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**A SUMMARY OF
PRODUCTIVE FOREIGN FISHING LOCATIONS
IN THE ALASKA REGION
DURING 1977-78: TRAWL FISHERIES**

Gary B. Smith and R. S. Hadley

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November 1979**

ALASKA SEA GRANT PROGRAM
University of Alaska
Fairbanks, Alaska 99701

A SUMMARY OF PRODUCTIVE FOREIGN FISHING LOCATIONS IN THE
ALASKA REGION DURING 1977-78: TRAWL FISHERIES

by

Gary B. Smith¹ and R. S. Hadley²

A Cooperative Effort of
Northwest and Alaska Fisheries Center
National Marine Fisheries Service, NOAA

and

Alaska Sea Grant Program
University of Alaska

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TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGMENTS	iv
ABSTRACT	1
INTRODUCTION	3
METHODS	4
LIMITATIONS AND USES OF THESE DATA	9
LITERATURE CITED	14
APPENDICES	15
Appendix A. Productive foreign fishing locations in the Kodiak Island region	15
Appendix B. Productive foreign fishing locations in the Shumagin and Sanak Islands region	117
Appendix C. Productive foreign fishing locations in the Unimak Pass region	141
Appendix D. Productive foreign fishing locations in the Unalaska Island region.	151
Appendix E. Productive foreign fishing locations in the Yakutat and Southeast Alaska regions.	167
Appendix F. Productive foreign fishing locations in the southeastern Bering Sea	195
Appendix G. Other Sources of Information	285

ACKNOWLEDGMENTS

The authors wish to express their gratitude to all those who have contributed to this report.

First, and foremost, this project would not have been possible without the existence and aid of the Foreign Fisheries Observer Program of the U.S. National Marine Fisheries Service (NMFS). The U.S. Observer Program should be recognized as the original source of all information presented in this report. Credit should be given to those individuals who served as the actual U.S. foreign fisheries observers, who often worked long hours under austere conditions. We also sincerely thank the managerial staff of the NMFS Observer Program in Seattle--Robert French, Russell Nelson, Jr., and Janet Wall--for their assistance and consultations, and to recognize these persons as directly responsible for having evolved the sampling procedures and data system that enabled development of this report.

The assistance of Bruce Gibbs, Steve Wilson, and Ralph Mintel of NMFS, and Cydney Hansen and Monique Schamell of the University of Alaska, in data processing and production is also gratefully acknowledged.

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ABSTRACT

Data resulting from U.S. observer coverage of foreign fishing activities in the Alaska region during 1977 and 1978 were summarized in ways intended to enhance the transfer of information to the U.S. fishing industry. Records from 3,714 independent stern trawler operations were available, resulting from coverage of about 10 percent of the total foreign fishing effort. The most productive foreign fishing locations are described for seven principal target fish "species," in seven important geographical regions.

INTRODUCTION

The United States Fishery Conservation and Management Act of 1976 requires, as one of its conditions, that any foreign vessel fishing within the U.S. 200-mile Fishery Conservation Zone accept and provide accommodations for a U.S. foreign fisheries observer. The purpose of placing scientific observers on foreign fishing vessels is to collect data which will allow the United States to estimate the foreign commercial catch and to provide information needed to assess the biological status of fish stocks (Nelson et al. 1978).

The intent of this document is to make available to the U.S. fishing industry selected data from this observer program. It is hoped that this information will be of assistance to the fisherman, processor, and investor in planning strategies intent upon increasing the proportion of the total bottomfish harvest taken by U.S. vessels.

This report presents data on species of bottomfish, of interest to both foreign and U.S. fishermen, taken in the waters off the coast of Alaska. By clearly indicating the exact fishing locations, catch composition, and catch rates of the highly successful foreign fleets, it is hoped that this volume will, in a small part, assist in achieving the principal objective of the Fishery Conservation and Management Act of 1976, "to encourage the development of fisheries which are currently underutilized or not utilized by United States fishermen, including bottomfish off Alaska."

METHODS

Prior to embarking, each fisheries observer is trained for a week to ten days on the proper methods for sampling and data recording. At this time, the observers are also intensively trained in identification of fish species (Nelson et al. 1978; Wall et al. 1978).

On board the vessel, the observer records the position, time, depth, and total catch weight of each gear operation. This information is usually provided by the vessel captain from his fishing logbook. The observer determines the species composition of the catch by taking subsamples from each haul, and counting and weighing each of the species groups identified. The observer may check the vessel captain's estimate of total catch weight by taking more exact measurements of the volume and density of the catch. Other data are also collected, including observations of quantities of restricted species taken incidentally, length frequency measurements, and otoliths or scales for determining age composition.

The U.S. Foreign Fisheries Observer Program in the Alaska and Pacific Northwest regions is administered by the Northwest and Alaska Fisheries Center (NWAFC), National Marine Fisheries Service (NMFS), an agency of the National Oceanic and Atmospheric Administration (NOAA). All data collected from each observer trip (approximately two months at sea) are returned to the Seattle laboratory of the NWAFC for computer entry and analysis. Further descriptions of observer schedules, sampling procedures, and results of Observer Program coverage during 1977 and 1978 are given in Nelson et al. (1978,1979) and Wall et al. (1978, 1979).

A total of 3,714 trawling records were available from observations of foreign independent stern trawler operations in the Alaska region during

1977 and 1978, representing a coverage of about 10 percent of the total foreign fishing effort. These include 1,567 trawl records from the Gulf of Alaska during 1978, 1,579 from the southeastern Bering Sea during 1978, and 568 from the Gulf of Alaska during 1977. Records from Japanese stern trawlers constituted approximately 82 percent of the total data; USSR trawlers, 11 percent; and Republic of Korea trawlers, 7 percent.

The seven geographic areas used to summarize the foreign fishing data are shown in Table 1 and Figure 1. Each region was chosen for its importance to commercial fishing, correspondence to a U.S. National Ocean Survey (NOS) navigational chart, and overlap with neighboring regions. Trawl records were selected by a geographic "window", year, and three-month period for each summary and analysis.

The fishing production rates, or "catch rates", were determined for the set of trawl records selected for each geographic region and time period. Catch rates were computed for seven groups of fish species (Table 2). Depending upon which fish group(s) individual trawling efforts were directed toward and the available fish densities, the observed catch rates ranged from zero to as high as 330,000 pounds per hour of trawling. Only trawling locations with catch rates greater than, or equal to, 500 pounds per hour of fishing are reported in these analyses.

Table 1.--Geographical areas used for summarization of foreign fishing locations.

Region	NOS Chart	Window Boundaries (Lat., Long.)
Kodiak Island	16013	54° 30'N to 60° 00'N by 146° 10'W to 159° 20'W
Shumagin and Sanak Islands	16540	53° 30'N to 55° 10'N by 159° 10'W to 162° 46'W
Unimak Pass	16520	53° 16'N to 54° 50'N by 162° 40'W to 166° 20'W
Unalaska Island	16500	52° 08'N to 53° 40'N by 166° 20'W to 169° 55'W
Yakutat and southeast Alaska	16016	54° 35'N to 60° 00'N by 132° 00'W to 144° 40'W
Southeastern Bering Sea	16011	52° 30'N to 58° 00'N by 160° 30'W to 173° 20'W
Albatross Bank	16580	55° 33'N to 57° 30'N by 151° 10'W to 155° 55'W

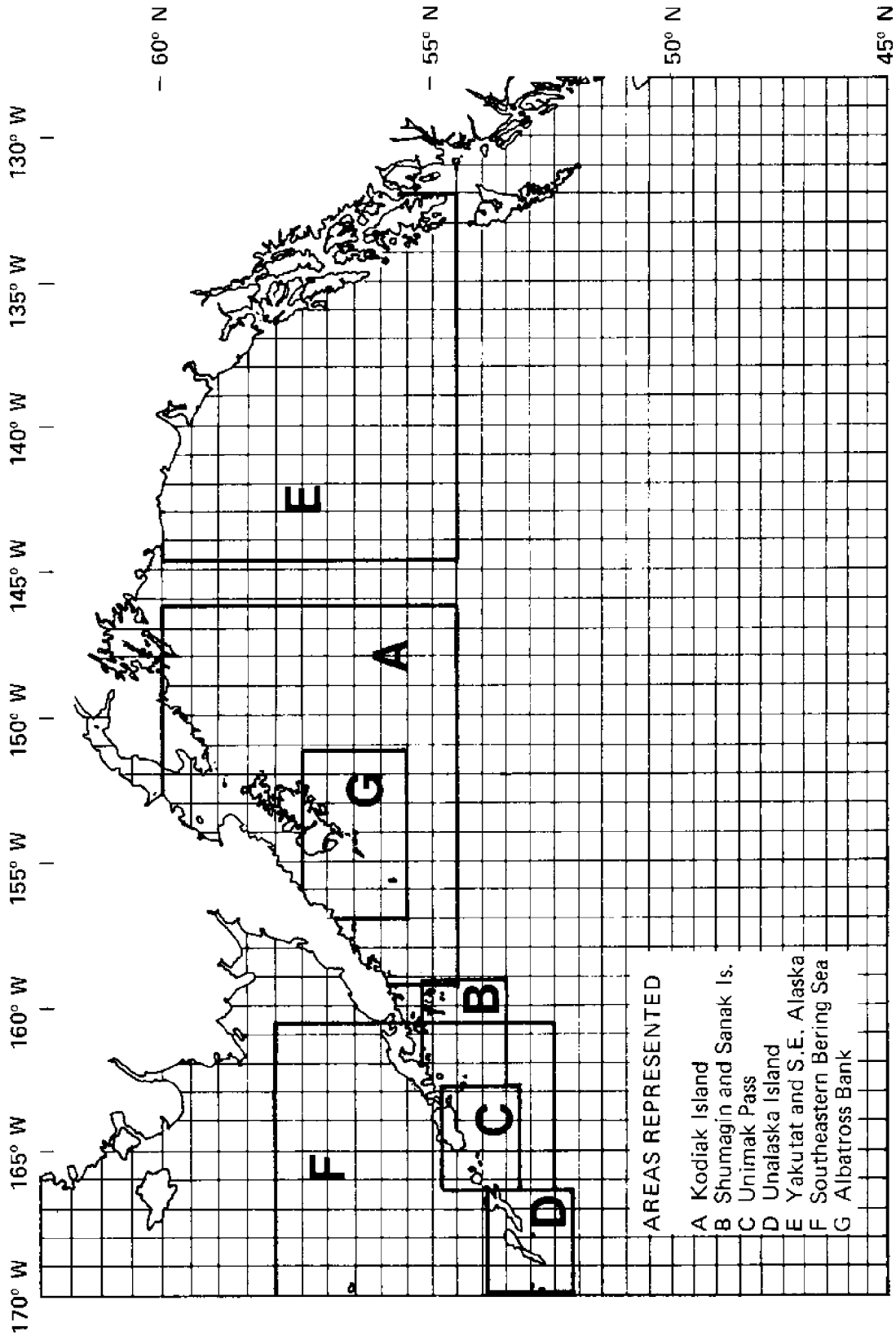


Figure 1.--Summary of geographical areas used for reporting foreign fishing data.

Table 2.--Fish species included in this analysis.

Group Name	Scientific Name or Class Definition
Walleye Pollock	<u>Theragra chalcogramma</u>
Pacific Cod	<u>Gadus macrocephalus</u>
Flounders	Includes all occurring pleuronectid species
Pacific Ocean Perch	<u>Sebastes alutus</u>
Atka Mackerel	<u>Pleurogrammus monopterygius</u>
All Rockfish	Includes all occurring <u>Sebastes</u> and <u>Sebastes</u> species
Yellowfin Sole	<u>Limanda aspera</u>

LIMITATIONS AND USES OF THESE DATA

In order to make the best use of this report, the reader must keep in mind certain limitations. Beyond those limitations of data collection and selection outlined in the "METHODS" section, the following must also be considered.

Observer Coverage of Total Fishing Effort

The NMFS Observer Program is obviously unable to place persons aboard every foreign vessel fishing in Alaska waters. It is assumed that those vessels which did have observers aboard fished in the same manner and in the same areas as vessels without observers. However, it cannot be positively stated that the data in this report are a statistically representative sample of the total foreign fishing effort. The data are the best available at this time.

In order to give an estimate of the sample size relative to the total effort, the statistics on fleet coverage should be considered. Table 3 summarizes the percentage of total foreign fishing effort that was covered by observers, (observer days/estimated vessel days on the grounds), by year and area. Based on this information, and granting the assumption of equal fishing effort, the data reported were selected from a minimum of 10 percent of the total potential data base.

Geographical Distribution of Observed Fishing Effort

A review of the data presented in this report will reveal certain apparent gaps. These gaps exist for one or more reasons, the most important

Table 3.--Summary of the percentage of foreign trawling activities covered by the National Marine Fisheries Service Observer Program (observer days/estimated vessel days on the ground) during 1977 and 1978 (Alverson 1979).

	BERING SEA		GULF OF ALASKA	
	<u>Japan</u>	<u>USSR</u>	<u>Japan</u>	<u>USSR</u>
1978				
Small stern trawlers ¹	5.5	--	16.3	--
Large stern trawlers ²	13.7	6.1	26.0	6.0
1977				
Small stern trawlers ^{1, 3}	1.5	--	--	--
Large stern trawlers ²	9.0	12.2	12.2	9.3

1 less than 1500 gross tons.

2 greater than 1500 gross tons.

3 classes of stern trawlers were no separated in the Gulf of Alaska during 1977.

of which are the following: (1) lack of coverage by the Observer Program; (2) areas closed to fishing by laws or management regulations; and (3) no fishing effort in certain areas. This report makes no attempt to evaluate reasons for data gaps, but instead reports only positive information. It would do the reader well to familiarize himself with management regulations that were in effect, in order to better understand the patterns of fishing reported in this document (see Appendix G).

Unknown Position Accuracy

The last important limitation to the information reported is the unknown accuracy of reported fishing positions. The accuracy of the position for each haul is dependent upon the captain or officers of the foreign vessel taking and then correctly reporting an accurate position to the observer. The observer has no independent means for assessing the position of the vessel.

Secondly, all data tables in this report contain Loran-C rates for each reported fishing location. It must be emphasized that these rates are only approximate, and that they were computed from the reported position. These rates should never be used for navigational purposes, but instead offer a readily understandable aid for plotting the approximate positions of successful fishing efforts.

Availability of Chart Overlays

To provide a more graphic and perhaps more convenient summary of the data listed in this report, sets of large transparent chart overlays have been developed for the seven geographical areas defined in Table 1. Each overlay is scaled to exactly fit the corresponding National Ocean Survey

navigational chart, and shows the point locations of trawling activities and catch rate (in units of "pounds per hour of trawling") obtained at each position.

Because of the uncertain demand for charts covering all regions, and high printing costs, only a limited number of two sets of overlays will initially be produced (Table 4). The Kodiak region was selected because of the importance of its established fishing industries. The southeastern Bering Sea was chosen because of its potential for U.S. development, extremely high catch rates, and large magnitude of total annual production. Sets of chart overlays for other areas may be produced later if there is sufficient demand.

To request either Set I or Set II of the chart overlays, which are available free of charge, please contact:

Alaska Sea Grant Program
University of Alaska
Fairbanks, Alaska 99701

It is hoped that fishermen entering the Alaskan bottomfish fishery will be able to use these overlays as a ready reference to fishing "hot spots."

National Ocean Survey navigation charts and chart catalogs are available from most marine supply dealers, or may be ordered from:

Distribution Division, C44
National Ocean Survey
Riverdale, Maryland 20840.

Table 4.--Chart overlays of foreign fishing locations available from the Alaska Sea Grant Program.

Set I. Kodiak Region -- NOS Charts 16013 and 16580.

Walleye Pollock	April-June, 1977-78	Chart 16013
Walleye Pollock	July-September, 1978	Chart 16013
Walleye Pollock	October-December, 1978	Chart 16013
Walleye Pollock	April-June, 1978	Chart 16580
Walleye Pollock	July-September, 1978	Chart 16580
Pacific Cod	April-June, 1977-78	Chart 16013
Flounders	July-September, 1977-78	Chart 16013
Pacific Ocean Perch	April, June, 1977-78	Chart 16013

Set II. Southeastern Bering Sea, including Unalaska and Unimak Pass Regions -- NOS Chart 16011.

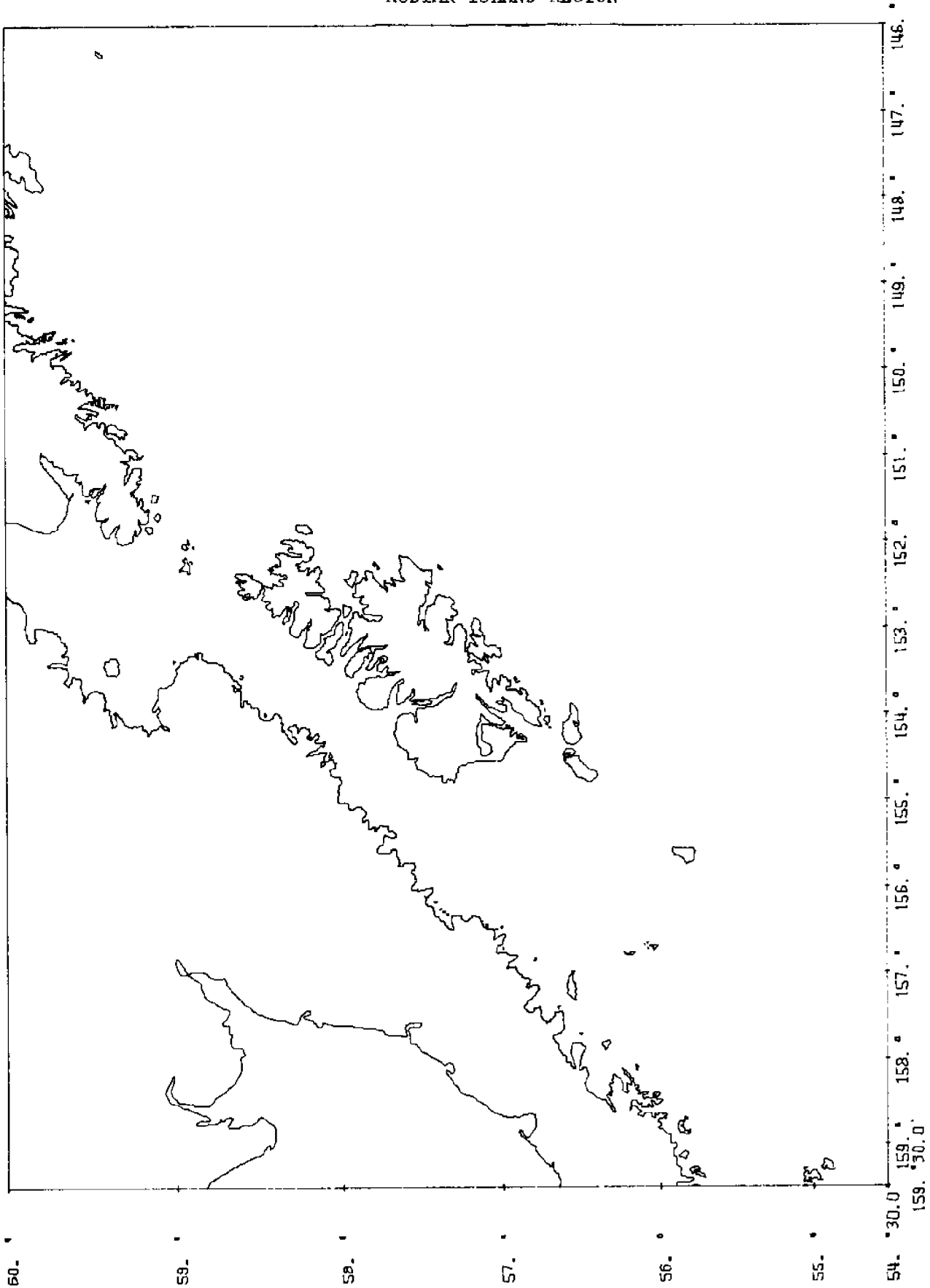
Walleye Pollock	April-June, 1978
Walleye Pollock	July-September, 1978
Walleye Pollock	October-December, 1978
Pacific Cod	July-September, 1978
Pacific Cod	October-December, 1978
Flounders	April-June, 1978
Flounders	July-September, 1978
Flounders	October-December, 1978

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APPENDIX A

KODIAK ISLAND REGION



APPENDIX A

Productive Foreign Fishing Locations in the Kodiak
Island Region

<u>Table</u>		<u>Page</u>
A-1.	Summary of overall catch composition and average catch rates observed in the Kodiak Island region during January-March, 1978.....	18
A-2.	Summary of overall catch composition and average catch rates observed in the Kodiak Island region during April-June, 1978.....	19
A-3.	Summary of overall catch composition and average catch rates observed in the Kodiak Island region during July-September, 1978.....	20
A-4.	Summary of overall catch composition and average catch rates observed in the Kodiak Island region during October-December, 1978.....	21
A-5.	Walleye Pollock, January-March, 1977-78.....	24
A-6.	Walleye Pollock, April-June, 1977-78.....	25
A-7.	Walleye Pollock, July-September, 1977.....	38
A-8.	Walleye Pollock, July-September, 1978.....	43
A-9.	Walleye Pollock, October-December, 1977.....	55
A-10.	Walleye Pollock, October-December, 1978.....	57
A-11.	Walleye Pollock, Albatross Bank area, April-June, 1978.	62
A-12.	Walleye Pollock, Albatross Bank area, July-Sept., 1978.	69
A-13.	Pacific Cod, January-March, 1977-78.....	72
A-14.	Pacific Cod, April-June, 1977-78.....	73
A-15.	Pacific Cod, July-September, 1977-78.....	77
A-16.	Pacific Cod, October-December, 1977-78.....	79
A-17.	Flounders, January-March, 1977-78.....	82
A-18.	Flounders, April-June, 1977-78.....	83
A-19.	Flounders, July-September, 1977-78.....	86
A-20.	Flounders, October-December, 1977.....	92

<u>Table</u>		<u>Page</u>
A-21.	Flounders, October-December, 1978.....	94
A-22.	Pacific Ocean Perch, April-June, 1977-78.....	96
A-23.	Pacific Ocean Perch, July-September, 1977.....	101
A-24.	Pacific Ocean Perch, July-September, 1978.....	105
A-25.	Pacific Ocean Perch, October-December, 1977.....	108
A-26.	Pacific Ocean Perch, October-December, 1978.....	110
A-27.	Atka Mackerel, January-March, 1977-78.....	111
A-28.	Atka Mackerel, April-June, 1978.....	112
A-29.	Atka Mackerel, July-September, 1977-78.....	114
A-30.	Atka Mackerel, October-December, 1977-78.....	115

Figure

A-1.	Length frequency of Walleye Pollock catch, 1978.....	22
A-2.	Length frequency of Pacific Ocean Perch catch, 1978...	23
A-3.	Walleye Pollock, April-June, 1977-78.....	37
A-4.	Walleye Pollock, July-September, 1977.....	44
A-5.	Walleye Pollock, July-September, 1978.....	54
A-6.	Walleye Pollock, October-December, 1978.....	61
A-7.	Pacific Cod, April-June, 1977-78.....	76
A-8.	Pacific Cod, July-September, 1977-78.....	81
A-9.	Flounders, April-June, 1977-78.....	85
A-10.	Flounders, July-September, 1977-78.....	91
A-11.	Pacific Ocean Perch, April-June, 1977-78.....	100
A-12.	Pacific Ocean Perch, July-September, 1977.....	104
A-13.	Pacific Ocean Perch, July-September, 1978.....	107
A-14.	Atka Mackerel, January-March, 1977-78.....	112

Table A-1

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH
RATES OBSERVED IN THE KODIAK ISLAND REGION DURING
JANUARY-MARCH, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Atka Mackerel	3888.05	0.71650	0.71650
Walleye Pollock	1086.27	0.20018	0.91668
Pacific Cod	222.79	0.04105	0.95774
Arrowtooth Flounder	157.12	0.02895	0.98669
Yelloweye Rockfish	18.34	0.00338	0.99008
Shortraker Rockfish	11.51	0.00212	0.99220
Pacific Ocean Perch	10.25	0.00188	0.99409
Rex Sole	10.07	0.00185	0.99594
Pacific Halibut	5.35	0.00098	0.99693
Darkblotched Rockfish	3.85	0.00071	0.99764
Skate unidentified	3.31	0.00061	0.99825
Sablefish	2.83	0.00052	0.99877
Splitnose Rockfish	2.04	0.00037	0.99915
Sculpin unidentified	1.33	0.00024	0.99940
Brown Irish Lord	1.27	0.00023	0.99963
Rock Sole	0.43	0.00008	0.99971
Greenland Turbot	0.38	0.00007	0.99978
Shortspine Thornyhead	0.32	0.00005	0.99984
Rougheye Rockfish	0.28	0.00005	0.99989
Dover Sole	0.27	0.00005	0.99995
Flathead Sole	0.12	0.00002	0.99997
Eelpout unidentified	0.12	0.00002	0.99999
Eulachon	0.02	0.00000	1.00000

Table A-2

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE KODIAK ISLAND REGION DURING
APRIL-JUNE, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	4879.21	0.83208	0.83208
Pacific Ocean Perch	388.58	0.06626	0.89835
Pacific Cod	188.31	0.03211	0.93046
Atka Mackerel	145.27	0.02477	0.95523
Arrowtooth Flounder	116.09	0.01979	0.97503
Darkblotched Rockfish	25.23	0.00430	0.97934
Northern Rockfish	20.04	0.00341	0.98275
Dover Sole	17.06	0.00291	0.98566
Rex Sole	14.75	0.00251	0.98818
Sculpin unidentified	12.01	0.00204	0.99023
<i>Sebastes variegatus</i>	11.21	0.00191	0.99214
Dusky Rockfish	7.94	0.00135	0.99350
Sablefish	6.75	0.00115	0.99465
Shortspine Thornyhead	5.40	0.00092	0.99557
Pacific Halibut	3.47	0.00059	0.99616
Brown Irish Lord	3.00	0.00051	0.99668
Bigmouth Sculpin	2.42	0.00041	0.99709
Redstripe Rockfish	1.91	0.00032	0.99742
Blue Rockfish	1.87	0.00031	0.99774
Shorthead Rockfish	1.60	0.00027	0.99801
Rougheye Rockfish	1.39	0.00023	0.99825
Black Rockfish	1.29	0.00022	0.99847
Rock Sole	1.12	0.00019	0.99866
Shorthorn Sculpin	1.08	0.00018	0.99884
Petrale Sole	0.81	0.00013	0.99898
Prowfish	0.73	0.00012	0.99911
Searcher	0.69	0.00011	0.99923
Yellowfin Sole	0.67	0.00011	0.99934
Sharpchin Rockfish	0.57	0.00009	0.99944
Flathead Sole	0.50	0.00008	0.99953
Rattail unidentified	0.37	0.00006	0.99959
Chinook Salmon	0.36	0.00006	0.99965
Blackfin Sculpin	0.31	0.00005	0.99971
Greenland Turbot	0.31	0.00005	0.99976
Bocaccio	0.23	0.00004	0.99980
Other Species	---	0.00019	1.00000

Table A-3

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE KODIAK ISLAND REGION DURING
JULY-SEPTEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	2033.14	0.82603	0.82603
Pacific Ocean Perch	138.36	0.05621	0.88224
Arrowtooth Flounder	98.28	0.03993	0.92218
Pacific Cod	40.09	0.01628	0.93847
Dover Sole	22.54	0.00915	0.94762
Atka Mackerel	19.17	0.00778	0.95541
Rex Sole	16.25	0.00660	0.96202
Shortspine Thornyhead	10.95	0.00444	0.96647
Bigmouth Sculpin	10.90	0.00443	0.97090
Sablefish	10.47	0.00425	0.97515
Shortraker Rockfish	8.85	0.00356	0.97875
Northern Rockfish	8.53	0.00346	0.98222
Rougheye Rockfish	7.75	0.00315	0.98537
Sculpin unidentified	7.69	0.00312	0.98850
Dusky Rockfish	3.37	0.00137	0.98987
Yelloweye Rockfish	3.30	0.00134	0.99121
<i>Sebastes variegatus</i>	2.54	0.00103	0.99225
Pectoral Rattail	2.28	0.00093	0.99318
Blue Rockfish	2.00	0.00081	0.99399
Flathead Sole	1.97	0.00080	0.99479
Redstripe Rockfish	1.69	0.00069	0.99549
Prowfish	1.66	0.00067	0.99616
Black Sculpin	1.40	0.00057	0.99673
Great Sculpin	0.87	0.00035	0.99709
Red Irish Lord	0.87	0.00035	0.99744
Widow Rockfish	0.84	0.00034	0.99779
Pacific Halibut	0.83	0.00033	0.99813
Rattail unidentified	0.72	0.00029	0.99842
Chinook Salmon	0.62	0.00025	0.99867
Sharpchin Rockfish	0.56	0.00022	0.99890
Rock Sole	0.52	0.00021	0.99911
Yellow Irish Lord	0.36	0.00014	0.99926
Petrable Sole	0.33	0.00013	0.99940
Starry Skate	0.20	0.00008	0.99949
Redbanded Rockfish	0.16	0.00006	0.99955
Other Species	---	0.00044	1.00000

Table A-4

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE KODIAK ISLAND REGION DURING
OCTOBER-DECEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	5330.75	0.82818	0.82818
Pacific Ocean Perch	463.92	0.07207	0.90026
Arrowtooth Flounder	198.81	0.03088	0.93115
Pacific Cod	155.49	0.02415	0.95530
Sablefish	83.52	0.01297	0.96828
Rex Sole	33.21	0.00516	0.97344
Pectoral Rattail	32.30	0.00501	0.97846
Dover Sole	28.96	0.00450	0.98296
Atka Mackerel	23.31	0.00362	0.98658
Shortspine Thornyhead	19.51	0.00303	0.98961
Sculpin unidentified	11.20	0.00174	0.99135
Rougeye Rockfish	10.96	0.00170	0.99306
Flathead Sole	8.26	0.00128	0.99434
Dusky Rockfish	5.49	0.00085	0.99519
Rock Sole	5.28	0.00082	0.99602
Northern Rockfish	4.25	0.00066	0.99668
Bigmouth Sculpin	4.14	0.00064	0.99732
Pacific Halibut	3.57	0.00055	0.99787
Roughscale Rattail	3.16	0.00049	0.99837
Shortraker Rockfish	2.89	0.00044	0.99882
<i>Sebastes variegatus</i>	1.54	0.00024	0.99906
Great Sculpin	1.07	0.00016	0.99922
Rattail unidentified	1.07	0.00016	0.99939
Redbanded Rockfish	0.63	0.00009	0.99949
Widow Rockfish	0.63	0.00009	0.99959
Searcher	0.57	0.00008	0.99968
Sharpchin Rockfish	0.35	0.00005	0.99973
Redstripe Rockfish	0.24	0.00003	0.99977
Longnose Skate	0.21	0.00003	0.99980
Big Skate	0.19	0.00003	0.99983
Skate unidentified	0.18	0.00002	0.99986
Prowfish	0.17	0.00002	0.99989
Starry Skate	0.12	0.00001	0.99991
Black Skate	0.11	0.00001	0.99993
Snailfish unidentified	0.07	0.00001	0.99994
Other Species	---	0.00005	1.00000

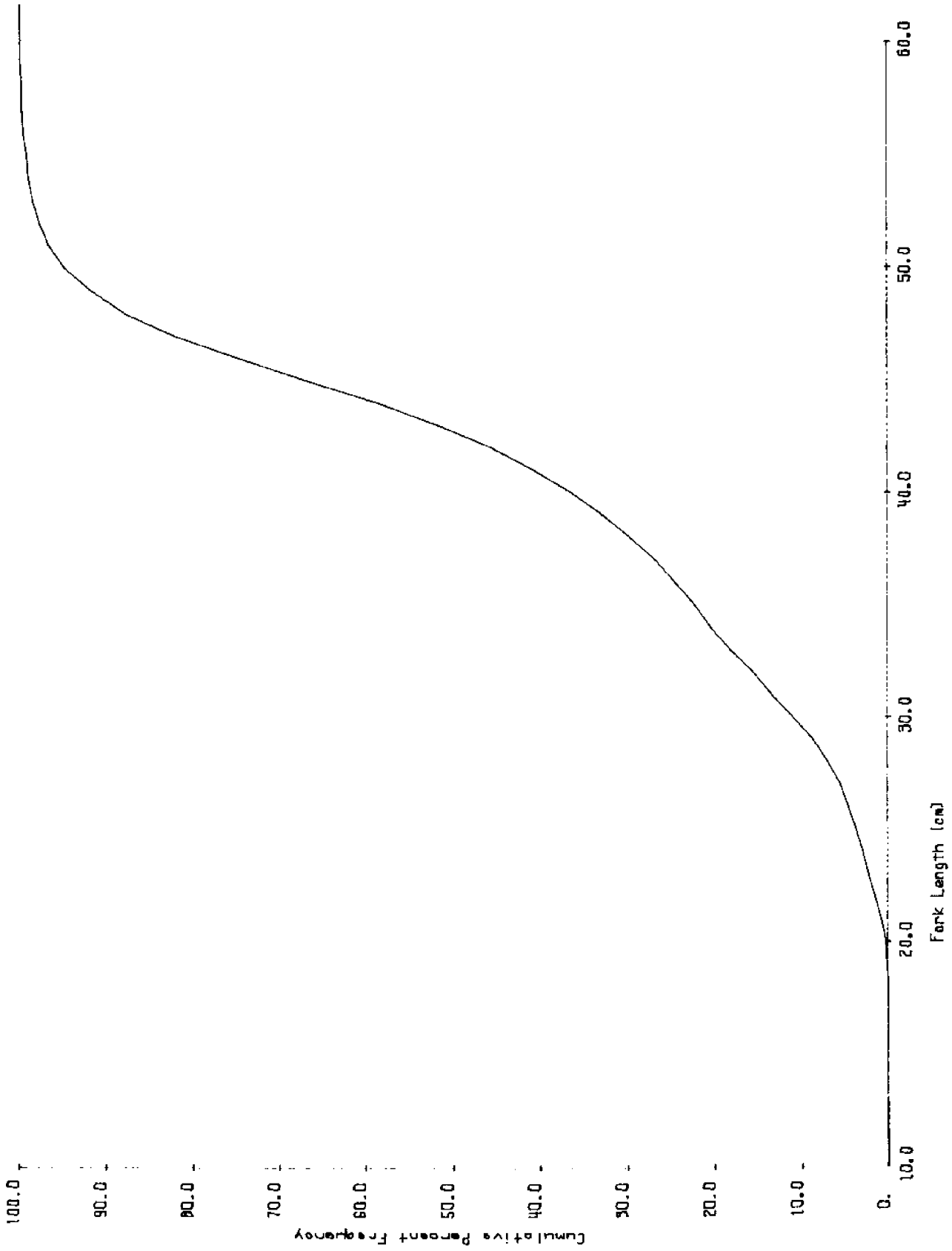
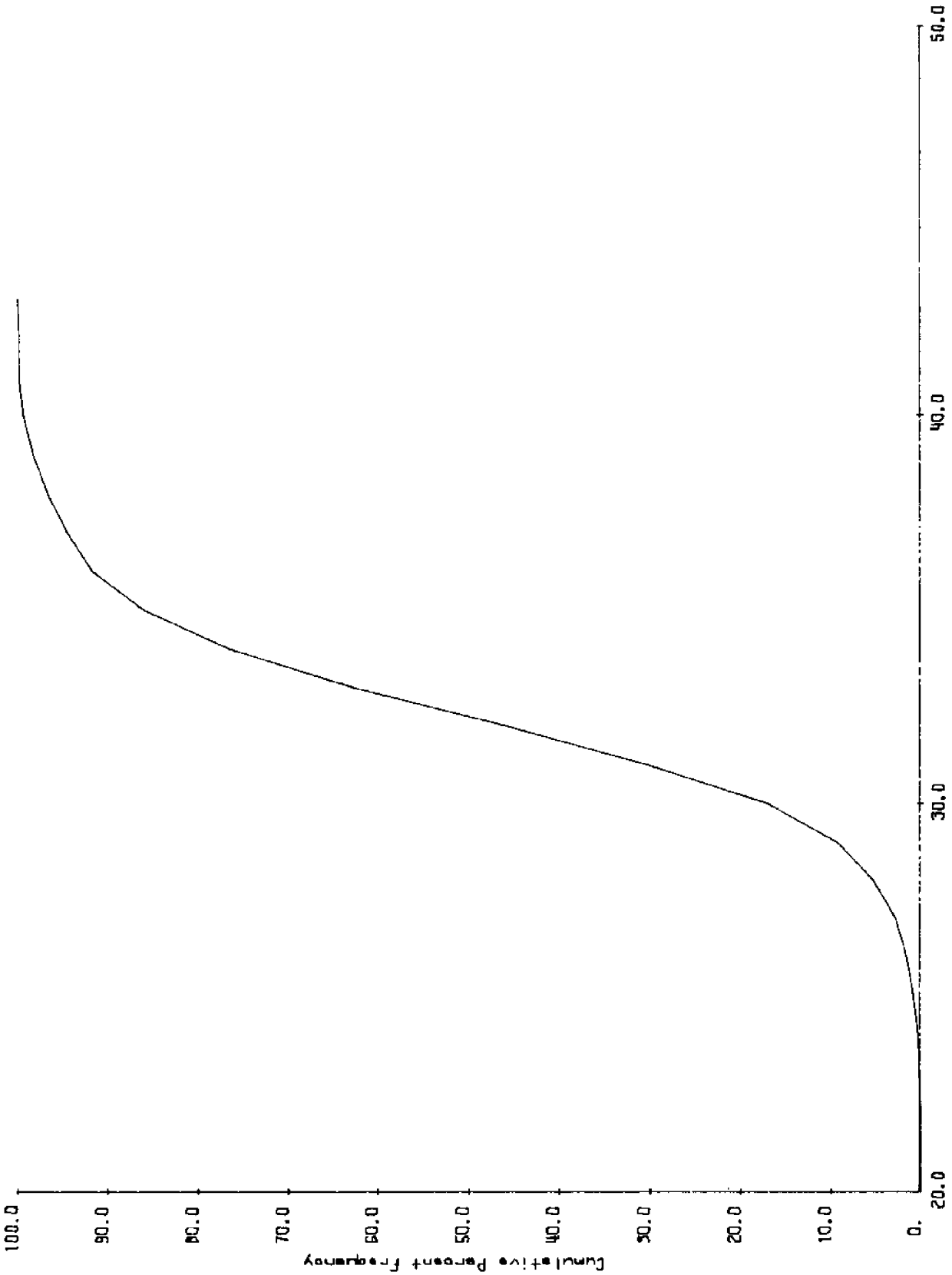


Figure A-1 Length Frequency of Halibut Pollock Catch, 1978



Fork Length (cm)
 Figure A-2 Length Frequency of Pacific Ocean Perch, 1978

TABLE A-5. WALLEYE POLLOCK, JANUARY-MARCH, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
USSR	78 214	5539	15510	3070.5	4316.4	262	1.6	32814	20.50
USSR	78 213	5544	15500	3033.6	44287.3	266	3.3	42261	14.30
USSR	78 213	5541	15506	3055.6	44287.3	246	2.8	23710	10.87
JAPAN	78 223	5539	15501	3054.0	44266.0	169	1.0	10879	5.93
JAPAN	78 214	5448	15740	3356.2	45297.7	172	2.8	10202	4.18
USSR	78 214	5540	15509	33064.1	44307.9	240	2.8	5817	3.04
JAPAN	78 214	5449	15743	33487.0	45318.6	169	1.5	7534	3.04
JAPAN	78 216	5448	15721	33562.5	45350.1	169	2.5	7534	3.04
USSR	78 214	5539	15510	33070.5	44316.4	262	2.3	5500	2.23
USSR	78 214	5448	15735	33577.6	44391.4	183	1.2	3030	2.18
JAPAN	78 221	5451	15730	33515.6	45239.0	183	2.2	4762	1.88
USSR	77 224	5632	15221	33581.6	43233.2	153	2.9	3995	1.68
USSR	77 225	5626	15232	32622.6	43251.1	153	1.0	3304	1.35
USSR	78 214	5447	15753	33616.5	45481.3	160	2.8	3304	1.35
JAPAN	78 218	5442	15747	33547.3	45337.2	190	3.3	2796	1.21
JAPAN	78 222	5443	15752	33602.2	45433.4	153	1.0	1255	0.90
USSR	78 222	5450	15800	33560.8	45420.5	84	1.0	1800	0.90
USSR	78 221	5446	15750	33587.3	45420.5	84	1.0	1800	0.90
JAPAN	78 213	5446	15833	33523.6	45303.0	109	1.6	1058	0.70
USSR	78 211	5629	15755	33619.0	45623.0	173	2.5	1121	0.65
USSR	78 225	5445	15752	33581.1	45389.8	73	1.5	928	0.61
USSR	78 215	5452	15728	33508.1	45378.6	114	3.1	928	0.61
USSR	78 222	5447	15800	33591.1	45422.6	82	1.6	1764	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

TABLE A-6. WALLEYE POLLOCK, APRIL-JUNE 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 4 18	54 43	158 00	3	45 42 9	131	0	785	261
USSR	77 6 26	56 34	152 26	5	43 28 3	171	1	257	257
JAPAN	78 4 19	56 42	158 10	2	43 48 8	131	0	138	138
JAPAN	78 4 15	56 42	158 02	3	43 50 1	149	0	187	187
JAPAN	78 6 3	54 42	158 05	0	45 46 0	196	0	439	439
USSR	78 6 3	55 10	157 05	7	45 05 4	43	0	72	72
JAPAN	78 5 12	55 12	157 50	0	44 28 0	109	1	65	65
USSR	78 6 18	54 48	157 52	4	45 37 3	103	0	62	62
JAPAN	78 6 29	55 45	153 42	1	43 80 5	103	1	61	61
USSR	78 5 13	55 45	153 05	5	43 45 5	69	0	61	61
JAPAN	78 6 26	54 47	157 27	2	45 38 1	71	0	61	61
USSR	78 6 27	54 51	157 27	5	45 38 1	98	0	57	57
JAPAN	78 6 27	56 32	157 47	8	45 22 1	78	0	55	55
USSR	78 6 27	56 32	157 47	5	45 34 2	84	0	55	55
JAPAN	78 6 18	56 03	157 33	7	43 71 9	113	0	52	52
USSR	78 6 18	54 56	157 30	6	45 22 9	162	0	52	52
JAPAN	78 5 31	56 41	151 50	9	43 15 3	109	0	51	51
USSR	78 5 31	54 59	157 18	0	45 46 0	109	0	48	48
JAPAN	78 5 19	54 54	157 40	7	45 15 3	84	0	48	48
USSR	78 5 29	54 58	157 15	1	45 22 2	43	1	46	46
JAPAN	78 6 21	55 59	153 35	5	43 76 2	128	1	46	46
USSR	78 6 22	56 24	158 00	0	45 26 7	92	1	46	46
JAPAN	78 6 6	55 65	153 43	3	43 79 6	79	1	44	44
USSR	78 6 6	56 05	153 38	5	43 73 5	87	1	42	42
JAPAN	78 6 5	54 55	153 70	2	45 07 0	131	0	39	39
USSR	78 6 5	55 12	156 54	4	44 9 8	129	0	38	38
JAPAN	78 5 30	54 32	157 50	3	45 48 5	65	0	36	36
USSR	78 5 19	56 34	157 22	5	45 35 4	82	0	36	36
JAPAN	78 6 17	57 13	151 04	0	43 00 4	87	1	34	34
JAPAN	78 6 20	54 5	157 35	5	45 26 6	95	0	34	34

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
JAPAN	78 5 4	5614	15300	7X	0	2.5	51479	20.59
JAPAN	78 6 23	5614	14645	7Y	1	1.1	23247	19.37
USSR	78 6 24	5506	15155	7Z	3	1.1	30599	18.85
JAPAN	78 6 28	5455	15710		1	1.6	48685	18.72
JAPAN	78 4 19	5455	15730		1	1.8	14900	18.62
USSR	78 5 27	5452	15725		1	1.4	33000	18.33
USSR	78 5 27	5452	15735		2	1.5	46200	18.33
JAPAN	78 5 25	5450	15801		2	1.9	46200	17.76
USSR	78 6 27	5451	15752		1	1.8	33000	17.28
USSR	78 6 27	5451	15710		1	1.8	48752	17.28
JAPAN	78 6 27	5447	15710		2	1.2	33000	17.16
USSR	78 6 27	5447	15705		1	1.2	27000	17.91
USSR	78 6 27	5451	15652		1	1.2	27000	16.91
USSR	78 6 27	5450	15753		1	1.2	27000	16.50
USSR	78 6 25	5450	15715		1	1.2	36079	16.37
JAPAN	78 6 42	5442	14642		1	1.2	36079	15.62
USSR	78 6 42	5442	15318		0	0.6	9372	15.42
JAPAN	78 6 30	5633	15218		1	1.1	24631	15.31
USSR	78 6 30	5451	15218		1	1.3	19499	14.29
USSR	78 6 30	5451	15725		1	1.3	19499	14.29
JAPAN	78 6 26	5449	15708		0	0.7	10371	14.81
USSR	78 6 26	5449	15700		0	0.3	44000	14.66
USSR	78 6 29	5455	15726		0	0.5	22000	14.66
USSR	78 6 28	5455	15752		0	0.9	22259	14.62
JAPAN	78 6 14	5611	15328		1	1.1	12796	14.21
JAPAN	78 6 28	5646	15147		1	1.0	14194	14.19
JAPAN	78 6 28	5443	15807		1	1.0	2819	14.05
JAPAN	78 6 21	5443	15707		2	2.0	27967	13.98
JAPAN	78 6 11	5453	15745		0	0.5	6958	13.95
USSR	78 6 5	5453	15808		0	0.2	46219	13.91
USSR	78 6 4	5455	15725		0	0.2	11009	13.75
JAPAN	78 6 17	5631	15225		0	0.2	32999	13.74
JAPAN	78 6 17	5631	15206		1	1.0	17326	13.71
JAPAN	78 6 17	5454	15732		1	1.0	1960	13.65

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
USSR	788	5449	15750	18519.6	45360.1	82	2.0	27279	13.63
JAPAN	788	5447	15744	18521.6	45324.8	114	1.0	13537	13.53
JAPAN	788	5600	15330	18665.1	43718.2	153	1.0	18059	13.43
JAPAN	788	5633	15158	18700.2	43215.6	115	1.0	10606	13.25
JAPAN	788	5442	15745	18527.6	45543.1	68	3.0	13208	13.20
JAPAN	788	5453	15744	18529.1	45417.7	76	5.0	13258	13.00
JAPAN	788	5706	15218	18722.5	43074.1	98	2.0	15019	12.84
JAPAN	788	5652	15334	18658.1	43273.2	76	0.8	11144	12.64
USSR	777	5553	15342	18658.6	43761.9	203	0.7	88265	12.63
JAPAN	788	5510	15342	18659.6	45054.0	38	2.8	88650	12.63
USSR	788	5514	15725	18536.0	45054.8	37	2.6	19000	12.27
USSR	788	5503	15725	18539.5	45206.0	60	2.2	33360	12.27
USSR	788	5515	15810	18541.7	45456.9	50	1.0	19800	11.70
JAPAN	788	5515	15638	18582.2	43804.8	39	2.7	76002	11.52
USSR	788	5515	15341	18536.2	45489.3	140	1.0	19360	11.52
JAPAN	788	5445	15645	18650.6	43779.3	105	1.3	19874	11.52
JAPAN	788	5452	15629	18606.2	45206.0	98	1.3	12620	11.52
JAPAN	788	5444	15729	18534.2	45260.4	98	1.0	17137	11.33
USSR	788	5451	15814	18516.0	45451.4	114	1.0	11047	11.00
USSR	788	5455	15710	18541.6	45499.5	78	1.6	88000	11.00
USSR	788	5448	15700	18541.7	45423.3	84	1.6	17600	11.00
USSR	788	5453	15730	18528.1	45323.6	62	1.4	13200	11.00
USSR	788	5453	15733	18532.7	45352.9	62	1.4	13200	11.00
JAPAN	788	5509	15715	18564.6	45115.9	107	2.4	45923	10.80
JAPAN	788	5506	15708	18564.6	45168.6	115	2.2	22243	10.65
JAPAN	788	5716	15212	18722.6	43001.2	63	3.0	16661	10.55
JAPAN	788	5647	15217	18698.9	43279.2	103	1.0	31664	10.31
USSR	788	5445	15725	18507.8	45462.1	163	1.0	15218	10.31
USSR	788	5452	15748	18537.1	45202.1	173	1.0	33005	10.30
USSR	788	5455	15717	18529.1	45343.3	176	1.2	16115	10.00
USSR	788	5455	15720	18539.1	45172.8	171	2.2	22000	10.00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 616	5629	15216	7X	7Z	114	1.0	10982	9.8
USSR	77 625	5635	15220			173	1.0	9777	9.7
JAPAN	78 624	5620	15340			142	1.0	4833	9.6
JAPAN	78 629	5610	15311			119	1.0	14497	9.5
JAPAN	78 614	5647	15324			120	1.2	11590	9.5
USSR	78 613	5450	15816			103	2.2	2000	9.1
USSR	78 615	5643	15225			65	2.2	2863	9.3
USSR	78 620	5443	15256			114	2.2	2567	9.3
JAPAN	78 630	5442	15803			194	1.5	1351	9.0
USSR	78 631	5453	15220			52	2.2	2040	9.2
USSR	77 626	5630	15222			22	2.2	2340	9.2
USSR	78 624	5635	15224			22	2.2	2030	9.2
USSR	78 629	5843	15220			22	2.2	2030	9.2
USSR	78 617	5635	15220			22	2.2	2030	9.2
USSR	78 627	5843	15220			22	2.2	2030	9.2
JAPAN	78 612	5635	15220			22	2.2	2030	9.2
JAPAN	78 627	5458	15215			76	2.2	2060	9.4
JAPAN	78 633	5444	15258			174	2.2	2002	9.1
JAPAN	78 627	5504	15221			165	2.2	2009	9.1
JAPAN	78 613	5447	15253			91	2.2	2013	9.1
JAPAN	78 614	5504	15221			108	2.2	2013	9.1
JAPAN	78 630	5447	15224			108	2.2	2013	9.1
JAPAN	78 632	5647	15220			108	2.2	2013	9.1
JAPAN	78 666	5714	15220			108	2.2	2013	9.1
JAPAN	78 663	5720	15035			120	2.2	2013	9.1
JAPAN	78 630	5450	15419			100	2.2	2013	9.1
JAPAN	78 614	5455	15245			100	2.2	2013	9.1
JAPAN	78 615	5444	15245			109	2.2	2013	9.1
JAPAN	78 625	5444	15810			109	2.2	2013	9.1
JAPAN	78 611	5444	14852			109	2.2	2013	9.1
USSR	78 627	5452	15254			43	2.2	2013	9.1
USSR	78 627	5454	15252			43	2.2	2013	9.1

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 6 28	56 3 2	152 19	7X 18 69 3	7Z 43 76 40	1 14	1	139 24	7 32
JAPAN	78 5 27	55 5 7	153 36	7X 18 53 6	7Z 43 65 40	1 71	1	175 01	7 28
USSR	78 6 4	55 0 7	157 12	7X 18 56 2	7Z 43 27 40	1 73	2	140 23	7 22
USSR	78 6 21	54 6 3	158 02	7X 18 51 4	7Z 43 32 40	1 79	1	202 55	7 05
JAPAN	78 6 6	57 1 4	151 04	7X 18 67 8	7Z 43 40 48	1 50	1	355 39	7 08
JAPAN	78 6 2	56 2 0	153 36	7X 18 69 5	7Z 43 64 08	1 17	1	70 32	7 00
JAPAN	78 6 24	55 2 0	152 55	7X 18 65 9	7Z 43 27 48	1 28	1	20 88	7 08
JAPAN	78 6 30	54 4 4	152 23	7X 18 51 8	7Z 43 35 34	1 00	1	37 39	7 08
JAPAN	78 6 22	54 5 5	152 43	7X 18 53 1	7Z 43 37 31	1 03	1	22 13	7 04
USSR	78 5 2	54 5 2	157 35	7X 18 53 1	7Z 43 35 45	1 07	1	154 07	7 09
JAPAN	78 6 4	54 5 8	157 48	7X 18 61 5	7Z 43 29 40	1 26	1	102 34	7 01
JAPAN	78 6 4	54 4 8	153 00	7X 18 57 0	7Z 43 24 00	1 35	1	131 78	7 01
USSR	78 6 15	54 4 2	158 22	7X 18 70 6	7Z 43 40 00	1 30	1	195 43	7 51
JAPAN	78 6 12	54 2 8	158 22	7X 18 70 6	7Z 43 40 00	1 35	1	110 27	7 47
JAPAN	78 6 14	54 2 8	158 22	7X 18 70 6	7Z 43 40 00	1 37	1	148 39	7 47
JAPAN	78 6 14	54 5 5	157 45	7X 18 62 5	7Z 43 32 55	1 07	1	119 77	7 37
JAPAN	78 6 22	54 5 5	157 35	7X 18 55 4	7Z 43 35 40	1 20	1	163 63	7 36
JAPAN	78 6 4	54 4 1	151 50	7X 18 67 4	7Z 43 32 40	1 29	1	162 47	7 29
JAPAN	78 6 22	54 5 9	157 44	7X 18 69 2	7Z 43 35 31	1 20	1	162 47	7 29
JAPAN	77 6 27	55 3 1	152 19	7X 18 67 4	7Z 43 30 58	1 21	1	30 44	7 00
USSR	77 6 21	56 0 3	149 50	7X 18 69 7	7Z 43 20 40	1 11	1	42 20	7 00
JAPAN	78 5 13	54 3 6	158 39	7X 18 52 7	7Z 43 50 76	1 02	1	54 11	7 00
JAPAN	78 5 22	54 5 2	157 42	7X 18 52 7	7Z 43 50 76	1 02	1	42 20	7 00
JAPAN	78 5 19	54 5 1	157 42	7X 18 52 7	7Z 43 50 76	1 02	1	122 00	7 00
JAPAN	78 5 30	54 4 2	158 01	7X 18 54 7	7Z 43 52 76	1 02	1	32 92	7 00
JAPAN	78 6 4	54 5 0	149 14	7X 18 52 0	7Z 43 52 76	1 05	1	29 25	7 00
JAPAN	78 6 4	54 4 6	151 49	7X 18 75 2	7Z 43 20 40	1 02	1	32 14	7 00
JAPAN	78 6 4	54 5 0	151 46	7X 18 75 2	7Z 43 20 40	1 02	1	15 48	7 00
JAPAN	78 6 3	56 3 4	152 20	7X 18 66 7	7Z 43 32 20	1 02	1	39 25	7 00
JAPAN	78 6 6	56 1 0	153 23	7X 18 67 5	7Z 43 32 20	1 02	1	39 52	7 00
JAPAN	78 6 6	56 3 3	153 23	7X 18 67 5	7Z 43 32 20	1 02	1	33 34	7 00
JAPAN	78 6 6	56 7 2	153 39	7X 18 67 3	7Z 43 32 20	1 03	1	39 52	7 00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C 7X	PULSE RATES 7Y	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 516	5448	15750	18518.0	33566.9	125	0.9	4977	5.53
JAPAN	78 421	5448	15748	18529.5	45361.4	192	2.2	16855	5.43
JAPAN	78 668	5632	15208	18698.9	43040.2	120	1.3	18062	5.37
JAPAN	78 427	5442	15807	18501.1	432470.4	112	4.3	27777	5.27
JAPAN	78 515	5442	15806	18501.4	45466.2	109	4.0	25270	5.27
USSR	78 522	5458	15816	18529.6	45500.7	84	1.5	20775	5.18
JAPAN	78 653	5636	15734	18532.3	45587.4	120	1.0	3551	5.07
JAPAN	78 530	5455	15738	18531.5	45332.2	171	1.6	7990	4.97
JAPAN	78 627	5632	15218	18698.3	45277.1	76	1.4	7971	4.97
USSR	78 524	5442	15802	18512.4	43468.3	103	1.6	7949	4.96
JAPAN	78 518	5442	15802	18512.4	45095.6	113	1.0	4965	4.94
JAPAN	78 623	5637	15739	18524.9	45093.6	112	1.0	4968	4.94
JAPAN	78 555	5450	15755	18523.2	45284.0	131	1.5	2934	4.93
JAPAN	78 523	5447	15755	18513.7	43128.8	136	1.5	5334	4.89
JAPAN	78 526	5447	15750	18513.7	45387.9	74	2.0	9778	4.88
USSR	78 521	5448	15758	18515.4	45420.8	84	1.5	8807	4.88
JAPAN	78 621	5634	15226	18660.8	45420.0	71	2.5	10568	4.80
USSR	78 622	5445	15758	18519.7	43282.3	103	2.7	3466	4.78
JAPAN	78 613	5814	14849	18508.8	45416.1	106	2.2	3156	4.69
JAPAN	78 517	5443	15756	18506.5	43085.7	114	1.6	7958	4.66
USSR	78 630	5633	15205	18697.3	45451.4	189	2.0	7492	4.47
JAPAN	78 621	5633	15205	18699.1	43225.4	103	0.5	2238	4.44
JAPAN	78 666	5714	15102	18727.3	43203.4	103	0.8	3553	4.41
USSR	78 523	5448	15747	18529.9	43007.2	141	2.5	1000	4.40
JAPAN	78 613	5708	15109	18727.3	45344.9	125	1.7	1793	4.40
JAPAN	78 524	5450	15745	18523.3	43012.4	195	1.4	1494	4.39
JAPAN	78 666	5702	14942	18727.3	45301.5	120	1.4	1514	4.24
JAPAN	78 666	5733	15224	18727.3	43048.1	120	1.2	5094	4.24
JAPAN	78 666	5633	15229	18697.7	43048.1	113	1.4	4241	4.20
USSR	78 515	5447	15715	18547.4	45314.3	76	1.2	5880	4.1

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780628	5631	15206	18709	32568	123	1.3	5466	4.18
JAPAN	780628	5642	15146	18709	32478	114	0.5	2069	4.13
JAPAN	780530	5450	15800	18503	33607	198	0.7	2864	4.00
USSR	780610	5450	14808	18748	33597	60	1.4	8543	4.00
JAPAN	780617	5812	14809	18748	31872	153	1.6	6483	4.00
JAPAN	780606	5620	15209	18723	32316	103	1.9	1349	3.87
JAPAN	780630	5740	14954	18740	32094	120	1.0	4265	3.87
JAPAN	780606	5557	15434	18661	33749	123	1.4	3485	3.86
JAPAN	780630	5605	15445	18659	33096	101	1.2	4907	3.84
USSR	780527	5405	15740	18527	33365	142	1.6	909	3.80
USSR	780509	5455	15227	18527	33529	62	2.2	900	3.77
USSR	780619	5635	15227	18577	33577	61	0.6	100	3.78
JAPAN	780612	5818	14838	18748	31860	150	1.6	1083	3.66
USSR	780511	5445	15750	18509	33600	98	1.1	3892	3.66
JAPAN	780513	5445	15750	18509	33595	98	1.1	699	3.61
JAPAN	780428	5445	15757	18531	33584	87	1.5	669	3.61
USSR	780514	5455	15810	18527	33512	76	1.4	1010	3.60
USSR	780517	5455	15735	18527	33585	116	1.6	7514	3.57
JAPAN	780524	5451	15750	18527	33525	154	1.3	2076	3.46
USSR	780514	5452	15750	18527	33533	120	1.6	500	3.41
JAPAN	780616	5643	15148	18707	32489	120	1.3	578	3.39
JAPAN	780607	5450	15703	18520	33573	105	1.0	781	3.38
JAPAN	780607	5450	15703	18520	33572	105	1.0	2045	3.38
JAPAN	780613	5550	15341	18660	33613	102	1.6	870	3.34
JAPAN	780613	5550	15341	18660	33613	102	1.6	2043	3.34
JAPAN	780613	5550	15341	18660	33613	102	1.6	305	3.30
JAPAN	780522	5455	15735	18724	33529	116	1.4	463	3.23
USSR	780522	5455	15735	18724	33529	116	1.4	309	3.23
JAPAN	780606	5702	15240	18720	32452	95	1.2	761	3.23
JAPAN	780606	5454	15240	18720	32452	95	1.2	199	3.20
JAPAN	780606	5622	15240	18720	32452	95	1.2	3179	3.20
JAPAN	780606	5622	15240	18720	32452	95	1.2	179	3.17
JAPAN	780606	5622	15240	18720	32452	95	1.2	4754	3.16
JAPAN	780606	5605	15336	18659	33606	199	1.5	19	3.15
JAPAN	780606	5470	15723	18723	33583	120	1.4	4519	3.12
JAPAN	780606	5442	15723	18723	33583	120	1.4	4692	3.12
JAPAN	780606	5635	15155	18701	33631	10	1.0	153	3.10

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USF WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
JAPAN	780611	575R	14927	18744	43001	123	1.0	2979	2.979
JAPAN	780617	572S	15038	18522	43001	125	1.8	5573	3.096
JAPAN	780530	544S	15749	18526	43349	176	2.5	8197	3.278
JAPAN	780531	544S	15806	18502	45454	176	1.5	4774	3.176
USSR	780615	545S	15725	18528	45443	79	1.0	2486	2.486
JAPAN	780624	544S	15803	18508	45443	98	1.5	3583	2.389
USSR	780625	563S	15740	18530	45436	87	1.5	4000	2.667
USSR	780625	544S	15733	18530	45460	87	1.5	3467	2.311
JAPAN	780631	565S	15207	18725	43059	87	1.5	3428	2.285
JAPAN	780633	544S	15731	18639	43253	121	1.0	1263	1.263
JAPAN	780635	545S	15039	18732	43200	123	1.6	2671	1.642
JAPAN	780635	572S	15048	18722	43008	109	1.6	2873	1.808
JAPAN	780636	544S	15003	18502	43008	109	1.0	3022	3.022
JAPAN	780636	544S	14851	18743	43075	158	1.3	3301	2.594
JAPAN	780636	565S	15335	18658	43381	109	1.6	3014	1.883
JAPAN	780636	555S	15346	18652	43362	109	1.5	3373	2.248
JAPAN	780636	544S	15751	18515	43362	109	1.5	3362	2.241
JAPAN	780636	544S	15806	18505	43350	109	1.0	3662	3.662
JAPAN	780638	545S	15749	18524	43308	179	2.2	5960	2.742
JAPAN	780642	571S	15221	18706	43227	68	1.0	2147	2.147
JAPAN	780642	565S	15373	18661	43248	87	1.0	2147	2.147
JAPAN	780642	552S	15544	18606	43548	87	1.0	2147	2.147
JAPAN	780642	544S	15750	18548	43361	87	1.0	2147	2.147
JAPAN	780642	562S	15209	18695	43265	82	1.5	3508	2.339
JAPAN	780642	571S	15056	18726	43003	82	1.0	3071	3.071
JAPAN	780642	545S	15723	18548	45174	82	1.0	3652	3.652
JAPAN	780642	580S	14849	18747	43070	133	1.0	1341	1.341
JAPAN	780645	556S	14659	18659	43070	103	1.0	2848	2.848
JAPAN	780645	591S	14343	18747	43220	103	1.0	2848	2.848
JAPAN	780645	545S	14671	18547	43220	103	1.0	2848	2.848
JAPAN	780645	544S	15829	18475	45141	103	1.0	2848	2.848
JAPAN	780645	544S	15829	18475	45615	103	1.0	2848	2.848
JAPAN	780645	544S	15829	18475	45640	103	1.0	2848	2.848

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 03 54 127	33 54 12	157 48	02 8 52	45 341	78	1 5	769	1 84
JAPAN	78 03 56 123	33 56 12	157 28	02 7 52	45 333	101	1 1	855	1 80
JAPAN	77 06 55 54	33 55 54	153 40	06 5 53	1 159	1	2	536	1 76
JAPAN	77 06 57 18	33 57 18	152 46	06 5 21	1 82	1	2	331	1 76
JAPAN	77 06 59 30	33 59 30	153 43	06 5 21	1 96	1	2	431	1 66
JAPAN	78 05 55 10	33 55 10	152 23	09 4 59	1 20	1	2	157	1 65
JAPAN	78 05 57 30	33 57 30	152 23	09 4 59	1 82	1	5	611	1 60
JAPAN	78 05 58 51	33 58 51	152 23	09 4 59	1 60	1	6	953	1 58
JAPAN	78 05 59 48	33 59 48	152 23	09 4 59	1 84	1	5	953	1 55
JAPAN	78 06 57 01	33 57 01	151 42	09 4 59	1 84	1	5	875	1 55
JAPAN	78 06 58 31	33 58 31	151 42	09 4 59	1 92	1	2	072	1 48
JAPAN	78 06 59 33	33 59 33	148 30	09 4 59	1 92	1	0	475	1 44
JAPAN	78 07 51 33	33 51 33	147 44	09 4 59	7 7	1	2	85	1 44
JAPAN	78 07 52 52	33 52 52	151 53	09 4 59	7 9	1	2	331	1 44
JAPAN	78 07 53 52	33 53 52	152 34	09 4 59	7 9	1	2	321	1 44
JAPAN	78 07 54 49	33 54 49	152 46	09 4 59	1 88	1	2	435	1 43
JAPAN	78 07 56 11	33 56 11	152 46	09 4 59	1 88	1	2	435	1 43
JAPAN	78 07 57 42	33 57 42	152 46	09 4 59	1 64	1	2	435	1 43
JAPAN	78 08 51 33	33 51 33	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 08 52 51	33 52 51	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 08 54 21	33 54 21	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 08 55 50	33 55 50	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 08 56 21	33 56 21	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 08 57 42	33 57 42	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 08 59 33	33 59 33	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 09 51 33	33 51 33	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 09 52 51	33 52 51	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 09 54 21	33 54 21	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 09 55 50	33 55 50	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 09 56 21	33 56 21	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 09 57 42	33 57 42	152 29	09 4 59	1 12	1	2	395	1 43
JAPAN	78 09 59 33	33 59 33	152 29	09 4 59	1 12	1	2	395	1 43
USSR	77 06 57 18	34 57 18	152 46	06 5 21	7 9	1	2	435	1 43
USSR	78 06 57 42	34 57 42	152 46	06 5 21	7 9	1	2	435	1 43
USSR	78 06 58 31	34 58 31	152 46	06 5 21	7 9	1	2	435	1 43
USSR	78 06 59 33	34 59 33	152 46	06 5 21	7 9	1	2	435	1 43
USSR	78 07 51 33	34 51 33	151 42	06 5 21	7 9	1	2	435	1 43
USSR	78 07 52 51	34 52 51	151 42	06 5 21	7 9	1	2	435	1 43
USSR	78 07 53 52	34 53 52	151 42	06 5 21	7 9	1	2	435	1 43
USSR	78 07 54 49	34 54 49	151 42	06 5 21	7 9	1	2	435	1 43
USSR	78 07 56 11	34 56 11	151 42	06 5 21	7 9	1	2	435	1 43

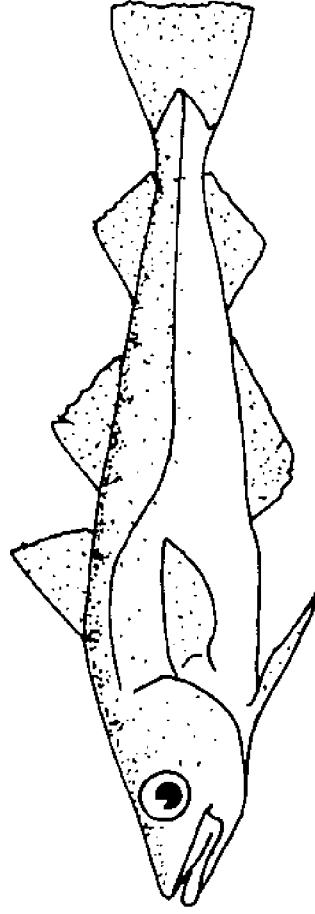
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PFR HOUR
JAPAN	78 424	5913	14650	18749.8	43220.4	125	1.5	1425	0.05
JAPAN	78 614	5640	15143	18741.2	43108.5	109	2.9	2772	0.95
JAPAN	78 624	5800	14916	18745.2	43105.4	125	1.5	1394	0.92
JAPAN	78 633	5624	15222	18691.7	43226.0	196	1.0	462	0.91
JAPAN	78 639	5753	14952	18744.0	43305.9	224	0.8	734	0.91
JAPAN	78 638	5633	15220	18690.0	43146.2	108	0.8	732	0.89
JAPAN	78 624	5835	14828	18750.4	43278.5	71	1.5	1604	0.88
JAPAN	78 524	5449	15726	18526.6	45219.5	128	1.6	2210	0.88
JAPAN	78 415	5442	15759	18513.4	45416.7	141	1.5	1418	0.88
JAPAN	78 610	5623	15227	18690.5	43348.3	158	1.0	1291	0.85
JAPAN	78 631	5501	15817	18581.5	45308.3	176	0.9	1681	0.85
JAPAN	78 529	5459	15717	18547.0	45147.4	90	1.0	772	0.82
JAPAN	78 625	5753	15231	18742.9	43251.6	61	0.2	825	0.78
JAPAN	78 611	5815	14747	18748.0	43088.0	61	0.4	1626	0.74
JAPAN	78 613	5905	14747	18748.0	43088.0	149	1.0	1045	0.73
JAPAN	78 613	5453	15758	18512.5	43229.2	93	2.0	1433	0.72
JAPAN	78 614	5453	15758	18512.5	43229.2	70	1.0	1045	0.68
JAPAN	78 616	5553	15343	18556.6	43309.0	164	1.5	1362	0.68
JAPAN	78 616	5453	15725	18534.2	43206.0	133	1.0	1045	0.68
JAPAN	78 612	5914	14714	18749.0	43233.0	109	1.8	1748	0.68
JAPAN	78 626	5442	15808	18504.0	43401.6	127	0.6	550	0.66
JAPAN	78 630	5442	15808	18504.0	43401.6	103	0.6	402	0.64
JAPAN	78 615	5623	15210	18696.5	43263.4	187	0.5	2904	0.60
JAPAN	78 615	5440	15336	18697.6	43261.1	101	1.5	1204	0.60
JAPAN	78 615	5603	15330	18698.2	43611.4	120	2.0	1535	0.59
JAPAN	78 615	5442	15803	18502.2	43228.5	97	0.5	259	0.59
JAPAN	78 620	5433	15854	18466.0	45448.0	112	1.0	589	0.58
JAPAN	78 617	5433	15757	18466.0	45448.0	86	1.0	589	0.58
JAPAN	78 621	5902	14747	18750.6	43210.0	153	2.0	1463	0.56
JAPAN	78 621	5746	15004	18741.1	43219.9	92	1.0	606	0.56
JAPAN	78 621	5438	15831	18485.1	45619.1	106	1.0	606	0.56
JAPAN	78 621	5440	15755	18489.3	45619.1	92	1.0	606	0.56
JAPAN	78 622	5443	15755	18506.6	45619.1	114	0.6	332	0.53

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	78 5 18	5449	15758	7X 18517.6 33580.3 45407.4	57	0.7	365	0.52
JAPAN	78 6 12	5832	14832	18750.2 31803.2 43132.5	133	3.3	1708	0.51
JAPAN	78 5 28	5455	15737	18534.7 33516.4 45272.7	76	2.2	1134	0.51
USSR	78 4 11	5447	15815	18508.6 33622.6 45511.5	123	1.5	750	0.50
JAPAN	78 6 25	5807	14350	18746.8 31924.7 43068.2	125	0.8	400	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***



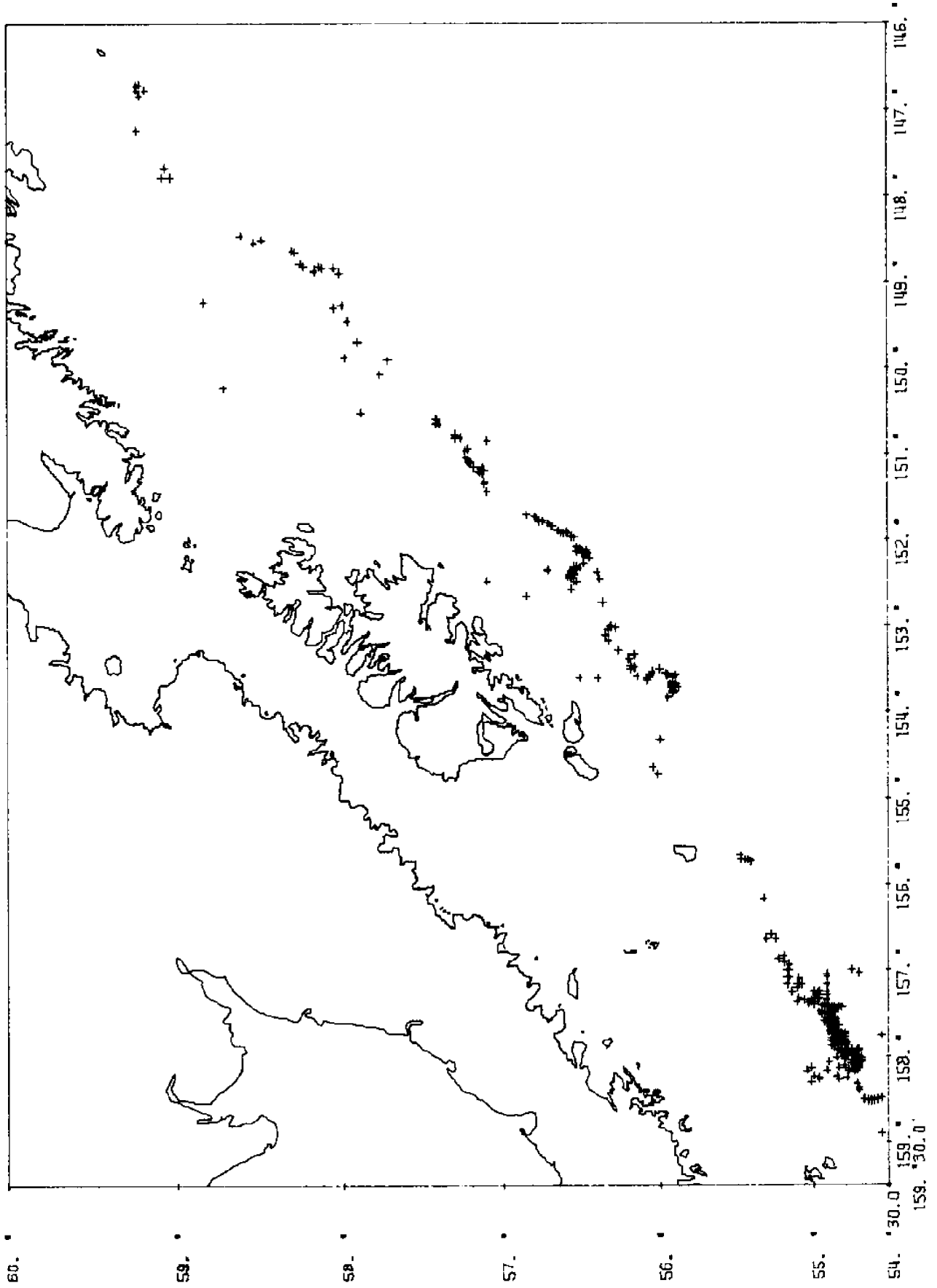


FIGURE A-3. WALLEYE POLLOCK, APRIL-JUNE, 1977-78

TABLE A-7. WALLEYE POLLOCK, JULY-SEPTEMBER 1977

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 7 7	56 34	152 22	43297.0	98	0.1	32887	328.87
USSR	77 7 1	56 33	152 22	43281.4	92	0.1	32860	328.60
USSR	77 7 30	56 47	151 45	43116.4	101	0.5	32500	325.00
JAPAN	77 7 16	56 09	153 31	43690.5	130	0.5	32193	321.93
USSR	77 7 15	56 34	152 26	43299.5	90	0.5	32064	320.64
USSR	77 7 27	56 30	152 48	43299.5	125	0.6	30806	308.06
JAPAN	77 7 8	56 10	153 21	43666.4	114	0.5	30532	305.32
JAPAN	77 7 12	56 41	151 50	43272.8	114	0.7	30517	305.17
JAPAN	77 7 22	55 58	153 34	43745.0	132	0.5	26404	264.04
JAPAN	77 7 22	55 32	152 26	43303.4	132	0.7	26272	262.72
USSR	77 7 17	56 32	152 09	43258.9	109	0.5	25822	258.22
USSR	77 7 17	56 31	152 09	43257.2	108	0.5	25822	258.22
USSR	77 7 7	56 31	152 09	43257.2	108	0.5	25822	258.22
USSR	77 7 12	56 33	152 19	43271.4	98	0.8	24826	248.26
USSR	77 7 22	56 32	152 00	43220.4	120	0.4	24826	248.26
JAPAN	77 7 13	55 51	153 39	43773.5	120	0.6	24826	248.26
JAPAN	77 7 22	55 21	156 21	44771.5	190	0.6	17090	170.90
JAPAN	77 7 19	55 58	153 35	43750.1	139	0.6	16547	165.47
JAPAN	77 7 30	55 07	152 06	45067.3	139	0.4	16547	165.47
USSR	77 7 9	55 25	152 35	43750.1	139	0.8	16547	165.47
USSR	77 7 30	55 07	152 06	45067.3	139	0.4	16547	165.47
USSR	77 7 6	56 30	152 31	43266.4	90	0.2	22705	227.05
USSR	77 7 16	56 34	152 34	43278.1	82	0.1	22609	226.09
USSR	77 7 16	56 05	149 05	43283.0	109	0.4	22572	225.72
USSR	77 7 17	56 30	152 12	43270.4	90	0.2	22572	225.72
USSR	77 7 15	55 20	156 20	43266.4	103	0.8	22572	225.72
USSR	77 7 15	56 34	152 20	43266.4	90	0.2	22572	225.72
USSR	77 7 1	54 49	157 52	43300.6	106	0.9	16484	164.84
USSR	77 7 26	56 30	152 13	43371.4	106	0.9	16484	164.84
USSR	77 7 18	56 28	152 13	43267.2	103	0.9	18266	182.66
USSR	77 7 21	56 28	152 13	43267.2	103	0.9	18266	182.66
JAPAN	77 7 9	55 55	153 55	43248.6	147	0.0	19613	196.13
JAPAN	77 7 14	55 55	154 05	43248.6	147	0.6	19613	196.13

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PEP HOUR
USSR	77 917	52 48	157 42	185 27	45 30 7	103	1 6	176 88	11 00
USSR	77 720	56 43	151 45	187 14	43 12	198	1 5	155 88	10 39
USSR	77 813	56 53	151 30	186 67	43 24	106	1 2	266 02	10 15
JAPAN	77 722	56 02	153 33	186 67	43 60	136	1 1	166 44	9 54
JAPAN	77 786	56 60	154 36	186 61	40 53	109	0 5	46 60	9 32
JAPAN	77 827	55 59	151 42	187 10	43 15	114	2 0	291 22	9 19
JAPAN	77 727	55 59	153 31	186 66	43 26	136	0 5	45 48	9 02
JAPAN	77 735	55 49	151 48	187 08	43 13	92	3 0	267 90	8 93
JAPAN	77 722	55 20	157 25	186 62	43 79	114	1 2	176 00	8 80
USSR	77 917	54 52	156 20	185 92	45 23	112	2 5	212 76	8 51
USSR	77 722	54 52	157 30	185 31	43 51	112	2 5	212 76	8 51
JAPAN	77 722	57 04	151 26	187 21	43 03	112	3 0	254 16	8 47
JAPAN	77 722	56 01	151 26	186 96	43 22	135	0 5	116 22	8 27
JAPAN	77 722	55 14	153 32	186 58	43 25	125	1 1	198 22	7 50
JAPAN	77 718	55 14	153 20	186 54	43 22	114	1 3	235 50	7 50
JAPAN	77 730	56 55	153 33	186 98	43 30	198	0 8	59 42	7 41
JAPAN	77 922	56 45	153 35	186 60	43 37	123	1 0	173 23	7 27
JAPAN	77 811	55 59	151 47	186 67	43 48	114	1 0	173 23	7 27
JAPAN	77 922	56 45	153 35	186 59	43 62	142	1 0	36 38	7 27
JAPAN	77 811	55 59	153 59	186 61	43 76	118	1 0	123 60	7 27
USSR	77 811	56 41	151 50	187 06	43 51	110	1 7	236 0	7 27
USSR	77 720	56 30	152 35	186 95	43 34	106	1 0	91 16	7 21
JAPAN	77 717	55 55	153 55	187 28	43 68	117	1 0	62 92	7 06
JAPAN	77 731	56 45	151 46	187 11	43 10	142	1 0	118 74	6 82
USSR	77 824	56 45	151 47	187 09	43 12	92	1 6	108 28	6 76
USSR	77 713	56 48	151 47	187 11	43 12	104	1 1	66 12	6 61
USSR	77 727	56 41	151 45	187 11	43 44	114	1 2	77 18	6 51
USSR	77 733	55 56	153 39	186 64	43 77	136	1 2	50 96	6 37
JAPAN	77 728	56 01	154 26	186 60	43 99	133	0 1	70 56	6 35
JAPAN	77 728	56 01	154 26	186 60	43 99	133	0 1	63 54	6 35
JAPAN	77 725	57 14	150 50	187 27	43 00	118	1 0	61 07	6 30
JAPAN	77 725	55 55	153 50	186 66	43 82	125	1 0	60 09	6 60

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
USSR	77 720	5708	15126	723	0	101	2	13405	6.7
USSR	77 719	5634	15228	723	0	98	1	13235	5.5
JAPAN	77 719	5656	15135	724	1	110	2	28770	5.5
JAPAN	77 729	5557	15348	724	1	142	1	52947	5.5
JAPAN	77 723	5511	15340	724	1	131	1	30851	5.5
JAPAN	77 719	5556	15350	725	1	128	1	50519	5.5
JAPAN	77 463	5516	15331	725	1	131	1	4574	5.5
JAPAN	77 725	5572	15340	726	1	129	1	51097	5.5
JAPAN	77 725	5572	15340	726	1	129	1	51097	5.5
USSR	77 713	5607	15346	727	1	95	1	69849	4.4
USSR	77 713	5634	15148	727	1	98	1	69849	4.4
USSR	77 738	5644	15148	727	1	112	1	67222	4.4
JAPAN	77 824	5537	15120	728	1	123	1	88636	4.4
JAPAN	77 924	5521	15152	728	1	128	1	88636	4.4
JAPAN	77 726	5528	15347	729	1	106	1	62691	4.4
JAPAN	77 726	5528	15347	729	1	106	1	62691	4.4
USSR	77 877	5559	15359	730	1	136	1	63078	4.4
USSR	77 877	5559	15359	730	1	136	1	63078	4.4
JAPAN	77 823	5588	15142	731	1	165	1	61125	4.4
JAPAN	77 823	5588	15142	731	1	165	1	61125	4.4
USSR	77 731	5700	15130	731	1	101	1	48719	3.3
USSR	77 731	5603	15211	731	1	98	1	31045	3.3
JAPAN	77 915	5516	14824	732	1	120	1	41533	3.3
USSR	77 915	5502	15657	732	1	190	1	40874	3.3
JAPAN	77 914	5604	15436	732	1	120	1	35740	3.3
USSR	77 716	5641	15150	732	1	101	1	3801	3.3
USSR	77 716	5641	15150	732	1	101	1	3801	3.3
JAPAN	77 914	5604	15144	733	1	150	1	3161	3.3
JAPAN	77 914	5604	15144	733	1	150	1	3161	3.3
JAPAN	77 715	5646	15147	733	1	164	1	3123	3.3
JAPAN	77 715	5646	15147	733	1	164	1	3123	3.3
JAPAN	77 823	5559	15130	733	1	106	1	4166	3.3
JAPAN	77 823	5559	15130	733	1	106	1	4166	3.3
USSR	77 829	5453	15174	734	1	109	1	484	3.3

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 723	55200	15624	7X 7Y 7Z	90	1.4	1858	1.328
JAPAN	77 729	55528	15457		169	1.5	1931	1.225
JUSSR	77 724	55535	15335		120	1.7	1378	1.221
JAPAN	77 706	56035	15632		114	1.7	1278	1.115
JUSSR	77 831	56439	15144		136	1.2	1528	1.114
JUSSR	77 712	56332	15232		147	1.5	1723	1.113
JAPAN	77 724	58074	14807		142	1.3	3755	1.105
JAPAN	77 719	55149	14722		1	1.5	1575	1.100
JUSSR	77 730	55533	15320		92	1.0	706	1.100
JUSSR	77 718	56144	15714		107	1.0	1413	1.099
JAPAN	77 814	57159	15049		115	1.0	798	1.099
JAPAN	77 822	55560	15402		123	1.4	798	1.099
JAPAN	77 918	58300	14811		136	1.3	1398	1.098
JUSSR	77 730	56372	15230		95	1.6	3267	1.095
JAPAN	77 721	56428	15756		138	1.0	1531	1.094
JUSSR	77 817	57417	15349		161	1.3	807	1.094
JUSSR	77 824	55138	15047		101	1.8	1093	1.093
JUSSR	77 730	55720	15647		101	1.8	900	1.090
JUSSR	77 725	56359	15333		112	1.8	1410	1.087
JUSSR	77 925	57085	15116		153	1.8	2164	1.087
JAPAN	77 720	57085	15116		101	1.0	2087	1.065
JAPAN	77 725	59156	15711		135	1.0	659	1.065
JUSSR	77 723	55360	14610		111	1.2	615	1.061
JAPAN	77 911	58502	14810		133	1.3	1959	1.060
JUSSR	77 815	56327	15222		76	1.8	2074	1.057
JAPAN	77 910	5757	14913		164	1.4	1037	1.057
JUSSR	77 824	5509	15702		192	1.2	2420	1.052
JAPAN	77 920	5842	14837		139	1.3	116	1.052

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

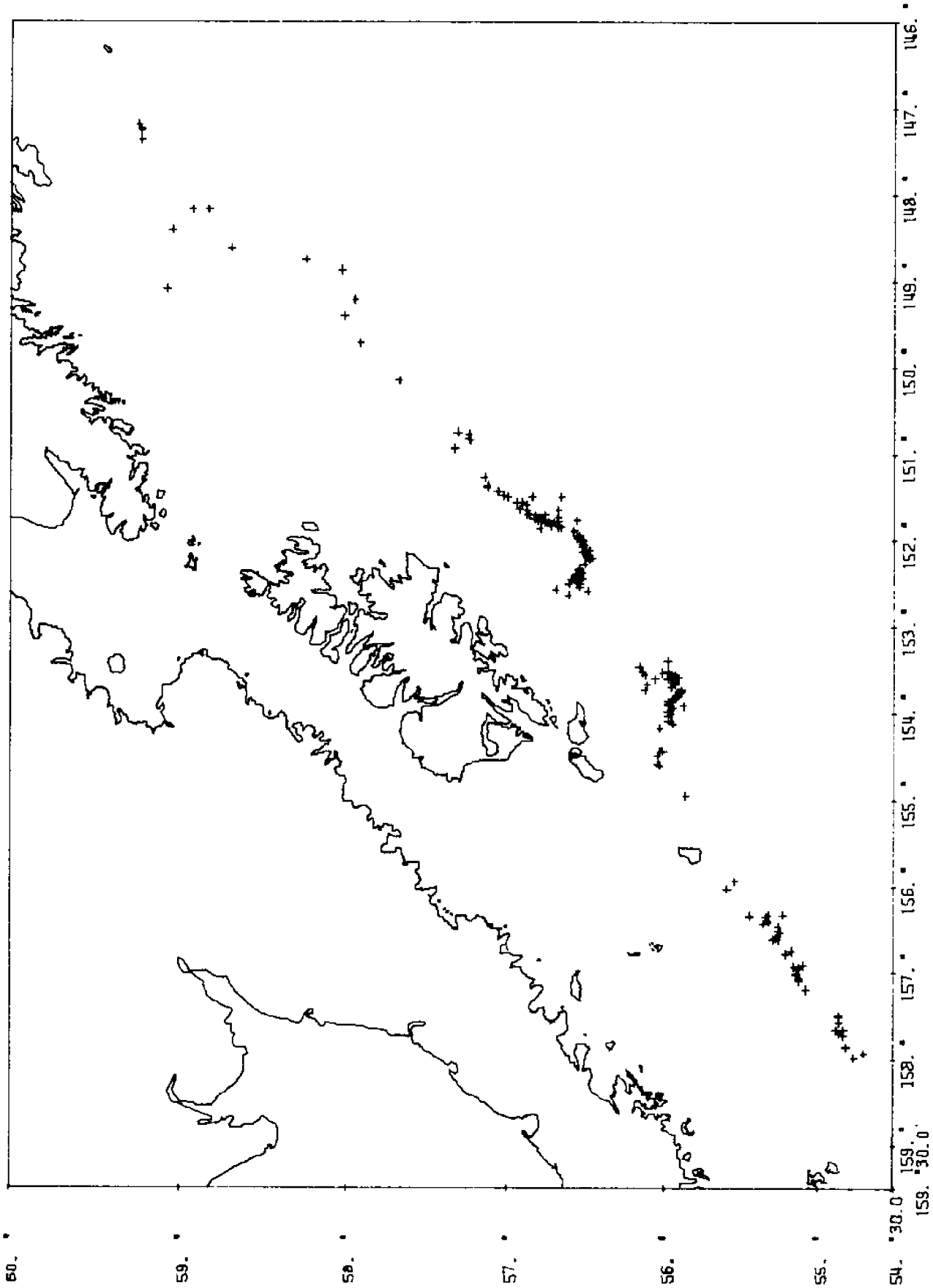


FIGURE A-4. WALLEYE POLLOCK, JULY-SEPTEMBER, 1977

TABLE A-8. WALLEYE POLLOCK, JULY-SEPTEMBER 1978

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C 7X	PULSE RATES 7Z	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 7 11	55 55	153 34	186 59	43 80	109	0 1	404	40
JAPAN	78 7 13	55 55	153 39	186 59	43 78	192	0 1	465	46
JAPAN	78 7 13	56 01	152 40	186 60	44 02	106	0 1	399	39
JAPAN	78 7 12	55 56	153 40	186 60	43 78	112	0 1	332	33
JAPAN	78 7 9	56 41	151 50	187 06	43 15	107	1 60	327	32
JAPAN	78 7 7	56 02	153 27	186 73	43 68	119	1 64	231	23
JAPAN	78 7 2	55 52	153 23	186 69	43 68	104	1 0	221	22
JAPAN	78 8 2	55 52	153 26	186 69	43 68	109	1 64	220	22
JAPAN	78 8 2	56 32	151 51	187 06	43 15	120	1 7	209	20
JAPAN	78 8 9	56 41	151 51	187 06	43 15	114	1 7	190	19
JAPAN	78 7 15	56 51	151 41	187 13	43 19	103	1 4	172	17
JAPAN	78 7 4	56 51	151 56	187 01	43 17	102	1 0	172	17
JAPAN	78 7 4	56 56	153 39	186 97	43 22	109	1 0	172	17
JAPAN	78 7 4	56 30	153 11	186 67	43 18	105	1 0	165	16
JAPAN	78 7 6	56 28	152 09	186 95	43 20	136	1 9	155	15
JAPAN	78 8 31	56 28	151 58	186 90	43 18	109	1 0	155	15
JAPAN	78 8 30	55 53	153 44	186 56	43 28	120	1 3	155	15
JAPAN	78 8 26	55 56	153 20	186 66	43 25	138	1 2	155	15
JAPAN	78 8 26	56 22	152 07	186 66	43 25	127	1 0	155	15
JAPAN	78 8 9	55 55	153 34	186 66	43 25	127	1 0	155	15
JAPAN	78 7 4	56 01	154 08	186 62	43 27	127	1 0	155	15
JAPAN	78 7 7	55 56	153 41	186 69	43 27	127	1 0	155	15
JAPAN	78 8 20	56 27	152 10	186 95	43 25	128	1 0	155	15
JAPAN	78 8 23	56 33	151 38	186 97	43 27	114	1 0	155	15
JAPAN	78 8 9	56 02	154 28	186 61	43 20	103	1 0	155	15
JAPAN	78 8 31	56 40	151 51	187 06	43 16	108	1 2	155	15
JAPAN	78 8 14	56 29	152 07	186 96	43 25	123	1 7	155	15
JAPAN	78 7 2	56 30	152 09	186 97	43 25	103	1 0	155	15
JAPAN	78 7 26	55 53	153 39	186 57	43 28	136	1 2	155	15

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780916	5643	15148	7X 18707	109	0	10919	12.13
JAPAN	780818	5637	15155	7Y 32489	96	1	14135	11.77
JAPAN	780822	5623	15210	7Z 43140	136	1	22912	11.45
JAPAN	780827	5642	15153	7X 43184	103	1	166219	11.07
JAPAN	780915	5607	15329	7Y 43174	123	1	16440	10.96
JAPAN	780916	5646	15147	7Z 43149	145	1	18333	10.77
JAPAN	780827	5553	15343	7X 43151	118	2	18481	10.74
JAPAN	780827	5629	15324	7Y 43174	147	2	25662	10.69
JAPAN	780827	5629	15324	7Z 43183	120	2	22788	10.51
JAPAN	780907	5632	15206	7X 43263	140	2	25072	10.42
JAPAN	780927	5635	15333	7Y 43237	98	1	14980	0.90
JAPAN	780827	5631	15225	7Z 43805	128	1	14990	0.90
JAPAN	780827	5631	15213	7X 43806	149	1	12535	0.69
JAPAN	780827	5630	15208	7Y 43218	100	2	12387	0.69
JAPAN	780827	5637	15332	7Z 43252	131	2	19141	0.57
JAPAN	780827	5625	15208	7X 43218	98	1	15230	0.55
JAPAN	780827	5632	15336	7Y 43257	129	2	16735	0.50
JAPAN	780827	5632	15332	7Z 43261	103	2	14830	0.43
JAPAN	780827	5632	15332	7X 43337	143	2	14835	0.43
JAPAN	780827	5632	15332	7Y 43300	124	2	17301	0.65
JAPAN	780827	5632	15332	7Z 43371	147	2	13439	0.57
JAPAN	780827	5634	15343	7X 43286	95	1	13559	0.47
JAPAN	780827	5606	15132	7Y 44017	95	1	10743	0.43
JAPAN	780827	5632	15320	7Z 43064	109	2	19550	0.74
JAPAN	780827	5632	15320	7X 43339	169	2	19550	0.74
JAPAN	780827	5632	15320	7Y 43076	129	2	19999	0.90
JAPAN	780827	5633	15157	7Z 43320	133	2	18526	0.77

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
JAPAN	780821	5633	15200	7X	125	2.6	19983	7.68
JAPAN	780821	5636	15347	7Z	114	0.8	6058	7.57
JAPAN	780821	5634	15158	7Y	108	1.2	7569	7.56
JAPAN	780821	5639	15211	7Y	136	1.2	3513	7.50
JAPAN	780821	5603	15336	7Y	120	1.5	11049	7.36
JAPAN	780821	5633	15203	7Y	149	1.2	3190	7.32
JAPAN	780821	5634	15207	7Y	120	1.2	220	7.17
JAPAN	780821	5637	15344	7Y	120	1.2	4288	7.14
JAPAN	780821	5635	15334	7Y	114	1.2	2850	7.12
JAPAN	780821	5602	14924	7Y	98	1.2	2003	7.06
JAPAN	780821	5602	15332	7Y	103	1.2	2668	7.00
JAPAN	780821	5601	15332	7Y	127	1.2	877	7.87
JAPAN	780821	5703	15128	7Y	113	1.2	10161	7.77
JAPAN	780821	5633	15333	7Y	158	1.2	18604	6.66
JAPAN	780821	5634	15335	7Y	149	1.2	10794	6.66
JAPAN	780821	5637	15206	7Y	109	1.2	10508	6.56
JAPAN	780821	5637	15356	7Y	115	1.2	3230	6.41
JAPAN	780821	5631	15214	7Y	120	1.2	6418	6.41
JAPAN	780821	5621	15214	7Y	110	2.2	2771	6.36
JAPAN	780821	5631	15205	7Y	133	1.0	2737	6.36
JAPAN	780821	5634	14918	7Y	99	1.0	7482	6.23
JAPAN	780821	5636	15213	7Y	131	1.5	5609	6.23
JAPAN	780821	5632	15203	7Y	131	1.5	9109	6.23
JAPAN	780821	5632	15213	7Y	109	1.5	7718	6.09
JAPAN	780821	5635	15336	7Y	103	1.5	5334	5.93
JAPAN	780821	5652	15140	7Y	112	1.5	5871	5.92
JAPAN	780821	5653	15132	7Y	114	1.5	8808	5.86
JAPAN	780821	5633	15200	7Y	142	1.3	7468	5.74
JAPAN	780821	5632	15200	7Y	114	1.3	17199	5.73
JAPAN	780821	5632	15140	7Y	114	1.6	9457	5.56
JAPAN	780821	5631	15058	7Y	126	1.2	4777	5.51
JAPAN	780821	5636	15136	7Y	117	1.4	7425	5.47
JAPAN	780821	5618	15245	7Y	131	1.2	5178	5.30
JAPAN	780821	5633	15200	7Y	131	1.2	10330	5.16

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780828	5705	15127	18727	114	2.8	13877	5.13
JAPAN	780828	5637	15218	18690	153	1.0	9151	5.08
JAPAN	780828	5558	15334	18662	107	0.5	2526	5.00
JAPAN	780828	5627	15209	18662	118	0.7	3941	5.07
JAPAN	780828	5613	15249	18684	120	0.4	1980	4.95
JAPAN	780828	5713	15102	18726	135	0.6	7815	4.90
JAPAN	780828	5608	15408	18750	130	1.3	7848	4.85
JAPAN	780828	5654	15338	18672	131	1.5	9218	4.85
JAPAN	780828	5614	15135	18715	131	1.8	17009	4.64
JAPAN	780828	5633	15426	18698	103	1.2	17440	4.64
JAPAN	780828	5633	15204	18699	113	1.0	9298	4.53
JAPAN	780828	5633	15217	18699	142	1.0	4524	4.52
JAPAN	780828	5633	15219	18697	120	1.5	11269	4.43
JAPAN	780828	5633	15343	18697	136	1.7	7532	4.42
JAPAN	780828	5655	15343	18658	114	1.5	2213	4.40
JAPAN	780828	5656	15159	18709	115	1.3	5396	4.37
JAPAN	780828	5631	15320	18659	108	1.4	4331	4.33
JAPAN	780828	5632	15337	18699	115	1.5	6934	4.33
JAPAN	780828	5632	15143	18661	107	2.0	10165	4.22
JAPAN	780828	5632	15403	18664	120	1.6	2773	4.22
JAPAN	780828	5655	15347	18658	187	1.8	2668	4.20
JAPAN	780828	5654	15330	18667	139	1.4	5874	4.16
JAPAN	780828	5656	15347	18659	132	1.9	2904	4.14
JAPAN	780828	5644	15147	18708	125	1.6	2487	4.07
JAPAN	780828	5659	15128	18715	117	2.0	8160	4.07
JAPAN	780828	5802	15182	18742	181	1.3	5281	4.06
JAPAN	780828	5802	15220	18733	140	1.2	2857	4.06
JAPAN	780828	5555	15032	18661	120	1.1	8077	3.99
JAPAN	780828	5531	15336	18667	106	1.1	4399	3.99
JAPAN	780828	5630	15228	18697	131	1.2	4705	3.96
JAPAN	780828	5634	15224	18699	121	1.2	9035	3.83
JAPAN	780828	5634	15224	18699	121	2.2	0	3.83

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
JAPAN	780804	57251	15037	18731.6	43005.7Z	139	2.0	709	35
JAPAN	780804	56554	15133	18716.6	43065.5	109	3.0	909	30
JAPAN	780804	56344	15147	18697.6	43274.8	147	3.0	1154	38
JAPAN	780804	56311	15149	18697.6	43315.6	147	1.5	1574	32
JAPAN	780804	56297	15226	18750.2	43127.5	105	3.0	1760	30
JAPAN	780804	56207	15120	18678.4	43015.4	125	2.5	951	38
JAPAN	780804	56119	15144	18705.2	43150.4	125	1.8	683	37
JAPAN	780804	56334	15159	18700.8	43108.7	142	1.5	565	37
JAPAN	780804	56316	15208	18727.6	43244.0	120	2.0	1024	51
JAPAN	780804	56300	15206	18707.3	43201.4	142	1.4	739	52
JAPAN	780804	56308	15236	18662.5	43256.2	123	1.0	576	56
JAPAN	780804	56315	15224	18672.7	43271.2	123	1.5	799	53
JAPAN	780804	56352	15150	18615.0	43246.0	130	1.5	548	36
JAPAN	780804	56354	15208	18699.2	43226.0	136	2.7	966	35
JAPAN	780804	56348	15316	18658.2	43280.5	132	1.2	503	41
JAPAN	780804	56512	15130	18717.0	43051.7	117	2.5	784	31
JAPAN	780804	57009	15120	18726.3	43005.7	110	2.5	876	34
JAPAN	780804	56300	15216	18696.9	43266.8	142	1.8	704	39
JAPAN	780804	56303	15216	18696.9	43276.8	142	2.2	927	42
JAPAN	780804	56332	15101	18726.8	43206.4	135	2.2	710	32
JAPAN	780804	56332	15220	18699.4	43276.8	135	2.2	924	42
JAPAN	780804	56336	15132	18700.6	43276.8	133	2.2	862	39
JAPAN	780804	56302	15220	18699.4	43276.8	133	2.2	924	42
JAPAN	780804	56356	15157	18716.6	43260.7	134	1.0	427	42
JAPAN	780804	56331	15202	18750.2	43221.2	134	1.0	326	32
JAPAN	780804	56330	15201	18698.5	43228.2	11	1.0	278	27
JAPAN	780804	56307	15423	18750.2	43127.8	1	1.0	32	32

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
JAPAN	780928	560167	153322	74.8	43731.6	109	3.2	10247	3.20
JAPAN	780928	560167	153322	74.9	43727.5	114	3.1	4147	3.19
JAPAN	780928	563022	151151	73.2	43473.5	149	2.5	3504	3.12
JAPAN	780928	563022	151151	73.4	43418.3	147	2.7	8419	3.11
JAPAN	780928	563022	151154	73.5	43255.7	131	2.0	6239	3.08
JAPAN	780928	563022	151154	73.7	43200.2	125	1.9	8669	3.03
JAPAN	780928	563022	151157	73.8	43200.1	106	2.0	2335	3.08
JAPAN	780928	563022	151154	73.9	43172.2	142	1.5	7230	3.08
JAPAN	780928	563022	151156	73.6	43020.0	136	1.3	4764	3.08
JAPAN	780928	563022	151157	73.9	43278.2	158	1.3	3669	3.08
JAPAN	780928	563022	151139	73.9	43208.3	152	2.0	9421	3.08
JAPAN	780928	563022	151114	73.9	43214.1	135	2.0	9478	3.07
JAPAN	780928	563022	151138	73.9	43208.3	132	2.0	5540	3.07
JAPAN	780928	563022	151205	73.5	43216.1	129	2.0	2767	3.07
JAPAN	780928	563022	151211	73.6	43226.6	136	2.0	5523	3.07
JAPAN	780928	563022	151205	73.4	43220.7	136	2.0	2689	3.07
JAPAN	780928	563022	151217	73.6	43226.6	135	1.5	4328	3.07
JAPAN	780928	563022	151353	73.5	43227.4	125	1.4	4000	3.07
JAPAN	780928	563022	151225	73.5	43258.9	125	1.2	6436	3.06
JAPAN	780928	563022	151054	73.6	43354.5	142	1.2	3105	3.06
JAPAN	780928	563022	151149	73.6	43291.5	134	1.2	6057	3.05
JAPAN	780928	563022	151158	73.5	43200.3	134	1.3	6090	3.05
JAPAN	780928	563022	151148	73.5	43210.5	120	1.3	8025	3.05
JAPAN	780928	563022	151149	73.4	43209.1	132	3.2	7384	3.04
JAPAN	780928	563022	151146	73.4	43012.9	145	2.4	5890	3.04
JAPAN	780928	563022	151146	73.4	43118.3	125	2.0	4354	3.04
JAPAN	780928	563022	151146	73.4	43130.9	114	2.0	4741	3.04
JAPAN	780928	563022	151146	73.4	43104.4	125	1.1	4005	3.03
JAPAN	780928	563022	151146	73.4	43223.8	114	1.1	2764	3.03
JAPAN	780928	563022	151146	73.4	43108.8	109	1.1	2794	3.03
JAPAN	780928	563022	151146	73.4	43166.5	109	1.1	232	3.03
JAPAN	780928	563022	151146	73.4	43112.5	109	1.1	232	3.03

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 0128	56203	15216	7X 43281.7	147	2	6489	2
JAPAN	78 0129	58038	15245	43043.0	106	1	3693	2
JAPAN	78 0130	56311	15262	43439.8	114	0	1833	2
JAPAN	78 0131	56331	15200	43206.3	147	2	5093	2
JAPAN	78 0132	56403	15209	43255.4	112	1	3060	2
JAPAN	78 0133	56309	15206	43260.4	119	1	3060	2
JAPAN	78 0134	56309	15238	43266.5	107	1	3182	2
JAPAN	78 0135	56305	15235	43219.5	105	1	3186	2
JAPAN	78 0136	56302	15239	43266.2	100	2	4604	2
JAPAN	78 0137	56344	15159	43000.4	102	2	3992	2
JAPAN	78 0138	56362	15128	43208.4	138	2	4170	2
JAPAN	78 0139	56537	15337	43262.7	120	1	4171	2
JAPAN	78 0140	56597	15423	43263.8	131	1	2032	2
JAPAN	78 0141	56597	15423	43263.8	109	1	3354	2
JAPAN	78 0142	56544	15143	43057.1	109	1	3177	1
JAPAN	78 0143	56285	15219	43129.4	135	2	4475	1
JAPAN	78 0144	56203	15220	43277.3	116	1	3630	1
JAPAN	78 0145	56203	15220	43201.4	103	1	5200	1
JAPAN	78 0146	56362	15211	43278.4	153	1	3110	1
JAPAN	78 0147	56362	15215	43266.3	120	1	3431	1
JAPAN	78 0148	56306	15205	43088.2	126	0	1371	1
JAPAN	78 0149	56302	15208	43234.7	108	2	1871	1
JAPAN	78 0150	56303	14920	43016.6	103	2	2010	1
JAPAN	78 0151	56303	14853	43059.4	136	3	2655	1
JAPAN	78 0152	56332	15020	43059.4	130	0	2480	1
JAPAN	78 0153	56332	15033	43000.8	121	0	4061	1
JAPAN	78 0154	56362	15343	43296.0	109	1	2941	1
JAPAN	78 0155	56362	15343	43296.0	109	1	751	1
JAPAN	78 0156	56362	15407	43307.0	114	1	2763	1
JAPAN	78 0157	56362	15407	43307.0	114	1	2763	1
JAPAN	78 0158	56362	15407	43307.0	114	1	2763	1
JAPAN	78 0159	56362	15407	43307.0	114	1	2763	1

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 8 18	56 27	152 34	18692	325	123	2	2982	1.42
JAPAN	78 8 25	56 23	152 10	18695	312	168	1	2458	1.36
JAPAN	78 9 12	56 33	152 30	18698	312	120	1	2291	1.34
JAPAN	78 9 12	56 30	152 19	18696	316	180	1	1342	1.33
JAPAN	78 7 10	58 34	148 27	18750	317	198	1	1750	1.22
JAPAN	78 7 23	57 12	151 04	18726	310	114	3	3095	1.19
JAPAN	78 9 4	55 56	153 47	18659	328	131	5	1789	1.17
JAPAN	78 6 6	56 10	153 28	18745	327	149	5	1715	1.15
JAPAN	78 9 22	56 54	151 38	18715	315	125	1	1500	1.14
JAPAN	78 8 7	58 01	148 58	18745	317	131	5	1722	1.12
JAPAN	78 8 7	58 39	147 30	18750	312	134	5	1712	1.11
JAPAN	78 7 3	59 14	147 40	18701	323	148	2	2912	1.11
JAPAN	78 7 26	56 35	151 44	18711	323	120	2	4705	1.08
JAPAN	78 9 30	58 02	151 48	18745	320	136	2	2351	1.07
JAPAN	78 9 18	57 08	149 20	18722	319	103	2	3665	1.06
JAPAN	78 8 4	58 04	150 04	18740	321	138	1	2180	1.04
JAPAN	78 7 39	56 53	154 18	18762	324	135	1	2150	1.04
JAPAN	78 9 29	56 33	151 20	18700	325	135	1	1882	1.03
JAPAN	78 8 4	57 08	151 09	18724	324	158	1	1765	1.03
JAPAN	78 8 23	56 27	152 03	18724	322	115	2	1435	1.01
JAPAN	78 8 23	56 27	152 08	18724	322	144	1	2842	1.00
JAPAN	78 9 23	58 06	149 17	18746	319	120	3	1888	0.96
JAPAN	78 9 23	57 22	149 17	18744	319	124	1	1931	0.93
JAPAN	78 9 14	59 16	147 03	18749	323	123	1	1679	0.91
JAPAN	78 8 28	56 52	151 40	18713	324	123	1	603	0.86
JAPAN	78 9 28	56 54	151 37	18715	328	141	1	2685	0.85
JAPAN	78 9 29	58 31	148 27	18750	313	125	2	1073	0.82
JAPAN	78 9 2	56 30	152 32	18709	325	164	3	3016	0.81
JAPAN	78 7 4	56 34	151 58	18696	325	117	3	3810	0.80
JAPAN	78 7 9	56 30	152 08	18707	322	110	2	1601	0.80

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 9 19	56 54	151 36	187 15.9	430 73.0	129	1.0	786	0.78
JAPAN	78 9 21	58 50	148 19	187 50.5	431 85.1	142	1.3	993	0.76
JAPAN	78 9 30	56 34	152 24	186 09.5	432 83.9	114	1.0	747	0.74
JAPAN	78 8 17	56 52	151 36	187 14.0	432 80.9	174	2.0	745	0.73
JAPAN	78 8 17	56 47	151 33	187 07.9	431 30.6	125	2.0	1808	0.72
JAPAN	78 7 12	55 57	153 27	186 67.4	432 77.4	114	1.0	1690	0.69
JAPAN	78 8 16	56 30	152 07	186 97.3	432 49.6	132	3.0	1032	0.68
JAPAN	78 8 33	57 10	148 58	187 45.2	430 53.7	149	3.0	2102	0.69
JAPAN	78 8 35	57 10	151 05	187 25.6	430 08.8	137	3.0	1686	0.66
JAPAN	78 9 30	58 02	149 20	187 45.6	430 60.2	98	2.0	1792	0.59
JAPAN	78 7 28	57 35	150 16	187 37.1	430 01.2	109	3.0	1141	0.57
JAPAN	78 7 28	57 25	150 30	187 33.0	430 01.2	131	3.0	1734	0.57
JAPAN	78 7 28	59 15	146 52	187 49.7	432 27.4	120	2.0	1368	0.56
JAPAN	78 8 25	58 02	149 18	187 45.6	432 34.5	125	3.0	1911	0.55
JAPAN	78 8 25	56 29	152 33	186 92.5	430 60.8	136	2.0	1103	0.52
JAPAN	78 9 16	57 06	152 10	186 96.5	432 63.3	178	2.0	1528	0.52
JAPAN	78 7 25	59 13	147 18	187 22.6	430 23.5	131	2.0	1059	0.52
JAPAN	78 7 6	59 16	146 56	187 48.5	432 32.3	109	3.0	1569	0.51
JAPAN	78 7 14	59 11	147 34	187 50.0	432 32.3	117	1.0	1543	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

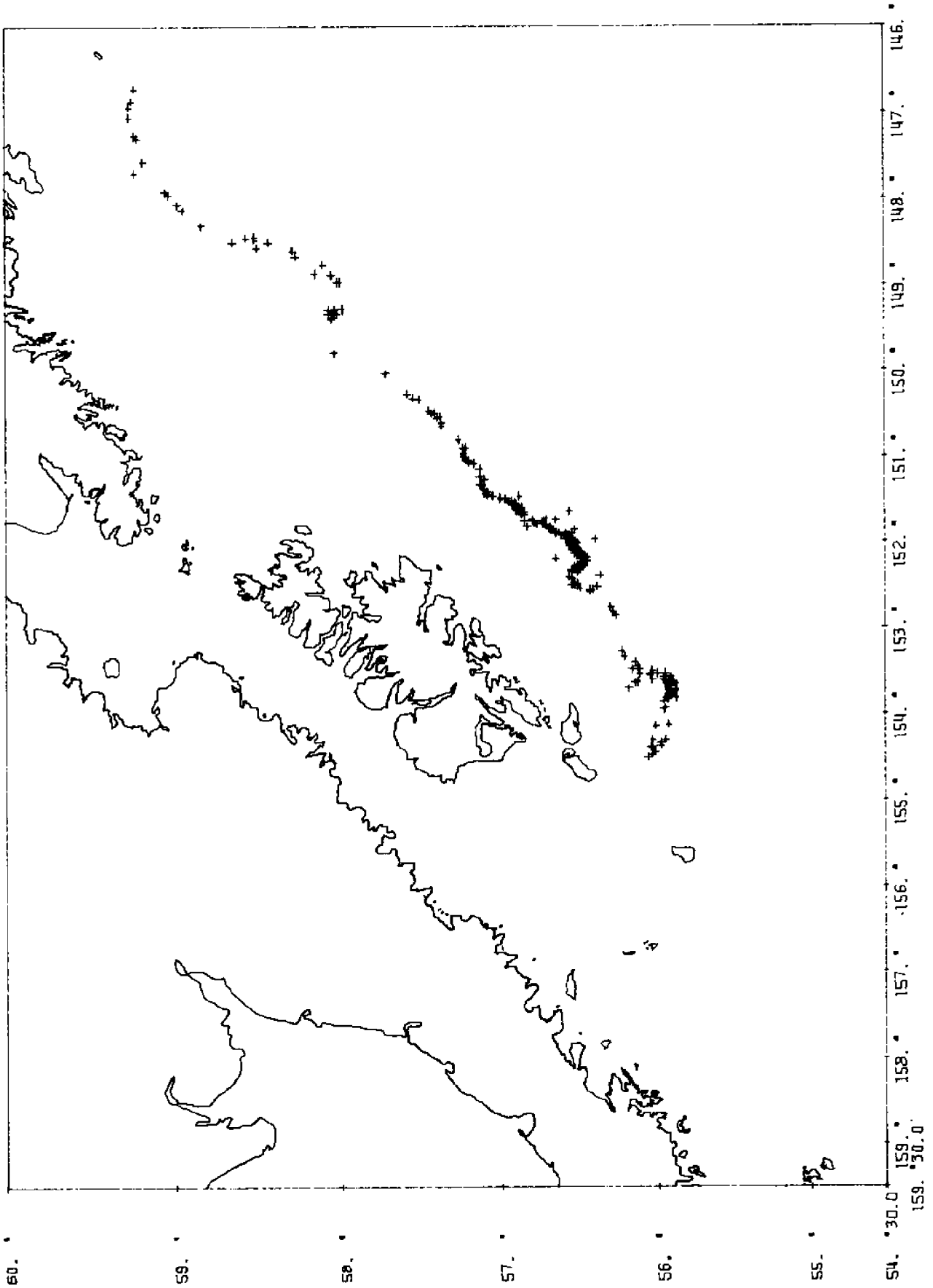


FIGURE A-5. WALLEYE POLLOCK, JULY-SEPTEMBER, 1978

TABLE A-9. WALLEYE POLLOCK, OCTOBER-DECEMBER 1977

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C PULSF RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	771022	5758	14901	18744.8	109	0.6	80083	133.47
JAPAN	771111	5835	14826	31973.2	149	0.8	76945	96.19
JAPAN	771120	5802	14923	31784.9	149	0.8	76945	96.19
JAPAN	771114	5557	15353	31980.3	161	0.6	69311	86.63
JAPAN	771119	5557	15353	32866.4	161	0.6	51724	86.20
JAPAN	771021	5526	15157	32542.1	147	0.2	85754	42.87
JAPAN	771014	5529	15552	33197.5	108	0.8	74225	92.12
JAPAN	771014	5512	15542	33220.0	121	0.6	24028	37.00
JAPAN	771014	5516	15620	33276.4	113	0.3	40028	30.00
JAPAN	771021	5747	15614	32113.0	113	0.2	23047	25.20
JAPAN	771112	5818	14839	31872.5	142	0.3	62647	22.50
JAPAN	771028	5818	14835	31864.0	155	0.2	67719	25.85
JAPAN	771019	5609	14835	31864.0	135	0.5	47719	22.20
JAPAN	771013	5513	15618	32295.0	125	0.9	17490	22.20
JAPAN	771015	5513	15642	3342.0	116	0.2	17490	22.20
JAPAN	771015	5555	15344	32859.0	133	0.2	30963	19.35
JAPAN	771018	5802	15626	33317.2	132	0.5	41462	18.92
JAPAN	771038	5816	14851	31946.8	169	0.3	25476	15.40
JAPAN	771023	5741	14957	32282.5	100	0.8	20138	15.40
JAPAN	771013	5544	15349	32106.3	130	0.1	11239	14.00
JAPAN	771013	5432	15244	32754.0	164	0.9	24968	14.63
JAPAN	771013	5613	15322	32672.4	147	0.2	33377	13.06
JAPAN	771017	5633	15712	32752.4	114	0.6	31377	12.06
JAPAN	771017	5633	15712	32752.4	114	0.6	31377	12.06
JAPAN	771017	5455	15221	32577.6	115	0.2	24585	10.57
JAPAN	771017	5514	15222	33485.9	192	0.5	14844	9.84
JAPAN	771016	5633	15618	32591.4	142	0.9	18859	9.84
JAPAN	771016	5633	15618	32591.4	130	0.6	15131	9.45
JAPAN	771016	5659	15130	32398.7	147	0.1	18467	8.44
JAPAN	771013	5826	15542	32178.6	155	0.1	8049	8.15
JAPAN	771117	5514	15617	33289.4	147	0.1	16082	9.04
JAPAN	771112	5820	14832	31849.0	139	0.1	23620	7.61
JAPAN	771015	5503	15712	32437.6	115	0.1	27571	6.68

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	771015	5512	156228	7X	4833	11	1	10290	6.43
JAPAN	771019	5511	156226	7X	3318	150	2	13794	6.27
JAPAN	771029	5513	14849	7X	3318	92	0	11437	5.71
JAPAN	771028	5525	15552	7Y	3320	139	1	6637	5.51
JAPAN	771019	5525	15324	7Y	3320	133	8	9267	5.15
JAPAN	771022	5631	15214	7Y	3325	147	6	4367	4.72
JAPAN	771017	5504	15210	7Y	3343	126	5	6979	4.36
JAPAN	771011	5528	15542	7Y	3317	120	2	4335	4.32
JAPAN	771018	5633	15220	7Y	3325	136	1	5365	3.35
JAPAN	771015	5632	15222	7Y	3325	121	2	6626	3.36
JAPAN	771015	5632	15227	7Y	3325	136	1	3310	3.31
JAPAN	771016	5633	15207	7Y	3325	128	1	3310	3.31
JAPAN	771013	5637	15540	7Y	3325	120	0	2287	2.28
JAPAN	771015	5633	15153	7Y	3325	124	0	2287	2.28
JAPAN	771013	5633	15154	7Y	3325	124	0	2287	2.28
JAPAN	771010	5622	15231	7Y	3325	136	0	2287	2.28
JAPAN	771016	5632	15222	7Y	3325	143	1	2287	2.28
JAPAN	771013	5645	15809	7Y	3325	123	1	2287	2.28
JAPAN	771018	5513	15339	7Y	3325	128	0	2287	2.28
JAPAN	771016	5520	15628	7Y	3325	142	0	2287	2.28
JAPAN	771014	5631	15756	7Y	3325	131	0	2287	2.28
JAPAN	771011	5629	15206	7Y	3325	128	0	2287	2.28
JAPAN	771014	5632	15203	7Y	3325	133	0	2287	2.28
JAPAN	771010	5520	15205	7Y	3325	129	0	2287	2.28
JAPAN	771120	5734	15018	7Y	3325	112	0	1873	0.00
JAPAN	771016	5632	15242	7Y	3325	129	0	1981	0.00
JAPAN	771011	5629	15218	7Y	3325	129	0	1486	0.00

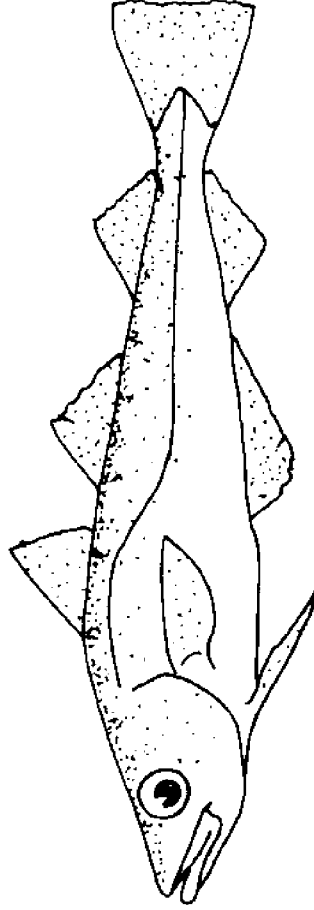
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	7810	5707	15112	7X 32347.3	136	2	8561	3.89
JAPAN	7810	5713	15102	3307.5	133	1	6236	3.80
JAPAN	7810	5722	15040	3303.4	131	1	4946	3.80
JAPAN	7811	5810	14913	3337.9	103	3	4883	3.75
JAPAN	7811	5510	15650	3326.6	164	5	1827	3.65
JAPAN	7810	5714	15347	33368.1	121	1	5427	3.43
JAPAN	7811	5507	15056	33291.4	120	5	5827	3.43
JAPAN	7811	5702	15112	3342.8	1	0	4693	3.13
JAPAN	7810	5556	15346	3342.5	148	0	4520	3.01
JAPAN	7810	5846	14812	32858.5	109	0	1176	3.35
JAPAN	7810	5710	15105	32221.0	108	0	3736	3.35
JAPAN	7810	5606	15142	32448.1	176	0	2198	3.15
JAPAN	7810	5472	15333	32798.0	192	0	6660	3.08
JAPAN	7810	5722	15036	3227.7	1	0	982	3.96
JAPAN	7810	5816	14838	3275.3	1	0	5586	3.91
JAPAN	7810	5720	15121	32349.7	198	0	5307	3.76
JAPAN	7810	5713	15048	32251.1	103	0	2307	3.64
JAPAN	7810	5634	15053	32258.2	174	0	4588	3.62
JAPAN	7810	5723	15045	32248.5	108	1	2690	3.40
JAPAN	7810	5723	15034	32259.4	138	1	3231	3.35
JAPAN	7810	5707	15056	32295.5	108	1	4387	3.55
JAPAN	7810	5723	15114	32348.5	124	0	2597	3.29
JAPAN	7810	5633	15028	32318.5	148	1	1552	3.10
JAPAN	7810	5712	15102	32307.5	198	1	1218	3.10
JAPAN	7810	5717	15031	32269.6	101	0	1555	3.05
JAPAN	7810	5726	14815	32209.4	142	0	1247	3.05
JAPAN	7810	5706	15119	32354.9	190	0	897	3.01
JAPAN	7810	5734	15018	32354.7	114	0	901	3.01
JAPAN	7810	5714	15050	32283.5	109	0	877	3.00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	781128	5452	15731	18530.8	33514.3	153	3.0	2211	0.73
JAPAN	781118	5525	15540	18607.3	33178.6	142	0.8	587	0.73
ROK	781118	5451	15738	18527.0	33532.1	147	2.7	1915	0.70
JAPAN	781024	5626	15234	18602.7	32625.3	98	1.3	704	0.61
JAPAN	781019	5724	15039	18732.4	32228.2	98	1.4	805	0.57
JAPAN	781018	5722	15041	18731.5	32239.0	98	1.5	794	0.52
JAPAN	781016	5706	15125	18772.5	32364.4	98	3.0	1550	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***



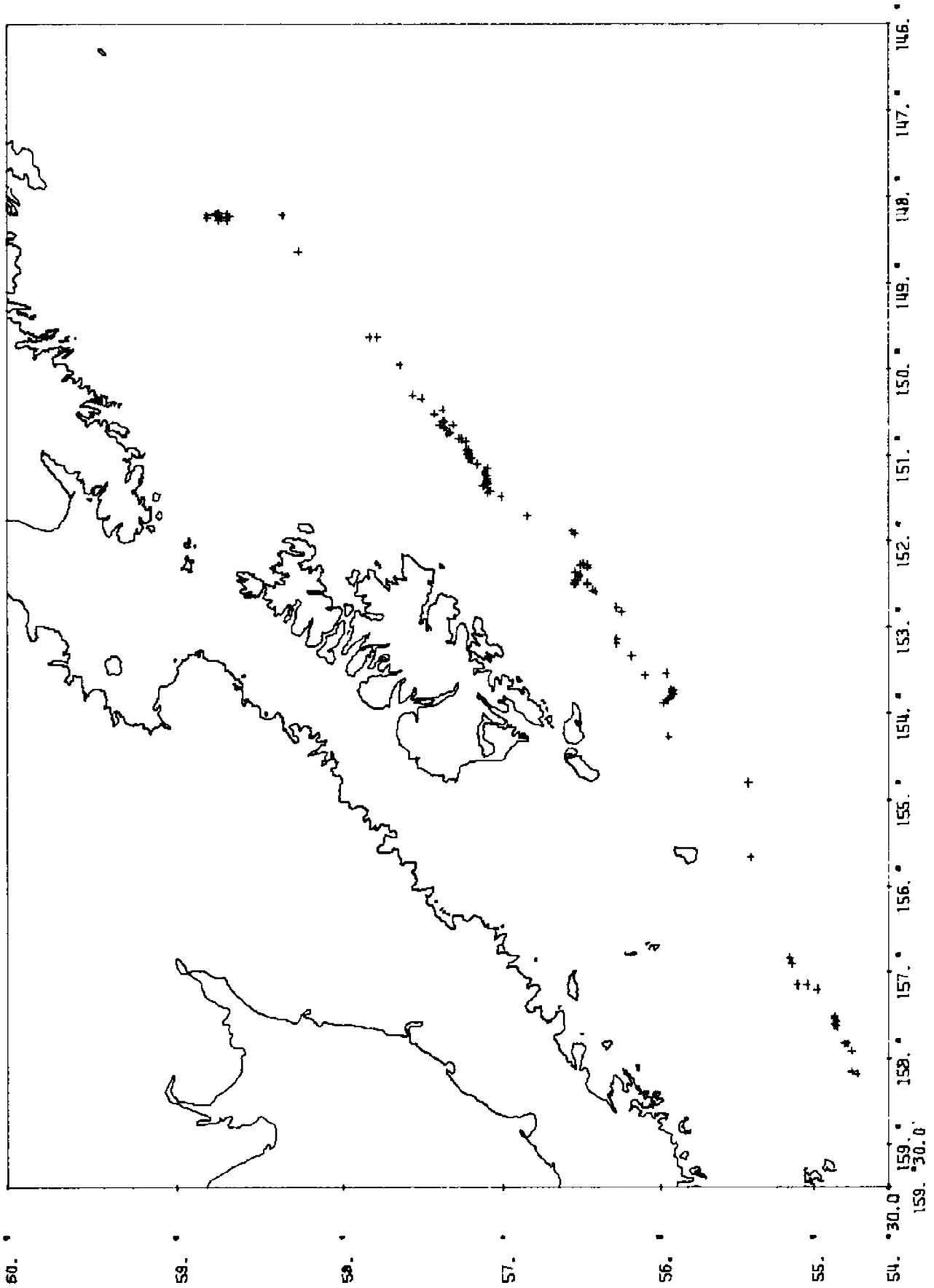


FIGURE A-6. WALLEYE POLLOCK, OCTOBER-DECEMBER, 1978

TABLE A-11. WALLEYE POLLOCK, ALPATROSS BANK AREA, APRIL-JUNE 78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780711	55556	153344	18659.7	43801.7	109	0.1	40459	40.48
JAPAN	780713	55555	153339	18659.1	43781.6	92	0.1	39659	39.65
JAPAN	780713	55555	154226	18660.0	44001.7	107	0.0	30987	30.98
JAPAN	780713	55556	152208	18668.1	43247.6	106	0.2	37612	37.61
JAPAN	780712	55556	153340	18660.1	43782.8	112	0.1	32055	32.05
JAPAN	780712	55541	151150	18706.3	43153.0	101	0.6	47676	47.67
JAPAN	780712	55558	153327	18661.0	43740.0	87	1.0	47658	47.65
JAPAN	780712	55558	153323	18662.2	43670.8	114	0.6	47676	47.67
JAPAN	780722	55562	153466	18658.5	43081.6	109	1.6	12883	23.83
JAPAN	780822	55562	152205	18659.1	43234.0	120	1.4	28514	21.47
JAPAN	780822	55541	151151	18706.2	43155.0	114	1.7	25361	20.51
JAPAN	780822	55541	151141	18706.2	43155.0	103	1.2	32816	20.51
JAPAN	780822	55535	151156	18701.1	43092.3	93	1.5	5943	19.53
JAPAN	780822	55556	153330	18660.1	43777.5	103	0.5	8700	17.00
JAPAN	780822	55556	153330	18660.1	43777.5	109	0.5	8700	17.00
JAPAN	780822	55556	152111	18662.2	43261.4	115	0.5	8504	17.00
JAPAN	780822	55556	153337	18662.2	43261.4	115	0.5	8504	17.00
JAPAN	780822	55556	152009	18660.5	43265.8	136	1.4	3140	16.52
JAPAN	780822	55534	151158	18700.0	43205.8	106	1.0	30177	16.52
JAPAN	780822	55534	153344	18656.5	43813.2	120	1.0	30177	16.52
JAPAN	780822	55556	153341	18660.0	43787.2	109	1.7	26231	15.43
JAPAN	780822	55556	153341	18660.0	43787.2	129	1.3	19752	15.43
JAPAN	780822	55555	153334	18659.6	43757.2	128	1.5	20437	13.62
JAPAN	780822	55555	153334	18659.6	43757.2	127	1.5	20437	13.62
JAPAN	780822	55555	153408	18660.0	43787.2	109	1.5	16324	13.62
JAPAN	780822	55555	153408	18660.0	43787.2	128	1.5	16324	13.62
JAPAN	780822	55557	152108	18695.0	43252.7	120	1.5	16324	13.62
JAPAN	780822	55557	152108	18695.0	43252.7	114	1.6	13413	13.41
JAPAN	780822	55552	153338	18697.4	43279.3	114	1.6	13413	13.41
JAPAN	780822	55552	154228	18661.0	44000.7	103	1.0	14633	13.30
JAPAN	780822	55552	154228	18661.0	44000.7	103	1.0	14633	13.30
JAPAN	780822	55552	152112	18694.5	43279.3	142	1.1	13362	13.30
JAPAN	780822	55552	152112	18694.5	43279.3	142	1.1	13362	13.30
JAPAN	780822	55552	151151	18694.5	43279.3	106	1.7	21888	12.87
JAPAN	780822	55552	151151	18694.5	43279.3	106	1.7	21888	12.87
JAPAN	780822	55553	152000	18697.3	43255.4	103	1.4	17496	12.67
JAPAN	780822	55553	152000	18697.3	43255.4	103	1.4	17496	12.67
JAPAN	780822	55553	153330	18657.0	43255.4	136	2.2	24978	12.67
JAPAN	780822	55553	153330	18657.0	43255.4	136	2.2	24978	12.67

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780814	5629	15158	7X 18693	7Y 0.6	136	1.8	13589	7.54
JAPAN	780821	5630	15211	18660	578	136	1.2	16513	7.50
JAPAN	780827	5632	15336	18700	543	120	1.5	13149	7.36
JAPAN	780829	5634	15153	18700	546	109	1.8	12920	7.32
JAPAN	780830	5635	15337	18661	546	114	1.6	14288	7.14
JAPAN	780831	5635	15347	18658	546	114	1.4	12850	7.12
JAPAN	780832	5636	15327	18671	546	103	1.4	28668	7.6
JAPAN	780833	5637	15328	18672	546	120	1.5	8268	7.89
JAPAN	780834	5638	15218	18670	546	113	1.3	10168	7.77
JAPAN	780835	5639	15333	18662	546	158	1.5	18684	7.66
JAPAN	780836	5640	15345	18657	546	149	1.9	10004	7.66
JAPAN	780837	5641	15206	18659	546	179	2.0	10194	7.61
JAPAN	780838	5642	15356	18659	546	110	1.5	10500	7.56
JAPAN	780839	5643	15206	18658	546	115	1.0	10230	7.46
JAPAN	780840	5644	15214	18698	546	115	1.0	13418	7.46
JAPAN	780841	5645	15214	18698	546	120	2.0	12771	7.36
JAPAN	780842	5646	15141	18713	546	133	2.0	12732	7.36
JAPAN	780843	5647	15203	18718	546	131	1.5	12482	7.20
JAPAN	780844	5648	15203	18718	546	131	1.5	19109	7.20
JAPAN	780845	5649	15203	18718	546	131	1.5	8928	7.20
JAPAN	780846	5650	15203	18718	546	131	1.5	7714	7.20
JAPAN	780847	5651	15203	18718	546	131	1.5	5800	7.20
JAPAN	780848	5652	15140	18717	546	103	1.0	5374	7.20
JAPAN	780849	5653	15132	18717	546	112	1.3	5800	7.20
JAPAN	780850	5654	15132	18717	546	112	1.3	7469	7.20
JAPAN	780851	5655	15220	18717	546	147	1.5	17157	7.20
JAPAN	780852	5656	15136	18713	546	142	1.6	19457	7.20
JAPAN	780853	5657	15245	18713	546	117	1.4	8816	7.51
JAPAN	780854	5658	15200	18713	546	131	1.6	7425	7.30
JAPAN	780855	5659	15137	18713	546	117	1.4	5130	7.30
JAPAN	780856	5660	15202	18713	546	131	2.0	10330	7.30
JAPAN	780857	5661	15137	18713	546	117	1.4	19151	7.30
JAPAN	780858	5662	15318	18660	546	109	1.5	3526	7.30
JAPAN	780859	5663	15374	18660	546	107	1.0	3041	7.30
JAPAN	780901	5664	15209	18660	546	118	2.0	119	7.30
JAPAN	780911	5667	15209	18660	546	118	2.0	119	7.30
JAPAN	780915	5668	15209	18660	546	118	2.0	119	7.30
JAPAN	780917	5669	15209	18660	546	118	2.0	119	7.30

*** NOTE ** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. **

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 8 16	33	15159	7X	142	1 0	4915	4.91
JAPAN	78 9 30	38	15338	7Y	131	3 5	17009	4.85
JAPAN	78 8 19	54	15135	7Z	131	1 8	18440	4.68
JAPAN	78 9 13	31	15206	7Z	113	1 3	5898	4.53
JAPAN	78 9 13	33	15204	7Z	142	1 0	4524	4.52
JAPAN	78 9 13	30	15219	7Z	120	2 8	11269	4.50
JAPAN	78 8 26	31	15219	7Z	136	1 7	4069	4.48
JAPAN	78 8 21	33	15343	7Z	114	1 5	7533	4.43
JAPAN	78 9 15	32	15159	7Z	115	0 3	2213	4.40
JAPAN	78 9 15	32	15342	7Z	108	1 2	5724	4.39
JAPAN	78 9 31	31	15207	7Z	108	1 5	4396	4.37
JAPAN	78 8 31	37	15337	7Z	114	0 5	6131	4.33
JAPAN	78 7 15	47	15114	7Z	125	1 6	2773	4.29
JAPAN	78 7 22	55	15347	7Z	187	1 8	7568	4.20
JAPAN	78 7 22	52	15334	7Z	130	1 6	5874	4.16
JAPAN	78 7 22	56	15347	7Z	115	1 4	2487	4.14
JAPAN	78 7 22	56	15128	7Z	117	2 0	8160	4.07
JAPAN	78 8 23	37	15336	7Z	106	1 2	5297	4.03
JAPAN	78 8 22	31	15228	7Z	121	1 3	4399	3.99
JAPAN	78 8 21	34	15208	7Z	121	2 5	4789	3.99
JAPAN	78 9 11	35	15204	7Z	109	2 4	9357	3.85
JAPAN	78 9 24	34	15147	7Z	120	3 1	8089	3.85
JAPAN	78 9 15	37	15129	7Z	147	3 0	11507	3.82
JAPAN	78 8 28	39	15320	7Z	125	2 0	9511	3.80
JAPAN	78 8 28	39	15164	7Z	125	1 8	7604	3.79
JAPAN	78 8 22	31	15147	7Z	120	2 8	6858	3.77
JAPAN	78 8 22	31	15159	7Z	147	1 5	8240	3.74
JAPAN	78 8 21	30	15206	7Z	142	2 8	10492	3.73
JAPAN	78 8 21	30	15206	7Z	142	1 4	5170	3.69

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780115	5558	15336	18662.5	43754.9	127	1.0	3669	3.669
JAPAN	780118	5631	15216	18697.7	43271.8	145	1.5	5482	3.654
JAPAN	780130	5632	15202	18699.2	43266.0	136	2.7	19668	3.588
JAPAN	780137	5654	15150	18706.2	43149.1	131	1.5	5377	3.553
JAPAN	780126	5618	15138	18738.9	43592.3	123	1.6	5003	3.551
JAPAN	780135	5709	15130	18717.6	43505.5	112	1.3	4573	3.511
JAPAN	780135	5620	15211	18719.1	43504.3	142	2.5	8764	3.508
JAPAN	780135	5630	15216	18696.9	43276.8	156	1.8	6704	3.485
JAPAN	780138	5630	15216	18696.9	43276.8	136	2.3	6774	3.351
JAPAN	780138	5632	15217	18698.4	43276.0	133	2.6	7923	3.300
JAPAN	780137	5636	15220	18716.0	43276.7	133	2.8	7923	3.300
JAPAN	780117	5633	15132	18708.5	43226.1	136	1.8	9226	3.265
JAPAN	780116	5633	15201	18708.5	43226.1	130	1.0	3265	3.265
JAPAN	780112	5656	15340	18660.3	43282.3	114	1.8	2586	3.233
JAPAN	780112	5603	15323	18663.3	43282.3	114	1.0	3265	3.233
JAPAN	780114	5601	15342	18663.8	43278.4	98	1.0	3209	3.209
JAPAN	780114	5616	15251	18674.2	43731.5	104	1.5	4147	3.182
JAPAN	780115	5707	15220	18723.2	43727.5	149	2.5	3804	3.112
JAPAN	780124	5632	15151	18697.3	43188.3	147	2.2	7419	3.111
JAPAN	780125	5630	15209	18697.3	43155.7	120	1.0	3247	3.103
JAPAN	780114	5635	15154	18701.6	43201.4	135	1.0	3339	3.039
JAPAN	780123	5634	15158	18701.6	43201.4	126	1.5	2735	2.984
JAPAN	780130	5652	15157	18704.0	43203.1	142	2.5	4768	2.884
JAPAN	780135	5634	15137	18714.0	43172.8	136	1.2	3684	2.884
JAPAN	780135	5631	15156	18701.6	43200.8	150	1.3	3669	2.820
JAPAN	780132	5631	15139	18697.3	43189.2	158	1.3	6842	2.820
JAPAN	780138	5708	15114	18723.3	43014.4	123	2.0	4421	2.807
JAPAN	780135	5634	15138	18702.0	43161.3	129	2.0	5440	2.765
JAPAN	780135	5632	15205	18699.4	43266.0	120	1.1	3637	2.765
JAPAN	780135	5632	15211	18699.4	43266.0	136	1.1	4373	2.765
JAPAN	780135	5632	15220	18699.4	43266.0	136	1.1	4373	2.765

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780819	36288	15116	7X 5095	1255	104	2688	2168
JAPAN	780827	35581	15217	7X 6971	1555	125	6400	2677
JAPAN	780815	36373	15223	7Y 5823	1422	121	5600	2553
JAPAN	780816	35370	15146	7Y 6861	1344	123	3205	2553
JAPAN	780921	36357	15158	7Y 5011	1366	228	8435	2541
JAPAN	780829	37028	15130	7Y 9135	1124	100	4354	2241
JAPAN	780816	36489	15114	7Y 6911	1259	220	4741	2237
JAPAN	780818	36489	15121	7Y 6654	1259	220	4741	2237
JAPAN	780812	36288	15116	7Y 6861	1470	208	6488	2231
JAPAN	780818	36303	15220	7Y 6971	1244	201	1838	2222
JAPAN	780817	36303	15220	7Y 6971	1109	103	5089	2219
JAPAN	780817	36429	15149	7Y 6971	1119	103	6060	2218
JAPAN	780823	36309	15206	7Y 6855	1119	103	3840	2212
JAPAN	780824	36309	15206	7Y 6855	1107	105	1868	2212
JAPAN	780824	36309	15206	7Y 6855	1305	122	3186	2210
JAPAN	780824	36309	15206	7Y 6855	1305	122	6692	2210
JAPAN	780824	36309	15206	7Y 6855	1305	122	3992	2210
JAPAN	780824	36309	15206	7Y 6855	1305	122	4170	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	2032	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	3357	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	4474	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	6474	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	3674	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	3110	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	4371	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	2018	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	3378	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	2260	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	4941	2207
JAPAN	780824	36309	15206	7Y 6855	1305	122	758	2207

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE	RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 7 25	56 32	151 24	187 22	32 67	43 07	152	1.6	2371	1.46
JAPAN	78 7 26	55 51	154 07	186 57	32 94	43 17	114	1.5	1763	1.14
JAPAN	78 8 18	56 27	152 34	187 13	32 45	43 09	131	2.5	3594	1.43
JAPAN	78 8 25	56 27	152 34	186 92	32 62	43 27	123	1.8	2457	1.36
JAPAN	78 9 17	56 33	152 30	186 98	32 58	43 30	164	1.0	1742	1.34
JAPAN	78 9 12	56 30	152 10	186 96	32 58	43 28	180	0.9	1107	1.33
JAPAN	78 9 27	55 56	151 27	187 29	32 52	43 01	137	0.5	3070	1.19
JAPAN	78 7 26	56 10	153 29	186 74	32 77	43 16	114	0.5	1703	1.17
JAPAN	78 9 22	56 54	151 38	187 15	32 43	43 67	109	1.3	1702	1.15
JAPAN	78 9 26	56 38	151 53	187 11	32 52	43 11	120	0.3	4145	1.11
JAPAN	78 9 11	56 48	151 44	187 23	32 46	43 11	120	0.3	4145	1.08
JAPAN	78 9 13	57 02	151 20	187 23	32 34	43 05	136	0.3	3551	1.07
JAPAN	78 7 30	56 53	154 18	186 62	32 83	43 16	189	0.3	1359	1.06
JAPAN	78 8 10	56 33	151 38	187 00	32 45	43 27	125	1.8	1882	1.06
JAPAN	78 8 20	56 29	152 31	186 90	32 54	43 21	124	0.4	1439	1.02
JAPAN	78 8 21	56 52	152 00	187 13	32 57	43 57	144	0.0	1842	0.96
JAPAN	78 9 28	56 54	151 47	187 15	32 42	43 07	141	0.0	603	0.85
JAPAN	78 9 23	56 40	151 47	187 09	32 47	43 24	123	0.2	766	0.82
JAPAN	78 9 7	56 34	152 38	186 96	32 60	43 31	164	0.0	1073	0.81
JAPAN	78 9 19	56 54	151 36	187 00	32 59	43 25	103	0.0	3016	0.80
JAPAN	78 8 30	56 54	152 08	186 90	32 52	43 08	124	0.0	1601	0.80
JAPAN	78 9 19	56 54	151 36	187 15	32 27	43 23	114	0.0	786	0.78
JAPAN	78 8 17	56 43	151 43	187 14	32 43	43 20	125	0.0	747	0.74
JAPAN	78 7 12	55 57	153 39	186 61	32 68	43 30	114	0.0	1465	0.72
JAPAN	78 9 16	56 39	152 10	186 97	32 47	43 24	132	0.0	1600	0.69
JAPAN	78 9 16	56 25	152 10	186 96	32 57	43 24	128	0.0	1032	0.68
JAPAN	78 7 25	57 06	151 24	187 22	32 67	43 07	131	0.0	1103	0.52

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

TABLE A-12. WALLEYE POLLOCK, ALBATROSS BANK AREA, JULY-SEPT 78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780605	5620	15302	18685.8	32692.7	49	0.3	37129	123.76
JAPAN	780629	5554	15343	18657.8	32859.5	103	0.8	49862	62.32
JAPAN	780628	5603	15150	18706.3	32809.7	113	0.9	49554	55.06
JAPAN	780622	5541	15335	18659.5	32499.9	103	0.5	26335	52.67
JAPAN	780628	5556	15348	18659.8	32853.5	179	1.1	51392	46.72
JAPAN	780628	5605	15335	18659.4	32810.2	87	0.6	48947	44.49
JAPAN	780628	5555	15347	18659.2	32767.5	103	0.7	44565	42.75
JAPAN	780628	5555	15323	18658.3	32864.1	112	1.1	26159	26.21
JAPAN	780628	5612	15306	18677.2	32758.0	103	1.1	23779	23.77
JAPAN	780615	5619	15300	18685.2	32693.5	182	1.0	25309	23.09
JAPAN	780613	5616	15307	18685.2	32732.5	82	0.5	51479	20.59
USSR	780619	5611	15328	18675.8	32770.4	115	1.0	24683	15.42
USSR	780614	5611	15330	18675.8	32773.4	65	0.6	17796	14.19
USSR	780617	5646	15147	18709.7	32475.5	114	1.0	14194	14.19
JAPAN	780619	5631	15206	18709.7	32475.5	109	0.9	2810	14.05
JAPAN	780619	5600	15330	18665.1	32541.9	153	1.3	17826	13.71
JAPAN	780615	5633	15158	18700.5	32543.5	153	1.3	18059	13.45
JAPAN	780626	5706	15126	18722.5	32364.4	98	0.8	10606	13.25
JAPAN	780622	5555	15343	18658.7	32857.9	120	1.0	25799	12.88
JAPAN	780622	5554	15343	18657.9	32857.9	98	0.9	9362	12.88
JAPAN	780622	5554	15209	18657.9	32857.9	120	1.0	9362	11.70
JAPAN	780622	5629	15212	18657.9	32857.9	109	0.9	10374	11.70
JAPAN	780616	5627	15216	18696.6	32575.6	109	1.0	11137	11.52
JAPAN	780624	5610	15111	18727.5	32588.1	166	1.5	10982	11.41
JAPAN	780619	5643	15144	18674.5	32340.7	114	1.1	15624	9.98
JAPAN	780615	5643	15144	18674.5	32340.7	109	1.0	14497	9.66
USSR	780627	5643	15144	18674.5	32340.7	120	1.2	11501	9.57
JAPAN	780627	5635	15155	18702.5	32535.6	106	0.9	31597	9.31
JAPAN	780627	5635	15224	18702.5	32535.6	106	0.9	18636	8.45
JAPAN	780627	5635	15224	18702.5	32535.6	106	0.9	3108	7.77
JAPAN	780630	5556	15340	18660.1	32782.5	101	0.9	14542	7.65
JAPAN	780630	5600	15419	18660.1	32898.9	100	1.0	11450	7.7

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
JAPAN	780607	5557	15350	18660.1	48	100	2.0	14561	7.205
JAPAN	780608	5624	15336	18687.6	30	158	1.4	27391	6.841
JAPAN	780609	5634	15233	18699.6	129	136	0.0	52911	6.661
JAPAN	780610	5642	15150	18666.7	29	109	0.0	14823	6.644
JAPAN	780611	5628	15235	18695.5	109	109	0.0	14477	6.637
JAPAN	780612	5646	15150	18709.4	90	165	1.0	16380	5.536
JAPAN	780613	5634	15220	18695.4	88	92	1.0	39819	5.571
JAPAN	780614	5632	15203	18698.6	89	95	1.0	39822	5.564
JAPAN	780615	5636	15154	18702.6	27	90	1.0	30621	5.507
JAPAN	780616	5637	15155	18703.0	25	120	1.0	35528	5.509
JAPAN	780617	5636	15200	18699.3	57	113	1.0	43468	4.787
JAPAN	780618	5630	15320	18667.1	80	103	1.0	32338	4.444
JAPAN	780619	5632	15205	18699.3	87	103	1.0	32338	4.444
JAPAN	780620	5707	15111	18623.8	7	128	1.0	51474	4.284
JAPAN	780621	5631	15214	18698.2	18	113	1.0	42822	4.220
JAPAN	780622	5632	15229	18698.7	21	123	1.0	46935	4.132
JAPAN	780623	5645	15206	18695.5	68	120	1.0	40835	3.876
JAPAN	780624	5628	15469	18695.7	87	123	1.0	44147	3.841
JAPAN	780625	5601	15434	18661.7	37	101	1.0	49785	3.841
JAPAN	780626	5601	15448	18670.7	50	120	1.0	45785	3.841
JAPAN	780627	5655	15341	18663.0	9	110	1.0	37032	3.340
JAPAN	780628	5638	15155	18703.4	22	113	1.0	46331	3.303
JAPAN	780629	5706	15119	18720.0	9	109	1.0	31949	2.910
JAPAN	780630	5602	15224	18663.5	5	135	1.0	46331	3.303
JAPAN	780631	5607	15119	18720.0	9	109	1.0	31949	2.910
JAPAN	780632	5605	15336	18669.5	28	107	1.0	46331	3.303
JAPAN	780633	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780634	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780635	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780636	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780637	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780638	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780639	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780640	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780641	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780642	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780643	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780644	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780645	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780646	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780647	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780648	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780649	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780650	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780651	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780652	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780653	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780654	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780655	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780656	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780657	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780658	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780659	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780660	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780661	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780662	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780663	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780664	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780665	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780666	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780667	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780668	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780669	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780670	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780671	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780672	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780673	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780674	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780675	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780676	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780677	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780678	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780679	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780680	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780681	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780682	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780683	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780684	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780685	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780686	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780687	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780688	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780689	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780690	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780691	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780692	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780693	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780694	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780695	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780696	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780697	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780698	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780699	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780700	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780701	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780702	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780703	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780704	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780705	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780706	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780707	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780708	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780709	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780710	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780711	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780712	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780713	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780714	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780715	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780716	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780717	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780718	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780719	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780720	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780721	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780722	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780723	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780724	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780725	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780726	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780727	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780728	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780729	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780730	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780731	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780732	5638	15115	18701.3	21	107	1.0	46331	3.303
JAPAN	780733	5635	15153	18701.2	6	109	1.0	46331	3.303
JAPAN	780734	5638	15115	18701.3</					

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
JAPAN	780610	5609	15335	7X 18673.5	7Z 43704.7	120	1.6	3001	2.2
JAPAN	780630	5555	15346	18658.4	43815.6	103	1.6	3347	2.2
USSR	780614	5643	15221	18706.2	43227.7	98	2.0	4400	2.2
JAPAN	780623	5555	15333	18669.1	43244.3	131	1.7	4175	2.2
JAPAN	780628	5628	15209	18665.8	43265.9	133	1.7	3504	2.1
JAPAN	780628	5556	15343	18659.5	43296.9	101	1.6	2149	1.1
JAPAN	780610	5555	15323	18657.4	43363.0	120	1.3	2887	1.1
JAPAN	780614	5701	15142	18724.5	43012.9	109	1.9	3071	1.1
JAPAN	780628	5634	15158	18713.0	43093.8	149	2.5	3572	1.1
JAPAN	780615	5637	15129	18708.5	43205.6	114	1.5	2220	1.1
JAPAN	780625	5637	15119	18623.3	43301.5	178	1.5	2406	1.1
USSR	780612	5602	15330	18685.0	43215.0	108	1.5	1601	1.1
JAPAN	780614	5629	15312	18711.2	43517.5	168	1.9	1872	1.1
JAPAN	780620	5624	15227	18699.7	43308.0	106	2.0	2462	1.0
JAPAN	780621	5623	15220	18690.1	43274.7	103	1.8	732	0.0
JAPAN	780605	5553	15343	18656.6	43380.1	167	1.5	681	0.0
JAPAN	780605	5634	15336	18693.1	43340.0	187	1.5	1045	0.0
JAPAN	780609	5620	15210	18666.7	43326.3	153	1.4	240	0.0
JAPAN	780609	5604	15334	18668.7	43372.0	112	1.0	253	0.0

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

TABLE A-13. PACIFIC COD, JANUARY-MARCH 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C 7X	APPROX LORAN-C 7Y	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
USSR	77 2 11	5627	15233	18693.6	32619.8	4350.0	153	2.0	7181	3.59
JAPAN	78 2 17	5443	15804	18504.1	33612.7	45452.8	184	2.6	7467	2.85
JAPAN	78 2 15	5454	15721	18537.0	33487.0	45180.6	169	2.5	7126	2.85
USSR	78 2 15	5452	15728	18531.6	33508.1	45225.4	174	3.1	5761	1.82
JAPAN	78 2 15	5451	15740	18506.5	33536.2	45297.7	172	2.0	4320	1.72
USSR	78 2 20	5445	15809	18506.4	33616.6	45479.1	176	2.5	2782	1.39
JAPAN	78 2 15	5451	15747	18526.2	33547.3	45337.2	82	1.5	1333	0.88
JAPAN	78 2 15	5448	15730	18529.2	33515.6	45279.0	183	2.6	2137	0.82
JAPAN	78 2 14	5447	15753	18515.2	33562.5	45350.1	169	2.0	1615	0.80
USSR	77 2 13	5626	15228	18693.2	33576.1	45336.8	153	2.3	1425	0.79
USSR	78 2 22	5449	15755	18518.5	33574.0	45389.7	173	1.8	1558	0.67
JAPAN	77 2 4	5632	15221	18521.9	33549.1	45318.9	185	1.8	862	0.55
USSR	77 2 5	5626	15232	18692.8	32621.6	43283.0	153	2.1	1972	0.51
JAPAN	78 2 23	5448	15749	18518.3	33564.9	45356.0	169	2.0	1071	0.51

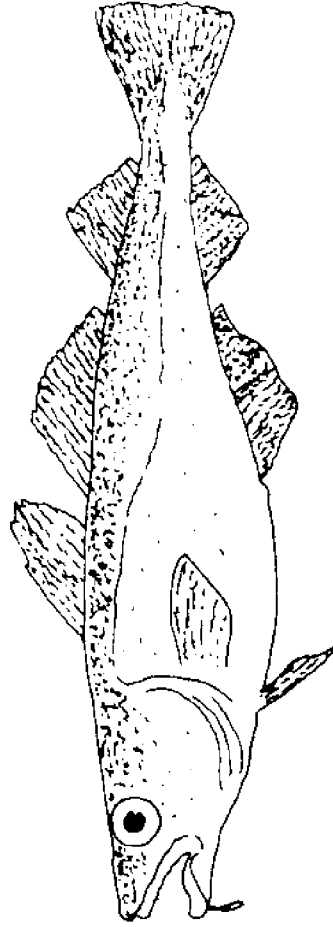
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 5 15	5444.2	15806	18501.0	45466.2	130	0.6	726	1.21
USSR	78 6 42	5444.0	15804	18506.8	45451.5	143	1.0	1582	1.21
JAPAN	78 6 30	5621.1	15317	18686.3	43215.2	82	1.0	1382	1.15
USSR	78 6 12	5611.6	15317	18681.3	43273.2	76	1.0	1716	1.17
JAPAN	78 6 14	5641.7	15801	18680.5	43440.3	25	1.1	1547	1.10
JAPAN	78 6 22	5643.6	15343	18707.8	43140.3	120	1.1	3158	1.01
JAPAN	78 5 31	5456.4	15736	18504.3	45486.6	70	1.0	967	0.96
JAPAN	78 5 27	5456.8	15736	18531.3	45265.0	90	1.0	663	0.93
JAPAN	78 6 19	5456.8	14727	18546.5	45164.0	70	1.0	244	0.88
USSR	78 6 25	5805.2	14859	18546.6	45265.0	20	1.0	1540	0.88
JAPAN	78 6 27	5456.8	15046	18529.6	45200.0	60	1.1	826	0.84
JAPAN	78 6 32	5443.2	15831	18493.0	43471.3	60	1.2	1738	0.87
JAPAN	78 5 24	5443.2	15831	18493.0	43471.3	20	1.3	408	0.77
JAPAN	78 6 30	5600.8	15619	18665.1	45426.0	90	1.1	291	0.76
USSR	78 6 18	5805.6	14856	18746.6	45467.0	20	1.1	126	0.74
USSR	78 6 19	5444.4	15806	18505.4	45466.6	65	1.0	866	0.77
USSR	78 4 20	5904.4	14744	18505.4	45466.6	45	1.0	335	0.68
JAPAN	78 6 4	5904.4	14751	18505.4	45466.6	95	1.0	325	0.62
JAPAN	78 6 5	5911.7	14646	18550.8	43218.0	97	1.0	565	0.61
JAPAN	78 6 26	5707.7	14646	18750.8	43218.0	48	1.1	1080	0.61
JAPAN	78 5 31	5457.0	15731	18523.9	43218.0	71	1.1	1680	0.61
JAPAN	78 4 27	5500.2	15724	18523.9	43233.6	105	1.0	1800	0.60
JAPAN	78 5 23	5914.0	14646	18547.0	45186.6	65	1.4	256	0.59
JAPAN	78 5 22	5914.0	14646	18547.0	45186.6	20	1.7	407	0.57
USSR	78 6 17	5630.7	15207	18538.0	43240.3	68	1.1	577	0.57
USSR	78 6 17	5807.8	14858	18669.1	43240.3	24	1.2	1301	0.56
JAPAN	78 6 17	5845.5	15014	18753.4	43237.2	76	1.2	1217	0.55

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 6 1	5529	15540	7X 18612.8 33163.7 44514.5	142	0.5	276	0.55
JAPAN	78 5 3	5914	14643	18749.7 31535.6 43220.7	136	2.0	1099	0.54
JAPAN	78 5 28	5502	15723	18550.8 33463.5 45176.9	65	2.3	1275	0.53
JAPAN	78 5 29	5459	15717	18547.0 33461.7 45147.4	90	1.0	1531	0.53
JAPAN	78 6 3	5446	15146	18709.8 32474.0 43122.8	65	2.7	1451	0.53
USSR	78 4 12	5642	15822	18496.4 33653.8 45560.7	125	1.3	1680	0.52
JAPAN	78 6 5	5619	15300	18685.2 32693.5 43497.6	60	2.5	1288	0.51
JAPAN	78 6 24	5442	15803	18502.4 33613.9 45448.5	90	1.3	1661	0.50
JAPAN	78 5 12	5443	15756	18506.5 33596.0 45405.7	114	1.5	760	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***



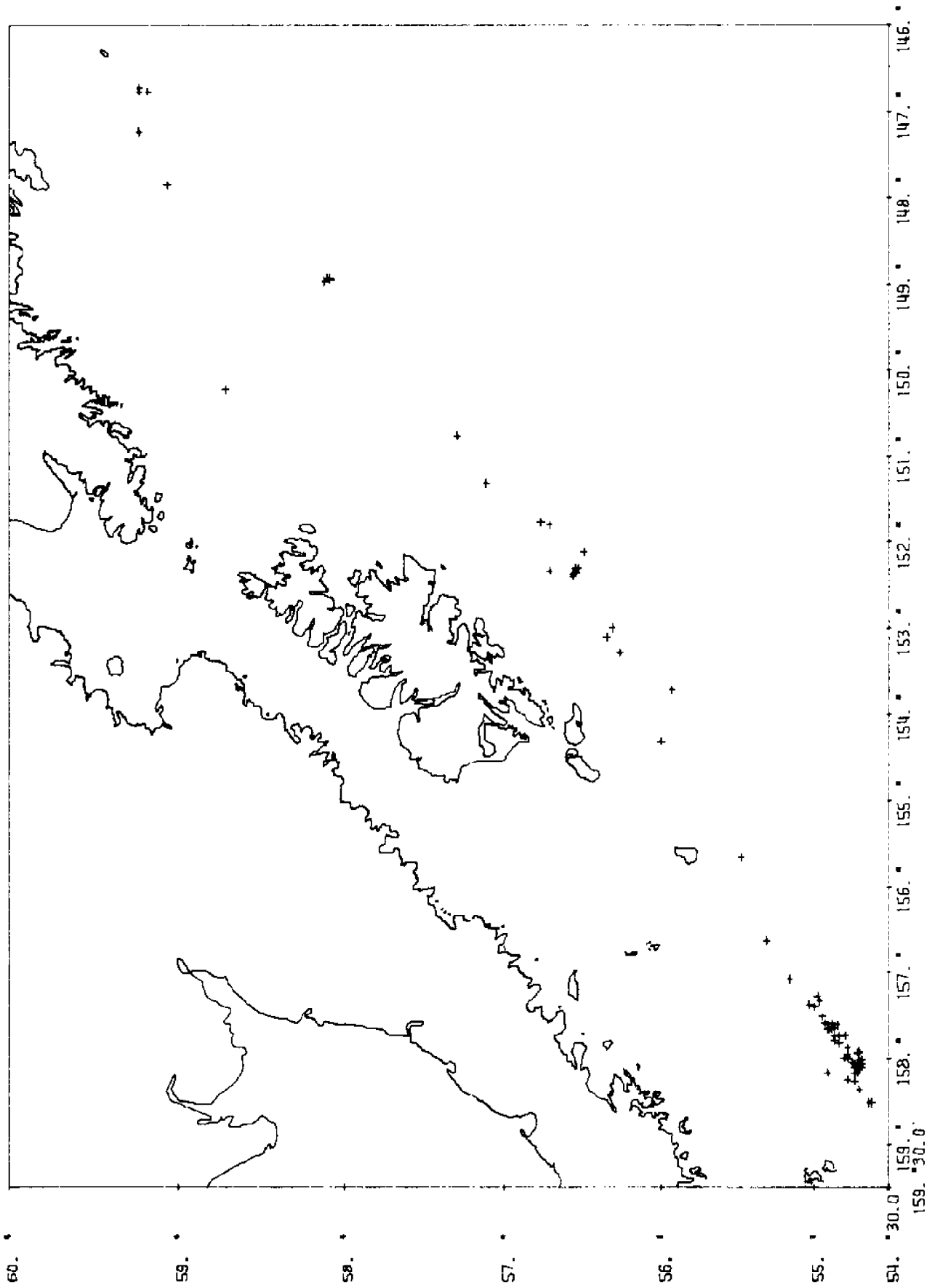


FIGURE A-7. PACIFIC COD, APRIL-JUNE, 1977-78

TABLE A-15. PACIFIC COD, JULY-SEPTEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE	RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
USSR	77 9 4	5635	15227	18700	7X	32578	71	0.5	2614	5.22
JAPAN	77 9 3	5555	15335	18659	7Y	32850	92	1.0	4784	4.78
USSR	77 9 15	5509	15701	18527	7Y	33522	95	1.2	5320	4.43
USSR	77 8 22	5517	15636	18585	7Y	33394	92	0.8	4234	3.52
USSR	77 7 16	5634	15219	18699	7Y	33574	98	0.5	5439	2.26
USSR	77 8 14	5522	15220	18595	7Y	33277	68	0.5	2120	2.24
USSR	77 7 29	5531	15202	18698	7Y	32569	98	0.5	5840	2.31
USSR	77 8 21	5631	14843	18740	7Y	33389	90	0.7	3403	2.26
USSR	77 8 16	5629	15213	18696	7Y	32581	103	0.7	3727	2.13
USSR	77 8 16	5640	15146	18711	7Y	32465	114	0.7	3554	2.10
USSR	77 8 18	5449	15752	18524	7Y	33567	65	0.4	819	1.04
USSR	77 7 17	5630	15211	18519	7Y	33539	65	0.9	1760	1.92
JAPAN	77 9 21	5903	15045	18697	7Y	32274	117	0.9	1750	1.92
USSR	77 9 26	5449	15752	18519	7Y	32647	110	0.3	2304	1.67
USSR	77 8 5	5635	15252	18698	7Y	32616	184	0.5	1823	1.64
JAPAN	77 7 19	5635	15156	18701	7Y	32541	192	0.5	783	1.56
USSR	77 7 30	5559	15336	18669	7Y	32830	123	0.7	1991	1.41
USSR	77 9 15	5509	15205	18565	7Y	33495	95	0.5	675	1.35
USSR	77 8 24	5559	15702	18567	7Y	33896	92	0.2	1167	1.29
USSR	77 8 28	5645	15334	18663	7Y	32826	76	0.2	1452	1.21
JAPAN	77 8 28	5649	14847	18767	7Y	33129	87	0.6	1849	1.15
JAPAN	77 8 28	5644	14844	18767	7Y	32491	98	0.0	3450	1.15
JAPAN	77 7 1	5641	15150	18708	7Y	32499	98	0.5	2158	1.06
USSR	77 9 7	5636	15206	18706	7Y	32499	114	0.5	1506	1.06
USSR	77 7 5	5636	15227	18700	7Y	32574	71	0.4	1371	1.09

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 7 6	56333	15218	18697.1	32573.1	79	1.0	1412	0.94
JAPAN	77 7 24	55133	15647	18677.2	33351.0	101	1.1	888	0.88
JAPAN	77 7 30	55555	15364	18658.6	32859.0	198	1.1	949	0.86
JAPAN	77 7 8	57403	15011	18739.7	32127.3	84	1.2	1025	0.84
JAPAN	77 7 26	55560	15420	18662.7	32904.2	118	1.4	2036	0.84
USSR	77 7 17	56306	15212	18697.2	32576.5	90	0.9	726	0.80
USSR	77 7 13	56364	15218	18700.4	32485.0	92	0.3	1043	0.74
JAPAN	77 7 8	55133	15332	18661.9	32431.4	87	0.0	1485	0.74
USSR	77 7 24	55133	15332	18677.2	32351.9	101	0.1	1805	0.73
USSR	77 7 19	56566	15138	18699.2	32576.1	92	0.4	1018	0.72
JAPAN	77 7 26	56463	15142	18716.4	32422.1	110	0.5	1363	0.72
USSR	77 7 26	56232	15241	18710.0	32468.3	114	0.2	1582	0.71
USSR	77 7 6	56559	15234	18689.9	32648.0	169	0.5	1350	0.70
JAPAN	77 7 14	55210	15422	18704.1	32560.5	82	0.7	1187	0.69
JAPAN	77 7 17	55210	15328	18654.2	32907.5	170	0.9	1316	0.66
JAPAN	77 7 25	55545	15345	18657.5	32774.6	125	0.6	1396	0.66
USSR	77 7 9	55055	15212	18657.6	32864.7	103	0.5	970	0.64
USSR	77 7 29	58237	14842	18558.3	31430.5	103	0.2	2027	0.63
USSR	77 7 23	56557	15134	18749.1	32412.4	112	0.3	1702	0.61
JAPAN	77 7 27	59014	14818	18750.6	31659.8	102	0.3	764	0.58
JAPAN	77 7 31	56011	15408	18662.6	31566.1	77	0.5	833	0.55
JAPAN	77 7 31	56088	15408	18662.6	32876.5	114	0.2	458	0.54
JAPAN	77 7 22	55133	15333	18677.2	32470.1	136	0.3	728	0.52
USSR	77 7 6	55130	15633	18596.7	33309.7	101	0.8	1051	0.52
JAPAN	77 7 31	57004	15130	18719.0	33304.6	109	0.0	1407	0.50
JAPAN	77 7 31	59114	14643	18749.7	31535.7	109	0.0	1407	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

TABLE A-16. PACIFIC COD, OCTOBER-DECEMBER, 1977-78

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	7811	5625	15235	18691.7	7X	125	0.2	2705	13.50
JAPAN	7811	5822	14813	18749.2	32630.7	142	0.3	1335	4.45
JAPAN	7811	5513	15642	18578.5	33342.0	116	1.6	713	4.45
JAPAN	7811	5633	15237	18598.2	33508.6	158	0.2	770	3.60
JAPAN	7811	5452	14959	18739.1	33218.4	133	0.2	600	3.00
JAPAN	7710	5740	15629	18579.2	33320.3	150	1.6	363	2.26
JAPAN	7811	5442	15750	18516.4	33378.5	111	0.6	410	1.68
JAPAN	7811	5512	15628	18579.8	33318.0	129	0.3	588	1.96
JAPAN	7811	5733	14957	18738.9	33114.8	159	1.8	375	1.56
JAPAN	7811	5626	15521	18608.4	33278.6	158	1.8	500	1.55
JAPAN	7811	5528	15521	18608.4	33278.6	158	1.8	500	1.55
JAPAN	7811	5621	15216	18676.6	33190.3	130	1.6	245	1.51
JAPAN	7710	5601	15324	18655.2	33263.7	130	1.6	245	1.51
JAPAN	7811	5518	15626	18578.2	33343.3	130	1.6	245	1.51
JAPAN	7811	5758	14901	18744.0	33194.9	130	1.6	245	1.51
JAPAN	7811	5448	15750	18517.5	33257.2	107	1.0	174	1.16
JAPAN	7811	5639	15216	18692.0	33361.9	162	1.5	277	1.15
JAPAN	7811	5526	15542	18592.5	33271.5	118	0.8	190	1.12
JAPAN	7710	5514	15617	18606.7	33197.2	117	0.2	90	1.05
JAPAN	7811	5639	15329	18698.4	33245.2	111	0.2	211	1.05
JAPAN	7811	5609	15722	18678.6	33309.4	132	1.0	303	1.05
JAPAN	7710	5455	14835	18578.6	33675.4	145	1.0	139	0.92
JAPAN	7811	5818	14839	18748.5	33093.5	142	1.0	180	0.90
JAPAN	7811	5517	15753	18748.5	33864.5	161	1.0	249	0.89
JAPAN	7811	5452	15332	18659.5	33862.4	142	1.0	254	0.87
JAPAN	7811	5526	15047	18530.6	33248.9	103	1.0	270	0.85
JAPAN	7811	5716	15657	18728.7	33201.0	103	1.0	107	0.80
JAPAN	7811	5509	15664	18569.3	33360.8	130	1.0	150	0.71
JAPAN	7811	5800	14834	18745.3	33399.7	130	1.0	182	0.69
JAPAN	7811	5611	15320	18676.6	33352.1	111	0.7	183	0.65

** NOTE ** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 ** USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	771120	5802	14923	18745.6 31980.7 43061.3	109	0.8	478	0.59
JAPAN	771029	5813	14849	18747.9 31899.0 43083.1	92	2.0	1128	0.56
JAPAN	771016	5452	15742	18527.8 33536.9 45307.7	129	2.5	1398	0.55
JAPAN	7811 3	5842	14817	18750.8 31747.3 43158.1	153	0.2	108	0.54
ROK	781128	5451	15735	18527.8 33525.9 45268.3	158	2.6	1328	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

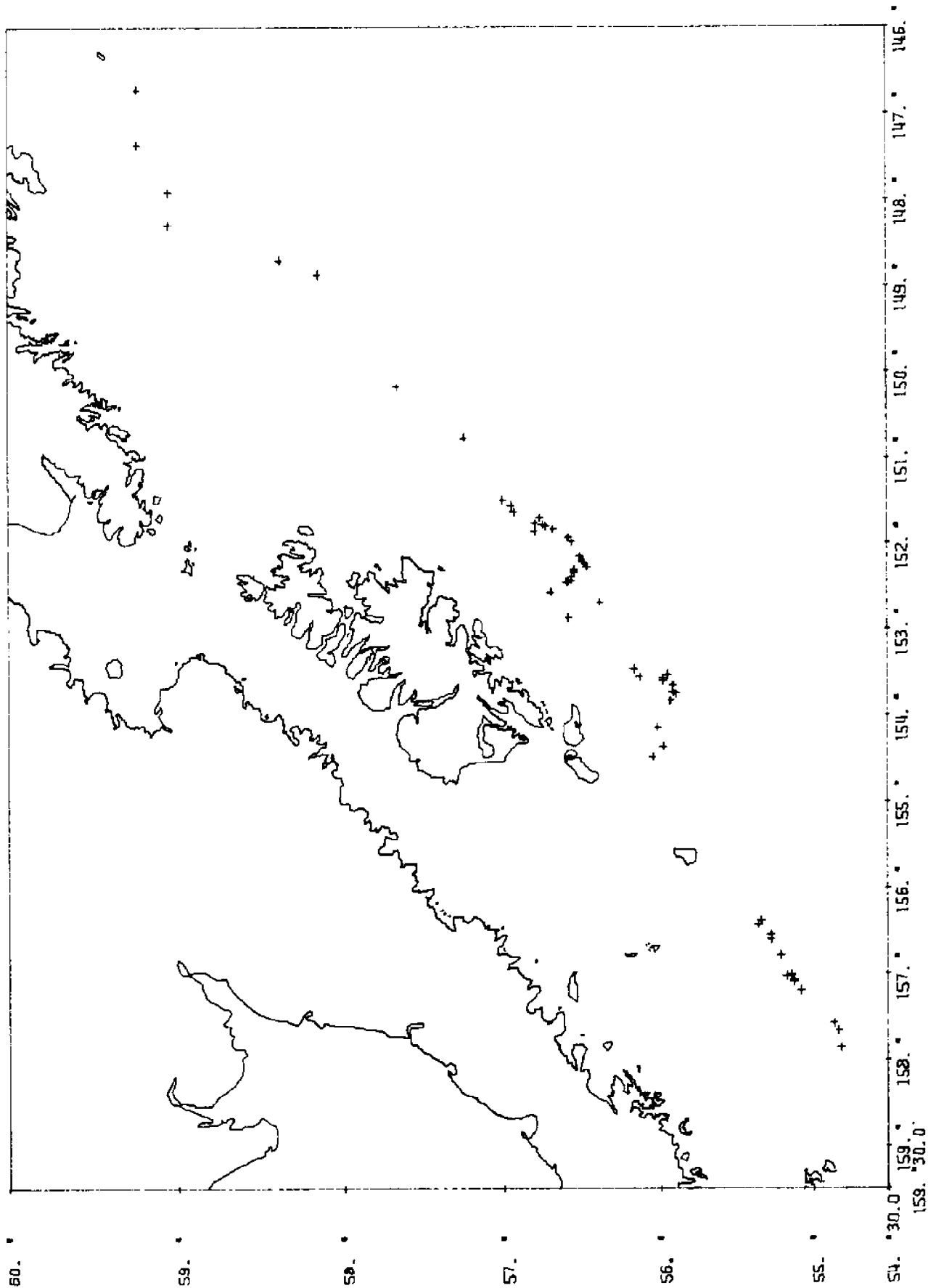


FIGURE A-8. PACIFIC COD, JULY-SEPTEMBER, 1977-78

TABLE A-17. FLOUNDERS, JANUARY-MARCH, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 2 14	54 54	152 21	18537.0	169	2.5	8343	3.330
USSR	77 2 18	56 25	152 13	18696.0	153	0.5	1985	3.306
USSR	77 2 11	56 30	152 15	18697.0	153	2.4	6131	2.555
JAPAN	78 2 14	54 49	152 13	18697.9	185	1.8	3868	2.144
USSR	78 2 14	56 29	152 13	18696.3	158	1.6	4130	2.568
JAPAN	78 2 15	55 39	152 10	18690.5	172	2.5	3382	1.335
USSR	77 2 9	57 20	150 45	18728.7	113	2.2	2482	1.124
JAPAN	78 2 15	54 48	152 28	18531.6	169	3.1	1459	1.208
USSR	78 2 14	54 27	152 33	18531.2	149	1.8	3365	1.892
JAPAN	77 2 13	56 26	152 28	18693.1	153	2.2	2137	0.964
USSR	77 2 10	56 34	152 18	18699.8	164	1.9	1609	0.844
JAPAN	78 2 15	54 51	150 45	18728.2	183	2.6	1739	0.665
USSR	77 2 11	56 27	152 19	18693.6	153	1.6	1049	0.664
USSR	77 2 13	56 38	152 19	18702.7	153	1.8	1102	0.611
US	77 2 3	56 33	152 25	18698.7	142	1.1	1107	0.556

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
JAPAN	78	5622.6	152.07	18695.5	43259.5	121	0.5	493	0.98
JAPAN	78	5522.6	155.44	18608.3	44545.9	131	0.5	463	0.92
JAPAN	78	5713.3	151.04	18726.5	43044.7	120	0.5	1041	0.88
JAPAN	78	5713.3	151.05	18726.6	43004.8	95	0.5	1710	0.85
JAPAN	78	5713.3	150.56	18726.6	43003.3	109	0.5	1276	0.82
JAPAN	78	5454.2	157.40	18501.8	45460.3	184	0.5	593	0.82
JAPAN	78	5442.2	158.03	18502.4	45448.5	90	0.5	1050	0.80
JAPAN	78	5636.6	151.54	18702.5	43486.4	160	0.5	532	0.76
JAPAN	78	5619.8	153.00	18685.2	43493.6	120	0.5	1805	0.72
JAPAN	78	5708.4	151.10	18724.0	43013.2	113	0.4	1997	0.71
JAPAN	78	5846.5	148.13	18750.0	43169.2	155	0.6	416	0.69
JAPAN	77	5855	148.10	18750.0	43197.5	124	0.3	1594	0.67
JAPAN	78	5644.1	158.01	18501.7	45438.4	125	0.5	1008	0.65
JAPAN	78	5708.4	151.48	18707.0	43140.9	120	0.3	1016	0.65
JAPAN	78	5554	152.41	18657.1	43012.9	120	0.8	2147	0.63
JAPAN	78	5554	153.04	18650.0	43095.3	114	0.8	503	0.62
JAPAN	78	5436.9	157.16	18481.2	45456.9	194	0.3	1803	0.61
JAPAN	78	5659	153.36	18670.5	45616.5	108	0.3	1803	0.60
JAPAN	78	5606	152.24	18690.5	43721.9	171	0.5	960	0.60
JAPAN	78	5452.8	157.20	18547.5	45266.5	171	0.5	608	0.60
JAPAN	78	5452.8	157.20	18547.5	45266.5	171	0.5	295	0.59
JAPAN	78	5453	157.27	18547.5	45267.0	135	0.5	280	0.58
JAPAN	78	5453	150.14	18750.8	45217.7	184	0.1	630	0.57
JAPAN	78	5513	156.36	18579.4	44877.6	168	0.6	642	0.56
JAPAN	78	5442	158.00	18503.3	44430.9	98	0.7	343	0.55
JAPAN	78	5442	158.07	18503.8	45472.1	98	0.8	385	0.55
JAPAN	78	5435	158.30	18479.2	45472.3	97	0.5	261	0.52
JAPAN	78	5610	153.20	18675.6	45628.4	114	0.7	366	0.52
JAPAN	78	5555	153.47	18690.3	43828.5	118	0.1	371	0.51
JAPAN	77	5832	152.05	18690.8	43828.5	164	0.2	258	0.50
JAPAN	77	5841	148.15	18750.8	43174.5	164	0.2	115	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

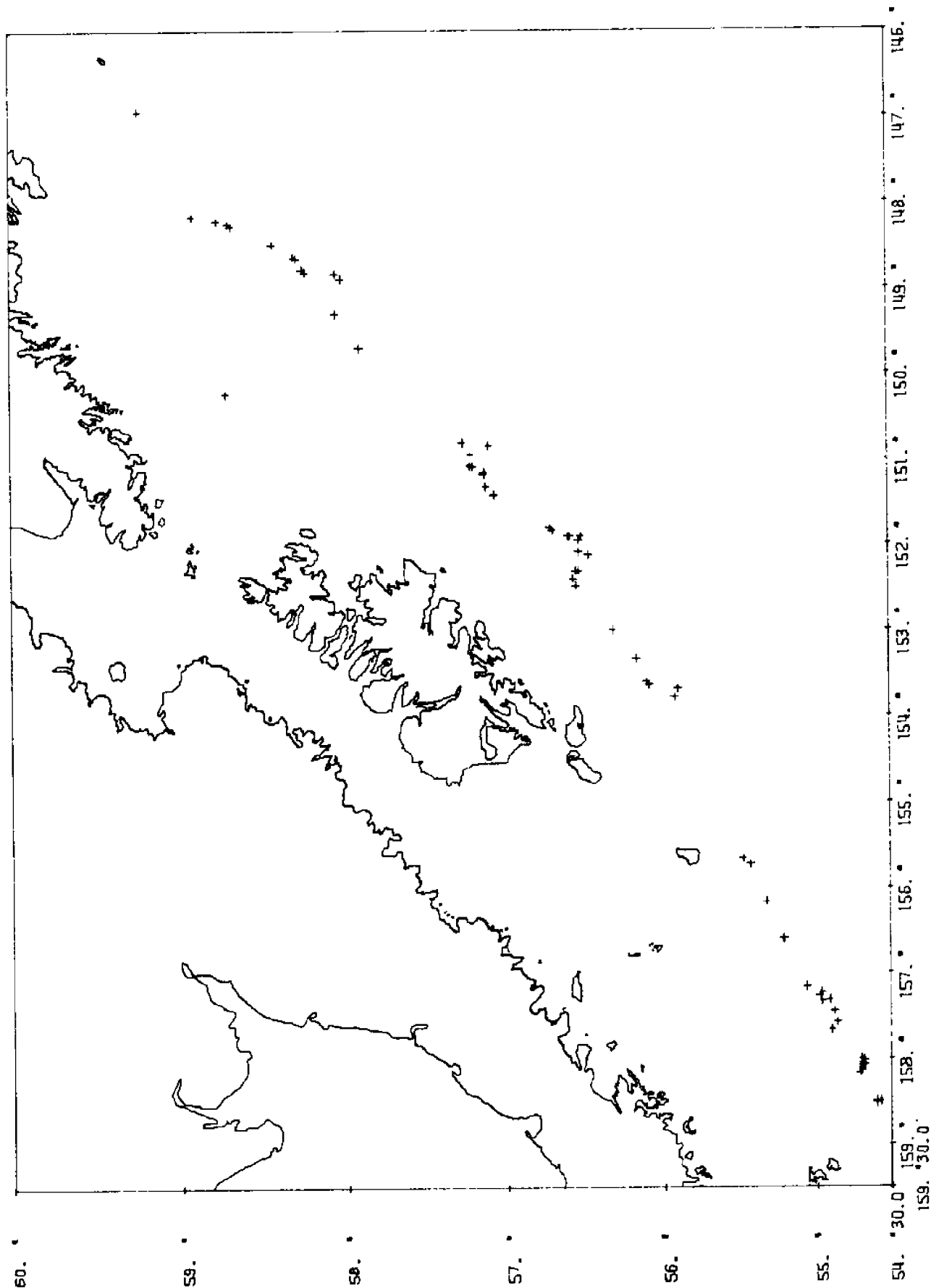


FIGURE A-9. FLOUNDERS. APRIL-JUNE, 1977-78

TABLE A-19. FLOUNDERS, JULY-SEPTEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 7 17	57 15	150 46	18728.2	32274.2	117	0.9	15794	17.54
JAPAN	77 8 5	56 08	153 44	18671.7	32808.2	169	1.1	14528	13.20
JAPAN	77 8 6	56 08	153 44	18671.7	32808.2	169	0.6	14528	10.79
JAPAN	77 7 28	55 59	154 05	18660.2	32878.9	174	1.5	10798	17.79
JAPAN	77 8 6	56 06	153 39	18670.5	32807.9	174	1.5	11122	17.40
JAPAN	77 7 13	56 09	153 36	18674.2	32774.9	174	1.5	6476	5.31
JAPAN	78 8 22	56 07	153 42	18670.8	32808.9	177	1.6	6717	4.19
JAPAN	77 7 14	56 09	153 42	18670.8	32774.9	177	1.1	4400	4.00
JAPAN	77 7 13	56 08	153 43	18672.8	32802.6	183	1.1	4131	4.75
JAPAN	77 7 18	55 54	153 46	18657.4	33708.6	179	1.4	4878	3.48
JAPAN	77 8 15	57 05	151 24	18722.0	33819.6	166	1.0	5655	3.32
JAPAN	77 8 13	56 08	153 33	18722.0	33025.6	190	0.6	3211	3.29
JAPAN	77 7 16	56 07	153 30	18670.4	3369.7	174	1.1	1726	2.09
JAPAN	77 8 30	56 37	152 30	18671.4	33739.6	165	1.1	3023	2.86
JAPAN	78 9 22	59 12	147 30	18749.9	32574.6	158	1.6	4077	2.54
JAPAN	78 8 23	56 26	152 35	18692.8	33348.6	153	1.4	3543	2.53
JAPAN	77 8 17	55 59	153 50	18658.1	3354.9	183	1.2	3211	2.47
JAPAN	77 8 9	55 03	151 27	18570.8	33378.2	164	1.0	2920	2.43
JAPAN	78 9 6	56 00	152 32	18672.0	33268.2	175	1.4	3220	2.29
JAPAN	78 9 20	56 06	152 37	18696.4	33063.6	164	1.3	3148	2.21
JAPAN	77 8 20	57 44	150 10	18670.0	32804.6	174	1.1	1958	1.95
JAPAN	78 9 12	57 04	151 20	18721.3	33026.2	182	1.1	2108	1.91
JAPAN	78 9 12	57 03	151 20	18721.3	33026.2	169	1.0	1918	1.91
JAPAN	78 7 4	57 03	151 25	18720.9	32365.4	169	2.5	4737	1.89
JAPAN	78 7 1	56 04	149 18	18746.0	32583.6	167	2.0	3547	1.85
JAPAN	78 7 8	56 34	151 56	18701.0	31967.0	199	0.9	1654	1.84
JAPAN	78 7 8	57 08	151 10	18724.4	32533.3	158	1.1	2208	1.69

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
JAPAN	78 9 2	56 32	152 17	4 32 575.6	147	2.6	4237	1.62
JAPAN	78 9 12	56 30	152 19	32 586.4	187	0.9	1637	1.59
JAPAN	78 7 8	57 59	151 20	4 330 23.9	207	1.3	1944	1.49
JAPAN	78 7 17	57 59	149 15	3 1984.4	136	2.0	2923	1.46
USSR	77 7 8	56 34	151 52	3 2541.0	109	0.5	2717	1.43
JAPAN	77 7 4	57 03	151 27	3 2378.1	178	1.0	2064	1.32
USSR	77 7 19	55 58	152 22	3 2579.5	92	0.6	1332	1.32
JAPAN	77 7 19	55 58	153 35	3 2832.8	131	0.0	787	1.31
JAPAN	78 7 8	57 06	151 16	3 2350.1	120	2.2	2625	1.31
JAPAN	78 7 28	57 06	150 02	4 3019.7	103	2.1	2761	1.26
JAPAN	77 7 8	57 07	151 19	4 3023.2	187	1.5	2467	1.26
JAPAN	78 7 8	56 22	152 31	4 3046.7	153	1.5	1908	1.26
JAPAN	77 7 8	56 22	152 31	4 3334.2	199	2.3	2665	1.25
JAPAN	77 7 8	55 55	151 27	4 3303.0	223	1.1	1630	1.25
JAPAN	77 7 8	55 55	151 22	4 3355.7	135	2.4	2972	1.25
JAPAN	78 7 8	56 33	152 17	4 3276.9	155	2.5	2817	1.21
JAPAN	78 7 3	56 31	152 09	4 3274.0	178	2.1	2748	1.21
JAPAN	77 7 3	57 03	151 18	4 3329.2	135	2.5	2768	1.16
JAPAN	77 7 7	57 03	151 18	4 3027.0	198	1.0	114	1.14
USSR	77 7 29	58 03	149 20	3 1973.5	99	0.7	341	1.08
JAPAN	78 7 29	58 03	149 20	3 1973.5	145	1.0	1056	1.08
JAPAN	77 7 8	57 06	151 26	4 3047.5	149	2.5	2708	1.08
JAPAN	78 7 8	57 06	151 20	4 3018.2	164	0.2	344	1.07
JAPAN	78 7 2	57 07	149 17	4 3053.0	107	3.2	3440	1.07
USSR	77 7 2	57 05	151 20	4 3108.8	147	1.0	2590	1.03
JAPAN	78 7 2	57 07	151 20	4 3022.5	174	1.5	1504	1.00
JAPAN	77 7 5	56 42	151 16	4 3109.3	182	1.0	1304	1.00
USSR	77 7 2	56 42	151 16	4 3337.4	164	1.8	1794	0.97
JAPAN	78 7 2	56 42	151 16	4 3337.4	138	1.5	1462	0.96
USSR	77 7 19	56 35	152 52	4 3383.1	138	0.5	1529	0.95
USSR	77 7 2	56 35	152 52	4 3350.1	106	0.6	1055	0.95
USSR	77 7 2	56 35	152 52	4 3387.3	108	1.1	1054	0.94
JAPAN	78 7 2	56 39	152 10	4 3286.3	178	1.0	1922	0.94
JAPAN	78 7 15	59 03	147 55	4 3267.0	114	1.3	1542	0.94
JAPAN	78 7 15	56 38	151 53	4 3217.0	125	2.0	1887	0.94
JAPAN	77 7 2	56 38	151 53	4 3164.0	131	2.0	260	0.93
JAPAN	77 7 2	56 38	151 53	4 3287.5	125	2.2	260	0.93

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 8 14	5640	15151	7X 18705	106	1	1553	0.091
JAPAN	78 8 19	5631	15218	7Y 18697	135	1	1603	0.089
JAPAN	78 8 24	5704	14926	7Z 18746	143	2	2248	0.088
JAPAN	78 8 37	5803	15230	18798	120	1	2286	0.087
JAPAN	78 8 28	5723	15032	18732	143	2	1747	0.086
JAPAN	78 8 35	5651	15349	18713	158	2	1488	0.085
JAPAN	78 8 28	5735	15139	18737	109	2	1713	0.084
JAPAN	77 7 24	5708	15016	18723	177	1	931	0.084
JAPAN	77 7 6	5648	15234	18705	98	1	845	0.084
USSR	77 9 7	5508	15115	18765	94	1	1185	0.083
JAPAN	77 7 6	5706	15206	18722	164	1	1247	0.083
JAPAN	77 7 22	5687	15333	18744	136	1	1202	0.083
JAPAN	77 9 11	5910	14918	18750	153	2	1005	0.083
JAPAN	78 8 25	5627	15228	18795	164	1	1745	0.082
JAPAN	77 9 6	5602	15239	18750	167	1	1480	0.081
JAPAN	77 9 30	5634	15204	18799	135	1	1805	0.080
JAPAN	77 8 33	5559	15145	18661	105	1	1046	0.080
JAPAN	77 8 25	5629	15307	18696	125	1	1208	0.080
JAPAN	77 8 25	5806	14918	18742	125	1	1260	0.080
JAPAN	77 8 15	5706	15225	18732	160	1	1364	0.079
JAPAN	78 8 16	5833	15258	18798	149	2	1953	0.078
JAPAN	78 8 38	5804	14957	18745	149	2	1909	0.078
JAPAN	78 8 24	5605	15135	18715	137	1	1710	0.077
JAPAN	78 8 25	5634	15228	18699	192	1	1565	0.077
USSR	77 8 9	5559	15359	18661	134	1	1385	0.077
JAPAN	77 8 9	5606	15340	18670	134	1	737	0.076
JAPAN	78 8 15	5708	15114	18723	125	1	733	0.076
JAPAN	78 8 18	5626	15218	18693	174	1	1863	0.074
JAPAN	78 8 18	5634	15230	18698	124	1	1440	0.072
JAPAN	78 8 18	5514	15620	18698	112	2	1722	0.072
USSR	77 8 9	5740	15011	18739	184	1	870	0.072
USSR	77 8 9	5637	15225	18701	73	1	871	0.072

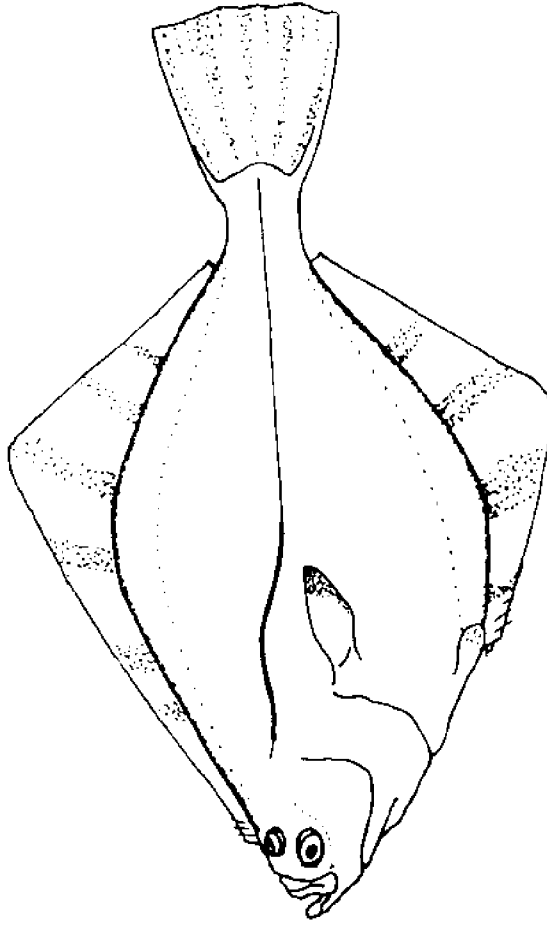
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
USSR	77 7 5	56 39	153 29	7X	72	71	4	283	0.70
JAPAN	77 7 19	56 55	153 34	7X	72	1	1	10544	0.70
USSR	77 7 9	56 53	151 39	7X	72	1	1	17664	0.68
JAPAN	77 7 9	56 53	148 42	7X	72	1	1	15606	0.67
JAPAN	77 7 9	56 10	148 42	7X	72	1	1	18015	0.65
JAPAN	77 7 9	56 56	154 50	7X	72	1	1	23443	0.65
JAPAN	77 7 9	56 56	147 40	7X	72	1	1	28067	0.65
JAPAN	77 7 9	56 11	147 40	7X	72	1	1	18371	0.64
JAPAN	77 7 9	56 56	151 05	7X	72	1	1	10310	0.61
JAPAN	77 7 9	56 56	153 52	7X	72	1	1	20310	0.59
JAPAN	77 7 9	56 56	149 20	7X	72	1	1	21379	0.59
JAPAN	77 7 9	56 56	149 20	7X	72	1	1	20659	0.59
JAPAN	77 7 9	56 55	153 31	7X	72	1	1	28580	0.57
JAPAN	77 7 9	56 55	151 22	7X	72	1	1	14379	0.56
JAPAN	77 7 9	56 55	151 22	7X	72	1	1	19580	0.55
JAPAN	77 7 9	56 55	148 30	7X	72	1	1	16796	0.55
JAPAN	77 7 9	56 57	152 13	7X	72	1	1	17221	0.54
JAPAN	77 7 9	56 57	151 20	7X	72	1	1	14212	0.54
JAPAN	77 7 9	56 57	152 34	7X	72	1	1	19822	0.54
JAPAN	77 7 9	56 29	152 11	7X	72	1	1	11367	0.54
JAPAN	77 7 9	56 29	152 34	7X	72	1	1	1857	0.54
JAPAN	77 7 9	56 29	149 07	7X	72	1	1	1607	0.54
JAPAN	77 7 9	56 14	147 49	7X	72	1	1	15400	0.53
JAPAN	77 7 9	56 08	154 36	7X	72	1	1	1584	0.53
JAPAN	77 7 9	56 35	152 18	7X	72	1	1	1795	0.53
JAPAN	77 7 9	56 35	152 18	7X	72	1	1	1614	0.53
JAPAN	77 7 9	56 35	150 30	7X	72	1	1	1657	0.53
JAPAN	77 7 9	56 35	151 27	7X	72	1	1	1848	0.53
JAPAN	77 7 9	56 35	151 02	7X	72	1	1	8322	0.52
JAPAN	77 7 9	56 32	152 12	7X	72	1	1	6240	0.52
JAPAN	77 7 9	56 32	152 12	7X	72	1	1	1052	0.51
JAPAN	77 7 9	56 34	153 44	7X	72	1	1	6240	0.51
JAPAN	77 7 9	56 09	153 28	7X	72	1	1	1750	0.50
JAPAN	77 7 9	56 09	153 38	7X	72	1	1	1000	0.50
JAPAN	77 7 9	56 17	148 40	7X	72	1	1	1000	0.50
JAPAN	77 7 9	56 17	148 40	7X	72	1	1	1000	0.50
JAPAN	77 7 9	56 17	148 40	7X	72	1	1	1000	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
*****	*****	***	*****	***** 7X	*****	*****	*****	*****
USSR	77 730	5559	15336	18663.5 32830.3 43750.8 7Y 7Z	73	0.7	350	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***



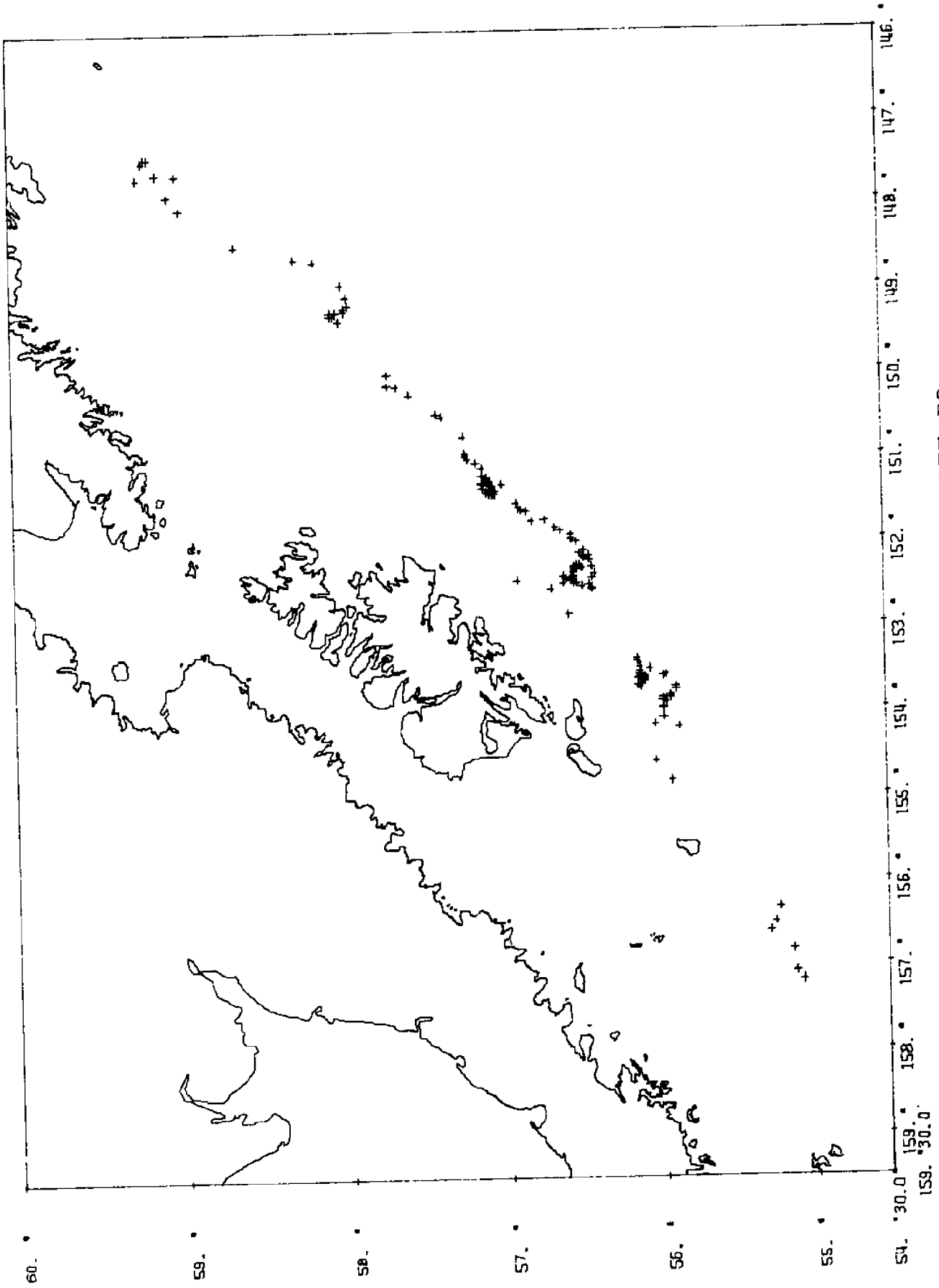


FIGURE A-10. FLOUNDERS, JULY-SEPTEMBER, 1977-78

TABLE A-20. FLOWNDERS, OCTOBER-DECEMBER, 1977

NATION	DATE YMMDD	LAT	LONG	APPROX 7X	LORAN-C 7Y	PULSE 7Z	RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LPS)	THOUSAND LPS PER HOUR
JAPAN	771011	5513	15642	18578.2	3342.0	44912.7	116	116	1.6	10408	6556
JAPAN	771019	5521	15552	18599.6	33216.1	44604.4	180	180	1.6	9148	5710
USSR	771011	5611	15330	18675.4	32788.2	43716.4	198	198	1.0	4148	4148
JAPAN	771018	5623	15352	18605.4	32201.2	44593.6	169	169	1.3	8013	4465
JAPAN	771013	5634	15153	18701.2	32583.1	43186.3	147	147	1.1	5247	4204
JAPAN	771016	5629	15218	18696.0	32589.1	43288.1	180	180	1.6	3301	3301
JAPAN	771011	5632	15622	18579.4	3318.1	44286.5	111	111	1.1	5151	3270
JAPAN	771015	5631	15226	18578.2	32317.7	44824.7	169	169	1.2	2973	2267
JAPAN	771019	5631	15631	18603.2	32316.0	44824.7	158	158	2.0	5870	2257
JAPAN	771010	5633	15157	18700.2	32342.1	43206.1	147	147	2.0	4347	2177
JAPAN	771022	5758	14901	18764.4	32047.1	43206.1	109	109	1.6	3212	2072
JAPAN	771015	5632	15152	18703.4	32172.8	43110.0	115	115	1.1	2238	2073
JAPAN	771018	5637	15152	18555.1	32437.6	44824.7	132	132	1.1	3168	2168
JAPAN	771011	5631	15626	18578.2	32317.1	44824.7	188	188	1.3	2258	1763
JAPAN	771012	5634	15225	18703.2	32555.8	43256.0	160	160	1.3	2208	1763
USSR	771011	5640	15225	18579.2	32582.0	45339.0	128	128	1.0	1636	1636
JAPAN	771016	5447	15356	18514.2	32061.5	45339.0	121	121	1.6	2476	1546
JAPAN	771014	5512	15605	18579.2	32061.5	44824.7	112	112	1.1	2368	1545
JAPAN	771013	5432	15854	18464.0	32754.8	45764.5	139	139	1.1	2767	1545
JAPAN	771011	5632	14833	18749.3	31852.3	43120.0	112	112	3.1	4507	1445
JAPAN	771011	5632	15153	18749.3	32520.3	44824.7	135	135	2.3	2667	1124
JAPAN	771012	5632	15628	18579.4	32318.6	44824.7	115	115	1.4	1624	1124
JAPAN	771015	5632	15712	18555.1	32437.6	45110.7	202	202	1.3	1456	1104
JAPAN	771016	5632	15225	18555.1	32582.0	44296.8	185	185	1.5	1982	1304
JAPAN	771030	5630	14946	18645.9	31946.2	43096.2	169	169	1.5	1565	1004
JAPAN	771017	5630	14710	18557.3	32430.0	45096.2	142	142	2.0	2089	1044
JAPAN	771019	5633	14849	18581.5	32314.5	43083.1	142	142	2.0	1971	998
JAPAN	771015	5631	15615	18581.5	32314.5	44762.0	155	155	2.0	1945	972
JAPAN	771028	5818	14835	18748.7	31864.0	44762.0	155	155	2.0	1945	972

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	771017	5455	15722	7X 7Y 7Z 5184.5	142	0.5	874	0.97
JAPAN	771012	5633	15154	3485.7	158	1.5	1387	0.92
JAPAN	771016	5552	15742	32537.6	129	2.8	2175	0.80
JAPAN	771045	5557	15400	33536.2	191	1.8	1441	0.76
JAPAN	771013	5555	15344	32878.8	133	2.0	1680	0.72
JAPAN	771017	5533	15344	32542.0	136	1.6	1220	0.70
JAPAN	771017	5514	15618	33291.4	164	1.0	1300	0.67
JAPAN	771017	5514	15617	33289.4	164	1.6	1385	0.65
JAPAN	771017	5515	15232	33265.6	256	1.7	1379	0.64
JAPAN	771043	5556	15355	32873.6	256	1.7	1373	0.64
JAPAN	771043	5556	15154	32537.6	147	1.6	1652	0.62
JAPAN	771012	5618	15249	32672.0	147	1.5	1752	0.60
JAPAN	771019	5640	14959	32179.6	135	1.6	910	0.59
JAPAN	771019	5520	15329	33306.4	189	1.1	950	0.50
JAPAN	771010	5517	15605	32744.4	132	1.6	650	0.57
JAPAN	771019	5611	15324	32763.6	132	1.6	915	0.55
JAPAN	771012	5817	14839	31872.2	144	1.6	1803	0.55
JAPAN	771015	5631	15205	32561.1	191	1.6	793	0.52
JAPAN	771016	5512	15626	33314.9	144	1.6	793	0.52
JAPAN	771016	5526	15540	33174.9	158	0.0	452	0.00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

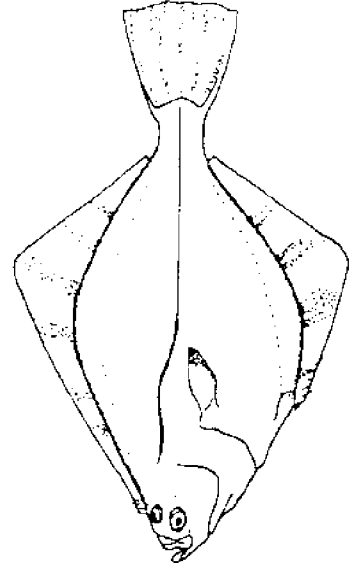


TABLE A-21. FLOUNDERS, OCTOBER-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781027	59026	14750	18750	43211	158	1.0	13079	6.88
JAPAN	781027	57067	15119	18722	43020	190	1.0	4991	4.99
ROK	781126	54477	15750	18516	43363	150	2.0	8286	4.14
ROK	781127	54522	15733	18530	45254	150	3.0	10795	3.59
ROK	781118	54428	15750	18518	45361	136	1.5	4694	3.12
JAPAN	781127	58239	14813	18749	43099	142	0.2	929	3.07
JAPAN	781127	57139	15239	18698	43099	158	0.2	614	3.06
JAPAN	781128	59032	14740	18730	42210	169	0.1	22	3.32
JAPAN	781128	59032	14738	18729	43278	143	0.2	458	2.29
JAPAN	781128	57472	14931	18741	43024	153	0.6	1356	2.63
JAPAN	781128	54528	15231	18594	43243	156	1.2	3512	2.93
JAPAN	781128	54528	15230	18594	43260	153	0.1	3503	1.63
JAPAN	781128	57336	15036	18727	43049	190	2.0	3521	1.75
JAPAN	781128	57336	15036	18727	43049	180	0.9	4218	1.43
JAPAN	781128	56348	14903	18744	43049	214	0.9	4112	1.44
JAPAN	781128	56348	14903	18744	43049	224	0.9	4112	1.44
JAPAN	781128	59069	14813	18750	43158	191	0.5	3746	1.37
JAPAN	781128	59069	14813	18750	43177	193	0.5	45	1.37
JAPAN	781128	54453	14745	18750	43196	159	0.6	5124	1.24
JAPAN	781128	59069	14821	18750	43279	193	1.0	2381	1.19
JAPAN	781128	59069	14821	18750	43279	193	0.5	2065	1.19
JAPAN	781128	56061	15216	18698	43020	162	0.2	1927	1.15
JAPAN	781128	56061	15216	18698	43020	162	0.6	4027	1.07
JAPAN	781128	56280	14746	18741	43336	172	0.4	4376	0.98
JAPAN	781128	55105	15650	18571	43099	122	1.1	1380	0.98
JAPAN	781128	5705	15120	18722	43020	212	0.6	1365	0.87
JAPAN	781128	5731	15015	18735	43001	256	1.1	2051	0.87
JAPAN	781128	57267	15339	18733	43001	136	0.2	37	0.27
JAPAN	781128	561	1531	18682	43355	136	0.2	37	0.27

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
JAPAN	781118	5617	15246	18684.5	32679.5	114	2.3	1713	0.74
JAPAN	781018	5729	15034	18774.5	32201.2	64	1.4	1041	0.72
JAPAN	781031	5723	15039	18731.9	32232.2	98	1.5	1093	0.65
JAPAN	781031	5845	14811	18750.9	31729.2	169	3.0	1904	0.63
JAPAN	78104	5855	14805	18750.9	31682.1	213	1.0	506	0.59
JAPAN	78111	5846	14813	18722.0	32360.9	164	0.5	288	0.57
JAPAN	78104	5746	14945	18750.2	31726.9	246	3.3	1843	0.55
JAPAN	781124	5633	15230	18741.4	32591.1	164	3.0	1631	0.54
JAPAN	781031	5849	14815	18750.9	31716.2	153	0.5	257	0.51
JAPAN	78103	5707	15111	18723.5	32340.0	103	3.1	1602	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

TABLE A-22. PACIFIC OCEAN PERCH, APRIL-JUNE, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 6 10	58 46	148 13	18 750	43169.2	155	0.6	18824	31.37
JAPAN	78 6 10	58 43	148 13	18 750	43159.3	172	0.7	15681	22.40
JUSSR	78 6 20	58 07	148 57	18 746	43065.9	65	0.6	18521	14.83
JAPAN	78 6 25	58 36	148 30	18 748	43616.8	94	0.3	40332	13.05
JAPAN	77 6 20	58 59	148 53	18 745	43690.4	94	0.6	40339	19.33
JAPAN	77 6 23	57 54	149 42	18 750	43661.2	153	1.2	14842	9.99
JAPAN	78 6 26	54 20	157 55	18 504	43044.6	120	0.6	10842	8.93
JAPAN	78 6 12	58 32	148 32	18 595	44710.5	117	0.7	5398	8.53
JAPAN	78 6 18	58 06	148 56	18 746	43132.7	133	3.2	27195	8.24
JAPAN	78 5 19	54 59	157 18	18 535	43066.2	65	1.0	9382	7.54
JAPAN	78 5 29	54 59	157 18	18 536	45153.4	87	0.5	3734	7.47
JAPAN	78 6 18	56 04	153 34	18 668	43720.4	120	0.9	583	7.31
JAPAN	78 6 18	56 35	151 54	18 702	43186.3	65	0.7	4671	7.65
JUSSR	78 6 18	58 05	148 56	18 746	43065.7	114	0.5	5857	6.50
JAPAN	78 5 18	54 43	157 56	18 506	45405.7	114	1.0	5237	6.65
JAPAN	78 6 24	57 16	150 48	18 728	43001.0	103	3.0	18003	6.00
JAPAN	78 6 24	56 35	151 54	18 701	43191.2	139	1.0	5995	5.99
JAPAN	78 6 11	57 46	150 06	18 741	43029.2	106	0.5	29924	5.98
JAPAN	78 6 15	57 42	150 06	18 741	45466.2	150	0.6	3364	5.60
JAPAN	78 6 14	56 43	151 48	18 702	43160.4	120	1.5	17051	5.50
JAPAN	78 6 18	56 43	151 36	18 692	43629.4	127	1.5	3364	5.50
JAPAN	78 6 18	56 43	151 36	18 692	45629.4	127	0.7	1530	5.20
JUSSR	78 6 19	58 05	148 57	18 746	43666.5	131	1.0	3475	4.96
JUSSR	78 6 14	57 07	151 11	18 723	43066.5	62	1.0	4611	4.61
JAPAN	78 6 15	57 03	151 11	18 746	43015.4	109	0.5	5304	4.42
JAPAN	78 6 50	54 28	153 31	18 485	43715.9	88	0.6	1207	4.24
JAPAN	78 6 22	56 24	153 36	18 687	45668.8	150	0.6	2368	3.85
JAPAN	78 6 13	54 74	153 07	18 501	43646.2	107	1.0	3778	3.77
JAPAN	78 6 16	54 14	153 07	18 502	45466.2	108	0.7	3564	3.63
JAPAN	77 6 6	54 42	151 56	18 502	43007.4	147	0.6	2165	3.60
JAPAN	77 6 6	54 42	151 56	18 501	45407.6	109	0.5	1742	3.48

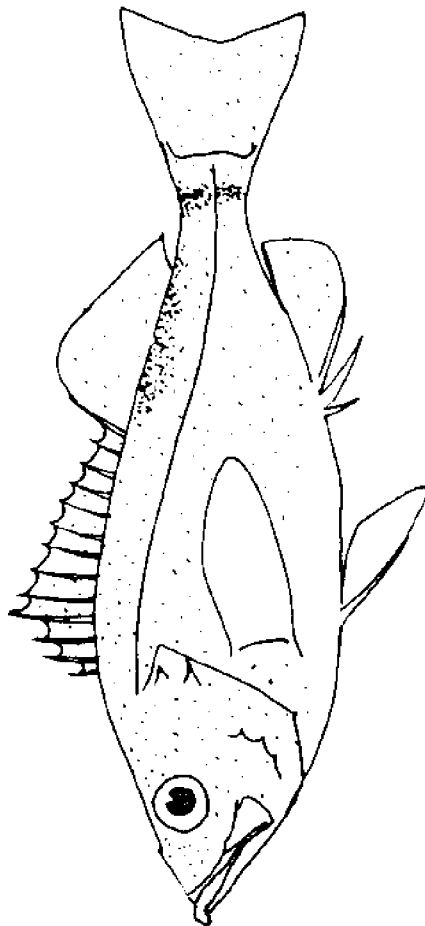
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
JAPAN	78	5442	15805	18501.7X	45460.77	109	0.7	835	1.19
JAPAN	78	5442	15804	18502.1	45454.3	103	1.5	1733	1.15
JAPAN	78	5435	15830	18479.6	45458.3	97	0.5	799	1.15
JAPAN	78	5610	15330	18675.8	43675.9	114	1.0	799	1.14
USSR	78	5611	14851	18747.4	43675.8	158	1.0	1073	1.10
JAPAN	78	5624	15222	18691.9	43226.2	166	0.5	1537	1.03
JAPAN	78	5623	15227	18690.7	43348.0	158	0.8	1537	1.03
JAPAN	78	5818	14838	18748.7	43094.5	150	0.6	1785	0.96
JAPAN	78	5555	15343	18750.9	43197.0	174	1.2	1505	0.95
JAPAN	78	5543	15307	18503.1	43870.4	120	1.0	1224	0.92
JAPAN	78	5603	15206	18690.7	43719.5	139	0.9	1843	0.91
JAPAN	78	5651	15216	18692.2	43241.9	100	0.3	1172	0.90
JAPAN	78	5623	15150	18549.7	43149.1	120	0.9	1172	0.90
JAPAN	78	5623	14918	18706.9	43149.1	128	0.8	2688	0.89
JAPAN	78	5807	14850	18745.8	43068.2	125	0.5	7137	0.89
JAPAN	78	5627	14850	18746.6	43276.3	125	0.4	7455	0.87
USSR	78	5448	15210	18696.6	43098.2	149	1.0	3850	0.82
JAPAN	78	5448	14847	18748.2	43098.2	149	0.4	3850	0.82
JAPAN	78	5448	15750	18518.8	43098.2	149	0.4	3850	0.82
JAPAN	78	5448	15904	18518.8	43098.2	149	0.4	3850	0.82
USSR	78	5707	15126	18723.6	43248.8	196	0.5	1737	0.81
JAPAN	78	5707	15226	18723.6	43248.8	196	0.5	1737	0.81
JAPAN	78	5442	15048	18502.6	43201.5	108	1.0	1203	0.80
JAPAN	78	5442	15810	18502.6	43201.5	108	0.8	1203	0.79
JAPAN	78	5442	14815	18750.8	43157.5	109	0.6	1668	0.77
JAPAN	78	5442	14815	18750.8	43157.5	109	0.6	1668	0.77
JAPAN	78	5442	15367	18658.3	43882.0	162	1.0	1754	0.76
JAPAN	78	5442	15906	18658.3	43882.0	162	1.0	1754	0.76
USSR	78	5447	15815	18508.9	43551.1	196	1.2	1817	0.74
USSR	78	5447	15808	18508.9	43551.1	196	1.2	1817	0.74
USSR	78	5447	15209	18602.6	43609.4	124	0.5	1051	0.70
USSR	78	5447	15209	18602.6	43609.4	124	0.5	1051	0.70
JAPAN	78	5625	15208	18673.2	43242.0	120	1.0	1708	0.65
JAPAN	78	5625	15208	18673.2	43242.0	120	1.0	1708	0.65
JAPAN	78	5851	14813	18750.9	43108.5	164	0.5	1305	0.65
JAPAN	78	5851	14813	18750.9	43108.5	164	0.5	1305	0.65

** NOTE ** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LRS PER HOUR
JAPAN	78 6 3	5628	15207	18695.9 7X	121	0.5	313	0.62
JAPAN	78 6 27	5636	15155	18702.5 7Y	106	1.3	789	0.60
JAPAN	78 6 27	5556	15342	18659.9	103	0.8	476	0.59
JAPAN	78 6 26	5441	15806	18499.4	106	0.8	471	0.58
JAPAN	78 6 11	5752	14932	18743.0	109	0.5	293	0.58
JAPAN	78 6 13	5638	15155	18703.9	185	2.6	1488	0.57
JAPAN	78 6 4	5713	15104	18726.7	92	0.5	263	0.52
JAPAN	78 6 10	5623	15227	18690.7 7Z	169	0.8	407	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***



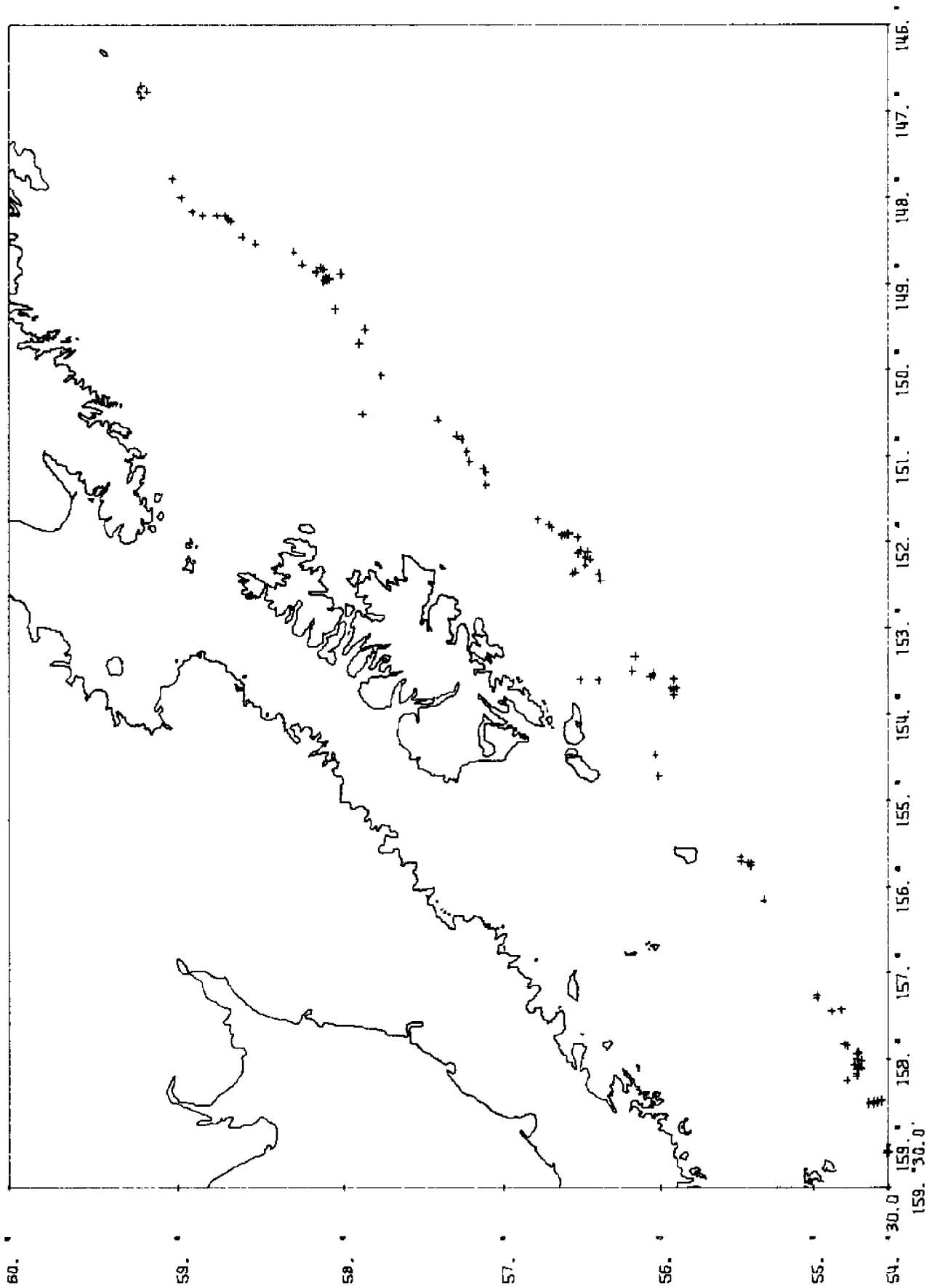


FIGURE A-11. PACIFIC OCEAN PERCH, APRIL-JUNE, 1977-78

TABLE A-23. PACIFIC OCEAN PERCH, JULY-SEPTEMBER, 1977

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
USSR	77 7 5	56 36	152 27	187 00.8	328 3.4	71	0.4	3769	9.42
JAPAN	77 7 22	55 59	154 02	186 61.7	438 80.3	123	1.7	8641	6.17
JAPAN	77 7 21	55 58	153 34	186 62.7	437 45.3	114	0.1	3952	5.64
JAPAN	77 7 19	56 03	154 29	186 62.0	440 11.5	131	1.5	5551	5.02
USSR	77 7 16	54 50	153 50	186 57.5	438 65.2	91	0.5	7388	4.04
USSR	77 7 17	56 04	157 47	187 00.5	453 28.5	164	0.9	6068	4.97
JAPAN	77 7 8	56 48	153 36	186 68.8	437 74.5	114	1.5	1988	3.27
USSR	77 7 9	59 14	147 22	187 49.7	431 23.7	192	1.5	2948	3.27
JAPAN	77 7 4	55 56	153 35	186 60.8	432 38.2	131	1.0	3860	2.56
JAPAN	77 7 21	55 57	153 52	186 59.4	437 58.7	131	0.6	3854	2.44
JAPAN	77 7 25	56 10	151 53	187 01.6	436 68.4	125	0.6	2441	2.23
JAPAN	77 7 12	55 35	153 35	186 62.3	431 53.8	131	0.5	2720	2.12
JAPAN	77 7 29	56 41	151 50	186 62.5	437 53.7	114	0.5	2272	2.03
JAPAN	77 7 23	55 48	153 45	186 57.1	438 14.7	106	1.6	3048	2.84
USSR	77 7 23	55 14	156 57	187 50.8	448 72.0	195	2.3	4147	1.75
JAPAN	77 7 18	58 43	148 59	187 50.1	431 81.5	120	0.6	1053	1.75
JAPAN	77 7 18	55 56	153 20	186 60.1	437 77.5	142	0.2	1202	1.74
JAPAN	77 7 9	55 14	156 44	186 57.6	447 80.5	142	0.2	1202	1.74
USSR	77 7 9	54 52	157 35	186 52.2	452 65.5	192	1.0	2018	1.68
JAPAN	77 7 26	56 03	154 36	186 62.2	440 45.0	131	0.7	1370	1.55
JAPAN	77 7 8	59 14	147 20	186 61.7	440 33.8	120	0.7	1489	1.47
JAPAN	77 7 11	54 51	157 30	186 49.2	452 39.0	131	0.6	1884	1.47
USSR	77 7 30	55 27	156 20	186 03.6	447 51.2	106	0.3	1024	1.45
JAPAN	77 7 21	54 42	156 16	185 02.5	447 47.4	138	0.0	4086	1.31
JAPAN	77 7 28	56 08	154 36	186 61.0	440 53.9	109	0.5	1685	1.26
USSR	77 7 20	56 48	151 45	187 11.7	431 12.0	198	1.1	1885	1.25
JAPAN	77 7 25	55 59	153 55	186 61.0	438 44.0	114	1.1	1480	1.23
JAPAN	77 7 27	59 03	148 18	187 55.6	432 22.6	107	1.1	1160	1.23

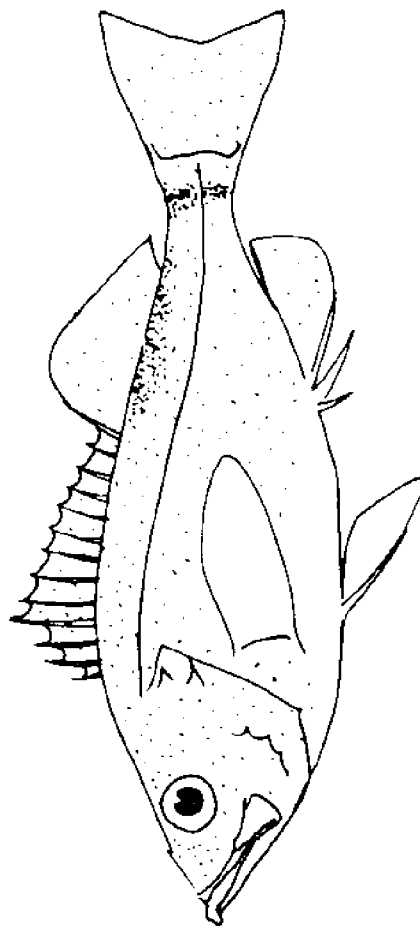
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
USSR	77 7 28	55 21	15 62 27	7X	7Z	87	1	1488	1
JAPAN	77 8 10	55 55	15 50 45	7X	7Z	136	1	1188	1
JAPAN	77 8 21	55 58	14 8 45	7X	7Z	153	1	3505	1
JAPAN	77 7 23	55 52	15 62 23	7X	7Z	136	1	547	1
USSR	77 8 14	57 55	14 0 43	7X	7Z	189	1	1611	1
JAPAN	77 7 27	55 48	14 8 11	7X	7Z	108	1	2244	1
JAPAN	77 7 26	55 60	15 3 52	7X	7Z	125	1	1865	1
JAPAN	77 8 12	55 59	15 3 59	7X	7Z	136	1	1091	1
JAPAN	77 7 29	55 57	15 0 45	7X	7Z	112	1	2909	1
JAPAN	77 7 30	55 57	15 3 48	7X	7Z	136	1	1059	1
JAPAN	77 7 30	55 57	15 3 36	7X	7Z	136	1	2059	1
JAPAN	77 7 30	55 57	15 3 36	7X	7Z	136	1	4525	1
JAPAN	77 7 31	55 57	15 3 36	7X	7Z	136	1	525	1
JAPAN	77 7 31	55 58	15 3 24	7X	7Z	136	1	1305	1
JAPAN	77 8 1	55 54	15 3 20	7X	7Z	117	1	866	1
JAPAN	77 8 2	59 14	14 7 14	7X	7Z	101	1	866	1
JAPAN	77 8 2	59 15	14 7 11	7X	7Z	117	1	945	1
JAPAN	77 8 2	56 21	15 4 26	7X	7Z	137	1	866	1
JAPAN	77 8 2	56 21	15 4 26	7X	7Z	137	1	866	1
USSR	77 8 14	55 21	15 6 27	7X	7Z	90	1	1217	1
USSR	77 8 22	55 21	15 6 27	7X	7Z	90	1	1466	1
USSR	77 8 24	55 57	15 6 27	7X	7Z	90	1	1754	1
USSR	77 9 23	54 55	15 3 40	7X	7Z	101	1	303	1
JAPAN	77 7 9	55 57	15 4 0 7	7X	7Z	128	2	603	1
JAPAN	77 8 0	55 58	15 4 0 7	7X	7Z	147	2	2974	1
JAPAN	77 8 23	56 0 8	15 3 5 3	7X	7Z	147	1	842	1
JAPAN	77 8 13	57 1 4	15 0 5 0	7X	7Z	158	1	642	1
JAPAN	77 8 19	55 55	15 1 5 9	7X	7Z	135	1	627	1
JAPAN	77 8 17	55 59	15 3 5 9	7X	7Z	135	1	1594	1
JAPAN	77 8 25	57 0 8	15 1 2 2	7X	7Z	135	1	594	1
JAPAN	77 8 21	56 3 5	15 1 5 4	7X	7Z	137	1	576	1
JAPAN	77 8 21	56 3 5	15 1 5 4	7X	7Z	137	1	546	1
JAPAN	77 8 8	58 5 6	14 8 1 0	7X	7Z	125	1	1877	1
JAPAN	77 8 8	58 5 6	14 8 1 0	7X	7Z	125	1	1877	1

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSF RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
*****	*****	***	****	***** 7X	***** 7Y	***** 7Z	*****	*****
JAPAN	77 72 6	5602	15410	18663.4	32875.6	43911.6	1515	0.52
JAPAN	77 8 6	5914	14715	18749.7	31561.1	43234.6	370	0.52
USSR	77 7 6	5633	15218	18699.1	32573.1	43248.2	790	0.52
JAPAN	77 9 8	5903	14824	18750.6	31665.2	43233.2	1799	0.52
JAPAN	77 9 19	5909	14736	18750.2	31598.9	43228.0	1856	0.51
JAPAN	77 8 9	5558	15352	18661.0	32860.8	43833.5	506	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***



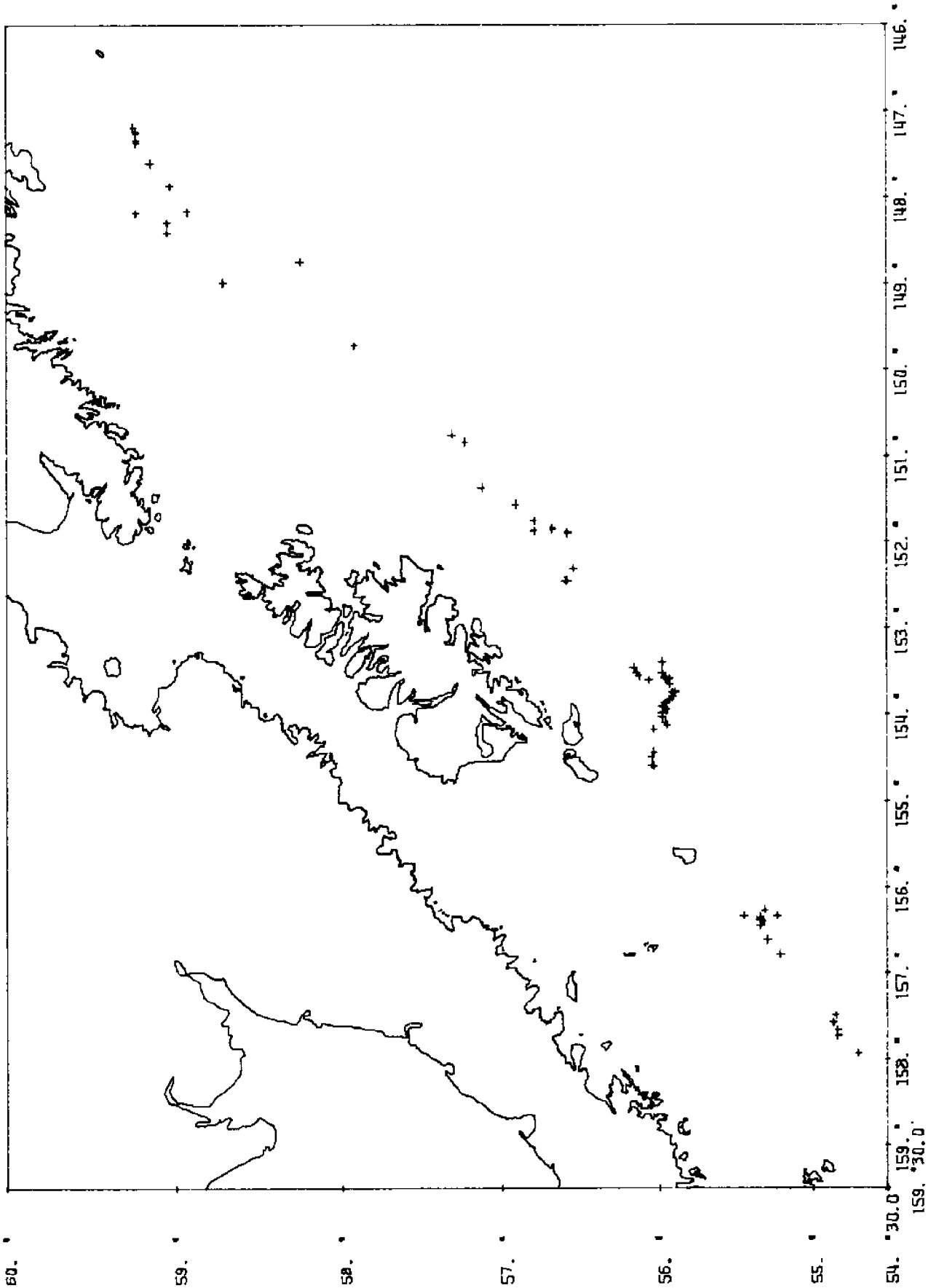


FIGURE A-12. PACIFIC OCEAN PERCH, JULY-SEPTEMBER, 1977

TABLE A-24. PACIFIC OCEAN PERCH, JULY-SEPTEMBER 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78730	5844	14811	18750	43162	164	20	23416	8.4
JAPAN	78732	5630	15209	18697	43255	103	0	8003	3.0
JAPAN	78711	5556	15344	18659	43801	109	1	3273	3.3
JAPAN	78712	5559	15422	18659	43074	170	1	5417	5.4
JAPAN	78711	5812	14811	18747	43214	166	2	6661	3.3
JAPAN	78710	5903	14753	18750	43215	134	0	2915	2.9
JAPAN	78711	5603	15332	18667	43371	117	4	3747	3.7
JAPAN	78712	5834	14812	18750	43200	136	3	5808	5.8
JAPAN	78712	5615	15156	18749	43200	117	3	3748	3.7
JAPAN	78712	5601	15422	18660	44001	105	0	5905	5.9
JAPAN	78723	5801	14858	18745	43055	117	5	1408	1.4
JAPAN	78723	5615	15402	18662	43927	177	2	2006	2.0
JAPAN	78723	5803	14653	18745	43257	120	4	3147	3.1
JAPAN	78712	5527	14818	18745	43072	109	1	3147	3.1
JAPAN	78712	5803	14923	18745	43063	106	0	3300	3.3
JAPAN	78712	5804	14918	18746	43065	109	0	3300	3.3
JAPAN	78716	5630	14703	18749	43205	110	0	1305	1.3
JAPAN	78716	5637	15157	18707	43205	139	0	1545	1.5
JAPAN	78730	5630	15209	18697	43205	106	0	3483	3.5
JAPAN	78710	5637	15332	18667	43267	114	0	3417	3.4
JAPAN	78714	5618	15245	18685	43439	120	0	230	2.3
JAPAN	78715	5605	15423	18661	43274	140	0	617	6.1
JAPAN	78713	5625	15336	18659	43281	125	0	949	9.4
JAPAN	78719	5628	15216	18696	43286	167	0	1185	11.8
JAPAN	78719	5620	15216	18695	43286	147	0	1857	18.5
JAPAN	78714	5903	14759	18750	43209	147	2	345	3.4
JAPAN	78712	5533	15343	18656	43210	147	1	266	2.6
JAPAN	78712	5633	15343	18656	43210	147	1	169	1.6
JAPAN	78712	5556	15333	18667	43378	112	1	169	1.6
JAPAN	78712	5553	15333	18667	43378	112	1	94	0.9
JAPAN	78712	5553	15333	18667	43378	112	1	215	2.1

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 8 14	56 40	151 51	187 05	4 5	106	1	146	0 00
JAPAN	78 8 16	58 70	148 34	187 50	3 8	72	2	184	0 84
JAPAN	78 8 13	56 41	151 50	187 50	3 8	101	3	135	0 84
JAPAN	78 8 24	56 37	149 04	187 04	3 6	103	3	219	0 82
JAPAN	78 7 24	55 57	153 36	186 61	3 0	108	1	189	0 80
JAPAN	78 7 33	56 03	153 33	186 67	3 1	154	1	196	0 79
JAPAN	78 7 13	59 14	147 42	187 49	3 4	114	2	203	0 78
JAPAN	78 7 33	55 55	153 43	187 49	3 5	117	0	235	0 77
JAPAN	78 7 11	59 16	148 08	187 50	3 4	151	1	221	0 75
JAPAN	78 7 31	55 59	154 20	186 59	3 5	129	1	233	0 74
JAPAN	78 7 21	58 50	147 34	187 50	3 4	120	1	206	0 74
JAPAN	78 7 14	59 11	147 38	187 01	3 0	136	1	272	0 72
JAPAN	78 7 29	58 35	151 58	187 45	3 3	142	3	87	0 62
JAPAN	78 7 12	58 08	149 20	187 45	3 3	149	2	206	0 62
JAPAN	78 7 21	56 31	152 21	186 95	3 6	148	1	225	0 62
JAPAN	78 7 21	56 31	153 42	186 97	3 6	148	1	274	0 62
JAPAN	78 7 16	55 53	153 42	186 56	3 6	109	1	104	0 60
JAPAN	78 7 15	59 13	146 42	187 01	3 2	102	0	304	0 60
JAPAN	78 7 13	55 56	153 44	186 59	3 2	114	0	482	0 60
JAPAN	78 8 21	56 20	152 08	186 97	3 5	147	1	402	0 60
JAPAN	78 8 21	56 20	152 55	186 96	3 2	144	1	158	0 60
JAPAN	78 8 14	56 24	151 58	186 93	3 4	136	1	289	0 59
JAPAN	78 8 24	56 29	148 31	186 99	3 8	142	1	160	0 58
JAPAN	78 8 13	58 29	152 13	187 50	3 2	131	2	348	0 55
JAPAN	78 8 20	56 29	153 44	186 96	3 6	114	0	220	0 55
JAPAN	78 7 16	55 57	153 49	186 58	3 7	119	0	263	0 55
JAPAN	78 7 16	55 57	153 49	186 59	3 7	109	0	263	0 55
JAPAN	78 7 20	56 31	149 21	186 97	3 1	127	0	152	0 50
JAPAN	78 7 30	58 09	147 47	187 47	3 7	146	0	152	0 50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

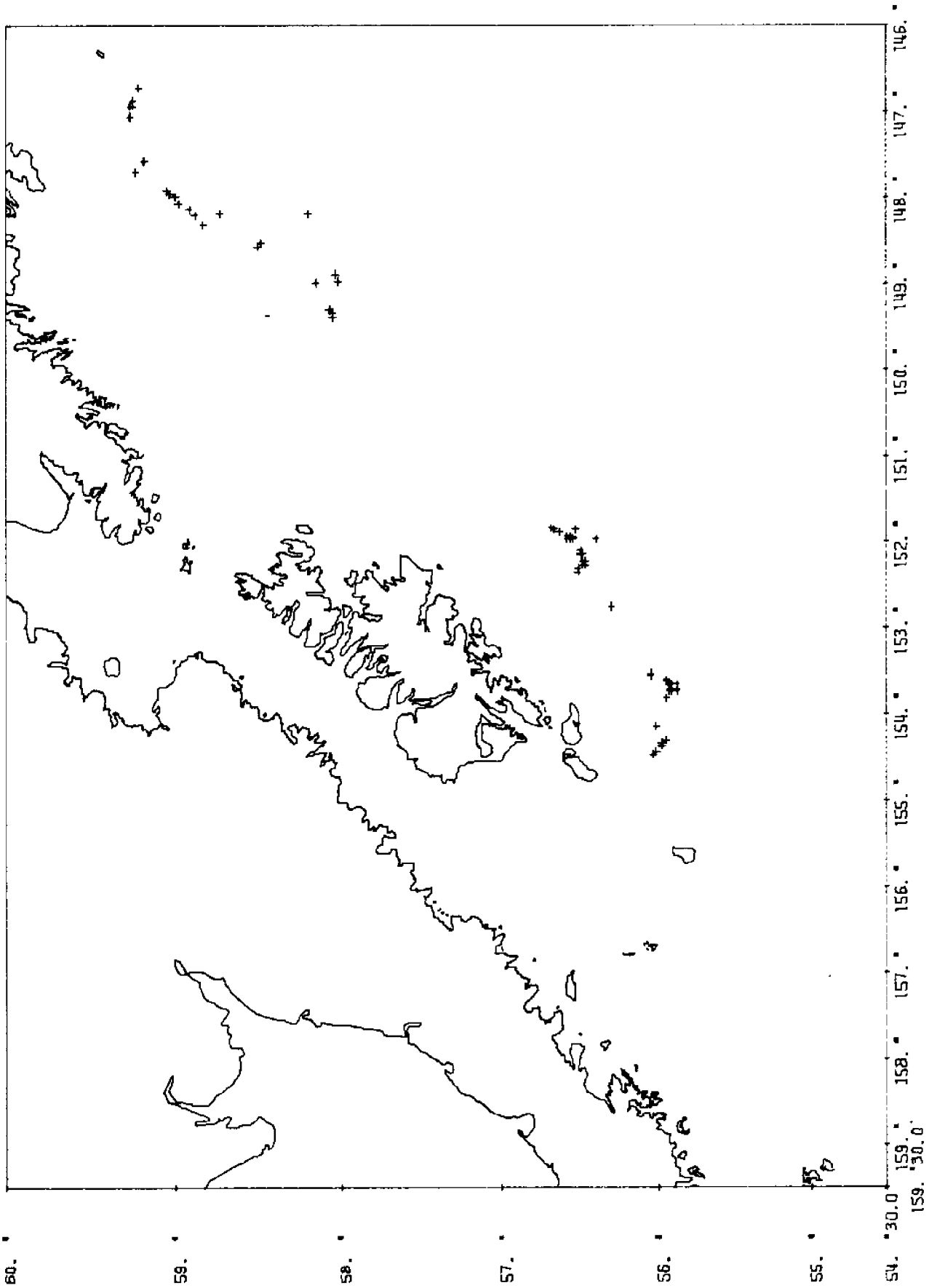


FIGURE A-13. PACIFIC OCEAN PERCH, JULY-SEPTEMBER, 1978

TABLE A-25. PACIFIC OCEAN PERCH, OCTOBER-DECEMBER, 1977

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	771022	5800	14854	745.3	57.5	130	0.3	6121	20.40
JAPAN	771023	5741	14957	739.5	50.5	135	0.8	9336	11.67
JAPAN	771037	5503	15718	739.9	60.0	125	0.4	8544	19.49
JAPAN	771016	5447	15756	755.3	82.8	128	0.2	17703	7.70
JAPAN	771011	5435	14826	750.5	89.9	144	0.8	5203	7.13
JAPAN	771018	5527	15542	709.5	74.8	147	0.5	5713	5.62
JAPAN	771019	5520	15556	707.5	72.2	131	0.1	5389	5.38
JAPAN	771008	5525	15552	705.7	89.2	119	1.8	8787	4.42
JAPAN	771010	5522	15554	700.6	73.5	126	1.6	7076	4.42
JAPAN	771015	5453	15722	738.6	80.1	145	0.9	3943	4.36
JAPAN	771015	5503	15712	738.6	64.3	125	1.1	4695	4.17
JAPAN	771030	5526	15543	708.4	64.3	159	1.1	4475	4.06
JAPAN	771010	5520	15605	708.9	64.5	129	0.2	714	3.95
JAPAN	771024	5526	15552	706.8	64.5	103	0.0	2955	2.80
JAPAN	771017	5514	15617	704.7	64.3	167	2.0	5604	2.80
JAPAN	771011	5528	15542	717.5	68.7	120	1.6	4311	2.69
JAPAN	771013	5445	15809	706.1	60.4	133	2.1	5227	2.50
JAPAN	771021	5516	15614	708.3	64.1	133	0.2	2627	2.27
JAPAN	771042	5516	15642	708.6	64.4	135	0.9	1767	1.96
JAPAN	771011	5513	15652	708.2	64.4	135	1.6	1691	1.40
JAPAN	771015	5512	15628	703.4	60.3	111	1.6	2251	1.32
JAPAN	771015	5504	15628	703.1	60.5	111	1.5	2050	1.28
JAPAN	771018	5554	15710	703.3	62.2	126	1.5	1887	1.25
JAPAN	771016	5514	15626	702.2	64.3	164	1.6	2608	1.24
JAPAN	771014	5512	15530	702.7	64.8	158	1.0	1800	1.11
JAPAN	771016	5514	15629	701.6	64.3	121	1.6	1763	1.10
JAPAN	771028	5818	14835	748.7	64.3	122	0.6	1328	0.82
JAPAN	771022	5758	14901	748.8	64.2	109	0.6	1437	0.81
JAPAN	771013	5432	14854	748.0	64.2	112	1.1	437	0.72

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
*****	*****	***	*****	***** 7X	***** 7Z	*****	*****	*****	*****
JAPAN	7710 5	5604	15330	18669.0	32800.9	43701.2	2.0	1399	0.69
JAPAN	7710 1	5529	15542	18612.5	32167.5	44525.9	0.8	532	0.66

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

TABLE A-26. PACIFIC OCEAN PERCH, OCTOBER-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781013	5841	14814	18750.8	43153.8	142	0.2	7954	39.77
JAPAN	781113	5842	14817	18750.8	43158.1	153	0.2	6768	33.74
JAPAN	781015	5849	14813	18750.9	43179.0	153	0.1	2096	20.96
JAPAN	781118	5525	15540	18607.3	44525.6	142	0.8	13418	16.77
JAPAN	781112	5747	14938	18741.6	43029.8	155	0.6	5527	16.23
JAPAN	781031	5845	14811	18750.9	43165.2	169	1.0	6824	6.82
JAPAN	781031	5849	14815	18750.9	43179.2	153	0.5	2099	4.19
JAPAN	781112	5842	14812	18750.8	43156.2	142	0.5	1941	3.88
JAPAN	781123	5633	14938	18742.4	43035.8	158	0.0	3682	3.68
JAPAN	781030	5843	15221	18698.9	43278.0	159	0.0	6188	3.00
JAPAN	781111	5845	14814	18750.9	43166.4	147	0.5	1248	2.48
JAPAN	781111	5842	14813	18749.3	43090.1	142	0.0	1715	2.35
JAPAN	781118	5526	15448	18749.2	44238.1	147	0.0	977	1.95
JAPAN	781117	5634	15264	18616.2	43079.4	147	0.0	1349	1.49
JAPAN	781112	5503	15153	18701.2	43193.6	139	0.0	1215	1.01
JAPAN	781116	5509	15709	18555.2	45092.4	125	1.3	4503	0.84
JAPAN	781111	5509	15654	18548.2	45118.1	133	2.1	1723	0.82
ROK	781118	5448	15750	18569.3	44991.8	136	1.5	1140	0.76
ROK	781118	5452	15737	18518.0	45361.9	143	0.2	113	0.56
JAPAN	781015	5846	14812	18750.0	43168.8	158	1.0	53	0.53

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

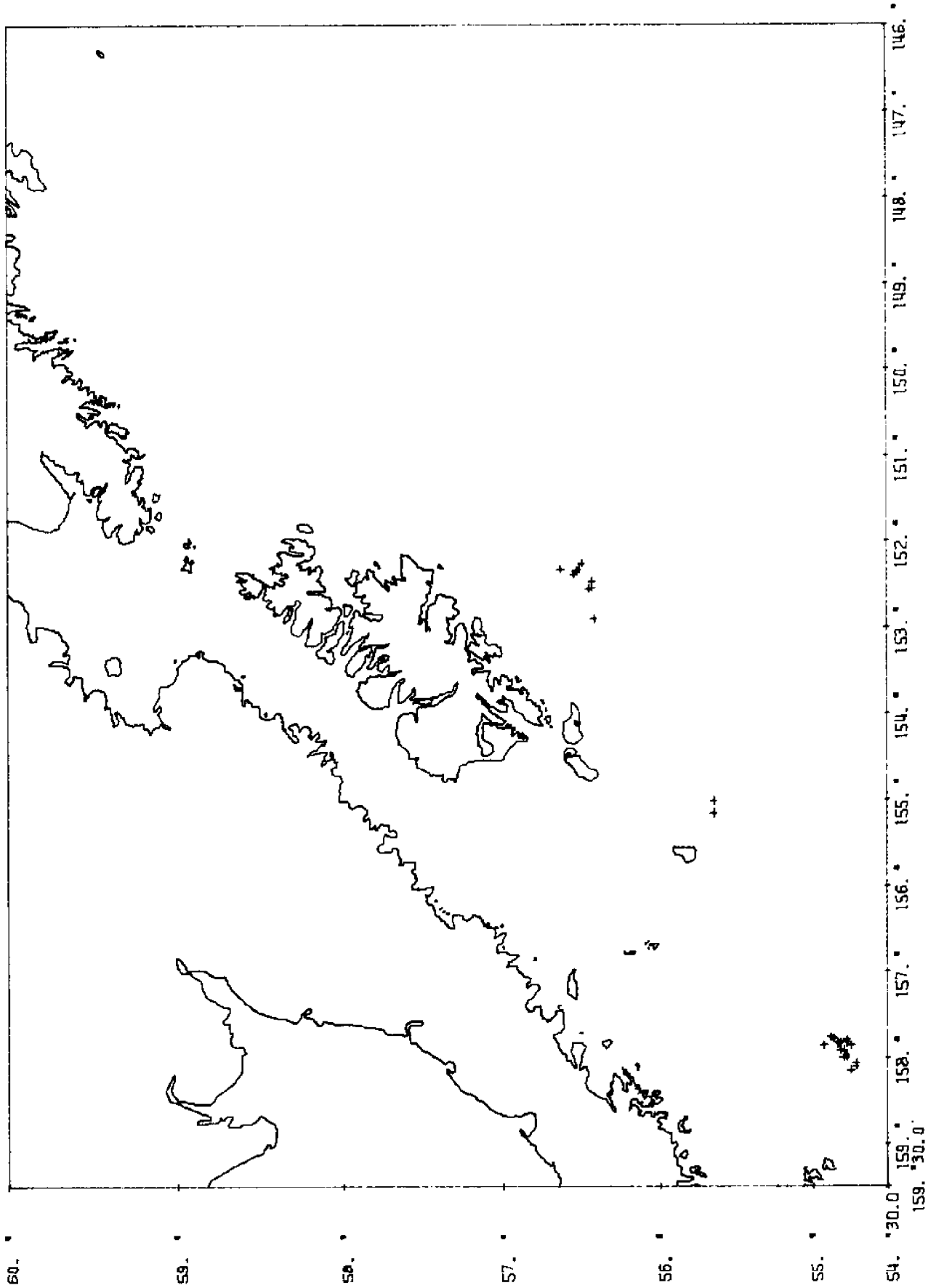


FIGURE A-14. ATKA MACHEREL. JANUARY-MARCH, 1977-78

TABLE A-28. ATKA MACKEREL, APRIL-JUNE, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	78 6 15	5445	15803	18508.3	45447.6	79	0.9	36091	40.10
JAPAN	78 6 13	5641	15148	18706.3	43149.6	65	0.5	12779	25.55
USSR	78 6 17	5447	15800	18513.1	45422.6	73	1.5	28932	19.28
USSR	78 6 18	5448	15757	18514.7	45404.9	87	1.5	17111	10.91
USSR	78 6 19	5448	15758	18515.7	45409.1	90	2.0	14865	6.43
USSR	78 6 19	5444	15806	18505.4	45462.9	94	1.5	18760	5.96
JAPAN	78 6 21	5445	15700	18506.4	45078.0	76	2.0	9932	4.96
USSR	78 6 17	5444	15803	18506.3	45451.2	73	2.2	7135	3.24
USSR	78 6 20	5444	15806	18505.4	45462.9	73	2.0	2247	3.17
JAPAN	78 6 20	5444	15806	18505.4	45462.9	105	2.8	5543	1.97
USSR	78 6 19	5805	14857	18746.4	43064.5	82	1.5	2447	1.63
USSR	78 6 21	5448	15800	18515.1	45420.5	83	1.0	1107	1.10
USSR	78 6 6	5510	15705	18568.6	45054.5	43	2.0	1351	0.70

** NOTE ** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

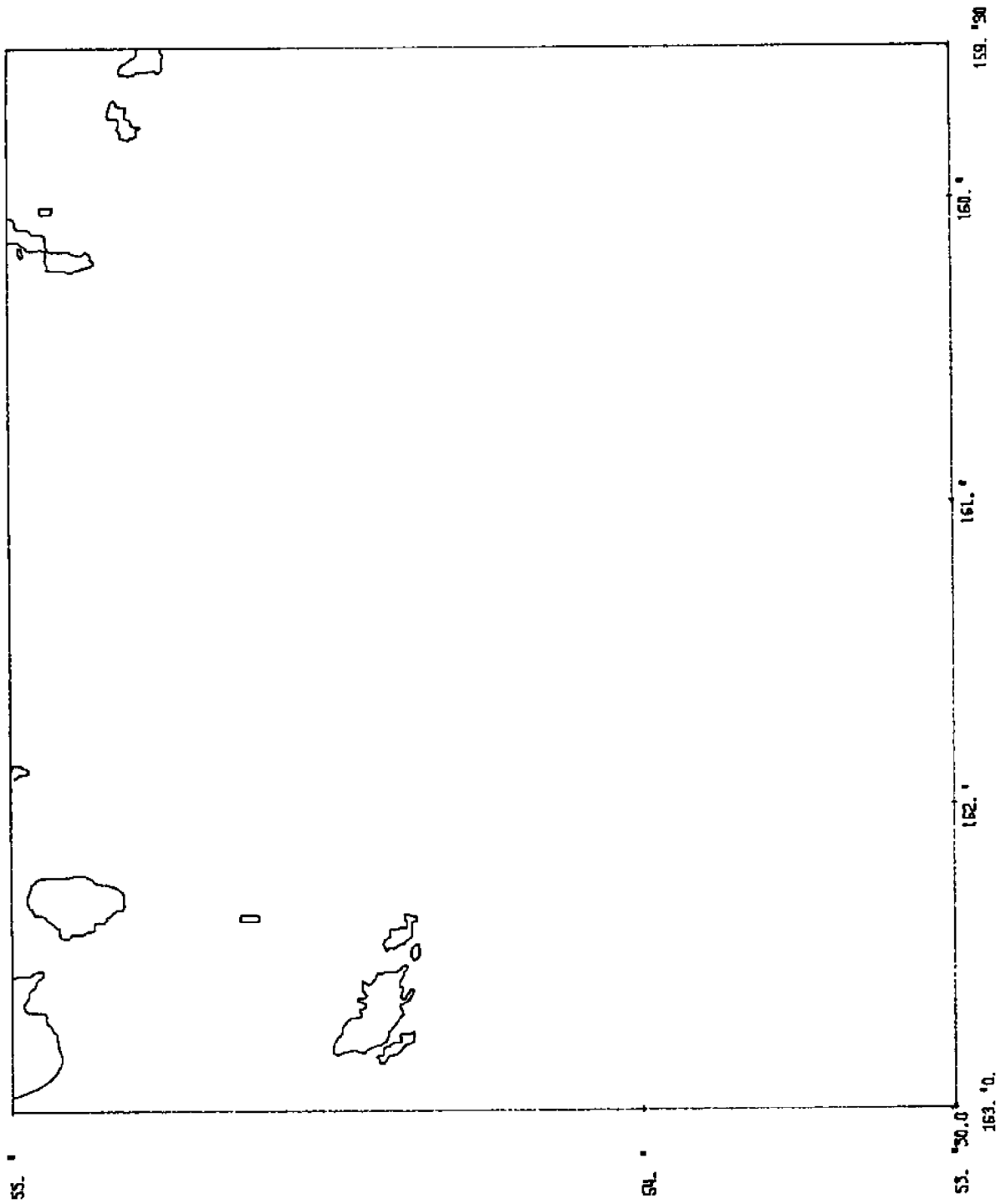
TABLE A-29. ATKA MACKEREL, JULY-SEPTEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 7 6	5622	15223	18690.2	43339.2	161	0.6	5455	9.09
JAPAN	78 7 29	5803	14858	18766.0	31949.5	63	0.6	4569	7.61
USSR	77 9 4	5636	15225	18700.9	43276.4	73	1.2	6522	5.43
USSR	77 9 3	5636	15227	18700.8	32574.5	79	1.0	1486	1.48
USSR	77 9 13	5636	15226	18700.9	43279.9	73	1.0	889	0.88

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

APPENDIX B

SHUMAGIN AND SANAK ISLANDS REGION



APPENDIX B

Productive Foreign Fishing Locations in the Shumagin
and Sanak Islands Region

<u>Table</u>		<u>Page</u>
B-1.	Summary of overall catch composition and average catch rates observed in the Shumagin and Sanak Islands region during January-March, 1978.....	119
B-2.	Summary of overall catch composition and average catch rates observed in the Shumagin and Sanak Islands region during April-June, 1978.....	120
B-3.	Summary of overall catch composition and average catch rates observed in the Shumagin and Sanak Islands region during October-December, 1978.....	121
B-4.	Walleye Pollock, January-March, 1978.....	122
B-5.	Walleye Pollock, April-June, 1977-78.....	123
B-6.	Walleye Pollock, July-September, 1977.....	126
B-7.	Walleye Pollock, October-December, 1978.....	129
B-8.	Pacific Cod, all months, 1977-78.....	132
B-9.	Flounders, January-September, 1977-78.....	134
B-10.	Flounders, October-December, 1978.....	135
B-11.	Pacific Ocean Perch, April-June, 1977-78.....	137
B-12.	Pacific Ocean Perch, July-December, 1977-78.....	139
 <u>Figure</u>		
B-1.	Walleye Pollock, April-June, 1977-78.....	125
B-2.	Walleye Pollock, July-September, 1977.....	128
B-3.	Walleye Pollock, October-December, 1978.....	131

Table B-1

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE SHUMAGIN AND SANAK ISLANDS REGION DURING
JANUARY-MARCH, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	907.71	0.41387	0.41387
Arrowtooth Flounder	521.73	0.23788	0.65176
Pacific Cod	317.78	0.14489	0.79665
Skate unidentified	174.23	0.07944	0.87610
Darkblotched Rockfish	119.40	0.05444	0.93054
Rex Sole	56.70	0.02585	0.95639
Shortraker Rockfish	46.00	0.02097	0.97737
Brown Irish Lord	22.83	0.01041	0.98778
Pacific Ocean Perch	12.40	0.00565	0.99343
Atka Mackerel	7.58	0.00345	0.99689
Shortspine Thornyhead	5.01	0.00228	0.99918
Sculpin unidentified	1.79	0.00081	1.00000

Table B-2

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE SHUMAGIN AND SANAK ISLANDS REGION DURING
APRIL-JUNE, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	870.24	0.50241	0.50241
Pacific Ocean Perch	591.26	0.34135	0.84376
Pacific Cod	92.93	0.05365	0.89741
Arrowtooth Flounder	60.54	0.03495	0.93237
Northern Rockfish	24.55	0.01417	0.94654
Pacific Halibut	13.00	0.00750	0.95405
<i>Sebastes variegatus</i>	12.49	0.00721	0.96126
Atka Mackerel	11.58	0.00668	0.96795
Brown Irish Lord	8.75	0.00505	0.97300
Redstripe Rockfish	7.44	0.00429	0.97730
Rex Sole	5.93	0.00342	0.98072
Sculpin unidentified	4.69	0.00271	0.98343
Darkblotched Rockfish	4.15	0.00239	0.98583
Bigmouth Sculpin	3.97	0.00229	0.98812
Bocaccio	3.15	0.00182	0.98994
Sharpchin Rockfish	2.48	0.00143	0.99138
Dover Sole	2.28	0.00131	0.99270
Black Rockfish	2.27	0.00131	0.99401
Shortspine Thornyhead	1.76	0.00101	0.99503
Chilipepper	1.50	0.00086	0.99590
Rock Sole	1.26	0.00073	0.99663
Shorthorn Sculpin	0.93	0.00053	0.99717
Searcher	0.89	0.00051	0.99769
Blackfin Sculpin	0.85	0.00049	0.99818
Petrale Sole	0.81	0.00047	0.99865
Canary Rockfish	0.59	0.00034	0.99900
Flathead Sole	0.39	0.00023	0.99923
Skate unidentified	0.35	0.00020	0.99943
Shortraker Rockfish	0.17	0.00009	0.99953
Eelpout unidentified	0.15	0.00008	0.99962
Prowfish	0.14	0.00008	0.99970
Greenland Turbot	0.14	0.00008	0.99979
Chinook Salmon	0.13	0.00007	0.99986
Rougeye Rockfish	0.07	0.00004	0.99991
Ribbed Sculpin	0.05	0.00003	0.99994
Other Species	---	0.00005	1.00000

Table B-3

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE SHUMAGIN AND SANAK ISLANDS REGION DURING
OCTOBER-DECEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	3362.61	0.83112	0.83112
Pacific Cod	251.09	0.06206	0.89318
Arrowtooth Flounder	238.77	0.05901	0.95220
Great Sculpin	38.51	0.00952	0.96172
Pacific Ocean Perch	37.94	0.00937	0.97110
Northern Rockfish	22.92	0.00566	0.97677
Sculpin unidentified	15.10	0.00373	0.98050
Pacific Halibut	11.15	0.00275	0.98326
Rex Sole	10.17	0.00251	0.98577
Flathead Sole	9.10	0.00225	0.98802
Atka Mackerel	8.83	0.00218	0.99021
Shortspine Thornyhead	6.89	0.00170	0.99191
Chinook Salmon	6.83	0.00168	0.99360
Dover Sole	6.53	0.00161	0.99521
Dusky Rockfish	4.21	0.00104	0.99626
Sablefish	3.67	0.00090	0.99716
Brown Irish Lord	3.54	0.00087	0.99804
Rock Sole	1.80	0.00044	0.99849
Bignouth Sculpin	1.40	0.00034	0.99883
Searcher	1.09	0.00027	0.99910
Shortraker Rockfish	1.07	0.00026	0.99937
Snailfish unidentified	0.60	0.00014	0.99952
Blackfin Sculpin	0.57	0.00014	0.99966
Darkblotched Rockfish	0.33	0.00008	0.99974
Rattail unidentified	0.32	0.00008	0.99983
Greenling unidentified	0.25	0.00006	0.99989
Prowfish	0.17	0.00004	0.99993
Rougheye Rockfish	0.11	0.00002	0.99996
Spiny Dogfish	0.06	0.00001	0.99998
Poacher unidentified	0.04	0.00001	0.99999
Redbanded Rockfish	0.02	0.00000	0.99999
Eulachon	0.00	0.00000	0.99999
Other Species	---	0.00000	1.00000

TABLE R-4. WALLFYE POLLOCK, JANUARY-MARCH, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSES	RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
JAPAN	78 219	5425	15940	18429.3	33875.3	46045.2	155	9877	6.17
JAPAN	78 220	5424	15911	18439.3	33815.1	45874.4	158	3387	3.07
JAPAN	78 219	5425	15927	18434.9	33846.9	45968.0	147	5742	2.05
JAPAN	78 226	5416	16045	18374.7	34045.6	46438.6	161	932	0.58

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

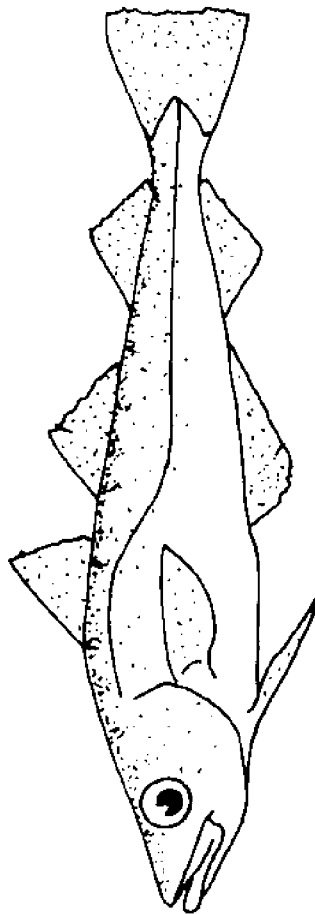


TABLE R-5. WALLEYE POLLOCK, APRIL-JUNE, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE	RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 5 29	5407	16149	18310.0	34213.5	46820.2	73	2.1	32801	15.61
JAPAN	78 5 17	5412	16037	18381.7	34024.9	46390.5	117	1.3	21401	14.20
JAPAN	78 6 10	5404	16028	18293.7	34245.7	46725.9	192	1.1	1891	14.69
JAPAN	78 5 10	5419	16034	18391.6	33999.2	46335.8	97	0.6	4874	8.05
JAPAN	78 5 10	5416	16034	18300.4	34021.7	46373.2	125	1.2	7519	5.37
JAPAN	78 4 27	5406	16152	18304.1	34222.8	46849.6	92	0.4	883	4.41
JAPAN	78 5 19	5418	16137	18333.0	34165.0	46710.4	87	0.4	1687	4.21
JAPAN	78 5 29	5407	16239	18273.0	34183.2	46749.5	90	1.1	5854	4.18
JAPAN	78 5 14	5418	16047	18400.7	33967.3	46714.7	76	1.5	8110	4.91
USSR	78 5 19	5416	16031	18379.1	34044.6	46449.4	90	1.7	4255	3.50
USSR	78 5 16	5417	16040	18382.2	34031.6	46408.4	114	1.1	4255	3.50
USSR	78 5 18	5422	16016	18410.2	33941.6	46202.6	102	0.9	4313	3.22
USSR	78 5 16	5417	16123	18356.8	34128.9	46664.8	96	1.6	4530	3.51
JAPAN	78 5 28	5405	16152	18308.0	34225.5	46264.3	121	2.0	4574	2.29
JAPAN	78 5 26	5405	16144	18307.3	34207.1	47107.9	136	0.3	2826	2.17
JAPAN	78 5 28	5406	16134	18312.9	34197.9	46773.0	73	0.5	3156	2.06
JAPAN	78 5 28	5404	16152	18328.7	34127.6	46731.8	102	1.3	1851	1.93
JAPAN	78 4 27	5423	15917	18446.1	33816.3	45905.4	115	0.9	2809	1.71
JAPAN	78 5 21	5403	16200	18296.2	34243.6	46884.2	131	1.3	1542	1.71
JAPAN	78 6 15	5402	16124	18355.6	34151.2	46670.9	125	1.5	1423	1.69
JAPAN	78 5 21	5408	16036	18393.1	34181.6	47141.4	164	1.5	2475	1.64
USSR	78 5 14	5418	16024	18393.5	33984.7	46743.8	194	1.0	1568	1.56
JAPAN	78 6 28	5424	15937	18401.2	33981.7	46310.3	123	0.5	2309	1.53
JAPAN	78 4 29	5406	16144	18310.3	34204.7	46790.7	192	1.7	1014	1.44

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	7707	5412	16127	0538	701	114	00	267	1.1
JAPAN	7707	5423	16017	0538	701	106	03	31	1.1
USSR	7706	5416	16057	0218	67	196	03	67	1.1
JAPAN	7706	5425	16004	0310	66	108	00	19	1.1
JAPAN	7706	5405	16243	0330	67	121	00	42	1.1
JAPAN	7706	5409	16136	0330	67	109	00	21	1.1
JAPAN	7705	5408	16135	0330	67	103	00	23	1.1
JAPAN	7705	5412	16131	0330	67	224	00	15	0.0
JAPAN	7705	5413	16130	0330	67	291	00	31	0.0
JAPAN	7705	5413	16135	0330	67	540	00	95	0.0
JAPAN	7705	5402	16146	0330	67	120	00	00	0.0
JAPAN	7705	5409	16129	0330	67	120	00	00	0.0
JAPAN	7705	5405	16145	0330	67	257	00	18	0.0
JAPAN	7705	5417	16132	0330	67	257	00	15	0.0
JAPAN	7705	5417	16145	0330	67	687	00	13	0.0
JAPAN	7705	5417	16027	0330	67	82	00	11	0.0
USSR	7705	5406	16146	0330	67	98	00	11	0.0
JAPAN	7705	5405	16146	0330	67	114	00	19	0.0
JAPAN	7705	5422	16146	0330	67	132	00	13	0.0
JAPAN	7705	5416	16134	0330	67	109	00	9	0.0
USSR	7705	5417	16027	0330	67	109	00	6	0.0
JAPAN	7705	5407	16027	0330	67	109	00	6	0.0
JAPAN	7705	5405	16133	0330	67	103	00	5	0.0
JAPAN	7705	5405	16147	0330	67	136	00	5	0.0
JAPAN	7705	5408	16147	0330	67	98	00	5	0.0
USSR	7705	5418	16027	0330	67	98	00	5	0.0

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION.***

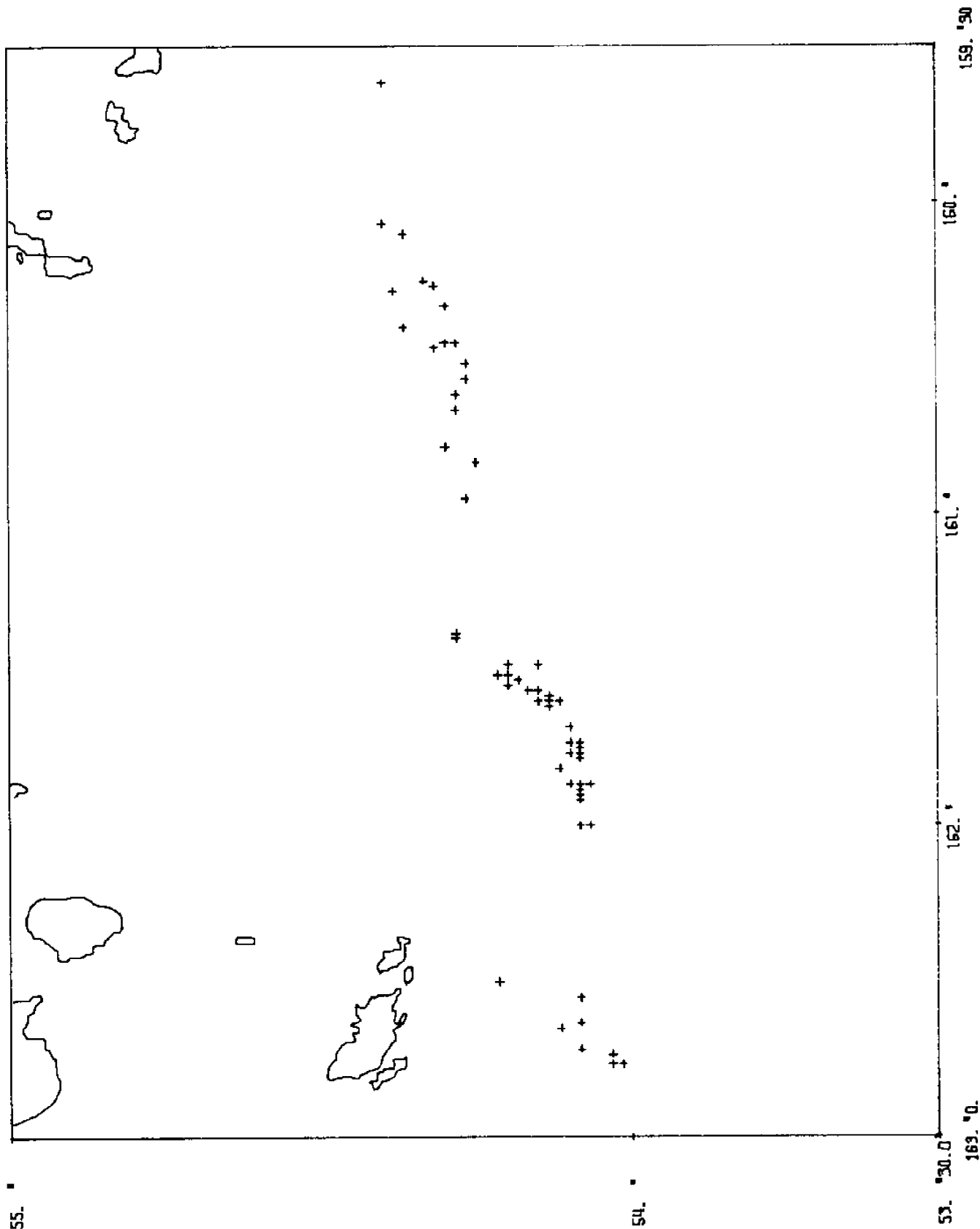


FIGURE B-1. WALLEYE POLLOCK, APRIL-JUNE, 1977-78

TABLE B-6. WALLEYE POLLOCK, JULY-SEPTEMBER, 1977

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 7204	5422	16007	7943.8	46208.6	87	1.0	33290	33.29
USSR	77 7205	5416	16052	34061.3	46480.3	103	1.6	40775	25.48
JAPAN	77 7130	5402	16246	34354.4	47153.7	102	1.0	41210	24.20
USSR	77 9129	5418	16030	34006.4	46348.9	90	1.6	38412	24.00
USSR	77 9120	5403	16159	34243.0	46872.9	108	1.4	32864	23.47
USSR	77 7205	5417	16005	33933.6	46557.5	76	2.0	40766	18.24
USSR	77 8205	5424	16007	33949.8	46195.6	90	1.9	16416	18.59
USSR	77 7268	5422	16012	33949.1	46208.6	87	1.0	29260	16.26
USSR	77 7268	5421	16012	33957.7	46239.0	79	1.6	19437	16.29
USSR	77 9129	5407	16142	34197.4	46272.1	98	1.0	19438	16.19
USSR	77 9129	5407	16141	34195.4	46272.1	92	1.8	26645	14.80
USSR	77 8127	5423	16006	33974.0	46220.6	92	1.2	19449	14.14
USSR	77 9127	5420	16006	33938.8	46220.6	92	1.5	27990	14.96
USSR	77 9122	5409	16131	34167.8	46271.3	92	1.2	17436	12.16
USSR	77 9122	5402	15943	33259.6	46064.0	112	1.5	17436	11.62
USSR	77 9122	5417	16204	34259.3	46908.0	103	1.8	29166	11.41
USSR	77 9228	5425	16003	34076.2	46527.5	103	1.0	10379	10.37
USSR	77 9221	5417	16045	34926.5	46182.2	76	1.4	21641	19.02
USSR	77 8221	5423	16005	34042.5	46438.2	98	2.2	17411	7.91
USSR	77 7279	5428	15923	33936.1	45941.1	95	2.1	15198	7.23
USSR	77 7279	5428	16005	33827.3	46195.9	98	2.0	3416	6.83
USSR	77 7279	5420	16015	33967.3	46257.9	79	2.5	12721	6.35
USSR	77 9228	5423	16007	34170.9	46220.7	92	1.4	8099	5.78
USSR	77 8125	5425	16005	33940.6	46194.4	92	1.5	14353	5.74
USSR	77 9134	5404	16144	34209.6	46790.8	92	2.5	14022	5.60
JAPAN	77 9125	5404	16159	34243.4	46872.9	109	2.0	11067	5.53
USSR	77 8277	5416	16028	34007.5	46337.6	92	2.0	4330	5.41
USSR	77 7255	5404	16009	33951.3	46808.4	92	1.5	7884	5.25
USSR	77 9127	5404	16211	34270.6	46949.3	98	1.6	7659	5.10
USSR	77 8125	5425	16005	33930.6	46194.4	90	2.2	8091	5.05
USSR	77 8125	5419	16024	33990.2	46312.4	82	2.2	12558	5.72

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSF RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 727	5425	16006	18417.7	46200.4	84	1.3	5965	4.58
USSR	77 727	5424	16009	18413.8	46219.1	82	1.9	8559	4.50
USSR	77 914	5404	16210	18268.2	46943.5	109	1.3	5493	4.22
USSR	77 727	5419	16015	18398.2	46258.4	82	1.7	6170	3.63
USSR	77 815	5425	16005	18418.2	46194.4	90	1.8	6184	3.43
USSR	77 819	5423	16006	18412.7	46201.9	92	2.2	7008	3.18
USSR	77 913	5413	16132	18339.0	46219.2	114	2.2	5918	2.52
USSR	77 726	5420	16006	18408.2	46220.7	87	1.5	3641	2.24
USSR	77 919	5418	16016	18392.6	46267.7	87	1.5	3361	2.20
USSR	77 819	5424	16016	18410.5	46294.0	90	2.0	4196	2.07
USSR	77 919	5417	16038	18381.5	46396.5	90	2.5	5030	2.01
USSR	77 913	5404	16148	18301.5	46814.3	71	1.1	1858	1.85
USSR	77 916	5428	15910	18448.0	45863.9	120	1.5	1831	1.22
USSR	77 727	5426	16002	18422.0	46175.7	133	3.5	3996	1.14
USSR	77 921	5417	16048	18375.8	46456.1	109	1.5	1464	1.09
USSR	77 723	5424	16006	18415.2	46201.2	90	2.0	1843	0.92
USSR	77 922	5418	16111	18365.0	46593.0	120	2.5	1437	0.57

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

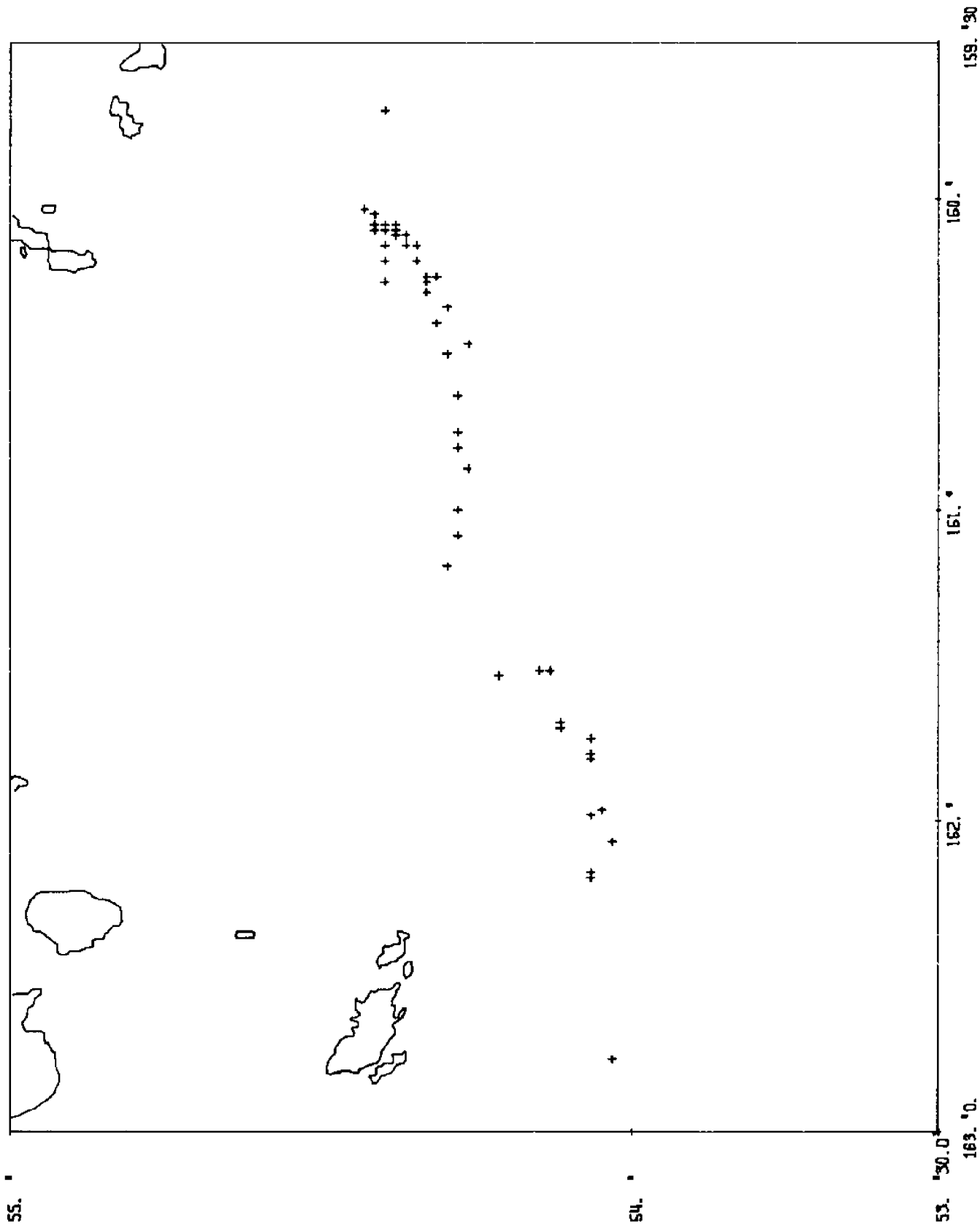


FIGURE B-2. WALLEYE POLLOCK, JULY-SEPTEMBER, 1977

TABLE B-7. WALLEYE POLLOCK, OCTOBER-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
ROK	781014	5418	16023	3390.8	89	1.5	138914	92.60
ROK	781015	5418	16024	3393.0	95	1.6	109853	68.65
ROK	781120	5418	16001	33927.6	90	1.4	103546	58.86
ROK	781120	5418	16024	33993.5	77	0.4	279111	56.50
ROK	781014	5422	16010	33950.2	79	3.0	106228	35.19
ROK	781016	5420	16031	34014.7	89	3.3	106228	32.45
ROK	781016	5420	16012	33960.9	90	3.7	482980	14.09
JAPAN	781120	5403	16135	34176.9	103	1.3	482147	14.09
JAPAN	781121	5406	16207	34263.5	98	1.3	170279	13.06
JAPAN	781121	5406	16147	34211.5	107	5.5	156798	12.22
ROK	781013	5427	15953	33904.0	84	6.5	534199	19.54
JAPAN	781121	5409	16122	34126.2	109	1.0	300677	9.15
JAPAN	781121	5409	16150	34178.2	109	1.0	733271	7.33
JAPAN	781121	5408	16135	34179.4	120	1.0	66387	6.63
JAPAN	781121	5415	16128	34145.6	103	1.0	61281	6.12
JAPAN	781121	5415	16135	34176.0	103	3.0	171312	5.57
JAPAN	781121	5419	16034	34021.2	103	1.3	15769	5.28
JAPAN	781122	5416	16024	33983.0	87	1.2	156076	4.43
JAPAN	781122	5418	16024	33993.5	109	6.8	234533	4.30
JAPAN	781119	5406	16212	34195.6	109	0.6	63892	4.30
JAPAN	781115	5406	16140	34150.5	109	1.6	35473	3.35
JAPAN	781116	5407	16145	34204.5	114	1.0	35106	3.51
JAPAN	781116	5407	16143	34202.4	109	0.9	35473	3.54
JAPAN	781109	5406	16143	34202.4	109	1.0	28975	2.89
JAPAN	781120	5406	16139	33803.4	125	1.0	12894	2.28
JAPAN	781120	5417	16123	34128.9	114	1.0	12894	2.28
JAPAN	781122	5422	15943	34176.0	120	4.4	36661	2.28
JAPAN	781114	5418	16101	34113.2	114	0.5	7801	2.28
JAPAN	781112	5417	16116	34076.2	120	1.3	2345	2.28
JAPAN	781114	5418	16130	34157.9	114	0.4	7345	2.28
JAPAN	781013	5419	16116	34107.6	95	3.0	7355	2.28
JAPAN	781028	5410	16133	34116.8	95	0.7	133	1.13

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781119	5404	16205	18289.5	125	1	1859	1.669
JAPAN	781117	5406	16145	18309.6	120	1	2495	1.666
JAPAN	781116	5407	16130	18312.5	192	1	2516	1.557
JAPAN	781124	5412	16123	18333.3	89	2	3898	1.552
JAPAN	781029	5416	16112	18353.3	109	1	1233	1.441
JAPAN	781116	5418	16135	18365.3	109	1	2537	1.440
JAPAN	781114	5405	16149	18319.8	109	1	1537	1.393
JAPAN	781123	5423	16004	18303.6	84	4	5806	1.323
JAPAN	781121	5417	16023	18413.6	142	1	841	1.208
JAPAN	781121	5417	16141	18393.6	109	1	1857	1.109
JAPAN	781122	5406	16008	18419.4	109	1	1657	1.108
JAPAN	781121	5423	16159	18419.4	98	1	1087	1.092
JAPAN	781121	5418	16159	18290.5	98	3	3242	1.091
JAPAN	781121	5417	16025	18377.5	108	1	916	0.911
JAPAN	781129	5405	16215	18319.5	136	1	1374	0.910
JAPAN	781119	5405	16134	18285.4	136	1	1374	0.877
JAPAN	781117	5406	16146	18309.4	117	1	842	0.770
JAPAN	781114	5406	16146	18313.0	153	1	1002	0.770
JAPAN	781113	5407	16140	18305.0	147	1	354	0.679
JAPAN	781117	5408	16139	18316.7	109	1	404	0.679
JAPAN	781114	5418	16115	18319.7	136	1	567	0.561
JAPAN	781113	5406	16139	18363.6	103	1	517	0.510
JAPAN	781118	5406	16145	18309.6	117	1	856	0.510

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

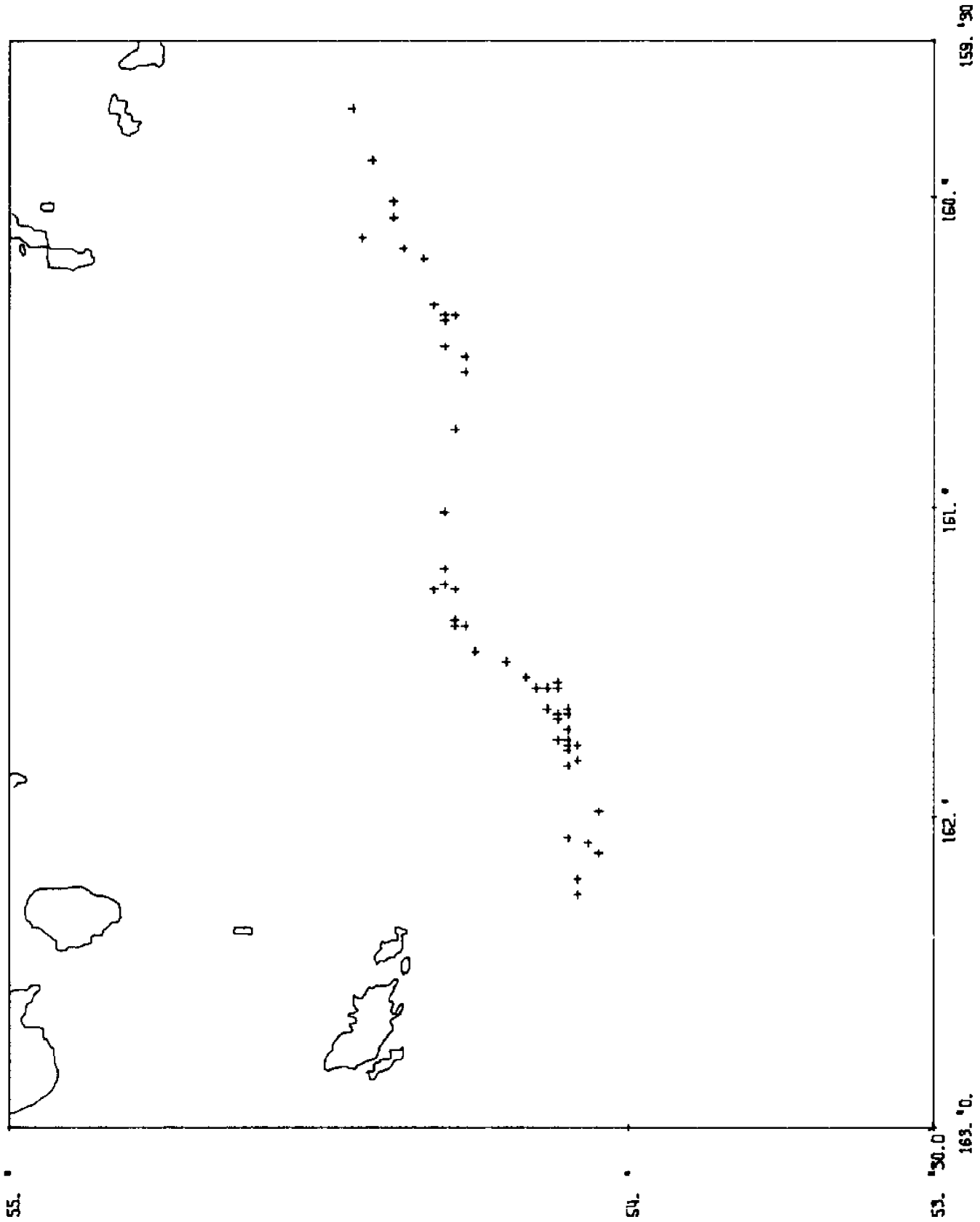


FIGURE B-3. WALLEYE POLLOCK, OCTOBER-DECEMBER, 1978

TABLE B-8. PACIFIC COD, ALL MONTHS, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	781120	5418	16024	18391.1	46312.6	90	1.4	9922	7.08
USSR	781122	5422	16007	18410.7	46172.1	90	0.8	2736	3.84
USSR	770919	5422	16009	18408.2	46208.5	98	1.5	6308	4.50
USSR	770919	5422	16021	18392.6	46220.7	82	2.0	5108	3.36
USSR	770914	5412	16130	18337.3	46207.4	82	0.5	6146	3.32
JAPAN	781109	5417	16034	18381.9	46390.5	117	1.5	4867	3.24
USSR	781029	5403	16006	18319.7	46231.0	93	1.5	4004	2.66
USSR	770821	5423	16025	18413.1	46195.9	95	1.1	4575	2.60
USSR	781014	5421	16026	18391.5	46312.6	77	1.6	4140	2.52
ROK	781014	5422	16010	18408.5	46226.5	95	0.5	4740	2.22
USSR	781016	5424	15943	18420.5	46067.8	112	1.0	3850	2.22
JAPAN	780428	5426	15940	18304.2	46087.0	192	0.4	3009	2.19
USSR	780221	5423	16007	18422.2	46207.8	90	1.7	3270	1.93
USSR	781016	5420	16031	18324.9	46239.9	90	1.3	2734	1.63
JAPAN	780116	5405	16152	18391.6	46306.6	91	0.4	1779	1.32
ROK	781013	5417	16023	18391.6	46306.6	88	1.5	1971	1.31
ROK	781013	5425	15953	18356.7	46152.2	87	0.5	4708	2.23
ROK	781121	5421	16026	18380.6	46225.0	95	1.8	3082	1.72
JAPAN	781108	5407	16141	18306.3	46077.3	109	1.1	3334	1.21
USSR	781108	5407	16034	18315.6	46277.3	92	1.8	3317	1.81
USSR	771835	5425	16005	18380.2	46194.4	90	0.5	3258	1.00
USSR	770816	5421	16012	18418.4	46194.4	79	1.2	2489	0.97
USSR	770726	5421	16032	18395.7	46239.9	82	1.4	1648	0.96
JAPAN	780516	5416	16028	18374.7	46143.8	161	0.6	1523	0.95
JAPAN	780222	5418	16024	18391.1	46312.6	192	0.8	1758	0.94
JAPAN	781121	5425	15940	18422.2	46067.8	15	3.6	211	0.72

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
*****	*****	***	****	***** 7X	*****	*****	*****	*****
USSR	77 725	5421	16009	33951.1	92	1.5	937	0.62
JAPAN	781030	5409	16135	34176.9	103	1.3	691	0.53
USSR	77 726	5424	16005	33933.6	76	0.9	475	0.52
USSR	77 819	5423	16006	33938.7	92	2.2	1139	0.51
USSR	77 727	5420	16015	33967.3	79	2.0	1000	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

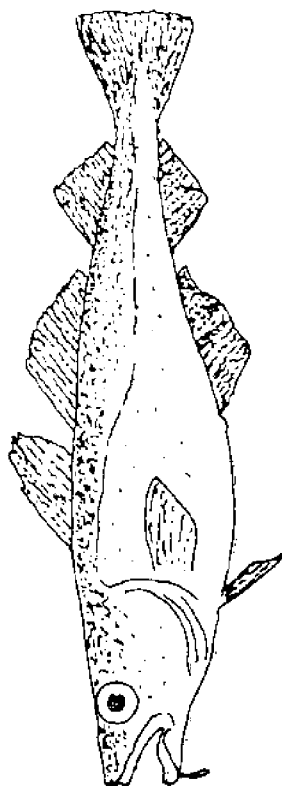


TABLE B-9. FLOUNDERS, JANUARY-SEPTEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	780728	5404	16147	46808	98	5	37237	2.2
JAPAN	770922	5416	16045	46633	161	5	32388	1.0
USSR	770928	5408	16131	46773	198	5	33864	1.1
JAPAN	770921	5422	16045	46644	150	2	33204	1.1
JAPAN	770921	5422	15927	46604	147	2	39801	1.1
USSR	770927	5404	16211	46949	148	6	26700	1.1
USSR	770927	5408	16100	46527	114	1	2696	1.1
JAPAN	770920	5424	15940	46587	158	1	13961	1.1
JAPAN	770921	5424	15940	46504	155	1	13751	1.1
USSR	770921	5404	16144	46790	158	1	1929	1.0
USSR	770922	5404	16050	46468	271	3	10289	1.0
USSR	770922	5404	16148	46814	271	0	289	1.0
USSR	770922	5407	16012	46237	82	8	15323	0.0
USSR	770922	5407	16141	46773	87	0	752	0.0
USSR	770927	5428	16007	46230	99	1	7562	0.0
USSR	770927	5428	16025	46394	90	5	1809	0.0
USSR	770927	5416	16052	46480	103	6	11430	0.0
USSR	770927	5418	16105	46557	108	1	1381	0.0
USSR	770927	5418	16162	46288	99	0	636	0.0
USSR	770927	5422	16020	46277	98	1	373	0.0
USSR	770927	5416	16100	46228	103	5	282	0.0
JAPAN	770927	5419	16016	46522	183	3	2961	0.0
USSR	770927	5422	16006	46294	96	0	471	0.0
JAPAN	770927	5416	16031	46235	114	1	8	0.0

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

TABLE B-10. FLOUNDERS, OCTOBER-DECEMBER, 1978

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	781122	5423	16001	7X	7Z	90	0.4	1299	3.24
JAPAN	781120	5418	16016	7X	7Z	1190	1.4	3333	2.38
JAPAN	781115	5406	16140	7X	7Z	109	0.8	2837	2.02
JAPAN	781121	5417	16045	7X	7Z	109	1.0	1443	1.40
JAPAN	781130	5409	16135	7X	7Z	136	1.2	1513	1.25
JAPAN	781114	5412	16130	7X	7Z	103	1.3	1795	1.35
JAPAN	781013	5405	16149	7X	7Z	182	1.5	3376	2.22
JAPAN	781113	5407	16126	7X	7Z	109	1.1	1422	1.29
JAPAN	781123	5427	15943	7X	7Z	147	3.0	4688	1.52
JAPAN	781013	5419	16116	7X	7Z	79	0.4	5187	1.21
JAPAN	781123	5426	16008	7X	7Z	79	0.3	3623	1.09
JAPAN	781016	5416	16032	7X	7Z	87	0.7	5607	0.84
JAPAN	781119	5406	16204	7X	7Z	90	1.1	2485	2.21
JAPAN	781116	5407	16135	7X	7Z	109	1.6	1406	0.87
JAPAN	781016	5412	16145	7X	7Z	114	1.8	1504	0.84
JAPAN	781014	5421	16031	7X	7Z	87	0.3	2533	0.76
JAPAN	781115	5411	16010	7X	7Z	120	1.0	7158	0.71
JAPAN	781112	5406	16130	7X	7Z	117	1.1	6670	0.69
JAPAN	781120	5409	16146	7X	7Z	187	1.2	2280	0.68
JAPAN	781123	5406	16133	7X	7Z	120	1.3	6896	0.68
JAPAN	781124	5406	16146	7X	7Z	145	0.7	4783	0.65
JAPAN	781120	5414	16026	7X	7Z	95	1.2	1637	0.64
JAPAN	781111	5410	16132	7X	7Z	125	1.1	5631	0.56
JAPAN	781121	5425	15953	7X	7Z	84	0.6	3130	0.55
JAPAN	781123	5423	16004	7X	7Z	84	0.4	2571	0.54

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
*****	*****	***	****	***** 7X	*****	*****	*****	*****
JAPAN	781121	5418	16029	18388.5 34004.2 46342.3	98	3.5	1886	0.53
JAPAN	781028	5415	16128	18347.4 34145.6 46695.1	109	1.0	525	0.52

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

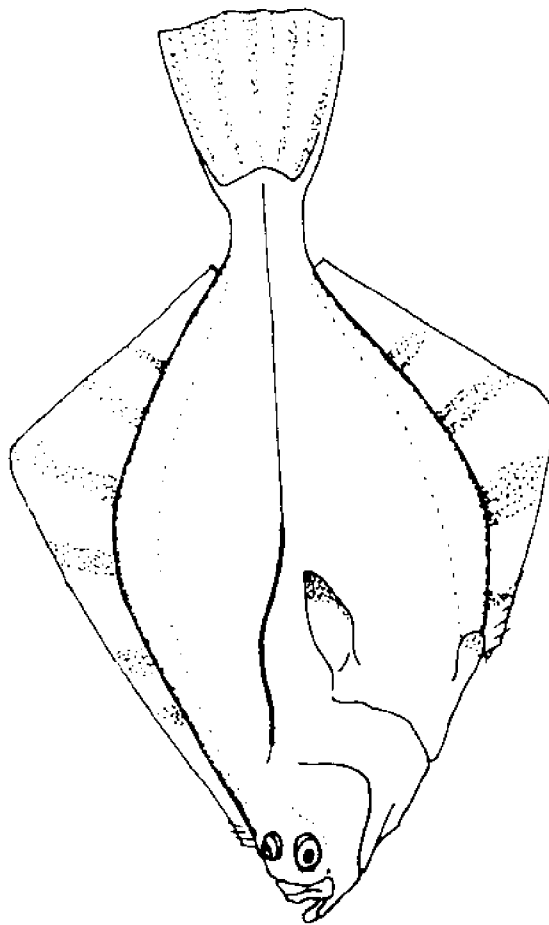


TABLE B-11. PACIFIC OCEAN PERCH, APRIL-JUNE, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780525	5406	16152	7X 304.5	8.7	92	0.4	7936	19.84
USSR	780516	5405	16052	229.8	4633	99	0.4	1080	19.80
JAPAN	780517	5408	16152	225.2	4683	71	0.4	3805	19.51
USSR	780513	5409	16036	229.7	4633	99	1.6	1326	8.28
JAPAN	780506	5409	16037	224.9	4674	109	1.5	1644	8.64
JAPAN	780516	5404	16200	245.7	4639	117	1.0	8206	8.20
USSR	780516	5422	16006	241.6	4688	102	1.3	5325	5.30
USSR	780518	5410	16006	241.6	4620	99	0.9	3016	3.34
JAPAN	780528	5412	16037	283.2	4608	119	0.7	1957	2.79
JAPAN	780528	5409	16200	291.7	4635	97	0.6	2715	2.76
JAPAN	780528	5405	16058	336.1	4659	94	0.5	1394	1.71
JAPAN	780528	5423	16037	36.5	4652	115	0.8	1520	1.90
JAPAN	780528	5416	16031	40.2	4635	114	0.7	3967	1.77
JAPAN	780528	5405	16155	29.1	4666	120	0.5	842	1.68
JAPAN	780528	5418	16204	33.5	4690	109	0.5	337	1.62
JAPAN	780528	5427	16040	30.1	4631	123	1.5	2116	1.42
USSR	780519	5405	16204	33.5	4647	103	1.6	1954	1.28
JAPAN	780526	5401	16200	30.7	4687	131	2.0	1780	1.13
JAPAN	780517	5401	16134	29.3	4688	137	1.4	965	1.09
JAPAN	780510	5416	16034	30.6	4671	125	1.4	1225	0.86
JAPAN	780523	5412	16129	31.8	4670	114	2.5	2091	0.83
JAPAN	780519	5415	16057	33.6	4651	96	3.0	1684	0.56
JAPAN	780530	5415	16050	38.9	4643	253	1.3	1929	0.55
JAPAN	780521	5416	16136	38.4	4637	110	1.1	371	0.35

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
*****	*****	***	*****	***** 7X	***** 7Y	***** 7Z	*****	*****
JAPAN	78 529	5405	16243	18264.0 34340.9 47137.2	128	2.0	1066	0.53

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

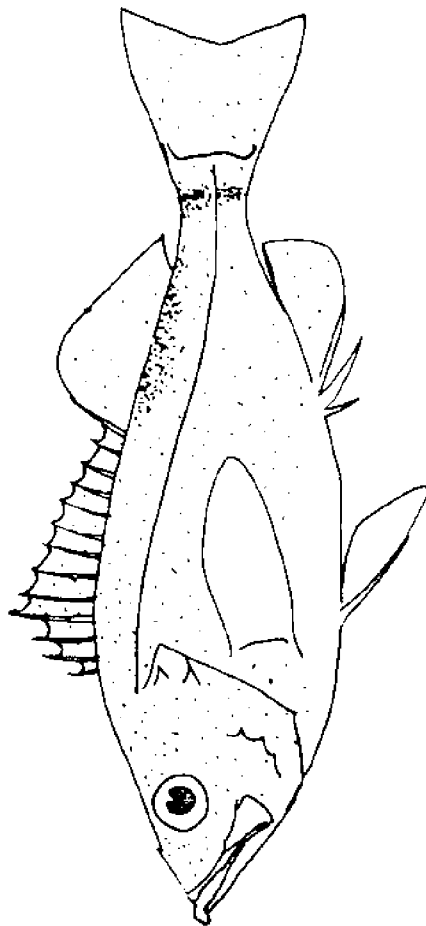
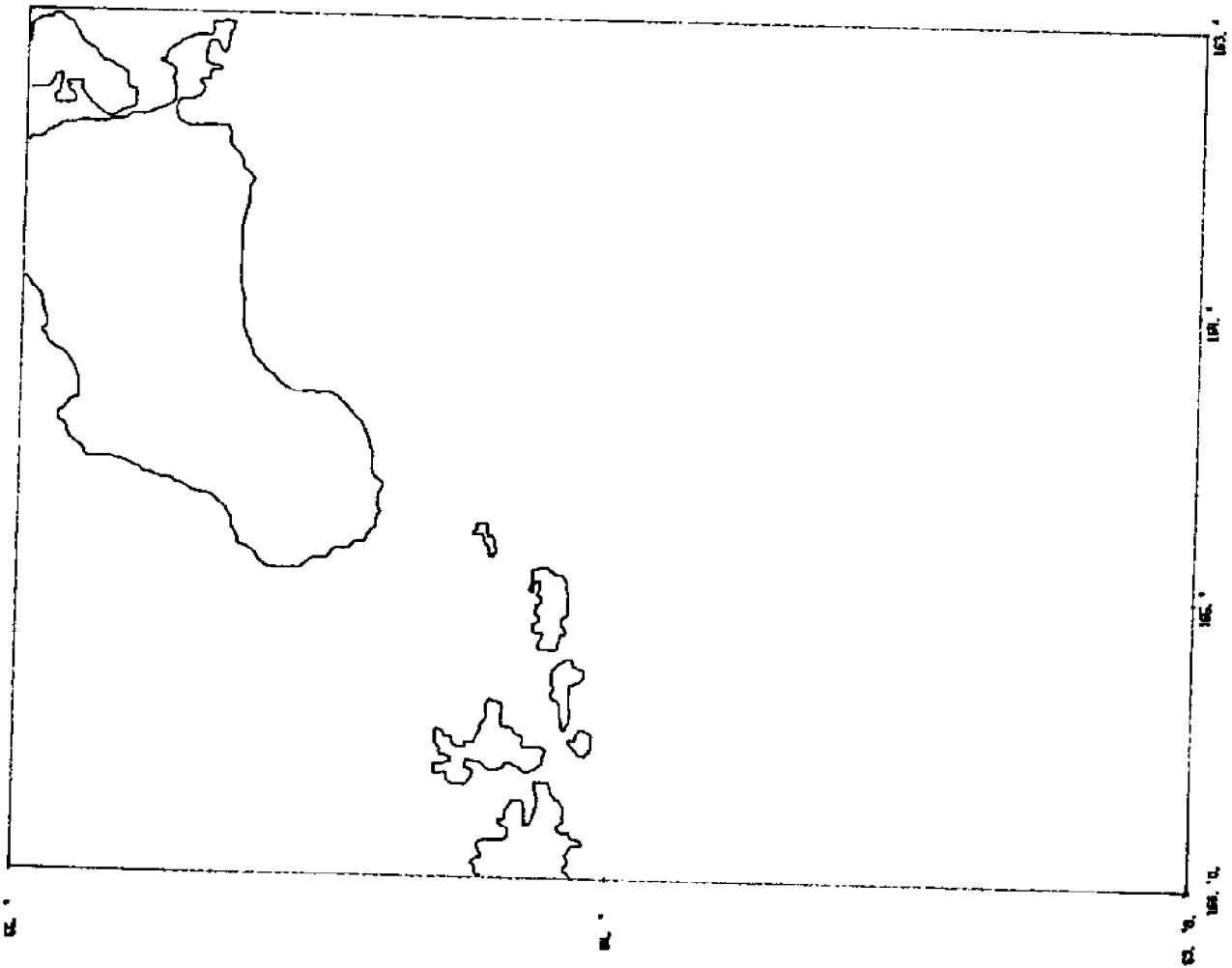


TABLE B-12. PACIFIC OCEAN PERCH, JULY-DECEMBER, 1977-78

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	77 825	54 21 6	160 07 8	183 83.7	463 37.6	92	0.8	10633	13.29
USSR	77 724	54 21 7	160 07 9	184 09.7	462 20.6	87	1.5	19691	19.69
USSR	77 725	54 21 8	160 09 2	184 06.2	462 21.3	98	1.6	44289	2.95
USSR	77 726	54 20 7	161 42 6	183 16.2	462 78.7	87	0.5	1269	2.11
USSR	77 727	54 20 8	160 16 1	184 00.6	462 61.1	89	0.5	3131	2.08
USSR	77 728	54 20 3	159 23 8	184 43.3	459 41.6	82	2.5	3771	1.88
USSR	77 729	54 23 7	160 06 6	184 12.3	462 75.9	92	0.5	3335	1.55
JAPAN	78 1 5	54 17 7	161 16 1	183 60.3	462 21.1	112	1.4	2746	1.24
USSR	77 720	54 21 8	160 12 4	183 15.8	462 33.0	92	1.8	1538	1.10
USSR	77 721	54 19 9	160 24 3	183 57.8	462 39.1	79	1.4	1528	1.03
USSR	77 722	54 19 9	160 24 3	183 57.8	462 32.6	82	2.7	1452	0.76
USSR	77 723	54 21 7	160 24 3	183 33.8	463 12.3	98	4.5	2074	0.71
USSR	77 724	54 21 7	161 05 5	183 66.1	460 61.3	98	2.1	3220	0.57
USSR	77 725	54 24 4	160 12 2	184 13.4	461 55.9	87	0.6	1209	0.57
USSR	77 726	54 24 4	161 47 7	184 12.4	462 37.4	109	1.3	3339	0.55
JAPAN	77 916	54 26 4	159 43 3	183 08.3	468 08.4	112	1.3	762	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

APPENDIX C
UNIMAK PASS REGION



APPENDIX C

Productive Foreign Fishing Locations in the Unimak
Pass Region

<u>Table</u>		<u>Page</u>
C-1.	Summary of overall catch composition and average catch rates observed in the Unimak Pass region during April-June, 1978.....	143
C-2.	Summary of overall catch composition and average catch rates observed in the Unimak Pass region during July-September, 1978.....	144
C-3.	Summary of overall catch composition and average catch rates observed in the Unimak Pass region during October-December, 1978.....	145
C-4.	Walleye Pollock, April-December, 1977-78.....	146
C-5.	Pacific Cod, July-December, 1978.....	148
C-6.	Flounders, April-December, 1977-78.....	149
C-7.	Pacific Ocean Perch, April-December, 1978.....	150

Table C-1

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE UNIMAK PASS REGION DURING
APRIL-JUNE, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	513.53	0.60201	0.60201
Pacific Ocean Perch	141.73	0.16615	0.76816
Arrowtooth Flounder	84.10	0.09859	0.86676
Pacific Cod	24.35	0.02855	0.89532
Brown Irish Lord	23.06	0.02703	0.92235
Bigmouth Sculpin	14.04	0.01646	0.93881
Northern Rockfish	10.13	0.01188	0.95070
Shortspine Thornyhead	7.70	0.00903	0.95973
Rex Sole	6.62	0.00776	0.96750
Rock Sole	5.26	0.00617	0.97368
Atka Mackerel	5.13	0.00601	0.97969
Pacific Halibut	5.09	0.00597	0.98567
Black Rockfish	3.54	0.00415	0.98983
Blackfin Sculpin	2.98	0.00350	0.99333
Dover Sole	1.64	0.00193	0.99526
<i>Sebastes variegatus</i>	1.54	0.00180	0.99707
Searcher	1.22	0.00143	0.99851
Flathead Sole	0.39	0.00046	0.99898
Ribbed Sculpin	0.37	0.00043	0.99941
Chinook Salmon	0.31	0.00037	0.99979
Rougheye Rockfish	0.09	0.00010	0.99989
Greenling unidentified	0.07	0.00009	0.99999
Poacher unidentified	0.00	0.00000	1.00000

Table C-2

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE UNIMAK PASS REGION DURING
JULY-SEPTEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	2725.85	0.80430	0.80430
Pacific Ocean Perch	322.82	0.09525	0.89955
Pacific Cod	172.83	0.05099	0.95055
Arrowtooth Flounder	67.25	0.01984	0.97039
Pacific Halibut	33.14	0.00977	0.98017
Flathead Sole	22.69	0.00669	0.98687
Rock Sole	12.42	0.00366	0.99053
Sculpin unidentified	10.79	0.00318	0.99372
Rex Sole	9.52	0.00280	0.99653
Skate unidentified	4.92	0.00145	0.99798
Sablefish	3.12	0.00092	0.99890
Eelpout unidentified	1.34	0.00039	0.99930
Shortspine Thornyhead	1.12	0.00033	0.99963
Northern Rockfish	0.98	0.00028	0.99992
Redstripe Rockfish	0.25	0.00007	0.99999
Other Species	---	0.00000	1.00000

Table C-3

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE UNIMAK PASS REGION DURING
OCTOBER-DECEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	2434.14	0.82062	0.82062
Pacific Cod	191.84	0.06467	0.88530
Arrowtooth Flounder	106.88	0.03603	0.92134
Pacific Halibut	60.55	0.02041	0.94175
Pacific Ocean Perch	57.24	0.01929	0.96105
Sablefish	46.48	0.01567	0.97672
Rock Sole	19.24	0.00648	0.98321
Chinook Salmon	18.89	0.00637	0.98958
Sculpin unidentified	13.64	0.00460	0.99418
Flathead Sole	4.76	0.00160	0.99579
Rex Sole	3.30	0.00111	0.99690
Dusky Rockfish	3.17	0.00107	0.99798
Shark unidentified	1.55	0.00052	0.99850
Shortraker Rockfish	1.51	0.00051	0.99901
Shortspine Thornyhead	1.38	0.00046	0.99948
Butter Sole	0.79	0.00036	0.99975
Redstripe Rockfish	0.41	0.00014	0.99989
Northern Rockfish	0.30	0.00010	0.99999
Skate Egg Case unidentified	0.01	0.00000	1.00000

TABLE C-4. WALLEYE POLLOCK, APRIL-DECEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C 7X	PULSE RATES 7Z	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	77 7 13	54 02	162 46	182 51	3 54	92	0 5	12100	24 20
ROK	78 10 16	53 25	166 15	178 35	4 82	79	3 8	50884	13 39
ROK	78 10 18	53 25	166 14	178 37	4 82	94	2 6	27496	11 50
ROK	78 10 17	53 28	166 04	178 64	4 82	117	3 3	40836	11 34
ROK	78 10 1	53 28	166 04	178 69	4 82	91	3 0	53305	11 36
ROK	78 7 5	53 28	166 03	178 71	4 82	92	3 8	47964	10 80
ROK	78 9 26	53 28	166 03	178 66	4 82	103	5 6	58034	8 56
ROK	78 9 27	53 28	166 03	178 67	4 82	108	6 5	54011	8 41
ROK	78 10 17	53 28	166 03	178 71	4 82	92	6 2	54011	8 81
ROK	78 10 28	53 28	166 03	178 72	4 82	92	6 6	48891	7 33
ROK	78 9 26	53 27	166 03	178 72	4 82	109	5 4	39984	7 24
USSR	77 9 18	53 27	166 17	178 66	4 82	109	3 3	28549	6 59
JAPAN	77 5 14	53 27	162 53	182 45	3 70	103	3 3	17279	5 56
USSR	77 9 11	53 27	166 04	178 66	4 82	120	2 5	13917	5 52
ROK	78 10 14	53 22	166 20	178 15	3 70	83	7 2	35922	5 38
ROK	78 10 27	53 22	166 20	178 16	4 82	92	3 5	38042	5 02
USSR	77 9 18	53 26	166 04	178 53	4 82	120	3 2	17855	5 02
ROK	78 10 18	53 22	166 18	178 74	4 82	95	5 8	46782	4 91
ROK	78 10 12	53 22	166 20	178 59	4 82	92	5 6	42336	3 59
USSR	77 9 12	53 22	166 17	178 16	4 82	114	2 5	69020	3 45
USSR	77 9 11	53 22	166 05	178 16	4 82	112	3 3	16610	3 31
ROK	78 10 11	53 22	166 02	178 62	4 82	136	3 5	11608	3 23
JAPAN	78 11 23	53 22	166 12	178 50	4 82	144	1 6	16270	2 33
ROK	78 10 15	53 22	166 12	178 50	4 82	182	6 8	14864	2 21
ROK	78 10 16	53 22	166 12	178 52	4 82	190	6 6	13382	2 21
JAPAN	78 5 15	53 22	162 44	178 72	4 82	160	1 7	12943	1 56
ROK	78 10 18	53 22	166 02	178 72	4 82	190	1 7	10943	1 11

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 5 14	5402	16251	7X 18247.4	142	1.0	1381	1.38
ROK	78 7 11	5329	16603	34365.6	131	4.5	5884	1.30
ROK	78 10 16	5321	16620	34818.2	138	6.2	7749	1.24
JAPAN	78 5 29	5405	16243	34855.0	128	2.0	2441	1.22
JAPAN	78 10 17	5328	16604	34340.9	133	4.5	5101	1.13
JAPAN	77 6 17	5402	16251	34821.6	142	1.2	1270	1.05
JAPAN	78 5 29	5405	16250	34365.6	131	2.1	1930	0.94
JAPAN	78 5 27	5404	16252	34356.5	131	2.5	1980	0.94
ROK	78 10 20	5324	16613	34840.4	120	0.9	871	0.90
JAPAN	78 5 15	5401	16246	34354.3	136	1.0	815	0.90
JAPAN	78 5 15	5401	16246	34356.5	136	1.0	544	0.54

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

TABLE C-5. PACIFIC COD, JULY-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	781010	5327	16604	17864.6 34821.8 48197.2	117	3.6	5292	1.47
ROK	78 926	5327	16603	17866.4 34820.0 48192.1	103	6.8	9948	1.44
ROK	781017	5328	16608	17862.2 34828.2 48219.2	101	5.0	3748	0.78
ROK	781018	5325	16614	17837.1 34841.4 48243.1	94	2.4	3807	0.68
ROK	781012	5323	16620	17816.4 34853.6 48268.6	112	5.6	1651	0.66
ROK	78 7 5	5328	16613	17871.1 34819.2 48240.1	92	3.5	3749	0.63
ROK	78 927	5326	16613	17843.7 34838.8 48240.1	92	6.6	2196	0.62
ROK	781017	5328	16603	17871.1 34819.2 48194.1	92	3.5	3814	0.57
ROK	781014	5322	16620	17811.6 34854.2 48266.5	92	7.2	3656	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

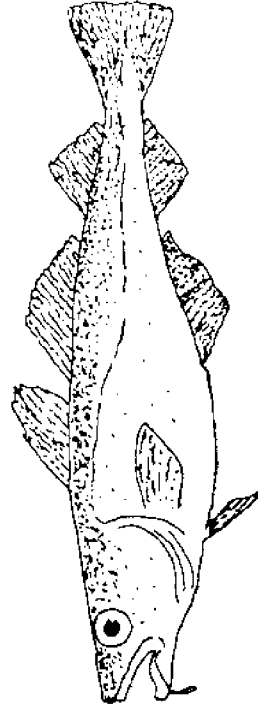


TABLE C-6. FLOUNDERS, APRIL-DECEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	781011	53225	16620	7811.6 7X	79	3.8	4721	1.24
ROK	781016	53225	16615	17835.3 7Y	95	2.6	3215	1.23
JAPAN	78 514	54027	16251	18247.4	142	1.0	970	0.97
ROK	78 711	53227	16603	17866.4	83	6.7	6290	0.93
ROK	781014	53222	16620	34854.2	92	7.2	6549	0.90
ROK	78 930	53228	16601	34854.2	90	9.5	7065	0.74
USSR	78 919	53228	16617	34815.5	114	2.0	1295	0.64
ROK	781018	53225	16614	34850.6	94	2.4	1510	0.62
ROK	781017	53228	16603	34841.7	92	6.6	3707	0.56
ROK	781012	53238	16623	34819.2	112	5.6	3153	0.56
USSR	78 919	53228	16606	34819.2	120	2.5	1338	0.53
ROK	781017	53228	16608	34828.2	195	5.0	2665	0.53

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

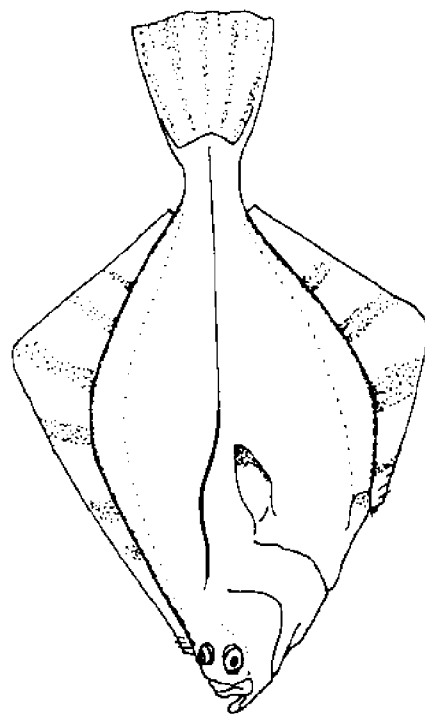
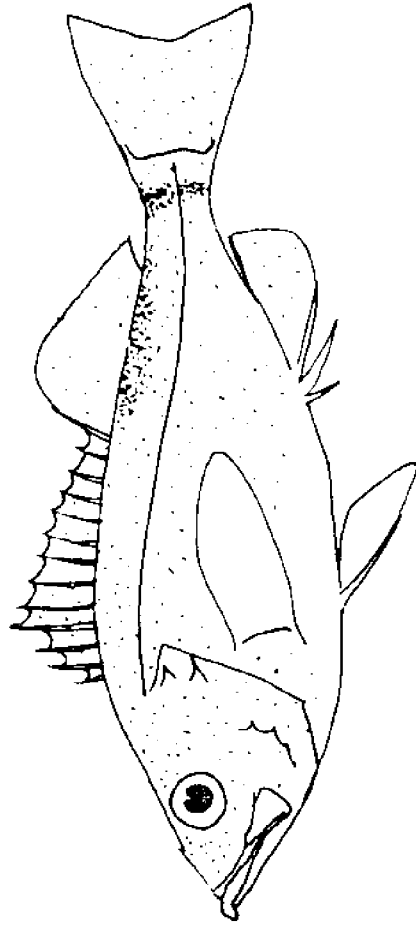


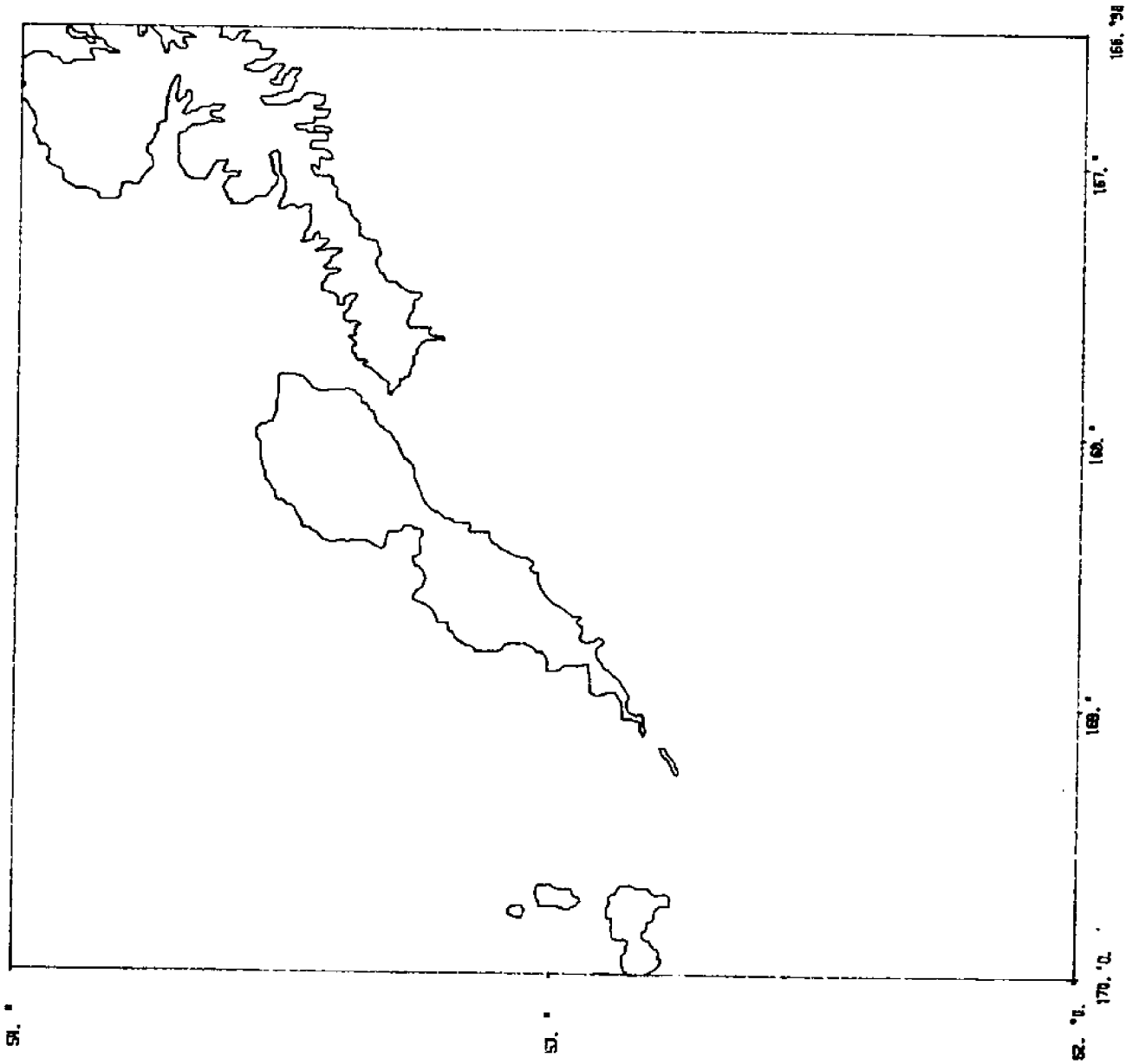
TABLE C-7. PACIFIC OCEAN PERCH, APRIL-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
*****	*****	***	****	***** 7Z	*****	*****	****	*****
*****	*****	***	****	***** 7Y	*****	*****	****	*****
*****	*****	***	****	***** 7X	*****	*****	****	*****
ROK	78 927	5327	16602	17868.2	34818.2	48187.1	98	2.15
ROK	78 926	5327	16603	17866.4	34820.8	48192.1	101	2.00
ROK	78 1010	5327	16604	17864.6	34821.8	48197.2	117	2.52
JAPAN	78 514	5402	16251	18247.4	34365.6	47182.6	142	1.04
ROK	78 926	5327	16603	17866.4	34820.0	48192.1	103	0.93
ROK	78 930	5327	16612	17850.3	34836.2	48237.2	182	0.93
JAPAN	78 515	5402	16254	18242.9	34372.3	47200.0	82	0.88
ROK	78 928	5328	16602	17872.9	34817.3	48189.0	92	0.65
ROK	78 927	5326	16613	17843.7	34838.8	48240.1	92	0.55
JAPAN	78 529	5405	16243	18264.0	34340.9	47137.2	128	0.53

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***



APPENDIX D
UNALASKA ISLAND REGION



APPENDIX D

Productive Foreign Fishing Locations in the Unalaska
Island Region

<u>Table</u>		<u>Page</u>
D-1.	Summary of overall catch composition and average catch rates observed in the Unalaska Island region during April-June, 1978.....	153
D-2.	Summary of overall catch composition and average catch rates observed in the Unalaska Island region during July-September, 1978.....	154
D-3.	Summary of overall catch composition and average catch rates observed in the Unalaska Island region during October-December, 1978.....	155
D-4.	Walleye Pollock, April-June, 1977-78.....	156
D-5.	Walleye Pollock, July-September, 1977-78.....	158
D-6.	Walleye Pollock, October-December, 1978.....	161
D-7.	Walleye Pollock, April-December, 1977-78.....	162
D-8.	Flounders, July-December, 1977-78.....	163
D-9.	Pacific Ocean Perch, April-September, 1977-78.....	164

Table D-1

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE UNALASKA ISLAND REGION DURING
APRIL-JUNE, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Pacific Ocean Perch	621.09	0.46310	0.46310
Walleye Pollock	612.24	0.45650	0.91960
Pacific Cod	51.06	0.03807	0.95768
Arrowtooth Flounder	16.82	0.01254	0.97022
Atka Mackerel	8.97	0.00669	0.97692
Shortraker Rockfish	7.22	0.00538	0.98230
Northern Rockfish	4.94	0.00368	0.98599
Shorthorn Sculpin	3.37	0.00251	0.98851
Prowfish	2.62	0.00195	0.99046
Sculpin unidentified	2.05	0.00153	0.99200
Bigmouth Sculpin	2.00	0.00149	0.99349
Shortspine Thornyhead	1.58	0.00118	0.99467
Rock Sole	1.47	0.00109	0.99577
Rougheye Rockfish	1.15	0.00086	0.99663
Blackfin Sculpin	0.96	0.00071	0.99735
<i>Sebastes variegatus</i>	0.94	0.00070	0.99806
Sablefish	0.60	0.00045	0.99851
Brown Irish Lord	0.51	0.00038	0.99890
Pacific Halibut	0.44	0.00033	0.99923
Ribbed Sculpin	0.32	0.00024	0.99947
Rex Sole	0.27	0.00020	0.99968
Dover Sole	0.20	0.00015	0.99983
Darkblotched Rockfish	0.12	0.00009	0.99992
Red Irish Lord	0.08	0.00006	0.99999
Other Species	---	0.00000	1.00000

Table D-2

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE UNALASKA ISLAND REGION DURING
JULY-SEPTEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	3170.19	0.92210	0.92210
Pacific Cod	71.48	0.02079	0.94289
Pacific Ocean Perch	64.49	0.01875	0.96165
Arrowtooth Flounder	45.61	0.01326	0.97492
Sculpin unidentified	34.41	0.01001	0.98493
Rock Sole	30.09	0.00875	0.99368
Pacific Halibut	7.86	0.00228	0.99597
Northern Rockfish	3.43	0.00100	0.99697
Skate unidentified	3.27	0.00095	0.99792
Rex Sole	3.06	0.00089	0.99881
Sablefish	1.14	0.00033	0.99914
Flathead Sole	0.88	0.00025	0.99940
Eelpout unidentified	0.83	0.00024	0.99964
Spiny Dogfish	0.50	0.00014	0.99979
Shortraker Rockfish	0.45	0.00013	0.99992
Atka Mackerel	0.10	0.00003	0.99995
Skate Egg Case unidentified	0.07	0.00002	0.99997
Poacher unidentified	0.07	0.00002	1.00000

Table D-3

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE UNALASKA ISLAND REGION DURING
OCTOBER-DECEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	2035.11	0.8419	0.84191
Pacific Cod	121.40	0.05022	0.89213
Arrowtooth Flounder	99.97	0.04136	0.93349
Pacific Halibut	59.75	0.02472	0.95821
Sablefish	30.82	0.01275	0.97096
Pacific Ocean Perch	23.98	0.00992	0.98089
Sculpin unidentified	19.46	0.00805	0.98894
Rock Sole	12.44	0.00514	0.99408
Flathead Sole	5.48	0.00226	0.99635
Butter Sole	3.18	0.00131	0.99767
Shark unidentified	2.21	0.00091	0.99859
Chinook Salmon	1.55	0.00064	0.99923
Atka Mackerel	0.82	0.00034	0.99957
Rex Sole	0.62	0.00025	0.99983
Northern Rockfish	0.38	0.00016	0.99999
Skate Egg Case unidentified	0.01	0.00000	1.00000

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C 7X	PULSE RATES 7Y	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	77 6 7	5257	16750	17484.9	35000.4	66	1.6	1103	0.688
JAPAN	78 5 11	5230	16951	16970.0	49006.8	125	0.6	413	0.687
JAPAN	77 6 19	5259	16745	17508.1	48604.3	171	1.6	1078	0.667
JAPAN	78 4 30	5303	16718	17594.8	48496.3	109	1.5	1018	0.665
JAPAN	78 5 4	5232	16935	17036.6	48958.0	134	0.7	983	0.654
JAPAN	78 5 2	5236	16802	17105.0	48920.7	118	1.6	448	0.623
JAPAN	78 5 13	5259	16802	17463.6	48676.8	65	1.6	995	0.623
JAPAN	78 5 12	5238	16913	17141.9	48896.8	82	2.6	1385	0.51
JAPAN	77 5 27	5257	16748	17490.1	48612.5	79	0.5	1258	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	780728	531128	166741	7202.6	109	5.9	47627	87.07
ROK	780728	531128	166741	7202.6	109	8.9	71071	77.95
USSR	770917	531128	166733	7202.6	92	5.7	71854	66.93
ROK	770831	531128	166740	7202.6	101	6.1	10615	66.32
ROK	780725	531128	166650	7202.6	114	7.2	32268	66.31
ROK	780922	531128	166644	7202.6	109	6.9	52013	66.28
ROK	780727	531128	166533	7202.6	106	5.3	35330	66.09
USSR	780822	531128	167033	7202.6	103	7.1	41981	55.82
ROK	780924	531128	167031	7202.6	117	7.8	40317	55.82
USSR	780924	531128	166547	7202.6	78	8.2	45235	55.51
ROK	780724	531128	167033	7202.6	114	8.7	17947	55.47
ROK	780724	531128	167033	7202.6	114	8.7	28496	55.47
USSR	770921	531128	167033	7202.6	125	5.3	29092	55.35
USSR	770821	531128	167033	7202.6	125	3.7	20820	55.34
USSR	770914	531128	167033	7202.6	125	3.9	20247	55.14
USSR	770919	531128	167033	7202.6	125	5.9	43683	55.00
ROK	780727	531128	167033	7202.6	125	8.3	32516	55.00
ROK	780727	531128	167033	7202.6	125	6.4	32516	55.00
USSR	770831	531128	167033	7202.6	108	5.5	21444	47.40
USSR	770831	531128	167033	7202.6	108	5.5	21444	47.40
ROK	780727	531128	167033	7202.6	123	3.5	40560	44.32
ROK	780727	531128	167033	7202.6	123	3.5	40560	44.32
USSR	780822	531128	167033	7202.6	123	5.5	14779	44.22
USSR	780822	531128	167033	7202.6	123	5.5	14779	44.22
ROK	780922	531128	167033	7202.6	123	5.5	14540	44.15
USSR	780922	531128	167033	7202.6	123	5.5	14540	44.15
ROK	780922	531128	167033	7202.6	123	5.5	19878	43.93
USSR	780922	531128	167033	7202.6	123	5.5	19878	43.93
ROK	780922	531128	167033	7202.6	123	5.5	29576	43.76
USSR	780922	531128	167033	7202.6	123	5.5	29576	43.76
ROK	780922	531128	167033	7202.6	123	5.5	30542	43.67
USSR	780922	531128	167033	7202.6	123	5.5	30542	43.67

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	78 7 10	5304	16715	7X 17606.2	7Z 8485.2	101	4.0	16487	3.66
USSR	77 9 22	5312	16645	17560.6	34951.5	102	10.0	34939	3.49
USSR	77 9 25	5300	16726	17560.6	34968.4	125	12.5	6893	3.44
ROK	78 9 21	5303	16715	17607.9	34951.5	1	4.5	15443	3.43
ROK	78 9 24	5259	16741	17577.3	34963.5	73	7.3	30535	3.20
USSR	78 9 17	5317	16739	17518.4	34985.9	82	8.2	24962	3.18
ROK	78 9 27	5301	16630	17568.1	34969.8	142	14.2	37264	3.05
ROK	78 9 27	5321	16623	17799.3	34874.8	120	12.0	19314	3.22
USSR	78 9 29	5321	16624	17799.3	34860.8	101	10.1	6900	2.75
USSR	77 9 32	5318	16622	17789.6	34860.8	136	13.6	3603	1.96
USSR	77 9 9	5302	16718	17589.8	34956.6	1	1.0	227	0.00
00000		5302	16718	16566.6	29000.9	109	10.9	2275	0.00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

TABLE D-6. WALLEYE POLLOCK, OCTOBER-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	781011	53258	16620	17811.6 7X	79	3.8	508	13.39
ROK	781013	52558	16735	17528.3	114	6.2	434	7.00
ROK	781021	52558	16735	17528.3	101	5.2	313	5.28
ROK	781014	53222	16622	17811.6	192	7.2	380	5.26
ROK	781013	53112	16652	17698.3	103	9.3	487	5.24
ROK	781010	53119	16725	17787.6	95	4.1	189	4.08
ROK	781019	52559	16732	17540.8	106	9.1	289	3.17
ROK	781021	53332	16620	17689.7	192	6.5	333	5.09
ROK	781012	53220	16620	17859.4	192	5.6	286	5.02
ROK	781015	53201	16621	17816.4	198	6.5	186	2.86
ROK	781019	53111	16655	17800.9	106	7.5	169	2.26
ROK	781014	53011	16726	17565.6	101	5.6	134	2.39
ROK	781016	53211	16620	17806.8	98	6.2	77	1.24

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

TABLE D-7. PACIFIC COD, APRIL-DECEMBER, 1977-78

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	77 9 3	53 0 4	167 12	7X 176 13.9	125	0.9	2637	2.93
USSR	77 8 24	53 0 6	167 12	7X 176 22.6	198	1.6	3703	2.61
USSR	77 8 23	53 0 1	166 57	7X 176 82.6	112	1.6	3863	2.61
USSR	77 9 4	53 0 8	167 04	7X 176 42.1	114	2.1	5000	2.38
USSR	77 8 24	53 0 8	167 05	7X 176 49.9	198	1.5	3649	2.29
USSR	77 8 23	53 0 8	167 05	7X 176 42.3	69	0.5	1054	2.10
JAPAN	78 4 23	52 3 4	169 17	7Y 171 07.8	153	0.5	1050	2.00
USSR	77 8 25	53 0 8	167 09	7Y 176 35.9	192	2.0	2409	2.02
USSR	77 8 23	53 0 8	167 05	7Y 176 35.9	103	1.6	3850	1.62
USSR	77 8 26	53 0 7	167 10	7Y 174 84.6	109	1.6	2607	1.62
JAPAN	77 6 27	52 5 7	167 50	7Z 174 80.2	66	1.5	2164	1.44
USSR	77 8 27	53 0 5	167 20	7Z 176 00.5	87	1.5	2163	1.43
JAPAN	77 5 17	52 5 6	167 52	7Z 174 74.6	76	1.5	2687	1.36
USSR	77 8 31	53 0 7	167 19	7Z 176 33.4	98	1.0	4497	0.99
USSR	77 9 4	53 0 1	167 19	7Z 175 82.5	120	2.6	4129	0.81
ROK	78 8 30	53 1 2	166 51	7Z 177 00.5	102	2.7	5816	0.77
USSR	77 8 17	52 5 8	167 33	7Z 175 38.8	102	1.7	1191	0.70
USSR	77 8 29	53 0 1	167 18	7Z 175 84.4	98	1.8	1276	0.70
ROK	78 10 12	52 3 3	166 20	7Z 178 16.4	112	1.6	1749	0.66
USSR	77 8 31	52 5 8	167 33	7Z 175 33.2	101	1.6	3963	0.60
USSR	77 8 31	53 0 3	167 15	7Z 176 01.3	123	1.4	2981	0.56
ROK	78 8 31	53 0 2	166 42	7Z 177 24.3	114	1.5	4615	0.54
ROK	78 7 23	53 0 2	166 20	7Z 176 11.6	92	1.8	4615	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

TABLE D-8. FLOWERS, JULY-DECEMBER, 1977-78

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
ROK	781011	5322	16620	17811.6	48266.5	79	3.8	4721	1.24
ROK	781015	5320	16624	17794.3	48282.0	109	5.2	6415	1.24
ROK	781014	5322	16620	17811.6	48266.5	92	7.3	6549	0.90
ROK	781015	5320	16621	17800.1	48267.3	98	6.3	5714	0.87
USSR	770825	5304	16712	17590.9	48505.3	125	2.9	1331	0.65
ROK	770932	5303	16712	17613.4	48471.6	112	0.6	3153	0.55
ROK	781012	5258	16737	17816.3	48267.8	103	5.3	4144	0.77
ROK	781016	5319	16625	17523.3	48567.7	98	4.3	2387	0.55
ROK	781016	5312	16650	17702.6	48388.9	109	5.9	3036	0.51

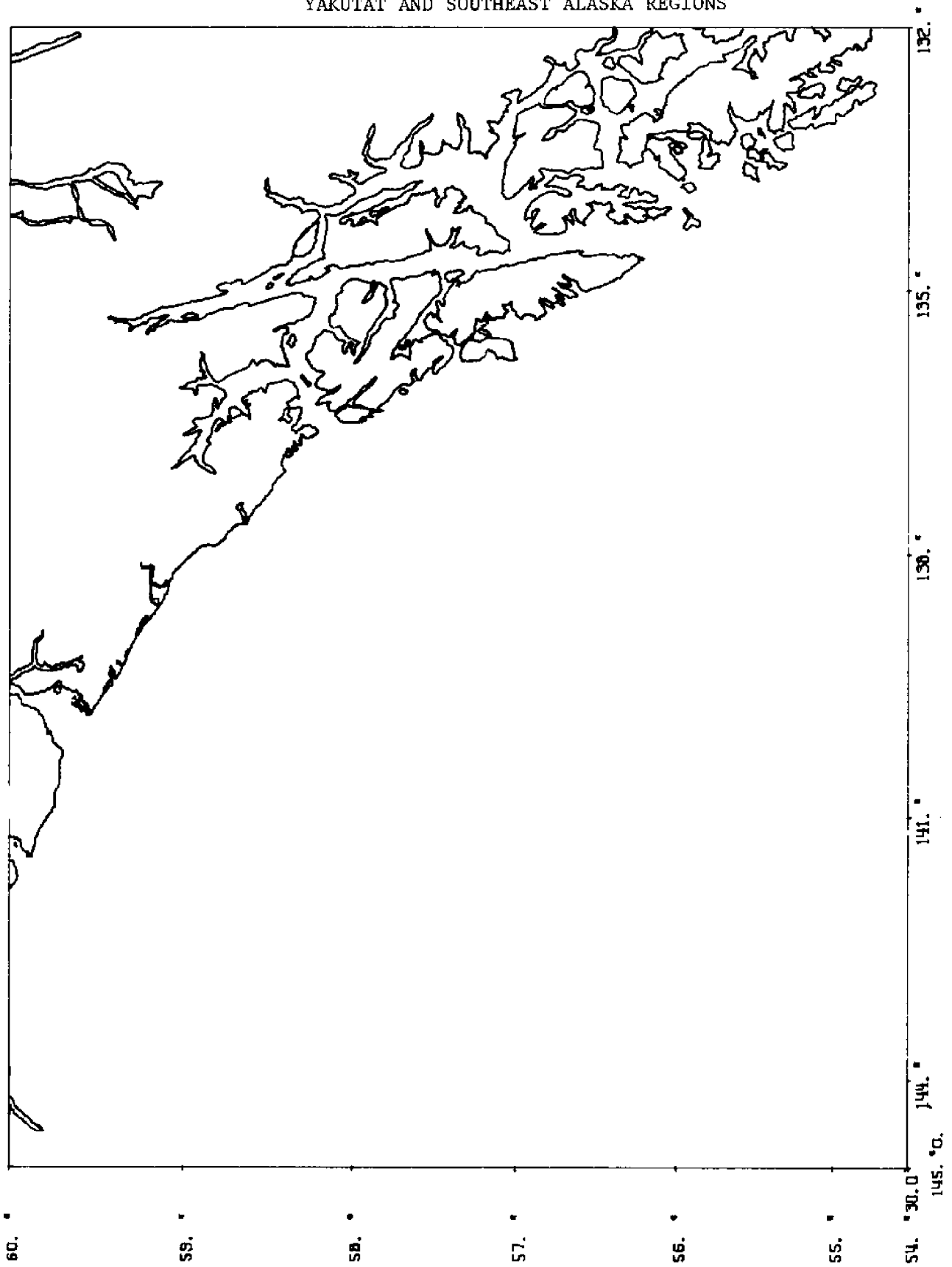
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
*****	*****	***	*****	***** 7X	***** 7Z	*****	*****	*****	*****
JAPAN	78 5 4	5233	16933	17048.7	35099.8	48953.8	128	1.0	518
									0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

APPENDIX E

YAKUTAT AND SOUTHEAST ALASKA REGIONS



APPENDIX E

Productive Foreign Fishing Locations in the Yakutat
and Southeast Alaska Regions

<u>Table</u>		<u>Page</u>
E-1.	Summary of overall catch composition and average catch rates observed in the Yakutat and Southeast Alaska region during January-March, 1978.....	169
E-2.	Summary of overall catch composition and average catch rates observed in the Yakutat and Southeast Alaska region during April-June, 1978.....	170
E-3.	Summary of overall catch composition and average catch rates observed in the Yakutat and Southeast Alaska region during July-September, 1978.....	171
E-4.	Summary of overall catch composition and average catch rates observed in the Yakutat and Southeast Alaska region during October-December, 1978.....	172
E-5.	Walleye Pollock, January-December	173
E-6.	Pacific Cod, January-December.....	176
E-7.	Flounders, January-March, 1977-78.....	177
E-8.	Flounders, April-June, 1977-78.....	178
E-9.	Flounders, July-September, 1977-78.....	181
E-10.	Flounders, October-December, 1977-78.....	182
E-11.	Rockfish, January-March, 1977-78.....	183
E-12.	Rockfish, April-June, 1977-78.....	184
E-13.	Rockfish, July-September, 1977-78.....	189
E-14.	Rockfish, October-December, 1977-78.....	193
 <u>Figure</u>		
E-1.	Walleye Pollock, all months, 1977-78.....	175
E-2.	Flounders, April-June, 1977-78.....	180
E-3.	Rockfish, April-June, 1977-78.....	188
E-4.	Rockfish, July-September, 1977-78.....	192

Table E-1

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE YAKUTAT AND SOUTHEAST ALASKA REGION DURING
JANUARY-MARCH, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Pacific Ocean Perch	404.78	0.33918	0.33918
Arrowtooth Flounder	401.95	0.33680	0.67599
Flathead Sole	131.83	0.11046	0.78646
Shortspine Thornyhead	59.41	0.04978	0.83624
Dusky Rockfish	48.75	0.04085	0.87709
Shortraker Rockfish	47.72	0.03998	0.91708
Walleye Pollock	33.41	0.02800	0.94508
Rougheye Rockfish	26.02	0.02180	0.96689
Skate unidentified	14.01	0.01174	0.97863
Rex Sole	8.82	0.00739	0.98603
Brown Irish Lord	3.66	0.00306	0.98909
Spiny Dogfish	3.42	0.00286	0.99196
Pacific Cod	2.26	0.00189	0.99386
Sablefish	1.89	0.00158	0.99545
Dover Sole	1.58	0.00133	0.99678
Eulachon	1.44	0.00121	0.99799
Sculpin unidentified	0.90	0.00075	0.99875
Blackfin Sculpin	0.55	0.00046	0.99921
Pectoral Rattail	0.44	0.00036	0.99958
Lingcod	0.28	0.00023	0.99981
Redbanded Rockfish	0.12	0.00010	0.99992
Eelpout unidentified	0.06	0.00005	0.99997
Poacher unidentified	0.02	0.00002	1.00000

Table E-2

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE YAKUTAT AND SOUTHEAST ALASKA REGION DURING
APRIL-JUNE, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Pacific Ocean Perch	1817.55	0.70252	0.70252
Arrowtooth Flounder	441.99	0.17084	0.87336
Walleye Pollock	100.77	0.03895	0.91231
Shortraker Rockfish	43.17	0.01668	0.92900
Rex Sole	34.58	0.01336	0.94237
Shortspine Thornyhead	27.56	0.01065	0.95302
Sablefish	25.64	0.00991	0.96293
Darkblotched Rockfish	20.88	0.00807	0.97100
Rougheye Rockfish	11.91	0.00460	0.97561
Dover Sole	10.38	0.00401	0.97962
Pacific Cod	9.16	0.00354	0.98316
Redstripe Rockfish	4.99	0.00193	0.98509
Redbanded Rockfish	4.49	0.00173	0.98683
Silvergray Rockfish	4.13	0.00159	0.98843
Bigmouth Sculpin	3.95	0.00152	0.98996
Rosethorn Rockfish	3.61	0.00139	0.99135
Bocaccio	2.91	0.00112	0.99248
Skate unidentified	1.81	0.00070	0.99318
Spiny Dogfish	1.75	0.00067	0.99386
Flathead Sole	1.70	0.00066	0.99452
Sharpchin Rockfish	1.38	0.00053	0.99505
Brown Irish Lord	1.33	0.00051	0.99557
Ratfish	1.14	0.00044	0.99601
Starry Skate	1.04	0.00040	0.99642
Widow Rockfish	0.87	0.00033	0.99676
Lingcod	0.81	0.00031	0.99707
Pectoral Rattail	0.76	0.00029	0.99737
Blackfin Sculpin	0.65	0.00025	0.99762
Sculpin unidentified	0.64	0.00024	0.99787
Pacific Halibut	0.56	0.00021	0.99809
Splitnose Rockfish	0.48	0.00018	0.99828
Yellowtail Rockfish	0.44	0.00017	0.99845
English Sole	0.43	0.00016	0.99862
Prowfish	0.40	0.00015	0.99877
<i>Sebastes variegatus</i>	0.37	0.00014	0.99892
Other Species	---	0.00107	1.00000

Table E-3

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE YAKUTAT AND SOUTHEAST ALASKA REGION DURING
JULY-SEPTEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Pacific Ocean Perch	356.83	0.48487	0.48487
Arrowtooth Flounder	150.81	0.20493	0.68981
Walleye Pollock	90.73	0.12329	0.81310
Rougheye Rockfish	25.05	0.03404	0.84714
Sablefish	20.81	0.02828	0.87543
Shortraker Rockfish	15.27	0.02074	0.89618
Shortspine Thornyhead	13.01	0.01769	0.91387
Dusky Rockfish	10.06	0.01367	0.92754
Sculpin unidentified	9.38	0.01274	0.94029
Pacific Cod	8.42	0.01145	0.95174
Bigmouth Sculpin	5.74	0.00779	0.95954
<i>Sebastes variegatus</i>	4.42	0.00601	0.96556
Pectoral Rattail	4.39	0.00597	0.97154
Yelloweye Rockfish	3.32	0.00452	0.97606
Dover Sole	3.27	0.00444	0.98050
Sharpchin Rockfish	2.04	0.00414	0.98465
Rex Sole	2.13	0.00290	0.98755
Darkblotched Rockfish	1.23	0.00168	0.98923
Northern Rockfish	1.05	0.00143	0.99067
Silvergray Rockfish	1.01	0.00138	0.99205
Big Skate	1.00	0.00136	0.99342
Blackfin Sculpin	0.98	0.00134	0.99476
Prowfish	0.96	0.00130	0.99607
Redbanded Rockfish	0.69	0.00093	0.99701
Rattail unidentified	0.34	0.00046	0.99747
Widow Rockfish	0.31	0.00042	0.99790
Flathead Sole	0.31	0.00042	0.99833
Canary Rockfish	0.20	0.00027	0.99861
Redstripe Rockfish	0.18	0.00024	0.99885
Atka Mackerel	0.16	0.00022	0.99908
Blue Rockfish	0.12	0.00017	0.99925
Rock Sole	0.09	0.00013	0.99938
Eelpout unidentified	0.08	0.00012	0.99950
Skate unidentified	0.07	0.00010	0.99961
Lingcod	0.07	0.00010	0.99971
Other Species	---	0.00028	1.00000

Table E-4

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE YAKUTAT AND SOUTHEAST ALASKA REGION DURING
OCTOBER-DECEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Pacific Ocean Perch	2624.67	0.50022	0.50022
Arrowtooth Flounder	868.41	0.16413	0.66435
Walleye Pollock	702.29	0.13273	0.79708
Sharpchin Rockfish	637.37	0.12046	0.91755
Shortspine Thornyhead	111.47	0.02106	0.93862
Sablefish	52.07	0.00984	0.94846
Redbanded Rockfish	42.27	0.00799	0.95645
Prowfish	37.35	0.00706	0.96351
Shortraker Rockfish	36.32	0.00686	0.97038
<i>Sebastes variegatus</i>	32.54	0.00615	0.97653
Pacific Cod	26.37	0.00498	0.98151
Rougheye Rockfish	25.16	0.00475	0.98627
Sculpin unidentified	18.62	0.00352	0.98979
Redstripe Rockfish	13.03	0.00246	0.99225
Yellowmouth Rockfish	11.96	0.00226	0.99451
Dover Sole	9.46	0.00178	0.99630
Rex Sole	7.86	0.00148	0.99779
Rosethorn Rockfish	2.96	0.00056	0.99835
Silvergray Rockfish	2.58	0.00048	0.99884
Dusky Rockfish	2.37	0.00044	0.99929
Spiny Dogfish	1.09	0.00020	0.99949
Lingcod	0.82	0.00015	0.99965
Yelloweye Rockfish	0.73	0.00013	0.99979
Skate unidentified	0.68	0.00012	0.99992
Canary Rockfish	0.25	0.00004	0.99996
Searcher	0.16	0.00003	1.00000

TABLE E-5. WALLEYE POLLOCK, JANUARY-DECEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781027	5839	14030	680.2	147	1.0	5354	5.35
JAPAN	781027	5842	14035	680.2	123	2.5	9432	3.77
JAPAN	781016	5930	14336	680.2	174	0.8	1740	2.18
JAPAN	781012	5930	14336	680.2	180	1.5	2796	1.86
JAPAN	781019	5937	14440	680.2	164	2.5	7240	2.89
JAPAN	781029	5902	14107	680.2	164	1.5	4235	2.82
JAPAN	781016	5841	14037	680.2	150	0.8	1292	1.62
JAPAN	781030	5935	14228	680.2	150	1.1	1979	1.79
JAPAN	771017	5817	14153	680.2	138	1.6	2617	1.64
JAPAN	771029	5751	13713	680.2	138	1.6	3355	2.10
JAPAN	781027	5834	14044	680.2	131	0.5	3300	2.20
JAPAN	781027	5844	14044	680.2	131	0.5	1082	2.16
JAPAN	781020	5841	14036	680.2	131	0.2	4820	2.41
JAPAN	781020	5938	14357	680.2	174	0.2	4820	2.41
JAPAN	781015	5934	14339	680.2	198	0.8	1424	1.78
JAPAN	781018	5842	14050	680.2	158	0.8	1399	1.74
JAPAN	781020	5801	13826	680.2	163	0.7	2049	1.70
JAPAN	771024	5942	14240	680.2	196	1.2	1184	1.67
JAPAN	781028	5937	14302	680.2	164	2.5	3571	1.43
JAPAN	781028	5833	14012	680.2	131	1.5	5686	3.79
JAPAN	771014	5455	13416	680.2	147	1.5	2294	1.53
JAPAN	781026	5937	14301	680.2	131	3.8	3244	1.41
JAPAN	781022	5839	14030	680.2	161	3.0	5295	1.76
JAPAN	781022	5935	14300	680.2	131	4.0	5227	1.31
JAPAN	771018	5842	14013	680.2	109	0.9	1161	1.29
JAPAN	771018	5839	14013	680.2	131	2.0	3274	1.64
JAPAN	771027	5936	14300	680.2	158	1.9	1085	1.20
JAPAN	771027	5935	14326	680.2	120	0.3	2217	1.14
JAPAN	781019	5840	14014	680.2	120	2.0	2636	1.32

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780728	355840	142227	0.9	174	2.8	31427	1.12
JAPAN	780810	355840	142227	0.9	164	3.1	34270	1.106
JAPAN	780810	355840	142227	0.9	131	1.0	1060	1.106
JAPAN	780810	355840	142227	0.9	174	4.0	4506	1.101
JAPAN	780810	355840	142227	0.9	131	0.7	1697	1.098
JAPAN	780810	355840	142227	0.9	167	0.5	4328	0.963
JAPAN	780810	355840	142227	0.9	158	6.5	22167	0.938
JAPAN	780810	355840	142227	0.9	158	4.8	4654	0.866
JAPAN	780810	355840	142227	0.9	158	2.0	2439	0.866
JAPAN	780810	355840	142227	0.9	135	6.6	5966	0.866
JAPAN	780810	355840	142227	0.9	142	1.3	485	0.820
JAPAN	780810	355840	142227	0.9	152	3.3	26159	0.788
JAPAN	780810	355840	142227	0.9	142	5.0	10159	0.788
JAPAN	780810	355840	142227	0.9	134	1.0	168	0.687
JAPAN	780810	355840	142227	0.9	164	6.6	4083	0.687
JAPAN	780810	355840	142227	0.9	180	0.0	2642	0.665
JAPAN	780810	355840	142227	0.9	165	3.3	9502	0.665
JAPAN	780810	355840	142227	0.9	129	1.8	1089	0.658
JAPAN	780810	355840	142227	0.9	164	2.0	1167	0.598
JAPAN	780810	355840	142227	0.9	133	3.3	1795	0.565
JAPAN	780810	355840	142227	0.9	131	2.2	1661	0.555
JAPAN	780810	355840	142227	0.9	130	1.8	1569	0.555
JAPAN	780810	355840	142227	0.9	142	2.6	1893	0.551
JAPAN	780810	355840	142227	0.9	172	6.6	1832	0.550
JAPAN	780810	355840	142227	0.9	164	2.6	130	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

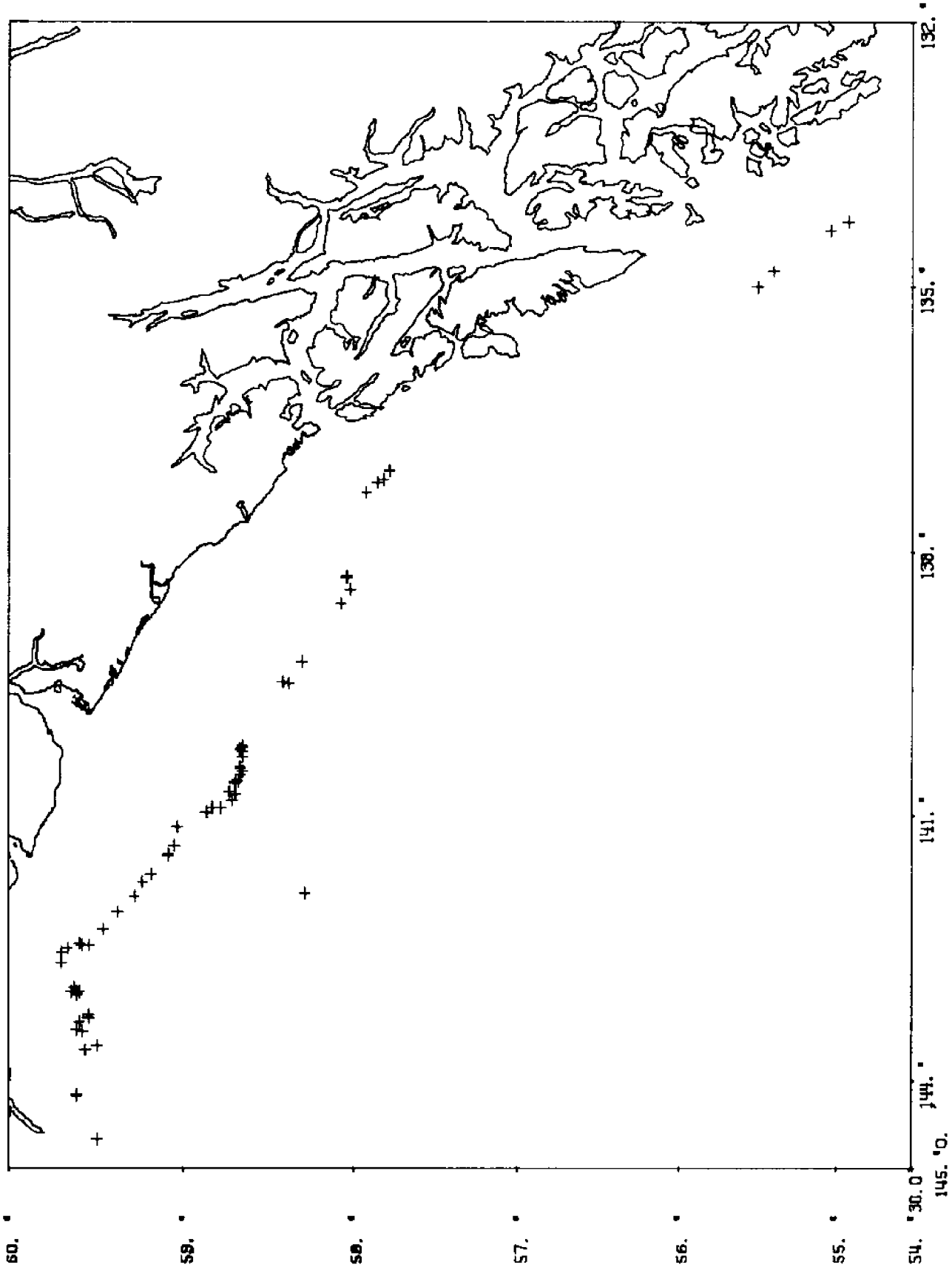


FIGURE E-1. WALLEYE POLLOCK, ALL MONTHS, 1977-78

TABLE E-6. PACIFIC COD, JANUARY-DECEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	77 6 28	5930	14440	6X 14026.0	103	0.3	387	1.29
JAPAN	78 10 25	5839	14030	14395.0	131	0.6	477	0.79
JAPAN	77 2 17	5749	13711	14538.1	147	2.0	1423	0.71
JAPAN	78 5 2	5930	14440	14026.0	180	1.5	831	0.55
JAPAN	78 5 4	5750	13715	14535.5	120	1.4	711	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

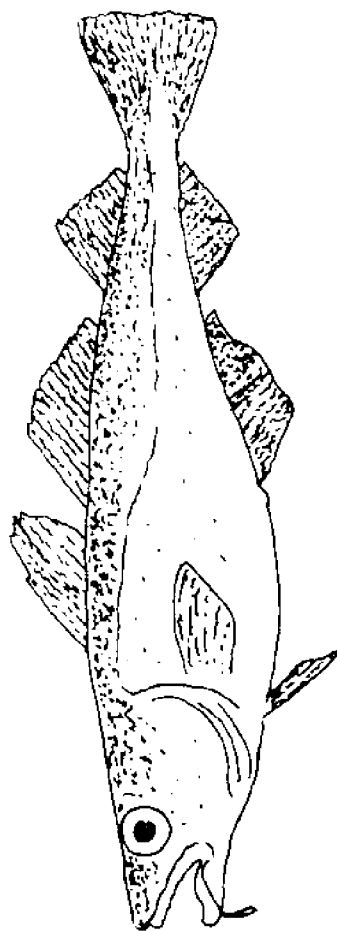


TABLE E-7. FLOUNDERS, JANUARY-MARCH, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78	57519	13719	14533	611.09	103	2	186	8.72
JAPAN	77	5819	13926	14543	50.5	161	6	435	2.67
JAPAN	78	57548	13722	14424	72.3	153	0	689	2.07
JAPAN	77	5818	14115	14542	0.2	185	8	149	2.06
JAPAN	78	5916	14250	14512	0.1	202	1	380	1.87
JAPAN	78	5939	14271	14461	0.7	147	0	274	1.37
JAPAN	77	5940	14234	14538	0.0	202	0	374	1.31
JAPAN	78	5748	13705	14544	0.2	133	6	320	1.22
JAPAN	78	5937	14252	14447	0.4	194	1	281	1.22
JAPAN	77	5937	14209	14439	0.2	184	6	302	1.16
JAPAN	78	5748	13709	14536	0.2	245	8	319	1.12
JAPAN	78	5936	14423	14138	0.1	185	5	165	1.09
JAPAN	78	5751	13725	14127	0.5	185	5	230	0.93
JAPAN	78	5848	14055	14592	0.3	153	5	353	0.85
JAPAN	78	5936	14422	14140	0.4	196	6	270	0.75
JAPAN	77	5747	13707	14535	0.4	224	1	197	0.72
JAPAN	78	5850	14058	14398	0.8	173	6	152	0.66
JAPAN	77	5931	14421	14152	0.6	174	8	173	0.66
JAPAN	78	5736	13715	14540	0.8	131	8	187	0.61
JAPAN	78	5931	14422	14140	0.4	188	3	140	0.60
JAPAN	77	5751	13713	14544	0.3	189	0	159	0.59
JAPAN	77	5748	13706	14542	0.5	177	5	139	0.55
JAPAN	78	5909	14134	14440	0.1	174	0	115	0.55
JAPAN	77	5751	13715	14540	0.8	125	4	172	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

TABLE 5-8. FLOUNDERS, APRIL-JUNE, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780513	5530	13500	6X	191	1	214	16.51
JAPAN	780521	5748	13703	9	202	3	669	33
JAPAN	780523	5608	13520	0	164	8	2464	3025
JAPAN	780523	5825	13420	5	136	0	1302	6
JAPAN	780524	5602	13523	9	174	6	3893	193
JAPAN	780524	5425	13930	1	218	5	952	38
JAPAN	780525	5615	13431	3	142	2	52	33
JAPAN	780525	5742	13705	1	191	3	452	143
JAPAN	780526	5874	13880	3	212	5	130	33
JAPAN	780527	5874	13880	4	191	6	844	22
JAPAN	780527	5616	13429	2	180	5	126	25
JAPAN	780527	5747	13703	6	174	7	915	33
JAPAN	780527	5617	13425	7	169	3	376	120
JAPAN	780527	5752	13710	1	142	4	104	26
JAPAN	780527	5524	13422	2	162	3	376	120
JAPAN	780527	5934	14236	1	273	2	674	22
JAPAN	780527	5747	13705	1	124	8	1028	124
JAPAN	780527	5912	14225	1	285	5	248	94
JAPAN	780527	5912	14225	1	161	0	22	1
JAPAN	780527	5602	13442	2	181	6	222	82
JAPAN	780527	5528	13442	3	147	1	44	70
JAPAN	780527	5526	13449	0	136	1	5	1
JAPAN	780527	5924	14249	5	160	5	35	62
JAPAN	780527	5755	13712	8	196	4	58	12
JAPAN	780527	5755	13713	9	136	1	3	1
JAPAN	780527	5755	13714	0	136	5	10	4
JAPAN	780527	5755	13715	8	196	5	58	12
JAPAN	780527	5755	13716	9	136	1	3	1
JAPAN	780527	5755	13717	0	136	5	10	4
JAPAN	780527	5755	13718	0	136	5	10	4
JAPAN	780527	5755	13719	0	136	5	10	4
JAPAN	780527	5755	13720	0	136	5	10	4
JAPAN	780527	5755	13721	0	136	5	10	4
JAPAN	780527	5755	13722	0	136	5	10	4
JAPAN	780527	5755	13723	0	136	5	10	4
JAPAN	780527	5755	13724	0	136	5	10	4
JAPAN	780527	5755	13725	0	136	5	10	4
JAPAN	780527	5755	13726	0	136	5	10	4
JAPAN	780527	5755	13727	0	136	5	10	4
JAPAN	780527	5755	13728	0	136	5	10	4
JAPAN	780527	5755	13729	0	136	5	10	4
JAPAN	780527	5755	13730	0	136	5	10	4
JAPAN	780527	5755	13731	0	136	5	10	4
JAPAN	780527	5755	13732	0	136	5	10	4
JAPAN	780527	5755	13733	0	136	5	10	4
JAPAN	780527	5755	13734	0	136	5	10	4
JAPAN	780527	5755	13735	0	136	5	10	4
JAPAN	780527	5755	13736	0	136	5	10	4
JAPAN	780527	5755	13737	0	136	5	10	4
JAPAN	780527	5755	13738	0	136	5	10	4
JAPAN	780527	5755	13739	0	136	5	10	4
JAPAN	780527	5755	13740	0	136	5	10	4
JAPAN	780527	5755	13741	0	136	5	10	4
JAPAN	780527	5755	13742	0	136	5	10	4
JAPAN	780527	5755	13743	0	136	5	10	4
JAPAN	780527	5755	13744	0	136	5	10	4
JAPAN	780527	5755	13745	0	136	5	10	4
JAPAN	780527	5755	13746	0	136	5	10	4
JAPAN	780527	5755	13747	0	136	5	10	4
JAPAN	780527	5755	13748	0	136	5	10	4
JAPAN	780527	5755	13749	0	136	5	10	4
JAPAN	780527	5755	13750	0	136	5	10	4
JAPAN	780527	5755	13751	0	136	5	10	4
JAPAN	780527	5755	13752	0	136	5	10	4
JAPAN	780527	5755	13753	0	136	5	10	4
JAPAN	780527	5755	13754	0	136	5	10	4
JAPAN	780527	5755	13755	0	136	5	10	4
JAPAN	780527	5755	13756	0	136	5	10	4
JAPAN	780527	5755	13757	0	136	5	10	4
JAPAN	780527	5755	13758	0	136	5	10	4
JAPAN	780527	5755	13759	0	136	5	10	4
JAPAN	780527	5755	13760	0	136	5	10	4
JAPAN	780527	5755	13761	0	136	5	10	4
JAPAN	780527	5755	13762	0	136	5	10	4
JAPAN	780527	5755	13763	0	136	5	10	4
JAPAN	780527	5755	13764	0	136	5	10	4
JAPAN	780527	5755	13765	0	136	5	10	4
JAPAN	780527	5755	13766	0	136	5	10	4
JAPAN	780527	5755	13767	0	136	5	10	4
JAPAN	780527	5755	13768	0	136	5	10	4
JAPAN	780527	5755	13769	0	136	5	10	4
JAPAN	780527	5755	13770	0	136	5	10	4
JAPAN	780527	5755	13771	0	136	5	10	4
JAPAN	780527	5755	13772	0	136	5	10	4
JAPAN	780527	5755	13773	0	136	5	10	4
JAPAN	780527	5755	13774	0	136	5	10	4
JAPAN	780527	5755	13775	0	136	5	10	4
JAPAN	780527	5755	13776	0	136	5	10	4
JAPAN	780527	5755	13777	0	136	5	10	4
JAPAN	780527	5755	13778	0	136	5	10	4
JAPAN	780527	5755	13779	0	136	5	10	4
JAPAN	780527	5755	13780	0	136	5	10	4
JAPAN	780527	5755	13781	0	136	5	10	4
JAPAN	780527	5755	13782	0	136	5	10	4
JAPAN	780527	5755	13783	0	136	5	10	4
JAPAN	780527	5755	13784	0	136	5	10	4
JAPAN	780527	5755	13785	0	136	5	10	4
JAPAN	780527	5755	13786	0	136	5	10	4
JAPAN	780527	5755	13787	0	136	5	10	4
JAPAN	780527	5755	13788	0	136	5	10	4
JAPAN	780527	5755	13789	0	136	5	10	4
JAPAN	780527	5755	13790	0	136	5	10	4
JAPAN	780527	5755	13791	0	136	5	10	4
JAPAN	780527	5755	13792	0	136	5	10	4
JAPAN	780527	5755	13793	0	136	5	10	4
JAPAN	780527	5755	13794	0	136	5	10	4
JAPAN	780527	5755	13795	0	136	5	10	4
JAPAN	780527	5755	13796	0	136	5	10	4
JAPAN	780527	5755	13797	0	136	5	10	4
JAPAN	780527	5755	13798	0	136	5	10	4
JAPAN	780527	5755	13799	0	136	5	10	4
JAPAN	780527	5755	13800	0	136	5	10	4

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	77 424	5846	14056	1436	3023	267	1.6	1680	1.05
JAPAN	78 428	5937	14410	14190	3123	164	3.6	3156	1.05
JAPAN	78 515	5525	13448	14183	3270	153	1.3	1682	1.05
JAPAN	77 520	5747	13704	14541	2688	202	2.5	2473	1.05
JAPAN	78 629	5922	14115	14625	3067	153	2.0	1908	1.05
JAPAN	77 564	5829	13930	14474	2977	205	2.0	2382	1.05
JAPAN	78 519	5753	13714	14553	2890	189	2.0	384	1.05
JAPAN	78 629	5753	13714	14553	2890	189	2.0	384	1.05
JAPAN	78 428	5938	14253	14444	3107	194	1.5	1765	1.05
JAPAN	77 428	5757	14409	14503	2912	166	2.3	1920	1.05
JAPAN	77 520	5748	13713	14528	2885	169	2.5	973	1.05
JAPAN	78 627	5909	14133	14442	3056	169	2.7	973	1.05
JAPAN	78 421	5828	14113	14414	3007	160	2.2	202	1.05
JAPAN	78 630	5828	14113	14414	3007	160	2.2	202	1.05
JAPAN	77 417	5754	13717	14637	2878	136	3.3	654	1.05
JAPAN	78 517	5751	13713	14552	2830	138	3.6	853	1.05
JAPAN	78 417	5758	13748	14544	2886	120	2.0	1057	1.05
JAPAN	77 412	5921	14210	14512	2902	121	2.0	1307	1.05
JAPAN	78 619	5758	13712	14532	2079	161	2.0	417	1.05
JAPAN	78 515	5501	13420	14583	2846	138	2.0	1659	1.05
JAPAN	77 423	5751	13713	14544	2886	199	2.2	1632	1.05
JAPAN	77 620	5826	13945	14420	2980	218	1.8	639	1.05
JAPAN	77 620	5749	13713	14534	2886	135	2.2	1174	1.05
JAPAN	77 620	5749	13713	14536	2886	135	2.2	1041	1.05

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

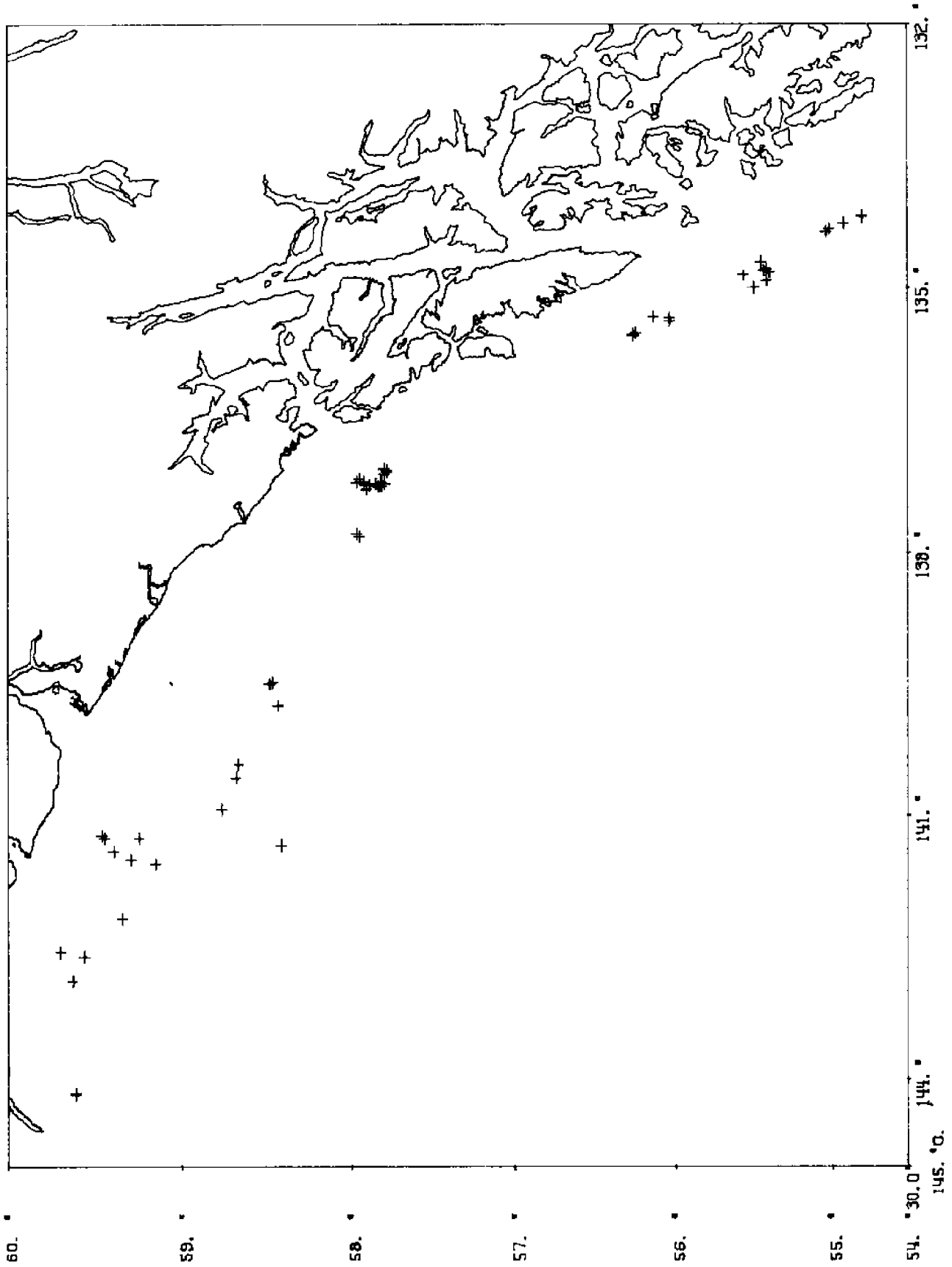


FIGURE E-2. FLOUNDERS, APRIL-JUNE, 1977-78

TABLE E-9. FLOUNDER, JULY-SEPTEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 8 23	59330	14337	6X 07	31113	148	1.0	6521	6.521
JAPAN	78 7 15	59356	14350	14248	31119	142	1.6	3279	2.049
JAPAN	78 8 26	59133	14133	14444	30581	142	1.3	2154	1.643
JAPAN	77 7 30	59332	14130	14288	31122	144	1.2	1578	1.433
JAPAN	77 7 30	59178	14155	14491	30708	145	1.3	1725	1.432
JAPAN	78 9 26	59260	14210	14463	30855	158	1.0	1427	1.427
JAPAN	78 9 24	59440	14235	14528	31024	136	3.0	3258	1.090
JAPAN	77 8 20	58344	14330	14389	30106	131	0.7	633	0.901
JAPAN	77 8 20	59328	14209	14266	31131	131	0.5	204	0.817
JAPAN	78 7 26	59328	14259	14424	31086	150	1.6	1258	0.785
JAPAN	78 7 19	59348	14257	14426	31088	147	2.0	1741	0.733
JAPAN	78 7 22	59337	14329	14432	31129	131	1.2	1538	0.731
JAPAN	77 7 20	59337	14300	14415	31079	181	2.1	1571	0.743
JAPAN	77 8 8	58119	13915	14445	29624	120	1.1	1474	0.709
JAPAN	77 8 3	59337	14350	14495	31024	112	2.0	1295	0.599
JAPAN	78 9 27	59336	14360	14406	31070	158	1.5	1358	0.588
JAPAN	78 9 16	59321	14109	14270	31138	153	1.4	1394	0.544
JAPAN	77 8 11	59244	14123	14674	30663	134	2.9	1594	0.544
JAPAN	77 8 20	59338	14046	14388	30181	166	3.0	1638	0.533
JAPAN	77 9 9	58349	14257	14440	30190	142	3.6	1605	0.532
JAPAN	78 7 17	59338	14303	14414	31097	142	1.1	180	0.500

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

TABLE E-10. FLOUNDERS, OCTOBER-DECEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
JAPAN	781023	5843	14050	6X09	186.1	158	0.8	8204	10.283
JAPAN	771110	5844	14055	14384	139.4	194	2.0	19631	5.81
JAPAN	771110	5844	14027	14409	208.6	164	0.5	2388	4.777
JAPAN	781023	5842	14036	14400	209.8	136	0.3	1322	4.45
JAPAN	781013	5842	14036	14243	110.8	177	0.8	3322	4.302
JAPAN	781018	5844	14046	14374	115.3	164	1.2	3545	4.393
JAPAN	781016	5845	14228	14492	163.6	150	1.0	3510	3.293
JAPAN	781022	5845	14030	14395	160.2	137	2.0	399	1.978
JAPAN	781027	5849	14030	14393	209.4	143	1.0	1771	1.74
JAPAN	781028	5844	14044	14394	244.3	125	0.5	846	1.57
JAPAN	781026	5844	14038	14393	235.3	131	0.2	295	1.40
JAPAN	781026	5841	14036	14393	250.7	131	0.5	2841	1.43
JAPAN	781022	5839	14012	14430	190.6	131	1.5	2112	1.403
JAPAN	781024	5839	14051	14419	160.4	164	1.0	2010	1.326
JAPAN	781025	5840	14030	14395	208.6	131	0.6	1636	1.091
JAPAN	781028	5841	14015	14398	289.6	131	1.0	912	0.833
JAPAN	781018	5839	14037	14390	209.6	131	0.5	755	0.075
JAPAN	781029	5801	14013	14484	108.5	123	0.2	1500	0.071
JAPAN	781020	5839	14016	14429	208.5	131	0.6	430	0.063
JAPAN	781023	5839	14027	14402	230.6	131	0.0	1392	0.063
JAPAN	781027	5843	14051	14368	29.9	164	1.0	1632	0.063
JAPAN	781020	5801	13826	14449	271.9	133	0.7	444	0.063
JAPAN	781026	5842	14037	14439	213.9	123	0.5	256	0.051

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

TABLE E-11. ROCKFISH, JANUARY-MARCH, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780303	57511	13719	6X3300	289110	103	3	28742	12.49
JAPAN	780305	57549	13722	145430	289505	101	2	22671	8.71
JAPAN	770215	57489	13722	145421	288696	162	1	1557	5.57
JAPAN	770216	57489	13706	145318	288600	134	1	3521	3.59
JAPAN	770215	57489	13711	145328	288600	147	2	6229	3.69
JAPAN	770215	57478	13705	145355	288250	224	2	6834	3.41
JAPAN	770218	57518	13722	145447	288250	223	1	5018	3.36
JAPAN	770218	57518	13713	145276	288250	145	2	5003	3.00
JAPAN	770218	57509	14134	145440	288860	189	1	647	1.76
JAPAN	770218	5818	13922	144240	288940	184	2	1417	1.76
JAPAN	770218	58239	13933	144300	288728	153	0	343	1.06
JAPAN	770217	59351	14250	144600	297280	122	1	2742	1.06
JAPAN	770302	59351	14409	145600	310940	201	2	1923	0.97
JAPAN	770302	5850	14058	143980	312530	131	2	1850	0.92
JAPAN	770302	5916	13715	143510	302760	213	2	6367	0.90
JAPAN	770303	5916	14115	145420	305720	185	2	2157	0.82
JAPAN	770303	5916	14115	145420	305720	185	2	177	0.63

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

TABLE E-12. ROCKFISH, APRIL-JUNE, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	7778	58231	13945	1426.9	0.7	109	0.1	283.71	283.71
JAPAN	7778	55311	13459	14184.7	0.7	150	0.3	152.22	152.22
JAPAN	7777	55355	13459	14184.7	1.5	123	0.3	430.99	143.66
JAPAN	7777	59337	13723	14552.3	1.5	107	0.5	418.35	183.69
JAPAN	7777	57566	13722	14553.7	1.5	98	1.0	560.99	56.09
JAPAN	7777	57567	13722	14553.7	1.5	98	1.0	437.49	43.75
JAPAN	7777	57560	13721	14553.5	1.5	117	0.9	296.58	32.64
JAPAN	7778	59301	13715	14039.8	1.5	120	1.4	338.8	23.84
JAPAN	7777	58911	14034	14039.8	1.5	135	1.0	698.5	23.29
JAPAN	7777	58911	14034	14039.8	1.5	150	1.6	594.8	15.42
JAPAN	7777	57504	14140	14433.8	1.5	98	1.2	314.69	14.30
JAPAN	7778	55254	13722	14551.5	1.5	121	1.2	137.30	14.36
JAPAN	7778	56448	13450	14368.0	1.5	131	1.2	167.82	12.15
JAPAN	7778	59346	13703	14340.9	1.5	202	1.6	109.39	8.70
JAPAN	7778	59346	13703	14340.9	1.5	185	1.5	31.53	8.70
JAPAN	7778	56744	13527	14555.2	1.5	174	1.6	97.06	6.05
JAPAN	7778	58408	13532	14420.6	1.5	164	1.3	78.50	6.05
JAPAN	7778	56744	13528	14454.6	1.5	147	1.6	193.22	5.55
JAPAN	7778	56744	13528	14454.6	1.5	142	1.6	341.66	5.55
JAPAN	7778	56744	13528	14454.6	1.5	142	1.6	84.55	5.55
JAPAN	7778	56744	13528	14454.6	1.5	145	1.5	29.55	5.55
JAPAN	7777	58027	13722	14537.4	1.5	109	1.2	105.40	4.44
JAPAN	7777	59029	14136	14442.9	1.5	127	1.4	40.40	4.44
JAPAN	7777	59029	14136	14442.9	1.5	103	1.0	174.8	4.44
JAPAN	7778	545	13416	1413.8	1.5	131	1.2	9.54	4.44

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780515	59373	14318	691.3	158	4.0	364	90
JAPAN	770627	59104	14134	14.0	174	2.5	129	51
JAPAN	770505	58021	13945	10.5	218	1.5	235	84
JAPAN	770528	56041	13521	0.5	153	1.6	198	79
JAPAN	780627	58144	14134	2.9	174	2.0	182	78
JAPAN	770827	59388	14253	1.8	199	2.0	165	76
JAPAN	770427	59387	14337	1.1	153	2.0	204	76
JAPAN	780627	59369	14446	1.1	174	2.0	244	75
JAPAN	770524	58299	13930	1.1	167	3.0	222	74
JAPAN	770613	58299	13930	1.1	202	3.0	244	73
JAPAN	780614	58314	14028	1.5	142	2.0	168	70
JAPAN	780521	59204	14207	0.0	142	2.0	173	69
JAPAN	770621	58323	14100	0.0	253	2.0	208	69
JAPAN	780618	57449	13707	5.8	180	1.0	276	68
JAPAN	770528	57477	13710	5.2	218	1.5	166	66
JAPAN	770522	59021	14107	2.9	164	3.0	100	65
JAPAN	770614	58511	14027	1.5	153	3.0	171	65
JAPAN	780622	58304	14038	2.5	136	3.0	204	69
JAPAN	780419	59370	14305	1.9	103	3.5	149	57
JAPAN	780619	59493	14255	1.8	164	3.5	138	55
JAPAN	780620	59333	14215	1.3	125	4.0	241	55
JAPAN	780613	59330	14228	1.1	164	2.0	116	52
JAPAN	770615	58404	14114	1.3	191	3.0	139	51
JAPAN	770615	59064	14121	1.1	167	3.0	156	52
JAPAN	770612	59063	14120	1.6	131	3.0	124	50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

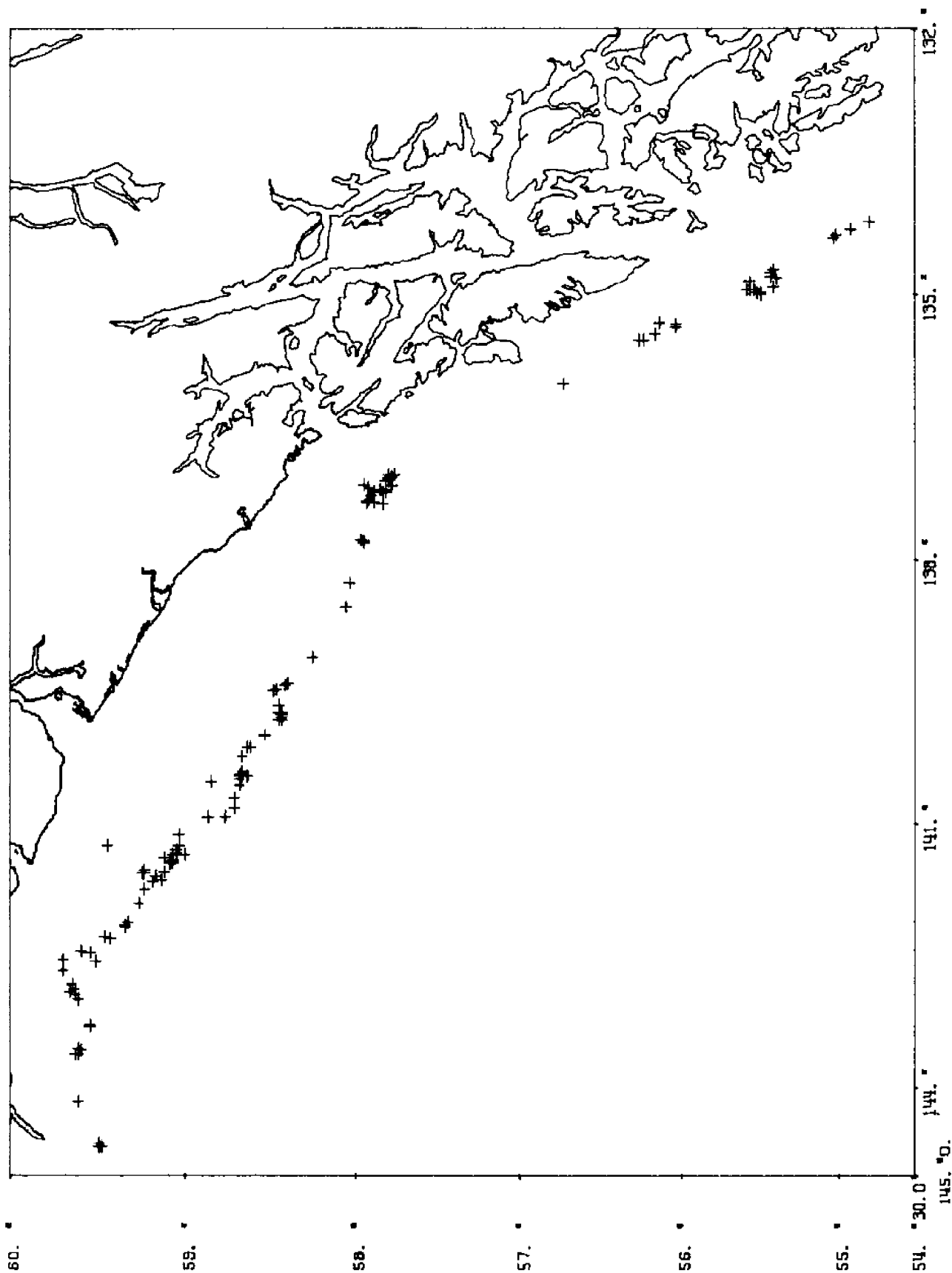


FIGURE E-3. ROCKFISH, APRIL-JUNE, 1977-78

TABLE E-13. ROCKFISH, JULY-SEPTEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	77 7 22	59 33 1	143 38	140 43	67.1	106	0.4	5250	13.1
JAPAN	77 8 24	59 33 0	143 14	143 38	7.8	136	0.8	6514	7.8
JAPAN	77 7 16	59 34 9	142 34	144 67	5.5	85	1.4	5378	7.6
JAPAN	77 8 26	59 34 4	137 18	145 24	8.8	164	1.0	10457	7.4
JAPAN	77 8 8	59 34 3	143 09	143 62	6.6	158	1.0	5770	5.4
JAPAN	78 8 15	59 06 6	141 31	142 39	8.8	180	2.0	4274	4.1
JAPAN	78 8 27	59 06 4	141 31	144 26	8.8	158	2.0	3107	3.0
JAPAN	78 8 27	58 04 8	138 36	144 26	8.8	198	2.0	6103	2.2
JAPAN	78 8 15	59 08 8	141 32	144 55	3.4	158	2.0	7603	2.2
JAPAN	78 8 19	59 38 0	142 57	144 32	8.0	167	2.0	5903	2.2
JAPAN	78 8 18	59 20 5	142 09	144 27	6.9	167	2.0	5163	2.2
JAPAN	78 8 21	59 35 5	143 43	142 63	6.9	167	2.0	5216	2.2
JAPAN	78 8 22	58 28 2	139 32	142 63	6.9	158	3.0	7716	2.2
JAPAN	77 8 21	58 02 3	138 27	144 63	6.4	137	3.0	7716	2.2
JAPAN	78 8 23	59 13 7	142 05	142 56	7.0	190	2.3	6869	2.2
JAPAN	78 7 20	59 34 4	143 29	142 99	9.7	131	2.0	4259	2.0
JAPAN	78 7 14	59 00 1	141 02	144 58	7.7	182	2.0	3912	1.9
JAPAN	77 8 4	58 03 3	138 34	144 77	8.1	137	2.0	3851	1.9
JAPAN	77 8 14	58 25 5	142 19	144 44	7.0	174	2.4	4612	1.8
JAPAN	77 8 25	58 25 3	139 29	144 28	8.8	142	2.7	6433	1.8
JAPAN	78 8 15	59 30 3	144 38	144 51	5.1	166	3.0	5097	1.8
JAPAN	78 7 18	58 48 3	140 51	140 33	8.9	131	4.0	6485	1.8
JAPAN	77 8 3	58 18 2	138 26	145 68	9.6	169	7.0	3080	1.8
JAPAN	77 8 5	58 02 2	138 62	144 55	8.7	131	2.0	3519	1.7
JAPAN	77 8 19	58 02 0	142 09	144 62	8.8	142	3.0	4302	1.6
JAPAN	78 7 15	59 36 3	143 50	144 27	6.6	168	2.0	3217	1.6
JAPAN	77 8 7	59 36 3	143 50	144 54	8.8	147	2.6	3491	1.5

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	77 7 8 1 4	59 35	142 22	6X 144 12 7	153	3	3087	0.79
JAPAN	77 7 8 1 5	59 02	141 26	144 19 5	164	2	1521	0.79
JAPAN	77 7 8 1 6	58 45	139 48	143 19 8	153	2	2420	0.75
JAPAN	77 7 8 2 1	58 27	139 45	144 26 9	162	3	2210	0.73
JAPAN	77 7 8 2 2	59 08	141 35	144 30 5	190	2	866	0.72
JAPAN	77 7 8 2 3	59 18	142 06	145 24 7	142	2	1486	0.67
JAPAN	77 7 8 2 5	58 02	137 34	145 37 9	136	3	1931	0.66
JAPAN	77 7 8 2 3	57 55	137 14	145 63 8	164	3	150	0.65
JAPAN	77 7 8 2 3	58 02	137 46	145 27 8	100	2	654	0.64
JAPAN	77 7 8 2 1	58 02	138 16	142 76 9	142	2	1538	0.61
JAPAN	77 7 8 2 1	58 02	138 10	144 58 1	153	3	1845	0.59
JAPAN	77 7 8 2 2	59 01	147 14	144 68 2	164	3	2325	0.58
JAPAN	77 7 8 2 3	57 56	142 31	144 68 5	169	2	1685	0.56
JAPAN	77 7 8 2 3	59 38	142 58	144 28 3	169	2	1985	0.54
JAPAN	77 7 8 2 1	58 41	143 05	143 46 9	122	1	985	0.51
JAPAN	77 7 8 2 1	59 37	143 03	144 06 0	155	3	1351	0.51
JAPAN	77 7 8 2 1	59 00	141 04	144 55 6	155	3	1663	0.51
JAPAN	77 7 8 2 1	59 39	142 58	144 37 8	147	4	2110	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

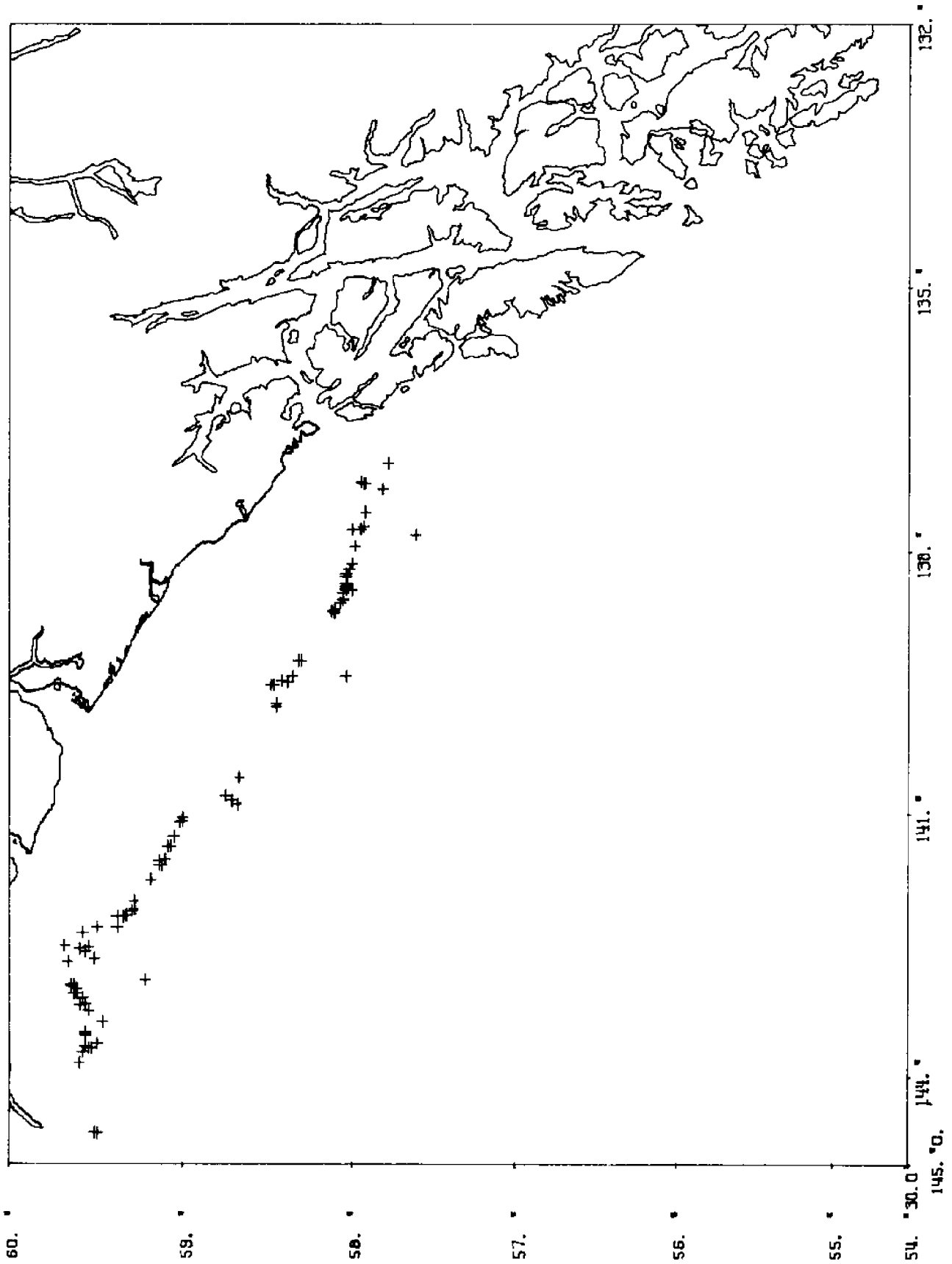


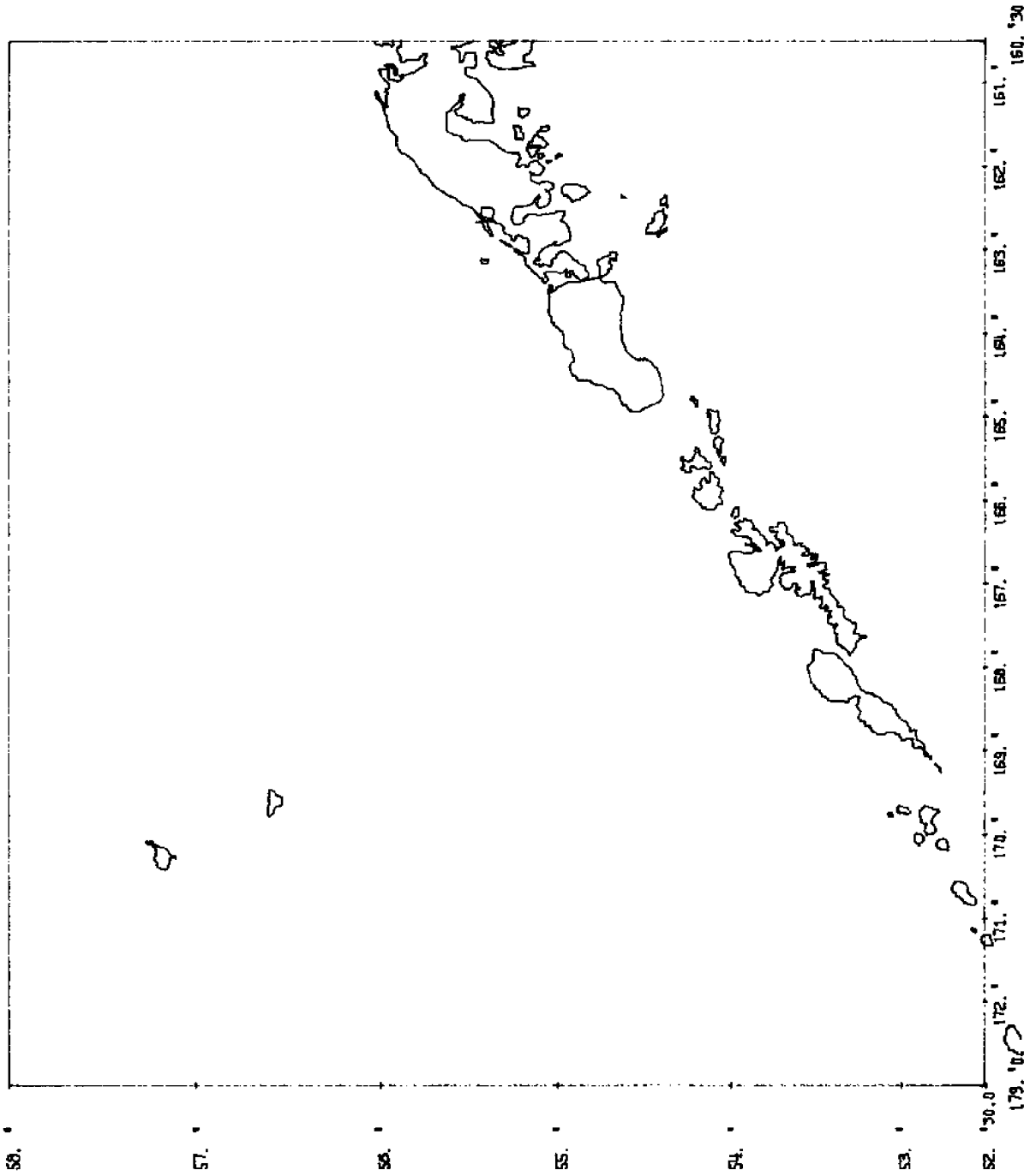
FIGURE E-4. ROCKFISH, JULY-SEPTEMBER, 1977-78

TABLE E-14. ROCKFISH, OCTOBER-DECEMBER, 1977-78

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781021	5758	13801	1446.0	131	0.1	4363	43.63
JAPAN	781022	5801	13810	1448.0	123	0.2	8543	42.71
JAPAN	781022	5840	14036	1440.0	136	0.3	7094	23.64
JAPAN	781022	5839	14032	1439.6	131	0.2	4227	21.13
JAPAN	781023	5839	14027	1440.2	136	1.5	20607	13.30
JAPAN	781026	5801	13826	1449.5	136	2.0	6964	10.94
JAPAN	781018	5839	14033	1437.5	133	0.5	6556	9.11
JAPAN	781018	5839	14042	1437.7	131	0.9	6217	6.90
JAPAN	781010	5840	14015	1438.4	131	2.0	12378	6.18
JAPAN	781027	5840	14030	1438.5	137	1.0	4056	4.05
JAPAN	781019	5840	14014	1444.1	120	1.0	1540	1.54
JAPAN	781024	5839	14030	1439.5	127	1.6	3992	2.49
JAPAN	781024	5839	14016	1439.0	131	0.6	2078	3.46
JAPAN	781029	5841	14037	1439.0	125	0.5	2058	3.43
JAPAN	781016	5935	14238	1449.2	150	0.8	1534	3.06
JAPAN	781016	5930	14336	1424.3	174	0.8	2401	3.00
JAPAN	781023	5840	14020	1440.9	164	0.5	1476	1.84
JAPAN	781028	5839	14038	1441.9	131	1.5	2866	1.73
JAPAN	781026	5842	14036	1439.4	125	0.6	3523	1.56
JAPAN	781025	5841	14045	1437.0	117	0.2	151	0.75
00000				16605.9	174	0.6	317	0.52

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

APPENDIX F
SOUTHEAST BERING SEA



APPENDIX F

Productive Foreign Fishing Locations in the Southeastern
Bering Sea

<u>Table</u>		<u>Page</u>
F-1.	Summary of overall catch composition and average catch rates observed in the southeastern Bering Sea during January-March, 1978.....	198
F-2.	Summary of overall catch composition and average catch rates observed in the southeastern Bering Sea during April-June, 1978.....	199
F-3.	Summary of overall catch composition and average catch rates observed in the southeastern Bering Sea during July-September, 1978.....	200
F-4.	Summary of overall catch composition and average catch rates observed in the southeastern Bering Sea during October-December, 1978.....	201
F-5.	Walleye Pollock, January-March, 1978.....	204
F-6.	Walleye Pollock, April-June, 1978.....	205
F-7.	Walleye Pollock, July-September, 1978.....	209
F-8.	Walleye Pollock, October-December, 1978.....	222
F-9.	Pacific Cod, January-March, 1978.....	228
F-10.	Pacific Cod, April-June, 1978.....	229
F-11.	Pacific Cod, July-September, 1978.....	230
F-12.	Pacific Cod, October-December, 1978.....	237
F-13.	Flounders, January-March, 1978.....	239
F-14.	Flounders, April-June, 1978.....	240
F-15.	Flounders, July-September, 1978.....	245
F-16.	Flounders, October-December, 1978.....	254
F-17.	Yellowfin Sole, July-September, 1978.....	267
F-18.	Yellowfin Sole, October-December, 1978.....	272
F-19.	Rockfish, January-December, 1978.....	283

<u>Figure</u>		<u>Page</u>
F-1.	Length frequency of Walleye Pollock catch, 1978.....	202
F-2.	Length frequency of Yellowfin Sole catch, 1978.....	203
F-3.	Walleye Pollock, April-June, 1978.....	208
F-4.	Walleye Pollock, July-September, 1978.....	221
F-5.	Walleye Pollock, October-December, 1978.....	227
F-6.	Pacific Cod, July-September, 1978.....	236
F-7.	Flounders, July-September, 1978.....	253
F-8.	Flounders, October-December, 1978.....	266
F-9.	Yellowfin Sole, July-September, 1978.....	271
F-10.	Yellowfin Sole, October-December, 1978.....	282

Table F-1

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE SOUTHEASTERN BERING SEA DURING
JANUARY-MARCH, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	609.73	0.31153	0.31153
Alaska Pollice	471.63	0.24097	0.55250
Pacific Cod	335.58	0.17146	0.72397
Greenland Turbot	245.39	0.12538	0.84935
Great Sculpin	76.09	0.03888	0.88823
Flathead Sole	69.66	0.03559	0.92383
Arrowtooth Flounder	54.74	0.02796	0.95180
Rock Sole	20.29	0.01036	0.96217
Pectoral Rattail	13.03	0.00665	0.96883
Sablefish	12.02	0.00614	0.97497
Pacific Ocean Perch	10.19	0.00520	0.98018
Deepsea Skate	7.85	0.00401	0.98419
Eelpout unidentified	7.42	0.00379	0.98799
Sculpin unidentified	7.41	0.00378	0.99178
Atka Mackerel	4.64	0.00237	0.99415
Big Skate	2.26	0.00115	0.99530
Splitnose Rockfish	2.21	0.00113	0.99643
Night Smelt	1.64	0.00083	0.99727
Starry Flounder	1.42	0.00073	0.99800
Shortraker Rockfish	0.93	0.00047	0.99848
Starry Skate	0.91	0.00046	0.99895
Petrals Sole	0.46	0.00023	0.99919
Skate unidentified	0.45	0.00023	0.99942
Black Skate	0.33	0.00016	0.99959
Sturgeon Poacher	0.19	0.00010	0.99969
Searcher	0.15	0.00008	0.99977
Northern Rockfish	0.15	0.00007	0.99985
Red Irish Lord	0.10	0.00005	0.99991
Rex Sole	0.09	0.00004	0.99995
Poacher Unidentified	0.03	0.00001	0.99997
Snailfish unidentified	0.03	0.00001	0.99999
Prickleback unidentified	0.01	0.00000	1.00000

Table F-2

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE SOUTHEASTERN BERING SEA DURING
APRIL-JUNE, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	1767.40	0.77711	0.77711
Greenland Turbot	221.47	0.09737	0.87449
Pacific Cod	143.03	0.06289	0.93739
Flathead Sole	33.94	0.01492	0.95231
Arrowtooth Flounder	33.66	0.01480	0.96711
Alaska Plaice	21.93	0.00964	0.97676
Sculpin unidentified	12.04	0.00529	0.98206
Eelpout unidentified	6.58	0.00289	0.98495
Sablefish	4.76	0.00209	0.98705
Bigmouth Sculpin	4.72	0.00207	0.98913
Pacific Ocean Perch	3.91	0.00172	0.99085
Shortraker Rockfish	3.68	0.00162	0.99247
Rattail unidentified	2.71	0.00119	0.99366
Skate unidentified	2.20	0.00097	0.99463
Shortspine Thornyhead	1.83	0.00080	0.99544
Pectoral Rattail	1.18	0.00051	0.99596
Rock Sole	1.13	0.00049	0.99646
Blackfin Sculpin	1.08	0.00047	0.99694
Red Irish Lord	0.93	0.00041	0.99735
Rougheye Rockfish	0.86	0.00038	0.99734
Saffron Cod	0.70	0.00030	0.99804
Rainbow Smelt	0.63	0.00027	0.99832
Pacific Halibut	0.54	0.00024	0.99856
Northern Rockfish	0.35	0.00015	0.99871
Smelt unidentified	0.28	0.00012	0.99884
Longnose Skate	0.26	0.00011	0.99895
Atka Mackerel	0.24	0.00010	0.99906
Rex Sole	0.23	0.00010	0.99917
Snailfish unidentified	0.22	0.00010	0.99927
Big Skate	0.19	0.00008	0.99935
Yellow Irish Lord	0.18	0.00008	0.99943
Eulachon	0.14	0.00006	0.99950
Black Skate	0.13	0.00005	0.99955
Prowfish	0.10	0.00004	0.99960
Deepsea Sole	0.09	0.00004	0.99964
Other Species	---	0.00035	1.00000

Table F-3

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE SOUTHEASTERN BERING SEA DURING
JULY-SEPTEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	7623.20	0.86511	0.86511
Yellowfin Sole	491.66	0.05579	0.92091
Pacific Cod	365.91	0.04152	0.96244
Greenland Turbot	76.90	0.00872	0.97116
Alaska Plaice	65.41	0.00742	0.97859
Arrowtooth Flounder	39.61	0.00449	0.98308
Sculpin unidentified	26.61	0.00302	0.98610
Flathead Sole	14.68	0.00166	0.98777
Pacific Ocean Perch	13.96	0.00158	0.98935
Bigmouth Sculpin	13.42	0.00152	0.99088
Eelpout unidentified	10.25	0.00116	0.99204
Rock Sole	7.48	0.00084	0.99289
Pacific Herring	7.23	0.00082	0.99371
Sablefish	6.16	0.00070	0.99441
Shorthorn Sculpin	4.93	0.00055	0.99497
Snailfish unidentified	4.90	0.00055	0.99553
Brown Irish Lord	4.09	0.00046	0.99599
Poacher unidentified	3.56	0.00040	0.99640
Spinyhead Sculpin	2.56	0.00029	0.99669
Great Sculpin	2.17	0.00024	0.99694
Bering Skate	2.09	0.00023	0.99717
Black Skate	2.07	0.00023	0.99741
Skate unidentified	2.01	0.00022	0.99764
Pectoral Rattail	1.73	0.00019	0.99783
Pacific Halibut	1.54	0.00017	0.99801
Twoline Eelpout	1.33	0.00015	0.99816
Rougheye Rockfish	1.29	0.00014	0.99831
Shortraker Rockfish	1.29	0.00014	0.99845
Prowfish	1.21	0.00013	0.99859
Red Irish Lord	1.06	0.00012	0.99871
Rex Sole	1.05	0.00011	0.99883
Northern Rockfish	0.90	0.00010	0.99893
Atka Mackerel	0.89	0.00010	0.99904
Rattail unidentified	0.86	0.00009	0.99913
Blackfin Sculpin	0.82	0.00009	0.99923
Black Eelpout	0.75	0.00008	0.99931
Other Species	---	0.00068	1.00000

Table F-4

SUMMARY OF OVERALL CATCH COMPOSITION AND AVERAGE CATCH RATES
OBSERVED IN THE SOUTHEASTERN BERING SEA DURING
OCTOBER-DECEMBER, 1978

<u>Species</u>	<u>Mean CPUE (kg/hr)</u>	<u>Proportion</u>	<u>Cumulative Proportion</u>
Walleye Pollock	2604.28	0.56471	0.56471
Yellowfin Sole	1709.52	0.37069	0.93541
Pacific Cod	88.34	0.01915	0.95457
Greenland Turbot	74.09	0.01606	0.97064
Alaska Plaice	48.56	0.01053	0.98117
Arrowtooth Flounder	24.12	0.00523	0.98640
Sculpin unidentified	16.89	0.00366	0.99006
Eelpout unidentified	8.45	0.00183	0.99190
Great Sculpin	6.72	0.00145	0.99335
Flathead Sole	5.72	0.00124	0.99460
Rock Sole	3.92	0.00085	0.99545
Pacific Halibut	3.20	0.00069	0.99614
Wattled Eelpout	2.23	0.00048	0.99663
Rattail unidentified	1.93	0.00041	0.99705
Poacher unidentified	1.91	0.00041	0.99746
Skate unidentified	1.81	0.00039	0.99786
Snailfish unidentified	1.13	0.00024	0.99810
Sturgeon Poacher	0.96	0.00020	0.99831
Bigmouth Sculpin	0.88	0.00019	0.99850
Atka Mackerel	0.88	0.00019	0.99869
Pacific Ocean Perch	0.83	0.00018	0.99888
Sablefish	0.70	0.00015	0.99903
Shortspine Thornyhead	0.64	0.00013	0.99917
Pacific Herring	0.52	0.00011	0.99928
Shorthorn Sculpin	0.45	0.00009	0.99938
Starry Flounder	0.34	0.00007	0.99945
Spinyhead Sculpin	0.30	0.00006	0.99952
Rex Sole	0.26	0.00005	0.99958
Starry Skate	0.21	0.00004	0.99962
Brown Irish Lord	0.17	0.00003	0.99966
Smooth Lump sucker	0.16	0.00003	0.99970
Eulachon	0.15	0.00003	0.99973
Shortraker Rockfish	0.13	0.00002	0.99976
Petrale Sole	0.09	0.00001	0.99978
Red Irish Lord	0.08	0.00001	0.99980
Other Species	---	0.00019	1.00000

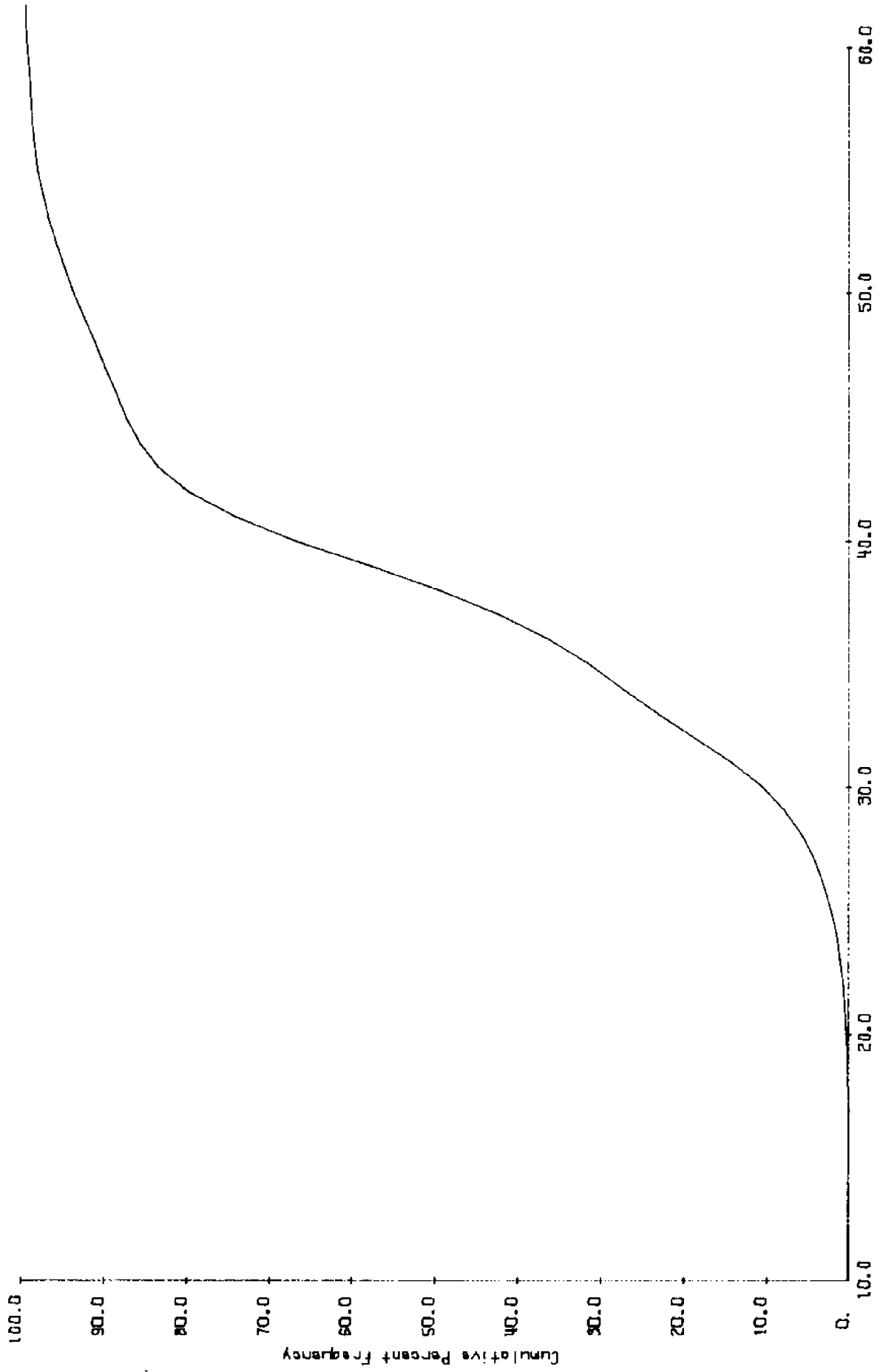
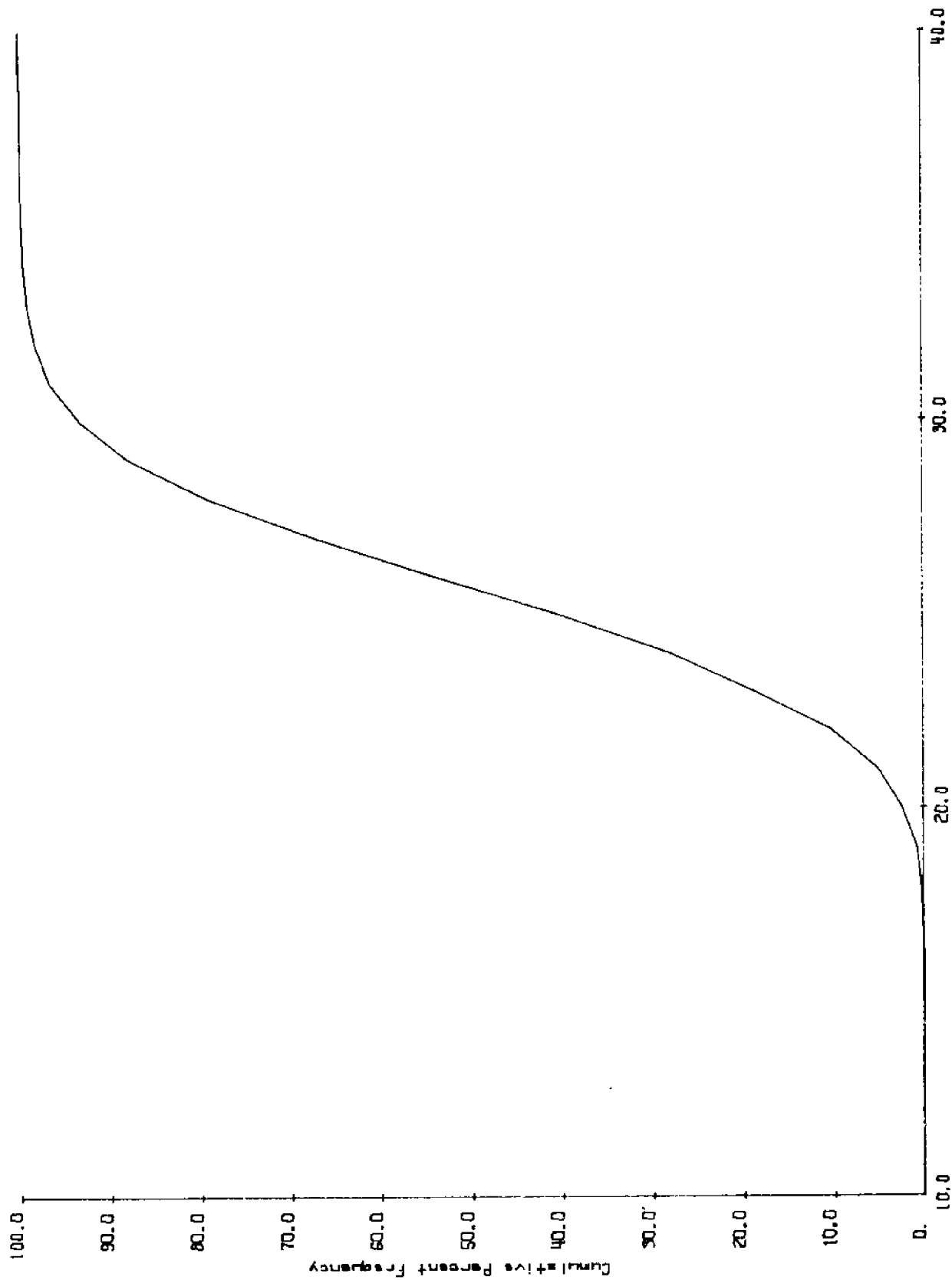


Figure F-1 Length Frequency of Walleye Pollock Catch, 1978



Fork Length (cm)
Figure F-2 Length Frequency of Yellowfin Sole Catch, 1978

TABLE F-5. WALLEYE POLLOCK, JANUARY-MARCH, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780126	5610	16745	18537.4	49126.1	54	3	16287	4.73
JAPAN	780122	5524	16834	18209.7	49258.4	68	1	14609	4.43
JAPAN	780125	5517	16739	18572.0	48921.6	73	1	13082	4.33
JAPAN	780128	5617	16828	18600.8	49102.3	73	2	3082	3.33
JAPAN	780128	5542	16845	18313.6	49430.5	69	0	843	3.33
JAPAN	780128	5615	16738	18540.8	49064.8	73	3	715	3.33
JAPAN	780125	5615	16738	18563.3	49092.8	73	0	810	3.33
JAPAN	780125	5535	16839	18280.8	49032.7	169	8	2087	2.22
JAPAN	780125	5606	16736	18524.5	49074.8	73	0	642	2.22
JAPAN	780122	5547	16849	18342.5	49062.5	71	5	754	2.22
JAPAN	780122	5547	16846	18342.5	49405.2	77	2	727	2.22
JAPAN	780124	5540	16832	18482.8	49421.8	82	1	274	2.22
JAPAN	780124	5612	16734	18552.8	48985.3	72	6	274	2.22
JAPAN	780122	5612	16751	18549.9	49067.0	75	1	288	2.22
JAPAN	780120	5617	16743	18541.5	49127.0	73	3	602	1.11
JAPAN	780120	5610	16738	18561.7	49083.6	74	8	289	1.11
JAPAN	780125	5615	16742	18561.4	49117.0	71	6	340	1.00
JAPAN	780123	5552	16838	18385.9	49380.8	90	1	294	0.00
JAPAN	780122	5551	16850	18360.7	49439.7	84	1	147	0.00
JAPAN	780122	5613	16738	18555.0	49089.4	73	1	128	0.00
JAPAN	780121	5544	16846	18323.8	49039.6	87	1	47	0.00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780630	536	16833	7X 296.9 18342.0	95	3.0	55	1.98
JAPAN	780630	534	16827	349.8 18335.1	79	1.1	19	1.76
JAPAN	780620	556	16804	7Y 350.1 18356.7	90	3.5	48	1.61
JAPAN	780630	553	16825	349.5 18332.0	66	1.0	55	1.59
JAPAN	780619	553	16827	349.7 18330.5	84	3.3	45	1.52
JAPAN	780613	552	16812	349.8 18311.2	79	6.8	94	1.49
JAPAN	780524	554	16812	349.5 18319.4	120	1.5	23	1.28
JAPAN	780526	554	16833	349.7 18319.4	79	1.0	11	1.15
JAPAN	780617	553	16823	349.3 18313.3	79	2.0	11	1.07
JAPAN	780610	552	16836	349.8 18322.3	79	4.1	39	0.96
JAPAN	780521	554	16825	349.5 18322.0	79	1.5	9	0.87
JAPAN	780518	554	16840	350.0 18326.7	82	3.1	13	0.86
JAPAN	780521	552	16805	350.3 18320.9	79	1.0	1	0.81
JAPAN	780513	554	16839	349.6 18324.8	109	2.0	9	0.74
JAPAN	780617	550	16820	347.3 18287.6	76	3.8	17	0.56

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

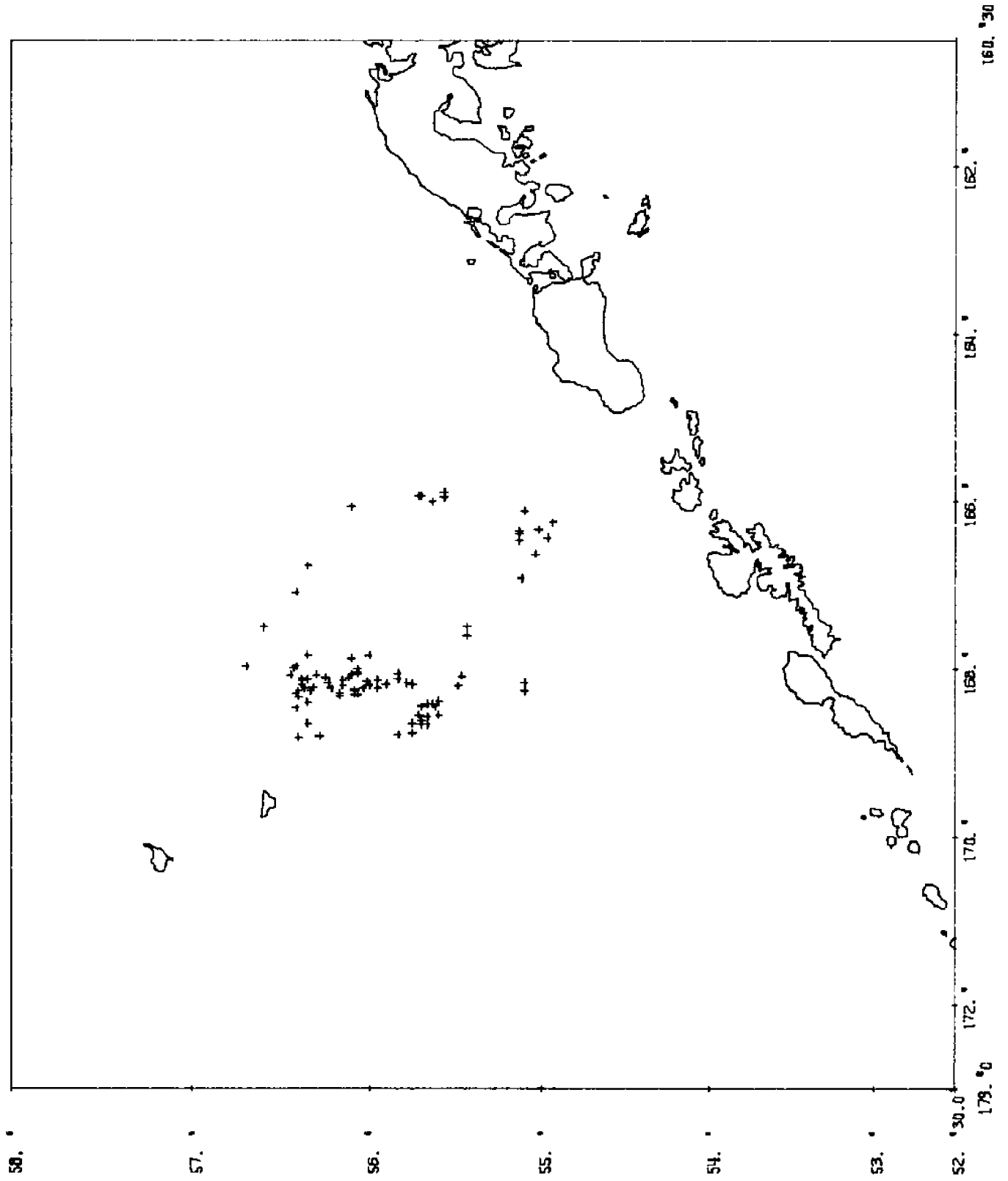


FIGURE F-3. WALLEYE POLLOCK, APRIL-JUNE, 1978

TABLE F-7. WALLEYE POLLOCK, JULY-SEPTEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 9 15	54 42	165 31	481 57.8	147	0.7	148551	212.21
JAPAN	78 9 16	56 00	169 45	497 66.1	182	0.9	165359	183.73
JAPAN	78 9 17	54 43	165 27	481 36.3	129	1.0	172904	172.90
JAPAN	78 7 14	56 00	169 52	487 60.5	193	1.1	1642968	149.85
JAPAN	78 7 23	55 03	166 27	485 19.8	78	0.8	922702	131.72
JAPAN	78 7 23	56 09	169 53	484 62.7	72	1.2	140099	116.74
JAPAN	78 7 11	55 39	168 41	493 51.8	99	1.2	189436	111.43
JAPAN	78 7 14	54 51	166 17	484 31.9	109	2.0	217736	108.86
JAPAN	78 7 13	54 48	165 30	484 72.0	137	2.7	210766	105.36
JAPAN	78 9 15	54 40	165 32	481 48.9	137	1.3	166766	96.92
JAPAN	78 8 15	54 38	165 34	481 56.3	105	1.6	153958	95.86
JAPAN	78 8 15	56 03	169 39	497 19.8	149	1.5	153390	95.74
JAPAN	78 9 13	54 40	168 44	481 81.4	128	1.5	127032	90.71
JAPAN	78 9 23	54 53	168 44	483 70.5	117	2.0	131425	85.46
JAPAN	78 9 18	56 01	169 40	487 15.5	136	2.3	179133	83.18
JAPAN	78 9 11	54 38	165 31	481 51.2	140	1.5	124379	82.91
JAPAN	78 9 11	55 41	168 46	493 84.1	103	2.0	124928	78.92
JAPAN	78 9 13	54 45	165 35	481 47.0	134	1.0	165515	78.81
JAPAN	78 9 19	54 43	165 27	481 86.3	150	2.1	156742	78.37
JAPAN	78 9 16	54 41	165 31	481 46.4	149	2.1	155621	74.30
JAPAN	78 9 16	56 07	169 47	487 56.0	134	2.4	151835	72.32
JAPAN	78 9 29	54 48	166 42	485 98.7	83	2.3	172419	72.61
JAPAN	78 9 29	54 56	167 07	484 60.0	113	2.0	162419	70.61
JAPAN	78 9 18	54 46	166 46	482 91.5	125	2.3	141029	70.51
JAPAN	78 8 42	56 07	169 36	487 71.3	91	1.5	190685	69.54
JAPAN	78 8 15	54 39	165 31	497 23.7	103	2.0	137858	69.78
JAPAN	78 8 27	54 49	168 07	481 52.8	148	2.2	149656	68.93
JAPAN	78 8 27	56 03	168 07	483 88.6	80	1.1	107996	67.49

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 713	54527	16277	18237	48496	89	4	29403	63.13
JAPAN	78 712	55441	16847	18340	49410	94	1	10603	62.33
JAPAN	78 716	56053	16941	18351	49737	78	1	10609	60.93
JAPAN	78 715	54520	16625	18239	48515	89	2	15104	60.41
JAPAN	78 821	56069	16613	18305	49728	127	3	19296	60.30
JAPAN	78 921	54469	16511	18267	48405	110	2	19607	59.16
JAPAN	78 871	56042	16942	18277	49728	95	1	58827	58.82
JAPAN	78 715	54429	16625	18225	48479	101	3	58557	58.26
JAPAN	78 916	54487	16941	18275	48274	108	3	50970	55.93
JAPAN	78 718	56077	16533	18365	48166	107	4	55583	55.85
JAPAN	78 914	54355	16525	18299	48106	140	6	55583	55.85
JAPAN	78 714	55649	16823	18285	49066	190	2	18580	55.62
JAPAN	78 711	55411	16713	18301	48634	108	3	18156	53.40
JAPAN	78 924	54579	16544	18201	48265	138	1	10631	53.71
JAPAN	78 715	54515	16623	18333	48486	191	2	16340	52.64
JAPAN	78 918	54515	16623	18333	48486	162	3	16190	52.13
JAPAN	78 730	56083	16948	18355	49779	138	2	16161	51.92
JAPAN	78 728	55033	16537	18257	48519	82	1	38354	51.54
JAPAN	78 919	54458	16547	18250	48165	87	3	87609	51.94
JAPAN	78 911	54458	16547	18250	49762	127	1	87606	51.92
JAPAN	78 718	56080	16944	18369	49752	134	3	13531	50.00
JAPAN	78 823	56065	16717	18242	48814	87	3	18021	48.61
JAPAN	78 723	54535	16650	18200	48676	77	3	48419	48.09
JAPAN	78 928	54417	16940	18199	48698	143	5	96825	48.07
JAPAN	78 729	56062	16630	18218	49847	79	3	18581	47.64
JAPAN	78 719	55062	16630	18264	49692	74	3	18581	47.64
JAPAN	78 915	54427	16533	18267	48111	136	1	79454	46.73
JAPAN	78 912	54478	16539	18265	48111	119	3	17558	46.20
JAPAN	78 921	54444	16632	18205	48543	132	3	17558	46.20
JAPAN	78 911	54444	16632	18205	48166	131	3	14187	45.76
JAPAN	78 924	55000	16719	18208	48166	133	3	11344	45.37
JAPAN	78 924	55000	16719	18208	48166	133	3	16708	43.96

*** NOTE ** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 78	5611	16801	7X 18531	7Z 49225	79	2	737	25
JAPAN	78 78	5508	16706	18261	48510	84	4	1650	25
JAPAN	78 78	5445	16631	18302	48510	104	3	899	24
JAPAN	78 78	5438	16533	18234	48162	136	2	646	24
JAPAN	78 78	5446	16630	18204	48507	136	3	693	24
JAPAN	78 78	5525	16707	18199	48549	132	2	328	24
JAPAN	78 78	5440	16551	18223	48269	164	4	335	24
JAPAN	78 78	5514	16651	18359	48805	182	0	775	24
JAPAN	78 78	5610	16952	18359	48805	182	7	572	24
JAPAN	78 78	5607	16543	18307	48252	60	9	464	24
JAPAN	78 78	5452	16812	18371	48267	78	2	774	24
JAPAN	78 78	5535	16800	18331	49133	76	0	103	24
JAPAN	78 78	5525	16800	18384	49033	78	0	82	24
JAPAN	78 78	5613	16954	18376	49154	98	5	121	23
JAPAN	78 78	5526	16709	18201	48754	126	4	169	22
JAPAN	78 78	5451	16620	18240	48455	129	0	124	22
JAPAN	78 78	5615	16951	18398	48223	70	7	439	22
JAPAN	78 78	5447	16537	18259	48695	92	4	234	22
JAPAN	78 78	5607	16938	18373	48200	150	7	347	22
JAPAN	78 78	5407	16813	18258	48264	150	2	396	22
JAPAN	78 78	5509	16611	18237	48397	182	0	142	22
JAPAN	78 78	5602	16935	18307	48098	135	3	190	21
JAPAN	78 78	5457	16547	18278	48415	198	5	568	21
JAPAN	78 78	5618	16801	18264	48240	197	1	273	21
JAPAN	78 78	5448	16748	18271	48359	187	6	402	21
JAPAN	78 78	5525	16707	18302	48028	187	7	370	21
JAPAN	78 78	5504	16741	18249	48336	187	8	255	21
JAPAN	78 78	5525	16707	18302	48028	186	7	309	21
JAPAN	78 78	5502	16632	18240	48625	194	2	151	21
JAPAN	78 78	5440	16529	18273	48769	197	4	246	21
JAPAN	78 78	5507	16529	18273	48769	197	5	246	21
JAPAN	78 78	5440	16529	18273	48769	197	2	151	21
JAPAN	78 78	5507	16529	18273	48769	197	2	151	21

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780728	552033	167494	7X	7Z	85	0	104498	17.41
JAPAN	780728	552009	168041	7X	7Z	80	0	51390	17.08
JAPAN	780728	554485	166518	7X	7Z	112	5	93940	17.02
JAPAN	780728	544488	166062	7X	7Z	197	1	65277	16.76
JAPAN	780728	544488	166062	7X	7Z	197	1	44683	16.54
JAPAN	780728	550353	167077	7X	7Z	97	0	64863	16.21
JAPAN	780728	550353	167077	7X	7Z	97	0	43714	16.19
JAPAN	780728	550353	167226	7X	7Z	133	0	48372	16.12
JAPAN	780728	550353	167226	7X	7Z	133	0	63738	15.93
JAPAN	780728	544036	165336	7X	7Z	104	0	63187	15.79
JAPAN	780728	544036	165336	7X	7Z	104	0	35958	15.63
JAPAN	780728	560482	166213	7X	7Z	149	3	23398	15.59
JAPAN	780728	560482	166213	7X	7Z	149	3	35989	15.54
JAPAN	780728	544036	166138	7X	7Z	87	5	38668	15.46
JAPAN	780728	544036	166138	7X	7Z	87	5	46370	15.45
JAPAN	780728	545029	166333	7X	7Z	148	3	73989	15.41
JAPAN	780728	545029	166333	7X	7Z	148	3	46166	15.48
JAPAN	780728	560300	168099	7X	7Z	135	2	53823	15.37
JAPAN	780728	560300	168099	7X	7Z	135	2	41804	15.30
JAPAN	780728	544036	165405	7X	7Z	172	5	19804	15.23
JAPAN	780728	544036	165405	7X	7Z	172	5	37117	15.28
JAPAN	780728	543877	165581	7X	7Z	154	3	54735	14.81
JAPAN	780728	543877	165581	7X	7Z	154	3	39141	14.74
JAPAN	780728	551277	167413	7X	7Z	132	6	72130	14.72
JAPAN	780728	551277	167413	7X	7Z	132	6	33829	14.70
JAPAN	780728	544515	167413	7X	7Z	128	5	39666	14.60
JAPAN	780728	560229	165458	7X	7Z	87	6	24786	14.58
JAPAN	780728	560229	165458	7X	7Z	87	6	50765	14.50
JAPAN	780728	544515	167088	7X	7Z	136	3	43237	14.46
JAPAN	780728	544515	167088	7X	7Z	136	3	69092	14.41
JAPAN	780728	545132	167481	7X	7Z	103	8	69092	14.39
JAPAN	780728	545132	167481	7X	7Z	103	8	86222	14.37
JAPAN	780728	550353	166375	7X	7Z	83	6	21494	14.32
JAPAN	780728	550353	166375	7X	7Z	83	6	34156	14.23

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780827	5456	16626	7X	7Y	84	4.0	76578	14.08
JAPAN	780827	5444	16607	3	99.5	132	3.4	46940	13.80
JAPAN	780827	5446	16603	4	50.3	120	3.4	58040	13.80
JAPAN	780829	5454	16552	2	62.5	1	6.2	52094	13.68
JAPAN	780814	5449	16607	0	39.0	1	3.8	51694	13.60
JAPAN	780820	5557	16810	3	42.0	83	1.0	25793	13.57
JAPAN	780823	5619	16944	6	91.3	77	3.1	41967	13.53
JAPAN	780820	5602	16953	1	73.8	125	4.5	60112	13.54
JAPAN	780823	5545	16702	3	46.0	142	4.5	95270	13.32
JAPAN	780827	5442	16645	1	105.7	1	7.0	60944	13.32
JAPAN	780830	5608	16945	6	89.1	79	2.2	35684	13.21
JAPAN	780819	5402	16935	4	22.0	23	3.8	26221	13.21
JAPAN	780827	5451	16632	4	78.5	102	1.3	16281	12.88
JAPAN	780827	5441	16648	5	81.1	178	3.6	48712	12.81
JAPAN	780827	5454	16804	6	14.4	119	2.1	43254	12.79
JAPAN	780827	5407	16609	9	23.3	80	0.8	25803	12.53
JAPAN	780828	5445	16547	1	86.0	125	3.0	47773	12.53
JAPAN	780829	5446	16632	0	37.0	142	3.3	47069	12.34
JAPAN	780829	5441	16555	3	72.3	138	3.5	40749	12.34
JAPAN	780816	5601	16813	6	91.6	84	1.2	18208	12.04
JAPAN	780810	5449	16549	9	27.0	74	3.4	25294	12.04
JAPAN	780813	5501	16714	1	92.1	98	5.6	40640	11.95
JAPAN	780818	5517	16740	2	62.5	109	3.1	45294	11.92
JAPAN	780818	5445	16523	5	14.8	153	4.1	48715	11.88
JAPAN	780819	5441	16739	8	31.6	101	3.3	39115	11.85
JAPAN	780821	5443	16541	5	25.8	112	4.6	54713	11.77
JAPAN	780821	5458	16541	4	90.4	137	3.9	41529	11.60
JAPAN	780821	5448	16557	1	20.8	100	2.3	33653	11.60
JAPAN	780821	5448	16557	1	20.8	100	2.3	33653	11.60
JAPAN	780821	5448	16557	1	20.8	100	2.3	33653	11.60

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780807	5511	16734	182503	48913	9	4	17254	11.49
JAPAN	780807	5445	16949	182503	48913	9	4	17254	11.49
JAPAN	780807	5445	16701	182503	48913	9	4	17254	11.49
JAPAN	780807	5505	16555	182503	48913	9	4	17254	11.49
JAPAN	780807	5450	16558	182503	48913	9	4	17254	11.49
JAPAN	780807	5446	16529	182503	48913	9	4	17254	11.49
JAPAN	780807	5607	16809	182503	48913	9	4	17254	11.49
JAPAN	780807	5612	16934	182503	48913	9	4	17254	11.49
JAPAN	780807	5605	16705	182503	48913	9	4	17254	11.49
JAPAN	780807	5502	16728	182503	48913	9	4	17254	11.49
JAPAN	780807	5510	16943	182503	48913	9	4	17254	11.49
JAPAN	780807	5502	16533	182503	48913	9	4	17254	11.49
JAPAN	780807	5646	16746	182503	48913	9	4	17254	11.49
JAPAN	780807	5446	16730	182503	48913	9	4	17254	11.49
JAPAN	780807	5520	16746	182503	48913	9	4	17254	11.49
JAPAN	780807	5446	16546	182503	48913	9	4	17254	11.49
JAPAN	780807	5556	16946	182503	48913	9	4	17254	11.49
JAPAN	780807	5619	16805	182503	48913	9	4	17254	11.49
JAPAN	780807	5458	16717	182503	48913	9	4	17254	11.49
JAPAN	780807	5446	16608	182503	48913	9	4	17254	11.49
JAPAN	780807	5525	16825	182503	48913	9	4	17254	11.49
JAPAN	780807	5459	16719	182503	48913	9	4	17254	11.49
JAPAN	780807	5536	16825	182503	48913	9	4	17254	11.49
JAPAN	780807	5517	16948	182503	48913	9	4	17254	11.49
JAPAN	780807	5504	16711	182503	48913	9	4	17254	11.49

*** NOTE ** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780728	55340	168068	7X	7Z	79	3.5	278	8.5
JAPAN	780719	55113	167359	7X	7Z	129	3.2	254	8.0
JAPAN	780830	54443	166507	7X	7Z	131	3.2	208	6.5
JAPAN	780827	56077	166935	7X	7Z	104	3.3	164	5.0
JAPAN	780714	54446	166114	7X	7Z	122	3.4	285	8.4
JAPAN	780716	55044	166339	7X	7Z	179	3.5	388	11.1
JAPAN	780811	55044	166356	7X	7Z	158	3.5	291	8.3
JAPAN	780712	55043	166150	7X	7Z	144	3.2	289	9.0
JAPAN	780917	55051	16650	7X	7Z	180	3.8	348	9.2
JAPAN	780917	54467	16556	7X	7Z	86	3.0	289	9.6
JAPAN	780822	56071	16811	7X	7Z	120	3.2	248	7.8
JAPAN	780817	55416	16747	7X	7Z	184	3.1	330	10.7
JAPAN	780817	55135	16608	7X	7Z	110	3.1	233	7.5
JAPAN	780715	55135	16744	7X	7Z	109	3.4	269	7.9
JAPAN	780725	55135	16646	7X	7Z	189	3.4	300	9.0
JAPAN	780716	55242	16727	7X	7Z	155	3.3	221	6.6
JAPAN	780716	55242	16629	7X	7Z	166	3.3	240	7.2
JAPAN	780823	54466	16536	7X	7Z	185	3.5	320	9.1
JAPAN	780822	55150	16851	7X	7Z	82	3.4	195	5.7
JAPAN	780819	54501	16635	7X	7Z	115	3.4	272	7.9
JAPAN	780825	5609	16812	7X	7Z	83	3.5	244	6.9
JAPAN	780822	5509	16543	7X	7Z	84	3.5	287	8.2
JAPAN	780902	5443	16558	7X	7Z	93	3.5	325	9.3
JAPAN	780902	5443	16550	7X	7Z	147	3.5	459	13.1
JAPAN	780821	5443	16552	7X	7Z	144	3.2	409	12.6
JAPAN	780809	5446	16552	7X	7Z	117	3.2	184	5.7

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LRS PER HOUR
JAPAN	78 9 18	5440	16548	18277.6	7X 251.9	144	2.5	21501	1.07
USSR	78 9 16	5755	16728	18742.3	98.2	35	3.6	26017	1.03
USSR	78 9 14	5756	16719	18742.1	72 48971.4	35	3.1	32527	1.02
USSR	78 9 10	5742	16728	18749.7	48007.5	35	2.6	24757	0.95
USSR	78 9 22	5752	16721	18741.9	48815.1	35	3.2	29577	0.92
JAPAN	78 8 17	5600	16815	18461.3	48936.0	38	1.6	13966	0.83
USSR	78 8 28	5613	16947	18745.9	49288.8	1	6.1	50220	0.83
USSR	78 9 06	5759	16658	18744.8	48908.5	35	4.0	21503	0.63
USSR	78 9 24	5751	16722	18750.8	48779.5	35	2.6	21622	0.62
USSR	78 9 27	5754	16659	18745.5	48784.8	35	3.2	17251	0.56

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

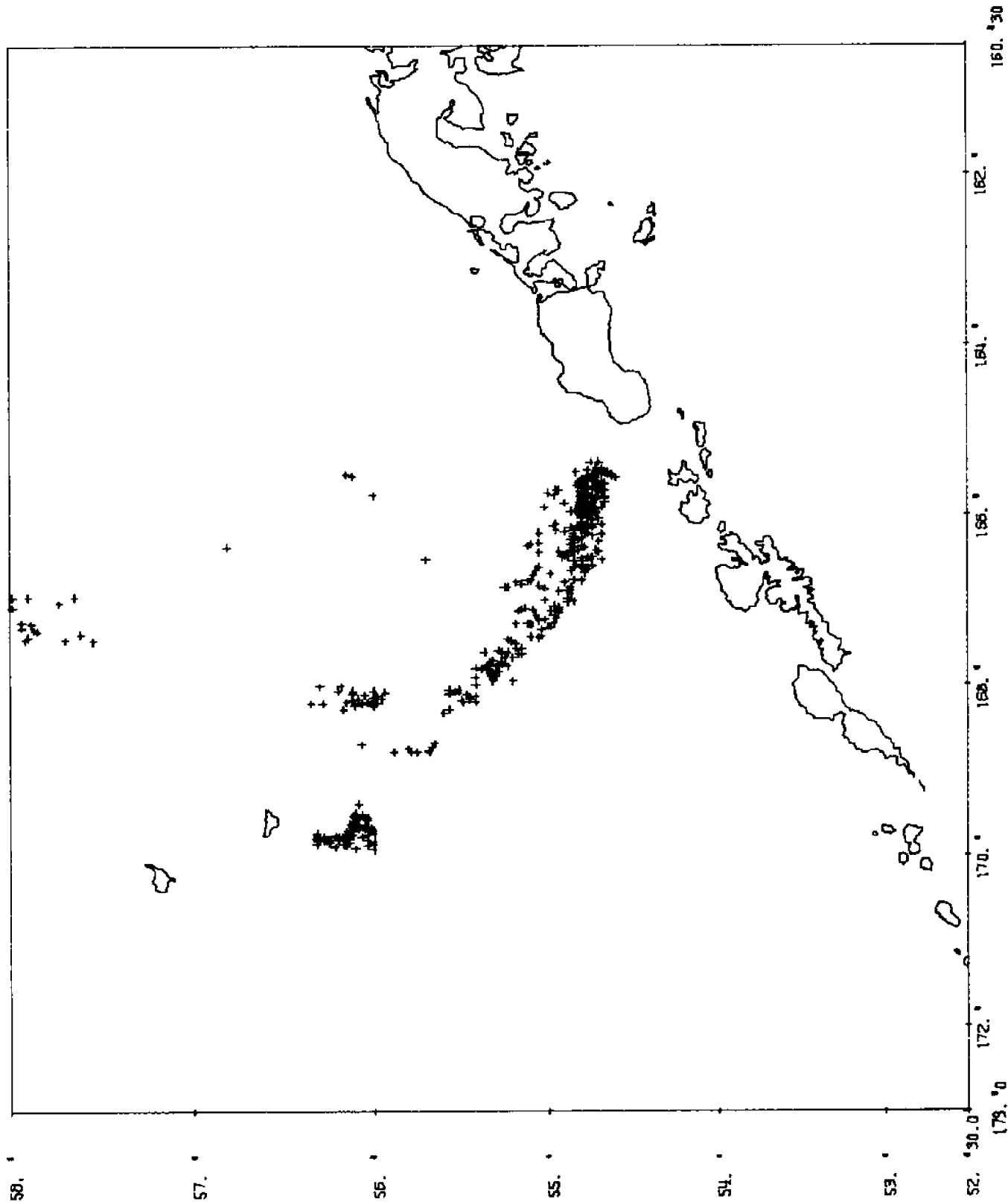


FIGURE F-4. WALLEYE POLLOCK, JULY-SEPTEMBER, 1978

TABLE F-8. WALLEYE POLLOCK, OCTOBER-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781105	5445	16540	48214.9	141	1.1	87960	79.96
JAPAN	781015	5445	16535	48186.3	133	1.1	76423	69.47
JAPAN	781008	5444	16632	48510.3	119	2.2	15729	68.38
JAPAN	781004	5444	16632	48507.1	109	2.0	13157	65.78
JAPAN	781012	5446	16615	48476.5	112	2.8	12801	60.61
JAPAN	781009	5443	16614	48416.4	137	1.5	10839	60.92
JAPAN	781007	5443	16632	48404.7	144	2.2	11552	57.76
JAPAN	781005	5445	16643	48158.6	132	2.4	13761	57.34
JAPAN	781014	5445	16635	48425.3	129	2.5	13411	53.64
JAPAN	781011	5445	16535	48188.3	133	2.7	13890	51.44
JAPAN	781103	5441	16529	48144.6	139	2.0	9000	49.50
JAPAN	781105	5442	16605	48361.9	117	1.8	5940	49.50
JAPAN	781004	5442	16638	48574.2	102	3.0	8706	48.37
JAPAN	781018	5442	16609	48574.2	131	3.5	13449	44.81
JAPAN	781108	5445	16525	48565.8	148	3.4	15245	44.26
JAPAN	781016	5442	16525	48127.8	150	3.4	18375	43.76
JAPAN	781007	5442	16543	48146.6	117	2.1	8325	41.64
JAPAN	781022	5446	16638	48408.9	138	2.6	9881	38.00
JAPAN	781025	5444	16633	48408.3	155	3.2	19647	37.40
JAPAN	781017	5444	16630	48549.6	121	3.8	19677	37.10
JAPAN	781022	5444	16633	48549.2	111	2.2	9077	35.93
JAPAN	781019	5446	16649	48448.6	147	3.5	10861	35.24
JAPAN	781028	5446	16621	48512.7	147	2.6	8786	35.91
JAPAN	781028	5446	16621	48555.0	151	3.5	10421	34.73
JAPAN	781023	5444	16638	48439.8	124	2.0	8360	34.74
JAPAN	781023	5444	16638	48446.9	142	3.0	9420	33.20
JAPAN	781023	5444	16638	48451.6	142	3.9	9420	31.40
JAPAN	781023	5444	16638	48451.6	151	3.4	10467	31.26
JAPAN	781027	5444	16633	48507.4	141	3.4	10467	30.98
JAPAN	781027	5444	16633	48507.4	153	3.4	11881	32.81
JAPAN	781027	5444	16633	48507.4	198	3.0	8616	28.72

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781010	5452	16547	18254	487	102	3	685	227
JAPAN	781011	5446	16543	18207	485	123	1	513	227
JAPAN	781012	5446	16604	18237	485	119	3	482	227
JAPAN	781013	5446	16615	18222	485	108	3	463	227
JAPAN	781014	5445	16620	18262	485	108	0	536	227
JAPAN	781015	5443	16529	18229	485	126	0	657	226
JAPAN	781016	5443	16538	18229	485	135	0	518	226
JAPAN	781017	5445	16652	18209	485	119	0	667	226
JAPAN	781018	5445	16628	18226	485	139	0	539	226
JAPAN	781019	5448	16621	18263	485	138	0	649	225
JAPAN	781020	5445	16649	18215	485	139	0	555	225
JAPAN	781021	5445	16631	18235	485	117	0	647	225
JAPAN	781022	5445	16654	18214	485	120	0	560	225
JAPAN	781023	5445	16631	18264	485	134	0	641	225
JAPAN	781024	5445	16539	18269	485	134	0	580	223
JAPAN	781025	5445	16521	18252	485	131	0	623	223
JAPAN	781026	5445	16545	18187	485	131	0	591	222
JAPAN	781027	5445	16616	18184	485	131	0	640	222
JAPAN	781028	5445	16638	18189	485	153	0	587	221
JAPAN	781029	5443	16620	18207	485	153	0	520	220
JAPAN	781030	5443	16529	18247	485	118	0	483	220
JAPAN	781031	5440	16645	18244	485	126	0	594	220
JAPAN	781032	5450	16647	18204	485	118	0	583	219
JAPAN	781033	5447	16630	18248	485	114	0	591	219
JAPAN	781034	5447	16635	18194	485	114	0	541	219
JAPAN	781035	5448	16639	18250	485	132	0	591	219
JAPAN	781036	5447	16629	18202	485	114	0	530	219
JAPAN	781037	5447	16537	18264	485	115	0	690	219
JAPAN	781038	5446	16558	18242	485	120	0	600	216

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PFR HOUR
JAPAN	781023	54523	16704	18209.8	48719.0	158	4.0	1055	1.026
JAPAN	781032	54452	16649	18213.9	48746.7	126	4.4	3787	0.733
JAPAN	781026	54532	16652	18210.1	48746.4	125	5.0	5879	0.919
JAPAN	781027	54425	16529	18256.3	48788.8	147	3.3	1788	0.907
JAPAN	781029	54445	16638	18260.7	48766.7	131	4.2	3107	0.787
JAPAN	781030	54449	16630	18219.0	48780.3	114	4.0	1902	0.727
JAPAN	781115	54483	16644	18458.2	48502.0	116	5.0	1223	0.964
JAPAN	781116	54408	16530	18246.1	48527.0	138	3.0	630	0.404
JAPAN	781022	54428	16505	18220.4	48505.3	111	2.2	380	0.812
USSR	781019	57162	16513	18723.7	48104.6	337	2.2	11	0.643
USSR	781018	54428	16548	18225.3	48068.5	118	2.5	182	0.529
USSR	781114	57108	16515	18239.6	48066.5	134	2.1	207	0.529
USSR	781022	56558	16553	18230.2	48033.7	135	2.5	262	0.947
USSR	781022	56558	16554	18230.5	48033.3	134	2.5	285	0.868
USSR	781022	56558	16526	18705.4	48138.4	132	3.1	187	0.761
USSR	781022	56558	16510	18720.5	48132.0	134	3.0	271	0.904
USSR	781029	57067	16605	18721.1	48254.6	141	3.0	437	1.277
USSR	781020	57465	16530	18750.7	48283.9	139	2.4	251	0.832
USSR	781020	57055	16450	18726.4	48031.7	136	3.6	533	1.777
USSR	781022	56543	16436	18715.4	48031.7	137	2.5	215	0.777
USSR	781022	57035	16441	18698.3	48066.3	135	2.5	215	0.646
USSR	781022	57035	16519	18716.2	48395.3	139	2.0	173	0.488
USSR	781022	57035	16502	18716.2	48395.3	139	2.0	173	0.488
USSR	781022	57142	16412	18749.4	48010.8	142	1.5	129	0.336
USSR	781023	57328	16412	18725.7	48210.7	139	2.2	287	0.819
USSR	781027	54385	16531	18748.6	48262.7	135	2.0	160	0.465
USSR	781028	57051	16456	18715.4	48222.8	139	2.5	342	0.916
USSR	781021	57105	16538	18724.4	48333.1	139	3.0	402	1.115
USSR	781021	57105	16538	18724.4	48333.1	139	3.0	402	1.115
USSR	781022	57105	16617	18719.3	48333.1	139	2.3	227	0.612
USSR	781022	57105	16617	18719.3	48333.1	139	2.3	227	0.612

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781020	5705	16528	18716.9	48107.5	35	2.8	2478	882
USSR	781026	5741	16559	18716.1	48129.3	35	2.2	1599	719
USSR	781130	5733	16603	18747.3	4846.8	35	2.2	1187	79
JAPAN	781123	5709	16611	18725.1	4854.6	40	2.4	1852	75
JAPAN	781019	5705	16505	18716.0	48107.2	35	2.2	1369	73
USSR	781128	5717	16518	18731.7	4848.5	35	2.2	1547	73
JAPAN	781121	5712	16634	18730.4	4869.5	30	2.2	1381	68
JAPAN	781214	5537	16517	18696.1	4932.4	1	2.4	1431	68
JAPAN	781027	5553	16639	18741.9	48122.3	1	2.4	2054	88
USSR	781026	5728	16553	18719.7	4808.9	35	2.2	1354	65
JAPAN	781124	5657	16706	18749.0	4808.2	35	2.2	1706	65
USSR	781130	5651	16536	18703.8	4890.9	2	2.2	1	61
JAPAN	781026	5431	16647	18200.6	48167.8	39	2.6	1	61
USSR	781022	5712	16426	18731.7	48185.6	1	3.0	1816	60
USSR	781027	5702	16444	18725.1	4878.7	33	3.0	1265	58
JAPAN	781019	5711	16504	18729.2	4795.4	3	3.0	1265	55
USSR	781127	5701	16448	18725.3	4809.5	37	2.9	1612	55
USSR	781019	5713	16434	18730.9	4788.7	33	2.2	1628	55
USSR	781019	5711	16434	18722.5	4789.5	33	2.2	1628	55
JAPAN	781124	5716	16643	18722.5	4870.7	33	3.0	1832	52
USSR	781124	5706	16508	18717.5	4870.7	33	3.0	1832	52

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION.***

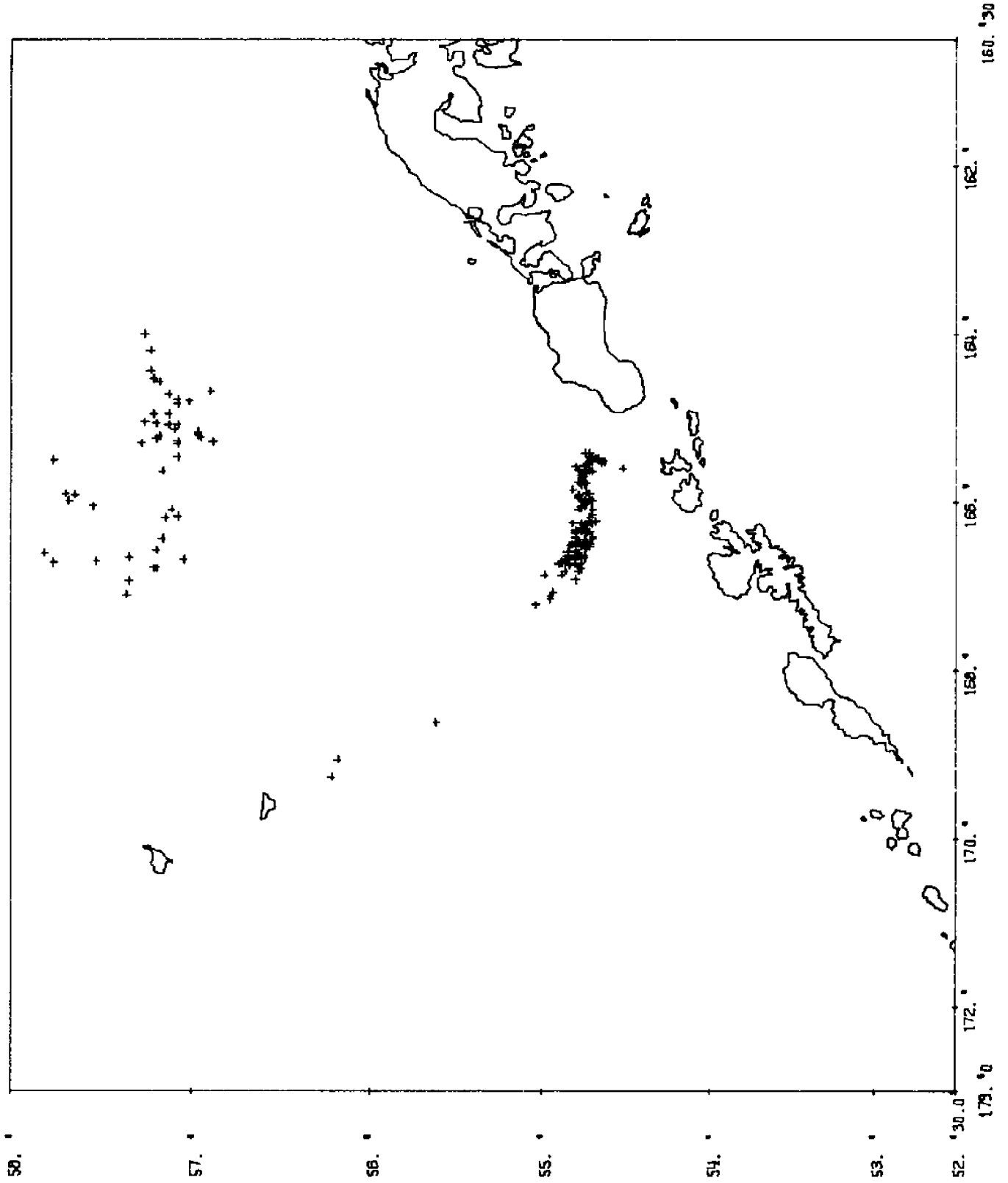


FIGURE F-5. WALLEYE POLLOCK, OCTOBER-DECEMBER, 1978

TABLE F-9. PACIFIC COD, JANUARY-MARCH, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 2 21	5547	16846	18342.5 7X	49405.2 7Z	87	1.2	10565	8.80
JAPAN	78 3 2	5551	16850	18360.7	49439.5	84	2.0	5882	2.94
JAPAN	78 2 17	5542	16845	18313.1	49382.5	87	2.7	6427	2.38
JAPAN	78 2 14	5540	16851	18352.8	49441.2	84	1.9	4052	2.12
JAPAN	78 2 16	5548	16846	18348.3	49408.7	84	1.5	3052	2.03
JAPAN	78 2 23	5545	16847	18328.3	49403.2	94	2.0	4937	1.08
JAPAN	78 2 19	5629	16828	18600.8	49430.3	69	1.0	2944	0.93
JAPAN	78 2 22	5512	16849	18116.8	49294.5	75	3.2	2957	0.92
JAPAN	78 2 22	5547	16847	18360.4	49410.3	84	1.8	1557	0.86
JAPAN	78 2 14	5540	16844	18302.4	49370.4	90	1.1	943	0.85
JAPAN	78 2 12	5544	16846	18323.8	49396.6	87	1.1	927	0.84
JAPAN	78 2 23	5522	16851	18209.4	49258.5	80	3.7	2389	0.75
JAPAN	78 3 21	5554	16734	18377.8	49455.3	73	1.7	2215	0.71
JAPAN	78 2 24	5554	16734	18352.9	49462.5	93	1.6	2008	0.63
JAPAN	78 3 3	5608	16836	18482.5	49421.4	81	2.0	1641	0.63
JAPAN	78 3 6	5606	16736	18524.5	49062.8	71	3.0	1751	0.58
JAPAN	78 3 5	5619	16738	18541.5	49083.2	74	3.6	1837	0.51
JAPAN	78 3 3	5619	16734	18582.8	49074.7	73	2.5	1252	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

TABLE F-10. PACIFIC COD, APRIL-JUNE, 1978

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780624	5507	16803	18420.9	49182.6	74	0.6	10529	17.53
JAPAN	780630	5554	16814	18445.2	49264.2	82	1.0	19379	19.37
JAPAN	780629	5604	16803	18494.2	49220.9	86	3.2	26509	7.53
JAPAN	780629	5602	16815	18488.2	49292.9	84	2.2	17807	7.80
JAPAN	780619	5604	16818	18479.9	49307.4	91	3.7	11983	3.41
JAPAN	780630	5506	16830	18337.1	49315.8	78	6.0	14737	3.45
JAPAN	780630	5509	16816	18515.9	49262.3	80	4.0	14378	3.54
JAPAN	780631	5540	16832	18358.5	49329.1	82	6.5	11323	2.74
JAPAN	780631	5506	16815	18462.7	49325.6	88	5.2	11335	2.16
JAPAN	780630	5506	16818	18485.4	49310.2	91	5.7	14356	1.68
JAPAN	780624	5601	16819	18476.9	49247.5	87	4.5	14285	1.66
JAPAN	780624	5604	16800	18496.4	49202.2	92	3.2	14295	1.64
JAPAN	780624	5540	16840	18309.4	49235.0	82	1.2	13775	1.32
JAPAN	780624	5540	16802	18409.5	49214.5	92	1.2	13259	1.12
JAPAN	780614	5529	16804	18302.5	49126.5	92	2.0	22048	1.10
JAPAN	780615	5530	16807	18308.1	49162.5	108	2.1	20480	1.00
JAPAN	780620	5540	16822	18395.8	49214.5	84	3.2	13408	1.00
JAPAN	780626	5600	16750	18485.2	49139.4	76	2.2	16449	0.94
JAPAN	780615	5606	16758	18513.2	49185.7	74	2.0	10801	0.90
JAPAN	780615	5526	16807	18289.6	49149.4	112	1.0	8673	0.80
JAPAN	780621	5542	16827	18339.8	49224.6	79	1.0	7773	0.77
JAPAN	780615	5547	16833	18358.8	49227.6	79	1.0	7149	0.70
JAPAN	780615	5527	16809	18341.6	49362.1	102	1.0	6421	0.57
JAPAN	780630	5529	16803	18391.0	49115.3	79	1.2	11421	0.90
JAPAN	780630	5547	16829	18358.8	49115.3	102	3.3	16323	0.50
JAPAN	780630	5547	16852	18341.6	49402.3	69	3.3	15236	0.50
JAPAN	780630	5547	16831	18371.2	49407.5	67	3.3	11521	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

TABLE F-11. PACIFIC COD, JULY-SEPTEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 720	5617	16947	49814.9	77	1.0	14230	14.23
JAPAN	78 720	5617	16947	49814.9	92	0.6	17594	12.62
JAPAN	78 715	5603	16945	49767.3	96	0.9	10465	11.62
JAPAN	78 715	5603	16939	49719.3	94	1.6	17825	11.18
JAPAN	78 714	5600	16952	49760.5	93	1.1	19843	11.09
JAPAN	78 915	5438	16932	48156.9	143	1.3	19870	8.66
JAPAN	78 711	5541	16846	49384.0	104	0.5	18342	8.34
JAPAN	78 820	5644	16609	48388.6	192	1.2	29057	8.30
JAPAN	78 829	5446	16557	48314.6	144	1.5	18950	7.58
JAPAN	78 719	5602	16938	48393.6	134	1.5	25083	7.53
JAPAN	78 724	5608	16946	49328.0	172	1.8	23624	7.21
JAPAN	78 727	5644	16846	48350.4	130	0.5	13262	6.02
JAPAN	78 713	5440	16535	48370.4	134	1.1	18031	6.60
JAPAN	78 913	5452	16521	48462.6	187	0.8	19207	5.96
JAPAN	78 821	5603	16950	49752.3	154	1.1	19383	5.23
JAPAN	78 827	5613	16946	49793.7	159	1.7	19376	5.16
JAPAN	78 828	5446	16955	48301.5	115	0.5	10385	4.74
JAPAN	78 823	5602	16933	49689.2	147	1.1	16272	4.71
JAPAN	78 823	5602	16923	49677.2	89	0.5	19298	4.63
JAPAN	78 820	5609	16944	49761.2	83	0.5	10988	4.39
JAPAN	78 924	5619	16707	49811.3	85	0.7	8508	4.22
JAPAN	78 711	5456	16841	48727.8	129	0.7	7178	4.22
JAPAN	78 924	5539	16841	48351.6	98	0.7	11301	4.00
JAPAN	78 828	5448	16509	48329.8	96	0.7	12069	3.95
JAPAN	78 828	5445	16501	48335.5	123	0.7	10669	3.79
JAPAN	78 828	5447	16539	48822.5	116	0.3	12511	3.77
JAPAN	78 828	5447	16542	48822.5	116	0.3	11722	3.77

*** NOTE. *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780827	5450	16559	7X	7Z	119	2.8	82406	3.0
JAPAN	780827	5450	16559	7X	7Z	191	2.1	66064	3.1
JAPAN	780827	5445	16609	7X	7Z	138	3.3	11709	3.5
JAPAN	780827	5445	16609	7X	7Z	88	2.5	9049	3.6
JAPAN	780827	5446	16608	7X	7Z	118	3.0	10738	3.5
JAPAN	780827	5440	16944	7X	7Z	126	2.8	11085	3.9
JAPAN	780827	5443	16555	7X	7Z	147	1.7	6165	3.5
JAPAN	780827	5443	16555	7X	7Z	121	1.9	5781	3.0
JAPAN	780827	5603	16943	7X	7Z	104	2.8	9625	3.4
JAPAN	780827	5607	16937	7X	7Z	103	2.0	6570	3.3
JAPAN	780827	5607	16937	7X	7Z	108	2.5	5389	2.2
JAPAN	780827	5448	16558	7X	7Z	80	2.6	2262	2.8
JAPAN	780827	5448	16558	7X	7Z	100	2.5	1258	2.5
JAPAN	780827	5606	16931	7X	7Z	110	2.5	766	2.5
JAPAN	780827	5531	16805	7X	7Z	78	1.5	447	2.9
JAPAN	780827	5531	16805	7X	7Z	95	2.5	1637	2.2
JAPAN	780827	5458	16747	7X	7Z	95	2.5	1637	2.2
JAPAN	780827	5458	16747	7X	7Z	120	1.0	716	2.8
JAPAN	780827	5503	16553	7X	7Z	76	2.0	366	2.7
JAPAN	780827	5503	16553	7X	7Z	76	2.0	366	2.7
JAPAN	780827	5507	16803	7X	7Z	105	1.5	431	2.2
JAPAN	780827	5507	16803	7X	7Z	105	1.5	431	2.2
JAPAN	780827	5609	16939	7X	7Z	105	1.5	431	2.2
JAPAN	780827	5609	16939	7X	7Z	105	1.5	431	2.2
JAPAN	780827	5444	16942	7X	7Z	105	1.5	431	2.2
JAPAN	780827	5444	16942	7X	7Z	105	1.5	431	2.2
JAPAN	780827	5451	16614	7X	7Z	132	1.3	517	2.5
JAPAN	780827	5451	16614	7X	7Z	132	1.3	517	2.5
JAPAN	780827	5438	16532	7X	7Z	99	2.5	973	3.4
JAPAN	780827	5438	16532	7X	7Z	99	2.5	973	3.4
JAPAN	780827	5444	16941	7X	7Z	131	2.5	502	2.3
JAPAN	780827	5444	16941	7X	7Z	131	2.5	502	2.3
JAPAN	780827	5603	16948	7X	7Z	144	2.5	188	2.2
JAPAN	780827	5603	16948	7X	7Z	144	2.5	188	2.2
JAPAN	780827	5446	16535	7X	7Z	152	3.5	698	2.0
JAPAN	780827	5446	16535	7X	7Z	152	3.5	698	2.0
JAPAN	780827	5606	16930	7X	7Z	124	2.5	643	2.2
JAPAN	780827	5606	16930	7X	7Z	124	2.5	643	2.2
JAPAN	780827	5443	16527	7X	7Z	129	1.2	71	2.2
JAPAN	780827	5443	16527	7X	7Z	129	1.2	71	2.2

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78890147	5447	16539	7X	102	3.0	4292	1.43
JAPAN	78890147	5447	16539	7Y	102	3.0	4292	1.43
JAPAN	78890147	5447	16539	7Z	102	3.0	4292	1.43
JAPAN	78890147	5447	16539	7X	132	3.4	5577	1.39
JAPAN	78890147	5447	16539	7Y	132	3.4	5577	1.39
JAPAN	78890147	5447	16539	7Z	132	3.4	5577	1.39
JAPAN	78890147	5447	16539	7X	135	4.1	5817	1.36
JAPAN	78890147	5447	16539	7Y	135	4.1	5817	1.36
JAPAN	78890147	5447	16539	7Z	135	4.1	5817	1.36
JAPAN	78890147	5447	16539	7X	110	3.5	4516	1.29
JAPAN	78890147	5447	16539	7Y	110	3.5	4516	1.29
JAPAN	78890147	5447	16539	7Z	110	3.5	4516	1.29
JAPAN	78890147	5447	16539	7X	138	3.8	6805	1.27
JAPAN	78890147	5447	16539	7Y	138	3.8	6805	1.27
JAPAN	78890147	5447	16539	7Z	138	3.8	6805	1.27
JAPAN	78890147	5447	16539	7X	122	3.7	5050	1.26
JAPAN	78890147	5447	16539	7Y	122	3.7	5050	1.26
JAPAN	78890147	5447	16539	7Z	122	3.7	5050	1.26
JAPAN	78890147	5447	16539	7X	122	3.5	4292	1.25
JAPAN	78890147	5447	16539	7Y	122	3.5	4292	1.25
JAPAN	78890147	5447	16539	7Z	122	3.5	4292	1.25
JAPAN	78890147	5447	16539	7X	136	3.1	4464	1.17
JAPAN	78890147	5447	16539	7Y	136	3.1	4464	1.17
JAPAN	78890147	5447	16539	7Z	136	3.1	4464	1.17
JAPAN	78890147	5447	16539	7X	126	3.5	4067	1.16
JAPAN	78890147	5447	16539	7Y	126	3.5	4067	1.16
JAPAN	78890147	5447	16539	7Z	126	3.5	4067	1.16
JAPAN	78890147	5447	16539	7X	152	3.5	4105	1.15
JAPAN	78890147	5447	16539	7Y	152	3.5	4105	1.15
JAPAN	78890147	5447	16539	7Z	152	3.5	4105	1.15
JAPAN	78890147	5447	16539	7X	102	4.0	3883	1.14
JAPAN	78890147	5447	16539	7Y	102	4.0	3883	1.14
JAPAN	78890147	5447	16539	7Z	102	4.0	3883	1.14
JAPAN	78890147	5447	16539	7X	131	3.2	3299	1.13
JAPAN	78890147	5447	16539	7Y	131	3.2	3299	1.13
JAPAN	78890147	5447	16539	7Z	131	3.2	3299	1.13
JAPAN	78890147	5447	16539	7X	139	3.5	4248	1.11
JAPAN	78890147	5447	16539	7Y	139	3.5	4248	1.11
JAPAN	78890147	5447	16539	7Z	139	3.5	4248	1.11
JAPAN	78890147	5447	16539	7X	173	3.5	5137	1.09
JAPAN	78890147	5447	16539	7Y	173	3.5	5137	1.09
JAPAN	78890147	5447	16539	7Z	173	3.5	5137	1.09
JAPAN	78890147	5447	16539	7X	173	3.6	4732	1.08
JAPAN	78890147	5447	16539	7Y	173	3.6	4732	1.08
JAPAN	78890147	5447	16539	7Z	173	3.6	4732	1.08
JAPAN	78890147	5447	16539	7X	142	3.8	4223	1.04
JAPAN	78890147	5447	16539	7Y	142	3.8	4223	1.04
JAPAN	78890147	5447	16539	7Z	142	3.8	4223	1.04
JAPAN	78890147	5447	16539	7X	154	3.1	3574	1.01
JAPAN	78890147	5447	16539	7Y	154	3.1	3574	1.01
JAPAN	78890147	5447	16539	7Z	154	3.1	3574	1.01
JAPAN	78890147	5447	16539	7X	136	3.5	4433	1.00
JAPAN	78890147	5447	16539	7Y	136	3.5	4433	1.00
JAPAN	78890147	5447	16539	7Z	136	3.5	4433	1.00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 9 3	5457	16511	7X 7Z	79	5	1514	1.00
JAPAN	78 9 12	5449	16528	8	120	1	1504	1.00
JAPAN	78 9 22	5449	16548	8	90	2	3665	1.00
JAPAN	78 9 25	5506	16718	7	124	2	2685	1.00
JAPAN	78 9 4	5440	16549	6	172	3	2277	0.94
JAPAN	78 9 9	5443	16536	4	140	3	2277	0.93
JAPAN	78 9 31	5457	16553	0	172	1	1978	0.91
JAPAN	78 9 47	5449	16555	6	193	3	1935	0.90
JAPAN	78 9 21	5451	16616	3	188	0	5374	0.87
JAPAN	78 9 24	5459	16708	4	103	2	2614	0.83
JAPAN	78 9 28	5602	16945	9	173	1	1947	0.80
JAPAN	78 9 14	5607	16537	9	173	2	1973	0.80
JAPAN	78 9 15	5520	16533	8	148	2	2728	0.79
JAPAN	78 9 21	5601	16725	2	129	1	1974	0.78
JAPAN	78 9 16	5601	16813	0	145	1	1736	0.78
JAPAN	78 9 13	5456	16556	2	185	1	1537	0.75
JAPAN	78 9 22	5452	16720	3	153	3	3109	0.73
JAPAN	78 9 27	5515	16630	2	144	1	2467	0.73
JAPAN	78 9 28	5447	16641	0	143	1	1467	0.73
JAPAN	78 9 28	5448	16546	5	147	3	2397	0.73
JAPAN	78 9 27	5509	16727	1	147	3	3256	0.72
JAPAN	78 9 13	5507	16715	0	198	3	3230	0.72
JAPAN	78 9 25	5508	16745	7	107	4	3569	0.71
JAPAN	78 9 25	5447	16558	0	97	1	2509	0.71
JAPAN	78 9 23	5457	16738	1	109	1	2859	0.71
JAPAN	78 9 23	5503	16807	1	83	1	2013	0.70
JAPAN	78 9 22	5452	16651	1	130	1	2530	0.70
JAPAN	78 9 22	5615	16951	3	170	1	120	0.00

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
JAPAN	780824	5654	16717	488166	88	3	209	0.69
USSR	780919	5750	16532	489278	34	2	173	0.69
JAPAN	780915	5609	16530	488278	53	1	104	0.68
JAPAN	780916	5446	16529	481527	111	2	136	0.68
JAPAN	780806	5522	16808	491354	123	5	356	0.67
JAPAN	780713	5600	16952	497603	77	1	209	0.67
JAPAN	780807	5600	16952	497603	114	8	356	0.66
JAPAN	780808	5600	16952	497603	150	7	288	0.65
JAPAN	780922	5446	16607	497325	111	3	307	0.65
JAPAN	780922	5446	16607	483463	134	5	239	0.63
JAPAN	780727	5458	16743	487862	164	10	343	0.63
JAPAN	780719	5519	16743	489042	91	8	346	0.62
JAPAN	780811	5521	16803	481462	120	3	249	0.60
JAPAN	780819	5605	16831	485267	84	5	79	0.59
JAPAN	780809	5509	16734	489071	113	6	131	0.59
JAPAN	780708	5520	16757	490311	106	8	277	0.59
JAPAN	780716	5521	16757	490311	134	3	284	0.59
JAPAN	780719	5602	16835	482162	106	2	179	0.58
JAPAN	780729	5511	16831	490071	84	5	87	0.57
JAPAN	780721	5532	16805	488971	91	6	140	0.57
JAPAN	780721	5532	16805	488971	78	4	121	0.56
JAPAN	780721	5532	16805	488971	68	5	154	0.56
JAPAN	780818	5600	16943	492392	174	5	254	0.56
JAPAN	780820	5600	16943	492392	136	5	231	0.56
JAPAN	780808	5607	16945	487627	79	7	143	0.55
JAPAN	780807	5607	16945	487627	79	6	135	0.55
JAPAN	780816	5442	16745	490982	132	8	168	0.55
JAPAN	780719	5522	16810	489152	120	1	221	0.55
JAPAN	780730	5522	16810	489152	89	0	142	0.55
JAPAN	780809	5445	16556	488309	142	2	115	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

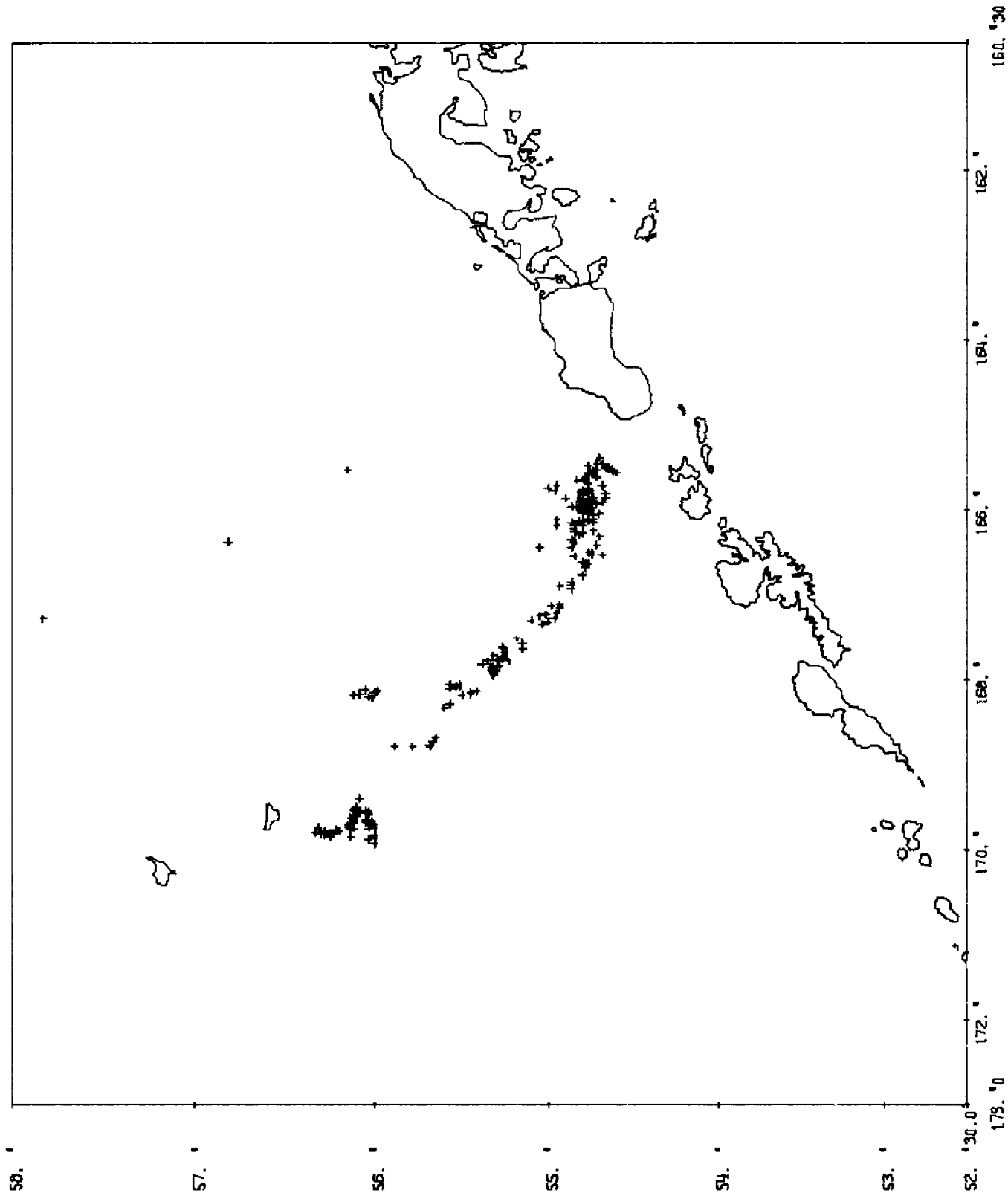


FIGURE F-6. PACIFIC COD, JULY-SEPTEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781013	5713	16559	18731.6	48657.2	37	2.5	15284	6600
JAPAN	781111	5442	16559	18223.5	48318.8	144	4.0	2617	6500
JAPAN	781016	5721	16630	18184.9	48493.9	1	3.0	1954	6500
USSR	781017	5716	16626	18740.4	48655.1	37	2.0	1317	6500
USSR	781126	5741	16559	18735.0	48429.3	35	6.6	2927	6300
JAPAN	781121	5440	16551	18264.0	48285.4	38	2.2	1672	6000
USSR	781122	5809	16636	18750.1	48655.3	35	5.0	1701	6000
JAPAN	781015	5442	16530	18255.3	48152.0	140	3.5	2417	6000
JAPAN	781136	5657	16547	18297.9	48791.6	1	4.0	2417	6000
JAPAN	781213	5651	16515	18248.5	48317.2	178	3.0	2288	5700
JAPAN	781011	5703	16631	18671.6	48183.8	138	4.0	2288	5700
JAPAN	781019	5444	16553	18239.4	48687.8	34	1.8	1082	5600
JAPAN	781018	5444	16621	18200.6	48240.6	142	3.8	1331	5600
JAPAN	781019	5448	16655	18180.6	48442.4	150	5.8	2894	5600
JAPAN	781019	5444	16622	18205.1	48651.6	141	3.4	1894	5500
JAPAN	781019	5444	16629	18196.1	48490.5	148	4.8	2593	5400
JAPAN	781111	5442	16638	18246.9	48198.2	156	4.0	2089	5200

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

TABLE F-13. FLOUNDERS, JANUARY-MARCH, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780227	56113	167228	791.0	49089.0	73	1.0	9587	65.9
JAPAN	780228	56111	167246	799.5	48956.2	72	2.0	1761	38.2
JAPAN	780305	56107	167338	799.4	49241.2	42	3.6	1461	40.1
JAPAN	780307	56107	167338	799.4	49083.2	74	3.1	1504	48.1
JAPAN	780308	56105	167462	798.2	49117.6	71	3.2	1563	48.7
JAPAN	780309	56108	167426	798.4	49049.4	68	1.9	1716	33.7
JAPAN	780310	56047	168360	799.6	49329.3	73	3.2	1895	59.2
JAPAN	780311	56047	168360	799.6	49102.2	72	2.1	3039	35.4
JAPAN	780312	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780313	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780314	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780315	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780316	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780317	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780318	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780319	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780320	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780321	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780322	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780323	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780324	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780325	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780326	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780327	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780328	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780329	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780330	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780331	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780332	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780333	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780334	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780335	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780336	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780337	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780338	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780339	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780340	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780341	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780342	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780343	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780344	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780345	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780346	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780347	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780348	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780349	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780350	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780351	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780352	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780353	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780354	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780355	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780356	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780357	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780358	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780359	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780360	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780361	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780362	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780363	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780364	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780365	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780366	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780367	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780368	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780369	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780370	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780371	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780372	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780373	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780374	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780375	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780376	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780377	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780378	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780379	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780380	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780381	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780382	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780383	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780384	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780385	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780386	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780387	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780388	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780389	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780390	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780391	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780392	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780393	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780394	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780395	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780396	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780397	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780398	56049	168392	798.5	49438.2	73	2.5	3039	35.4
JAPAN	780399	56047	168360	798.4	49102.2	72	2.2	3039	35.4
JAPAN	780400	56049	168392	798.5	49438.2	73	2.5	3039	35.4

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

TABLE F-14. FLOUNDERS, APRIL-JUNE, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780624	553300	168003	7X 180042	74	03	5922	9587
JAPAN	780611	543260	167231	7Y 180047	3470	4	185186	5574
JAPAN	780628	561090	169011	7Z 185625	3280	1	241802	3303
JAPAN	780622	560190	169023	7X 184615	3855	4	148637	3371
JAPAN	780622	542209	168538	7Y 179733	3484	4	156106	3352
JAPAN	780617	560984	168482	7Z 184607	3328	1	152264	3208
JAPAN	780620	560000	168495	7X 184095	3335	1	431389	2285
JAPAN	780620	543234	167255	7Y 180537	769	2	630387	2262
JAPAN	780605	555600	167269	7Z 180377	3474	4	103082	2244
JAPAN	780602	543330	167105	7X 180335	3055	5	140221	2230
JAPAN	780622	561064	167420	7Y 180520	3724	4	149622	2200
JAPAN	780625	562637	169122	7Z 185329	384	3	101333	2207
JAPAN	780627	561137	167072	7X 180448	3066	2	166395	1947
JAPAN	780625	560060	167422	7Y 185213	3374	1	333947	1809
JAPAN	780625	543300	167202	7Z 180325	3411	2	32901	1764
JAPAN	780524	553735	168527	7X 182927	3303	1	225240	1630
JAPAN	780526	542075	168515	7Y 180208	3377	1	25222	1577
JAPAN	780603	560000	169070	7Z 179904	3493	2	36577	1557
JAPAN	780614	543366	168407	7X 184334	3328	0	29692	1549
JAPAN	780621	552266	168224	7Y 180618	3367	5	69184	1486
JAPAN	780625	55567	168548	7Z 183855	3289	6	91845	1469
JAPAN	780626	55567	168548	7X 183855	3289	6	1761	1334

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780615	5443	16732	7X	48827.4	388	4.5	4128	91
JAPAN	780615	5443	16735	7Y	48814.4	369	4.6	4178	90
JAPAN	780615	5603	16728	7Y	49007.7	79	4.6	4140	90
JAPAN	780615	5515	16752	7Y	49050.6	379	5.0	4548	90
JAPAN	780615	5528	16823	7Y	48722.9	240	5.0	3928	87
JAPAN	780615	5539	16848	7Y	49386.8	461	5.8	4364	86
JAPAN	780615	5444	16714	7Y	48806.4	333	5.2	4490	86
JAPAN	780615	5419	16731	7Y	48028.4	288	5.1	4164	85
JAPAN	780615	5429	16732	7Y	48050.4	374	5.1	2350	85
JAPAN	780615	5441	16737	7Y	48819.0	371	5.0	5177	85
JAPAN	780615	5529	16812	7Y	49217.1	371	5.0	5377	82
JAPAN	780615	5538	16843	7Y	49216.2	227	5.0	4069	81
JAPAN	780615	5538	16833	7Y	49358.2	236	5.2	2614	81
JAPAN	780615	5606	16836	7Y	49493.7	304	5.3	1057	81
JAPAN	780615	5539	16737	7Y	49493.7	199	5.4	3276	80
JAPAN	780615	5427	16730	7Y	48770.0	182	4.7	3789	79
JAPAN	780615	5432	16706	7Y	48816.5	462	5.6	3555	79
JAPAN	780615	5429	16852	7Y	48635.1	323	5.5	3555	79
JAPAN	780615	5538	16852	7Y	48727.1	382	5.6	1252	78
JAPAN	780615	5542	16852	7Y	49427.4	373	5.6	1252	78
JAPAN	780615	5501	16850	7Y	49460.5	353	5.6	3985	78
JAPAN	780615	5524	16812	7Y	49127.8	404	5.1	3926	78
JAPAN	780615	5502	16832	7Y	48226.4	444	5.4	3966	75
JAPAN	780615	5525	16852	7Y	49187.9	385	5.6	3480	73
JAPAN	780615	5507	16818	7Y	48826.4	444	5.4	3298	72
JAPAN	780615	5523	16752	7Y	48826.4	14	4.4	3191	72
JAPAN	780615	5423	16807	7Y	4921.6	110	4.4	3488	71
JAPAN	780615	5424	16714	7Y	48851.4	383	4.6	4310	70
JAPAN	780615	5609	16735	7Y	48935.7	428	4.5	2822	69
JAPAN	780615	5543	16830	7Y	48802.1	38	4.2	41	69

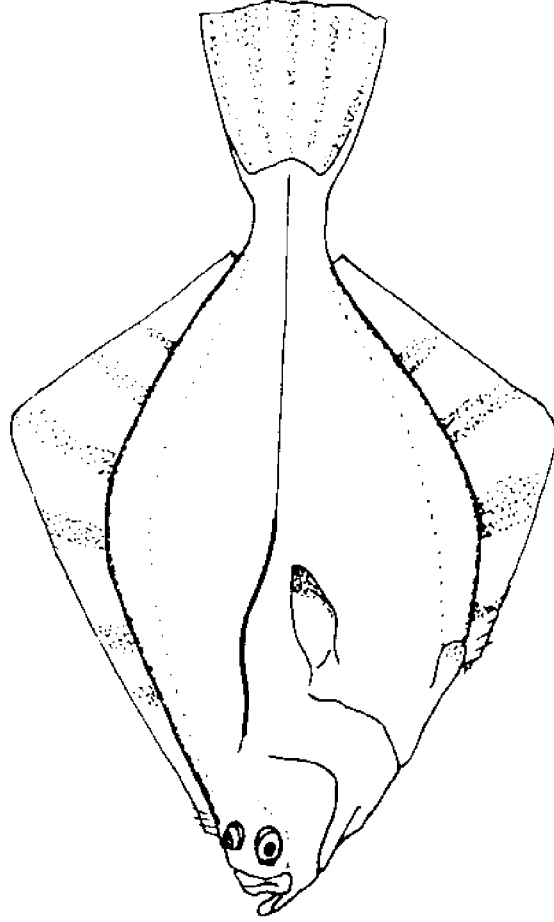
*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 8	5600	16837	75.6	328	1	1251	0.69
JAPAN	78 525	5600	16841	75.6	328	1	1249	0.69
JAPAN	78 518	5526	16858	78.1	377	1	1189	0.68
JAPAN	78 414	5536	16730	74.2	377	1	1231	0.67
JAPAN	78 630	5501	16745	73.0	311	1	1215	0.67
JAPAN	78 615	5532	16822	76.0	335	1	1192	0.66
JAPAN	78 414	5621	16656	72.8	347	1	1201	0.66
JAPAN	78 419	5642	16702	75.7	347	1	1329	0.65
JAPAN	78 618	5543	16711	72.8	489	1	1296	0.64
JAPAN	78 627	5517	16719	71.5	284	2	1176	0.63
JAPAN	78 630	5520	16813	75.4	284	2	1267	0.63
JAPAN	78 610	5625	16707	73.9	317	2	1275	0.63
JAPAN	78 416	5605	16744	72.9	317	2	1259	0.63
JAPAN	78 520	5605	16846	72.9	317	2	1337	0.62
JAPAN	78 624	5604	16802	71.6	76	3	1479	0.61
JAPAN	78 612	5532	16815	73.8	295	3	1263	0.61
JAPAN	78 618	5428	16739	72.8	464	3	1368	0.60
JAPAN	78 618	5431	16705	72.8	464	3	1204	0.60
JAPAN	78 418	5605	16705	72.8	431	3	1398	0.58
JAPAN	78 418	5605	16855	72.8	431	3	1319	0.58
JAPAN	78 626	5432	16712	71.9	316	3	1036	0.57
JAPAN	78 614	5419	16729	73.8	464	3	1306	0.57
JAPAN	78 533	5603	16658	71.4	347	1	1359	0.56
JAPAN	78 608	5425	16852	70.0	327	1	616	0.56
JAPAN	78 628	5436	16716	71.3	317	1	1085	0.54
JAPAN	78 628	5601	16848	71.3	295	1	1074	0.53
JAPAN	78 523	5557	16852	71.5	317	1	1067	0.53

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	78 527	5553	16856	18363.1	35027.0	306	1.6	835	0.52
JAPAN	78 618	5444	16731	18103.1	34915.9	380	4.5	2318	0.51
JAPAN	78 623	5510	16758	18202.5	34946.0	388	4.2	2166	0.51
JAPAN	78 613	5423	16620	18106.8	34794.2	371	4.7	2350	0.50

7X
7Y
7Z



*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

TABLE F-15. FLOWERS, JULY-SEPTEMBER, 1978

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	780928	5749	16717	303	4929	36	20	561	12
USSR	780928	5749	16748	303	4911	34	3	623	170
USSR	780928	5735	16658	342	4881	36	3	623	170
USSR	780928	5732	16654	342	4881	36	3	623	170
USSR	780928	5733	16653	342	4880	36	3	623	170
USSR	780928	5730	16708	342	4880	36	3	623	170
USSR	780928	5731	16635	342	4880	36	3	623	170
USSR	780928	5748	16632	342	4880	36	3	623	170
USSR	780928	5751	16610	342	4880	36	3	623	170
USSR	780928	5752	16612	342	4880	36	3	623	170
USSR	780928	5751	16642	342	4880	36	3	623	170
USSR	780928	5749	16719	342	4880	36	3	623	170
USSR	780928	5756	16706	342	4880	36	3	623	170
USSR	780928	5745	16702	342	4880	36	3	623	170
USSR	780928	5741	16738	342	4880	36	3	623	170
USSR	780928	5742	16728	342	4880	36	3	623	170
USSR	780928	5736	16726	342	4880	36	3	623	170
USSR	780928	5749	16630	342	4880	36	3	623	170
USSR	780928	5739	16657	342	4880	36	3	623	170
USSR	780928	5745	16654	342	4880	36	3	623	170
USSR	780928	5748	16659	342	4880	36	3	623	170
USSR	780928	5739	16724	342	4880	36	3	623	170
USSR	780928	5742	16710	342	4880	36	3	623	170
USSR	780928	5747	16645	342	4880	36	3	623	170
USSR	780928	5750	16642	342	4880	36	3	623	170
USSR	780928	5750	16723	342	4880	36	3	623	170

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. **

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	78 9 16	57 42	167 24	750.4	91.4	5	2	159	7.2
USSR	78 9 25	57 35	167 04	750.4	66.6	3	3	203	7.6
USSR	78 9 29	57 44	167 26	750.5	89.5	5	3	229	6.6
USSR	78 8 27	57 55	166 58	746.8	84.2	5	2	248	6.6
USSR	78 9 20	57 55	167 20	746.5	21.0	6	1	203	6.6
USSR	78 9 22	57 45	167 25	746.5	69.0	6	0	193	6.6
USSR	78 9 26	57 39	167 04	750.7	89.6	6	0	141	6.6
USSR	78 9 14	58 03	166 60	743.0	58.1	3	2	139	6.6
USSR	78 8 21	57 55	167 24	743.7	80.0	5	2	173	6.6
USSR	78 9 3	57 56	167 14	744.8	80.0	5	4	194	6.6
USSR	78 8 28	57 53	167 17	744.6	81.6	5	1	145	6.6
USSR	78 9 19	57 54	167 26	746.0	81.6	4	5	155	6.6
USSR	78 9 24	57 52	167 06	750.9	25.0	4	2	150	6.6
USSR	78 9 23	57 51	166 40	750.8	16.5	3	2	191	6.5
USSR	78 8 21	57 50	167 05	750.8	24.5	3	2	150	6.5
USSR	78 8 27	57 36	167 25	750.9	22.9	3	2	191	6.5
USSR	78 9 27	57 35	167 15	747.6	17.2	3	2	170	6.5
USSR	78 9 29	57 42	167 28	749.6	17.5	3	2	187	6.5
USSR	78 9 10	57 48	166 51	750.6	17.5	3	2	187	6.5
USSR	78 9 23	57 34	166 28	750.8	74.6	5	6	151	6.5
USSR	78 9 17	57 33	167 08	750.4	96.0	5	5	141	6.5
USSR	78 9 28	57 43	167 18	738.9	24.0	3	2	168	6.5
USSR	78 9 30	57 43	167 22	749.5	48.3	3	0	162	6.5
USSR	78 9 27	57 51	167 22	745.9	48.5	3	0	195	6.5
USSR	78 8 24	57 46	166 52	745.2	65.5	3	1	172	6.5
USSR	78 8 31	57 41	166 45	750.8	77.0	3	2	177	6.5
USSR	78 8 31	57 54	166 56	750.5	72.0	3	3	171	6.5
USSR	78 9 10	57 37	167 24	750.7	93.0	3	0	165	6.5
USSR	78 9 13	57 40	167 05	750.1	60.0	3	2	163	6.5
USSR	78 9 27	57 49	167 16	749.0	87.0	3	3	128	6.5
USSR	78 9 27	57 49	166 47	749.6	26.5	3	3	161	6.5
USSR	78 9 27	57 36	167 27	750.8	15.1	3	0	161	6.5

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780819	5606	16834	7X	7Z	149	5.60	3581	1.00
JAPAN	780819	5527	16851	7X	7Z	164	3.60	3613	1.00
JAPAN	780818	5419	16822	7X	7Z	246	5.5	3666	0.98
JAPAN	780817	5402	16933	7X	7Z	507	5.3	5409	0.96
JAPAN	780817	5449	16613	7X	7Z	144	2.2	2288	0.94
JAPAN	780819	5435	16535	7X	7Z	131	1.8	1974	0.93
JAPAN	780819	5419	16650	7X	7Z	160	3.5	4963	0.90
JAPAN	780819	5456	16717	7X	7Z	255	5.8	4968	0.90
JAPAN	780819	5436	16858	7X	7Z	354	1.0	3438	0.90
JAPAN	780819	5436	16628	7X	7Z	408	5.3	4594	0.88
JAPAN	780819	5437	16620	7X	7Z	548	3.0	2696	0.88
JAPAN	780819	5420	16729	7X	7Z	113	2.5	2026	0.87
JAPAN	780819	5431	16608	7X	7Z	186	3.5	3493	0.87
JAPAN	780819	5431	16727	7X	7Z	349	5.7	3527	0.87
JAPAN	780819	5534	16723	7X	7Z	47	3.5	4014	0.87
JAPAN	780819	5534	16805	7X	7Z	381	5.5	4797	0.87
JAPAN	780819	5603	16806	7X	7Z	725	2.6	3075	0.87
JAPAN	780819	5646	16948	7X	7Z	95	1.4	1044	0.86
JAPAN	780819	5454	16612	7X	7Z	142	2.9	2460	0.85
JAPAN	780819	5428	16710	7X	7Z	304	3.6	3089	0.85
JAPAN	780819	5448	16710	7X	7Z	200	3.6	3050	0.84
JAPAN	780819	5607	16835	7X	7Z	209	3.3	2508	0.82
JAPAN	780819	5446	16533	7X	7Z	147	2.8	2273	0.82
JAPAN	780819	5611	16601	7X	7Z	115	2.9	1619	0.80
JAPAN	780819	5421	16801	7X	7Z	734	5.0	2382	0.79
JAPAN	780819	5421	16805	7X	7Z	425	4.6	3640	0.79
JAPAN	780819	5422	16655	7X	7Z	513	5.1	4078	0.78
JAPAN	780819	5422	16707	7X	7Z	454	4.5	3609	0.77

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION.***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	780822	5428	16555	7X	7Z	73	3.7	287	77
JAPAN	780823	5432	16546	7X	7Z	24	3.5	268	76
JAPAN	780824	5441	16722	7X	7Y	67	3.6	234	64
JAPAN	780825	5448	16727	7X	7Y	30	5.8	340	58
JAPAN	780826	5441	16647	7X	7Y	16	0.5	291	57
JAPAN	780827	5415	16707	7X	7Y	30	6.7	364	54
JAPAN	780828	5428	16651	7X	7Y	1	0.6	271	45
JAPAN	780829	5438	16643	7X	7Y	1	0.3	229	33
JAPAN	780830	5456	16654	7X	7Y	2	0.8	212	27
JAPAN	780831	5500	16746	7X	7Y	9	0.5	273	22
JAPAN	780832	5603	16804	7X	7Y	9	0.5	219	21
JAPAN	780833	5449	16557	7X	7Y	9	1.0	151	17
JAPAN	780834	5431	16729	7X	7Y	3	0.5	142	10
JAPAN	780835	5441	16836	7X	7Y	5	0.5	105	6
JAPAN	780836	5427	16535	7X	7Y	1	0.9	142	6
JAPAN	780837	5436	16823	7X	7Y	2	0.5	133	5
JAPAN	780838	5423	16535	7X	7Y	4	0.5	105	6
JAPAN	780839	5423	16624	7X	7Y	3	0.5	133	5
JAPAN	780840	5512	16611	7X	7Y	2	0.9	105	6
JAPAN	780841	5520	16757	7X	7Y	1	0.4	121	3
JAPAN	780842	5607	16936	7X	7Y	2	0.0	160	0
JAPAN	780843	5609	16936	7X	7Y	1	0.0	135	0
JAPAN	780844	5443	16527	7X	7Y	1	0.0	135	0
JAPAN	780845	5451	16614	7X	7Y	1	0.8	196	2
JAPAN	780846	5456	16705	7X	7Y	1	0.0	135	0
JAPAN	780847	5441	16727	7X	7Y	1	0.5	193	4
JAPAN	780848	5521	16807	7X	7Y	1	0.5	152	3
JAPAN	780849	5418	16707	7X	7Y	1	0.5	152	3
JAPAN	780850	5425	16614	7X	7Y	1	0.0	144	1
JAPAN	780851	5420	16658	7X	7Y	1	0.1	144	1
JAPAN	780852	5422	16628	7X	7Y	1	0.6	131	6
JAPAN	780853	5429	16728	7X	7Y	1	0.5	173	3
JAPAN	780854	5420	16658	7X	7Y	1	0.8	173	3
JAPAN	780855	5420	16718	7X	7Y	1	0.8	173	3

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	788713	55549	16813	4920.6	82	3.2	1976	0.61
JAPAN	788715	54455	16555	34706.0	119	2.1	1236	0.60
JAPAN	788718	56188	16740	34847.0	339	1.4	2968	0.59
JAPAN	788723	55203	16745	34929.7	194	5.4	2946	0.59
JAPAN	788737	54337	16737	34936.3	429	1.5	435	0.59
JAPAN	788734	5451	16611	34727.6	74	1.5	897	0.59
JAPAN	788749	55501	16555	48415.0	115	3.1	369	0.59
JAPAN	788711	54435	16635	48330.0	122	5.0	298	0.59
JAPAN	788727	54439	16527	48337.0	149	1.3	598	0.58
JAPAN	788722	54200	16716	48704.1	43	3.1	190	0.58
JAPAN	788714	5507	16726	48715.0	49	6.7	103	0.57
JAPAN	788715	5607	16746	48939.0	82	2.8	708	0.57
JAPAN	788725	5609	16805	49232.0	121	6.7	955	0.56
JAPAN	788716	5605	16828	49367.0	84	1.7	55	0.56
JAPAN	788712	5607	16817	4942.0	94	3.3	36	0.54
JAPAN	788718	5546	16541	4922.0	138	3.0	340	0.54
JAPAN	788713	5456	16541	48251.0	174	3.3	48	0.54
JAPAN	788714	5456	16542	48251.0	134	3.6	283	0.54
JAPAN	788716	5449	16742	48350.0	152	1.8	195	0.54
JAPAN	788719	5608	16938	48300.0	134	3.1	283	0.54
JAPAN	788714	5439	16722	48762.0	153	3.5	332	0.53
JAPAN	788715	5604	16509	48278.0	131	1.5	195	0.53
JAPAN	788731	5437	16642	48545.0	147	3.4	491	0.52
JAPAN	788719	5433	16532	48165.0	140	1.1	295	0.51
JAPAN	788711	5438	16531	48151.0	236	1.5	768	0.51
JAPAN	788715	5430	16544	48256.0	242	3.8	1891	0.51
JAPAN	788722	5430	16552	48256.0	246	4.7	2684	0.50
JAPAN	788722	5419	16702	48882.0	546	7.3	3684	0.50

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

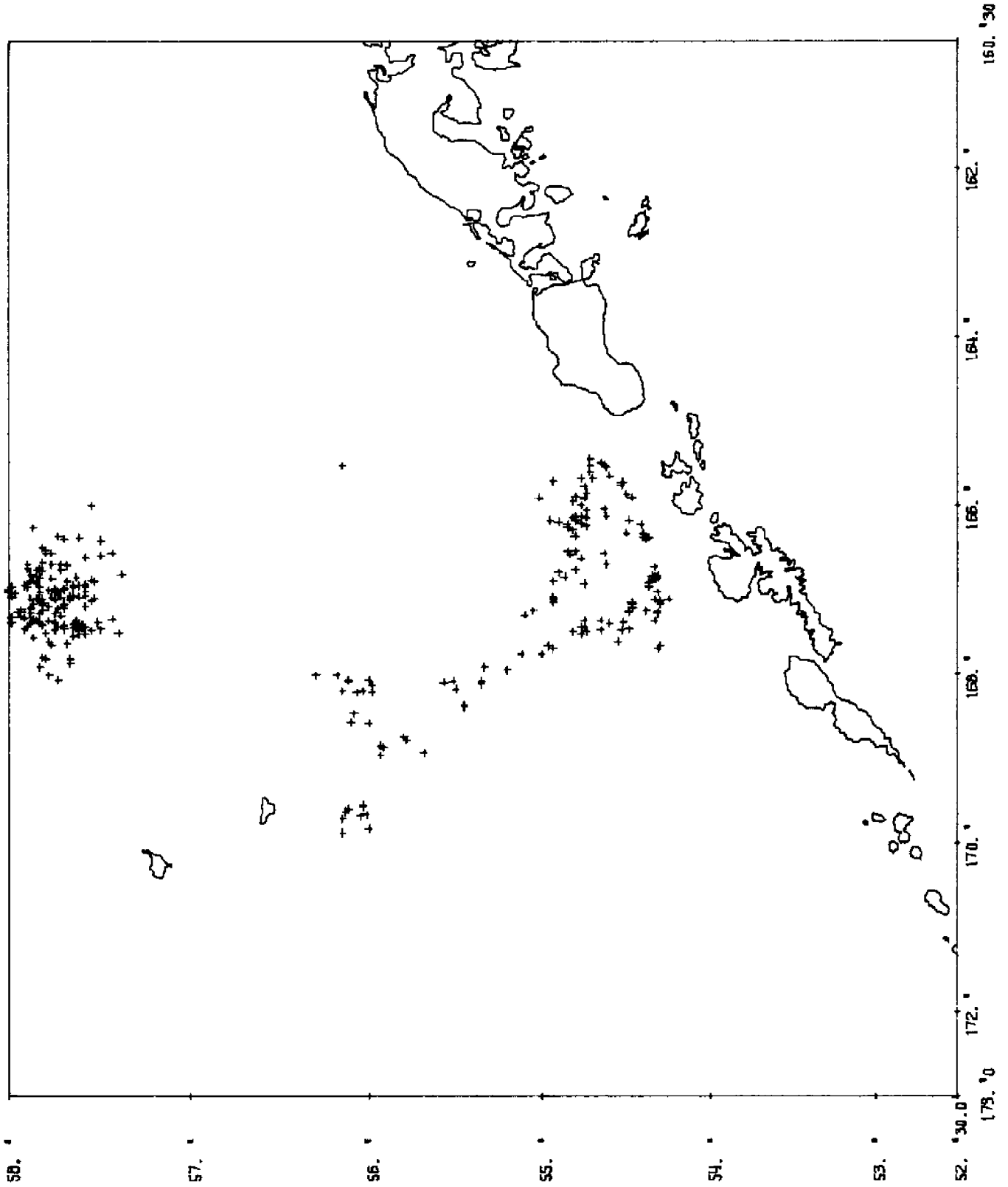


FIGURE F-7. FLOUNDERS, JULY-SEPTEMBER, 1978

TABLE F-16. FLOUNDERS, OCTOBER-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781130	5731	16603	78028	48867	55	15	4308	289.95
JAPAN	781134	5703	16645	78028	48873	38	3	3666	122.28
JAPAN	781204	5658	16551	78034	48871	38	0	3175	16.71
JAPAN	781206	5716	16614	78037	48864	40	6	3108	15.41
USSR	781217	5723	16629	78044	48855	37	0	4547	15.48
USSR	781216	5723	16642	78049	48823	59	7	4547	14.87
JAPAN	781234	5650	16502	78091	48809	39	1	3027	14.32
JAPAN	781239	5657	16555	78091	48804	45	5	3388	13.55
JAPAN	781227	5657	16441	78086	48806	37	0	3586	12.92
USSR	781221	5659	16457	78087	48803	37	0	3586	12.92
USSR	781220	5659	16555	78086	48803	39	5	3481	12.74
JAPAN	781223	5651	16449	78061	48803	40	6	4987	12.44
JAPAN	781219	5702	16604	78095	48836	40	6	1986	12.41
JAPAN	781219	5703	16654	78095	48837	46	5	3060	12.24
JAPAN	781213	5705	16613	78091	48852	41	2	2507	11.94
JAPAN	781223	5749	16636	78061	48855	38	7	3187	11.79
JAPAN	781233	5710	16615	78068	48872	35	6	1877	11.73
JAPAN	781239	5709	16611	78061	48854	48	4	2782	11.59
JAPAN	781239	5703	16533	78075	48846	48	6	2783	11.57
JAPAN	781239	5703	16610	78081	48842	45	0	2634	11.31
USSR	781239	5708	16558	78085	48847	45	2	2473	11.24
USSR	781219	5709	16532	78085	48859	38	8	3177	10.97
JAPAN	781268	5658	16532	78077	48865	38	5	2744	10.92
JAPAN	781266	5650	16454	78083	48806	33	8	1966	10.87
JAPAN	781219	5658	16440	78083	48803	33	5	3805	10.79
USSR	781221	5700	16505	78083	48801	36	9	2899	10.55
USSR	781219	5707	16400	78091	48807	36	8	3166	10.55
JAPAN	781220	5657	16400	78091	48806	36	0	2095	10.49
JAPAN	781221	5657	16511	78091	48806	40	1	3369	10.44
JAPAN	781211	5651	16513	78092	48814	41	4	3540	10.41

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781019	57133	16504	18725.5	48095.4	366	9	307	10.41
USSR	781020	57133	16424	18724.9	48226.7	341	0	307	10.26
JAPAN	781121	56556	16555	18729.4	48177.9	389	0	407	10.19
JAPAN	781124	56553	16453	18729.8	48442.0	339	6	198	10.192
JAPAN	781128	57087	16604	18723.2	48500.1	369	6	158	9.91
USSR	781013	57134	16731	18736.0	48653.5	366	1	307	9.905
USSR	781114	57134	16628	18736.0	48653.5	366	1	307	9.85
JAPAN	781120	57107	16458	18718.5	48783.0	328	5	304	9.829
USSR	781107	57133	16412	18726.0	48747.9	337	5	304	9.55
USSR	781017	57133	16478	18726.0	48747.9	337	5	304	9.55
USSR	781014	57133	16648	18733.7	48781.5	337	2	302	9.45
USSR	781012	57133	16648	18733.7	48781.5	337	2	302	9.45
JAPAN	781126	57205	16631	18742.9	48055.4	343	3	131	9.42
JAPAN	781126	57205	16629	18742.9	48055.4	343	3	131	9.42
JAPAN	781123	56532	16448	18720.1	48669.4	343	0	218	9.418
JAPAN	781123	56532	16448	18720.1	48669.4	343	0	218	9.418
USSR	781123	56532	16635	18695.6	48220.0	343	0	218	9.22
USSR	781123	56532	16635	18695.6	48220.0	343	0	218	9.22
USSR	781122	57448	16607	18750.1	48265.0	343	0	218	9.06
USSR	781122	57448	16607	18750.1	48265.0	343	0	218	9.06
JAPAN	781122	57041	16649	18713.9	48469.5	343	5	213	8.81
JAPAN	781122	57041	16649	18713.9	48469.5	343	5	213	8.81
JAPAN	781130	57047	16655	18732.9	48221.0	343	6	229	8.81
JAPAN	781130	57047	16655	18732.9	48221.0	343	6	229	8.81
JAPAN	781121	57033	16641	18717.5	48395.3	343	6	240	7.9
JAPAN	781121	57033	16641	18717.5	48395.3	343	6	240	7.9
JAPAN	781122	56527	16503	18729.5	48004.0	343	5	226	6.6
JAPAN	781122	56527	16503	18729.5	48004.0	343	5	226	6.6
JAPAN	781014	56527	16655	18736.0	48653.5	343	5	303	6.65
JAPAN	781014	56527	16655	18736.0	48653.5	343	5	303	6.65
USSR	781111	56529	16706	18719.5	48037.0	343	5	276	6.4
USSR	781111	56529	16706	18719.5	48037.0	343	5	276	6.4
USSR	781123	57134	16434	18750.1	48265.0	343	5	256	5.87
USSR	781123	57134	16434	18750.1	48265.0	343	5	256	5.87
JAPAN	781019	57151	16430	18772.2	48895.0	343	5	298	5.22
JAPAN	781019	57151	16430	18772.2	48895.0	343	5	298	5.22
USSR	781011	57227	16727	18742.0	48823.0	343	5	280	5.22
USSR	781011	57227	16727	18742.0	48823.0	343	5	280	5.22

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781012	5705	16454	4806	78	38	162	42
USSR	781013	5705	16454	4803	35	32	192	59
USSR	781014	5705	16455	4804	36	30	208	69
JAPAN	781015	5651	16517	4819	41	40	224	54
USSR	781021	5721	16639	4822	38	30	260	86
USSR	781021	5721	16644	4809	37	35	199	56
USSR	781021	5721	16448	4802	34	32	203	62
JAPAN	781029	5720	16435	4807	34	32	148	46
USSR	781031	5720	16446	4823	32	30	142	45
USSR	781031	5720	16459	4805	35	33	165	50
USSR	781031	5720	16658	4814	33	30	203	67
JAPAN	781041	5720	16629	4831	34	32	153	47
USSR	781041	5730	16642	4820	33	30	168	53
USSR	781041	5720	16446	4825	33	30	228	71
USSR	781041	5720	16640	4833	33	32	269	81
USSR	781041	5720	16507	4814	33	32	209	59
USSR	781041	5720	16653	4827	33	32	242	72
JAPAN	781041	5702	16435	4804	33	30	191	57
USSR	781041	5703	16443	4820	33	32	258	77
USSR	781041	5658	16456	4805	33	30	219	59
JAPAN	781041	5658	16453	4803	33	30	213	56
USSR	781041	5705	16453	4806	33	30	255	75
USSR	781041	5705	16443	4803	33	30	213	56
JAPAN	781041	5659	16456	4803	33	30	219	59
USSR	781041	5711	16633	4809	33	30	212	58
USSR	781041	5711	16635	4806	33	30	216	60
USSR	781041	5722	16633	4804	33	30	212	58
USSR	781041	5722	16635	4805	33	30	217	60
JAPAN	781041	5705	16633	4803	33	30	201	57
JUSS	781041	5707	16642	4837	33	30	115	29

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781117	5710	16648	727.5	612.6	33	50	178	7.14
USSR	781117	5707	16618	729.6	195.0	32	00	214	7.12
USSR	781116	5712	16617	740.5	87.0	33	00	213	7.11
USSR	781113	5703	16520	741.5	87.0	33	25	157	7.08
USSR	781031	5707	16507	740.7	18.5	33	01	247	6.96
USSR	781113	5706	16444	741.5	18.9	33	01	246	6.93
USSR	781120	5720	16746	742.3	8.5	33	00	205	6.83
USSR	781124	5716	16654	747.2	8.5	33	00	204	6.81
USSR	781114	5752	16522	744.2	21.6	33	00	204	6.81
USSR	781014	5728	16624	745.6	13.0	33	00	203	6.77
USSR	781014	5728	16624	745.4	13.0	33	00	203	6.77
USSR	781112	5716	16637	737.0	13.7	33	04	203	6.76
USAM	781123	5654	16521	737.9	13.7	34	00	202	6.74
JAPAN	781224	5654	16521	737.9	13.7	34	00	202	6.74
USSR	781028	5705	16400	730.8	97.1	33	01	181	6.67
USSR	781019	5715	16509	733.4	66.2	33	05	167	6.65
USSR	781209	5703	16530	730.4	29.5	33	01	167	6.65
JAPAN	781209	5703	16530	730.4	29.5	33	01	167	6.65
USSR	781123	5659	16628	727.2	9.6	33	01	194	6.60
USSR	781021	5727	16608	736.2	53.5	33	01	204	6.57
USSR	781021	5668	16450	701.8	07.0	33	01	183	6.54
USSR	781012	5734	16719	750.4	67.9	33	04	170	6.50
USSR	781012	5718	16613	750.2	50.9	33	00	135	6.47
JAPAN	781206	5708	16457	719.6	9.3	37	00	197	6.47
USSR	781016	5726	16642	745.4	63.2	33	02	204	6.46
USSR	781016	5726	16642	745.4	63.2	33	02	204	6.46
USSR	781128	5712	16452	731.1	55.2	33	01	193	6.45
USSR	781128	5642	16452	731.1	55.2	33	01	193	6.45
JAPAN	781205	5654	16603	761.4	99.1	34	02	120	6.43
USSR	781121	5712	16714	733.9	66.0	33	03	120	6.43

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
J	781127	5708	16443	7X 18719.1	38	9	25050	6.42
USSR	781111	5715	16631	39 18715.2	37	1	19849	6.49
USSR	781013	5719	16653	38 18739.5	38	3	19823	6.63
USSR	781015	5715	16644	37 18735.2	38	3	19750	6.63
USSR	781105	5730	16643	32 18747.2	37	3	14665	6.36
USSR	781112	5656	16524	28 18702.3	27	0	19550	6.30
USSR	781021	5714	16426	39 18725.7	37	3	19550	6.62
USSR	781017	5715	16458	25 18730.5	39	3	18834	6.27
J	781117	5711	16455	6 18714.7	38	4	17337	6.27
J	781121	5651	16434	0 18709.5	38	2	15023	6.17
USSR	781121	5712	16705	6 18730.7	38	2	12722	6.16
USSR	781048	5736	16704	8 18750.6	38	0	12722	6.16
USSR	781017	5655	16458	9 18750.3	38	2	12722	6.16
USSR	781117	5655	16455	9 18720.2	38	2	12722	6.16
USSR	781021	5728	16706	6 18748.1	37	2	12722	6.16
USSR	781115	5736	16709	1 18754.2	37	2	12722	6.16
USSR	781021	5710	16538	1 18724.4	37	2	12722	6.16
USSR	781014	5710	16556	6 18750.5	37	3	12722	6.16
USSR	781014	5716	16625	9 18755.0	37	3	12722	6.16
USSR	781114	5722	16637	4 18746.7	35	5	18619	6.00
USSR	781128	5740	16628	3 18741.0	37	5	15090	6.00
USSR	781025	5722	16632	6 18755.4	37	5	20870	6.96
USSR	781025	5740	16645	7 18747.1	38	2	20870	6.96
USSR	781108	5729	16640	7 18747.9	38	2	20870	6.96
USSR	781124	5725	16671	1 18747.0	35	5	18088	6.88
USSR	781124	5740	16541	5 18750.5	37	5	20360	6.88
USSR	781124	5654	16521	2 18736.4	37	5	20360	6.88
USSR	781117	5654	16456	4 18736.8	37	3	19157	6.80
USSR	781014	5722	16647	8 18742.0	37	4	19077	6.80
USSR	781011	5702	16571	7 18712.0	38	3	19077	6.80
USSR	781112	5739	16615	5 18749.4	37	3	16755	6.77
J	781122	5659	16620	8 18709.1	37	2	16755	6.77
J	781123	5745	16641	5 18750.7	37	2	15558	6.77
USSR	781116	5704	16502	4 18714.6	37	3	19213	6.73
USSR	781015	5724	16502	3 18743.6	37	3	21657	6.73
USSR	781015	5724	16638	8 18743.6	37	3	21657	6.73

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781126	5658	1509	7X 18705.4	7Y 129.1	39	4	22578	5.64
JAPAN	781126	5712	1656	18724.9	15.5	38	4	22584	5.62
J	781129	5710	1650	18722.9	1.4	38	2	18457	5.59
USSR	781116	5733	1655	18747.1	3.3	37	2	13957	5.58
USSR	781016	5725	1662	18744.0	3.5	38	5	13950	5.57
USSR	781106	5725	1653	18740.0	3.9	38	9	16178	5.54
J	781124	5800	1645	18708.2	3.3	32	3	17183	5.54
USSR	781105	5707	1663	18745.4	2.5	35	0	16566	5.52
USSR	781117	5705	1663	18725.0	2.5	35	1	16943	5.49
USSR	781114	5705	1651	18716.0	2.1	35	5	12962	5.40
J	781118	5705	1645	18717.0	1.1	38	5	13411	5.36
J	781130	5657	1651	18703.3	0.9	35	0	18572	5.36
J	781129	5703	1651	18713.3	2.5	39	1	18572	5.36
J	781129	5709	1655	18721.1	2.5	39	1	15901	5.35
USSR	781103	5711	1645	18735.2	3.0	37	1	16068	5.35
USSR	781030	5711	1655	18737.2	3.6	37	0	16761	5.35
USSR	781026	5717	1661	18735.5	3.5	35	2	16761	5.35
USSR	781017	5714	1663	18733.2	3.9	37	8	14706	5.32
J	781129	5653	1650	18696.9	2.3	37	1	18943	5.26
J	781124	5640	1650	18689.6	2.3	39	2	18533	5.22
USSR	781013	5722	1663	18757.6	3.7	34	7	12072	5.22
USSR	781115	5713	1650	18726.5	3.4	37	1	16115	5.19
USSR	781115	5713	1650	18726.5	3.6	38	1	15976	5.15
USSR	781016	5712	1665	18732.1	3.7	38	1	15876	5.12
USSR	781024	5717	1662	18735.5	3.0	36	9	14800	5.10
USSR	781024	5717	1662	18742.5	2.4	35	2	14755	5.08
USSR	781117	5724	1650	18726.5	3.7	36	9	15761	5.08
USSR	781117	5701	1644	18709.2	3.5	37	9	14719	5.07
J	781124	5710	1665	18729.2	3.1	39	9	14619	5.04
USSR	781129	5709	1661	18725.5	3.7	36	7	12089	5.03
USSR	781013	5701	1663	18729.2	3.8	37	3	16512	5.02
USSR	781016	5702	1663	18745.9	3.8	37	3	15512	5.00
J	781111	5659	1650	18706.5	3.3	37	5	12442	4.97
J	781130	5705	1651	18716.5	3.3	39	2	10415	4.6

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 USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781116	57205	16537	740.6	482.6	32	4.3	21056	4.89
USSR	781111	57059	16457	745.3	480.5	37	3.5	15922	4.84
USSR	781014	57225	16647	742.3	487.8	33	2.5	19384	4.84
JAPAN	781127	57027	16447	745.4	479.8	33	4.5	24381	4.81
USSR	781138	57420	16703	750.5	485.6	38	2.0	14344	4.78
USSR	781025	57205	16647	740.7	487.0	33	2.2	11460	4.77
JAPAN	781129	57189	16518	747.4	488.5	39	1.9	9540	4.76
USSR	781028	57055	16457	741.5	481.9	38	1.3	7621	4.76
USSR	781013	57125	16435	747.4	487.0	33	2.5	16248	4.72
USSR	781111	56530	16530	740.9	482.7	32	1.5	14700	4.68
USSR	781021	57035	16543	742.4	486.3	38	2.1	14520	4.67
JAPAN	781218	57105	16432	740.9	483.6	37	1.6	12582	4.55
JAPAN	781026	57025	16446	741.6	487.0	33	2.1	13677	4.55
USSR	781022	57025	16442	743.3	479.7	37	2.3	10460	4.50
JAPAN	781119	57044	16444	749.2	481.6	34	2.0	13851	4.47
JAPAN	781130	57066	16508	745.2	481.3	35	2.0	13276	4.42
USSR	781129	57441	16508	750.4	483.5	38	2.2	11078	4.42
USSR	781113	57417	16608	748.4	480.5	37	2.2	12668	4.38
JAPAN	781101	57165	16440	742.8	482.1	38	2.5	11858	4.35
JAPAN	781124	57107	16556	742.5	487.7	38	2.2	12977	4.35
JAPAN	781120	57077	16437	743.8	482.1	37	2.5	13884	4.34
JAPAN	781124	57044	16433	747.5	480.6	34	2.2	11907	4.32
USSR	781015	57107	16637	741.5	486.9	38	2.1	10639	4.25
JAPAN	781120	57077	16431	747.5	487.1	34	2.5	13487	4.25
USSR	781012	57117	16445	742.5	486.7	37	2.3	14838	4.24
USSR	781011	57077	16445	742.5	489.9	38	2.3	14838	4.23
JAPAN	781119	57409	16714	747.2	486.7	37	2.2	10593	4.22
USSR	781117	56508	16516	749.2	481.7	38	2.2	11836	4.21
USSR	781117	56508	16506	749.5	481.1	37	2.3	13325	4.21

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 USE WITH CAUTION. **

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781113	5702	16502	18711.4	48085.7	37	6	10733	4.12
JAPAN	781202	5659	16600	18708.2	48083.1	48	1	6599	4.12
USSR	781021	5733	16713	18750.2	48305.4	38	3	13552	4.10
USSR	781210	5745	16522	18700.6	48185.6	39	0	6545	4.10
JAPAN	781115	5659	16430	18706.0	4806.9	37	2	10491	4.03
USSR	781024	5747	16705	18749.3	48168.7	38	0	1922	3.96
USSR	781016	5725	16631	18744.2	48203.0	38	5	9858	3.94
USSR	781017	5717	16627	18736.2	48304.4	38	3	15403	3.86
USSR	781121	5710	16626	18727.4	48306.9	38	3	12903	3.85
JAPAN	781117	5706	16503	18718.7	48159.3	38	3	15871	3.85
JAPAN	781223	5714	16609	18731.5	48229.3	38	3	6137	3.83
USSR	781116	5707	16618	18725.4	48337.9	38	0	7508	3.75
JAPAN	781014	5724	16645	18748.3	48111.9	38	2	12057	3.73
USSR	781129	5729	16702	18748.7	48258.1	38	3	19464	3.65
JAPAN	781116	5704	16503	18714.5	48133.7	39	2	10175	3.62
JAPAN	781129	5728	16527	18713.0	48254.2	38	2	19750	3.61
JAPAN	781127	5703	16527	18713.0	48156.9	35	5	12576	3.58
USSR	781124	5706	16620	18746.0	48586.0	34	3	10766	3.57
USSR	781027	5712	16555	18720.6	48231.8	35	3	12672	3.56
USSR	781028	5658	16512	18741.6	48108.2	35	5	10642	3.51
USSR	781103	5729	16636	18705.9	48156.2	38	4	11942	3.47
USSR	781031	5716	16633	18746.7	48085.6	33	0	10434	3.45
USSR	781029	5731	16647	18748.8	48211.9	35	0	10340	3.48
USSR	781029	5727	16615	18742.0	48559.4	34	1	10495	3.48
JAPAN	781128	5707	16459	18730.6	48058.4	34	3	7363	3.34
JAPAN	781125	5717	16504	18731.2	48098.2	36	2	17337	3.33
JAPAN	781118	5710	16526	18731.8	48212.1	39	0	6661	3.30
JAPAN	781118	5703	16513	18723.8	48244.3	39	2	8091	3.23
USSR	781015	5735	16712	18750.6	48119.1	36	3	10347	3.23
USSR	781013	5733	16714	18750.3	48936.4	38	3	10347	3.23

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NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781015	57225	16648	180745.18034	77.4	6	1.0	945	3.3
JAPAN	781012	54325	16708	180715.18033	77.8	2	3.3	945	3.3
USSR	781021	57180	16553	180730.18031	77.4	3	3.3	974	3.3
JAPAN	781019	57150	16553	180710.18031	77.4	3	3.3	937	3.3
USSR	781010	57158	16552	180731.18035	77.6	3	3.3	932	3.3
USSR	781019	57088	16550	180720.18034	77.6	3	3.3	932	3.3
USSR	781012	57117	16512	180729.18031	77.4	3	3.3	640	3.3
USSR	781125	57075	16622	180719.18029	77.3	3	3.3	328	3.3
USSR	781120	57311	16622	180747.18031	77.4	3	3.3	313	3.3
USSR	781030	57328	16510	180749.18031	77.4	3	3.3	109	3.3
USSR	781023	56589	16622	180745.18031	77.8	3	3.3	94	3.3
USSR	781016	57110	16622	180705.18031	77.3	3	3.3	94	3.3
JAPAN	781017	57140	16541	180738.18033	77.3	3	3.3	94	3.3
JAPAN	781017	57140	16541	180738.18033	77.3	3	3.3	94	3.3
JAPAN	781126	57201	16519	180746.18032	77.6	3	3.4	89	3.3
JAPAN	781029	57022	16623	180710.18032	77.6	3	3.4	89	3.3
JAPAN	781129	57022	16623	180710.18032	77.6	3	3.4	89	3.3
JAPAN	781118	56588	16513	180701.18031	77.4	3	3.5	87	3.3
JAPAN	781018	57064	16656	180728.18034	77.4	3	3.5	87	3.3
JAPAN	781114	56549	16530	180707.18031	77.9	3	3.5	87	3.3
JAPAN	781016	57287	16652	180744.18034	77.9	3	3.5	87	3.3
JAPAN	781016	57287	16652	180744.18034	77.9	3	3.5	87	3.3
JAPAN	781128	57177	16642	180730.18033	77.5	3	3.5	85	3.3
JAPAN	781123	57103	16541	180728.18033	77.5	3	3.5	85	3.3
JAPAN	781126	54264	16704	180723.18033	77.5	3	3.6	85	3.3
JAPAN	781121	55088	16853	180717.18033	77.6	3	3.6	85	3.3
JAPAN	781110	55388	16853	180717.18033	77.6	3	3.6	85	3.3
JAPAN	781121	5429	16724	180734.18034	77.4	3	3.6	85	3.3

THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION.

NATION	DATE YMMDD	LAT	LONG	APPROX 7X	LORAN-C	PULSE 7Y	RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781024	5711	16604	18227	3	226	8	38	1	30	2
JAPAN	781021	5433	16713	18164	3	265	9	33	3	61	2
JAPAN	781115	5652	16420	18094	3	490	6	33	2	91	1
JAPAN	781127	5436	16727	18077	3	036	7	27	3	95	1
JAPAN	781210	5543	16854	18703	3	308	9	33	3	87	1
JAPAN	781113	5424	16632	18016	3	491	2	33	3	82	1
JAPAN	781128	5543	16854	18091	3	025	3	34	3	74	1
JAPAN	781120	5434	16706	18091	3	276	1	22	3	72	1
JAPAN	781112	5706	16648	18723	3	401	5	26	3	63	1
JAPAN	781115	5659	16706	18091	3	401	1	23	3	62	1
JAPAN	781110	5659	16706	18091	3	401	5	23	3	62	1
JAPAN	781110	5703	16543	18707	3	135	6	34	3	50	1
JAPAN	781110	5703	16543	18717	3	222	5	33	3	52	1
JAPAN	781110	5703	16543	18710	3	133	6	33	3	52	1
JAPAN	781120	5439	16708	18025	3	484	1	20	3	61	1
JAPAN	781130	5523	16810	18257	3	485	3	25	3	61	1
JAPAN	781127	5430	16709	18064	3	885	7	28	3	61	1
JAPAN	781149	5426	16640	18191	3	247	3	25	3	61	1
JAPAN	781125	5424	16710	18032	3	803	3	19	3	61	1
JAPAN	781116	5424	16719	18027	3	089	3	33	3	61	1
JAPAN	781127	5431	16708	18072	3	883	3	35	3	61	1
JAPAN	781111	5654	16849	18703	3	255	3	27	3	61	1
JAPAN	781124	5436	16553	18168	3	771	1	23	3	61	1
JAPAN	781145	5435	16553	18191	3	718	4	23	3	61	1
JAPAN	781122	5437	16603	18074	3	853	3	23	3	61	1
JAPAN	781129	5438	16603	18074	3	853	3	23	3	61	1
JAPAN	781126	5431	16619	18205	3	904	3	12	3	61	1
JAPAN	781110	5446	16715	18222	3	751	1	11	3	61	1

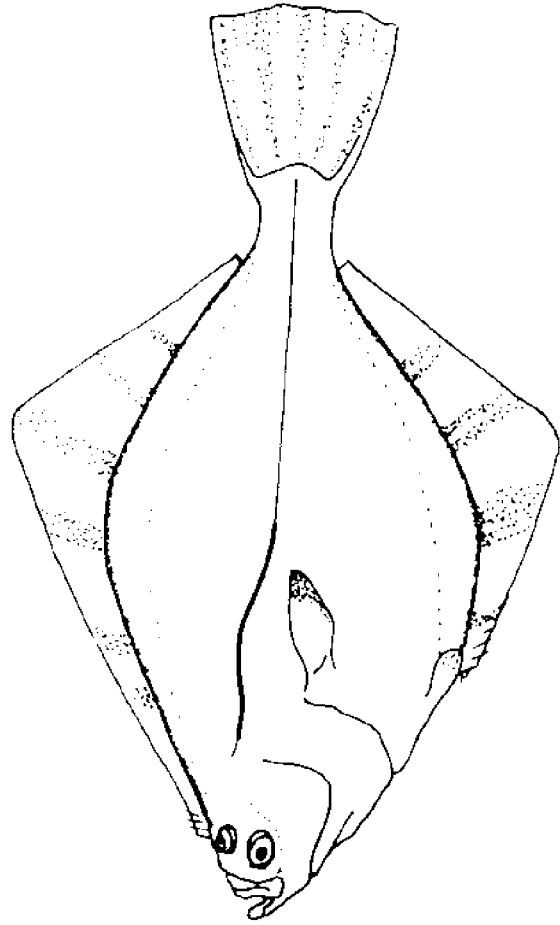
THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. **

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781125	54328	16720	7X 18057.3	7Y 4905.4	300	3.0	3157	1.05
JAPAN	781118	54202	16724	18071.8	4916.3	338	3.2	2084	1.04
JAPAN	781114	54501	16500	18219.1	4807.9	102	3.0	2074	1.04
JAPAN	781022	55527	16900	18381.1	4801.2	349	3.5	3104	1.03
JAPAN	781213	55437	16855	18307.1	4932.0	344	3.5	2560	1.00
JAPAN	781021	54335	16530	18307.2	4987.7	256	3.0	4040	1.00
JAPAN	781027	54358	16555	18196.3	4828.2	240	3.0	3540	1.00
JAPAN	781120	55180	16847	18408.5	4844.7	328	3.5	2892	0.96
JAPAN	781130	55347	16818	18209.3	4921.6	325	3.2	2310	0.92
JAPAN	781025	55073	16750	18198.7	4964.5	256	2.8	3184	0.90
JAPAN	781027	54338	16703	18166.2	4876.6	260	3.0	2281	0.82
JAPAN	781016	54226	16707	18068.2	4835.5	300	3.0	3385	0.82
JAPAN	781020	54427	16602	18197.5	4832.1	323	3.2	2881	0.82
JAPAN	781013	56036	16835	18245.5	4877.9	325	3.2	1759	0.79
JAPAN	781226	54433	16547	18410.3	4904.0	371	3.4	1567	0.77
JAPAN	781011	54443	16532	18218.7	4793.3	318	3.4	3305	0.75
JAPAN	781021	56036	16842	18264.6	4870.4	318	3.4	1959	0.75
JAPAN	781018	54084	16626	18493.5	4838.7	191	2.5	1885	0.74
JAPAN	781021	54509	16645	18170.4	4836.4	246	2.9	1955	0.73
JAPAN	781016	54509	16642	18227.1	4839.2	228	2.5	2145	0.72
JAPAN	781014	54435	16709	18203.1	4854.9	313	3.5	1688	0.70
JAPAN	781225	54438	16651	18276.9	4808.1	355	3.5	1517	0.63
JAPAN	781021	54447	16646	18211.3	4827.8	338	3.4	1973	0.63
JAPAN	781025	54443	16631	18201.5	4819.3	358	3.6	1628	0.62
JAPAN	781022	54566	16704	18201.9	4862.9	351	3.6	2435	0.62
JAPAN	781027	54388	16704	18208.5	4862.2	350	3.6	2669	0.61
JAPAN	781031	54261	16722	18021.8	4814.2	355	3.6	2923	0.61
JAPAN	781028	5441	16614	18065.8	4890.2	300	3.5	1519	0.60
JAPAN	781020	5438	16545	18221.5	4875.5	196	3.2	2114	0.57

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NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781027	5502	16713	7X 18227.4	98	3.0	1695	0.56
JAPAN	781027	5444	16622	34859.1	141	3.4	1894	0.55
JAPAN	781025	5446	16621	34770.8	119	3.0	1662	0.55
JAPAN	781012	5538	16900	34764.8	382	2.5	1378	0.55
JAPAN	781011	5447	16838	35002.6	237	3.5	1933	0.55
JAPAN	781119	5440	16713	35007.1	131	2.8	1502	0.51
JAPAN	781011	5555	16856	34884.1	259	2.0	1032	0.51
JAPAN	781210	5556	16900	35025.5	246	2.0	1032	0.51
				7Y 35032.9	344	3.0	1534	0.51

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***



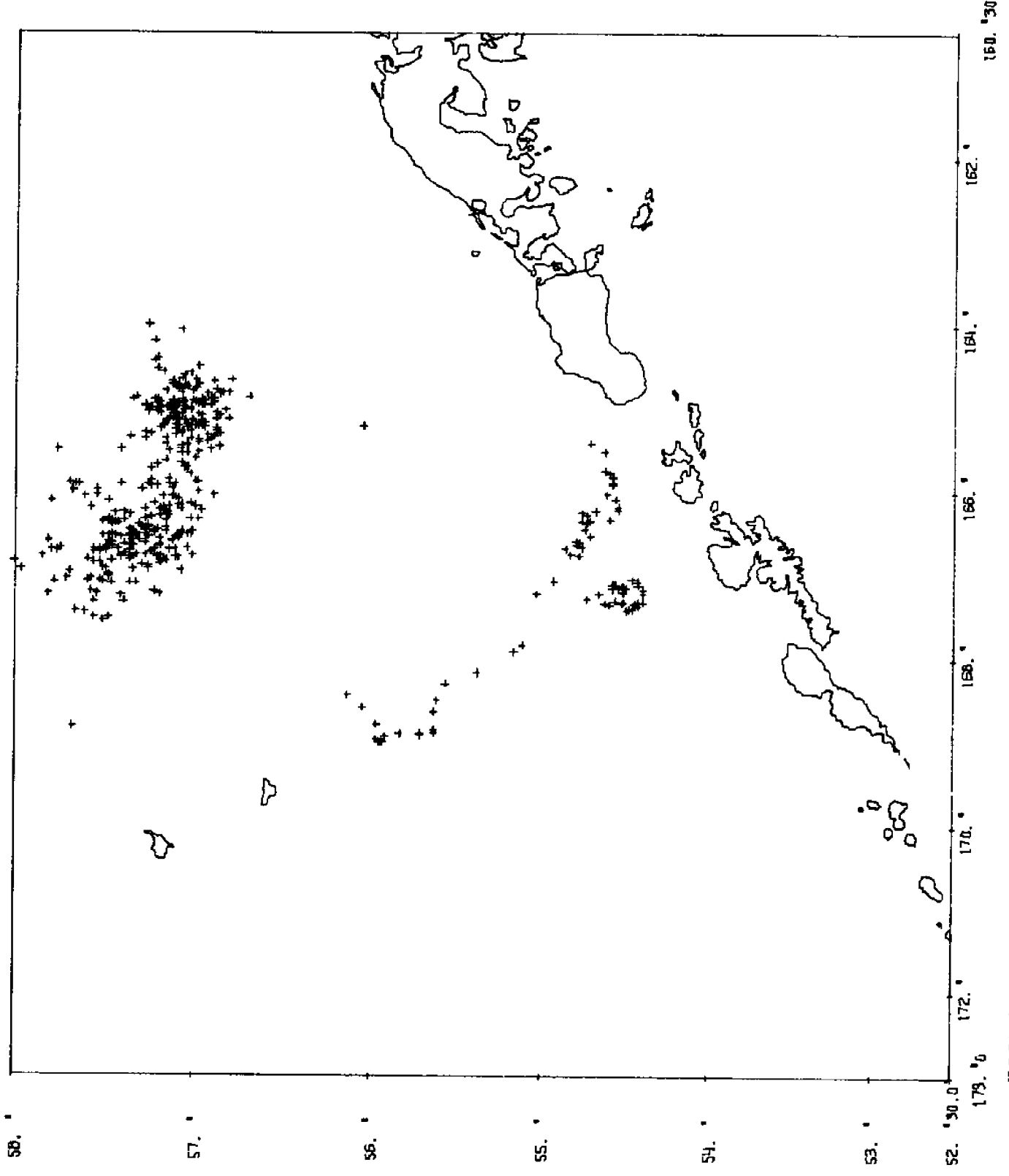


FIGURE F-8. FLOUNDERS, OCTOBER-DECEMBER, 1978

TABLE F-17. YELLOWFIN SOLE, JULY-SEPTEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	780922	5749	16717	18749.30	48929.29	36	00	172	12.08
USSR	780925	5749	16748	18743.30	48911.15	34	03	175	11.77
USSR	780926	5735	16657	18750.33	48827.39	36	03	201	11.20
USSR	780924	5737	16657	18750.49	48816.30	36	02	289	10.36
USSR	780925	5733	16654	18749.67	48806.30	36	02	116	10.22
USSR	780914	5730	16650	18748.84	48741.74	36	02	118	10.72
USSR	780921	5732	16625	18746.40	48666.40	36	05	198	9.56
USSR	780928	5730	16718	18749.77	48034.95	69	00	228	9.08
USSR	780928	5737	16705	18750.37	48869.31	69	00	102	9.05
USSR	780921	5751	16655	18748.37	49025.94	65	08	268	8.87
USSR	780939	5737	16729	18749.49	49077.53	65	05	243	8.47
USSR	780911	5741	16738	18749.17	49087.80	65	05	262	8.47
USSR	780948	5756	16719	18742.17	48912.54	65	06	244	8.88
USSR	780920	5742	16722	18749.17	48803.20	65	03	275	8.88
USSR	780921	5745	16702	18748.33	48832.57	65	04	250	8.02
USSR	780921	5749	16742	18748.04	48848.66	65	03	158	8.77
USSR	780912	5749	16706	18748.48	48808.57	65	04	246	7.45
USSR	780912	5748	16726	18750.48	48803.94	65	03	204	7.77
USSR	780923	5741	16654	18750.88	48878.92	67	02	208	7.77
USSR	780923	5739	16657	18750.88	48854.41	67	02	205	7.77
USSR	780920	5735	16724	18746.26	48814.80	64	03	235	7.22
USSR	780925	5739	16723	18750.81	48878.92	67	03	208	7.77
USSR	780925	5739	16656	18746.83	48854.41	64	03	208	7.77
USSR	780923	5747	16712	18750.83	48814.80	64	03	235	7.22
USSR	780918	5749	16730	18748.83	48892.07	65	06	159	6.91
USSR	780925	5735	16704	18750.44	48866.65	65	03	203	6.66
USSR	780925	5744	16710	18749.44	48898.91	65	03	203	6.66
USSR	780922	5742	16711	18750.44	48898.91	65	03	193	6.66
USSR	780922	5747	16722	18748.44	48895.66	64	03	189	6.66

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	780916	5737	16723	18749.7	7X	5	2	984	4.53
USSR	780917	5757	16716	18750.7	7Y	5	5	1403	4.52
USSR	780927	5736	16733	18750.3	7Z	5	2	1121	4.42
USSR	780911	5738	16703	18743.4		5	1	1437	4.39
USSR	780918	5740	16732	18746.8		5	3	1364	4.36
USSR	780913	5743	16746	18748.0		5	0	1461	4.32
USSR	780915	5749	16709	18748.1		5	2	1298	4.26
USSR	780913	5751	16724	18747.4		6	2	1087	4.18
USSR	780921	5745	16707	18748.4		6	0	1915	4.17
USSR	780931	5759	16719	18749.3		5	1	1169	4.16
USSR	780928	5754	16756	18746.7		5	1	1048	4.15
USSR	780920	5748	16734	18749.4		5	2	1278	4.08
USSR	780930	5740	16707	18750.7		5	1	1305	4.07
USSR	780932	5754	16745	18747.5		6	1	612	4.05
USSR	780927	5738	16804	18744.7		6	3	1215	4.05
USSR	780922	5732	16706	18750.7		5	1	1325	4.02
USSR	780924	5749	16721	18745.0		5	2	1277	3.92
USSR	780927	5737	16700	18747.0		5	1	1057	3.87
USSR	780930	5747	16801	18742.3		6	0	1143	3.71
USSR	780920	5752	16734	18742.9		5	2	1102	3.71
USSR	780920	5746	16653	18746.0		5	2	1402	3.69
USSR	780924	5735	16739	18746.0		5	2	1034	3.67
USSR	780929	5748	16658	18750.8		5	6	1956	3.66
USSR	780920	5748	16723	18743.6		5	5	1284	3.65
USSR	780930	5735	16737	18748.3		5	3	841	3.65
USSR	780930	5740	16749	18749.6		5	2	951	3.52
USSR	780915	5800	16702	18748.6		5	3	877	3.51
USSR	780917	5747	16700	18749.6		5	2	1156	3.50
USS	780917	5753	16700	18746.2		5	3	1978	3.41
USS	780917	5753	16706	18746.6		5	4	1159	3.41

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

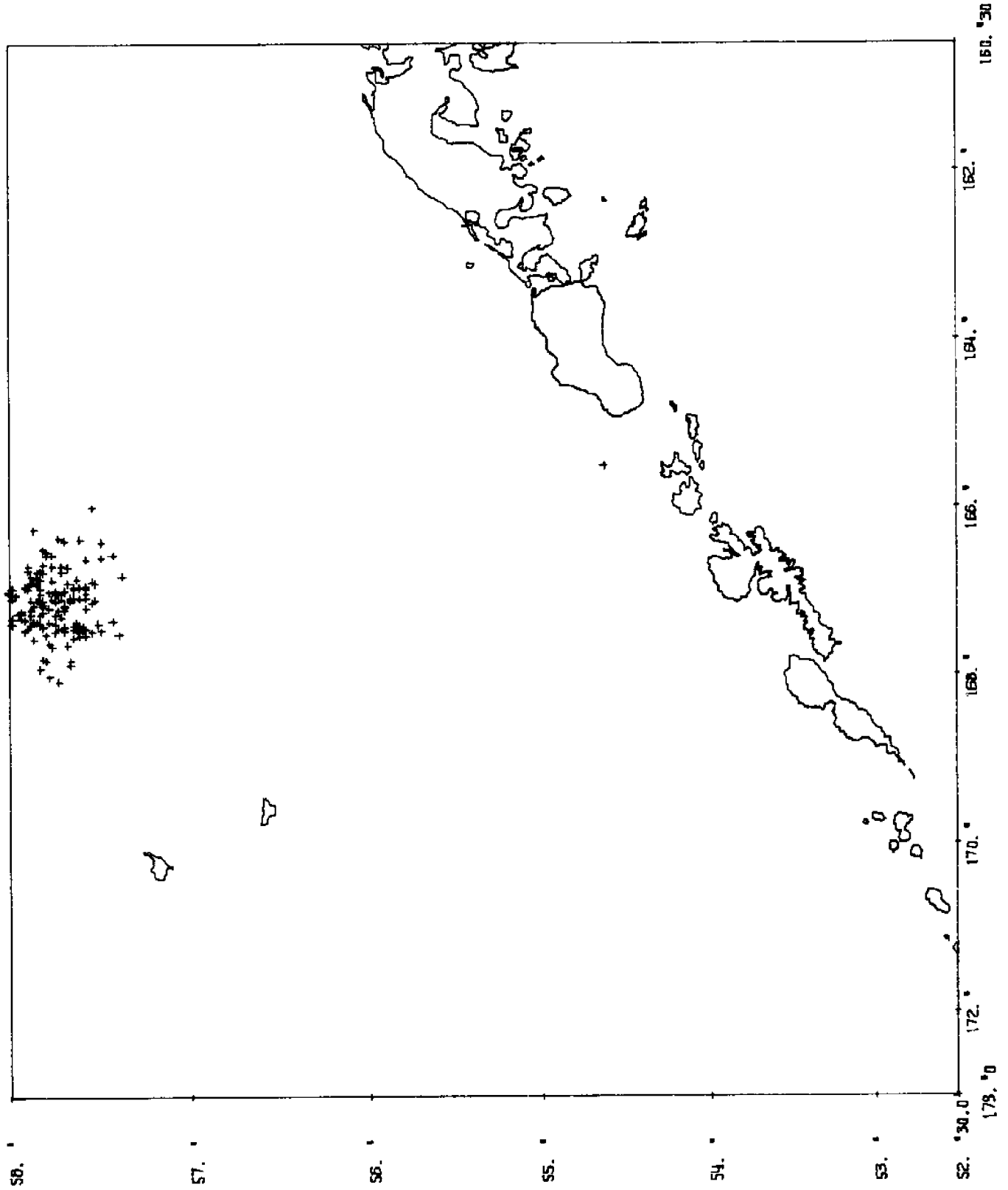


FIGURE F-9. YELLOWFIN SOLE, JULY-SEPTEMBER, 1978

TABLE F-18. YELLOWFIN SOLE, OCTOBER-DECEMBER, 1978

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
USSR	781130	5731	16655	18748.9	48814.6	55	1.3	355	27.34
USSR	781130	5733	16603	18747.3	48817.8	38	1.5	391	26.10
JAPAN	781020	5709	16545	18723.8	48973.3	80	2.0	378	18.90
JAPAN	781026	5658	16551	18707.4	48571.8	7	1.6	257	16.43
USSR	781016	5722	16629	18740.5	48255.9	37	3.0	443	14.92
USSR	781017	5734	16626	18735.1	48641.8	5	3.7	433	14.77
USSR	781023	5734	16502	18749.4	48723.8	5	1.5	239	14.08
JAPAN	781124	5650	16555	18749.4	48701.2	5	2.2	317	13.89
JAPAN	781129	5739	16541	18749.7	48643.7	5	2.2	319	12.76
JAPAN	781021	5659	16457	18719.7	48906.7	7	2.2	353	12.68
JAPAN	781021	5659	16457	18719.7	48906.7	7	2.2	353	12.68
USSR	781026	5655	16455	18706.7	48045.5	7	2.3	301	12.66
USSR	781029	5709	16554	18724.5	48439.1	40	2.3	315	12.40
JAPAN	781243	5705	16609	18714.3	48503.6	9	1.6	197	11.92
JAPAN	781123	5705	16649	18671.9	48562.2	4	2.2	242	11.23
JAPAN	781129	5705	16613	18719.2	48545.8	1	2.0	197	11.08
JAPAN	781123	5703	16533	18714.1	48545.8	1	2.2	242	11.23
JAPAN	781019	5708	16558	18722.7	48459.1	8	2.2	278	11.08
USSR	781123	5732	16642	18722.7	48572.7	38	2.2	307	10.65
JAPAN	781233	5710	16415	18726.7	48035.4	7	1.5	187	10.45
USSR	781066	5659	16632	18726.7	48035.4	7	1.5	187	10.45
USSR	781019	5729	16503	18746.0	48691.2	6	2.8	267	10.42
USSR	781019	5708	16605	18721.8	48097.2	38	1.3	182	10.40
JAPAN	781018	5705	16605	18721.8	48097.2	38	1.3	182	10.40
USSR	781021	5700	16440	18716.8	48506.5	6	1.9	171	10.37
USSR	781122	5749	16536	18750.8	48655.4	5	2.2	278	10.32
USSR	781019	5712	16504	18725.2	48095.4	6	2.2	298	10.25
USSR	781020	5716	16424	18726.4	48066.6	6	2.2	298	10.25
USSR	781102	5713	16424	18726.4	48066.6	6	2.2	298	10.25

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
JAPAN	781121	5603	16513	73.5	48150.4	41	34	343	10.1
JAPAN	781121	5653	16511	73.4	48149.8	40	33	342	10.0
JAPAN	781123	5653	16515	73.9	48142.9	38	31	339	9.9
JAPAN	781123	5653	16528	73.3	48177.5	34	30	330	9.6
USSR	781101	5717	16628	74.4	48045.5	36	31	300	9.6
USSR	781127	5734	16758	74.2	48058.2	38	32	335	9.5
JAPAN	781124	5654	16453	74.0	48044.5	37	32	330	9.5
JAPAN	781120	5714	16412	74.1	48030.9	37	32	336	9.5
JAPAN	781121	5705	16429	74.0	48045.4	41	33	364	9.3
JAPAN	781119	5713	16457	74.0	48055.6	37	32	326	9.2
USSR	781102	5723	16748	73.1	48091.6	37	32	306	9.2
USSR	781102	5713	16641	73.3	48055.5	37	32	329	9.2
USSR	781102	5654	16447	73.6	48049.5	37	32	345	9.2
JAPAN	781102	5655	16528	73.6	48055.0	38	33	356	9.0
JAPAN	781114	5653	16531	73.8	48080.4	41	33	352	8.8
USSR	781121	5748	16607	73.5	48225.0	35	31	308	8.4
JAPAN	781121	5709	16529	73.5	48243.1	35	31	327	8.4
JAPAN	781121	5651	16529	73.4	48271.3	32	28	275	8.6
JAPAN	781126	5701	16555	73.5	48295.3	34	30	305	8.6
USSR	781130	5717	16555	73.5	48229.5	35	31	320	8.5
JAPAN	781117	5704	16529	73.6	48240.3	35	31	327	8.5
JAPAN	781127	5708	16555	73.6	48240.3	38	32	380	8.5
JAPAN	781128	5652	16539	73.4	48270.4	39	32	379	8.4
USSR	781101	5722	16639	73.0	48270.4	37	32	374	8.4
USSR	781128	5705	16529	73.0	48273.8	39	32	391	8.3
JAPAN	781120	5715	16527	73.6	48273.8	38	32	374	8.3
JAPAN	781120	5715	16527	73.6	48273.8	38	32	374	8.3
JAPAN	781120	5715	16527	73.6	48273.8	38	32	374	8.3
JAPAN	781124	5716	16525	73.6	48085.2	38	32	378	8.2
JAPAN	781114	5723	16454	73.5	48085.2	38	32	378	8.2
USSR	781124	5703	16459	73.6	48061.9	38	32	371	8.2
USSR	781124	5716	16459	73.6	48061.9	38	32	371	8.2
USSR	781124	5716	16459	73.6	48061.9	38	32	371	8.2
USSR	781123	5703	16454	73.5	48035.5	38	32	370	8.2
USSR	781123	5740	16700	73.2	48035.5	38	32	370	8.2
USSR	781126	5740	16555	73.3	48050.6	35	31	240	8.0

THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION.

NATION	DATE Y M D D	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781123	5706	1644	7X	7Z	36	15	140	9.86
USSR	781031	5707	1642	7Y	7Z	33	32	150	4.66
USSR	781119	5720	1650	7Y	7Z	33	33	204	6.17
USSR	781014	5722	1663	7Y	7Z	33	22	203	9.27
USSR	781020	5749	1663	7Y	7Z	33	23	188	8.17
USSR	781020	5725	1640	7Y	7Z	33	23	206	9.01
USSR	781020	5715	1670	7Y	7Z	33	25	197	7.44
USSR	781027	5720	1670	7Y	7Z	33	25	198	7.30
USSR	781027	5725	1643	7Y	7Z	33	25	195	7.35
USSR	781127	5721	1643	7Y	7Z	33	26	204	7.84
USSR	781127	5748	1640	7Y	7Z	33	26	194	7.24
USSR	781127	5729	1640	7Y	7Z	33	26	197	7.44
USSR	781026	5730	1664	7Y	7Z	33	26	203	7.73
J	781126	5735	1665	7Y	7Z	34	26	197	7.44
USSR	781126	5716	1665	7Y	7Z	34	26	203	7.44
USSR	781126	5715	1663	7Y	7Z	34	26	193	7.44
USSR	781022	5739	1663	7Y	7Z	34	26	203	7.44
USSR	781022	5659	1673	7Y	7Z	34	26	192	7.44
USSR	781022	5712	1652	7Y	7Z	34	26	192	7.44
USSR	781022	5708	1645	7Y	7Z	34	26	192	7.44
J	781022	5708	1645	7Y	7Z	34	26	192	7.44
J	781128	5708	1645	7Y	7Z	34	26	192	7.44
J	781128	5708	1645	7Y	7Z	34	26	192	7.44
J	781128	5708	1645	7Y	7Z	34	26	192	7.44
USSR	781021	5721	1651	7Y	7Z	34	26	192	7.44
USSR	781021	5656	1650	7Y	7Z	34	26	192	7.44
USSR	781123	5618	1652	7Y	7Z	34	26	192	7.44
USSR	781021	5702	1663	7Y	7Z	34	26	192	7.44
USSR	781021	5711	1661	7Y	7Z	34	26	192	7.44
J	781125	5654	1660	7Y	7Z	34	26	192	7.44
J	781125	5714	1642	7Y	7Z	34	26	192	7.44

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN. USE WITH CAUTION. ***

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781017	5711	16649	18730.5	4879.4	38	3.4	20964	6.13
USSR	781114	5701	16455	18709.7	4874.1	32	2.8	17181	6.13
USSR	781119	5758	16656	18774.3	4876.1	32	3.0	18350	6.11
JAPAN	781214	5654	16521	18737.8	4882.1	41	3.4	20266	6.08
USSR	781018	5720	16642	18745.4	4873.6	38	3.0	19468	6.06
USSR	781107	5655	16458	18720.2	4850.8	38	3.0	18202	6.05
USSR	781021	5710	16538	18724.4	4832.4	37	3.0	19364	6.04
USSR	781115	5704	16458	18714.2	4804.6	37	3.0	20947	5.94
USSR	781013	5717	16628	18736.7	4865.3	37	3.0	18420	5.94
USSR	781121	5712	16634	18731.7	4878.8	37	3.0	17737	5.91
JAPAN	781128	5712	16634	18730.7	4869.8	40	3.0	17737	5.85
JAPAN	781212	5722	16658	18741.3	4864.2	38	3.0	17737	5.85
USSR	781015	5728	16706	18703.5	4806.2	38	3.0	20412	5.83
USSR	781015	5715	16642	18748.2	4809.2	38	3.0	15764	5.80
USSR	781022	5715	16632	18743.2	4876.8	37	3.0	11524	5.75
USSR	781033	5740	16726	18750.3	4896.9	37	3.0	20178	5.70
USSR	781055	5730	16643	18747.0	4876.6	37	3.0	14380	5.72
USSR	781014	5730	16643	18745.0	4873.6	37	3.0	17736	5.72
USSR	781112	5710	16521	18735.0	4813.4	37	3.0	17716	5.71
USSR	781116	5700	16502	18718.0	4816.2	37	3.0	16446	5.65
USSR	781115	5704	16504	18714.9	4808.2	37	3.0	14077	5.63
USSR	781114	5722	16715	18749.7	4820.1	35	3.0	14077	5.63
USSR	781115	5728	16637	18736.4	4820.0	35	3.0	15205	5.55
JAPAN	781124	5659	16620	18746.9	4895.6	41	3.0	11157	5.55
JAPAN	781122	5659	16643	18709.5	4861.1	35	3.0	11157	5.55
JAPAN	781126	5712	16456	18724.8	4804.1	38	3.0	22210	5.54
JAPAN	781123	5654	16509	18750.4	4813.6	39	4.0	20503	5.42
USSR	781116	5652	16456	18750.4	4869.6	37	3.0	18207	5.51
USSR	781116	5652	16506	18750.4	4811.7	37	3.0	18207	5.51
JAPAN	781129	5711	16615	18728.9	4817.1	39	3.0	18207	5.51
JAPAN	781129	5711	16609	18722.9	4813.0	38	3.0	18207	5.51
USSR	781018	5729	16640	18747.1	4871.8	38	3.0	11923	5.49

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781015	57226	16638	744.6	191.3	33	5.0	1726	5.47
USSR	781014	57225	16639	743.8	153.7	33	3.4	1333	5.47
USSR	781116	57225	16537	740.0	30.5	33	3.2	1587	5.47
USSR	781114	57367	16704	750.6	52.3	33	3.2	1743	5.44
USSR	781025	57208	16632	745.4	23.6	33	2.0	1855	5.42
USSR	781117	57333	16659	745.2	49.5	33	3.5	1895	5.41
USSR	781018	57305	16517	741.6	17.3	33	2.4	1348	5.39
USSR	781114	57109	16519	722.5	1.0	33	1.1	1365	5.36
USSR	781019	57066	16455	731.9	1.2	33	1.1	1534	5.35
USSR	781012	57103	16452	732.0	1.0	33	1.0	1650	5.34
JAPAN	781129	55653	16508	713.8	2.2	33	1.0	1508	5.31
JAPAN	781129	55653	16508	713.8	2.2	33	1.0	1508	5.31
JAPAN	781017	57164	16630	737.3	9.6	33	1.7	1269	5.21
USSR	781115	57133	16519	722.6	2.5	33	1.1	1572	5.15
USSR	781015	57133	16503	722.6	2.5	33	1.1	1572	5.13
USSR	781026	57177	16620	735.9	2.3	33	1.1	1558	5.11
USSR	781013	57220	16631	737.1	7.6	33	1.9	1394	5.10
USSR	781016	57112	16640	732.1	6.5	33	1.8	1531	5.07
USSR	781016	57117	16652	732.7	1.9	33	1.1	1582	5.02
USSR	781128	56559	16505	706.9	3.5	33	1.5	1525	5.02
USSR	781117	56649	16508	709.5	3.5	33	1.5	1564	5.02
JAPAN	781216	57020	16631	715.2	8.9	33	2.8	1387	4.94
USSR	781016	57000	16650	712.4	4.9	33	1.5	1531	4.93
USSR	781111	56559	16505	706.9	3.5	33	1.5	1525	4.90
USSR	781117	56649	16508	709.5	3.5	33	1.5	1564	4.90
USSR	781214	57020	16631	715.2	8.9	33	2.8	1387	4.88
USSR	781016	57000	16650	712.4	4.9	33	1.5	1531	4.87
JAPAN	781124	57109	16650	715.2	8.9	33	2.8	1387	4.85
USSR	781116	57209	16633	725.4	7.6	33	2.4	1685	4.85
JAPAN	781130	57055	16519	716.5	3.1	33	1.4	1650	4.85
USSR	781021	57059	16531	722.7	3.1	33	1.5	1099	4.80
USSR	781013	57331	16705	749.3	3.5	33	2.3	1156	4.77
USSR	781013	57331	16705	749.3	3.5	33	2.3	1156	4.75

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YMMDD	LAT	LONG	APPROX LORAN-C	PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
JAPAN	781130	5657	16514	7X	7Y	39	1.6	7588	4.74
USSR	781124	5720	16627	7X	7Y	35	2.3	1354	4.77
USSR	781117	5727	16616	7X	7Y	38	3.3	1398	4.66
USSR	781017	5712	16639	7X	7Y	38	3.3	1584	4.66
USSR	781013	5743	16703	7X	7Y	38	3.3	1390	4.63
USSR	781014	5722	16515	7X	7Y	34	2.4	1184	4.62
USSR	781015	5723	16643	7X	7Y	36	2.4	1844	4.61
JAPAN	781121	5715	16544	7X	7Y	37	2.2	1918	4.59
JAPAN	781124	5705	16547	7X	7Y	37	2.2	1241	4.57
USSR	781113	5655	16518	7X	7Y	37	1.9	1738	4.57
USSR	781127	5705	16530	7X	7Y	32	1.3	1419	4.54
JAPAN	781020	5706	16447	7X	7Y	37	1.0	1427	4.48
JAPAN	781029	5703	16524	7X	7Y	37	3.8	1034	4.45
USSR	781019	5704	16432	7X	7Y	37	2.2	1246	4.37
USSR	781113	5707	16458	7X	7Y	36	2.2	1963	4.33
JAPAN	781130	5704	16509	7X	7Y	38	2.7	1166	4.28
USSR	781120	5720	16556	7X	7Y	39	3.1	1308	4.25
USSR	781012	5707	16445	7X	7Y	37	1.5	1048	4.19
JAPAN	781128	5710	16508	7X	7Y	38	3.8	1166	4.16
JAPAN	781128	5706	16502	7X	7Y	38	3.0	1244	4.14
JAPAN	781113	5656	16520	7X	7Y	40	2.6	1024	4.10
JAPAN	781124	5659	16633	7X	7Y	41	2.5	1042	4.07
USSR	781128	5659	16646	7X	7Y	37	2.6	961	4.01
USSR	781029	5720	16630	7X	7Y	35	2.2	920	4.00
JAPAN	781119	5733	16516	7X	7Y	38	2.3	921	4.00
JAPAN	781128	5707	16543	7X	7Y	38	3.3	637	3.96
JAPAN	781017	5717	16547	7X	7Y	38	3.3	624	3.92
USSR	781015	5717	16627	7X	7Y	38	3.3	524	3.88

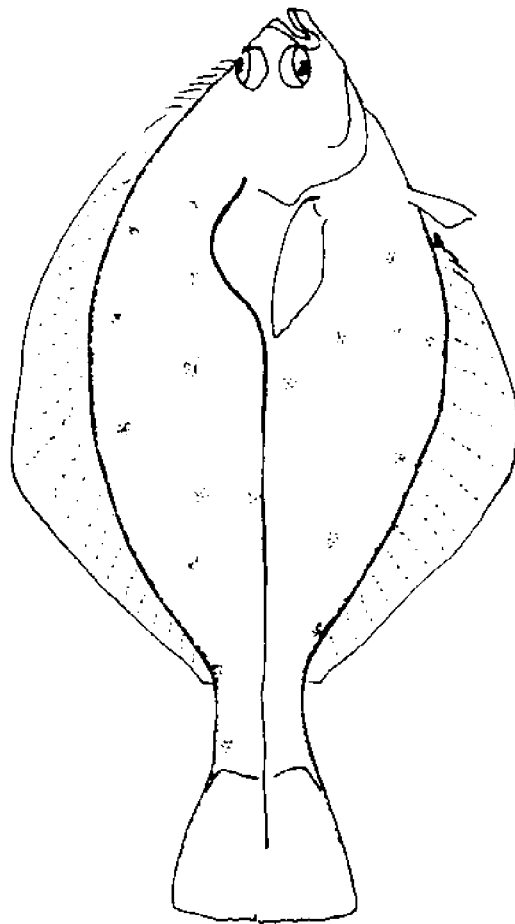
THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. **

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LBS)	THOUSAND LBS PER HOUR
USSR	781024	57078	165016	746.0	38	0	7660	83
JAPAN	781117	57058	165016	746.0	38	0	5750	83
USSR	781117	57058	165016	746.0	38	0	12501	80
USSR	781015	57127	16633	746.0	38	0	13385	80
USSR	781016	57205	16512	746.0	38	0	19418	79
JAPAN	781120	57065	16520	746.0	38	0	12531	76
JAPAN	781116	57077	16520	746.0	38	0	5922	74
JAPAN	781123	57079	16628	746.0	38	0	7395	74
USSR	781121	57110	16626	746.0	38	0	1252	68
JAPAN	781121	57114	16629	746.0	38	0	1274	68
JAPAN	781018	57148	16642	746.0	38	0	1573	68
JAPAN	781116	57049	16502	746.0	38	0	1924	55
USSR	781127	57225	16555	746.0	38	0	1233	55
USSR	781127	57225	16555	746.0	38	0	1233	55
USSR	781027	57122	16645	746.0	38	0	1945	55
USSR	781124	57126	16610	746.0	38	0	1039	50
JAPAN	781124	57077	16610	746.0	38	0	945	46
JAPAN	781019	57077	16512	746.0	38	0	1924	42
USSR	781122	57089	16514	746.0	38	0	1023	41
USSR	781122	57089	16514	746.0	38	0	1023	41
USSR	781016	57168	16503	746.0	38	0	1053	32
USSR	781012	57311	16632	746.0	38	0	990	32
USSR	781031	57311	16632	746.0	38	0	990	32
USSR	781018	57219	16636	746.0	38	0	1018	32
USSR	781014	57297	16459	746.0	38	0	1100	22
USSR	781129	57242	16513	746.0	38	0	990	22
USSR	781118	57077	16513	746.0	38	0	960	22
JAPAN	781128	57077	16504	746.0	38	0	639	19
JAPAN	781118	57110	16526	746.0	38	0	702	19
JAPAN	781118	57110	16526	746.0	38	0	702	19
USSR	781011	57138	16559	746.0	38	0	1004	13
USSR	781011	57138	16559	746.0	38	0	1004	13

*** NOTE *** THE ACCURACY OF POSITION AND LORAN-C INFORMATION REPORTED IN THIS TABLE IS UNKNOWN.
 USE WITH CAUTION. ***

NATION	DATE YYMMDD	LAT	LONG	APPROX LORAN-C PULSE RATES	FISHING DEPTH (FMS)	HOURS TRAWLED	CATCH (LRS)	THOUSAND LBS PER HOUR
USSR	7811 9	5700	16611	7X 18710.8 34313.6 48551.0	37	2.6	3665	1.40
USSR	7810 18	5702	16548	18713.6 34228.5 48396.0	38	2.5	3491	1.39
JAPAN	7812 9	5703	16543	18714.6 34206.9 48362.0	39	0.8	10725	1.34
JAPAN	7811 4	5709	16618	18725.5 34284.3 48593.2	35	3.5	4365	1.24
USSR	7811 19	5722	16632	18741.5 34247.7 48674.8	35	3.1	3285	1.20
JAPAN	7811 14	5659	16553	18708.4 34261.3 48430.7	41	2.0	2085	1.04
JAPAN	7811 14	5702	16500	18711.7 34079.2 48074.1	39	1.6	1652	1.00
USSR	7810 11	5741	16849	18735.0 34553.9 49521.2	38	3.1	3110	1.00
USSR	7812 2	5737	16604	18749.0 34053.3 48468.5	35	3.6	3549	0.98
USSR	7810 16	5709	16642	18727.1 34363.4 48754.0	38	2.4	1490	0.62

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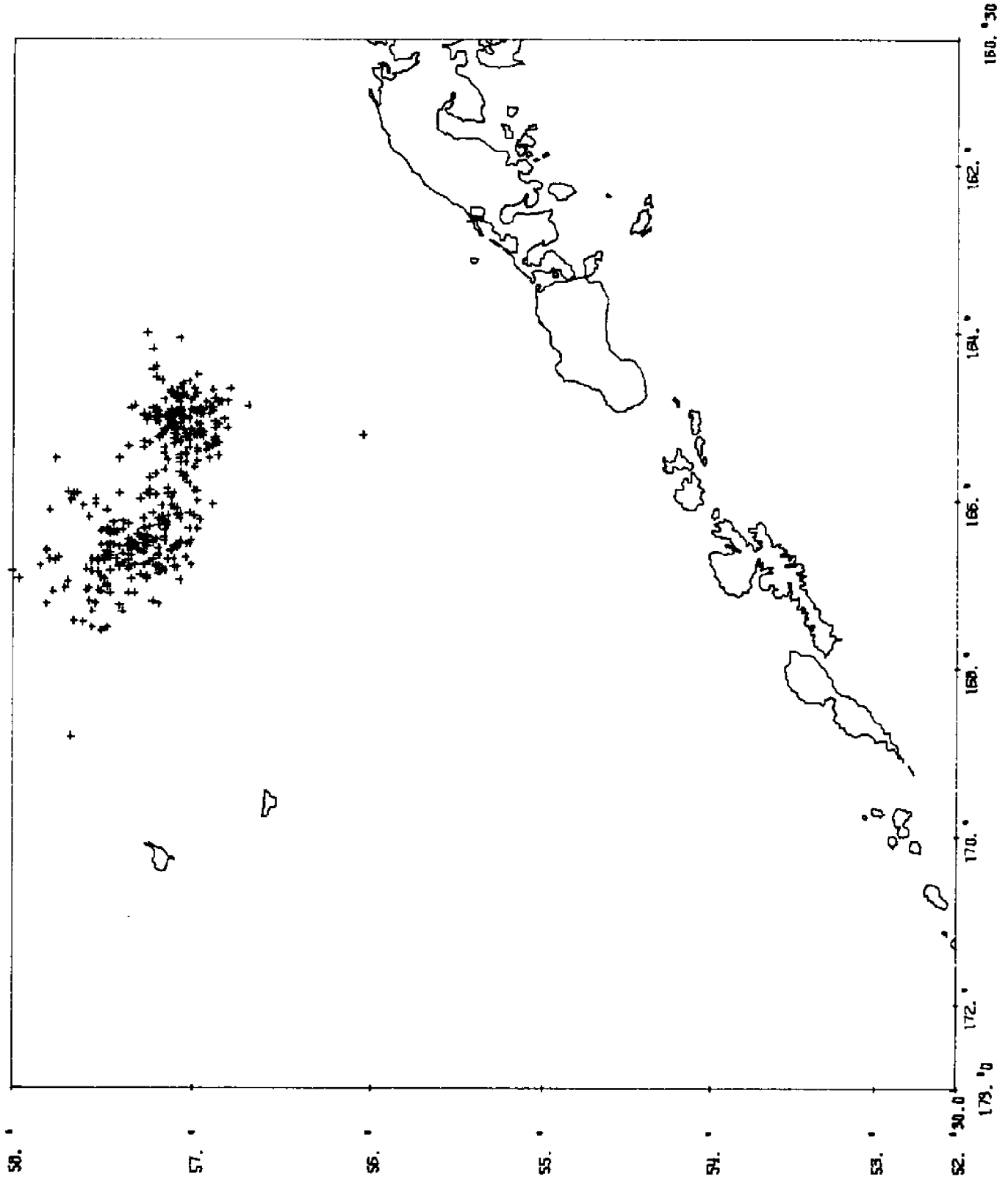


FIGURE F-10. YELLOWFIN SOLE, OCTOBER-DECEMBER, 1978

APPENDIX G

Other Sources of Information

As an aid in using this report, a short bibliography of other publications available to the reader follows.

APPENDIX G

Other Sources of Information

As an aid in using this report, a short bibliography of other publications available to the reader follows. These publications should assist in the understanding of the data gaps in this report, and also fill these gaps to some extent.

- Anon. 1974. Preliminary results of an industry-government venture on Alaska groundfish. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest Fish. Center, Seattle, WA, Processed rep., 72 p.
- Anon. 1977. Fishery management plan and environmental impact statement for the Gulf of Alaska groundfish fishery during 1978. Final draft. North Pacific Fishery Management Council, Anchorage, 323 p.
- Anon. 1978. Fishery management plan and draft environmental impact statement for the groundfish fishery in the Bering Sea/Aleutain Island area. Draft. Vol. 1. North Pacific Fishery Management Council, Anchorage, 224 p.
- Bakkala, R. G. and G. B. Smith. 1978. Demersal fish resources of the eastern Bering Sea: spring 1976. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest and Alaska Fish. Center, Seattle, WA, Processed rep., 234 p.
- Hughes, S. E. and N. B. Parks. 1975. A major new fishery for Alaska. Natl. Fisherman Yearbook 55(13):34-40.
- Low, L. L. and J. Akada. 1978. Atlas of groundfish catch in the north-eastern Pacific Ocean, 1964-1976. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest and Alaska Fish. Center, Seattle, WA, Processed rep., 546 p.
- Parks, N. B. and H. Zenger. 1978. Trawl surveys of groundfish resources in the eastern Gulf of Alaska and southeastern Alaskan waters 1976-77. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest and Alaska Fish. Center, Seattle, WA, Processed rep., 53 p.
- Pereyra, W. T., J. E. Reeves, and R. G. Bakkala. 1976. Demersal fish and shellfish resources of the eastern Bering Sea in the baseline year 1975. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest Fish. Center, Seattle, WA, Processed rep., 619 p.
- Ronholt, L. L., H. H. Shippen, and E. S. Brown. 1976. An assessment of the demersal fish and invertebrate resources of the northeastern Gulf of Alaska, Yakutat Bay to Cape Cleare, May-Aug. 1975. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest Fish. Center, Seattle, WA, NEGOA annual rep., 184 p.

- Ronholt, L. L., H. H. Shippen, and E. S. Brown. 1978. Demersal fish and shellfish resources of the Gulf of Alaska from Cape Spencer to Unimak Pass 1948-1976 (a historical review). Vols. 1-4. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest and Alaska Fish. Center, Seattle, WA, Processed rep., 955 p.
- Smith, G. B. 1977. Fish and shellfish resources of the eastern Bering Sea, 1975-76. U.S. Dep. Commer., Natl. Oceanic Atmos. Admin., Natl. Mar. Fish. Serv., Northwest and Alaska Fish. Center, Seattle, WA, Chart Overlay Series, 20 sheets.

