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Distribution and Abundance of Yellowtail Flounder (*Limanda ferruginea*) on the Grand Bank, NAFO Divisions 3LNO, as Derived from Annual Canadian Bottom Trawl Surveys.

by

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Abstract

Multi-species annual stratified-random bottom trawl surveys of the Grand Bank, NAFO Divisions 3LNO, have been conducted by the Newfoundland region of the Canadian Dept of Fisheries and Oceans in Div. 3LNO during the spring of each year since 1971. This paper presents an update of area swept estimates of abundance and biomass of yellowtail flounder from the 1998 spring and fall surveys. Recent surveys have indicated that the population is increasing in size and expanding its northward range to re-occupy habitats in the northern Grand Bank.

Introduction

Multi-species annual stratified-random bottom trawl surveys have been conducted by the Newfoundland region of the Canadian Dept of Fisheries and Oceans in Div. 3LNO during the spring of each year since 1971. Since 1990, a second series of surveys have been carried out on the Grand Bank during the period October to December. From both of these surveys, swept area abundance estimates are derived for yellowtail flounder (*Limanda ferruginea*) and serve as fishery-independent indices of stock size. Because catchability of the survey trawl is unknown and assumed to be <=1.0, 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 directed to monitor annual changes in stock size and 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 1971-1999 spring and the 1990-99 fall surveys covered depths from 45 to 731m. Beginning in 1994 it was decided to extend the coverage of the fall surveys to depths deeper than 731 m. However, mechanical problems with the survey vessel did not permit these strata to be fished in 1995 and in 1996. In 1997 there was insufficient time for the survey to cover these depth strata beyond 731 m. In 1998 and 1999, the extended coverage met with some success, however, these changes have negligible effect on estimation of the yellowtail flounder resource because the stock is found almost exclusively in depths less than 100 m.

Survey gears: From 1971 to 1982 the surveys of the Grand Bank were conducted by 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 the *A.T. Cameron* was replaced by the *FRV*

Wilfred Templeman (WT). Occasionally the *W. Templeman's* sister ship, the *FRV 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 rockhopper footgear (see Figs. 2-4;Table 1). The Yankee and the Engel trawls were both towed at 3.5 kt and 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 W. Templeman. The Campelen trawl also replaced the Yankee 41 shrimp trawl used in the fall juvenile groundfish surveys from 1985-94 (McCallum and Walsh 1996). Since 1993, the geometry and performance of all bottom trawl surveys have been monitored by Scanmar trawl mounted acoustic instrumentation (McCallum and Walsh 1999).

Data from 1971-82 time period has not been converted to Campelen trawl units and can be found in the 1997 assessment paper (see Walsh et al. 1997 for details). Conversion factors have been derived from comparative fishing trials to convert the 1984-95 spring and 1990-94 fall Engel trawl yellowtail flounder survey data into Campelen trawl units and are presented in Walsh et al. (1998a, 1998b). To-date, conversion factors for yellowtail flounder have not been derived for either the 1971-82 time series nor the 1985-94 juvenile groundfish series. Consequently, only survey data from 1984 onward is reported here.

All species are separated, counted and weighed for every trawl haul. From each haul a sample or a sub-sample is taken to collect biological data on size, age, maturity and feeding for all commercial species. The catches are standardized to distance towed.

Results

In all years and in both time series, the majority of yellowtail flounder were caught in less than 100 m on the Grand Bank; however, occasionally small catches have been taken in deep waters along the slope edge in Div. 3O.

A) Spring groundfish surveys 1984-99

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 estimates in Div. 3L, 3N, and 3O, respectively, and for a combined Div. 3LNO estimate for the time period 1984-99. Figures 5 and 6 show plots of the abundance and biomass estimates from surveys during the 1984-99 period.

Abundance trends: Tables 8-10 and Figure 5 show the population abundance trends by Division from 1984-99, with 95% confidence intervals.

In Div. 3L, there has been a continuous decline from a high of 50 million fish in 1985 to "0.0" fish abundance in 1995. Since 1996 yellowtail have again been caught in this division and 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 estimate in the time series (Fig. 5;Table 8).

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 3 fold increase in 1996 to 475 million fish. Since 1995, there has been a continuos increase in population size reaching 572 million fish in 1998. In 1999, the abundance estimate jump 68% to 965 million fish (Fig. 5: Table 9)

In Div. 3O, the abundance fluctuated around an average level of 77 million fish from 1984-87 and then began to decline gradually to 28 million fish in 1992. In 1993, the population estimate of 101 million was almost 4 times that of 1992, and in 1994 and 1995 the population abundance again dropped back to a level in line with the 1992 estimate. This anomalous high estimate in 1993 mainly appears to be due to the high catch rates in stratum 352 and is reflected in the high variability around the estimate (see Fig. 5). 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 has fluctuated around an average size of 153 million fish. In 1999, the estimate increased by 74% to reach a high of 269 million fish (Table 10;Fig 5).

Div. 3LNO: Table 11 presents the total population estimate for the combined divisions. Overall the stock showed a decline from 544 million fish in 1984 to 148 million fish in 1994. Since 1995, the population estimate began to rebound from this decline and increased dramatically from 187 million fish to a high of 734 million fish in 1998. 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 gear and is also reflected in the size composition of the survey catches for those years. However, the 76% increase in abundance from 1998 to 1999, the highest in the time series at 1289 million fish, may not be indicative of a natural increase in stock size. Catch rates were very high in many strata throughout all divisions (Tables 2-4).

Biomass trends: Tables 12-15 and Figure 6 shows the trends in survey biomass and associated 95% confidence intervals from 1984-99.

In Div. 3L, the biomass index has declined steadily from a high of about 22,000 t in 1984 to "0.0" t in 1994 and 1995. 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 tons is over 5 times higher than the average size of the last three years. (Table 12; Fig. 6A).

In Div. 3N, the majority of the stock is distributed in and around the Southeast Shoal area (strata 375, 376, 360 and 361 in Fig 1) The biomass index declined gradually from 168,000 t in 1984 to 46,000 tons 1994. After a 25% increase in 1995 the 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 of 238,000 t was 66% higher than the 1998 estimate.

In Div. 3O[1], the biomass index show 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 6 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 are unknown. In 1999, the biomass increased by 70% over the 1998 estimate to a high of 98,000 t.

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 1999. 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 decline in biomass levels ceased and increased by 27 %. In 1996, the biomass increased by 60% and this coincided with a change to a more efficient survey gear in the fall of 1995. Between 1996 and 1997 the stock remained stabled at an average level of 175,000 t and then again increased in 1998 by 16% to a level of 202,000 t in 1998. 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. Increases were seen in many strata, indicative of an 'anomalous ' year effect.

B) Fall groundfish surveys, 1990-99

Tables 16-21 show the survey catch rates in the form of stratified mean number and weight-per -tow by stratum and division. Tables 22-29 show abundance and biomass per stratum, along with confidence intervals, for Div. 3L, 3N, and 3O, respectively, and a combined Div. 3LNO estimate for the time period 1990-99. Figures 7 and 8 shows plots of the abundance and biomass estimates by division from 1990-99.

Abundance trends: Tables 22-25 and Figure 7 show the abundance trends by Division up to 1999, with 95% confidence intervals.

In Div 3L, 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 survey, these fish were found in three strata (350, 363 and 372; see Fig. 1) in depths less than 100 m similar to the distribution occupied in the mid-1980s as determined from

1 In the 1998 assessment of this stock (Walsh et al. 1998) the estimates for Div 3O were slightly lower because of an error which resulted in the deletion of stratum 340 in all years. This error has been corrected.

the spring surveys. In the 1999 survey, the abundance showed a 57% increase in stock size. Fish were found mainly in the same three strata as in 1998.

In Div. 3N from 1990-94, the survey abundance 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 739 million fish in 1999 (Table 23; Fig 7).

In Div. 3O, there has been 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 since has fluctuated around an average level of 180 million fish during 1998 and 1999.

In 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 high of 937 million fish in 1999, the largest in the time series (Table 25).

***Biomass trends*:** Tables 26 to 29 and Figure 8 show the trends in survey biomass and 95% confidence intervals.

In Div. 3L, the biomass has shown a decrease from 1990 level of 2,000 t to "0.0 t" in 1994. Noteworthy is that a 0.0 t biomass was also estimated for the 1994 and 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 . The 1999 biomass was 85% than the 1998 estimate (Table 26;Fig 8A). Such an increase in biomass is thought to be the result of an extension of the range of yellowtail flounder with increasing stock size (see spatial section below).

In Div. 3N, similar to the spring surveys, the majority of the stock was found in this Division. From 1990-92 the stock size has 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 192,000 t in 1999 (Table 27;Fig 8A)

In Div. 3O, the survey biomass index, in Table 28, showed no obvious trend from 1990-96, fluctuating around an average level of 20,000 t. In 1997, the biomass almost tripled in size. Since then the biomass has shown a decrease in stock size probably reflective of movements between Div. 3N (Table 28; Fig 8A). Both estimates of the 1997 and 1998 are close in agreement with the spring estimate for those years. In 1999, the biomass was estimated to be 48,000 t. In this Division, almost half of the biomass was found in stratum 352, which borders the dividing line with Division 3N, in 1999, similar to other years and to the spring time series.

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 at 113, 000 t, there has been an increasing upward trend to 1999. From 1996 to 1997, the biomass increased by 40% and reached its highest point in the time series at 250,000 t in 1999 (Table 29;Fig 8B). In the spring series the upward trend began in 1995 while in the fall series it began in 1993..

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 spring of 1999, the huge increase in abundance and biomass was not evident in the fall surveys and can be regarded as a 'year' effect probably related to changes in catchability whose cause can only be speculated.

Spatial analysis

Figures 9 and 16 show the standard number and weight of individual fishing sets plotted as point estimates using the Campelen trawl data in the Canadian spring and fall surveys of 1998 and 1999. In all surveys, yellowtail flounder were most abundant in and around the Southeast Shoal in Div. 3N (Fig. 1), straddling the Canadian 200 mile limit and extending into the Regulatory Area confirming earlier descriptions of distribution (Walsh 1992; Walsh et al. 1999). Yellowtail appear to be more abundant in the Regulatory Area of Division 3N in 1998 and 1999 then in recent years and, as well, the northward distribution of the stock has extended in Div. 3L, similar to historical times when the stock size was high Brodie et al.(1995) noted that the northward extension of yellowtail on the Grand Bank has decreased 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. Figure 17 shows a plot of the proportion of biomass north of 45^0 N from 1973 to 1999 and it is obvious that the stock has been extending northward. Recent tag returns from the 1998-2000 fishery are plotted in Figures 18-20 and also show confirm the northward extension of the stock in recent years. These tagging experiments were carried out in the early 1990s (see Morgan and Walsh 1999 for details).

References

Brodie, W.B., S.J. Walsh and D.B. Atkinson 1995. The effect of stock abundance on range contraction of yellowtail flounder (Pleuronectes ferruginea) on the Grand Bank of Newfoundland in the Northwest Atlantic from 1975 to 1995. J. Sea Res. 39:139-152

Doubleday, W.B. 1981 Manual on groundfish surveys in the Northwest Atlantic. NAFO Sci. Coun. Studies 2:55p.

McCallum, B.R and S.J Walsh 1996. Groundfish survey trawls used at the Northwest Atlantic Fisheries Centre, 1971-present. NAFO SCR Doc. 96/50:18p

McCallum, B.R and S.J Walsh 1999. Analysis of the performance of the Campelen 1800 shrimp trawl during annual Canadian bottom trawl surveys of Subarea 2J + Divisions 3KLMNO, and 3PS from 1995-1998. NAFO SCR Doc. 99/46

Morgan, M.J. and S.J. Walsh 999. An update of results of tagging experiments with juvenile yellowtail flounder NAFO Divisions 3LNO. NAFO SCR Doc. 99/23: 8p

Walsh, S.J. 1992. Factors influencing distribution of juvenile yellowtail flounder (Limanda ferruginea) on the Grand Bank of Newfoundland Neth. J. Sea Res.29:193-203

Walsh, S.J, W.B. Brodie, M.J. Morgan, W.R. Bowering, D. Orr, and M.Veitch 1997 An Assessment of the Grand Bank Yellowtail Flounder Stock in NAFO Divisions 3LNO. NAFO SCR Doc. 97/72:54p

Walsh, S.J, D. Orr and W.B. Brodie 1998. Conversion factors for yellowtail flounder survey indices derived from comparative fishing trials between the Engel 145 otter trawl and the Campelen 1800 shrimp trawl. NAFO SCR Doc. 98/60: 10p.

Walsh, S.J, W.B. Brodie, M.Veitch, D. Orr, C. McFadden, and D. Maddock Parsons 1998 An Assessment of the Grand Bank Yellowtail Flounder Stock in NAFO Divisions 3LNO. NAFO SCR Doc. 98/72:78p

Walsh, S.J., K.S. Whalen and M. Simpson 1999. Preliminary analysis of spatial and temporal variation in the distribution of juvenile yellowtail flounder on the Grand Bank: Investigating the methodology. NAFO SCR Doc. 99/59

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 (m2)	0.00727

Table 2. Mean Number 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 T 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
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
	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
	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		2.5
	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	5.1	47.3
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
367-549	729	25,586.4		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
	733	64,378.6		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
550-731	730	23,385.4		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
	734	31,363.9		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
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)**
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**
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**

Table 3. Mean Number per set 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 WT238-4
<=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
	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
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
	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
	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
	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
	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
	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
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
	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
	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
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
	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
	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
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
	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
	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
367-549	723	21,322.0								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
	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
	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
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)	51.5(76)	66.1(89)	198.0(82)	233.2(71)	240.4(88)	402.1(82)
Upper C.I.			251.2	135.1	141.7	202.3	86.3	335.7	206.4	165.4	127.0	103.6	89.1	101.0	254.8	349.9	324.1	499.8
Lower C.I.			128.2	74.1	58.3	53.9	31.6	81.2	59.9	57.9	31.6	17.1	13.8	31.3	141.1	116.5	156.8	304.4

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*
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
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
	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
	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
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
	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
	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
367-549	717	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
	719	10,454.6								0.0	0.0	0.0	0.0	0.0	0.8	3.5	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
550-731	718	15,269.3								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
	722	12,793.2								0.0	0.0	0.0	0.0	6.5	0.0	4.9	0.0	0.0
732-914	764	14,443.9											0.0					
	772	18,570.8											0.0					
Mean No. (sets)			**27.9(52)**	**34.2(93)**	**28.5(95)**	**36.9(91)**	**59.7(77)**	**18.9(101)**	**23.9(84)**	**19.7(107)**	**11.0(91)**	**39.8(75)**	**8.6(76)**	**11.2(80)**	**70.6(70)**	**54.6(75)**	**60.9(93)**	**105.4(86)**
Upper C.I.			**45.8**	**46.2**	**39.5**	**52.6**	**85.2**	**26.1**	**36.5**	**30.0**	**15.9**	**80.5**	**17.6**	**19.2**	**96.3**	**89.1**	**83.4**	**141.2**
Lower C.I.			**9.9**	**22.1**	**17.5**	**21.2**	**34.2**	**11.8**	**11.2**	**9.3**	**6.1**	**-0.9**	**-0.4**	**3.1**	**44.9**	**20.1**	**38.3**	**69.7**

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
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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
367-549	729	25,586.4		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
	733	64,378.6		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
550-731	730	23,385.4		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
	734	31,363.9		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
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)**	**4.9(175)**
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**
Lower C.I.			**2.3**	**1.9**	**1.4**	**6.0**	**4.0**	**0.2**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**-0.1**	**1.9**

Table 6. Mean Weight (Kg) per set 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*
<=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
	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
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
	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
	362	346,653.9	86.8	32.1	61.2	40.3	35.1	24.6	30.3	24.4	2.9	40.9	1.3	0.3	83.5	97.1	111.8	166.3
	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
	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
	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
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
	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
	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
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
	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
	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
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
	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
	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
367-549	723	21,322.0								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
	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
	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
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)**	**18.9(76)**	**24.1(89)**	**43.3(82)**	**51.0(71)**	**59.8(88)**	**99.3(82)**
Upper C.I.			**97.3**	**48.7**	**58.9**	**47.8**	**31.1**	**50.3**	**47.1**	**39.7**	**33.2**	**36.0**	**33.2**	**36.3**	**54.0**	**72.2**	**80.2**	**127.4**
Lower C.I.			**48.9**	**28.1**	**24.0**	**20.5**	**13.7**	**18.0**	**18.9**	**17.9**	**8.4**	**6.2**	**4.6**	**11.9**	**32.6**	**29.8**	**39.5**	**71.3**

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*
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
	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
	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
	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
	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
	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
	353	17.6353.3	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
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
	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
	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
	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
	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
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
	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
	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
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
	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
	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
367-549	717	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
	719	10,454.6								0.0	0.0	0.0	0.0	0.0	0.5	2.0	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
550-731	718	15,269.3								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
	722	12,793.2								0.0	0.0	0.0	0.0	3.9	0.0	2.3	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)**	**4.9(80)**	**30.5(80)**	**20.8(75)**	**22.9(93)**	**38.7(86)**
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**	**41.6**	**32.5**	**31.6**	**51.3**
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**	**19.4**	**9.2**	**14.1**	**26.1**

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*
30-56	784	36866.37																
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
	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
	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		0.4
	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
	364	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
367-549	729	25,586.4		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
	733	64,378.6		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
550-731	730	23,385.4		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
	734	31,363.9		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
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**
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**
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**

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
<=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
	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
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
	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
	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
	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
	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
	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
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
	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
	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
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
	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
	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
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
	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
	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
367-549	723	21,322.0								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
	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
	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
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**
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**
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**

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
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
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
	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
	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
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
	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
	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
367-549	717	12,793.2								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
	721	10,454.6								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
	720	14,443.9								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
732-914	764	14,443.9											0.0					
	772	18,570.8											0.0					
Abundance (millions)			**63.5**	**84.1**	**70.1**	**90.9**	**57.3**	**46.7**	**57.3**	**50.0**	**28.0**	**101.1**	**21.9**	**28.5**	**161.7**	**139.4**	**154.5**	**269.1**
Upper C.I.			**103.4**	**113.8**	**97.2**	**129.5**	**82.7**	**64.2**	**87.6**	**76.3**	**40.4**	**204.4**	**44.7**	**49.1**	**222.7**	**227.5**	**211.7**	**360.3**
Lower C.I.			**23.5**	**54.5**	**43.0**	**52.3**	**31.9**	**29.2**	**26.9**	**23.6**	**15.6**	**-2.2**	**-1.0**	**8.0**	**100.6**	**51.4**	**97.3**	**177.9**

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

Depth Range (m)	Stratum	No. of trawlable Units	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
			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*
				WT 28-30														
<=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
	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
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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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		0.4
	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	1.7	16.0
	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
	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
	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
	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
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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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

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*
184-274	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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**
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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**
367-549	717	12,793.2								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
	721	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723	21,322.0								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
	727	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729	25,586.4		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
	733	64,378.6		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
TOTAL				**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 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
550-731	718	15,269.3								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
	722	12,793.2								0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
	724	17,057.6								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
	730	23,385.4		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
	734	31,363.9		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
TOTAL				0.0						0.0	0.0	0.0	0.0	0.1	0.0	0.1	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					
	752	18,433.2											0.0					
	756	14,581.5											0.0					
	760	21,184.4											0.0					
	764	14,443.9											0.0					
	772	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
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
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

Table 12. Biomass estimates ('000t) 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 WT 240-41
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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
367-549	729	25,586.4		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
	733	64,378.6		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
550-731	730	23,385.4		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
	734	31,363.9		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
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**
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**
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**

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*
<=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
	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
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
	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
	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
	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
	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
	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
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
	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
	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
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
	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
	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
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
	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
	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
367-549	723	21,322.0								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
	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
	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
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**
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**
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**

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
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
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
	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
	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
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
	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
	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
367-549	717	12,793.2								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
	721	10,454.6								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
	720	14,443.9								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
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**	**21.6**	**25.1**	**23.3**	**11.6**	**42.4**	**9.2**	**12.7**	**70.6**	**53.2**	**58.0**	**98.7**
Upper C.I.			**45.6**	**50.7**	**41.4**	**59.0**	**36.2**	**28.6**	**37.8**	**36.3**	**17.0**	**84.5**	**18.0**	**22.2**	**96.3**	**82.9**	**80.2**	**130.8**
Lower C.I.			**10.1**	**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**

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

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 WT221-24	1999 WT 238-41
<=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
	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
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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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		0.2
	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
	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
	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
	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
	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
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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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

Table 15 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 WT 238-41
184-274	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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**
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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**
367-549	717	12,793.2								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
	721	10,454.6								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723	21,322.0								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
	727	22,009.8								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729	25,586.4		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
	733	64,378.6		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
TOTAL				**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
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*
(m)		Units		*WT 28-30*														
550-731	718	15,269.3								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
	722	12,793.2								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724	17,057.6								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
	730	23,385.4		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
	734	31,363.9		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
TOTAL				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					
	752	18,433.2											0.0					
	756	14,581.5											0.0					
	760	21,184.4											0.0					
	764	14,443.9											0.0					
	772	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**
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**
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**

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*
30 - 56	784	36,866.4	.		.	.	.	.	0.5	0.0	0.0	.
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
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
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
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
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
57 - 92	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
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
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
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
93 - 183	348	291,629.5	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
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
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
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
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
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
93 - 183	786	11,555.1	.	.	.	.	.	.	0.5	0.0	0.5	.
93 - 183	787	84,325.0	.	.	.	.	.	.	0.0	0.0	1.0	.
93 - 183	788	34,665.4	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	799	9,904.4	.	.	.	.	.	.	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
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
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
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
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
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
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
184 - 274	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.
184 - 366	789	11,142.5	.	.	.	.	.	.	0.0	0.0	0.0	.
184 - 366	791	42,368.8	.	.	.	.	.	.	0.0	0.0	0.0	.
184 - 366	798	13,756.1	.	.	.	.	.	.	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
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
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
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
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
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
275 - 366	796	24,073.2	.	.	.	.	.	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
367 - 549	731	29,713.2	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
367 - 549	735	37,416.6		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	.
550 - 731	730	23,385.4	.	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
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
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
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0
732 - 914	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
732 - 914	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0
732 - 914	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
915 -1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0
915 -1097	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0
915 -1097	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
915 -1097	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1098 -1280	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1098 -1280	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1098 -1280	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1281 -1463	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1281 -1463	751	31,501.5	.	.	.	.	.	.	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 (124)**	**3.6(170)**
Upper C.I.			**1.6**	**0.6**	**0.6**	**1.3**	**0.1**	**1.3**	**2.2**	**2.7**	**5.0**	**8.6**
Lower C.I.			**0.0**	**0.2**	**0.2**	**-0.3**	**0.0**	**0.1**	**-0.1**	**-0.7**	**-0.8**	**-1.6**

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 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
<=56	375	219,134.8	40.7	58.0	.	76.5	329.8	398.5	216.7	212.6	310.9	372.8
<=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
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
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
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
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
57 - 92	374	128,069.4	0.0	1.0	.	0.0	0.0	0.0	30.0	18.0	15.7	182.3
57 - 92	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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
93 - 183	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	3.0	2.0	3.5
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
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
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
184 - 274	381	25,036.1	.	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
275 - 366	379	14,581.5	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
367 - 549	723	21,322.0	.	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
367 - 549	727	22,009.8	.	.	.	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
550 - 731	726	9,904.4	.	.	.	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
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)**
Upper C.I.			**108.2**	**151.7**	**198.7**	**227.0**	**179.3**	**294.2**	**302.9**	**321.4**	**313.7**	**417.7**
Lower C.I.			**23.6**	**32.5**	**-25.8**	**48.4**	**36.7**	**129.8**	**127.2**	**191.9**	**168.7**	**198.6**

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
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
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
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
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
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
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
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
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
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
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
93 - 183	339	80,473.2	1.0	2.5	0.0	0.0	1.0	0.0	0.3	0.5	0.0	.
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
184 - 274	355	14,168.8	.	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
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
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.5	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
275 - 366	356	8,391.2	.	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
367 - 549	719	10,454.6	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
550 - 731	718	18,433.2	.	.	.	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
550 - 731	722	12,793.2	.	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 (203)**	**69.0 (96)**	**71.4(75)**
Upper C.I.			**24.0**	**52.3**	**51.5**	**27.3**	**21.5**	**50.5**	**37.7**	**84.4**	**98.8**	**97.2**
Lower C.I.			**8.1**	**14.0**	**-6.2**	**5.5**	**1.0**	**11.9**	**7.6**	**41.0**	**39.2**	**45.6**

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 WT 213-217 TEL 57,58	1998 WT2230-33 TEL75,76	1999 WT 246-48
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.
57 - 92	350	284,889.0	2.6	0.3	0.3	0.0	0.1	0.2	0.2	0.0	0.3	0.7
57 - 92	363	244,858.7	2.7	0.5	0.9	0.0	0.1	2.3	1.5	0.6	15.9	36.3
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
57 - 92	372	338,400.3	1.9	2.3	1.7	3.3	0.0	1.9	5.4	3.3	3.6	1.4
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
57 - 92	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
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
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
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
93 - 183	348	291,629.5	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
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
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
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
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
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
93 - 183	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.2	.
93 - 183	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.
93 - 183	799	9,904.4	.	.	.	.	.	.	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
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
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
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
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
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
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
184 - 274	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
184 - 366	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.
184 - 366	798	13,756.1	.	.	.	.	.	.	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
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
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
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
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
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
275 - 366	796	24,073.2	.	.	.	.	.	.	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
367 - 549	731	29,713.2	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
367 - 549	735	37,416.6	.	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	.
550 - 731	730	23,385.4	.	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
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
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
732 - 914	737	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0
732 - 914	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
732 - 914	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0
732 - 914	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
915 -1097	738	30,401.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
915 -1097	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0
915 -1097	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
915 -1097	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1098 -1280	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1098 -1280	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1098 -1280	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1281 -1463	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
1281 -1463	751	31,501.5	.	.	.	.	.	.	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 (124)**	**1.6(170)**
Upper C.I.			**0.8**	**0.3**	**0.3**	**0.5**	**0.0**	**0.4**	**0.8**	**0.5**	**2.0**	**4.0**
Lower C.I.			**0.0**	**0.1**	**0.1**	**-0.1**	**0.0**	**0.0**	**-0.1**	**0.1**	**-0.8**	**-0.7**

Table 20. Mean Weight of yellowtail by stratum, Div 3N - Fall												
Depth	**Stratum**	**No. of**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Range		**trawlable**	*WT 102*	*WT 113,114*	*WT 128,129*	*WT 144,145*	*WT 160,161*	*WT 176,177*	*TEL 41,42*	*WT 212-214*	*WT229-30,33*	*WT 245-47*
(m)		**Units**							*AN 253*		*TEL76*	
<=56	375	219,134.8	14.6	23.0	.	36.4	142.0	67.7	54.8	70.1	87.1	112.2
<=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
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
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
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
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
57 - 92	374	128,069.4	0.0	0.9	.	0.0	0.0	0.0	8.2	6.2	7.9	78.1
57 - 92	383	92,716.2	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
93 - 183	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	1.4	0.4	1.0
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
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
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
184 - 274	381	25,036.1	.	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
275 - 366	379	14,581.5	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
367 - 549	723	21,322.0	.	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
367 - 549	727	22,009.8	.	.	.	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
550 - 731	726	9,904.4	.	.	.	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
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)**
Upper C.I.			**35.6**	**36.6**	**43.7**	**62.6**	**66.4**	**56.5**	**65.0**	**87.1**	**85.0**	**100.3**
Lower C.I.			**5.6**	**7.6**	**4.6**	**16.6**	**13.1**	**29.1**	**29.3**	**49.6**	**47.5**	**59.6**

Table 21. Mean Weight of yellowtail by stratum, Div 30 - Fall												
Depth	**Stratum**	**No. of**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Range		**trawlable**	*WT 102*	*WT 114*	*WT 128*	*WT 144*	*WT 160,161*	*WT 176,177*	*WT 200*	*WT 212,213*	*WT229,30,33*	*WT 244-45*
(m)		**Units**							*AN 253, TEL 42*			
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
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
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
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
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
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
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
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
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
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
93 - 183	339	80,473.2	0.5	1.1	0.0	0.0	0.5	0.0	0.1	0.3	0.0	.
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
184 - 274	333	20,221.5	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
184 - 274	355	14,168.8	.	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
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
275 - 366	356	8,391.2	.	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
367 - 549	719	10,454.6	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
550 - 731	718	18,433.2	.	.	.	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
550 - 731	722	12,793.2	.	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 (203)**	**19.9 (96)**	**19.6(75)**
Upper C.I.			**10.5**	**18.1**	**17.5**	**11.1**	**8.2**	**15.0**	**12.7**	**31.7**	**28.2**	**26.1**
Lower C.I.			**3.5**	**6.3**	**-1.7**	**2.7**	**0.5**	**5.1**	**2.5**	**13.6**	**11.6**	**13.1**

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

Depth Range (m)	Strat	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
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									**0.0**	**0.0**	**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
	363	244,858.7	1.3	0.3	0.5	0.0	0.1	1.3	0.9	0.3	9.4	18.1
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372	338,400.3	1.3	1.6	1.3	2.6	0.0	2.2	5.7	5.8	3.4	2.2
	384	154,068.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL			**4.3**	**2.1**	**1.9**	**2.6**	**0.1**	**3.6**	**6.7**	**6.1**	**12.9**	**20.6**
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
	341	216,521.2	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
	343	72,219.6	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
	349	290,804.1	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
	365	143,201.1	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
	385	324,093.9	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
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.1	.
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.
	799	9,904.4	.	.	.	.	.	.	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**
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
	347	135,222.6	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
	369	132,196.2	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
	389	112,937.7	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
	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.
	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	798	13,756.1	.	.	.	.	.	.	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**
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
	346	118,990.3	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
	387	98,768.9	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
	392	19,946.4	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	.
TOTAL			**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
	731	29,713.2	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
	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	.	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**
550 - 731	730	23,385.4	.	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
	734	31,363.9	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
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

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

Depth Range (m)	Strat	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
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
TOTAL								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
	742	28,337.6	.	.	.	.		.	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL								0.0	0.0	0.0	0.0	0.0
1098 - 128	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
TOTAL									0.0	0.0	0.0	0.0
1281 - 146	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									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**
Upper C.I.			**8.7**	**3.3**	**3.1**	**6.6**	**0.3**	**6.8**	**14.1**	**16.9**	**31.6**	**50.5**
Lower C.I.			**0.1**	**1.0**	**0.9**	**-1.4**	**-0.1**	**0.3**	**-0.7**	**-4.7**	**-5.4**	**-9.2**

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 T229,30,3 TEL76	1999 WT 245-47
<=56	375	219,134.8	8.9	12.7	.	16.8	72.3	87.3	47.5	46.6	68.1	81.7
	376	206,204.1	66.7	70.7	66.6	139.1	42.5	146.7	171.4	180.1	161.3	149.0
TOTAL			75.6	83.4	66.6	155.9	114.8	234.0	218.9	226.7	229.4	230.7
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
	361	254,900.7	21.8	68.7	68.8	80.7	98.2	114.7	106.0	101.3	134.7	66.8
	362	346,653.9	16.5	21.0	2.3	0.6	2.3	84.9	26.2	106.5	48.3	198.3
	373	346,653.9	0.4	0.9	0.0	0.0	2.5	4.8	0.0	12.2	12.2	18.9
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	3.8	2.3	2.0	23.4
	383	92,716.2	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
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
	377	13,756.1	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
TOTAL			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
	378	19,121.0	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
TOTAL			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
	379	14,581.5	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
TOTAL			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
	725	14,443.9	.	.	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
TOTAL				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
	726	9,904.4	.	.	.	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
TOTAL				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**
Upper C.I.			**243.8**	**349.7**	**363.3**	**540.0**	**430.5**	**706.4**	**727.2**	**771.6**	**822.2**	**1003.0**
Lower C.I.			**53.3**	**74.9**	**-47.2**	**115.3**	**88.2**	**311.5**	**305.4**	**460.8**	**442.0**	**476.9**

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*
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
	331	62,728.0	0.4	1.8	0.5	1.0	0.0	0.1	0.0	0.1	0.2	0.9
	338	261,091.0	2.2	5.2	0.5	2.3	0.1	25.3	0.1	10.0	8.1	9.3
	340	236,055.0	1.3	8.5	0.1	1.2	0.4	1.1	0.0	6.7	5.5	8.8
	351	346,654.0	12.8	5.5	0.6	12.2	2.4	5.5	4.0	37.2	71.9	46.9
	352	354,908.0	17.0	61.2	53.4	20.1	24.7	43.3	47.7	88.4	95.8	90.5
	353	176,353.0	4.9	0.0	0.0	1.5	0.0	1.5	1.2	14.6	0.1	13.0
TOTAL			**39.0**	**82.2**	**55.5**	**39.3**	**27.6**	**79.2**	**53.0**	**159.1**	**182.1**	**176.2**
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
	332	144,026.0	0.1	0.0	0.3	2.3	0.7	0.5	0.4	0.0	0.1	0.2
	337	130,408.0	0.0	0.1	0.0	0.0	0.0	0.0	2.5	0.2	0.7	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
	354	65,204.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	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**
184 - 274	333	20,221.0	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
	355	14,169.0	.	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**
275 - 366	334	13,206.0	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
	356	8,391.0	.	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**
367 - 549	717	22,835.0	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
	721	10,455.0	.	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**
550 - 731	718	18,433.0	.	.	.	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
	722	12,793.0	.	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**
Abundance (millions)			**39.6**	**82.7**	**56.8**	**41.6**	**28.5**	**79.7**	**56.2**	**159.2**	**183.0**	**176.5**
Upper C.I.			**59.0**	**130.4**	**126.9**	**69.3**	**54.5**	**128.9**	**93.5**	**214.2**	**262.0**	**240.3**
Lower C.I.			**20.1**	**34.9**	**-15.3**	**13.9**	**2.4**	**30.4**	**18.8**	**104.1**	**103.9**	**112.8**

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
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
(m)		Units			*GA 226*			*TEL 22,23*	*TEL41,42;AN 253*	*TEL57,58*	TEL 75,76	
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									0.0	0.0	0.0	
<=56	375	219,134.8	8.9	12.7	.	16.8	72.3	87.3	47.5	46.6	68.1	81.7
	376	206,204.1	66.7	70.7	66.6	139.1	42.5	146.7	171.4	180.1	161.3	149.0
TOTAL			75.6	83.4	66.6	155.9	114.5	234.0	218.9	226.7	229.4	230.7
57 - 92	330	287,365.1	0.4	0.0	0.4	1.0	0.0	2.4	0.0	2.1	0.5	6.8
	331	62,727.9	0.4	1.8	0.5	1.0	0.0	0.1	0.0	0.1	0.2	0.9
	338	261,090.9	2.2	5.2	0.5	2.3	0.1	25.3	0.1	10.0	8.1	9.3
	340	236,054.8	1.3	8.5	0.1	1.2	0.4	1.1	0.0	6.7	5.5	8.8
	350	284,889.0	1.7	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.4
	351	346,653.9	12.8	5.5	0.6	12.2	2.4	5.5	4.0	37.2	71.9	46.9
	352	354,907.6	17.0	61.2	53.4	20.1	24.7	43.3	47.7	88.4	95.8	90.5
	353	176,353.3	4.9	0.0	0.0	1.5	0.0	1.5	1.2	14.6	0.1	13.0
	360	411,582.8	34.3	38.2	20.4	90.4	41.5	70.5	161.4	167.2	205.3	201.9
	361	254,900.7	21.8	68.7	68.8	80.7	98.2	114.7	106.0	101.3	134.7	66.8
	362	346,653.9	16.5	21.0	2.3	0.6	2.3	84.9	26.2	106.5	48.3	198.3
	363	244,858.7	1.3	0.3	0.5	0.0	0.1	1.3	0.9	0.3	9.4	18.1
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372	338,400.3	1.3	1.6	1.3	2.6	0.0	2.2	5.7	5.8	3.5	2.2
	373	346,653.9	0.4	0.9	0.0	0.0	2.5	4.8	0.0	12.2	12.3	18.9
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	3.8	2.3	2.0	23.4
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	384	154,068.4	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	.
TOTAL			116.3	213.2	148.9	213.6	172.2	357.7	357.1	554.7	597.8	706.1
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
	329	236,742.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	332	144,026.5	0.1	0.0	0.3	2.3	0.7	0.5	0.4	0.0	0.0	0.2
	337	130,407.9	0.0	0.1	0.0	0.0	0.0	0.0	2.5	0.2	0.7	0.0
	339	80,473.2	0.1	0.2	0.0	0.0	0.1	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
	342	80,473.2	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
	348	291,629.5	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
	354	65,204.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	359	57,913.2	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
	365	143,201.1	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
	377	13,756.1	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
	385	324,093.9	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
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.1	.
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.
	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL			0.6	0.3	0.4	2.3	0.8	0.5	3.0	0.2	1.0	0.3
184 - 274	333	20,221.5	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
	344	217,621.6	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
	355	14,168.8	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	358	30,951.2	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
	369	132,196.2	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
	381	25,036.1	.	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
	389	112,937.7	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
	795	22,560.0	.	.	.	.	.	.	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

Table 25 Con'd

Depth Range (m)	Stratum	No. of trawlable Units	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
			WT 101,102	WT 113-115	WT 128-130	WT 144-146	WT 160-162	WT 176-179,181	WT 188-191	WT 204-208	WT 229-33	WT 244-48
					GA 226			TEL 22,23			TEL 75,76	
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									0.0	0.0	0.0	
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.1	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
	345	196,987.5	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
	356	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	357	22,560.0	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
	379	14,581.5	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
	387	98,768.9	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
	392	19,946.4	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	.
TOTAL			0.0	0.0	0.0	0.0	0.1	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
	719	10,454.6	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
	723	21,322.0	.	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
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729	25,586.4	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
	733	64,378.6	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
	792	6,878.1	.	.	.	.	.	.	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
550 - 731	718	18,433.2	.	.	.	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
	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724	17,057.6	.	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
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	730	23,385.4	.	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
	734	31,363.9	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
TOTAL			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
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
TOTAL								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
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL								0.0	0.0	0.0	0.0	0.0
1098 -128	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
TOTAL									0.0	0.0	0.0	0.0
1281 -146	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									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**
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**
Lower C.I.			**95.9**	**155.5**	**21.0**	**157.6**	**115.3**	**391.0**	**366.6**	**617.8**	**540.6**	**669.2**

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
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									**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
	363	244,858.7	0.7	0.1	0.2	0.0	0.0	0.6	0.4	0.2	3.9	8.9
	371	154,206.0	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
	384	154,068.4	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	.
TOTAL			**2.1**	**1.0**	**0.9**	**1.1**	**0.0**	**1.2**	**2.2**	**1.3**	**5.2**	**9.6**
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
	341	216,521.2	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
	343	72,219.6	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
	349	290,804.1	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
	365	143,201.1	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
	385	324,093.9	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
	786	11,555.1	.		.	.	.	.	0.0	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	.
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.
	799	9,904.4	.	.	.	.	.	.	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**
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
	347	135,222.6	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
	369	132,196.2	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
	389	112,937.7	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
	795	22,560.0	.	.	.	.	.	.	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**
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									**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
	346	118,990.3	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
	387	98,768.9	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
	392	19,946.4	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	.
TOTAL			**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
	731	29,713.2	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
	735	37,416.6	.	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	.
TOTAL			**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
	732	31,776.6	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
	736	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**

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*
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
TOTAL								**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
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL								**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
1098 -128	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
TOTAL									**0.0**	**0.0**	**0.0**	**0.0**
1281 -146	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									**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**
Upper C.I.			**4.1**	**1.6**	**1.5**	**2.7**	**0.1**	**2.2**	**6.3**	**3.1**	**12.8**	**23.6**
Lower C.I.			**0.0**	**0.4**	**0.4**	**-0.5**	**0.0**	**0.3**	**-0.8**	**-0.5**	**-2.4**	**-4.4**

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*
<=56	375	219,134.8	3.2	5.1	.	8.0	31.1	14.8	12.0	15.4	19.1	24.6
	376	206,204.1	20.1	10.9	10.8	31.3	10.2	24.4	24.2	32.5	35.9	37.7
TOTAL			**23.3**	**16.0**	**10.8**	**39.3**	**41.3**	**39.2**	**36.2**	**47.9**	**55.0**	**62.3**
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
	361	254,900.7	9.5	19.6	24.3	29.8	41.0	34.1	31.2	36.4	37.3	17.7
	362	346,653.9	6.8	6.4	1.0	0.3	1.0	12.1	8.0	27.6	18.8	35.1
	373	346,653.9	0.2	0.5	0.0	0.0	0.9	1.0	0.0	4.2	5.4	6.1
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	1.1	0.8	1.0	10.0
	383	92,716.2	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**
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
	377	13,756.1	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
TOTAL			**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
	378	19,121.0	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
TOTAL			**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
	379	14,581.5	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
TOTAL			**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
	725	14,443.9	.	.	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
TOTAL				**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
	726	9,904.4	.	.	.	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
TOTAL				**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**
Upper C.I.			**80.3**	**84.4**	**79.9**	**148.9**	**159.5**	**135.7**	**156.1**	**209.2**	**222.7**	**240.9**
Lower C.I.			**12.6**	**17.4**	**8.4**	**39.5**	**31.5**	**69.9**	**70.3**	**119.1**	**124.5**	**143.0**

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*
57 - 92	330	287,365.1	0.2	0.0	0.3	0.5	0.0	1.1	0.0	0.8	0.2	3.6
	331	62,727.9	0.2	0.9	0.1	0.5	0.0	0.0	0.0	0.0	0.1	0.1
	338	261,090.9	1.0	2.0	0.3	1.1	0.1	7.2	0.0	5.7	2.8	2.8
	340	236,054.8	0.6	4.0	0.2	0.3	0.2	0.5	0.0	2.6	2.2	2.6
	351	346,653.9	5.5	2.3	0.3	5.0	1.0	2.2	1.3	14.5	18.8	11.9
	352	354,907.6	7.0	21.0	0.4	8.3	9.3	13.7	15.2	26.5	28.5	23.5
	353	176,353.3	2.4	0.0	0.2	0.6	0.0	0.8	0.7	7.3	0.0	3.8
TOTAL			**16.9**	**30.2**	**1.8**	**16.3**	**10.6**	**25.5**	**17.2**	**57.4**	**52.6**	**48.3**
93 - 183	329	236,742.6	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	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
	337	130,407.9	0.0	0.1	0.1	0.0	0.0	0.0	1.3	0.1	0.2	0.0
	339	80,473.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	.
	354	65,204.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.2**	**0.2**	**0.6**	**1.0**	**0.4**	**0.1**	**1.5**	**0.1**	**0.3**	**0.1**
184 - 274	355	14,168.8	.	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
	336	16,644.9	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**
275 - 366	334	13,205.9	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
	356	8,391.2	.	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**
367 - 549	717	22,835.1	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
	721	10,454.6	.	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**
550 - 731	718	18,433.2	.	.	.	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
	722	12,793.2	.	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**
Biomass ('000t)			**17.3**	**30.5**	**19.4**	**17.5**	**10.9**	**25.7**	**18.9**	**57.5**	**52.8**	**48.4**
Upper C.I.			**25.9**	**45.2**	**43.1**	**28.1**	**20.7**	**38.4**	**31.5**	**80.5**	**74.8**	**64.4**
Lower C.I.			**8.6**	**15.8**	**-4.3**	**6.8**	**1.2**	**13.1**	**6.2**	**34.5**	**30.8**	**32.3**

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

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 WT212-17 TEL 57,58	1998 WT229-33 TEL 75,76	1999 WT 244-48
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									**0.0**	**0.0**	**0.0**	
<=56	375	219,134.8	3.2	5.1	.	8.0	31.1	14.8	12.0	15.4	19.1	24.6
	376	206,204.1	20.1	10.9	10.8	31.3	10.2	24.4	24.2	32.5	35.9	37.7
TOTAL			**23.3**	**16.0**	**10.8**	**39.3**	**41.3**	**39.2**	**36.2**	**47.9**	**55.0**	**62.3**
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
	331	62,727.9	0.2	0.9	0.3	0.5	0.0	0.0	0.0	0.0	0.1	0.1
	338	261,090.9	1.0	2.0	0.2	1.1	0.1	7.2	0.0	5.7	2.8	2.8
	340	236,054.8	0.6	4.0	0.0	0.3	0.2	0.5	0.0	2.6	2.2	2.6
	350	284,689.0	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
	351	346,653.9	5.5	2.3	0.3	5.0	1.0	2.2	1.3	14.5	18.8	11.9
	352	354,907.6	7.0	21.0	18.2	8.3	9.3	13.7	15.2	26.5	28.5	23.5
	353	176,353.3	2.4	0.0	0.0	0.6	0.0	0.8	0.7	7.3	0.0	3.8
	360	411,582.8	6.7	8.3	8.0	24.8	11.2	16.3	36.6	47.2	56.1	60.7
	361	254,900.7	9.5	19.6	24.3	29.8	41.0	34.1	31.2	36.4	37.3	17.7
	362	346,653.9	6.8	6.4	1.0	0.3	1.0	12.1	8.0	27.6	18.8	35.1
	363	244,858.7	0.7	0.1	0.2	0.0	0.0	0.6	0.4	0.2	3.9	8.9
	371	154,206.0	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
	373	346,653.9	0.2	0.5	0.0	0.0	0.9	1.0	0.0	4.2	5.4	8.1
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	1.1	0.8	1.0	10.0
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	384	154,068.4	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	.
TOTAL			**42.2**	**66.1**	**53.4**	**72.3**	**64.7**	**90.2**	**96.5**	**174.9**	**176.3**	**187.5**
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
	329	236,742.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	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
	337	130,407.9	0.0	0.1	0.0	0.0	0.0	0.0	1.3	0.1	0.2	0.0
	339	80,473.2	0.0	0.1	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
	342	80,473.2	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
	348	291,629.5	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
	354	65,204.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	359	57,913.2	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
	365	143,201.1	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
	377	13,756.1	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
	385	324,093.9	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
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	.
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.
	799	9,904.4	.	.	.	.	.	.	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**
184 - 274	333	20,221.5	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
	344	217,621.6	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
	355	14,168.8	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	358	30,951.2	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
	369	132,196.2	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
	381	25,036.1	.	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
	389	112,937.7	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
	795	22,560.0	.	.	.	.	.	.	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**

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
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.
	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									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
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	345	196,987.5	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
	356	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	357	22,580.0	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
	379	14,581.5	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
	387	98,768.9	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
	392	19,946.4	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	.
TOTAL			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
	719	10,454.6	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
	723	21,322.0	.	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
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729	25,586.4	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
	733	64,378.6	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
	792	6,878.1	.	.	.	.	.	.	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
550 - 731	718	18,433.2	.	.	.	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
	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724	17,057.6	.	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
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0
	730	23,385.4	.	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
	734	31,363.9	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
TOTAL			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
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0
TOTAL									0.0	0.0	0.0	0.0
915 - 1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL								0.0	0.0	0.0	0.0	0.0
098 - 128	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0	0.0
TOTAL									0.0	0.0	0.0	0.0
281 - 146	740	36,318.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.
TOTAL									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
Upper C.I.			99.8	117.5	103.8	168.0	171.0	164.3	178.3	272.5	285.2	301.8
Lower C.I.			31.8	47.3	25.2	57.6	41.9	95.2	90.3	173.4	178.1	198.0

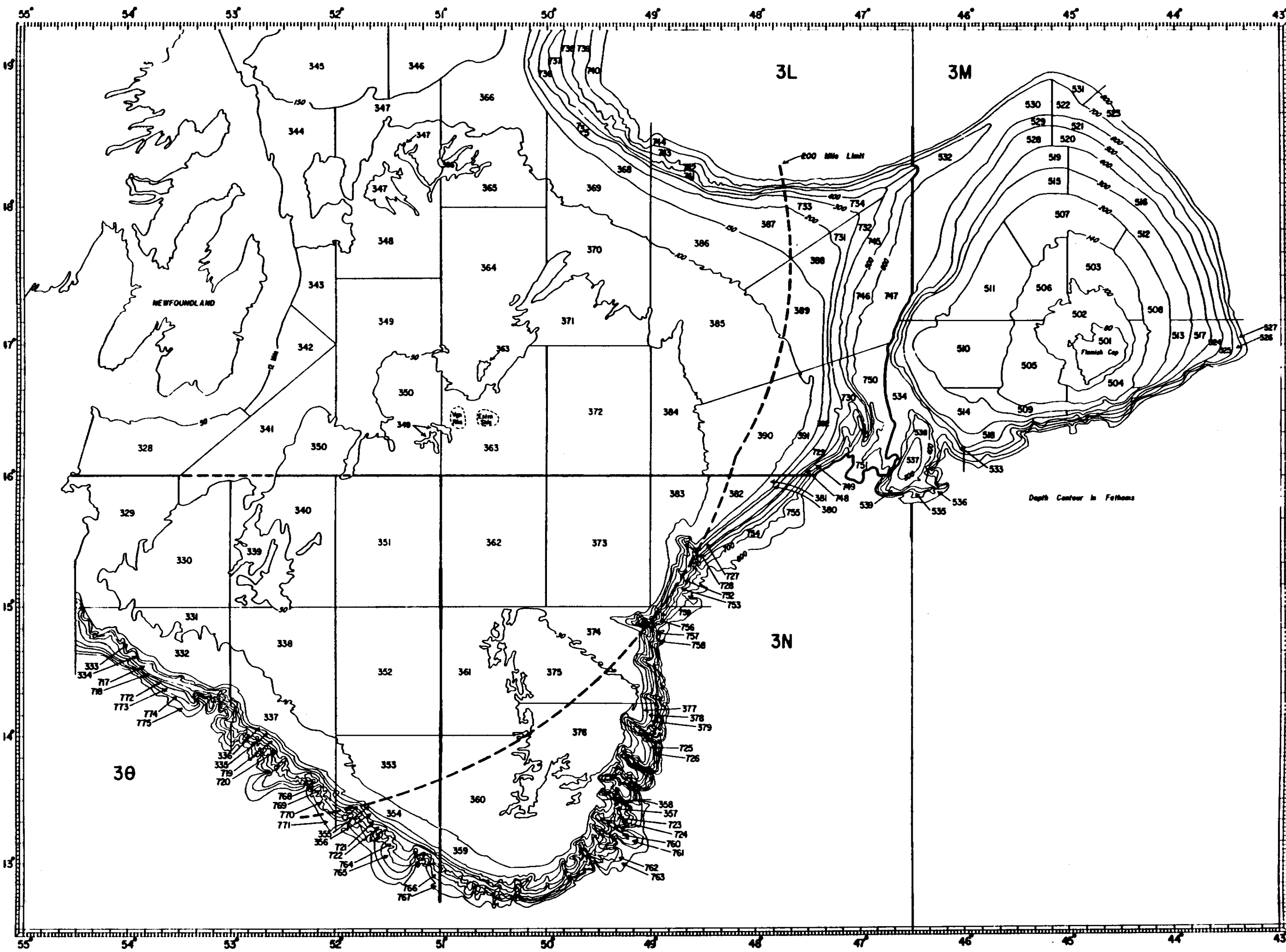
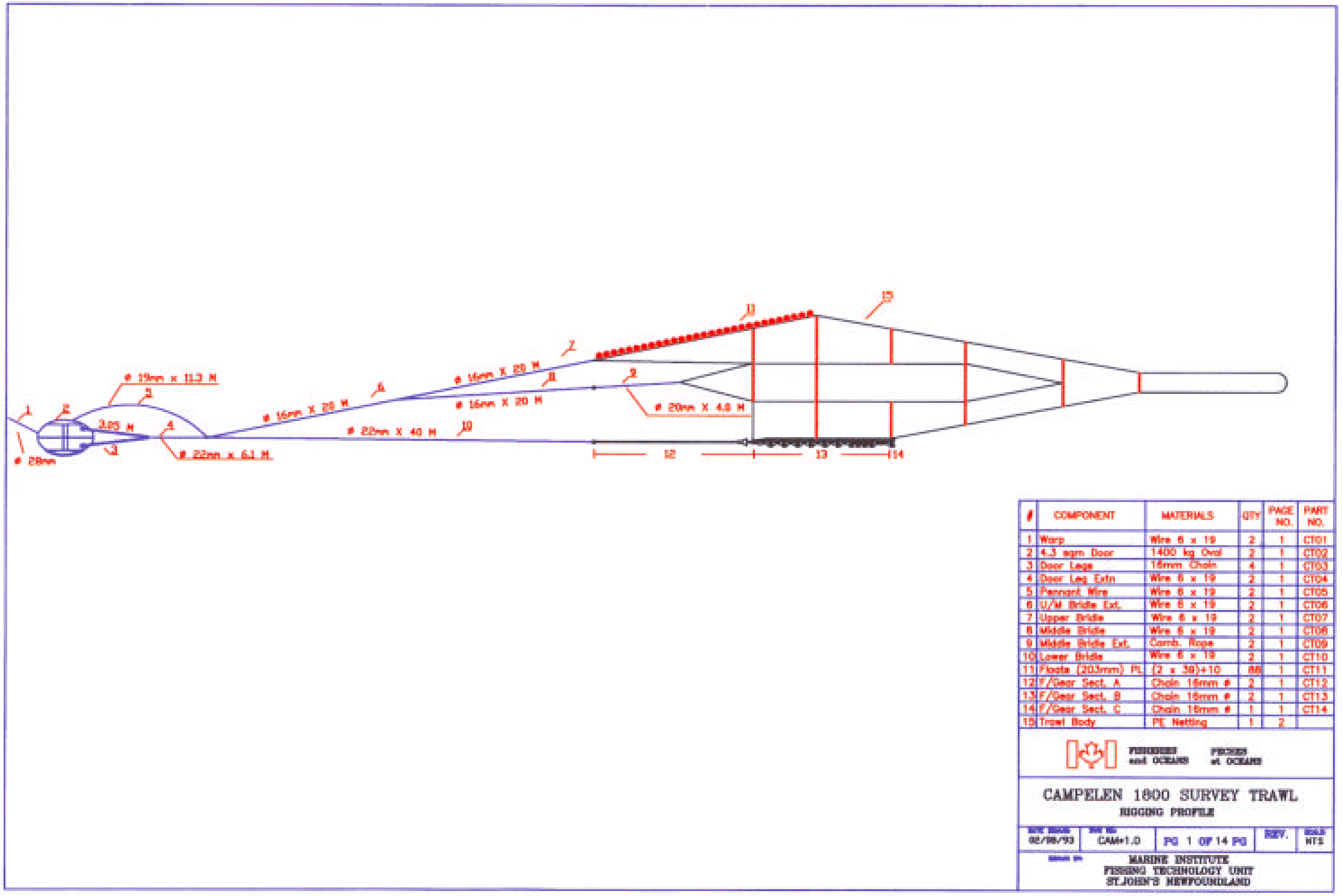
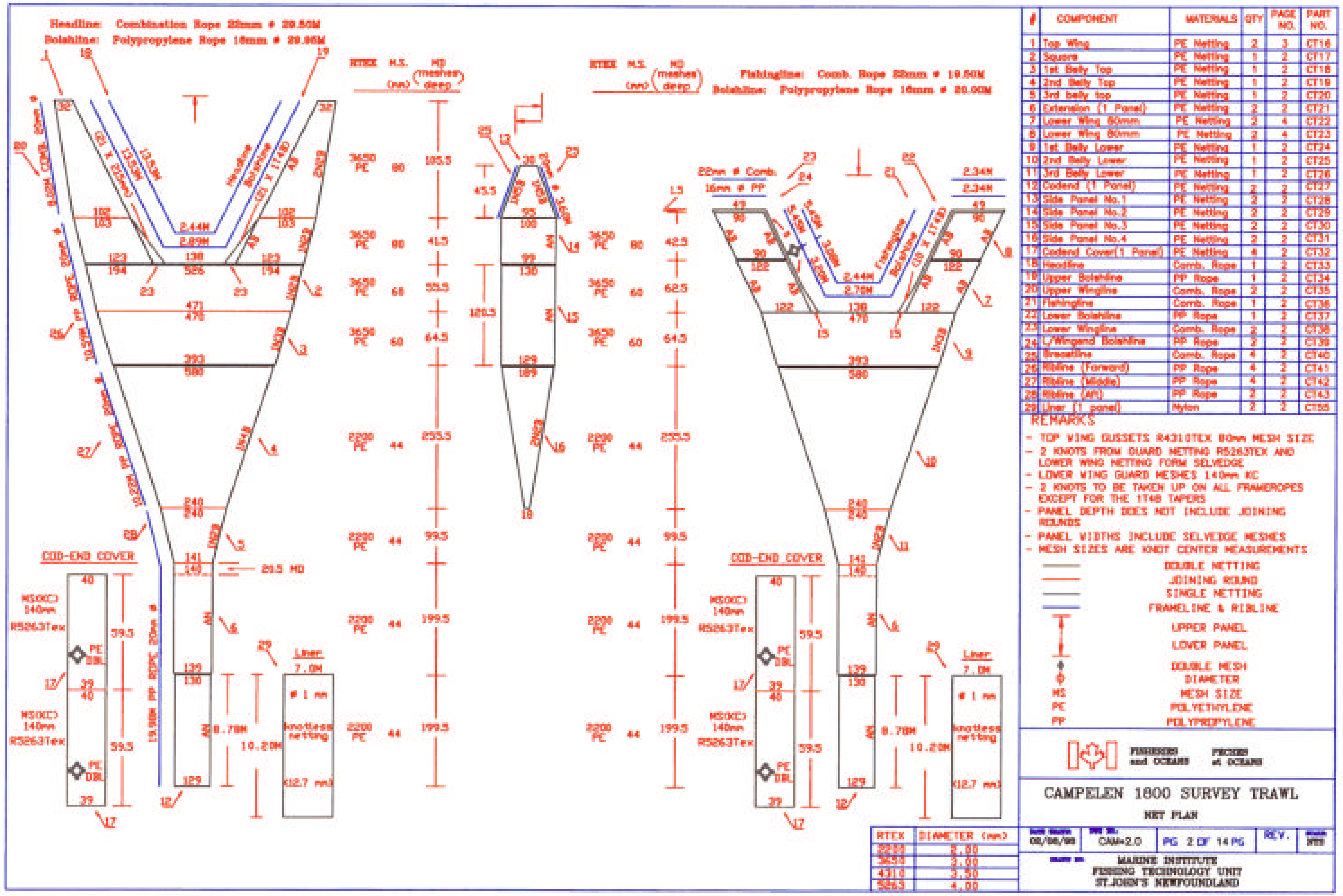


Fig. 1. Stratification chart of the Grand Banks, NAFO Divisions 3LNO, used in annual Canadian spring and fall bottom trawl surveys.



#	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 #	2	1	CT12
13	F/Gear Sect. B	Chain 16mm #	2	1	CT13
14	F/Gear Sect. C	Chain 16mm #	1	1	CT14
15	Trawl Body	PE Netting	1	2	

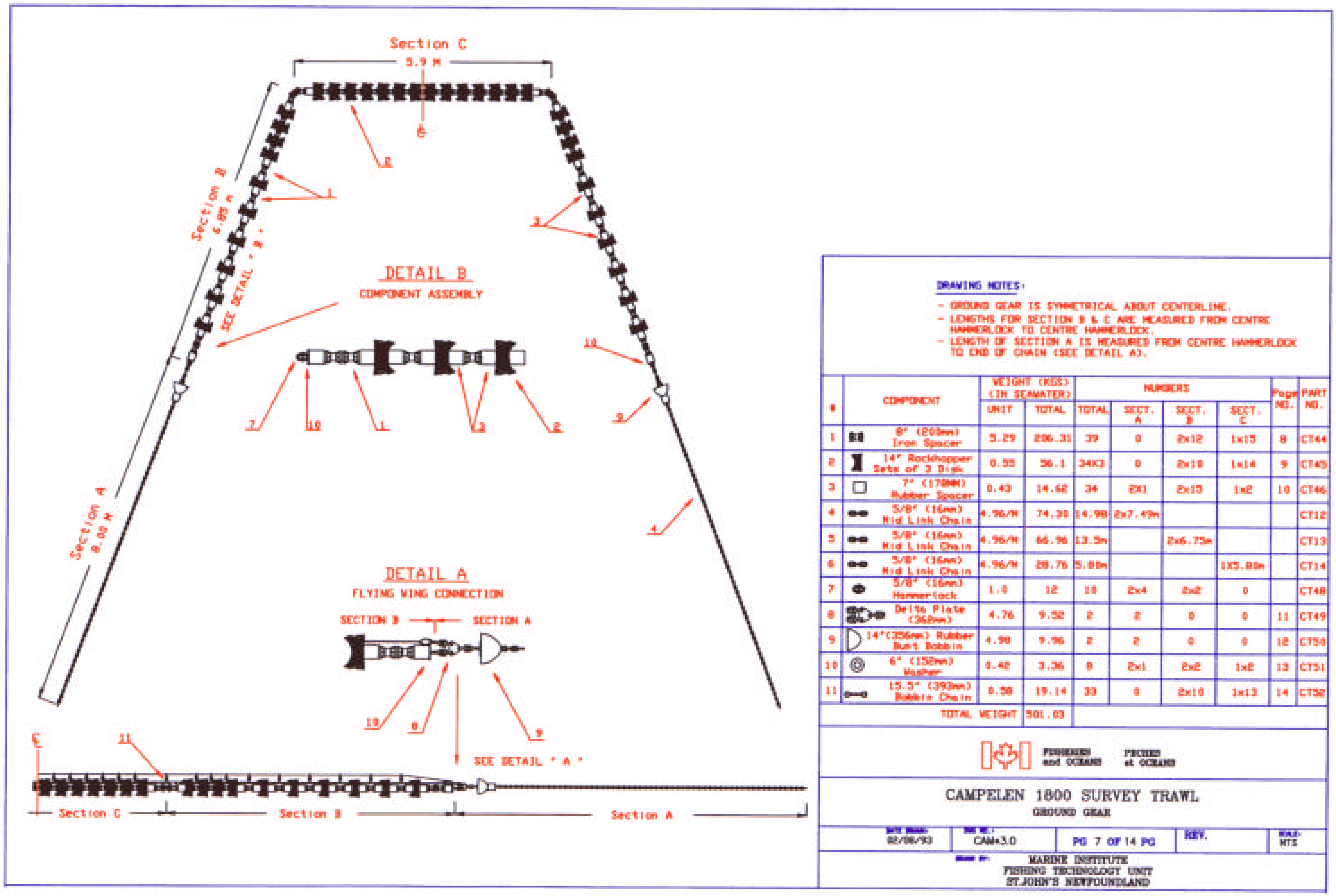
Fig. 2. Rigging profile of the Campelen 1800 shrimp trawl used in annual surveys of the Grand Bank



#	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 80mm	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

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	TOTAL	NUMBERS TOTAL	SECT. A	SECT. B	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 (368mm)	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.

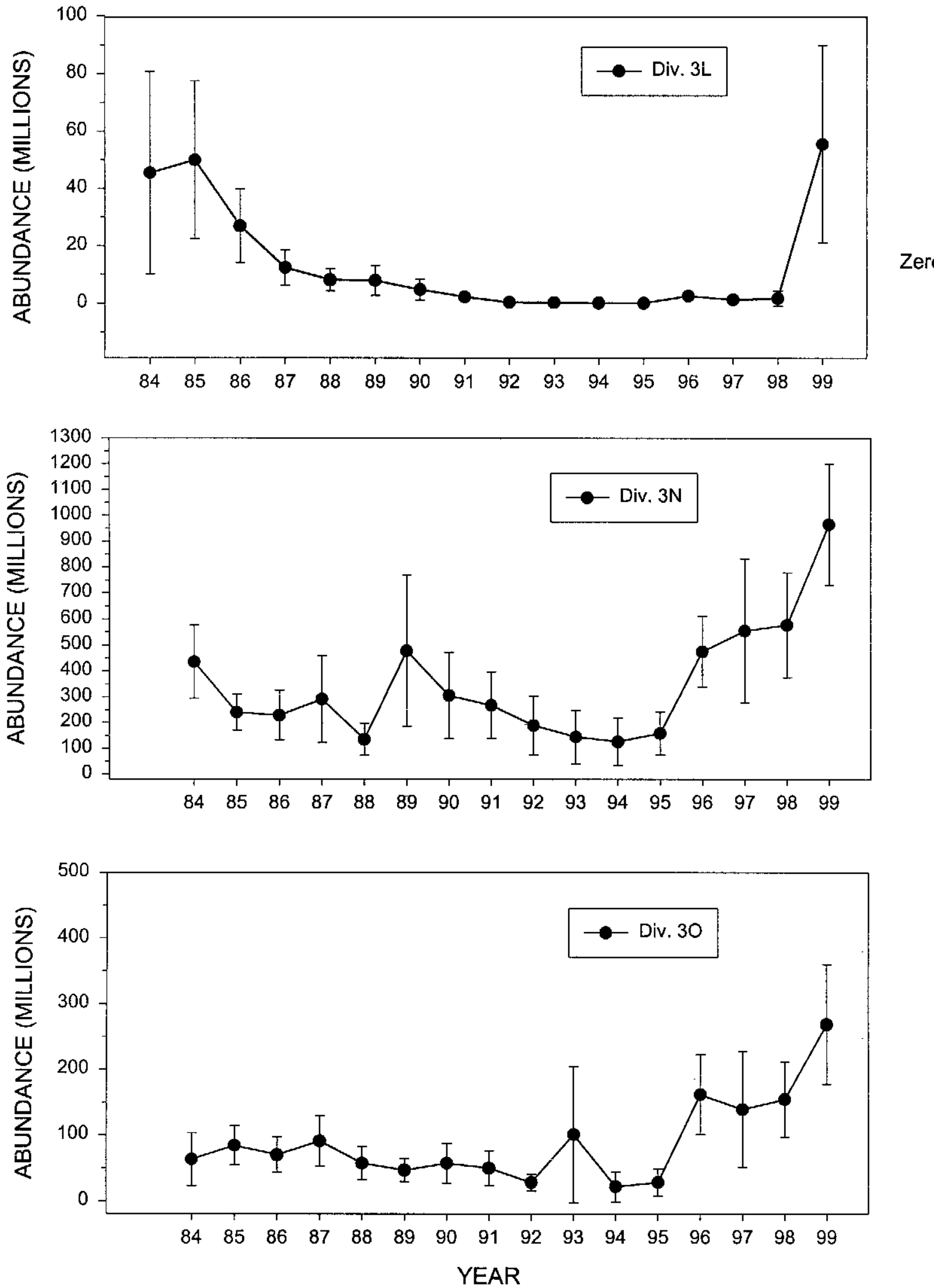


Fig. 5. Abundance estimates of yellowtail (with approx. 95% CI) from Canadian spring surveys in Campelen trawl units, 1984-99, by NAFO Division.

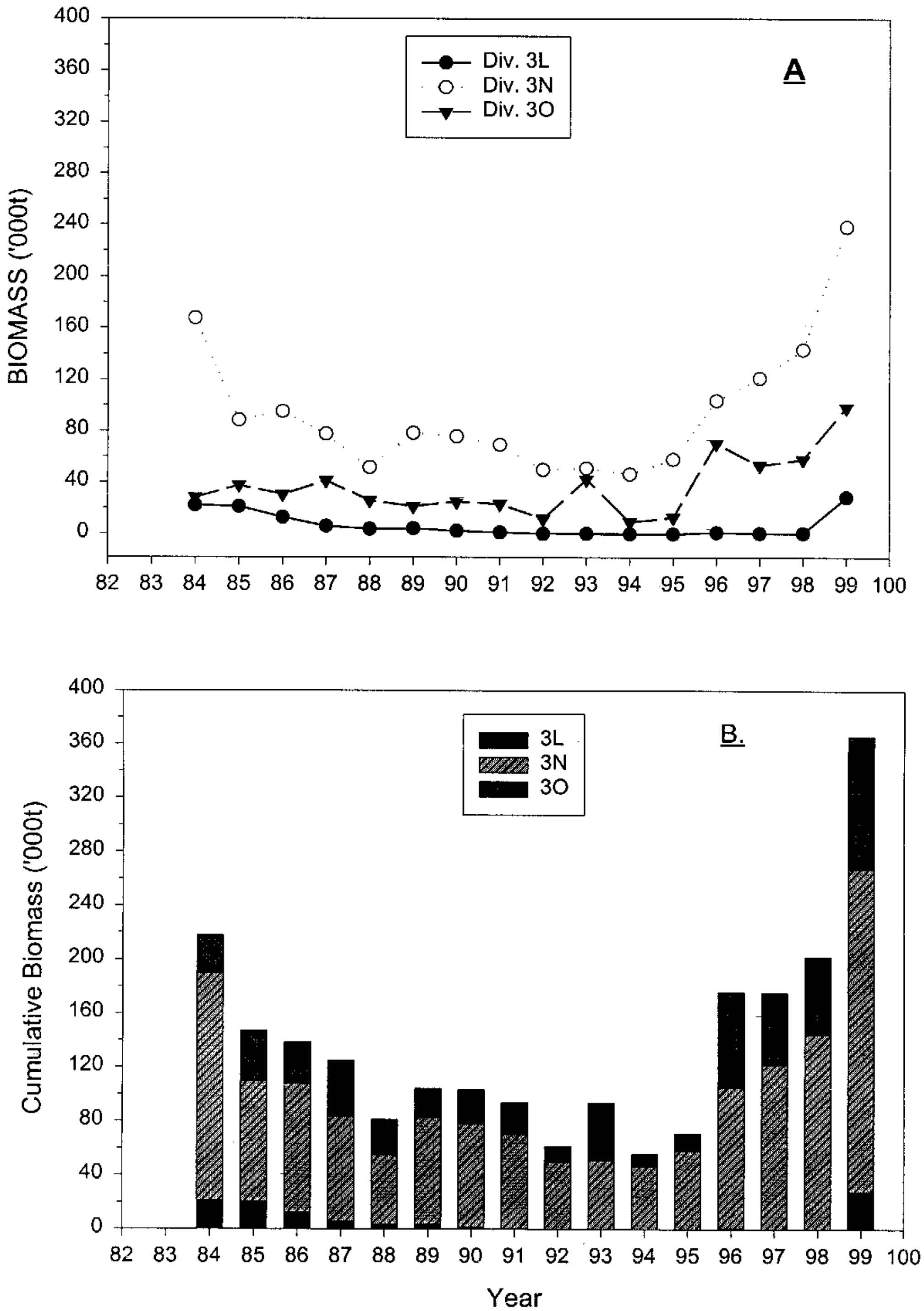


Fig. 6 A. Biomass estimates of yellowtail flounder by Division from the Canadian spring surveys from 1984-99.
B Cumulative biomass estimates of yellowtail from Division 3LNO Canadian spring surveys from 1984-99.

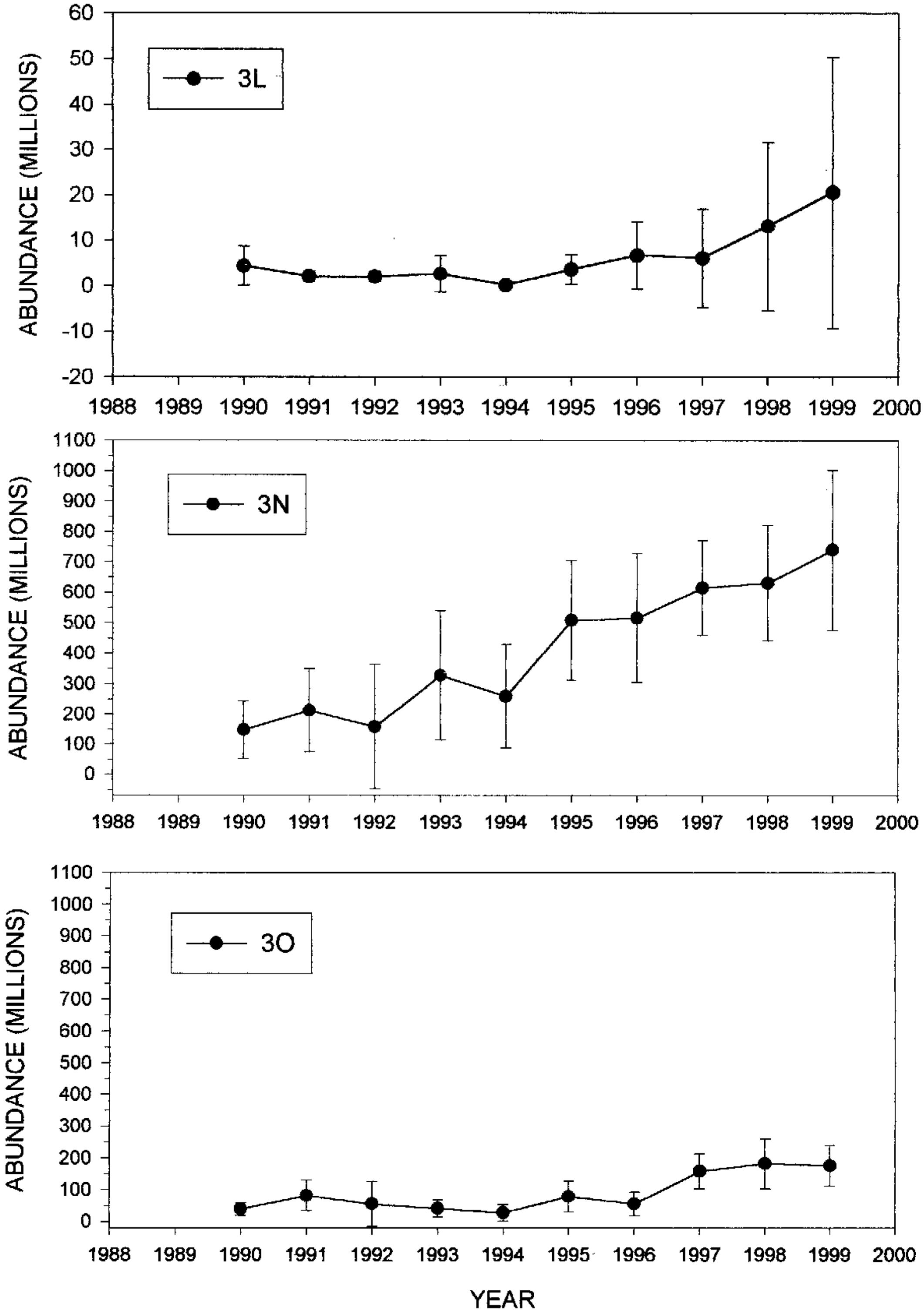


Fig. 7. Abundance estimates of yellowtail (with approx. 95% CI) from Canadian spring fall surveys in Campelen trawl units, 1990-99, by NAFO Division.

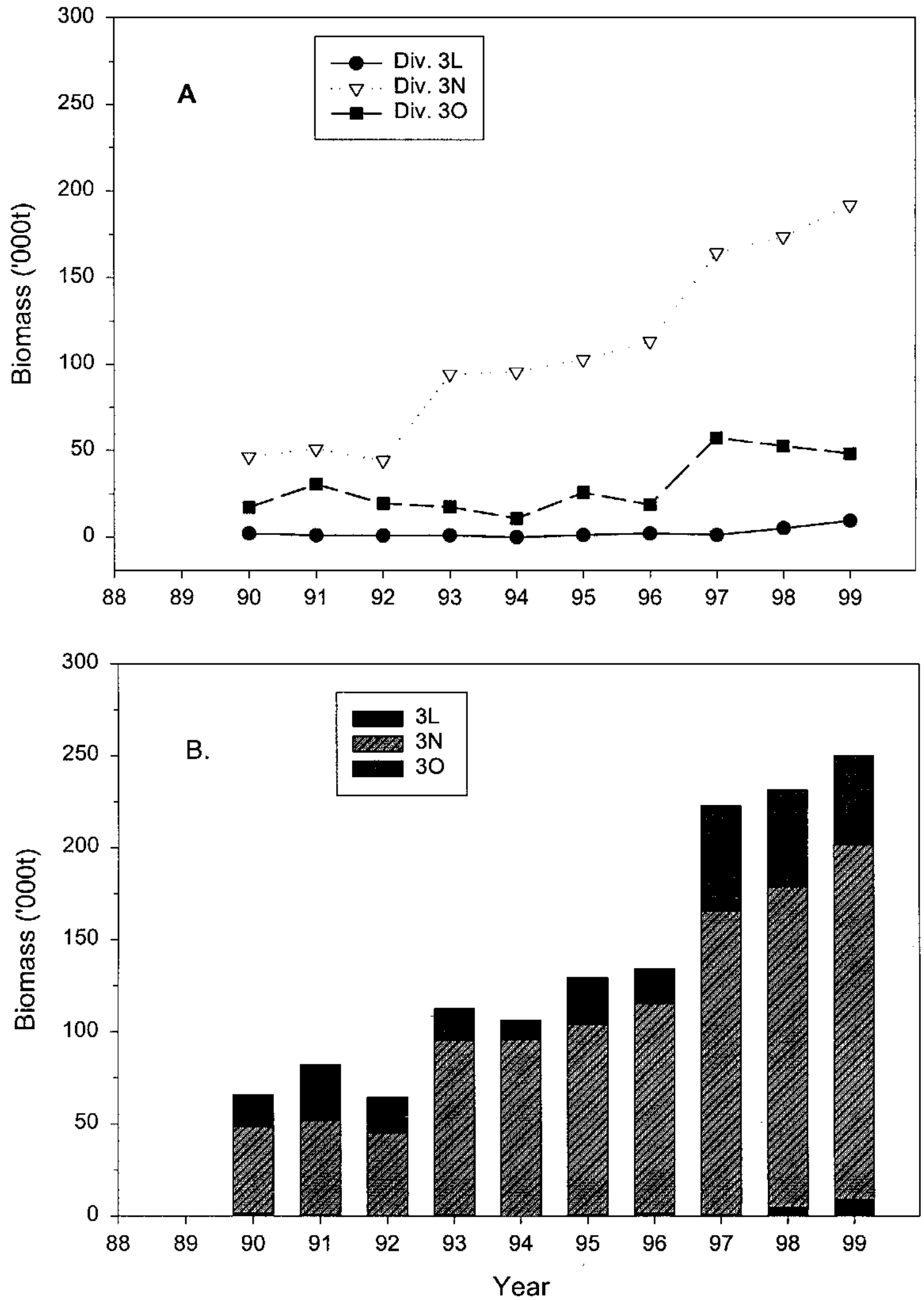


Fig.8. **A.** Biomass estimates of yellowtail flounder by Division from the Canadian fall surveys from 1990-99.
B. Cumulative biomass estimates of yellowtail flounder from Division 3LNO Canadian fall surveys from 1990-99.

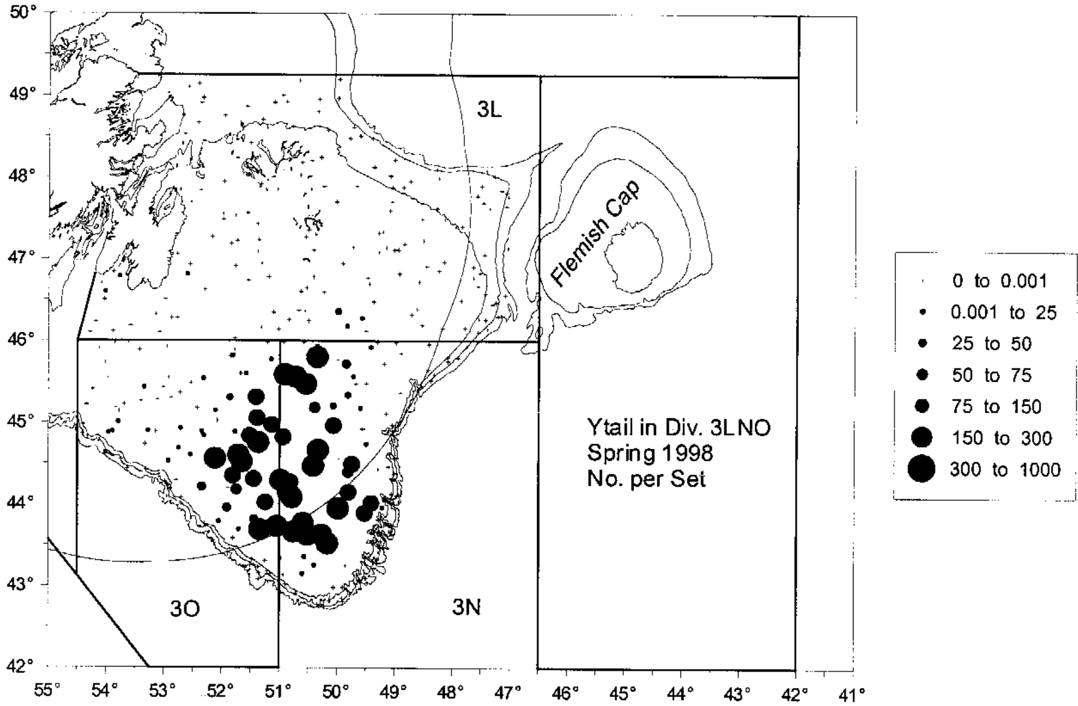


Fig.9 Number per set of Yellowtail flounder from Canadian spring surveys in Div. 3LNO during spring 1998.

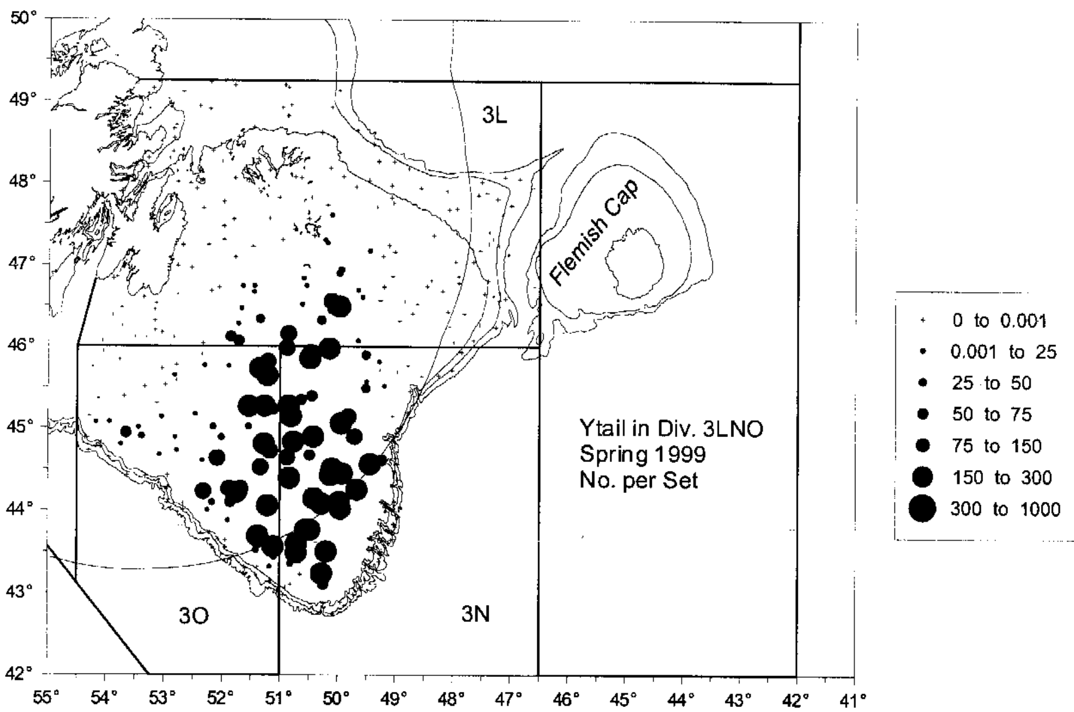


Fig.10 Number per set of Yellowtail flounder from Canadian spring surveys in Div. 3LNO during spring 1999.

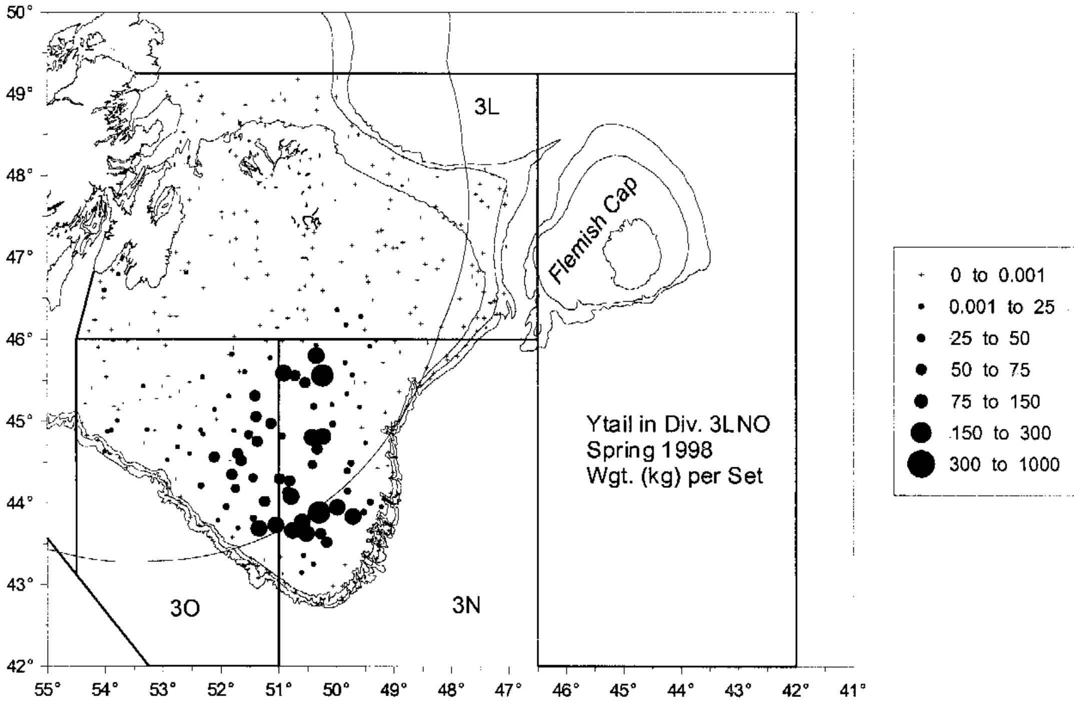


Fig. 11 Weight (kg) per set of Yellowtail flounder from Canadian spring surveys in Div. 3LNO during spring 1998.

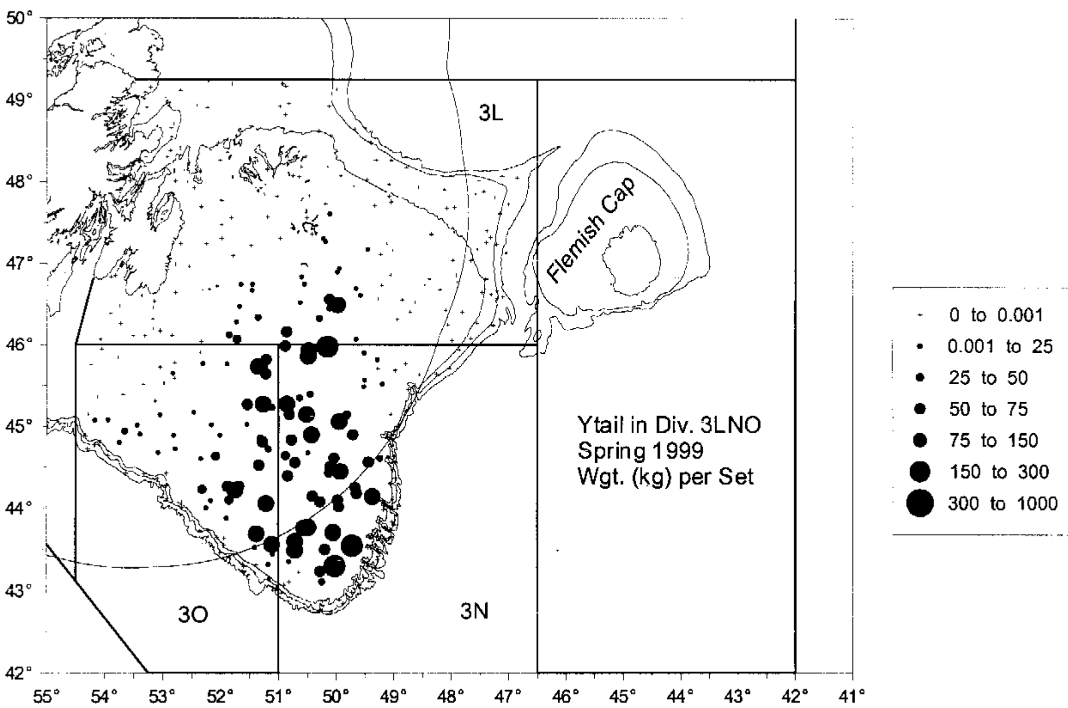


Fig. 12 Weight (kg) per set of Yellowtail flounder from Canadian spring surveys in Div. 3LNO during spring 1999.

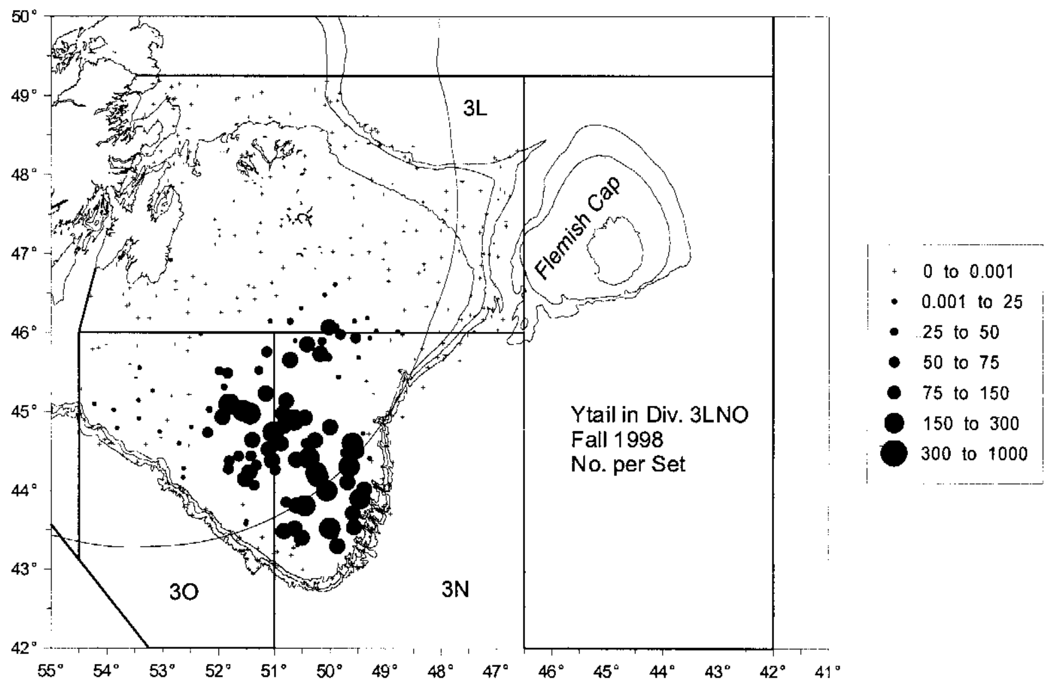


Fig.13 Number per set of Yellowtail flounder from Canadian fall surveys in Div. 3LNO during fall 1998.

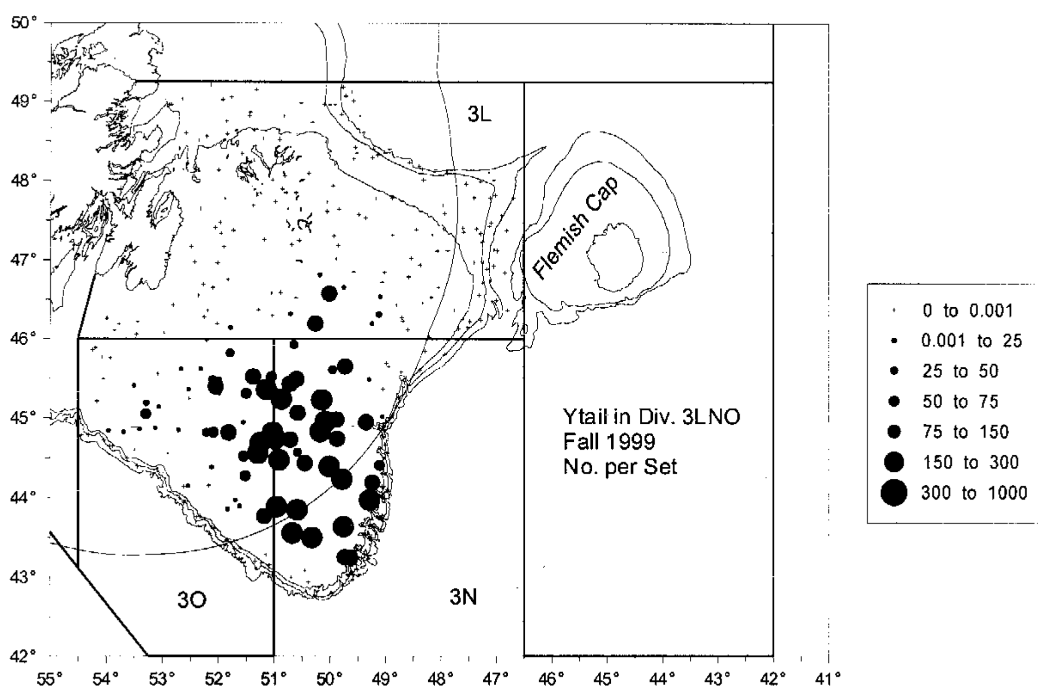


Fig.14 Number per set of Yellowtail flounder from Canadian fall surveys in Div. 3LNO during fall 1999.

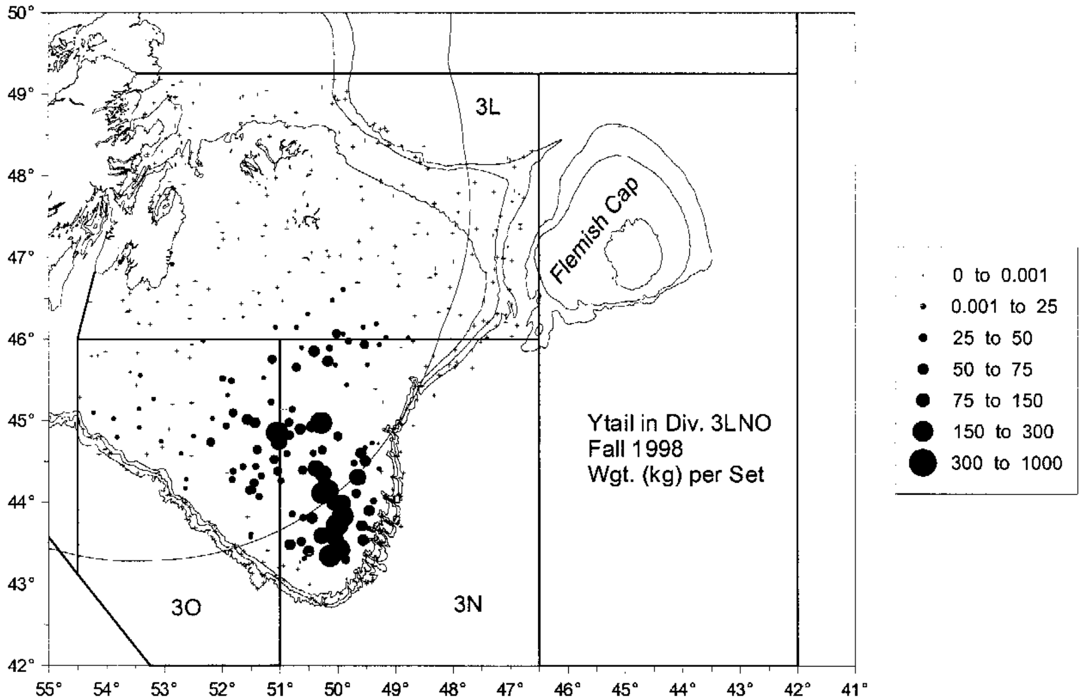


Fig.15 Weight (kg) per set of Yellowtail flounder from Canadian fall surveys in Div. 3LNO during fall 1998.

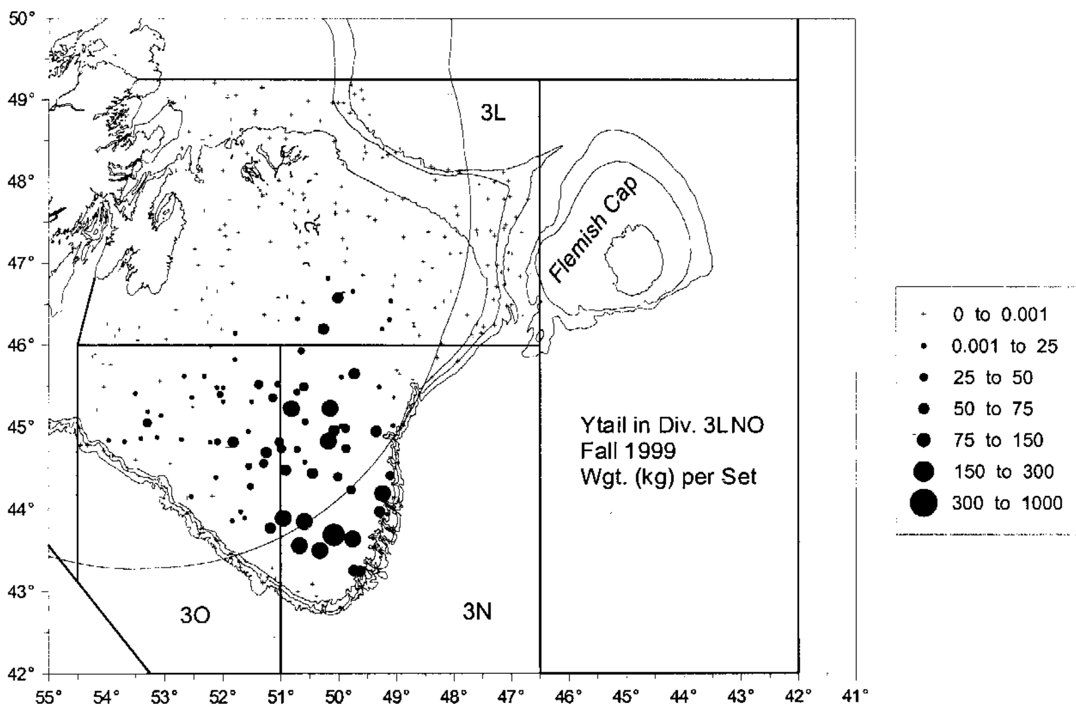


Fig.16 Weight (kg) per set of Yellowtail flounder from Canadian fall surveys in Div. 3LNO during fall 1999.

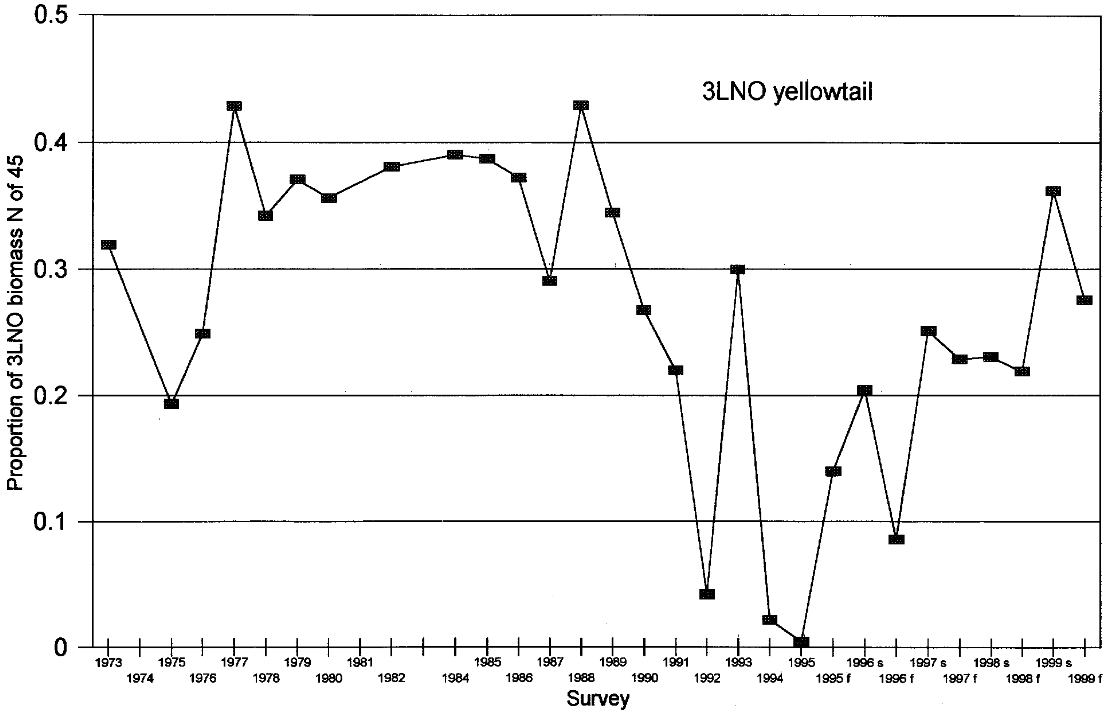


Fig. 17. The proportion of yellowtail flounder biomass found north of the 45^0 latitude from annual surveys.

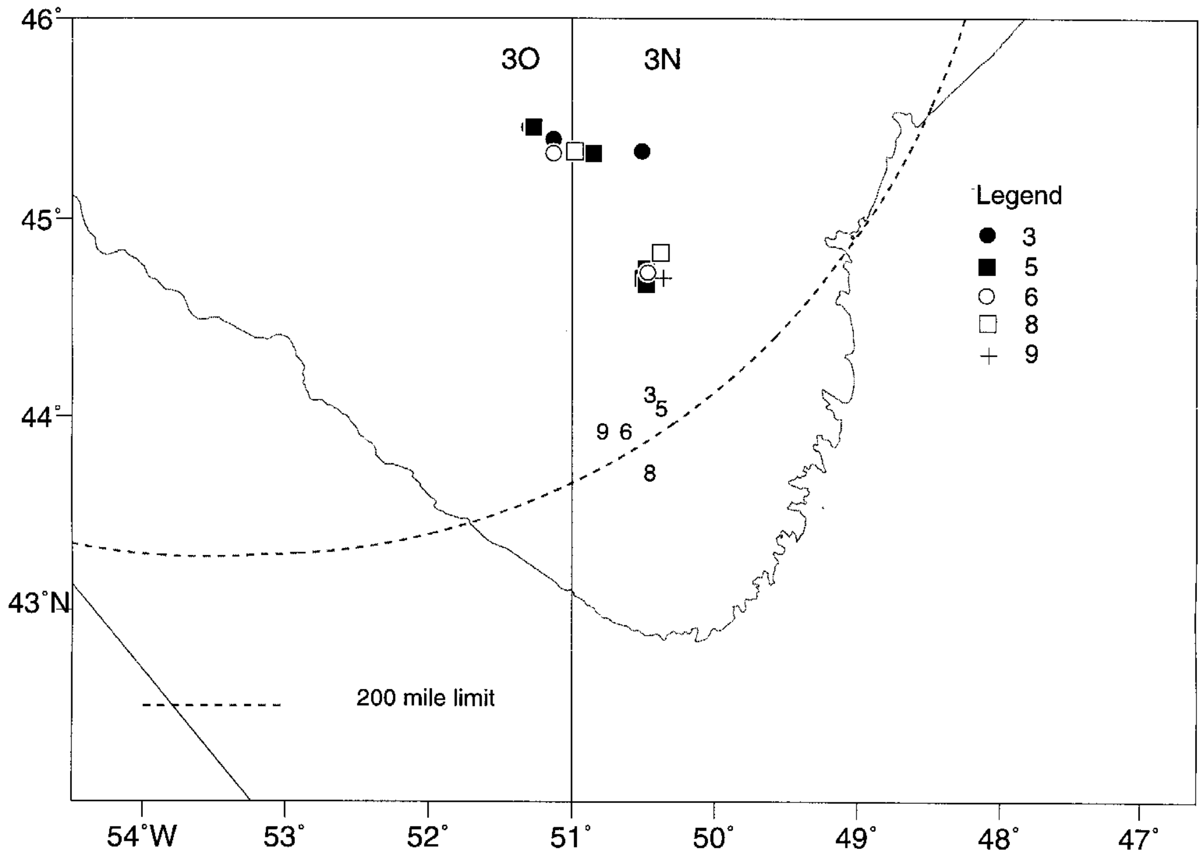
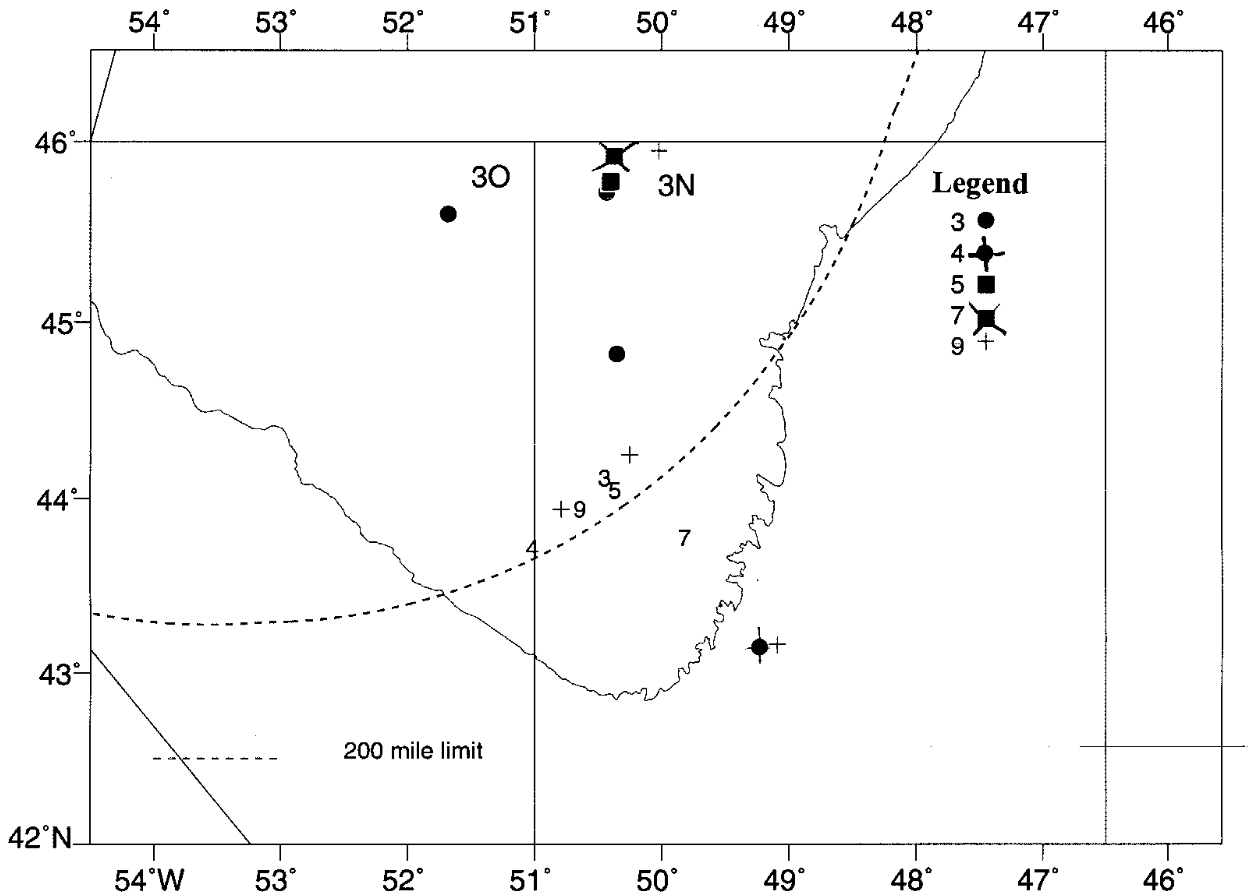


Figure 18 Return positions for yellowtail tags recaptured in the 1998 commercial fishery. The symbols indicate the return positions and the numbers give the locations of the release positions. The legend shows which symbol corresponds to each release position.



Fiigure /? Return positions for yellowtail tags recaptured in the 1999 commercial fishery. The symbols indicate the return positions and the numbers give the locations of the release positions. The legend shows which symbol corresponds to each release position.

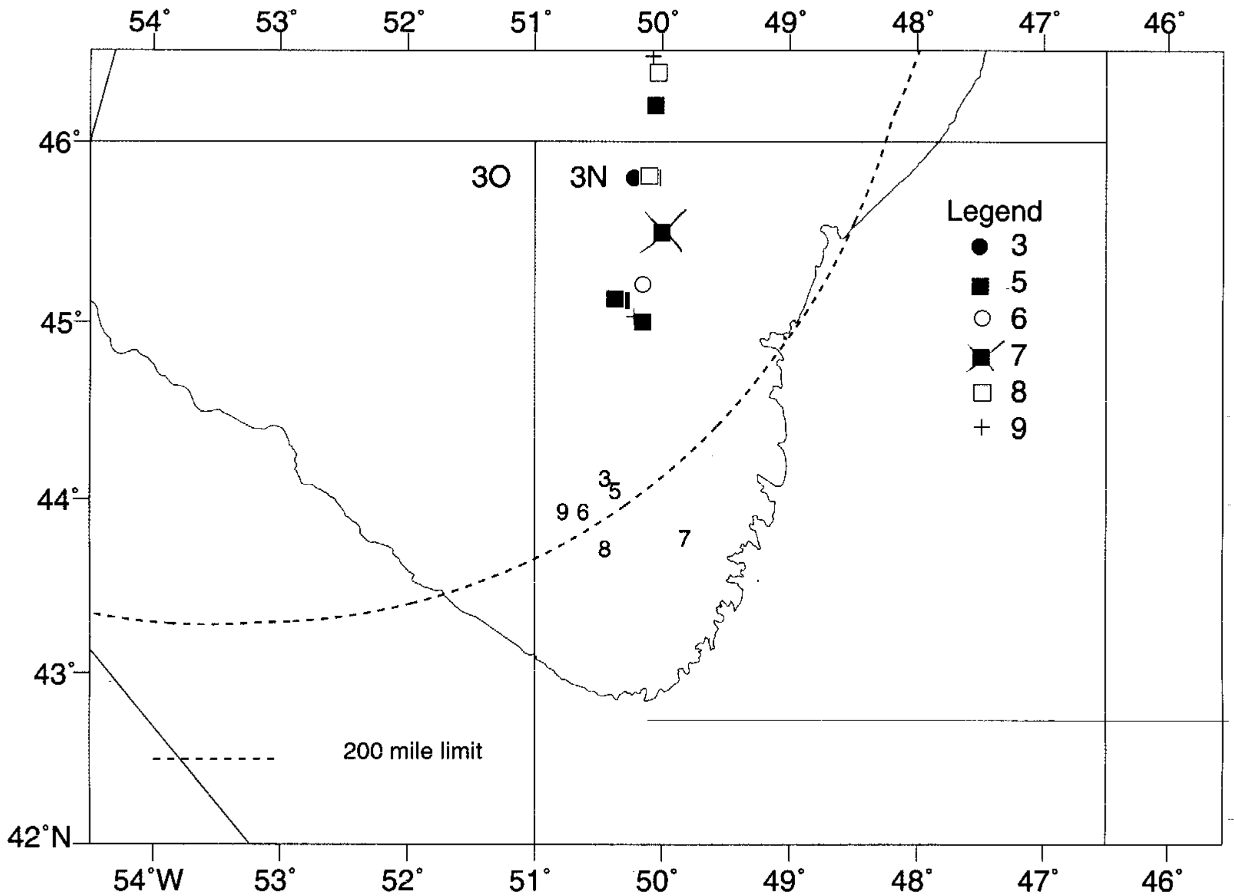


Figure 20 Return positions for yellowtail tags recaptured in the 2000 commercial fishery. The symbols indicate the return positions and the numbers give the locations of the release positions. The legend shows which symbol corresponds to each release position.