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ベーリング海の日本底魚漁業の概況

Outline of the Japanese groundfish fishery in the  
Bering Sea in 1983 January-December  
and 1984 January-July

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# ベーリング海の日本底魚漁業の概況

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## 1. 1983年の日本の底魚漁業

ベーリング・アリューシャン水域で操業する日本の底魚漁業は、1983年も1982年に引き続いてアメリカ合衆国のマグナソン漁業保存管理法による各種の規制を受けて推移した。

ベーリング、アリューシャン水域で操業した日本の底魚漁業は、母船式底びき網漁業、北方トロール漁業、北洋はえなわ・さし網漁業及び北転船漁業の4種類で1982年と変わりなかった。

漁船数は、母船が6隻その付属独航船83隻、単船操業を行う北方トロール漁船49隻、はえなわ漁船22隻及びトロール漁法で単船操業する北転船が70隻であった。

### (1) 母船式、北方トロール及び北洋はえなわ・さし網漁業（1983年1月～12月）

1983年のベーリング・アリューシャン水域における、母船式、北方トロール及び北洋はえなわ・さし網漁業の実稼動隻数は表1に示されている。この表によると、1983年の稼動隻数は1982年と

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本報告の引用は下記に従うこと：

手島和之 1984. ベーリング海の日本底魚漁業の概要（北太平洋漁業国際委員会提出文書）. 16頁. 水産庁、東京.

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比較して付属独航船が3隻減少し、北方トロール漁船が7隻増加したが、はえなわ漁船は前年と変わらなかった。

母船式、北方トロール及び北洋はえなわ・さし網の3つの漁業種類の暦年集計値による漁法別の漁獲量、努力量及びCPUEを表2に示した。

2そうびき網漁法の1983年の努力量は、1982年より4,427時間(15.5%)減少して24,134時間であった。一方、漁獲量は1982年より57,084トン(15.7%)減少して306,313トンで、これは1983年の総漁獲量(811,006トン)の37.8%を占めた。CPUEは1982年の12.72トンと僅差の12.69トンであった。

1そうびき網漁法の1983年の努力量は、1982年の12,148回より1,591回(13.1%)減少して、10,557回であった。1983年の漁獲量は1982年より13,381トン(17.7%)減少して62,005トンとなり、全体の7.6%であった。1983年のCPUEは1982年の6.21トンより僅か減少して5.87トンとなった。

トロール漁法の1983年の努力量は1982年から630時間(0.5%)減少し、118,947時間となった。漁獲量は1982年より7,420トン(1.7%)減少し428,519トンで全体(811,006トン)の52.8%を占めた。CPUEは1982年と僅差の3.60トンであった。

はえなわ漁法の1983年の努力量及び漁獲量は1982年より、それぞれ、41,200鉢(9.9%)、4,096トン(40.7%)と増加して457,600鉢及び14,169トンであった。総漁獲量(811,006トン)に占める割合は小さく、わずか1.7%であった。CPUEは1982年の0.024トンより25%増加して0.030トンとなった。

これら4種類の漁法別努力量の地理的分布は図1～4に示されている。すなわち、1983年の2そうびき網漁法の努力量は、INPFC海区Iの大陸棚上へその大部分が投入され全体(24,134時間)の81.0%(19,538時間)であった。1そうびき網漁法も2そうびき網漁法とほぼ同様に大陸棚上のINPFC海区Iに集中し、全体の85.0%(8,966回)を占めた。トロール漁法の努力量は1982年とほぼ同様、前2者に比べ広範囲に分布するが、とりわけ大陸棚縁辺部に沿って多く投入されていた。1983年のはえなわ漁法の努力量はINPFC海区IとIIで全体(457,600鉢)の87.2%を占めた。

1983年における母船式、北方トロール及び北洋はえなわ・さし網漁業の総漁獲量は811,007トンで、1982年の884,795トンより73,788トン(8.3%)減少した(表3)。

1983年の総漁獲量の魚種別内訳は、スケトウダラ673,088トン(82.9%)、コガネガレイ64,702トン(8.0%)、マダラ25,705トン(3.2%)、カラスガレイ15,404トン(1.9%)、その他のカレイ類11,179トン(1.4%)及び上記以外のその他の魚種13,561トン(1.7%)であった(表3)。

1983年の魚種別漁獲量を1982年と比較すると、コガネガレイ、マダラ及びギンダラの漁獲量は、

それぞれ、1,018トン(1.6%)、9,339トン(57.1%)、408トン(17.5%)増加したが、これら3種以外の魚種は減少した(表3)。特にスケトウダラは72,937トン(9.8%)の減少であった。

母船式底びき網漁業の1983年の漁獲量は450,381トンで、1982年より、6,481トン(12.9%)減少した。主な漁獲物はスケトウダラ389,634トン(86.5%)、コガネガレイ36,647トン(8.1%)及びマダラ8,945トン(2.0%)であった。1982年と比較すると、マダラは1,478トン(19.8%)増加したが、それ以外はすべて減少した(表4)。

1983年の北方トロール漁業は総計346,456トン漁獲し、1982年より11,404トン(3.2%)減少した。主要な漁獲物はスケトウダラ283,300トン(81.8%)、コガネガレイ25,056トン(7.2%)及びカラスガレイ11,823トン(3.4%)であった。1982年と比較すると、スケトウダラとアラスカメスケの漁獲量が減少した(表4)。

1983年の北洋はえなわ・さし網漁業の総漁獲量は、1982年より4,096トン(40.7%)増加し、14,169トンであった。主要な漁獲物はマダラ8,471トン(59.8%)、ギンダラ2,441トン(17.2%)及びカラスガレイ2,338トンであった。1982年と比較すると、カラスガレイを除く、他の魚種の漁獲量が増加した(表4)。特に、マダラは約2倍に増加した。

スケトウダラの漁場はソ連水域を除く東部ベーリング海域であった。南東水域(170°W以東)と北西水域(170°W以西)の本種の漁獲割合は、それぞれ、58.1%及び41.9%であった(図5)。

コガネガレイの主要漁場はベーリング海大陸棚上の南東水域で、ここから全漁獲量の99.3%が漁獲され、1982年と同様な傾向を示した(図6)。

日本の底魚漁業による主要な魚種の漁業形態別漁法別漁獲量を表5に示した。

## (2) 北転船漁業(1983年1月～12月)

1983年には、70隻のトロール漁船が北転船漁業として、170°W以西のベーリング・アリューシャン水域で操業した(表1)。

1983年の統計によれば、1983年の総漁獲量は、1982年より23,445トン(24.4%)減少して、72,520トンとなった。漁獲量の主要魚種別内訳は、スケトウダラ28,703トン(39.6%)、カラスガレイ19,737トン(27.2%)及びマダラ5,263トン(7.3%)であった。1982年と比較すると、アブラガレイとマダラを除く、他の魚種の漁獲量は減少した(表6)。

## 2. 1984年の日本底魚漁業(1984年1月～7月)

1984年にベーリング・アリューシャン水域では、6隻の母船とそれに付属する77隻の独航船の操業が許可された。42隻のスターン・トロール船が北方トロール漁業として、また22隻のはえなわ船が北洋はえなわ・さし網漁業として操業を許可された。更に、70隻のスターン・トロール船が北転船漁業として操業を許可されたが、漁獲割当量、操業規制及び生産経費の高騰などのために4月～5月末日まで自主的に操業を中断した(表1)。

7月までの予備的統計によれば、母船式、北方トロール、北洋はえなわ・さし網及び北転船漁業によるベーリング・アリューシャン水域の総漁獲量は、280,767トンで、1983年同期と比較すると、129,441トン（32%）減少した。表7に示されているようにコガネガレイを除くすべての魚種で1983年より減少した。総漁獲量の魚種別内訳は、スケトウダラ230,537トン（82%）、コガネガレイ22,081トン（8%）及びマダラ13,942トン（5%）などであった。

総漁獲量のI N P F C海区別内訳は、海区Ⅰが14%、海区Ⅱが75%及び海区Ⅴが11%であった。

Table 1. Number of vessels of each of the Japanese groundfish fisheries actually operated in the Bering Sea during 1982 to 1984 calendar year.

Fishery	Type of processing/ gear	Calendar year		
		1982	1983	1984
Mothership (Motherhip)	Total	<u>6</u>	<u>6</u>	<u>6</u>
	Fish meal	<u>5</u>	<u>5</u>	<u>5</u>
	Frozen fish	1	1	1
Mothership (Catcher boat)	Total	<u>83</u>	<u>80</u>	<u>77</u>
	Pair trawl	58	56	54
	Danish seine	16	14	13
	Stern trawl	9	10	10
North Pacific Trawl	Total	<u>49</u>	<u>56</u>	<u>42</u>
	Stern trawl	49	56	42
North Pacific Longline-gillnet	Total	<u>22</u>	<u>22</u>	<u>22</u>
	Longline	22	22	22
Landbased	Total	<u>70</u>	<u>70</u>	<u>70</u>
	Trawl	70	70	70

Data for 1984 is preliminary

Table 2. Catch-effort statistics (all species included) of each gear used by Japanese groundfish fisheries (mothership, North Pacific trawl and North Pacific longline-gillnet) in the Bering Sea, 1982 and 1983 calendar years.

Type of gear and standard unit of effort	1983			1982		
	Effort	Catch(t)	CPUE	Effort	Catch(t)	CPUE
Pair trawl (hours)	24,134	306,313	12.69	28,561	363,397	12.72
Daish seine (sets)	10,557	62,005	5.87	12,148	75,386	6.21
Stern trawl (hours)	118,947	428,519	3.60	119,577	435,939	3.65
Longline (Hachi)	457,600	14,169	0.030	416,400	10,073	0.024
Total		811,006			884,795	

Table 3. Annual catch(t) by species caught by Japanese groundfish fisheries (mothership, North Pacific trawl and North Pacific longline-gillnet) in the Bering Sea, 1982 and 1983 calendar year.

Species	1983	1982
Total	811,007	884,795
Yellowfin sole	64,702	63,684
Arrowtooth flounder	3,918	7,215
Greenland turbot	15,404	16,730
Other flatfish	11,179	15,599
Sablefish	2,734	2,326
Pacific cod	25,705	16,366
Pollock	673,088	746,025
Pacific ocean perch	716	1,232
Others	13,561	15,618



Table 4. Comparison of catch(t) by species caught by Japanese groundfish fisheries in the Bering Sea between 1982 and 1983 calendar years.

Fishery	Mothership					
	1982		1983		Difference	
Year	Catch	%	Catch	%	Catch	%
Total	516,862	100.0	450,381	100.0	-66,481	-12.9
Yellowfin sole	45,801	8.9	36,647	8.1	- 7,154	-15.6
Arrowtooth fl.	5,675	1.1	2,366	0.5	- 3,309	-58.3
Greenland turb.	3,281	0.6	1,243	0.3	- 2,038	-62.1
Other flatfish	6,863	1.3	5,531	1.2	- 1,332	-19.4
Sablefish	61	0.0	41	0.0	- 20	-32.8
Pacific cod	7,467	1.4	8,945	2.0	+ 1,478	+19.8
Pollock	441,308	85.4	389,634	86.5	-51,674	-11.7
POP	3	0.0	1	0.0	- 2	-66.7
Others	6,403	1.2	5,973	1.3	- 430	-6.7

Fishery	North Pacific trawl					
	1982		1983		Difference	
Year	Catch	%	Catch	%	Catch	%
Total	357,860	100.0	346,456	100.0	-11,404	- 3.2
Yellowfin sole	22,262	6.2	25,056	7.2	+ 2,794	+12.6
Arrowtooth fl.	1,461	0.4	1,460	0.4	- 1	- 0.0
Greenland turb.	10,224	2.9	11,823	3.4	+ 1,599	+15.6
Other flatfish	5,112	1.4	5,649	1.6	+ 537	+10.5
Sablefish	135	0.0	252	0.1	+ 117	+86.7
Pacific cod	4,853	1.4	8,288	2.4	+ 3,435	+70.8
Pollock	304,607	85.2	283,300	81.8	-21,307	+ 7.0
POP	1,219	0.3	705	0.2	- 514	-42.2
Others	7,987	3.3	9,923	2.9	+ 1,936	+24.2

Fishery	North Pacific longline-gillnet					
	1982		1983		Difference	
Year	Catch	%	Catch	%	Catch	%
Total	10,073	100.0	14,169	100.0	+4,096	+40.7
Yellowfin sole	-	-	-	-	-	-
Arrowtooth fl.	80	0.8	93	0.6	+ 13	+16.3
Greenland turb.	3,225	32.0	2,338	16.5	- 887	+27.5
Other flatfish	-	-	1	0.0	+ 1	-
Sablefish	2,130	21.1	2,441	17.2	+ 311	+14.6
Pacific cod	4,047	40.2	8,471	59.8	+4,424	+109.3
Pollock	110	1.1	154	1.1	+ 44	+40.0
POP	10	0.1	11	0.1	+ 1	+10.0
Others	471	4.7	660	4.7	+ 189	+40.1

Table 5. Monthly catch(t) by major species by type of Japanese groundfish fisheries in the Bering Sea during 1983 calendar year.

	Fishery	Gear	Species	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Mothership fishery	Surimi fleet	PT DS ST	Total	410,472	-	-	-	-	12,490	87,042	103,395	101,475	83,676	22,394	-	-	
			Yellowfin sole	1,926	-	-	-	-	-	95	792	341	520	172	6	-	-
			Arrowtooth fl.	2,352	-	-	-	-	-	107	334	298	804	646	163	-	-
			Greenland turb.	1,242	-	-	-	-	-	229	265	205	286	224	33	-	-
			Sablefish	42	-	-	-	-	-	-	1	-	3	17	21	-	-
			Pacific cod	8,370	-	-	-	-	-	544	1,764	2,278	1,750	1,368	666	-	-
			Pollock	388,712	-	-	-	-	-	10,919	81,598	98,645	96,270	80,041	21,239	-	-
			POP	0	-	-	-	-	-	0	-	-	-	0	0	-	-
			Others	7,824	-	-	-	-	-	596	2,288	1,628	1,838	1,208	266	-	-
			Frozen-fish fleet	PT ST	Total	39,910	-	-	-	-	-	-	1,502	9,495	8,830	7,617	7,798
	Yellowfin sole	34,723			-	-	-	-	-	-	1,330	8,225	7,479	6,782	6,912	3,989	-
	Arrowtooth fl.	14			-	-	-	-	-	-	-	-	-	4	8	2	-
	Greenland turb.	0			-	-	-	-	-	-	-	-	-	0	0	-	-
	Sablefish	-			-	-	-	-	-	-	-	-	-	-	-	-	-
	Pacific cod	575			-	-	-	-	-	-	-	34	229	155	28	53	76
	Pollock	921			-	-	-	-	-	-	-	25	198	222	121	170	185
	POP	-			-	-	-	-	-	-	-	-	-	-	-	-	-
	Others	3,681			-	-	-	-	-	-	-	113	847	974	686	649	416
	North Pacific longline-gill net fishery	LL			Total	14,169	1,061	1,828	946	905	1,004	319	1,207	710	1,318	1,303	1,554
			Yellowfin sole	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arrowtooth fl.			93	0	1	1	4	10	5	6	7	23	14	4	17		
Greenland turb.			2,338	24	2	8	45	121	78	435	360	724	159	158	223		
Sablefish			2,441	20	50	22	119	439	100	183	165	297	262	217	568		
Pacific cod			8,471	965	1,700	849	698	379	102	501	134	161	800	1,086	1,096		
Pollock			154	11	26	20	6	7	4	10	3	12	14	23	19		
POP			11	0	1	0	0	1	1	2	1	1	1	1	1		
Others			661	41	48	46	33	47	29	70	40	100	53	65	90		
North Pacific trawl fishery			Surimi factory	ST	Total	270,960	5,204	21,009	28,602	20,822	2,233	7,945	34,759	39,449	37,389	44,020	23,567
	Yellowfin sole	18			-	-	-	-	-	-	-	16	2	0	0	-	
	Arrowtooth fl.	187			1	16	10	4	-	0	16	35	32	25	26	19	
	Greenland turb.	162			5	6	11	4	1	1	3	6	35	58	32	2	
	Sablefish	81			0	0	0	0	-	-	-	3	7	9	20	35	
	Pacific cod	2,173			22	97	208	184	30	39	312	374	324	291	265	28	
	Pollock	266,813			5,152	20,831	28,295	20,549	2,182	7,887	34,334	38,942	36,654	43,241	22,903	5,844	
	POP	38			-	0	0	0	0	5	2	3	6	4	16	1	
	Others	1,488			24	59	78	81	20	13	73	80	329	381	290	60	
	Frozen-fish factory	ST			Total	75,496	6,622	7,854	8,566	3,356	3,334	3,322	3,765	7,238	6,137	6,267	6,963
			Yellowfin sole	28,038	771	1,432	2,656	1,864	771	277	873	3,283	2,620	3,062	2,222	8,208	
			Arrowtooth fl.	1,273	190	134	117	25	92	109	100	62	132	70	133	109	
			Greenland turb.	11,661	84	45	387	189	692	1,528	1,558	1,676	2,288	1,637	1,351	225	
			Sablefish	171	0	-	45	1	4	4	4	17	9	27	28	34	
			Pacific cod	6,115	191	378	1,053	513	359	130	225	423	185	529	1,064	1,065	
			Pollock	16,487	4,217	4,566	2,525	169	486	712	415	642	261	410	921	1,165	
			POP	667	-	1	1	2	285	166	14	108	7	61	4	19	
			Others	11,084	1,169	1,298	1,782	593	645	396	576	1,027	635	471	1,240	1,247	

DT: Danish seine, LL: Longline, PT: Pair trawl, ST: Stern trawl

Table 6. Annual catch (t) by species caught by Japanese landbased dragnet fishery in the Bering Sea during 1981 and 1983 calendar years.

Species	1981	1982	1983
Total	110,792	95,965	72,520
Yellowfin sole	1,286	727	214
Arrowtooth flounder	3,231	2,863	4,691
Greenland turbot	18,661	21,190	19,737
Other flatfishes	11,803	11,688	5,064
Sablefish	275	230	142
Pacific cod	4,369	4,123	5,263
Pollock	43,858	37,865	28,703
Pacific ocean perch	1,192	529	79
Others	26,117	16,750	8,627

Table 7. Preliminary catch(t) data Japanese groundfish fisheries by INPFC Areas in the Bering Sea during January through July in 1984. The data included catch by landbased dragnet fishery. Catch data for the same period in 1983 are shown in parentheses.

Species	Bering Sea			Aleutians	TOTAL
	I	II	III	V	
Total	38,154.3 (147,802.4)	209,764.3 (227,351.1)	- (5.5)	32,848.2 (35,048.7)	280,766.8 (410,207.7)
Pollock	5,368.5 (110,548.5)	193,817.2 (195,741.9)	- (5.5)	31,351.4 (25,172.5)	230,537.1 (331,468.4)
P. cod	3,111.7 (5,184.4)	10,396.3 (9,483.5)	- (-)	434.3 (1,474.9)	13,942.3 (16,142.8)
POP	9.8 (11.0)	64.8 (22.1)	- (-)	67.6 (395.9)	142.2 (429.0)
Yellowfin sole	21,982.7 (18,670.9)	97.0 (537.3)	- (-)	1.3 (64.3)	22,081.0 (19,272.5)
Other faltfish	6,888.8 (9,790.5)	3,393.9 (16,442.5)	- (-)	762.2 (4,408.8)	11,044.9 (30,645.8)
Sablefish	190.5 (378.5)	86.2 (466.4)	- (-)	116.9 (136.8)	393.6 (981.7)
Other fish	593.1 (3,129.9)	1,241.0 (3,639.9)	- (-)	100.6 (2,569.9)	1,934.7 (9,339.7)
Squid	9.2 (62.2)	667.9 (907.6)	- (-)	13.9 (362.2)	691.0 (1,332.0)

Fig. 1. Geographical distribution of annual effort of pair trawl (in hours) attached to the motherships in 1983 calendar year.

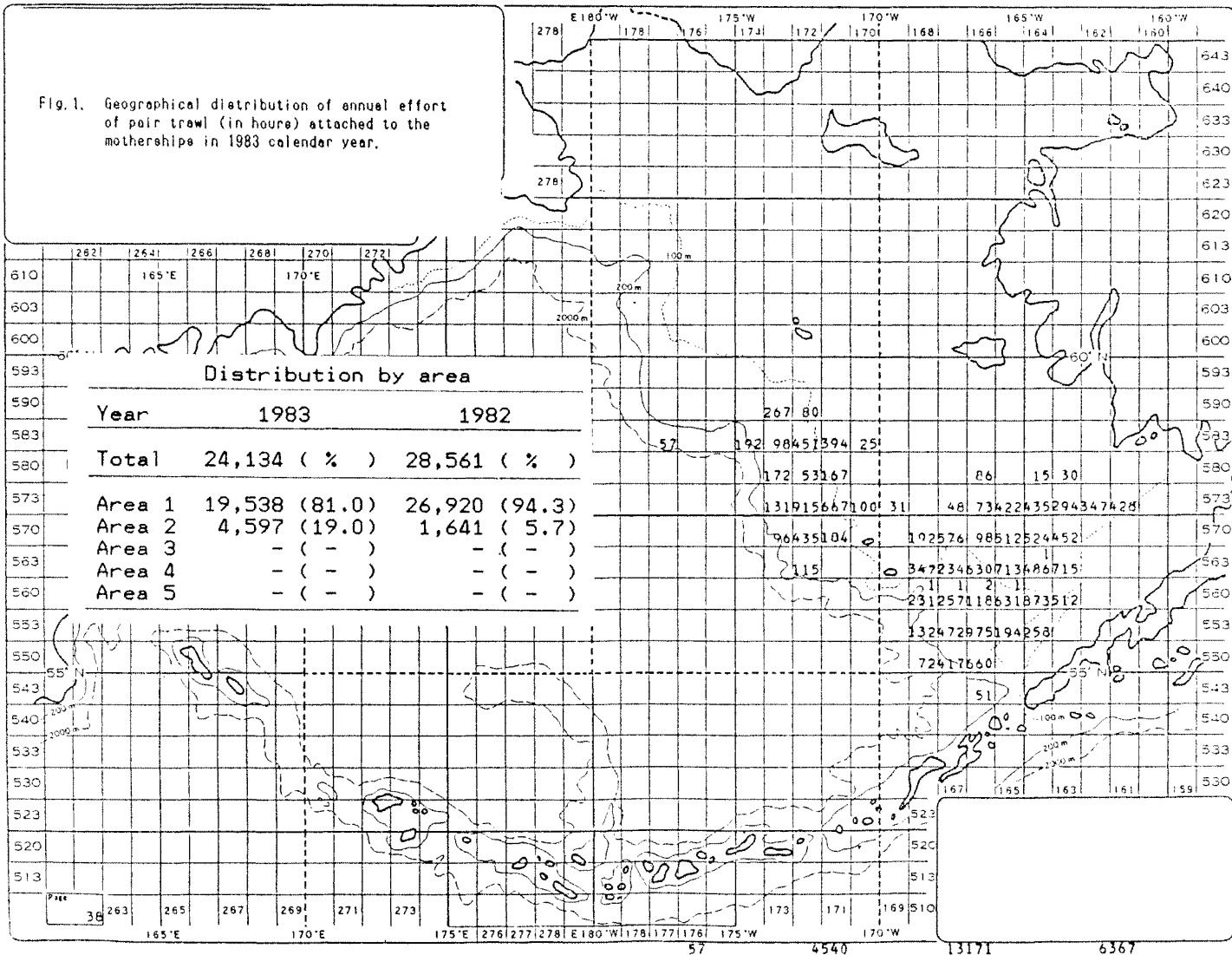


Fig. 2. Geographical distribution of annual effort of Danish seine (in sets) attached to the motherships in 1983 calendar year.

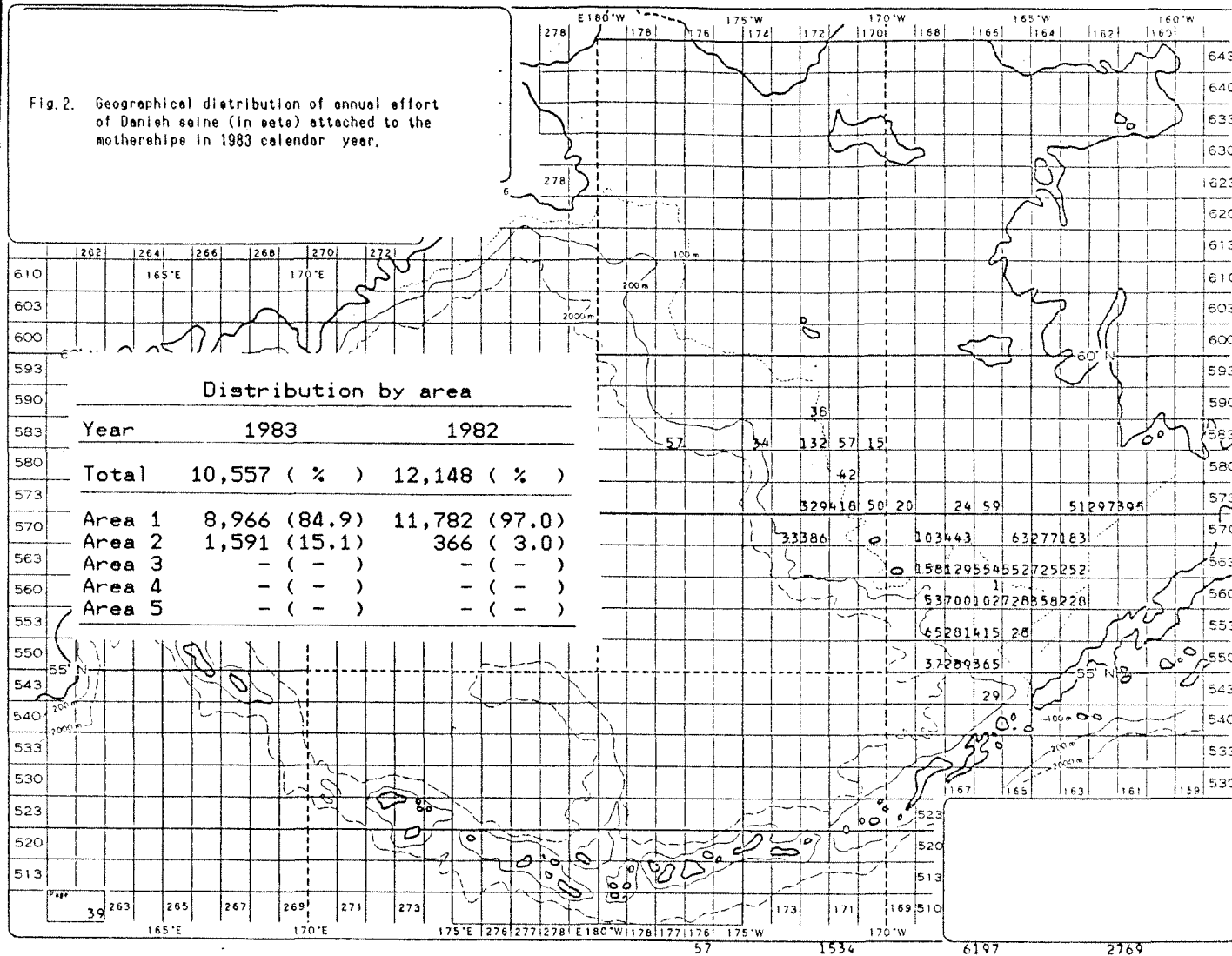


Fig.3. Geographical distribution of annual effort (in hour) of the mother-ships and North Pacific trawl fisheries in 1983 calendar year.

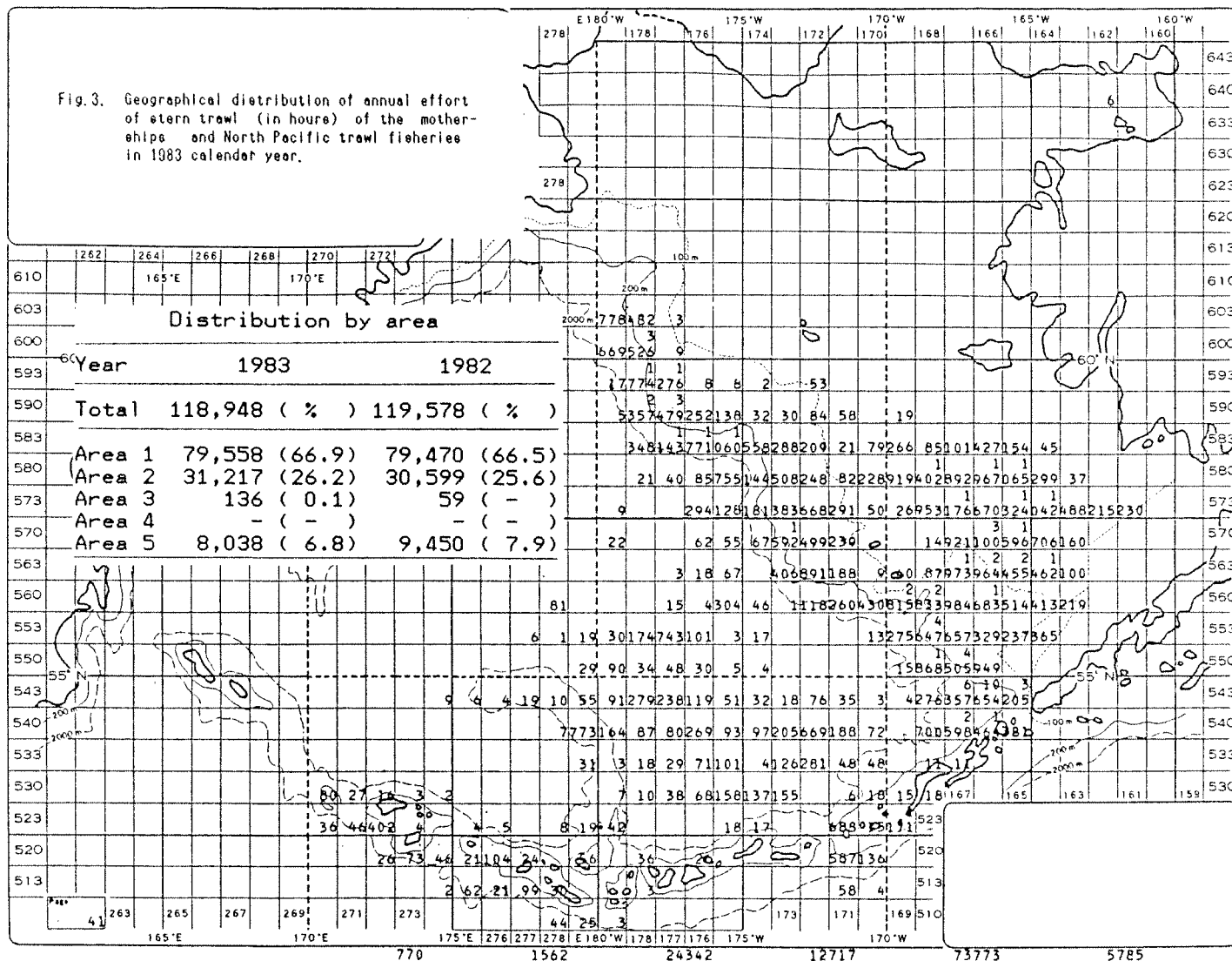


Fig. 4. Geographical distribution of annual effort of longline (in hechi) of North Pacific longline-gillnet fishery in 1983 calendar year.

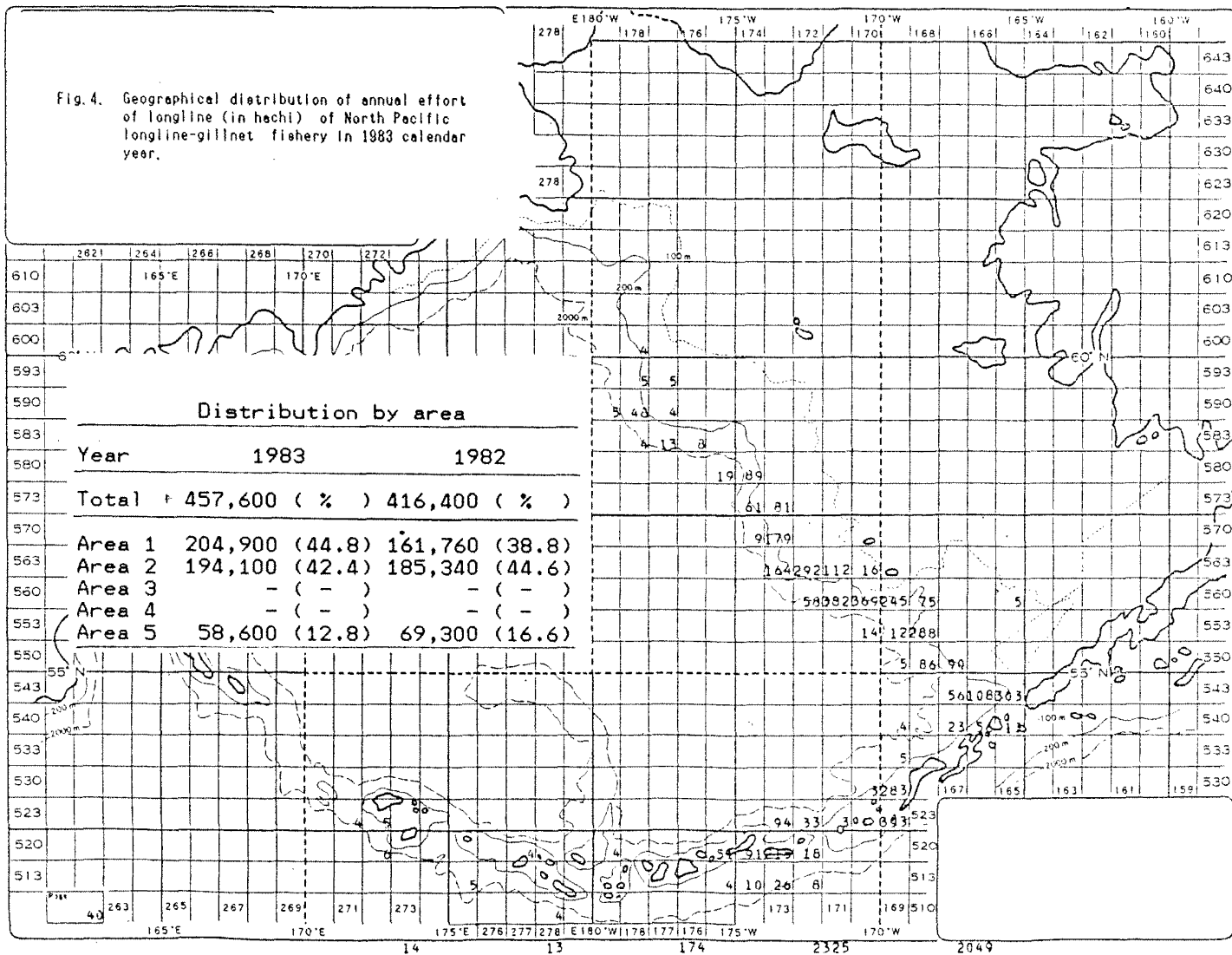




Fig. 5. Geographical distribution of annual catch of pollock(t) in 1983 calendar year.

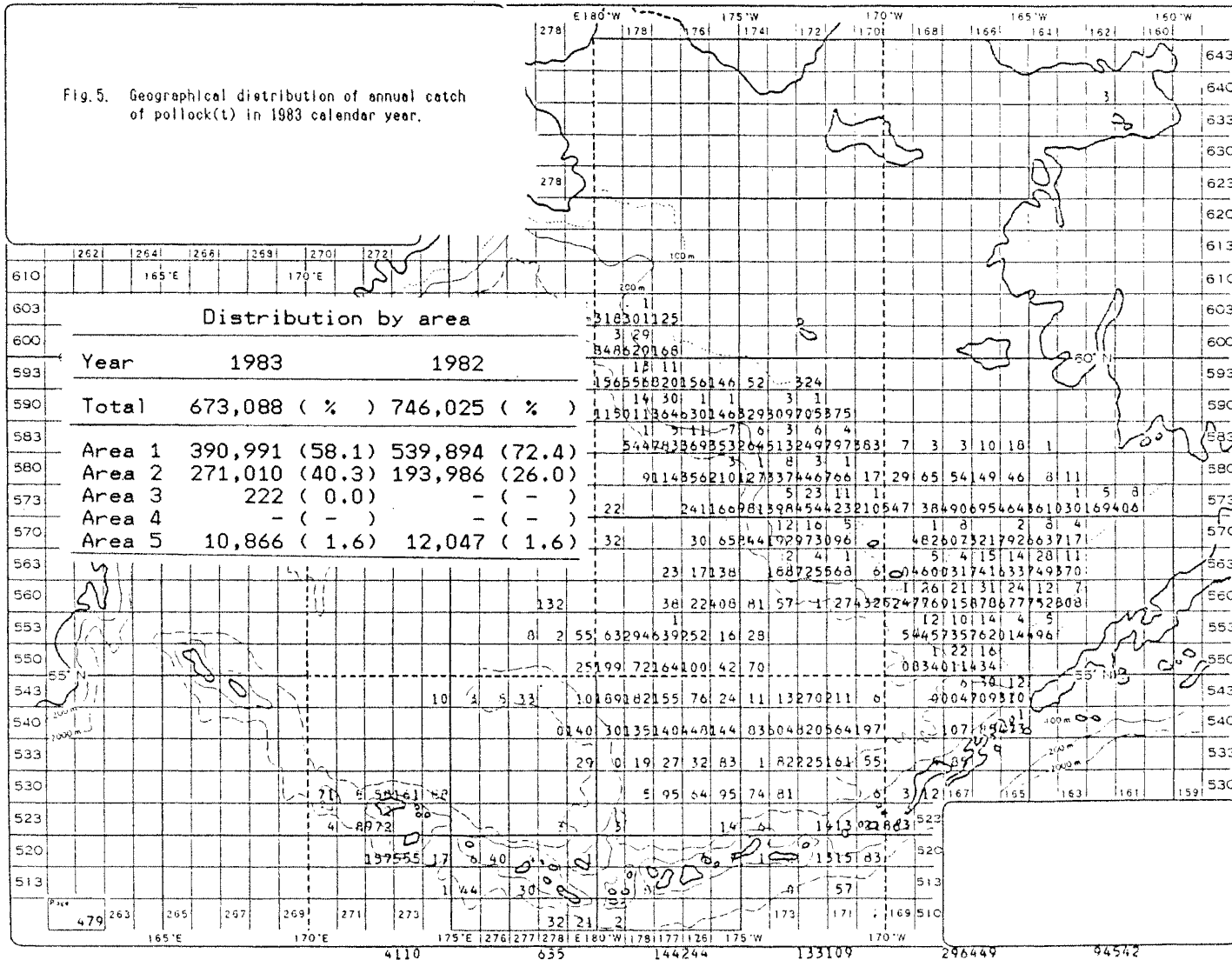
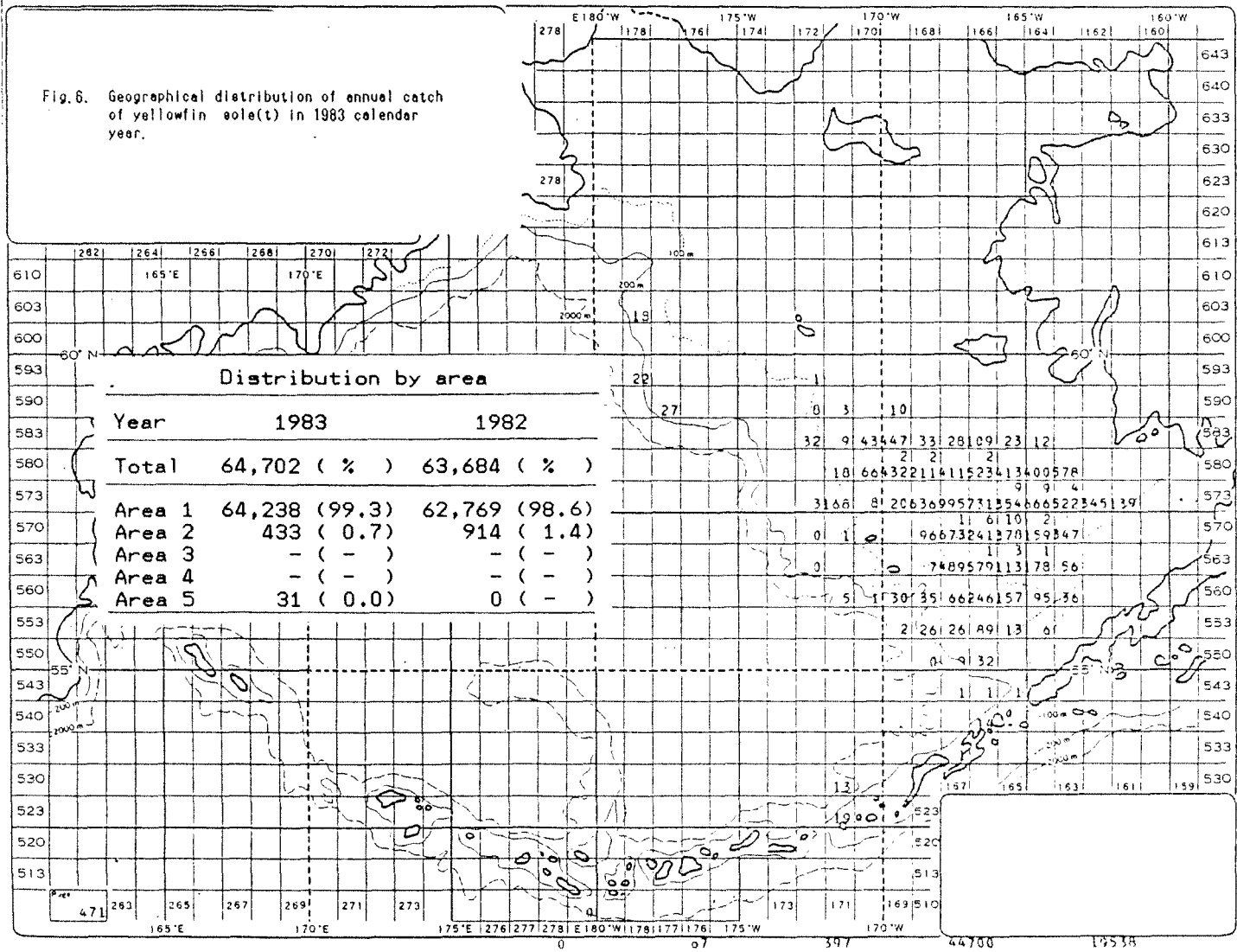


Fig.6. Geographical distribution of annual catch of yellowfin sole(t) in 1983 calendar year.



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TRANSLATION

OUTLINE OF THE JAPANESE GROUND FISH FISHERY IN THE BERING SEA  
IN 1983 JANUARY TO DECEMBER AND 1984 JANUARY TO JULY

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1. The Japanese groundfish fishery in 1983

The Japanese groundfish fisheries operating in the Bering Sea and Aleutian area in 1983 were controlled by the enactment of the U.S. Fishery Conservation and Management Act of 1976 and various regulations which continued to be applied for fishing activities in 1983.

In 1983, as in 1982, the Japanese groundfish fisheries operating in the Bering Sea and Aleutian area were of four types: the mothership-type trawl, North Pacific trawl, North Pacific longline-gillnet, and landbased dragnet fisheries.

The number of fishing vessels in 1983 were: six motherships with 83 catcher boats in the mothership-type trawl fishery, 49 vessels in the North Pacific trawl fishery, 22 vessels in the North Pacific longline-gillnet fishery, and 70 vessels in the landbased dragnet fishery.

(a) Mothership-type trawl, North Pacific trawl, and North Pacific longline-gillnet fisheries (1983 January to December)

The numbers of fishing vessels which actually operated in the Bering Sea and Aleutian areas in 1983 in the mothership-type trawl, North Pacific trawl, and North Pacific longline-gillnet fisheries are shown in Table 1. According to this table, changes in number of vessels in 1983 from 1982 were: three less catcher boats attached to the motherships, seven more North Pacific trawlers which conduct independent operations in the trawl fishery; the number of longliners was similar to that in 1982.

The catch, effort, and CPUE by the mothership-type trawl, North Pacific trawl, and North Pacific longline-gillnet fisheries combined in the 1983 calendar year are shown by gear in Table 2.

Fishing effort with pair trawls in 1983 was 24,134 hours, a decrease of 15.5% (4,427 hours) from that in the previous year. The catch by pair trawlers in 1983 constituted 37.8% of the total catch (811,006 t) and was 306,313 t, a decrease of 57,084 t (15.7%) from the previous year. CPUE was 12.69 t/hr, a slight decrease of 0.03 t/hr from the previous year.

Fishing effort with Danish seiners was 10,557 sets in 1983, a decrease of 13.1% (1,591 sets) from the fishing effort in 1982 which was 12,148 sets. The catch by the Danish seine fishery in 1983 was 62,005 t, a decrease of 13,381 t (17.7%) from the previous year and constituted 7.6% of the overall catch. CPUE in 1983 was 5.87 t/set, a slight decrease of 0.34 t/set from the previous year (6.21 t/set in 1982).

Fishing effort by trawlers in 1983 was 118,947 hours, a decrease of 630 hours (0.5%) from the previous year. Catch by trawlers in 1983 was 428,519 t, a decrease of 7,420 t (1.7%) from the previous year and constituted 52.8% of the overall catch (811,006 t). Trawler CPUE in 1983 was 3.60 t/hr, a slight decrease of 0.05% from the previous year.

Longline fishing effort and catch in 1983 was 457,600 hachi and 14,169 t, an increase of 9.9% (41,200 hachi) and 40.7% (4,096 t), respectively, from the previous year. Longline catch constituted only 1.7% of the total catch (811,006 t). CPUE in 1983 was 0.030 t/10 hachi, an increase of 0.006 t/10 hachi from 0.024 t/10 hachi in 1982.

The geographical distribution of fishing effort in these fisheries, by type of gear, is summarized in Figs. 1 to 4. Almost all fishing effort with pair trawls in 1983 was concentrated on the continental shelf in INPFC Area 1, where it amounted to 81.0% (19,538 hours) of the total effort (24,134 hours). Fishing effort with Danish seines was also concentrated on the continental shelf in INPFC Area 1 (85.0% of the total effort or 8,966 sets).

Fishing effort by the trawl fishery in 1983 was concentrated in the area along the edge of the continental shelf. This pattern was similar to that in 1982. Of the fishing effort by the longline fishery in 1983, 87.2% of the overall effort of 457,600 hachi was in INPFC Areas 1 and 2.

The total catch by the mothership-type, North Pacific trawl, and North Pacific longline-gillnet fisheries in 1983 was 811,007 t, a decrease of 8.3% or 73,788 t from the previous year (Table 3).

Of the total catch taken in 1983, pollock accounted for 82.9% (673,088 t), yellowfin sole, 8.0% (64,702 t), Pacific cod, 3.2% (25,705 t), Greenland turbot, 1.9% (15,404 t), "other flatfish", 1.4% (11,179 t), and "other species", 1.7% (13,561 t) (Table 3).

Compared with catch by species in 1982, those of yellowfin sole, Pacific cod, and sablefish increased by 1.6% (1,018 t), 57.1% (9,339 t), and 17.5% (408 t), respectively, but catch of all other species decreased (Table 3). Pollock, in particular, decreased by 9.8% (72,937 t) from the previous year.

The total catch by the mothership-type trawl fishery in 1983 was 450,381 t, a decrease of 12.9% (6,481 t). The catch was mainly pollock, 86.5% (389,634 t), yellowfin sole, 8.1% (36,647 t), and Pacific cod, 2.0% (8,945 t). Compared with catches in 1982, Pacific cod increased by 19.8% (1,478 t), but all other species decreased (Table 4).

The total catch by the North Pacific trawl fishery in 1983 was 346,456 t, a decrease of 3.2% (11,404 t) from the previous year. The main catches were pollock, 81.8% (283,300 t), yellowfin sole, 7.2% (25,056 t), and Greenland turbot, 3.4% (11,823 t). Compared with catches in 1982, those of pollock and Pacific ocean perch decreased (Table 4).

The total catch by the North Pacific longline-gillnet fishery in 1983 was 14,169 t, an increase of 40.7% (4,096 t) from the previous year. The main species taken were Pacific cod (40.2% or 8,471 t), sablefish (17.2% or 2,441 t), and Greenland turbot (2,338 t). Compared with catches in 1982, catches of all species except Greenland turbot increased (Table 4). In particular, Pacific cod catches were about twice the level in the previous year.

The main fishing grounds for pollock were the eastern Bering Sea, excluding U.S.S.R. waters. Of the pollock catch in 1983, 58.1% came from the southeastern grounds (east of 170°W) and 41.9% from the northwest grounds (west of 170°W) (Fig. 5).

The main fishing grounds for yellowfin sole were the southeast grounds, along the continental shelf in the Bering Sea, from which 99.3% of the yellowfin sole catch was taken, as was the case in 1982 (Fig. 6).

Catches of the main species by fishery and by month in 1983 are shown in Table 5.

(b) Landbased dragnet fishery (1983 January to December)

In 1983, a total of 70 trawlers operated in the Bering Sea and Aleutian area west of 170°W as a landbased dragnet fishery (Table 1).

Total catch by this fishery in 1983 amounted to 72,520 t, a decrease of 24.4% (23,445 t) from the previous year. Major species in the catch were pollock (39.6%, 28,703 t), Greenland turbot (27.2%, 19,737 t), and Pacific cod (7.3%, 5,263 t). Compared with the catch in 1982, the catch of all species other than arrowtooth flounder and Pacific cod decreased (Table 6).

## 2. Japanese groundfish fisheries in 1984

In 1984, six motherships with 77 catcher boats operated in the Bering Sea and Aleutian area. In addition, 42 stern trawlers in the North Pacific trawl fishery, 22 longline-gillnetters in the North Pacific longline-gillnet fishery, and 70 stern trawlers in the landbased dragnet fishery operated but because of the catch quota, fishing regulations, and rising production costs, fishing was voluntarily discontinued from April to the end of May (Table 1).

The preliminary overall catch by the mothership-type, North Pacific trawl, North Pacific longline-gillnet, and the landbased dragnet fisheries in the Bering Sea and Aleutian area as of the end of July was 280,767 t.

In comparison with the same period in 1983, the catch decreased by 32% (129,441 t). Catches of all species except yellowfin sole decreased from the previous year (Table 7). Of the overall catch in 1984, pollock accounted for 82% (230,537 t), yellowfin sole, 8% (22,081 t), and Pacific cod, 5% (13,942 t). Of the overall catch, 14% came from Area 1, 75% from Area 2, and 11% from Area 5.

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TABLES 1 TO 7 AND FIGS. 1 TO 6 ARE IN ENGLISH IN THE JAPANESE DOCUMENT