0	212.3	108.2	187.9	72.1	236.3
	784-3L	36,866.4	.																	0.0
TOTAL			**100.7**	**81.7**	**123.2**	**194.0**	**51.9**	**219.5**	**164.4**	**162.3**	**112.5**	**36.9**	**6.8**	**32.8**	**146.2**	**319.1**	**198.4**	**292.2**	**150.8**	**302.4**
57-92	330-3O	287,365.1	0.3	4.3	1.4	0.4	0.3	0.6	0.3	2.6	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.2	13.6	0.5
	331-3O	62,727.9	3.1	3.9	0.3	1.7	0.6	1.6		0.1	0.0	0.1	0.3	0.0	0.1	0.3	0.1	4.4	2.7	1.9
	338-3O	261,090.9	7.8	5.8	2.8	1.1	12.8	3.4	2.9	4.5	4.7	3.4	1.3	2.6	17.2	17.8	14.2	16.6	11.3	38.9
	340-3O	236,054.8	1.4	3.2	3.8	9.6	2.4	1.5	4.2	1.3	0.8	0.7	0.0	0.0	0.0	2.1	0.4	2.1	10.4	2.7
	350-3L	284,889.0	0.9	2.1	1.2	0.4	0.8	0.4	0.1	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	9.4	6.1	1.3
	351-3O	346,653.9	27.7	29.7	28.0	13.7	26.1	15.1	18.2	8.5	2.5	2.0	0.1	0.3	9.9	22.7	17.6	112.4	36.5	51.1
	352-3O	354,907.6	22.6	19.7	25.9	36.7	16.7	18.0	27.7	27.8	18.0	80.3	19.7	12.8	110.9	63.0	87.4	99.3	95.3	77.3
	353-3O	17.6353.31	0.4	17.4	5.7	26.2	0.5	1.7	3.6	4.7	1.8	11.7	0.3	12.4	21.6	30.9	33.6	33.2	16.3	22.0
	360-3N	411,582.8	119.2	63.9	13.3	13.6	2.9	197.7	37.7	20.6	57.7	17.2	2.8	54.8	150.1	51.9	154.1	280.0	88.8	226.1
	361-3N	254,900.7	86.3	43.6	25.8	33.2	42.5	36.3	74.8	61.9	16.2	60.6	115.0	70.5	115.6	108.9	116.2	149.5	138.7	162.9
	362-3N	346,653.9	78.7	25.8	55.4	35.8	25.4	17.7	27.5	18.6	2.6	30.1	0.8	0.2	58.7	73.0	104.0	176.1	180.0	181.1
	363-3L	244,858.7	11.2	6.8	3.6	3.2	2.4	0.8	1.9	0.3	0.1	0.0	0.0	0.0	1.1	0.2	0.0	23.2	24.0	3.3
	371-3L	154,206.0		0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0		0.4	0.0	0.0
	372-3L	338,400.3	32.7	39.6	21.0	8.3	4.7	6.6	2.7	1.4	0.2	0.2	0.0	0.0	0.8	0.8	1.7	16.0	9.6	6.5
	373-3N	346,653.9	42.3	20.1	9.8	13.4	12.0	7.2	0.9	4.6	0.0	0.0	1.0	0.0	2.7	0.6	3.8	35.7	108.1	236.0
	374-3N	128,069.4	7.6	4.9	1.9	1.0	0.5	0.0	0.2	0.1	0.1	0.0	0.0	0.4	2.0	1.4	0.7	31.8	28.9	11.3
	383-3N	92,716.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	384-3L	154,068.4		1.2	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
	785-3L	63,965.9																		0.0
TOTAL			**442.7**	**292.1**	**200.4**	**198.5**	**150.7**	**308.6**	**202.7**	**157.4**	**104.7**	**206.5**	**141.5**	**154.1**	**491.7**	**373.9**	**533.9**	**990.3**	**770.1**	**1,023.2**
93-183	328-3L	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	329-3O	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	332-3O	144,026.5	0.0	0.1	2.0	1.3	0.0	4.4	0.3	0.2	0.1	1.9	0.0	0.2	0.9	0.2	1.1	0.7	0.0	0.6
	337-3O	130,407.9	0.0	0.0	0.1	0.2	0.3	0.4	0.0	0.0	0.1	0.9	0.0	0.1	0.4	2.1	0.1	0.1	0.3	0.0
	339-3O	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	2.2
	341-3L	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	342-3L	80,473.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343-3L	72,219.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	348-3L	291,629.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	349-3L	290,804.1	0.0	0.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.7	0.0
	354-3O	65,204.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
	359-3N	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	364-3L	387,509.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.2	0.0
	365-3L	143,201.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	370-3L	181,580.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	377-3N	13,756.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382-3N	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385-3L	324,093.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390-3L	203,728.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786-3L	11,555.1																		0.0
	787-3L	84,325.0																		0.0
TOTAL			**0.7**	**0.3**	**2.9**	**1.7**	**0.5**	**4.8**	**0.4**	**0.5**	**0.3**	**2.9**	**0.1**	**0.3**	**1.5**	**2.3**	**1.2**	**7.3**	**1.6**	**3.1**

Table 11 Con'd

Depth Range (m)	Stratum	No. of trawlable Units	1984 AN 27,28	1985 AN 43 WT 28-30	1986 WT 47,48	1987 WT 58-60	1988 WT 70,71	1989 WT 82-83	1990 WT 94-96	1991 WT 105-107	1992 WT 119-122	1993 WT 136-138	1994 WT 152-154	1995 WT 168-170	1996 WT 188-191	1997 WT 204-208	1998 WT221-224	1999 WT238-41	2000 WT315-18	2001 WT367-70
184-274	333-3O	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336-3O	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	344-3L	205,516.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	347-3L	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	355-3O	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	358-3N	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366-3L	191,760.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	369-3L	132,196.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	378-3N	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381-3N	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386-3L	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	389-3L	112,937.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	391-3L	38,792.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275-366	334-3O	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335-3O	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	345-3L	196,987.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	346-3L	118,990.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	356-3O	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	357-3N	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368-3L	45,945.4		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	379-3N	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380-3N	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387-3L	98,768.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	388-3L	49,659.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	392-3L	19,946.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**
367-549	717-3O	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719-3O	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721-3O	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723-3N	21,322.0								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725-3N	14,443.9								0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727-3N	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729-3L	25,586.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731-3L	29,713.2		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	733-3L	64,378.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	735-3L	37,416.6		0.0							0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
TOTAL				**0.0**						**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table 11 Con'd																				
Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 27,28*	*AN 43*	*WT 47,48*	*WT 58-60*	*WT 70,71*	*WT 82-83*	*WT 94-96*	*WT 105-107*	*WT 119-122*	*WT 136-138*	*WT 152-154*	*WT 168-170*	*WT 188-191*	*WT 204-208*	*WT221-224*	*WT238-41*	*WT315-18*	*WT367-70*
(m)		Units		*WT 28-30*																
550-731	718-3N	15,269.3								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720-3N	14,443.9								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722-3N	12,793.2								0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
	724-3O	17,057.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726-3O	9,904.4								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728-3O	21,459.5								0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
	730-3L	23,385.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732-3L	31,776.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	734-3L	31,363.9		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	736-3L	24,073.2		0.0							0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
TOTAL				**0.0**						**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**
732-914	737-3L	31,226.4											0.0							.
	741-3L	30,676.1											0.0							.
	745-3L	47,871.3											0.0							.
	748-3L	21,872.2											0.0							.
	752-3N	18,433.2											0.0							.
	756-3N	14,581.5											0.0							.
	760-3N	21,184.4											0.0							.
	764-3O	14,443.9											0.0							.
	772-3O	18,570.8											0.0							.
TOTAL													**0.0**				**0.0**			
Abundance (millions)			**544.2**	**374.1**	**326.5**	**394.2**	**203.1**	**532.9**	**367.4**	**320.3**	**217.4**	**246.3**	**148.4**	**187.4**	**639.4**	**695.5**	**733.6**	**1,289.9**	**922.5**	**1,328.5**
Upper C.I.			**691.2**	**453.2**	**425.8**	**565.7**	**269.6**	**825.6**	**536.9**	**450.5**	**331.5**	**380.8**	**244.7**	**272.7**	**785.8**	**974.8**	**940.9**	**1,540.0**	**1,092.8**	**1,800.2**
Lower C.I.			**397.2**	**295.0**	**227.3**	**222.7**	**136.5**	**240.3**	**198.0**	**190.0**	**103.4**	**111.8**	**52.2**	**102.1**	**493.1**	**416.3**	**526.2**	**1,039.7**	**752.2**	**856.9**

Table 12. Biomass estimates ('000t) of Yellowtail Flounder by stratum, Div 3L - Spring

Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 28*	*WT 28-30*	*WT 48*	*WT 58-60*	*WT 70,71*	*WT 82,83*	*WT 96*	*WT 106,107*	*WT 120-122*	*WT 137,138*	*WT 152-154*	*WT 169,170*	*WT 189-191*	*WT 205-208*	*WT221-24*	*WT 240-41*	*WT317,318*	*WT368-70*
(m)		Units																		
30-56	784	36866.37																.		0.0
57-92	350	284,889.0	0.4	1.0	0.6	0.2	0.4	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	4.6	2.4	0.6
	363	244,858.7	5.4	3.1	1.7	1.6	1.1	0.4	0.8	0.1	0.0	0.0	0.0	0.0	0.5	0.1	0.0	12.6	10.7	1.3
	371	154,206.0		0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
	372	338,400.3	15.7	16.3	9.7	3.8	2.1	3.4	1.3	0.7	0.1	0.1	0.0	0.0	0.4	0.2	0.5	8.2	4.1	2.4
	384	154,068.4		0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	785	63,965.9																		0.0
93-183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343	72,219.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3	0.0
	364	387,509.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0
	365	143,201.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1																		0.0
	787	84,325.0																		0.0
184-274	344	205,516.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1																		0.0
550-731	730	23,385.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2		0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732-914	737	31,226.4											0.0					.	.	.
	741	30,676.1											0.0					.	.	.
	745	47,871.3											0.0					.	.	.
	748	21,872.2											0.0					.	.	.
Biomass ('000t)			**21.9**	**21.1**	**12.6**	**5.8**	**3.7**	**4.0**	**2.2**	**1.1**	**0.2**	**0.1**	**0.0**	**0.0**	**1.1**	**0.5**	**0.5**	**28.5**	**17.5**	**4.4**
Upper C.I.			**38.9**	**32.0**	**18.3**	**8.5**	**5.4**	**6.8**	**4.0**	**1.8**	**0.4**	**0.3**	**0.1**	**0.0**	**1.7**	**0.8**	**1.3**	**46.2**	**25.8**	**8.9**
Lower C.I.			**4.8**	**10.2**	**6.8**	**3.1**	**2.1**	**1.2**	**0.5**	**0.4**	**-0.1**	**-0.1**	**0.0**	**0.0**	**0.5**	**0.1**	**-0.3**	**10.8**	**9.3**	**0.0**

Table 13. Biomass estimates ('000t) of Yellowtail Flounder by stratum, Div 3N - Spring																				
Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43 WT 29*	1986 *WT 47*	1987 *WT 58,59*	1988 *WT 70*	1989 *WT 82*	1990 *WT 95,96*	1991 *WT 106*	1992 *WT 119,120*	1993 *WT 136,137*	1994 *WT 152,153*	1995 *WT 168,169*	1996 *WT 189*	1997 *WT 205,206*	1998 *WT221-24*	1999 *WT 239-40*	2000 WT316,317	2001 WT367-69
<=56	375	219,134.8	32.9	17.1	39.8	22.8	11.1	4.6	18.5	2.6	25.9	10.8	2.7	13.1	17.3	19.2	19.9	21.9	15.4	18.5
	376	206,204.1	6.2	13.8	13.8	16.2	2.6	25.1	14.6	29.6	4.6	1.1	0.1	0.6	1.1	25.5	20.5	31.0	15.0	52.3
57-92	360	411,582.8	43.9	19.0	4.6	3.1	1.0	25.1	5.0	5.0	10.4	3.6	1.0	16.3	28.0	16.1	32.0	76.5	26.2	60.2
	361	254,900.7	32.3	15.3	9.8	14.8	17.9	11.1	26.8	21.0	7.5	21.0	41.8	27.7	27.1	26.1	31.2	31.4	32.9	41.9
	362	346,653.9	30.1	11.1	21.2	14.0	12.2	8.5	10.5	8.5	1.0	14.2	0.5	0.1	28.9	33.7	38.8	57.6	56.3	42.9
	373	346,653.9	18.3	9.1	4.8	6.2	6.3	3.8	0.3	2.5	0.0	0.0	0.3	0.0	0.6	0.3	1.1	11.1	42.0	79.0
	374	128,069.4	3.9	2.7	1.1	0.6	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.9	0.4	0.1	8.8	9.5	3.1
	383	92,716.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	377	13,756.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	357	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9								0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5								0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
732-914	752	18,433.2											0.0					.	.	.
	756	14,581.5											0.0					.	.	.
	760	21,184.4											0.0					.	.	.
Biomass ('000t)			**167.7**	**88.2**	**95.1**	**77.5**	**51.4**	**78.3**	**75.7**	**69.1**	**49.6**	**50.8**	**46.3**	**57.9**	**103.9**	**121.3**	**143.7**	**238.5**	**197.3**	**297.9**
Upper C.I.			**223.2**	**111.9**	**135.2**	**108.5**	**71.4**	**115.4**	**108.1**	**95.3**	**79.1**	**86.5**	**81.5**	**87.2**	**129.7**	**171.7**	**192.6**	**305.8**	**248.4**	**447.6**
Lower C.I.			**112.1**	**64.5**	**55.1**	**46.6**	**31.4**	**41.2**	**43.3**	**42.9**	**20.1**	**15.0**	**11.2**	**28.6**	**78.2**	**70.9**	**94.8**	**171.1**	**146.2**	**148.3**

Table 14. Biomass estimates ('000t) of Yellowtail Flounder by stratum, Div 30 - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43*	1986 *WT 47*	1987 *WT 58*	1988 *WT 70*	1989 *WT 82*	1990 *WT 94,95*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 *WT221-24*	1999 *WT238-39*	2000 *WT315-317*	2001 *WT367*
57-92	330	287,365.1	0.2	1.9	0.7	0.2	0.2	0.3	0.2	1.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	6.8	0.7
	331	62,727.9	1.4	1.9	0.2	0.8	0.3	0.9	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	1.7	1.2	0.6
	338	261,090.9	3.3	2.8	1.4	0.5	5.1	1.7	1.4	1.3	2.1	1.4	0.7	1.3	8.0	6.5	5.5	7.2	4.7	14.1
	340	236,054.8	0.7	1.5	1.8	4.3	1.1	0.8	2.0	0.6	0.4	0.4	0.0	0.0	0.0	0.8	0.2	1.0	4.2	1.0
	351	346,653.9	12.4	13.0	11.7	6.0	11.2	6.9	8.4	4.0	1.1	0.8	0.0	0.1	4.7	9.2	6.2	31.1	12.1	15.4
	352	354,907.6	10.0	8.7	10.7	15.2	7.5	8.0	11.2	13.6	7.1	33.0	8.1	5.5	46.0	25.6	29.7	39.1	35.5	26.7
	353	17.6353.31	0.2	7.6	2.8	13.4	0.3	0.9	1.7	2.3	0.8	5.3	0.2	5.6	10.7	9.9	16.0	18.2	7.4	4.4
93-183	329	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	332	144,026.5	0.0	0.0	1.1	0.7	0.0	1.7	0.1	0.1	0.1	0.9	0.0	0.1	0.5	0.1	0.3	0.3	0.0	0.3
	337	130,407.9	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.6	0.0	0.0	0.3	0.8	0.0	0.1	0.1	0.0
	339	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
	354	65,204.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
184-274	355	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732-914	764	14,443.9											0.0					.	.	.
	772	18,570.8											0.0					.	.	.
Biomass ('000t)			**28.2**	**37.5**	**30.5**	**41.2**	**25.8**	**21.5**	**25.1**	**23.3**	**11.6**	**42.4**	**9.2**	**12.7**	**70.6**	**53.2**	**58.0**	**98.7**	**72.1**	**63.6**
Upper C.I.			**45.6**	**50.7**	**41.4**	**59.0**	**36.2**	**28.5**	**37.8**	**36.3**	**17.0**	**84.5**	**18.0**	**22.2**	**96.3**	**82.9**	**80.2**	**130.8**	**93.9**	**91.9**
Lower C.I.			**10.8**	**24.3**	**19.5**	**23.5**	**15.5**	**14.4**	**12.4**	**10.3**	**6.2**	**0.3**	**0.5**	**3.3**	**44.9**	**23.5**	**35.9**	**66.6**	**50.4**	**35.4**

Table 15. Biomass estimates ('000t) of Yellowtail Flounder by stratum, Div 3LN0 - Spring

Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 27,28*	*AN 43*	*WT 47,48*	*WT 58-60*	*WT 70,71*	*WT 82-83*	*WT 94-96*	*WT 105-107*	*WT 119-122*	*WT 136-138*	*WT 152-154*	*WT 168-170*	*WT 188-191*	*WT 204-208*	*WT221-24*	*WT 238-41*	*WT315-18*	*WT367-70*
(m)		Units		*WT 28-30*																
<=56	375-3N	219,134.8	32.9	17.1	39.8	22.8	11.1	4.6	18.5	2.6	25.9	10.8	2.7	13.1	17.3	19.2	19.9	21.9	15.4	18.5
	376-3N	206,204.1	6.2	13.8	13.8	16.2	2.6	25.1	14.6	29.6	4.6	1.1	0.1	0.6	1.1	25.5	20.5	31.0	15.0	52.3
	784-3L	36,866.4																		0.0
TOTAL			**39.1**	**30.9**	**53.6**	**39.0**	**13.7**	**29.7**	**33.1**	**32.2**	**30.6**	**11.9**	**2.8**	**13.7**	**18.4**	**44.7**	**40.4**	**52.9**	**30.4**	**70.8**
57-92	330-3O	287,365.1	0.2	1.9	0.7	0.2	0.2	0.3	0.2	1.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	6.8	0.7
	331-3O	62,727.9	1.4	1.9	0.2	0.8	0.3	0.9	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	1.7	1.2	0.6
	338-3O	261,090.9	3.3	2.8	1.4	0.5	5.1	1.7	1.4	1.3	2.1	1.4	0.7	1.3	8.0	6.5	5.5	7.2	4.7	14.1
	340-3O	236,054.8	0.7	1.5	1.8	4.3	1.1	0.8	2.0	0.6	0.4	0.4	0.0	0.0	0.0	0.8	0.2	1.0	4.2	1.0
	350-3L	284,889.0	0.4	1.0	0.6	0.2	0.4	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	4.6	2.4	0.6
	351-3O	346,653.9	12.4	13.0	11.7	6.0	11.2	6.9	8.4	4.0	1.1	0.8	0.0	0.1	4.7	9.2	6.2	31.1	12.1	15.4
	352-3O	354,907.6	10.0	8.7	10.7	15.2	7.5	8.0	11.2	13.6	7.1	33.0	8.1	5.5	46.0	25.6	29.7	39.1	35.5	26.7
	353-3O	17.6353.31	0.2	7.6	2.8	13.4	0.3	0.9	1.7	2.3	0.8	5.3	0.2	5.6	10.7	9.9	16.0	18.2	7.4	4.4
	360-3N	411,582.8	43.9	19.0	4.6	3.1	1.0	25.1	5.0	5.0	10.4	3.6	1.0	16.3	28.0	16.1	32.0	76.5	26.2	60.2
	361-3N	254,900.7	32.3	15.3	9.8	14.8	17.9	11.1	26.8	21.0	7.5	21.0	41.8	27.7	27.1	26.1	31.2	31.4	32.9	41.9
	362-3N	346,653.9	30.1	11.1	21.2	14.0	12.2	8.5	10.5	8.5	1.0	14.2	0.5	0.1	28.9	33.7	38.8	57.6	56.3	42.9
	363-3L	244,858.7	5.4	3.1	1.7	1.6	1.1	0.4	0.8	0.1	0.0	0.0	0.0	0.0	0.5	0.1	0.0	12.6	49.0	1.3
	371-3L	154,206.0		0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.2	0.0	0.0
	372-3L	338,400.3	15.7	16.3	9.7	3.8	2.1	3.4	1.3	0.7	0.1	0.1	0.0	0.0	0.4	0.2	0.5	8.2	4.1	2.4
	373-3N	346,653.9	18.3	9.1	4.8	6.2	6.3	3.8	0.3	2.5	0.0	0.0	0.3	0.0	0.6	0.3	1.1	11.1	42.0	79.0
	374-3N	128,069.4	3.9	2.7	1.1	0.6	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.9	0.4	0.1	8.8	9.5	3.1
	383-3N	92,716.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	384-3L	154,068.4		0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	785-3L	63,965.9																		0.0
TOTAL			**178.3**	**115.7**	**83.1**	**84.7**	**67.1**	**72.1**	**69.8**	**61.0**	**30.7**	**79.9**	**52.8**	**56.7**	**156.4**	**129.2**	**161.4**	**309.5**	**294.3**	**294.3**
93-183	328-3L	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	329-3O	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	332-3O	144,026.5	0.0	0.0	1.1	0.7	0.0	1.7	0.1	0.1	0.1	0.9	0.0	0.1	0.5	0.1	0.3	0.3	0.0	0.3
	337-3O	130,407.9	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.6	0.0	0.0	0.3	0.8	0.0	0.1	0.1	0.0
	339-3O	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
	341-3L	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	342-3L	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343-3L	72,219.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	348-3L	291,629.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	349-3L	290,804.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3	0.0
	354-3O	65,204.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	359-3N	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	364-3L	387,509.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0
	365-3L	143,201.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	370-3L	181,580.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	377-3N	13,756.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382-3N	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385-3L	324,093.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390-3L	203,728.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786-3L	11,555.1																		0.0
	787-3L	84,325.0																		0.0
TOTAL			**0.3**	**0.2**	**1.5**	**0.9**	**0.2**	**2.0**	**0.2**	**0.3**	**0.1**	**1.5**	**0.1**	**0.2**	**0.9**	**0.9**	**0.4**	**3.2**	**0.7**	**1.4**

Table 15 Con'd																				
Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 27,28*	*AN 43*	*WT 47,48*	*WT 58-60*	*WT 70,71*	*WT 82-83*	*WT 94-96*	*WT 105-107*	*WT 119-122*	*WT 136-138*	*WT 152-154*	*WT 168-170*	*WT 188-191*	*WT 204-208*	*WT221-224*	*WT 238-41*	*WT315-18*	*WT367-70*
(m)		Units		*WT 28-30*																
184-274	333-3O	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336-3O	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	344-3L	205,516.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	347-3L	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	355-3O	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	358-3N	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366-3L	191,760.2		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	369-3L	132,196.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	378-3N	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381-3N	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386-3L	135,222.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	389-3N	112,937.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	391-3N	38,792.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
TOTAL				**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275-366	334-3O	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335-3O	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	345-3L	196,987.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	346-3L	118,990.3		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	356-3O	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	357-3N	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368-3L	45,945.4		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	379-3N	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380-3N	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387-3L	98,768.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	388-3L	49,659.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	392-3L	19,946.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367-549	717-3O	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719-3O	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721-3O	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723-3N	21,322.0								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725-3N	14,443.9								0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727-3N	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729-3L	25,586.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731-3L	29,713.2		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	733-3L	64,378.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	735-3L	37,416.6		0.0							0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
TOTAL				**0.0**						**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table 15 Con'd																				
Depth	Stratum	No. of	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*AN 27,28*	*AN 43*	*WT 47,48*	*WT 58-60*	*WT 70,71*	*WT 82-83*	*WT 94-96*	*WT 105-107*	*WT 119-122*	*WT 136-138*	*WT 152-154*	*WT 168-170*	*WT 188-191*	*WT 204-208*	*WT221-224*	*WT 238-41*	*WT315-18*	*WT367-70*
(m)		Units		*WT 28-30*																
550-731	718-3N	15,269.3								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720-3N	14,443.9								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722-3N	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724-3O	17,057.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726-3O	9,904.4								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728-3O	21,459.5								0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
	730-3L	23,385.4		0.0						0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732-3L	31,776.6		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	734-3L	31,363.9		0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	736-3L	24,073.2		0.0							0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
TOTAL				**0.0**						**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
732-914	737-3L	31,226.4											0.0							.
	741-3L	30,676.1											0.0							.
	745-3L	47,871.3											0.0							.
	748-3L	21,872.2											0.0							.
	752-3N	18,433.2											0.0							.
	756-3N	14,581.5											0.0							.
	760-3N	21,184.4											0.0							.
	764-3O	14,443.9											0.0							.
	772-30	18,570.8											0.0							.
TOTAL													**0.0**							
Biomass ('000t)			**217.7**	**146.8**	**138.2**	**124.6**	**81.0**	**103.8**	**103.1**	**93.4**	**61.4**	**93.3**	**55.6**	**70.6**	**175.6**	**174.9**	**202.2**	**365.7**	**287.0**	**366.0**
Upper C.I.			**276.2**	**175.3**	**179.7**	**159.5**	**103.0**	**141.4**	**137.5**	**121.8**	**91.5**	**143.7**	**92.2**	**100.9**	**210.8**	**231.3**	**254.9**	**440.2**	**342.2**	**516.6**
Lower C.I.			**159.3**	**118.3**	**96.7**	**89.6**	**59.0**	**66.1**	**68.8**	**65.0**	**31.3**	**42.8**	**19.0**	**40.3**	**140.4**	**118.6**	**149.6**	**291.2**	**231.8**	**215.3**

Table 16. Mean Number of yellowtail by stratum, Div 3L - Fall

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 101*	1991 *WT 114,115*	1992 *WT 128-130 GA 226*	1993 *WT 145,146*	1994 *WT 161,162*	1995 *WT 176-179,181 TEL 22,23*	1996 *WT 196-198 TEL 41*	1997 *WT 213-217 TEL 57,58*	1998 *WT230-33 TEL75,76*	1999 *WT 246-48*	2000 *WT321-23 TEL339-343*	2001 *WT372-76TEL 357-61 AN399*
30 - 56	784	36,866.4	.	.	.	.	.	.	0.5	0.0	0.0	.	41.5	1.0
57 - 92	350	284,889.0	5.9	0.7	0.5	0.0	0.1	0.4	0.3	0.0	0.4	1.3	3.1	12.4
57 - 92	363	244,858.7	5.5	1.1	2.0	0.0	0.3	5.2	3.5	1.2	38.4	73.8	119.5	114.2
57 - 92	371	154,206.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
57 - 92	372	338,400.3	3.9	4.8	3.8	7.7	0.0	6.4	16.9	17.2	10.2	6.5	18.0	125.8
57 - 92	384	154,068.4	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3
57 - 92	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	1.5	3.5
93 - 183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	343	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	348	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
93 - 183	364	387,509.6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
93 - 183	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0
93 - 183	370	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	385	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	390	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	786	11,555.1	.	.	.	.	.	.	0.5	0.0	0.5	.	5.5	0.0
93 - 183	787	84,325.0	.	.	.	.	.	.	0.0	0.0	1.0	.	0.0	0.0
93 - 183	788	34,665.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
93 - 183	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
93 - 183	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
93 - 183	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
93 - 183	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
93 - 183	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
184 - 274	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	347	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	366	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	369	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	386	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	389	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	391	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
184 - 366	789	11,142.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.5
184 - 366	791	42,368.8	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
184 - 366	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
275 - 366	345	196,987.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	346	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	368	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	387	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	388	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	392	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	796	24,073.2	.	.	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
367 - 549	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	792	6,878.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
Mean No. (sets)			**0.8 (161)**	**0.4 (219)**	**0.4 (215)**	**0.5 (153)**	**0.0 (200)**	**0.7 (161)**	**1.1 (211)**	**1.0 (203)**	**2.1 (204)**	**3.5(170)**	**6.1(176)**	**11.7(203)**
Upper C.I.			**1.6**	**0.6**	**0.6**	**1.3**	**0.1**	**1.3**	**2.2**	**2.7**	**5.0**	**8.6**	**11.2**	**18.4**
Lower C.I.			**0.0**	**0.2**	**0.2**	**-0.3**	**0.0**	**0.1**	**-0.1**	**-0.7**	**-0.8**	**-1.6**	**1.0**	**5.0**

Table 17. Mean Number of yellowtail by stratum, Div 3N - Fall														
Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 113,114*	1992 *WT 128,129*	1993 *WT 144,145*	1994 *WT160,161*	1995 *WT 176,177*	1996 *TEL 41,42 AN 253*	1997 *WT 212-214*	1998 *WT229-30,33 TEL76*	1999 *WT 245-47*	2000 *WT319-323 TEL338,339*	2001 *WT372-76TEL 357-61 AN399*
<=56	375	219,134.8	40.7	58.0	.	76.5	329.8	398.5	216.7	212.6	310.9	372.8	460.5	643.3
<=56	376	206,204.1	323.3	342.8	323.0	674.8	206.3	711.6	831.3	873.3	782.2	722.5	2047.0	2539.0
57 - 92	360	411,582.8	83.3	92.8	49.5	219.7	100.8	171.3	392.1	406.2	498.8	490.6	458.3	319.4
57 - 92	361	254,900.7	85.4	269.5	269.8	316.6	385.2	450.0	415.8	397.3	528.5	262.0	146.8	737.6
57 - 92	362	346,653.9	47.6	60.7	6.7	1.9	6.8	245.0	75.6	307.3	139.4	572.0	202.7	571.4
57 - 92	373	346,653.9	1.2	2.5	0.0	0.0	7.1	13.8	0.0	35.3	35.4	54.4	69.9	307.9
57 - 92	374	128,069.4	0.0	1.0	.	0.0	0.0	0.0	30.0	18.0	15.7	182.3	130.3	202.3
57 - 92	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	3.0	2.0	3.5	4.5	0.0
93 - 183	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	381	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	357	22,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	379	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	380	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean No. (sets)			**65.9(80)**	**92.1 (67)**	**86.4 (34)**	**137.7 (70)**	**108.0 (73)**	**212.0 (90)**	**215.0 (82)**	**256.7(100)**	**241.2(119)**	**308.2(70)**	**320.3(94)**	**489.5(94)**
Upper C.I.			**108.2**	**151.7**	**198.7**	**227.0**	**179.3**	**294.2**	**302.9**	**321.4**	**313.7**	**417.7**	**494.3**	**673.2**
Lower C.I.			**23.6**	**32.5**	**-25.8**	**48.4**	**36.7**	**129.8**	**127.2**	**191.9**	**168.7**	**198.6**	**146.4**	**305.9**

Table 18. Mean Number of yellowtail by stratum, Div 3O - Fall														
Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 114*	1992 *WT 128*	1993 *WT 144*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *WT 200 AN 253, TEL 42*	1997 *WT 212,213*	1998 *WT 229-30,33*	1999 *WT 244-45*	2000 *WT319,329 TEL338*	2001 *WT372-76TEL 357-61 AN399*
57 - 92	330	287,365.1	1.3	0.1	1.3	3.3	0.1	8.2	0.2	7.3	1.7	23.8	3.3	20.0
57 - 92	331	62,727.9	6.7	29.0	8.0	16.0	0.0	2.0	0.0	1.0	3.5	14.0	3.4	29.1
57 - 92	338	261,090.9	8.5	20.0	2.0	8.8	0.3	97.0	0.5	38.2	31.2	35.8	78.0	260.0
57 - 92	340	236,054.8	5.6	36.0	0.3	5.0	1.6	4.8	0.0	28.2	23.2	37.3	4.8	47.6
57 - 92	351	346,653.9	36.9	15.9	1.8	35.3	7.0	15.8	11.6	107.3	207.4	135.3	272.6	171.1
57 - 92	352	354,907.6	47.9	172.4	150.5	56.7	69.7	121.9	134.3	249.0	269.9	255.0	369.7	288.0
57 - 92	353	176,353.3	28.0	0.0	0.0	8.7	0.0	8.7	7.0	82.8	0.5	73.5	30.0	70.0
93 - 183	329	236,742.6	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
93 - 183	332	144,026.5	0.8	0.3	2.3	15.7	5.0	3.3	3.0	0.0	0.3	1.7	1.0	10.0
93 - 183	337	130,407.9	0.0	1.0	0.0	0.0	0.0	0.0	19.0	1.3	5.3	0.3	0.9	0.0
93 - 183	339	80,473.2	1.0	2.5	0.0	0.0	1.0	0.0	0.3	0.5	0.0	.	1.5	9.0
93 - 183	354	65,204.0	1.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.5	0.0
184 - 274	355	14,168.8	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
184 - 274	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.5	0.0	.	0.0	0.0	0.0	0.0	0.0
275 - 366	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	356	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	717	22,835.1	0.0	.	.	0.0	3.0	0.0	.	0.0	0.0	0.0	0.0	0.0
367 - 549	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
550 - 731	720	.	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
550 - 731	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean No. (sets)			**16.1 (91)**	**33.1 (84)**	**22.7 (54)**	**16.4 (75)**	**11.3 (75)**	**31.2 (81)**	**22.7 (60)**	**62.7 (81)**	**69.0 (96)**	**71.4(75)**	**91.5(100)**	**95.3(97)**
Upper C.I.			**24.0**	**52.3**	**51.5**	**27.3**	**21.5**	**50.5**	**37.7**	**84.4**	**98.8**	**97.2**	**131.3**	**156.2**
Lower C.I.			**8.1**	**14.0**	**-6.2**	**5.5**	**1.0**	**11.9**	**7.6**	**41.0**	**39.2**	**45.6**	**51.8**	**34.4**

Table 19. Mean Weight of yellowtail by stratum, Div 3L-Fall														
Depth Range (m)	**Stratum**	**No. of trawlable Units**	**1990** *WT 101*	**1991** *WT 114.115*	**1992** *WT 128-130 GA 226*	**1993** *WT 145.146*	**1994** *WT 161.162*	**1995** *WT 176-179.181 TEL 22,23*	**1996** *WT 196-198 TEL 41*	**1997** *WT213-217 TEL 57,58*	**1998** *WT2230-33 TEL75,76*	**1999** *WT 246-48*	**2000** *WT321-23 TEL339-343*	**2001** *WT372-76TEL 357-61 AN399*
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	4.0	0.1
57 - 92	350	284,889.0	2.6	0.3	0.3	0.0	0.1	0.2	0.2	0.0	0.3	0.3	1.1	4.1
57 - 92	363	244,858.7	2.7	0.5	0.9	0.0	0.1	2.3	1.5	0.6	15.9	15.9	41.8	41.1
57 - 92	371	154,206.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
57 - 92	372	338,400.3	1.9	2.3	1.7	3.3	0.0	1.9	5.4	3.3	3.6	0.0	5.3	41.9
57 - 92	384	154,068.4	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
57 - 92	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.4	0.2
93 - 183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	343	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	348	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
93 - 183	364	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0
93 - 183	370	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	385	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	390	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.2	0.2	0.3	0.0
93 - 183	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	347	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	366	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	369	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	386	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	389	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	391	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.1
184 - 366	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
184 - 366	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	345	196,987.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	346	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	368	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	387	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	388	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	392	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	796	24,073.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.1	0.0
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
367 - 549	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	792	6,878.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	737	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	738	30,401.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
Mean Wt (sets)			**0.4 (161)**	**0.2 (219)**	**0.2 (215)**	**0.2 (153)**	**0.0 (200)**	**0.2 (161)**	**0.4 (211)**	**0.2 (203)**	**0.8 (204)**	**1.6(170)**	**2.0(176)**	**4.0(203)**
Upper C.I.			**0.8**	**0.3**	**0.3**	**0.5**	**0.0**	**0.4**	**0.8**	**0.5**	**2.0**	**4.0**	**3.8**	**6.2**
Lower C.I.			**0.0**	**0.1**	**0.1**	**-0.1**	**0.0**	**0.0**	**-0.1**	**0.1**	**-0.4**	**-0.7**	**0.3**	**1.8**

Table 20. Mean Weight of yellowtail by stratum, Div 3N - Fall														
Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 113,114*	1992 *WT 128,129*	1993 *WT 144,145*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *TEL 41,42 AN 253*	1997 *WT 212-214*	1998 *WT229-30,33 TEL76*	1999 *WT 245-47*	2000 *WT319-323 TEL338,339*	2001 *WT372-76TEL 357-61 AN399*
<=56	375	219,134.8	14.6	23.0	.	36.4	142.0	67.7	54.8	70.1	87.1	112.2	115.8	177.8
<=56	376	206,204.1	97.2	53.0	52.3	151.7	49.4	118.6	117.2	157.4	174.3	182.9	607.1	597.5
57 - 92	360	411,582.8	16.4	20.1	19.5	60.3	27.3	39.6	89.4	114.8	136.4	147.5	148.2	102.6
57 - 92	361	254,900.7	37.3	77.0	95.3	116.9	161.0	133.7	122.5	142.9	146.3	69.6	40.7	234.5
57 - 92	362	346,653.9	19.5	18.6	3.0	1.0	3.0	35.0	23.0	79.7	54.1	101.3	50.6	157.9
57 - 92	373	346,653.9	0.6	1.4	0.0	0.0	2.5	2.8	0.0	12.2	15.6	17.5	23.4	119.2
57 - 92	374	128,069.4	0.0	0.9	.	0.0	0.0	0.0	8.2	6.2	7.9	78.1	40.6	67.4
57 - 92	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	1.4	0.4	1.0	1.1	0.0
93 - 183	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	381	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	357	22,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	379	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	380	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean Wt (sets)			**20.6(80)**	**22.1 (67)**	**24.1 (34)**	**39.6 (70)**	**39.8 (73)**	**42.8 (90)**	**47.1 (82)**	**68.4 (100)**	**66.3(119)**	**79.9(70)**	**94.1(94)**	**137.3(94)**
Upper C.I.			**35.6**	**36.6**	**43.7**	**62.6**	**66.4**	**56.5**	**65.0**	**87.1**	**85.0**	**100.3**	**143.9**	**177.0**
Lower C.I.			**5.6**	**7.6**	**4.6**	**16.6**	**13.1**	**29.1**	**29.3**	**49.6**	**47.5**	**59.6**	**44.3**	**97.7**

Table 21. Mean Weight of yellowtail by stratum, Div 30 - Fall														
Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 114*	1992 *WT 128*	1993 *WT 144*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *WT 200 AN 253, TEL 42*	1997 *WT 212,213*	1998 *WT229,30,33*	1999 *WT 244-45*	2000 *WT319,329 TEL338*	2001 *WT372-76TEL 357-61 AN399*
57 - 92	330	287,365.1	0.7	0.1	0.7	1.6	0.1	3.7	0.0	2.6	0.6	12.5	1.1	9.7
57 - 92	331	62,727.9	3.8	14.9	4.6	8.8	0.0	0.6	0.0	0.3	1.2	1.9	1.1	6.9
57 - 92	338	261,090.9	3.7	7.8	0.9	4.3	0.2	27.7	0.2	21.7	10.9	10.8	24.7	99.0
57 - 92	340	236,054.8	2.7	16.8	0.2	1.3	0.8	2.0	0.0	10.9	9.2	11.0	2.1	13.8
57 - 92	351	346,653.9	16.0	6.7	0.8	14.4	2.8	6.4	3.7	42.0	54.2	34.2	69.2	50.4
57 - 92	352	354,907.6	19.7	59.2	51.3	23.5	26.1	38.6	42.8	74.6	80.2	66.1	102.8	76.4
57 - 92	353	176,353.3	13.9	0.0	0.0	3.6	0.0	4.8	4.2	41.4	0.2	21.7	10.0	21.5
93 - 183	329	236,742.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
93 - 183	332	144,026.5	0.4	0.2	1.0	7.3	2.6	0.9	1.7	0.0	0.0	0.5	0.4	3.4
93 - 183	337	130,407.9	0.0	0.6	0.0	0.0	0.0	0.0	10.2	0.9	1.6	0.2	0.2	0.0
93 - 183	339	80,473.2	0.5	1.1	0.0	0.0	0.5	0.0	0.1	0.3	0.0	.	0.6	2.6
93 - 183	354	65,204.0	0.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.2	0.0
184 - 274	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
184 - 274	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	355	14,168.8	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.2	0.0	.	0.0	0.0	0.0	0.0	0.0
275 - 366	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	356	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	717	22,835.1	0.0	.	.	0.0	1.0	0.0	.	0.0	0.0	0.0	0.0	0.0
367 - 549	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
550 - 731	720	.	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
550 - 731	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean Wt (sets)			**7.0 (91)**	**12.2 (84)**	**7.9 (54)**	**6.9 (75)**	**4.3 (75)**	**10.1 (81)**	**7.6 (60)**	**22.7 (81)**	**19.9 (96)**	**19.6(75)**	**25.1(100)**	**29.5(97)**
Upper C.I.			**10.5**	**18.1**	**17.5**	**11.1**	**8.2**	**15.0**	**12.7**	**31.7**	**28.2**	**26.1**	**35.5**	**54.7**
Lower C.I.			**3.5**	**6.3**	**-1.7**	**2.7**	**0.5**	**5.1**	**2.5**	**13.6**	**11.6**	**13.1**	**14.7**	**4.4**

Table 22. Abundance (millions) of yellowtail by stratum, Div 3L - Fall

Depth	Strat	No. of	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*WT 101*	*WT 114,115*	*WT 128-130*	*WT 145,146*	*WT 161,162*	*WT 176-179,181*	*WT 196-198*	*WT 213-217*	*WT230-33*	*WT 246-48*	*WT321-23*	*WT372-76TEL*
(m)		Units			*GA 226*			*TEL 22,23*	*TEL 41*	*TEL 57,58*	*TEL75,76*		*TEL339-343*	*357-61 AN399*
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.	1.5	0.0
TOTAL									**0.0**	**0.0**	**0.0**		**1.5**	**0.0**
57 - 92	350	284,889.0	1.7	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.4	0.9	3.5
	363	244,858.7	1.3	0.3	0.5	0.0	0.1	1.3	0.9	0.3	9.4	18.1	29.3	28.0
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372	338,400.3	1.3	1.6	1.3	2.6	0.0	2.2	5.7	5.8	3.4	2.2	6.1	42.6
	384	154,068.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.2
TOTAL			**4.3**	**2.1**	**1.9**	**2.6**	**0.1**	**3.6**	**6.7**	**6.1**	**12.9**	**20.6**	**36.3**	**74.4**
93 - 183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	364	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0
	370	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.0
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.1	.	0.0	0.0
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**	**0.1**
184 - 274	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275 - 366	345	196,987.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	796	24,073.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
915 -1097	738	30,401.0	.	.	.	.		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Abundance (millions)			**4.4**	**2.1**	**2.0**	**2.6**	**0.1**	**3.6**	**6.7**	**6.1**	**13.1**	**20.6**	**37.9**	**74.5**
Upper C.I.			**8.7**	**3.3**	**3.1**	**6.6**	**0.3**	**6.8**	**14.1**	**16.9**	**31.6**	**50.5**	**69.4**	**117.2**
Lower C.I.			**0.1**	**1.0**	**0.9**	**-1.4**	**-0.1**	**0.3**	**-0.7**	**-4.7**	**-5.4**	**-9.2**	**6.5**	**31.8**

Table 23. Abundance (millions) of yellowtail by stratum, Div 3N - Fall

Depth Range (m)	Strat	No. of trawlable Units	1990 *WT 102*	1991 *WT 113,114*	1992 *WT 128,129*	1993 *WT 144,145*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *TEL 41,42 AN 253*	1997 *WT 212-214*	1998 *WT229,30,33 TEL76*	1999 *WT 245-47*	2000 *WT319-323 TEL338,339*	2001 *WT372-76TEL 357-61 AN399*
<=56	375	219,134.8	8.9	12.7	.	16.8	72.3	87.3	47.5	46.6	68.1	81.7	100.9	141.0
	376	206,204.1	66.7	70.7	66.6	139.1	42.5	146.7	171.4	180.1	161.3	149.0	422.1	523.6
TOTAL			**75.6**	**83.4**	**66.6**	**155.9**	**114.8**	**234.0**	**218.9**	**226.7**	**229.4**	**230.7**	**523.0**	**664.5**
57 - 92	360	411,582.8	34.3	38.2	20.4	90.4	41.5	70.5	161.4	167.2	205.3	201.9	188.6	131.4
	361	254,900.7	21.8	68.7	68.8	80.7	98.2	114.7	106.0	101.3	134.7	66.8	37.4	188.0
	362	346,653.9	16.5	21.0	2.3	0.6	2.3	84.9	26.2	106.5	48.3	198.3	70.3	198.1
	373	346,653.9	0.4	0.9	0.0	0.0	2.5	4.8	0.0	12.2	12.3	18.9	24.2	106.7
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	3.8	2.3	2.0	23.4	16.7	25.9
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**73.0**	**128.9**	**91.5**	**171.7**	**144.5**	**274.9**	**297.4**	**389.5**	**402.5**	**509.2**	**337.2**	**650.2**
93 - 183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**
184 - 274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275 - 366	357	22,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL				**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL				**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Abundance (millions)			**148.5**	**212.3**	**158.0**	**327.7**	**259.3**	**509.0**	**516.3**	**616.2**	**632.1**	**739.9**	**860.3**	**1314.7**
Upper C.I.			**243.8**	**349.7**	**363.3**	**540.0**	**430.5**	**706.4**	**727.2**	**771.6**	**822.2**	**1003.0**	**1327.5**	**1808.0**
Lower C.I.			**53.3**	**74.9**	**-47.2**	**115.3**	**88.2**	**311.5**	**305.4**	**460.8**	**442.0**	**476.9**	**393.1**	**821.4**

Table 24. Abundance (millions) of yellowtail by stratum, Div 30 - Fall

Depth Range (m)	Strat	No. of trawlable Units	1990 *WT 102*	1991 *WT113,114*	1992 *WT 128*	1993 *WT 144*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *WT 200 AN 253, TEL 42*	1997 *WT 212,213*	1998 *WT229,30,33*	1999 *WT 244-45*	2000 *WT319,329 TEL338*	2001 *WT372-76TEL 357-61 AN399*
57 - 92	330	287,365.0	0.4	0.0	0.4	1.0	0.0	2.4	0.0	2.1	0.5	6.8	1.0	5.7
	331	62,728.0	0.4	1.8	0.5	1.0	0.0	0.1	0.0	0.1	0.2	0.9	0.2	1.8
	338	261,091.0	2.2	5.2	0.5	2.3	0.1	25.3	0.1	10.0	8.1	9.3	20.4	67.9
	340	236,055.0	1.3	8.5	0.1	1.2	0.4	1.1	0.0	6.7	5.5	8.8	1.1	11.2
	351	346,654.0	12.8	5.5	0.6	12.2	2.4	5.5	4.0	37.2	71.9	46.9	94.5	59.3
	352	354,908.0	17.0	61.2	53.4	20.1	24.7	43.3	47.7	88.4	95.8	90.5	131.2	102.2
	353	176,353.0	4.9	0.0	0.0	1.5	0.0	1.5	1.2	14.6	0.1	13.0	5.3	12.3
TOTAL			**39.0**	**82.2**	**55.5**	**39.3**	**27.6**	**79.2**	**53.0**	**159.1**	**182.1**	**176.2**	**253.6**	**260.6**
93 - 183	329	236,743.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	332	144,026.0	0.1	0.0	0.3	2.3	0.7	0.5	0.4	0.0	0.1	0.2	0.1	1.4
	337	130,408.0	0.0	0.1	0.0	0.0	0.0	0.0	2.5	0.2	0.7	0.0	0.1	0.0
	339	80,473.0	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7
	354	65,204.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.5**	**0.3**	**0.3**	**2.3**	**0.8**	**0.5**	**3.0**	**0.2**	**0.8**	**0.3**	**0.4**	**2.2**
184 - 274	333	20,221.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	336	16,645.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	355	14,169.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275 - 366	334	13,206.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	335	7,979.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	717	22,835.0	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	719	10,455.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,455.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	718	18,433.0	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	722	12,793.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL				**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Abundance (millions)			**39.6**	**82.7**	**55.8**	**41.6**	**28.5**	**79.7**	**56.2**	**159.2**	**183.0**	**176.5**	**254.1**	**262.7**
Upper C.I.			**59.0**	**130.4**	**126.9**	**69.3**	**54.5**	**128.9**	**93.5**	**214.2**	**262.0**	**240.3**	**364.3**	**430.5**
Lower C.I.			**20.1**	**34.9**	**-15.3**	**13.9**	**2.4**	**30.4**	**18.8**	**104.1**	**103.9**	**112.8**	**143.8**	**95.0**

Table 25. Abundance (millions) of Yellowtail Flounder by stratum, Div 3LN0 - Fall

Depth	Stratum	No. of	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*WT 101,102*	*WT 113-115*	*WT 128-130*	*WT 144-146*	*WT 160-162*	*WT 176-179,181*	*WT196-98,200*	*WT212-216*	WT 229-33	WT 244-48	WT319-23	*WT372-76TEL*
(m)		Units			*GA 226*			*TEL 22,23*	*TEL41,42;AN 253*	*TEL57,58*	TEL 75,76		TEL338-43	*357-61 AN399*
30 - 56	784-3L	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.	1.5	0.0
TOTAL									**0.0**	**0.0**	**0.0**		**1.5**	**0.0**
<=56	375-3N	219,134.8	8.9	12.7	.	16.8	72.3	87.3	47.5	46.6	68.1	81.7	100.9	141.0
	376-3N	206,204.1	66.7	70.7	66.6	139.1	42.5	146.7	171.4	180.1	161.3	149.0	422.1	523.6
TOTAL			**75.6**	**83.4**	**66.6**	**155.9**	**114.8**	**234.0**	**218.9**	**226.7**	**229.4**	**230.7**	**523.0**	**664.5**
57 - 92	330-3O	287,365.1	0.4	0.0	0.4	1.0	0.0	2.4	0.0	2.1	0.5	6.8	1.0	5.7
	331-3O	62,727.9	0.4	1.8	0.5	1.0	0.0	0.1	0.0	0.1	0.2	0.9	0.2	1.8
	338-3O	261,090.9	2.2	5.2	0.5	2.3	0.1	25.3	0.1	10.0	8.1	9.3	20.4	67.9
	340-3O	236,054.8	1.3	8.5	0.1	1.2	0.4	1.1	0.0	6.7	5.5	8.8	1.1	11.2
	350-3L	284,889.0	1.7	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.4	0.9	3.5
	351-3O	346,653.9	12.8	5.5	0.6	12.2	2.4	5.5	4.0	37.2	71.9	46.9	94.5	59.3
	352-3O	354,907.6	17.0	61.2	53.4	20.1	24.7	43.3	47.7	88.4	95.8	90.5	131.2	102.2
	353-3O	176,353.3	4.9	0.0	0.0	1.5	0.0	1.5	1.2	14.6	0.1	13.0	5.3	12.3
	360-3N	411,582.8	34.3	38.2	20.4	90.4	41.5	70.5	161.4	167.2	205.3	201.9	188.6	131.4
	361-3N	254,900.7	21.8	68.7	68.8	80.7	98.2	114.7	106.0	101.3	134.7	66.8	37.4	188.0
	362-3N	346,653.9	16.5	21.0	2.3	0.6	2.3	84.9	26.2	106.5	48.3	198.3	70.3	198.1
	363-3L	244,858.7	1.3	0.3	0.5	0.0	0.1	1.3	0.9	0.3	9.4	18.1	29.3	28.0
	371-3L	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372-3L	338,400.3	1.3	1.6	1.3	2.6	0.0	2.2	5.7	5.8	3.5	2.2	6.1	42.6
	373-3N	346,653.9	0.4	0.9	0.0	0.0	2.5	4.8	0.0	12.2	12.3	18.9	24.2	106.7
	374-3N	128,069.4	0.0	0.1	.	0.0	0.0	0.0	3.8	2.3	2.0	23.4	16.7	25.9
	383-3N	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	384-3L	154,068.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	785-3L	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.2
TOTAL			**116.3**	**213.2**	**148.9**	**213.6**	**172.2**	**357.7**	**357.1**	**554.7**	**597.8**	**706.1**	**627.2**	**985.1**
93 - 183	328-3L	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	329-3O	236,742.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	332-3O	144,026.5	0.1	0.0	0.3	2.3	0.7	0.5	0.4	0.0	0.0	0.2	0.1	1.4
	337-3O	130,407.9	0.0	0.1	0.0	0.0	0.0	0.0	2.5	0.2	0.7	0.0	0.1	0.0
	339-3O	80,473.2	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	.	0.1	0.7
	341-3L	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	342-3L	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343-3L	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348-3L	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349-3L	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	354-3O	65,204.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	359-3N	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	364-3L	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	365-3L	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370-3L	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	377-3N	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	382-3N	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385-3L	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390-3L	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786-3L	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.0
	787-3L	84,325.0	.	.	.	.	.	.	0.0	0.0	0.1	.	0.0	0.0
	788-3L	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	790-3L	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	793-3L	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	794-3L	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0
	797-3L	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0
	799-3L	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0
TOTAL			**0.5**	**0.3**	**0.4**	**2.3**	**0.8**	**0.5**	**3.0**	**0.2**	**1.0**	**0.3**	**0.5**	**2.2**
184 - 274	333-3O	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	336-3O	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	344-3L	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347-3L	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	355-3O	14,168.8	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	358-3N	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366-3L	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369-3L	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378-3N	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381-3N	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386-3L	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389-3L	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391-3L	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	795-3L	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table 25 Con'd

Depth	Stratum	No. of	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*WT 101,102*	*WT 113-115*	*WT 128-130*	*WT144-146*	*WT 160-162*	*WT 176-179,181*	*WT 188-191*	*WT 204-208*	WT 229-33	WT 244-48	WT319-23	*WT372-76TEL*
(m)		Units			*GA 226*			*TEL 22,23*			TEL 75,76		TEL338-43	*357-61 AN399*
184 - 366	789-3L	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	791-3L	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	798-3L	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**		**0.0**	**0.0**
275 - 366	334-3O	13,205.9	0.0	0.0	0.0	0.0	0.1	0.0	.	0.0	0.0	0.0	0.0	0.0
	335-3O	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	345-3L	196,987.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346-3L	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	356-3O	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	357-3N	22,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368-3L	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379-3N	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380-3N	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387-3L	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388-3L	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392-3L	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	796-3L	24,073.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	717-3O	22,835.1	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	719-3O	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721-3O	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723-3N	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725-3N	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727-3N	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729-3L	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731-3L	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	733-3L	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735-3L	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792-3L	6,878.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	718-3O	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	720-3O	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	722-3O	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724-3N	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726-3N	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728-3N	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	730-3L	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732-3L	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734-3L	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736-3L	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
732 - 914	737-3L	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	741-3L	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	745-3L	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	748-3L	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
915 -1097	738-3L	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	742-3L	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	746-3L	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	749-3L	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1098 -1280	739-3L	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	743-3L	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	747-3L	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	750-3L	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1281 -1463	740-3L	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	744-3L	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	751-3L	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Abundance (millions)			**192.5**	**297.1**	**215.9**	**371.9**	**287.9**	**592.2**	**579.1**	**781.5**	**828.2**	**937.1**	**1,152.3**	**1,651.9**
Upper C.I.			**289.0**	**438.7**	**410.7**	**581.1**	**460.5**	**793.3**	**791.7**	**945.3**	**1,115.7**	**1,205.0**	**1,604.0**	**2,120.4**
Lower C.I.			**95.9**	**155.5**	**21.0**	**157.6**	**115.3**	**391.0**	**366.6**	**617.8**	**540.6**	**669.2**	**700.6**	**1,183.4**

Table 26. Biomass ('000t) of yellowtail by stratum, Div 3L - Fall

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 101*	1991 *WT 114,115*	1992 *WT 128-130 GA 226*	1993 *WT 145,146*	1994 *WT 161,162*	1995 *WT 176-179,181 TEL 22,23*	1996 *WT 196-198 TEL 41*	1997 *WT 213-217 TEL 57,58*	1998 *WT 230-33 TEL 75,76*	1999 *WT246-48*	2000 *WT321-23 TEL339-343*	2001 *WT372-76TEL 357-61 AN399*
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.0
TOTAL									**0.0**	**0.0**	**0.0**		**0.0**	**0.0**
57 - 92	350	284,889.0	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	1.2
	363	244,858.7	0.7	0.1	0.2	0.0	0.0	0.6	0.4	0.2	3.9	8.9	10.2	10.1
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372	338,400.3	0.6	0.8	0.6	1.1	0.0	0.6	1.8	1.1	1.2	0.5	1.8	14.2
	384	154,068.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**2.1**	**1.0**	**0.9**	**1.1**	**0.0**	**1.2**	**2.2**	**1.3**	**5.2**	**9.6**	**12.4**	**25.5**
93 - 183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	364	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0
	370	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
184 - 274	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**		**0.0**	**0.0**
275 - 366	345	196,987.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	796	24,073.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table 26. Cont'd

Depth Range (m)	Stratum	No. of trawlable Units	1990 WT 101	1991 WT 114,115	1992 WT 128-130 GA 226	1993 WT 145,146	1994 WT 161,162	1995 WT 176-179,181 TEL 22,23	1996 WT 196-198 TEL 41	1997 WT 213-217 TEL 57,58	1998 WT220-33 TEL75,76	1999 WT 246-48 TEL 88	2000 WT321-23 TEL339-343	2001 WT372-76TEL 357-61 AN399
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
915 -1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Biomass ('000t)			**2.1**	**1.0**	**0.9**	**1.1**	**0.0**	**1.2**	**2.2**	**1.3**	**5.2**	**9.6**	**12.5**	**25.5**
Upper C.I.			**4.1**	**1.6**	**1.5**	**2.7**	**0.1**	**2.2**	**5.3**	**3.1**	**12.8**	**23.6**	**23.4**	**39.7**
Lower C.I.			**0.0**	**0.4**	**0.4**	**-0.5**	**0.0**	**0.3**	**-0.8**	**-0.5**	**-2.4**	**-4.4**	**1.6**	**11.3**

Table 27. Biomass ('000t) of yellowtail by stratum, Div 3N - Fall

Depth Range (m)	Stratum	No. of trawlable Units	1990 WT 102	1991 WT 113,114	1992 WT 128,129	1993 WT 144,145	1994 WT 160,161	1995 WT 176,177	1996 TEL 41,42 AN 253	1997 WT 212-214	1998 WT 229,30,33 TEL 76	1999 WT 245-47	2000 WT319-323 TEL338,339	2001 WT372-76TEL 357-61 AN399
<=56	375	219,134.8	3.2	5.1	.	8.0	31.1	14.8	12.0	15.4	19.1	24.6	25.4	39.0
	376	206,204.1	20.1	10.9	10.8	31.3	10.2	24.4	24.2	32.5	35.9	37.7	125.2	123.2
TOTAL			**23.3**	**16.0**	**10.8**	**39.3**	**41.3**	**39.2**	**36.2**	**47.9**	**55.0**	**62.3**	**150.6**	**162.2**
57 - 92	360	411,582.8	6.7	8.3	8.0	24.8	11.2	16.3	36.8	47.2	56.1	60.6	61.0	42.2
	361	254,900.7	9.5	19.6	24.3	29.8	41.0	34.1	31.2	36.4	37.3	17.7	10.4	59.8
	362	346,653.9	6.8	6.4	1.0	0.3	1.0	12.1	8.0	27.6	18.8	35.1	17.5	54.8
	373	346,653.9	0.2	0.5	0.0	0.0	0.9	1.0	0.0	4.2	5.4	6.1	8.1	41.3
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	1.1	0.8	1.0	10.0	5.2	8.6
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**23.2**	**34.9**	**33.3**	**54.9**	**54.1**	**63.5**	**77.1**	**116.2**	**118.6**	**129.5**	**102.2**	**206.7**
93 - 183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
184 - 274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275 - 366	357	22,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL				**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL				**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Biomass ('000t)			**46.5**	**50.9**	**44.1**	**94.2**	**95.5**	**102.8**	**113.2**	**164.2**	**173.6**	**191.9**	**252.8**	**368.9**
Upper C.I.			**80.3**	**84.4**	**79.9**	**148.9**	**159.5**	**135.7**	**156.1**	**209.2**	**222.7**	**240.9**	**386.5**	**475.3**
Lower C.I.			**12.6**	**17.4**	**8.4**	**39.5**	**31.5**	**69.9**	**70.3**	**119.1**	**124.5**	**143.0**	**119.1**	**262.5**

Table 28. Biomass ('000t) of yellowtail by stratum, Div 30 - Fall

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 114*	1992 *WT 128*	1993 *WT 144*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *WT 200 AN 253, TEL 42*	1997 *WT 212,213*	1998 *WT229,30,33*	1999 *WT 244-45*	2000 *WT319,329 TEL338*	2001 *WT372-76TEL 357-61 AN399*
57 - 92	330	287,365.1	0.2	0.0	0.2	0.5	0.0	1.1	0.0	0.8	0.2	3.6	0.3	2.8
	331	62,727.9	0.2	0.9	0.3	0.5	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4
	338	261,090.9	1.0	2.0	0.2	1.1	0.1	7.2	0.0	5.7	2.8	2.8	6.4	25.9
	340	236,054.8	0.6	4.0	0.0	0.3	0.2	0.5	0.0	2.6	2.2	2.6	0.5	3.3
	351	346,653.9	5.5	2.3	0.3	5.0	1.0	2.2	1.3	14.5	18.8	11.9	24.0	17.5
	352	354,907.6	7.0	21.0	18.2	8.3	9.3	13.7	15.2	26.5	28.5	23.5	36.5	27.1
	353	176,353.3	2.4	0.0	0.0	0.6	0.0	0.8	0.7	7.3	0.0	3.8	1.8	3.8
TOTAL			**16.9**	**30.2**	**19.2**	**16.3**	**10.6**	**25.5**	**17.2**	**57.4**	**52.6**	**48.3**	**69.5**	**80.7**
93 - 183	329	236,742.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	332	144,026.5	0.1	0.0	0.1	1.0	0.4	0.1	0.2	0.0	0.0	0.1	0.1	0.5
	337	130,407.9	0.0	0.1	0.0	0.0	0.0	0.0	1.3	0.1	0.2	0.0	0.0	0.0
	339	80,473.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.2
	354	65,204.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.2**	**0.2**	**0.1**	**1.0**	**0.4**	**0.1**	**1.5**	**0.1**	**0.3**	**0.1**	**0.1**	**0.7**
184 - 274	355	14,168.8	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	717	22,835.1	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL				**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Biomass ('000t)			**17.3**	**30.5**	**19.4**	**17.5**	**10.9**	**25.7**	**18.9**	**57.5**	**52.8**	**48.4**	**69.7**	**81.4**
Upper C.I.			**25.9**	**45.2**	**43.1**	**28.1**	**20.7**	**38.4**	**31.5**	**80.5**	**74.8**	**64.4**	**98.6**	**150.9**
Lower C.I.			**8.6**	**15.8**	**-4.3**	**6.8**	**1.2**	**13.1**	**6.2**	**34.5**	**30.8**	**32.3**	**40.8**	**12.0**

Table 29. Biomass ('000t) of Yellowtail Flounder by stratum, Div 3LN0-Fall

Depth	Stratum	No. of	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Range		trawlable	*WT 101,102*	*WT 113-115*	*WT 128-130*	*WT 144-146*	*WT 160-162*	*WT 176-179,181*	*WT196-98,200*	*WT212-17*	*WT229-33*	*WT 244-48*	*WT319-23*	*WT372-76TEL*
(m)		Units			*GA 226*			*TEL 22,23*	*TEL 41,42 AN 253*	*TEL 57,58*	*TEL 75,76*		*TEL338-43*	*357-61 AN399*
30 - 56	784-3L	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.0
TOTAL									**0.0**	**0.0**	**0.0**		**0.1**	**0.0**
<=56	375-3N	219,134.8	3.2	5.1	.	8.0	31.1	14.8	12.0	15.4	19.1	24.6	25.4	39.0
	376-3N	206,204.1	20.1	10.9	10.8	31.3	10.2	24.4	24.2	32.5	35.9	37.7	125.2	123.2
TOTAL			**23.3**	**16.0**	**10.8**	**39.3**	**41.3**	**39.2**	**36.2**	**47.9**	**55.0**	**62.3**	**150.6**	**162.2**
57 - 92	330-3O	287,365.1	0.2	0.0	0.2	0.5	0.0	1.1	0.0	0.8	0.2	3.6	0.3	2.8
	331-3O	62,727.9	0.2	0.9	0.3	0.5	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4
	338-3O	261,090.9	1.0	2.0	0.2	1.1	0.1	7.2	0.0	5.7	2.8	2.8	6.4	25.9
	340-3O	236,054.8	0.6	4.0	0.0	0.3	0.2	0.5	0.0	2.6	2.2	2.6	0.5	3.3
	350-3L	284,889.0	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	1.2
	351-3O	346,653.9	5.5	2.3	0.3	5.0	1.0	2.2	1.3	14.5	18.8	11.9	24.0	17.5
	352-3O	354,907.6	7.0	21.0	18.2	8.3	9.3	13.7	15.2	26.5	28.5	23.5	36.5	27.1
	353-3O	176,353.3	2.4	0.0	0.0	0.6	0.0	0.8	0.7	7.3	0.0	3.8	1.8	3.8
	360-3N	411,582.8	6.7	8.3	8.0	24.8	11.2	16.3	36.8	47.2	56.1	60.7	61.0	42.2
	361-3N	254,900.7	9.5	19.6	24.3	29.8	41.0	34.1	31.2	36.4	37.3	17.7	10.4	59.8
	362-3N	346,653.9	6.8	6.4	1.0	0.3	1.0	12.1	8.0	27.6	18.8	35.1	17.5	54.8
	363-3L	244,858.7	0.7	0.1	0.2	0.0	0.0	0.6	0.4	0.2	3.9	8.9	10.2	10.1
	371-3L	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372-3L	338,400.3	0.6	0.8	0.6	1.1	0.0	0.6	1.8	1.1	1.2	0.5	1.8	14.2
	373-3N	346,653.9	0.2	0.5	0.0	0.0	0.9	1.0	0.0	4.2	5.4	6.1	8.1	41.3
	374-3N	128,069.4	0.0	0.1	.	0.0	0.0	0.0	1.1	0.8	1.0	10.0	5.2	8.6
	383-3N	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	384-3L	154,068.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	785-3L	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**42.2**	**66.1**	**53.4**	**72.3**	**64.7**	**90.2**	**96.5**	**174.9**	**176.3**	**187.5**	**184.1**	**312.9**
93 - 183	328-3L	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	329-3O	236,742.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	332-3O	144,026.5	0.1	0.0	0.1	1.0	0.4	0.1	0.2	0.0	0.0	0.1	0.1	0.5
	337-3O	130,407.9	0.0	0.1	0.0	0.0	0.0	0.0	1.3	0.1	0.2	0.0	0.0	0.0
	339-3O	80,473.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.2
	341-3L	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	342-3L	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	343-3L	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348-3L	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349-3L	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	354-3O	65,204.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	359-3N	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	364-3L	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	365-3L	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0
	370-3L	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	377-3N	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382-3N	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385-3L	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390-3L	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786-3L	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	787-3L	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	788-3L	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	790-3L	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	793-3L	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	794-3L	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0
	797-3L	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	799-3L	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.2**	**0.2**	**0.2**	**1.0**	**0.4**	**0.1**	**1.5**	**0.1**	**0.3**	**0.1**	**0.2**	**0.7**
184 - 274	333-3O	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	336-3O	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	344-3L	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347-3L	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	355-3O	14,168.8	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	358-3N	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366-3L	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369-3L	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378-3N	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381-3N	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386-3L	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389-3L	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391-3L	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	795-3L	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table 29 Con'd

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 101,102*	1991 *WT 113-115*	1992 *WT 128-130 GA 226*	1993 *WT 144-146*	1994 *WT 160-162*	1995 *WT 176-179,181 TEL 22,23*	1996 *WT196-98,200 TEL 41,42 AN 253*	1997 *WT 212-17 TEL 57,58*	1998 *WT229-33 3EL 75,76*	1999 *WT 244-48 TEL 88*	2000 *WT319-23 TEL338-43*	2001 *WT372-76TEL 357-61 AN399*
184 - 366	789-3L	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	791-3L	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
	798-3L	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**		**0.0**	**0.0**
275 - 366	334-3O	13,205.9	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	335-3O	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	345-3L	196,987.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346-3L	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	356-3O	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	357-3N	22,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368-3L	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379-3N	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380-3N	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387-3L	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	388-3L	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	392-3L	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	796-3L	24,073.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	717-3O	22,835.1	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	719-3O	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721-3O	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723-3N	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725-3N	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727-3N	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729-3L	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731-3L	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	733-3L	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735-3L	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792-3L	6,878.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
550 - 731	718-3O	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	720-3O	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	722-3O	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724-3N	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726-3N	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728-3N	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	730-3L	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732-3L	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734-3L	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736-3L	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
732 - 914	737-3L	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	741-3L	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	745-3L	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	748-3L	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
915 -1097	738-3L	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	742-3L	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	746-3L	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	749-3L	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1098 -1280	739-3L	34,940.5	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0
	743-3L	29,025.4	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0
	747-3L	99,594.2	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0
	750-3L	76,484.0	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1281 -1463	740-3L	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	744-3L	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	751-3L	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Biomass ('000t)			**65.8**	**82.4**	**64.5**	**112.8**	**106.4**	**129.8**	**134.3**	**222.9**	**231.6**	**249.9**	**335.0**	**475.8**
Upper C.I.			**99.8**	**117.5**	**103.8**	**168.0**	**171.0**	**164.3**	**178.3**	**272.5**	**285.2**	**301.8**	**463.5**	**588.5**
Lower C.I.			**31.8**	**47.3**	**25.2**	**57.6**	**41.9**	**95.2**	**90.3**	**173.4**	**178.1**	**198.0**	**206.5**	**363.1**

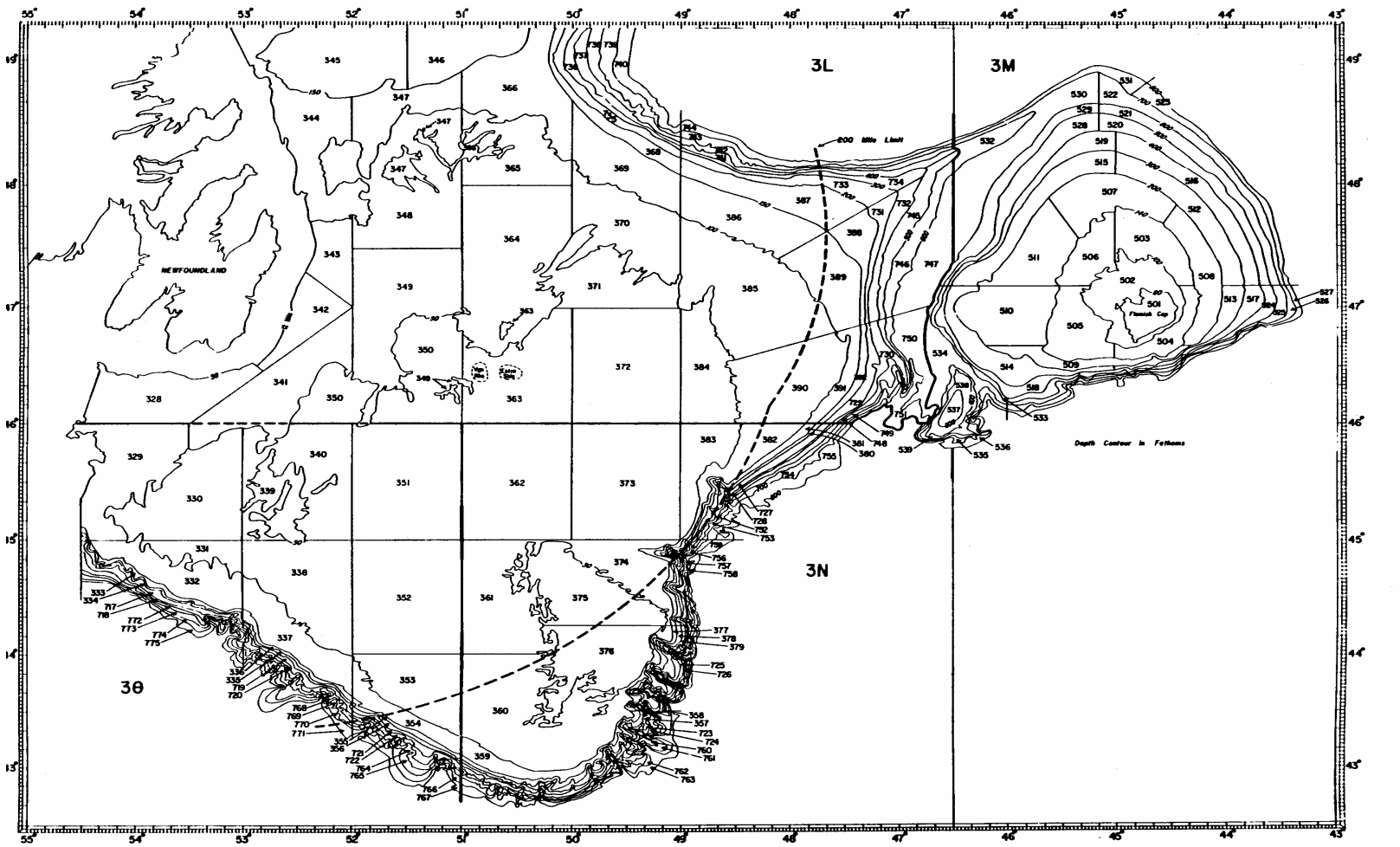
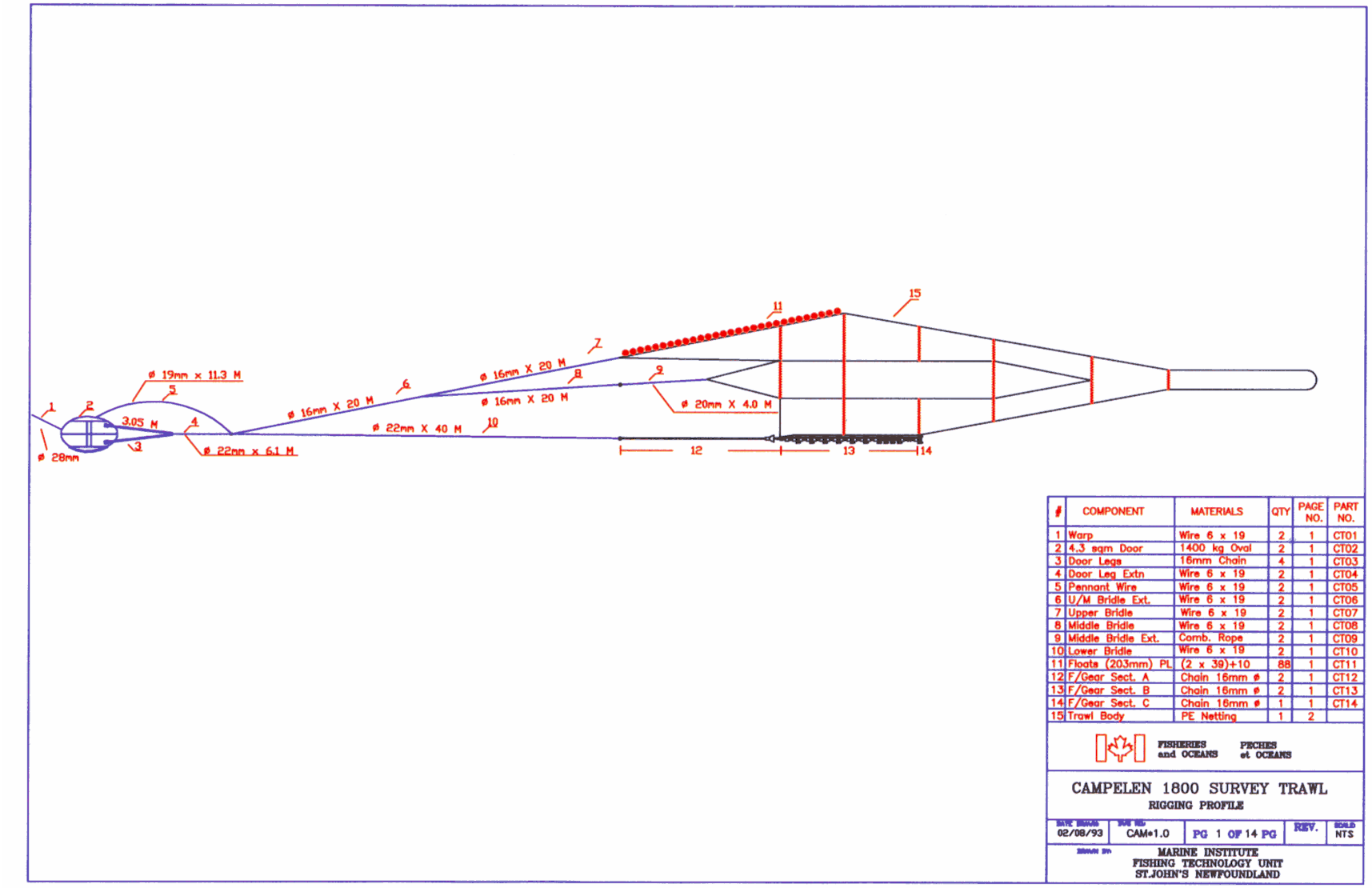


Fig. 1. Stratification chart of the Grand Banks, NAFO Divisions 3LNO, used in annual Canadian spring and fall bottom trawl surveys.



#	COMPONENT	MATERIALS	QTY	PAGE NO.	PART NO.
1	Warp	Wire 6 x 19	2	1	CT01
2	4.3 sqm Door	1400 kg Oval	2	1	CT02
3	Door Legs	16mm Chain	4	1	CT03
4	Door Leg Extn	Wire 6 x 19	2	1	CT04
5	Pennant Wire	Wire 6 x 19	2	1	CT05
6	U/M Bridle Ext.	Wire 6 x 19	2	1	CT06
7	Upper Bridle	Wire 6 x 19	2	1	CT07
8	Middle Bridle	Wire 6 x 19	2	1	CT08
9	Middle Bridle Ext.	Comb. Rope	2	1	CT09
10	Lower Bridle	Wire 6 x 19	2	1	CT10
11	Floats (203mm) PL	(2 x 39)+10	88	1	CT11
12	F/Gear Sect. A	Chain 16mm ø	2	1	CT12
13	F/Gear Sect. B	Chain 16mm ø	2	1	CT13
14	F/Gear Sect. C	Chain 16mm ø	1	1	CT14
15	Trawl Body	PE Netting	1	2	

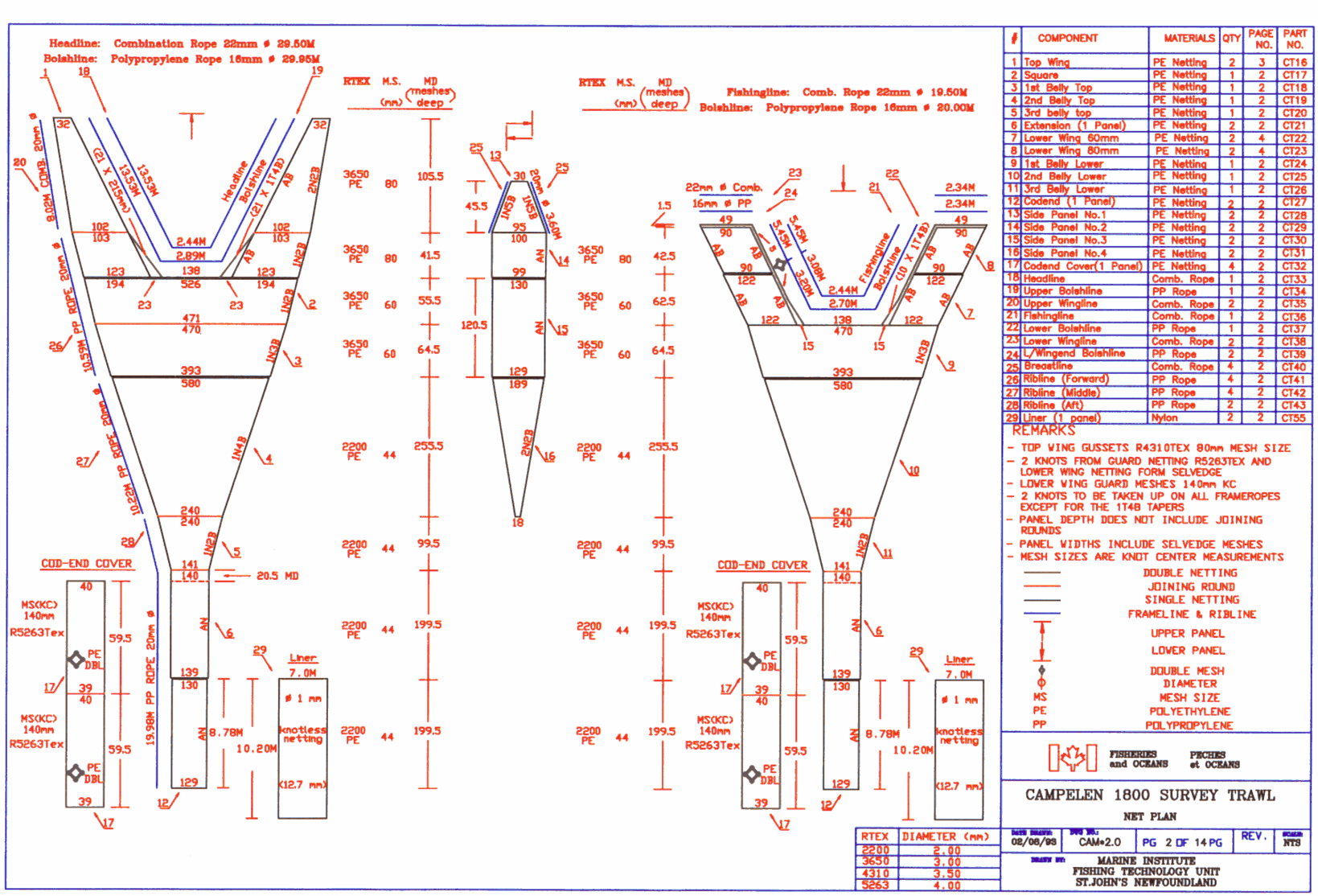
FISHERIES and OCEANS / PECHES et OCEANS

CAMPELEN 1800 SURVEY TRAWL
RIGGING PROFILE

DATE ISSUED	DWG NO.		REV.	SCALE
02/08/93	CAM•1.0	PG 1 OF 14 PG		NTS

DRAWN BY: MARINE INSTITUTE
FISHING TECHNOLOGY UNIT
ST.JOHN'S NEWFOUNDLAND

Fig. 2. Rigging profile of the Campelen 1800 shrimp trawl used in annual surveys of the Grand Bank



#	COMPONENT	MATERIALS	QTY	PAGE NO.	PART NO.
1	Top Wing	PE Netting	2	3	CT16
2	Square	PE Netting	1	2	CT17
3	1st Belly Top	PE Netting	1	2	CT18
4	2nd Belly Top	PE Netting	1	2	CT19
5	3rd belly top	PE Netting	1	2	CT20
6	Extension (1 Panel)	PE Netting	2	2	CT21
7	Lower Wing 60mm	PE Netting	2	4	CT22
8	Lower Wing 80mm	PE Netting	2	4	CT23
9	1st Belly Lower	PE Netting	1	2	CT24
10	2nd Belly Lower	PE Netting	1	2	CT25
11	3rd Belly Lower	PE Netting	1	2	CT26
12	Codend (1 Panel)	PE Netting	2	2	CT27
13	Side Panel No.1	PE Netting	2	2	CT28
14	Side Panel No.2	PE Netting	2	2	CT29
15	Side Panel No.3	PE Netting	2	2	CT30
16	Side Panel No.4	PE Netting	2	2	CT31
17	Codend Cover(1 Panel)	PE Netting	4	2	CT32
18	Headline	Comb. Rope	1	2	CT33
19	Upper Bolshline	PP Rope	1	2	CT34
20	Upper Wingline	Comb. Rope	2	2	CT35
21	Fishingline	Comb. Rope	1	2	CT36
22	Lower Bolshline	PP Rope	1	2	CT37
23	Lower Wingline	Comb. Rope	2	2	CT38
24	L/Wingend Bolshline	PP Rope	2	2	CT39
25	Breastline	Comb. Rope	4	2	CT40
26	Ribline (Forward)	PP Rope	4	2	CT41
27	Ribline (Middle)	PP Rope	4	2	CT42
28	Ribline (Aft)	PP Rope	2	2	CT43
29	Liner (1 panel)	Nylon	2	2	CT55

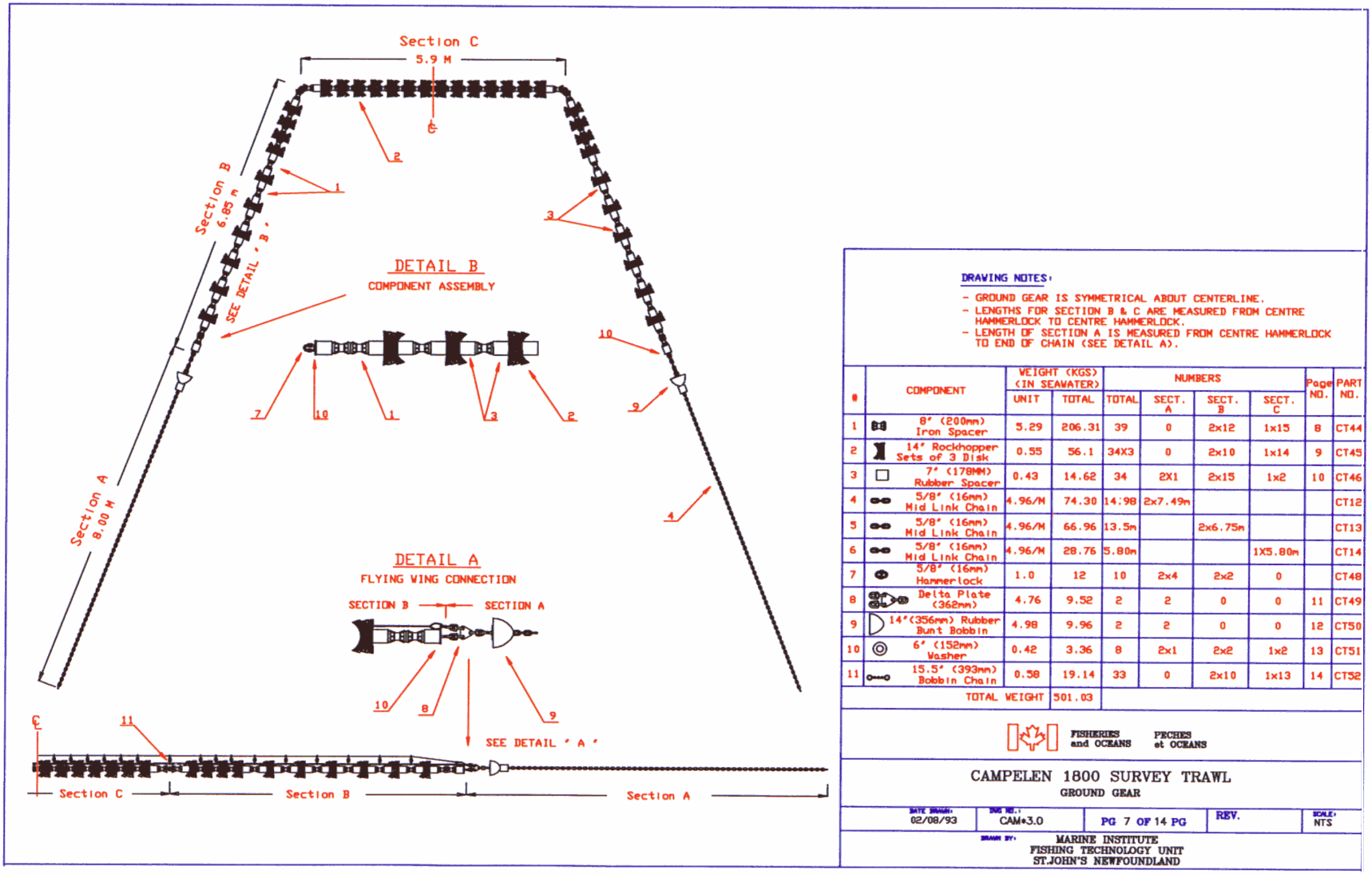
REMARKS
- TOP WING GUSSETS R4310TEX 80mm MESH SIZE
- 2 KNOTS FROM GUARD NETTING R5263TEX AND LOWER WING NETTING FORM SELVEDGE
- LOWER WING GUARD MESHES 140mm KC
- 2 KNOTS TO BE TAKEN UP ON ALL FRAMEROPES EXCEPT FOR THE 1T48 TAPERS
- PANEL DEPTH DOES NOT INCLUDE JOINING ROUNDS
- PANEL WIDTHS INCLUDE SELVEDGE MESHES
- MESH SIZES ARE KNOT CENTER MEASUREMENTS

DOUBLE NETTING
JOINING ROUND
SINGLE NETTING
FRAMELINE & RIBLINE
UPPER PANEL
LOWER PANEL
ø DOUBLE MESH DIAMETER
MS MESH SIZE
PE POLYETHYLENE
PP POLYPROPYLENE

FISHERIES and OCEANS / PECHES et OCEANS

RTEX	DIAMETER (mm)
2200	2.00
3650	3.00
4310	3.50
5263	4.00

Fig. 3. Schematic diagram of net plan for the Campelen 1800 shrimp trawl.



#	COMPONENT	WEIGHT (KGS) (IN SEAWATER) UNIT	WEIGHT (KGS) (IN SEAWATER) TOTAL	NUMBERS TOTAL	NUMBERS SECT. A	NUMBERS SECT. B	NUMBERS SECT. C	Page NO.	PART NO.
1	8' (200mm) Iron Spacer	5.29	206.31	39	0	2x12	1x15	8	CT44
2	14' Rockhopper Sets of 3 Disk	0.55	56.1	34X3	0	2x10	1x14	9	CT45
3	7' (178MM) Rubber Spacer	0.43	14.62	34	2X1	2x15	1x2	10	CT46
4	5/8' (16mm) Mid Link Chain	4.96/M	74.30	14.98	2x7.49m				CT12
5	5/8' (16mm) Mid Link Chain	4.96/M	66.96	13.5m		2x6.75m			CT13
6	5/8' (16mm) Mid Link Chain	4.96/M	28.76	5.80m			1X5.80m		CT14
7	5/8' (16mm) Hammerlock	1.0	12	10	2x4	2x2	0		CT48
8	Delta Plate (362mm)	4.76	9.52	2	2	0	0	11	CT49
9	14'(356mm) Rubber Bunt Bobbin	4.98	9.96	2	2	0	0	12	CT50
10	6' (152mm) Washer	0.42	3.36	8	2x1	2x2	1x2	13	CT51
11	15.5' (393mm) Bobbin Chain	0.58	19.14	33	0	2x10	1x13	14	CT52
	TOTAL WEIGHT		501.03						

Fig. 4. Schematic plan of the rockhopper footgear of the Campelen 1800 shrimp trawl

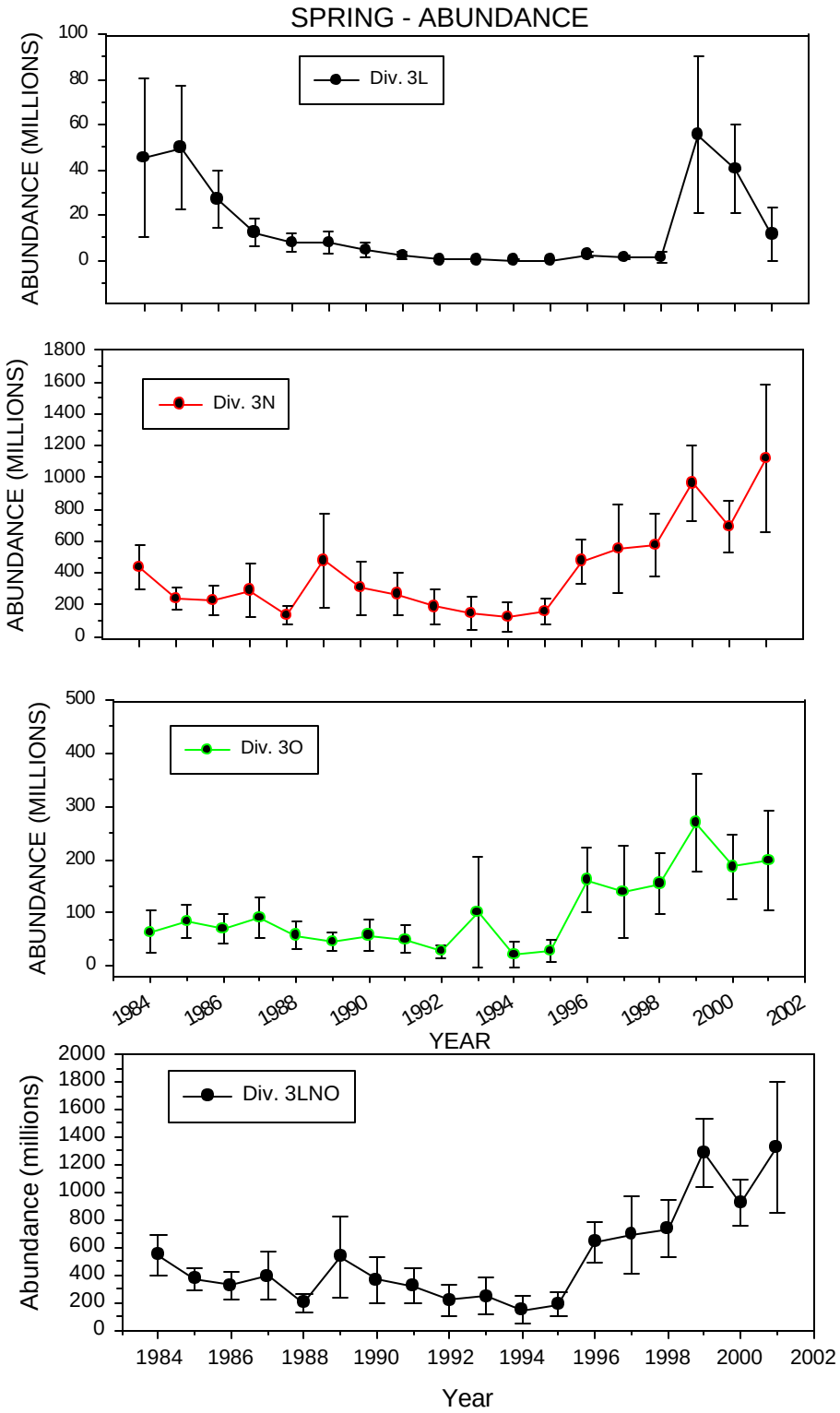


Fig. 5. Abundance estimates of yellowtail (with approx. 95% CI) from Canadian spring surveys in Campelen trawl units, 1984-2001, by NAFO Division and cumulative estimates for the combined Div 3LNO.

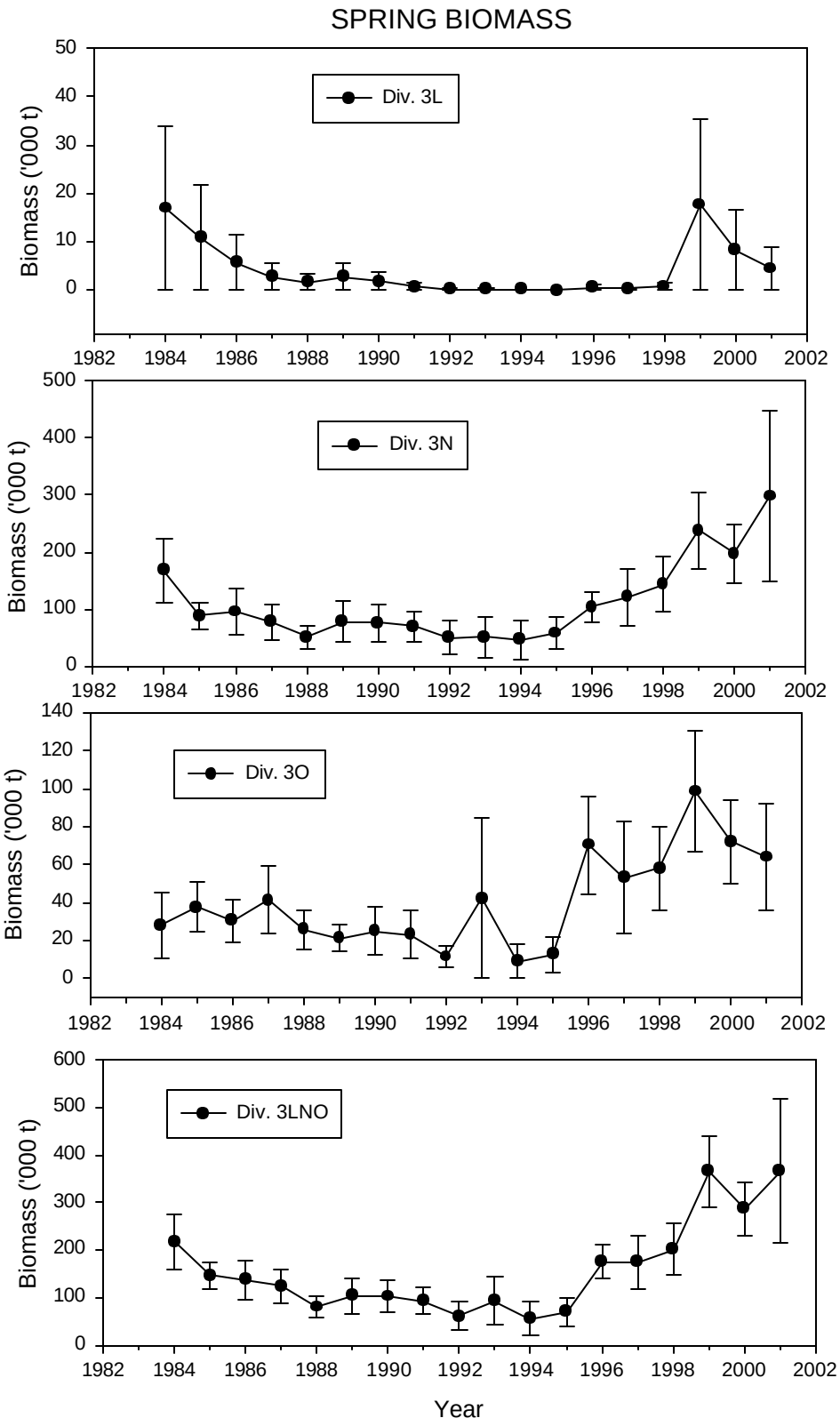


Fig. 6 Biomass of yellowtail flounder (with approx. 95%CI) from Canadian Spring surveys, 1984-2001.

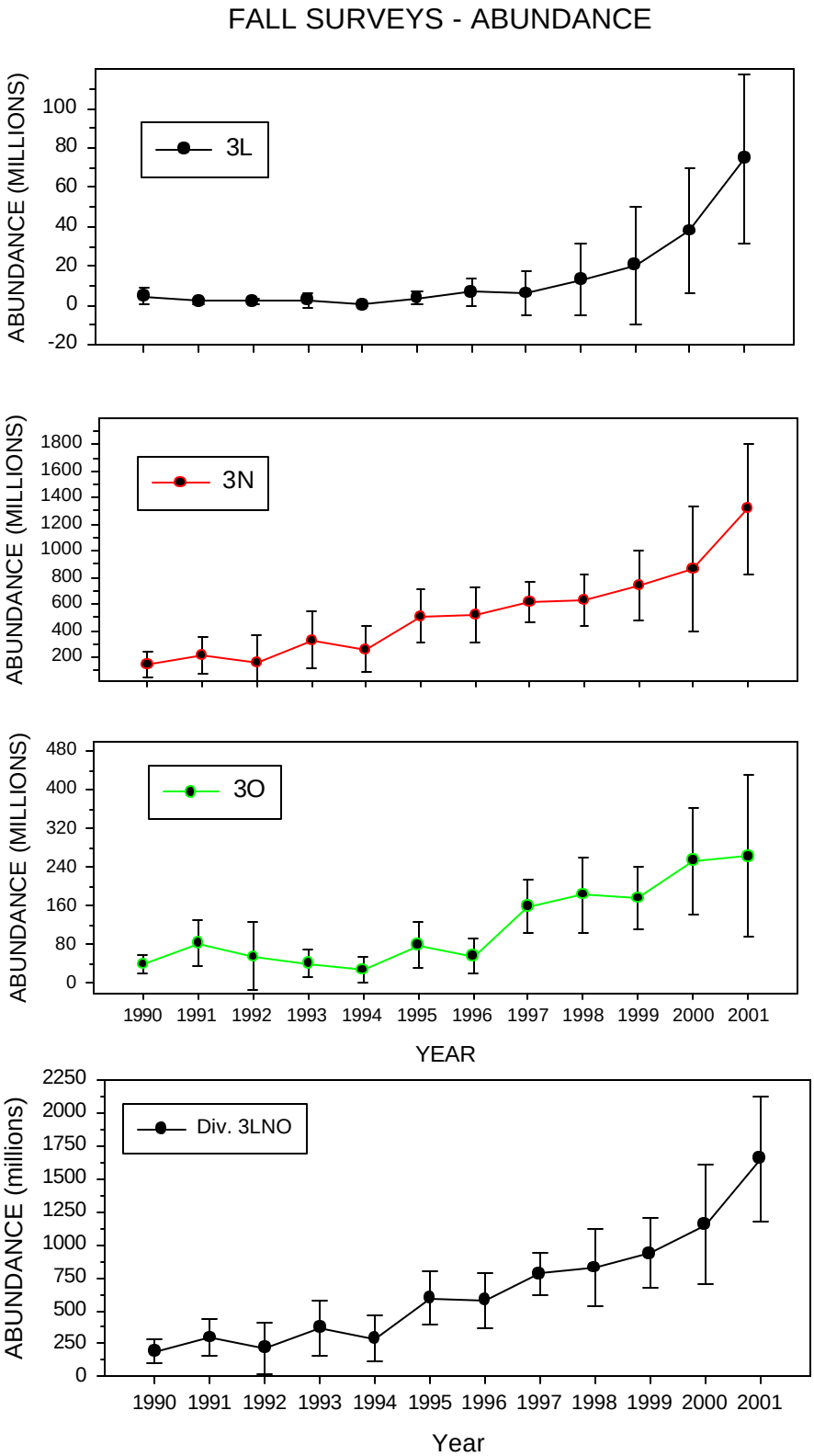


Fig. 7. Abundance estimates of yellowtail flounder (with approx. 95% CI) from Canadian fall surveys, 1990-2001, by NAFO Division and cumulative estimates for Div. 3LNO.

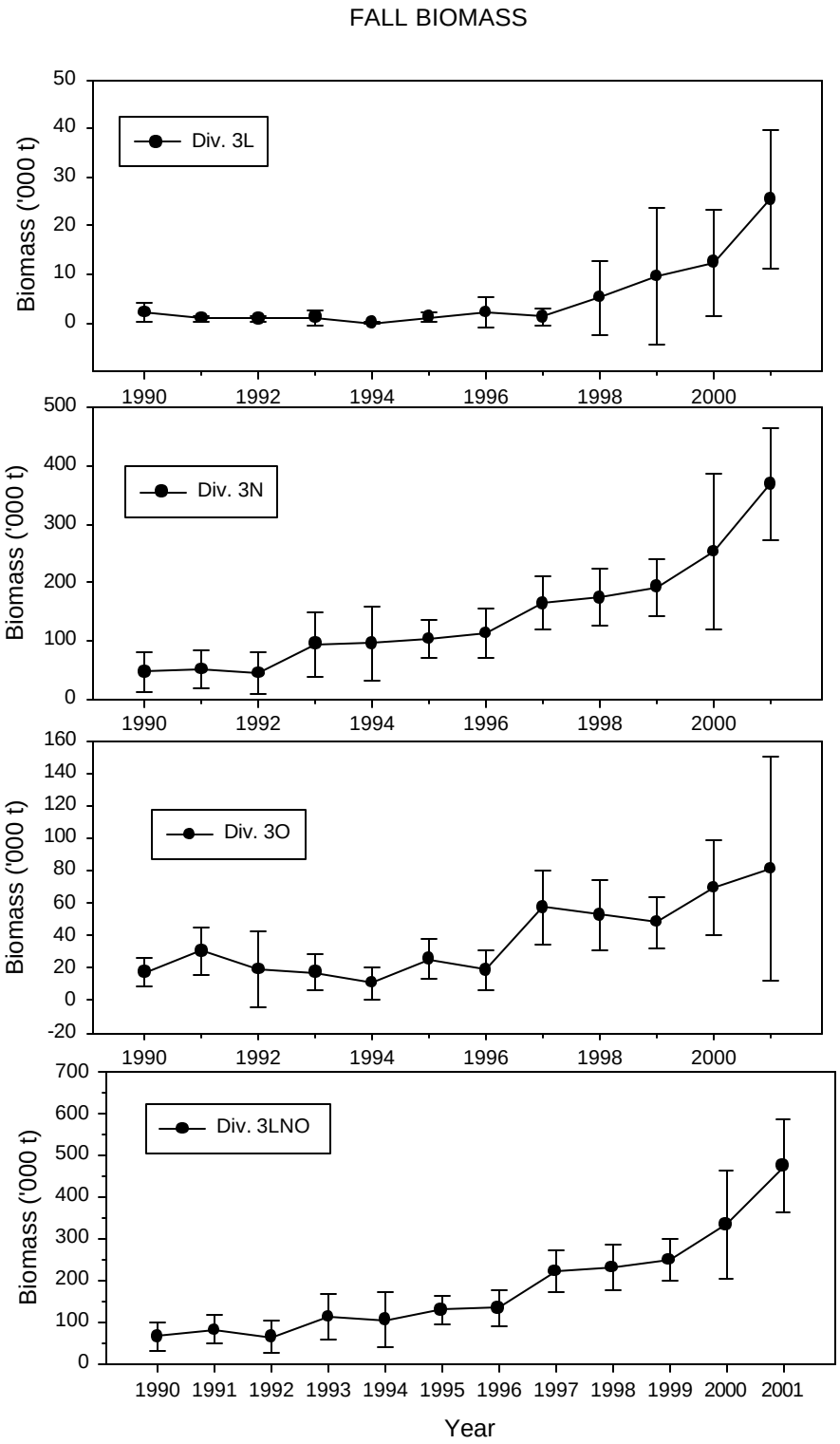


Fig.8. Biomass estimates (with approx. 95%CI) by Division and cumulative biomass (lower panel) of yellowtail flounder from the Canadian fall surveys from 1990-2001.

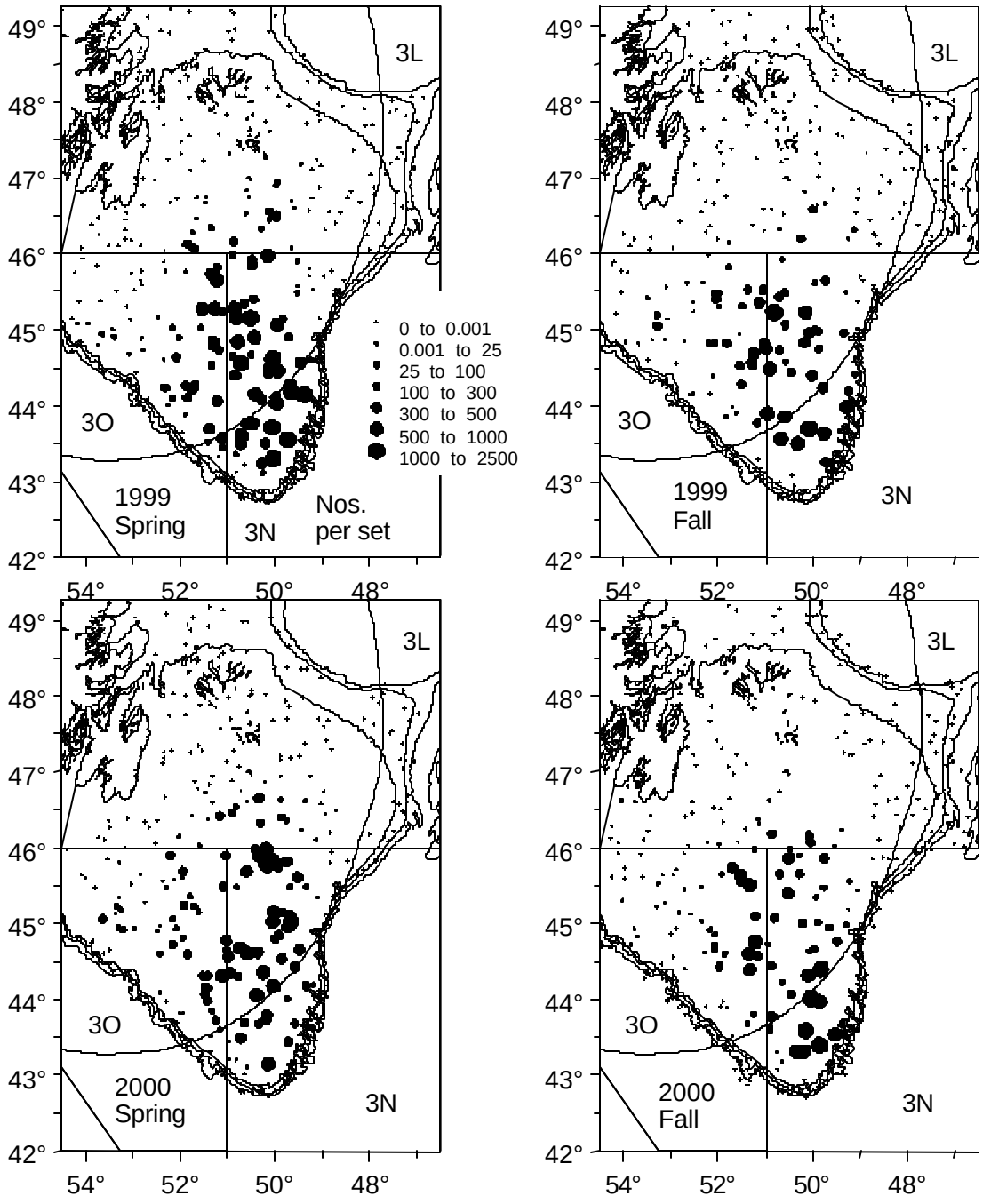


Fig. 9 Number of yellowtail flounder caught per set from Canadian surveys in Div. 3LNO.

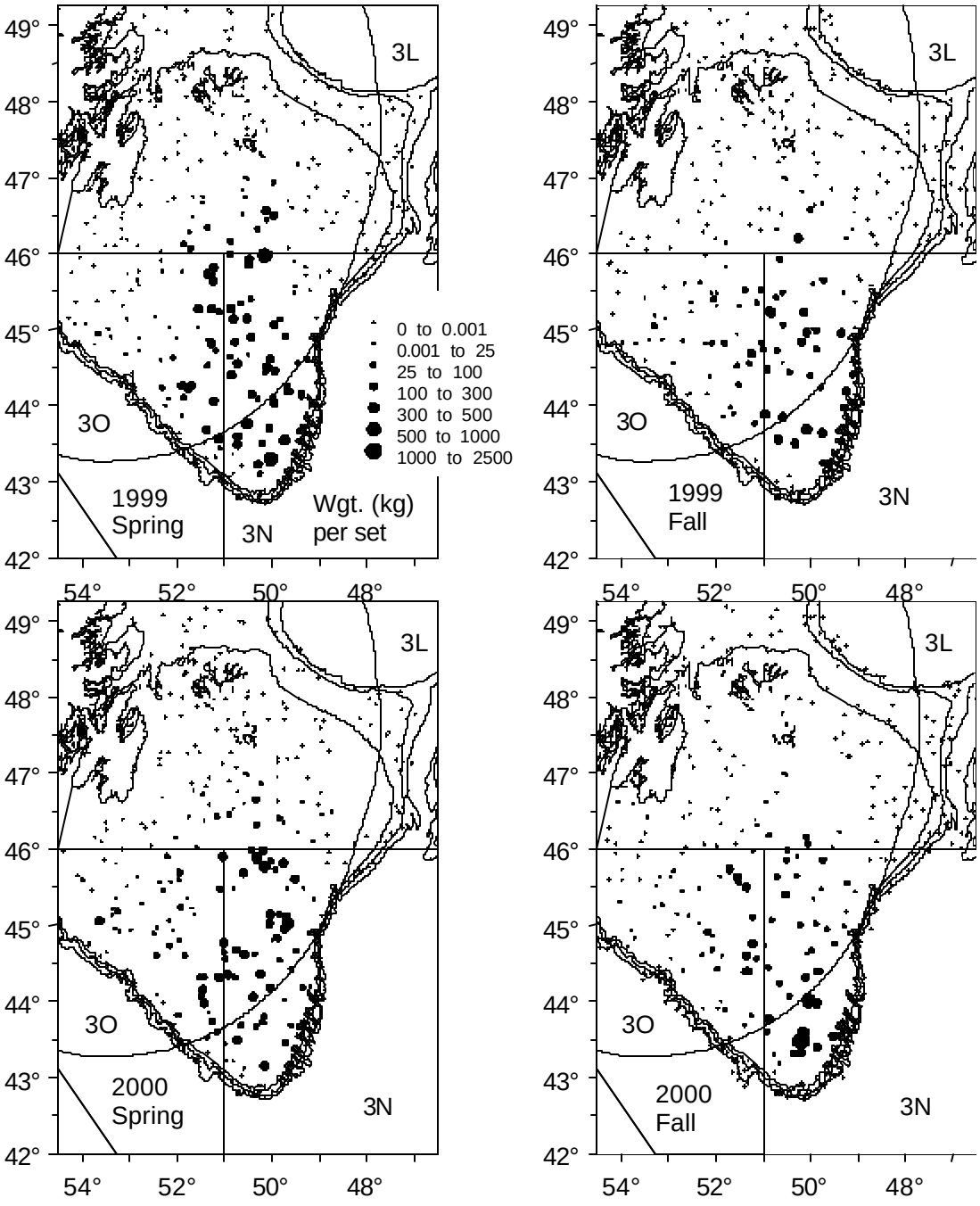


Fig.10. Weight (kg) of yellowtail flounder caught per set from Canadian in Div. 3LNO.

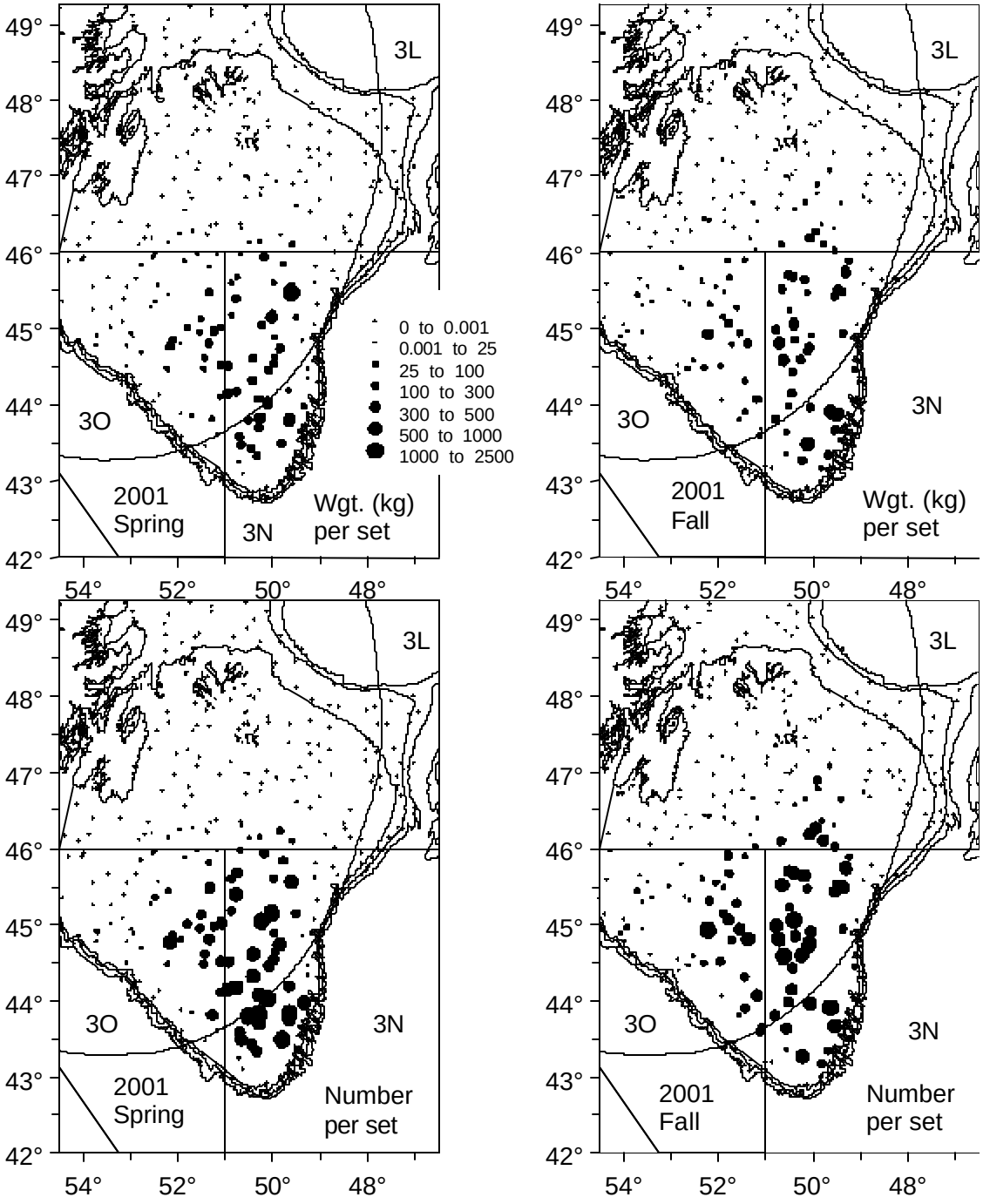


Fig.11. Number and weight (kg) of yellowtail flounder caught per set Canadian surveys in Div. 3LNO.

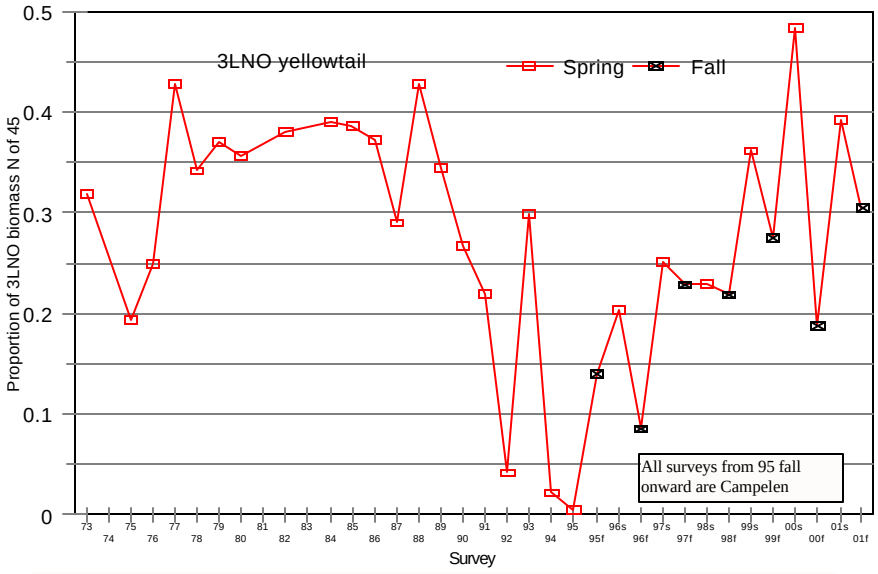


Fig. 12. Proportion of yellowtail biomass located north of 45°N in Div. 3LNO.