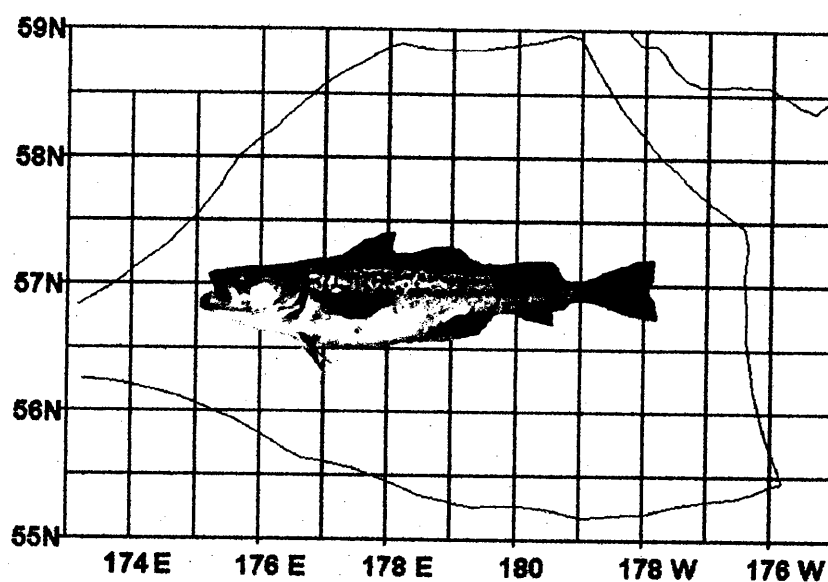


**Data Base of the Japanese Pollock Fisheries
In the International Waters
of the Central Bering Sea during 1984-1991**



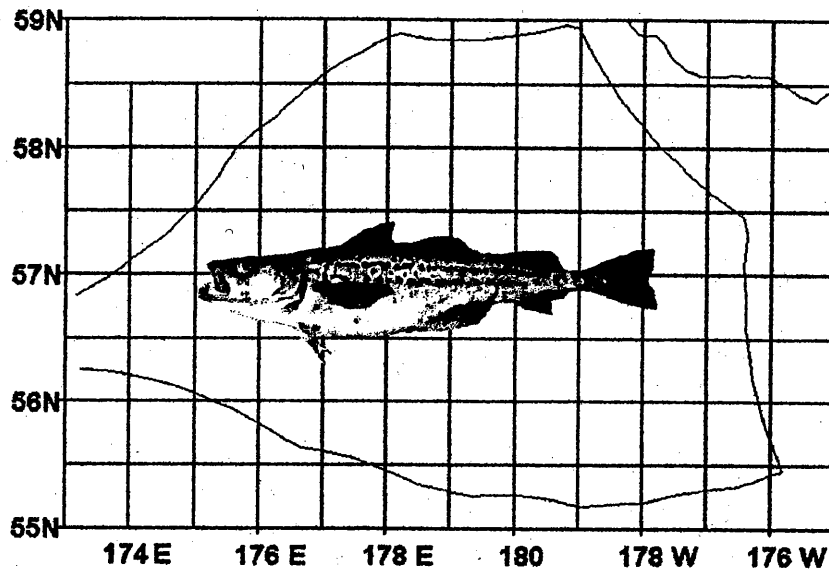
Prepared by

Hokkaido National Fisheries Research Institute

Fisheries Research Agency

2002

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Contents

Description of work	-----	1
North Pacific Trawl Fisheries		
Monthly catch, effort and CPUE of walleye pollock in the Donut Hole area during 1984-1991.		
Table 2: 1984	-----	7
Table 3: 1985	-----	9
Table 4: 1986	-----	12
Table 5: 1987	-----	16
Table 6: 1988	-----	23
Table 7: 1989	-----	33
Table 8: 1990	-----	41
Table 9: 1991	-----	49
Monthly catch of pelagic walleye pollock in the Donut Hole area by statistical blocks (0.5°Lat.x1°Long.) during 1984-1991.		
Figure 1: 1984	-----	56
Figure 2: 1985	-----	58
Figure 3: 1986	-----	60
Figure 4: 1987	-----	62
Figure 5: 1988	-----	64
Figure 6: 1989	-----	66
Figure 7: 1990	-----	68
Figure 8: 1991	-----	70
Landbased Dragnet Fisheries		
Monthly catch, effort and CPUE of walleye pollock in the Donut Hole area during 1984-1991.		
Table 10: 1984	-----	75
Table 11: 1985	-----	78
Table 12: 1986	-----	82

Data Base of the Japanese Pollock Fisheries International waters of the Bering Sea during 1984-1991

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DESCRIPTION OF THE WORK

The Science and Technology Committee of the Bering Sea Pollock Convention discussed the importance of historical catch data to understand the stock in the central Bering Sea. To cope with this data rescue program, this data base was compiled by the Hokkaido National Fisheries Research Institute (HNF) of the Fisheries Research Agency. In the central Bering Sea area, significant abundances of pelagic walleye pollock were found in the late 1970s, and a mid-water trawl fishery was developed rapidly in the 1980s. Pollock harvest in the international waters was especially high during the late 1980s and the resulting fishery developed on the strong 1978 year class (Table 1). Pollock fishery in the international waters has been closed since 1993 as a result of a rapid decrease in abundance. The mechanism of the rise and decline of these pelagic pollock stock is still in the fog. The major purpose of this work is to rescue the historical information of pelagic walleye pollock fisheries in the international waters. Monthly efforts, catches, and CPUE data in each statistical block is thought to be important to investigate the actual conditions of the fisheries. Main task of this work was to construct an electric data base of pollock fisheries in the area during 1984-1991.

Japanese stern trawl fisheries in this area comprised the following two types of the fisheries:

- North Pacific Trawler (NPT)
- Landbased Dragnet (LBD).

Before 1987, the statistics from these two types of fisheries were compiled separately. NPT and LBD statistics were compiled by the National Research Institute of Far Seas Fisheries (NRIFSF) and HNF, respectively. After 1987, LBD statistics were incorporated into NPT statistics, and both of the statistics were compiled by NRIFSF. From 1998, staff and function for North Pacific groundfish study moved from NRIFSF to HNF, and HNF take charge of the Bering Sea pollock study.

In this data base, the NPT and LBD statistics were prepared separately for 1984-1986 statistics. After 1987 statistics, information of the LBD fisheries was included to the NPT statistics. There was no substantial difference in catch ability between NPT and LBD.

In this work, the data from "North Pacific Groundfish Fisheries Statistics (National Research Institute of Far Seas Fisheries)" were used for preparing electric data base for NPT. The area of the central Bering Sea was divided into statistical blocks (0.5°latitude by 1°longitude). Efforts, catches, and CPUE were computed for each block. The statistical data was listed in Table 2-10 for NPT. For visual presentation of the pollock catches in the area, special program was prepared by HNF. Figures 1-8 shows monthly pollock catches by statistical block for NPT.

Data from "Annual statistical report for Far Seas Groundfish Fisheries (HNF)" were also used for preparing electric data base for LBD. The statistical data was listed in Table 10-12. During this process, insufficient descriptions were found out on the position information of 1984 and 1985 LBD statistics. There was no information about east or west longitude, and the accurate position was not able to figure out. For this reason, the visual presentation of the pollock catches was not prepared for LBD data base.

Most of the statistical numbers were rounded through the process of the work. This is the major reason that the numbers in this data base does not coincide in details with the official statistical numbers. If necessary, the official information about Japanese

pollock fisheries in the Bering Sea is available from the following INPFC documents.

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Table 1. Effort and catch of pelagic pollock fisheries by Japanese trawler operated in the international waters during 1984-1991.

	1984	1985	1986	1987	1988	1989	1990	1991
North Pacific Trawl								
Effort (hours)	10,749	17,078	30,399	93,635	109,785	108,658	135,414	74,928
Pollock catch (t)	33,343	124,174	375,030	783,286	750,012	654,923	417,067	140,874
CPUE	3.1	7.3	12.3	8.4	6.8	6.0	3.1	1.9
Landbased Dragnet								
Effort (hours)	11,941	13,757	50,922					
Pollock catch (t)	62,661	59,169	322,947					
CPUE	5.2	4.3	6.3					
Combined								
Effort (hours)	22,690	30,835	81,321	93,635	109,785	108,658	135,414	74,928
Pollock catch (t)	96,004	183,343	697,977	783,286	750,012	654,923	417,067	140,874
CPUE	4.2	5.9	8.6	8.4	6.8	6.0	3.1	1.9

North Pacific Trawl Fisheries
(1984-1991)

Table 2. Monthly catch, effort and CPUE of walleye pollock in the central Bering Sea by statistical blocks (0.5 Lat. X 1 Long.) for the Japanese fisheries in 1984.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1984	Jan.	55.15 N	175.3 W	5	15	0.3
1984	Jan.	55.15 N	176.3 W	180	175	1
1984	Jan.	55.15 N	177.3 W	278	172	1.6
1984	Jan.	55.15 N	178.3 W	139	67	2.1
1984	Jan.	55.15 N	179.3 W	109	58	1.9
1984	Jan.	55.15 N	178.3 E	19	13	1.5
1984	Jan.	55.45 N	175.3 W	33	23	1.4
1984	Jan.	55.45 N	178.3 W	36	30	1.2
1984	Jan.	55.45 N	179.3 W	21	9	2.3
1984	Jan.	55.45 N	178.3 E	2413	1201	2
1984	Jan.	55.45 N	179.3 E	688	233	3
1984	Jan.	56.15 N	178.3 E	2127	911	2.3
1984	Jan.	56.15 N	179.3 E	14	10	1.4
1984	Jan.	56.45 N	178.3 E	229	106	2.2
1984	Jan.	57.45 N	178.3 E	11	9	1.2
1984	Jan.	58.15 N	178.3 E	4	5	0.8
1984	Jan.	58.45 N	169.3 W	2	36	0.1
1984	Jan.	58.45 N	178.3 E	2	4	0.5
1984	Feb.	55.15 N	175.3 W	341	196	1.7
1984	Feb.	55.15 N	176.3 W	140	24	5.8
1984	Feb.	55.45 N	175.3 W	28	38	0.7
1984	Feb.	55.45 N	176.3 W	2199	413	5.3
1984	Feb.	55.45 N	177.3 W	497	146	3.4
1984	Feb.	55.45 N	178.3 W	22	9	2.4
1984	Feb.	55.45 N	179.3 W	82	33	2.5
1984	Feb.	55.45 N	176.3 E	38	14	2.7
1984	Feb.	55.45 N	177.3 E	14	15	0.9
1984	Feb.	55.45 N	178.3 E	995	284	3.5
1984	Feb.	55.45 N	179.3 E	1475	513	2.9
1984	Feb.	56.15 N	176.3 W	4624	1178	3.9
1984	Feb.	56.15 N	177.3 W	1197	342	3.5
1984	Feb.	56.15 N	178.3 W	90	11	8.2
1984	Feb.	56.45 N	176.3 E	4	8	0.5
1984	Feb.	56.45 N	177.3 E	3	4	0.8
1984	Feb.	56.45 N	178.3 E	11	6	1.8
1984	Feb.	57.15 N	176.3 E	7	9	0.8
1984	Feb.	57.15 N	177.3 E	3	8	0.4
1984	Feb.	57.15 N	179.3 E	3	8	0.4
1984	Feb.	57.45 N	177.3 E	10	20	0.5
1984	Feb.	57.45 N	178.3 E	4	10	0.4
1984	Feb.	57.45 N	179.3 E	9	4	2.3
1984	Mar.	55.15 N	175.3 W	96	23	4.2
1984	Mar.	55.15 N	176.3 W	318	110	2.9
1984	Mar.	55.15 N	177.3 W	5	9	0.6
1984	Mar.	55.15 N	178.3 W	23	6	3.8
1984	Mar.	55.45 N	176.3 W	3732	1240	3
1984	Mar.	55.45 N	177.3 W	3958	1212	3.3
1984	Mar.	55.45 N	178.3 W	130	42	3.1
1984	Mar.	55.45 N	179.3 W	80	14	5.7
1984	Mar.	55.45 N	178.3 E	52	3	17.3
1984	Mar.	55.45 N	179.3 E	70	8	8.8
1984	Mar.	56.15 N	176.3 W	167	71	2.4
1984	Mar.	56.15 N	177.3 W	1711	400	4.3
1984	Mar.	56.15 N	178.3 W	22	4	5.5
1984	Mar.	56.45 N	176.3 W	145	16	9.1
1984	Mar.	56.45 N	177.3 W	267	118	2.3

Table 2. Continued.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1984	Mar.	56.45 N	178.3 W	9	1	9
1984	Mar.	56.45 N	179.3 W	0	2	0
1984	Mar.	57.15 N	177.3 W	115	64	1.8
1984	Mar.	57.15 N	178.3 W	22	21	1
1984	Mar.	57.45 N	178.3 W	4	5	0.8
1984	Mar.	58.45 N	178.3 W	147	14	10.5
1984	Mar.	58.45 N	179.3 W	65	18	3.6
1984	Mar.	58.45 N	179.3 E	3	1	3
1984	Apr.	55.45 N	177.3 W	19	18	1.1
1984	Apr.	55.45 N	178.3 W	81	46	1.8
1984	Apr.	55.45 N	179.3 W	172	84	2
1984	Apr.	55.45 N	179.3 E	93	31	3
1984	Apr.	56.15 N	174.3 E	51	27	1.9
1984	Apr.	56.15 N	175.3 E	247	77	3.2
1984	Apr.	56.15 N	176.3 E	221	85	2.6
1984	Apr.	56.15 N	177.3 E	695	128	5.4
1984	Apr.	56.15 N	178.3 E	372	122	3
1984	Apr.	56.15 N	179.3 E	362	73	5
1984	Apr.	57.45 N	178.3 W	12	7	1.7
1984	Apr.	57.45 N	179.3 W	128	36	3.6
1984	Apr.	58.15 N	178.3 W	33	16	2.1
1984	Apr.	58.15 N	179.3 W	114	31	3.7
1984	Apr.	58.15 N	179.3 E	40	8	5
1984	May	56.15 N	175.3 E	13	11	1.2
1984	May	56.15 N	174.3 E	25	9	2.8
1984	May	56.45 N	173.3 E	35	32	1.1
1984	Sep.	58.15 N	177.3 W	219	18	12.2
1984	Sep.	58.45 N	178.3 W	765	57	13.4
1984	Oct.	58.45 N	178.3 W	131	13	10.1
1984	Nov.	58.45 N	178.3 W	83	3	27.7
1984	Dec.	55.15 N	178.3 W	66	28	2.4
1984	Dec.	55.15 N	179.3 W	27	12	2.3
1984	Dec.	58.45 N	178.3 W	92	5	18.4

Table 3. Monthly catch, effort and CPUE of walleye pollock in the central Bering Sea by statistical blocks (0.5 Lat. X 1 Long.) for the Japanese fisheries in 1985.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1985	Jan.	55.15 N	177.3 W	457	93	4.9
1985	Jan.	55.15 N	178.3 W	1870	293	6.4
1985	Jan.	55.15 N	179.3 W	465	44	10.6
1985	Jan.	55.15 N	179.3 E	248	36	6.9
1985	Jan.	55.45 N	175.3 W	21	7	3
1985	Jan.	55.45 N	176.3 W	1314	222	5.9
1985	Jan.	55.45 N	177.3 W	4541	852	5.3
1985	Jan.	55.45 N	178.3 W	6349	853	7.4
1985	Jan.	55.45 N	179.3 W	3699	622	5.9
1985	Jan.	55.45 N	177.3 E	2148	253	8.5
1985	Jan.	55.45 N	178.3 E	1455	253	5.8
1985	Jan.	55.45 N	179.3 E	2904	360	8.1
1985	Jan.	56.15 N	176.3 W	22	7	3.1
1985	Jan.	56.15 N	177.3 W	483	101	4.8
1985	Jan.	56.15 N	178.3 W	487	116	4.2
1985	Jan.	56.15 N	179.3 W	585	85	6.9
1985	Jan.	56.15 N	176.3 E	19	3	6.3
1985	Jan.	56.15 N	177.3 E	52	21	2.5
1985	Jan.	56.15 N	178.3 E	443	86	5.2
1985	Jan.	56.15 N	179.3 E	422	70	6
1985	Jan.	56.45 N	177.3 W	129	36	3.6
1985	Jan.	56.45 N	178.3 W	1248	195	6.4
1985	Jan.	56.45 N	179.3 W	618	93	6.6
1985	Jan.	56.45 N	177.3 E	37	7	5.3
1985	Jan.	56.45 N	178.3 E	168	26	6.5
1985	Jan.	56.45 N	179.3 E	238	49	4.9
1985	Jan.	57.15 N	178.3 W	24	16	1.5
1985	Jan.	57.15 N	177.3 E	459	29	15.8
1985	Jan.	57.15 N	178.3 E	373	56	6.7
1985	Jan.	57.15 N	179.3 E	89	13	6.8
1985	Feb.	55.15 N	176.3 W	33	21	1.6
1985	Feb.	55.15 N	177.3 W	936	194	4.8
1985	Feb.	55.15 N	178.3 W	5115	750	6.8
1985	Feb.	55.15 N	179.3 W	1651	134	12.3
1985	Feb.	55.15 N	178.3 E	250	11	22.7
1985	Feb.	55.15 N	179.3 E	530	19	27.9
1985	Feb.	55.45 N	176.3 W	9480	1749	5.4
1985	Feb.	55.45 N	177.3 W	8680	1094	7.9
1985	Feb.	55.45 N	178.3 W	10498	1238	8.5
1985	Feb.	55.45 N	179.3 W	17663	1492	11.8
1985	Feb.	55.45 N	176.3 E	1305	124	10.5
1985	Feb.	55.45 N	177.3 E	5530	251	22
1985	Feb.	55.45 N	178.3 E	893	47	19
1985	Feb.	55.45 N	179.3 E	3640	166	21.9
1985	Feb.	56.15 N	176.3 W	52	10	5.2
1985	Feb.	56.15 N	177.3 W	67	17	3.9
1985	Feb.	56.15 N	179.3 W	688	59	11.7
1985	Feb.	57.15 N	177.3 W	56	9	6.2
1985	Mar.	55.15 N	175.3 W	59	24	2.5
1985	Mar.	55.15 N	176.3 W	986	348	2.8
1985	Mar.	55.15 N	177.3 W	1581	347	4.6
1985	Mar.	55.45 N	175.3 W	10	22	0.5
1985	Mar.	55.45 N	176.3 W	4361	1289	3.4
1985	Mar.	55.45 N	177.3 W	1512	312	4.8
1985	Mar.	55.45 N	178.3 W	910	98	9.3
1985	Mar.	55.45 N	179.3 W	120	10	12

Table 3. Continued.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1985	Mar.	55.45 N	176.3 E	1232	222	5.5
1985	Mar.	55.45 N	177.3 E	48	52	0.9
1985	Mar.	55.45 N	178.3 E	20	7	2.9
1985	Mar.	55.45 N	179.3 E	0	6	0
1985	Mar.	56.15 N	176.3 W	140	18	7.8
1985	Mar.	56.15 N	174.3 E	15	4	3.8
1985	Mar.	56.15 N	176.3 E	20	7	2.9
1985	Mar.	56.45 N	176.3 W	24	5	4.8
1985	Mar.	56.45 N	175.3 E	83	28	3
1985	Mar.	56.45 N	177.3 E	30	4	7.5
1985	Mar.	56.45 N	178.3 E	16	15	1.1
1985	Mar.	57.15 N	178.3 W	9	8	1.1
1985	Mar.	57.15 N	179.3 W	18	17	1.1
1985	Mar.	57.15 N	178.3 E	3	5	0.6
1985	Mar.	57.15 N	179.3 E	25	15	1.7
1985	Mar.	57.45 N	179.3 W	19	4	4.8
1985	Mar.	57.45 N	178.3 E	1	5	0.2
1985	Mar.	57.45 N	179.3 E	30	26	1.2
1985	Mar.	58.15 N	178.3 W	50	31	1.6
1985	Mar.	58.15 N	179.3 W	129	83	1.6
1985	Mar.	58.15 N	179.3 E	58	22	2.6
1985	Mar.	58.45 N	178.3 W	194	20	9.7
1985	Mar.	58.45 N	179.3 W	177	142	1.2
1985	Apr.	55.15 N	176.3 W	32	7	4.6
1985	Apr.	55.15 N	177.3 W	283	24	11.8
1985	Apr.	55.15 N	178.3 W	265	30	8.8
1985	Apr.	55.15 N	179.3 W	585	50	11.7
1985	Apr.	55.15 N	178.3 E	29	23	1.3
1985	Apr.	55.45 N	177.3 W	53	9	5.9
1985	Apr.	55.45 N	178.3 W	2202	221	10
1985	Apr.	55.45 N	179.3 W	1820	206	8.8
1985	Apr.	55.45 N	177.3 E	227	14	16.2
1985	Apr.	55.45 N	178.3 E	847	146	5.8
1985	Apr.	55.45 N	179.3 E	590	42	14
1985	Apr.	56.15 N	176.3 W	70	14	5
1985	Apr.	56.45 N	175.3 E	14	4	3.5
1985	Jun.	58.45 N	178.3 W	0	20	0
1985	Oct.	58.45 N	178.3 W	120	6	20
1985	Nov.	55.45 N	177.3 E	20	9	2.2
1985	Nov.	55.45 N	178.3 E	10	9	1.1
1985	Nov.	56.15 N	178.3 E	25	3	8.3
1985	Nov.	56.15 N	179.3 E	10	9	1.1
1985	Nov.	56.45 N	177.3 E	15	18	0.8
1985	Nov.	58.45 N	178.3 W	284	17	16.7
1985	Dec.	55.15 N	178.3 E	111	16	6.9
1985	Dec.	55.15 N	179.3 E	564	64	8.8
1985	Dec.	55.45 N	176.3 W	206	27	7.6
1985	Dec.	55.45 N	177.3 W	342	53	6.5
1985	Dec.	55.45 N	178.3 W	72	8	9
1985	Dec.	55.45 N	179.3 W	49	3	16.3
1985	Dec.	55.45 N	177.3 E	30	8	3.8
1985	Dec.	55.45 N	178.3 E	422	61	6.9
1985	Dec.	55.45 N	179.3 E	648	127	5.1
1985	Dec.	56.15 N	177.3 W	1119	50	22.4
1985	Dec.	56.15 N	178.3 W	878	41	21.4
1985	Dec.	56.15 N	176.3 E	57	12	4.8
1985	Dec.	56.15 N	177.3 E	246	45	5.5

Table 3. Continued.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1985	Dec.	56.15 N	178.3 E	45	11	4.1
1985	Dec.	56.15 N	179.3 E	215	58	3.7
1985	Dec.	56.45 N	178.3 W	812	60	13.5
1985	Dec.	56.45 N	177.3 E	82	20	4.1
1985	Dec.	56.45 N	178.3 E	22	7	3.1
1985	Dec.	56.45 N	179.3 E	12	6	2
1985	Dec.	58.45 N	178.3 W	427	42	10.2

Table 4. Monthly catch, effort and CPUE of walleye pollock in the central Bering Sea by statistical blocks (0.5 Lat. X 1 Long.) for the Japanese fisheries in 1986.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1986	Jan.	55.15 N	177.3 W	148	23	6.4
1986	Jan.	55.15 N	178.3 W	335	27	12.4
1986	Jan.	55.15 N	179.3 W	3331	295	11.3
1986	Jan.	55.15 N	178.3 E	125	16	7.8
1986	Jan.	55.15 N	179.3 E	1596	119	13.4
1986	Jan.	55.45 N	176.3 W	69	9	7.7
1986	Jan.	55.45 N	178.3 W	390	28	13.9
1986	Jan.	55.45 N	179.3 W	32838	2714	12.1
1986	Jan.	55.45 N	176.3 E	2687	250	10.7
1986	Jan.	55.45 N	177.3 E	1516	144	10.5
1986	Jan.	55.45 N	178.3 E	5153	405	12.7
1986	Jan.	55.45 N	179.3 E	12090	890	13.6
1986	Jan.	56.15 N	177.3 W	40	7	5.7
1986	Jan.	56.15 N	173.3 E	642	50	12.8
1986	Jan.	56.15 N	174.3 E	2978	169	17.6
1986	Jan.	56.15 N	175.3 E	1298	86	15.1
1986	Jan.	56.15 N	176.3 E	2778	210	13.2
1986	Jan.	56.15 N	177.3 E	2692	241	11.2
1986	Jan.	56.15 N	178.3 E	6625	535	12.4
1986	Jan.	56.15 N	179.3 E	539	75	7.2
1986	Jan.	56.45 N	174.3 E	1223	56	21.8
1986	Jan.	56.45 N	175.3 E	453	53	8.5
1986	Jan.	56.45 N	176.3 E	462	86	5.4
1986	Jan.	56.45 N	177.3 E	631	92	6.9
1986	Jan.	56.45 N	178.3 E	265	24	11
1986	Jan.	56.45 N	179.3 E	468	21	22.3
1986	Jan.	57.45 N	176.3 E	70	4	17.5
1986	Feb.	55.15 N	176.3 W	33	21	1.6
1986	Feb.	55.15 N	177.3 W	936	194	4.8
1986	Feb.	55.15 N	178.3 W	5115	750	6.8
1986	Feb.	55.15 N	179.3 W	1651	134	12.3
1986	Feb.	55.15 N	178.3 E	250	11	22.7
1986	Feb.	55.15 N	179.3 E	530	19	27.9
1986	Feb.	55.45 N	176.3 W	9480	1749	5.4
1986	Feb.	55.45 N	177.3 W	8680	1094	7.9
1986	Feb.	55.45 N	178.3 W	10498	1238	8.5
1986	Feb.	55.45 N	179.3 W	17663	1492	11.8
1986	Feb.	55.45 N	176.3 E	1305	124	10.5
1986	Feb.	55.45 N	177.3 E	5530	251	22
1986	Feb.	55.45 N	178.3 E	893	47	19
1986	Feb.	55.45 N	179.3 E	3640	166	21.9
1986	Feb.	56.15 N	176.3 W	52	10	5.2
1986	Feb.	56.15 N	177.3 W	67	17	3.9
1986	Feb.	56.15 N	179.3 W	688	59	11.7
1986	Feb.	57.15 N	177.3 W	56	9	6.2
1986	Mar.	55.15 N	179.3 W	84	19	4.4
1986	Mar.	55.45 N	175.3 W	285	17	16.8
1986	Mar.	55.45 N	176.3 W	5421	1484	3.7
1986	Mar.	55.45 N	177.3 W	35	22	1.6
1986	Mar.	55.45 N	178.3 W	117	28	4.2
1986	Mar.	55.45 N	179.3 W	251	12	20.9
1986	Mar.	55.45 N	176.3 E	260	134	1.9
1986	Mar.	55.45 N	178.3 E	12	12	1
1986	Mar.	56.15 N	176.3 W	675	141	4.8
1986	Mar.	56.15 N	177.3 W	131	14	9.4
1986	Mar.	56.15 N	178.3 W	222	17	13.1

Table 4. Continued.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1986	Mar.	56.15 N	179.3 W	27	4	6.8
1986	Mar.	56.45 N	176.3 W	4430	565	7.8
1986	Mar.	56.45 N	177.3 W	1508	120	12.6
1986	Mar.	56.45 N	178.3 W	1256	93	13.5
1986	Mar.	57.15 N	176.3 W	428	60	7.1
1986	Mar.	57.15 N	177.3 W	76	3	25.3
1986	Mar.	58.45 N	179.3 W	59	7	8.4
1986	Apr.	55.45 N	177.3 W	12	9	1.3
1986	Apr.	56.15 N	179.3 W	44	10	4.4
1986	Apr.	56.45 N	178.3 W	608	42	14.5
1986	Apr.	56.45 N	179.3 W	952	100	9.5
1986	Apr.	57.15 N	176.3 W	111	7	15.9
1986	Apr.	57.15 N	177.3 W	363	22	16.5
1986	Apr.	57.15 N	178.3 W	823	43	19.1
1986	Apr.	57.15 N	179.3 W	939	78	12
1986	Apr.	57.15 N	176.3 E	241	24	10
1986	Apr.	57.15 N	177.3 E	745	64	11.6
1986	Apr.	57.15 N	178.3 E	118	15	7.9
1986	Apr.	57.15 N	179.3 E	548	34	16.1
1986	Apr.	57.45 N	176.3 W	1143	96	11.9
1986	Apr.	57.45 N	177.3 W	503	50	10.1
1986	Apr.	57.45 N	178.3 W	107	9	11.9
1986	Apr.	57.45 N	175.3 E	236	28	8.4
1986	Apr.	57.45 N	176.3 E	2431	269	9
1986	Apr.	57.45 N	177.3 E	1573	191	8.2
1986	Apr.	57.45 N	178.3 E	198	23	8.6
1986	Apr.	58.15 N	177.3 W	1135	101	11.2
1986	Apr.	58.15 N	176.3 E	1328	131	10.1
1986	Apr.	58.15 N	177.3 E	2376	259	9.2
1986	Apr.	58.45 N	177.3 E	141	25	5.6
1986	May	55.15 N	179.3 W	51	3	17
1986	May	55.45 N	178.3 W	10	7	1.4
1986	May	56.45 N	177.3 W	2	5	0.4
1986	May	56.45 N	174.3 E	52	7	7.4
1986	May	56.45 N	175.3 E	19	11	1.7
1986	May	57.15 N	176.3 W	484	55	8.8
1986	May	57.15 N	175.3 E	655	153	4.3
1986	May	57.15 N	176.3 E	59	43	1.4
1986	May	57.15 N	177.3 E	4	12	0.3
1986	May	57.45 N	176.3 W	1599	127	12.6
1986	May	57.45 N	175.3 E	341	96	3.6
1986	May	57.45 N	176.3 E	279	39	7.2
1986	May	58.15 N	177.3 W	4285	290	14.8
1986	May	58.15 N	176.3 E	1527	160	9.5
1986	May	58.15 N	177.3 E	1108	94	11.8
1986	Jun.	57.15 N	175.3 E	11	6	1.8
1986	Jun.	57.45 N	179.3 W	17	13	1.3
1986	Jun.	58.15 N	179.3 E	61	47	1.3
1986	Jun.	58.45 N	178.3 E	26	10	2.6
1986	Jul.	55.45 N	177.3 E	24	13	1.8
1986	Jul.	55.45 N	178.3 E	82	43	1.9
1986	Jul.	55.45 N	179.3 E	7	6	1.2
1986	Jul.	56.15 N	178.3 E	59	38	1.6
1986	Jul.	56.15 N	179.3 E	13	6	2.2
1986	Jul.	56.45 N	178.3 W	49	6	8.2
1986	Jul.	56.45 N	179.3 E	441	85	5.2
1986	Jul.	58.15 N	178.3 E	6	10	0.6
1986	Jul.	58.45 N	179.3 E	5	5	1

Table 4. Continued.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1986	Aug.	55.45 N	177.3 E	16	5	3.2
1986	Aug.	56.15 N	176.3 E	204	56	3.6
1986	Aug.	56.15 N	177.3 E	140	34	4.1
1986	Aug.	56.15 N	178.3 E	28	12	2.3
1986	Aug.	57.15 N	178.3 E	57	30	1.9
1986	Aug.	57.45 N	179.3 E	8	13	0.6
1986	Sep.	55.45 N	177.3 E	18	13	1.4
1986	Sep.	55.45 N	178.3 E	40	38	1.1
1986	Sep.	55.45 N	179.3 E	23	25	0.9
1986	Sep.	57.45 N	178.3 W	14	18	0.8
1986	Oct.	55.45 N	179.3 W	27	10	2.7
1986	Oct.	55.45 N	177.3 E	34	18	1.9
1986	Oct.	55.45 N	178.3 E	20	6	3.3
1986	Oct.	56.15 N	176.3 W	722	42	17.2
1986	Oct.	56.15 N	174.3 E	3439	233	14.8
1986	Oct.	56.15 N	175.3 E	1791	87	20.6
1986	Oct.	56.15 N	179.3 E	36	13	2.8
1986	Oct.	56.45 N	178.3 W	12	14	0.9
1986	Oct.	56.45 N	179.3 W	169	94	1.8
1986	Oct.	56.45 N	173.3 E	3139	335	9.4
1986	Oct.	56.45 N	174.3 E	2461	172	14.3
1986	Oct.	56.45 N	175.3 E	1406	67	21
1986	Oct.	56.45 N	178.3 E	67	19	3.5
1986	Oct.	57.15 N	174.3 E	158	37	4.3
1986	Oct.	57.15 N	175.3 E	70	16	4.4
1986	Oct.	57.15 N	178.3 E	26	15	1.7
1986	Oct.	57.15 N	179.3 E	31	10	3.1
1986	Oct.	58.15 N	176.3 E	2	2	1
1986	Nov.	55.45 N	175.3 E	105	6	17.5
1986	Nov.	55.45 N	176.3 E	439	28	15.7
1986	Nov.	56.15 N	173.3 E	1340	104	12.9
1986	Nov.	56.15 N	174.3 E	7728	437	17.7
1986	Nov.	56.15 N	175.3 E	11547	737	15.7
1986	Nov.	56.15 N	176.3 E	127	19	6.7
1986	Nov.	56.15 N	179.3 E	100	8	12.5
1986	Nov.	56.45 N	173.3 E	1262	107	11.8
1986	Nov.	56.45 N	174.3 E	9305	497	18.7
1986	Nov.	56.45 N	175.3 E	7600	393	19.3
1986	Nov.	56.45 N	176.3 E	205	19	10.8
1986	Nov.	57.15 N	174.3 E	1725	92	18.8
1986	Nov.	57.15 N	175.3 E	4488	257	17.5
1986	Nov.	57.45 N	175.3 E	122	7	17.4
1986	Dec.	55.15 N	178.3 W	456	21	21.7
1986	Dec.	55.15 N	179.3 W	260	20	13
1986	Dec.	55.15 N	178.3 E	67	7	9.6
1986	Dec.	55.15 N	179.3 E	403	27	14.9
1986	Dec.	55.45 N	175.3 W	474	13	36.5
1986	Dec.	55.45 N	176.3 W	592	24	24.7
1986	Dec.	55.45 N	177.3 W	596	33	18.1
1986	Dec.	55.45 N	178.3 W	400	28	14.3
1986	Dec.	55.45 N	175.3 E	786	36	21.8
1986	Dec.	55.45 N	176.3 E	9140	452	20.2
1986	Dec.	55.45 N	177.3 E	4944	248	19.9
1986	Dec.	55.45 N	178.3 E	4604	404	11.4
1986	Dec.	55.45 N	179.3 E	912	92	9.9
1986	Dec.	56.15 N	176.3 W	3815	155	24.6
1986	Dec.	56.15 N	177.3 W	308	28	11
1986	Dec.	56.15 N	178.3 W	888	61	14.6

Table 4. Continued.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1986	Dec.	56.15 N	173.3 E	300	4	75
1986	Dec.	56.15 N	174.3 E	13162	617	21.3
1986	Dec.	56.15 N	175.3 E	31462	1336	23.5
1986	Dec.	56.15 N	176.3 E	9653	434	22.2
1986	Dec.	56.15 N	177.3 E	3796	331	11.5
1986	Dec.	56.15 N	178.3 E	2695	282	9.6
1986	Dec.	56.15 N	179.3 E	1638	132	12.4
1986	Dec.	56.45 N	176.3 W	894	30	29.8
1986	Dec.	56.45 N	177.3 W	50	8	6.3
1986	Dec.	56.45 N	173.3 E	7	5	1.4
1986	Dec.	56.45 N	174.3 E	8886	372	23.9
1986	Dec.	56.45 N	175.3 E	8957	357	25.1
1986	Dec.	56.45 N	176.3 E	3767	204	18.5
1986	Dec.	56.45 N	177.3 E	3192	267	12
1986	Dec.	56.45 N	178.3 E	1055	123	8.6
1986	Dec.	56.45 N	179.3 E	190	17	11.2
1986	Dec.	57.15 N	174.3 E	92	6	15.3
1986	Dec.	57.15 N	175.3 E	132	6	22
1986	Dec.	57.15 N	176.3 E	2940	189	15.6
1986	Dec.	57.45 N	175.3 E	540	16	33.8
1986	Dec.	57.45 N	176.3 E	989	83	11.9

Table 5. Monthly catch, effort and CPUE of walleye pollock in the central Bering Sea by statistical blocks (0.5 Lat. X 1 Long.) for the Japanese fisheries in 1987.

Year	Month	Latitude	Longitude	Catch	Effort	CPUE
1987	Jan.	55.15 N	178.3 W	150	9	16.7
1987	Jan.	55.15 N	179.3 W	805	74	10.9
1987	Jan.	55.15 N	178.3 E	2260	219	10.3
1987	Jan.	55.15 N	179.3 E	7031	838	8.4
1987	Jan.	55.45 N	177.3 W	64	9	7.1
1987	Jan.	55.45 N	178.3 W	2480	179	13.9
1987	Jan.	55.45 N	179.3 W	1444	107	13.5
1987	Jan.	55.45 N	175.3 E	444	16	27.8
1987	Jan.	55.45 N	176.3 E	4278	341	12.5
1987	Jan.	55.45 N	177.3 E	7563	848	8.9
1987	Jan.	55.45 N	178.3 E	64305	6096	10.5
1987	Jan.	55.45 N	179.3 E	27173	2902	9.4
1987	Jan.	56.15 N	177.3 W	52	5	10.4
1987	Jan.	56.15 N	179.3 W	1329	78	17.0
1987	Jan.	56.15 N	173.3 E	70	4	17.5
1987	Jan.	56.15 N	174.3 E	385	76	5.1
1987	Jan.	56.15 N	175.3 E	7899	695	11.4
1987	Jan.	56.15 N	176.3 E	6860	650	10.6
1987	Jan.	56.15 N	177.3 E	6286	678	9.3
1987	Jan.	56.15 N	178.3 E	31816	2364	13.5
1987	Jan.	56.15 N	179.3 E	10050	962	10.4
1987	Jan.	56.45 N	173.3 E	65	19	3.4
1987	Jan.	56.45 N	174.3 E	707	134	5.3
1987	Jan.	56.45 N	175.3 E	785	162	4.8
1987	Jan.	56.45 N	176.3 E	919	75	12.3
1987	Jan.	56.45 N	177.3 E	687	48	14.3
1987	Jan.	56.45 N	178.3 E	1752	230	7.6
1987	Jan.	56.45 N	179.3 E	187	21	8.9
1987	Jan.	57.15 N	175.3 E	137	6	22.8
1987	Jan.	57.15 N	176.3 E	140	41	3.4
1987	Jan.	57.15 N	178.3 E	232	28	8.3
1987	Jan.	58.15 N	179.3 E	52	15	3.5
1987	Feb.	55.15 N	178.3 E	372	41	9.1
1987	Feb.	55.15 N	179.3 E	246	51	4.8
1987	Feb.	55.45 N	176.3 W	5448	391	13.9
1987	Feb.	55.45 N	177.3 W	2049	207	9.9
1987	Feb.	55.45 N	178.3 W	876	104	8.4
1987	Feb.	55.45 N	179.3 W	1469	168	8.7
1987	Feb.	55.45 N	176.3 E	895	53	16.9
1987	Feb.	55.45 N	177.3 E	507	50	10.1
1987	Feb.	55.45 N	178.3 E	45547	6966	6.5
1987	Feb.	55.45 N	179.3 E	15048	2618	5.7
1987	Feb.	56.15 N	176.3 W	273	41	6.7
1987	Feb.	56.15 N	177.3 W	455	49	9.3
1987	Feb.	56.15 N	178.3 W	140	51	2.7
1987	Feb.	56.15 N	179.3 W	349	86	4.1
1987	Feb.	56.15 N	174.3 E	83	3	27.7
1987	Feb.	56.15 N	175.3 E	72	13	5.5
1987	Feb.	56.15 N	178.3 E	15693	1687	9.3
1987	Feb.	56.15 N	179.3 E	17213	1576	10.9
1987	Feb.	56.45 N	176.3 W	20	6	3.3
1987	Feb.	56.45 N	177.3 W	114	8	14.3
1987	Feb.	56.45 N	177.3 E	135	19	7.1
1987	Feb.	56.45 N	178.3 E	200	18	11.1
1987	Feb.	56.45 N	179.3 E	801	54	14.8
1987	Feb.	57.15 N	177.3 W	56	17	3.3

