

March 30, 1984

TESTIMONY OF MARK LUNDSTEN

1984 Central Area Sablefish Apportionments -

OY - 3,060 mt  
Reserve - 612 mt  
DAP - 1,360 mt  
JVP - 290 mt  
TALFF - 798 mt (Only available after October 7, 1984, provided  
the domestic fleet has not harvested it.)

1983 percent sablefish bycatch in joint venture fishery - 2.5%

Potential JV bycatch = 674 mt (2.5% of 29,650 mt)  
Potential DAP trawl bycatch = 428 mt (2.5% of 22,716 mt, domestic bottom trawlers)  
Directed DAP = 1,360 mt  
2,462 mt = total removal of fish by domestic fishermen (DAH)

3,060 (OY) - 2,462 = 598 mt remainder

- 177 mt apportioned to Japanese for Pacific cod bycatch

421 mt effective reserve of sablefish

With the DAP and JVP considered harvested, 1,410 mt would still be available through reserve (612 mt) and TALFF (798 mt).

Considering that only 421 mt would effectively remain, the harvest of that 1,410 mt would constitute an overharvest, beyond the OY, of 989 mt.

Also, if it is considered that the trawl bycatch and the Japanese bycatch (to be harvested in shallow water) are of small fish that may very well be immature, almost exclusively, then the effect of overfishing could be magnified.

FINANCE COMMITTEE MINUTES

MARCH 29, 1984

The Finance Committee met in the Council offices on March 29, 1984, with the following people present: John Winther (Chairman), Robert McVey, John Harville, Keith Specking, Pat Barker, Don Rosenberg, Harold Lokken, Donald Bevan, James Campbell, Jim Branson, Clarence Pautzke and Judy Willoughby.

The Committee reviewed the FY84 mid-year administrative budget. It was noted that there is a possibility of a \$7,000 deficit. Several items were discussed for possible reductions and, if needed, action will be taken later.

The Finance Committee voted to approve the final report of the Bering Sea Herring Scale Analysis - Phase I, and approved the final report of the Domestic Fleet Mix and Effort Required to Harvest the Alaska Groundfish OY and payment of \$3,000.

Jim Branson then presented a job description for a summer intern that has been established by the University of Alaska. Alaska Sea Grant will fund one position for this summer. The individual will work for the Council updating the Gulf of Alaska Groundfish FMP. Jim stated if Council funds were available, another person would be hired to do the same update for the Bering Sea/Aleutian Islands Groundfish FMP. Don Bevan will research the possibility of the University of Washington establishing such a position.

The FY84 Programmatic funding was reviewed by Don Rosenberg. The SSC recommends the Domestic Groundfish Monitoring, approved by NMFS for \$145,000, be delayed until May. A committee has been formed to rewrite the contract.

They also recommended the Chinook Salmon Incidental Catch Study contract for \$40,000 be issued immediately.

Approval for funding of the Herring Scale Analysis, Phase II for \$62,465, was postponed by NMFS until at least May. It was recommended that a small amount of funding, borrowed from the groundfish project, be authorized to enable the contractor to be on the grounds during the herring season. The contractor should be notified that there is the possibility that the additional funding will not be available.

The Finance Committee approved the SSC's proposal for \$50,000 to \$100,000 for herring research to be sent out for agency review. Approval was also given to send for agency review a proposal for \$400,000 for vessel time to do the winter herring stock study.

The SSC's recommendation that \$10,000 from the domestic groundfish monitoring program was discussed by the committee. It was recommended that this reallocation not be requested in light of the disapproval received in the March 21 memo. The committee recommends that the Council write William Gordon requesting that he place high priority on his agency providing the required funding.

FINANCE COMMITTEE REPORT

DATE: 11/15/88

The Finance Committee met in the Council offices on March 15, 1988, with the following members present: John Thomas (Chairman), Robert McKay, John Berman, James Grogan, Pat Baker, Tom Rosenberg, Harold Berman, David Berman, James Grogan, the Council Liaison, and Bob Wilkerson.

The Committee reviewed the 1988 mid-year administrative budget. It was noted that there is a possibility of a \$1,000 deficit. Several items were discussed for possible reduction and it is noted that more will be taken later.

The Finance Committee voted to approve the final report of the Budget Review Panel. The report was approved by the Council on March 15, 1988. The report was prepared by the Budget Review Panel and the Finance Committee on March 15, 1988.

The report on the proposed new job description for a research intern that has been established by the University of Alaska. Also, the report on the proposed position for the summer. The individual will work in the Council office during the fall of 1988. The salary is \$12,000. The report also contains a list of possible positions for the fall of 1988. The report was prepared by the Budget Review Panel and the Finance Committee on March 15, 1988.

The 1988 programmatic budget was reviewed by Tom Rosenberg. The 1988 programmatic budget was approved by the Council on March 15, 1988. A committee has been formed to review the programmatic budget.

The report on the proposed new job description for a research intern that has been established by the University of Alaska. Also, the report on the proposed position for the summer. The individual will work in the Council office during the fall of 1988. The salary is \$12,000. The report also contains a list of possible positions for the fall of 1988. The report was prepared by the Budget Review Panel and the Finance Committee on March 15, 1988.

Approval for funding of the programmatic budget was given by the Council on March 15, 1988. The report on the proposed new job description for a research intern that has been established by the University of Alaska. Also, the report on the proposed position for the summer. The individual will work in the Council office during the fall of 1988. The salary is \$12,000. The report also contains a list of possible positions for the fall of 1988. The report was prepared by the Budget Review Panel and the Finance Committee on March 15, 1988.

The Finance Committee approved the 1988's proposal for \$10,000 to \$15,000 for funding research to be done on the study review. Approval was also given to fund for agency review a proposal for \$10,000 for a period time to do the interim hearing study study.

The 1988's recommendation for \$10,000 from the domestic programmatic monitoring program was reviewed by the committee. It was recommended that this recommendation not be passed in light of the information received in the March 15 meeting. The committee recommended that the Council Liaison contact requesting that he place high priority on his agency providing the required funding.

The Finance Committee discussed the note in the March 21 memo from William Gordon indicating that funding for the domestic groundfish monitoring program must seek other sources of fishing for this long range program. The Committee discussed the responsibility for this data collection rests with both the federal and state governments. The NMFS discussed problems that they are having with the budget process. The Committee recommends that since programmatic funds cannot apparently be used, that the operating costs of such a monitoring program be included in the operating budget for the Council.

The Finance Committee discussed the report on the March 21 memo from William Gordon indicating that funding for the health's educational activities program must seek other sources of funding for this long range program. The Committee discussed the responsibility for this data collection system with both the Federal and State governments. The WHP discussed previous that they are having and the budget process. The Committee recommended that other programmatic funds should be used, that the operating costs of such a monitoring program be included in the operating budget for the Council.

MEMORANDUM

TO: Council, SSC, and AP Members

FROM: Jim H. Branson *JHB*  
Executive Director

DATE: March 21, 1984

SUBJECT: Status of Contracts and Proposed Projects

ACTION REQUIRED

- (a) *Bering Sea Herring Scale Analysis - Final approval.*
- (b) *Study of Domestic Fleet Mix and Effort Required to Harvest the Alaska Groundfish OY - Final approval.*

BACKGROUND

Current Council contracts are listed below with information on the contractor, funding amount, percent expended to date, duration, objective, and status.

Current Council Contracts

83-1: Social and Cultural Aspects of the Pacific Halibut Fishery  
(Langdon, \$26,500, 94%, January 1 to July 31, 1983)

Objective: To gather social, cultural and demographic information descriptive of the contemporary Pacific halibut fishery important to management decisions.

Status: SSC and Council review are scheduled for May.

83-2: ADF&G Plan Maintenance  
(ADF&G, \$60,000, 24%, July 1, 1983 to June 30, 1984)

Objective: To support liaison between ADF&G and the Council by funding personnel travel to Council activities and providing support for such other activities as computer compilation and data analysis, etc.

Status: Work is proceeding satisfactorily; no progress reports are required.

83-4: Joint Venture Trawl Logbook Program  
(ADF&G, \$33,400, 0%, September 1, 1983 to September 30, 1984)

Objective: To provide interview coverages at three major ports (Kodiak, Akutan, and Unalaska/Dutch Harbor) to support the joint venture logbook program.

Status: No progress reports have been made yet on this project.

84-1: Sea Lion Pup Census Adjacent to Shelikof Strait  
(ADF&G, \$16,548, 0%, October 1, 1983 to October 31, 1984)

Objective: To provide an estimate of the total number of sea lion pups produced at the major sea lion rookeries in and adjacent to Shelikof Strait for comparison with similar counts made in 1978 and 1979.

Status: The pup census will be conducted in June 1984.

84-2: Chinook Troll Data Analysis  
(ADF&G, \$22,600, 0%, January 1 to September 30, 1984)

Objective: To provide a comprehensive analysis and evaluation of the potential consequences of ADF&G changing the chinook accounting period.

Status: The analysis commenced in January.

Update on Programmatic Requests for FY/84

In December the Council, its Finance Committee, and SSC approved the following prioritized list of research projects for FY/84 programmatic funding:

- |    |  |           |
|----|--|-----------|
| 1. | <u>Domestic Groundfish Monitoring</u>  | \$145,000 |
|    | Provide first year funding for a State of Alaska monitoring system including dock sampling and observers to collect catch and effort information on the domestic groundfish fishery. |           |
| 2. | <u>Chinook Salmon Incidental Catch - Part II</u>   | 40,000    |
|    | Provide additional information on stock separation of chinooks caught incidental to the foreign trawl fisheries.   |           |
| 3. | <u>Bering Sea Herring Scale Analysis - Part II</u>   | 60,000    |
|    | A continuation of the ongoing stock separation studies on herring.   |           |
| 4. | <u>Fisheries Management Conference</u>   | 10,000    |
|    | Will provide the Council's share in cosponsoring this conference that will examine current problems and solutions in fisheries management. Total estimated cost is \$92,000.         |           |
| 5. | <u>ADF&amp;G FMP Development</u>   | 15,000    |
|    | Provide support for ADF&G personnel participation in Council activities.   |           |
|    |  | <hr/>     |
|    | TOTAL  | \$270,000 |

We've heard that Domestic Groundfish Monitoring has been approved and that the Chinook Salmon and Bering Sea Scale Analyses may be approved, but there has been nothing in writing yet. Funding for the fisheries management conference may be made available out of NMFS funds other than programmatic monies.

## Status of Other Projects

### \*Domestic Groundfish Fleet Study

In February the Council approved this \$3,000 study by Natural Resources Consultants of the domestic fleet mix and effort that will be required to harvest the Alaska groundfish OY. The final report is up for final approval at this meeting. It was sent to the Council family in the March 19 mailing and extra copies are available at this meeting.

### \*Bering Sea Herring Scale Analysis

This project is up for final approval. A recommendation from the SSC should be available.

The project was approved by the Council in March 1983. The \$59,930 from FY/83 funds was channeled through the NWAFC to expedite the project. The contractor is the University of Washington Fisheries Research Institute and the period of the contract is April 1, 1983 to March 31, 1984. The project will determine the degree of separability of major spawning stocks of herring in the eastern Bering Sea, north Alaska Peninsula and Aleutian areas using scale pattern characters. It will also examine the stock composition of herring collected from the domestic summer food and bait fishery and from offshore overwintering grounds if spawning stocks are determined to be separable.

### Joint Venture Analysis

This analysis of the short and long term effects of joint ventures on the entire domestic groundfish industry was requested by Larry Cotter in early 1982. In July 1982 the SSC recommended that the study be conducted by employing a graduate student to compile existing data and summarize the relevant analyses. This is being done at the Northwest and Alaska Fisheries Center under the supervision of Dr. Rich Marasco. The project is progressing satisfactorily and will be reported on in May.

### Lowell Wakefield Fisheries Symposium on Non-fishing and Fishing Induced Changes in King Crab Populations

The Council in September approved contributing \$4,000 from administrative funds to co-sponsor the Lowell Wakefield Symposium which is tentatively scheduled for January 1985 in Anchorage.

### Programmatic Requests for FY/84:

In February the Council put out the call for research proposals to be funded from FY/85 programmatic monies. We have received several proposals which the SSC will screen for agency review. The Council and SSC will review the proposals and agency responses in May.

\*Requires Council action at this meeting.



MEMORANDUM

TO: SSC

FROM: Clarence Pautzke *CP*  
Deputy Director

DATE: March 26, 1984

SUBJECT: Research Projects and Proposals

There are five topics on your draft agenda under item 4 on Contracts and Proposals (tab E in your notebooks). The following describes more fully what we need from the SSC on this agenda item.

Bering Sea Herring Scale Analysis

The final report on this project was sent to you in the March 7 Council mailing. I have extra copies available. If the report is acceptable, the SSC should give final approval to this contract so that Rich Marasco, who monitored the contract, can close it out. I have copies of the contract available.

Second on this topic, Part II of this herring study was previously reviewed and approved by the SSC. A copy of the proposed research is under tab E in your notebooks. On our programmatic list sent to NMFS for funding, this project was No. 3. NMFS deferred funding and will make the decision in May. The question to the SSC: given the results of Part I, is there any changes that need to be made to the proposed research? Are there other projects on herring or other subjects that you would rather see funded?

NRC Study on Domestic Groundfish Fleet

We need SSC review and final approval of this report. It was sent to you in the March 19 mailing. An extract from the contract is in your notebooks under tab E for reference.

Follow-up on King Crab Research

I have copies available of a summary of king crab research that Steve Davis put together for the February meeting. He will be available to expand on it or answer questions. Do we need to do anything further on king crab research? We have one proposal, do we need more? Who should have the lead in coordinating king crab research? Do we need an oversight group?

### Initial Screening of Programmatic Proposals

We put out the call for proposals and received two thus far:

1. The Reproductive Biology of Brown King Crab (A.J. Paul)
2. Evaluation of Gear-Caused Scars on Salmon (ADF&G)

The crab proposal was sent to you on March 7. The second proposal is in your notebooks under tab E. We need SSC approval to send both to agency review. The final review will come in May. Are there any others we should review?

### Incidental Salmon Identification Project

We have been notified that the \$40,000 research proposal by FRI on the Determination of Stock Origins of Chinook Salmon Incidentally Caught in Foreign Trawls has been approved by NMFS for funding. I have copies of the proposal available. Do you have any suggested changes before I write up the contract? It had second priority on our programmatic list.

### Groundfish Monitoring

We've received approval for \$145,000 for the domestic groundfish monitoring program with ADF&G. I've got copies of the project description as it stands right now. Its specifics need to be fleshed out more before an actual contract is written. There are several relevant items here:

1. This is a one-year program; NMFS has indicated that programmatic funds should not be used again.
2. We would like to redirect \$10,000 from the funding to be used in supporting the fisheries management conference that was left unfunded.
3. What is the best data program we can set up for \$135,000? Is ADF&G's program getting the data we really need? Should it be changed or expanded?
4. Do we need a small workgroup to establish data needs--including Council, SSC and industry representatives?

I will make copies of a letter from Pete Jackson available to you. He has explained the current groundfish program of ADF&G.

### Social-Cultural Study of Halibut Limited Entry

We'll have a status report on this project.

RESEARCH PROPOSAL

Evaluation of Gear-Caused Scars on Salmon

RELEVANT FMP's

Salmon Troll

Gulf Groundfish Plan

## OBJECTIVES

1. Continue gear mark sampling through 1986
2. Initiate development of regional clearinghouse for information, reports, photographs, and samples of gear

## NEED

In 1973-75 the Department began a cursory examination and catalogue documentation of gear-caused scars occurring on salmon caught by the commercial trollers in Southeast Alaska. Reports by various fishermen since the late 1960's have indicated that scarred salmon have been regularly observed in relatively small numbers. An attempt to estimate the frequency of occurrence of these scars was made by the Department in 1980 and 1981. The scarring rates of 1.7% for chinook and 2.2% for coho which were observed at that time were presumed to represent upper bounds on scarring rates at the ports sampled. A more extensive sampling program in 1982 demonstrated that approximately three fourths of one percent of the chinook and coho salmon landed by the troll fishery bore scars and marks which could be attributed to fishing gear. Limited sampling in 1983 showed a similar scarring rate for chinook but only one tenth the scarring level for coho. A more thorough investigation of this phenomenon has been precluded by a lack of available funding.

There continues to be a high level of public interest in gear-scarred salmon. Fishermen and Department staff routinely find pieces of discarded monofilament drift gillnet floating in all waters off Southeast Alaska and many see these as a major source of marks. If salmon are encountering actively fishing or derelict gear on the high seas, the potential losses to the commercial trolling industry could be as high as 2-2.5 million dollars per year (based on limited sampling effort results and a 50% escape rate.) The true source of some marks, however, remains, remains uncertain. Recent information indicates that some scarring of coho salmon usually attributed to gillnets may actually result from the behavior of these fish when they encounter troll gear. For these reasons, the Gear Mark Workgroup of the North Pacific Fishery Management Council recommended that additional documentation regarding known causes of

gear marking and scarring be collected and that a central library of such documentation be established.

#### EXPECTED BENEFITS

While it is not expected that a program of this magnitude will answer all the questions concerning net or gear scarred salmon, it is expected that the information gained through this program will further the knowledge about these scars and their possible causes. This program will continue the monitoring of the incidence of gear-marking and scarring of chinook and coho salmon in the domestic fishery. It will also establish a central reference library of photographic documentation of marks and scars.

#### WORK TO BE PERFORMED

##### 1. Sampling of the commercial troll catch

Funds provided by this proposal will supplement the existing port sampling program by providing a sampler who will devote additional time to gear sampling. This should improve the accuracy of incidence information and will enable more detailed sampling of individual scars. The sampler will be based in Sitka, a major outside port of landing.

##### 2. Compile photographic records of scarred salmon

Past records of scars have been categorized into 6 major types. This photographic record could be expanded to include additional categories to better define causes of scars.

##### 3. Record and catalogue derelict gear

Samples of derelict gear will be catalogued and stored. Pertinent information, such as date of recovery, location, estimated amount and condition of gear will be maintained. These data will form the basis of a reference library for future studies of derelict gear origin

URGENCY AND DURATION

Funding for an extensive program in the 1984 season is unavailable. The Department will attempt to maintain a level of sampling similar to 1983. If this proposal is funded, it will support sampling and cataloging activities in 1985, and should continue this program through the 1986 season.

BUDGET ESTIMATES

Personnel Services- 6-8 mm.	\$ 26,000
Commodities - Film, storage supplies -	3,000
Equipment - Photo equipment -	<u>1,000</u>
Total	\$ 30,000

DATA

Information will be kept on microcomputer in Sitka. End of season reports will be presented to the NPFMC and Board of Fisheries in December.

ORIGINATOR OF PROPOSAL

Alan Davis: Fisheries Biologist, Alaska Department of Fish and Game, Sitka.

UNIVERSITY OF WASHINGTON  
SEATTLE, WASHINGTON 98195

**DRAFT**

TO: NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

TYPE OF SUPPORT REQUESTED: Research Contract

TITLE OF PROJECT: Feasibility of Using Scale Analysis  
Methods to Identify Bering Sea  
Herring Stocks

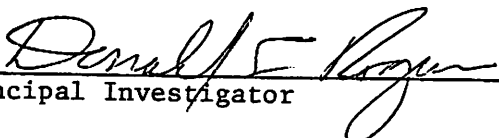
PRINCIPAL INVESTIGATOR: Donald E. Rogers, Research Professor  
Fisheries Research Institute, WH-10  
University of Washington  
Seattle, Washington 98195  
(206) 543-7628

AMOUNT REQUESTED: \$ 62,465

DESIRED PERIOD: 1 April 1984 - 31 March 1985

UNIVERSITY OFFICE TO BE CONTACTED REGARDING GRANT OR CONTRACT NEGOTIATION: Grant and Contract Services  
Rm 22, Administration Building, AD-24  
University of Washington  
Seattle, Washington 98195  
(206) 543-4043

DATE: 20 December 1983

  
Principal Investigator

OFFICIAL AUTHORIZED TO  
GIVE UNIVERSITY APPROVAL:

\_\_\_\_\_  
Donald R. Baldwin, Director  
Grant and Contract Services

Title: Feasibility of Using Scale Analysis Methods to Identify Bering  
Sea Herring Stocks

Relevant Fishery Management Plan: Bering-Chukchi Sea Herring

Objectives and Need

Objectives

1. To determine the degree and annual variation in the separability of major spawning stocks of herring in eastern Bering Sea, north Alaska Peninsula and Aleutian areas using scale pattern characters from two age classes of herring.
2. To determine the stock composition of herring collected from a domestic summer food and bait fishery and from offshore wintering grounds and the variability in composition between years.

Need

From previous Soviet and U.S. research, it was known that some Bering Sea spawning stocks made extensive migrations after the inshore spring spawning season and overwintered near the Pribilof Islands. An analysis of the scale patterns and lengths of age 5 herring from four Bering Sea and one Alaska Peninsula stocks collected in 1982 indicated that three stocks were present in the Dutch Harbor summer fishery (Walker and Schnepf 1982). No samples were available from Aleutian spawning stocks. An analysis of samples from 1983 is in progress; however, preliminary results indicate that the very abundant Togiak stock was again predominant in the Dutch Harbor catches, whereas northern stocks (Norton Sound, Cape Romanzof) and an Aleutian stock contributed relatively little to the summer fishery (Rogers, et al., 1983). More samples are needed from Aleutian Island stocks to confirm age and scale pattern characteristics of these potential contributing populations.



Samples from the 1982 incidental catches of foreign trawl fisheries could not be accurately classified because the scales were collected from several body areas and lengths were recorded only to the nearest centimeter. Improved sampling methods were recommended for 1984. The exact spawning stocks involved in specific offshore wintering grounds and their relative abundance also have not been determined because samples have not been available.

Stock identification is an important research priority to determine stock composition in the summer fishery, on wintering grounds and in the incidental catches of trawl fisheries. It is also important to determine if several stocks mingle in eastern Bering Sea coastal areas before moving to individual spawning grounds. Scale analysis techniques appear to offer the best means to identify herring stocks but the consistency of the method needs to be determined.

#### Expected Benefits

This information is required to develop a management system that will prevent overharvest of stocks subject to exploitation in more than one fishery and to allocate the harvest among user groups. Information on the identity of herring stocks at specific locations and times will enable the design of management strategies to harvest individual stocks at appropriate levels.

#### Work to be Performed

The primary analysis will be conducted on scale samples to be collected in 1984 by Alaska Department of Fish and Game from spawning grounds, by National Marine Fisheries Service observers on foreign trawlers, or by NMFS research vessels. One FRI staff member will be

responsible for coordinating with the other agencies on scale collection techniques, sample and data requirements, and transfer of samples to FRI for analysis. We will also collect samples of otoliths to compare with scale measurements.

Analyses will be conducted on scale samples collected by ADF&G from Port Moller, Togiak, Goodnews Bay, Security Cove, Nelson Island, Cape Romanzof, Norton Sound, and the Aleutian Islands. Samples will also be analyzed from the Dutch Harbor summer fishery sampled by ADF&G, from observer collections made available by Northwest and Alaska Fisheries Center, and from other sampling effort if available. Scale samples collected by ADF&G biologists will be mounted by them, whereas those collected by NMFS observers will be mounted by FRI personnel. Scales and associated data will be assembled at Fisheries Research Institute, where scales will be measured, digitized and analyzed using the FRI scale analysis laboratory facilities.

The basic assumption of scale pattern analysis is that fish from a given area grow in a characteristic manner which is reflected in patterns on the scales. The scale characters from the known spawning stocks ("standards") can then be used to classify the scale characters of individuals sampled from mixed-stock fisheries ("unknowns") and to estimate the contribution (mixing proportions) of the spawning stocks to these fisheries.

The variance of a mixing proportion estimate is inversely proportional to the sample size of the standards and the most precise estimates are obtained when fish are classified with large ( $n = 100-200$ ) sample sizes for each standard. There is little gain in precision

from larger sample sizes; however, the fish in a sample should be from the same age class or there may be a loss in precision from annual variation in growth and maturity schedules. Since Pacific herring samples commonly contain six or more age classes with one or two age classes predominating, it is necessary to collect about 1,000 scales from each area to ensure that about 200 usable scales will be available for each of two age classes from all areas.

In those areas where herring are caught in subdistricts, the number of scales from each subdistrict will be proportional to the estimated biomass in the subdistricts to make up a total district sample size of 200.

Measurements on the scales will be made from the focus to each annulus. The scale measurement variables will be the distance between annuli, distance from focus to annuli, and several combinations of these measurements, e.g., the ratio of one year's growth to another year's growth and the proportion of scale growth in each year. We will then screen the 20-30 scale measurement variables from the standards to choose a set of variables that includes large H-statistics, large differences in sums of ranks for each pairwise comparison, and independence from other characters chosen. The most important characters for separation will also be analyzed to determine the extent of annual variation (1982, 1983, and 1984).

The selected set of variables for each age class will then be analyzed by discriminant function (linear or polynomial). Point estimates of the proportions of the standard stocks in the unknown stocks will be determined by a classification matrix correction

procedure, and variance estimates and 90% confidence intervals on the corrected point estimates will be made. The point estimates for 1982-1984 will be compared to determine the annual variability in the composition of the Dutch Harbor fishery catches.

A draft final report including tables of classification accuracies and sample data will be provided two months prior to the end of the contract period.

Budget Estimate--12 Months

Salaries and Benefits

Principal Investigator, 1.5 mos	\$ 5,598
Fishery Biologist I, 12 mos	18,720
Graduate research assistant, 12 mos	<u>12,412</u>

Subtotal	\$ 36,730
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Travel and Per Diem to Bering Sea  
and to Council Meeting

3,800

Supplies and Services

Scientific, office, computer time, report preparation, secretarial	<u>5,400</u>
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Total Direct Costs	\$ 45,930
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Indirect Costs (36% of direct costs)	<u>16,535</u>
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Total	\$ 62,465
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Principal Investigator: Donald E. Rogers, Research Professor  
Fisheries Research Institute, WH-10  
University of Washington  
(206) 543-7628

Date Submitted: 20 December 1983

References

- Rogers, D.E., K.N. Schnepf, and P.R. Russell. 1983. Feasibility of using scale analysis methods to identify Bering Sea herring stocks. Preliminary Report to the National Marine Fisheries Service. Fish. Res. Inst., Univ. Washington, Seattle, FRI-UW-8319. 25 pp.
- Walker, R.V., and K.N. Schnepf. 1982. Scale pattern analysis to estimate the origin of herring in the Dutch Harbor fishery. Final Report to Alaska Department of Fish and Game. Fish. Res. Inst. Univ. Washington, Seattle, FRI-UW-8219. 21 pp.

# North Pacific Fishery Management Council

James O. Campbell, Chairman  
Jim H. Branson, Executive Director

605 West 4th Avenue  
Anchorage, Alaska 99510



Mailing Address: P.O. Box 103136  
Anchorage, Alaska 99510

Telephone: (907) 274-4563  
FTS 271-4064

Contract 84-3

## ANALYSIS OF DOMESTIC FLEET

This contract is entered into between the North Pacific Fishery Management Council, herein called the "Council" and represented by the Executive Director executing this contract, and

Natural Resources Consultants  
4055 21st Avenue West  
Seattle, Washington 98199

hereinafter called the "Contractor", who agree as follows:

### ARTICLE I - OBJECTIVES AND STATEMENT OF WORK

#### Objective

The objective of this analysis is to project the domestic fleet composition and effort that will be required to harvest the groundfish O.Y. from the fishery conservation zone off Alaska.

#### Statement of Work

- Task 1: Appraise the "most likely" domestic fleet mix required to harvest the 1.5 million metric tons of O.Y.
- Task 2: Project the numbers of vessels and annual effort within the above fleet components.
- Task 3: Analyze the fleets and number of vessels within fleets that are presently available to harvest groundfish and their potential catch (1984, for example) as well as fleets and numbers of vessels within fleets that with modifications, i.e. installations of trawl gear, could be available by 1987 to harvest groundfish off Alaska.
- Task 4: Estimate how many additional domestic vessels, above those now available, would be required to harvest the O.Y.

### ARTICLE II - PROJECT SCHEDULES AND DELIVERABLES

Final report due in Council offices no later than March 19, 1984.

### ARTICLE III - COST IN TERMS OF THE CONTRACT

The Council agrees to pay, and the Contractor agrees to accept as full payment for all services agreed to above, an amount not to exceed \$3,000.

UNIVERSITY OF WASHINGTON  
SEATTLE, WASHINGTON 98195

**DRAFT**

TO: NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

TYPE OF SUPPORT REQUESTED: Research Contract

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Methods to Identify Bering Sea  
Herring Stocks

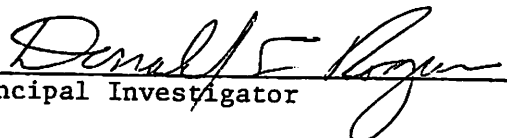
PRINCIPAL INVESTIGATOR: Donald E. Rogers, Research Professor  
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AMOUNT REQUESTED: \$ 62,465

DESIRED PERIOD: 1 April 1984 - 31 March 1985

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Rm 22, Administration Building, AD-24  
University of Washington  
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DATE: 20 December 1983

  
Principal Investigator

OFFICIAL AUTHORIZED TO  
GIVE UNIVERSITY APPROVAL:

\_\_\_\_\_  
Donald R. Baldwin, Director  
Grant and Contract Services

Title: Feasibility of Using Scale Analysis Methods to Identify Bering  
Sea Herring Stocks

Relevant Fishery Management Plan: Bering-Chukchi Sea Herring

Objectives and Need

Objectives

1. To determine the degree and annual variation in the separability of major spawning stocks of herring in eastern Bering Sea, north Alaska Peninsula and Aleutian areas using scale pattern characters from two age classes of herring.

2. To determine the stock composition of herring collected from a domestic summer food and bait fishery and from offshore wintering grounds and the variability in composition between years.

Need

From previous Soviet and U.S. research, it was known that some Bering Sea spawning stocks made extensive migrations after the inshore spring spawning season and overwintered near the Pribilof Islands. An analysis of the scale patterns and lengths of age 5 herring from four Bering Sea and one Alaska Peninsula stocks collected in 1982 indicated that three stocks were present in the Dutch Harbor summer fishery (Walker and Schnepf 1982). No samples were available from Aleutian spawning stocks. An analysis of samples from 1983 is in progress; however, preliminary results indicate that the very abundant Togiak stock was again predominant in the Dutch Harbor catches, whereas northern stocks (Norton Sound, Cape Romanzof) and an Aleutian stock contributed relatively little to the summer fishery (Rogers, et al., 1983). More samples are needed from Aleutian Island stocks to confirm age and scale pattern characteristics of these potential contributing populations.

Samples from the 1982 incidental catches of foreign trawl fisheries could not be accurately classified because the scales were collected from several body areas and lengths were recorded only to the nearest centimeter. Improved sampling methods were recommended for 1984. The exact spawning stocks involved in specific offshore wintering grounds and their relative abundance also have not been determined because samples have not been available.

Stock identification is an important research priority to determine stock composition in the summer fishery, on wintering grounds and in the incidental catches of trawl fisheries. It is also important to determine if several stocks mingle in eastern Bering Sea coastal areas before moving to individual spawning grounds. Scale analysis techniques appear to offer the best means to identify herring stocks but the consistency of the method needs to be determined.

#### Expected Benefits

This information is required to develop a management system that will prevent overharvest of stocks subject to exploitation in more than one fishery and to allocate the harvest among user groups. Information on the identity of herring stocks at specific locations and times will enable the design of management strategies to harvest individual stocks at appropriate levels.

#### Work to be Performed

The primary analysis will be conducted on scale samples to be collected in 1984 by Alaska Department of Fish and Game from spawning grounds, by National Marine Fisheries Service observers on foreign trawlers, or by NMFS research vessels. One FRI staff member will be



responsible for coordinating with the other agencies on scale collection techniques, sample and data requirements, and transfer of samples to FRI for analysis. We will also collect samples of otoliths to compare with scale measurements.

Analyses will be conducted on scale samples collected by ADF&G from Port Moller, Togiak, Goodnews Bay, Security Cove, Nelson Island, Cape Romanzof, Norton Sound, and the Aleutian Islands. Samples will also be analyzed from the Dutch Harbor summer fishery sampled by ADF&G, from observer collections made available by Northwest and Alaska Fisheries Center, and from other sampling effort if available. Scale samples collected by ADF&G biologists will be mounted by them, whereas those collected by NMFS observers will be mounted by FRI personnel. Scales and associated data will be assembled at Fisheries Research Institute, where scales will be measured, digitized and analyzed using the FRI scale analysis laboratory facilities.

The basic assumption of scale pattern analysis is that fish from a given area grow in a characteristic manner which is reflected in patterns on the scales. The scale characters from the known spawning stocks ("standards") can then be used to classify the scale characters of individuals sampled from mixed-stock fisheries ("unknowns") and to estimate the contribution (mixing proportions) of the spawning stocks to these fisheries.

The variance of a mixing proportion estimate is inversely proportional to the sample size of the standards and the most precise estimates are obtained when fish are classified with large ( $n = 100-200$ ) sample sizes for each standard. There is little gain in precision

from larger sample sizes; however, the fish in a sample should be from the same age class or there may be a loss in precision from annual variation in growth and maturity schedules. Since Pacific herring samples commonly contain six or more age classes with one or two age classes predominating, it is necessary to collect about 1,000 scales from each area to ensure that about 200 usable scales will be available for each of two age classes from all areas.

In those areas where herring are caught in subdistricts, the number of scales from each subdistrict will be proportional to the estimated biomass in the subdistricts to make up a total district sample size of 200.

Measurements on the scales will be made from the focus to each annulus. The scale measurement variables will be the distance between annuli, distance from focus to annuli, and several combinations of these measurements, e.g., the ratio of one year's growth to another year's growth and the proportion of scale growth in each year. We will then screen the 20-30 scale measurement variables from the standards to choose a set of variables that includes large H-statistics, large differences in sums of ranks for each pairwise comparison, and independence from other characters chosen. The most important characters for separation will also be analyzed to determine the extent of annual variation (1982, 1983, and 1984).

The selected set of variables for each age class will then be analyzed by discriminant function (linear or polynomial). Point estimates of the proportions of the standard stocks in the unknown stocks will be determined by a classification matrix correction

procedure, and variance estimates and 90% confidence intervals on the corrected point estimates will be made. The point estimates for 1982-1984 will be compared to determine the annual variability in the composition of the Dutch Harbor fishery catches.

A draft final report including tables of classification accuracies and sample data will be provided two months prior to the end of the contract period.

Budget Estimate--12 Months

Salaries and Benefits

Principal Investigator, 1.5 mos	\$ 5,598
Fishery Biologist I, 12 mos	18,720
Graduate research assistant, 12 mos	<u>12,412</u>

Subtotal	\$ 36,730
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Travel and Per Diem to Bering Sea  
and to Council Meeting

3,800

Supplies and Services

Scientific, office, computer time, report preparation, secretarial	<u>5,400</u>
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Total Direct Costs	\$ 45,930
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Indirect Costs (36% of direct costs)	<u>16,535</u>
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Total	\$ 62,465
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Principal Investigator: Donald E. Rogers, Research Professor  
Fisheries Research Institute, WH-10  
University of Washington  
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Date Submitted: 20 December 1983

References

Rogers, D.E., K.N. Schnepf, and P.R. Russell. 1983. Feasibility of using scale analysis methods to identify Bering Sea herring stocks. Preliminary Report to the National Marine Fisheries Service. Fish. Res. Inst., Univ. Washington, Seattle, FRI-UW-8319. 25 pp.

Walker, R.V., and K.N. Schnepf. 1982. Scale pattern analysis to estimate the origin of herring in the Dutch Harbor fishery. Final Report to Alaska Department of Fish and Game. Fish. Res. Inst. Univ. Washington, Seattle, FRI-UW-8219. 21 pp.

# BILL ATKINSON'S NEWS REPORT

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## SALMON

### Japan-Soviet Salmon Talks

The Managing Director of the National Federation of Fisheries Co-Operatives recently returned from a trip to the Soviet Union. The purpose of the trip was to review the salmon fishery prior to the beginning of the government level negotiations.

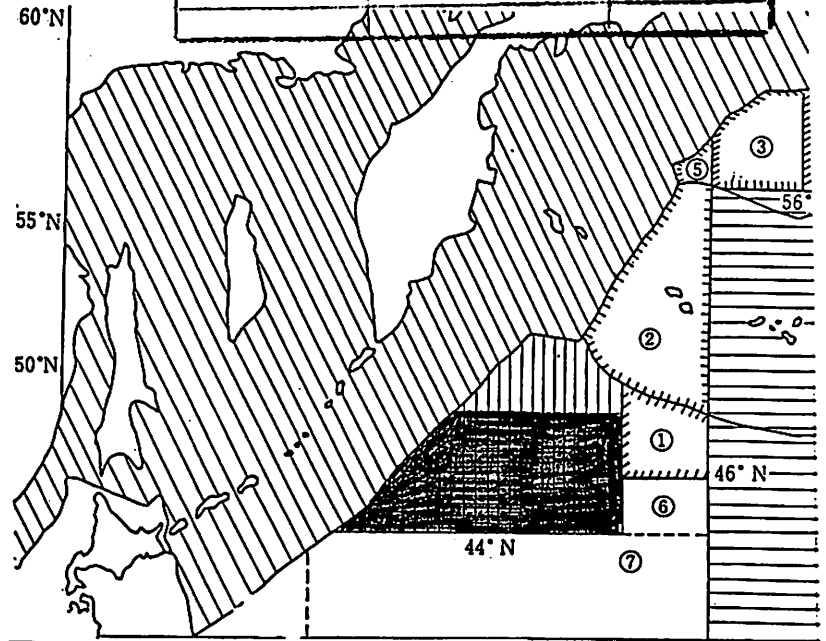
Some of the items discussed during the meetings are as follows.

1. The Japanese Co-Op wants to exchange the current fishing grounds for medium-class drift-net vessels south of 44° N, for the area between 44° and 48° N. (See the chart at right).

The Soviets have indicated that the opening of fishing grounds are based on the actual fish stocks. The Japanese were advised to formally present the request during the negotiations and to support it with as much scientific data as possible about the fish stocks.

2. The Soviets pointed out to the Co-Op visitors that the number of violations last year were unexcusable. They stressed that the strict observance of regulations was the duty of both countries.

3. A good-will youth group tour of the Soviet Union is scheduled for this summer. The members of the Co-Op mission requested permission for two reporters from the Fishery Agency Reporters Club to accompany the youth mission. The Soviets agreed to the participation of the reporters.



Change in fishing grounds being requested. Japanese currently fishing in area 7, below 44° N. New fishing ground requested is shaded area.

Source: Suisan Nenkan

### Salted Salmon Market

The final word on the salmon inventory in Japan is that it is definitely at low levels; some are even worried that there might not be enough salmon in inventory to last until the new season's product begins arriving this June.

The trading for salted salmon, however, has entered a brief resting period. Traders are stopping to take a look at where the market is, and where it might be going. Processors of salted salmon are also waiting for the prices of the finished product to catch up with the increases in the raw

product. Frozen red (sockeye) salmon is selling for about ¥1,200/kilo (\$2.45/lb); with processing costs of about ¥150/kilo (\$0.29/lb) for salting, the cost of salted red salmon is about ¥1,350 (\$2.75). The market price for the same product, though, is only ¥1,300/kilo (\$2.65/lb). The salt processors are hoping that a brief rest will allow the salted salmon market prices to catch up with the higher frozen prices.

## FISH MARKETS

### Roe Capelin

Price negotiations between Norway and the Japanese trading companies were completed on March 5th; the price for roe-bearing capelin was settled at \$1,100 per ton, down \$175 from last year. The influence of the high inventories in Japan are reflected in this year's prices. The reduced catches expected this year did not show in the prices much.

Norway's catches of capelin this year have been set at 380,000 tons according to their agreement with the Soviets. This is about one-half of the tonnage caught last year. The roe-capelin yield is expected to be about 10,000 tons, versus 18,000 tons for last season.

The beginning of the season this year is about 10 days later than for 1983, partly due to the delay in settling the prices and partly due to the large percentage of immature roe sacks at the start of the season. It is hoped that the over-all quality of the product is better this year.

Note: Roe-bearing capelin are a popular item, as is. They are sold frozen (fish with roe) to use for meals, or as "drinking snacks".

### Capelin Roe

Norway and Iceland are the two main sources of capelin roe to the Japanese market. For the past two years, Iceland has enforced a moratorium on capelin fishing in order to protect the resource. The fishery will be open this year, however, and the prices have been established at \$1,900 per ton for the capelin roe. This price is the same as the Japanese have concluded with the Norwegians.

Exports of capelin roe are expected to total about 10,000 tons this year, 2,000 tons from Iceland and 8,000 tons from Norway.

### "Imitation" Product Labelling

Consumer protection groups are applying considerable pressure on the Japanese government for the enforcement of strict labelling regulations on the so-called "imitation" products, such as imitation crab legs and imitation herring roe products (using capelin roe). A recent survey showed that 40% of the housewives polled stated that they had purchased imitation products by mistake, thinking that they were the real thing.

The various processors are working on voluntary regulation, but whether the results will be sufficient is not known.

### Dried Herring

The price of frozen herring (for dry-processing) has increased to about ¥550/kilo (\$1.12/lb) over the past few weeks due to an expected short supply of top grade product. The processors were hoping that the Atlantic

herring would ease the tight supply situation, but the Atlantic fish flesh is not holding up well, and this is decreasing the shelf-life of the product. In addition, the Bristol Bay herring (herring after the roe has been removed) is usually of a lesser quality, so that the only hope for high grade product is the Japanese North Pacific fleet.

The volume of dried herring on the Tsukiji market is about 10 tons per day; this represents about 10% hard dried product, 30% soft dried North Pacific fleet product, and the balance is Bristol Bay dried product. The prices have just recently reached ¥1,200/kilo (\$2.45/lb) needed to breakeven with the ¥550 frozen herring prices.

### Pollock Roe

Concentrated hokutensen deliveries of pollock roe are expected in northern Japan. They will continue through the early part of April. A struggle between the vessel owners and the processors over price is anticipated, as the processors try to establish a stable and reasonable price.

The vessels are in a strong bargaining position, though, in view of the greater fishing restrictions and the two-month tie-up that will begin from March 16th.

In order for the frozen roe prices to be in line with the processed market prices, they would have to be about ¥1,200/kilo (\$2.32/lb); the processed prices are about ¥1,900/kilo (\$3.68). Nichiro's mothership pollock roe, however, is currently priced at ¥1,420/kilo, or about \$2.75/lb. Even with the ¥100/kilo decrease in the hokutensen roe prices, the prices are still about ¥120 (\$0.24) higher than the processors want.

### Sablefish

Dealers are watching closely as the hokutensen begin their voluntary tie-up. The Soviet water fleet generally supplies fair quantities of sablefish to the market, and no one knows what effect the one month tie up will have on the market.

The sablefish prices have strengthened considerably, with both domestic and import prices at healthy levels. Prices on the 21st were:

<u>Size</u>	<u>Port-of Landing</u>	<u>Consumer</u>
Domestic*		
4 - 6	¥905 (\$1.84)	¥910 (\$1.85)
7 - 8	¥835 (\$1.70)	¥850 (\$1.73)
Import		
5 - 7 Lbs.	¥810 - 830 (\$1.65 - 1.69)	- -

\* Number of fish per 15 kilo (33 lb) box.

It is reported that an inventory of import sablefish in Japan is still available.

## PROCESSED FISH PRODUCTS

### Land-Processed Surimi Market

As the hokutensen prepare for the voluntary tie-up, the land-based surimi

processors are very active. Many of the processors have purchased additional product in order to maintain production during the tie-up. As a result, land-processed surimi prices are very strong. The demand for the surimi has resulted in port-of landing market prices at about ¥255/kilo (\$0.51/lb), whereas the consumer market prices in western Japan are about ¥25/kilo below these.

Both the dealers and the processors are hoping that the fishery in the Taraika Bay area of Sakhalin is productive once the tie-up ends, as this will help to bring prices back to normal levels and maintain the supply.

#### Marine Beef

(BANR Note: Marine beef is a product that can be used as an additive, and/or on its own. It is similar to ground beef, and is made from a series of grinding and freeze-drying the raw product fish being utilized )

Mitsubishi and Niigata Iron Works jointly helped in the construction of a facility in Peru to process a finished product called marine beef. The plan originally called for the use of anchovies, but the El Nino interfered with the resource. Sardines, mackerel and horse mackerel were used, and were found to be equally suitable for the process.

The plant is scheduled to begin full operation by the end of March, and has a capacity of producing one ton of marine beef from 15 tons of fish per day.

Samples of the product from test runs show that the quality of the Peruvian product is excellent, and the Japanese plan to use the samples to develop the range of uses for the product.

#### Japan Marine Beef Plant

A group of processors from northern Japan have presented a proposal for the construction of a facility for the production of marine beef in Hokkaido. The Peruvian plant's initial success is behind the request, as such a facility has not been proven financially viable until now.

Due to the scope of the construction, the group has requested partial funding from the Japanese government. The Fishery Agency has put the request for funding on hold, pending firmer results from the Peruvian project. The Fishery Agency budget also does not have sufficient funds available for proper handling of the project.

The Agency has also recommended that the processing group consider the importation of Peruvian product for use in their products.

#### Marine Beef Plant Export

Mitsubishi is currently negotiating with the Soviet Union for the export of a marine beef processing facility. The Soviets are showing an interest in the project in order to improve the results of their current five-year plan. Where the plant would be located is not known.

### NEW PRODUCTS

#### Salmon Kamaboko

One of the Japanese kamaboko makers has introduced a salmon-flavored kamaboko, with the hopes that it will be as big a hit as the artificial crab legs.

The product is smoke flavored, and it is recommended for use as an hors d'oeuvre and in other dishes. The makers believe that the market for real salmon is too strong to compete with, so the product is being marketed as a speciality item. Sales to Taiwan are reportedly already very strong.

The product retails for between ¥400 - 450 (\$0.77 - 0.87) for a 360 gram package with five slices.

#### Seafood Morning Burgers

A Japanese processor has recently come out with a new line of products called "Morning (Seafood) Burgers. They use the best quality fish scraps from fish processing and form them into breakfast burgers. They use minced fish meat from red salmon, squid, sardines and scallops. Reportedly sales for the first month on the market totaled \$45,000.

The Morning Burgers cost slightly higher than other similar products, but this is felt to be unavoidable due to the use of high quality fish, instead of lower grades.

Each pack contains four burgers, and sell for ¥288 (\$1.29) for sardine burgers, and ¥348 (\$1.56) for the other flavor burgers.

#### Surimi Tofu

A company called Kamaichi has introduced a surimi base tofu on the market. It uses a process that mixes surimi with tofu to produce the "fish" tofu. It is packaged in top-sealed plastic boxes, with a content weight of about 150 grams. The retail cost is about ¥160, or about \$0.72.

### GENERAL

#### Soviet Invitation

The Soviet Government has extended an invitation to the Japanese Minister of Agriculture and Fisheries to visit the Soviet Union and meet with the top level members of the Government. The Minister is expected to accept the invitation, but the trip itself will probably not take place until the fall.

#### Marshall Island-Japan Fisheries Negotiations

Negotiations between Japan and the Marshall Islands were concluded recently after temporarily being broken off. The amount of the fishing fees was the main area of disagreement. The Marshall Island representatives were insisting on an increase in the per voyage charges, after they realized that the income from the period through March would only be about \$950,000; the lump sum payment for the previous year had totaled \$1.25 million.

The Japanese finally agreed to an increase in the per voyage fees of \$100. The results of the latest agreement are as follows.

1. The term of the agreement is for 13 months from April 1, 1984 - April 30, 1985, and covers operations by tuna longliners and skipjack pole-and-line vessels.
2. Registration fee is \$150 per vessel.



3. Fishing Fee: Longline \$2,200 per Voyage  
 Pole-and-Line \$1,900 per Voyage
4. Port-call fee: \$400 per call at Majuro, down \$50 per call from last year.

Last year, the Japanese fleet had 114 longliners and 83 pole-and-line vessels operating in Marshall Island waters; they caught 6,800 tons and 21,000 tons respectively.

#### Hotel/Restaurant Show

At this year's annual Hotel and Restaurant Show, the U.S. emphasized the promotion of U.S. catfish. The U.S. catfish industry is trying to develop the market in Japan, beginning with the restaurant and fast food outlets.

BANR Note: Catfish used to be considered an "unclean" fish in Japan. There are restaurants that serve it, and some in Japan that specialize in catfish; in general, however, it has a negative public image.

#### Market Prices - January

The average market prices for selected products during January, 1984, are as follows.

<u>Species</u>	<u>Tons</u>	<u>Yen/Kilo</u>	<u>Dollar/Lb</u>
<u>Port-of-Landing Market</u>			
Pollock	38,085	¥ 55	\$ 0.11
Frozen Skipjack	11,932	154	0.30
Frozen Yellowfin	622	628	1.21
<u>Consumer Market</u>			
Frozen Yellowfin	1,027	698	1.35
Frozen Bigeye	3,048	1,075	2.08
Frozen Bluefin	800	2,937	5.68
Salted Cod	978	568	1.09
Salted Salmon	1,903	1,236	2.39
Cod Roe	962	1,956	3.78

#### Philippine Whale Meat Embargo

On March 2nd, the Ministeries of Transportation and Agriculture and Fisheries issued an order prohibiting the importation of whale meat from the Philippines. Their review concluded that the Philippine government was violating the IWC regulations in their whaling practices. The two ministries pointed out that the Philippine operation was processing the whales at sea, and were using exploding harpoons. The processing of whales at sea by the coastal operations is prohibited by the IWC. (BANR Note: The exploding harpoon item is probably a misunderstanding on the part of the reporter, as the use of exploding harpoons is required by the "humane Killing" provision of the IWC regulations.)

As Japanese gunners and other crew personnel were hired by the Philippine Government to conduct the operations, the two Ministries have forbidden any Japanese national from working on a foreign vessel without a permit issued by the Office of the Minister of Agriculture and Fisheries.

This News Report summarizes articles found in the Nikkan Suisan Keizai Shinbun, the Daily Fisheries Economic Newspaper, between March 6th and 12th. The article on "fish tofu" was from the Minato Shinbun, the Minato Newspaper.

WHOLESALE MARKET INFORMATION  
CONSUMER & PORT-OF-LANDING MARKETS

SPECIES	REMARKS	SIZE	March				
			5th	6th	7th	8th	10th
TOKYO CENTRAL WHOLESALE MARKET (TSUKIJI)							
<u>SALTED SALMON</u>							
Fall Chum (Aki)	Off-Shore	Top High	850	850	850	850	850
		Low	750	750	750	750	750
		Nor High	-	700	700	-	700
		Low	-	600	600	-	600
		High	-	-	-	-	-
		Low	-	-	-	-	-
Spring Chum (Toki)	Off-Shore	10 High	-	1650	-	1650	-
		Low	-	1620	-	-	-
		11 High	-	1600	-	-	-
		Low	-	1550	-	-	-
	In-Shore	8 High	1700	1700	1700	1700	1700
		Low	1650	1650	1650	1650	1650
		9 High	1600	1600	1600	1600	1600
		Low	1550	1550	1550	1550	1550
		11 High	-	1650	-	-	-
		Low	-	1600	-	-	-
Silver	Off-Shore	12 High	-	1550	-	-	-
		Low	-	1520	-	-	-
		High	-	-	-	-	-
Pink		Low	-	-	-	-	-
		High	-	-	-	-	-
		Low	-	-	-	-	-
Red	Off-Shore	8 High	-	-	2500	2500	-
		Low	-	-	1450	2450	-
		9 High	-	-	2250	2250	-
		Low	-	-	2200	2200	-

Notes: Yen/Kilo. "Off-Shore" refers to fish caught more than 5 miles off of shore. "In-Shore" refers to fish taken by in-shore fish traps. Prices are for top grade (toku toku) product only.

WHOLESALE MARKET INFORMATION  
CONSUMER & PORT-OF-LANDING MARKETS

SPECIES	REMARKS	SIZE	March						
			5th	6th	7th	8th	10th		
TOKYO CENTRAL WHOLESALE MARKET (TSUKIJI)									
<u>SALTED SALMON</u>									
Alaska Red	Off-Shore	Top	High	1700	1700	1700	1700	1700	
			Low	1500	1500	1500	1500	1500	
		Nor	High	-	1450	1450	-	1450	
			Low	-	1250	1250	-	1250	
	In-Shore	Top	High	1350	1350	1350	1350	1350	
			Low	1250	1250	1250	1250	1250	
		Nor	High	-	1200	1250	-	1250	
			Low	-	-	1150	-	1150	
	<u>FROZEN</u>								
	Mothership Chum	SD	3/4	High	-	-	-	-	1170
			Low	-	-	-	-	1160	
5		High	-	-	-	-	1150		
		Low	-	-	-	-	-		
Import - Red		Local Dress #1	6/9	High	-	-	-	-	1450
				Low	-	-	-	-	-
	4/6	High	-	-	-	-	1350		
		Low	-	-	-	-	1280		
Bristol No. 1	6/9	High	-	-	-	-	1280		
		Low	-	-	-	-	1250		
	4/6	High	-	-	-	-	1220		
		Low	-	-	-	-	1200		
- Chum	No. 1	6/9	High	-	-	-	-	1000	
			Low	-	-	-	-	700	
	4/6	High	-	-	-	-	950		
		Low	-	-	-	-	650		

Notes: Yen/Kilo. SD = Semi-Dressed. Frozen/Import sizes are #'s per fish, others are no. of fish per box. Alaska Red salmon is mainly frozen product that is thawed and then salted.

WHOLESALE MARKET INFORMATION  
CONSUMER & PORT-OF-LANDING MARKETS

SPECIES	REMARKS	SIZE	March						
			5th	6th	7th	8th	10th		
<u>SEA URCHIN</u>									
Red	-	L High	5600	4000	3500	3200	3500		
		Low	3800	3000	2800	2500	2500		
White	-	L High	7000	6500	6500	7000	6500		
		Low	3400	3700	3000	2700	2300		
Los Angeles	-	L High	4300	3800	3000	3200	3200		
		Low	800	600	700	700	600		
Korea	-	S High	-	1600	1400	1300	1100		
		Low	-	400	400	400	300		
Kobako (Broken)	-	High	-	-	1600	1300	1800		
		Low	-	-	1500	-	800		
<u>SHRIMP - PANDALIDS</u>									
<u>Akaebi</u>	Hokkai	L High	4700	5500	4200	4000	-		
		Low	3800	4000	3100	2500	-		
		ML High	-	-	-	-	-		
		Low	-	-	-	-	-		
		M High	2800	3000	2100	2100	-		
		Low	1800	1500	1500	1200	-		
		MS High	-	-	-	-	-		
		Low	-	-	-	-	-		
		S High	-	-	-	-	-		
		Low	-	-	-	-	-		
		<u>OTHERS</u>							
		Sablefish	Domestic Dressed	4/6 High	-	-	-	930	-
Low	-			-	-	900	-		
7/8	High		-	-	-	850	-		
	Low		-	-	-	830	-		
9/10	High		-	-	-	750	-		
	Low		-	-	-	730	-		

Notes: Yen/Kilo. L=Large; ML = Medium Large; M = Medium; MS = Medium Small; S = Small. Other sizes show no. of fish per box

WHOLESALE MARKET INFORMATION  
 CONSUMER & PORT-OF-LANDING MARKETS

March

<u>SPECIES</u>	<u>REMARKS</u>	<u>SIZE</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>10th</u>
<u>OTHERS</u>							
Sablefish	Canada Dressed	7 upHigh	-	-	-	850	-
		Low	-	-	-	830	-
	5/7	High	-	-	-	830	-
		Low	-	-	-	800	-
	4/5	High	-	-	-	750	-
		Low	-	-	-	730	-
Pacific Cod	Mothership Dressed	2L High	-	-	-	400	-
		Low	-	-	-	-	-
	L	High	-	-	-	380	-
		Low	-	-	-	-	-
	M	High	-	-	-	350	-
		Low	-	-	-	-	-
Herring	Domestic Round	3L High	-	-	-	570	-
		Low	-	-	-	550	-
	2L	High	-	-	-	530	-
		Low	-	-	-	500	-
	L	High	-	-	-	420	-
		Low	-	-	-	380	-
	Canada Round	400 g. Up	-	-	-	420	-
		Round	-	-	-	400	-
	250/350		-	-	-	380	-
			-	-	-	350	-

Yen/Kilo. Canadian Sablefish Sizes in pounds.

WHOLESALE MARKET INFORMATION  
 CONSUMER & PORT-OF-LANDING MARKETS

SPECIES	REMARKS	SIZE	March				
			5th	6th	7th	8th	10th
PORT-OF-LANDING MARKETS							
<u>SHIOGAMA</u>							
Pacific Cod	North Pac. Longline	4/6 High	360	-	-	343	-
		Low	-	-	-	-	
		7/8 High	355	-	-	343	-
		Low	-	-	-	-	
Cod Roe	Red	High	412	-	-	-	-
		Low	-	-	-	-	
	Black	High	362	-	-	-	-
		Low	-	-	-	-	-
<u>HACHINOHE</u>							
Flying Squid (Drift Net)	Hiraki	High	-	-	-	-	-
		Low	-	-	-	-	
	Nuki	High	-	-	-	-	-
		Low	-	-	-	-	-
<u>KUSHIRO</u>							
Pollock	Hokuten	High	161	164	176	177	175
		Low	103	90	106	100	153
Cod	Hokuten	3 High	263	263	188	206	-
		Low	219	244	125	-	-
	Trawl	High	-	-	-	-	-
		Low	-	-	-	-	-
Exchange Rate	Yen/Dollar	-	226	223	222	224	

Notes: Yen/Kilo.



98TH CONGRESS  
2D SESSION

# H. R. 4589

To amend the Coastal Zone Management Act of 1972 regarding Federal activities that are subject to the Federal consistency provisions of the Act, and for other purposes.

---

## IN THE HOUSE OF REPRESENTATIVES

JANUARY 23, 1984

Mr. D'AMOURS (for himself, Mr. PANETTA, Mr. STUDDS, Mr. MCKERNAN, Mr. LEVINE of California, and Mrs. BOXER) introduced the following bill; which was referred to the Committee on Merchant Marine and Fisheries

---

## A BILL

To amend the Coastal Zone Management Act of 1972 regarding Federal activities that are subject to the Federal consistency provisions of the Act, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*  
3 That section 307(c)(1) of the Coastal Zone Management Act  
4 of 1972 (16 U.S.C. 1456(c)(1)) is amended to read as follows:  
5       “(c)(1)(A) Each Federal agency conducting or support-  
6 ing an activity (whether within, or landward or seaward of,  
7 the coastal zone) that directly affects the coastal zone shall



1 conduct or support that activity in a manner which is, to the  
2 maximum extent practicable, consistent with approved state  
3 management programs.

4 “(B) For purposes of subparagraph (A), a Federal  
5 agency activity shall be treated as one ‘that directly affects  
6 the coastal zone’ if the conduct or support of the activity  
7 either—

8 “(i) produces identifiable physical, biological,  
9 social, or economic consequences in the coastal zone;  
10 or

11 “(ii) initiates a chain of events likely to result in  
12 any of such consequences.

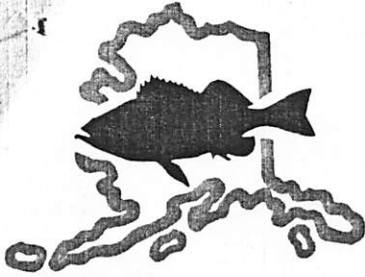
13 “(C) As used in subparagraph (A), the phrase ‘, the  
14 maximum extent practicable,’ shall be construed as requiring  
15 each Federal agency to conduct or support each of its activi-  
16 ties directly affecting the coastal zone in a manner fully con-  
17 sistent with approved management programs, unless—

18 “(i) the conduct or support of the activity in that  
19 manner is prohibited by Federal law; or

20 “(ii) a circumstance arising after a management  
21 plan is approved, and unforeseen at the time of approv-  
22 al, presents a substantial obstacle to the achievement  
23 by the agency of full consistency in conducting or sup-  
24 porting the activity.

1 In the event that achievement by a Federal agency of full  
2 consistency is prevented by a circumstance described in  
3 clause (i) or (ii), the agency may deviate from full consistency  
4 only to the extent justified by the presence of such circum-  
5 stance.”.

○



# Alaska Fisheries Development Foundation, Inc.


805 West Third Avenue  
Anchorage, Alaska 99501  
(907) 276-7315  
Telex: 26595/AHG

RECEIVED MAR 23 1984

March 20, 1984

ACTION	ROUTE TO	INITIAL
M E M O R A N D U M	Exec. Dir.	J
	Deputy Dir.	
	Admin. Off.	
	Exec. Sec.	
	Staff Asst. 1	
	Staff Asst. 2	
	Staff Asst. 3	
	Economist	
	Sec. Clk.	
	Sec./Typist	

TO: Distribution

FR: Chris Mitchell 

RE: Japanese Reaction to AFDF Surimi Project

Thought you might be interested in the attached translation from the February 29th issue of Japan's leading fishery newspaper. Though the articles have a number of factual errors, they do not detract from the real message; THE JAPANESE (industry and government) ARE TAKING AFDF'S POLLOCK SURIMI PROJECT SERIOUSLY. And well they should.

encl.

- cc: AFDF members
- C. Rosier, NMFS, Juneau
  - R. Hayes, NMFS, D.C.
  - R. Morgan, PSPA
  - R. Moore, Congressmen Young
  - K. Coyner, Senator Murkowski
  - J. Branson, NPFMC
  - E. Wolfe, Dept. of State

ALASKA FISHERIES DEVELOPMENT FOUNDATION FUNDS PRODUCTION OF POLLOCK SURIMI.  
ANNUAL PRODUCTION TO BE 600 TONS. EXPORTS TO JAPAN PLANNED.

Royal Alaskan Seafood Co., a fish processor, based at Dutch Harbor, Alaska, has been granted the sum of \$550,000 by the Alaska Fisheries Development Foundation (AFDF) for the development of pollock surimi production. Annual production of 600 tons is scheduled to begin in March (1984) with assistance from Japanese surimi technicians and with equipment supplied by a Japanese surimi machinery manufacturer. According to the wishes of AFDF, this surimi will be distributed to Alaskan fish processors as the raw ingredient for crab-like kamaboko. They further expect to eventually export surimi to Japan.

Dutch Harbor, was once known as a major crab port, but in recent years, the catch of crab has decreased significantly resulting in suffering for Alaska's crab processors. To remedy this, production of crab-like kamaboko utilizing surimi was suggested.

The United States government has long been nurturing the goal to reserve all fish within America's 200 mile zone for American harvesters and processors." In order to achieve this goal, the U.S. federal government assists the industry in new venture activities through a number of fishery-related grant programs. Saltonstall-Kennedy funding (AFDF's source of funds) comes from the 1% fishery import duties (\$8 million annually nationwide).

AFDF announced that Royal Alaskan Seafood Co. had been awarded \$550,000; \$450,000 to adapt a surimi processing plant and \$100,000 for employing Japanese technicians for making high quality surimi. With these funds, Royal Alaskan is now ready to enter surimi production. They have two contracts with two trawling vessels; the Storm Petrel and Lone Star for the catching of fresh pollock. These vessels have previously participated in Japanese-American joint ventures and have been involved in providing pollock to Japanese motherships.

The surimi processing plant, which after a study of Japanese equipment, has been strictly designed for Royal Alaskan, will have the capability of processing 11,800 pounds of fresh pollock per hour into 2,600 pounds of surimi. The plan is to distribute the surimi made at the above plant, among fish and food companies (approximately 100) which are participating with AFDF in the development of the pollock project. The aim is to export 10% of the 600 tons of production to Japan. There already have been many inquiries by Japanese fish processing companies regarding the importation of finished product. If Royal Alaskan succeeds in surimi production, AFDF plans in the future to increase the number of the surimi processing companies.

#### PROCESSING PLANT IMPORTED FROM BIBUN

AFDF has given much support to the Royal Alaskan surimi producing plant. They have even been involved in the selection of the equipment and the layout of the plant all on their own. For this, AFDF established a project team. In November/December of last year, they sent an expert to Japan. This person observed an Abashiri surimi producing plant and has seen the present production

of surimi first hand. At that time, Japanese industry personnel who came in contact with this American expert all said that they were indeed very impressed by his thorough knowledge of surimi production.

In selecting the equipment, AFDF has asked Ryan Engineering Co. for their assistance in providing the equipment. For heading and gutting the fish, Toyo equipment was chosen. Bibun bleaching tanks and deboner, were selected; and for the dehydrator, Tokoku was chosen. All of the equipment was ordered separately thus AFDF has not followed the standard one package deal. Aside from the above equipment AFDF, on their own, had other equipment designed. In the future, AFDF hopes to be able to build all this equipment in the U.S. Aside from this American surimi producing plant, the rumor is that the Canadians have shown much interest and they have even ordered some equipment. In any event, we should keep an eye on their future moves. "They certainly show a strong interest in producing surimi at sea." These are the observations by the Japanese industry and they (Japan) are now forced to see the consequence of this project in the future.

There has been some interest among Japanese kamaboko processors to import surimi produced by Royal Alaskan, but land surimi producers have already taken some measures, including stating that they would absolutely oppose such importation.

JAPANESE INDUSTRY WATCHES THE UNITY OF GOVERNMENT AND CIVILIAN (PUBLIC) IN U.S.

Surimi production by Royal Alaskan has stirred tremendous interest among Japanese fisheries agency, the fishing industry and trading companies. This project is not simply carried out by an individual company but is being assisted

by a government agency called AFDF. Thus the U.S. has taken the first step toward the making of the surimi.

According to officials of Japan's Ministry of Fisheries, the U.S. has been pushing many new projects funded by grant programs. The Ministry says, "it will take time to find out whether this surimi project will succeed, but in any case, the Ministry suspects that the U.S. will stress surimi's use in processed frozen foods. The Ministry also adds that after surimi production on land, it is possible that the U.S. will consider producing surimi at sea. The Ministry hopes this will not create any friction with Japanese interests as far as the 200 mile zone is concerned. The Ministry further understands that there is a plan to export the surimi to Japan. In any event, the Ministry will decide what to do according to the actions in the U.S. from now on."

On the other hand, Japanese industry questions whether the U.S. can succeed in producing high quality surimi. Even if this project does not succeed, Royal Alaskan's risk is small since their project is funded by AFDF. Japanese industry further questions the economic viability of Royal Alaskan's surimi production if it were undertaken without AFDF's assistance.

天然香料

香味豊かな天然スパイスを

飯野香料商会

〒113 東京都文京区向丘1丁目1番16号  
TEL. 03 (813) 6731(代)

2月29日

昭和59年(水曜日)

発行所  
水産経済新聞社  
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電話 東京 (401) 6531(代) 千106  
振替口座番号 東京 92557番

(土、日、祭日は休刊)

# 水産経済新聞

THE SUISAN-KEIZAI

(昭和29年1月28日創刊) 特別増刊号第900号・昭和59年7月11日第3種郵便物認可

## ロイヤルアラスカン社

アラスカ漁業開発基金

# AFFDFが資金助成

## 年間600トン、日本にも輸出

アラスカのダッチ・ハーバーにある水産加工会社ロイヤル・アラスカン・シーフーズはAFFDF(アラスカ・フィッシュヤーズ・デベロップメント)から開発資金五十五万ドルの助成を得てスケソウズリ身の製造を行う。同社は、すでにわが国の加工機器メーカーからスリ身プラントを輸入しており、日本による技術指導の下に三月から本格生産に入る模様で、年間百三十万ポンド(六百トン)の生産を計画している。このスリ身はAFFDFの方針に沿ってカナカなどの原料用としてアラスカ州内の水産加工業者に供給されるほか、いずれ日本にも輸出する意向である。

ダッチ・ハーバーはもとカニの水揚げ基地として知られた。カニ加工の盛んな漁業基地であった。ところが近年はカニ資源の減少に伴い、同地の漁業者や水産加工業者の経営が悪化した。その打開策のひとつとして浮上してきたのがスケソウズリ身製造とそのスリ身を原料としたカナカマココなどの加工振興である。

アメリカ政府は、かねてから「自国二百水域では自国漁船で漁獲、水産加工業を進展させる」という長期目標をもっており、これを現実化していくため、リ身製造とそのスリ身を原料としたカナカマココなどの加工振興を奨励している。スケソウズリ身製造は、わが国が輸出できる品目である。このプログラムに沿って民間企業が新しい事業に進出する場合は、連邦政府が助成する制度がある。その制度のひとつはサートンストール・ケネディ法に基づき、AFFDFである。このファンドの財源は輸入関税の1% (年間約八百万ドル) といわれる。この財源の一部をAFFDFの基金として分配している。

### 米側の「官民一体」に注目

わが国の業界

ロイヤル・アラスカンのスリ身生産にこれに原料として水産加工貿易の生産に力を入れてきた。陸上スリ身製造は、わが国が輸出できる品目である。このプログラムに沿って民間企業が新しい事業に進出する場合は、連邦政府が助成する制度がある。その制度のひとつはサートンストール・ケネディ法に基づき、AFFDFである。このファンドの財源は輸入関税の1% (年間約八百万ドル) といわれる。この財源の一部をAFFDFの基金として分配している。

スケソウズリ身の代用品として、シカラスリ身を開発すること。しかし、当初は色が黒すぎたため、魚臭が強い。スケソウズリ身の品質向上努力や、色や臭いも高い市況で取引が伸びてきた。八戸加工を中心に年間約一千トンの生産が予想されている。スケソウズリ身の品質向上努力や、色や臭いも高い市況で取引が伸びてきた。八戸加工を中心に年間約一千トンの生産が予想されている。

### イワシスリ身、独自の市場開拓

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先



ロイヤルアラスカン社

ステクソウ・スリ身生産へ

アラスカ漁業開発基金

AFFDFが資金助成

年間600ト、日本にも輸出

アラスカのグッチ・ハーバーにある水産加工会社ロイヤル・アラスカン・シーフーズはAFFDF(アラスカ・フィッシャリーズ・デベロップ・ファンド)から開発資金百十五万ドルの助成を得てステクソウ・スリ身の製造を行う。同社は、すでにわが国の加工機器メーカーからスリ身プラントを輸入しており、日本人による技術指導の下に三月から本格生産に入る模様で、年間百三十万ポンド(六百ト)の生産を計画している。このスリ身はAFFDFの方針に沿ってカニカマなどの原料用としてアラスカ州内の水産加工業者に供給されるほか、いずれ日本にも輸出する意向である。

グッチ・ハーバーはもとより製造をそのスリ身を原料とするシグランド・プロケラムがある。このプロケラムに沿って民間企業が新しい事業に進出する場合は連邦政府が助成する制度がある。その制度のひとつは「回國」(回水)水産加工業者を奨励する制度である。その制度のひとつは「回國」(回水)水産加工業者を奨励する制度である。その制度のひとつは「回國」(回水)水産加工業者を奨励する制度である。

米側の「官民一体」に注目 わが国のロイヤル・アラスカンのスリ身でもスリ身生産とこれを原料とする水産加工製品の生産に力を入れている。このスリ身は、単にアメリカの企業が生産し、単にアメリカの企業が輸出するのではなく、わが国の水産加工業者が原料として水産加工製品の生産に力を入れている。このスリ身は、単にアメリカの企業が生産し、単にアメリカの企業が輸出するのではなく、わが国の水産加工業者が原料として水産加工製品の生産に力を入れている。

米側の「官民一体」に注目

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先行き不

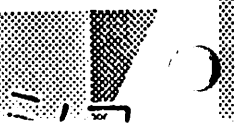
冷スリ身 十五二百三十五ト 上二般品が二月に入って急騰、旬に比べ二割強の高値を付けている。北極圏が二一二月間、F

イワンスリ身、独自の市場開拓

ステクソウ・スリ身の代用品として開拓されたイワンスリ身により急騰をしのぐと、魚質が優れる、ステクソウ・スリ身より品質が劣るなど、徐々にその地位を固め、独自の市場を開拓した。五十八年度までの事業は、イワンスリ身より品質が劣るなど、徐々にその地位を固め、独自の市場を開拓した。



大津漁業が三行 表示した役員およそ の人事異動は、近 幅なものとなつ 構改革の発表を される、という思 されたに今回の が意味するもの をひく。二月二 れた魚友会会 席上でも、この 話題にのぼった にも名刺が間に いた。 天辰副社長も ことです。中部 りに練つたらス う。ショック療 えないうことな いう。







The bill provides initial Council funding by authorizing federal money through fees collected from foreign fishing within U.S. waters, and by tariffs on imported fishery products.

Private industry assessments would eventually pay for the continuation of the Council.

Expected to testify are representatives from the New England fishing and processing industries.

For further information, contact Jim Gilmore of the Majority Staff at (202)224-8170, or Jim Drewry of the Minority Staff at (202)224-4912.

NOTE: The schedules of hearings are subject to possible last minute change. When there is not enough time to mail notices of changes, only the Senate Press Galleries will be notified.

The bill, introduced by Senator Stevens, establishes a Council that would create a coordinated national program of research, education, and promotion to expand markets for fishery products. The Council would assist in developing and utilizing all species of fish harvested and processed in the United States. The Council would assist in improving the quality of fishery products and in educating the American consumer about the health benefits of increased consumption of fish. There would be sixteen members on the Council, comprised of regional representatives, processors and processors of fish. All members would be appointed by the Administrator of the National Oceanic and Atmospheric Administration.

Introduced: 3/23/84  
Referred: House Special Committee  
on Fisheries and Resources

BY THE RESOURCES COMMITTEE  
BY REQUEST

1 IN THE HOUSE

2 HOUSE JOINT RESOLUTION NO. 73

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 THIRTEENTH LEGISLATURE - SECOND SESSION

5 Relating to the licensing of commercial  
6 halibut vessels in Alaska.

7 BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

8 WHEREAS the International Pacific Halibut Commission (IPHC) requires  
9 that all vessels that fish halibut for commercial purposes, including sport  
10 charter vessels that retain halibut, be licensed annually by the IPHC; and

11 WHEREAS a halibut license can be obtained only by submitting an appli-  
12 cation at the commission's Seattle, Washington, office; and

13 WHEREAS the halibut license application is similar to applications for  
14 permits and licenses issued by the Alaska Commercial Fisheries Entry Com-  
15 mission; and

16 WHEREAS the Alaska Commercial Fisheries Entry Commission has better  
17 capacity than the International Pacific Halibut Commission to process  
18 Alaskans' applications for halibut licenses; and

19 WHEREAS appointing the Alaska Commercial Fisheries Entry Commission as  
20 an agent for processing and issuing halibut licenses would eliminate dupli-  
21 cation for Alaskan fishermen;

22 BE IT RESOLVED that the Alaska State Legislature respectfully requests  
23 the International Pacific Halibut Commission to appoint the Alaska Commer-  
24 cial Fisheries Entry Commission as its agent to process halibut vessel  
25 license applications and to issue licenses on the behalf of the IPHC.

26 COPIES of this resolution shall be sent to Michael Hunter, Chairman,  
27 International Pacific Halibut Commission; James Campbell, Chairman, North  
28 Pacific Fishery Management Council; Bruce Twomley, Chairman, Alaska  
29 Commercial Fisheries Entry Commission; and to the Honorable Ted Stevens and

1 the Honorable Frank Murkowski, U.S. Senators, and the Honorable Don Young,  
2 U.S. Representative, members of the Alaska delegation in Congress.