

Northwest and Alaska Fisheries Center Processed Report*

REPORT OF U.S. OBSERVATIONS OF THE JAPANESE MOTHERSHIP
SALMON FISHERY DURING 1978

by

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Submitted to the

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

by the

U.S. NATIONAL SECTION

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* This report does not constitute a publication and is for information only. All data herein are to be considered provisional.

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CONTENTS

Introduction -----	1
Information collected -----	2
Fishing operations -----	2
Distribution of fishing effort -----	3
Recommendations -----	6
Appendix -----	7

TABLE

Table 1. Estimated distribution of fleet days of fishing effort by Japanese mothership fleets in 1978 with respect to the U.S. Fishery Conservation Zone. --	5
--	---

FIGURE

Figure 1. Estimated fleet days of effort fished by the Japanese mothership fishery during 1978. ----	4
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INTRODUCTION

Following the signing in Tokyo on 25 April 1978 of the Protocol amending the International Convention for the High Seas Fisheries of the North Pacific Ocean, a group of observers was organized by the Marine Mammals and Resource Ecology and Fisheries Management Divisions of the Northwest and Alaska Fisheries Center to monitor fishing operations within the U.S. Fisheries Conservation Zone (FCZ). Two additional salmon biologists were trained as observers in order to participate in a cruise of a Japanese research vessel in the central Bering Sea. A separate report covers the research cruise.

The observer team for each mothership consisted of one member whose primary responsibility was to monitor salmon operations and another whose primary responsibility was to observe and sample marine mammals. The observers left Seattle the first week of June 1978 and traveled via Anchorage and Adak, Alaska, before boarding a Japanese vessel for transfer to the motherships. Most teams were not aboard by the opening of the FCZ to fishing on 10 June due to delays in transit from Adak to each of the motherships. The observer teams left the motherships on or about 23 June and returned to Adak on 26 June.

Cooperation of the Japanese officers, crew, and JFA inspectors with U.S. observers was excellent; although, there were some misunderstandings regarding the reporting of catches of Japanese scouting vessels inside the FCZ. Reporting requirements of Japanese fishing operations were apparently not clear to all concerned.

INFORMATION COLLECTED

The primary purpose of placing salmon observers aboard the motherships was to collect data on catch, effort, and average size (weight) by species. A copy of the data form used by U.S. observers to log catches is appended to this report. Five samples of fish were weighed to compute average size for each species so that variability in average size could be determined. Detailed data on catch-effort statistics from the mothership fishery in 1978 will be used to study the precision of catch estimates based on catch weight and average weight per fish.

FISHING OPERATIONS

Salmon fishing operations of the mothership fleets followed the pattern observed by U.S. scientists in the early 1960's. Each fleet of 43 catcher-boats set gillnets in late afternoon and began pulling the gear early the following morning. Catches were transferred daily in mesh bags to each of the four motherships from the catcher-boats moored at fore and after weighing stations. Each bag contained a single species of salmon and its weighing was supervised by three men: a representative of the catcher-vessel owner's association representing the seller, an official of the mothership company representing the buyer, and a JFA inspector who certified the accuracy of the catch weight and arbitrated buyer-seller disagreements. The U.S. salmon observer could not monitor all catch weights because the catcher-boats were off-loading at the two places with about 1 minute intervals between

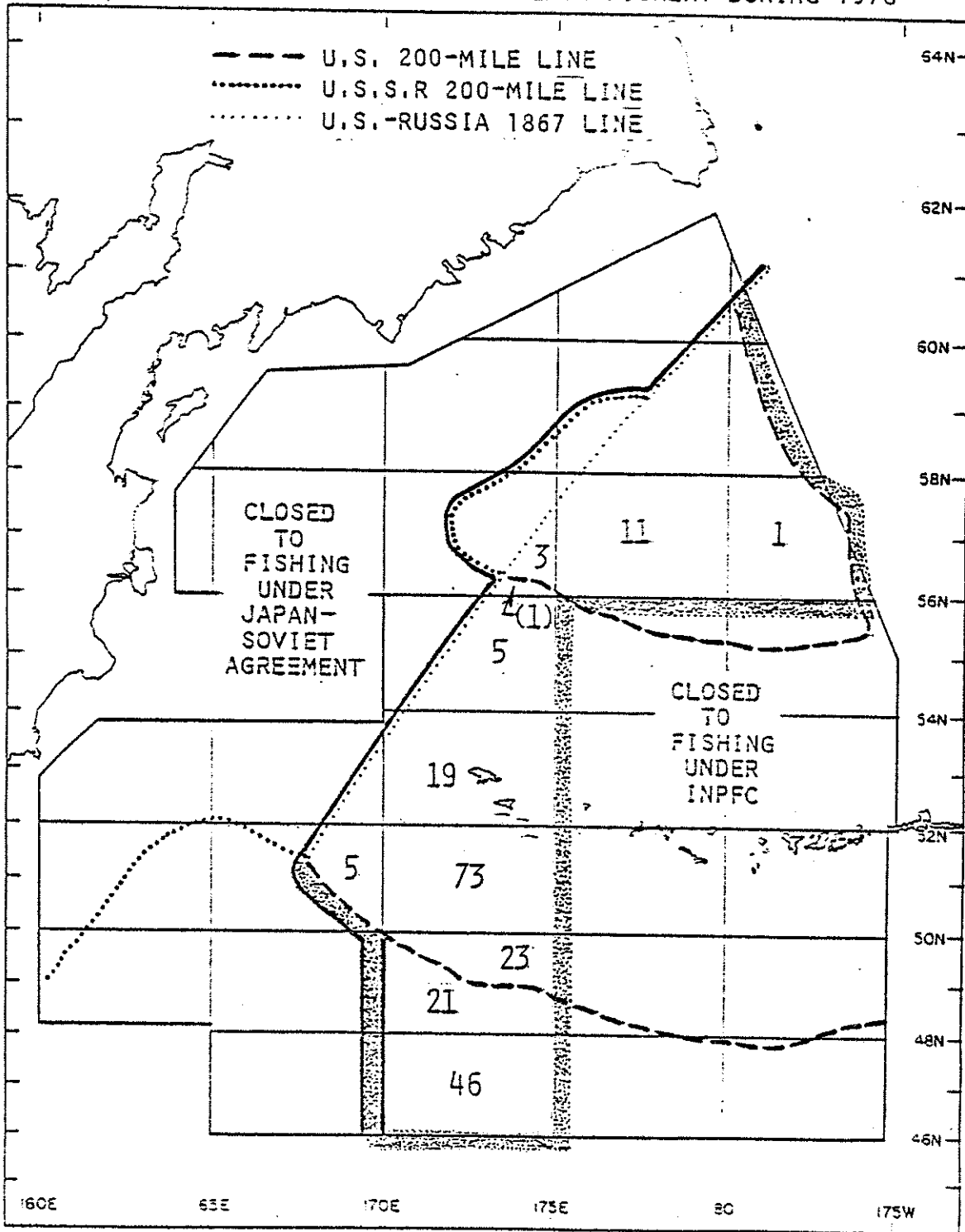
weighings. Instead, the observer randomly checked weights at both stations, recording about one-fourth the catch weights of the 37 catcher-boats. Observers later compared their catch records with those furnished by the JFA chief inspector; little or no discrepancy was found between records except for the omission of the catches of the six scout boats. One observer was able to obtain daily scout-boat landings; similar data were withheld from observers aboard the other three motherships. During those days when the fleets fished seaward of the FCZ, the salmon observers were directed by the ship captains to suspend recording of weights and limit their observations to Dall's porpoise.

DISTRIBUTION OF FISHING EFFORT

The 1978 fishing season began 1 June south of the FCZ and north of latitude 46° N between longitudes 170° E and 175° E. The area north of the FCZ, west of longitude 175° E, was open to fishing 1 June; but no operations took place in this area. The FCZ west of longitude 175° E was open to fishing after 9 June and the central Bering Sea outside the FCZ and north of latitude 56° N was open to fishing after 25 June.

In most years prior to 1977, fishing effort in late June and early and mid-July has been extensive in the central Bering Sea. This was not the case in 1978; most of the fishing effort was concentrated south of the Aleutian Islands, primarily between longitudes 173° E and 175° E and from latitudes 48° N to 52° N (Figure 1). The decision to remove observers from the motherships in late June was, in part, based on the

Figure 1. ESTIMATED FLEET DAYS OF EFFORT FISHED BY THE JAPANESE MOTHERSHIP SALMON FISHERY DURING 1978



assumption that fishing operations would be shifting from inside the FCZ to the central Bering Sea outside the FCZ. This did not occur. After 22 June, the Japanese continued to fish inside the FCZ with about the same effort as prior to that date (Table 1). As a result, fishing operations inside the FCZ were not completely covered.

Table 1.--Estimated distribution of fleet days of fishing effort by Japanese mothership fleets in 1978 with respect to the U.S. Fishery Conservation Zone.*

Mothership	Total days			Number of days after June 9			Percentage after June 9	
	In	Out	Total	In	Out	Total	In	Out
1	31	21	52	31	12	43	72	28
2	27	26	53	27	17	44	64	36
3	38	15	53	38	6	44	86	14
4	30	20	50	30	11	41	73	27
Fleet Total	126	82	208	126	46	172	74	26

* "In" refers to operations inside the FCZ and "Out" refers to operations seaward of the FCZ.

RECOMMENDATIONS

If U.S. salmon observers are to accurately monitor the catches of salmon by the mothership fleet within the FCZ, a minimum of two salmon observers must be aboard each mothership throughout the entire fishing season. Observers must be deployed to the motherships well in advance of 10 June, the opening of the FCZ to fishing west of longitude 175° E. In one case during 1978, a salmon observer spent 11 days in transit aboard the Japanese patrol vessel and 6 working days aboard the mothership of which only 2 days were inside the FCZ. If observers boarded the motherships in Japan prior to sailing for the fishing grounds and disembarked near Adak at the end of the season, complete monitoring of mothership operations within the FCZ would be ensured. In addition, some clear understanding of reporting requirements of the mothership catches must be reached with the Japanese well in advance of the beginning of the fishing season.

