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Distribution and Abundance of Yellowtail Flounder (*Limanda ferruginea*) on the Grand Bank, in NAFO Divisions 3LNO, from Canadian Bottom Trawl Surveys in 1984-2003

by

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Abstract

Abundance and biomass indices of Grand Bank yellowtail flounder in NAFO Divisions 3LNO were derived from annual multi-species, stratified-random bottom trawl surveys conducted by Canada during the spring of 1984-2003 and during the fall from 1990 to 2003. The majority of the stock is found in depths less than 93 m and in Div. 3NO. After declining in stock size and geographical range from the mid-1980s to the mid-1990s, recent surveys have indicated that the stock size has increased dramatically and has again expanded northward to re-occupy habitats on the northern Grand Bank. The 2003 spring estimate of biomass is the highest in the time series and the fall estimate is the second highest; the average of both is 378,000 tons (1.3 billion fish).

Introduction

Annual multi-species, stratified-random bottom trawl surveys have been conducted by the Newfoundland region of the Canadian Dept of Fisheries and Oceans on the Grand Bank, in Div. 3LNO, during the spring (April-June) of each year since 1971. Since 1990, a second series of surveys has been carried out on the Grand Bank during the fall period, from October to December. However, since 1971 there have been two changes in survey gears and only one set of conversion factors has been developed for the 1984-1995 time series. Consequently only data from 1984 to 2003 will be presented here.

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

The purpose of this paper is to update the results of these annual surveys. The last detailed review of the survey results for yellowtail in Div. 3LNO took place in 2002 (Walsh *et al.*, 2002). Because this stock is on a two-year cycle for full assessment by NAFO Scientific Council, attention will focus on monitoring annual changes in stock size and recent changes in temporal and spatial patterns of distribution in relation to historical patterns.

Materials and Methods

Survey design: The stratification scheme is based on depth and shown in Fig. 1 (see Doubleday 1981 for a review of procedures). The 1984-2003 spring and the 1990-1994 fall surveys both covered depths from 45 to 731 m.

Number of successful sets, spring surveys 1996-2003 (Campelen time-series)
All surveys conducted by *RV Wilfred Templeman*
Range of dates (earliest to latest day each year) also shown

	3L	No. of inshore sets included	3N	3O	Total	Dates of Trip earliest	latest
1996	188	0	82	86	356	7-May	27-Jun
1997	158	0	71	81	310	30-Apr	26-Jun
1998	163	8	88	93	352	12-May	30-Jun
1999	177	32	82	86	377	11-May	29-Jun
2000	134	0	81	83	298	11-May	29-Jun
2001	154	12	79	79	324	29-Apr	24-Jun
2002	146	4	79	79	308	27-Apr	22-Jun
2003	155	14	79	79	327	8-May	26-Jun
mean	*159.4*		*80.1*	*83.3*	322.8		

Depth range (m), Campelen spring surveys 1996-2003.

	3L		3N		3O	
	min	max	min	max	min	max
1996	66	664	42	665	65	685
1997	60	681	35	689	62	669
1998	53	721	38	682	64	657
1999	41	692	40	659	62	679
2000	61	681	45	664	61	694
2001	34	695	40	650	74	699
2002	42	710	40	641	63	628
2003	62	698	39	681	63	726

Beginning in the fall of 1995 with the use of the new Campelen survey trawl, the coverage of the fall surveys extended to 1,500 m. Mechanical problems with the *CCG Teleost* survey vessel permitted only sets in the deepwater strata of Div. 3L to be fished in 1995 (see table below). Since the fall of 1996, there has been relatively good success at fishing these deep water sets in most years with the exception of 1999 (see summary table below). However, the deep water fishing sets in the fall surveys have negligible effect on estimation of the relative abundance and biomass of yellowtail flounder because the stock is found almost exclusively in depths less than 93 m. Nevertheless, the inclusion of these deepwater sets does lower the overall mean catch per tow by Division in those years. In addition, in years, 1995, 2002 and 2003, some northern portions of the surveys have overlapped into January of the following calendar year due to mechanical problems with the survey vessels. However, these delays should not affect yellowtail flounder estimates because of its shallow water distribution in the southern section of the survey area, which was generally completed on time.

Summary of sets in Campelen fall surveys in SA 3 in 1995 - 2003.
Depth range is given in meters, numbers of sets appear in parentheses.

Year	Division	Ship				Year	Division	Ship			
		Teleost	*W. Templeman*	*A. Needler*	***Total***			*Teleost*	*W. Templeman*	*A. Needler*	***Total***
1995	3L	733-1210 (5)	63-640 (161)		166	1999	3L	1366(1)	63-1407 (169)		170
	3N		40-650 (90)		90		3N		39-664 (68)		68
	3O		63-730 (81)		81		3O		58-692 (75)		75
					337						**313**
1996	3L	805 - 1433 (31)	51 - 671 (180)		211	2000	3L	1152-1430 (74)	42-447 (102)		176
	3N	390 - 1147 (13)		37 - 309 (54)	67		3N	747-1419 (24)	46-642 (70)		94
	3O	68 - 690 (24)	65 - 139 (19)	63 - 304 (15)	58		3O	752-1424 (24)	62-654 (76)		100
					336						**370**
1997	3L	161-1436 (71)	35-714 (134)		205	2001	3L	1146-1457 (34)	38-702 (169)	187-203 (2)	205
	3N		41-769 (74)		74		3N	739-1410 (24)	45-660 (70)		94
	3O		62-611 (73)		73		3O	803-1391 (22)	67-703 (75)		97
					352						**396**
1998	3L	691-1437 (32)	34-675 (172)		204	2002	3L	763-1431 (30)	35-670 (176)		206
	3N	834-1447 (12)	37-1079 (78)		90		3N	811-1429 (24)	44-675 (70)		94
	3O		82-1076 (87)		87		3O	775-1504 (24)	65-696 (75)		99
					381						**399**
						2003	3L	753-1446 (30)	32-702 (175)		205
							3N		43-727 (70)		70
							3O		63-650 (75)		75
											350

Notes:
1995 fall survey extended into January 1996
2002 fall survey extended into January 2003
2003 fall survey extended into January 2004

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

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

Fishing and catch protocols: The Campelen carries out 15 minute tows using a towing speed of 3.0 kts and covers an average tow distance of 0.75 nautical miles (see Table 1). The catches are standardized to distance towed. The average wingspread used in estimating swept area abundance indices is 16.84 m and the average swept area is estimated to be 24,950 m^2. After each set, all species in the catch are separated, counted and weighed. From each haul, the total catch or a sub-sample is taken to collect biological data on size, age, maturity and feeding for all commercial species.

Results

A) Spring groundfish/multispecies surveys 1984-2003

Abundance and biomass trends:

Tables 2 to 7 give the survey catch rates by division in the form of mean number and weight-per-tow by stratum. Tables 8-15 show abundance and biomass per stratum, along with confidence limits, for stock size in Div. 3L, 3N, and 3O, respectively, and for a combined Div. 3LNO estimate for the time period 1984-2003. Figures 5 and 6 show plots of the abundance and biomass estimates from surveys during the 1984-2003 period. The high 1999 survey estimates point to a 'year effect' (Walsh *et al.*, 2000; STACFIS, 2001). The Summary Table below identifies large fishing sets that contribute to variation seen around some of the estimates of stock size.

SummaryTable

Identification of large fishing sets in 1999-2003 by Divison and Stratum
Selection criteria was sets with greater than 900 fish or sets >400 Kg.

SPRING

		1999				2000				2001				2002				2003	
Division	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)
3N	360	2131	667	**3N**	362	1274	400	**3N**	360	1404	304	**3N**	360	1474	432	**3N**	360	922	288
	360	1621	453		373	1147	451		360	1043	226		360	1096	269		360	1105	291
	361	1140	146						360	1008	280		360	1200	376		373	906	319
	362	1315	244						361	998	243		360	1118	332		376	1976	394
	362	1045	573						362	1657	346						376	1004	305
	375	1029	130						362	1388	242						376	1677	377
	376	1540	267						***373***	***4824***	***1654***								
	376	1023	182						376	1080	306								
	376	1295	148						376	1370	293								
									376	2384	494								

FALL

		1999				2000				2001				2002				2003	
Division	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)	Div.	Stratum	Number	Weight (kg)
3N	362	938	198	**3N**	360	1060	238	**3N**	361	1275	376	**3N**	360	1642	742	**3N**	360	1360	493
	362	1772	241		375	1020	232		362	1433	424		360	1190	315		361	1355	339
					376	2193	420		376	4243	889		361	990	285		361	972	240
					376	3994	1150		376	2081	517		361	987	249		375	899	227
					376	1392	682		376	3178	831		362	1289	296		376	1627	475
				3O	352	924	235	**3O**	338	1192	463		375	1103	296	**3O**	351	1345	255
													376	1365	298		353	993	340
													376	1367	259				

In Div. 3L, there was a continuous decline in abundance and biomass from 1985 to 1995 (Tables 8 and 12; Fig. 5 and 6). From 1996 to 1998, the stock showed a marginal increase to stabilize at an average biomass level of 500 tons and then increased sharply to a level of 28,000 tons in 1999 (Table 12; Fig. 6). From 2000-2002 the abundance and biomass declined, and by 2002 the biomass was 600 tons, similar to the 1996-98 level. In 2003 the abundance and biomass indices again increased by a large margin, from 1.6 million to 92 million fish and biomass from 600 tons to 34,300 tons, the highest in the time series. In general, most of the yellowtail flounder were found in stratum 363 and stratum 372 in the spring surveys.

In Div. 3N, in general, the majority of the stock was distributed in and around the Southeast Shoal area (strata 375, 376, 360 and 361 in Fig. 1), although in recent surveys, the abundance and biomass has been increasing in strata to the north of the Shoal, in particular strata 362 and 373 (Tables 9 and 13). The biomass index declined gradually from 168,000 tons (435 million fish) in 1984 to 46,000 tons (135 million fish) by 1994, an overall decline of 73% (Fig. 5 and 6). The high abundance estimate of 478 million fish in 1989 was mainly due to the strong 1985 and 1986

year-classes, which were not major contributors to the biomass estimate for that survey due to their small size and weight. After a slight increase from 1994 to 1995, the survey biomass in 1996 jumped by 80% to 104,000 tons (475 million fish) followed by a continued increase to a high of 238,000 tons (965 million fish) in 1999 (Fig. 5 and 6). Since 1998, the survey abundance and biomass has shown an annual up-and-down pattern with the biomass in 2001 being the highest estimate in the time series at 298,000 tons (1.3 billion fish): The 2003 biomass and abundance estimates were similar to 2001, at 280,000 tons and 915 million fish. The low estimate in 2002 was highlighted by the lack of yellowtail flounder in the northern part of Div. 3N, strata 362 and 373.

The variability around the 2001 estimates of abundance and biomass (Fig. 5 and 6), both the highest estimates in their respective time series, was quite high. Some of this variation may be due to numerous large catches. Over half of the biomass estimate comes from sets in strata 360, 376, and 373. Similar to the 1999 survey where large catches were prevalent in strata 360, 361 362, 375 and 376, ten sets in 2001 had catches greater than 1,000 fish (5 in excess of 300 kg), including one set which caught 2,400 (476 kg) in stratum 376 and another in stratum 373 which caught 4,800 (1.6 tons) of yellowtail (see Summary Table above). The biomass in stratum 373 contributes 79,000 tons to the overall estimate in 2001 of 298,000 tons (Table 13). In 2003, there were also several moderately large catches in strata 360, 373 and 376, but the confidence limits around the abundance and biomass estimates are not as wide as in 2001. In 2000 and 2002, when the biomass was lower than in 1999, 2001 and 2003 there were only a few large catches.

In Div. 3O, the abundance and biomass showed a slightly declining trend from 1984 to 1992, with a rise in 1993 before again declining (Tables 10 and 14; Fig. 5 and 6). The biomass index showed moderate fluctuations around an average value of 27,000 tons (675 million fish) for the period 1984-92, increasing to 42,000 tons (101 million fish) in 1993 and then declining to an average of 11,000 tons in 1994-95. The anomalously high estimate in 1993 may have been produced by the high catch rates in stratum 352 and is reflected in the high variability around the estimate (see Fig. 5C). In 1996, the biomass index increased sharply to 71,000 tons. With the exception of the 1999 estimate of 99,000 tons (269 million fish), the biomass has fluctuated around an average level of 63,000 tons (177 million fish) since 1996. In Div. 3O, most of the biomass is generally found in two strata, 351 and 352 (see Fig.1) which borders Div. 3N. Whether some of the annual fluctuations are related to movement between Div. 3N and 3O is unknown. In 2003 the survey biomass estimate reached 72,000 tons (243.2 million fish) of which 67% came from stratum 352, similar to the percentage in the 2002 survey (Table 14). There are no incidences of very large catches (greater than 400 kg or 900 fish) in this Division during the 1999-2003 time period (see Summary Table)

In the spring estimates of Div. 3LNO, the majority of the survey abundance and biomass was found in Div. 3N and hence the stock trends mimic that of Div. 3N. Since 1989, there had been negligible amounts in Div. 3L until the 1999 survey.

Biomass in Div. 3LNO increased rapidly in the late-1990s from the lowest levels in the mid-1990s (Table 15). Between 1998 and 2003, the abundance and biomass has shown an annual up-and-down pattern (Fig. 5 and 6). The biomass estimates for 1999, 2001, and 2003 are all similar, in the range of 366 thousand to 387 thousand tons. The 2001 survey estimate of abundance and biomass was the most variable, and like the 1999 estimate it had many sets with large catches, including one with 1.6 tons (4,824 fish) in Div. 3N. These large catches contributed to the high variability around the estimate. Thus it is unlikely that this is a year effect as was seen in 1999 since the 2001 biomass was very low in Div. 3L and even showed a small decline in Div. 3O. In 2003 the biomass index reached the highest point in the time series at 387,000 tons (about 20,000 tons higher than the 1999 and 2001 estimates) although the abundance estimate was equivalent to 1999 and 2001 at approximately 1.3 billion fish (Tables 11 and 15). The upward trend was seen in all three Divisions, in particular Div. 3L where the biomass estimate increased by a factor of 57. Similar to the 1999 survey, more yellowtail were caught in the northern area of Div. 3N and in the southern area of 3L in 2003 than in 2002. In 2002, the majority of the biomass was located in and around stratum 352 of Div. 3O and strata 360, 361, 375 and 376 the Southeast Shoal area in Div. 3N, and a few large catches were taken in stratum 360 (see Summary Table above). The abundance and biomass estimates in Div. 3LNO increased by 93% from 2002 to 2003. Given the similar survey estimates in 1999, 2001, and 2003, it is more likely that spring 2002 estimates are a negative anomaly, highlighted by the lack of fish in the northern areas (Fig. 9 and 10).

B) Fall groundfish/multispecies surveys, 1990-2003

Abundance and biomass trends:

Tables 16-21 show the survey catch rates in the form of stratified mean number and weight-per-tow by stratum and Division for the fall surveys, 1990-2003. Tables 22-29 show abundance and biomass per stratum, along with confidence intervals for all Divisions. Figures 7 and 8 shows plots of the abundance and biomass estimates by Division from 1990-2003 and an estimate for Div. 3LNO combined for the same time period.

In Div. 3L, abundance and biomass estimates were very low and varied without trend from 1990-1995, reaching an estimate close to zero in 1994 (Fig. 7 and 8). Noteworthy is that no yellowtail were caught during the 1995 spring survey in Div. 3L. From 1990 to 95 the abundance index varied around an average level of 2 million fish, and then tripled to approximately 6 million fish in 1995 and 1996. The biomass varied around an average level of 1,000 tons from 1990-1997 before increasing, then reaching the highest level in the time series of 26,000 tons in 2001 (Table 26). Similarly the abundance rose from 6 million fish in 1996 to the peak of 75 million fish in 2001. Both the abundance and biomass indices dropped dramatically in 2002, by 56% and 46%, respectively. In 2003 the biomass rose from 14,000 tons (33 million fish) in 2002 to 19,000 tons (59 million fish). As in the spring surveys, most of the fish in the fall surveys were found in strata 363 and 372 (Tables 22 and 26), which border Div. 3N. The increases in biomass in Div. 3L since the mid-1990s are thought to be the result of an extension of the range of yellowtail flounder with increasing stock size (see spatial section below). There are obvious within-year differences in the amount of yellowtail flounder caught in this Division, and this is reflected in the wide confidence intervals around the estimates for 1999, 2001 and 2003.

In Div. 3N, estimates of stock size from 1990-92 fluctuated around an average value of 47,000 tons before doubling in 1993 (Table 27). Since then the stock has shown an increasing trend to a high of 369,000 tons in 2001. This was followed by decreases in 2002-03, to 252,000 tons in 2003 (Table 27; Fig. 8). Similarly, the survey abundance from 1990-94 fluctuated around an average size of about 220 million fish, prior to a strong upward trend beginning in 1995, and reaching a high of 1.3 billion fish in 2001 (Table 23; Fig 7). From this 2001 peak, the abundance index has decreased to a level of 900 million fish. The large jump in stock biomass seen in the 2003 spring survey was not evident in the fall survey (81% *vs*. 10%, respectively), probably because the fall 2002 survey did not decline like the spring 2002 did. The 2000 and 2001 surveys both featured very large catches in stratum 376 on the Southeast Shoal, ranging from 420 to 1,150 kg (2000 to 4300 fish, see summary table above). Biomass estimates in stratum 376 in these 2 years were more than double the next highest value for this stratum in the time series, and contributed 50% (2000) and 33% (2001) of the Div. 3N biomass estimate. In both years, there were large confidence intervals around both estimates of abundance and biomass. Similar to the spring survey, strata 360-362, 373 and 375-376 account for most of the biomass in this Division. Even though the estimate of stock size was lower in 2002, there were 3 large catches taken on the Southeast Shoal strata.

In Div. 3O, both the abundance and biomass index showed no obvious trend from 1990-96, with abundance fluctuating around an average value of 55 million fish and biomass fluctuating around an average level of 20,000 tons (Tables 24 and 28: Fig. 7 and 8). Then in 1997, the indices increased sharply to 159 million fish and 58,000 tons. From 1997-2002 the biomass and abundance varied without trend before increasing to peak values of 98,000 tons and 334 million fish in 2003. Estimates of abundance and biomass were highly variable in 2001 and 2003, particulary in 2001. (Tables 24 and 28; Fig. 7 and 8). A large catch of 1200 fish (463 kg) in stratum 338 contributed to the large variability around the 2001 fall estimate. In 2003, there were a couple of large catches including one with 1345 fish/255 kg (see summary table above). Most of the biomass in Division was found in strata 351 and 352, which borders Div. 3N.

In the fall surveys of Div. 3LNO, similar to the spring surveys, the majority of the stock was found in Div. 3N. The abundance and biomass show a general upward trend since the start of the surveys (Tables 25 and 29, Fig. 7 and 8). Since 1993, when the survey biomass in Div. 3LNO was estimated to be 113,000 tons (372 million fish), there has been an increasing trend to a high of 476,000 tons (1.2 billion fish) in 2001, representing a 321% increase in stock biomass. The 2001 survey biomass estimate of 476,000 tons showed a 42% increase in size over the 2000 estimate. The biomass in the Southeast Shoal strata, 375 and 376, usually contribute significantly to the overall biomass: e.g. 45 % in 2000 and 34% in 2001 and the large catches in these strata contribute to the high variability

around these two survey estimates. Since 2001 the biomass has decreased to 368,000 tons (1.3 billion fish) in 2003, putting the 2002 and 2003 results more in line with the 2000 estimates. The 2003 fall estimate is close in size to the 2003 spring biomass estimate of 387,000 tons. The annual up and down pattern in the biomass and abundance seen from 1998 to 2003 in the spring surveys was only seen from 2000-2003 in the fall, however, the changes were not as dramatic: 2000-2001 up 42%; 2001-2002 down 29% and 2002-2003 up 8% (Tables 15 and 29). One interpretation is that the 2001 survey represents a positive anomaly in the fall series, which otherwise has shown a steady increase in yellowtail stock size since the mid-1990s (Fig. 7 and 8).

Spatial analysis of the 2002-2003 survey data.

Figures 9 and 10 show the standard number and weight of yellowtail flounder from the catches of individual fishing sets plotted as ACON expanding point estimates using the spring and fall Campelen trawl data from the 2002-2003. In all surveys, yellowtail flounder were most abundant on the Southeast Shoal and the strata immediately to the west in Div. 3N (Fig. 1), most of which straddle the Canadian 200-mile limit and extend into the NAFO Regulatory Area. This confirms earlier descriptions of distribution (Walsh, 1992; Brodie *et al.*, 1998; Walsh *et al.*, 1999; 2000; 2001a, c). Fish appear to be more abundant in the Regulatory Area of Div. 3N in the 1999 – 2003 surveys than in previous years, and the northward distribution of the stock has extended to Div. 3L, similar to mid-1980s when the stock size was high (see also Walsh *et al.*, 2002). Brodie *et al.* (1998) noted that the northward range of yellowtail flounder on the Grand Bank contracted with decreasing stock size during the mid to late-1980s and early-1990s so that the bulk of the stock was south of 45°N. Simpson and Walsh (2003) have shown that the observed range contraction of yellowtail flounder at low population levels represents selection for preferred habitats in the southern area of the Bank. During periods of large increases in stock size, the range of yellowtail flounder expands into less favourable habitats to north and to a lesser extent westward, which supports MacCall's basin hypothesis (MacCall, 1990). Tag returns from the fishery have also confirmed the northward extension of the stock in recent years (Walsh *et al.*, 2001b).

Figure 11 shows a plot of the proportion of biomass north of 45°N from 1973 to 2003 and it is obvious that the range of the stock has extended northward since 1995. There appears to be a seasonal pattern in recent years, with the proportion of biomass north 45°N being higher in the spring than in the fall. The one obvious exception is the spring of 2002, when the proportion of biomass is much lower than in fall 2002, and is close to the low values in the early-1990s. Little difference in the proportions north of 45° were apparent in the 2002 fall and 2003 spring and fall surveys, at just under 30%. However, Figure 11 does not track the changes in spatial location of the stock in Div. 3L, which showed an increasing trend in the fall abundance and biomass while the spring indices showed a declining trend from 1999-2002 followed by a very large increase in 2003. The ACON point plots confirmed that most of the biomass in the 2002 spring survey was south of 45°N (Fig. 9 and 10) and that the northward extension was again obvious in the fall survey. Both 2003 surveys showed increasing frequency of yellowtail catches in the northern areas.

Depth Distribution

Simpson and Walsh (2004) used GAM to investigate the effect of habitat correlates on the distribution of yellowtail and concluded that yellowtail are more frequently found in shallow warmer waters and sand and gravely sand substrates. Nevertheless, occasionally small catches have been taken in deeper waters on the shelf edge and slope. Tables 2-4 and 16-18 give the average number of fish caught per tow in the spring and fall surveys on a divisional basis.

In Div. 3L, occasional small catches were taken in the spring surveys in a depth range of 93-183 m on the northern slope of the bank in each year except 1992, 1995, 2001 and 2002 (Table 2). Only one catch exceeded 10 fish and that was in stratum 364 where a catch of 18 fish was taken in 1999; most average catches in these deeper strata were less than 1 fish per tow. In the fall, fewer catches of yellowtail were taken in deeper waters and those only in 1992, 1996 and 1998; all had averages less than 1 fish per tow (Table 16). The deepest catch of yellowtail was found in the depth range of 184-366 m in stratum 791, which is an inshore area (Fig. 1).

In Div. 3N, small catches were taken in the spring surveys of 1988, 1993, and 2000-2002 mainly in the depth range of 93-183 (Table 3). These mean catches ranged up to 6.5 fish per tow. From 2000-2002, a few catches were taken in the depth range of 184-366 m with stratum means ranging from 0.4 to 7.0 fish per tow. In the fall surveys, beginning

in 1997, a few smaller catches were taken, all of them in the depth range of 93-183 m. Average catches ranged from 0 to 11.5 kg (Table 17). Interestingly, no such small catches were observed in 2001, which had the largest biomass estimate in the fall series.

In Div. 3O, small catches were taken in every spring survey from 1984-2003 in the strata along the southwest slope of the bank in the depth range of 93-183 m (Table 4). Here, mean catches ranged from 0 to 30.4 fish per tow. With the exception of 1993, small catches have been taken in strata in a depth range from 184 to 731 m in the 1992-1998 surveys, with 1995 and 1997 having the most frequent occurrences. Since then no catches have been taken in that depth range. Average catches in these strata ranged from 0 to 6.5 fish per tow. In the fall surveys, many strata in the 93-183 m depth range along the southwest slope of the bank yield small catches of yellowtail, with means ranging from 0 to 23.0 fish per tow (Table 18). However, with the exception of 1994, when small catches (average of 0.5 to 3.0 fish per tow) were taken in two strata near the western end of the southwest slope of the bank in the depth range 275-549 m, there were no catches in waters deeper than 183 m.

In summary, the majority of the yellowtail stock is found shallower than 93 m in all surveys, and small catches in deep water contribute little to the abundance and biomass estimates for the stock. Small catches of yellowtail in waters deeper than 92 m are more prevalent during the spring surveys than during the fall surveys. Most of these catches were taken in strata in the 93 to 183 m depth range and the most numerous catches were taken in Div. 3O along the southwest slope of the bank. The reduction in the frequency of small catches in deep water from spring to fall could indicate either seasonal movements, although there is no annual pattern to the data, or it could simply indicate fringe areas of the stock.

Conclusions

Since 1995, the surveys have shown that the stock has been increasing in size after the decline in the late-1980s and early-1990s. In the 1999 spring survey, but not the fall survey, a huge increase in abundance and biomass was evident and this survey was regarded as an estimate with 'year' effects (STACFIS, 2000). In the 2000 surveys, both the spring and fall abundance estimates were lower than that estimated from the 1999 surveys, being more in line with the 1998 surveys. However, both the 2001 spring and fall estimates showed large increases over the 2000 survey. The 2001 fall estimate of 476,000 tons was 30% higher than the spring estimate of 367,000 tons, is the highest value recorded in both time series, and likely represents a positive anomaly. The trend in the stock component in Div. 3N was upward in both 2001 spring and fall from the 2000 estimates, but remained almost the same size in Div. 3O in both years, and showed a declining trend in the spring survey and an increasing trend in the fall surveys in Div. 3L. Between 2001 and 2002, the stock biomass declined both in the spring (46%) and fall (29%) then in 2003 increased by 93 % in the spring and 8% in the fall. There are signs to suggest that the large increase in the 2003 spring biomass and abundance could be a 'year effect' if we consider that the presence of several (6) large catches and an increase in biomass in all three divisions are symptomatic of a 'year effect'. However, one could also argue that the large apparent increase in the 2003 spring indices is due mainly to the 46% decrease in biomass in 2002, and therefore the spring 2002 survey is a negative anomaly. In 2002 spring, very few yellowtail were caught north of 45°N in Div. 3N, which is uncharacteristic of recent years, and the biomass decreased by 166,000 tons from 2001 to 2002. It is possible that 2002 spring was the result of a 'year effect' which was characterized by a decrease in catchability. Such a change would occur if the fish were less accessible to the trawl. Since there were no reports of large catches of yellowtail in deeper waters in Div. 3NO then one possible explanation was that some fish may have been off-bottom as seen in the archival data from returned data storage tags (Walsh and Morgan, 2004). In the fall of 2002 the spatial structure again showed the northward expansion into northern part of Div. 3N and into Div. 3L, as it did in both surveys in 2003. The 2003 spring and fall survey estimates are close to each other, at 387,000 tons and 368,000 tons and 1.2 billion and 1.3 billion fish, respectively, which represents the highest (spring) and second highest (fall) estimates of biomass in the series.

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

Parameter	Measurement
Rigging	
Doors	4.3m/1400 kg
Sweeps (m)	6.1
Bridles (m)	40
Buoyancy (kg)	226.5
Headline (m)	29.5
Fishing line (m)	19.5
Footgear	
Length (m)	35.6
Material	102 rubber disks (rockhopper)
Weight in air (kg)	501.3
Size (diameter cm)	35
Mesh Size (mm)	
Wings/square	80/60
Bellies	60/44
Codend	44
Liner	12.7
Material	Polyethelylene
Geometry	
Doorspread (m)	45 to 55
Wingspread (m)	15 to 17
Opening (m)	4 to 5
Towing speed (knots)	3.0
Swept Area Abundance Model	
Tow duration (min)	15
Tow distance (nm)	0.8
Average wingspread (m)	16.84
Catchability coefficient	1.0
Swept area (m2)	24950.15

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 *WT 120-122*	1993 *WT 137,138*	1994 *WT 152-154*	1995 *WT 169,170*	1996 *WT 189-191*	1997 *WT 205-208*	1998 *WT221-24*	1999 *WT240-41*	2000 *WT317,318*	2001 *WT368-70*	2002 *WT 422-24*	2003 *WT 481-82*
30-56	784	36,866.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	.
57-92	350	284,889.0	3.2	7.4	4.4	1.3	2.8	1.4	0.3	1.5	0.1	0.0	0.1	0.0	1.6	0.0	0.0	33.2	21.5	4.5	0.3	8.4
	363	244,858.7	45.6	27.6	14.5	13.1	9.9	3.4	7.6	1.3	0.2	0.0	0.0	0.0	4.4	1.0	0.0	94.8	97.9	13.7	0.7	207.7
	371	154,206.0	.	0.7	0.7	0.0	0.8	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	2.5	0.0	0.0	0.0	0.0
	372	338,400.3	96.6	117.1	62.0	24.4	13.9	19.5	8.0	4.0	0.6	0.7	0.1	0.0	2.5	2.4	5.1	47.3	28.2	19.1	3.8	113.8
	384	154,068.4	.	7.7	2.5	1.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.5	0.8	0.3	0.3
	785	63,965.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	1.0	.
93-183	328	208,955.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.2
	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
	343	72,219.6	.	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5	.	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.2	0.1	2.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	18.0	2.6	0.0	0.0	0.4
	364	387,509.6	1.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.5	0.0	0.0	0.0
	365	143,201.1	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	.	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	.	0.0	0.0	.
184-274	344	205,516.3	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4	.	0.0	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	.	.	0.0	0.0	0.0
550-731	730	23,385.4	.	0.0	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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)**	**0.9(156)**	**0.4(143)**	**0.1(178)**	**0.1(181)**	**0.0(160)**	**0(151)**	**0.5(188)**	**0.2(158)**	**0.3(155)**	**9.6(175)**	**7.6(134)**	**2.1(153)**	**0.3(146)**	**16.9(155)**
Upper C.I.			**39.3**	**14.6**	**7.8**	**3.6**	**2.4**	**2.6**	**1.6**	**0.7**	**0.1**	**0.1**	**0.0**	**0.0**	**0.7**	**0.4**	**0.8**	**15.6**	**11.3**	**4.2**	**0.6**	**30.2**
Lower C.I.			**5.0**	**4.2**	**2.8**	**1.2**	**0.9**	**0.5**	**0.2**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.1**	**-0.2**	**3.6**	**3.9**	**0.0**	**0.0**	**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 WT238-40	2000 WT316,317	2001 WT367-69	2002 WT421-24	2003 WT480-81
<=56	375	219,134.8	373.6	165.6	409.6	208.3	118.5	82.3	259.5	21.5	340.3	135.7	29.0	139.7	603.3	487.2	411.6	476.4	359.0	301.6	213.4	395.0
	376	206,204.1	91.5	220.3	162.3	719.6	125.7	977.0	521.3	764.1	183.7	35.0	2.3	10.8	67.8	1,029.8	524.8	911.0	349.5	1145.8	243.8	1092.6
57-92	360	411,582.8	289.7	155.3	32.3	33.0	7.0	480.3	91.7	50.1	140.2	41.9	6.8	133.2	364.7	126.2	374.4	680.3	215.7	549.4	730.8	600.1
	361	254,900.7	338.6	171.0	101.4	130.1	166.6	142.3	293.3	242.9	63.6	237.9	451.0	276.7	453.6	427.2	455.7	586.7	544.0	639.2	375.3	526.2
	362	346,653.9	227.1	74.4	159.9	103.3	73.3	50.9	79.4	53.7	7.5	86.8	2.3	0.6	169.3	210.5	300.0	507.7	519.1	522.6	55.6	263.2
	373	346,653.9	122.0	58.1	28.2	38.7	34.6	20.8	2.5	13.4	0.1	0.1	3.0	0.0	7.8	1.9	11.1	103.1	311.8	680.9	32.9	273.6
	374	128,069.4	59.7	38.5	14.8	7.6	4.2	0.2	1.8	0.4	1.0	0.0	0.0	3.3	15.3	10.7	5.8	248.7	225.5	88.3	31.3	279.7
	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	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	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	0.0	0.0	2.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
275-366	357	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	.	.	.	.	.	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	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)**	**289.5(81)**	**466.4(79)**	**61.4(79)**	**381.0(79)**
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**	**356.3**	**660.0**	**80.0**	**467.6**
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**	**222.8**	**272.8**	**42.7**	**294.5**

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 94,96*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 *WT221-24*	1999 *WT238,39*	2000 *WT315-17*	2001 *WT365-67*	2002 *WT419-21*	2003 *WT479*
57-92	330	287,365.1	1.0	14.8	5.0	1.5	1.1	2.0	1.2	9.2	0.0	0.1	0.0	0.0	1.8	0.6	0.5	0.6	47.2	1.6	6.0	10.3
	331	62,727.9	50.0	62.3	5.3	26.5	9.0	25.0		1.0	0.0	2.0	5.5	0.5	1.5	5.3	1.0	69.8	43.5	30.0	17.0	86.5
	338	261,090.9	30.0	22.2	10.6	4.1	48.9	13.2	11.3	17.1	18.0	13.0	5.0	10.0	66.0	68.1	54.3	63.7	43.2	148.8	28.7	30.2
	340	236,054.8	6.0	13.6	16.3	40.8	10.0	6.4	17.7	5.4	3.2	2.8	0.0	0.2	0.0	9.0	1.6	8.8	44.0	11.4	13.6	82.2
	351	346,653.9	80.0	85.6	80.7	39.5	75.2	43.5	52.4	24.5	7.2	5.8	0.3	0.8	28.5	65.3	50.7	324.2	105.3	147.5	70.8	105.9
	352	354,907.6	63.7	55.6	73.0	103.4	47.2	50.7	77.9	78.4	50.8	226.1	55.6	36.0	312.6	177.4	246.3	279.7	268.4	217.9	294.0	458.8
	353	17.6353.31	2.0	98.5	32.1	148.5	3.0	9.6	20.7	26.7	10.0	66.5	1.8	70.2	122.2	175.0	190.6	188.2	92.4	124.9	80.6	36.0
93-183	329	236,742.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0
	332	144,026.5	0.0	0.6	14.2	9.2	0.3	30.4	1.8	1.3	1.0	13.3	0.3	1.5	6.5	1.3	7.5	4.8	0.0	4.3	22.0	5.7
	337	130,407.9	0.0	0.0	1.0	1.2	2.3	2.8	0.0	0.0	1.0	7.0	0.3	0.5	3.0	15.9	0.5	0.9	2.0	0.0	8.7	0.0
	339	80,473.2	1.0	0.3	0.3	0.3	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	27.0	1.0	11.0
	354	65,204.0	0.0	1.0	0.0	0.0	0.0	0.5	0.0	3.0	0.0	0.0	0.0	0.7	2.0	0.5	0.0	0.4	1.0	0.0	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	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.8	3.5	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	6.5	0.0	4.9	0.0	0.0	0.0	0.0	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)**	**73.1(83)**	**77.3(79)**	**63.1(79)**	**95.3(79)**
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**	**96.8**	**113.3**	**102.9**	**122.6**
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**	**49.4**	**41.2**	**23.3**	**68.0**

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

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 28*	1985 *WT 28-30*	1986 *WT 48*	1987 *WT 58-60*	1988 *WT 70,71*	1989 *WT 82,83*	1990 *WT 96*	1991 *WT 106,107*	1992 *WT 120-122*	1993 *WT 137,138*	1994 *WT 152-154*	1995 *WT 169,170*	1996 *WT 189-191*	1997 *WT 205-208*	1998 *WT221-224*	1999 *WT240-41*	2000 *WT317,318*	2001 *WT368-70*	2002 *422-24*	2003 *WT 481-82*
30-56	784	36,866.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	
57-92	350	284,889.0	1.4	3.5	2.0	0.6	1.4	0.6	0.2	0.7	0.1	0.0	0.1	0.0	0.7	0.0	0.0	16.3	8.4	2.1	0.1	2.6
	363	244,858.7	22.2	12.6	6.9	6.3	4.5	1.6	3.4	0.6	0.1	0.0	0.0	0.0	2.2	0.5	0.0	51.6	43.6	5.3	0.1	77.6
	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	0.0	0.0	0.0	0.0
	372	338,400.3	46.5	48.2	28.7	11.2	6.2	9.9	4.0	2.0	0.3	0.4	0.1	0.0	1.1	0.7	1.4	24.2	12.0	7.0	1.5	43.0
	384	154,068.4	.	3.7	1.5	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.2	0.3	0.3	0.0
	785	63,965.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.2	.
93-183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	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	0.0	0.0	0.0	0.0
	343	72,219.6	.	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5	.	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.1	0.0	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	7.9	1.0	0.0	0.0	0.1
	364	387,509.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.2	0.0	0.0	0.0
	365	143,201.1	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	.	0.0	0.0	.
184-274	344	205,516.3	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2	.	0.0	0.0	0.0	0.0	0.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4	.	0.0	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	0.0
550-731	730	23,385.4	.	0.0	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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)**	**0.4(156)**	**0.2(143)**	**0.0(178)**	**0.0(181)**	**0.0(160)**	**0.0(151)**	**0.2(188)**	**0.1(158)**	**0.1(155)**	**4.9(175)**	**3.2(134)**	**0.8(153)**	**0.1(146)**	**6.3(155)**
Upper C.I.			**19.0**	**6.0**	**3.6**	**1.7**	**1.1**	**1.3**	**0.8**	**0.4**	**0.1**	**0.1**	**0.0**	**0.0**	**0.3**	**0.1**	**0.2**	**8.0**	**4.8**	**1.6**	**0.2**	**10.9**
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**	**1.7**	**0.0**	**0.0**	**1.7**

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 96,96*	1991 *WT 106*	1992 *WT 119,120*	1993 *WT 136,137*	1994 *WT 152,153*	1995 *WT 168,169*	1996 *WT 189*	1997 *WT 205,206*	1998 *WT221-24*	1999 *WT238-40*	2000 WT316,317	2001 WT367-69	2002 WT421-24	2003 WT480-81
<=56	375	219,134.8	150.0	78.2	181.6	103.8	50.6	21.2	84.3	11.7	118.4	49.5	12.1	59.7	78.7	87.5	90.8	100.2	70.1	84.6	65.6	133.9
	376	206,204.1	30.0	66.8	66.8	78.7	12.6	121.7	70.9	143.7	22.4	5.1	0.6	2.8	5.4	123.6	99.6	150.2	72.8	253.6	50.4	266.0
57-92	360	411,582.8	106.6	46.3	11.2	7.4	2.5	61.0	12.2	12.1	25.3	8.8	2.5	39.6	68.1	39.1	77.8	186.0	63.5	146.3	213.5	191.2
	361	254,900.7	126.7	59.9	38.3	58.1	70.2	43.5	105.0	82.3	29.6	82.5	163.9	108.5	106.1	102.5	122.4	123.3	129.2	164.5	102.8	163.7
	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	162.4	123.6	12.5	84.3
	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	121.1	228.0	8.1	95.6
	374	128,069.4	30.1	21.1	8.9	4.3	2.3	0.1	0.6	0.2	0.6	0.0	0.0	1.1	7.1	3.0	1.2	69.0	74.3	23.9	10.3	103.4
	383	92,716.2	2.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	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	0.0	0.0	0.3	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
275-366	357	22,560.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	.	.	.	.	.	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	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)**	**82.2(81)**	**124.1(79)**	**61.4(79)**	**116.7(79)**
Upper C.I.			**97.3**	**48.7**	**58.9**	**47.8**	**31.1**	**50.3**	**47.1**	**39.7**	**33.2**	**36.0**	**33.2**	**36.3**	**54.0**	**72.2**	**80.2**	**127.4**	**103.5**	**186.4**	**80.0**	**138.4**
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**	**60.9**	**61.8**	**42.7**	**95.0**

Table 7. Mean Weight (Kg) per set of Yellowtail Flounder by stratum, Div 3O - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43*	1986 *WT 47*	1987 *WT 58*	1988 *WT 70*	1989 *WT 82*	1990 *WT 94,95*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 *WT221-24*	1999 *WT238-39*	2000 *WT315-317*	2001 *WT365-67*	2002 *WT419-21*	2003 *WT479*
57-92	330	287,365.1	0.6	6.7	2.6	0.7	0.6	1.1	0.7	4.0	0.0	0.1	0.0	0.0	0.9	0.2	0.2	0.3	23.7	2.3	1.9	2.0
	331	62,727.9	21.7	29.5	2.8	13.2	4.6	14.8		0.6	0.0	1.4	2.8	0.2	0.5	1.6	0.0	27.3	19.1	10.0	6.5	38.7
	338	261,090.9	12.7	10.6	5.4	1.9	19.6	6.4	5.6	5.1	8.1	5.3	2.7	4.9	30.8	24.8	21.2	27.6	18.1	53.9	12.6	11.5
	340	236,054.8	2.9	6.6	7.5	18.3	4.7	3.2	8.5	2.7	1.6	1.5	0.0	0.0	0.0	3.4	0.8	4.2	17.8	4.4	3.1	20.3
	351	346,653.9	35.8	37.5	33.8	17.3	32.4	20.0	24.2	11.6	3.2	2.4	0.1	0.3	13.6	26.6	18.0	89.7	34.9	44.3	13.7	28.1
	352	354,907.6	28.1	24.5	30.0	42.9	21.3	22.7	31.5	38.3	19.9	93.0	22.7	15.4	129.7	72.0	83.5	110.1	100.0	75.3	93.6	136.5
	353	17.6353.31	1.1	43.2	15.9	75.7	1.6	4.9	9.9	13.0	4.6	29.8	1.1	31.8	60.5	56.3	90.8	103.2	41.8	24.9	37.7	14.0
93-183	329	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
	332	144,026.5	0.0	0.3	7.7	5.0	0.1	11.9	0.8	0.7	0.5	6.2	0.2	0.9	3.5	0.5	2.3	1.8	0.0	2.2	10.0	2.4
	337	130,407.9	0.0	0.0	0.6	0.6	1.0	1.7	0.0	0.0	0.4	4.4	0.2	0.2	2.0	6.4	0.2	0.5	1.0	0.0	4.2	0.0
	339	80,473.2	0.6	0.2	0.1	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	11.7	0.4	2.9
	354	65,204.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	0.3	0.9	0.4	0.0	0.1	0.6	0.0	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	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	3.9	0.0	2.3	0.0	0.0	0.0	0.0	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)**	**28.3(83)**	**24.9(79)**	**20.2(79)**	**28.2(79)**
Upper C.I.			**18.5**	**20.6**	**16.8**	**23.9**	**14.7**	**11.6**	**15.8**	**14.3**	**6.7**	**33.3**	**7.1**	**8.7**	**41.6**	**32.5**	**31.6**	**51.3**	**36.8**	**36.0**	**32.8**	**35.6**
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**	**19.7**	**13.9**	**7.7**	**20.9**

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

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 28*	1985 *WT 28-30*	1986 *WT 48*	1987 *WT 58-60*	1988 *WT 70,71*	1989 *WT 82,83*	1990 *WT 96*	1991 *WT 106,107*	1992 *WT 120-122*	1993 *WT 137,138*	1994 *WT 152-154*	1995 *WT 169,170*	1996 *WT 189-191*	1997 *WT 205-208*	1998 *WT221-24*	1999 *WT240-41*	2000 *WT317,318*	2001 *WT368-70*	2002 *WT 422-24*	2003 *WT 481-82*
30-56	784	36866.37	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	.
57-92	350	284,889.0	0.9	2.1	1.2	0.4	0.8	0.4	0.1	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	9.4	6.1	1.3	0.1	2.4
	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	24.0	3.3	0.2	50.8
	371	154,206.0	.	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0
	372	338,400.3	32.7	39.6	21.0	8.3	4.7	6.6	2.7	1.4	0.2	0.2	0.0	0.0	0.8	0.8	1.5	16.0	9.6	6.5	1.3	38.5
	384	154,068.4	.	1.2	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.1	.
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	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	0.0	0.0	0.0	0.0
	343	72,219.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.8	0.0	0.0	0.1
	364	387,509.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.2	0.0	0.0	0.0
	365	143,201.1	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	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	0.0	0.0	0.0	0.0
	347	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	346	118,990.3	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4	.	0.0	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	.	0.0	0.0	0.0
550-731	730	23,385.4	.	0.0	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0
732-914	737	31,226.4	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	741	30,676.1	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	745	47,871.3	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	748	21,872.2	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
Abundance (millions)			**45.4**	**49.9**	**26.9**	**12.3**	**8.1**	**7.9**	**4.7**	**2.2**	**0.3**	**0.2**	**0.1**	**0.0**	**2.5**	**1.2**	**1.6**	**55.4**	**40.7**	**11.5**	**1.6**	**92.0**
Upper C.I.			**80.7**	**77.5**	**39.7**	**18.4**	**11.9**	**13.2**	**8.3**	**3.6**	**0.7**	**0.7**	**0.3**	**0.0**	**3.8**	**2.0**	**4.3**	**89.9**	**60.3**	**23.1**	**3.1**	**164.3**
Lower C.I.			**10.2**	**22.3**	**14.2**	**6.2**	**4.3**	**2.7**	**1.1**	**0.8**	**-0.1**	**-0.2**	**0.0**	**0.0**	**1.2**	**0.4**	**-1.1**	**20.9**	**21.0**	**-0.1**	**0.1**	**19.6**

Table 9. Abundance (millions) of Yellowtail Flounder by stratum, Div 3N - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43 WT 29*	1986 *WT 47*	1987 *WT 58,59*	1988 *WT 70*	1989 *WT 82*	1990 *WT 95,96*	1991 *WT 106*	1992 *WT 119,120*	1993 *WT 136,137*	1994 *WT 152,153*	1995 *WT 168,169*	1996 *WT 189*	1997 *WT 205,206*	1998 *WT221-24*	1999 *WT238-40*	2000 WT316,317	2001 WT367-69	2002 *WT421-24*	2003 WT480-81
<=56	375	219,134.8	81.9	36.3	89.8	45.6	26.0	18.0	56.9	4.7	74.6	29.7	6.4	30.6	132.2	106.8	90.2	104.4	78.7	66.1	46.8	86.6
	376	206,204.1	18.9	45.4	33.5	148.4	25.9	201.5	107.5	157.6	37.9	7.2	0.5	2.2	14.0	212.3	108.2	187.9	72.1	236.3	50.3	225.3
57-92	360	411,582.8	119.2	63.9	13.3	13.6	2.9	197.7	37.7	20.6	57.7	17.2	2.8	54.8	150.1	51.9	154.1	280.0	88.8	226.1	300.8	247.0
	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	138.7	162.9	95.7	134.1
	362	346,653.9	78.7	25.8	55.4	35.8	25.4	17.7	27.5	18.6	2.6	30.1	0.8	0.2	58.7	73.0	104.0	176.1	180.0	181.1	19.3	91.2
	373	346,653.9	42.3	20.1	9.8	13.4	12.0	7.2	0.9	4.6	0.0	0.0	1.0	0.0	2.7	0.6	3.8	35.7	108.1	236.0	11.4	94.8
	374	128,069.4	7.6	4.9	1.9	1.0	0.5	0.0	0.2	0.1	0.1	0.0	0.0	0.4	2.0	1.4	0.7	31.8	28.9	11.3	4.0	35.8
	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	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	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	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	357	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	.	.	.	.	.	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0
732-914	752	18,433.2	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	756	14,581.5	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	760	21,184.4	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
Abundance (millions)			**435.3**	**240.1**	**229.5**	**291.0**	**135.3**	**478.3**	**305.5**	**268.1**	**189.2**	**145.0**	**126.4**	**158.8**	**475.3**	**554.9**	**577.2**	**965.4**	**695.3**	**1,119.9**	**528.3**	**914.9**
Upper C.I.			**576.5**	**310.0**	**325.1**	**459.6**	**198.0**	**770.4**	**473.6**	**397.2**	**303.0**	**248.8**	**218.8**	**242.5**	**611.8**	**832.5**	**778.1**	**1,200.0**	**855.6**	**1,584.8**	**690.4**	**1,122.6**
Lower C.I.			**294.1**	**170.1**	**133.9**	**122.5**	**72.5**	**186.2**	**137.4**	**139.0**	**75.3**	**41.1**	**34.0**	**75.1**	**338.8**	**277.3**	**376.4**	**730.9**	**535.0**	**655.1**	**366.3**	**707.1**

Table 10. Abundance (millions) of Yellowtail Flounder by stratum, Div 30 - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43*	1986 *WT 47*	1987 *WT 58*	1988 *WT 70*	1989 *WT 82*	1990 *WT 94,95*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 WT221-224	1999 WT238,239	2000 *WT315-317*	2001 *WT365-67*	2002 *WT419-21*	2003 *WT 479*
57-92	330	287,365.1	0.3	4.3	1.4	0.4	0.3	0.6	0.3	2.6	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.2	13.6	1.6	1.7	3.0
	331	62,727.9	3.1	3.9	0.3	1.7	0.6	1.6	.	0.1	0.0	0.1	0.3	0.0	0.1	0.3	0.1	4.4	2.7	1.9	1.1	5.4
	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	11.3	38.9	7.5	7.9
	340	236,054.8	1.4	3.2	3.8	9.6	2.4	1.5	4.2	1.3	0.8	0.7	0.0	0.0	0.0	2.1	0.4	2.1	10.4	2.7	3.2	19.4
	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	36.5	51.1	24.5	36.7
	352	354,907.6	22.6	19.7	25.9	36.7	16.7	18.0	27.7	27.8	18.0	80.3	19.7	12.8	110.9	63.0	87.4	99.3	95.3	77.3	104.3	162.8
	353	17.6353.31	0.4	17.4	5.7	26.2	0.5	1.7	3.6	4.7	1.8	11.7	0.3	12.4	21.6	30.9	33.6	33.2	16.3	22.0	14.2	6.3
93-183	329	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	332	144,026.5	0.0	0.1	2.0	1.3	0.0	4.4	0.3	0.2	0.1	1.9	0.0	0.2	0.9	0.2	1.1	0.7	0.0	0.6	3.2	0.8
	337	130,407.9	0.0	0.0	0.1	0.2	0.3	0.4	0.0	0.0	0.1	0.9	0.0	0.1	0.4	2.1	0.1	0.1	0.3	0.0	1.1	0.0
	339	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	2.2	0.1	0.9
	354	65,204.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
184-274	355	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	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**	**186.5**	**197.2**	**161.0**	**243.2**
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**	**247.1**	**289.1**	**262.5**	**312.8**
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**	**126.0**	**105.2**	**59.4**	**173.6**

Table 11. Abundance (millions) 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 *WT221-224*	1999 *WT238-41*	2000 *WT315-18*	2001 *WT367-70*	2002 WT419-24	2003 WT479-82
<=56	375	219,134.8	81.9	36.3	89.8	45.6	26.0	18.0	56.9	4.7	74.6	29.7	6.4	30.6	132.2	106.8	90.2	104.4	78.7	66.1	46.8	86.6
	376	206,204.1	18.9	45.4	33.5	148.4	25.9	201.5	107.5	157.6	37.9	7.2	0.5	2.2	14.0	212.3	108.2	187.9	72.1	236.3	50.3	225.3
	784	36,866.4																		0.0	0.0	.
TOTAL			**100.7**	**81.7**	**123.2**	**194.0**	**51.9**	**219.5**	**164.4**	**162.3**	**112.5**	**36.9**	**6.8**	**32.8**	**146.2**	**319.1**	**198.4**	**292.2**	**150.8**	**302.4**	**97.0**	**311.9**
57-92	330	287,365.1	0.3	4.3	1.4	0.4	0.3	0.6	0.3	2.6	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.2	13.6	1.6	1.7	3.0
	331	62,727.9	3.1	3.9	0.3	1.7	0.6	1.6		0.1	0.0	0.1	0.3	0.0	0.1	0.3	0.1	4.4	2.7	1.9	1.1	5.4
	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	11.3	38.9	7.5	7.9
	340	236,054.8	1.4	3.2	3.8	9.6	2.4	1.5	4.2	1.3	0.8	0.7	0.0	0.0	0.0	2.1	0.4	2.1	10.4	2.7	3.2	19.4
	350	284,889.0	0.9	2.1	1.2	0.4	0.8	0.4	0.1	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	9.4	6.1	1.3	0.1	2.4
	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	36.5	51.1	24.5	36.7
	352	354,907.6	22.6	19.7	25.9	36.7	16.7	18.0	27.7	27.8	18.0	80.3	19.7	12.8	110.9	63.0	87.4	99.3	95.3	77.3	104.3	162.8
	353	17.6353.31	0.4	17.4	5.7	26.2	0.5	1.7	3.6	4.7	1.8	11.7	0.3	12.4	21.6	30.9	33.6	33.2	16.3	22.0	14.2	6.3
	360	411,582.8	119.2	63.9	13.3	13.6	2.9	197.7	37.7	20.6	57.7	17.2	2.8	54.8	150.1	51.9	154.1	280.0	88.8	226.1	300.8	247.0
	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	138.7	162.9	95.7	134.1
	362	346,653.9	78.7	25.8	55.4	35.8	25.4	17.7	27.5	18.6	2.6	30.1	0.8	0.2	58.7	73.0	104.0	176.1	180.0	181.1	19.3	91.2
	363	244,858.7	11.2	6.8	3.6	3.2	2.4	0.8	1.9	0.3	0.1	0.0	0.0	0.0	1.1	0.2	0.0	23.2	24.0	3.3	0.2	50.8
	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	0.0	0.0	0.0	0.0
	372	338,400.3	32.7	39.6	21.0	8.3	4.7	6.6	2.7	1.4	0.2	0.2	0.0	0.0	0.8	0.8	1.7	16.0	9.6	6.5	1.3	38.5
	373	346,653.9	42.3	20.1	9.8	13.4	12.0	7.2	0.9	4.6	0.0	0.0	1.0	0.0	2.7	0.6	3.8	35.7	108.1	236.0	11.4	94.8
	374	128,069.4	7.6	4.9	1.9	1.0	0.5	0.0	0.2	0.1	0.1	0.0	0.0	0.4	2.0	1.4	0.7	31.8	28.9	11.3	4.0	35.8
	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	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	0.1	0.1	0.0	0.0
	785	63,965.9	.																	0.0	0.1	.
TOTAL			**442.7**	**292.1**	**200.4**	**198.5**	**150.7**	**308.6**	**202.7**	**157.4**	**104.7**	**206.5**	**141.5**	**154.1**	**491.7**	**373.9**	**533.9**	**990.3**	**770.1**	**1,024.3**	**589.3**	**936.3**
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	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	0.0	0.0	0.0	0.0
	332	144,026.5	0.0	0.1	2.0	1.3	0.0	4.4	0.3	0.2	0.1	1.9	0.0	0.2	0.9	0.2	1.1	0.7	0.0	0.6	3.2	0.8
	337	130,407.9	0.0	0.0	0.1	0.2	0.3	0.4	0.0	0.0	0.1	0.9	0.0	0.1	0.4	2.1	0.1	0.1	0.3	0.0	1.1	0.0
	339	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	2.2	0.1	0.9
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	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	0.0	0.0	0.0	0.0
	343	72,219.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	348	291,629.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.7	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	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	0.1	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	0.2	0.0	0.0	0.0
	365	143,201.1	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	370	181,580.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	377	13,756.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.																	0.0	.	.
	787	84,325.0	.																	0.0	.	.
TOTAL			**0.7**	**0.3**	**2.9**	**1.7**	**0.5**	**4.8**	**0.4**	**0.5**	**0.3**	**2.9**	**0.1**	**0.3**	**1.5**	**2.3**	**1.2**	**7.3**	**1.6**	**3.1**	**4.4**	**1.9**

Table 11 Con'd

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27,28*	1985 *AN 43 WT 28-30*	1986 *WT 47,48*	1987 *WT 58-60*	1988 *WT 70,71*	1989 *WT 82-83*	1990 *WT 94-96*	1991 *WT 105-107*	1992 *WT 119-122*	1993 *WT 136-138*	1994 *WT 152-154*	1995 *WT 168-170*	1996 *WT 188-191*	1997 *WT 204-208*	1998 *WT221-224*	1999 *WT238-41*	2000 *WT315-18*	2001 *WT367-70*	2002 WT419-24	2003 WT479-82
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	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	347	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	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	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	0.0	0.0	0.0	0.0
	366	191,760.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	369	132,196.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	389	112,937.7	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	391	38,792.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	346	118,990.3	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	368	45,945.4	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	388	49,659.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	392	19,946.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367-549	717	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	.	.	.	.	.	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0
	731	29,713.2	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	733	64,378.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	.	.	.	.	.		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**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*	2000 *WT315-18*	2001 *WT367-70*	2002 WT419-24	2003 WT479-82
550-731	718	15,269.3	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	732	31,776.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	734	31,363.9	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	736	24,073.2	.	0.0	.	.	.	.	.		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**	**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**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Abundance (millions)			**544.2**	**374.1**	**326.5**	**394.2**	**203.1**	**532.9**	**367.4**	**320.3**	**217.4**	**246.3**	**148.4**	**187.4**	**639.4**	**695.5**	**733.6**	**1,289.9**	**922.5**	**1,328.5**	**690.9**	**1,250.1**
Upper C.I.			**691.2**	**453.2**	**425.8**	**565.7**	**269.6**	**825.6**	**536.9**	**450.5**	**331.5**	**380.8**	**244.7**	**272.7**	**785.8**	**974.8**	**940.9**	**1,540.0**	**1,092.8**	**1,800.2**	**873.9**	**1,472.2**
Lower C.I.			**397.2**	**295.0**	**227.3**	**222.7**	**136.5**	**240.3**	**198.0**	**190.0**	**103.4**	**111.8**	**52.2**	**102.1**	**493.1**	**416.3**	**526.2**	**1,039.7**	**752.2**	**856.9**	**507.9**	**1,027.5**

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*	2000 *WT317,318*	2001 *WT368-70*	2002 *WT 422-24*	2003 *WT 481-82*
30-56	784	36866.37	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.
57-92	350	284,889.0	0.4	1.0	0.6	0.2	0.4	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	4.6	2.4	0.6	0.0	0.7
	363	244,858.7	5.4	3.1	1.7	1.6	1.1	0.4	0.8	0.1	0.0	0.0	0.0	0.0	0.5	0.1	0.0	12.6	10.7	1.3	0.0	19.0
	371	154,206.0	.	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
	372	338,400.3	15.7	16.3	9.7	3.8	2.1	3.4	1.3	0.7	0.1	0.1	0.0	0.0	0.4	0.2	0.5	8.2	4.1	2.4	0.5	14.5
	384	154,068.4		0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.
93-183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	0.0	0.0	0.0	0.0
	343	72,219.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3	0.0	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	0.1	0.0	0.0	0.0
	365	143,201.1	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	370	181,580.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.
	787	84,325.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	0.0	.
184-274	344	205,516.3	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	347	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	366	191,760.2	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	369	132,196.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	389	112,937.7	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	391	38,792.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	345	196,987.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	346	118,990.3	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	368	45,945.4	.	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	388	49,659.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	392	19,946.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	729	25,586.4	.	0.0	.	.	.	.	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	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	0.0	0.0	0.0	0.0
	732	31,776.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	.	0.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732-914	737	31,226.4	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	741	30,676.1	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	745	47,871.3	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	748	21,872.2	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
Biomass ('000t)			**21.9**	**21.1**	**12.6**	**5.8**	**3.7**	**4.0**	**2.2**	**1.1**	**0.2**	**0.1**	**0.0**	**0.0**	**1.1**	**0.5**	**0.5**	**28.5**	**17.5**	**4.4**	**0.6**	**34.3**
Upper C.I.			**38.9**	**32.0**	**18.3**	**8.5**	**5.4**	**6.8**	**4.0**	**1.8**	**0.4**	**0.3**	**0.1**	**0.0**	**1.7**	**0.8**	**1.3**	**46.2**	**25.8**	**8.9**	**1.2**	**59.2**
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**	**9.3**	**0.0**	**-0.1**	**9.5**

Table 13. Biomass estimates ('000t) of Yellowtail Flounder by stratum, Div 3N - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43 WT 29*	1986 *WT 47*	1987 *WT 58,59*	1988 *WT 70*	1989 *WT 82*	1990 *WT 95,96*	1991 *WT 106*	1992 *WT 119,120*	1993 *WT 136,137*	1994 *WT 152,153*	1995 *WT 168,169*	1996 *WT 189*	1997 *WT 205,206*	1998 *WT221-24*	1999 *WT 239-40*	2000 WT316,317	2001 WT367-69	2002 *WT421-24*	2003 *WT 480-81*
<=56	375	219,134.8	32.9	17.1	39.8	22.8	11.1	4.6	18.5	2.6	25.9	10.8	2.7	13.1	17.3	19.2	19.9	21.9	15.4	18.5	14.4	29.3
	376	206,204.1	6.2	13.8	13.8	16.2	2.6	25.1	14.6	29.6	4.6	1.1	0.1	0.6	1.1	25.5	20.5	31.0	15.0	52.3	10.4	54.8
57-92	360	411,582.8	43.9	19.0	4.6	3.1	1.0	25.1	5.0	5.0	10.4	3.6	1.0	16.3	28.0	16.1	32.0	76.5	26.2	60.2	87.9	78.7
	361	254,900.7	32.3	15.3	9.8	14.8	17.9	11.1	26.8	21.0	7.5	21.0	41.8	27.7	27.1	26.1	31.2	31.4	32.9	41.9	26.1	41.7
	362	346,653.9	30.1	11.1	21.2	14.0	12.2	8.5	10.5	8.5	1.0	14.2	0.5	0.1	28.9	33.7	38.8	57.6	56.3	42.9	4.3	29.2
	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	42.0	79.0	2.8	33.1
	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	9.5	3.1	1.3	13.2
	383	92,716.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93-183	359	57,913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	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	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	358	30,951.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	357	22,560.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	723	21,322.0	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	.	.	.	.	.	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	724	17,057.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
732-914	752	18,433.2	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	756	14,581.5	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	760	21,184.4	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
Biomass ('000t)			**167.7**	**88.2**	**95.1**	**77.5**	**51.4**	**78.3**	**75.7**	**69.1**	**49.6**	**50.8**	**46.3**	**57.9**	**103.9**	**121.3**	**143.7**	**238.5**	**197.3**	**297.9**	**147.3**	**280.2**
Upper C.I.			**223.2**	**111.9**	**135.2**	**108.5**	**71.4**	**115.4**	**108.1**	**95.3**	**79.1**	**86.5**	**81.5**	**87.2**	**129.7**	**171.7**	**192.6**	**305.8**	**248.4**	**447.6**	**192.1**	**332.2**
Lower C.I.			**112.1**	**64.5**	**55.1**	**46.6**	**31.4**	**41.2**	**43.3**	**42.9**	**20.1**	**15.0**	**11.2**	**28.6**	**78.2**	**70.9**	**94.8**	**171.1**	**146.2**	**148.3**	**102.5**	**228.2**

Table 14. Biomass estimates ('000t) of Yellowtail Flounder by stratum, Div 3O - Spring

Depth Range (m)	Stratum	No. of trawlable Units	1984 *AN 27*	1985 *AN 43*	1986 *WT 47*	1987 *WT 58*	1988 *WT 70*	1989 *WT 82*	1990 *WT 94,95*	1991 *WT 105*	1992 *WT 119,120*	1993 *WT 136*	1994 *WT 152*	1995 *WT 168*	1996 *WT 188,189*	1997 *WT 204,205*	1998 *WT221-24*	1999 *WT238-39*	2000 *WT315-317*	2001 *WT365-67*	2002 *WT419-21*	2003 *WT 479*
57-92	330	287,365.1	0.2	1.9	0.7	0.2	0.2	0.3	0.2	1.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	6.8	0.7	0.5	0.6
	331	62,727.9	1.4	1.9	0.2	0.8	0.3	0.9	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	1.7	1.2	0.6	0.4	2.4
	338	261,090.9	3.3	2.8	1.4	0.5	5.1	1.7	1.4	1.3	2.1	1.4	0.7	1.3	8.0	6.5	5.5	7.2	4.7	14.1	3.3	3.0
	340	236,054.8	0.7	1.5	1.8	4.3	1.1	0.8	2.0	0.6	0.4	0.4	0.0	0.0	0.0	0.8	0.2	1.0	4.2	1.0	0.7	4.8
	351	346,653.9	12.4	13.0	11.7	6.0	11.2	6.9	8.4	4.0	1.1	0.8	0.0	0.1	4.7	9.2	6.2	31.1	12.1	15.4	4.8	9.7
	352	354,907.6	10.0	8.7	10.7	15.2	7.5	8.0	11.2	13.6	7.1	33.0	8.1	5.5	46.0	25.6	29.7	39.1	35.5	26.7	33.2	48.4
	353	17.6353.31	0.2	7.6	2.8	13.4	0.3	0.9	1.7	2.3	0.8	5.3	0.2	5.6	10.7	9.9	16.0	18.2	7.4	4.4	6.6	2.5
93-183	329	236,742.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	332	144,026.5	0.0	0.0	1.1	0.7	0.0	1.7	0.1	0.1	0.1	0.9	0.0	0.1	0.5	0.1	0.3	0.3	0.0	0.3	1.4	0.3
	337	130,407.9	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.6	0.0	0.0	0.3	0.8	0.0	0.1	0.1	0.0	0.5	0.0
	339	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.0	0.2
	354	65,204.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184-274	355	14,168.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	333	20,771.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367-549	717	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550-731	718	15,269.3	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732-914	764	14,443.9	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
	772	18,570.8	.	.	.	.	.	.	.	.	.	.	0.0	.	.	.	.	.	.	.	.	.
Biomass ('000t)			**28.2**	**37.5**	**30.5**	**41.2**	**25.8**	**21.5**	**25.1**	**23.3**	**11.6**	**42.4**	**9.2**	**12.7**	**70.6**	**53.2**	**58.0**	**98.7**	**72.1**	**63.6**	**51.6**	**72.0**
Upper C.I.			**45.6**	**50.7**	**41.4**	**59.0**	**36.2**	**28.5**	**37.8**	**36.3**	**17.0**	**84.5**	**18.0**	**22.2**	**96.3**	**82.9**	**80.2**	**130.8**	**93.9**	**91.9**	**83.7**	**90.7**
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**	**50.4**	**35.4**	**19.5**	**53.2**

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*	2000 *WT315-18*	2001 *WT367-70*	2002 *WT419-24*	2003 WT479-82
<=56	375	219,134.8	32.9	17.1	39.8	22.8	11.1	4.6	18.5	2.6	25.9	10.8	2.7	13.1	17.3	19.2	19.9	21.9	15.4	18.5	14.4	29.3
	376	206,204.1	6.2	13.8	13.8	16.2	2.6	25.1	14.6	29.6	4.6	1.1	0.1	0.6	1.1	25.5	20.5	31.0	15.0	52.3	10.4	54.8
	784	36,866.4																		0.0	0.0	.
TOTAL			**39.1**	**30.9**	**53.6**	**39.0**	**13.7**	**29.7**	**33.1**	**32.2**	**30.6**	**11.9**	**2.8**	**13.7**	**18.4**	**44.7**	**40.4**	**52.9**	**30.4**	**70.8**	**24.8**	**84.2**
57-92	330	287,365.1	0.2	1.9	0.7	0.2	0.2	0.3	0.2	1.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	6.8	0.7	0.5	0.6
	331	62,727.9	1.4	1.9	0.2	0.8	0.3	0.9	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	1.7	1.2	0.6	0.4	2.4
	338	261,090.9	3.3	2.8	1.4	0.5	5.1	1.7	1.4	1.3	2.1	1.4	0.7	1.3	8.0	6.5	5.5	7.2	4.7	14.1	3.3	3.0
	340	236,054.8	0.7	1.5	1.8	4.3	1.1	0.8	2.0	0.6	0.4	0.4	0.0	0.0	0.0	0.8	0.2	1.0	4.2	1.0	0.7	4.8
	350	284,889.0	0.4	1.0	0.6	0.2	0.4	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	4.6	2.4	0.6	0.0	0.7
	351	346,653.9	12.4	13.0	11.7	6.0	11.2	6.9	8.4	4.0	1.1	0.8	0.0	0.1	4.7	9.2	6.2	31.1	12.1	15.4	4.8	9.7
	352	354,907.6	10.0	8.7	10.7	15.2	7.5	8.0	11.2	13.6	7.1	33.0	8.1	5.5	46.0	25.6	29.7	39.1	35.5	26.7	33.2	48.4
	353	17.6353.31	0.2	7.6	2.8	13.4	0.3	0.9	1.7	2.3	0.8	5.3	0.2	5.6	10.7	9.9	16.0	18.2	7.4	4.4	6.6	2.5
	360	411,582.8	43.9	19.0	4.6	3.1	1.0	25.1	5.0	5.0	10.4	3.6	1.0	16.3	28.0	16.1	32.0	76.5	26.2	60.2	87.9	78.7
	361	254,900.7	32.3	15.3	9.8	14.8	17.9	11.1	26.8	21.0	7.5	21.0	41.8	27.7	27.1	26.1	31.2	31.4	32.9	41.9	26.2	41.7
	362	346,653.9	30.1	11.1	21.2	14.0	12.2	8.5	10.5	8.5	1.0	14.2	0.5	0.1	28.9	33.7	38.8	57.6	56.3	42.9	4.3	29.2
	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	49.0	1.3	0.0	19.0
	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	0.0	0.0	0.0	0.0
	372	338,400.3	15.7	16.3	9.7	3.8	2.1	3.4	1.3	0.7	0.1	0.1	0.0	0.0	0.4	0.2	0.5	8.2	4.1	2.4	0.5	14.5
	373	346,653.9	18.3	9.1	4.8	6.2	6.3	3.8	0.3	2.5	0.0	0.0	0.3	0.0	0.6	0.3	1.1	11.1	42.0	79.0	2.8	33.1
	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	9.5	3.1	1.3	13.2
	383	92,716.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	785	63,965.9	.																	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**	**294.3**	**294.3**	**172.7**	**301.7**
93-183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	332	144,026.5	0.0	0.0	1.1	0.7	0.0	1.7	0.1	0.1	0.1	0.9	0.0	0.1	0.5	0.1	0.3	0.3	0.0	0.3	1.4	0.3
	337	130,407.9	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.6	0.0	0.0	0.3	0.8	0.0	0.1	0.1	0.0	0.5	0.0
	339	80,473.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.0	0.2
	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	0.0	0.0	0.0	0.0
	343	72,219.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	348	291,629.5	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	349	290,804.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3	0.0	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	0.1	0.0	0.0	0.0
	365	143,201.1	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	370	181,580.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	377	13,756.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	385	324,093.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	390	203,728.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	786	11,555.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0	.	.
	787	84,325.0	.																	0.0		
TOTAL			**0.3**	**0.2**	**1.5**	**0.9**	**0.2**	**2.0**	**0.2**	**0.3**	**0.1**	**1.5**	**0.1**	**0.2**	**0.9**	**0.9**	**0.4**	**3.2**	**0.7**	**1.4**	**2.0**	**0.6**

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*	2000 *WT315-18*	2001 *WT367-70*	2002 *WT419-24*	2003 WT479-82
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	0.0	0.0	0.0	0.0
	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	347	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	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	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	0.0	0.0	0.0	0.0
	366	191,760.2	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	369	132,196.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	381	25,036.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	386	135,222.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	389	112,937.7	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	391	38,792.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
275-366	334	12,655.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	346	118,990.3	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	356	8,391.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	368	45,945.4	.	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	379	14,581.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	380	15,957.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	387	98,768.9	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	388	49,659.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	392	19,946.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367-549	717	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	.	.	.	.	.	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0
	731	29,713.2	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	733	64,378.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	.	.	.	.	.		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

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*	2000 *WT315-18*	2001 *WT367-70*	2002 *WT419-24*	2003 *WT479-82*
550-731	718	15,269.3	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	726	9,904.4	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	732	31,776.6	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	734	31,363.9	.	0.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
	736	24,073.2	.	0.0	.	.	.	.	.		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**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**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Biomass ('000t)			**217.7**	**146.8**	**138.2**	**124.6**	**81.0**	**103.8**	**103.1**	**93.4**	**61.4**	**93.3**	**55.6**	**70.6**	**175.6**	**174.9**	**202.2**	**365.7**	**287.0**	**366.0**	**199.5**	**386.5**
Upper C.I.			**276.2**	**175.3**	**179.7**	**159.5**	**103.0**	**141.4**	**137.5**	**121.8**	**91.5**	**143.7**	**92.2**	**100.9**	**210.8**	**231.3**	**254.9**	**440.2**	**342.2**	**516.6**	**252.2**	**445.2**
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**	**231.8**	**215.3**	**146.8**	**327.8**
Av.Wt/tow			32.0	14.6	14.1	12.7	8.2	10.6	10.6	9.5	6.0	9.1	5.3	6.9	17.1	17.0	25.7	35.3	27.9	34.9	19.2	37.2
Upper C.I.			40.6	17.4	18.3	16.3	10.5	14.4	14.1	12.4	9.0	14.0	8.8	9.8	20.5	22.5	32.4	42.5	33.3	49.2	24.3	42.8
Lower C.I.			23.4	11.7	9.8	9.2	6.0	6.7	7.0	6.6	3.1	4.2	1.8	3.9	13.6	11.6	19.0	28.1	22.5	20.5	14.1	31.5

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

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 101*	1991 *WT 114,115*	1992 *WT 128-130 GA 226*	1993 *WT 145,146*	1994 *WT 161,162*	1995 *WT 176-179,181 TEL 22,23*	1996 *WT 196-198 TEL 41*	1997 *WT 213-217 TEL 57,58*	1998 *WT230-33 TEL75,76*	1999 *WT 246-48*	2000 *WT321-23 TEL339-343*	2001 *WT373-76TEL 357-61 AN399*	2002 *WT428-31 TEL412-15*	2003 *WT487-89,511 TEL 513*
30 - 56	784	36,866.4	.	.	.	.	.	.	0.5	0.0	0.0	.	41.5	1.0	0.0	0.5
57 - 92	350	284,889.0	5.9	0.7	0.5	0.0	0.1	0.4	0.3	0.0	0.4	1.3	3.1	12.4	18.4	29.3
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	119.5	114.2	34.7	95.5
57 - 92	371	154,206.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3	0.3
57 - 92	372	338,400.3	3.9	4.8	3.8	7.7	0.0	6.4	16.9	17.2	10.2	6.5	18.0	125.8	55.8	79.9
57 - 92	384	154,068.4	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.0
57 - 92	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	1.5	3.5	1.5	1.0
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
93 - 183	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	343	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	348	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	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	0.0	0.0	0.0	0.0
93 - 183	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0
93 - 183	370	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	385	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	390	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	786	11,555.1	.	.	.	.	.	.	0.5	0.0	0.5	.	5.5	0.0	0.0	0.0
93 - 183	787	84,325.0	.	.	.	.	.	.	0.0	0.0	1.0	.	0.0	0.0	0.0	0.0
93 - 183	788	34,665.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
93 - 183	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	1.0
93 - 183	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
93 - 183	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
93 - 183	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
93 - 183	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
184 - 274	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	347	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	366	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	369	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	386	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	389	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	391	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
184 - 366	789	11,142.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.5	0.4	0.0
184 - 366	791	42,368.8	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
184 - 366	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	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
275 - 366	346	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	368	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	387	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	388	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	392	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	796	24,073.2	.	.	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	792	6,878.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
Mean No. (sets)			**0.8 (161)**	**0.4 (219)**	**0.4 (215)**	**0.5 (153)**	**0.0 (200)**	**0.7 (161)**	**1.1 (211)**	**1.0 (203)**	**2.1 (204)**	**3.5(170)**	**6.1(176)**	**11.7(203)**	**5.2(204)**	**9.2(205)**
Upper C.I.			**1.6**	**0.6**	**0.6**	**1.3**	**0.1**	**1.3**	**2.2**	**2.7**	**5.0**	**8.6**	**11.2**	**18.4**	**8.0**	**16.2**
Lower C.I.			**0.0**	**0.2**	**0.2**	**-0.3**	**0.0**	**0.1**	**-0.1**	**-0.7**	**-0.8**	**-1.6**	**1.0**	**5.0**	**2.4**	**2.3**

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 *WT 229,30,33 TEL 76*	1999 *WT 245-47*	2000 *WT320-323 TEL338,339*	2001 *WT372-73 TEL 357*	2002 *WT427-28 TEL411-12*	2003 *WT 486-87*
<=56	375	219,134.8	40.7	58.0	.	76.5	329.8	398.5	216.7	212.6	310.9	372.8	460.5	643.3	545.5	488.5
<=56	376	206,204.1	323.3	342.8	323.0	674.8	206.3	711.6	831.3	873.3	782.2	722.5	2047.0	2539.0	1001.9	993.9
57 - 92	360	411,582.8	83.3	92.8	49.5	219.7	100.8	171.3	392.1	406.2	498.8	490.6	458.3	319.4	578.3	546.3
57 - 92	361	254,900.7	85.4	269.5	269.8	316.6	385.2	450.0	415.8	397.3	528.5	262.0	146.8	737.6	692.0	617.3
57 - 92	362	346,653.9	47.6	60.7	6.7	1.9	6.8	245.0	75.6	307.3	139.4	572.0	202.7	571.4	434.7	339.1
57 - 92	373	346,653.9	1.2	2.5	0.0	0.0	7.1	13.8	0.0	35.3	35.4	54.4	69.9	307.9	189.0	142.9
57 - 92	374	128,069.4	0.0	1.0	.	0.0	0.0	0.0	30.0	18.0	15.7	182.3	130.3	202.3	108.3	64.7
57 - 92	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	11.5	0.5
93 - 183	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	3.0	2.0	3.5	4.5	0.0	0.0	0.0
93 - 183	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
184 - 274	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	381	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
275 - 366	379	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	380	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
550 - 731	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean No. (sets)			**65.9(80)**	**92.1 (67)**	**86.4 (34)**	**137.7 (70)**	**108.0 (73)**	**212.0 (90)**	**215.0 (82)**	**256.7(100)**	**241.2(119)**	**308.2(70)**	**320.3(94)**	**489.5(94)**	**361.7(94)**	**364.8(70)**
Upper C.I.			**108.2**	**151.7**	**198.7**	**227.0**	**179.3**	**294.2**	**302.9**	**321.4**	**313.7**	**417.7**	**494.3**	**673.2**	**462.3**	**464.7**
Lower C.I.			**23.6**	**32.5**	**-25.8**	**48.4**	**36.7**	**129.8**	**127.2**	**191.9**	**168.7**	**198.6**	**146.4**	**305.9**	**261.1**	**264.9**

Table 18. Mean Number of yellowtail by stratum, Div 3O - Fall

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 114*	1992 *WT 128*	1993 *WT 144*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *WT 200 AN 253, TEL 42*	1997 *WT 212,213*	1998 *WT 229-30,33 TEL76*	1999 *WT 244-46*	2000 *WT319-322 TEL338*	2001 *WT 372 TEL 357*	2002 *WT427 TEL411*	2003 *WT 485-86 TEL 469*
57 - 92	330	287,365.1	1.3	0.1	1.3	3.3	0.1	8.2	0.2	7.3	1.7	23.8	3.3	20.0	8.3	22.2
57 - 92	331	62,727.9	6.7	29.0	8.0	16.0	0.0	2.0	0.0	1.0	3.5	14.0	3.4	29.1	41.0	3.0
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	78.0	260.0	6.4	72.2
57 - 92	340	236,054.8	5.6	36.0	0.3	5.0	1.6	4.8	0.0	28.2	23.2	37.3	4.8	47.6	94.6	31.0
57 - 92	351	346,653.9	36.9	15.9	1.8	35.3	7.0	15.8	11.6	107.3	207.4	135.3	272.6	171.1	170.8	446.1
57 - 92	352	354,907.6	47.9	172.4	150.5	56.7	69.7	121.9	134.3	249.0	269.9	255.0	369.7	288.0	192.3	283.3
57 - 92	353	176,353.3	28.0	0.0	0.0	8.7	0.0	8.7	7.0	82.8	0.5	73.5	30.0	70.0	53.0	253.0
93 - 183	329	236,742.6	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2	0.2
93 - 183	332	144,026.5	0.8	0.3	2.3	15.7	5.0	3.3	3.0	0.0	0.3	1.7	1.0	10.0	19.0	0.0
93 - 183	337	130,407.9	0.0	1.0	0.0	0.0	0.0	0.0	19.0	1.3	5.3	0.3	0.9	0.0	0.0	0.0
93 - 183	339	80,473.2	1.0	2.5	0.0	0.0	1.0	0.0	0.3	0.5	0.0	.	1.5	9.0	23.0	18.5
93 - 183	354	65,204.0	1.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.5	0.0	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
184 - 274	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	356	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	717	22,835.1	0.0	.	.	0.0	3.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	720	.	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean No. (sets)			**16.1 (91)**	**33.1 (84)**	**22.7 (54)**	**16.4 (75)**	**11.3 (75)**	**31.2 (81)**	**22.7 (60)**	**62.7 (81)**	**69.0 (96)**	**71.4(75)**	**91.5(100)**	**95.3(97)**	**61.4(99)**	**130.9(75)**
Upper C.I.			**24.0**	**52.3**	**51.5**	**27.3**	**21.5**	**50.5**	**37.7**	**84.4**	**98.8**	**97.2**	**131.3**	**156.2**	**86.7**	**197.6**
Lower C.I.			**8.1**	**14.0**	**-6.2**	**5.5**	**1.0**	**11.9**	**7.6**	**41.0**	**39.2**	**45.6**	**51.8**	**34.4**	**36.1**	**64.2**

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*	2000 *WT321-23 TEL339-343*	2001 *WT373-76TEL 357-61 AN399*	2002 *WT428-31 TEL412-15*	2003 *WT487-39,511 TEL 513*
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	4.0	0.1	0.0	0.1
57 - 92	350	284,889.0	2.6	0.3	0.3	0.0	0.1	0.2	0.2	0.0	0.3	0.3	1.1	4.1	5.8	9.1
57 - 92	363	244,858.7	2.7	0.5	0.9	0.0	0.1	2.3	1.5	0.6	15.9	15.9	41.8	41.1	12.7	35.1
57 - 92	371	154,206.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1
57 - 92	372	338,400.3	1.9	2.3	1.7	3.3	0.0	1.9	5.4	3.3	3.6	0.0	5.3	41.9	25.5	21.8
57 - 92	384	154,068.4	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
57 - 92	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4
93 - 183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	341	216,521.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	342	80,473.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	343	72,219.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	348	291,629.5	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	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	0.0	0.0	0.0	0.0
93 - 183	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0
93 - 183	370	181,580.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	385	324,093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	390	203,728.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.0
93 - 183	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
93 - 183	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93 - 183	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	347	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	366	191,760.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	369	132,196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	386	135,222.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	389	112,937.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	391	38,792.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
184 - 366	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 366	798	13,756.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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
275 - 366	346	118,990.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	368	45,945.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	387	98,768.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	388	49,659.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	392	19,946.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	796	24,073.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	792	6,878.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	737	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732 - 914	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	738	30,401.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
915 -1097	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098 -1280	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281 -1463	751	31,501.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean Wt (sets)			**0.4 (161)**	**0.2 (219)**	**0.2 (215)**	**0.2 (153)**	**0.0 (200)**	**0.2 (161)**	**0.4 (211)**	**0.2 (203)**	**0.8 (204)**	**1.6(170)**	**2.0(176)**	**4.0(203)**	**2.1(204)**	**2.9(205)**
Upper C.I.			**0.8**	**0.3**	**0.3**	**0.5**	**0.0**	**0.4**	**0.8**	**0.5**	**2.0**	**4.0**	**3.8**	**6.2**	**3.4**	**5.1**
Lower C.I.			**0.0**	**0.1**	**0.1**	**-0.1**	**0.0**	**0.0**	**-0.1**	**0.1**	**-0.8**	**-0.7**	**0.3**	**1.8**	**0.8**	**0.5**

Table 20. Mean Weight of yellowtail by stratum, Div 3N - Fall

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 113,114*	1992 *WT 128,129*	1993 *WT 144,145*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *TEL 41,42 AN 253*	1997 *WT 212-214*	1998 *WT 229,30,33 TEL 76*	1999 *WT 245-47*	2000 *WT320-323 TEL338,339*	2001 *WT372-73 TEL 357*	2002 *WT427-28 TEL411-12*	2003 *WT 486-87*
<=56	375	219,134.8	14.6	23.0	.	36.4	142.0	67.7	54.8	70.1	87.1	112.2	115.8	177.8	149.1	142.0
<=56	376	206,204.1	97.2	53.0	52.3	151.7	49.4	118.6	117.2	157.4	174.3	182.9	607.1	597.5	229.7	278.9
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	148.2	102.6	203.7	174.0
57 - 92	361	254,900.7	37.3	77.0	95.3	116.9	161.0	133.7	122.5	142.9	146.3	69.6	40.7	234.5	185.3	153.4
57 - 92	362	346,653.9	19.5	18.6	3.0	1.0	3.0	35.0	23.0	79.7	54.1	101.3	50.6	157.9	97.8	91.5
57 - 92	373	346,653.9	0.6	1.4	0.0	0.0	2.5	2.8	0.0	12.2	15.6	17.5	23.4	119.2	66.4	51.2
57 - 92	374	128,069.4	0.0	0.9	.	0.0	0.0	0.0	8.2	6.2	7.9	78.1	40.6	67.4	34.1	24.6
57 - 92	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	5.4	0.2
93 - 183	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	1.4	0.4	1.0	0.0	0.0	0.0	0.0
93 - 183	382	89,002.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
184 - 274	378	19,121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	381	25,036.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
275 - 366	379	14,581.5	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	380	15,957.1	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.
550 - 731	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean Wt (sets)			**20.6(80)**	**22.1 (67)**	**24.1 (34)**	**39.6 (70)**	**39.8 (73)**	**42.8 (90)**	**47.1 (82)**	**68.4 (100)**	**66.3(119)**	**79.9(70)**	**94.1(94)**	**137.3(94)**	**101.5(94)**	**105.7 (70)**
Upper C.I.			**35.6**	**36.6**	**43.7**	**62.6**	**66.4**	**56.5**	**65.0**	**87.1**	**85.0**	**100.3**	**143.9**	**177.0**	**136.0**	**135.7**
Lower C.I.			**5.6**	**7.6**	**4.6**	**16.6**	**13.1**	**29.1**	**29.3**	**49.6**	**47.5**	**59.6**	**44.3**	**97.7**	**67.1**	**75.7**

Table 21. Mean Weight of yellowtail by stratum, Div 30 - Fall

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 114*	1992 *WT 128*	1993 *WT 144*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *WT 200 AN 253, TEL 42*	1997 *WT 212,213*	1998 *WT 229-30,33 TEL76*	1999 *WT 244-46*	2000 *WT319-322 TEL338*	2001 *WT 372 TEL 357*	2002 *WT427 TEL411*	2003 *WT 485-86 TEL 469*
57 - 92	330	287,365.1	0.7	0.1	0.7	1.6	0.1	3.7	0.0	2.6	0.6	12.5	1.1	9.7	3.4	7.8
57 - 92	331	62,727.9	3.8	14.9	4.6	8.8	0.0	0.6	0.0	0.3	1.2	1.9	1.1	6.9	12.7	1.5
57 - 92	338	261,090.9	3.7	7.8	0.9	4.3	0.2	27.7	0.2	21.7	10.9	10.8	24.7	99.0	2.3	24.9
57 - 92	340	236,054.8	2.7	16.8	0.2	1.3	0.8	2.0	0.0	10.9	9.2	11.0	2.1	13.8	38.8	9.0
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	69.2	50.4	44.0	93.6
57 - 92	352	354,907.6	19.7	59.2	51.3	23.5	26.1	38.6	42.8	74.6	80.2	66.1	102.8	76.4	62.6	108.8
57 - 92	353	176,353.3	13.9	0.0	0.0	3.6	0.0	4.8	4.2	41.4	0.2	21.7	10.0	21.5	16.6	86.6
93 - 183	329	236,742.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.1
93 - 183	332	144,026.5	0.4	0.2	1.0	7.3	2.6	0.9	1.7	0.0	0.0	0.5	0.4	3.4	6.2	0.0
93 - 183	337	130,407.9	0.0	0.6	0.0	0.0	0.0	0.0	10.2	0.9	1.6	0.2	0.2	0.0	0.0	0.0
93 - 183	339	80,473.2	0.5	1.1	0.0	0.0	0.5	0.0	0.1	0.3	0.0	.	0.6	2.6	8.2	4.9
93 - 183	354	65,204.0	0.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0	0.0
184 - 274	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
184 - 274	336	16,644.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.2	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	335	7,978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
275 - 366	356	8,391.2	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	717	22,835.1	0.0	.	.	0.0	1.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
367 - 549	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	720	.	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0
550 - 731	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean Wt (sets)			**7.0 (91)**	**12.2 (84)**	**7.9 (54)**	**6.9 (75)**	**4.3 (75)**	**10.1 (81)**	**7.6 (60)**	**22.7 (81)**	**19.9 (96)**	**19.6(75)**	**25.1(100)**	**29.5(97)**	**19.3(99)**	**38.3(75)**
Upper C.I.			**10.5**	**18.1**	**17.5**	**11.1**	**8.2**	**15.0**	**12.7**	**31.7**	**28.2**	**26.1**	**35.5**	**54.7**	**27.5**	**57.1**
Lower C.I.			**3.5**	**6.3**	**-1.7**	**2.7**	**0.5**	**5.1**	**2.5**	**13.6**	**11.6**	**13.1**	**14.7**	**4.4**	**11.0**	**19.5**

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

Depth Range (m)	Stratum	No. of trawlable Units	1990 WT 101	1991 WT 114,115	1992 WT 128-130 GA 226	1993 WT 145,146	1994 WT 161,162	1995 WT 176-179,181 TEL 22,23	1996 WT 196-198 TEL 41	1997 WT 213-217 TEL 57,58	1998 WT230-33 TEL75,76	1999 WT 246-48	2000 WT321-23 TEL339-343	2001 WT373-76TEL 357-61 AN399	2002 WT428-31 TEL412-15	2003 WT487-89,511 TEL 513
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.	1.5	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**	**1.5**	**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	0.9	3.5	5.3	8.3
	363	244,858.7	1.3	0.3	0.5	0.0	0.1	1.3	0.9	0.3	9.4	18.1	29.3	28.0	8.5	23.4
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
	372	338,400.3	1.3	1.6	1.3	2.6	0.0	2.2	5.7	5.8	3.4	2.2	6.1	42.6	18.9	27.0
	384	154,068.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.2	0.1	0.1
TOTAL			**4.3**	**2.1**	**1.9**	**2.6**	**0.1**	**3.6**	**6.7**	**6.1**	**12.9**	**20.6**	**36.3**	**74.4**	**32.9**	**58.9**
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
	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
	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
	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
	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	364	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0
	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
	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
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.0	0.0	0.0
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.1	.	0.0	0.0	0.0	0.0
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**	**0.1**	**0.2**	**0.0**
184 - 274	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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
	795	22,560.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	798	13,756.1	.	.	.	.	.	.	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**
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	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
	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
	796	24,073.2	.	.	.	.	.	.	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**
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	.	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	.	0.0	0.0	.	0.0	0.0	0.0	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**
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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**
915 -1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	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**
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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**
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	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**
Abundance (millions)			**4.4**	**2.1**	**2.0**	**2.6**	**0.1**	**3.6**	**6.7**	**6.1**	**13.1**	**20.6**	**37.9**	**74.5**	**33.1**	**58.9**
Upper C.I.			**8.7**	**3.3**	**3.1**	**6.6**	**0.3**	**6.8**	**14.1**	**16.9**	**31.6**	**50.5**	**69.4**	**117.2**	**51.2**	**103.0**
Lower C.I.			**0.1**	**1.0**	**0.9**	**-1.4**	**-0.1**	**0.3**	**-0.7**	**-4.7**	**-5.4**	**-9.2**	**6.5**	**31.8**	**15.0**	**14.8**

Table 23. Abundance (millions) 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 229,30,3 TEL 76*	1999 *WT 245-47*	2000 *WT320-323 TEL338,339*	2001 *WT372-73 TEL 357*	2002 *WT427-28 TEL411-12*	2003 *WT 486-*
<=56	375	219,134.8	8.9	12.7	.	16.8	72.3	87.3	47.5	46.6	68.1	81.7	100.9	141.0	119.5	107.1
	376	206,204.1	66.7	70.7	66.6	139.1	42.5	146.7	171.4	180.1	161.3	149.0	422.1	523.6	206.6	204.9
TOTAL			**75.6**	**83.4**	**66.6**	**155.9**	**114.8**	**234.0**	**218.9**	**226.7**	**229.4**	**230.7**	**523.0**	**664.5**	**326.1**	**312.0**
57 - 92	360	411,582.8	34.3	38.2	20.4	90.4	41.5	70.5	161.4	167.2	205.3	201.9	188.6	131.4	238.0	224.9
	361	254,900.7	21.8	68.7	68.8	80.7	98.2	114.7	106.0	101.3	134.7	66.8	37.4	188.0	176.4	157.4
	362	346,653.9	16.5	21.0	2.3	0.6	2.3	84.9	26.2	106.5	48.3	198.3	70.3	198.1	150.7	117.6
	373	346,653.9	0.4	0.9	0.0	0.0	2.5	4.8	0.0	12.2	12.2	18.9	24.2	106.7	65.5	49.6
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	3.8	2.3	2.0	23.4	16.7	25.9	13.9	8.3
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**73.0**	**128.9**	**91.5**	**171.7**	**144.5**	**274.9**	**297.4**	**389.5**	**402.5**	**509.2**	**337.2**	**650.2**	**644.5**	**557.6**
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	0.7	0.0
	377	13,756.1	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	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
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.7**	**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
	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
	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
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**
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
	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
	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
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**
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**
Abundance (millions)			**148.5**	**212.3**	**158.0**	**327.7**	**259.3**	**509.0**	**516.3**	**616.2**	**632.1**	**739.9**	**860.3**	**1314.7**	**971.3**	**869.6**
Upper C.I.			**243.8**	**349.7**	**363.3**	**540.0**	**430.5**	**706.4**	**727.2**	**771.6**	**822.2**	**1003.0**	**1327.5**	**1808.0**	**1241.5**	**1107.7**
Lower C.I.			**53.3**	**74.9**	**-47.2**	**115.3**	**88.2**	**311.5**	**305.4**	**460.8**	**442.0**	**476.9**	**393.1**	**821.4**	**701.1**	**631.5**

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

Depth Range (m)	Stratum	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 *WT 229-30,33 TEL76*	1999 *WT 244-46*	2000 *WT319-322 TEL338*	2001 *WT 372 TEL 357*	2002 *WT427 TEL411*	2003 *WT 485-86 TEL 469*
57 - 92	330	287,365.0	0.4	0.0	0.4	1.0	0.0	2.4	0.0	2.1	0.5	6.8	1.0	5.7	2.4	6.4
	331	62,728.0	0.4	1.8	0.5	1.0	0.0	0.1	0.0	0.1	0.2	0.9	0.2	1.8	2.6	0.2
	338	261,091.0	2.2	5.2	0.5	2.3	0.1	25.3	0.1	10.0	8.1	9.3	20.4	67.9	1.7	18.9
	340	236,055.0	1.3	8.5	0.1	1.2	0.4	1.1	0.0	6.7	5.5	8.8	1.1	11.2	22.3	7.3
	351	346,654.0	12.8	5.5	0.6	12.2	2.4	5.5	4.0	37.2	71.9	46.9	94.5	59.3	59.2	154.7
	352	354,908.0	17.0	61.2	53.4	20.1	24.7	43.3	47.7	88.4	95.8	90.5	131.2	102.2	68.2	100.5
	353	176,353.0	4.9	0.0	0.0	1.5	0.0	1.5	1.2	14.6	0.1	13.0	5.3	12.3	9.3	44.6
TOTAL			**39.0**	**82.2**	**55.5**	**39.3**	**27.6**	**79.2**	**53.0**	**159.1**	**182.1**	**176.2**	**253.6**	**260.6**	**165.8**	**332.6**
93 - 183	329	236,743.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	332	144,026.0	0.1	0.0	0.3	2.3	0.7	0.5	0.4	0.0	0.1	0.2	0.1	1.4	2.7	0.0
	337	130,408.0	0.0	0.1	0.0	0.0	0.0	0.0	2.5	0.2	0.7	0.0	0.1	0.0	0.0	0.0
	339	80,473.0	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7	1.9	1.5
	354	65,204.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**0.5**	**0.3**	**0.3**	**2.3**	**0.8**	**0.5**	**3.0**	**0.2**	**0.8**	**0.3**	**0.4**	**2.2**	**4.6**	**1.5**
184 - 274	333	20,221.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	336	16,645.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	355	14,169.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
275 - 366	334	13,206.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	335	7,979.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	356	8,391.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
367 - 549	717	22,835.0	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,455.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,455.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
550 - 731	718	18,433.0	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.0	.	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**
Abundance (millions)			**39.6**	**82.7**	**55.8**	**41.6**	**28.5**	**79.7**	**56.2**	**159.2**	**183.0**	**176.5**	**254.1**	**262.7**	**170.4**	**334.1**
Upper C.I.			**59.0**	**130.4**	**126.9**	**69.3**	**54.5**	**128.9**	**93.5**	**214.2**	**262.0**	**240.3**	**364.3**	**430.5**	**240.6**	**504.4**
Lower C.I.			**20.1**	**34.9**	**-15.3**	**13.9**	**2.4**	**30.4**	**18.8**	**104.1**	**103.9**	**112.8**	**143.8**	**95.0**	**100.2**	**163.8**

Table 25. Abundance (millions) 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 TEL41,42;AN 253*	1997 *WT212-216 TEL57,58*	1998 *WT 229-33 TEL 75,76*	1999 *WT 244-48*	2000 *WT319-23 TEL338-43*	2001 *WT372-76TEL 357-61 AN399*	2002 *WT427-31 TEL411-15*	2003 *WT 485-89,511 T2L469 513*
30 - 56	784	36,866.4			.				0.0	0.0	0.0	.	1.5	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**	**1.5**	**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	100.9	141.0	119.5	107.1
	376	206,204.1	66.7	70.7	66.6	139.1	42.5	146.7	171.4	180.1	161.3	149.0	422.1	523.6	206.6	204.9
TOTAL			**75.6**	**83.4**	**66.6**	**155.9**	**114.8**	**234.0**	**218.9**	**226.7**	**229.4**	**230.7**	**523.0**	**664.5**	**326.1**	**312.0**
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	1.0	5.7	2.4	6.4
	331	62,727.9	0.4	1.8	0.5	1.0	0.0	0.1	0.0	0.1	0.2	0.9	0.2	1.8	2.6	0.2
	338	261,090.9	2.2	5.2	0.5	2.3	0.1	25.3	0.1	10.0	8.1	9.3	20.4	67.9	1.7	18.9
	340	236,054.8	1.3	8.5	0.1	1.2	0.4	1.1	0.0	6.7	5.5	8.8	1.1	11.2	22.3	7.3
	350	284,889.0	1.7	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.4	0.9	3.5	5.3	8.3
	351	346,653.9	12.8	5.5	0.6	12.2	2.4	5.5	4.0	37.2	71.9	46.9	94.5	59.3	59.2	154.7
	352	354,907.6	17.0	61.2	53.4	20.1	24.7	43.3	47.7	88.4	95.8	90.5	131.2	102.2	68.2	100.5
	353	176,353.3	4.9	0.0	0.0	1.5	0.0	1.5	1.2	14.6	0.1	13.0	5.3	12.3	9.3	44.6
	360	411,582.8	34.3	38.2	20.4	90.4	41.5	70.5	161.4	167.2	205.3	201.9	188.6	131.4	238.0	224.9
	361	254,900.7	21.8	68.7	68.8	80.7	98.2	114.7	106.0	101.3	134.7	66.8	37.4	188.0	176.4	157.4
	362	346,653.9	16.5	21.0	2.3	0.6	2.3	84.9	26.2	106.5	48.3	198.3	70.3	198.1	150.7	117.6
	363	244,858.7	1.3	0.3	0.5	0.0	0.1	1.3	0.9	0.3	9.4	18.1	29.3	28.0	8.5	23.4
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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	6.1	42.6	18.9	27.0
	373	346,653.9	0.4	0.9	0.0	0.0	2.5	4.8	0.0	12.2	12.3	18.9	24.2	106.7	65.5	49.6
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	3.8	2.3	2.0	23.4	16.7	25.9	13.9	8.3
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	785	63,965.9							0.0	0.0	0.0	.	0.1	0.2	0.1	0.1
TOTAL			**116.3**	**213.2**	**148.9**	**213.6**	**172.2**	**357.7**	**357.1**	**554.7**	**597.8**	**706.1**	**627.2**	**985.1**	**843.2**	**949.0**
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
	329	236,742.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	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	0.1	1.4	2.7	0.0
	337	130,407.9	0.0	0.1	0.0	0.0	0.0	0.0	2.5	0.2	0.7	0.0	0.1	0.0	0.0	0.0
	339	80,473.2	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	.	0.1	0.7	1.9	1.5
	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
	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
	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
	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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	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	0.0	0.0	0.7	0.0
	364	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	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
	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
	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
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	0.0	0.0	0.0
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.1	.	0.0	0.0	0.0	0.0
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0	0.0	0.0
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0	0.0	0.0
	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0	0.0	0.0
TOTAL			**0.5**	**0.3**	**0.4**	**2.3**	**0.8**	**0.5**	**3.0**	**0.2**	**1.0**	**0.3**	**0.5**	**2.2**	**5.5**	**1.6**
184 - 274	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	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
	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
	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
	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
	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
	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
	795	22,560.0							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**

Table 25 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 *WT 188-191*	1997 *WT 204-208*	1998 *WT 229-33 TEL 75,76*	1999 *WT 244-48*	2000 *WT319-23 TEL338-43*	2001 *WT372-76TEL 357-61 AN399*	2002 *WT427-31 TEL411-15*	2003 *WT 485-89,511 T2L469 513*
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	798	13,756.1	.	.	.	.	.	.	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**
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.1	0.0	.	0.0	0.0	0.0	0.0	0.0	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
	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
	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
	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
	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
	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
	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
	796	24,073.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
367 - 549	717	22,835.1	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	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**
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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**	
915 -1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	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**	
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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**	
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	751	31,501.5	.	.	.	.	.	.	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**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Abundance (millions)			**192.5**	**297.1**	**215.9**	**371.9**	**287.9**	**592.2**	**579.1**	**781.5**	**828.2**	**937.1**	**1,152.3**	**1,651.9**	**1,174.8**	**1,262.6**
Upper C.I.			**289.0**	**438.7**	**410.7**	**581.1**	**460.5**	**793.3**	**791.7**	**945.3**	**1,115.7**	**1,205.0**	**1,604.0**	**2,120.4**	**1,452.5**	**1,545.4**
Lower C.I.			**95.9**	**155.5**	**21.0**	**157.6**	**115.3**	**391.0**	**366.6**	**617.8**	**540.6**	**669.2**	**700.6**	**1,183.4**	**897.1**	**979.9**

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

Depth Range (m)	Stratum	No. of trawlable Units	1990 WT 101	1991 WT 114,115	1992 WT 128-130 GA 226	1993 WT 145,146	1994 WT 161,162	1995 WT 176-179,181 TEL 22,23	1996 WT 196-198 TEL 41	1997 WT 213-217 TEL 57,58	1998 WT 230-33 TEL 75,76	1999 WT246-48	2000 WT321-23 TEL339-343	2001 WT373-76TEL 357-61 AN399	2002 WT428-31 TEL412-15	2003 WT487-89,511 TEL 513
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	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**	**0.0**	**0.0**	**0.0**	**0.0**
57 - 92	350	284,889.0	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	1.2	1.7	2.6
	363	244,858.7	0.7	0.1	0.2	0.0	0.0	0.6	0.4	0.2	3.9	8.9	10.2	10.1	3.1	8.6
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372	338,400.3	0.6	0.8	0.6	1.1	0.0	0.6	1.8	1.1	1.2	0.5	1.8	14.2	8.6	7.4
	384	154,068.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
TOTAL			**2.1**	**1.0**	**0.9**	**1.1**	**0.0**	**1.2**	**2.2**	**1.3**	**5.2**	**9.6**	**12.4**	**25.5**	**13.5**	**18.6**
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	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
	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
	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
	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
	364	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	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
	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
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
TOTAL			**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**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	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	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
	795	22,560.0	.	.	.	.	.	.	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**
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	798	13,756.1	.	.	.	.	.	.	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**
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	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
	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
	796	24,073.2	.	.	.	.	.	.	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**
367 - 549	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	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**
550 - 731	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**

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 WT 230-33 TEL 75,76	1999 WT246-48	2000 WT321-23 TEL339-343	2001 WT373-76TEL 357-61 AN399	2002 WT428-31 TEL412-15	2003 WT487-89,511 TEL 513
732 - 914	737	31,226.4	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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**
915 -1097	738	30,401.0	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	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**
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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**
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	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**
Biomass ('000t)			**2.1**	**1.0**	**0.9**	**1.1**	**0.0**	**1.2**	**2.2**	**1.3**	**5.2**	**9.6**	**12.5**	**25.5**	**13.6**	**18.6**
Upper C.I.			**4.1**	**1.6**	**1.5**	**2.7**	**0.1**	**2.2**	**5.3**	**3.1**	**12.8**	**23.6**	**23.4**	**39.7**	**21.7**	**34.2**
Lower C.I.			**0.0**	**0.4**	**0.4**	**-0.5**	**0.0**	**0.3**	**-0.8**	**-0.5**	**-2.4**	**-4.4**	**1.6**	**11.3**	**5.4**	**3.0**

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

Depth Range (m)	Stratum	No. of trawlable Units	1990 WT 102	1991 WT 113,114	1992 WT 128,129	1993 WT 144,145	1994 WT 160,161	1995 WT 176,177	1996 TEL 41,42 AN 253	1997 WT 212-214	1998 WT 229,30,33 TEL 76	1999 WT 245-47	2000 WT320-323 TEL338,339	2001 WT372-73 TEL 357	2002 WT427-28 TEL411-12	2003 WT 486-87
<=56	375	219,134.8	3.2	5.1	.	8.0	31.1	14.8	12.0	15.4	19.1	24.6	25.4	39.0	32.7	31.1
	376	206,204.1	20.1	10.9	10.8	31.3	10.2	24.4	24.2	32.5	35.9	37.7	125.2	123.2	47.4	57.5
TOTAL			**23.3**	**16.0**	**10.8**	**39.3**	**41.3**	**39.2**	**36.2**	**47.9**	**55.0**	**62.3**	**150.6**	**162.2**	**80.0**	**88.6**
57 - 92	360	411,582.8	6.7	8.3	8.0	24.8	11.2	16.3	36.8	47.2	56.1	60.6	61.0	42.2	83.8	71.6
	361	254,900.7	9.5	19.6	24.3	29.8	41.0	34.1	31.2	36.4	37.3	17.7	10.4	59.8	47.2	39.1
	362	346,653.9	6.8	6.4	1.0	0.3	1.0	12.1	8.0	27.6	18.8	35.1	17.5	54.8	33.9	31.7
	373	346,653.9	0.2	0.5	0.0	0.0	0.9	1.0	0.0	4.2	5.4	6.1	8.1	41.3	23.0	17.8
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	1.1	0.8	1.0	10.0	5.2	8.6	4.4	3.2
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL			**23.2**	**34.9**	**33.3**	**54.9**	**54.1**	**63.5**	**77.1**	**116.2**	**118.6**	**129.5**	**102.2**	**206.7**	**192.3**	**163.3**
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	0.3	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
	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
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**	**0.3**	**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
	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
	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
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**
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
	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
	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
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**
367 - 549	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**
550 - 731	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**	
Biomass ('000t)			**46.5**	**50.9**	**44.1**	**94.2**	**95.5**	**102.8**	**113.2**	**164.2**	**173.6**	**191.9**	**252.8**	**368.9**	**272.7**	**252.0**
Upper C.I.			**80.3**	**84.4**	**79.9**	**148.9**	**159.5**	**135.7**	**156.1**	**209.2**	**222.7**	**240.9**	**386.5**	**475.3**	**365.1**	**323.5**
Lower C.I.			**12.6**	**17.4**	**8.4**	**39.5**	**31.5**	**69.9**	**70.3**	**119.1**	**124.5**	**143.0**	**119.1**	**262.5**	**180.2**	**180.5**

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

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 102*	1991 *WT 114*	1992 *WT 128*	1993 *WT 144*	1994 *WT 160,161*	1995 *WT 176,177*	1996 *WT 200 AN 253, TEL 42*	1997 *WT 212,213*	1998 *WT 229-30,33 TEL76*	1999 *WT 244-46*	2000 *WT319-322 TEL338*	2001 *WT 372 TEL 357*	2002 *WT427 TEL411*	2003 *WT 485-86 TEL 469*
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	0.3	2.8	1.0	2.2
	331	62,727.9	0.2	0.9	0.1	0.5	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.8	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	6.4	25.9	0.6	6.5
	340	236,054.8	0.6	4.0	0.2	0.3	0.2	0.5	0.0	2.6	2.2	2.6	0.5	3.3	9.2	2.1
	351	346,653.9	5.5	2.3	0.3	5.0	1.0	2.2	1.3	14.5	18.8	11.9	24.0	17.5	15.2	32.5
	352	354,907.6	7.0	21.0	0.4	8.3	9.3	13.7	15.2	26.5	28.5	23.5	36.5	27.1	22.2	38.6
	353	176,353.3	2.4	0.0	0.2	0.6	0.0	0.8	0.7	7.3	0.0	3.8	1.8	3.8	2.9	15.3
TOTAL			**16.9**	**30.2**	**1.8**	**16.3**	**10.6**	**25.5**	**17.2**	**57.4**	**52.6**	**48.3**	**69.5**	**80.7**	**51.9**	**97.3**
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	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	0.1	0.5	0.9	0.0
	337	130,407.9	0.0	0.1	0.1	0.0	0.0	0.0	1.3	0.1	0.2	0.0	0.0	0.0	0.0	0.0
	339	80,473.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.2	0.7	0.4
	354	65,204.0	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
TOTAL			**0.2**	**0.2**	**0.6**	**1.0**	**0.4**	**0.1**	**1.5**	**0.1**	**0.3**	**0.1**	**0.1**	**0.7**	**1.6**	**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	0.0	0.0
	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	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
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**
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	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
	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
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**
367 - 549	717	22,835.1	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
Biomass ('000t)			**17.3**	**30.5**	**19.4**	**17.5**	**10.9**	**25.7**	**18.9**	**57.5**	**52.8**	**48.4**	**69.7**	**81.4**	**53.5**	**97.7**
Upper C.I.			**25.9**	**45.2**	**43.1**	**28.1**	**20.7**	**38.4**	**31.5**	**80.5**	**74.8**	**64.4**	**98.6**	**150.9**	**76.4**	**145.6**
Lower C.I.			**8.6**	**15.8**	**-4.3**	**6.8**	**1.2**	**13.1**	**6.2**	**34.5**	**30.8**	**32.3**	**40.8**	**12.0**	**30.6**	**49.8**

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*	2000 *WT319-23 TEL338-43*	2001 *WT372-76TEL 357-61 AN39*	2002 *WT427-31 TEL411-15*	2003 *WT 4 5-89,511 T2L 69,513*
30 - 56	784	36,866.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.1	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**	**0.1**	**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	25.4	39.0	32.7	11.1
	376	206,204.1	20.1	10.9	10.8	31.3	10.2	24.4	24.2	32.5	35.9	37.7	125.2	123.2	47.4	47.5
TOTAL			**23.3**	**16.0**	**10.8**	**39.3**	**41.3**	**39.2**	**36.2**	**47.9**	**55.0**	**62.3**	**150.6**	**162.2**	**80.0**	**58.6**
57 - 92	330	287,365.1	0.2	0.0	0.2	0.5	0.0	1.1	0.0	0.8	0.2	3.6	0.3	2.8	1.0	2.2
	331	62,727.9	0.2	0.9	0.3	0.5	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.8	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	6.4	25.9	0.6	5.5
	340	236,054.8	0.6	4.0	0.0	0.3	0.2	0.5	0.0	2.6	2.2	2.6	0.5	3.3	9.2	2.1
	350	284,889.0	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	1.2	1.7	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	24.0	17.5	15.2	12.5
	352	354,907.6	7.0	21.0	18.2	8.3	9.3	13.7	15.2	26.5	28.5	23.5	36.5	27.1	22.2	18.6
	353	176,353.3	2.4	0.0	0.0	0.6	0.0	0.8	0.7	7.3	0.0	3.8	1.8	3.8	2.9	5.3
	360	411,582.8	6.7	8.3	8.0	24.8	11.2	16.3	36.8	47.2	56.1	60.7	61.0	42.2	83.8	11.6
	361	254,900.7	9.5	19.6	24.3	29.8	41.0	34.1	31.2	36.4	37.3	17.7	10.4	59.8	47.2	39.1
	362	346,653.9	6.8	6.4	1.0	0.3	1.0	12.1	8.0	27.6	18.8	35.1	17.5	54.8	33.9	11.7
	363	244,858.7	0.7	0.1	0.2	0.0	0.0	0.6	0.4	0.2	3.9	8.9	10.2	10.1	3.1	3.6
	371	154,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	372	338,400.3	0.6	0.8	0.6	1.1	0.0	0.6	1.8	1.1	1.2	0.5	1.8	14.2	8.6	7.4
	373	346,653.9	0.2	0.5	0.0	0.0	0.9	1.0	0.0	4.2	5.4	6.1	8.1	41.3	23.0	17.8
	374	128,069.4	0.0	0.1	.	0.0	0.0	0.0	1.1	0.8	1.0	10.0	5.2	8.6	4.4	3.2
	383	92,716.2	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0
	785	63,965.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
TOTAL			**42.2**	**66.1**	**53.4**	**72.3**	**64.7**	**90.2**	**96.5**	**174.9**	**176.3**	**187.5**	**184.1**	**312.9**	**257.7**	**279.2**
93 - 183	328	208,955.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.1	0.5	0.9	0.0
	337	130,407.9	0.0	0.1	0.0	0.0	0.0	0.0	1.3	0.1	0.2	0.0	0.0	0.0	0.0	0.0
	339	80,473.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.2	0.7	0.4
	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
	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
	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
	349	290,804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	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	0.0	0.0	0.3	0.0
	364	387,509.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	365	143,201.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	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
	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
	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
	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
	786	11,555.1	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	787	84,325.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	788	35,903.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	790	12,242.9	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	793	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	794	29,713.2	.	.	.	.	.	.	0.0	0.0	0.0	.	.	0.0	0.0	0.0
	797	13,481.0	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	799	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
TOTAL			**0.2**	**0.2**	**0.2**	**1.0**	**0.4**	**0.1**	**1.5**	**0.1**	**0.3**	**0.1**	**0.2**	**0.7**	**2.0**	**1.4**
184 - 274	333	20,221.5	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	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
	344	217,621.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
	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
	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
	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
	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
	795	22,560.0	.	.	.	.	.	.	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**

Table 29 Con'd

Depth Range (m)	Stratum	No. of trawlable Units	1990 *WT 101,102*	1991 *WT 113-115*	1992 *WT 128-130 GA 226*	1993 *WT 144-146*	1994 *WT 160-162*	1995 *WT 176-179,181 TEL 22,23*	1996 *WT196-98,200 TEL 41,42 AN 253*	1997 *WT 212-17 TEL 57,58*	1998 *WT229-33 3EL 75,76*	1999 *WT 244-48 TEL 88*	2000 *WT319-23 TEL338-43*	2001 *WT372-76TEL 357-61 AN39*	2002 *WT427-31 TEL411-15*	2003 *WT 45-89,511 T2L459-513*
184 - 366	789	9,904.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	791	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0
	798	13,756.1	.	.	.	.	.	.	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**
275 - 366	334	13,205.9	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	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
	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
	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
	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
	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
	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
	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
	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
	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
	796	24,073.2	.	.	.	.	.	.	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**
367 - 549	717	22,835.1	0.0	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	719	10,454.6	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	721	10,454.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	723	21,322.0	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	725	14,443.9	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	727	22,009.8	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	729	25,586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	731	29,713.2	0.0	0.0	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	733	64,378.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	735	37,416.6	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	792	6,878.1	.	.	.	.	.	.	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**
550 - 731	718	18,433.2	.	.	.	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	720	14,443.9	.	.	.	0.0	0.0	0.0	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0
	722	12,793.2	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	724	17,057.6	.	0.0	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	726	9,904.4	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	728	21,459.5	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	730	23,385.4	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	732	31,776.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	734	31,363.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	736	24,073.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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**
732 - 914	737	31,226.4	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	741	30,676.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	745	47,871.3	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	748	21,872.2	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	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**
915 -1097	738	30,401.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	742	28,337.6	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	746	53,924.0	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	749	17,332.7	.	.	.	.	.	.	0.0	0.0	0.0	.	0.0	0.0	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**
1098 -1280	739	34,940.5	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
	743	29,025.4	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
	747	99,594.2	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
	750	76,484.0	.	.	.	.	.	.	0.0	0.0	0	0.0	0.0	0.0	0.0	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**
1281 -1463	740	36,316.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	744	38,517.1	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	751	31,501.5	.	.	.	.	.	.	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**
Biomass ('000t)			**65.8**	**82.4**	**64.5**	**112.8**	**106.4**	**129.8**	**134.3**	**222.9**	**231.6**	**249.9**	**335.0**	**475.8**	**339.7**	**3[illegible]8.3**
Upper C.I.			**99.8**	**117.5**	**103.8**	**168.0**	**171.0**	**164.3**	**178.3**	**272.5**	**285.2**	**301.8**	**463.5**	**588.5**	**434.2**	**4[illegible]2.1**
Lower C.I.			**31.8**	**47.3**	**25.2**	**57.6**	**41.9**	**95.2**	**90.3**	**173.4**	**178.1**	**198.0**	**206.5**	**363.1**	**245.2**	**2[illegible]4.6**
Av.Wt./Tow			**6.6**	**8.1**	**6.7**	**11.3**	**10.4**	**12.6**	**12.0**	**19.7**	**19.9**	**23.4**	**28.7**	**40.3**	**28.7**	**3[illegible]2.6**
Upper C.I.			**10.0**	**11.6**	**10.8**	**16.9**	**16.7**	**16.0**	**15.9**	**24.1**	**24.5**	**28.3**	**39.7**	**49.8**	**36.7**	**4[illegible]0.0**
Lower C.I.			**3.2**	**4.7**	**2.6**	**5.8**	**4.1**	**9.3**	**8.0**	**15.3**	**15.3**	**18.6**	**17.7**	**30.7**	**20.7**	**2[illegible]5.2**

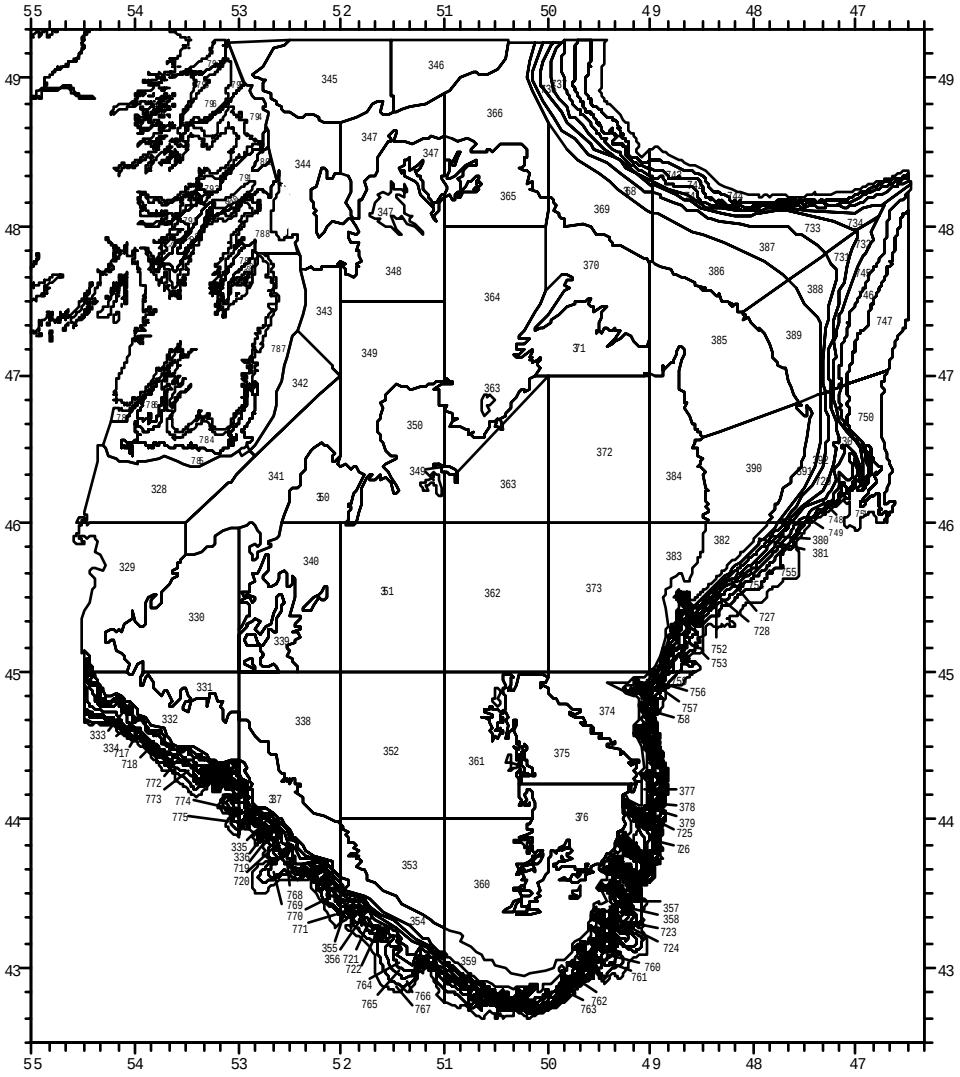
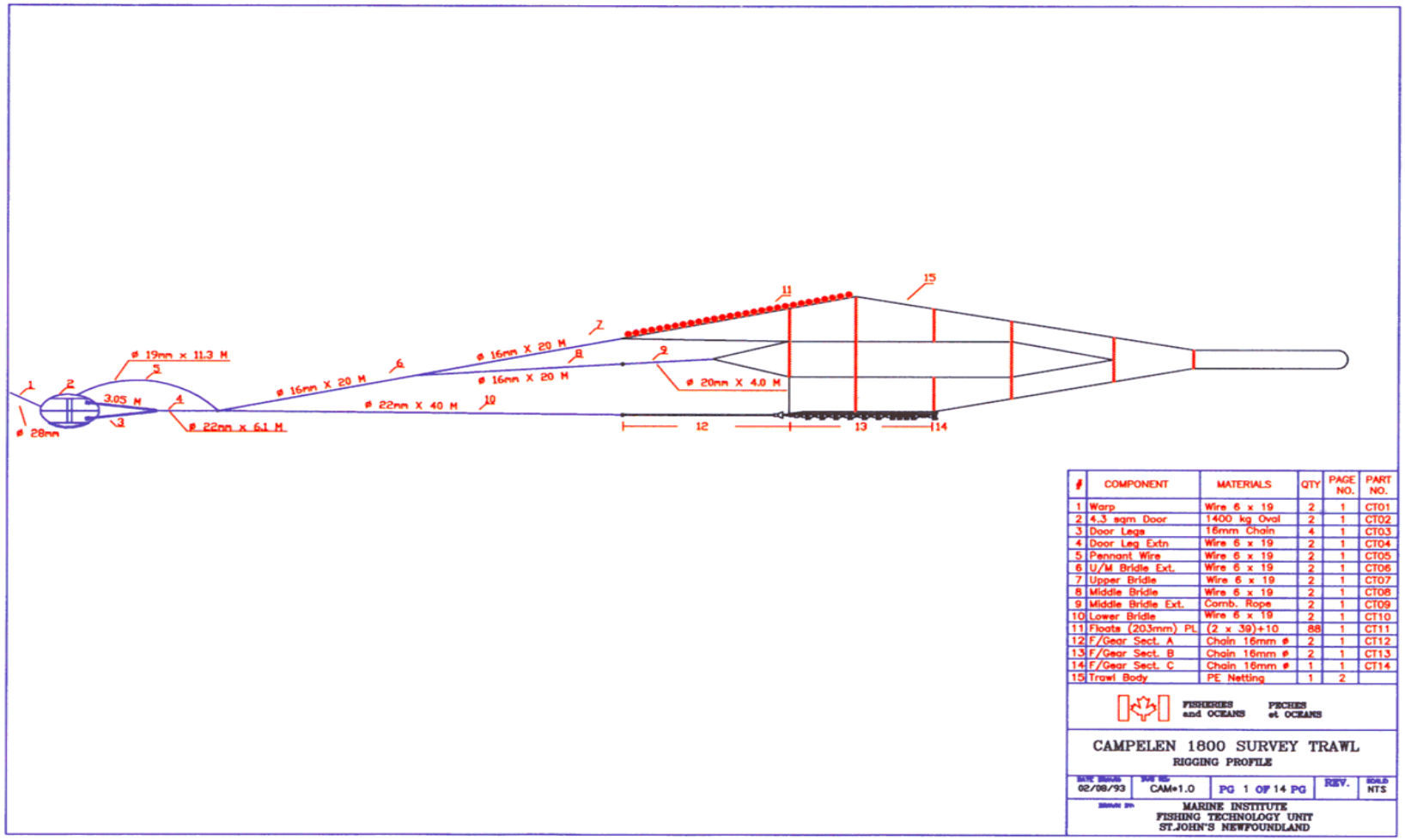


Fig. 1. Stratification chart of the Grand Bank, Divisions 3LNO



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

FISHERIES and OCEANS / PÊCHES et OCÉANS

CAMPELEN 1800 SURVEY TRAWL
RIGGING PROFILE

DATE (Issued)	DWG No.		REV.	SCALE
02/08/93	CAM-1.0	PG 1 OF 14 PG		NTS

MARINE INSTITUTE
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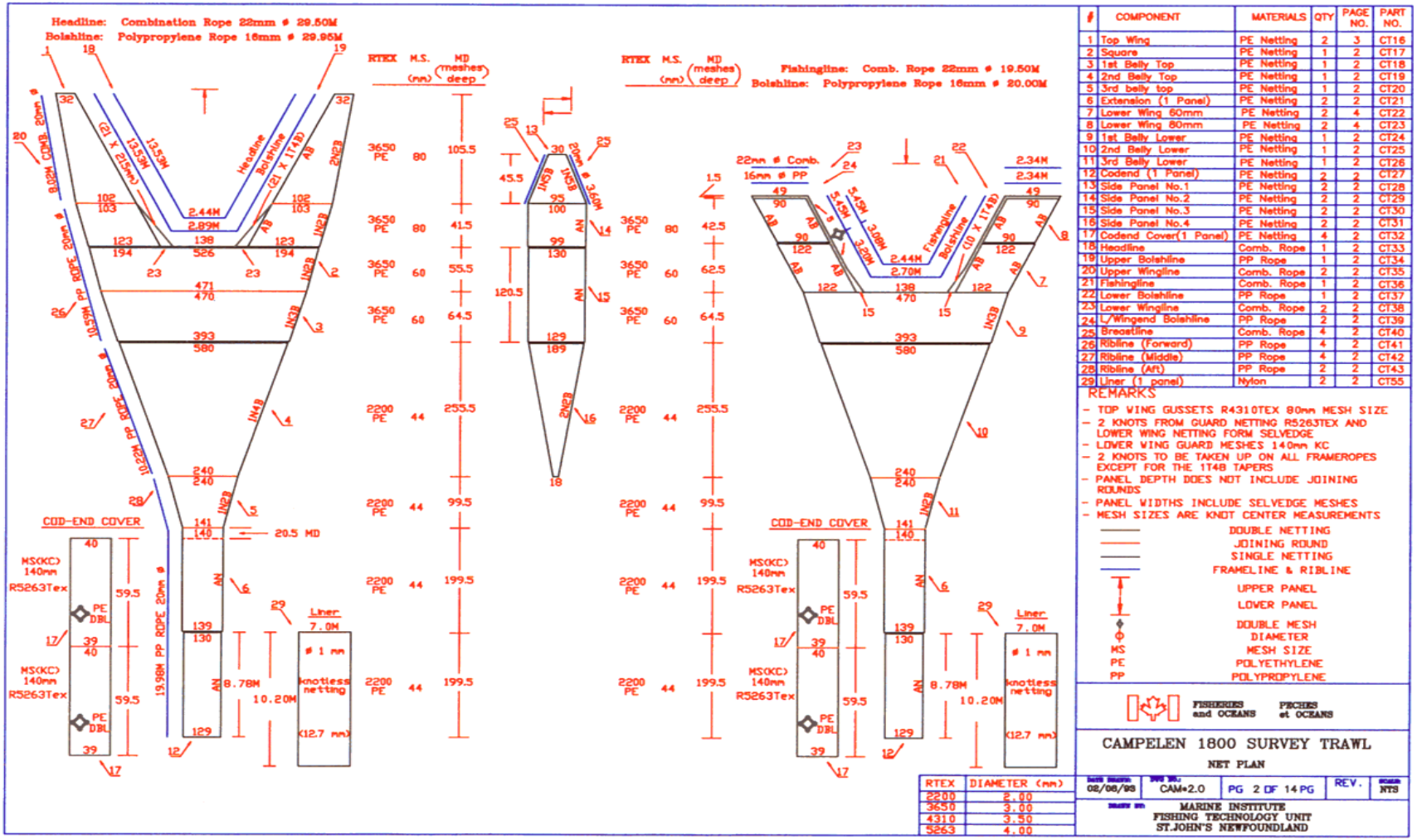
ST.JOHN'S NEWFOUNDLAND

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

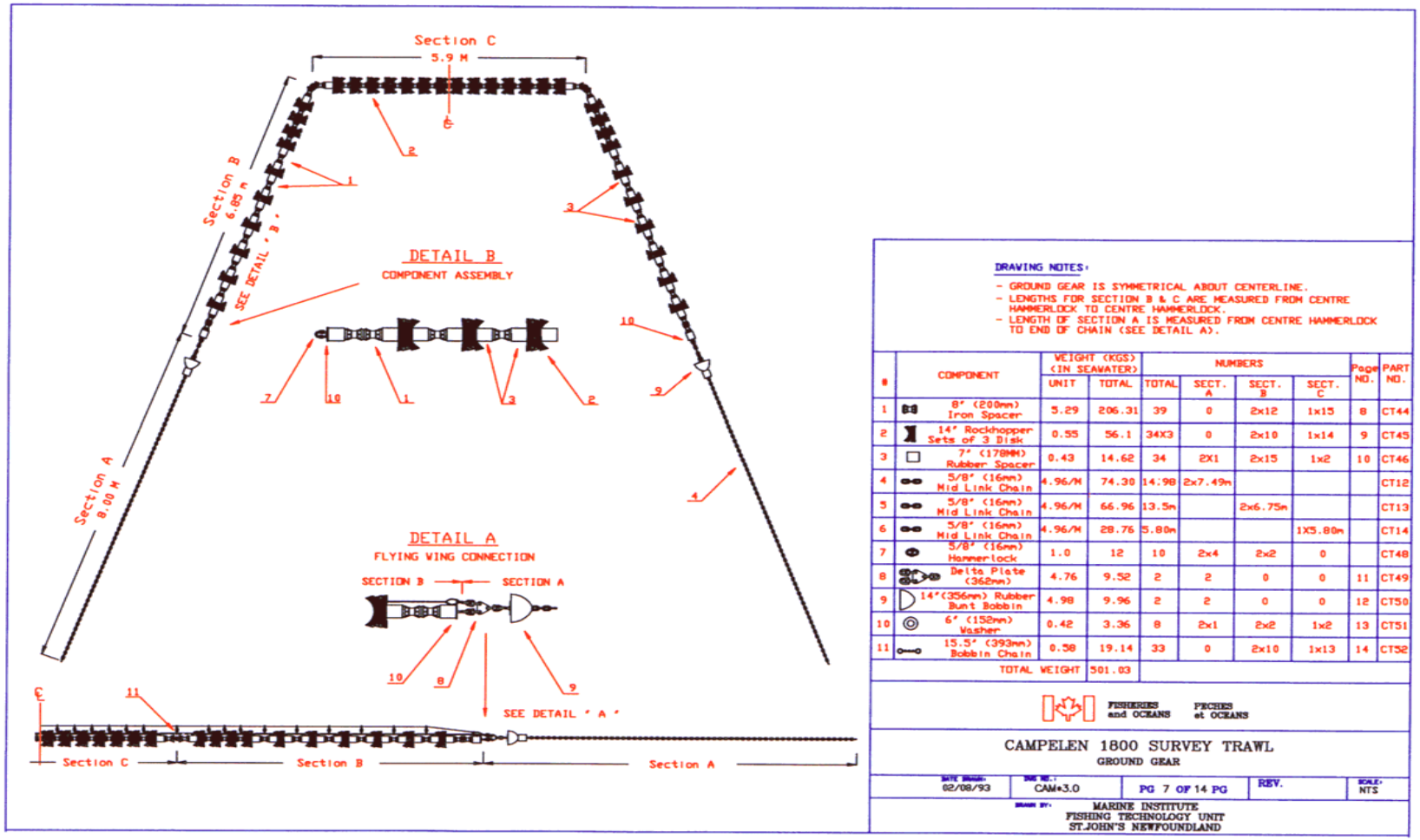


#	COMPONENT	MATERIALS	QTY	PAGE NO.	PART NO.
1	Top Wing	PE Netting	2	3	CT16
2	Square	PE Netting	1	2	CT17
3	1st Belly Top	PE Netting	1	2	CT18
4	2nd Belly Top	PE Netting	1	2	CT19
5	3rd belly top	PE Netting	1	2	CT20
6	Extension (1 Panel)	PE Netting	2	2	CT21
7	Lower Wing 60mm	PE Netting	2	4	CT22
8	Lower Wing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

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

DATE DRAWN	DWG NO.	REV.	SCALE
02/06/95	CAM-2.0	PG 2 OF 14 PG	NTS

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



#	COMPONENT	WEIGHT (KGS) (IN SEAWATER) UNIT	WEIGHT (KGS) (IN SEAWATER) TOTAL	NUMBERS TOTAL	NUMBERS SECT. A	NUMBERS SECT. B	NUMBERS SECT. C	Page NO.	PART NO.
1	8" (200mm) Iron Spacer	5.29	206.31	39	0	2x12	1x15	8	CT44
2	14" Rockhopper Sets of 3 Disk	0.55	56.1	34X3	0	2x10	1x14	9	CT45
3	7" (178MM) Rubber Spacer	0.43	14.62	34	2X1	2x15	1x2	10	CT46
4	5/8" (16mm) Mid Link Chain	4.96/M	74.30	14.9m	2x7.49m				CT12
5	5/8" (16mm) Mid Link Chain	4.96/M	66.96	13.5m		2x6.75m			CT13
6	5/8" (16mm) Mid Link Chain	4.96/M	28.76	5.80m			1X5.80m		CT14
7	5/8" (16mm) Hammerlock	1.0	12	10	2x4	2x2	0		CT48
8	Delta Plate (362mm)	4.76	9.52	2	2	0	0	11	CT49
9	14"(356mm) Rubber Bunt Bobbin	4.98	9.96	2	2	0	0	12	CT50
10	6" (152mm) Washer	0.42	3.36	8	2x1	2x2	1x2	13	CT51
11	15.5" (393mm) Bobbin Chain	0.58	19.14	33	0	2x10	1x13	14	CT52
	TOTAL WEIGHT		501.03						

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

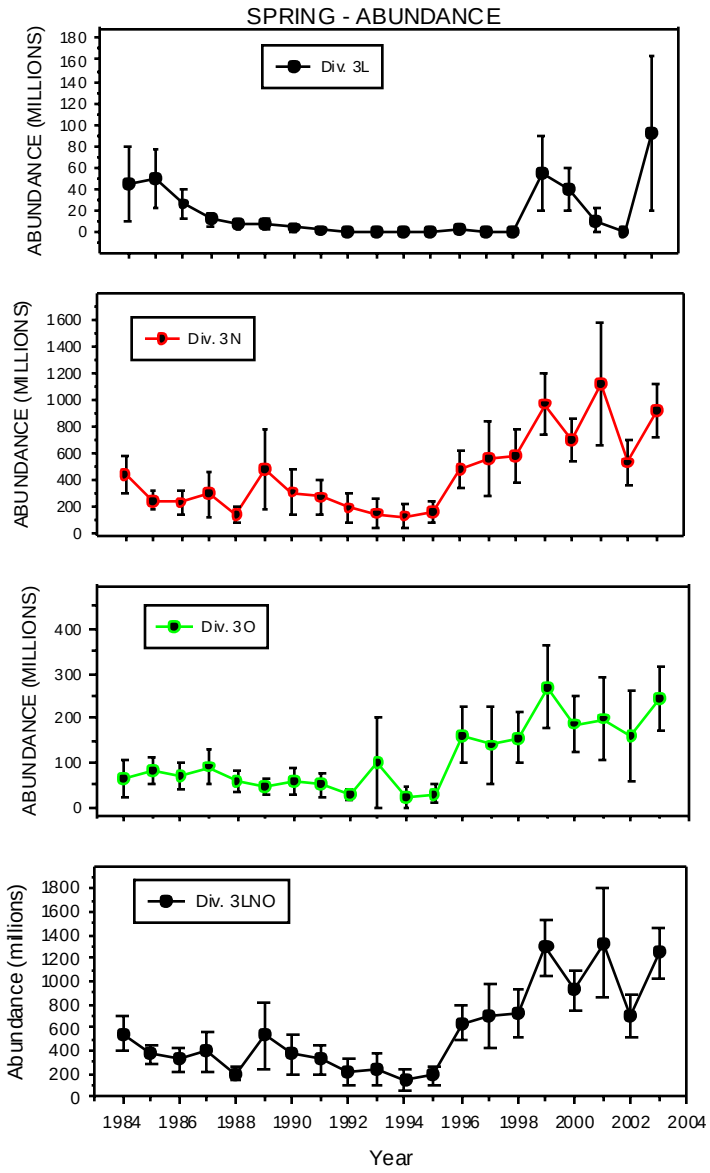


Fig. 5. Abundance estimates of yellowtail flounder (with approx. 95% CI) from Canadian spring surveys in Campelen trawl units, 1984-2003, by NAFO Division and cumulative estimates for the combined Div. 3LNO.

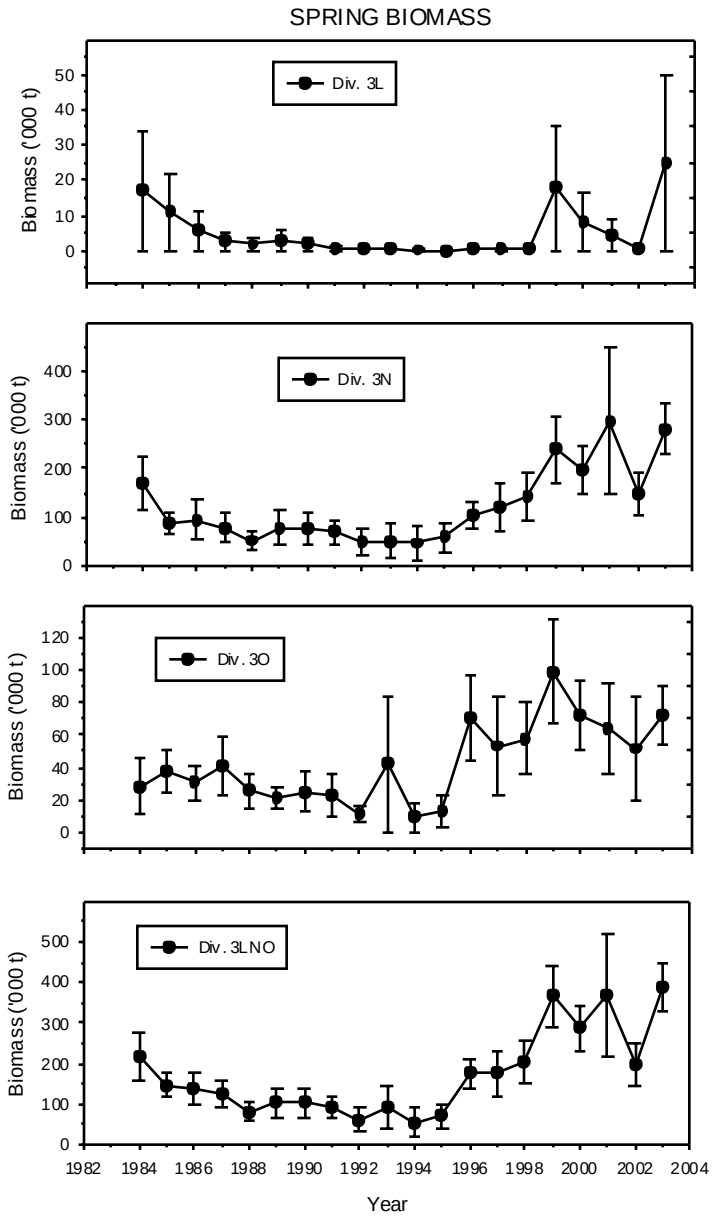


Fig. 6. Biomass of yellowtail flounder (with approx. 95% CI) from Canadian spring surveys, 1984-2003.

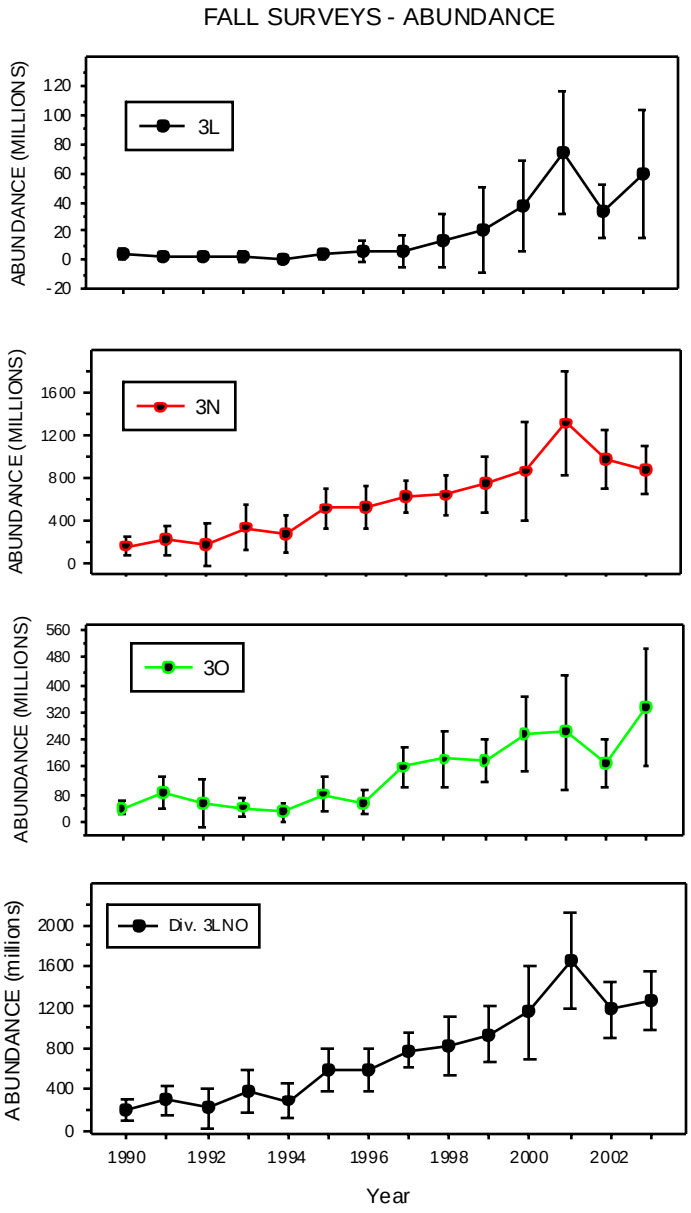


Fig. 7. Abundance estimates of yellowtail flounder (with approx. 95% CI) from Canadian fall surveys, 1990-2003, by NAFO Division and cumulative estimates for the combined Div. 3LNO.

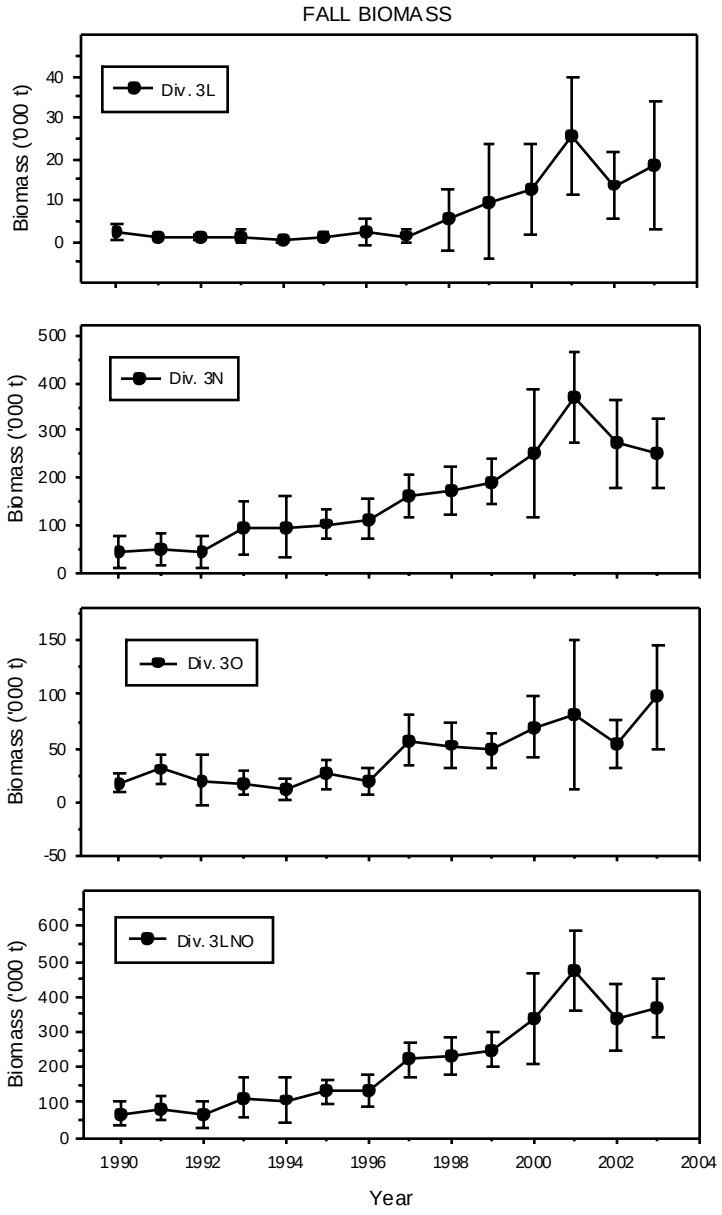


Fig. 8. Biomass estimates (with approx. 95% CI) by NAFO Division and cumulative estimates for Div. 3LNO (lower panel) of yellowtail flounder from the Canadian fall surveys from 1990-2003..

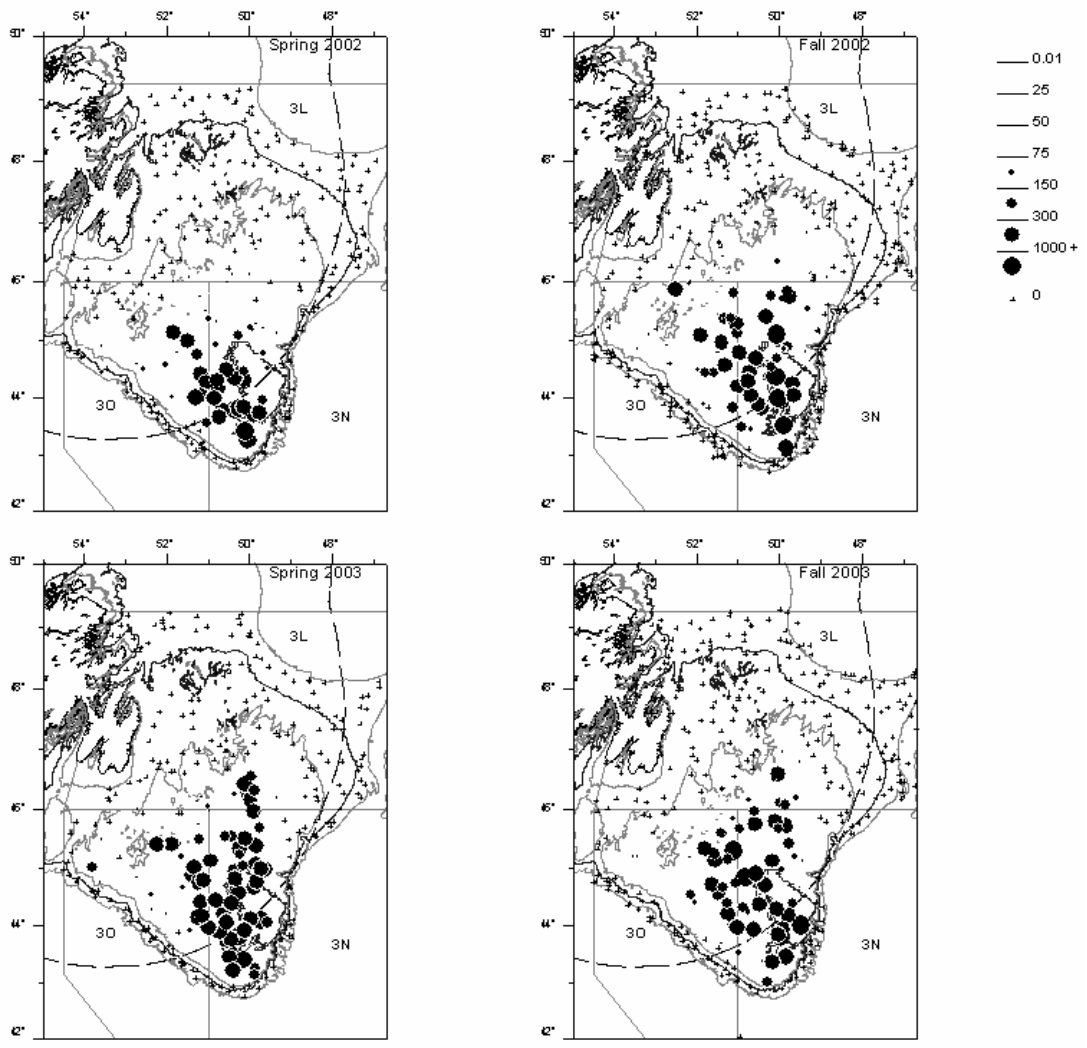


Fig. 9. Yellowtail flounder (number/tow) in Div. 3LNO in spring and fall surveys for 2002 and 2003.

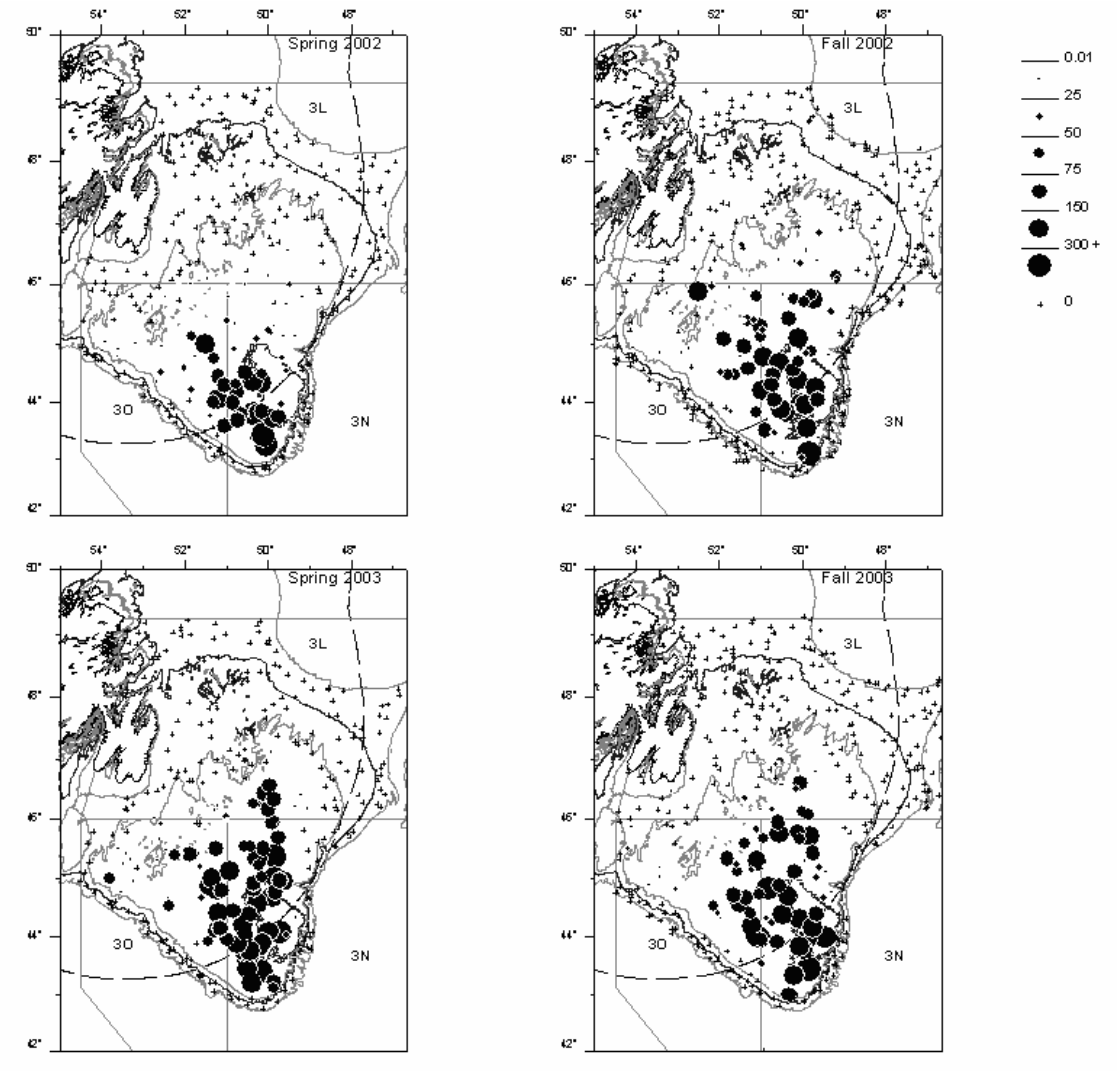


Fig. 10. Yellowtail flounder weight (kg/tow) in Div. 3LNO in spring and fall surveys for 2002 and 2003.

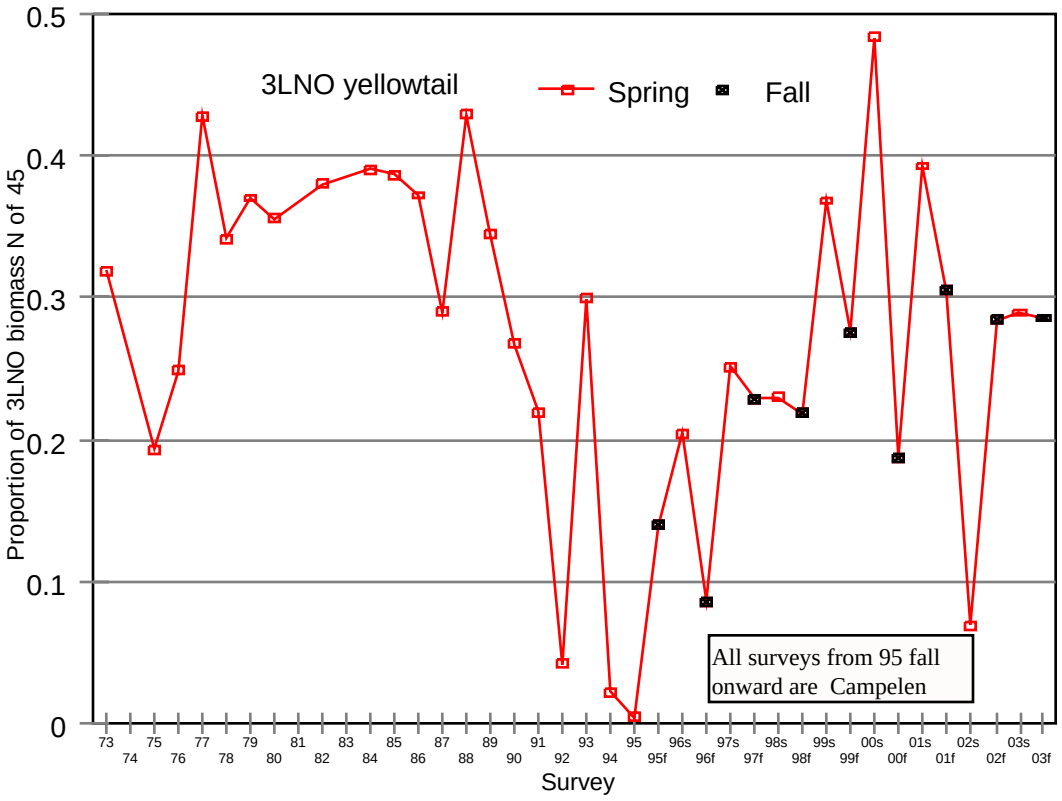


Fig 11. Proportion of yellowtail flounder biomass found north of 45°N in Div. 3LNO, during Canadian surveys.