

ALASKA LEGISLATURE COMMITTEE FILES 1981-1982 86/2

1947 RES SJR 60

1997

*History of foreign interception of
Alaskan fisheries.*

PROTECTION OF ALASKAN RED SALMON FISHERIES

FEBRUARY 19, 1958.—Ordered to be printed

Mr. GREEN, from the Committee on Foreign Relations, submitted the following

REPORT

[To accompany S. Res. 263]

The Committee on Foreign Relations, whose attention was directed by Senators Magnuson, Jackson, and Morse to the depletion of Alaskan salmon resources resulting from intensified Japanese fisheries activity in the North Pacific, reports an original resolution, Senate Resolution 263, to the Senate and recommends that it do pass.

BACKGROUND OF THE RESOLUTION

Early in the present session of Congress, Senators Magnuson, Jackson, and Morse brought to the attention of the Committee on Foreign Relations a serious situation existing in the North Pacific fisheries area because of the effects of intensified Japanese fishing activity upon red-salmon stocks of North American origin. In a 10-year period from 1947 to 1957, the red-salmon fisheries yield of the Alaskan area had fallen from 1,887,500 cases valued at \$44,133,000 to 983,000 cases with a value of \$24,651,000.

Information furnished to the committee indicates that this alarming destruction of one of the Nation's important economic resources was attributable almost entirely to the activities of Japanese fishing fleets, and that if this fishing is continued at the same level even the remaining diminished stocks of commercial red salmon would be jeopardized. Conditions have been such that frequently, under United States conservation practices, American fishermen have been restricted to one 24-hour period of red-salmon fishing in the course of a week. American conservation laws, moreover, limit such fishing to United States territorial waters; whereas Japanese fisheries activities are carried out on the high seas.

THE NORTH PACIFIC FISHERIES CONVENTION OF 1952

By treaty concluded on May 9, 1952, between the United States, Canada and Japan (in force June 12, 1953; TIAS 2786), the Japanese

Government agreed to abstain from fishing stocks of salmon in the North Pacific (including the Bering Sea) east of a line tentatively set at 175° W. longitude (par. 2 of the annex to the Convention). This undertaking was accompanied by an obligation assumed by the United States and Canada to carry out necessary conservation measures for the salmon stocks in specified areas east of this line.

The problem dealt with in the present resolution arises from the fact that many of the red salmon from Bristol Bay spawning areas (which is east of this line) migrate to the North Pacific beyond the provisional treaty line. That line, which is approximately 800 to 1,000 miles west of Bristol Bay, actually is closer to Kamchatka than to the Alaskan mainland. It is the area west of the line which is being heavily fished by the Japanese fleets and their nets. In consequence, even though Japan may have, by and large, observed the literal provisions of the convention, it cannot be said that Japanese fishing practices have conformed to the spirit of conservation which was the underlying motivation of the treaty.

A further complicating element is injected by the fact that in the area where the Japanese fishing fleets have operated, pink salmon originating in the western Pacific intermingle with the red salmon from American waters.

OBJECTIVE OF THE TREATY

The resolution approved by the committee urges the Secretary of State and other appropriate officials of the United States to initiate negotiations immediately with the Government of Japan for the purpose of further effectuating the 1952 treaty, and to assure, in time for the 1958 season, such action as may be necessary to prevent the destruction of salmon stocks of North American origin.

The problem of Alaskan salmon depletion was considered in executive session of the committee on February 11, 1958. At that time testimony was received by the committee from Mr. William G. Herrington, Special Assistant for Fisheries and Wildlife to the Under Secretary of State; and Mr. Warren F. Jooney, Deputy Special Assistant. After reviewing the background of the treaty and events leading to the present critical condition of red salmon resources in the North Pacific, the committee voted unanimously to report the present resolution to the Senate.

COMMITTEE RECOMMENDATION

It seems beyond question that unless immediate measures are taken to preserve the Alaskan salmon resources from continued decimation by Japanese fishing fleets, the red-salmon cycle will be disrupted to a point from which full recovery may not be possible. Moreover, the impact of Japanese exploitation of these resources has created severe economic dislocation for our own fishermen, closing certain fisheries to them entirely. This, of course, has produced adverse consequences for the salmon-fishing industry, resulting in the disappearance of the Alaskan salmon commodity from many consumers' markets in the United States.

To be effective for the 1958 salmon season, immediate action by our Government is essential. For this reason, the Committee on Foreign Relations urges the Senate to give its approval to the pending resolution without delay.

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85TH CONGRESS
2D SESSION

S. RES. 263

[Report No. 1291]

IN THE SENATE OF THE UNITED STATES

FEBRUARY 19, 1958

Mr. GREEN, from the Committee on Foreign Relations, reported the following resolution; which was ordered to be placed on the calendar

RESOLUTION

Whereas the salmon fisheries of the Territory of Alaska are vital to the economic welfare of the Nation as well as to the Territory; and

Whereas the salmon fisheries constitute a valuable natural resource that provides millions of pounds of food and employment for thousands of persons annually; and

Whereas the 1947 red salmon pack was one million eight hundred and eighty-seven thousand five hundred cases valued at \$44,133,000; and

Whereas the average red salmon pack for the past ten years has been only nine hundred and eighty-three thousand cases; and

Whereas the wholesale value of the 1957 red salmon pack was only \$24,651,000; and

Whereas in 1952 Japan concluded a treaty with Canada and the United States whereby Japan agreed to abstain from taking salmon spawned in Alaskan waters; and

Whereas in 1954, with the treaty in full effect, Japan initiated high-seas fishing on a substantial scale; and

Whereas Japan has increased and expanded its high-seas fishing program during the years 1955, 1956, and 1957; and

Whereas studies indicate that unless emergency action is taken the red salmon cycle will be impaired and weakened to the point from which full recovery may never be possible; and

Whereas, in the circumstances, the United States is faced with closing certain fisheries entirely to our fishermen, thereby creating severe economic dislocation, or, in the alternative, allowing them to fish seven days a week to meet the Japanese competition; and

Whereas to do either of the foregoing would end in serious economic dislocation and possible destruction of the fisheries:

1. Resolved, That the Secretary of State, together with
2. other appropriate officials of our Government, immediately
3. initiate negotiations with the appropriate officials and agen-
4. cies of the Government of Japan for the purpose of:
 5. (a) Effectuating the purposes of the treaty entered into
 6. by the United States, Canada, and Japan in 1952; and
 7. (b) Assuring in time for the 1958 season necessary ac-
 8. tion to prevent destruction of salmon stocks of North Ameri-
 9. can origin.

February 4, 1958

Honorable Dwight D. Eisenhower
President of the United States
of America
White House
Washington, D. C.

Dear Mr. President:

I call your attention to the enclosed resolution which was passed by the Alaska Legislative Council at its recent meeting held in Ketchikan, Alaska on January 18, 1958.

This matter is deemed of extreme importance to the Territory and we sincerely hope it will be given your due consideration and attention.

Very truly yours,

Henry J. Canerot
Executive Director

HJC/mw

Encl.

*Some letters to all
States listed in the Resolution*

ALASKA LEGISLATIVE COUNCIL RESOLUTION NO. 1
(TWENTY-THIRD LEGISLATIVE SESSION)

WHEREAS the Legislature for the Territory of Alaska is not scheduled to convene until January of 1959; and

WHEREAS testimony presented at a hearing held in Ketchikan, Alaska before the Alaska Legislative Council on January 17 and 18, 1958, indicates that the taking of salmon between 175° W. and 170° E. longitude is seriously jeopardizing the Alaska fishing industry, especially in the Bristol Bay area; and

WHEREAS it is further indicated by such testimony that immediate action is deemed necessary to preserve one of Alaska's major industries and an important segment of its economy,

NOW THEREFORE, BE IT RESOLVED that the Alaska Legislative Council, on January 18, 1958, in executive session assembled, hereby endorses Resolution No. 4 of the Alaska Fish and Game Commission relating to the present devastating high seas salmon fishing practices by the Japanese nationals, which resolution is quoted as follows:

"ALASKA FISH AND GAME COMMISSION

Resolution No. 4

BE IT RESOLVED BY THE ALASKA FISH AND GAME COMMISSION OF THE TERRITORY OF ALASKA:

WHEREAS, the International North Pacific Fisheries Commission was created by a convention between Canada, Japan and the United States, which came into force on June 12, 1953, and under terms of this treaty the three nations agreed to establish a commission, which could recommend conservation measures for regulation of

species of fish in the North Pacific Ocean, that are of joint interest to the three nations; and

WHEREAS, the said convention also recognized that the stocks of salmon spawned in the rivers of North America and the stocks of halibut and herring adjacent to the coasts of North America qualified for abstention and accordingly Japan agreed to abstain from fishing these stocks, and Canada agreed to abstain from fishing salmon in the Eastern Bering Sea; and

WHEREAS, at the time the Convention was negotiated it was expected that the stocks of salmon of North American and Asian origin might intermingle somewhere in the Mid-Pacific area, therefore a line running north and south through 175° W. longitude was established on a provisional or temporary basis to separate the stocks; and

WHEREAS, the International North Pacific Fisheries Commission inaugurated in 1955 a comprehensive, coordinated research program to be participated in by scientists of the three countries to solve the problems of the treaty and which has been continued and expanded in 1956 and 1957, with participation by specialists from the three countries in the fields of salmon distribution on the high seas, racial studies, scale analysis, parasitology, tagging and other related sciences; and

WHEREAS, results of these extensive studies have demonstrated that (1) there is a broad band of intermingling of stocks of salmon of North American and Asian origin in the Mid-Pacific on both sides of the provisional line, (2) stocks of red salmon spawned in Bristol Bay streams occur in considerable numbers at least as far west as 170° E. longitude, approximately 500 miles west of the provisional line, (3) a large proportion of these red salmon between 175° W. and 170° E. longitude are immature and would, therefore, gain greatly in weight if allowed to remain in the ocean to feed until mature, (4) during the 1957 fishing season Japanese vessels caught between 5,000,000 and 10,000,000 red salmon in the above area, most of which, if not all, were destined for Bristol Bay streams, thereby depriving American fishermen of earning a livelihood; and

WHEREAS, American and Canadian fishermen have already been prohibited from catching salmon on the high seas by means of nets, are restricted to rather narrow limits along the coast and, furthermore, they are closely regulated by means of fishing seasons, mesh size, closed areas and other measures; and

WHEREAS, in view of the above facts the United States section of the International North Pacific Fisheries Commission recommended to the respective parties, at its recent meeting in Vancouver, B. C., on November 4-6, 1957, the cessation of all salmon fishing in the zone of intermingling; and

WHEREAS, this proposal of the United States Section was not accepted by the two other national sections, thereby permitting this intermingling zone to be as heavily exploited in 1956 as in 1957 to the great detriment, perhaps annihilation, of the runs of red salmon destined for the streams of Bristol Bay; and

WHEREAS, should the Japanese be allowed to destroy the salmon fishery of Bristol Bay, which is the only source of income for the residents, the present stable resident population of the area, so essential to the national security of the United States, would be forced to move, thus creating a large uninhabited section of the country vulnerable to invasion by an unfriendly power; and

WHEREAS, the added burden of the Japanese fishing effort on the Bristol Bay runs makes it impossible for the United States Government to fulfill its treaty obligation of maintaining the fishery on a maximum sustained yield basis;

·NOW, THEREFORE, BE IT RESOLVED by the Alaska Fish and Game Commission of the Territory of Alaska that the Government of the United States do everything within its power to alleviate this situation."

BE IT FURTHER RESOLVED that a copy of this Resolution be submitted to the Honorable Dwight D. Eisenhower, President of the United States of America; the Honorable John Foster Dulles, Secretary of State; the Honorable Fred A. Seaton, Secretary of the Interior; the Honorable Sinclair Weeks, Secretary of Commerce; the Honorable Richard M. Nixon, President of the Senate; the Honorable Sam Rayburn, Speaker of the House of Representatives; the Honorable Henry M. Jackson and the Honorable Warren G. Magnuson, Senators from the State of Washington; the Honorable Richard L. Neuberger and the Honorable Wayne Morse, Senators from the State of Oregon; the Honorable James E. Murray, Chairman of the Senate Committee on Interior and Insular Affairs; the Honorable Warren G. Magnuson, Chairman of the Senate Committee on Interstate and Foreign Commerce; the Honorable Theodore Francis Green, Chairman

of the Senate Foreign Relations Committee; the Honorable Clair Engle, Chairman of the House Committee on Interior and Insular Affairs; the Honorable Oren Harris, Chairman of the House Committee on Interstate and Foreign Commerce; the Honorable Thomas S. Gordon, Chairman of the House Foreign Affairs Committee; the Honorable Herbert C. Bonner, Chairman of the House Merchant Marine and Fisheries Committee; the Honorable E. L. Bartlett, Delegate to Congress from Alaska; the Honorable Mike Stepovich, Governor of Alaska; the Honorable William Egan and the Honorable Ernest Gruening, Tennessee Plan Senators from Alaska; the Honorable Ralph Rivers, Tennessee Plan Representative from Alaska; the International North Pacific Fisheries Commission; the Washington State Department of Fisheries; and to the British Columbia Department of Fisheries;

209 Westbrook C.
Secretary of State; the Honorable *John D. ...*
Interior; the Honorable *John ...*
Honorable Richard M. Nixon, President
Honorable Henry M. Jackson and the Honorable
of the Senate and the House of Representatives
of the Senate and the House of Representatives
of the Senate and the House of Representatives
of the Senate and the House of Representatives

Committee for the Protection of the

North Pacific Fisheries

As of January 7, 1968

G. L. Anderson, Director
Alaska Dept. of Fish and Game

W. C. Arnold, Managing Director
Alaska Salmon Industry, Inc.

DeWitt Gilbert, Editor
Pacific Fisherman

George Johansen, Sec'y-Treas.
Alaska Fishermen's Union

Robert Kellenberg, Chairman
Alaska Fish and Game Commission

Harold E. Lokken, Manager
Fishing Vessel Owners Assn.

Milo Moore, Director
Washington Dept. of Fisheries

T. F. Sandoz, President
Columbia River Packers Assn.

John Smith, Mayor
Mellakalia, Alaska

Lowell Wakefield, President
Wakefield's Deep Sea Trawlers

Alaska Fishermen's Union

Alaska Salmon Industry, Inc.

Alaska Salmon Institute

Association of Pacific Fisheries

Columbia River Salmon & Tuna Packers Assn.

Deep Sea Fishermen's Union of the Pacific

Dist. Council of Carpenters, AFL, Local 1184

Fishermen's Cooperative Assn.

Fishing Vessel Owners Assn.

Alaska Cannery Committee of International
Association of Machinists, Hope Lodge 79

ILFWU Local 3, Fisheries Division

Northwest Fisheries Assn.

Northwest Salmon Cannery Assn.

Pacific Herring Packers Assn.

Pogge Club, Seattle Chapter

Puget Sound Gillnetters Assn.

Puget Sound Salmon Cannery, Inc.

Purse Seine Vessel Owners Assn.

Radio Officers & Technicians Assn.

The Fishermen's News

Washington Reef Net Owners Assn.

JAPAN'S High Seas Salmon Fishing

WHAT ARE
THE
PLAIN FACTS

?

THIS BOOKLET

... was prepared and published by the Committee for the Protection of North Pacific Fisheries to provide Americans with the plain facts necessary to a basic understanding of the problem of protecting one of the United States' great natural resources, the salmon of North America, from destruction as result of Japanese exploitation on the high seas in contradiction of the principles and spirit of a solemn international treaty.

At time of publication, Jan. 2, 1958, the committee was composed of those individuals, organizations and agencies listed on the back cover of this booklet.

The committee seeks adherence from all interested in awakening the United States and Canada to the peril threatening a continental resource.

The situation is one of urgency. Already the destructive effect of this ocean fishery is plainly apparent in the depletion of the Alaska salmon runs, from which the ocean operations wastefully take immense numbers of immature salmon. Another season, or two, and all years of the salmon cycle will have been drained to a point from which they may never recover.

By law, and wisely, Americans and Canadians are forbidden to compete with the Japanese in this high seas fishery. Why? Because scientific research in biology and management of the salmon shows that such a fishery is incompatible with sound conservation.

This booklet offers the basic facts, as objectively and dispassionately as possible in the face of threatened destruction of a priceless natural resource.

—Committee for the Protection of
North Pacific Fisheries

George Johanson, Chairman
302 Colman Bldg.,

JAPAN'S HIGH SEAS SALMON FISHING

What are the Plain Facts?

History —

• In the Russian-Japanese War, 1904-5, Japan gained rights in the shore salmon fisheries of Siberia, which she aggressively developed.

Following the Bolshevik Revolution in 1918, the U.S.S.R. gradually forced the Japanese from many of their fishery locations in Soviet territory. As a result, the Japanese developed off-shore fishing techniques and a fleet of floating canneries.

From 1931 until 1937 the Japanese gradually extended their high seas fishing operations north and east along The Chain of the Aleutian Islands, into Bering Sea, and to the fringes of the rich Alaska salmon fishing area of Bristol Bay.

Recognizing that such exploitation of immature stocks on the high seas would be more than the Alaska stocks of salmon could sustain without jeopardizing the long-standing conservation program of the United States, the American salmon industry vigorously opposed this extension of Japan's high seas fishing operations to the home waters of the Alaska salmon.

In 1937 the U.S. Department of State, in what came to be known as the "Cordell Hull doctrine," asserted to Japan that: "There is in these resources a special and unmistakable American interest"; and that their exploitation by Japan "must be regarded as important in the comity of the nations concerned."

Despite the diplomatic the language, the implication was plain and the Japanese in 1938 announced the suspension of their operations.

In World War II Japan lost all her fishing rights

in Kamchatka, as well as the island territories she had held off the coast of Siberia north from Japan.

Once more she prepared to engage in high seas salmon fishing operations. As Japan has virtually no salmon spawning in her own territory, it was obvious that all salmon taken on the high seas would be fish which had originated in the streams and lakes of the United States, Canada or Soviet Russia.

North Pacific Treaty —

• In the Peace Treaty terminating World War II in the Pacific, Japan agreed to negotiate a separate treaty dealing with fishery problems in the North Pacific. This was done late in 1951 with Canada, Japan and the United States participating in the convention.

Japan negotiated the treaty as a sovereign nation, under no compulsion or duress deriving from the outcome of World War II.

The treaty plainly declares its objective to be: "To ensure the maximum sustained productivity of the North Pacific Ocean."

Moreover, it imposes this solemn responsibility:

"Each of the parties should assume an obligation, on a free and equal footing, to encourage the conservation of such resources."

• As a means of bringing this about, the treaty establishes the "Principle of Abstention," which briefly is this:

A nation should abstain from entering a fishery which is already utilized as fully as is consistent with its sustainable yield; which is under scientific study to determine the steps necessary for its conservation, and its maximum yield; and which is being managed administratively in keeping with the findings of research and the objectives of sustained yield conservation.

Japan specifically accepted abstention from fishing stocks of salmon, halibut and herring originating in the eastern Pacific, subject to a re-examination of each fishery's qualification for abstention after a

• Primary responsibility laid by the treaty upon the International Commission which it creates is to investigate "as expeditiously as practicable" the waters of the North Pacific "to determine if there are areas in which salmon originating in the rivers of Canada and the United States of America intermingle with salmon originating in the rivers of Asia. If such areas are found the commission shall conduct suitable studies to determine a line or lines which best divide salmon of Asiatic origin and salmon of American origin."

Until such division based on scientific study could be established, the treaty provided the meridian of 175° West Longitude "as a provisional line . . . subject to confirmation or readjustment."

The commission is directed, when "it can be shown beyond a reasonable doubt" that "this line or lines" determined by research "more equitably divide such salmon than the provisional line," to establish the line or lines in accordance with the scientific findings.

Research and Fishing —

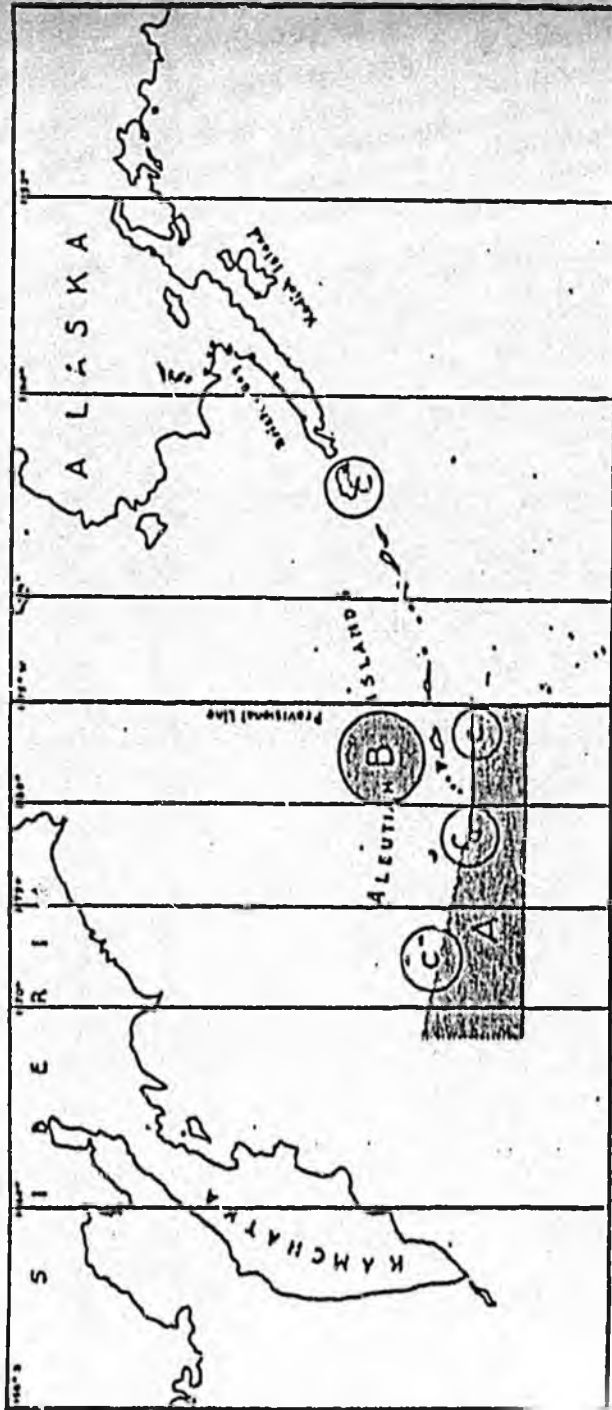
• In 1954, with the North Pacific treaty in full effect, Japan initiated high seas salmon fishing on a substantial scale. In 1955 fishing effort was expanded, and again in 1956.

It was not possible for the nations to mount their scientific research programs in 1954, but beginnings were made in 1955, followed by full-scale operations in 1956 and 1957.

The research program mounted by the United States, primarily in discharge of the treaty mandate "to determine if there are areas in which salmon of Asian and North American origin intermingle," has cost approximately \$2,000,000 to date. It is beyond doubt the most extensive and intense investigation ever undertaken in the field of oceanic fisheries biology.

The Warning —

• Through the entire period since the Japanese



OCEAN FISHING AREAS

Many Red salmon are taken in mid-ocean waters by the shaded area in the sketch map. This area covers the original fishing grounds centered in 1955. In 1956 the same good Red salmon fishing at (B) and (C) was most effectively. Poor results on the shore fishery in 1956. The symbols indicate the fishing areas of American fishermen.

American salmon industry has felt that the Japanese have drawn heavily upon stocks of Red salmon which originated in North American streams.

They based this belief on the obvious fall-off of Bristol Bay Red salmon returns. Where earlier forecasts had been surprisingly accurate, returns suddenly were far below anticipation. Further —

Fish bearing on their noses the marks of gillnets of mesh smaller than those employed in the American fishery began to appear in Bristol Bay. They had escaped from gillnets with the mesh sizes used by the Japanese, smaller than those legal for American fishermen, and thus able to take immature salmon.

These were practical findings which became evident while the scientific researches were under way.

It remained for 1956 to underscore the warning with effect so plain and dangerous that it could not be mistaken.

The 1956 Discovery —

• Soviet Russia took a hand in Japanese high seas fishing operations in 1956, arbitrarily requiring that the Japanese secure licenses from the U.S.S.R. for ocean fishing in the western Pacific, and operate under a catch quota.

Moreover, the licenses were delayed. The Japanese fleet was at sea, but under the necessity of fishing outside the license zone created by the Russians. They fished close to the 175° West Longitude Provisional Line, but there is no indication whatever what they then, or at any other time, transgressed the line.

Instead, some vessels passed through The Chain of the Aleutian Islands and there, in the funnel leading into Bristol Bay—but just west of the Provisional Line—they found surprisingly heavy fishing for Red salmon.

A few weeks later the Bristol Bay salmon run, due to be the largest of the five-year cycle, collapsed in mid-season. The run to the Nushagak River system of Bristol Bay in particular showed the effects of disaster at sea.

In 1957 the same situation was repeated, with added evidence of disaster. Japanese found with

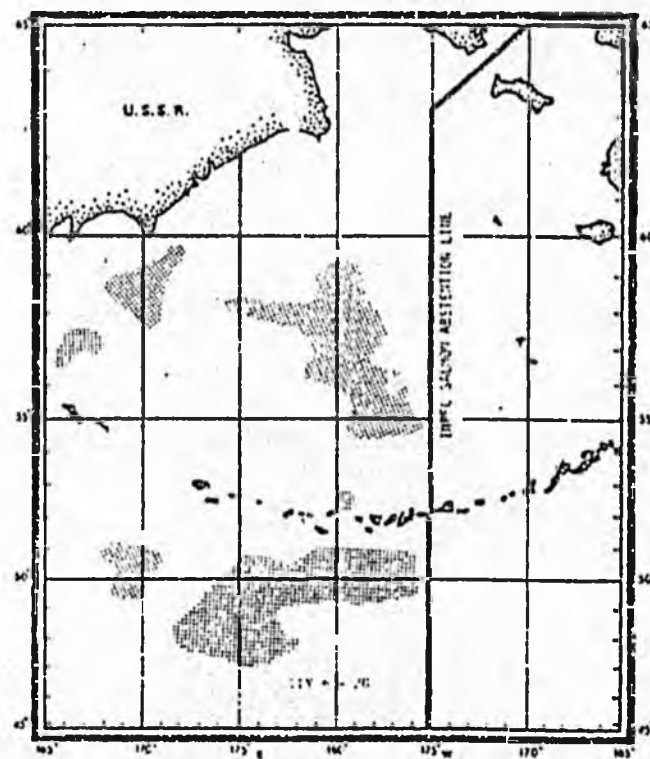
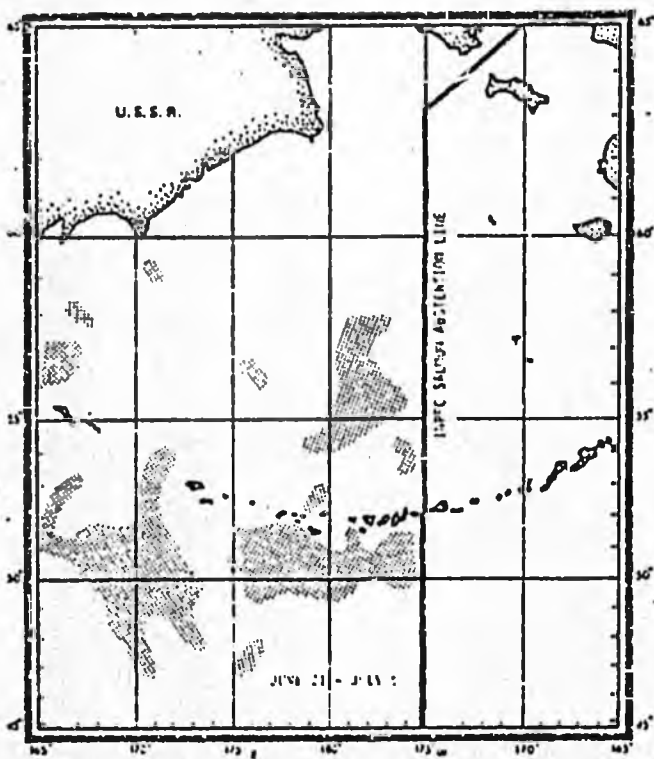
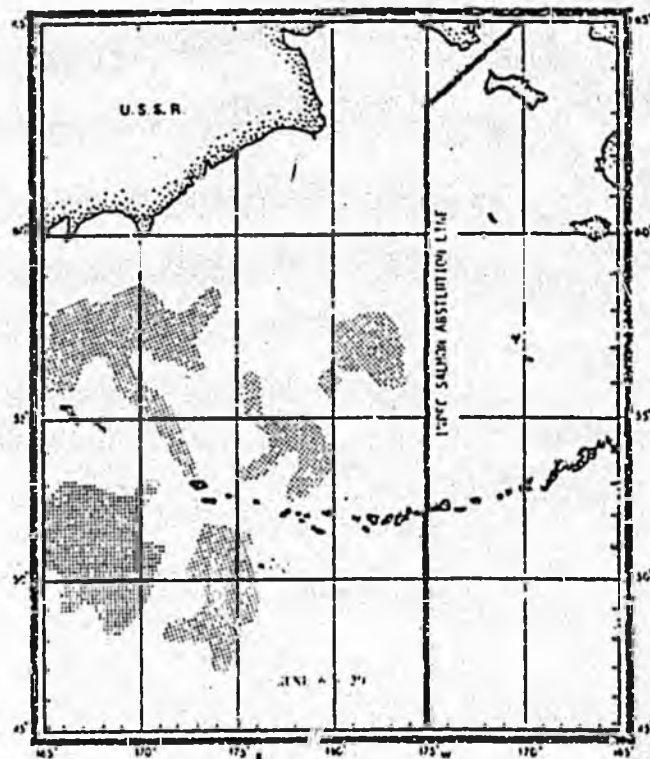
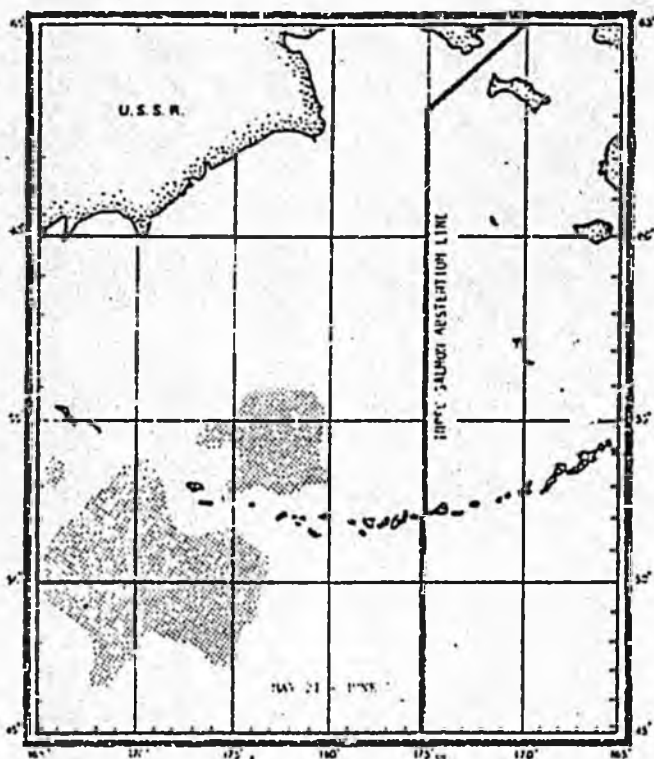
Salmon Fishery

The Japanese salmon fishery in 1974 (Fig. 12), as in 1973, again employed 10 factory ships accompanied by a total of 332 gillnetters. Fishing began on May 21, 1974, one day later than in 1973, and ended on July 20, 1974, five days earlier than in 1973.

The Japanese salmon fishery in the north Pacific Ocean and the Bering Sea is governed by two treaties: (1) International North Pacific Fisheries Convention (INPFC) between Japan, Canada, and the United States, which prohibits Japanese salmon fishing east of longitude 175°W, and (2) The Northwest Pacific Fisheries Convention between Japan and the U.S.S.R. which governs Japanese fishing in the north Pacific and Bering Sea west of 175°W. The latter treaty places a quota on the Japanese salmon catch which is renegotiated each year. The 1974 quota for the factory ships was 33,702 metric tons. That was a decrease of 2,030 metric tons from the previous year.

As in past years, fishing was initially southwest of the western Aleutians in the north Pacific Ocean. Up to four fleets fished in the Alaska area in late May. By the first of June the fishery expanded into the Bering Sea with two fleets operating north of the western Aleutians. In early June the effort in the Bering Sea increased with up to seven fleets fishing in the Alaska area, some as far east as the 180th meridian. In mid-June the number of fleets in the Alaska area in the Bering Sea declined to one but up to five fleets fished south of the western Aleutian Islands. In late June up to seven fleets fished south of the Aleutian Islands and the fishing area was extended east to near the

FIGURE 12. --JAPANESE HIGH SEAS SALMON FISHING AREAS, 1974



abstention line. Two fleets continued fishing in the Alaska area in the Bering Sea in late June. In July the number of fleets in the Bering Sea increased, reaching five just prior to the ending of the fishery. Three to four fleets fished south of the Aleutian Islands in July. The fishery ended on July 20 when the last of the fleets achieved their quota.

By weight the catch consisted of 40 percent chum salmon, 20 percent red salmon, 20 percent silver salmon, 10 percent pink salmon, and 10 percent king salmon. Again in 1974 the high seas fleets took red salmon destined for Bristol Bay. The catch of fish of North American origin was calculated at 675,000 matures and 996,000 immatures of all species. Of these totals, 251,000 were mature red salmon and 708,000 were immature red salmon.

On July 10, 21 Japanese landbased (Zone B) salmon gillnetters were sighted operating 260 miles inside Zone A. The 21 vessels were not associated with the 10 factory ship fleets but were from the Japanese land based fleet licensed to fish in the western North Pacific south of 46°N latitude and west of 175°W longitude. This incident was reported to the Department of State which in turn brought it to the attention of the Japanese Government.

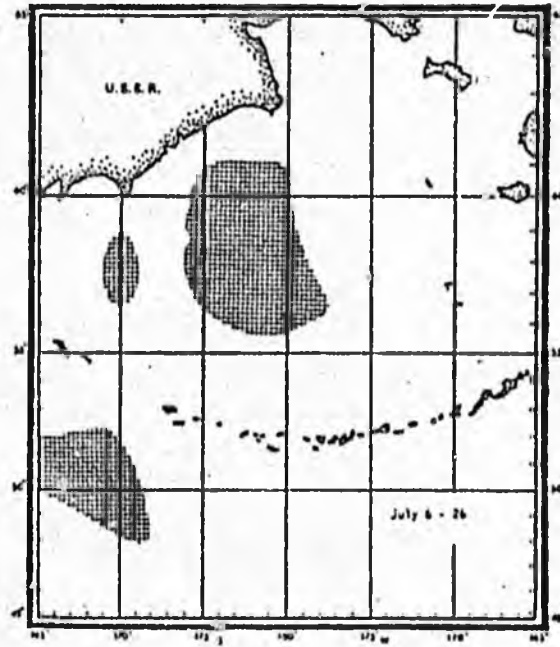
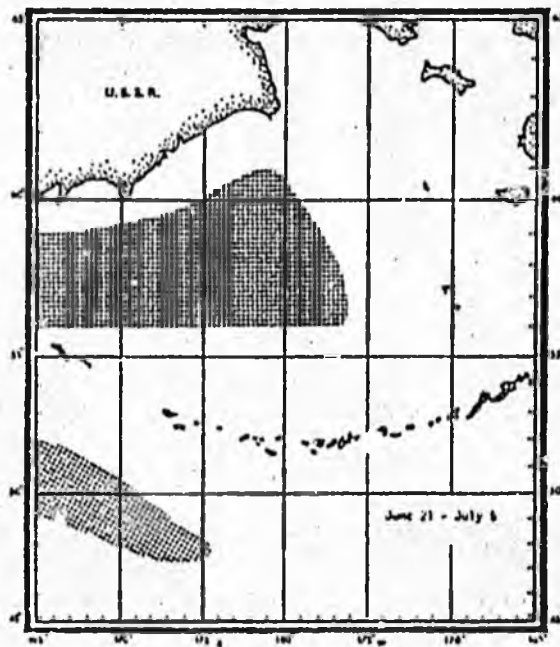
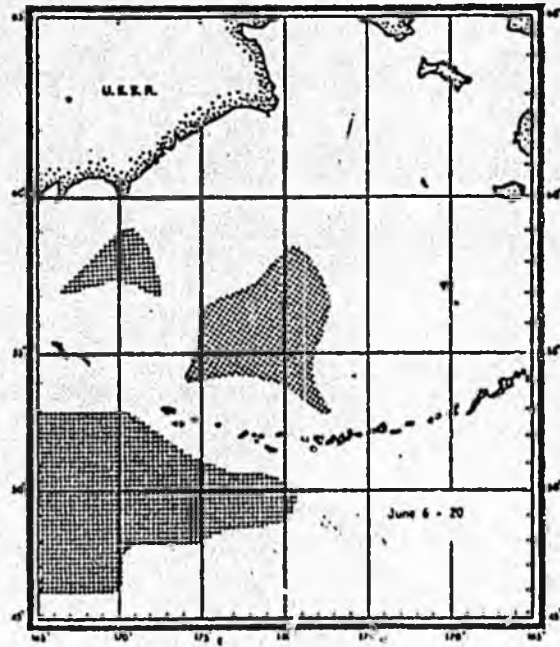
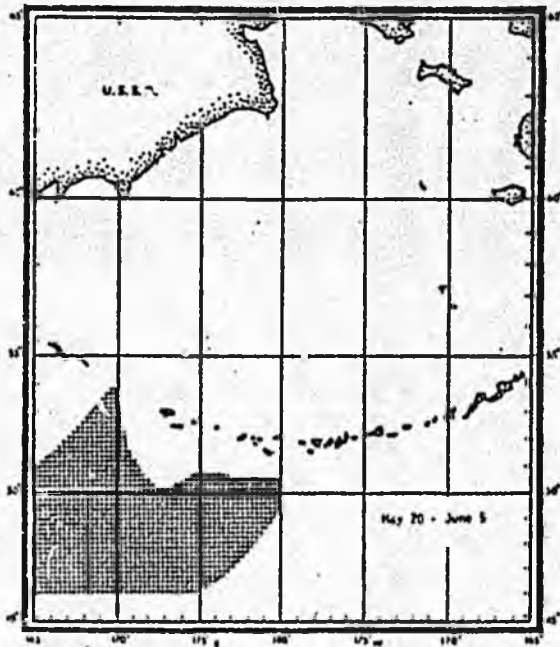
Salmon Fishery

The 1972 expedition (Fig. 13) was the 21st consecutive year of Japanese high seas salmon factory ship fleet fishing in the North Pacific Ocean and Bering Sea. The 1972 fishery was slightly reduced from the previous 10 years involving 10 factory ships rather than 11 and the number of accompanying gillnetters was reduced from 369 to 332.

The Japanese salmon fishery in the North Pacific Ocean and the Bering Sea is governed by two treaties: (1) the International North Pacific Fisheries Convention (INPFC) between Canada, Japan and the United States, which prohibits Japanese salmon fishing east of longitude 175°W, and (2) the Northwest Pacific Fisheries Convention between Japan and the U.S.S.R. which governs Japanese salmon fishing in the North Pacific and Bering Sea west of longitude 175°W. The latter treaty places a quota, which is renegotiated each year, on the Japanese high-seas salmon catch. The 1972 Japanese quota for the high-seas was 35,326 metric tons -- a reduction of 2,031 metric tons from the previous year.

The 1972 fishery began on May 21 and ended on July 26 when the last of the fleets reached its assigned portion of the quota. The predominant species taken in 1972 was chum salmon which accounted for 70 percent of the catch. The remainder of the catch consisted of 15 percent red salmon, 10 percent pink salmon, and 5 percent silver and king salmon. The Japanese fleets caught an estimated 707,000 mature and 210,000 immature red salmon of Bristol Bay origin in 1972.

FIGURE 13. -- JAPANESE HIGH SEAS SALMON FISHING AREAS, 1972.



In May and the first week in June the fleets fished in the North Pacific southwest of the Aleutian Islands. Red salmon were reportedly not very abundant and the fleets concentrated further west and only 4 fleets moved into the Alaskan area. By mid-June the fishery had expanded into the Bering Sea and six fleets were in the Alaskan area -- 3 southwest of the western Aleutians and 3 along the 180th meridian in the Bering Sea. The other four fleets remained nearer the Soviet coasts. In late June the major effort shifted into the Bering Sea and by the first of July only one fleet remained in the North Pacific. During the first half of July, four to five fleets fished in the Alaskan area in the Bering Sea, with the other fleets still to the westward. The single fleet in the North Pacific remained southwest of the western Aleutians out of the Alaska area most of the time. About mid-July most of the fleets moved westward toward the Soviet coast with only three fleets remaining in the Alaskan Bering Sea area until the fishery ended on July 26.

In mid-July four Japanese salmon gillnetters were found fishing south of Kodiak Island in the Gulf of Alaska. The four vessels were not associated with the 10 factory ship fleets but were from the Japanese land-based fleet licensed to fish in the western North Pacific south of 46° north longitude. The gillnetters were more than 700 miles east of the INPFC salmon abstention line and after a 24-hour chase were seized by U.S. fisheries patrol units. Two of the vessels had been fishing for 7 days, the other two had been fishing for one day. The four vessels had taken 24,597 salmon over 15,000 of which were red salmon and nearly 9,000 of which were chum salmon.

PROTOCOL AMENDING THE INTERNATIONAL
CONVENTION FOR THE HIGH SEAS FISHERIES
OF THE NORTH PACIFIC OCEAN

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

THE PROTOCOL AMENDING THE INTERNATIONAL CONVEN-
TION FOR THE HIGH SEAS FISHERIES OF THE NORTH
PACIFIC OCEAN, TOGETHER WITH RELATED AGREED MINUTES
AND TWO MEMORANDA OF UNDERSTANDING, SIGNED AT
TOKYO, APRIL 25, 1978



JUNE 5, 1978.—Treaty was read the first time and, together with the
accompanying papers, referred to the Committee on Foreign Relations
and ordered to be printed for the use of the Senate

U.S. GOVERNMENT PRINTING OFFICE

29-118

WASHINGTON : 1978

LETTER OF TRANSMITTAL

THE WHITE HOUSE, June 5, 1978.

To the Senate of the United States:

I am pleased to transmit the Protocol Amending the High Seas Fisheries of the North Pacific Ocean between the United States, Canada, and Japan for Senate advice and consent to ratification. The Protocol, along with accompanying Agreed Minutes and Memoranda of Understanding, were signed in Tokyo on April 25, 1978.

The Protocol amends the existing International Convention for the High Seas Fisheries of the North Pacific Ocean. Under the Protocol salmon of United States origin will receive substantially greater protection than afforded under the existing International Convention for the High Seas Fisheries of the North Pacific Ocean signed on May 9, 1952. An amendment to the existing Convention, rather than sole reliance on the provisions of the Fishery Conservation and Management Act, is being sought in order to obtain the continuing benefits of the abstention principle established by the existing Convention, and to overcome the practical management and enforcement problems which occur in areas of the high seas where United States origin salmon intermingle with salmon originating in other countries.

I transmit also for the information of the Senate the report of the Department of State with respect to the Protocol and associated documents.

I urge the Senate to act favorably at an early date on this Protocol.

JIMMY CARTER.

LETTER OF SUBMITTAL

DEPARTMENT OF STATE,
Washington, May 18, 1978.

The PRESIDENT,
The White House.

THE PRESIDENT: I have the honor to submit the Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean, signed at Tokyo, April 25, 1978, together with related Agreed Minutes, and two Memoranda of Understanding. The Protocol provides for the extensive amendment of the existing International Convention for the High Seas Fisheries of the North Pacific Ocean signed on May 9, 1952. The need for such an amendment results from the establishment of the extended fishery management authority of the United States under the Fishery Conservation and Management Act.

The existing Convention entered into force in 1953 between the United States, Canada and Japan. It is best known for the "abstention principle" it established, the practical effect of which was to bar Japanese high seas salmon fishing east of 175° West longitude. Since 1953, and long before the protection offered by our 12 or 200 nautical mile limits, the existing Convention provided very significant protection for North American origin salmon in vast areas of the high seas, particularly for salmon originating in the rivers of Southeastern Alaska, British Columbia, Washington, Oregon and California.

Following the enactment of the Fishery Conservation and Management Act of 1976 which established our 200-mile fishery conservation zone as well as our fishery management authority over our salmon throughout their migratory range, the United States was required to reevaluate its participation in the Convention. It was quite apparent that there were a number of inconsistencies between our new fisheries law and the old Convention. Some of those differences related to:

(a) the requirement under the law for foreign fishing vessels to have U.S. permits or board while in the U.S. fishery conservation zone.

(b) the requirement that in most cases such permits would authorize foreign fishing only for fish caught in surplus of U.S. harvesting capacity; and

(c) the requirement that the management structure for the fishing take into account local concerns, not those of an international commission.

At the same time, however, it was recognized that unilateral enforcement of our fishery law was impractical in areas where North American salmon mingle with Asian salmon in the Bering Sea and North Pacific

Ocean. Furthermore, reliance solely on our fishery law, rather than the abstention principle, would open up large areas of the high seas closed under the Convention, thus exposing millions of North American salmon to Japanese salmon fishing in the Gulf of Alaska east of 175° West longitude.

Therefore, the United States embarked upon an effort to renegotiate the Convention to provide maximum protection for U.S. origin salmon. Connected with this effort, the United States gave notice to the other two Parties on February 10, 1977, of our intent to terminate the existing Convention. That action triggered the Convention's one year termination provision.

Renegotiation efforts began in mid-summer of 1977. Because of the significant progress that was made during the negotiations, the United States withdrew its notice of intent to terminate the Convention on February 8, 1978, allowing the present Convention to continue in force. The final texts were agreed to on April 6, 1978, and were signed in Tokyo on April 25, 1978.

The accommodations necessary to secure maximum protection for U.S. origin salmon and to maintain the abstention principle necessitated inclusion in the new agreement of provisions not entirely consistent with the terms of a governing international fishery agreement required by our fisheries law. Thus, the Senate's advice and consent to ratification, rather than the 60-day Congressional oversight procedures established by the fishery law, are required to bring the renegotiated agreement into force.

Four texts were signed on April 25, 1978, in Tokyo: A Protocol Amending the High Seas Fisheries of the North Pacific Ocean, Agreed Minutes, a Memorandum of Understanding on scientific research on salmon, and a Memorandum of Understanding on porpoise research.

The Protocol itself has two articles: the first article amends the existing Convention and sets forth the new text; and the second article is the Protocol's entry into force provision.

The amended Convention, as set forth in Article I of the Protocol, has twelve articles and an annex.

Article I carries forward provisions of the existing Convention relating to the area of the Convention's applicability and a non-prejudice clause. It also contains a slightly modified definition of "fishing vessel" in order to include fishery support vessels under that definition.

Article II carries forward provisions of the existing Convention relating to the operations of the International North Pacific Fisheries Commission. The administrative operations of the Commission will not be disrupted by the Protocol.

Article III sets forth the functions of the Commission. The Commission will be authorized to carry out ongoing scientific studies on salmon and other species but will provide for new emphasis on research into the continent of origin of salmon stocks in the Convention area. The Commission will not have a regulatory role, but may make recommendations to the Governments for changing the measures set forth in the Annex.

Article IV requires the parties to work toward the establishment of a new multilateral organization to coordinate scientific studies on non-salmon fisheries of the Pacific Ocean.

Article V makes the Annex an integral part of the Convention, and obligates the Governments, nationals and vessels of all Parties to abide by the conservation measures set forth in the Annex.

Article VI carries forward a provision of the existing Convention calling on the Parties to cooperate in a situation where a non-party takes action to affect adversely the implementation of the Convention.

Article VII provides that the Annex may be amended upon the acceptance by all the Parties of a recommendation of the Commission to amend the conservation measures in the Annex.

Article VIII carries forward a provision of the existing Convention concerning the compilation of scientific information.

Article IX is a major change in light of our new fishery law. It provides for U.S. enforcement and application of U.S. determined penalties for violation of the Convention within the 200-mile U.S. fishery conservation zone.

Outside our 200-mile fishery conservation zone, U.S. enforcement authorities may board the vessels of the other Contracting Parties fishing for salmon in order to make inspections. Vessels found in violation of the Convention may be seized and further inspections carried out. Such vessels are to be turned over as promptly as practicable to the flag State for further legal action. Evidence obtained during inspections will be taken into account by the authority trying the offense.

Article X reflects agreement in general terms on a cooperative scientific program, involving research activities on salmon and incidentally caught marine mammals. Such a program would include the exchange of scientists. The various Agreed Minutes and Memoranda of Understanding implement this article.

Article XI provides for consultations between the Governments upon the request of any of them.

Article XII is the termination and review provision.

The Annex sets forth the times, areas, and certain restrictions of effort that will apply to Japanese fishing under the amended Convention. The attached chart shows graphically the restrictions that have been placed on the Japanese salmon fishing effort. The provisions of the Annex move the effect of the abstention principle ten degrees to the west everywhere except the central Bering Sea. In that area, the Annex places substantial limits on the amount of fishing effort that may be undertaken.

The Annex does provide for a certain amount of salmon fishing for Asian origin salmon in the U.S. fishery conservation zone in the area off the coast of the western-most Aleutian Islands. Fishing is allowed in this area only after June 9 of each year, when U.S. origin salmon are not normally present. Japanese salmon fishing vessels in this area must have on board a registration permit issued by the United States. The United States may condition such permits on the acceptance of U.S. observers aboard the fishing vessels. Furthermore, until June 9, 1981, the Annex requires suspension of the need for a Certificate of Inclusion relating to the incidental take of marine mammals in the Japanese salmon fishery. Until June 9, 1981, scientific research will be conducted concerning the stocks of Dull porpoise caught incidentally in the fishery. The scientific research to be conducted is included in a Memorandum of Understanding on porpoise and is discussed below.

The Agreed Minutes accompanying the Protocol set forth the understanding of the Governments regarding a scientific research program in the Northern Bering Sea beyond the U.S. 200-mile fishery conservation zone. Under such a program Japan would send a scientific research vessel into the area during the time of the commercial fishery to conduct research on the salmon migrating in the area. Three U.S. and/or Canadian scientists could accompany this vessel. Such scientists would be allowed to visit Japanese fishing vessels and processing ships in this area for a specified number of days.

The Memorandum of Understanding on salmon research sets forth the understanding of the Parties to the Protocol on the statistical reporting of fishery catches that will be undertaken by all the Parties. In particular, paragraph 1 deals with the types of statistics Japan will gather in its salmon fisheries covered by the amended Convention.

The Memorandum of Understanding on porpoise research reflects a significant step on the part of Japan and the United States to cooperate on marine mammal research and marine mammal protection. Presently, there is virtually no reliable scientific information on the Dall Porpoise populations in the North Pacific Ocean and Bering Sea. In order to obtain information from the Japanese fishery, which is the only available source, and in light of agreement on the part of the United States to waive the Certificate of Inclusion provision of the Marine Mammal Protection Act, Japan agrees to:

- Provide statistical information on incidentally caught porpoises in the fisheries covered by the amended Convention,
- Provide such data that is available for past years,
- Consult on means to reduce or eliminate the incidental catch of marine mammals in the U.S. fishery conservation zone, with the first consultation being held prior to the 1978 salmon season,
- Conduct specified sighting surveys,
- Undertake to allow U.S. scientists on board three Japanese research vessels,
- Ensure that Japanese vessels in the U.S. fishery conservation zone make every effort to collect biological data and samples from all incidentally caught Dall porpoise, as well as to take similar steps in other areas,
- Undertake field trials of proposed gear modifications, and
- Undertake to make available a research vessel dedicated to porpoise research.

The Department of Commerce, which participated with the Department of State in the renegotiation of the existing Convention, concurs in the view that the early ratification of the Protocol is most desirable. I recommend that the Protocol be transmitted to the Senate as soon as possible for its advice and consent to ratification.

Respectfully submitted,

CYRUS VANCE,

PROTOCOL AMENDING THE INTERNATIONAL CONVENTION FOR THE HIGH SEAS FISHERIES OF THE NORTH PACIFIC OCEAN

The Governments of the United States of America, Canada and Japan,

Having regard to the International Convention for the High Seas Fisheries of the North Pacific Ocean, signed at Tokyo on the ninth day of May, nineteen hundred and fifty-two, its Annex and the Protocol thereto (hereinafter referred to as "the Convention")

Sharing the view that the Convention has served to promote and coordinate scientific studies relating to the fishery resources of the North Pacific Ocean and its adjacent seas, and has aided in the conservation of these fishery resources,

Taking into account that each of the Contracting Parties has established new fishery jurisdiction in the Convention area,

Acknowledging that certain provisions of the Convention are not compatible with such jurisdiction, and

Desirous of amending the Convention,

Have agreed as follows:

ARTICLE I

The Convention shall be amended to read as follows:

"The Governments of the United States of America, Canada and Japan have agreed as follows:

Article I

1. The area to which this Convention applies, hereinafter referred to as "the Convention area", shall be all waters, other than territorial waters, of the North Pacific Ocean which for the purpose hereof shall include the adjacent seas.

2. Nothing in this Convention shall be deemed to affect adversely (prejudice) the claims or position of any Contracting Party in regard to the limits of territorial waters or to the jurisdiction of a coastal state over fisheries.

3. For the purposes of this Convention the term "fishing vessel" shall mean any vessel engaged in catching fish or processing or transporting fish landed in the Convention area, or any vessel outfitted for such activities, or any vessel in normal support of another vessel as described above.

Article II

1. The Contracting Parties shall maintain the International North Pacific Fisheries Commission, hereinafter referred to as "the Commission".

2. The Commission shall be composed of three national sections each consisting of not more than four members appointed by the Governments of the respective Contracting Parties.

3. Each national section shall have one vote. All proposals, recommendations and other decisions of the Commission shall be made only by a unanimous vote of the three national sections.

4. The Commission may decide upon and amend, as occasion may require, by-laws or rules for the conduct of its meetings.

5. The Commission shall meet at least once each year and at such other times as may be requested by a majority of the national sections.

6. The Commission shall select a Chairman, Vice-Chairman and Secretary from different national sections. The Chairman, Vice-Chairman and Secretary shall hold office for a period of one year. During succeeding years selection of a Chairman, Vice-Chairman and Secretary from the national sections shall be made in such a manner as will provide each Contracting Party in turn with representation in those offices.

7. The location of the Commission's headquarters shall be determined by the Commission.

8. Each Contracting Party may establish an Advisory Committee for its national section, to be composed of persons who shall be well informed concerning North Pacific fishery problems of common concern. Each such Advisory Committee shall be invited to attend all sessions of the Commission except those which the Commission decides to be *in camera*.

9. The Commission may hold public hearings. Each national section may also hold public hearings within its own country.

10. The official languages of the Commission shall be Japanese and English. Proposals and data may be submitted to the Commission in either language.

11. Each Contracting Party shall bear and pay the expenses incurred by its national section. Joint expenses incurred by the Commission shall be paid by the Commission through contributions made by the Contracting Parties in the form and proportion recommended by the Commission and approved by the Contracting Parties.

12. An annual budget of joint expenses shall be recommended by the Commission and submitted to the Contracting Parties for approval.

13. The Commission shall authorize the disbursement of funds for the joint expenses of the Commission and may employ personnel and acquire facilities necessary for the performance of its functions.

Article III

1. The Commission shall perform the following functions:

(a) provide for scientific studies and for coordinating the collection, exchange and analysis of scientific data regarding anadromous species, including data regarding the continent of origin of these species, and provide a forum for cooperation among the Contracting Parties with respect to these species;

(b) pending the establishment of an international organization as referred to in Article IV, provide a forum for cooperation among the Contracting Parties with respect to the study, analysis and exchange of scientific information and views relating to the stocks of nonanadromous species of the Convention area, including information and views relating to all relevant factors affecting these

stocks, the promotion of scientific research designed to fill gaps in knowledge and the compilation and dissemination of statistics and records;

(c) recommend, when necessary, amendment of the Annex to this Convention;

(d) coordinate scientific studies to determine the continent of origin of anadromous species migrating in the waters south of 40° North Latitude, and following three years of such studies make recommendations if appropriate in accordance with sub-paragraph (c) above relating to the conservation of salmon of North American origin;

(e) consider and make proposals to the Contracting Parties concerning the enactment of schedules of equivalent penalties for violations of this Convention which occur outside the 200 nautical mile fishery zone of any Contracting Party;

(f) compile and study the records provided by the Contracting Parties pursuant to Article VIII;

(g) submit annually to each Contracting Party a report on the Commission's operations, investigations and findings, with appropriate proposals, and inform each Contracting Party whenever it is deemed advisable, on any matter relating to the implementation of this Convention;

(h) consider the results of reviews undertaken by the Contracting Parties pursuant to Article XI and make proposals as appropriate.

2. In the performance of its functions, the Commission shall, insofar as feasible, utilize the technical and scientific services of, and information from, official agencies of the Contracting Parties and their political sub-divisions and may, when desirable and if available, utilize the services of, and information from, any public or private institution or organization or any private individual.

Article IV

The Contracting Parties shall work towards the establishment of an international organization with broader membership dealing with species of the Convention area other than anadromous species. Progress towards this end shall be reviewed during the consultations provided for in Article XI. When such an international organization becomes functional, the functions of the Commission under the provisions of Article III, paragraph 1, sub-paragraph (b) shall be terminated and transferred to the new organization.

Article V

1. The Annex attached hereto forms an integral part of this Convention. All references to the Convention shall be understood as including the said Annex either in its present terms or as amended in accordance with the provisions of Article VII.

2. The Contracting Parties agree that in fishing for anadromous species in the Convention area, they shall respect the conservation measures specified in the Annex to this Convention and that any infringement of these measures shall be deemed to be in violation of the terms of this Convention.

3. The nationals and fishing vessels of the Contracting Parties shall abide by the conservation measures specified in the Annex to this Convention.

Article VI

In the event that it shall come to the attention of any of the Contracting Parties that the nationals or fishing vessels of any country which is not a Party to this Convention appear to affect adversely the operations of the Commission or the implementation of this Convention, such Party shall call the matter to the attention of other Contracting Parties. All the Contracting Parties agree upon the request of such Party to confer upon the steps to be taken towards obviating such adverse effects or relieving any Contracting Party from such adverse effects.

Article VII

1. The Annex to this Convention shall be considered amended from the date upon which the Commission receives notification from all the Contracting Parties of acceptance of a recommendation to amend the Annex made by the Commission in accordance with the provisions of Article III, paragraph 1., sub-paragraph (c).

2. The Commission shall notify all the Contracting Parties of the date of receipt of each notification of acceptance of an amendment to the Annex.

Article VIII

The Contracting Parties agree to keep as far as practicable all records requested by the Commission and to furnish compilations of such records and other information upon request of the Commission. No Contracting Party shall be required hereunder to provide the records of individual operations.

Article IX

1. The Contracting Parties agree that within the Convention area:

(a) each Contracting Party shall enforce the provisions of this Convention within its 200 nautical mile fishery zone in accordance with its domestic law;

(b) outside the 200 nautical mile fishery zone of any Contracting Party, any Contracting Party may enforce the provisions of this Convention in accordance with the following:

(i) The duly authorized officials of any Contracting Party may board vessels fishing for anadromous species of the other Contracting Parties to inspect equipment, logs, documents, catch and other articles and question the persons on board for the purpose of carrying out the provisions of this Convention. Such inspections and questioning shall be made so that the vessels suffer the minimum interference and inconvenience. Such officials shall present credentials issued by their respective governments if requested by the master of the vessel.

(ii) When any such person or fishing vessel is actually engaged in operations in violation of the provisions of this Convention, or there is reasonable ground to believe was obviously so engaged prior to boarding of such vessel by any such official, the latter may arrest or seize such person or vessel and further investigate the circumstances if necessary. The Contracting Party to which the official belongs shall notify promptly the Contracting Party to which such person or vessel belongs of such arrest or seizure, and shall deliver such person or vessel as promptly as practicable to the authorized officials of the Contracting Party to which such person or vessel belongs at a place to be agreed upon by both Parties. Provided, however, that when the Contracting Party which receives such notification cannot immediately accept delivery, the Contracting Party which gives such notification may keep such person or vessel under surveillance within the waters of the Convention area or within its own territory under the conditions agreed upon by both the Contracting Parties.

(iii) Only the authorities of the Contracting Party to which the above-mentioned person or fishing vessel belongs may try the offense and impose penalties therefor. The witnesses and evidence necessary for establishing the offense, so far as they are under the control of any of the Contracting Parties to this Convention, shall be furnished as promptly as possible to the Contracting Party having jurisdiction to try the offense and shall be taken into account, and utilized as appropriate, by the executive authority of the Contracting Party having jurisdiction to try the offense.

(c) the Contracting Parties shall take appropriate measures to ensure that their fishing vessels allow and assist boardings and inspections carried out in accordance with this Convention of such vessels by the duly authorized officials of any Contracting Party, and cooperate in such enforcement action as may be undertaken.

2. Each Contracting Party agrees, for the purpose of rendering effective the provisions of this Convention, to enact and enforce necessary laws and regulations, with appropriate penalties against violations thereof, and to transmit to the Commission a report on any action taken by it in regard thereto.

Article X

The Contracting Parties agree that a scientific program is necessary to carry out the provisions of this Convention. To this end the Contracting Parties agree to establish such a program to coordinate their scientific research activities with respect to anadromous species in the Convention area as well as species of marine mammals incidentally caught in fishing for anadromous species. In this regard, the Contracting Parties agree to exchange scientists in order to carry out scientific observations with respect to the catches and methods of operation. The Contracting Parties shall establish procedures to facilitate such observations.

Article XI

1. The Contracting Parties agree to hold consultations whenever necessary, or not later than sixty days following the request of any of them, in order to review the implementation of this Convention.

2. The Contracting Parties agree to hold consultations, at a time and place to be mutually agreed upon, not later than ninety days following notice by any Contracting Party of its intention to terminate the Convention in accordance with the provisions of Article XII, paragraph 1. of this Convention.

Article XII

1. This Convention shall continue in force until one year from the day on which a Contracting Party shall give notice to the other Contracting Parties of an intention of terminating the Convention, whereupon it shall terminate as to all Contracting Parties.

2. This Convention shall be subject to review by the Contracting parties upon the conclusion of a multilateral treaty resulting from the Third United Nations Conference on the Law of the Sea.

ANNEX

1. The following measures shall apply to salmon fishery operations conducted by Japanese nationals and fishing vessels in the waters of the Convention area:

(a) North of 56° North Latitude, east of 175° East Longitude and outside the United States fishery conservation zone, beginning on June 26 (Japan Standard Time) (1500 June 25 GMT) of each year, the Japanese mothership fishery shall conduct no more than 22 mothership fleet days in the area between 175° East Longitude and 180° Longitude and no more than 31 mothership fleet days in the area between 180° Longitude and 175° West Longitude.

(b) North of 46° North Latitude, between 175° East Longitude and 170° East Longitude, and outside the United States fishery conservation zone, salmon fishery operations shall not begin before June 1 (Japan Standard Time) (1500 May 31 GMT) of each year.

(c) West of 175° East Longitude, and within the United States fishery conservation zone, salmon fishery operations shall not begin before June 10 (Japan Standard Time) (1500 June 9 GMT) of each year. Fishing vessels engaged in this fishery shall be required to have on board a registration permit which shall be issued by the Government of the United States. Such vessels may be required by the Government of the United States to accept on board scientific observers and to bear the expenses incurred in such boarding. The requirement of the Government of the United States that Japanese fishing vessels engaged in this fishery have on board a Certificate of Inclusion relating to the incidental taking of marine mammals shall be suspended for the period ending June 9, 1981 during which period the Governments of Japan and the United States shall conduct joint research, shall

marine mammal populations, and shall seek to reduce or eliminate the incidental catch of marine mammals in the fishery.

(d) Except for the areas specified in (a) above, there shall be no salmon fishery operations east of 175° East Longitude unless such fishery operations are agreed to for a temporary period among the three Contracting Parties.

2. For the purposes of this Annex, a mothership fleet day is defined as one mothership with no more than forty-one catcher-boats present during a portion of any one calendar day in the areas specified in paragraph 1. (a) of this Annex. Any increase in the number of catcher-boats assigned to a mothership will be reflected in a proportional reduction in the number of authorized fleet days. Modifications to gear or fishing procedures which might affect current fishing efficiency shall be undertaken only after consultations among the three Contracting Parties. In such consultations the Contracting Parties shall examine the necessity of change in the number of authorized fleet days to take account of any increase in fishing efficiency.

3. East of 170° East Longitude the southern limit of the Japanese mothership fishery and the northern limit of the Japanese landbased fishery shall remain at 46° North Latitude. West of 170° East Longitude the southern limit of the Japanese mothership fishery shall not extend south of 46° North Latitude, and the northern limit of the Japanese landbased fishery shall not extend north of 48° North Latitude.

ARTICLE II

This Protocol shall be ratified or approved by the Contracting Parties to the Convention in accordance with their respective constitutional processes, and the instruments of ratification or approval shall be exchanged as soon as possible at Tokyo. This Protocol shall come into force on the date of the exchange by all the Contracting Parties of instruments of ratification or approval.

IN WITNESS WHEREOF, the undersigned, being duly authorized by their respective Governments, have signed this Protocol.

DONE, in triplicate, in the English, French and Japanese languages, all texts being equally authentic at Tokyo this twenty-fifth day of April, nineteen hundred and seventy-eight.

For the Government of the United States of America:

MICHAEL J. MANSFIELD.

For the Government of Canada:

BRUCE RANFAN.

For the Government of Japan:

SUNAO SONODA.

AGREED MINUTES

The representatives of the Government of the United States of America, the Government of Canada and the Government of Japan have agreed to record the following in connection with the International Convention for the High Seas Fisheries of the North Pacific Ocean, as amended by the Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean signed this day:

1. It is understood that the Government of Japan intends to send throughout the period of the commercial salmon fishery in the Northern Bering Sea a scientific research vessel of the Government of Japan to conduct research with respect to the continent of origin of anadromous species migrating in the waters of the Northern Bering Sea.

2. It is understood that the Government of Japan is prepared to allow, upon the request of the Government of the United States of America and/or the Government of Canada, no more than three scientists of the Government of the United States of America and/or the Government of Canada to board the above-mentioned scientific research vessel.

3. It is understood that the Government of the United States of America and the Government of Canada undertake to bear expenses incurred in such boarding of their respective scientists.

4. It is understood that the Government of Japan is prepared to facilitate temporary visits by the above-mentioned scientists to Japanese motherships and/or catcher-boats engaged in salmon fishery operations for collecting scientific information with respect to the catcher of anadromous species. It is also understood that for the above-mentioned scientists visiting motherships and/or catcher-boats from the above-mentioned scientific research vessel the following restrictions will apply:

(a) The total number of visits made by these scientists shall not exceed eight days for the waters north of 50° North Latitude, between 175° West Longitude and 180° Longitude, and ten days for the waters north of 50° North Latitude, between 180° Longitude and 175° West Longitude.

(b) Such visits shall be timed in such a manner as to minimize adverse effects on the research activities of the above-mentioned scientific research vessel.

For the Government of the United States of America:

MICHAEL J. MANSFIELD.

For the Government of Canada:

BRUCE RANKIN.

For the Government of Japan:

SUNAO SONODA.

TOKYO, April 25, 1978.

MEMORANDUM OF UNDERSTANDING

The Delegations of the Governments of the United States of America, Canada and Japan have agreed to record the following in connection with the International Convention for the High Seas Fisheries of the North Pacific Ocean, as amended by the Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean signed this day, in order to further research studies on anadromous *Salmonidae* in the Convention area:

1. The Government of Japan will provide the following statistics to the International North Pacific Fisheries Commission:

A. For the landbased driftnet fishery, statistics by 2°X5° INPFC statistical area and ten-day period by species in numbers and tonnage, with corresponding effort in tons fished, by mesh size, within six months of annual termination of the fishery.

B. For the mothership gillnet fishery, catch statistics on a ten-day basis by 1°X1° statistical area by species in numbers and tonnage with corresponding effort in tons fished, and with summary information on mesh sizes used, within six months of annual termination of the fishery.

C. Age composition and maturity data on salmon sampled in the areas of the landbased driftnet and mothership fisheries in the detail determined necessary for scientific studies pertinent to continent of origin determinations.

2. The Governments of the United States of America, Canada and Japan intend to provide to the International North Pacific Fisheries Commission:

A. Scale and/or fish samples requested by the Commission for special scientific studies.

B. Statistics on the all salmon fisheries of the North Pacific Ocean and adjacent seas for continued publication in the Annual Statistical Yearbook.

C. Catch, tagging, oceanographic and associated biological data collected by research vessels of the three Contracting Parties in at least the same detail and timeliness as in recent years.

TOKYO, APRIL 25, 1978.

For the Delegation of the Government of the United States of America:

Michael J. Mansfield

For the Delegation of the Government of Canada:

Bruce Rankin

For the Delegation of the Government of Japan:

Sunao Sonoda

MEMORANDUM OF UNDERSTANDING

The Delegations of the Government of the United States of America and the Government of Japan have agreed to record the following in connection with Article X of and Paragraph 1. (c) of the Annex to the International Convention for the High Seas Fisheries of the North Pacific Ocean, as amended by the Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean signed this day (hereinafter referred to as "the Convention").

1. The Government of Japan will provide the following statistical data to the Government of the United States of America within six months of annual termination of the fishery:

A. For the land-based driftnet salmon fishery in the waters east of 100 degrees East Longitude, number of Dall porpoise (*Phocaenoides dalli*), taken by 2°X5° INPFC statistical area and 10-day period.

B. For the mothership gillnet salmon fishery, number and species of marine mammals, particularly Dall porpoise, taken by 1°X1° statistical area and 10-day period.

2. The Government of Japan will provide:

A. By January 1, 1979, available past incidental catch data for all classes of research vessels, to the extent possible by 2°X5° INPFC statistical area and 10-day period with corresponding effort in tons fished and metric tons of salmon harvested.

B. Within six months of annual termination of the Japanese salmon fishery, incidental catch data for all classes of research vessels by 2°X5° INPFC statistical area and 10-day period with corresponding effort in tons fished and metric tons of salmon harvested.

3. Scientists of the Government of the United States of America and the Government of Japan will independently or jointly study data on incidental catch of Dall porpoise per ton of gillnet and incidental catch per ton of salmon harvested, with a view to determining suitability of such data as indices of Dall porpoise abundance, and biological data and samples of Dall porpoises collected by the Japanese salmon fishery and research vessels to develop the information on life history, stock differentiation, status and trends.

4. Scientists of the Government of the United States of America and the Government of Japan will consult with regard to the research programs of Japanese salmon research vessels including sighting surveys on Dall porpoises, with a view to developing the most effective program to determine the status and trends of their populations. They will also consult on methods to reduce or eliminate their incidental catch in the Japanese mothership gillnet salmon fishery pursuant to the provisions of Paragraph 1.(c) of the Annex to the Convention. The first such consultation will be held prior to the 1978 Japanese salmon fishing season.

5. Scientists of the Government of the United States of America and the Government of Japan will conduct for the period ending June 9, 1981, annual sighting surveys on Dall porpoises on Japanese salmon research vessels operating in the Convention area with a view to obtaining adequate sighting data to provide estimates of abundance. The sighting data collected will include, *inter alia*, time of observation,

location, number seen, distance and direction from vessel, sea state, wind direction and strength, and visibility.

6. The Government of Japan intends to allow for the period ending June 9, 1981, up to two scientists of the Government of the United States of America on board each of no less than three salmon research vessels of the Government of Japan for the studies on Dall porpoise. Scientists of the Government of the United States of America may be accepted on board additional Japanese salmon research vessels. The Government of the United States of America will bear expenses incurred in such boarding of scientists.

7. Scientists of the Government of the United States of America will analyze the Dall porpoise sightings data collected by its Polagic Fur Seal Investigations and, as possible, by other sources to develop information on stock differentiation, distribution and abundance in the eastern North Pacific Ocean.

8. To obtain adequate specimen material for biological studies:

A. The Government of Japan will ensure for the period ending June 9, 1981, that nationals and fishing vessels of Japan conducting salmon fishery operations within the United States fishery conservation zone make every effort to return to the motherships, where feasible, all Dall porpoises captured incidentally by gillnets of the Japanese salmon fishery for collection of biological data and samples. In this connection, the Government of Japan will require that accurate records be kept of the number of Dall porpoises captured but not returned to the mothership and the circumstances preventing their return. The Government of Japan will ensure for the above-mentioned period that the scientists of the Government of the United States of America accepted pursuant to the provisions of Paragraph 1.(c) of the Annex to the Convention on board each mothership operating within the United States fishery conservation zone be allowed to collect appropriate marine mammal data. It is understood that the total number of scientists of the Government of the United States of America on board each mothership will, in any case, be no more than two.

B. The Government of Japan intends to take appropriate measures for the period ending June 9, 1981, to collect biological data and samples from Dall porpoises captured incidentally by the Japanese mothership gillnet salmon fishery in the areas specified in Paragraph 1. (a) and (b) of the Annex to the Convention, with a view to obtaining a representative sample of Dall porpoises captured incidentally in those areas.

D.A. Scientists of the Government of the United States of America will examine the acoustic characteristics of gillnets and of the Dall porpoise in an effort to determine appropriate gear modifications that contribute to reducing incidental mortality.

B. Scientists of the Government of Japan will review past research data to determine if variations in gear resulted in reduced incidental catch rates.

C. Scientists of the Government of Japan will conduct field trials of proposed gear modifications to determine their usefulness in reducing incidental catches when a program is mutually agreed upon between scientists of the Government of the United States of America and the Government of Japan.

10. The Government of Japan intends to ensure that cooperative Dall porpoise research be conducted with use of an appropriate Japanese vessel not later than the 1979 salmon fishing season, unless it is agreed that such research can be accomplished in another manner.
For the Delegation of the United States of America:

Michael J. Mansfield — J. H. Allison

For the Delegation of Japan:
Tokyo, April 25, 1978.

○

PROTOCOL AMENDING THE INTERNATIONAL CONVENTION FOR THE HIGH SEAS FISHERIES OF THE NORTH PACIFIC OCEAN

AUGUST 25, 1978.—Ordered to be printed

Mr. ROBERT C. BYRD (for Mr. SPARKMAN), from the Committee on Foreign Relations, submitted the following

REPORT

[To accompany Ex. J. 95-2]

The Committee on Foreign Relations, to which was referred the Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean, Together With Related Agreed Minutes and Two Memoranda of Understanding, Signed at Tokyo, April 25, 1978, having considered the same, reports favorably thereon without reservation and recommends that the Senate give its advice and consent to ratification thereof.

PURPOSE

The primary objective of this protocol is to provide substantially greater protection for salmon of the U.S. origin than that provided by the existing Convention.

BACKGROUND

The International Convention for the High Seas Fisheries of the North Pacific Ocean (INPFC) was signed by the United States, Canada, and Japan in 1952 and entered into force in 1953. This Convention is noted for codifying an "abstention principle" under which each contracting party agrees to refrain from entering a fishery on stocks already fully utilized by one or more of the contracting parties, and which are under regulation to achieve maximum sustainable yield. The contracting parties understood when the Convention was negotiated that Pacific salmon of the North American origin, met the criteria for abstention. Accordingly, Canada and Japan agreed to abstain from fishing for salmon east of 175 west longitude in the Bering Sea. The Convention provides for annual review to assure that these stocks continue to qualify for abstention, and to consider possible additions to the abstention list.

The costs of this protocol fall in budget function 300.

6. Basis of estimate: The costs resulting from the ratification of this protocol are those for marine mammal research authorized to be conducted by the Secretary of Commerce by Public Law 95-326. That law authorizes appropriations for such research in fiscal years 1979, 1980 and 1981. However, without the cooperation of the Japanese, which is insured by this protocol, the research would not take place.

7. Estimate comparison: None.

8. Previous CBO estimate: None.

9. Estimate prepared by Susan Cirillo.

10. Estimate approved by Robert D. Harris, Deputy Assistant Director, Budget System and Process Branch.

TEXT OF RESOLUTION OF RATIFICATION

Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean

Resolved (two-thirds of the Senators present concurring therein), That the Senate advise and consent to the ratification of the protocol signed at Tokyo April 25, 1978, Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean, Together with Related Agreed Minutes and Two Memoranda of Understanding (Ex. J, 95-2) without reservation.

APPENDIX

STATEMENT BY LARRY SNEAD, ACTING DIRECTOR OF THE OFFICE OF FISHERY AFFAIRS, DEPARTMENT OF STATE

Mr. Chairman, I am pleased to have this opportunity to review with you and members of the committee our effort to renegotiate the International Convention for the High Seas Fisheries of the North Pacific Ocean. Ambassador Negroponte, who headed these negotiations and who was to have testified last week before you and members of the committee, is out of town this week and therefore unable to testify. He asked me to express his regrets at not being here today. However, his written testimony is before you. I would like to summarize briefly the main points of the agreement.

The protocol before the committee amends the International Convention for the High Seas Fisheries of the North Pacific Ocean to greatly reduce Japanese interceptions of North American origin salmon. Under this protocol the Japanese have agreed to further restrict their salmon fishery in the North Pacific in areas outside the U.S. 200-mile fishery conservation zone by moving the existing "abstention" line, east of which the Japanese will not fish for salmon, 10° further west, from 175°W to 175°E longitude. It should be noted that this agreement does allow the Japanese to fish for a limited period within a small area inside our 200-mile zone: it is an area known to have a high concentration of Asian-origin stocks during the times the Japanese are allowed to fish.

The agreement also provides for enforcement of the Convention, and for research programs on salmon, as well as on marine mammals, which are taken incidentally in this fishery.

The domestic legislation to implement this protocol has been passed by both Houses and was signed by the President on July 28, 1978. The Governments of Japan and Canada have already ratified this agreement, and during the salmon season this summer, the Japanese have voluntarily abided by the protocol, even though the instruments of ratification have not yet been exchanged. Because of these events, and based on widespread support of the protocol by the U.S. fishing industry, the regional fisheries management councils, and other fisheries interests, I would urge the prompt ratification of this protocol.

My staff and I will be pleased to answer any questions you may have.

STATEMENT BY JOHN D. NEGROPONTE, DEPUTY ASSISTANT SECRETARY OF STATE FOR OCEANS AND FISHERIES AFFAIRS

Mr. Chairman, I am pleased to have this opportunity to review with you and members of the committee the current status of our efforts to renegotiate the International Convention for the High Seas Fisheries of the North Pacific Ocean.

Let me begin by briefly describing the background for this negotiation and the essential elements of the agreement.

The Convention has provided some, although not total, protection for U.S. fisheries. During a 20-year period (1956-76), the Japanese salmon mothership fishery has taken approximately 201.4 million salmon of North American origin.

At INPFC annual meetings, Japan has been asked to take appropriate steps to minimize the interception of North American salmon west of the abstention line. Furthermore, the United States has conveyed its concern with the operations of Japan's landbased driftnet salmon fishery.

On February 10, 1977, the United States gave notice of its desire to terminate the International Convention for the High Seas Fisheries of the North Pacific Ocean, basing the decision to give notice on the fact that the Convention was not consistent with the purposes, policy or provisions of the Fishery Conservation and Management Act. The termination would have become effective on February 10, 1978, had not the United States withdrawn its notice of intent to terminate the Convention in view of the substantial progress being made in the United States-Canada-Japan negotiations on this protocol.

MAJOR PROVISIONS

This agreement consists of four parts: (1) a protocol amending the INPFC; (2) agreed minutes; (3) a United States-Canadian-Japan memorandum of understanding concerning salmon data reporting requirements of the parties; and (4) a United States-Japan memorandum of understanding concerning research and data reporting requirements relating to marine mammals, particularly Dall porpoise, in the Convention area.

The agreement is based on the assumption that it is essential that an effective regime be established to insure conservation of marine mammals within and beyond the U.S. 200-mile fishery conservation zone as well as North American origin salmon to the extent of their migratory range beyond recognized fisheries zones of noncontracting parties. Consequently the protocol, agreed minutes, and memoranda of understanding would: (1) greatly reduce interception of North American origin salmon by the Japanese land-based and mothership salmon fisheries; and (2) provide for research on marine mammals to determine the effect of the Japanese salmon fishery on marine mammal populations, and to reduce or eliminate the incidental catch of marine mammals, particularly Dall porpoise.

The following is a detailed summary of the documents of this agreement.

RENEGOTIATION OF THE INTERNATIONAL CONVENTION FOR THE HIGH SEAS FISHERIES OF THE NORTH PACIFIC OCEAN. (INPFC)

(Summary of documents)

I. Protocol Amending the INPFC

The Protocol, which takes into account the extended fishery jurisdiction of the United States, Canada, and Japan and acknowledges that certain provisions of the 1953 INPFC are incompatible with that juris-

dition, amends the 1953 INPFC. The Protocol stands by itself and does not require reference back to the old Convention.

The Protocol:

A. Defines the Convention area

B. Retains the International North Pacific Fisheries Commission

C. Provide that the Commission shall:

1. provide for scientific studies and the exchange of information on anadromous species (i.e., salmon);

2. provide for scientific studies and the exchange of information on non-anadromous species, pending the establishment of an international organization of broader membership dealing with other species; when this organization becomes functional, discussions of scientific research relating to non-anadromous species shall be transferred to it; and

3. coordinate studies on the continent of origin of salmon within the land-based fishing area (south of 46°N. latitude, west of 175°E. longitude).

D. Provides that enforcement shall be as follows:

1. Right of arrest, seizure, prosecution and imposition of penalties by each Contracting Party within its own 200-mile zone; and

2. arrest or seizure by any Contracting Party outside 200-mile zones, with delivery of the vessel to the flag state of the offending vessel for prosecution and the imposition of penalties.

E. Provides that the Parties agree to exchange scientists to carry out observations on catches and methods of operation. Japan will bear the expenses associated with U.S. scientists on Japanese salmon vessels within the U.S. 200-mile zone.

F. Provides that the Convention shall continue in force until 1 year from when any Contracting Party gives notice of an intention to terminate.

II. Annex to the Protocol

The Annex:

A. Describes the restrictions applicable to Japanese salmon fishing operations in the Convention area (see attached chart).

B. Provides that the requirement of the United States that Japanese salmon fishing vessels within the U.S. 200-mile zone have on board a Certificate of Inclusion relating to the incidental taking of marine mammals shall be suspended until June 9, 1981, during which period the United States and Japan shall conduct joint marine mammal research.

III. Agreed minutes

The Agreed Minutes note the agreement of the Parties that:

A. A Japanese research vessel will conduct research in the northern Bering Sea, during the commercial salmon fishery, concerning the continent of origin of anadromous species migrating in those waters.

B. Japan is prepared to allow up to three scientists of Canada and/or the United States on board that vessel, at Canadian and/or

U.S. expense. These scientists will be allowed to make temporary visits to Japanese salmon motherhips or catcher boats in that fishery, with certain conditions.

IV. Memorandum of understanding (on salmon)

This memorandum:

A. Notes Japanese agreement to provide defined statistics on catch and effort by Japan's mothership fishery throughout the Convention area and by Japan's land-based salmon fishery east of 160°E. longitude.

B. Notes the intention of the Parties to provide to the Commission seal and/or fish samples, salmon fishery statistics, and research vessel results.

V. Memorandum of understanding (marine mammals)

This memorandum notes:

A. Japan will provide defined statistics on the incidental take of marine mammals by the mothership salmon fishery throughout the Convention area.

B. Japan will provide defined statistics on the incidental take of Dall porpoise by the land-based salmon fishery in waters east of 160°E. longitude.

C. Japan will provide past and current data on the incidental take of marine mammals by Japanese research vessels.

D. U.S. and Japanese scientists will study incidental catch data and biological samples with a view to determining Dall porpoise abundance, and developing information on life history, stock differentiation, status and trends.

E. U.S. and Japanese scientists will consult on the research programs of Japanese research vessels and on methods to reduce or eliminate the incidental take of marine mammals in the U.S. 200-mile zone.

F. U.S. and Japanese scientists will conduct annual Dall porpoise sighting surveys on Japanese research vessels. Japan will allow two U.S. scientists on board no fewer than three Japanese research vessels for this purpose.

G. Japan will make every effort to ensure that all Dall porpoise taken by the mothership fishery in the U.S. 200-mile zone are returned to motherhips for examination. The United States will be permitted to place up to two scientists on board each mothership for marine mammal/salmon observations.

H. Japan will take appropriate measures to collect a representative sample of Dall porpoise taken incidentally beyond the U.S. 200-mile zone.

I. U.S. scientists will examine acoustic characteristics of gillnets and Dall porpoise to determine gear modifications that reduce incidental mortality. Japan will conduct field trials of proposed gear modifications.

J. Japan intends to make available an appropriate vessel for Dall porpoise research, unless it is agreed that such research can be accomplished in another manner.

COMMITTEE ACTION

On August 22, 1978, the Committee on Foreign Relations heard Mr. Larry Snead, Acting Director of the Office of Fishery Affairs, Department of State, deliver testimony expressing the administration's support for this protocol and submit the statement of Ambassador John D. Negroponte, Deputy Assistant Secretary of State for Oceans and Fisheries Affairs. Both statements are printed in the appendix to this report.

On that same day, the committee by unanimous consent ordered this agreement favorably reported without amendment. The committee recommends that the Senate grant its advice and consent to ratification of this agreement.

COST ESTIMATE

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, D.C., August 25, 1978.

HON. JOHN SPARKMAN,
Chairman, Committee on Foreign Relations,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Pursuant to section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached cost estimate for Ex. J. 95-2, a Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean.

Should the committee so desire, we would be pleased to provide further details on the attached cost estimate.

Sincerely,

ROBERT A. LEVINE
(For Alice M. Rivlin, Director).

CONGRESSIONAL BUDGET OFFICE—COST ESTIMATE

AUGUST 25, 1978.

1. No. Ex. J. 95-2.
2. Title: Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean.
3. Status: As ordered reported by the Senate Committee on Foreign Relations, August 22, 1978.
4. Purpose: The protocol amends the International Convention for the High Seas Fisheries of the North Pacific Ocean to make its provisions consistent with U.S. policy as put forth in the Fishery Conservation and Management Act of 1976. It also provides for cooperation between the United States and Japan on marine mammal research.
5. Cost estimate:

| Estimated cost: | | (By fiscal year, in millions of dollars) |
|-----------------|-------|--|
| 1979 | ----- | 0.0 |
| 1980 | ----- | 0.0 |
| 1981 | ----- | 1.0 |
| 1982 | ----- | 0.4 |
| 1983 | ----- | 0.1 |

As you know, the Fishery Conservation and Management Act calls on the Department to renegotiate existing fishery treaties when necessary to conform them to the purposes and policies of the act. We determined last year that the INPFC Treaty was inconsistent with the act in several important respects, and deposited a notice of intent to terminate the Convention on February 10, 1977. We began the renegotiation effort with an informal preparatory session with Japan and Canada, August 8-10, 1977 in Lake Wilderness, Wash. We had subsequent full negotiating sessions in Anchorage, Alaska, October 24-26, in Tokyo, Japan, January 17-22, 1978, in Vancouver, British Columbia, Canada, February 6-9 and in Washington, D.C., March 21-23 and 27-29, and April 4-6.

One of the most basic inconsistencies of the present treaty is that it permits the conduct of a Japanese high seas salmon fishery both within and outside the U.S. fishery conservation zone without regard to U.S. management authority. Under the law, that management authority now extends to all salmon within the U.S. zone and salmon of U.S. origin outside the zone, so long as it remains outside the fishery conservation zone of other nations. Accordingly, a major focus of our effort was to incorporate in a restructured treaty the substance of a new trilateral agreement on the conservation of high seas salmon, minimizing interceptions of U.S.-origin salmon in the Japanese Asian salmon fishery. We were successful at the Tokyo session in reaching agreement on this very key matter. In view of the process achieved at this meeting, we lifted our notice of intent to terminate the Convention. Subsequent sessions were held to negotiate enforcement and observer provisions, and to come to agreement regarding the incidental take of marine mammals. The negotiations were concluded on April 6, and on April 25 in Tokyo, Japan, the United States, Canada, and Japan signed a Protocol Amending the INPFC, Agreed Minutes and Two Memoranda of Understanding which were transmitted by the President for advice and consent of the Senate on June 5. Legislation to implement this protocol has been passed by both Houses and was signed by the President on July 28, 1978.

The newly agreed measures greatly limit the total ocean area available to the Japanese fleet. With the exception of a very limited area in the Bering Sea outside the U.S. FCZ, they, in effect, move the existing "abstention" line for both the land-based and mothership fleets from 175° W. longitude to 175° E. longitude and provide seasonal closures for large additional areas outside our 200-mile zone. The effect of these combined measures is to provide a high degree of protection for U.S. salmon by moving the Japanese fishery out to areas where Asian and U.S. salmon are known to intermingle. I should add that these measures do permit the Japanese fleet to fish for a limited period within a small area inside our 200-mile zone. However, in exchange for this we have obtained Japanese agreement not to fish in areas roughly 10 times as large outside our fishery zone. The alternative to this approach would be to simply close our 200-mile fishery conservation zone to the Japanese fleet. However, this would allow the Japanese complete freedom to fish salmon in the vast areas of the north Pacific beyond our zone. In addition, simple closure of our 200-mile zone would also permit the Japanese to concentrate unlimited amounts of fishing effort in rich salmon fishing areas just outside our 200-mile zone. Our

that our newly agreed measures would reduce the rate of interception of U.S. origin salmon by 83 percent of what it was under the old INPFC as compared to a reduction of 72 percent that would be achieved under a unilateral closure of our 200-mile zone.

The enforcement provisions of the agreement allow each party the right within its own 200-mile zone to arrest, seize, and prosecute nationals and vessels of another party for violations of the Convention, and to impose appropriate penalties in accordance with domestic law. Beyond the 200-mile zones, any party may arrest and seize an offending vessel of another party, but prosecution and the imposition of penalties remains with the flag state of the offending vessel.

The agreement also provides for U.S. scientists to observe Japanese operations. Scientists will be exchanged to observe salmon catches and methods of operation and Japan will bear the costs associated with placing U.S. scientists on board Japanese salmon vessels operating in the U.S. 200-mile zone. The Japanese have also agreed to provide a Japanese research vessel to conduct annual research in the northern Bering Sea to study the continent of origin of anadromous species migrating in that area. Japan will allow the United States and/or Canada to place up to three scientists aboard that vessel at U.S. and/or Canadian expense. These scientists will be allowed to visit vessels of the Japanese salmon mothership fleet in that area to observe commercial fishing operations.

The agreement also provides that the requirement of the United States that Japanese salmon fishing vessels within the U.S. 200-mile zone have on board a certificate of inclusion relating to the incidental taking of marine mammals shall be suspended until June 2, 1981, during which period the United States and Japan shall conduct joint research, shall cooperate to determine the effect of the Japanese salmon fishery on marine mammal populations, and shall work to reduce or eliminate the incidental catch of marine mammals in the fishery. In return for our suspending this requirement, Japan will provide past and current incidental catch data on Dall porpoise for study by United States and Japanese scientists. Japanese or United States scientists will conduct annual Dall porpoise sighting surveys on all Japanese salmon research vessels in the Convention area. Japan will make every effort to return all Dall porpoises incidentally captured within the U.S. 200-mile zone to Japanese salmon motherships where they will be examined by U.S. scientists. In addition, Japan will take appropriate measures to collect biological data and samples from a representative sample of Dall porpoises captured incidentally by the mothership salmon fishery outside the U.S. 200-mile zone.

The United States and Japan will make an effort to determine if gear modifications can contribute to reducing incidental mortality, and Japan will conduct field trials of proposed gear modifications when United States and Japanese scientists agree on a program. Japan also intends to insure that an appropriate Japanese vessel will be made available for cooperative Dall porpoise research not later than the sample of Dall porpoises captured incidentally by the mothership salmon fishery outside the U.S. 200-mile zone.

That concludes my presentation on the renegotiation of the INPFC.

Thank you, Mr. Chairman, and members of the committee. I would now be pleased to answer any questions you may have.

Translated from Japanese on board ship

JAPAN'S DRIFT GILL NET FISHERY FOR OMMASTREPHES BARATRAMI

Nov. 1981

Japan's larger squid jigging boats have been jigging for aka-ika, Ommastrephes baratrami, in the northern Pacific Ocean since 1975. The drift gill net fishery developed very rapidly in 1978 and soon expanded to at one point including 1,000 boats. This fishery has been a source of controversy and problems almost since its inception - the primary problem being competition with the less efficient squid jigging boats. However, by the action of the Central Fisheries Adjustment Committee meeting from late May 1981, as of August 1, 1981 the free status of this fishery has ended and participants must be authorized.

The reasons for this action include the fact that the drift gill net fishery competes severely with the existing squid jigging fishery for the same species. Also, because of the extremely high efficiency of the drift gill net fishing method, the preservation of the resource cannot be left to itself. Furthermore, as salmon is an incidental catch of this fishery, there is apprehension that this will lead to international problems.

The new regulation provide that boats may not participate in the fishery without a permit issued to selected boats by the Minister of the Ministry of Agriculture, Forestry and Fisheries. Boats must be between 50 and 500 tons, and the regulated fishing area is north of 20 °N Latitude. However, within this area, fishing is to occur only east of 170 °E Longitude. The mesh of the nets is to be above ten centimeters and landings may be made at any three of thirty designated landing ports, subject to approval of the ports selected by the particular boat.

This Fisheries Adjustment Committee action is the result of a two year controversy between the organizations representing the drift gill net fishery and the squid jigging fisheries. Japan's Fisheries Agency has mediated the controversy.

The 1981 drift gill net squid season is five months long from August through December, and the 1982 season will run from June for seven months. Many of the drift gill net permits have been obtained in exchange for squid jigging permits as a means of reducing the number of squid jigging participants. (In September 1981 the All Japan Large Vessel Squid Jigging Association announced a one-third reduction in the number of its member boats from 212 boats to 140. As of mid-September 1981 a total of 534 boats hold permits in the new fishery - of these 163 are over 100 Tons and 371 are under 100 tons in size.

Landings of Ommastrephes baratrami squid were 144,000 MT (200,000 MT round weight equivalent) and over 95 per cent were frozen. Forecast landings for 1981 are from 125,000 to 144,000 MT (180,000 to 200,000 MT round weight equivalent). The very low price of squid in 1980 forced many drift gill net boats to work overtime to process the squid on board and to freeze only the mantles as this would bring a higher return in the market place and enable the boats to at least minimize their deficit.

(Translated, edited and compiled from various Japanese fisheries press items and from information gathered from various industry and government sources by Bill Court September 27, 1981.)

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Draft

CHINOOK SALMON STUDIES IN S. E. ALASKA

BOARD OF FISHERIES

December 1981

By

Paul Kissner

The Chinook Salmon Research Project is responsible for determining the status of chinook salmon stocks native to Southeastern Alaska. Annual operations include escapement surveys in the major and medium producing systems, collection of biological information from spawners, i.e., age, length, and sex composition data, and microwire tagging of juveniles and smolts to determine ocean migration patterns, areas of harvest and other life history information.

The three major chinook systems are the Taku, Stikine, and Alsek Rivers. All three are transboundary rivers. Alaska, British Columbia, and the Yukon Territory manage these chinook salmon stocks in their respective waters.

Taku River

During 1981 a total of 9,786, 3 and 4-ocean chinook salmon were enumerated in the major spawning tributaries of the Taku River (Table 1). The Nakina River, which is the Taku's major clearwater spawning tributary, had the largest observed escapement since 1954. Similarly a record 2,945 chinook were enumerated in the Nahlin River, i.e., the Taku's other major clearwater chinook spawning tributary.

The April 16 - May 14 commercial trolling closure helped increase the escapements into both of these river systems. This was clearly demonstrated when three disc tagged chinook salmon, which had been tagged by the Department during the closure, were observed or recovered from the spawning grounds.

The later portion of the run, which is bound for Trapper and Tatsamenie Lakes, did not appear to respond as well to the troll closure. The escapements were slightly below the 1980 level and no disc tags were observed or recovered.

Based on age sampling conducted at the Nakina carcass weir, it appears that returns to the Taku River will be weak in 1982 and 1983. Spawning ground returns to date indicate a weakness in the 1976*, 1977, and 1978

*The ocean return in 1981 from the 1976 brood was stronger than expected, probably because of the commercial troll closure during mid-April to mid-May, 1981.

did not appear to respond to the early troll closure like the systems in northern Southeast Alaska.

Coded Wire Tagging and Recovery

Over 300,000 juvenile chinook salmon have been tagged in various tributaries of the Taku and Stikine Rivers during the last five years. Tag recoveries of Taku Chinook during 1981 showed a similar pattern to the 1980 recoveries, i.e., all commercial and sport recoveries were made in April - June (Map 1). A summary of the 1981 tag recoveries is presented in Table 5. It appears that Taku chinook must leave southeastern Alaska, rear somewhere beyond the present limits of the troll fishery and migrate back through the waters of Southeastern Alaska only at maturity to return to their river of origin.

No recoveries of Stikine River chinook were recorded this year, probably because only the first tag group of 1,200 smolts tagged during the spring of 1978 has reached the minimum commercial size. A summary of the potential number of legal size Taku River and Stikine River CWT chinook salmon available, by year, is presented in Table 6.

Commercial Fisheries Division

230 S. Franklin St. - Rm.
Juneau, Alaska 99801
(907) 465-4250

April 2, 1980

Mr. Dusty Anderson
27 N. W. Cedar Street
Warrenton, Oregon 97146

Dear Mr. Anderson:

Re: Peterson Disc tag #65876.
recovered from M/V Kupreanof trawl catch.

The Alaska Department of Fish & Game thanks you for returning the fish tag(s) listed below. The tag(s) were placed on adult salmon captured by a chartered purse seine fishing vessel at the indicated location(s). The tagging study is being accomplished to determine migration routes, run timing and stock intermingling rates of northern Southeastern pink and chum salmon returns passing through major Southeast Alaska fishing areas. In this case, it appears that the tagging crew accidentally tagged a king salmon and released it without much hope of the tag being recovered. I have enclosed the \$1.00 reward that is offered for the return of these tags.

Tag Number

Release Information

Recovery Information

65876

False Point Pybus on July 25, 197⁷.
This area is 70 miles south of
Juneau on the southeast side of Admiralty
Island....

Bering Sea 2/20/80.

Thank you again for returning the above tag(s).

Sincerely,

Stephen H. Hoffman

Stephen H. Hoffman
Fishery Biologist

cc: Gary Gunstrom
Paul Perderson
Jim Blackburn
David Owen
Tyler Gilmer
Arnold Shavl

5/13/81

Larry - Info from Steve Hoffman

1 King tagged @ Fake Pybus recovered
in Beaufort Sea US trawl - ~~data~~
documentation being mailed

Also

2 Pybus tagged in Northern SF, recovered in PWS
4 " " P.W.S. S.E. SF

**INTERNATIONAL NORTH PACIFIC
FISHERIES COMMISSION**

**Proceedings
of the
27th Annual Meeting**

1980

Anchorage, Alaska, November 4 to 7, 1980

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Anchorage, Alaska

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Seattle, Washington

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INPFC
Doc. 2359

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

27th Annual Meeting--1980

Anchorage, Alaska, 1980 November 4

LIST OF PARTICIPANTS

OFFICERS OF THE MEETING

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Vice-Chairman.....H. Douglas Johnston
Secretary.....Kenjiro Nishimura

C A N A D A

Commissioners

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Vancouver, British Columbia

Joseph A. Garcia
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APPENDIX 1
(Doc. 2352)

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

27th Annual Meeting--1980

Anchorage, Alaska, 1980 November 1

REPORT OF THE SUB-COMMITTEE ON SALMON

1980 November 1

The Sub-Committee on Salmon met from October 27 to November 1, 1980. C. Harris of the United States served as chairman and K.V. Aro of Canada was appointed recorder. Mr. C. Funayama, Ms. A. Ono, and Ms. C. Okazaki were the interpreters.

1. PARTICIPANTS

Persons assigned specifically to participate in the work of the sub-committee were:

| | | |
|---------------|--------------------|---|
| CANADA | Member Advisers | B. Riddell K.V. Aro L. Margolis |
| JAPAN | Member Advisers | K. Takagi O. Sano M. Tachibana K. Imamura M. Miyahara |
| UNITED STATES | Member Advisers | R. Burgner M. Dahlberg C. Harris C.P. Meacham W. Arvey A. Kingsbury R. Regnart K. Johnson S. Marshall |

2. AGENDA

The following agenda was adopted:

- (1) Selection of chairman
- (2) Listing of designated participants
- (3) Adoption of agenda
- (4) Review of terms of reference
- (5) Meeting procedures
- (6) Review of results of anadromous salmonid and related oceanographic research
 - (a) Review of documents
 - (b) Outline of research conducted by each country
 - (c) Review of results of studies on continent of origin
 - (d) Summary of new information
- (7) Review of progress on joint comprehensive reports
- (8) Review and report on exchange of basic tagging, catch, effort, biological, and oceanographic data from research operations
- (9) Review and report on exchange of catch, effort, species composition, and biological data, and times and areas of operation of Japanese mothership and landbased fisheries
- (10) Exchange and presentation of statistical material
- (11) Review of research plans for 1981, including exchange of samples and personnel
- (12) Publications
- (13) Other business
- (14) Recommendations
- (15) Consideration of a report to the Standing Committee on Biology and Research

3. TERMS OF REFERENCE

Terms of reference for the Sub-Committee on Salmon were assigned by the Standing Committee on Biology and Research in 1978 as follows:

- (1) To review and report on results of scientific research on anadromous salmonids in the Convention area by considering results of salmonid and oceanographic research during the year preceding the annual meeting through:
 - (a) preparation of an outline of the program of research conducted by each country during the past year (not including discussions of results), and

- (b) preparation of summaries of new information on distribution and origin and on the relationship of salmon distribution to oceanographic conditions

In connection with item (b) above, it is noted that in preparation for the annual meeting, each national section will submit a statement of what new information is contained in its reports.

- (2) To review and report on results of scientific studies to determine the continent of origin of anadromous salmonids in the Convention area including those anadromous salmonids migrating in the waters south of 46° north latitude, as per Article III 1(a) and III 1(d)
- (3) To review and report on progress in exchange of statistical data in accordance with the Memorandum of Understanding by the Contracting Parties concerning furtherance of research studies on anadromous Salmonidae in the Convention area and specifically concerning exchange of fishery statistics, age, and maturity data, scale and fish samples, and data collected by research vessels on catch, tagging, oceanographic conditions and biological parameters
- (4) To review the exchange of statistical material on salmon among the three countries and the presentation of such material in documents, in the Statistical Yearbook, and in the Commission's Bulletin. The sub-committee's report shall contain an account of actions taken and recommendations regarding exchange and presentation of statistical material
- (5) To review the plans of the three national sections on salmonid research and oceanography in the Convention area to effect the best possible coordination of these plans, and to arrange for exchanges of samples and of personnel. The sub-committee's report shall contain a statement of progress made and agreed measures regarding coordination and exchanges in accordance with Article X and statements by each country indicating their plans for the ensuing year, including requests for exchanges of samples and personnel
- (6) To recommend publication of reports with regard to anadromous salmonids

4. REVIEW OF RESULTS OF SALMONID AND OCEANOGRAPHIC RESEARCH

(1) Documents

The sub-committee reviewed the documents presented to the Commission since the 1979 Annual Meeting (titles of all such documents are listed in INPFC Doc. 2349) and agreed that the following documents were relevant to the work of the sub-committee:

| | |
|---------------|---|
| Canada | 2328 |
| Japan | 2262, 2270, 2272, 2305, 2306, 2316, 2317, 2318, 2319, 2320, 2350 |
| United States | 2332, 2333, 2336, 2342, 2343, 2344, 2345, 2346, 2348, 2351, 2369 |
| Secretariat | 2259, 2261, 2281, 2311, 2321 |

(2) Outline of research conducted by each country in 1980

(a) Canada

(i) Salmon

High seas tagging (Doc. 2328): Recoveries of salmon tagged offshore in the North Pacific Ocean by Japan and the United States in 1977, 1978, and 1979, and additional recoveries from earlier Canadian, Japanese, and United States taggings were listed.

Other studies: The incidental catch of salmon (almost entirely chinook) by foreign vessels while trawling for hake in waters off the west coast of Vancouver Island, British Columbia, was recorded by Canadian observers during 1980.

(ii) Oceanography

Oceanographic programs and research were conducted by several Canadian agencies in the eastern Subarctic Pacific during 1980. These included:

- Cruises and moored current meter arrays to obtain physical, chemical, and biological data were used to study the spatial and temporal variability of currents, water properties, and plankton distributions in continental shelf and slope waters off the west coast of Vancouver Island
- Development of remote sensing techniques, including a sensor to determine chlorophyll distributions from aircraft
- Physical and chemical observations at Ocean Station P and along line P. Systems to replace Ocean Station P are being examined

- Daily observations of sea surface temperatures and salinity at coastal light stations and the collection of oceanographic data during fisheries research surveys were continued
- Publication of temperature charts for the eastern Subarctic Pacific

(b) Japan

(i) Salmon

Research on board research vessels (Docs. 2316 and 2317):

The Japanese investigations were conducted by nine research vessels in 1980. One vessel simultaneously carried out investigations on Dall's porpoise as a U.S.-Japan joint research vessel in its first cruise. The research period commenced in April, about two weeks earlier than in the previous year, and ended in August. The research areas were mainly located in the northwestern Pacific Ocean and the Bering Sea (Fig. 1) with additional sampling by one vessel in the Gulf of Alaska. Surveys were not implemented in the Sea of Okhotsk nor within the 200-mile fishery zone of the U.S.S.R.

Fishing gears used were gillnets and/or longlines, the type and number of which varied slightly according to purposes of the survey.

The vessels Hokushin maru, Iwaki maru, and Kumamoto maru were engaged in research activities to obtain information on distribution and abundance of and biological data on salmon and steelhead trout, and used research gillnets with ten mesh sizes (48, 55, 63, 72, 82, 93, 106, 121, 138, and 157 mm) and the common gillnets with mesh sizes and structure similar to the gillnets used by the commercial vessels.

Another three vessels, Hokuho maru, Riasu maru No. 2, and Hokko maru were engaged in tagging experiments conducted to clarify continental origin of salmonids distributed in waters south of 46°N. The first two vessels used longlines in addition to the gillnets while the third used only longlines.

Hoyo maru No. 81 was dedicated to research on marine mammals, particularly Dall's porpoise, caught incidentally by salmon gillnets. These activities were carried out during the first cruise as one of the catcher boats grouped under a mothership fleet and using approximately the same number of common gillnets as a commercial fishing vessel. Gillnet and longline research was conducted in its second cruise to clarify the continental origin of salmon migrating in the central Bering Sea.

Oshoro maru and Hokusei maru used common gillnets, the research gillnets with 10 mesh sizes, gillnets with special mesh sizes (such as 30, 33, 42, 130, 179, 204, and 233 mm) and longlines (in case of Oshoro maru) in order to collect biological data on pelagic species such as salmon and squids in the subarctic zone of the North Pacific Ocean.

The research vessel personnel fished with gillnets and longlines, collected biological measurements of the catch, and tagged fish still viable out of those caught with longlines. All the vessels executed oceanographic surveys and carried out research on animals (fishes, squids, birds, and marine mammals) which were incidentally caught by these gears.

One Japanese scientist participated in a cruise of a U.S. research vessel dedicated to investigations to clarify the continental origin of salmonids in the area south of 46°N. The purposes were (1) to facilitate communication at sea to obtain data from Japanese research vessels for use in choosing stations for offshore purse seine operation in the area, (2) to provide advisory service about the operation of Japanese longlines, and (3) to observe the U.S. purse seine research operation.

Gillnet research: The gillnet research in 1980 commenced on May 1, about two weeks earlier than in the previous year, and was completed on August 7. A total of 276 gillnet operations were conducted during this period of time. In the northwestern Pacific Ocean, the research by gillnet was basically conducted at 5° intervals of longitude. In addition, operations were carried out to implement research to collect biological data, to conduct tagging experiments, and to execute the Dall's porpoise/salmon surveys in the fishing ground of the mothership fleets.

In May, 84 gillnet operations were conducted by six research vessels in the northwestern Pacific Ocean west of 175°W. In June, seven research vessels conducted a total of 65 gillnet operations almost in the same area. In July, the gillnet research was carried out by eight vessels in three areas. In the northwestern Pacific Ocean west of 175°W, six research vessels conducted 90 gillnet operations. In the central Bering Sea, one vessel conducted 19 gillnet operations. An additional six stations were fished along 145°W between 48°-57°N in the Gulf of Alaska. In August, three research vessels conducted 11 gillnet operations in the northwestern Pacific Ocean and one in the Bering Sea.

Longline research: The longline operation commenced from May 2, two weeks earlier than the year before, and ended on August 3, 1980. During the period, a total of 114 longline operations including 93 tagging operations were conducted. Efforts of the longline research operation were mainly exerted to clarify the

continental origin of salmonids distributed in the areas south of 46°N and were carried out in waters of latitudinal range 2-3 degree, south to north, centering around 45°N and between 161°E-175°W in the northwestern Pacific Ocean. Tagging experiments were also conducted in the Bering Sea and the Gulf of Alaska.

In May, two research vessels made 36 sets in a broad area between 41°-46°N and 161°E-175°W. The main target species then was sockeye salmon. In June, four research vessels made 25 sets mainly in waters 41°-47°N and 161°E-175°W, with primary target species of sockeye and coho salmon. In July, the longline research was carried out in three areas by four research vessels. Forty sets were conducted by two research vessels in the northwestern Pacific Ocean between 42°-49°N and between 162°E-175°W with primary target species for tagging being coho salmon. One research vessel made six longline sets in the central Bering Sea. The main target species were chinook and chum salmon. One research vessel conducted four longline operations along 145°W. In August, two research vessels conducted two longline operations in the northwestern Pacific Ocean and one in the Bering Sea.

Research on board motherships (Doc. 2316): The mothership salmon fishery in 1980 was conducted by four motherships and 172 catcher boats (each of the motherships was accompanied by 43 catcher boats). The mothership fleets left Hakodate on May 26 and returned between August 4 and 6. The landings to the motherships by catcher boats commenced on June 2 and completed on July 29-31 for a total of 22 landings. In June, there were 106 operations within a narrow area, south to north, between 170°-175°E in the North Pacific Ocean and one operation in the Bering Sea. In July, the operation was conducted 68 times in the Pacific Ocean and 47 times in the Bering Sea.

Daily catch statistics were collected on board the four salmon motherships. Records of fork length, body weight, gonad weight, and collections of scales were made for up to 60 sockeye salmon and up to 30 of each other salmon species on each mothership every landing day. The numbers of salmon measured on motherships in 1980 were 32,269 in all, consisting of 12,570 sockeye, 6,630 chum, 6,600 pink, 1,930 coho, and 4,539 chinook. Motherships made oceanographic observations every day at noon.

Investigation by U.S. observers (Doc. 2316): In 1980 eight U.S. scientific observers were on board four motherships, including one salmon observer and one marine mammal observer on board each mothership. The former was engaged in monitoring of the salmon fishing operation and collection of biological data within the U.S. Fishery Conservation Zone (USFCZ), while the latter was dedicated to investigation of marine mammals, particularly Dall's porpoise, incidentally caught by salmon gillnets. The observers worked on board motherships for 163 days in all, 40-42 days each for four motherships.

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In 1980 a total of six U.S. scientists embarked the Japanese salmon research vessels with a split of 1, 2, and 3, respectively, on board Hokushin maru, Oshoro maru, and Hoyo maru No. 81. The purpose of the embarkation was to investigate marine mammals incidentally caught by salmon gillnets.

(ii) Oceanography (Doc. 2318)

Oceanographic studies of the northwestern North Pacific Ocean were carried out. Analyses of data for the period April to July 1980 were conducted with respect to the location of Western Subarctic Water and the Alaskan Stream.

(c) United States

(i) Salmon

Research on board research vessels and motherships (Docs. 2342, 2345, and 2348): Two research vessels fished with 732 m purse seines and a limited amount of longline gear in the North Pacific Ocean from mid-June to early August. Most sampling was done south of 46°N latitude and between 167°E-177°W longitude, although some sampling also occurred within 100 nautical miles of the central Aleutian Islands in early August. The principal objective of this work was to tag and release salmon and steelhead trout to determine the migrations and continent of origin of anadromous salmonids in waters south of 46°N latitude. Total sampling effort was 77 seine sets and 4 longline sets south of 46°N and 25 seine sets north of 46°N latitude.

In 1980, four U.S. salmon observers were trained; each was placed on board one of four Japanese motherships. Between June 10 and July 31, the observers reported fishing operations and collected biological data when the vessels were within the USFCZ. Data from four tagging experiments on board catcher vessels were analyzed to test the randomness of the catch sampling procedures used on board the motherships.

A chartered fishing vessel systematically fished across the migratory route of the Bristol Bay sockeye salmon run from June 7 through July 15. Sampling was conducted at 13 predetermined stations from 30 to 80 nautical miles offshore along the historic transect between Port Moller and Cape Newenham. Fishing was conducted with 200 fathoms of 137 mm mesh gillnet, 62 meshes deep. The primary objectives of the project were to estimate both daily and seasonal abundance and to monitor the age composition of the Bristol Bay run. Secondary objectives were to monitor timing of the run and to collect scale samples for post-seasonal racial analyses.

Other studies: (Docs. 2332, 2333, 2336; 2344, 2346, 2348; 2351, and 2369): Catches of immature and maturing sockeye salmon of Bristol Bay origin by the Japanese mothership salmon fishery were estimated for 1978 and 1979 and were reported as in 1956-1977. Annual catches of western Alaska and Canadian Yukon chinook salmon by the Japanese mothership salmon fishery were estimated for 1956-1979.

Estimates were made of the incidental catches of salmon and steelhead trout by foreign and U.S.-U.S.S.R. and U.S.-Korean joint venture groundfish fisheries in 1979 off the coast of Washington, Oregon, and California, and in the Gulf of Alaska and Bering Sea.

Data were compiled on inshore catch, escapement, and age composition of chinook salmon returning to western Alaskan rivers.

United States scientists continued study of a relationship between indices of prevailing springtime ocean temperatures in the eastern Aleutian area and the timing of the sockeye salmon run to Bristol Bay, Alaska. Correlation between the Adak-Cold Bay mean air temperature in May and the median date of the run was slightly improved with the addition of the 1979 point. This relationship was used to forecast the timing of the large 1980 run.

Information on the distribution of salmon obtained from U.S. high seas tagging experiments was updated with the return of 19 tags in 1980.

Research continued to determine the continental origins of sockeye salmon in and around the area of the pre-1978 Japanese landbased driftnet fishery using scale pattern analysis. Numerous samples of maturing and immature sockeye salmon collected in the period 1972-1976 by Japanese research vessels and motherships were analyzed with a direct density classification procedure. The potential usefulness of scale pattern analysis in determining continental origins of coho salmon was explored in a preliminary analysis of 1979 coho scale samples collected from 19 river systems on the Kamchatka Peninsula and in Alaska.

Considerable effort was expended to identify the origin of salmon harvested in various inshore, mixed-stock fisheries of Alaska. The primary technique used was scale pattern recognition, although extensive tag recovery studies have also been undertaken, primarily for pink and chum salmon. Specific studies have included: sockeye salmon in Bristol Bay, Chignik, Kodiak, Prince William Sound, Cook Inlet, and Lynn Canal; chum salmon in Kotzebue Sound, Norton Sound, and the Yukon River; coho salmon in Cook Inlet and southeast Alaska; chinook salmon in Cook Inlet, southeast Alaska, and the Yukon River; and pink salmon in Prince William Sound and southeast Alaska.

A forecast of the 1980 Bristol Bay sockeye salmon run was generated. It represented the sum of forecasts for each of the eight major river systems of the bay. These were developed using one or more relationships each between the parent escapement and total return, between the smolt outmigration estimates and subsequent returns, and between the number of mature fish in the preceding year and the number of mature fish from the same brood year and freshwater age returning the next year. Each method used was weighted by its relative historic accuracy to yield the final forecast.

(3) Review of results of studies on continent of origin

(a) Coordination of research plans (Docs. 2244 Appendix 1, 2259, and 2261)

The precursor of the Ad Hoc Salmon Research Coordinating Group of the Sub-Committee on Salmon was formed at the 1977 Annual Meeting, and because of its importance in coordinating and facilitating research on continent of origin of salmon, the group was formalized and given special terms of reference at the 1979 Annual Meeting. Following the recommendation of the sub-committee, the group, including the spokesman-members of the sub-committee and their advisers, met for the fifth time in late February 1980, immediately prior to the meeting of the Ad Hoc Committee on Marine Mammals.

A major item of discussion was the 1980 research plans of Japan and the United States. Japan presented plans which included three longline vessels dedicated to conduct continent of origin research in waters around 46°N. Proposed transects and sampling stations were reviewed, and a southward shift of longline effort in the second cruise of two vessels was recommended. The U.S. member encouraged Japan to increase gillnet sampling in the area between 50°N and the central Aleutian Islands for the purpose of studying a relationship between the abundance of Bristol Bay sockeye on the high seas and inshore returns. The United States presented plans for a two-vessel tagging operation in waters near 46°N, which would employ purse seine and longline gear. Frequent radio exchange of catch data between U.S. and Japanese research vessels was proposed to provide information on areas of greatest abundance of target species. To facilitate this radio communication, a Japanese scientist was invited to work on board the U.S. vessels, and it was agreed that the details of this coordination would be settled through correspondence and through a meeting of Japanese and U.S. scientists in Seattle just prior to the field season. Neither the United States nor Canada intended to place salmon scientist/observers on board Japanese research vessels in 1980.

The status of exchanges of salmon scale samples and of catch statistics and other data was discussed at length. The United States informed Japan that earlier requests for 1972-1976 sockeye salmon scales had been fulfilled, and outlined 1980 plans for scale pattern analysis of sockeye salmon. The United States requested scale samples of coho salmon sampled on the high seas in 1979, and 1978 and 1979 sockeye and coho scales received by Japan from the U.S.S.R. Japan requested Alaskan chum salmon scales for years 1975 to present.

Japan presented recompiled (according to catcher vessel location) 1978 mothership catch and effort statistics and 1979 high seas catch statistics. The exchange of salmon research data was discussed. Since more and more data were being exchanged on computer tape, it was agreed that the Secretariat would maintain a record of and document the content, medium, and format of such exchanges.

The United States presented plans for the 1980 salmon mothership observer program, which were basically similar to those of 1979. The United States requested cooperation to repeat a tagging experiment to study randomness of samples of mothership catches, suggested two new sampling procedures, and requested the cooperation of mothership masters in logistical matters relating to observers' performance of assigned duties.

The February meeting ended with a short discussion of possible improvements of the sub-committee's report to the Commission, and of the need to clarify the period of cooperative research referred to in the revised Convention.

In preparation for field operations, considerable correspondence between Japan and the United States took place, which culminated with a meeting between a Japanese scientist and United States scientists in Seattle in early April. The detailed plans for radio communication between Japanese and U.S. vessels were made, and travel arrangements for the Japanese observer were discussed.

Radio exchange of research catch data took place every other day once the U.S. vessels reached the study area. Communication was often difficult on busy public frequencies, but enough data were accurately transmitted for the U.S. biologists to learn from the more extensive Japanese survey the areas of highest abundance of salmon. Several areas of possible improvement of such communication were identified.

(b) Review of results(i) Results of studies by Japan (Doc. 2317 and additional information)

Japanese research vessels conducted salmon tagging operations during seven separate cruises from May through August 1980 in the North Pacific Ocean, Bering Sea, and Gulf of Alaska. Salmon were captured by longline, tagged and released in the waters lying between 41°28'-48°57'N and between 161°26'E-175°59'W in the North Pacific Ocean, between 55°48'-58°00'N and between 174°24'E-176°30'W in the Bering Sea, and between 49°52'-56°00'N and between 145°06'-144°50'W in the Gulf of Alaska. In total, 6,576 salmon were caught and of this number 2,822 were tagged and released. The number of fish tagged by species was 422 sockeye, 1,654 chum, 570 pink, 143 coho, 16 chinook, and 17 steelhead trout.

As much as possible, tagging effort was directed to those locations in which sockeye and coho were most abundant in the waters south of 46°N. The original survey plan was to make six survey cruises by three research vessels. However, the second cruise of Hokko maru was not conducted because of the rise in fuel oil price. Examination of gillnet CPUE data indicated that sockeye salmon were mainly distributed in waters close to 45°N in the western area and waters north of 45°N in the eastern area in May. The tagging stations were widely distributed from east to west in waters of 41°N to 46°N and were equivalent to the southern half of the distribution area of sockeye salmon. In the west longitudinal area, the density of sockeye was particularly low around the tagging stations. In June, relatively high density of coho salmon was observed in waters of 42°N to 46°N in the west longitudinal area and the tagging locations corresponded with this group of fish. In July the center of distribution of coho salmon was observed in the area of 47°N to 48°N and a few coho were tagged in waters south of 46°N in both the eastern and western areas.

Twenty-six recoveries of salmon tagged in the North Pacific, Bering Sea, and Gulf of Alaska in the period 1978 to 1980, and a recovery from the 1976 tagging were reported in 1980. The results of new recoveries are as follows:

Sockeye salmon: One immature sockeye salmon, released at 49°29'N, 179°23'E on July 27, 1979, was recovered at Nushagak in Bristol Bay on July 13, 1980, which supports previous data on offshore distribution of immature Bristol Bay sockeye salmon in July. Four additional sockeye salmon were recovered on the high seas.

Chum salmon: Five chum salmon were recaptured in coastal areas. Two notable recoveries among those were: one chum released at 45°30'N, 173°26'E on May 25, 1979 was recovered off Odate, Aomori Prefecture on October 10, 1979, and another, released at 47°36'N, 161°29'E on June 19, 1979, was recovered at Wakkanai, Hokkaido on September 28, 1979. Japanese coastal recoveries of chum salmon have in the past been mainly from releases in the Bering Sea during June-August, and only one recovery of a chum released in waters south of 46°N, west of 175°E in May and June has been made along the Japanese coast. The two new recoveries support this single recovery in demonstrating a distribution and migration of Japanese chum salmon which differ from the typical distribution and return migration from the Gulf of Alaska through the Bering Sea (INPFC Bulletin 35).

Three other recoveries of chum salmon (one released in the Bering Sea on July 25, 1979 and captured at Shizunai, Hokkaido; another released at 44°31'N, 166°28'E and recovered in the Amur River on September 14, 1978; and the other released at 50°00'N, 162°57'E and also recovered in the Amur River on October 14, 1979) support previous findings. Three other chum salmon were recovered on the high seas.

Pink salmon: One pink salmon, released at 56°03'N, 176°30'W on July 18, 1980 and recovered at Nushagak in Bristol Bay on August 11, 1980, extended the northwestern limit of Kuskokwim and Bristol Bay pink salmon (previously known to be 55°07'N, 175°40'W). A pink salmon released in the Gulf of Alaska on July 12, 1980 was recovered in Cook Inlet on July 30, 1980. Another pink released in the area around the central Kuril Islands on July 22, 1976 was recovered in Terpeniya Bay of Sakhalin. These two recoveries substantiate previous findings. Four other pink salmon were recovered on the high seas.

Coho salmon: A coho salmon released in the Gulf of Alaska on July 12, 1980 and recovered in Cook Inlet on July 25, 1980, and another coho, released at 48°31'N, 178°28'W, on July 31, 1979 and recovered in the Levaya Kotelnaya River, east Kamchatka in the same year, support previous findings for coho salmon of central Alaska and the east Kamchatka origin, respectively. Four other coho salmon, released in the waters of 44°-48°N, 179°E-176°W in late June, were recovered by mothership fleet operations in the areas of 49°-50°N, 173°-175°E in late July. They further support findings of northwestward migration of coho salmon in the above waters.

Steelhead trout: A steelhead trout, released at 45°31'N, 179°28'E on June 25, 1979, was caught in the Sandy River, a tributary of the Columbia River on January 19, 1980. This is a southward extension of the known ocean distribution of North American steelhead trout in the central North Pacific Ocean (previous distribution limit 51°00'N, 177°17'E).

Additional information regarding distributions, origins; and oceanographic conditions (Doc. 2318, 2319, and 2320): The catch data obtained in 1980 through operations by research gillnets with 10 mesh sizes were examined (Doc. 2320). The results obtained from the preliminary research data were:

Sockeye salmon: In May, three locations with CPUE over 1.0 fish/tan were observed. They were the area near 45°N, 162°E, the area south of the central Aleutian Islands north of 50°N, and the area near 44°N, 172°-178°E. Based on the past findings, the fish in the first and the second areas would be maturing fish and those in the third area would be immature fish. In June, CPUE over 1.0 was observed south of the central Aleutians. However, the range of this high CPUE did not extend to the waters south of Attu Island (north of 50°N west of 174°E). Areas with CPUE over 0.5 were observed in waters between 43°-49°N west of 175°E, but the center of this distribution was not well defined. In July, the area of main distribution of sockeye salmon was in waters north of 47°N. CPUE over 1.0 was observed near 48°-52°N and widely spread from east to west. According to past findings, this concentration was considered to consist of immature fish. A wide distribution of CPUE over 0.5 was observed in the central area of the Bering Sea. These fish were also considered to be immature.

Chum salmon: Except for the waters east of 175°E near 43°-45°N where CPUE over 0.4 was observed, CPUE in May was generally low, particularly north of 47°N. In June, CPUE over 0.4 was observed frequently in waters near the Kuril Islands and east of 175°E, but in the waters around 170°E the CPUE was still low. In July, CPUE over 0.4 was observed over a wide area north of 45°N, and in the central Bering Sea CPUE over 5.0 was widely observed. Based on past findings it was considered that both maturing and immature fish occurred in this area.

Pink salmon: In May, CPUE was generally low, except for the waters near 42°N, 160°E and the waters south of 47°N near 177°E where CPUE over 1.0 was observed. In June, CPUE was generally low in the waters east of 160°E, but in the waters west of 160°E, very high CPUE (up to 16.0) was observed. In July, CPUE over 2.0 was observed in a wide area from south to north in the waters west of 165°E. However, CPUE in the Bering Sea and the waters east of 165°E was very low.

Coho salmon: In May, CPUE over 0.2 was observed only in the waters south of 44°N east of 175°E. In June, CPUE over 0.4 was occasionally observed in waters south of 46°N. In July, CPUE over 0.4 was widely observed south of 49°N but CPUE was generally low.

Chinook salmon: In May, chinook salmon were infrequently caught. In June the areas with CPUE over 0.02 were widely distributed and CPUE over 0.1 was observed. In July, areas with CPUE over 0.05 were observed in the waters near Kamchatka west of 165°E, the waters south of the Aleutians east of 180°, and the central Bering Sea.

Data obtained from immature sockeye salmon caught by the research gillnets with 10 different meshes south of the Aleutian Islands in July and August of each year from 1972 to 1980 were examined (Doc. 2319). It is known that immature sockeye in the area at that time of season are primarily of western Alaska origin. Sockeye salmon caught by research gillnets did not differ in fork length from fish sampled by purse seine but there was a possibility of underestimating relative abundance of age .1 sockeye. It was, therefore, concluded that age .1 and age .2 fish should be treated separately. In these waters, the sampling was conducted during July 1 to July 14 in 1980 and the average CPUEs were 1.18 fish/tan for age .1 fish and 0.77 for age .2 fish.

Observations on oceanographic conditions of the northwest Pacific Ocean were made during the summer of 1980 (Doc. 2318). The Western Subarctic Water did not show a marked deviation from the usual year to year pattern in waters west of 165°E, but the southerly extension of the Komandorski Cold Tongue was notable. The Okhotsk high pressure area developed in July and extended to the south, resulting in low temperature phenomena in some offshore areas between Hokkaido and Sanriku. However, on the salmon fishing grounds, the unusual low temperature phenomena were not observed.

(ii) Results of studies by the United States
(Docs. 2332, 2333, 2336, 2347, 2344, 2346, 2348, 2351, and 2369)

New recoveries of salmon tagged by the United States were reported in the usual manner (Docs. 2348 and 2369). Two of these signified significant range extensions for North American stocks of pink and sockeye salmon. The recovery in Makushin Bay, Unalaska Island, of a pink salmon tagged at 45°42'N and 178°35'W marks the first North American tag recovery of a salmon released in the area of the pre-1978 landbased fishery area, and extends the known southwestern range of North American pink salmon. The 1979 recovery at Hissin Point on the west coast of Vancouver Island of a sockeye released south of Adak in 1977 extends the known range of southern British Columbia sockeye from 172°03'W to 176°24'W. A sockeye salmon released just south of Adak Island in 1978 was recovered by a landbased driftnet vessel, purportedly at 43°N, 167°E on July 9, 1980.

A study of the continent of origin of sockeye salmon in the pre-1978 Japanese landbased driftnet fishery area by means of scale pattern recognition involved a separate analysis for each of 14 groups of maturing and immature sockeye, viz., immature age 1.2 sockeye sampled in 1972 and 1975, immature age 2.2 fish in 1972 and 1973, maturing age 2.2 fish in 1972-1974 and 1976, maturing age 1.3 fish in 1973 and 1976, and maturing age 2.3 fish in 1972-1974 and 1976 (Doc. 2346). For several of these groups, sampling coverage was too sparse or sporadic to reveal spatial or temporal trends in mixing proportions of Kamchatkan and Alaskan stocks. Among the groups sampled sufficiently to demonstrate trends in distribution of continental stocks, statistically significant estimates of the proportion of Alaskan fish in the pre-1978 landbased area and west of 175°E were obtained for immature age 2.2 sockeye in 1972 and 1973, maturing age 2.2 fish in 1973, and maturing age 2.3 fish in 1972. For most sample groups the estimated proportions of Alaskan sockeye decreased to the west and south, as would be expected. Most of the Alaskan sockeye detected were of Bristol Bay origin, although some statistically significant estimates were obtained for Gulf of Alaska stocks as far west as area E6048. Because misclassification error rates were relatively high between Kamchatka and Gulf of Alaska fish and because many of the "unknown" sample sizes were quite small, some of the estimates for Gulf of Alaska may be spurious. Areas of intermingling of maturing and immature Asian and Alaskan sockeye were found to be more extensive than depicted in INPFC Bulletins 30 and 34. Few samples of either maturing or immature sockeye were available for the southeast part of the study area, south of 46°N and east of 175°E, so no firm conclusions could be drawn regarding continent of origin of sockeye in that sector.

A preliminary study to determine the potential usefulness of scale pattern analysis in continent of origin studies of coho salmon provided encouraging results (Doc. 2348). Scale samples of age 2.1 coho collected from 19 Kamchatkan and Alaskan river systems in 1979 were grouped according to four geographical regions: Kamchatka, and western, central, and southeastern Alaska. Classification of 735 fish of known origin in a 4-category analysis resulted in an overall classificatory accuracy of 65%, and the classificatory accuracy of the single Asian category was 73.6%.

Analyses of tagging data from experiments on board the Japanese catcher vessels revealed that handling of the fish between the time the fish are removed from the net on board the catcher vessel and the time the fish are sampled on board the mothership does not randomize the sequence fish are sampled (Doc. 2342). However, this nonrandom sample still produced a random sample of weight. The effects of nonrandom sequence in the sample on age-composition estimation would have to be evaluated in a similar experiment. Any nonrandom ordering of ages or weights in the net would result in increased variability between samples.

Using procedures reported in INPFC Bulletin 30, the United States estimated that 360,000 Bristol Bay sockeye salmon were caught by the Japanese mothership salmon fishery in 1978--124,000 were maturing; 236,000 were immature (Doc. 2344). The estimates for 1979 were 68,000 for maturing fish and 410,000 immature fish, for a total of 478,000. From 1956 through 1979, average annual catch by the Japanese mothership salmon fishery of chinook salmon originating in western Alaska and in the Canadian portion of the Yukon River was estimated at 123,000. Statistical areas 8056 and 8058 in the central Bering Sea yielded 31% of the total catch of chinook salmon of western Alaska and Canadian Yukon origin.

Additional information regarding the incidence of salmonids in 1979 groundfish fishery catches was obtained by United States observers on board foreign and U.S.-U.S.S.R. and U.S.-Korea joint venture vessels off the Pacific coast of North America and in the Bering Sea (Docs. 2332, 2333, and 2336). The estimated incidental catch of salmonids by joint venture vessels was 2,674 fish. Of this total, 1,623 fish were caught off Washington, Oregon, and California, and 1,051 were caught in the Gulf of Alaska. The estimated total incidental salmon catch by foreign groundfish vessels was 135,160 fish (7,044 off Washington, Oregon, and California, 20,410 from the Gulf of Alaska, and 107,706 from the Bering Sea). The estimated species composition of the total foreign incidental take was 91.6% chinook, 6.7% chum, and 1.7% coho, sockeye, and pink salmon. The catches of chinook salmon by area were estimated to be 100,382 in the Bering Sea (as compared to 39,113 in 1978), 16,379 in the Gulf of Alaska (42,455 in 1978), and 6,551 off Washington, Oregon, and California (5,586 in 1978). The higher catches in the Bering Sea in 1979 were attributed to higher incidence rates on large surimi and freezer trawlers from Japan, Republic of Korea, and the U.S.S.R.

Because of U.S. concern regarding the impact of high seas driftnet and groundfish fisheries on stocks and inshore harvest of chinooks returning to western Alaska rivers, data were also compiled on inshore catches (Doc. 2351). Table 1 summarizes available estimates of catches by the driftnet, groundfish, and inshore fisheries by year of catch. Estimates in groundfish fisheries were not available for years prior to 1977. The sub-committee noted that Canada has a similar concern regarding salmon originating in the Canadian portion of the Yukon River.

(c) Summary of information on continent of origin

Three sampling seasons have passed since renegotiation of the INPFC treaty. Members of the Sub-Committee on Salmon agreed, therefore, that a summarization of information concerning continent of origin of salmonids in waters south of 46°N and west of 175°W is needed. It was considered appropriate to summarize this information with respect to the periods before and after the beginning of coordinated and intensified research on this matter which immediately followed the renegotiation early in 1978.

Before 1978 virtually all information on continent of origin of salmonids south of 46°N had come from Japanese high seas tagging experiments, although some additional information regarding sockeye salmon origins was available from studies of the incidence of parasite "tags" (Doc. 1795), age composition (Docs. 1796 and 1932), distribution of sockeye of various maturity stages (Docs. 2029 and 2030), and yearly fluctuations of CPUE (Doc. 2031). Most of the salmon released south of 46°N by Japanese tagging vessels before 1978 were pink and chum salmon, and the great majority of these were released west of 175°E (Doc. 2237 summarizes tagging information through 1978, and 1978 releases are reported in Doc. 2089). All coastal recoveries of pink and chum salmon were from Asia. Kamchatka pink salmon south of 46°N were known to occur as far east as 176°31'W (Doc. 2089). The nearest release locations of pink and chum salmon recovered in North American coastal areas were in the region of the central Aleutian Islands. Sockeye salmon were tagged south of 46°N at a much lower rate than were pink and chum and the great majority of these releases also occurred west of 175°E. Only one coastal recovery (from the Ozernaya River of the U.S.S.R.) resulted from these releases. Six additional Kamchatkan coastal recoveries of sockeye were from releases between 46°N-48°N and 160°-170°E. Information from other studies mentioned above provided no firm conclusions on continent of origin of sockeye in waters south of 46°N. Chinook and coho salmon and steelhead trout were also tagged southwest of 46°N, 175°W, albeit in much smaller numbers, and from these releases only one Asian coastal recovery of a coho salmon (released in area E6544) was recorded. A coho released at 44°28'N, 173°31'W in late June 1977, however, was recovered in early September in Bristol Bay, Alaska, which indicated occurrence of North American stocks in the vicinity of the area encompassed by this summary. Another coho released in the same longline set as this North American coho was recovered in the Kamchatka River in November 1977. These two recoveries signified intermingling of North American and Asian stocks much further to the southeast than previously known. The nearest release areas of chinook salmon and steelhead trout recovered in North American coastal areas were 8050 and W7550, respectively.

Research in the period 1978-80 that has provided additional information on continent of origin of salmonids south of 46°N has consisted of expanded tagging efforts by Japan (Docs. 2089, 2237, and 2317), a tagging effort by the United States in 1980 (Docs. 2348 and 2369), and scale pattern analysis of sockeye by the United States (Docs. 2136, 2222, and 2346). The recently increased rate of tag releases of all species (except for pink salmon southwest of 46°N, 175°E) is evident in Table 2. Recently acquired information on continent of origin of each salmonid species follows:

(i) Sockeye salmon

There have been three significant tag recoveries of sockeye in the post-1977 period. A maturing sockeye released in early June 1978 at 43°29'N, 168°38'E was recovered in the Ozernaya River of the U.S.S.R. This recovery significantly extended the known limit of the southern range of west Kamchatka sockeye. A maturing sockeye released in late May 1979 at 46°27'N, 171°38'E was recovered in Bristol Bay, Alaska. Although this recovery was not from a release south of 46°N, it significantly extended the known southwestern limit of maturing Bristol Bay sockeye and demonstrated the occurrence of this stock in the immediate vicinity of the landbased fishery area. Third, an early July 1980 recovery by a landbased driftnet vessel of a sockeye at 43°N, 167°E was from an August 1978 release just south of Adak Island. Intensive tagging studies have shown that virtually all immature sockeye in the Adak area in mid-summer are of North American (primarily Bristol Bay) origin (INPFC Bulletin 34). There is some reservation, however, regarding the accuracy of recovery location for this sockeye.

Scale pattern analysis of maturing and immature sockeye sampled on the high seas by Japanese research vessels in 1972-1976 has provided the greatest degree of resolution of information on sockeye origins south of 46°N. These studies have provided estimates of stock mixing proportion within maturity group, age group, 10-day period, and INPFC statistical area strata. Proportions of maturing Alaskan sockeye were estimated for 35 such strata. These estimates (most of which were not statistically significant) ranged from 0% to 35.6% and averaged 7.0% (unweighted mean). All samples of sufficient size were collected west of 175°E. For immature Alaskan sockeye, 25 samples of sufficient size provided estimates ranging from 0% to 53.7% and averaging 11.0%. Only 2 of these 25 samples were collected east of 175°E. It was concluded from these on-going studies that North American sockeye occur in the pre-1978 landbased fishery area, but that the great majority of sockeye there are of Asian origin. No firm conclusions were possible for the area east of 175°E due to lack of sufficient samples.

In summary, recent tagging experiments and scale pattern studies have provided evidence of the occurrence of North American sockeye in the area south of 46°N and west of 175°E. The scale pattern studies suggest that Asian and Alaskan sockeye intermingle over a broader area than depicted in Bulletins 30 and 34. There is little information on sockeye origins east of 175°E, owing to the markedly lower tagging and sampling of sockeye in that area (Table 2).

(ii) Chum salmon

The additional information from fish tagged in waters south of 46°N includes three chum salmon recaptured in coastal areas. Two notable recoveries were: one chum salmon released at 45°20'N, 173°26'E on May 25, 1979 and recovered off Odanosawa, Aomori on October 10, 1979; another released at 44°29'N, 161°31'E on June 16, 1979 and recovered at Mineoka in Soya Strait of Hokkaido on October 2, 1979. Japanese coastal recoveries of chum salmon have been mainly from releases in the Bering Sea during June-August, while a Japanese coastal recovery of chum salmon released southwest of 46°N, 175°E in May and June has been made only once before. These two new recoveries and the earlier one suggest a broader distribution of Japanese chum salmon than previously acknowledged, i.e., that maturing Japanese chum salmon are typically distributed through the Gulf of Alaska in April and May and migrate through the Bering Sea between June and August (INPFC Bulletin 35). A chum salmon released at 44°31'N, 166°28'E on May 24, 1978 was recovered on September 14, 1978 in the Amur River. There are still no coastal tag recoveries of chum released south of 46°N and between 175°E-175°W.

(iii) Pink salmon

Additional information from fish tagged in waters southwest of 46°N, 175°W includes one pink salmon recaptured in a coastal area. A pink salmon tagged at 45°42'N, 178°35'W on June 29, 1980 was recovered in Makushin Bay, Unalaska Island between July 15 and August 20. The previously known southern extent of North American pink salmon in waters west of 175°W was 50°56'N, which makes the present recovery a significant range extension.

(iv) Coho salmon

Catch per unit effort data from Japanese research vessels (INPFC Annual Report 1978, 1979, and Doc. 2320) indicate that coho salmon south of 46°N latitude annually increase in abundance between May and July in northeasterly and northwesterly directions from 175°E. Peak concentrations of coho occur north of 46°N in July. New information concerning the origin of coho migrating in the Pacific south of 46°N is very limited and indicates intermingling of stocks over a broad area. Three ocean and two coastal recoveries have been reported from the 1978-80 tagging by Japan and the United States. Tagged coho released west of 175°E at latitudes 46°35'N, 45°30'N, and 45°33'N were recovered within the same year at 49°17'N, 173°22'E; 49°52'N, 174°11'E; and 43°N, 167°E, respectively (Docs. 2317 and 2348). No coastal recoveries of coho tagged southwest of 46°N, 175°E have been reported; however, a coho tagged in 1978 at 49°59'N, 164°30'W was recovered in southeast Kamchatka in the same year.

There have been no coastal recoveries of coho tagged south of 46°N and between 175°E-175°W since 1977. However, a coho tagged at 48°31'N, 178°28'W in 1979 was recovered in the same year in the Levaya Kotelnaya River of the U.S.S.R. (Doc. 2317).

(v) Chinook salmon

Catch per unit effort data from Japanese research vessels (INPFC Annual Report 1978, 1979; Doc. 2320) indicate that chinook salmon are widely distributed and occur in low abundance south of 46°N latitude. Chinook abundance generally increases north of 46°N throughout the summer but remains low in relation to the other salmon species. Very few chinook salmon have been tagged southeast or southwest of 46°N, 175°E in the period 1978-1980 (Table 2). There have been no recoveries from these releases.

(vi) Steelhead trout

The distribution and abundance of steelhead are poorly documented south of 46°N latitude. Japanese tagging documents (Docs. 2089, 2236, and 2317) suggest steelhead are widely distributed and are similar to chinook salmon in relative abundance. No tags have been recovered from steelhead released southwest of 46°N, 175°E in the period 1978-1980 (Table 2). In 1980, however, a steelhead tagged at 45°31'N, 179°28'E in 1979 was recovered in a tributary of the Columbia River (Doc. 2317). This recovery significantly extended the known southwestern limit of North American steelhead in the central North Pacific Ocean, although Japan reports that a Washington State steelhead was previously tagged further west (51°00'N, 177°17'E; Doc. 2317). The latter steelhead was tagged in 1970 and recovered in 1971, but was first recorded in INPFC literature in 1980 (Doc. 2317).

(4) Summary of new information

- (a) A pink salmon tagged by U.S. biologists at 45°42'N, 178°35'W on June 29, 1980 was recovered in Makushin Bay, Unalaska Island between July 15 and August 20. The previously known southern extent of North American pink salmon in waters west of 175°W was 50°56'N, which makes the present recovery a significant range extension. This recovery is also the first North American coastal recovery of a salmon released in the area of the pre-1978 Japanese landbased driftnet fishery.
- (b) A pink salmon released by Japan at 56°03'N, 176°30'W on July 18, 1980 and recovered at Nushagak in the Bristol Bay on August 11, 1980 extended the known ocean distribution of pink salmon of Kuskokwim and Bristol Bay origin to the northwest (previously 55°07'N, 175°40'W).

- (c) A sockeye tagged by U.S. biologists at 50°59'N, 176°24'W on July 7, 1977 was recovered at Hissin Point on the west coast of Vancouver Island on June 27, 1979. This recovery extends the known western limit of southern British Columbia sockeye from 172°03'W.
- (d) Scale pattern analysis of numerous sample groups of maturing and immature sockeye salmon collected in the period 1972-1976 provided several statistically significant estimates of Alaskan (principally Bristol Bay) sockeye in the pre-1978 landbased fishery area that ranged between 6.5% and 36.9%. The area of intermingling of Asian and Alaskan maturing and immature sockeye was found to be more extensive than depicted in INPFC Bulletin 30.
- (e) A steelhead trout released by Japan at 45°31'N, 179°28'E on June 25, 1979 was caught in the Sandy River, an Oregon tributary of the Columbia River on January 19, 1980, extending the known ocean distribution of steelhead trout of North American origin to the south in the central North Pacific (previously 51°00'N, 177°17'E).
- (f) The first recoveries of coded-wire tagged salmonids outside of the U.S. and Canadian 200-mile fishery zones were made by a Japanese research vessel in the Gulf of Alaska in 1980. Two coded-wire tagged steelhead trout were recovered in July along longitude 145°W in the central gulf during the cruise of the Oshoro maru. One steelhead was released from the Niagara Springs Hatchery, Idaho, in April 1980 (Doc. 2317), and the second steelhead was released from the Cowlitz Hatchery (Columbia River), Washington, in April 1978 (K. Johnson, Pacific Marine Fisheries Commission, pers. comm.). Further, the former recovery is the only marine recovery of a tagged Idaho steelhead.

5. NEW JOINT COMPREHENSIVE REPORTS

The Sub-Committee on Salmon has reviewed the progress toward publication of the new joint comprehensive reports proposed by the Standing Committee on Biology and Research in 1970. The reports on chum salmon, sockeye salmon, coho salmon, and oceanography have been published and distributed in both English and Japanese versions. The English version of the report on chinook salmon has been distributed and the Japanese version is in the process of translation. The English version of the report on pink salmon should be distributed in early 1981; the Japanese translation has been started. The draft of the report on masu salmon will be submitted in Japanese to the Secretariat by the summer of 1981.

6. EXCHANGE OF DATA (Agenda items 8, 9, and 10)

The sub-committee notes that the exchange of basic tagging, catch, effort, biological, and oceanographic data from research operations is up to date generally, and that it should be continued at least at the same level as in the past. The United States indicated that detailed biological data collected by its biologists on U.S. purse seine vessels in 1980 would be provided on computer tape and tabular form, and detailed sockeye and coho scale measurement data would be provided on computer tape by late 1980. Japan indicated that detailed catch and oceanographic data from salmon research vessels for 1980 would be available by mid-1981.

The sub-committee notes that Japan has provided mothership salmon fishery statistics for 1978 and 1979 consisting of catch by species (in numbers and weight) and effort by 10x10 area and 10-day period, tabulated according to catcher boat position. The 1980 statistics will be tabulated in the same manner and submitted by late January 1981 in accordance with the Memorandum of Understanding. The U.S. member requested that the voluminous 1980 statistics be submitted on a computer tape instead of in typed format, and Japan indicated that submission of data in the same computer-readable format as used for the 1979 data would be possible.

Japan has provided 1979 catch (in numbers and weight) and effort data for the landbased driftnet fishery, tabulated by 20x50 statistical area and 10-day period. The Japanese member indicated that the 1980 statistics for this fishery would be provided in the same level of detail by late January 1981. The United States requested that the 1980 statistics for the landbased driftnet fishery be submitted on a computer tape in a suitable format similar to the one used for the mothership salmon fishery statistics except that 20x50 statistical area will be used for the landbased driftnet fishery statistics.

A list of material and data exchanges during 1979-80 was documented by the Secretariat (Doc. 2317). This list included in part 1978 and 1979 scale samples and associated biological data for sockeye and coho salmon and 1972-1979 tagging data on sockeye and coho salmon requested by the United States and provided by Japan. Japan requested and the United States provided Alaskan chum salmon scales and associated biological data from 1975 through 1979.

7. STATISTICAL YEARBOOK

At recent annual meetings the status of the Statistical Yearbook has been reviewed and recommendations have been made regarding the format of the Yearbook and regarding inclusion of salmon statistics from non-member countries. The actions taken to date are as follows:

(1) 1977 Statistical Yearbook

The 1977 Statistical Yearbook has gone to press. The Yearbook will be distributed in mid-1981.

(2) 1978 Statistical Yearbook

Completion of the 1978 Statistical Yearbook has been delayed because of lack of a substantial portion of the salmon catch data from the states of Alaska, Washington, and Oregon. The U.S. member indicated that the states will be urged to provide the data promptly. The 1978 Yearbook will follow the format changes recommended by the sub-committee documented in the 1979 Proceedings.

(3) Inclusion of statistics from the U.S.S.R.

Coastal catches by species for 1978 and 1979 were provided through the United States and will be incorporated into the Yearbook. The sub-committee urges the Secretariat to continue its efforts to obtain catch data for 1975 through 1977.

(4) Inclusion of statistics from other non-member countries

The Secretariat has received the Republic of Korea 1979 Yearbook of Fisheries Statistics which contains information on the catch of salmonids in 1978. The 1978 catch statistics from the Republic of Korea will be published in the 1978 Statistical Yearbook with a footnote that the species composition of the catch is uncertain.

(5) 1979 and future Yearbooks

The sub-committee agreed that the format of the 1979 and future Statistical Yearbooks should follow that adopted for the 1978 Yearbook.

8. PUBLICATIONS (Agenda item 12)

The sub-committee reviewed the status of publications other than the comprehensive reports on salmon and oceanography, and the Statistical Yearbooks. The status of other publications is as follows:

(1) Historical Salmon Statistics Bulletin

The English version of the Historical Salmon Statistics Bulletin has been published and distributed as Bulletin Number 39 and the Japanese translation has been completed.

(2) 1972 Salmon Symposium Proceedings

The Japanese and English versions of the 1972 Salmon Symposium Proceedings (INPFC Bulletin 32) have been published and distributed.

(3) Bulletin

The U.S. Section intends to submit a manuscript entitled "Early oceanic migration and growth of juvenile Pacific salmon and steelhead trout" to the Secretariat for publication as a Bulletin.

9. RESEARCH PLANS FOR 1981

Tentative research plans for each national section for 1981 were exchanged. Requests for samples and data associated with these plans are listed in Appendix 1(A). The three national sections agreed to meet the requests insofar as possible, to consider making special effort for the collection of samples, and to expedite sample exchange.

The 1980 recovery by a Japanese research vessel in the Gulf of Alaska of a coded-wire tagged steelhead trout led to a request to the INPFC from the Pacific Marine Fisheries Commission for Japanese research vessels to examine salmonid catches routinely for adipose fin clips that may indicate the presence of such tags, and to return snouts of such fish along with recovery data. This request was referred to the Sub-Committee on Salmon. The sub-committee members agreed that high seas recoveries of coded-wire tagged salmonids would contribute significantly to information on ocean migrations and distribution, and that cooperation in recovery effort facilitated through the INPFC should involve U.S. and Canadian research and observer programs as well as the Japanese research program. The sub-committee therefore RECOMMENDS that the research and observer programs of the national sections include efforts, insofar as possible, to examine research or observed commercial catches for salmonids missing the adipose fin. Heads collected from these fish and accompanying recovery data will be processed in accordance with procedures to be decided at the next meeting of the Ad Hoc Salmon Research Coordinating Group. Specific participants in this cooperative effort will be Japanese and U.S. salmon research vessels, U.S. and Canadian observers on groundfish vessels, and U.S. observers on Japanese salmon motherships.

Following the 1980 recoveries of three tagged steelhead trout (two with coded wire tags, one with a Japanese disc tag), there was considerable discussion in the sub-committee about steelhead ocean migrations and distributions. Since information on this subject is scant, the Canadian member requested Japan to provide research and perhaps commercial (landbased driftnet and mothership) catch data for steelhead. The Japanese member responded that steelhead catches by

research vessels have not been reported (except in tagging documents that report only longline catches), but that they would be provided. Regarding the possibility of future commercial catch data on steelhead, Japan mentioned that a change in reporting procedures would require changes in domestic regulations and, although the possibility of such changes would be explored, no assurances could be presently made that these data would become available.

As a consequence of the review on continent of origin studies included in this year's sub-committee report, the sub-committee RECOMMENDS that in 1981:

- (1) increased emphasis be given to tagging and collection of scales from sockeye salmon south of 46°N and between 175°E-175°W because of the much lower level of past tagging and sampling in this area
- (2) increased emphasis also be given to tagging of pink salmon southeast of 46°N, 175°E due to the disproportionately lower level of past tagging in this area
- (3) scales be collected, if possible, from all coho and chinook salmon sampled by research vessels south of 46°N since the potential for identification of the continent of origin of coho and chinook salmon by scale pattern appears favourable
- (4) the Ad Hoc Salmon Research Coordinating Group review ways to improve the amount of information obtained from efforts to determine the continent of origin of salmonids south of 46°N.

The sub-committee notes that the efforts of the Ad Hoc Salmon Research Coordinating Group, reported under Review of results of studies on continent of origin, have resulted in a greater level of cooperation in planning of research vessel operations, execution of research, exchange of data, and analyses. The sub-committee notes with satisfaction the recent increase in tagging effort by Japanese research vessels and the initiation of U.S. tagging. However, the sub-committee considers that our present knowledge and the level of research planned cannot provide sufficient information on continent of origin of salmonids within the next year to enable the Commission to make recommendations under Article III 1(d) of the Convention. The sub-committee RECOMMENDS that the Standing Committee on Biology and Research call this problem to the attention of the Commission.

The sub-committee also RECOMMENDS that the Ad Hoc Salmon Research Coordinating Group continue its work through correspondence, and that the group meet in Tokyo, Japan in February 1981. If possible, the meeting should be held immediately prior to the meeting of the Scientific Sub-Committee of the Ad Hoc Committee on Marine Mammals. This will facilitate coordination of salmon and marine mammal research on vessels and simplify arrangements by the Secretariat for meeting rooms, interpreters, and typing services.

Tentative research plans for each country follow.

(1) Canada

(a) Salmonid research

Salmonids occurring incidentally in catches of marine species will be examined for incidence of adipose fin-clips. Heads of salmonids missing the adipose fin and all recovery information will be forwarded to the Pacific Marine Fisheries Commission. Information from high seas tagging will continue to be updated.

(b) Oceanographic research

In November 1980, a joint U.S.-Canada project in the vicinity of Ocean Station P will include the deployment of 25 drifting buoys and 4 moored buoys, and CTD and bathythermograph observations.

The observational program at coastal lighthouses, from fisheries vessels and at Ocean Station P (until July 1981) and the publication of temperature charts will be continued. Moored current meters off the west coast of Vancouver Island will be maintained. Development of remote sensing techniques and alternative systems for Station P will also be continued.

(2) Japan

Research plans for 1981 are still tentative but it is expected that research will continue in the North Pacific Ocean and Bering Sea.

(a) Salmon

(i) Research on board motherships

As in previous years, daily catch statistics will be collected. Body length and weight, gonad weight, and sex will be recorded for samples of each species. Scale samples will be taken.

(ii) Research by research vessels

The number of research vessels engaged in 1981 may be nine vessels. They will operate from May to August, a period similar to that in previous years. One or two of these vessels will operate in the Bering Sea.

The main objective is to collect biological data and samples for studies on distribution and abundance of salmon and steelhead trout in the North Pacific Ocean and Bering Sea in relation to stock identification of salmonids in offshore waters and to assess the status of the salmonid stocks.

Two or more of the research vessels mentioned above will be engaged in tagging of salmon under the research coordination plan of the three countries for studying continental origin of salmon distributed and migrating in the waters south of 46°N.

Head snouts and biological data for adipose-clipped salmonids will be collected from catches by the salmon research vessels.

(b) Oceanography

Oceanographic observations will be made by the research vessels and motherships carrying out the above.

(3) United States

(a) Continent of origin studies (Fisheries Research Institute)

The United States will continue studies of the continent of origin of salmon, particularly in the area of the pre-1978 Japanese landbased driftnet fishery. The main objective will be to tag salmon from possibly two research vessels which will fish with purse seine and longline gear in the period May through July. Because of the relatively low level of tag releases of the target species likely to be realized in far offshore tagging experiments, an intensive effort will be made to encourage the return of tags seen in Asian and North American coastal fisheries. Another major objective will be to continue scale pattern analyses of sockeye and coho. Scale samples already received from Japan and expected to be received from the U.S.S.R. will be used in continent of origin studies of immature and maturing sockeye salmon, and of coho salmon. Attempts will be made to obtain from the U.S.S.R. scales from past and 1981 sampling which will be used in future analyses.

(b) U.S. salmon observer program (National Marine Fisheries Service)

In 1981 the United States plans to place a salmon observer on board each of the motherships so that catches of salmon can be observed during all fishing operations within the USFCZ. Weighing of daily landings from catcher boats will be directly observed while the weight of daily catches of scout boats within the USFCZ will be obtained from a copy of the catch log furnished by the appropriate ship's officer. Daily effort and location, to the nearest minute of latitude and longitude, for each catcher and scout boat within the USFCZ, will also be recorded from the catch log. The U.S. salmon observers may collect biological data such as scales, body length and weight, gonad weight, and sex from samples of each species of salmon. Catches of salmon will be routinely monitored by U.S. salmon observers for any salmon missing adipose fins. Fish without adipose fins will be sampled for biological data and to recover potential coded wire tags implanted in the snout. The U.S. salmon observers will not monitor salmon catches beyond the USFCZ.

(c) Other studies

A research vessel will fish with gillnets along a transect offshore from Port Moller. Daily abundance estimates of mature Bristol Bay sockeye will be generated. Size characteristics of the fish will be investigated as a means for assessing total run strength. Inshore stock separation activities based on scale pattern analysis, age class composition differences, and tagging will continue on a comparable level as in 1980. A forecast of the total run of sockeye salmon to Bristol Bay by age class and river system will be made. These studies will be conducted by the Alaska Department of Fish and Game.

In response to a request from the Pacific Marine Fisheries Commission and subsequent recommendation by this sub-committee to accommodate that request, the United States will greatly increase efforts to examine salmonids sampled on the high seas for missing adipose fins which may indicate the presence of coded wire tags. U.S. observers on board motherships, foreign trawl and longline vessels, as well as on U.S. salmon research vessels will insofar as possible examine salmonids caught purposely or incidentally for missing adipose fins, and return snouts of these fish and accompanying recovery information in accordance with procedures to be determined at the upcoming meeting of the Ad Hoc Salmon Research Coordinating Group.

10. RECOMMENDED PROCEDURE FOR FUTURE MEETINGS

It is RECOMMENDED that the rapporteur system in use by the other sub-committees be tried by the Sub-Committee on Salmon for preparation of its 1981 report. The sub-committee nominated C. Harris (U.S.) as rapporteur for the 1981 meeting. The sub-committee noted that because of the short time between completion of field sampling and the annual meeting date, preparation of documents must be expedited insofar as possible. To be considered by the rapporteur the documents (in English) will need to be received two weeks prior to the sub-committee meeting date.

Suggested panel topic: Changes in recent years in operations of Japan's salmon mothership and landbased driftnet fisheries:

- (1) Changes in seasonal and area distribution of effort and of catch by species
- (2) Effect of these changes in terms of probable continent of origin of catch

TABLES 1 AND 2, FIG. 1, AND APPENDIX 1(A) FOLLOW

Table 1. Estimated total catch in thousands of western Alaska and Canadian Yukon chinook salmon by the Japanese mothership fishery, foreign groundfish fisheries, and U.S. commercial and subsistence fisheries.

| Year | Mothership ^a | Groundfish ^b | Sub-total | Western Alaska ^c | | Sub-total | Total |
|-------------------|-------------------------|-------------------------|-----------|-----------------------------|-------------|-----------|-------|
| | | | | Commercial | Subsistence | | |
| 1956 | 55.4 | - | - | 132.7 | - | - | - |
| 1957 | 15.2 | - | - | 158.4 | - | - | - |
| 1958 | 5.4 | - | - | 181.9 | - | - | - |
| 1959 | 27.8 | - | - | 195.1 | - | - | - |
| 1960 | 135.0 | - | - | 195.7 | - | - | - |
| 1961 | 13.9 | - | - | 243.1 | - | - | - |
| 1962 | 29.7 | - | - | 213.1 | - | - | - |
| 1963 | 40.8 | - | - | 208.1 | 66.2 | 274.3 | 315.1 |
| 1964 | 252.9 | - | - | 260.0 | 50.5 | 310.5 | 563.4 |
| 1965 | 105.5 | - | - | 263.0 | 52.9 | 315.8 | 421.3 |
| 1966 | 111.5 | - | - | 207.5 | 69.5 | 277.0 | 388.5 |
| 1967 | 69.8 | - | - | 284.0 | 81.9 | 365.9 | 435.7 |
| 1968 | 226.3 | - | - | 259.0 | 54.2 | 313.2 | 539.5 |
| 1969 | 435.2 | - | - | 287.6 | 65.2 | 352.9 | 788.1 |
| 1970 | 344.8 | - | - | 290.8 | 95.1 | 386.0 | 730.8 |
| 1971 | 143.6 | - | - | 283.2 | 73.8 | 357.1 | 500.7 |
| 1972 | 169.5 | - | - | 224.1 | 66.7 | 290.8 | 460.3 |
| 1973 | 47.0 | - | - | 177.4 | 69.7 | 247.1 | 294.1 |
| 1974 | 286.8 | - | - | 180.2 | 57.3 | 237.6 | 524.4 |
| 1975 | 109.2 | - | - | 126.2 | 77.2 | 203.3 | 312.5 |
| 1976 | 167.7 | - | - | 241.5 | 84.0 | 325.6 | 493.3 |
| 1977 ^d | 64.5 | 43.5 | 108.0 | 296.1 | 84.1 | 380.2 | 488.2 |
| 1978 ^d | 31.3 | 39.1 | 70.4 | 380.0 | 74.6 | 454.6 | 525.0 |
| 1979 ^d | 65.0 | 100.4 | 165.4 | 412.0 | 99.5 | 511.3 | 676.7 |
| 1980 ^d | 143.7 | - ^e | - | 312.0 | 90.0 | 402.0 | - |

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...continued

Table 1. Continued.

^aDoc. 2344; estimates do not include dropouts.

^bDocs. 2121, 2210, and 2336 (assuming 100% of the catch is of western Alaska and Canadian Yukon origin).

^cDoc. 2351.

^dPreliminary estimates for western Alaska inshore catch and the 1980 mothership catch.

^eUnknown, but first quarter catches were comparable to those in the first quarter of 1979.

Table 2. Numbers of salmonids tagged and released by Japan and the United States^a in waters south of 46°N and west of 175°W before and after renegotiation of the INPFC treaty early in 1978. Percentages of 1956-1980 total tag releases of each species by period are shown in parentheses.

| Period and area | Species | | | | | | Total |
|---------------------------------|---------|--------|--------|--------|---------|------------------------|--------|
| | Sockeye | Chum | Pink | Coho | Chinook | Steelhead ^b | |
| 1956-1977 | | | | | | | |
| West of 175°E | 843 | 7,923 | 43,401 | 137 | 48 | - | 52,352 |
| East of 175°E | 60 | 605 | 454 | 202 | 1 | - | 1,322 |
| Sub-total | 903 | 8,528 | 43,855 | 339 | 49 | - | 53,674 |
| | (52.9) | (72.9) | (95.8) | (43.5) | (57.0) | - | (89.3) |
| 1978-1980 | | | | | | | |
| West of 175°E | 695 | 2,097 | 1,460 | 126 | 14 | 3 | 4,395 |
| East of 175°E | 109 | 1,070 | 476 | 314 | 23 | 40 | 2,032 |
| Sub-total | 804 | 3,167 | 1,936 | 440 | 37 | 43 | 6,427 |
| | (47.1) | (27.1) | (4.2) | (56.5) | (43.0) | - | (10.7) |
| Sub-total by area, 1956-1980 | | | | | | | |
| West of 175°E | 1,538 | 10,020 | 44,861 | 263 | 62 | - | 56,747 |
| East of 175°E | 169 | 1,675 | 930 | 516 | 24 | - | 3,354 |
| Grand total | 1,707 | 11,695 | 45,791 | 779 | 86 | - | 60,101 |

^aThe United States tagged salmonids in this region only in 1980.

^bData are not presently available for the 1956-57 period.

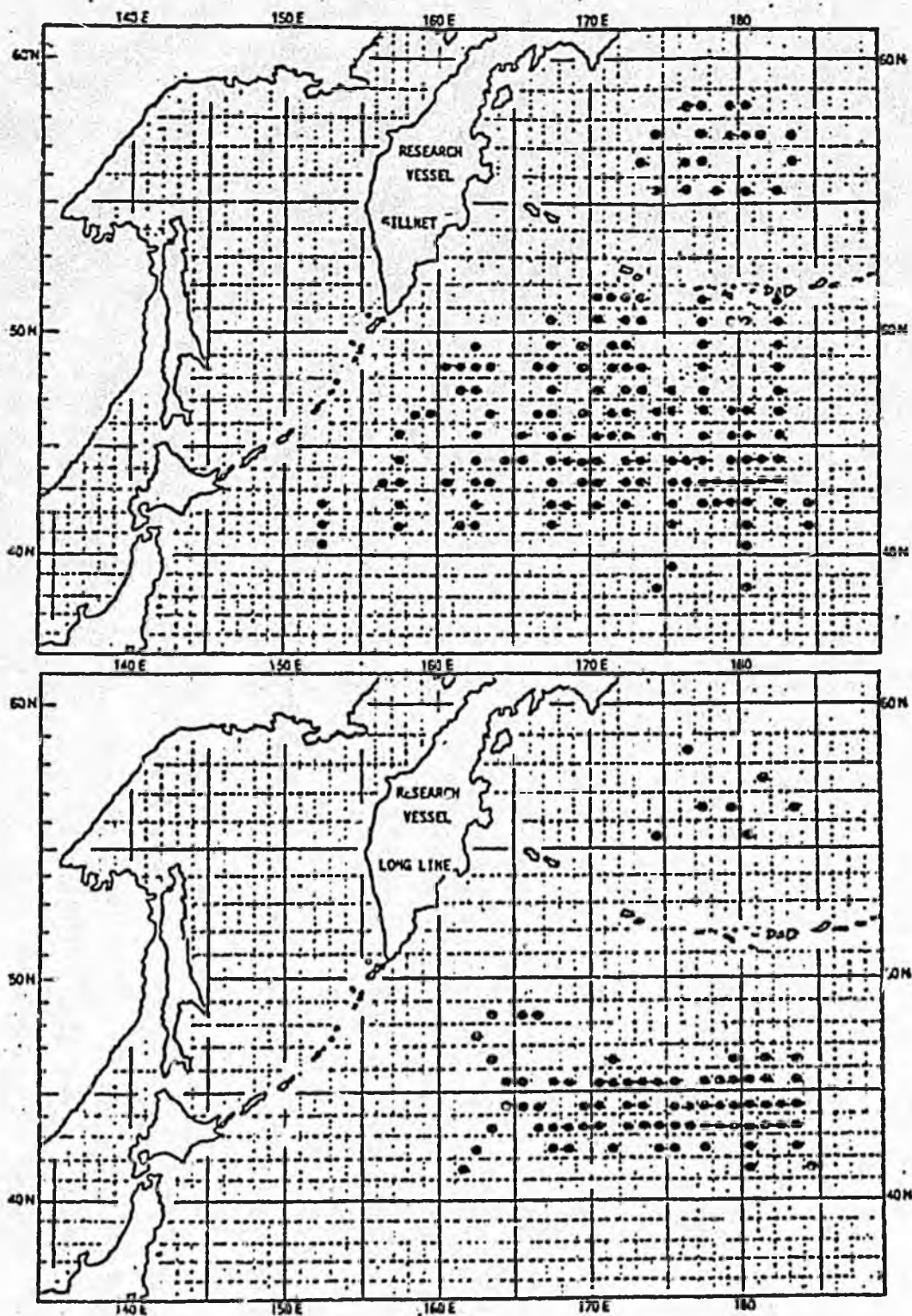


Figure 1. Fishing locations of Japanese research vessels west of 175°W, 1980. (Doc. 2316).

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

27th Annual Meeting--1980

Anchorage, Alaska, 1980 November 4
-----SAMPLE AND DATA REQUESTS FOR 19811. REQUESTS BY CANADA

Samples of fish or scales from various U.S. and Japanese fisheries and rivers may be required. Requests will be forwarded by Canada when specific requirements are known.

2. REQUESTS BY JAPAN

Samples of fish or scales from various U.S. and Canadian fisheries and rivers may be requested. Requests will be forwarded by Japan when specific sample requirements are determined. Associated biological and sample information data will be required.

3. REQUESTS BY THE UNITED STATES

Samples of scales or plastic scale impressions from Japanese research vessel and mothership collections and from Asian rivers may be requested of Japan to aid analyses by U.S. scientists of the area of origin of salmon taken on the high seas. Samples of scales or scale impressions from Canadian fisheries and rivers may also be requested. Requests will be forwarded by the U.S. member when specific sample requirements are determined. Associated biological and sample information will be requested.

In order to study the operations of the high seas salmon fisheries of Japan, the United States requests an English language copy of the 1980 fishing regulations and charts showing the regulatory areas and sub-units of the landbased driftnet and mothership salmon fisheries which depict any quota, time, area, or effort regulations affecting the operation of the fisheries. The United States wishes to obtain one tan of drift gillnet of each mesh size used in the landbased and mothership salmon fisheries.

In recent years Japan has provided sockeye CPUE data to the United States obtained by research vessels fishing driftnet stations in July and August south of the central Aleutians between 175°E and 175°W north of 50°N. These data show a useful run forecast relationship between CPUE by ocean age group and return runs to Bristol Bay the following year. The United States, therefore, encourages Japan to continue this sampling in 1981 if feasible and to again provide the CPUE data by age group by the time of the 1981 INPFC annual meeting.