

INPFC
DOCUMENT

Ser. No. 2345

Rev. No.

REPORT OF U.S. OBSERVATIONS OF THE JAPANESE MOTHERSHIP
SALMON FISHERY DURING 1980

by

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Submitted to the

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

by the

U.S. NATIONAL SECTION

September 1980

This paper may be cited in the following manner: Dahlberg, M. L. 1980. Report of U.S. observations of the Japanese mothership salmon fishery during 1980. (Document submitted to annual meeting of the International North Pacific Fisheries Commission, Anchorage, Alaska, October 1980. 3 pp. Northwest and Alaska Fisheries Center, Natl. Mar. Fish. Serv., Natl. Oceanic Atmos. Admin., Auke Bay Laboratory, P.O. Box 155, Auke Bay, AK, 99821.)

U.S. SALMON OBSERVER PROGRAM IN 1980

INTRODUCTION

As part of the Annex [Paragraph 1(c)] to the amended International Convention for the High Seas Fisheries of the North Pacific Ocean (INPFC), the Government of Japan may be required by the Government of the United States to accept scientific observers on board vessels fishing within the United States Fishery Conservation Zone (FCZ). The United States placed observer teams similar to those used in 1978 and 1979 on board each of the Japanese salmon motherships operating within the FCZ in 1980. In 1978 and 1979, the United States placed an observer team on board each of the Japanese salmon motherships. One member of the two-observer team monitored salmon operations and the other observed and sampled marine mammals. It was agreed at the meeting of the ad hoc Salmon Research Coordinating Group, Salmon Subcommittee, Biology and Research Committee, INPFC, in Tokyo 20-22 February 1980 that United States observers would arrive at Adak Island, Alaska, by 6 June 1980 and be ready for embarkation on Japanese patrol vessels on 7 June 1980.

Mothership Observations in 1979

Salmon observers were placed aboard the motherships to collect data on total catch, fishing effort, and average weight of each species. One of the salmon observers conducted four tagging experiments on dead pink salmon or chum salmon to examine the randomness with which the fishery was sampled. The salmon observers' duties were:

- 1) Observe and record daily catch weights of salmon, by species, as the fish were transferred from each of the catcher-boats to the mothership. Each day, the observer obtained the following information from the fleet commander or Japan Fisheries Agency (JFA) inspector:
 - a) the average weight of 30 fish of each salmon species, if available, from each of 5 catcher-boats and the identification number of each of the 5 catcher-boats;
 - b) the catch weights of salmon, by species, for catcher-boats not actually observed; the total effort and effective effort in tans of gillnet for each catcher-boat in the fleet; and the geographical coordinates where each catcher-boat set its nets; and
 - c) the latitude and longitude of the mothership at noon Japan Standard Time and air and surface-water temperatures.
- 2) Record daily the catch weight of salmon, by species, from each of the scout boats in the mothership fleet. (Data obtained from the ship's log or from the JFA inspector.) Also record the total fishing effort and effective fishing effort in tans of gillnet and latitude and longitude of each set for each of the scout boats.
- 3) Summarize daily catcher-boat landings, by salmon species; summarize catch-effort data, by 1° x 1° INPFC statistical area;

and prepare a radio message for transmission to the National Marine Fisheries Service Alaska Regional Office, Juneau, Alaska.

- 4) Randomly select one weighing container of each species each day and count the salmon within it to determine average weight of fish in the container and compare this figure with the average obtained by weighing groups of 30 fish.

The salmon observers gave the Japanese fleet commander on each mothership a written copy of the salmon observers' duties. A Japanese language copy of the U.S. Salmon Observer Manual was furnished to each vessel in 1979 to clarify why the salmon observers were aboard and precisely what the observers were to do each day.

Schedule--The four U.S. salmon observers left Seattle on 4 June 1980 and traveled via Anchorage and Adak, Alaska, before boarding a Japanese vessel on 6 June for transfer to the motherships. The motherships were observed as follows:

<u>Vessel</u>	<u>Dates observer on board (JST)</u>
<u>Kizan Maru</u>	9 June - 1 July and 14 July - 31 July
<u>Meiyo Maru</u>	9 June - 29 June and 9 July - 30 July
<u>Nojima Maru</u>	9 June - 8 July and 20 July - 29 July
<u>Jinyo Maru</u>	10 June - 8 July and 19 July - 30 July

From 9 July to 13 July, the fleets of the Nojima Maru and Jinyo Maru either fished in the central Bering Sea or were in transit. The Kizan Maru operated outside the FCZ 2-13 July, and the Meiyo Maru was either in transit or seaward of the FCZ during 30 June-8 July. The U.S. observers boarded the vessels when the vessels reentered the FCZ and observed salmon catches until 29-31 July. The observers aboard the Nojima Maru boarded a Japanese patrol vessel on 29 July and remained on board until all observers were picked up and returned to Adak, Alaska, on 1 August 1980.

Coverage--Salmon fishing operations of the mothership fleets in 1980 followed the pattern observed by U.S. observers in 1978 and 1979. Each fleet of 43 catcher-boats set gillnets in late afternoon and began pulling in the nets early the next morning. Catches were transferred daily to each of the four motherships. The catcher-boats were moored at fore and aft weighing stations and the catch was transferred in mesh bags. Each bag contained a single species of salmon. The U.S. salmon observer could not monitor all catch weights because the catcher-boats off-loaded at both places with about 1 minute intervals between weighings. Instead, the observer randomly checked weights at both stations and recorded about 39% of the catch weights of the 37 catcher-boats. The six scout boats delivered fish, but their catches were not weighed. Observers later compared their catch records with

those furnished by the JFA chief inspector. Few discrepancies were found between records. Most discrepancies were attributed to the observer's inexperience in reading the needle of the scale as it swung with the roll of the ship.

Lack of Coverage--During the fishing season, all four motherships left the FCZ and returned. Salmon observers reboarded all vessels when the vessels returned to the FCZ and observed fishing operations until the end of the season.

The U.S. observers were unable to record some catches on the Meiyo Maru and the Nojima Maru. The Meiyo Maru operated within the FCZ on 9 July, and all catcher boats delivered their catches before the U.S. observer was able to board later that day. For tagging experiments, the U.S. observer on the Nojima Maru boarded a catcherboat early in the morning and returned to the mothership late the next day. Consequently, he did not observe catches on 16 and 17 June, 23 and 24 June, 1 and 2 July, and 22 and 23 July.

SALMON OBSERVER PROGRAM PROBLEMS

During 1979, most U.S. salmon observers were placed on a rigid meal and bath schedule that interfered with their monitoring of salmon catches. Extended tea and meal time sessions distracted the observers from assigned duties. In addition, three of the four motherships severely restricted the movement of U.S. observers about the motherships.

After discussions in Tokyo during the 1979 annual meeting of the INPFC, the JFA agreed to allow U.S. observers more freedom of movement on board the motherships. In 1980, three of the four motherships allowed U.S. observers an acceptable degree of mobility. However, the U.S. salmon observer on board the Jinyo Maru was confined to his quarters while not observing landings. He was allowed to move between fore and aft weighing stations only while escorted.

The U.S. salmon observers must be allowed to observe the weighing of the catches from the catcher boats without interference. Scout-boat catch-effort and locations must be included on the JFA log and must be given to the salmon observer each day. Fishing must not occur inside the FCZ without U.S. observers aboard.