WHALING STATISTICS

LXXXII

THE COMMITTEE FOR WHALING STATISTICS



INTERNATIONAL WHALING STATISTICS LXXXII

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PREFACE

This publication, International Whaling Statistics No. LXXXII, embraces the results of the Antarctic whaling during the season 1977/78.

The statistical data are based on catch reports sent to the Bureau of International Whaling Statistics, Sandefjord.

Sandefjord, November 1978.

Einar Vangstein

INTRODUCTION

International Whaling Statistics publication No. LXXX gave details of catch by Antarctic pelagic expeditions in the Southern Hemisphere in the 1976/77 season.

On October 7, 1976 the Government of Japan issued a special permit to take for scientific research purposes not more than 240 Bryde's whales from the waters of the Southern Hemisphere in the 1976/77 season, and 225 Bryde's whales were taken north of 40°S. This catch was not notified to the Bureau of International Whaling Statistics, and is therefore not recorded in publication No. LXXX.

At the 29th meeting of the International Whaling Commission in 1977 the catch limits for baleen whales and sperm whales for the 1977/78 pelagic season and the 1978 coastal season for the Southern Hemisphere were set at:

Sei whales 771 Minke whales 5,690

Sperm whales 4,538 males and 1,370 females.

In addition to the above quotas the Government of Japan and the Government of the USSR issued special permits to take for scientific research purposes not more than 120 and 5 Bryde's whales respectively in the Southern Hemisphere 1977/78 season.

The quotas set for sei whales and minke whales were sub-divided on an Area basis. The total catches to be taken in any of the Areas I to VI should not exceed the limits shown below. However, in no circumstances should the sum of the Area catches exceed the total quotas for each species.

						Sei whales	Minke whales
Area	Ι	120°	W— 60°	W		388	704
Area	Π	60°	W 0			_	1,150
Area	Ш	0	— 70°	${f E}$			1,826
Area	IV	70°	$\rm E-\!$	${f E}$		460	963
Area	V	130°	$E-170^{\circ}$	W			930
Area	VI	170°	$W\!\!-\!\!\!-\!\!120^\circ$	W		-	688
The t	otal	catc	h not to	exce	ed	771	5,690

The quota set for sperm whales was sub-divided on a Division basis. The total catches in any of the Divisions 1 to 9 should not exceed the limits shown below. However, in no circumstances should the sum of the Division catches exceed the total quota.

	Male	Female
Division 1 60° W— 30° W	333	111
Division 2 30° W— 20° E	889	295
Division 3 20° E — 60° E	1,035	343
Division 4 60° E — 90° E	623	-
Division 5 90° E —130° E	590	195
Division 6 130° E —160° E	304	101
Division 7 160° E —170° W	257	143
Division 8 170° W—100° W	961	319
Division 9 100° W— 60° W	and a	
_		
The total quota not to exceed	4,538	1,370

Other important regulations governing the pelagic whaling in the Antarctic in the 1977/78 season were the following:

- 1. The open season for the taking of sei whales comprised the period from December 12th to April 7th, both days inclusive.
- 2. The open season for the taking of sperm whales was restricted to 8 months out of any period of twelve months.
- 3. The open season for the taking of minke whales was restricted to 6 consecutive months out of any period of twelve months.
- 4. It was forbidden to take sei whales below 40 feet and sperm whales below 30 feet, also sperm whales over 45 feet in the Southern Hemisphere north of 40° South Latitude during the months of October to accompanied by calves.

January inclusive. Further it was forbidden to kill blue whales, fin whales, humpback whales, right whales, Bryde's whales and female whales.

The quotas set were by agreement between Japan, USSR, Brazil and Australia split into national quotas as follows:

	Sei whales			Sperm whales			
		whales	Male	Female	Total		
Japan	460	2,400	704	226	930		
USSR	311	2,600	3,291	950	4,241		
Brazil (Division 2)	_	690	7	17	24		
Australia (Division 5)	_		536	177	713		
-	771	5,690	4,538	1,370	5,908		

In the 1977/78 Antarctic season 1 Japanese and 2 USSR expeditions operated with a total of 34 catchers. The catch amounted to:

	Sei whales		Sperm whales			
		whales	Male	Female	Total	
Japan	254	2,378	- 31	5	3 6	
USSR	311	2,600	2,070	54	2,124	
Total	565	4,978	2,101	59	2,160	

In addition, the Antarctic pelagic expeditions caught 119 Bryde's whales (for scientific research purposes), 1,375 male sperm whales, 1,002 female sperm whales and 22 minke whales in the Southern Hemisphere north of 40° South.

The total catch by the Antarctic pelagic expeditions in the Southern Hemisphere amounted to (south and north of 40° South):

	Sei whales			Sperm whales			
				Male	Female	Total	
Japan	254	114	2,400	185	111	296	
USSR	311	5	2,600	3,291	950	4,241	
Total	565	119	5,000	3,476	1,061	4,537	

The catch south of 40° South by Areas was:

	Sei	Sei Minke	Sperm whales			
	whales	whales	Male	Female	Total	
Area I	311	463	153		153	
Area II		362	305	_	305	
Area III		1,801	597		597	
Area IV	254	963	283	_	283	
Area V	_	868	200	5	205	
Area VI	_	521	563	54	617	
Total	565	4,978	2,101	59	2,160	

The catch made by the Antarctic pelagic expeditions in the Southern Hemisphere north of 40° South by Areas before and/or after the 1977/78 pelagic season was:

	Minke Bryde's		Sperm whales			
	whales	whales	Male	Female	Total	
Area I	_				_	
Area II	_	-	212	132	344	
Area III	_	5	984	537	1,521	
Area IV	_	_	3	-	3	
Area V	16	114	109	96	205	
Area VI	6	_	67	237	304	
Total	22	119	1,375	1,002	2,377	

As mentioned above the Bryde's whales were caught under special permit for scientific research purposes.

The catch of sperm whales north and south of 40° South by Antarctic pelagic expeditions was:

	Male	Sperm whale Female	s Tota
		remale	1014
Division 1	325	94	419
Division 2	731	$\boldsymbol{292}$	1,023
Division 3	753	283	1,036
Division 4	531	_	531
Division 5	44	_	44
Division 6	80	_	80
Division 7	229	101	330
Division 8	783	291	1,074
Division 9	_	_	_
Total	3,476	1,061	4,537

The average sizes (in English feet) of the different species and sexes of whales caught in the different Areas were as follows:

	Sei whales			М	inke whal	es	Sı	perm whal	.es
	M	F	Total	M	F	Total	M	F	Total
Area I	48.6	51.3	50.2	28.1	29.3	28.9	48.1	_	48.1
Area II			_	27.9	29.1	28.7	48.4	_	48.4
Area III		-	_	27.6	28.9	28.5	47.6		47.6
Area IV	46.9	48.6	47.6	27.3	28.7	28.3	46.4	_	46.4
Area V	-		-	27.3	28.5	28.0	48.6	36.8	48.3
Area VI	-	-	-	26.7	27.1	26.9	44.9	35.2	44.1
Total	47.7	50.3	49.0	27.4	28.8	28.3	47.0	35.3	46.7

Table a shows the catch and production, table b and c catch by month, table d average size, table e whaling results for the various countries and table f the production of by-products. The tables also include data for

1971/72 - 1976/77 inclusive. Corresponding data for the seasons 1961/62 - 1970/71 will be found in publication No. LXVIII.

Table a. - Pelagic whaling in the Antarctic.

	Species of whales caught									Expeditions	
Years	Blue	Fin	Hump- back	Sei/ Bryde's	Minke	Sperm	Others	Total		Floating factories	Catch- ers
1971/72 1972/73 1973/74 1974/75 1975/76 1976/77	7 - -	2,683 1,761 1,288 979 206	5 —	5,456 3,864 4,392 3,859 1,821 1,858	5,745 7,713 7,000 6,034	4,927 4,162 2,829		14,529 15,585 18,320 16,000 10,890 11,760	345,539 334,065 292,504 180,076	7 8 7 5	89 ¹) 82 78 75 56 43
1977/78	_	_		565				7,703		()	34

¹⁾ Including 1 combined floating factory/catcher.

Table b. - Antarctic, pelagic whaling, Catch by months in absolute figures

					•				
Species of and se		Nov.	Dec.	Jan.	Feb.	March	April	Total	Total including lost whales
Total animals	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78	321 846 2,579 1,607 1,318 1,738 120	4,093 5,737 4,748 3,920 3,007 3,184 2,468	4,508 4,695 4,301 2,398 2,598	2,982 2,342 3,146 2,846 2,482 3,225 2,506	2,082 1,409 797	267 486 818 1,243 274 218	14,512 15,569 18,313 15,999 10,888 11,760 7,703	15,573 18,320 16,000 10,890 11,760
Fin whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78		153 89 172 3 15	225 329 206	1,061 1,148 601 367 91	861 299 174 356 44 —	4 11 47 —	2,683 1,761 1,287 979 206	1,761 1,288 979
Sei/Bryde's whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78	-	2,348 1,347 1,294 1,041 458 546 16	1,681 1,518 1,882 769 657	540 488 1,408 727 438 546 198	441 346 159 186 151 109 114	28 1 7 23 3	5,455 3,863 4,386 3,859 1,819 1,858	3,864 4,392 3,859 1,821 1,858
Minke whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78	105 604 2,501 1,571 1,263 1,736 113	1,195 3,453 2,656 2,410 2,098 2,285 2,193	1,687 1,539 1,522 1,018 1,324	675 900 1,496 1,655 2,555 1,873	13 117 — — —		3,019 5,744 7,713 6,999 6 034 7,900 4,978	5,745 7,713 7,000 6,034 7,900
Sperm whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78	216 242 78 36 55 2 7	397 848 626 466 436 353 259	691 555 617	706 706 237 256 298 124 435	706 1,005 1,877 1,540 1,214 688 754	235 485 1)800 2)1,173 271 218	3,355 4,201 4,927 4,162 2,829 2,002 2,160	4,203 4,927 4,162 2,829 2,002

¹⁾ Including 48 in May. 2) Including 201 in May.

Table c. - Antarctic, pelagic whaling. Catch by months in percentage figures.

Species of Seaso		Nov.	Dec.	Jan.	Feb.	March	April	Total	Total including lost whales
Total animals	1971/72	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fin Whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78		3,7 1.5 3.6 — 0.5	12,5 5.0 7.0 4,8 2.3	35,6 49.0 19.1 12,9 3.7	42,6 18.1 7.5 17,1 3.1	1,5 1.3 3,8 	18,5 11.3 7.0 6,1 1.9	11.3 7.0 6,1
Sei/Bryde's whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78		57,4 23.5 27.3 26,6 15.2 17.1 0.7	43,5 37.3 32.3 43.7 32.1 25.3 13.6	18,1 20.8 44.8 25,5 17.6 16.9 7.9	21,8 21.0 6.8 8,9 10.7 13.7 13.1	10,5 0.2 0.9 1,8 1.1	37,6 24.8 24.0 24,1 16.7 15.8 7.3	24.8 24.0 24,1 16.7 15.8
Minke whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78	32,7 71.4 97.0 97,8 95.8 99.9 94.2	29,2 60.2 55.9 61,5 69.8 71.8 88.8	21,4 37,4 32,8 35,4 42,5 51,0 45,9	22,6 28.6 52,6 66.7 79.2 74.7	0,7 5.0 —		20,8 36.9 42.1 43,8 55.4 67.2 64.6	36.9 42.1 43,8 55.4 67.2
Sperm whales	1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78	67,3 28.6 3.0 2,2 4.2 0.1 5.8	9,7 14.8 13.2 11,9 14.5 11.1 10.5	22.6 20.3 27.9 16.1 23.1 23.7 40.5	23,7 30.2 7.5 9,0 12.0 3.9 17.4	34,9 60.9 80.7 74,0 86.2 86.3 86.9	88,0 99.8 97.8 94,4 98.9 100.0	23,1 27.0 26.9 26,0 26.0 17.0 28.1	26,9 26.0 26.0

Table d. - Average size of whales killed in the Antarctic, by species of whales.

	F	Fin whales			Sei whales			Minke whales			Sperm whales		
	Males Engl. feet	Fe- males Engl. feet	Total Engl. feet	Males Engl. feet	Fe- males Engl. feet	Total Engl. feet	Males Engl. feet	Fe- males Engl. feet	Total Engl. feet	Males Engl. feet	Fe- males Engl. feet	Total Engl. feet	
1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78	64,3 64.7 63.9 64.5 64.2	67.7 66.8 67.4	66.2 65.5 66,0	46.9 47.1 47,3	48.2 48.8 48,5 48.5 48.6	47.5 47.9 47.8 47.8 47.7	26.5 26,9 27.2 27.4	27.1 27.8 28.3 28.3 28.7	26.7 27.3 27,8 27.8 28.2	45.1 44.7 44.9 46.5 46.0	34.8 34.7 34,5 35.0 34.1	44.3 42.2 42,8 45.0 45.2	

Table e. - Antarctic, pelagic whaling results for the various countries.

	All countries	g eq	J	apan	pa s	N	orway	eq.	U	.s.s.r.	ا ا
Nun o wha kil	f Oil pro-	Catchers	Number of whales killed	Oil pro- duction	Catchers employe	Number of whales killed	Oil pro- duction	Catchers employed	Number of whales killed	Oil pro- duction	Catchers employed
	Barrels			Barrels			Barrels			Barrels	
$1971/72 \dots 14,$	529 387,064	89	8,711	159,610	41	3	36	11)	5,815	227,418	47
$1972/73 \dots 15,$	585 345,539	82	6,285	119,307	35			<u> </u>	9,300	226,232	47
$1973/74 \dots 18,$	320 334,065	78	7,087	84,998	31			—	11,233	249,067	47
$1974/75 \dots 16,$	$000 292,\!504$	75	6,656	89,547	30				9,344	202,957	45
$1975/76 \dots 10,$	890 180,076	56	4,597	43,588	23			—	6,293	136,488	33
$1976/77 \dots 11,$	760 137,460	43	5,316	37,067	18	-		—	6,444	100,393	25
$1977/78 \dots 7,$	703 130,004	34	2,668	11,864	10	_		_	5,035	118,140	24

¹⁾ Combined catcher/floating factory.

Table f. - Production of by-products in the Antarctic.

Seasons Countries	Whale meat-meal, bone-meal, grax meal, guano	Whale liver or liver flakes	Liver oil Mill. units Vitamin A	Whale meat, blubber, ventral grooves	Whale solubles	Other products
1971/72 1972/73 1973/74 1974/75 1975/76 1976/77	L. tons 13,397 13,423 14,659 14,210 7,982 6,565	L. tons 1,791 1,516 1,694 1,700 1,737 1,302	1,253,000 1,915,000 2,092,000 2,063,000	L. tons 104,438 87,384 93,338 95,863 66,308 64,911	L. tons 1,574 1,624 1,723 1,151	L. tons 1,211 12,216 3,412 301 155 188
1977/78 Japan	5,426	1,396	681 l. t.	14,971 31,211 46,182		$\begin{array}{c} 7\\32\\\hline \\39\end{array}$

¹⁾ Including by-products from whales caught north of 40° S.

TABLES

Antarctic season 1977/78.

Table 1. - Whaling results for the various countries in the Antarctic in the season 1977/78.

Pelagic whaling.

		Species of wh	nales caught		Oil	Expe	litions
Countries	Sei	Minke	Sperm	Total	production. Barrels of 170 kg	Floating factories	Catchers
Japan USSR	$\begin{array}{c} 254 \\ 311 \end{array}$	2,378 2,600	$\begin{array}{c} 36 \\ 2,124 \end{array}$	2,668 ¹)5,0 3 5	11,864 118,140	$\frac{1}{2}$	10 24
Total	565	4,978	2,160	7,703	130,004	3	34

¹⁾ In addition 77 killer whales and 3 bottlenosed whales were caught.

Table 2. — Average size of whales caught in the Antarctic in the season 1977/78.

Pelagic whaling.

N	aber of whales measured.	77. 2111		Average size.	
Num	noer of whates measured.	Expedition.	Males.	Females.	Total.
	Sei whales.				
Males Females	278 287 Total 565	No. 1 2	$\begin{array}{c} 46.9 \\ 48.6 \end{array}$	48.6 51.3	$\begin{array}{c} 47.6 \\ 50.2 \end{array}$
	Average		47.7	50.3	49.0
	Minke whales.				
Males Females	1.712 3.266 Total 4,978	No. 1 2 3	$27.3 \\ 28.0 \\ 27.1$	28.7 29.2 28.6	$28.1 \\ 28.8 \\ 28.2$
	Average		27.4	28.8	28.3
	Sperm whales.				
Males Females	$2,101 \atop 59$ Total 2,160	No. 1 2 3	$44.9 \\ 48.2 \\ 46.3$	$rac{36.8}{-} \ 35.2$	43.8 48.2 45.9
	Average		47.0	35.3	46.7

Table 3.—Whales caught in the Antarctic in the season 1977/78, by species, sex and size.

Pelagic whaling.

Sei whales.

Engl foot	Numb	er of	(Toda)	The sale for the	Num	ber of	m-4-1
Engl. feet	males	females	Total	Engl. feet	males	females	Total
40	_	1	1	53	_	30	30
41	12	3	15	54		16	16
42	5	3	8	55	_	6	6
43	8	3 3 5 8 3	13	56		3	3
44	7	8	15				
45	13	3	16	Total	278	287	565
46	23	10	33				
47	40	9	49	1	_		
48	50	17	67	1.		les 47.7	feet
49	52	19	71	Average a		males 50.3	**
5 0	39	47	86		oT J	tal 49.0	,,
51	28	47	75	1		_	
52	1	60	61	Per cent:	,	des 49.2 males 50.8	

Minke whales.

Email foot	Numl	per of	Motol.	Engl foot	Num	ber of	Total
Engl. feet	males	females	Total	Engl. feet	males	females	10001
19	_	1	1	32	1	62	63
20	1	3	4	33	_	8	8
21	3	6	4 9	34	_	1	1
22	10	9	19	35	_	1	1
23	20	24	44				
24	50	42	92	Total	1,712	3,266	4,978
25	114	73	187				
26	232	158	39 0				
27	387	316	703	1.		les 27.4	feet
28	486	594	1,080	Average		males 28.8	,,
29	303	846	1,149		{ To	tal 28.3	,,
30	99	751	850	Per cent:	∫ Mε	les 34.4	
31	6	371	377	Fer cent:	1 Fe	males 65.6	

Sperm whales.

Engl. feet	Numb	er of	Total	Engl. feet	Numb	er of	Total
Engi. ices	males	females	Total	Engi. leet	males	females	Total
31	_	1	1	49	289	_	289
32	_	2	2	50	236	_	236
33	1	10	$\begin{array}{c} 1\\2\\11\end{array}$	51	106	-	106
34	3	7	10	52	65	_	65
35	$\frac{1}{5}$	14	15	53	29	-	29
36	5	6	11	54	7	-	7
37	21	12	33	55	5	-	5
38	23	4	27	56	1		1
39	23	$egin{array}{c} 4 \ 2 \ 1 \end{array}$	25				
40	31	1	32	Total	2,101	59	2,160
41	48	_	48				
42	61	-	61		(Ma	les 47.0	foot
43	80	-	80	Arronomo		$\begin{array}{ccc} \text{nales} & 47.0 \\ \text{nales} & 35.3 \end{array}$	»
44	$\frac{92}{152}$	_	92	Average	Tot		<i>"</i> »
45	152	-	152		(10	ai 40.7	"
46	234	-	234		(3/5-	OF 9	
47	293		293	Per cent:	∫ Ma		
48	295	_	295		[Fer	nales 2.7	

Table 4.—Size of pregnant female whales caught in the Antarctic in the season 1977/78.

Pelagic whaling.

Sei whales.1)

Length	Number of pregnant females	Length	Number of pregnant females		
46 47 48 49 50 51	1 3 10 9 25 25	52 53 54 55 56 Total	39 15 11 2 1	Number of foetuses measured	143 1

¹⁾ Exclusive of 4 females with no information of pregnancy.

Minke whales.1)

Length	Number of pregnant females	Length	Number of pregnant females	
25 26 27 28 29 30	2 45 179 425 668 605	31 32 33 35 ——————————————————————————————	298 52 7 1 2,282	Number of foetuses measured

¹⁾ Exclusive of 101 females with no information of pregnancy.

Sperm whales.

Length	Number of pregnant females	Length	Number of pregnant females		
32 33 34 35	1 1 3 1	37 38 Total	10	Number of foetuses measured	10

Table 5.—Whale foetuses measured in the Antarctic in the season 1977/78, by species and groups of size, in each month.

Pelagic whaling.

Sei whale foetuses.

Groups of size. Engl. feet	Dec.	Jan.	Febr.	March	Total
0'— 0'11"	_	_	6	1	7
1'— 1'11"	_	1	_		1
2'— 2'11"	_	1	_	_	1
3′— 3′11″	-	4	_	-	4
4' 4' 11"	-	5	3	1	9
5'— 5'11"		7	3	1	11
6'— 6'11"	_	11	5	_	16
7′— 7′11″	1	8	6	3	18
8′— 8′11″	_	1	13	3	17
9' 9'11"	_	1	15	4	20
10′—10′ 11″	_	1	15	8	24
11'—11' 11"	_	_	4	7	11
12′—12′11″	_	_	1	3	4
Total	1	40	71	31	143
Average size	7′ 0″	5′ 9″	8′ 0″	9′ 4″	7′ 8″

Minke whale foetuses.

Groups of size. Engl. feet	Nov.	Dec.	Jan.	Febr.	Total
0'— 0'11" 1)	8 2 1 - - - - - -	390 396 174 42 7 - 1 2 1	143 137 78 34 13 7 1 - -	104 221 220 134 114 45 12 4	645 756 473 210 134 52 13 5 3
Total	11 0′ 8″	1,013 1'2"	413 1′ 5″	855 2′ 5″	2,292 1′ 8″

¹⁾ Including very small foetuses (first stage) not measured and foetuses lost.

Sperm whale foetuses. (South of 40° S.)

Groups of size. Engl. feet	Nov.	March	Total
0'— 0'11" 11'—11'11" 12'—12'11" 14'—14'11" Total Average size	1 - - 1 -	3 2 3 1 9 8′ 5″	4 2 3 1 1 7'7"

Table 6.—Whale foetuses measured in the Antarctic in the season 1977/78, by species and sex, in each month.

Pelagic whaling.

	Number of		Sex not	Total	Number of
	males	females	determined	Total	males per 100 females
Sei whale foetuses.					
December	_	1	-	1	_
January	22	18	-	40	122
February	34	31	6	71	110
March	16	14	1	31	114
Total	72	64	7	143	113
Minke whale foetuses.					
November	4	7	_	11	57
December	492	394	127	1,013	125
January	182	190	41	413	96
February	431	406	18	855	106
Total	1,109	997	186	2,292	111
Sperm whale foetuses.			***		
November	_	1	_	1	_
March	4	3	2	9	133
Total	4	4	2	10	100

