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**The 1991 Inshore Capelin Fishery in NAFO Div. 3K**

by

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### Abstract

Provisional landings of 19,781 t in 1991 in SA2 and Div. 3K were lower than in previous years and less than the quota of 29,400 t. The 1991 catch was dominated by the 1988 year-class as three-year-olds (48%) and the 1987 year-class as four-year-olds (40%). Only one purse seine logbook was returned because many purse seiners did not fish in 1991. Reported discards was 70% of trap landings. The low percentage of females in the catch was the predominant reason for discarding by both purse seine and trap fisheries. Catch rates from purse seine and traps were considerably lower than in 1990 and represent the lowest level observed since the mid-1980's. Opening dates from July 17 to August 1 for the fixed gear fisheries reflect the later arrival of mature capelin in Div. 3K in 1991 compared to previous years. Trends in catch rates-at-age for traps and purse seines agreed on strong and weak year-classes in recent years.

### Résumé

Les chiffres préliminaires sur les débarquements en provenance de la sous-zone 2 et de la division 3K en 1991, soit 19 781 t, sont inférieurs, d'une part, à ceux des années précédentes et, d'autre part, au contingent (29 400 t). Ce sont les poissons de trois et quatre ans, soit ceux des classes d'âge de 1988 et de 1987, qui ont dominé les prises, dans des proportions respectives de 48 % et de 40 %. Un bon nombre de pêcheurs à la senne coulissante n'ont pas pêché en 1991, ce qui explique que seul un journal de pêche à la senne coulissante ait été retourné. Les rejets déclarés se chiffraient à 70 % dans la pêche au parc en filet. Le faible pourcentage de femelles a été la cause principale des rejets pratiqués tant dans la pêche à la senne coulissante que dans la pêche au parc en filet. Les taux de prises dans les deux types de pêche ont été considérablement inférieurs à ceux de 1990 et ont atteint leur seuil le plus bas depuis le milieu des années 80. Les dates de commencement de la pêche aux engins fixes en 1991 échelonnées, entre le 17 juillet et le 1<sup>er</sup> août, reflètent l'arrivée tardive des capelans adultes dans la division 3K par rapport aux années précédentes. Les tendances des taux de prises selon l'âge dans la pêche au parc en filet et dans la pêche à la senne coulissante ont concordé ces dernières années en ce qui a trait aux fortes et aux faibles classes d'âge.

## Introduction

Provisional landings in 1991 of 19,781 t were less than the 29,400 t quota in NAFO SA2 and Div. 3K and were lower than landings in the previous three years (Table 1). Purse seine landings were especially low representing only 3% of total landings in 1991. We provide herein a summary of the 1991 commercial fishery, the age composition of the catch, and an analysis of the research logbooks maintained by fishermen.

## Materials and Methods

Commercial samples were collected by fishermen and at fish plants by reliable collectors at the rate of two samples per gear type per week per statistical section in Div. 3K (Fig. 1). From each sample, length, sex, maturity stage were measured on 200 fish and a stratified sample of 2 otoliths per sex per 1/2 cm length was taken for ageing.

In 1991 research logbooks were mailed to 20 purse seine and 48 fixed gear licensed fishermen residing in Div. 3K. Of these fishermen, 1 purse seine and 26 fixed gear logbook records were returned to us in 1991, a significant decline from last year (Nakashima and Harnum 1991). Only one logbook record from purse seiners was available in our analysis for 1991. Of the 48 fixed gear fishermen, 26 returned logbooks and seven did not fish in 1991. Only the records from the 23 fishermen who fished capelin traps were included in this report. The remaining three fixed gear logbooks were for beach seines. The number of fishermen who did not fish capelin in 1991 was high, most likely due to the late arrival of capelin and low prices.

Fishing effort was estimated from research logbook records for both purse seines and capelin traps. Fishing days for purse seines were defined as those days when the vessel was out searching for capelin schools. Similarly fishing days for traps were defined as those days when the trap was fishing. In 1991, 18 trap fishermen fished one trap each, two fishermen fished two traps and maintained separate records for each trap fished, and three fishermen fished two traps each and combined the records for both traps into a single logbook. To utilize the records from the three unseparated logbooks we estimated effort by developing an effort adjustment factor based on the effort information contained in the logbooks from the two fishermen who kept separate records for each of the two traps they fished (e.g. Carscadden et al. 1990). To estimate total fishing days for unseparated traps, the reported fishing days were doubled and multiplied by 0.94 and to estimate total number of hauls, the reported hauls were doubled and multiplied by 0.80. This assumes that the three fishermen who did not separate effort for each trap fished, fished in a manner similar to the aggregate effort of the two fishermen who had separated their effort for individual traps.

## Results and Discussion

### The Inshore Fishery

The inshore fishery in Div. 3K and 2J was prosecuted by purse seines, capelin traps, and beach seines and has been regulated by quota management since 1982. Quotas by area and gear type are presented in Appendix A. Similar to 1989 and 1990 the quota in 1991 was subdivided into four areas: Notre Dame Bay,

White Bay, North White Bay, and Labrador (Fig. 1). The 1991 quota of 29,400 t was the same as in 1990. However the fixed gear quotas were further subdivided in Notre Dame Bay and North White Bay as given in Appendix A. Opening dates varied considerably. All purse seine fisheries and the fixed gear fisheries in Notre Dame Bay between Dog Bay Point and Cape Freels and in Labrador were opened on June 5. Remaining areas for fixed gear fisheries were monitored and opened between July 17 and August 1. These dates were the latest opening dates since the inshore fishery has been regulated and reflects the later arrival of spawning fish inshore in 1991. Capelin trap fishermen who completed our logbooks in White Bay began fishing between July 17 and July 28 and took up their traps between August 1 and August 14. In Notre Dame Bay the nine trap fishermen started fishing between July 23 and August 3 and stopped fishing between August 5 and August 9.

#### Age Composition of the Inshore Commercial Catch

In 1991, 54 biological samples were collected and processed from commercial landings throughout Div. 3K. Samples include 10 purse seine, 8 beach seine, and 36 trap (Table 2).

In 1991, the catch in numbers was dominated by the 1988 year-class as three-year-olds (47.9%) and the 1987 year-class as four-year-olds (40.4%) (Table 3). The strong 1986 year-class as six-year-olds represented 6.8% of the total catch. The 1989 year-class as two-year-olds made up 4.9% of the catch which was the highest proportion of age 2's in the series. The proportion of age 2's in the catch should be considered a maximum estimate and the age 3's a minimum. In 1991 we experienced some difficulty in age reading because otolith formation appeared to differ from other years which may have resulted in errors in assigning ages between 2- and 3-year-olds.

The 1990 age compositions reported in Nakashima and Harnum (1991) have been revised to reflect updated landing statistics for 1990.

#### Research Logbook Survey

The reasons reported for discarding capelin in 1991 varied between Notre Dame Bay and White Bay and between gear types. For traps set in White Bay low percentage of females in the catch (47%) and redfeed content in the stomachs (23%) were the predominant reasons for discarding capelin (Table 4). In Notre Dame Bay redfeed content (47%) and sorting males from the catch (39%) were the reasons most often reported for discarding by capelin trap fishermen (Table 4). For one purse seiner in Notre Dame Bay a low percentage of females (44%) was the major reason for discarding capelin (Table 4). The low percentage of females for 1991 purse seines is one of the highest levels, however this estimate comes from a single purse seine logbook (Table 5). For Div. 3K overall, low percentage of females (38%), redfeed content (28%), and males sorted out of the landings (20%) were the major reasons reported for discarding capelin by trap fishermen (Table 6). Of note are reports of discarding due to small females (3%) which had not been a problem for traps in Div. 3K.

The single purse seiner who completed a logbook reported no landings and all his catch was discarded (Table 7). Discarding from traps in 1991 declined to 56% of trap landings (Table 8) from 76% in 1990 (Nakashima and Harnum 1991). Discard totals from traps include approximately 55 t which were given away to

other fishermen and are not represented in the percentages given in Tables 4, 5, and 6. According to research logbook reports fishermen reported that 70% of trap and 100% of purse seine discards were released alive at sea. In the analyses presented in Tables 4-9 discards are defined as all capelin caught but not landed by the fisherman who caught them and includes both live and dead fish.

Catch/effort (CPUE) data were available since 1981 for purse seine vessels and since 1983 for capelin traps. CPUE estimates for purse seines were lower than in 1990 (Table 7). The 1991 purse seine CPUE of 5.4 t/day was the lowest in the series, however, only one seiner completed the logbook in 1991 and failed to land any capelin. In the case of capelin traps, the 1991 CPUE estimate of 4.6 t/day was the lowest estimate since 1985 and the 3.4 t/haul was comparable to estimates in 1988 and 1990 (Table 8).

Effort by a single purse seiner of 8 searching days and 5 sets (Table 7) in 1991 was comparable to 1990. In 1991 28 traps in Div. 3K averaged 15.6 fishing days and were hauled 20.1 times (Table 8), however the effort expended was markedly different between White Bay and Notre Dame Bay. In White Bay 19 traps were fished for 19.0 days and hauled 25 times which more than doubled the effort in Notre Dame Bay of 9 traps fishing 8.4 days each and averaging 11 hauls (Table 9).

If we accept CPUE's as an index of inshore abundance of mature capelin and assume that total catch (i.e. landings + discards) as reported in these research logbooks is more realistic than landings alone, then both purse seine and trap CPUE's indicate that inshore abundance was considerably lower in 1991 than in 1990 and was the lowest in abundance for purse seines in the series and lowest since 1985 for traps (Fig. 2).

In 1991 less fishermen fished capelin than in 1990. One of the reasons was the late arrival of capelin in many parts of the island. Other indications of a poor fishery were low percentages of females in the catch, high redfeed levels, and small females. The latter reason was significant because the Japanese roe market was interested in large females (<35 females per kg).

#### Relative Year-class Strength

Relative year-class strength was estimated for purse seines and traps by estimating total effort (days fished) from landings (Table 1) and catch rates (Tables 7, 8). The total effort (Table 10) and catch-at-age (Table 11) were used to derive catch rates-at-age in Table 12. To visualize trends in year-class strengths in the 1980's the catch rates-at-age were summed for ages 3 and 4 for year-classes 1979 to 1987 (Table 13) and compared (Fig. 3, 4). The standardized values in Figure 4 suggest that the same strong (eg. 1983, 1986) and weak (eg. 1981, 1984) year-classes were prosecuted by both inshore gears.

#### Acknowledgments

We especially are grateful to the fishermen who have diligently reported their fishing activities in these research logbooks. The inshore commercial sampling programme was organized by P. J. Williams. Samples were processed by the technical staff of the Pelagic Fish Section. Otoliths were aged by P. G. Eustace. M. Y. Hynes assisted in the preparation of the manuscript.

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Table 1. Inshore capelin landings (t) by gear, 1979-91.

Year	NAFO Div.	Purse seine	Ring net	Beach seine	Trap	Total
1979	2J	-	-	-	-	-
	3K	-	168	461	42	671
	2+3K	-	168	461	42	671
1980	2J	-	-	-	-	-
	3K	-	560	655	139	1354
	2+3K	-	560	655	139	1354
1981	2J	-	-	-	-	-
	3K	-	1000	520	283	1803
	2+3K	-	1000	520	283	1803
1982	2J	-	4	4	-	8
	3K	-	1935	1544	381	3760
	2+3K	-	1939	1548	381	3768
1983	2J	-	-	4	-	4
	3K	2359	-	1062	344	3765
	2+3K	2359	-	1066	344	3769
1984	2J	-	-	1	-	1
	3K	3661	-	2338	1119	7118
	2+3K	3661	-	2339	1119	7119
1985	2J	-	-	1	-	1
	3K	3948	-	835	2584	7367
	2+3K	3948	-	836	2584	7368
1986	2J	-	-	3	-	3
	3K	4222	-	2534	5143	11889
	2+3K	4222	-	2537	5143	11892
1987*	2J	-	-	4	-	4
	3K	3038	-	2141	5625	10804
	2+3K	3038	-	2145	5625	10808
1988*	2J	-	-	2	-	2
	3K	9767	-	3725	13353	26845
	2+3K	9767	-	3725	13353	26847
1989*	2J	-	-	3	304	307
	3K	6608	-	3436	17451	27495
	2+3K	6608	-	3439	17755	27802
1990*	2J	-	-	1	-	1
	3K	10304	-	3721	21114	35139
	2+3K	10304	-	3721	21114	35140
1991*	2J	-	-	1	-	1
	3K	598	-	2976	16206	19780
	2+3K	598	-	2977	16206	19781

\* provisional

Table 2. Summary of the commercial samples collected and aged from the 1991 inshore capelin fishery in Div. 3K.

Gear type	No. of LSM/strat samples	No. otoliths aged (N)	Mean no. otoliths $\pm$ SD per sample
Purse seine	10	380	38.0 $\pm$ 4.6
Beach seine	8	290	36.3 $\pm$ 4.6
Capelin trap	36	1283	35.6 $\pm$ 4.6
<b>TOTAL</b>	<b>54</b>	<b>1953</b>	

Table 3. Age-compositions (%) of capelin from the inshore commercial capelin fishery, Div. 3K, 1982-91.

	Age				
	2	3	4	5	6
<b>Males</b>					
1982	1.2	92.3	6.3	0.1	0.1
1983	0	47.5	52.5	0	0
1984	0	30.7	68.2	1.1	0
1985	0.6	61.7	34.7	3.0	0
1986	0	59.1	40.4	0.5	0
1987	0	8.7	89.9	1.4	0
1988	0.6	65.8	29.9	3.7	0
1989	+	72.7	27.0	0.3	+
1990	0.1	29.2	70.7	+	0
1991	6.0	50.5	42.1	1.4	0
<b>Females</b>					
1982	0.9	79.5	9.8	7.7	2.1
1983	0	38.0	58.8	3.2	0
1984	1.5	38.0	54.1	6.2	0.3
1985	0.8	55.5	27.1	16.0	0.5
1986	0	62.6	32.1	3.9	1.3
1987	0.2	12.5	76.3	10.4	0.6
1988	3.4	54.3	13.6	27.0	1.7
1989	0.8	66.5	27.2	2.4	3.1
1990	0.3	39.1	58.6	2.0	0
1991	3.8	45.6	38.8	11.8	+
<b>Sexes combined</b>					
1982	1.0	85.0	8.3	4.5	1.3
1983	0	43.3	55.0	1.4	0
1984	0.6	33.4	62.6	3.1	0.1
1985	1.5	57.2	29.5	11.5	0.4
1986	0	61.0	35.8	2.4	0.7
1987	0.1	10.8	82.5	6.3	0.3
1988	1.9	59.5	20.8	16.9	1.0
1989	0.4	69.7	27.1	1.3	1.5
1990	0.2	34.7	63.9	1.2	0
1991	4.9	47.9	40.4	6.8	+





Table 6. Reasons (expressed as % by weight) reported in logbooks for discarding capelin from capelin traps in Div. 3K in 1983-91. This analysis excludes capelin given away to other fishermen.

Year	Redfeed	Small females	Females over ripe	No market	Low % females	Males picked out	Females spawned out	Misc.	Not given
1983	81	0	0	0	4	1	15	0	0
1984	1	0	0	17	51	19	4	8	0
1985	19	0	0	27	28	19	+	2	4
1986	10	0	16	27	30	7	3	6	0
1987	27	0	0	37	11	5	0	14	6
1988	19	0	0	50	14	14	0	2	1
1989	3	0	0	18	66	12	0	1	0
1990	26	0	+	29	30	5	0	5	5
1991	28	3	0	9	38	20	1	+	1

Table 7. Capelin landings (t), discards (t), and catch/effort from research logbook records for purse seines in Div. 3K, 1981-91.

Year	No. fishermen	Landings	Discards logbook	No. days fished (D)	No. sets made (S)	L = Landings		C = Landings + discards	
						L/D	L/S	C/D	C/S
1981	10	725.0	92.9	89	118	8.2	6.1	9.2	6.9
1982	8	849.9	188.0	67	109	12.7	7.8	15.5	9.5
1983	14	1097.0	253.2	113	161	9.7	6.8	12.0	8.4
1984	10	928.0	297.1	87	127	10.7	7.3	14.1	9.7
1985	9	1067.2	551.5	98	129	10.9	8.3	16.5	12.6
1986	8	1053.9	310.0	76	110	13.9	9.6	18.0	12.4
1987	6	253.2	219.7	31	61	8.2	4.2	15.3	7.8
1988	16	2300.3	407.8	146	257	15.8	9.0	18.5	10.5
1989	28	1840.4	510.3	141	238	13.1	7.7	16.7	9.9
1990	20	1784.1	1075.8	131	224	13.6	8.0	21.8	12.8
1991	1	0	43.1	8	5	0	0	5.4	8.6

Table 8. Capelin landings (t), discards (t), bycatch (t), and catch/effort from research logbook records for capelin traps in Div. 3K, 1983-91.

Year	No. fishermen	No. traps	Landings	Discards logbook	Bycatch		No. days fished (D)	No. times hauled (H)	L = Landings		C = Landings + discards	
					Cod	Herring			L/D	L/H	C/D	C/H
1983	3	3	85.8	51.3	6.0	24.9	41	48	2.1	1.8	3.3	2.9
1984	6	6	217.0	111.3	2.6	0.1	80	101	2.7	2.1	4.1	3.3
1985	9	9	212.0	209.9	2.8	0	132	123	1.6	1.7	3.2	3.4
1986	14	14	757.6	575.9	3.4	+	229	278	3.3	2.7	5.8	4.8
1987	13	15	355.8	378.4	0.1	0	70	125	5.1	2.8	10.5	5.9
1988	18	20	992.0	532.5	1.5	0	258	423	3.8	2.3	5.9	3.6
1989	28	35	1360.7	1038.1	4.9	0	411	732	3.3	1.9	5.8	3.3
1990	34	48	1893.7	1447.9	2.9	0.1	312	575	6.1	3.3	10.7	5.8
1991	23	28	1288.5	722.5	1.4	1.4	439	583	2.9	2.2	4.6	3.4

Table 9. Capelin landings (t), discards (t), bycatch (t), and catch/effort from research logbook records for capelin traps in Div. 3K in 1991.

Area	No. fishermen	No. traps	Landings	Discards logbook*	Bycatch		No. days fished (D)	No. times hauled (H)	L = Landings		C = Landings + discards	
					Cod	Herring			L/D	L/H	C/D	C/H
White Bay	14	19	1184.5	567.2	+	1.4	362.5	484	3.3	2.4	4.8	3.6
Notre Dame Bay	9	9	104	155.3	1.4	+	76	99	1.4	1.1	3.4	2.6

\* includes capelin given to other fishermen

Table 10. Capelin landings (t), catch rates (t/day, and effort (days fished) for purse seines (PS) and capelin traps (T) in NAFO Div. 3K, 1982-91.

Year	Gear	Landings	Catch rate	Effort
1982	PS	1939	15.5	125
1983	PS	2359	12.0	197
	T	344	3.3	104
1984	PS	3661	14.1	260
	T	1119	4.1	273
1985	PS	3948	16.5	239
	T	2584	3.2	808
1986	PS	4222	18.0	235
	T	5143	5.8	887
1987	PS	3038	15.3	199
	T	5625	10.5	536
1988	PS	9767	18.5	528
	T	13353	5.9	2263
1989	PS	6608	16.7	396
	T	17755	5.8	3061
1990	PS	10304	21.8	473
	T	21114	10.7	1973
1991	PS	598	5.4	111
	T	16206	4.6	3523

Table 11. Catch-at-age (numbers  $\times 10^{-3}$ ) for mature capelin by purse seines and traps in NAFO Div. 3K, 1982-91.

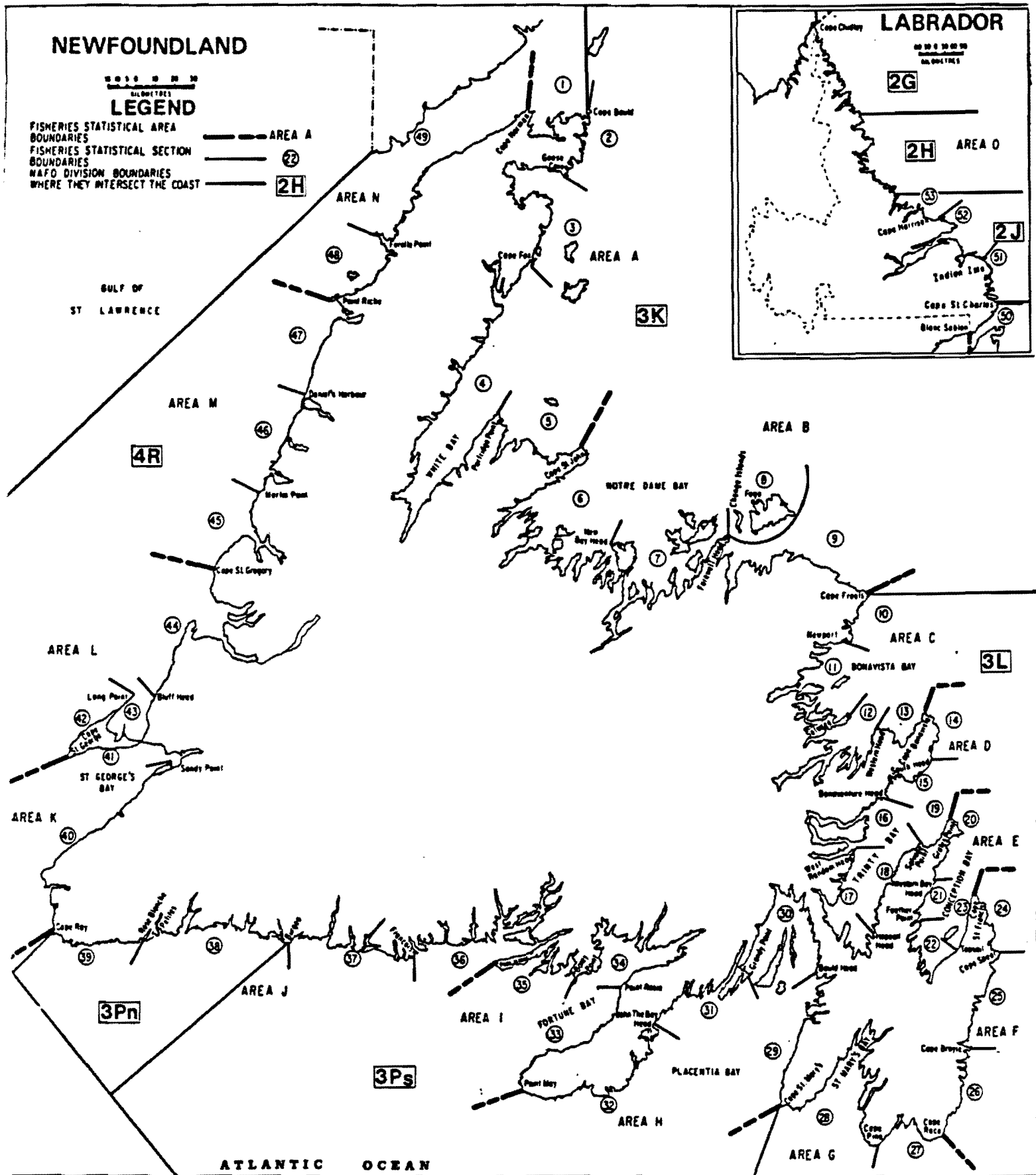
	Year	Ages				
		2	3	4	5	6
Purse seine	1982	721	50424	5853	2684	866
	1983	0	23701	41243	1120	0
	1984	869	43719	63597	2532	68
	1985	2317	88525	39908	17304	528
	1986	0	92407	49080	3328	962
	1987	292	25579	196175	14998	808
	1988	3232	165420	58995	49118	2423
	1989	302	152365	48062	2798	3299
	1990	610	119653	218226	3285	0
	1991	994	12132	9698	1929	21
Trap	1984	211	9784	21590	1177	23
	1985	1320	45400	27798	9263	287
	1986	53	100409	62607	4415	1565
	1987	108	15454	100172	9027	687
	1988	7822	226722	85210	69096	3791
	1989	2667	355777	152256	6677	8028
	1990	1489	231748	457297	7935	0
	1991	32188	311818	249952	44632	153

Table 12. Catch rates-at-age (t/day) for mature capelin from purse seines and traps in NAFO Div. 3K, 1982-91.

	Year	Ages				
		2	3	4	5	6
Purse seine	1982	5.8	403.4	46.8	21.5	6.9
	1983	0	120.3	209.4	5.7	0
	1984	3.3	168.2	244.6	9.7	0.3
	1985	9.7	370.4	167.0	72.4	2.2
	1986	0	393.2	208.9	14.2	4.1
	1987	1.5	128.5	985.8	75.4	4.1
	1988	6.1	313.3	111.7	93.0	4.6
	1989	0.8	384.8	121.4	7.1	8.3
	1990	1.3	253.0	461.4	6.9	0
	1991	9.0	109.3	87.4	17.4	0.2
Traps	1984	0.8	35.8	79.1	4.3	0.1
	1985	1.6	56.2	34.4	11.5	0.4
	1986	0.1	113.2	70.6	5.0	1.8
	1987	0.2	28.8	186.9	16.8	1.3
	1988	3.5	100.2	37.7	30.5	1.7
	1989	0.9	116.2	49.7	2.2	2.6
	1990	0.8	117.5	231.8	4.0	0
	1991	9.1	88.5	70.9	12.7	0.1

Table 13. Catch rate-at-age (t/day) for ages 3 and 4 mature capelin combined for NAFO Div. 3K year-classes, 1979-87.

Year-class	Purse seine (C/D)	Trap (C/D)
1979	612.8	
1980	364.9	
1981	335.2	70.2
1982	579.3	126.8
1983	1379.0	300.1
1984	240.2	66.5
1985	434.7	149.9
1986	846.2	348.0
1987	340.4	188.4



**Fig. 1. Statistical areas (alphabetic) and sections (numeric) for the Newfoundland Region.**

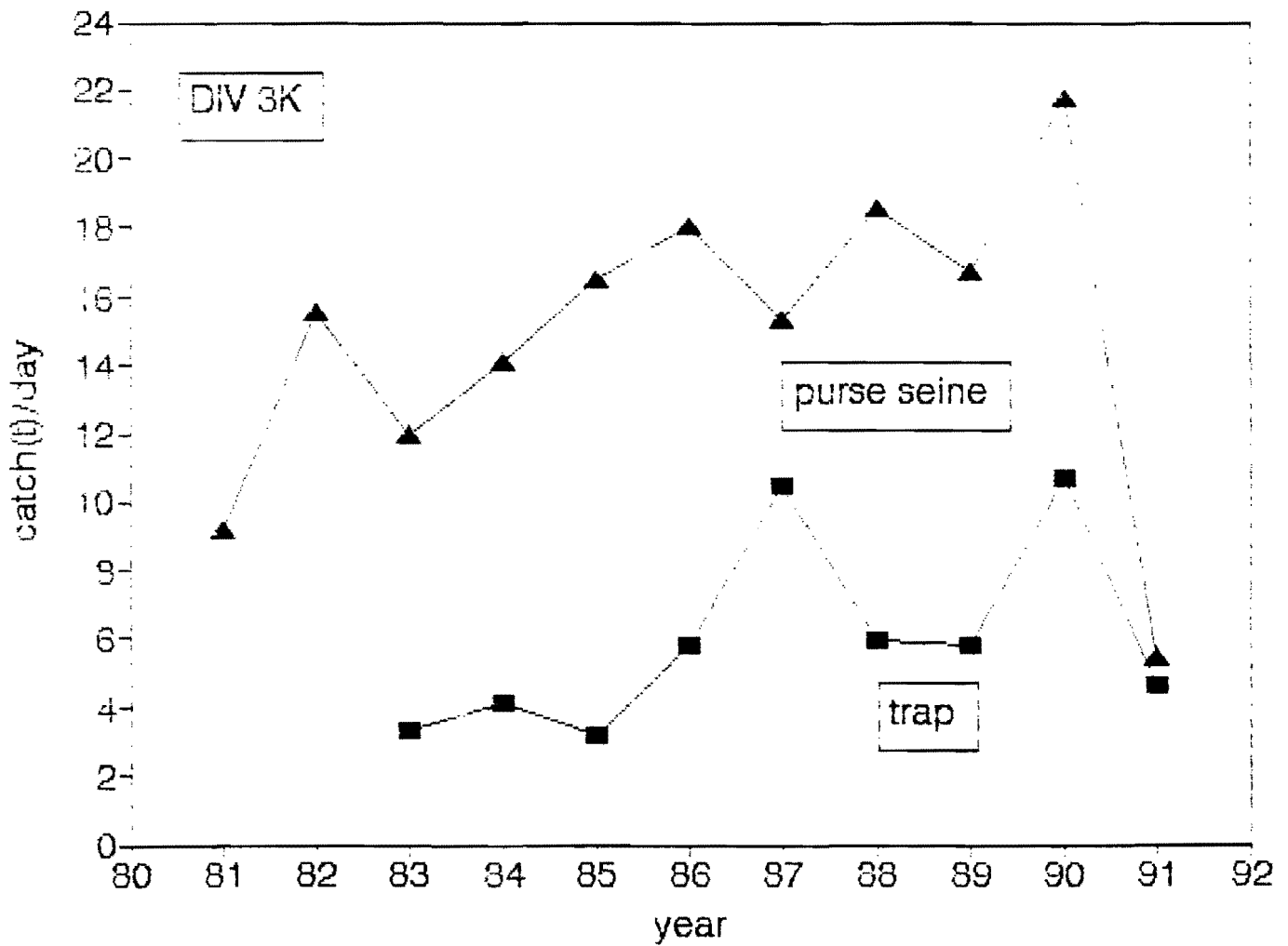


Fig. 2. Catch rates (t/day) for purse seine and trap fisheries in Div. 3K.



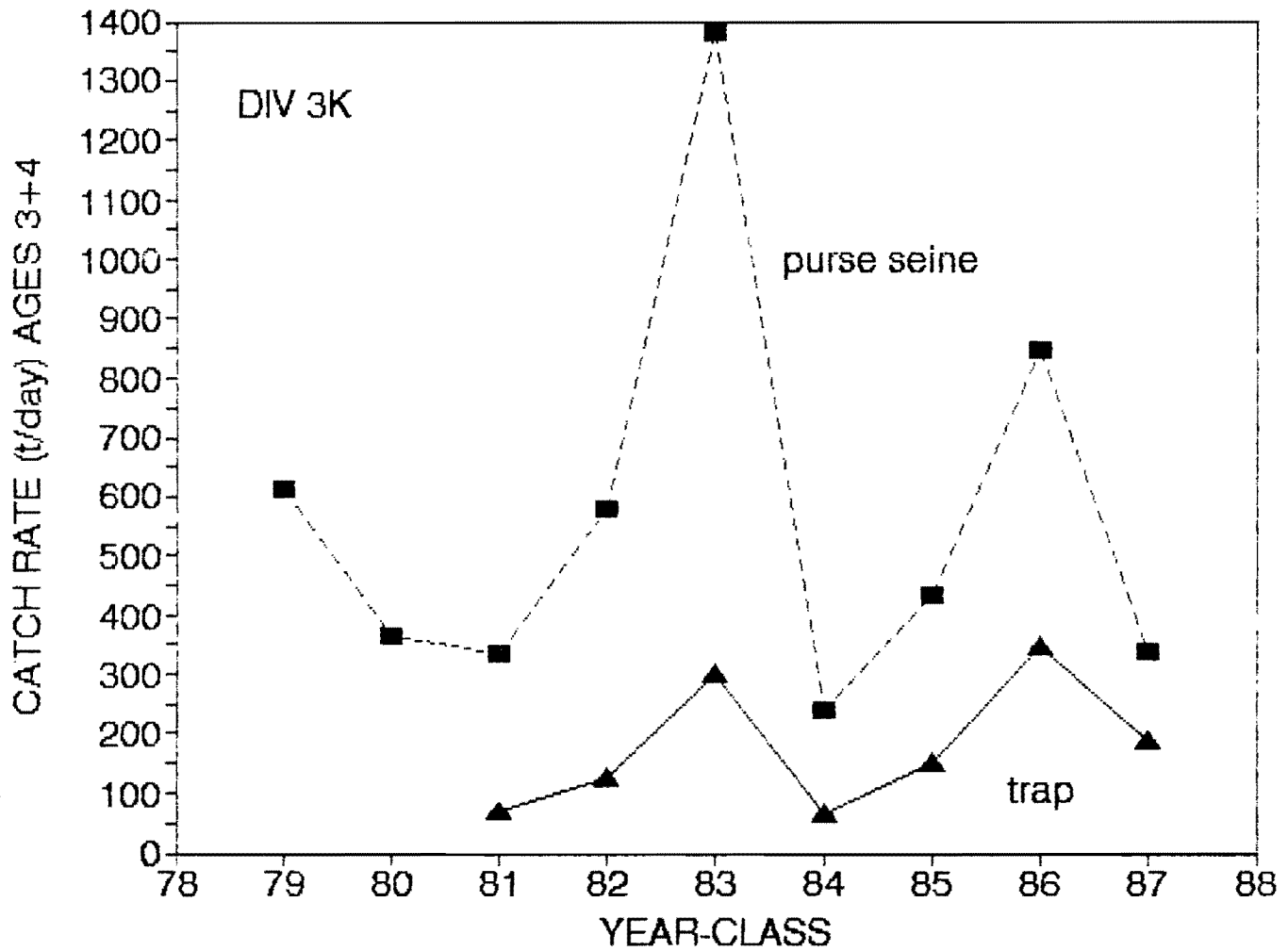


Fig.3. Catch rates at ages 3 and 4 combined for purse seines and traps in NAFO Div. 3K.

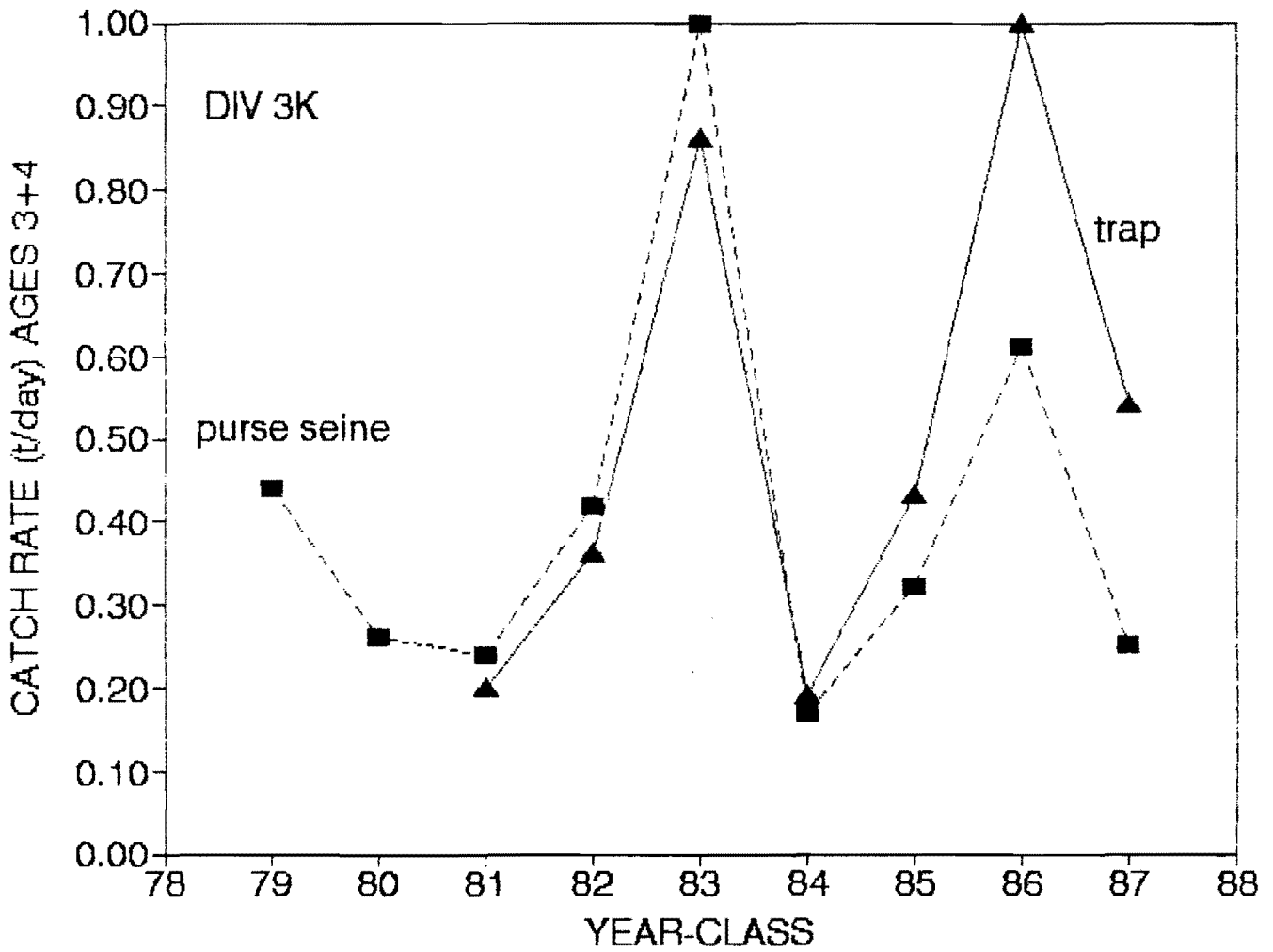


Fig. 4. Standardized catch rates at ages 3 and 4 combined for purse seines and traps in NAFO Div. 3K.

## APPENDIX A

Allocation of quotas (t) and opening dates for the inshore commercial fishery in SA2 + Div. 3K.

Year	Area	Fixed gear	Purse seine	Reserve	Total	Product use	Opening date
1982	2J3K	1000	1000	1000	3000	Frozen females	June 1
1983	Notre Dame Bay	1500	1500		3000	Frozen females	June 15
	White Bay	1500	1500		3000	Frozen females	June 15
	2J3K	1000	1000		2000	Roe extraction	June 15
1984	Notre Dame Bay	2500	2500		5000	Frozen females	June 15
	White Bay & Labrador	1500	1500		3000	Frozen females	June 15
1985	Notre Dame Bay	2500	2500		5000	Frozen females	June 28
	White Bay & Labrador	1500	1500		3000	Frozen females	June 28
1986	Notre Dame Bay	5500	5500		11000	Frozen females	June 1
	White Bay & Labrador	4000	4000		8000	Frozen females	June 1
1987	Notre Dame Bay	3300	1700		5000	Frozen females	June 1*
	White Bay & Labrador	2600	1000		3600	Frozen females	June 1*
1988	Notre Dame Bay	8200	3250		11450	Frozen females	June 1
	White Bay & Labrador	5300	3250	1500	10050	Frozen females	June 1
1989	Notre Dame Bay	8500	3500		12000	Frozen females	June 7
	White Bay	7000	3300		10300	Frozen females	June 7
	N. White Bay	1500			1500	Frozen females	June 7
	Labrador	300			300	Frozen females	June 7
1990	Notre Dame Bay	10500	4000		14500	Frozen females	June 26
	White Bay	8500	4000		12500	Frozen females	June 28
	N. White Bay	2000			2000	Frozen females	July 9
	Labrador	400			400	Frozen females	June 27
1991	Notre Dame Bay		4000		4000	Frozen females	June 5
	- Cape John to North Hd.	2950			2950	Frozen females	July 23
	- North Hd. to Dog Bay Pt.	6150			6150	Frozen females	July 23
	- Dog Bay Pt. to Cape Freels	1400			1400	Frozen females	June 5
	White Bay		4000		4000	Frozen females	June 5
		8500			8500	Frozen females	July 17
	North White Bay						
	- North of Fischot Is.	1500			1500	Frozen females	Aug. 1
	- South of Fischot Is.	500			500	Frozen females	July 31
	Labrador	400			400	Frozen females	June 5

\* fishery began June 19 after agreement on price structure and quotas