MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director

DATE: April 14, 1995

ESTIMATED TIME
2 Hours

SUBJECT: Sablefish and Halibut IFQs

ACTION REQUIRED

(a) Receive IFQ Industry Implementation Team report.
(b) Status of IFQ fisheries.
(c) Initial review of issues paper for sablefish early season opening.
(d) Status of other amendment packages, including Area 4 suballocations.

BACKGROUND

Implementation Team Report

The IFQ Industry Implementation Team met on April 5-6, 1995 to discuss a number of issues that have arisen as a result of the implementation of the IFQ fisheries for halibut and sablefish. Their minutes will be distributed at meeting time.

Status of IFQ Fisheries

The NMFS Restricted Access Management will provide a report on the first month of the IFQ halibut and sablefish fisheries.

Sablefish Early Season Opening

In May 1994, Alaska Sablefish, Inc. requested the Council to continue the January 1 sablefish opening in the Aleutian Islands. They made the request on behalf of the freezer/longliner *Judi B* and the 6 to 8 vessels fishing at the start of the year, noting that the participants typically took 10 to 11 months to harvest their allocated quota. A delayed opening of March 15 would limit their ability to harvest their quota. Typically 20 to 30% of the allocated quota is taken in the first three months of the year. But with higher prices at the start of the fishing year, 50% or more of their gross income is realized then.

Last June the Council initiated a regulatory amendment to open the Aleutian Islands for 1995 on January 1 for sablefish on 25% of the preliminary TAC specified in September. In September NMFS said they had not proceeded with the amendment, citing the complexity of the changes to the regulations, the small number of beneficiaries, and the lack of concurrence by IPHC. The Council indicated continued interest in an early sablefish opening for the Aleutian Islands for future years. An issues paper of three management alternatives is included as Item C-4(a):

Alternative 1. Status quo. Sablefish and halibut seasons would remain concurrent throughout the range.

Alternative 2. Allow IFQ fishing beginning January 1 on 25 % of the preliminary sablefish TAC specified in September each year, as currently allowed in the BSAI groundfish regulations.

Option A. Retention of halibut would not be permitted.

Option B. Retention of halibut would be permitted by halibut IFQ holders. (possibly limited to a percent)

Alternative 3. Change the fishing year for IFQ sablefish to March 15 through March 14. Aleutian Islands fishermen may choose to postpone fishing until the end of the redefined fishing year (January - March 14).

Option A. Retention of halibut would not be permitted.

Option B. Retention of halibut would be permitted by halibut IFQ holders. (possibly limited to a percentage)

IPHC discussed this issue at their 1995 annual meeting, noting, "Data from a limited number of vessels in the Aleutian Islands sablefish fishery during winter months (November - March) shows a halibut bycatch rate that ranges up to 19%. This rate amounts to a minor quantity of halibut mortality with the current fleet of one or two vessels. However, the Commission is concerned that an increase in the number of vessels will occur if the fishery is opened in the winter, as other fishing activities are limited at that time. Halibut mortality would increase as a result, which conflicts with the Commission goals for reductions in halibut bycatch mortality. As an example, the BSAI sablefish fishery caused 38 mt of halibut mortality in 1994, of which 13 mt occurred in the winter. We expect higher bycatch rates and more total mortality if a winter fishery expands. Halibut are distributed in deep water for spawning in winter, and competition among vessels for prime fishing grounds would increase."(excerpted from Item C-4(a), Appendix 1)

The Commission's Conference Board recommended that the Council allow sablefish fishing, with no halibut retention, in the Aleutians starting January 1. The Commission took no formal action, but did offer to assist in evaluating the effects of a winter fishery. Their report is attached in Item C-4(a), Appendix 2.

The IFQ Industry Implementation Team last took action on this proposal in May 1994. "The Committee recommends that the sablefish opening date and duration be the same as now written in the regulation for the IFQ program. The Committee felt that the issue was a market oriented situation, and that all sablefish and halibut market conditions are likely to change dramatically with the advent of the IFQ program."

The Enforcement Committee, in November 1994, agreed that an earlier opening in the Aleutian Islands was enforceable, but that catch must be deducted from the IFQ quota share.

To ensure that regulations for an early opening are effective January 1, 1996, we will need to take final action on this issue in June.

Other Regulatory Actions

Staff will report on the status of other amendment packages, including Area 4 suballocations (Item C-4(b).

Issues Paper for Early Opening of the Sablefish IFQ Fishery

In May 1994, Alaska Sablefish, Inc. requested that the Council approve continuation of the January 1 start date for the Aleutian Islands sablefish fishery after implementation of the IFQ program in 1995. Alaska Sablefish, Inc. made the request on behalf of the freezer/longliner *Judi B* and the 6 to 8 vessels fishing at the start of the year. The request noted that the participants typically took 10 to 11 months to harvest their allocated quota. A delayed opening of March 15 would limit their ability to harvest their quota. Typically 20 to 30% of the allocated quota is taken in the first three months of the year. But with higher prices at the start of the fishing year, 50% or more of their gross income is realized then.

The Council reviewed the request and received a report from NMFS at their June 1994 Council meeting. The Council voted to proceed with a regulatory amendment to allow sablefish IFQ fishing in the Aleutian Islands area for 1995 only to begin in January on 25 % of the preliminary TAC to be specified in September. In September 1994 the Council received a report from NMFS indicating that they had not proceeded with a regulatory amendment for an early opening for the 1995 season citing the complexity of the changes to the regulations, the small number of beneficiaries, and the lack of concurrence by the IPHC. The Council indicated continued interest in an early sablefish opening for the Aleutian Islands for future years.

The following is excerpted from a discussion of the early opening and its effect on halibut bycatch mortality at the 1995 Annual Meeting of the IPHC (Appendix 1). "Data from a limited number of vessels in the Aleutian Islands sablefish fishery during winter months (November - March) shows a halibut bycatch rate that ranges up to 19%. This rate amounts to a minor quantity of halibut mortality with the current fleet of one or two vessels. However, the Commission is concerned that an increase in the number of vessels will occur if the fishery is opened in the winter, as other fishing activities are limited at that time. Halibut mortality would increase as a result, which conflicts with the Commission goals for reductions in halibut bycatch mortality. As an example, the BSAI sablefish fishery caused 38 mt of halibut mortality in 1994, of which 13 mt occurred in the winter. We expect higher bycatch rates and more total mortality if a winter fishery expands. Halibut are distributed in deep water for spawning in winter, and competition among vessels for prime fishing grounds would increase."

The Commission's Conference Board recommended that the Council allow sablefish fishing, with no halibut retention, in the Aleutians starting January 1. The Commission did not take formal action on this item but offered to assist the Council in evaluating the effects of a winter sablefish fishery in the Aleutian Islands. Their report is attached (Appendix 2).

Background

The opening date for the sablefish IFQ fishery is not specified in the plan and the Council may annually review and specify the sablefish IFQ season. For initial implementation of the sablefish IFQ fishery the Council has tied the sablefish IFQ fishery to the start of the Pacific halibut IFQ fishery. The fishing season for halibut was set by the International Pacific Halibut Commission as March 15 - November 15. The predominant sablefish spawning period is December through April; the Pacific halibut spawning period extends from November through March. While fishing would ideally occur year-round under any IFQ program, spawning season closures are recognized as critical for continued stock health.

In addition to a delay caused by a spawning closure, the annual halibut catch limits are not specified by the IPHC until late January. One of the principal reasons for timing the halibut and sablefish IFQ programs concurrently was to reduce bycatch by allowing retention of both species by QS holders. The 10 week delay also affords time for the administrative actions required by the IFQ programs. It allows for:

- official publication of the final sablefish specifications usually in January or early February;
- calculation of each IFQ; and
- notification of the precise amount of IFQ sablefish to be harvested by each IFQ permit holder.

Before initiating this amendment several factors should be evaluated by the Council.

Logistical factors. To legally harvest under the IFQ program a person must possess an IFQ card. Only after the amount of IFQ a person is to receive is determined can an IFQ card be issued. To determine the amount of IFQ each person receives, the total allowable catch (TAC) must be known. The TAC is not final until sometime in February each year, due to the TAC setting procedure in the groundfish FMPs. This means harvesters would fish without IFQ cards until the TAC is final. This could be accomplished by estimating how much the TAC would be and allowing a certain percentage of that amount to be harvested during an early season. The amount actually caught by each person could be subtracted from their IFQ account. In effect, they would be fishing on credit against their eventual IFQ allocation for that year.

Another method would be to extend the fishing season, i.e., March 15 through March 14, rather than March 15 through November 15. A person would be able to use their IFQ during the latter part of the IFQ season, November 16 through March 14. Aleutian Islands fishermen could choose not to fish until the following January and February to optimize market prices, such that they would defer fishing their 1996 IFQ until January or February 1997. This alternative would create a year-round Aleutian Islands sablefish fishery.

Biological factors. Consideration must be given to the potential bycatch and discard of halibut during the early season fishery for sablefish. Current estimates show 67 mt of sablefish with a bycatch of 26 mt of halibut was caught in January 1994 (2 vessels) and 109 mt of sablefish with a bycatch of 77 mt of halibut was caught in February 1994 (5 vessels). With an assumed mortality rate of 13.75 percent, halibut mortality in January and February 1994 was 4 mt and 11 mt, respectively. Even if this amount is not significant, it must be considered that if the season was opened earlier, any person that had IFQ could fish during the early season--and perhaps would, if the market was favorable. This would increase the halibut bycatch amount. Halibut IFQ could not be used as a safeguard against this bycatch unless the IPHC was willing to open the halibut season concurrently with the early sablefish season, or agree to allow some percentage of retention during the closed season. The potential of the former is slight, while the latter is a possibility. Furthermore, if the bycatch ratio is high, there may be insufficient halibut IFQ in that subarea--especially for freezer vessels, where the ratio of the amount of sablefish to halibut is disproportionate.

Socioeconomic factors. Aleutian Islands fishermen have historically harvested sablefish at the beginning of the calendar year to take advantage of favorable sablefish distributions and market conditions. CDQ groups awarded sablefish in this subarea may also wish to participate in the sablefish fishery at the beginning of the year. However, the Council has so far considered this allowance for only the Aleutians Islands to allow them to continue sablefish fishing during their traditional fishing season. A major factor in this decision was the limited number of potential participants and their expected impacts on disturbing the newly implemented IFQ program.

The primary reason an early season fishery for sablefish was requested was to take advantage of favorable market conditions for sablefish during the beginning of the calendar year. A secondary reason was to allow entire harvest of IFQ allocated, which was anticipated by the potential recipient to be in such amounts as to make it unharvestable in its entirety during the established 10 month season. The primary reason was presented to the IFQ Implementation Workgroup established by the Council. The Workgroup responded that the IFQ program was going to change market conditions in such a way that advantages currently enjoyed by early harvesters would probably be eliminated, and did not support an early opening.

Affected parties

On average, fewer than five hook-and-line vessels have participated in the Aleutian Islands sablefish fishery in the first two months of 1993 and 1994. The average sablefish harvest in January for these two years is about 60 mt. The two year average harvest in February, however, is about 143 mt. This average harvest increases only slightly in March despite additional vessels (Table 1), while halibut bycatch increases significantly.

Table 1. Vessels participating in the early sablefish fishery in 1993 and 1994 (Source: NMFS).

Month	Average vessels #	Sablefish Harvested (mt)	Halibut Bycatch (mt)	Halibut Mortality* (mt)
Jan 93	2		- *confidential* -	
Jan 94	2		- *confidential* -	
Feb 93	7	177	81	11
Feb 94	5	109	77	11
Mar 93	9	173	273	38
Mar 94	8	116	159	22

*halibut bycatch mortality assumed to be 13.75% (Source: NMFS)

Management Alternatives

Alternative 1. Status quo. Sablefish and halibut seasons would remain concurrent throughout the range.

Pros: No change in current IFQ regulations.
Affords greatest biological protection to the stocks of Pacific halibut and sablefish.

Cons: Imposes a shorter fishing season than traditionally fished, causing unspecified economic harm to some Aleutian Islands sablefish fishermen.

Alternative 2. Allow IFQ fishing beginning January 1 on 25 % of the preliminary sablefish TAC specified in September each year, as currently allowed in the BSAI groundfish regulations.

Option A. Retention of halibut would not be permitted.

Pros: Provides for early-season fishing in the AI.
Sablefish fishermen would be willing to forego retention of IFQ halibut to harvest sablefish at the beginning of the calendar year.

Cons: IFQ permits will not be issued until February based on quota share holdings as of January 31. An exception would have to be made to allow fishing without an IFQ. The final quotas may put some fishermen at risk of unknowingly overharvesting their IFQ.
Need to implement a separate system to "advance" AI sablefish fishermen part of their IFQ and monitor landings outside the regular season.
Increased halibut bycatch mortality is expected.
Enforcement would be compromised by exempting a few fishermen from the season closure.
Halibut and sablefish fisheries would not be concurrent throughout the management range.

Option B. Retention of halibut would be permitted by halibut IFQ holders. (possibly limited to a percent)

Pros: Provides for early-season IFQ fishing in the AI.
Minimizes halibut bycatch mortality by allowing retention of legal sized catch by IFQ holders.
Has greater socioeconomic benefits by allowing retention of legally harvested halibut.
Has decreased halibut bycatch mortality.

Cons: IFQ permits will not be issued until February based on quota share holdings as of January 31. An exception would have to be made to allow fishing without an IFQ. The final quotas may put some fishermen at risk of unknowingly overharvesting their IFQ.
Need to implement a separate system to "advance" AI sablefish and halibut fishermen part of their IFQ and monitor landings outside the regular season.
Increases overall halibut mortality by allowing retention of legal catch.
Enforcement would be compromised by exempting a few fishermen from the season closure.
Halibut and sablefish fisheries would not be concurrent throughout the management range.

Alternative 3. Change the fishing year for IFQ sablefish to March 15 through March 14. Aleutian Islands fishermen may choose to postpone fishing until the end of the redefined fishing year (January - March 14).

Option A. Retention of halibut would not be permitted.

Pros: Provides for year-round fishing in the Aleutian Islands.
Sablefish fishermen would be willing to forego retention of IFQ halibut to harvest sablefish at the beginning of the calendar year.
Does not require new administrative procedure to "advance" AI sablefish fishermen part of their IFQ.

Cons: Increased halibut bycatch mortality is expected.
Enforcement would be compromised by exempting a few fishermen from the season closure.
Halibut and sablefish fisheries would not be concurrent throughout the management range.

Option B. Retention of halibut would be permitted by halibut IFQ holders. (possibly limited to a percent)

Pros: Provides for early-season IFQ fishing in the AI.
Minimizes halibut bycatch mortality by allowing retention of legal sized catch by IFQ holders.
Does not require new administrative procedure to "advance" AI sablefish fishermen part of their IFQ.

Cons: Increases overall halibut mortality by allowing retention of legal catch.
Enforcement would be compromised by exempting a few fishermen from the season closure.
Halibut and sablefish fisheries would not be concurrent throughout the management range.

INTERNATIONAL PACIFIC HALIBUT COMMISSION

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ESTABLISHED BY A CONVENTION BETWEEN CANADA
AND THE UNITED STATES OF AMERICA

February 17, 1995

Dr. Clarence Pautzke, Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Dear Clarence:

The International Pacific Halibut Commission, at its 1995 Annual Meeting in Victoria, B.C., discussed two issues associated with bycatch mortality of halibut during the winter closed period of November 15 through the following March 14. The first issue is sablefish fishing in the Aleutian Islands during winter, and the second is retention of halibut by hook and line fisheries for other groundfish species.

The Commission's Conference Board recommended that the Council allow sablefish fishing, with no halibut retention, in the Aleutians starting January 1, and that the Council and Commission staffs evaluate the benefits and costs of limited halibut retention during the winter hook and line groundfish fisheries. The Commission identified several concerns that should be addressed if the Council decides to further analyze these issues, but took no other action on them.

Data from a limited number of vessels in the Aleutian Islands sablefish fishery during winter months (November - March) shows a halibut bycatch rate that ranges up to 19%. This rate amounts to a minor quantity of halibut mortality with the current fleet of one or two vessels. However, the Commission is concerned that an increase in the number of vessels will occur if the fishery is opened in the winter, as other fishing activities are limited at that time. Halibut bycatch mortality would increase as a result, which conflicts with Commission goals for reductions in halibut bycatch mortality. As an example, the BSAI sablefish fishery caused 38 mt of halibut mortality in 1994, of which about 13 mt occurred in the winter. We expect higher bycatch rates and more total mortality if a winter fishery expands. Halibut are distributed in deep water for spawning in winter, and competition among vessels for prime fishing grounds would increase. The Commission staff will be available to assist the Council in evaluating the effects of a winter sablefish fishery in the Aleutian Islands.

In other hook and line groundfish fisheries retention of halibut bycatch during winter could be authorized, for example, as a percentage of the groundfish (by species or in aggregate). Such retention could reduce halibut bycatch mortality during the winter halibut closure. However, the

Commission has identified four potential problems that need analysis as part of an evaluation of retention. 1) The amount of halibut harvested could be substantial given the observed bycatch rates and groundfish harvest. 2) Distribution of halibut IFQ cannot occur until the Commission sets halibut catch limits, which would be after these other fisheries would start. 3) Harvest during the closed period would present a market advantage to those fishermen able to retain halibut. 4) The halibut retention allowance would be difficult to enforce and could interfere with the detection of illegal halibut from other sources.

If the Council decides to proceed with these issues, the Commission staff will be pleased to assist in the analysis.

Sincerely yours,

Donald A. McCaughran,
Director

cc: Commissioners

INFORMATION ON THE BERING SEA/ALEUTIAN SABLEFISH FISHERY AND HALIBUT BYCATCH DURING WINTER MONTHS

by

Gregg H. Williams
January 19, 1995

Introduction

IPHC staff have proposed a closure of the IFQ halibut fishery off Alaska during winter months. If adopted, a similar closure for the IFQ sablefish fishery is likely. A significant hook-&-line fishery for sablefish occurs in the Aleutian Islands subarea of the BSAI region and has historically been a year-round fishery. Fishermen that participate in this fishery would be affected by a winter closure and have requested an exemption from the closure for this area, with the justification that halibut bycatch and subsequent mortality occurs in minimal amounts. Additionally, to reduce discards and waste, they propose that retention of halibut bycatch be allowed by those fishermen holding halibut IFQ.

This report documents available information on the winter fishery for sablefish in the Bering Sea/Aleutians, estimates the potential magnitude of halibut retained, with a comparison to current bycatch levels.

The Bering Sea/Aleutians Sablefish Fishery

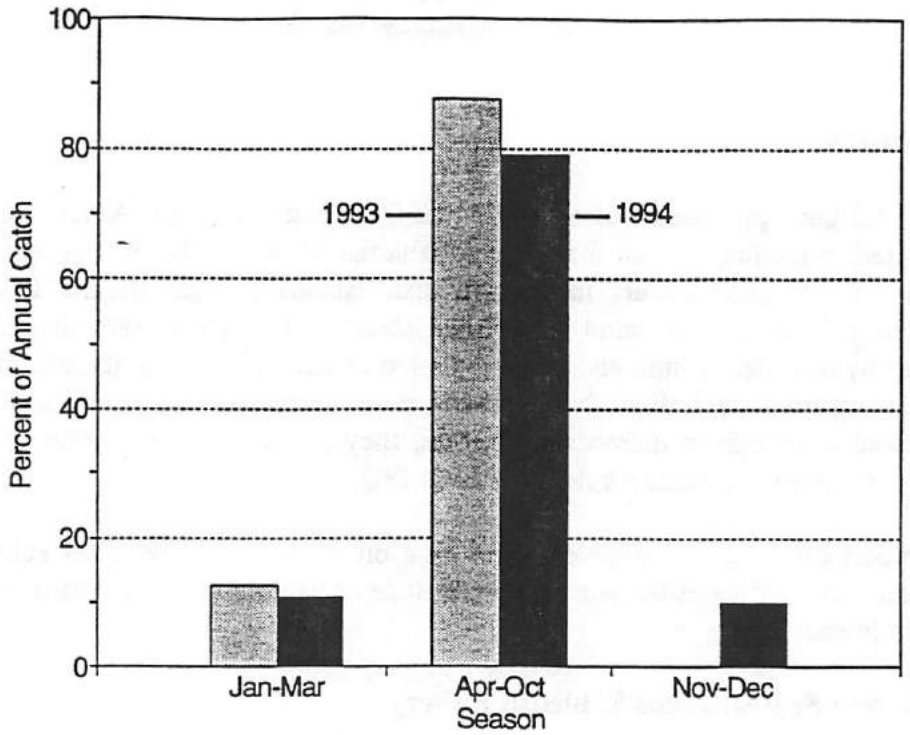
Vessel Effort Since 1990, the sablefish fishery in the Bering Sea/Aleutian Islands region has opened on January 1 and, with the exception of 1992, has remained open through December. Vessel effort is traditionally low during winter months, picking up in March. June and July usually see the greatest number of vessels:

Number of Vessels by Month in the Bering Sea/Aleutians Fishery

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1993	1	1	6	9	7	10	10	2	4	2	0	0
1994	0	1	5	5	2	10	8	5	0	4	3	3

Groundfish Catch The sablefish TAC is allocated between trawl and fixed gear, but the hook-&-line fishery is the only directed fishery. The majority of the fixed gear sablefish TAC is apportioned to the Aleutian subarea: in 1994, the Bering Sea subarea received a 270 mt apportionment, whereas the Aleutian subarea was apportioned 2,100 mt. The Aleutian subarea is traditionally apportioned the greatest share of the TAC, because the sablefish resource is largest in that subarea.

Sablefish are primarily fished during April-October, but minor amounts are taken outside of this time period, usually in January-March. Before 1994, catches in November-December hardly occurred. In 1994, for the first time, 10% of the BSAI catch was taken in November-December. The seasonal breakdown of the catch in 1993 and 1994 is shown in the following:



Halibut Bycatch

Bycatch Rates NMFS observer data (NORPAC data) indicates large variability in halibut bycatch rates during winter months in the Aleutians. This is probably a consequence of many factors, including (1) the bottom topography prevalent in the Aleutian Island subarea, where the continental slope drops off quite severely in many places, and (2) the swift currents around the islands, which can carry hook-&-line gear away from the intended grounds.

Halibut bycatch rates, in number of fish per mt of groundfish and in kg per mt, are shown in Table 1. In general, bycatch rates are low, much lower than has been documented in the Gulf of Alaska sablefish hook-&-line fishery. During 1990-1993, rates averaged 2.5 halibut per mt of groundfish and 34.9 kg per mt of groundfish in winter months. The latter is equivalent to a 3.5% bycatch rate.

Halibut Viability and Discard Mortality Rates Very little data on halibut viability were collected by observers during the winter months in the Aleutian subarea. Although data may suggest some

small seasonal or area differences in viability, other factors (e.g., fisherman skill and experience at release) have a greater influence on halibut viability. In all probability, halibut viability and discard mortality rates are consistent across seasons. Williams (unpub.)[1] recently recommended a discard mortality rate of 17% for 1995, an average of data collected by observers during 1992-1993. In comparison, NMFS has been using 12.5% and 15% for observed and unobserved vessels, respectively, in the Bering Sea/Aleutian sablefish fishery.

Size Composition of Bycatch Observer data indicates that the majority of halibut caught as bycatch in the sablefish fishery in the Aleutian Islands subarea are legal-size fish, i.e., greater than the minimum legal size allowed for the halibut fishery (32 inches, or 82 cm). The amount of data collected during 1990-1993 is small (Table 2), so I aggregated all available data and determined that 29% of the number of halibut caught as bycatch were sublegal, while 71% were of legal size. In terms of weight, the fraction of sublegal pounds was 13%, with 87% of legal size.

Impact of Proposed Exemption from Closure on Halibut Bycatch Mortality

In examining this proposal for its impact on bycatch, one must look at what happens to the bycatch of sublegal and legal-size halibut during the winter under two scenarios, one that allows retention, and a scenario without retention. This can be represented in the following fashion:

Size Group	Without Retention	With Retention
Sublegals (< 32 inches)	Discarded (bycatch mortality)	Discarded (bycatch mortality)
Legals (> 32 inches)	Discarded (bycatch mortality)	Retained by IFQ holders (attributed to IPHC catch limit)

In concept, allowing retention of legal halibut to IFQ holders shifts halibut from bycatch to directed harvest, thereby reducing bycatch.

Let's use 1994 as an example. NMFS estimates 79 mt of halibut bycatch during January-March and November-December in the Bering Sea/Aleutian fishery. If the sublegal/legal proportions by weight presented earlier are applied, then there were 10 mt of sublegal halibut and 69 mt of legal halibut caught.

Bycatch mortality for each size group can then be estimated by applying a discard mortality rate. Assume the 17% rate calculated by Williams (unpub.)[1] for the Bering Sea/Aleutian sablefish

[1]Williams, Gregg H. Unpublished. Pacific halibut discard mortality rates in the 1993 groundfish fisheries off Alaska. Int'l. Pac. Halibut Comm. Report of Assessment and Research Activities 1994: 153-166.

hook-&-line fishery, and full retention of all legal halibut.

Size Group	1994 Bycatch (mt)	With Winter Fishery, Without Retention		With Winter Fishery, Allowing Retention		
		Discard Mort. Rate	Bycatch Mort. (mt)	Discard Mort. Rate	Bycatch Mort. (mt)	Directed Catch (mt)
Sublegals	10	17%	1.7	17%	1.7	0.0
Legals	69	17%	11.7	(100%)	0.0	69.0
Total	79	-	13.4	-	1.7	69.0

Bycatch of halibut during the winter period of the Bering Sea/Aleutian sablefish fishery was 79 mt in 1994, with mortality estimated at 13.4 mt. If the fishery is closed during the winter, fishing effort may shift to an open period, assuming total sablefish effort remains constant. The bycatch will be taken during another part of the year, thereby causing no reduction in bycatch.

With the winter fishery operating and retention allowed, removals in the 1994 Bering Sea/Aleutian fishery would have increased significantly, perhaps as much as 5-fold. The increase is attributed to the retention of legal-size halibut which would otherwise be discarded and survive. But bycatch mortality in the winter fishery would decrease almost 90%, from 13.4 mt to 1.7 mt, if all legal halibut could be retained by IFQ holders.

These results are based on two key assumptions. First, all vessels fishing are assumed to have sufficient halibut IFQ to enable full retention. In reality, some vessels will not have halibut IFQ, and will discard as is usual. This would serve to reduce the estimate of halibut retention without the closure. Also, freezer longliners may find it impractical to retain halibut bycatch with present freezer configurations and/or lack or holding capacity, given the larger size of halibut in comparison to cod. Thus, the estimate of 69 mt of legal retention is probably a best-case.

Second, the results are based on the conditions within the 1994 sablefish fishery. Marketing factors within the sablefish fishery may expand winter fishing, if allowed, and thus increase winter retention of halibut. This could lead to conflicts in the perception of marketing advantage by halibut fishermen.

If the Bering Sea/Aleutian sablefish fishery is closed during November-March, fishing effort would presumably shift to other time periods when bycatch rates are different from those experienced during the winter. Halibut and sablefish distributions have greater overlap during the winter, as halibut are deep for spawning. With the spatial separation of the summer, bycatch rates should be lower, but absolute levels of bycatch may not decline if vessel effort experiences a greater increase. In any event, minor increases or decreases in the small amount of bycatch shown to occur in the winter would not have a significant impact on overall bycatch mortality.

Table 1. **Summary of halibut bycatch rates in the 1990-1993 hook-&-line sablefish fishery in the Aleutian Islands subarea. Source: NORPAC database, NMFS Domestic Observer Program.**

Year	Jan	Feb	Mar	Nov	Dec	Jan	Feb	Mar	Nov	Dec
	Number of halibut per mt					*Kg of halibut per mt*				
1990	-	-	4.7	2.6	-	-	-	70.2	14.3	-
1991	-	0.8	1.0	-	-	-	5.3	17.8	-	-
1992	-	7.1	1.6	-	-	-	115.7	27.6	-	-
1993	9.5	3.4	10.6	-	-	48.4	22.0	131.9	-	-
AVG	9.5	3.7	4.5	2.6	-	48.4	47.7	61.9	14.3	-

Table 2. **Size breakdown of halibut bycatch in the 1990-1993 hook-&-line sablefish fishery in the Aleutian Islands subarea. Source: NORPAC database, NMFS Domestic Observer Program.**

Year	Jan	Feb	Mar	Nov	Dec	Jan	Feb	Mar	Nov	Dec
	Number of sublegal/legal halibut					*Kg of sublegal/legal halibut*				
1990	-	-	30/72	-	-	-	-	85/548	-	-
1991	-	2/6	6/4	-	-	-	7/20	19/27	-	-
1992	-	-	-	-	-	-	-	-	-	-
1993	-	-	8/32	-	-	-	-	35/340	-	-

AGENDA C-4(b)
APRIL 1995

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AND THE UNITED STATES OF AMERICA

February 17, 1995

Dr. Clarence Pautzke, Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Dear Clarence:

The International Pacific Halibut Commission, at its 1995 Annual Meeting in Victoria, B.C., agreed to maintain the harvest of Pacific halibut in subareas of Area 4 in the same proportion as in recent years. The Commission noted however, that there is no conservation basis for the catch limits in Areas 4C, 4D, and 4E. The present catch limits are more allocative than biologically based, although they do not put the stock at risk.

It is the Commission's policy to establish regulatory areas to distribute harvest in proportion to the biomass in each area. As long as Areas 4C, 4D, and 4E are separate, our management philosophy would indicate a transition from status quo to proportional harvest. For this meeting the staff developed a harvest distribution for Area 4 based on habitat (fishing area) and CPUE to provide a more scientifically sound procedure, as requested by our Commissioners. The procedure is the same as used in other areas. The proposed redistribution of harvest in Area 4 was substantially different from status quo in some subareas and would have interfered with the Council's IFQ/CDQ allocations.

We believe that continued separation of Areas 4C, 4D, and 4E may cause conflict between the Commission's harvest philosophy and the Council's allocation decisions. The Commission believes that one option would be to combine Areas 4C, 4D, and 4E in 1996, and rely on the Council to allocate directly among the groups that harvest halibut in these areas. The Commission staff has recommended moving toward the equal exploitation rate strategy in Areas 4A and 4B. There is considerable stock separation between those areas. Appropriate management will require coordination between the Council and the Commission. We recommend that the staffs of the Council and the Commission work jointly to prepare a plan to manage this area. Our staff will be pleased to assist in preparation of an EA/RIR that the Council will need in its deliberations.

Please let me know how you think we should proceed.

Sincerely yours,

Donald A. McCaughran,
Director

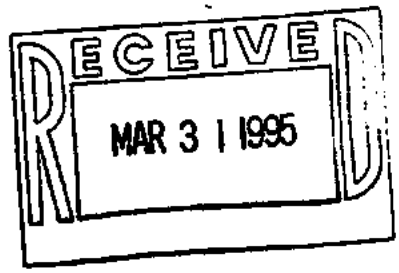
cc: Commissioners

AGENDA C-4
APRIL 1995
Supplemental

Alaska Sablefish Inc.

F/V Judi B

P.O. BOX 219. HOMER, ALASKA 99603 (907) 235-8581



March 31, 1995

IFQ Workgroup
Juneau, Alaska

Dear Members,

I appreciate you revisiting our request for an earlier opening date in the Aleutian Islands under the IFQ plan at your meeting April 4, 1995. I feel that this issue was not properly presented when it was discussed at the January meeting nor were there enough members present at that meeting to insure that all opinions were taken into account. I was not aware that the IFQ Workgroup had talked about this issue until I read about it in the analysis the NPFMC has drafted for this proposal.

The analysis states that the primary reason we are requesting this early opening is to take advantage of favorable markets. This is absolutely incorrect. The primary reason is because we are very concerned that we will not have enough time to harvest our quota share. For the past decade we have been fishing in the Aleutian Islands for black cod 10 - 11 months a year and have always began on January 1st. I think the ice boat black cod fishermen that fish primarily in the Gulf of Alaska do not realize that under the IFQ program we are looking at considerably less time to fish and we will see a decrease in our production, unlike them who are now facing the best season they've had yet. As you know, the purpose of the IFQ program is to give the fishermen time to fish responsibly ie. put safety first, minimize bycatch and produce a quality product. We need to continue to have the Aleutians open during the winter months so we have the time to fish with care, as well.

I understand from talking to a couple of the members who were at the January meeting that nearly all that was discussed regarding this issue were market considerations. Apparently, the concern was that the market would be preempted for the March 15 opening. We are talking about such

an insignificant amount of black cod, perhaps a few hundred thousand pounds, compared to the over-all quota that I just don't believe it will adversely affect the Gulf of Alaska market. Keep in mind, as well, that we are not asking to retain halibut during this time so there should be no concern about that market being affected.

We brought this proposal in front of the IPHC and it's Conference Board in January, 1995. The Conference Board voted to support it. The Commissioners did not vote on it since it is not their management area but we wanted to insure that they did not have overwhelming concerns about the halibut bycatch. Don McCaughran has told me that he does not have a problem with it because the bycatch numbers are very small but the IPHC will not come out publicly and support it because it is not really their concern. Kris has told me that she thought some of the staff at IPHC may have concerns about the bycatch. I read in the letter that Don McCaughran wrote to the Council that their concern is that effort may increase in the Aleutians in the winter if it is the only area open therefore increasing the halibut bycatch. Although there are no guarantees, I find it unlikely that this fishery will see a huge increase in participation. Already this has been the situation for the past 10 years. The Aleutians have been open in the winter and the Gulf of Alaska has been closed. In the past 3 years, the black cod season in the Gulf was extremely short, the Aleutians were open and there was not a huge increase in the fleet. If there was ever a time for the longliners to be looking for more opportunities it was then, not now.

Thank you for taking the time to discuss this.

Regards,

Mary Standaert
Alaska Sablefish, Inc.

Dave Franklin
3401 Lawton St.
Seattle, WA 98199

April 2, 1995

North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear Council,

Dealing with the IFQ program has been one of the most frustrating endeavors of my fishing, business, or college experiences. In my opinion, it is similar to the IRS code with almost as many rules and regulations. For over two months the RAM telephone number was not answered. Today one's chances of getting through are only fifty-fifty. How can they expect someone to run a business with no access to the people who know what the rules and regulations are? I couldn't get through to find out how certain parts of the form should be filled out. I wrote letters asking specific questions on how certain parts of the forms should be filled out and never got a reply. Now, more than a month after I sent in transfer forms, I still haven't heard. I can't get through and now I'm pretty sure some part of the form I filed must have been filled out wrong.

Several years ago, I purchased a vessel and their associated quota shares. As it has now turned out, these associated quota shares have been a detriment. These shares are small and due to the block ammendment, I'm already blocked out of the areas I want to fish. Now I'm in IFQ hell. I can't get through to transfer these shares out of my name so I can buy the larger shares that I need to make trips economically feasible.

This brings me to another nightmare; trying to find unblocked shares so I am not blocked out. As you know, this unblocked designation has put a premium on these shares. There are none available, especially in C class, and those that are, are sold within a day or two. All the while, I can find all the small blocks I want. However, with the two block amendment, only fishers who don't target on halibut or sablefish can have the luxury of purchasing a small block.

The way this IFQ block system is working out, there is not

nearly enough C class unblocked. I can find all the B class I want, but no C class. I can find all the C class, but only small blocks. Something needs to be done to make the system work. Two blocks are just not enough to be a workable alternative. In order to build a trip, I need more than two blocks. Almost all of the available quota for sale is too small to work with. You've got a system that is great for guys who received initial allocations of large blocks and small operators who only need a few pounds, but fishers who want to build usable trips and target on halibut and sablefish in each area can't.

Next, I found some freezer quota to purchase. I don't want to freeze, just sell fresh like the rest of my catch. Everyone I talked to said you don't have to freeze A class quota. I was in the process of paying the premium freezer price just to get some quota to use. However, just a day before I put money in escrow, I found out you can't use A class quota (even if you don't freeze or process) on the same trip you land C class quota. Extra constraints make small A class quota unusable.

There are so many constraints in the program, it is actually unworkable. I don't want a lot of quota, I'd just like enough for me and several crew members to make reasonable-sized trips in a few of the areas. I enjoy fishing in the different areas; delivering in different coastal towns, seeing the sights, and visiting. I don't think it is too much to ask to have a system in place so I can fish and travel in Alaska in a way longliners have been doing for many years.

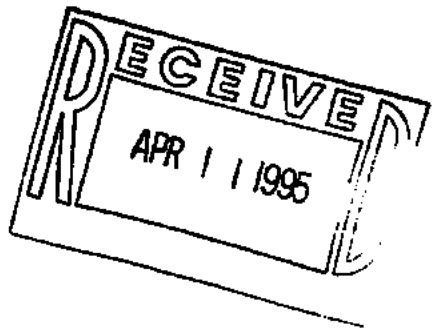
Here are some options you should consider to improve the IFQ program: increase the blocks to four or more; let the unblocked shares travel over vessel length; let quota that hasn't been fished for a year become unblocked; for a 1% fee payable to NMFS, make blocked shares become unblocked. Anything to make the system more flexible would be an improvement. Some relief is needed. I know I'm very frustrated with all the constraints. Many other fishers I talk to are also.

Sincerely,

Dave Franklin

Dave Franklin
F/V Haida Warrior

cc Kris Norosz
Implementation Council



April 11,1995

Michael J. Mayo
2800 Sawmill Creek Hwy.
Sitka, Ak 99835

Clarence G. Pautzke, Executive Director
605 West 4th Ave.
Anchorage, Ak 99501

Dear Council Members:

There is an interpretation of the sablefish/halibut IFQ fishery that the RAM Division is taking that I think was not in the Councils intent when you designed the plan. I am refering to the leasing provision. This allows 10% of your quota to be leased. I have talked to a couple of Council members, they say their intent was that you could lease 10% of your total quota, not 10% of each individual area as is the current interpretation of the RAM division. I believe RAM's interpretation will leave a fair amount of quota unharvested. With the block proposal it will make these amounts hard to sell and combine into a harvestable quota.

I would appreciate if you would consider changing this provision or letting RAM know your intent was to lease 10% of each shareholders total allowable catch, if indeed, this was your intent.

Sincerely,

Michael J. Mayo

Alaska Longline Fishermen's Assoc.
P.O. Box 1229 Sitka, AK 99835 (907) 747-3400

FOR IMMEDIATE RELEASE

Conference Explores Financing of IFQs by Alaskans

As the first halibut are landed under Alaska's new individual fishing quota (IFQ) management system, the Alaska Longline Fishermen's Association (ALFA) is sponsoring a conference to improve participation by residents of these important fisheries.

The April 4-5 conference in Juneau is designed to gather the problem-solvers of the seafood industry and coastal communities, according to Linda Behnken, ALFA executive director. "We want to discuss the problems encountered by resident fishermen in financing the purchase of IFQs and develop an action plan for implementing solutions."

"Although Alaskans received a healthy percentage of halibut and sablefish quota shares, many ended up with fewer pounds than necessary to sustain viable fishing operations," Behnken said. "Forty-three percent of Alaskans receiving a quota share ended up with less than 1,000 pounds of halibut, and 82 percent received less than 10,000 pounds. Many of these fishermen need larger shares, but prices are high and financing is largely unavailable. Most of the purchases to date have been financed by individual savings, or secured with other collateral."

"Lenders are concerned about the lack of a centralized lien registry, and many communities and processing companies are concerned that, in the absence of financing, historic delivery patterns will be disrupted. With many shares beginning to change hands, we fear that Alaskans will lose access to productive longline fisheries."

"That's why ALFA is sending out a call to members of the seafood industry, municipalities, banking community and government officials to participate in the conference," Behnken said. "It is vital that we maintain historic fishing patterns."

The conference will feature presentations by fishermen, processors, municipal officials, bankers and regulators covering the range of issues involved in the financing of quota shares, but the real substance of the gathering will take place in focus group work sessions. The two-day conference begins Tuesday, April 4 at 8:30 a.m. in the Alaska Native Brotherhood Hall. Registration is free.

Co-sponsors of the conference include: the Alaska Department of Commerce and Economic Development, Access Unlimited; Aleutian-Pribilof Islands Community Development Association; Commercial Fishing and Agriculture Bank; Hoonah Cold Storage; Kake Tribal Corporation, Kodiak Longline Fishermen's Association; National Bank of Alaska; Preston, Gates & Ellis; Seafood Producers Cooperative; Sitka Sound Seafood; and Trident Seafoods Corporation.

For registration or more information, contact Pacific Associates at 907-586-3107.

-end-

Contact: Rodger Painter - 206-526-8675

Financing Individual Fishing Quotas

A Conference Organized by the Alaska Longline Fishermen's Association
April 4-5, 1995
ANB Hall Juneau, Alaska

TUESDAY, APRIL 4, 1995

8:30 - 8:45 a.m. - Introduction

Larry Cotter, moderator
Description and purpose of the conference.

8:45 - 9:15 a.m. - How Can Alaskans Build Profitable Fishing Operations Under IFQ's?

Linda Behnken, Executive Director, Alaska Longline Fishermen's Association
Problems encountered by small-vessel harvesters in entering the longline fisheries or in financing purchases of enough quota shares to support profitable fishing operations. What factors are influencing financing.

9:15 - 9:45 a.m. - A Processor's Perspective and Financing IFQ's; the Positives and Pitfalls

John Woodruff, Icicle Seafood's
How will seafood processors maintain historic harvesting patterns? Will processors finance the purchase of quota shares by their harvesters?

9:45 - 10:00 a.m. - BREAK

10:00 - 10:30 a.m. - The Concerns of a Coastal Community

Henrich Kadake, Sr., Kake Tribal Corporation
Will halibut and sablefish still flow through coastal communities under IFQs? How coastal leaders will ensure residents remain invested in the longline fisheries.

10:30 - 11:00 a.m. - Early IFQ Transfer Trends

Larry Cotter, Access Unlimited, Inc.
Who's selling quota shares? Who's buying? What do they cost? How are the purchases financed?

11:00 - 11:30 a.m. - The Role of Private Lending Institutions In Financing IFQ's

Jim O'Connell - National Bank of Alaska, Anchorage
David Rogers - CFAB

Why the lack of a lien registry has hampered the financing of quota shares. Are there alternatives to a central lien registry? What other factors contribute to the lack of financing for IFQs?

11:30 - Noon - **The Role of Government Financing**

Martin Richards, Director, Div. of Investments, Ak. Dept. Commerce & Economic Development
Is the state making loans for IFQS? What is the state's perspective on the need for a centralized lien registry? Are there acceptable alternatives to a central lien registry? Are there other potential sources of financing?

12:00 - 1:15 p.m. -

Conference lunch will be served at the ANB Hall
Keynote Speaker Lt. Gov. Fran Ulmer

1:15 - 1:45 p.m. - **The IFQ Transfer Process**

Phil Smith, director, Restricted Access Management Div., NMFS
What are the mechanics of the quota share transfer process? Is the buyer adequately protected? Are quota share sellers required to disclose liens? What factors influence transferability?

1:45 - 2:15 p.m. - **The Federal Role in IFQ Transfers**

Bob Babson, General Counsel, NOAA
Why NMFS does not maintain a centralized lien registry. Is a lien registry necessary? Are there alternatives? Has NMFS developed a cost estimate for a central lien registry? What are the policy issues involved?

2:15 - 2:45 p.m. - **Should the IFQ Program be Changed?**

David Benton, Deputy Commissioner, Alaska Department of Fish and Game
Are changes necessary to make the IFQ program work for Alaska? Is financing a significant enough a concern for the state to seek amendments? What are the prospects of gaining a political consensus for amendments to the IFQ program?

2:45 - 3:15 p.m. - **IFQ's and Capital Gain Tax**

Sharon K. Elliott, Alaska Exchange Corporation
How quota share holders can trade quota share's without incurring capital gains tax. Description of 1031 tax exchanges.

3:15 - 3:30 p.m. - **BREAK**

3:30 - 4:30 p.m. - **Problems and Impediments to the Financing of IFQs**

Group session to identify impediments to IFQ financing, and discussion of process for development of an action plan.

4:30p.m. **Adjourn for the day**

WEDNESDAY, APRIL 5, 1995

8:30 - 9:00 - Identification of IFQ Focus Groups

Review of problems and impediments to IFQ financing and discussion of how to break down into focus groups.

9:00 - 11:30 - Individual Focus Group Sessions

11:30 a.m. - Noon - Reports from Focus Groups and Group Discussion

Noon - 1:00 p.m. - LUNCH

1:00 - 2:00 p.m. - Individual Focus Group Sessions

2:00 - 2:45 p.m. - Focus Group Recommendations

2:45 - 3:30 p.m. - Adoption of Conference Recommendations and Action Plan

3:30 p.m. - ADJOURN

Conference Sponsors

Alaska Longline Fishermen's Assoc.
Access Unlimited, Inc.
CFAB
Kake Tribal Corporation
National Bank of Alaska
Seafood Producers Cooperative
Trident Seafoods Corporation
Alaska Dept. of Commerce & Econ. Dev.
APICDA
Hoonah Cold Storage
Kodiak Longline Fishermen's Assoc.
Preston, Gates & Ellis
Sitka Sound Seafoods

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Agenda C-4
April 1995

April 19, 1995

Richard B. Lauber, Chairman
North Pacific Fishery Management Council
P.O. Box 10316
Anchorage, Alaska 99510

IFQ IMPLEMENTATION REPORT

Dear Mr. Lauber:

This will bring you and the Council up-to-date on the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program. The report discusses both the "numbers" and a variety of implementation policy concerns. Enforcement and regulatory issues are being dealt with separately.

As you know, there are a number of elements to the program, so if I have overlooked an item or issue that you would like to see addressed, please let me know.

INITIAL APPLICATION PROCESSING

Requests for Application (RFAs):

All persons applying for Quota Share (QS) were required to complete, and to submit, an RFA by no later than July 15, 1994. The following table (which has been presented before) summarizes the numbers of applications received:

	Halibut	Sablefish	Total
RFAs made available	7,590	1,950	9,540
RFAs undeliverable	410	70	480
RFAs duplicated (same person)	160	50	210
RFAs not returned	1,020	230	1,250
Total RFAs Returned to RAM	**5,900**	**1,700**	**7,600**

Quota Share Permits Issued:

These 7,600 RFAs each represent one application for halibut or sablefish QS (in all appropriate areas). Because each application may result in more than one type of QS permit, the following table displays statistics on QS permits that were issued (these numbers include permits issued for CDQ compensation):

	Halibut	Sablefish	Total
Blocked Permits (73%)	5,900	1,360	7,260
Unblocked Permits (27%)	1,610	1,020	2,630
Total QS Permits Issued:	**7,510**	**2,380**	**9,890**

More detailed information on initial issuance of QS (by IFQ area and residence, for instance) is available from the Division.

Initial Administrative Determinations:

The Division has issued Initial Administrative Determinations to over 1,050 persons who were not eligible to apply. An additional 250 (approximate) Initial Administrative Determinations have been (and are being) prepared to inform applicants that some (or all) of their claims can not be granted. These are issued for a variety of reasons, including late applications, vessel category claims, claimed leases of qualifying vessels, claims for additional qualifying pounds, etc. Additionally, some 120 applications have been placed in conflict as a result of more than one person claiming the same pounds from the same vessel during the same period of time (these conflicts, for the most part, involved claimed leases of vessels that are disputed by vessel owners and further involve both species).

Appeals of Initial Determinations:

A total of 38 formal appeals of Initial Determinations have been filed with the Appeals Officer. Of those, 16 have been decided (a decision has issued or is in preparation) and 22 remain in processing (awaiting hearing, awaiting a decision, awaiting additional evidence, etc.).

We expect these numbers to increase considerably in the near future. The reason is that the deadline for filing appeals is drawing near in a large number of cases in which the applicant's claims were denied by an Initial Administrative Determination.

TRANSFERS OF QUOTA SHARE

As of today (4/19/95), the Division has completed processing of over 400 QS and IFQ transfers. Attached to this memorandum is a report that displays the number of QS units that have been transferred by species and area. Additionally, the data display how many transfers have resulting in Alaskans (and non-Alaskans) receiving QS.

As you can see, there has been a net gain for Alaskan residents of some 686,000 units of sablefish QS (resulting from 19 transfers TO Alaskans v. 7 transfers FROM Alaskans to non-Alaskans) and 1,130,600 units of halibut QS (resulting from 43 transfers TO Alaskans v. 27 transfers FROM Alaskans to non-Alaskans).

The transfer data also display approved leases of QS and IFQ, as well as "sweep-up" activity under the QS block program.

In addition to the transfer data, the Division has approved the issuance of over 450 Transfer Eligibility Certificates to IFQ Crew Members (i.e., individuals who did not receive QS upon initial issuance). Of those, 77 have received QS by transfer.

REGISTERED BUYERS AND TRANSACTION TERMINALS

Landings of IFQ halibut and sablefish must be made by Registered Buyers and must be recorded using electronic transaction terminals and printers (when they work!).

During the past two months, the Division has issued 674 Registered Buyer Permits. Additionally, almost 300 electronic transaction terminals have been distributed to registered buyers, CDQ groups, harbormasters and other officials.

LANDINGS OF IFQ HALIBUT AND SABLEFISH

The attached table displays the number of vessel landings (year-to-date) by IFQ area pounds. As you can see, 422 halibut vessel landings have been made (~~96~~ ? of the halibut TAC remains to be harvested) and 275 sablefish vessel landings have been made (88% of the sablefish TAC ~~has been~~ remains to be landed. There also have been 3 vessel landings of CDQ sablefish.

In addition to the table displaying IFQ landings, we have also attached a table showing landings by port. This displays how many landings (year-to-date) of halibut and sablefish (and from which IFQ Regulatory Area) have been landed in each named port.

PUBLIC COMMUNICATIONS

Telephone Calls:

The Division maintains an "800" number, toll-free, for the convenience of the industry and the public. In the four months (November, 1994, through February, 1995) since QS has been issued, we have received calls as follows:

Month	Calls	Minutes	Hours
November	2,006	11,695	195
December	2,343	9,175	153
January	3,641	13,559	226
February	3,230	10,292	172
TOTALS	**11,220**	**44,721**	**748**

Although data on the use of the 800 number is not available after February (and does not include "regular" calls to the Division's number or to individual staff members), the volume has not recently decreased.

This volume has made reaching the Division difficult and, at times, very frustrating. In recognition of this, the Region assigned additional staff to the Division -- the purpose of which is to try to keep up with the enormous volume of public inquiries and phone calls that this new and innovative (and sometimes confusing) program has caused. We appreciate the patience that the public has displayed when busy signals or answering machines (instead of real people) are encountered.

Use of NMFS Computer Bulletin Board:

Updates of the Division's reports on transfers and landings will be placed on the NMFS Computer Bulletin Board on a weekly basis. We invite the Council and other representatives of the Industry to review those reports and to recommend (request) changes and additional information.

Analysis of IFQ Program:

We are seeking to establish an arrangement with the the State of Alaska, Commercial Fisheries Entry Commission, whereby the Commission would periodically (perhaps semi-annually) provide comprehensive analysis of the effects of the program (addressing such issues as transfer, rates of landing, etc.). Discussions have begun, but no conclusions have yet been reached.

MISCELLANEOUS IMPLEMENTATION ISSUES

Issuance of Category A (Freezer Vessel) QS:

Some concern has been expressed that more Freezer Vessel QS has been issued than had originally been identified in the Final Supplemental Environmental Impact Statement (FSEIS) provided to the Council. In response to those concerns we reviewed the initial issuance data and found that, indeed, more QS in the Freezer Vessel category had been issued than was predicted.

In a letter to Chris Oliver (March 30, 1995), Jessica Gharrett, RAM Operations Manager, provided relevant data. The data show that the FSEIS estimated that 1% of the total halibut QS would be issued in the Freezer Vessel category; in fact, 2.3% (880,398 units) was so issued. Additionally, the FSEIS estimated that 16.6% of the sablefish QS would be issued in the Freezer Vessel category; in fact, 19% (7,503,840) was so issued.

Further, Jessican's letter noted some possible explanations for the increases, as follows:

* While FSEIS data included all years, the QS issued was based upon the applicant's 5 "best" years; it is possible that category A vessels (which generally fish in deeper waters) may have been more successful than catcher vessels, resulting in differentially more "counted" category A qualifying pounds;

* Freezer Vessels were disproportionately represented by fish tickets (and pounds) that were added to the database;

* actual Freezer Vessel shares issued include CDQ compensation QS - such vessels were more likely to have CDQ compensation QS and in larger amounts than catcher vessels;

* some vessels that fished only within 3 miles (which were processor vessels whose processing activities were not elucidated on fish tickets) were, upon proper evidence, awarded Freezer Vessel QS.

With very few exceptions, the Division did not amend the "Official Record" (database) to change pre-assigned vessel categories. In fact, most requested changes were denied by Initial Administrative Determination (and at least one such Determination is now on appeal).

Requirement that Hired Skippers Fish on IFQ Holders' Vessel

To date, the Division has issued 188 IFQ Permit Cards to "Hired Skippers" (persons hired by IFQ permits holders to fish the IFQ). The Division has not examined, in each case, the question of whether or not the IFQ holder "owns" the vessel upon which the IFQ Permit Card holder will be fishing. The phrase "owns the vessel" has been variously interpreted (and no evidentiary standards have been set out) and we have been told that enforcement of the provision is a function of NOAA Enforcement Division, not the RAM Division.

However, concern has been expressed that some IFQ Permit holders may be "buying 1% of a boat" to thwart the Council's anti-leasing intent. In consideration of that concern, and if it is clearly the Council's intent that the requirement be strictly enforced, the Division is prepared to amend its practices and require that, prior to issuing a card to a non-IFQ Permit holder, the USCG Abstract of Title must be submitted and the IFQ Permit holder must be listed on the Abstract. If possible, we would also place the name of the vessel on the IFQ Permit card.

In this manner, there would be a high degree of assurance that the IFQ holder "owns the vessel" upon which the IFQ fishing is occurring.

If the Council wishes, we will implement those new procedures within the next two months.

Other Issues:

Other implementation issues were discussed in detail with the IFQ Implementation Workgroup and will be reported to the Council.

CONCLUSION

Implementing the IFQ program has been (and remains) a signifcant challenge. It is new, complex, and sometimes frustrating for the industry. Accordingly, I appreciate the patience of the fleet with the sometimes difficult issues that have been encountered in implementation.

Sincerely,

Philip J. Smith
Chief, RAM Division

National Marine Fisheries Service
P.O. 21668
Juneau Ak 99802-1668

Prepared: 19-Apr-95
Restricted Access Mgmt Division
(800) 304-4846

halibut

Transfers of Quota Shares and Individual Fishing Quota Between Alaskans and Non-Alaskans

Area	To Alaska		From Alaska		Inside Alaska		Outside Alaska		Area Totals	
	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units
2C	12	371,094	15	500,523	78	2,530,025	23	839,336	128	4,240,978
3A	24	1,903,421	6	502,972	74	4,548,622	22	2,272,717	126	9,227,732
3B	5	76,015	4	182,405	13	542,447	6	537,967	28	1,338,834
4A	1	2,294	2	46,636	5	180,110	2	42,521	10	271,561
4B	1	10,318	0	0	2	49,671	0	0	3	59,989
4C	0	0	0	0	1	18,876	0	0	1	18,876
4D	0	0	0	0	0	0	1	69,848	1	69,848
4E	0	0	0	0	0	0	0	0	0	0
T1	43	2,363,142	27	1,232,536	173	7,869,751	54	3,762,389	297	15,227,818

Leases of Quota Shares and Individual Fishing Quota Between Alaskans and Non-Alaskans

Area	To Alaska		From Alaska		Inside Alaska		Outside Alaska		Area Totals	
	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units
2C	1	29,594	1	58,629	0	0	1	3,604	3	91,827
3A	1	217,597	0	0	0	0	2	508,743	3	726,340
3B	0	0	0	0	0	0	1	114,153	1	114,153
4A	0	0	0	0	0	0	1	51,437	1	51,437
4B	0	0	0	0	0	0	0	0	0	0
4C	0	0	0	0	0	0	0	0	0	0
4D	0	0	0	0	0	0	0	0	0	0
4E	0	0	0	0	0	0	0	0	0	0
T1	2	247,191	1	58,629	0	0	5	677,937	8	983,757

National Marine Fisheries Service
P.O. 21668
Juneau Ak 99802-1668

Prepared: 19-Apr-95
Restricted Access Mgmt Division
(800) 304-4846

halibut

Sweep-ups of Quota Shares and Individual
Fishing Quota Between Alaskans and Non-Alaskans

Area	To Alaska		From Alaska		Inside Alaska		Outside Alaska		Area Totals	
	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units
2C	1	1,121	0	0	2	2,901	0	0	3	4,022
3A	0	0	0	0	2	2,590	0	0	2	2,590
3B	0	0	0	0	0	0	0	0	0	0
4A	0	0	0	0	0	0	0	0	0	0
4B	0	0	0	0	0	0	0	0	0	0
4C	0	0	0	0	0	0	0	0	0	0
4D	0	0	0	0	0	0	0	0	0	
4E	0	0	0	0	0	0	0	0	0	
T1	1	1,121	0	0	4	5,491	0	0	5	6,612

National Marine Fisheries Service
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Prepared: 19-Apr-95
Restricted Access Mgmt Division
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sablefish

Transfers of Quota Shares and Individual Fishing Quota Between Alaskans and Non-Alaskans

Area	To Alaska		From Alaska		Inside Alaska		Outside Alaska		Area Totals	
	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units
SE	9	632,144	1	116,390	33	1,773,934	11	537,843	54	3,060,311
WY	3	170,969	2	137,969	7	242,358	6	556,123	18	1,107,419
CG	5	384,312	2	45,068	9	963,385	11	881,587	27	2,274,352
WG	1	3,604	1	178,377	0	0	3	236,046	5	418,027
AI	0	0	1	35,532	1	13,500	1	9,394	3	58,426
BS	1	8,273	0	0	2	293,417	1	543	4	302,233
Tl	19	1,199,302	7	513,336	52	3,286,594	33	2,221,536	111	7,220,768

Leases of Quota Shares and Individual Fishing Quota Between Alaskans and Non-Alaskans

Area	To Alaska		From Alaska		Inside Alaska		Outside Alaska		Area Totals	
	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units
SE	1	277,429	1	110,053	0	0	1	41,633	3	429,115
WY	2	128,061	0	0	0	0	1	114,849	3	242,910
CG	1	220,443	0	0	0	0	1	72,738	2	293,181
WG	0	0	0	0	0	0	1	4,175	1	4,175
AI	0	0	0	0	0	0	2	2,187,549	2	2,187,549
BS	0	0	0	0	0	0	1	130,221	1	130,221
Tl	4	625,933	1	110,053	0	0	7	2,551,165	12	3,287,151

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sablefish

Sweep-ups of Quota Shares and Individual
Fishing Quota Between Alaskans and Non-Alaskans

Area	To Alaska		From Alaska		Inside Alaska		Outside Alaska		Area Totals	
	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units	Count	QS Units
SE	0	0	0	0	0	0	0	0	0	0
WY	0	0	0	0	0	0	0	0	0	0
CG	0	0	0	0	1	5,900	0	0	1	5,900
WG	0	0	0	0	0	0	0	0	0	0
AI	0	0	0	0	0	0	0	0	0	0
BS	0	0	0	0	0	0	0	0	0	0
Tl	0	0	0	0	1	5,900	0	0	1	5,900

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Prepared: 19-APR-95 12:17
Restricted Access Mgmt Division
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1995 Individual Fishing Quota (IFQ) Allocations and Landings

From 01-JAN-1995 through 19-APR-1995

Area	Species	Vessel Landings	Total Catch Pounds	Tac Allocation Pounds	Tac Remaining Pounds	Tac Percent Remaining
2C	halibut	218	629,914	9,000,000	8,370,086	93
3A	halibut	197	931,045	20,000,000	19,068,955	95
3B	halibut	6	21,260	3,700,000	3,678,740	99
4A	halibut	1	423	1,950,000	1,949,577	100
4B	halibut	0	0	1,848,000	1,848,000	100
4C	halibut	0	0	385,000	385,000	100
4D	halibut	0	0	539,000	539,000	100
4E	halibut	0	0	0	0	0
Total		422	1,582,642	37,422,000	35,839,358	96
SE	sablefish	138	2,369,804	12,996,900	10,627,096	82
WY	sablefish	61	1,936,199	8,586,917	6,650,718	77
WG	sablefish	67	1,034,424	15,167,648	14,133,224	93
EG	sablefish	6	67,237	4,585,568	4,518,331	99
AI	sablefish	0	0	2,910,072	2,910,072	100
BS	sablefish	3	45,341	1,410,944	1,365,603	97
Total		275	5,453,005	45,658,049	40,205,044	88

Notes:
1. This report summarizes fixed gear IFQ landings reported by Registered Buyers. At sea discards are not included.
2. Halibut weights are headed and gutted pounds. Sablefish weights are round pounds.

National Marine Fisheries Service
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1995 Community Development Quota (CDQ) Allocations and Landings

From 01-JAN-1995 through 19-APR-1995

Area	Species	Vessel Landings	Total Catch Pounds	Tac Allocation Pounds	Tac Remaining Pounds	Tac Percent Remaining
4B	halibut	0	0	462,000	462,000	100
4C	halibut	0	0	385,000	385,000	100
4D	halibut	0	0	231,000	231,000	100
4E	halibut	0	0	120,000	120,000	100
Total		0	0	1,198,000	1,198,000	100
AI	sablefish	3	32,851	727,649	694,798	95
BS	sablefish	0	0	352,800	352,800	100
Total		3	32,851	1,080,449	1,047,598	97

Notes:
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2. Halibut weights are headed and gutted pounds.
   Sablefish weights are round pounds.

National Marine Fisheries Service
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1995 Individual Fishing Quota (IFQ) Harvest by Port of Landing

From 01-JAN-1995 To 19-APR-1995

Harvest Area	Port of Landing	Vessel Landings	Total Catch Pounds	Species	% of Area
2C	AUKE BAY	1	645	halibut	0.10
	BELLINGHAM	2	1,295	halibut	0.20
	CRAIG	11	9,238	halibut	1.46
	GUSTAVUS	3	5,197	halibut	0.82
	HAINES	1	2,294	halibut	0.36
	HOONAH	17	36,539	halibut	5.76
	JUNEAU	17	56,163	halibut	8.85
	KAKE	2	8,139	halibut	1.28
	KETCHIKAN	21	54,635	halibut	8.61
	KODIAK	1	2,230	halibut	0.35
	PELICAN	17	58,636	halibut	9.24
	PETERSBURG	51	251,274	halibut	39.59
	PRINCE RUPERT	2	25,147	halibut	3.96
	SEATTLE	2	4,527	halibut	0.71
	SEWARD	1	7,865	halibut	1.24
	SITKA	65	84,870	halibut	13.37
	WRANGELL	4	21,753	halibut	3.43
	YAKUTAT	1	4,284	halibut	0.67
	Area Total	219	634,731		100.00
3A	ANCHORAGE	2	3,093	halibut	0.33
	BELLEVUE	1	3,122	halibut	0.34
	CORDOVA	15	49,340	halibut	5.30
	HOMER	23	48,237	halibut	5.18
	HOONAH	3	24,760	halibut	2.66
	JUNEAU	1	87	halibut	0.01
	KENAI	2	9,814	halibut	1.05
	KODIAK	28	99,864	halibut	10.73
	NIKISKI	1	71	halibut	0.01
	NINILCHIK	1	3,524	halibut	0.38
	PELICAN	9	35,431	halibut	3.81
	PETERSBURG	4	63,150	halibut	6.78
	SEATTLE	2	38,605	halibut	4.15
	SEWARD	71	374,317	halibut	40.20
	SEWARD NORTH DOCK	1	324	halibut	0.03
	SITKA	7	45,421	halibut	4.88
	VALDEZ	3	17,541	halibut	1.88
	YAKUTAT	23	114,344	halibut	12.28
	Area Total	197	931,045		100.00
3B	BELLEVUE	1	9,365	halibut	30.53
	KODIAK	3	21,310	halibut	69.47
	Area Total	4	30,675		100.00

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1995 Individual Fishing Quota (IFQ) Harvest by Port of Landing

From 01-JAN-1995 To 19-APR-1995

Harvest Area	Port of Landing	Vessel Landings	Total Catch Pounds	Species	% of Area
4A	DUTCH HARBOR	1	423	halibut	100.00
	Area Total	1	423		100.00
BS	DUTCH HARBOR	3	45,341	sablefish	100.00
	Area Total	3	45,341		100.00
CG	CORDOVA	1	8,004	sablefish	0.77
	DUTCH HARBOR	3	187,490	sablefish	18.13
	HOMER	4	3,469	sablefish	0.34
	KODIAK	15	289,913	sablefish	28.03
	SEWARD	42	512,886	sablefish	49.58
	VALDEZ	1	32,641	sablefish	3.16
	Area Total	66	1,034,403		100.00
SE	BELLINGHAM	2	17,381	sablefish	0.73
	CRAIG	1	20,224	sablefish	0.85
	DUTCH HARBOR	2	6,885	sablefish	0.29
	HOMER	1	35,076	sablefish	1.47
	HOONAH	11	110,155	sablefish	4.62
	JUNEAU	4	48,665	sablefish	2.04
	KETCHIKAN	5	59,859	sablefish	2.51
	PELICAN	25	328,346	sablefish	13.76
	PETERSBURG	13	401,557	sablefish	16.83
	PRINCE RUPERT	2	61	sablefish	0.00
	SEATTLE	3	29,018	sablefish	1.22
	SEWARD	1	7,759	sablefish	0.33
	SITKA	68	1,273,797	sablefish	53.40
	YAKUTAT	2	46,611	sablefish	1.95
	Area Total	140	2,385,394		100.00
WG	DUTCH HARBOR	6	67,237	sablefish	100.00
	Area Total	6	67,237		100.00
WY	CORDOVA	4	107,808	sablefish	5.47
	DUTCH HARBOR	2	38,738	sablefish	1.97
	HOMER	1	40,886	sablefish	2.08
	KENAI	3	98,152	sablefish	4.98
	KODIAK	3	37,086	sablefish	1.88
	PELICAN	2	8,283	sablefish	0.42
	PETERSBURG	1	6,000	sablefish	0.30

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1995 Individual Fishing Quota (IFQ) Harvest by Port of Landing

From 01-JAN-1995 To 19-APR-1995

Harvest Area	Port of Landing	Vessel Landings	Total Catch Pounds	Species	% of Area
WY	SEATTLE	1	4,151	sablefish	0.21
	SEWARD	19	724,878	sablefish	36.81
	SITKA	1	74,781	sablefish	3.80
	YAKUTAT	24	828,654	sablefish	42.08
	Area Total	61	1,969,417		100.00

Landing Summary:

Total Landings	Total Catch Pounds	Species
421	1,596,874	halibut
276	5,501,792	sablefish

Notes:
1. This report summarizes fixed gear IFQ landings reported by Registered Buyers. At sea discards are not included.
2. Halibut weights are headed and gutted pounds.
   Sablefish weights are round pounds.

IFQ INDUSTRY IMPLEMENTATION MEETING MINUTES
APRIL 5-6, 1995

The IFQ Industry Implementation Team (Team) met April 5 - 6, 1995 to discuss the issues identified below. Present for the meeting were Kris Norosz (Chair), Don Iverson, Harold Thompson, Perfenia Pletnikoff, Jr., Linda Kozak, Drew Scalzi, John Woodruff, Jack Phillips, and John Bruce. Jack Knudsen and Jeff Stephan were absent.

Also present were Jane DiCosimo (Council staff), John Lepore, Jay Ginter, Phil Smith, Jesse Gharett, Shawn Carey, Frank Pfeiffer, Steve Meyer, Jeff Passer (all of NMFS), Heather Gilroy (IPHC), Earl Krygier and Bruce Simonson (ADF&G), Capt. Bill Anderson and Lt. Cmdr. Walt Hunnings (D17 USCG), Dick Tremaine and C.J. Zane.

- IFQ fishing in multiple areas. The Team discussed enforcement and biological concerns of vessels fishing their IFQ in one area and moving to another area to fish that associated IFQ. They discussed that this problem is more prevalent in the Bering Sea, observers are not on all vessels, and vessels have incentives (e.g., time, money, fuel) to fish in one area and report the catch as coming from another; however, the disincentive was potential loss of their QS.

  MOTION: Recommend to the Council a 2-year exemption from § 676.16(d) for all vessels, except for halibut in Area 4, requiring vessels to keep logbooks on a timely basis and notification of NMFS prior to a trip where multiple regulatory areas will be fished. (Passed 7:2)

  MOTION: Recommend to the Council that an options paper be developed for potential IFQ changes, and to include the above recommendation as a preferred option for one of the management actions. (Passed unanimously)

- Offloading of freezer boats between areas The Team expressed concern over a requirement for freezer boats to offload when transiting between areas. Freezer vessels generally would not come ashore and offload until a full van or container was been caught. See above actions.

- Coordinate between registered buyer permit and Federal processor permit (IFQ Program and Research Plan). The Team discussed at length the required procedure for tracking IFQ product through to the final purchaser. Industry commented that the required paperwork for tracking each sale was burdensome.

  MOTION: Recommend that the regulations be clarified so that the first recipient of IFQ landings be designated the registered buyer in transactions between two registered buyers. (Passed unanimously)

- QS caps The Team discussed the QS use cap, the vessel cap, and the restriction on holding more than two blocks which applies to "persons, individually and collectively." This provision's limitation on ownership, particularly when coupled with the block restriction, should be reviewed. An individual who was a member of multiple corporations and was at his/her block cap would limit all his/her corporations from increasing their QS. The Team agreed that the block cap was the most restrictive to fishermen. A change would require a regulatory amendment.

  MOTION: Recommend to the Council a review of block caps, changing "individually or collectively" language to "person" as written in the FMP. (Failed 4:5)

- Vessel caps and use caps. The Team agreed that these caps may be set too low to allow efficient use of IFQ, especially for specific IFQ regulatory areas (e.g., halibut regulatory areas 4A through 4E). This situation is exacerbated further by the deduction of the CDQ allotment from the total amount, rather than the gross total, used to determine the cap. A significant economic disadvantage occurs to those at their vessel or use caps; many blocks are too small to be harvested. An interpretive rule may clarify the ambiguity regarding the CDQ deduction in calculating vessel/use caps.

MOTION: Recommend to the Council including a review of ownership caps of ½, 1, and 2 percent (and their 1995 poundage equivalent) in a discussion paper; with the preference of the Team reestablishing historic catch levels as an upper limit. (Passed unanimously)

The Team also expressed concern that vessel limits are currently calculated with the CDQ allocation removed, resulting in a lower percentage to the QS holder. The Team felt that the regulation should be changed to deduct the CDQ allocation prior to calculating vessel limits.

MOTION: Recommend to the Council that § 676.22(h) be clarified so that vessel limitations be based on combined total catch limits, with CDQ apportionments removed from the calculation. (Passed unanimously)

- Eliminate certified mail requirements. The Team agreed with Restricted Access Management's request to eliminate the requirement that certain routine mailings (e.g., IFQ crewmember certificates, etc.) be sent certified to reduce costs.

  MOTION: Recommend to the Council that certified mail requirements be eliminated. (Passed unanimously)

- Prohibit sub-leasing of QS or IFQ. The Team discussed the current regulations (§676.21(g)) which could be construed to allow a lessee to become a sub-lessor. The regulations could be clarified regarding the issue of leasing QS (as provided in the regulations) and receiving the resulting IFQ, as opposed to leasing IFQ (which is not provided for in the regulations).

  MOTION: Recommend to the Council that: (a) only a QS holder can lease QS (i.e., no sub-leasing); and (b) clarify leasing of QS, not IFQ. (Passed unanimously)

- Adjustment policy The Team discussed using the "Canadian System" for overages, particularly a fixed pound exception. Changes to the regulations would allow underages of 10 % of a person's total IFQ and overages up to 10 % of a person's remaining IFQ account prior to their final landing.

  Recommendation: The Team agreed with changing the overage application.

- Fair start provision. Capt. Anderson raised whether the fair start continues to be necessary under the IFQ program. The Team discussed the need for the 72 hour fair start provision with the extended IFQ season, but reiterated that they supported continuation of the provision since the original reasons for concern remained. They acknowledged that the penalty schedule, requiring a penalty of foregoing the remainder of the IFQ season, now ten months, needs revision.

  MOTION: Recommend to the Council that the fair start provision be maintained, and direct staff to adopt language similar to IPHC language requiring offloading or hold inspection if a vessel chooses to fish in the 72 hours prior to the start of the IFQ season. (Passed unanimously)

- Discretion to allow temporary transfers for emergency circumstances. The Team discussed the need for temporary emergency transfers of QS due to death or serious injury to QS owner; currently there is no administrative discretion to grant a temporary transfer to alleviate an emergency circumstance. The Team expressed great concern that flagrant abuses of the CFEC system should be avoided under the IFQ program; however, they recognized that genuine emergencies do arise.

  MOTION: Recommend to the Council that in concurrence with CFEC rules, a surviving spouse or immediate family member may get transfer rights of QS for up to three years with the broadest allowance (e.g., leasing, hiring skipper). (Passed unanimously)

The Team subsequently appointed a subcommittee of Drew Scalzi, Harold Thompson, and Perfenia Pletnikoff to produce a statement of intent in regards to emergency transfers.

MOTION: Recommend to the Council the following policy statement:
"If a person can demonstrate to the Regional Director that due to some unforeseen accident, injury, or illness, he has been rendered incapacitated in his ability to longline, he may be allowed a one-time medical transfer provided the RD feels there is insufficient time before the season's closure for recovery to harvest all or part of his quota share. Consideration by the RD will take into account vessel size and fall weather limitations, accordingly.

Medical documentation shall be satisfactory to NMFS in making impairment determination. Chronic injuries such as "bad backs," or aging ailments such as arthritic crippling, loss of vision or hearing, do not constitute grounds for medical transfer. Incarceration does not constitute grounds for medical transfer. The one-rime transfer provision may last for a period of no more than two fishing seasons. Decisions by the RD to allow transfers are final and not subject to further appeal.

Justification: The integrity of the IFQ system. If we can not produce a mechanism for medical transfer that has clear legitimacy, then the Council should consider either no transfer of QS or revisit leasing as a provision." (Passed unanimously)

MOTION: Recommend that the emergency transfer involve IFQ and not QS. (Passed unanimously)

- Early season opening for sablefish. The Team spent considerable time discussing this item and listed a number of factors related to an early sablefish opening: extended IFQ harvesting season, hiring out to harvest additional CDQ along with their IFQ QS, general stock decline concerns, marketing advantage to first fish in, concerns of fishing in spawning stock early in the season, Council's intent on mimicking historical fishing practices, anticipated low halibut bycatch, and interest in concurrent opening with halibut. The Team ultimately recommended no action on this item, deferring to their previous motion of not supporting this amendment. They recommended tabling this item, and reevaluating it at the end of the first season. They noted that Alternative 3 in the issues paper would allow for an extension of the fishing season so that if the Council chooses, the BSAI fleet would be allowed sufficient time to harvest their QS.

  The Team expressed concern over the general decline of sablefish stocks in the Gulf of Alaska and Bering Sea/Aleutian Islands. Team members cited the current low catches in the eastern Bering Sea, which are well below historical levels of the 1960s. The low catch levels since 1977 have been attributed to low stock abundance and catch restrictions placed on foreign fishing. The Team requested that NMFS provide a briefing on the sablefish decline and potential effects of an early season opening at the next Team meeting.

- Crew members using QS on vessels The Team discussed situations where a crew member acquired QS, but was unable to use it on his regular fishing vessel because the vessel was at its cap. The Team acknowledged that he was free to use his QS on another vessel and that the system was working to prevent consolidation.

  Recommendation: No change.

- Vessel ownership requirements for leasing The Team discussed the ability for an individual to take part ownership in a vessel (say, for as little as $10) in order to hire a vessel and skipper to fish his QS. The Team discussed "controlling interest" (e.g., 51%) or other requirements to prevent "paper" ownership to circumvent Council intent. They recognized a potential problem where these transactions are currently legal, and would negatively impact numerous individuals who are currently in such arrangements.

  MOTION: The Team is concerned that a loophole exists which allows leasing in perpetuity by initial recipients due to inexact language related to ownership of vessels on which QS is fished. (Passed 7:1:1)

- Shipping reports The Team discussed issues related to shipping reports, i.e., being legally responsible for IFQ fish that are no longer within the physical control of the initial recipient. Currently, the entity that completes and files the shipping report, i.e., the initial recipient of the IFQ product, is responsible for that IFQ product, no matter how many hands it passes through while in the State of Alaska. The Team discussed the need to monitor sales as a deterrent to cheating. They recommended that notification be given to Enforcement prior to shipping to monitor incoming and outgoing shipments; and original shipping report accompany shipments as a tie back to original shipper. The Team discussed the difficulty of these requirements on shippers who make changes to shipping manifestos due to unforeseen changes in plane or container capacities or buyer needs. The Team discussed the possibility of using a weekly summary of sales, in lieu of individual shipping reports for each sale, to notify Enforcement of IFQ shipments.

  MOTION: Report to the Council that Enforcement and processors will meet to address shipping reports prior to the April Council meeting. (Passed unanimously)

- Transhipments The Team discussed delivery of processed product between vessels.

  MOTION: Report that the Team had no changes to the 24 hour notice of transhipments to Enforcement, but recommended clarification of language and procedures (including FAX) whereby agents can notify Enforcement on behalf of the owner/operator and captain of the transhipping vessel. (Passed unanimously)

- Sweep-up provisions The Team discussed revising the sweep-up provisions since too many small pieces in all vessel categories have been found to be unfishable and unmarketable. Alternatives to be considered include analyzing a range of 1,000 - 10,000 lb for all categories or different levels for each category. A review of the database of unused QS at the end of the season should be undertaken to determine other appropriate levels for analysis.

  MOTION: Recommend that the Council initiate a review to increase the sweep-up provision for halibut and sablefish in an options paper. (Passed unanimously)

- Block Program The Team discussed whether to recommend exempting Area 4 from the block provisions. A motion was made and withdrawn.

- The Team received as information items, reports on:

The need to clarify and distinguish between the "prelanding written clearance" and the "preclearance report" has been changed in the omnibus final rule. § 676.17(a) is expanded to 3 separate paragraphs for clearer information on meeting the requirements and the "preclearance report" is renamed the "departure report."

An explanation has been added to the omnibus final rule (§ 676.17(a)) that clarifies that waters in or adjacent to the State of Alaska refers to the waters inside Alaska, the territorial sea of Alaska, and the EEZ that extends beyond the waters inside and the territorial sea of Alaska.

§ 676.16(o) will need to be deleted (or revised) for Amendments 33/37. This prohibition currently provides that a vessel cannot act as a catcher vessel and a freezer vessel during the same trip. Amendments 33/37 will allow limited processed product to be onboard while sablefish catcher vessel IFQ is being used.

More specificity was added to the omnibus final rule concerning transshipment reports § 676.14(e). The regulations provide that a person must receive authorization from a clearing officer for each instance of transshipment by at least 24 hours.

IFQ INDUSTRY IMPLEMENTATION MEETING MINUTES
APRIL 5-6, 1995

The IFQ Industry Implementation Team (Team) met April 5 - 6, 1995 to discuss the issues identified below. Present for the meeting were Kris Norosz (Chair), Don Iverson, Harold Thompson, Perfenia Pletnikoff, Jr., Linda Kozak, Drew Scalzi, John Woodruff, Jack Phillips, and John Bruce. Jack Knudsen and Jeff Stephan were absent.

Also present were Jane DiCosimo (Council staff), John Lepore, Jay Ginter, Phil Smith, Jesse Gharett, Shawn Carey, Frank Pfeiffer, Steve Meyer, Jeff Passer (all of NMFS), Heather Gilroy (IPHC), Earl Krygier and Bruce Simonson (ADF&G), Capt. Bill Anderson and Lt. Cmdr. Walt Hunnings (D17 USCG), Dick Tremaine and C.J. Zane.

- IFQ fishing in multiple areas The Team discussed enforcement and biological concerns of vessels fishing their IFQ in one area and moving to another area to fish that associated IFQ. They discussed that this problem is more prevalent in the Bering Sea, observers are not on all vessels, and vessels have incentives (e.g., time, money, fuel) to fish in one area and report the catch as coming from another; however, the disincentive was potential loss of their QS.

  MOTION: Recommend to the Council a 2-year exemption from § 676.16(d) for all vessels, except for halibut in Area 4, requiring vessels to keep logbooks on a timely basis and notification of NMFS prior to a trip where multiple regulatory areas will be fished. (Passed 7:2)

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- Offloading of freezer boats between areas The Team expressed concern over a requirement for freezer boats to offload when transiting between areas. Freezer vessels generally would not come ashore and offload until a full van or container was been caught. See above actions.

- Coordinate between registered buyer permit and Federal processor permit (IFQ Program and Research Plan). The Team discussed at length the required procedure for tracking IFQ product through to the final purchaser. Industry commented that the required paperwork for tracking each sale was burdensome.

  MOTION: Recommend that the regulations be clarified so that the first recipient of IFQ landings be designated the registered buyer in transactions between two registered buyers. (Passed unanimously)

- QS caps The Team discussed the QS use cap, the vessel cap, and the restriction on holding more than two blocks which applies to "persons, individually and collectively." This provision's limitation on ownership, particularly when coupled with the block restriction, should be reviewed. An individual who was a member of multiple corporations and was at his/her block cap would limit all his/her corporations from increasing their QS. The Team agreed that the block cap was the most restrictive to fishermen. A change would require a regulatory amendment.

  MOTION: Recommend to the Council a review of block caps, changing "individually or collectively" language to "person" as written in the FMP. (Failed 4:5)

- Vessel caps and use caps. The Team agreed that these caps may be set too low to allow efficient use of IFQ, especially for specific IFQ regulatory areas (e.g., halibut regulatory areas 4A through 4E). This situation is exacerbated further by the deduction of the CDQ allotment from the total amount, rather than the gross total, used to determine the cap. A significant economic disadvantage occurs to those at their vessel or use caps; many blocks are too small to be harvested. An interpretive rule may clarify the ambiguity regarding the CDQ deduction in calculating vessel/use caps.

MOTION: Recommend to the Council including a review of ownership caps of ½, 1, and 2 percent (and their 1995 poundage equivalent) in a discussion paper, with the preference of the Team reestablishing historic catch levels as an upper limit. (Passed unanimously)

The Team also expressed concern that vessel limits are currently calculated with the CDQ allocation removed, resulting in a lower percentage to the QS holder. The Team felt that the regulation should be changed to deduct the CDQ allocation prior to calculating vessel limits.

MOTION: Recommend to the Council that § 676.22(h) be clarified so that vessel limitations be based on combined total catch limits, with CDQ apportionments removed from the calculation. (Passed unanimously)

- Eliminate certified mail requirements. The Team agreed with Restricted Access Management's request to eliminate the requirement that certain routine mailings (e.g., IFQ crewmember certificates, etc.) be sent certified to reduce costs.

  MOTION: Recommend to the Council that certified mail requirements be eliminated. (Passed unanimously)

- Prohibit sub-leasing of QS or IFQ. The Team discussed the current regulations (§676.21(g)) which could be construed to allow a lessee to become a sub-lessor. The regulations could be clarified regarding the issue of leasing QS (as provided in the regulations) and receiving the resulting IFQ, as opposed to leasing IFQ (which is not provided for in the regulations).

  MOTION: Recommend to the Council that: (a) only a QS holder can lease QS (i.e., no sub-leasing); and (b) clarify leasing of QS, not IFQ. (Passed unanimously)

- Adjustment policy The Team discussed using the "Canadian System" for overages, particularly a fixed pound exception. Small QS holders (e.g., 50 lb) are currently allowed to land an overage of 400 lb on their 50 lb IFQ. No change would occur to the underage of 10% of his/her total IFQ, but a change is recommended for limiting overages to 10% of the remainder of IFQ on his/her final trip of the season. This eliminates the possibility of a individual with 50 lb QS from landing 400 lb and counting the overage against future years' QS.

  Recommendation: The Team agreed with changing the overage application.

- Fair start provision. Capt. Anderson raised whether the fair start continues to be necessary under the IFQ program. The Team discussed the need for the 72 hour fair start provision with the extended IFQ season, but reiterated that they supported continuation of the provision since the original reasons for concern remained. They acknowledged that the penalty schedule, requiring a penalty of foregoing the remainder of the IFQ season, now ten months, needs revision.

  MOTION: Recommend to the Council that the fair start provision be maintained, and direct staff to adopt language similar to IPHC language requiring offloading or hold inspection if a vessel chooses to fish in the 72 hours prior to the start of the IFQ season. (Passed unanimously)

- Discretion to allow temporary transfers for emergency circumstances. The Team discussed the need for temporary emergency transfers of QS due to death or serious injury to QS owner; currently there is no administrative discretion to grant a temporary transfer to alleviate an emergency circumstance. The Team expressed great concern that flagrant abuses of the CFEC system should be avoided under the IFQ program; however, they recognized that genuine emergencies do arise.

  MOTION: Recommend to the Council that in concurrence with CFEC rules, a surviving spouse or immediate family member may get transfer rights of QS for up to three years with the broadest allowance (e.g., leasing, hiring skipper). (Passed unanimously)

The Team subsequently appointed a subcommittee of Drew Scalzi, Harold Thompson, and Perfenia Pletnikoff to produce a statement of intent in regards to emergency transfers.

> **MOTION**: Recommend to the Council the following policy statement:
> "If a person can demonstrate to the Regional Director that due to some unforeseen accident, injury, or illness, he has been rendered incapacitated in his ability to longline, he may be allowed a one-time medical transfer provided the RD feels there is insufficient time before the season's closure for recovery to harvest all or part of his quota share. Consideration by the RD will take into account vessel size and fall weather limitations, accordingly.
>
> Medical documentation shall be satisfactory to NMFS in making impairment determination. Chronic injuries such as "bad backs," or aging ailments such as arthritic crippling, loss of vision or hearing, do not constitute grounds for medical transfer. Incarceration does not constitute grounds for medical transfer. The one-rime transfer provision may last for a period of no more than two fishing seasons. Decisions by the RD to allow transfers are final and not subject to further appeal.
>
> Justification: The integrity of the IFQ system. If we can not produce a mechanism for medical transfer that has clear legitimacy, then the Council should consider either no transfer of QS or revisit leasing as a provision." (Passed unanimously)
>
> **MOTION**: Recommend that the emergency transfer involve IFQ and not QS. (Passed unanimously)

- Early season opening for sablefish. The Team spent considerable time discussing this item and listed a number of factors related to an early sablefish opening: extended IFQ harvesting season, hiring out to harvest additional CDQ along with their IFQ QS, general stock decline concerns, marketing advantage to first fish in, concerns of fishing in spawning stock early in the season, Council's intent on mimicking historical fishing practices, anticipated low halibut bycatch, and interest in concurrent opening with halibut. The Team ultimately recommended no action on this item, deferring to their previous motion of not supporting this amendment. They recommended tabling this item, and reevaluating it at the end of the first season. They noted that Alternative 3 in the issues paper would allow for an extension of the fishing season so that if the Council chooses, the BSAI fleet would be allowed sufficient time to harvest their QS.

  The Team expressed concern over the general decline of sablefish stocks in the Gulf of Alaska and Bering Sea/Aleutian Islands. Team members cited the current low catches in the eastern Bering Sea, which are well below historical levels of the 1960s. The low catch levels since 1977 have been attributed to low stock abundance and catch restrictions placed on foreign fishing. The Team requested that NMFS provide a briefing on the sablefish decline and potential effects of an early season opening at the next Team meeting.

- Crew members using QS on vessels The Team discussed situations where a crew member acquired QS, but was unable to use it on his regular fishing vessel because the vessel was at its cap. The Team acknowledged that he was free to use his QS on another vessel and that the system was working to prevent consolidation.

  Recommendation: No change.

- Vessel ownership requirements for leasing The Team discussed the ability for an individual to take part ownership in a vessel (say, for as little as $10) in order to hire a vessel and skipper to fish his QS. The Team discussed "controlling interest" (e.g., 51%) or other requirements to prevent "paper" ownership to circumvent Council intent. They recognized a potential problem where these transactions are currently legal, and would negatively impact numerous individuals who are currently in such arrangements.

  MOTION: The Team is concerned that a loophole exists which allows leasing in perpetuity by initial recipients due to inexact language related to ownership of vessels on which QS is fished. (Passed 7:1:1)

- Shipping reports The Team discussed issues related to shipping reports, i.e., being legally responsible for IFQ fish that are no longer within the physical control of the initial recipient. Currently, the entity that completes and files the shipping report, i.e., the initial recipient of the IFQ product, is responsible for that IFQ product, no matter how many hands it passes through while in the State of Alaska. The Team discussed the need to monitor sales as a deterrent to cheating. They recommended that notification be given to Enforcement prior to shipping to monitor incoming and outgoing shipments; and original shipping report accompany shipments as a tie back to original shipper. The Team discussed the difficulty of these requirements on shippers who make changes to shipping manifestos due to unforeseen changes in plane or container capacities or buyer needs. The Team discussed the possibility of using a weekly summary of sales, in lieu of individual shipping reports for each sale, to notify Enforcement of IFQ shipments.

  MOTION: Report to the Council that Enforcement and processors will meet to address shipping reports prior to the April Council meeting. (Passed unanimously)

- Transhipments The Team discussed delivery of processed product between vessels.

  MOTION: Report that the Team had no changes to the 24 hour notice of transhipments to Enforcement, but recommended clarification of language and procedures (including FAX) whereby agents can notify Enforcement on behalf of the owner/operator and captain of the transhipping vessel. (Passed unanimously)

- Sweep-up provisions The Team discussed revising the sweep-up provisions since too many small pieces in all vessel categories have been found to be unfishable and unmarketable. Alternatives to be considered include analyzing a range of 1,000 - 10,000 lb for all categories or different levels for each category. A review of the database of unused QS at the end of the season should be undertaken to determine other appropriate levels for analysis.

  MOTION: Recommend that the Council initiate a review to increase the sweep-up provision for halibut and sablefish in an options paper. (Passed unanimously)

- Block Program The Team discussed whether to recommend exempting Area 4 from the block provisions. A motion was made and withdrawn.

- The Team received as information items, reports on:

The need to clarify and distinguish between the "prelanding written clearance" and the "preclearance report" has been changed in the omnibus final rule. § 676.17(a) is expanded to 3 separate paragraphs for clearer information on meeting the requirements and the "preclearance report" is renamed the "departure report."

An explanation has been added to the omnibus final rule (§ 676.17(a)) that clarifies that waters in or adjacent to the State of Alaska refers to the waters inside Alaska, the territorial sea of Alaska, and the EEZ that extends beyond the waters inside and the territorial sea of Alaska.

§ 676.16(o) will need to be deleted (or revised) for Amendments 33/37. This prohibition currently provides that a vessel cannot act as a catcher vessel and a freezer vessel during the same trip. Amendments 33/37 will allow limited processed product to be onboard while sablefish catcher vessel IFQ is being used.

More specificity was added to the omnibus final rule concerning transshipment reports § 676.14(e). The regulations provide that a person must receive authorization from a clearing officer for each instance of transshipment by at least 24 hours.

Report of the Enforcement Committee
North Pacific Fishery Management Council
April 18, 1995

The Council's Enforcement Committee met on April 18, 1995 to discuss management issues before the Council at their April meeting. Committee members in attendance were: Ron Hegge (Chairman), Capt. Bill Anderson, Sue Salveson, Steve Meyer, and Bill Karp. Others in attendance were Jane DiCosimo (NPFMC) and Ron Berg (NOAA).

- **(C-4) IFQ Implementation Team items**

IFQ fishing in multiple areas - The Enforcement Committee emphasized the need to identify catch on board with location of fishing activity, and supports the current program of offloading prior to fishing in another fishing area. Enforcement has liberally interpreted "operating" to mean "fishing" in § 676.16(d) to accommodate those vessels transiting from a fishing area to landing points. They discussed their concern that under the IFQ program, fishermen have an economic incentive to fish illegally in areas near their home port for small amounts of IFQ in distant areas. They discussed the need to identify catch with its area of take for developing IPHC stock assessments and TAC setting.

They reviewed the Industry Implementation Team's recommendations. They discussed that "timely basis" was not sufficiently specific; the lack of verification of actual location of fishing activity; the lower rate of observer coverage on catcher vessels for verification; lack of access to vessel equipment for and knowledge of observers to absolutely identify fishing location; and the loss of safeguards changes to the original restriction places on the integrity of the IFQ program.

The Committee agreed that easing the 671.16(d) restrictions would result in groundfish/halibut logbooks and catcher/processor reports being used to verify that locations of IFQ fishing are consistent with quotas issued. However, halibut logbooks are not required to be filled out until 24 hours after the fishery each day fished and prior to offloading. For sablefish, one alternative that could be considered is examining the differences between processor and catcher requirements. The additional management requirements currently placed on processors (e.g., processor reports, logbooks, observer coverage) in the sablefish fishery provide increased ability to verify fishing locations with IFQ catch.

Offloading of freezer boats between areas - Hold inspections for freezer vessels to certify poundage onboard before fishing in another area was discussed. Hold inspections, particularly for vessels with large quantities of product onboard are laborious and time-consuming. For this reason, it was agreed that inspection dockside, an alternative to offload, is impractical.

Fair start provision - Based on observations in 1995, the Committee indicated that the usefulness of the fair start provision may be no longer necessary under the IFQ program. Industry representatives at the IFQ Industry Implementation Team meeting indicated that 1995 may have not provided a true indicator of need, however, because of bad weather. If retained, the regulations should be made consistent with the IPHC halibut regulations whereby no vessel using set gear in the BSAI/GOA areas 72 hours prior to the IFQ season may be used to conduct directed fishing for sablefish during such season until that vessel has removed all set line gear from the water and has either made a landing and completely offloaded.

Early sablefish season opening - The Committee discussed that the TAC would not yet be determined nor would the IFQ, certificate, and card be issued under an early sablefish opening. They expressed concern over the lack of weighing and reporting requirements in the IFQ program, particularly in this fishery. They

identified concerns related to inconsistency between State and Federal management restrictions on sablefish including avoidance of the 2% Research Plan fee by claiming State water landings and emphasized that inconsistency between the two programs hampers enforcement.

- **C-6 Observer Program**

The Committee reviewed the letter from Dr. Bill Karp and Special Agent-in-Charge Steve Meyer to Chairman Ron Hegge regarding Observer Program compliance monitoring. The Committee expressed satisfaction that the committee contributed to greater communication between the Observer Program and NMFS Enforcement in addressing these issues.

- **D-1 Scallop Management**

The Committee emphasized the need for consistent management (openings/closings) between the State and Federal zones under any scallop management program would enhance effectiveness of enforcement.

- **D-2(a) Chinook Salmon Bycatch; D-2(b) Crab Bycatch Management and Rebuilding; and D-2(f) BSAI Pollock Midwater Trawl Fishery**

The Committee recognized that the Council must weigh effectiveness of enforcement against economic impacts of fishing restrictions, but emphasized that closures to all trawling are most enforceable compared with closures to bottom, mid-water, or pelagic trawling.

- **D2(d) Halibut Grid-sorting Amendment**

The committee confirmed their earlier comments regarding the grid-sorting proposal, recognizing that grid welding requirements were unlikely.

National Marine Fisheries Service
P[illegible]. 21668
[illegible]eau Ak 99802-1668

Prepared: 12-APR-95 12:44
Restricted Access Mgmt Division
(800) 304-4846

1995 Individual Fishing Quota (IFQ) Allocations and Landings

Area	Species	<-- Year to Date ---> Landings	Total Catch Pounds	<---------- Tac ----------> Allocation Pounds	Remaining Pounds	Percent Remaining
2C	halibut	154	429,433	9,000,000	8,570,567	95
3A	halibut	141	718,992	20,000,000	19,281,008	96
3B	halibut	1	4,561	3,700,000	3,695,439	100
4A	halibut	1	423	1,950,000	1,949,577	100
4B	halibut	0	0	1,848,000	1,848,000	100
4C	halibut	0	0	385,000	385,000	100
4D	halibut	0	0	539,000	539,000	100
4E	halibut	0	0	0	0	0
Total		297	1,153,409	37,422,000	36,268,591	97
SE	sablefish	103	1,877,072	12,996,900	11,119,828	86
WY	sablefish	42	1,210,048	8,586,917	7,376,869	86
CG	sablefish	44	712,660	15,167,648	14,454,988	95
WG	sablefish	2	14,666	4,585,568	4,570,902	100
AI	sablefish	0	0	2,910,072	2,910,072	100
[illegible]	sablefish	2	29,578	1,410,944	1,381,366	98
Total		193	3,844,024	45,658,049	41,814,025	92

Notes:
1. This report summarizes fixed gear IFQ landings reported by Registered Buyers. At sea discards are not included.
2. Halibut weights are headed and gutted pounds.
   Sablefish weights are round pounds.

Alliance Against
IFQs 4/21/95
Paul Seaton

? STEWARDSHIP ? UNDER IFQS

PROPOSALS BY INDUSTRY AND ACTIONS BY AGENCIES DIRECTLY RELATED TO HALIBUT AND SABLEFISH IFQs

==========

Legalization of crucifiers

Exemption of both IFQ and State water sablefish fisheries from the halibut prohibited species bycatch cap - under generally unobserved conditions. (39% no observers, 40% of vessels have only 30% observer coverage)

Recommendation of IPHC Conference Board and establishment of catch quota above recommended 30% maximum exploitation rate.

IFQ Regulations allowing catch and sale of 10% overage on last trip or 400 pounds without any consideration within the 30% harvest rate. (Over 1/2 of the QS blocks are under 1000 lbs. - 400 lbs. represents a 400% overharvest for a 100 lb. block.)

Highgrading was identified in EIS as significant factor under IFQs but no compensation was built into the 30% harvest rate.

The IFQ plan provides for a State sablefish fishery but NMFS allocated 100% of the combined waters TAC to IFQ holders, disregarding the 15% reserve established by the NPFMC, so all state waters fish are above the TAC (1995 TAC = ABC) .

Proposal to reclassify Thornyhead rockfish into "other rockfish" category so they can be IFQ fished to low levels, in fact to extinction, without triggering an overfishing definition.

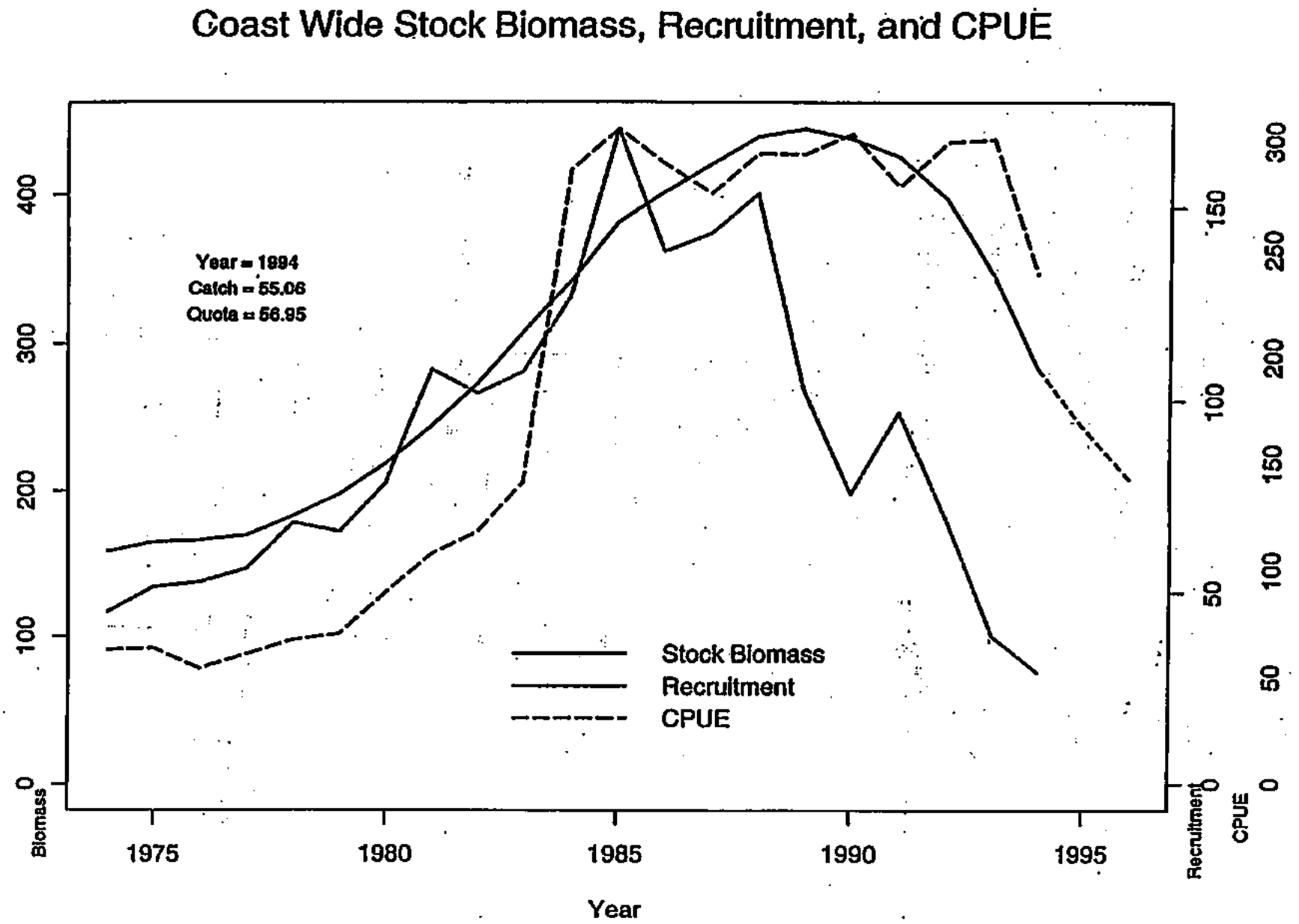

Figure 2. Biomass (Mil. Pounds), Recruitment (Mil. Pounds), CPUE (Pounds/Skate)

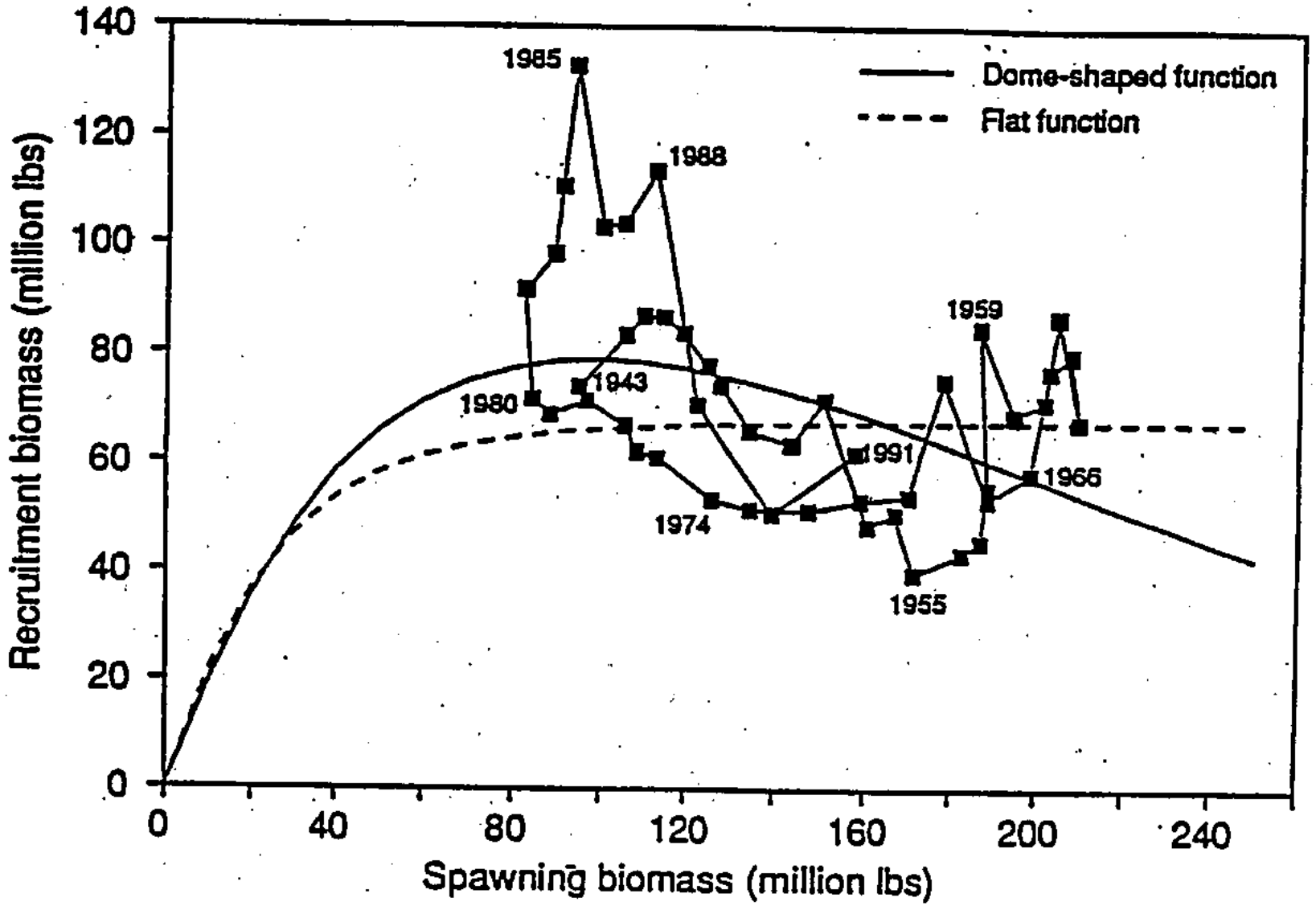
Dome-shaped function
Flat function
Recruitment biomass (million lbs)
Spawning biomass (million lbs)
0
20
40
60
80
100
120
140
0
40
80
120
160
200
240
1985
1988
1959
1943
1980
1991
1966
1974
1955

Table 2. **Trade-offs between long-term average yield and the risk that the spawning stock drops below the historical minimum at least once over 25 years simulation, under the three different stock-recruitment models considered.**

Recruitment scenario	Harvest rate	Relative long-term yield (%)	Probability that spawning stock drops below historical minimum
Dome-shaped	0.35	100	0.47
	0.30	96	0.04
Cyclic	0.35	100	0.96
	0.30	97	0.41
Flat	0.35	100	0.30
	0.30	99	0.01

Short-term projections were generated assuming that (1) recruitment is reduced by 15% due to bycatch of juveniles, and (2) a bycatch compensation of 15 million pounds is subtracted annu from the constant exploitation yield. The predictions with respect to spawning biomass sho not depend too strongly on these assumptions, as in reality bycatch is compensated by reducing the quota so as to maintain spawning biomass at the level it would attain in the absence of bycatch.

It should be noticed that probabilities reported in the table are based on short-term projections of stock trajectories simulated using the 1991 estimates of abundance as initial conditions. The stock assessment for 1992 resulted in a new low recruitment value (the third in a row), so the probability that the stock will drop below 80 million lbs over the next 5-7 years may be actually slightly higher than the values reported in the table. The effectiveness of a reduction in harvest rate in achieving a desired level of protection for the stock depends on when that reduction takes place. While a harvest rate of 0.30, if implemented now, may be enough to prevent the stock from dropping to unprecedented low levels, a more drastic cut might be needed later if harvest rates are maintained at 0.35 and future recruitment remains low for a few more years, as predicted by the cyclic model.

Table A.5 Historical Exploitation Rates (Closed Subarea)

	AREA							
Year	2A	2B	2C	3A	3B	4	Total	+Bycatch
1974	0.29	0.14	0.17	0.14	0.17	0.03	0.13	0.25
1975	0.25	0.21	0.19	0.17	0.25	0.03	0.17	0.24
1976	0.15	0.23	0.17	0.17	0.26	0.03	0.17	0.25
1977	0.13	0.18	0.10	0.13	0.28	0.05	0.13	0.20
1978	0.07	0.15	0.12	0.14	0.11	0.06	0.12	0.19
1979	0.04	0.15	0.12	0.14	0.03	0.06	0.12	0.19
1980	0.02	0.17	0.08	0.13	0.01	0.03	0.10	0.19
1981	0.13	0.17	0.08	0.14	0.02	0.04	0.11	0.17
1982	0.17	0.16	0.07	0.13	0.15	0.05	0.11	0.15
1983	0.19	0.14	0.10	0.12	0.21	0.13	0.13	0.16
1984	0.33	0.20	0.09	0.14	0.16	0.09	0.14	0.17
1985	0.38	0.22	0.13	0.14	0.25	0.12	0.16	0.18
1986	0.52	0.22	0.15	0.20	0.21	0.16	0.19	0.21
1987	0.60	0.23	0.15	0.18	0.18	0.19	0.18	0.21
1988	0.35	0.22	0.16	0.20	0.16	0.13	0.19	0.22
1989	0.32	0.18	0.14	0.18	0.17	0.13	0.17	0.20
1990	0.18	0.15	0.15	0.16	0.19	0.15	0.16	0.20
1991	0.15	0.13	0.15	0.14	0.30	0.17	0.16	0.19
1992	0.20	0.13	0.17	0.16	0.27	0.19	0.17	0.21
1993	0.24	0.19	0.21	0.18	0.31	0.20	0.20	0.24
1994	0.22	0.20	0.22	0.25	0.22	0.18	0.23	0.28

REPORT OF ASSESSMENT AND RESEARCH ACTIVITIES 1994

INTERNATIONAL PACIFIC HALIBUT COMMISSION

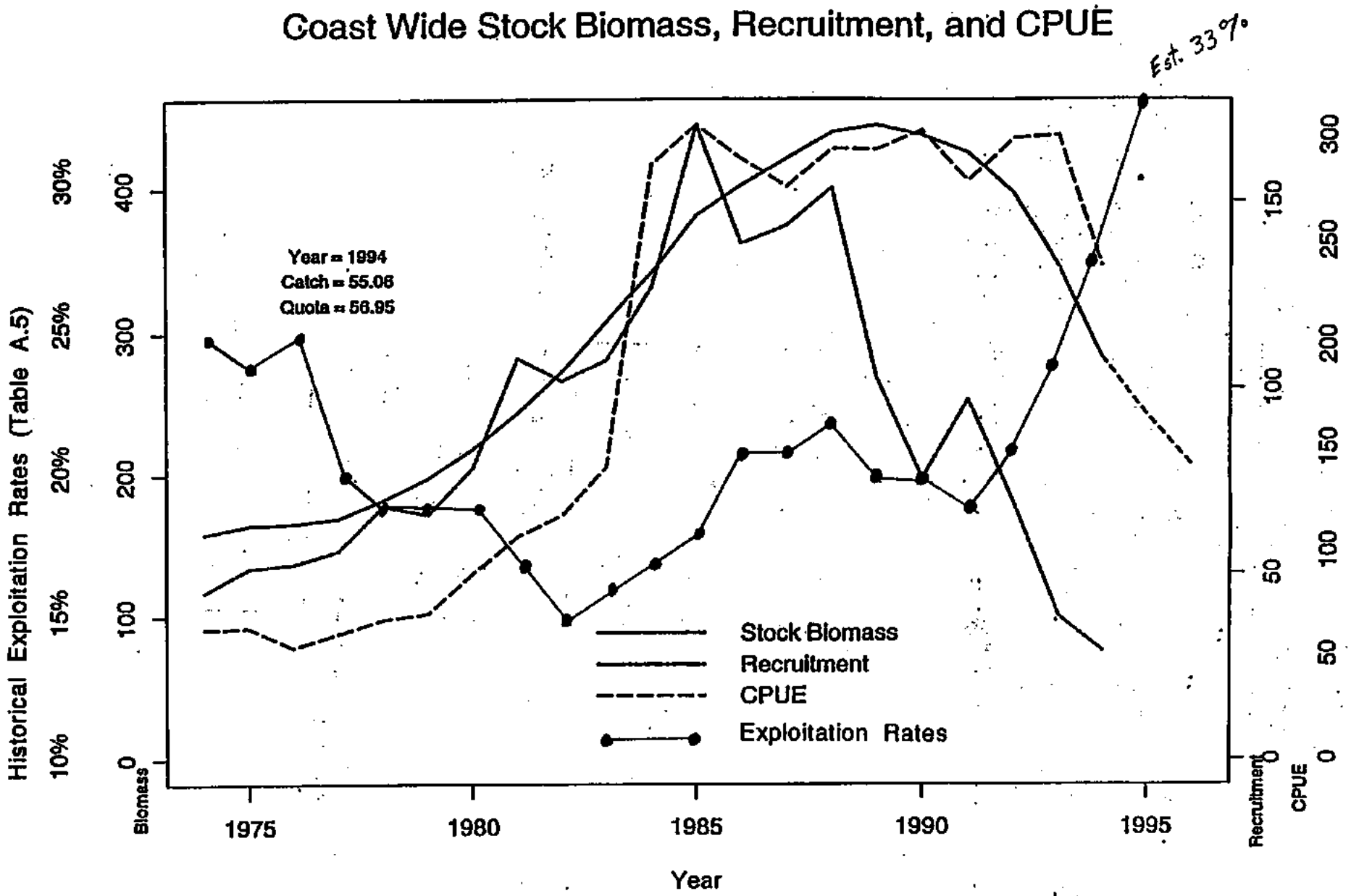

Figure 2. Biomass (Mil. Pounds), Recruitment (Mil. Pounds), CPUE (Pounds/Skate)

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Lawrence A. Aschenbrenner
Heather Kendall
Native American Rights Fund
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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ALASKA

NATIVE VILLAGE OF EYAK, Plaintiff, v. TRAWLER DIANE MARIE, INC., and RONALD H. BROWN, SECRETARY OF COMMERCE, Defendants.	Case No. A95-_____ CIV (__) **COMPLAINT**

INTRODUCTION

This is a civil action seeking a judgment declaring that Plaintiff Native Village of Eyak (hereafter "Eyak") possesses aboriginal title to its traditional hunting and fishing grounds on the Outer Continental Shelf (OCS) and an order enjoining the Defendant, Trawler Diane Marie, Inc. (hereafter the "Corporation") from harvesting scallops within Plaintiff's traditional hunting and fishing grounds and for a further Order prohibiting the Defendant Secretary from permitting the Defendant Corporation or any other person or entity to fish or otherwise trespass upon or interfere with Plaintiff's aboriginal territory and aboriginal hunting and fishing rights.

14. The Defendant Corporation's scallop fishery operation has and will significantly injure and interfere with the exercise of Plaintiff's aboriginal fishing rights and the maintenance of its members subsistence way of life.

15. Plaintiff's subsistence way of life revolves around the process by which their members harvest local fish and game and then directly consume it, exchange it on local trade networks, or sell it for cash. The subsistence way of life is essential for the continued habitation of Alaska Natives in Prince William Sound and the Gulf of Alaska.

16. On November 9, 1993 the Defendant Secretary adopted regulations authorizing the issuance of Individual Fishing Quotas (IFQ's) for halibut and sablefish to non-tribal members which effectively authorizes them to fish within Eyak's aboriginal territory in the OCS and prohibits tribal members without IFQ's from fishing for halibut and sable fish within their own aboriginal territory in the OCS. 58 Fed. Reg. 59,375-59, 413 (Nov. 9. 1993).

17. The Defendant Secretary knows or should know that Plaintiff claims aboriginal rights to its traditional use areas in Prince William Sound and the Gulf of Alaska which encompass the Defendant Corporation's scallop fishing operation. The Secretary also knows, or should know, that Plaintiff's aboriginal claims are valid and that he has the authority and duty to protect Plaintiff's aboriginal rights by immediately shutting down such scallop fishing operation and by amending his IFQ regulations so they will not interfere with the Eyak's aboriginal title and hunting and fishing rights in the OCS.

COUNT I

18. The Defendant Corporation's scallop fishery operation and the Defendant Secretary's failure to protect Plaintiff's aboriginal rights from such operation and from the adverse impact of his IFQ regulations constitute trespass upon the water and wildlife resources of the OCS which Plaintiff holds exclusive aboriginal rights to use, occupy, possess. hunt. fish, and exploit, and the continuation of such scallop operation and the Defendant Secretary's

Native American Rights Fund
310 "K" Street, Suite 708 • Anchorage, Alaska 99501 • (907) 276-0680

ALASKA PACIFIC SEAFOODS
DIVISION OF NORTH PACIFIC PROCESSORS, INC.
☐ HOME OFFICE: 2300 EASTLAKE AVE. EAST • SEATTLE, WASHINGTON 98102 • (206) 726-9900
P.O. BOX 31179 • SEATTLE, WASHINGTON 98103-1179
☐ PROCESSING PLANT: 627 SHELIKOF AVE. • KODIAK, ALASKA 99615 • (907) 486-3234

COMMENTS FROM JOHN SEVIER, ALASKA PACIFIC SEAFOODS

TO THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

PROBLEMS WITH THE IFQ PROGRAM:

1. THE ATM MACHINES DO NOT WORK DEPENDABLY IN THE FIELD. The failure of these machines to work dependably means our staff is having to take time and effort to fax the information required for each IFQ landing.

2. NMFS requires IFQ halibut landings to be reported by statistical area. However, the boundary between halibut management areas 3A and 3B are not aligned along NMFS stat areas. This means NMFS cannot tell if a fish taken in stat area transected by the 3A-3B boundary came from Area 3A or area 3B. We feel the reporting form should be modified to allow reporting halibut deliveries by area 3A or 3B instead of by stat area.

Thank you for allowing me the opportunity to raise these issues.

TONY KNOWLES
GOVERNOR

P.O. Box 110001
Juneau, Alaska 99811-0001
(907) 465-3500
Fax (907) 465-3532

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

April 20, 1995

Mr. Richard Lauber, Chairman
North Pacific Fisheries Management
Council
P.O. Box 103136
Anchorage, AK 99510

Dear Chairman Lauber:

I am writing to express my continued concern about the recently implemented halibut/sablefish Individual Fishing Quota program. I also want to state that until the impacts of this first venture into IFQs are identified, quantified and addressed, the State of Alaska is not willing to consider proposals to extend IFQs to additional species.

The halibut/sablefish IFQ program, which became operational about one month ago, affects the lives and livelihoods of thousands of Alaskan fishing families and our coastal communities. Stories abound of lost crewmember jobs, economic dislocation of people dependent on the fishery while quota share windfalls have gone to some who voluntarily left the fishery long ago, lack of opportunity for small boat fishermen who need species diversification to make a living, difficulties fishermen are having with obtaining financing to purchase the quota shares they need to remain viable, and on and on. Now that the fishery is underway under this IFQ program, it is both possible and necessary that we get real answers to the many questions and concerns about the impacts of the program.

With that goal in mind, I am instructing my state departments of Commerce and Economic Development, Labor, Revenue, Community and Regional Affairs, and Fish and Game to begin collecting data on the impacts of the IFQ program. Information from this effort will be made available to the council for review and consideration.

In addition, I request that the council thoroughly monitor and review the halibut/sablefish IFQ program to document and evaluate its effects. The collection of factual data is a crucial first step in being able to take reasonable actions to address concerns with

the program. Issues which I believe must be analyzed include quota consolidation, fishery monitoring and enforcement, effects on conservation of fish stocks, effects on fishing vessel safety, impacts on the shoreside processing industry, changes in fleet composition and employment on fishing vessels, effects on employment and revenues in Alaska's coastal communities, and other effects which can now be documented by the actual experience under the program. Furthermore, an analysis is needed of how successfully the IFQ program is meeting its intended goals and expectations. To be complete, this effort should include broad public participation. After all, those who are most affected by this program are in the best position to point out its real impacts. The time for speculation is past, and the time has come to gather the facts and chart a course for addressing concerns.

The need to understand the true effects of the halibut/sablefish IFQ program goes beyond being able to address the problems in this program alone. The council will have proposals before it in the future for quota share programs for other species. A full analysis of the performance and effects of this first program, and demonstration of our ability to address its identified shortcomings, will be crucial to making decisions on those proposals.

In my recent testimony before the U.S. Senate Commerce Committee's Subcommittee on Oceans and Fisheries regarding the reauthorization of the Magnuson Act, I identified other important issues which I believe must be addressed prior to consideration of any new IFQ programs. These include such matters as foreign ownership, bycatch reduction, improved utilization, processing quotas, fees, monitoring and enforcement, and related issues.

I believe that the council has a responsibility to continually review and improve its programs, and I urge the council to take appropriate action at the April meeting to ensure immediate and ongoing evaluation of the halibut/sablefish IFQ program.

Sincerely,

Tony Knowles
Governor

DUTCH HARBOR ALASKA

The Dutch Harbor Fisherman

Volume 1 Issue 3 | Published in Dutch Harbor/Unalaska | March 1, 1987

Photo by Tim Honan

GORDON GILL FOUND BY SEA STAR

What appeared to be a ghost trawler fishing in prohibited waters, 7 miles south of Egg Island, turned out to be the most unique catch of 1987 for skipper Larry Hendricks and crew of the Sea Star.

Last October the tug Orion Expediter with owner skipper Don Tetrault was making way from the Canadian Arctic to Halifax Nova Scotia with tug Gordon Gill in tow.

After refueling in Dutch Harbor, the tugs continued south. During the night on October 23, approximately 200 miles south of Dutch Harbor, the Gordon Gill was separated from the Orion Expediter. The loss was discovered at first light. The Orion Expediter immediately began a search of the area.

Several days of searching failed to produce the Gordon Gill. The Orion Expediter continued south to Vancouver B.C.

On November 19, the Coast Guard cutter Yacona spotted the Gordon Gill. Bad weather prevented the cutter from getting a line on the boat. The coordinates and current direction were taken and radioed to skipper Don Tetrault in Vancouver.

Tetrault decided to go to the coordinate and resume the search. It took two weeks to get to Kodiak because the weather was so bad. The storms continued through the next week making a search that much more difficult. After spending a total of three weeks in rough seas and almost sinking, the Orion Expediter headed back to Vancouver. The Gordon Gill was written off.

Off Egg Island, on 24th of February, the Sea Star was just beginning to put down some pots for grey cod. That night what appeared to be a ghost trawler on the radar, was the first contact with the Gordon Gill in over 4 months. After watching the vessel and trying to contact it on radio, Hendricks determined the vessel was abandoned.

In eight foot seas going stern of stern, crew members Joe McIntosh and Tom Payne jumped aboard the Gordon Gill. Once tow lines were secured, the Sea Star made way to Dutch Harbor with its catch.

Under maritime law, Hendricks and his crew are entitled to salvage rights, which in some cases is 20% of the market value of the vessel.

The Gordon Gill was built in 1982 and named after its Canadian builder. The vessel is 65'3" LOA, has a 28' beam and a molded depth of 11'. The tug is powered by 2-800 horse volvo diesels and the gross tonnage is 130 tons.

After floating at sea for 4 months, the exterior and interior of the vessel were in remarkable condition. With the exception of some broken dishes and 3, inches of water in the engine room, the vessel is in sail away condition.

F/V SEA STAR
BUILT 1969

Description

Fishing vessel SEA STAR is an all steel 104 foot Marco manufactured crab boat built in 1969. She is powered by a 750 horse power Caterpillar D 348 main engine, two D 3306 TA, 155 kW, caterpillar generator sets, and a 20 kW hotel generator. At cruising speed (9.5 knots) , the D 348 produces 550 HP at a conservative fuel rate (26 gal./hr.) speed 9.2 knots, and at maximum speed (750 horse power) she cruises 10.2 knots and fuel consumption raises to 37 gal./hr. The two Caterpillar 3306 auxiliary engines average 7.0 gal./hr., depending on amount of power consumed in generator sets. In most cases one generator is adequate to meet all power requirements with paralleling capability for extreme load situations.

These speeds and fuel consumption indicate fully loaded refrigerated holds and 10,000 gallons fuel (average load). Maximum capacities are, 26,000 gallons diesel fuel, 300 gallons lube oil, 3500 gallons fresh water, and 400 gallons hydraulic oil. The vessel is capable of off loading small amounts (500 gallons per/hr) of diesel fuel to other vessels, as well as fresh water. The vessel is equipped with oil spill response as required by oil pollution act of 1990, for dispensing fuel oils.

The boat is fully equipped with two 30 ton freon 502 chilled brine systems built by Anderson Refrigeration Company in 1980. Chilled brine tank capacity is 4500 cubic feet with a maximum capacity of 225,000 pounds. Average required time for chilling water to temperature levels is 10-12 hours (48 degrees to 31.5 degrees) per tank, the piping system is configured to put two chillers on one tank for reduced time for chilling as well as being capable of one system chilling two tanks in the event of system failure. The holds are fiberglass lined with an average of eight inches of insulation configured to meet Canadian and American specifications. The vessel has delivered many loads of chilled fish to ports in Canada and meets all fishery, tonnage, and manning requirements. The vessel Sea Star also has coiled holds with freezer capacity should frozen cargo have to be hauled. The holds are capable of holding product at minus 40 Fahrenheit.

Deck equipment aboard the vessel SEA STAR include one 12 ton Aurora knuckle crane and one Browns Marine Fabrication swing crane. Both are capable of off loading salmon from gillnetters or seine craft over the side into chill tanks. Additional deck equipment include, one Innovac fish pump with complete de-watering and sorting table, weight tote with certified port-a-weigh scale and adequate suction hose to pump fish from either side. The sorting table is of a design manufactured within my facilities. It is designed to eliminate any bruising of money fish and to check for singular species. Drawings have been supplied of how the deck has been configured.

F/V Sea Star

1110 N.W. 50th
Seattle Washington 98107
(206) 286-9234 office
(206) 782-0408 facsimile

From: LARRY HENDRICKS
1110 N.W. 50th
SEATTLE WASHINGTON
98107

To: COUNCIL MEMBER OR STAFF MEMBER
N.P.F.M.C.
ANCHORAGE, AK

DEAR COUNCIL OR STAFF MEMBER,

I AM WRITING THIS LETTER AFTER MUCH CONVERSATION WITH N.M.F.S PERSONNEL TO ANSWER MY QUESTIONS AND ADDRESS MY VESSELS NEEDS. THE QUESTIONS I ASKED LED ME TO COME BEFORE YOU TO SOLVE MY PROBLEMS CONCERNING HARVESTING FINFISH WITH POTS. MY FISHING VESSEL'S HISTORY IS DOCUMENTED IN THE FOLLOWING PAGES ALONG WITH MY PARTICULAR DILEMMAS WITH PAST LAWS LEGISLATED IN, ALONG WITH FUTURE LAWS WHICH MAY COME. ALL PICTURES AND ARTICLES SUBMITTED PERTAIN TO MY VESSELS HISTORY AND HOW I CAME ABOUT TO ASKING FOR YOUR HELP.

MY FISHING CAREER SPANS FROM 1962 FISHING KING CRAB WITH POTS TO PRESENT DAY, ABOARD THE VESSELS SEA STAR, (BOTH OLD AND NEW). ALL MY FISHING FROM MY BEGINNING HAS BEEN DONE WITH POTS OR ENTRAPMENT DEVISES.

EARLY IN THE YEAR 1985 I LOST MY MARKET TO FISH CRAB DUE TO AN OWNERSHIP CHANGE OF THE CANNERY. I WAS FORCED TO FIND AN ALTERNATIVE FISHERY DUE TO UNAVAILABILITY OF MARKETS FOR OPEILIO CRAB, SO THE FISHERY I CHOSE FOR MY VESSEL WAS BOTTOM FISH WITH POTS.

DURING THIS TIME PERIOD (1986 TO 1989) I FISHED FOR SABLEFISH, PACIFIC COD, AND OCTOPUS. WE FROZE ALL OF OUR FISH AND BY-CATCH AND QUALIFIED FOR AN A-CLASS FREEZER VESSEL PERMIT. OUR TARGET SPECIES PRIMARILY WAS FOR SABLEFISH WITH THE ENTRAILS USED AS BAIT FOR COD FISH. THE ENTRAILS FROM OUR PACIFIC COD AND OCTOPUS WERE USED FOR BAIT IN OUR SABLEFISH POTS. THIS WAS DONE TO MEET THE NEW DEPARTMENT OF CONSERVATION RULES OF DUMPING THE ENTRAILS OVER A CERTAIN SIZE BACK INTO THE OCEAN.

HALIBUT WAS ILLEGAL TO KEEP SO WE CONFIGURED OUR POTS TO KEEP HALIBUT OUT WITH RESTRICTED SIZE OPENINGS. AS WITH HALIBUT, OR ANY OTHER SPECIE, BY-CATCH AFFECTS THE AMOUNT OF YOUR TARGET SPECIE THAT WILL ENTER A CONFINED SPACE WITHIN A POT. BY-CATCH INCLUDED SCULPIN, MUDSHARK, BULLHEAD, AND ASSORTED ROCKFISHES. IT WAS IN MY BEST INTEREST TO ELIMINATE MY BY-CATCH IN ORDER TO MAXIMIZE MY CATCH WITHIN THE CONFINES OF A POT. COMBINED WEIGHT OF ALL BY-CATCH GENERALLY WAS LESS THEN ONE PERCENT OF TARGET SPECIE WEIGHTS.

WEIGHTS CAN BE VERIFIED BY MY CURRENT AND PAST FISH TICKETS AND OBSERVER OBSERVATIONS ABOARD MY VESSEL. DEPTH AND BOTTOM TYPE DICTATED TYPE OF BY-CATCH AND SPECIE CAUGHT.

. AS FOR CONFLICTS WITH MARINE MAMMALS, THERE WERE NO GEAR CONFLICTS OR LOSS OF FISH WITH POTS. FISHING FILMS SHOULD BE IN N.M.F.S. FILES DOCUMENTING MY VESSELS INTERACTION WITH WHALES AND SEA LIONS. MY ONLY TAPE WAS SENT TO N.M.F.S. AND WAS CONSTRUED AS ILLEGAL HARASSMENT OF MAMMALS FOR WE WERE FEEDING THE ORCAS AND SEA LIONS THE SMALLEST OF OUR FISH. A VALUABLE LESSON WAS LEARNED CONCERNING HUMAN/MAMMAL INTERACTION ABOARD FISHING VESSELS.

REQUIREMENTS OF A FREEZER VESSEL MEANT I HAD TO REPORT MY CATCH WEEKLY. BEING A SMALL VESSEL WITH LIMITED SPACE WE TALLIED OUR WEIGHTS BY COUNTING FISH. WITH FISH BEING DIFFERENT SIZES AND WEIGHTS WE REGULATED OUR MESH SIZE TO CATCH ONLY THE LARGE AND UNIFORM SIZE FISH. ALL HI-GRADING WAS DONE WITH MESH SIZE TO CULL JUVENILE FISH WHILE THE POT WAS ON THE BOTTOM. HAD I KNOWN OUR FUTURE WOULD BE JUDGED BY WEIGHTS OF THE PAST I MIGHT HAVE CONDUCTED MY PAST FISHERY DIFFERENTLY.

I HAD CONDUCTED MANY EXPERIMENTS WITH POTS DURING THIS PERIOD. ONE WHICH I TRIED WAS HOOKS STRUNG WITHIN THE FRAME OF A POT. I REGISTERED WITH N.M.F.S. ON MY ANNUAL FISHERIES PERMIT ONLY TO BE KNOWN AS MAYBE A PRANKSTER. N.M.F.S. PERSONNEL WONDERED WHAT NEXT? A JIG TRAWL? A JIG WITH A PIECE OF TRAWL WEB.

I TRIED MANY METHODS WITH POTS AND I WAS ABLE TO ACHIEVE A TARGET SIZE FOR MY FISH AND ELIMINATE THE MAJORITY OF BY-CATCH. I HAVE MADE MORE PROGRESS ELIMINATING MY BY-CATCH SINCE THE ALASKA DEVELOPMENT FOUNDATION STUDY SUPPLIED IN THIS FOLDER.

NOW THE PROBLEM I HAVE HAS TO DO WITH LAWS PREVIOUSLY PASSED CONCERNING USE OF POTS WITHIN THE SABLEFISH FISHERY. SINGLE POT FISHING IS ALLOWED BY THE STATE OF ALASKA FOR LITHODES COUSEI AND TANNERI IN AREA M AND AREA K. AT THE MARCH MEETING OF THE ALASKA BOARD OF FISH THIS YEAR, POT LIMITS WERE ELIMINATED FOR THESE SPECIES. BOTH OF THESE FISHERIES ARE IN THE SAME DEPTHS AND AREAS SIMILAR TO SABLEFISH.

I MAY ALSO BRING TO YOUR ATTENTION THAT SINCE THE PASSAGE OF AMENDMENT 13, THE STATE OF ALASKA HAS ISSUED A SINGLE POT PERMIT FOR SABLEFISH IN CLEARANCE STRAIT WHICH IS IN SOUTHEAST ALASKA INSIDE WATERS. ANOTHER TWO WILL BE ISSUED WHEN THEY HAVE DETERMINED QUALIFYING PARAMETERS OF THE PARTICIPANTS INVOLVED. I HAVE SPOKEN TO THE PERMIT HOLDER AND IN THE LATTER PART OF THE NOTEBOOK I HAVE SUPPLIED HIS NAME, ADDRESS AND PHONE NUMBER.

ANOTHER PROBLEM I HAVE HAS TO DO WITH YOUR C.D.Q. COMPENSATION AND BEING AN A-CLASS FREEZER VESSEL. I WAS ISSUED C.D.Q. QUOTA SHARE FOR SOUTHEAST ALASKA AND EASTERN YAKATAT. I HAD QUOTA TAKEN AWAY FROM MY VESSEL IN AN AREA WHICH POTS WERE LEGAL AND ISSUED SHARES WHERE I CANNOT FISH MY QUOTA WITH POTS. A LAW WAS PASSED FOR A ONE TIME EXCHANGE OF QUOTAS EXCEPT FOR A-CLASS PERMITS.

CURRENT LAWS DICTATE THAT IF YOU ARE A QUOTA SHARE HOLDER AND CATCH SABLEFISH IN OTHER FISHERIES YOU MUST KEEP THEM AND REGISTER AS PART OF YOUR QUOTA. RARELY IN A POT WILL YOU SEE BOTH SABLEFISH AND PACIFIC COD BUT IT DOES HAPPEN IN CERTAIN AREAS. WITH POTS I MUST RETURN SABLEFISH BACK TO THE OCEAN UNDER THE CURRENT LAWS. YET IF YOU CATCH SABLEFISH AS BY-CATCH IN OTHER FISHERIES YOU ARE REQUIRED TO KEEP THEM.

FUTURE LEGISLATION WITH GEAR AND AREA LICENSE LIMITATION MIGHT PRESENT ANOTHER DILEMMA FOR MY VESSEL. I'M FEARFUL TO INVEST IN A HOOK SYSTEM FOR SABLEFISH SHOULD I BE STOPPED FROM FULLY UTILIZING THE GEAR IN OTHER SPECIE FISHING . I DID NOT QUALIFY FOR HALIBUT PERMITS AND BY-CATCH COULD BE A

PROBLEM WITH A HOOK SYSTEM SHOULD I INSTALL ONE. VESSELS SHOULD BE ABLE TO CROSSOVER GEAR TYPES IF THEY ARE MORE ENVIRONMENTALLY FRIENDLY, SPECIE SELECT, AND IT HELPS VESSELS CATCH THEIR TARGET SPECIES WITH MINIMUM BY-CATCH.

IN SUMMERY, I AM ASKING FOR HELP FROM YOU TO SOLVE MY PROBLEMS WITH A CONTACT PERSON WITHIN N.M.F.S. AND SOME DIRECTION FROM YOU AS THE COUNCIL. I WOULD LIKE TO ASK FOR EITHER A REPEAL OF AMENDMENT 13 OR A SPECIAL PERMIT TO FISH MY QUOTA WITH SINGLE POTS. COPIES OF MY QUOTA SHARES ARE INCLUDED ALONG WITH THE POUNDAGE AMOUNTS AVAILABLE TO CATCH. THE YEAR OF 1995 WILL SOON BE GONE AND I WOULD APPRECIATE TO HAVE THIS MATTER ADDRESSED WITH OUT FALLING BETWEEN THE CRACKS OF BUREAUCRACY AND WATCH MY FISHING YEAR DISAPPEAR.

THANK YOU

LARRY HENDRICKS

Vessel History:

Year	Activity	Cannery	Contact
1969 to 1972	Crab	American Freezerships	Robert Ressof
1973 to 1980	Crab	Sea Alaska Inc.	Robert Ressof
1980 to 1982	Crab	Sea Alaska Inc.	Robert Ressof
	Salmon Pack	Peter Pan	Ron Tullis Lloyd Guffy
1983	Crab	Sea Alaska/Con-Agra	Ron Jensen
	Herring & Salmon Pack	JX Fisheries	Dick Johnson
	Salmon Pack	Trident	Chuck Bundrant
1984	Crab	Sea Alaska/Con-Agra	Ron Jensen
	Herring & Salmon Pack	JX Fisheries	Dick Johnson
1985	Crab	Sea Alaska/Trident	Chuck Bundrant
1986	Sablefish/Processor Pacific Cod/Processor	F/V Sea Star/Captain Ole's	Larry Hendricks
	Salmon Pack	Sea Catch Inc.	Jim Long
1987	Sablefish/Processor Pacific Cod/Processor	F/V Sea Star/Captain Ole's	Larry Hendricks
	Salmon Pack	Sea Catch Inc.	Jim Long
!988	Sablefish/Processor Pacific Cod/Processor	F/V Sea Star	Larry Hendricks
	Salmon Pack	Sea Catch Inc.	Jim Long
	Crab	Trident	Bart Eaton
1989	Sablefish/Processor	F/V Sea Star/Captain Ole's	Larry Hendricks
	Salmon Pack	Sea Catch Inc.	Jim Long
	Crab	Aleutian Processors	David Keene
1990	Crab	Alyeska Seafood's	Frank Kelty
	Salmon Pack	Sea Catch Inc.	Jim Long
	Crab (fall)	Unisea Inc.	Rich White
1991	Crab	Unisea Inc.	Rich White
	Pacific Cod	Sea Catch Inc.	Jim Long
	Salmon Pack	Sea Catch Inc.	Jim Long
	Salmon Pack	Nelbro	Mike Lee
1992	Crab	Unisea Inc.	Rich White
	Pacific Cod	Aleutian Dragon Seafood's	Hugh Risner
	Salmon Pack	Sea Catch Inc.	Jim Long
1993	Crab	Unisea Inc.	Rich White
	Salmon Pack	Sea Catch Inc.	Jim Long
	Pacific Cod	All Alaskan Inc.	Lloyd Cannon
1994	Crab	Unisea Inc.	Rich White
	Pacific Cod		
	Salmon Pack	Sea Catch Inc.	Jim Long
1995	Crab	Unisea Inc.	Rich White
	Pacific Cod	Unisea Inc.	
	Salmon Pack	??????????	
	Sablefish (CG, WG, AI, SE, EY)	?	

DEPT. OF TRANSP., U.S. COAST GUARD, CG-2849 (REV. 8-87)

FILE NO.

SERIAL NUMBER

718967

ISSUE NUMBER

4,4

UNITED STATES COAST GUARD

LICENSE

TO U.S. MERCHANT MARINE OFFICER

This is to certify that **********LARRY O. HENDRICKS **********

having been duly examined and found competent by the undersigned, is licensed to serve as ********** MASTER **********

OF NEAR COASTAL UNINSPECTED FISHING INDUSTRY VESSELS OF NOT MORE THAN 1600 GROSS TONS

---

for the term of five years from this date.

Given under my hand this 26TH *day of* MAY *, 19* 93 .

PUGET SOUND, WASHINGTON
Port

M. J. MATTIE
By direction of *Officer in Charge of Marine Inspection*

LARRY OSCAR HENDRICKS
1110 NW 50th
SEATTLE, WA 98107

RESUME

GENERAL INFORMATION

LARRY HENDRICKS IS PRINCIPAL OWNER OF THE F/V SEA STAR . HE ALSO IS HALF OWNER OF THE F/V LAUREN M, A BRISTOL BAY GILLNETTER WITH KEN HENDRICKS. LARRY FISHES THE BRISTOL BAY SALMON SEASON FOR TRIDENT SEAFOOD'S AND HAS DONE SO SINCE 1982. HE IS THE CAPTAIN FOR THE KING CRAB SEASON ON THE F/V SEA STAR, AND HAS ALSO FISHED FOR OPEILEO CRAB, BARIDI CRAB, BLACK COD (SABLEFISH), GRAY COD, AND OCTOPUS IN THE NORTH PACIFIC, BOTH SPINY AND SLIPPER LOBSTER, SHRIMP AND VARIOUS FISH IN HAWAIIAN AND EQUATORIAL WATERS..

LARRY HAS NAVIGATED ALL WATERS OF THE PACIFIC, INCLUDING HAWAII, ALASKA, INSIDE PASSAGE, SOUTHEAST ALASKA, CENTRAL ALASKA, SOUTHWESTERN ALASKA, AND NORTHERN WATERS OF THE BERING SEA, EXCEPT THE WATERS OF THE ARCTIC OCEAN. PAST DUTIES INCLUDED DECKHAND, COOK, ENGINEER, CAPTAIN, AND VESSEL ADVISOR.. LARRY HAS DEMONSTRATED A FLAWLESS SAFETY RECORD OPERATING THE F/V SEA STAR OR F/V LAUREN M. LARRY HENDRICKS HOLDS A 1600 TON MASTERS LICENSE, FIRST ISSUE JULY 1977.

LARRY HAS AN EXTENSIVE KNOWLEDGE OF ALL WORKING MACHINERY AND ELECTRICAL SYSTEMS ABOARD THE F/V SEA STAR. MANY OF THE FABRICATIONS HAVE BEEN DESIGNED FOR FUNCTION AND SPEED IN HANDLING FISHERIES PRODUCTS FOR QUALITY OF FISH PRODUCTS. HIS OFFICE COMMUNICATES WITH THE VESSEL DAILY FOR MAINTENANCE AND EFFICIENT VESSEL OPERATIONS VIA STANDARD C. FAXCIMILE.

CURRENTLY LARRY HENDRICKS OWNS AND OPERATES GULLYWASHER INC., A MANUFACTURING AND DESIGN FABRICATION SHOP. ENCLOSED ARE BROCHURES OF PRIMARY PRODUCTS MANUFACTURED. TIME FROM WORK IS TAKEN OFF TO OCCASIONALLY OPERATE F/V SEA STAR TO KEEP MASTERS LICENSE CURRENT ALSO TO VISIT FRIENDS WITHIN THE FISHING INDUSTRIES.

PAST HISTORY

1962 - 1971	*FISHED KING CRAB IN SUMMERS WITH HIS FATHER, OLE HENDRICKS.*
1971	*GRADUATED FROM BALLARD HIGH SCHOOL AND FISHED IN SUMMER*
1972-1975	*ATTENDED WESTERN WASHINGTON STATE COLLEGE. LARRY WAS ENROLLED IN THE TECHNOLOGY PROGRAM. PRIMARY STUDIES INCLUDED EXPLOSIVE METALLURGY, TECHNICAL DRAWING, CASTING DESIGN, PLASTICS AND INDUSTRIAL CHEMISTRY, WOOD WORKING, AND METAL FABRICATION. LARRY ALSO FISHED DURING THE SUMMERS.*

1976 *ATTENDED BRUDWICK SCHOOL OF REFRIGERATION. STUDIES INCLUDED PHYSICS THEORY AND GAS LAWS, ELECTRICAL CONTROLS AND PRACTICAL KNOWLEDGE OF REFRIGERATION THEORY AND DESIGN.. GRADUATED 1976*

1976 *ASSISTANT CAPTAIN/ENGINEER F/V SEA STAR*

1977 *CAPTAIN F/V SEA STAR*
RECEIVED WASHINGTON STATE REAL ESTATE LICENSE

1978 *CAPTAIN F/V SEA STAR*

1979 *CAPTAIN F/V SEA STAR*

1980 to 1985 *CAPTAIN OF F/V SEA STAR*

1986 *CAPTAIN OF SEA STAR/ PROCESSORS OF BLACKCOD*
STARTED CAPTAIN OLE'S SEAFOOD'S AK 606

1987 *CAPTAIN OF SEA STAR/ PROCESSOR OF BLACKCOD*
CAPTAIN OLE'S SEAFOOD'S
SALVAGE OF ICE BREAKING TUG GORDON GILL

1988 *CAPTAIN OF SEA STAR/ PROCESSOR OF BLACKCOD*
CAPTAIN OLE'S SEAFOOD'S

1989 *CAPTAIN OF F/V SEA STAR*
CAPTAIN OF F/V LAUREN M
DEVELOPED AND PATENTED UNDERWATER TECHNOLOGY
TRADE NAME GOTYA

1990 *CAPTAIN OF F/V SEA STAR*
CAPTAIN OF F/V LAUREN M
OWN AND OPERATE GOT YA'S

1991 *CAPTAIN OF F/V SEA STAR*
WORKED WITH MIKE SMITH TO DEVELOP MACHINERY TO BRAID SQUARE LINE
MARKETED UNDER LABEL OF SENNIT INTERNATIONAL, DISTRIBUTED BY SQUAREHEAD ROPE..

1992 *CAPTAIN OF F/V SEA STAR*
CAPTAIN OF F/V LAUREN M
OWN AND OPERATE GOT YA'S

1993 *CAPTAIN OF SEA STAR (PART TIME)*
CAPTAIN OF LAUREN M
OWN AND OPERATE GOT YA'S
BOARD OF DIRECTORS, UNITED MARINE FUND

1994 *CAPTAIN OF SEA STAR (PART TIME)*
CAPTAIN OF LAUREN M
INCORPORATE AQUA-NET INC.
INCORPORATE GULLYWASHER INC.
BOARD OF DIRECTORS, UNITED MARINE FUND

Initial Issuee

Transfer Eligibility Certificate

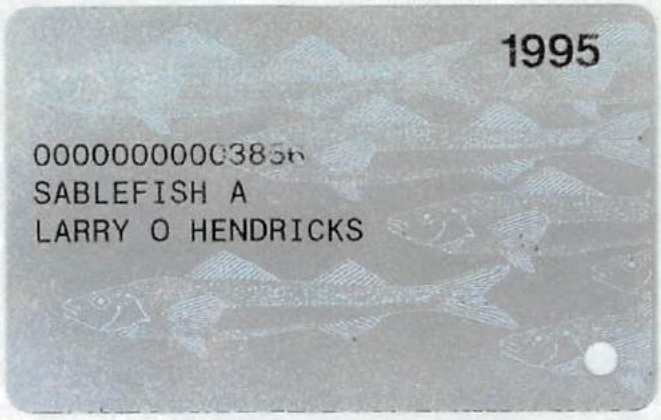
HENDRICKS, LARRY O.

has met the terms of the Pacific halibut and sablefish Individual Fishing Quota program as promulgated by the U.S. Secretary of commerce (50 CFR, Part 676), and is therefore certified as eligible to receive Quota Share [QS]and Individual Fishing Quota [IFQ] by transfer (purchase, gift, or lease). The holder has been assigned the following IFQ Identification Number, which must be provided upon application to receive QS and/or IFQ by transfer.

25583DCKA

By Direction of Steven Pennoyer, Director
Alaska Region, National Marine Fisheries Service

By: Philip J. Smith 11-Jan-1995
Philip J. Smith Date
Chief, Restricted Access Management Division



IFQ Annual Fishing Permit

for the 1995 season

LARRY O HENDRICKS
Permit: 000000003856

is the holder of the following Individual Fishing Quota for sablefish in vessel category A as measured in round weight:

Area	Initial Pounds	Underage(+)/ Overage(-)	Leased In (+)	Leased OUT (-)	Total IFQ Pounds
AI	7211	0	0	0	7211
CG	36603	0	0	0	36603
SE	728	0	0	0	728
WG	36413	0	0	0	36413
WY	490	0	0	0	490

This permit is an Individual Fishing Quota Permit, issued under the provisions of the Pacific halibut and sablefish Individual Fishing Quota program, as promulgated by the Secretary of the U.S. Department of Commerce. Under the terms of the Individual Fishing Quota program, as set out in 50 CFR, Part 676, this permit authorizes the holder to harvest halibut or sablefish in the amount(s), in the IFQ regulatory area(s), and aboard a vessel of the appropriate category as described above. Prior notice of IFQ landing must be made to NMFS via the toll-free number (800-304-4846).

By Direction of the
National Marine Fisheries Service
Steven Pennoyer, Alaska Regional Director

By: Philip J. Smith Date: 27-Feb-1995

Philip J. Smith
Chief, Restricted Access Management Division

Quota Share
CERTIFICATE

LARRY O HENDRICKS
IFQ ID No. 25583DCKA

is the holder of the following designated Quota Shares:

294,257 Units, designated as:
S-WG-A-U-109,932,101 through S-WG-A-U-110,226,357

This certificate is a Quota Share Permit, issued under the provisions of the Pacific halibut and sablefish Individual Fishing Quota program, as promulgated by the Secretary of the U.S. Department of Commerce. This permit entitles the holder to all privileges and responsibilities under the terms of the Individual Fishing Quota program, as set out in 50 CFR, Part 676.

By Direction of Steven Pennoyer, Director
Alaska Region, National Marine Fisheries Service

By: Philip J. Smith — 30-Jan-1995

Philip J. Smith — Date

Chief, Restricted Access Management Division

Quota Share
CERTIFICATE

LARRY O HENDRICKS
IFQ ID No. 25583DCKA

is the holder of the following designated Quota Shares:

3,149 Units, designated as:
S-WY-A-B-283,475,507 through S-WY-A-B-283,478,655

This certificate is a Quota Share Permit, issued under the provisions of the Pacific halibut and sablefish Individual Fishing Quota program, as promulgated by the Secretary of the U.S. Department of Commerce. This permit entitles the holder to all privileges and responsibilities under the terms of the Individual Fishing Quota program, as set out in 50 CFR, Part 676.

By Direction of Steven Pennoyer, Director
Alaska Region, National Marine Fisheries Service

By: Philip J. Smith — 31-Jan-1995
Philip J. Smith — Date
Chief, Restricted Access Management Division

Quota Share
CERTIFICATE

LARRY O HENDRICKS
IFQ ID No. 25583DCKA

is the holder of the following designated Quota Shares:

296,340 Units, designated as:
S-WG-A-U-109,932,101 through S-WG-A-U-110,228,440

This certificate is a Quota Share Permit, issued under the provisions of the Pacific halibut and sablefish Individual Fishing Quota program, as promulgated by the Secretary of the U.S. Department of Commerce. This permit entitles the holder to all privileges and responsibilities under the terms of the Individual Fishing Quota program, as set out in 50 CFR, Part 676.

By Direction of Steven Pennoyer, Director
Alaska Region, National Marine Fisheries Service

By: Philip J. Smith — 31-Jan-1995

Philip J. Smith — Date

Chief, Restricted Access Management Division

Quota Share
CERTIFICATE

LARRY O HENDRICKS
IFQ ID No. 25583DCKA

is the holder of the following designated Quota Shares:

3,841 Units, designated as:
S-SE-A-B-283,463,168 through S-SE-A-B-283,467,008

This certificate is a Quota Share Permit, issued under the provisions of the Pacific halibut and sablefish Individual Fishing Quota program, as promulgated by the Secretary of the U.S. Department of Commerce. This permit entitles the holder to all privileges and responsibilities under the terms of the Individual Fishing Quota program, as set out in 50 CFR, Part 676.

By Direction of Steven Pennoyer, Director
Alaska Region, National Marine Fisheries Service

By: Philip J. Smith — 31-Jan-1995

Philip J. Smith — Date

Chief, Restricted Access Management Division

Quota Share
CERTIFICATE

LARRY O HENDRICKS
IFQ ID No. 25583DCKA

is the holder of the following designated Quota Shares:

267,517 Units, designated as:
S-CG-A-U-110,097,841 through S-CG-A-U-110,365,357

This certificate is a Quota Share Permit, issued under the provisions of the Pacific halibut and sablefish Individual Fishing Quota program, as promulgated by the Secretary of the U.S. Department of Commerce. This permit entitles the holder to all privileges and responsibilities under the terms of the Individual Fishing Quota program, as set out in 50 CFR, Part 676.

By Direction of Steven Pennoyer, Director
Alaska Region, National Marine Fisheries Service

By: Philip J. Smith — 31-Jan-1995

Philip J. Smith — Date

Chief, Restricted Access Management Division

F/V Sea Star

1110 N.W. 50th
Seattle Washington 98107
(206) 286-9234 office
(206) 782-0408 facsimile

From: LARRY HENDRICKS
1110 N.W. 50th
SEATTLE WASHINGTON
98107

To: COUNCIL OR STAFF MEMBERS

DEAR SIR OR MADAM,

THE FOLLOWING PAGES REFLECT SOME OF THE PROBLEMS I SEE WITH THE SYSTEM.

1. PAGE CONCERNING QUOTA SHARE RECIPIENT MEANT I WOULD GET COMPENSATION FOR MY QUOTA LOSS FOR C.D.Q., YET GEAR TYPE PROBLEMS HAD NOT BEEN ADDRESSED. CALLING STAFF MEMBERS COULD NOT ANSWER MY QUESTIONS PROPERLY FOR I FISHED WITH POTS. THERE ANSWER WAS I WOULD HAVE TO CHANGE GEAR TYPE EVEN IF MY BY-CATCH WAS GREATER.

2. YOUR PUBLICATION I.F.Q. PROGRAM ADDRESSED BY-CATCH ISSUES IF YOU HELD VALID SABLEFISH QUOTA. WITH POTS SHOULD YOU CATCH A SABLEFISH WITH A POT YOU MUST RELEASE IT. ITS WONDERFUL THAT WE WOULD RELEASE OUR BY-CATCH IN A HEALTHY CONDITION, YET IF WE CAUGHT THE FISH WE SHOULD BE ABLE TO KEEP THE FISH. I AM AWARE THAT THERE MIGHT BE ABUSES TO THE SYSTEM BUT STIFF PENALTIES FOR VIOLATORS SHOULD SOLVE ANY PROBLEMS.

3. YOUR SPECIAL NOTICE TO I.F.Q. FISHERMAN CONCERNING ROCKFISH AND POSSIBLE CLOSURE BECAUSE OF BY-CATCH APPLIES TO POT FISHERMAN. IF YOU CHECK PAST RECORDS OF ALL POT FISHERMAN YOU WILL FIND VERY LITTLE BY-CATCH OF ROCKFISH. THIS HAS TO DO WITH THE TERRITORIAL NATURE OF ROCKFISH. VERY RARELY WILL YOU FIND ANY ABUNDANCE OF ROCKFISH IN A POT DUE TO A NON SCHOOLING INSTINCT AND SPECIE INTERACTION WITHIN THE CONFINES OF A POT.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

February 1, 1995

Dear Quota Share Recipient:

Enclosed with this letter you will find four Quota Share Certificates reflecting an adjustment to your initial allocation of quota shares. This adjustment is a result of the Community Development Quota (CDQ) program provided for under the regulations governing the Pacific Halibut and sablefish Individual Fishing Quota (IFQ) program. In order to make it fair for fishermen who fished in the CDQ areas and whose IFQ will be reduced by the CDQ allocation, you have been awarded small amounts of quota shares from the other areas, in the same proportion as the amount allocated to the CDQ program. Some of these certificates will replace certificates previously issued to you for CDQ compensated areas while others will reflect CDQ compensation in areas for which you have not previously been issued quota share. **This is a one time adjustment to your initial allocation of quota shares.**

As with all other QS you have received by initial issuance, and subject to relevant rules and regulations, this QS is transferable; that is it can be bought, sold, leased or transferred by gift. It can also be transferred by "operation of law" (settlements, decrees, probated wills, etc.) and by the terms of a security agreement. Instructions for transferring QS and the QS/IFQ Transfer Application forms were sent to you with your original QS Certificates. Additional forms can be obtained by contacting the Restricted Access Management (RAM) Division.

If you have any questions about the CDQ program and this adjustment to your initial quota share allocation, please call the RAM Division toll free at 1-800-304-4846 or, in Juneau, at 586-7202.

Sincerely,

Philip J. Smith
Chief, Restricted Access
Management Division

Enclosures

THE IFQ PROGRAM

February 1995

UNDER WAY

➢ This publication is only a summary of the IFQ program, and is not intended to create any rights enforceable in law. For further clarification and legal precision, please refer to the Federal Register (50 CFR 676).

This booklet is published by the National Marine Fisheries Service (NMFS) Restricted Access Management (RAM) Division, with assistance from NMFS Enforcement. If you have any questions please call 1-800-304-4846. The RAM Division can also be reached at (907) 586-7202, NMFS Enforcement at (907) 586-7225.

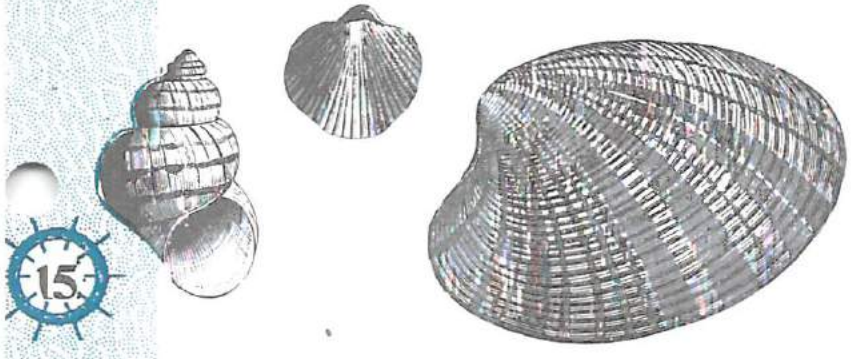
IFQ fisheries for halibut and sablefish are subject to seasons, size limits, overfishing restrictions, and other directed fishing standards. If, in the course of fishing, you harvest halibut or sablefish with fixed gear and you have an IFQ card on- board with unused IFQ pounds for that species, you **must** keep the fish, unless other regulations (such as minimum size) apply.

Conversely, if you don't have an IFQ card on-board with sufficient unused pounds, you may not keep the fish even if the season is open. By-catch is governed by existing groundfish regulations. For example, Pacific cod or rockfish that are taken when IFQ halibut or sablefish are on-board must be kept, unless State of Alaska laws require them to be discarded.

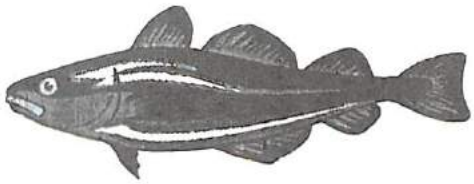
Overages and Underages

If you land more pounds than remain on your IFQ permit you have an **overage**. In addition to any penalties which may be assessed, the Regional Director will deduct an amount equal to the overage from the following year's IFQ amount. This adjustment will be specific for each regulatory area and will affect whomever holds the QS permit the following year.

In general, the amount of overage which exceeds 10% of the total amount of pounds remaining in your annual IFQ account **prior to that landing**, will be forfeited. There is an exception to this 10% rule. If the delivery of an IFQ species exceeds the amount remaining in your annual IFQ account by less than 400 lbs, forfeiture would be waived. This will eliminate a situation where one large halibut in excess of your IFQ would result in forfeiture.



Underages up to 10% of your annual IFQ account for the current fishing year will be credited to your IFQ account for the following fishing year. Underages in excess of 10% will expire at the end of the current year. This provision is designed to take the pressure off of harvesting right up to the last pound, and help prevent overfishing. Any overages or underages affecting your IFQ account will apply to whomever fishes the IFQ permit in subsequent years, whether that is you or someone to whom you have transferred QS or IFQ pounds.



Landing and Reporting Requirements

All landing and reporting requirements for IFQ fishing are **in addition to** any existing requirements which apply to the fisheries, and these landing and reporting requirements apply even if IFQ fish are taken incidentally in non-IFQ fisheries (such as a halibut retained by a salmon fisherman who has valid halibut IFQ). If you anticipate difficulty complying with any of these requirements, please contact the NMFS Enforcement office. You must also contact NMFS Enforcement if any reports already submitted to NMFS need correction.

The system which has been designed for reporting IFQ catch requires each of the following; prior notice of landing, vessel clearance, landing reports, shipment reports and transshipment notification. We'll examine each requirement below. Remember - registered buyers must keep copies of all reports and receipts for three years; you must make them available for inspection upon request by an authorized officer or a clearing officer.

SPECIAL NOTICE TO IFQ FISHERMEN

ROCKFISH BYCATCH AND IFQ FISHERY CLOSURES

Some fishermen have expressed concern that the National Marine Fisheries Service (NMFS) could prematurely close the halibut or sablefish IFQ fisheries to prevent overfishing of certain of the rockfish species, especially thornyhead rockfish and shortraker/rougheye rockfish, because only small quotas are available for these species. But,

according to Steve Pennoyer, NMFS Regional Director, it is *"Extremely Unlikely"* that overharvest of rockfish could result in early closure of the IFQ fisheries.

NMFS is confident that overfishing concerns for thornyhead rockfish or shortraker/rougheye rockfish in either the Gulf of Alaska or the Bering Sea and Aleutian Islands management area during 1995 will NOT cause an early closure of the 1995 IFQ halibut or sablefish fisheries. NMFS research data indicate that the available amounts of these species will clearly be sufficient to provide adequate bycatch needs in the IFQ fisheries, as well as other fisheries, during 1995.

According to Pennoyer, NMFS is required by the Magnuson Act to prevent overfishing of fish stocks managed under fishery management plans. Therefore, NMFS will closely monitor rockfish catches during the 1995 fishing year, and could possibly be required to implement inseason management adjustments to prevent overfishing. These "adjustments" could include allowing the fisheries to continue in noncritical areas and time periods, designating species threatened by overfishing as prohibited, and other steps. "Closure of the IFQ fisheries would be the absolute last resort," says Pennoyer.

Questions regarding these management measures should be directed to the NMFS Fish Management Division in Juneau. The Division can be reached toll-free by dialing 800-304-4846 or by calling 907-586-7228.

February, 1995

F/V Sea Star

1110 N.W. 50th
Seattle Washington 98107
(206) 286-9234 office
(206) 782-0408 facsimile

From: LARRY HENDRICKS
1110 N.W. 50th
SEATTLE WASHINGTON
98107

To: COUNCIL OR STAFF MEMBERS

DEAR SIR OR MADAM,

THE FOLLOWING PAGES REFLECT ONE COD FISH TRIP THIS SPRING WITH AN OBSERVER ABOARD COUNTING OUR BY-CATCH. ONE OF MY RELIEF CAPTAINS OPERATED THE VESSEL WITH THE OBSERVER ABOARD SUPPLIED BY SALTWATER SERVICES.

THERE ARE TWO FISH TICKETS FOR ONE TRIP DUE TO PART OF THE LOAD WENT TO FRESH MARKET AND THE REMAINING FOR SALT MARKET.

TOTAL POUNDAGE; 67,268 LBS.

BY-CATCH	HALIBUT	9	ANIMALS
	BARIDI	155	ANIMALS
	OPILIO	8	ANIMALS
	SCULPIN	10	LBS.
	ARROWTOOTH	0	LBS.
	ROCK SOLE	8	LBS.
	YELLOWFIN SOLE	2	LBS

THE MESH SIZE OF THE POTS WERE DESIGNED TO RELEASE JUVENILE PACIFIC COD. THE TRADE OFF MEANS CRAB CAN CRAWL THROUGH THE MESH FROM THE OUTSIDE. SIZE AND WEIGHTS OF THE BY-CATCH CAN BE VERIFIED BY N.M.F.S. WITH THE NUMBER AND CONTACT PERSON LISTED IN THE INDEX.

PRINTED ON THE FRONT INSIDE COVER OF EACH BOOKLET

✓ G95026899

Vessel Name: Sea Star (N SEA STAR)

Fishery: MISC FIN POT L STW

Name: DERRILL R DIZARD

Permit Number: M91B162752 00997

9501X 538564021 52

ADF&G NO.

Date Trip Began: 3/29

PROCESSED INSIDE 3 MILES

Proc. Code: UNISEA, INC

Date Landed: 4/1

Company: G1

Days Fished: 3/29 - 3/30

PORT OF LANDING OR VESSEL TRANSSHIPPED TO: DUTCH

TYPE OF GEAR USED: POTS 91

Finished 4/1 22:45

STATISTICAL AREA WORKSHEET

AREA	%	AREA	%
655600	100		
517	100		

SPECIES	CODE	STAT AREA	COND. CODE	POUNDS	PRICE	AMOUNT
SABLEFISH	710	# of fish				
Halibut	200	9	98		—	
Bairdi	931	155	98		—	
Opilio	932	8	98		—	
Scalpin	1100		98	10	—	
Arrowtooth	121		98	0	—	
Rock Sole	123		98	8	—	
Flathead Sole	122		98	2	—	
FLATHEAD SOLE	122					
ROCK SOLE	123					
YELLOWFIN SOLE	127					
ARROWTOOTH FLOUNDER	121					
GREENLAND TURBOT	134					
Pac Cod tuMod	110		03	6527	.015	97.91
PACIFIC (GRAY) COD	110		03	37466	.18	6743.88
POLLOCK	270					

SPECIES	CODE	STAT AREA	COND. CODE	POUNDS	PRICE	AMOUNT
DEMERSAL ROCKFISH						
			99	0		
PELAGIC ROCKFISH						
SLOPE ROCKFISH						
PACIFIC OCEAN PERCH COMPLEX	141					
THORNYHEAD ROCKFISH	143					
ATKA MACKEREL	193					
LING COD	130					
SQUID	875					
OTHER GROUNDFISH						
Grand Total				43993		6841.

Fisherman's Signature * Derrill R Dizard

Fish Received by Lisa M Ryan

FISH DELIVERED HEREBY WERE CAUGHT IN COMPLIANCE WITH STATE LICENSING LAWS AND STATE LABOR LAWS AND REGULATIONS.

11-218

4/1 — 10:30 p.m.

PLACE WRAPAROUND COVER UNDER GOLDENROD COPY

DISTRIBUTION: WHITE - PURCHASER YELLOW - FISH & GAME PINK - SELLER GOLDENROD - PURCHASER

ALASKA DEPARTMENT OF FISH & GAME

GROUNDFISH TICKET

PLEASE REFER TO CODE LISTS PRINTED ON THE FRONT INSIDE COVER OF EACH BOOKLET

DO NOT WRITE IN THIS SPACE

G94 043107

Vessel Name: Sea Star

Fishery Name: [illegible]

Permit Number: [illegible]

ADF&G NO.: 00997

Date Trip Began: [illegible]

PROCESSED INSIDE 3 MILES

Proc. Code: OSTERMAN FISH

Date Landed: 4 2 95

Company: [illegible]

Days Fished: 4 Days

Dutch Harbor — PORT OF LANDING OR VESSEL TRANSSHIPPED TO

Pots — TYPE OF GEAR USED

STATISTICAL AREA WORKSHEET

AREA	%	AREA	%
655600	100	519	100

SPECIES	CODE	STAT AREA	COND. CODE	POUNDS	PRICE	AMOUNT
SABLEFISH	710					
FLATHEAD SOLE	122					
ROCK SOLE	123					
YELLOWFIN SOLE	127					
ARROWTOOTH FLOUNDER	121					
GREENLAND TURBOT	134					
PACIFIC (GRAY) COD	110	519	03	23275	.22	5,120.50
POLLOCK	270			City 2%		<102.48>
				STATE 1%		<51.24>
						$ 4,964.88

SPECIES	CODE	STAT AREA	COND. CODE	POUNDS	PRICE	AMOUNT
DEMERSAL ROCKFISH						
PELAGIC ROCKFISH						
SLOPE ROCKFISH						
PACIFIC OCEAN PERCH COMPLEX	141					
THORNYHEAD ROCKFISH	143					
ATKA MACKEREL	193					
LING COD	130					
SQUID	875					
OTHER GROUNDFISH						

F/V Sea Star

1110 N.W. 50th
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(206) 286-9234 office
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From: LARRY HENDRICKS
1110 N.W. 50th
SEATTLE WASHINGTON
98107

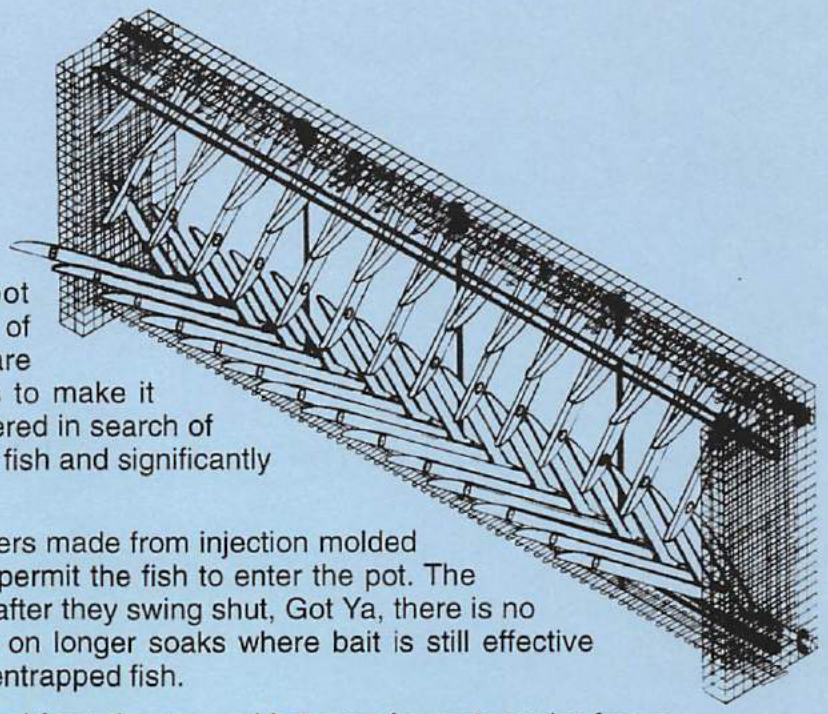
To: COUNCIL OR STAFF MEMBERS

DEAR SIR OR MADAM,

THE FOLLOWING SECTION CONTAINS AN ALASKA DEVELOPMENT REPORT OF A STUDY CONDUCTED IN 1991. I HAVE MADE GREAT STRIDES TO UNDERSTAND BY-CATCH AND SPECIE INTERACTION WITHIN THE CONFINES OF A POT. I HAVE DRAMATICALLY IMPROVED SINCE THIS STUDY AND MY CATCH RECORD INDICATE WHAT I SAY. A N.M.F.S. CONTACT NAME IS SUPPLIED IN THE INDEX..

ALSO INCLUDED IS A BROCHURE DESCRIBING THE FISH ENTRANCE AND HOW A FISH ENTRANCE AND POT WORKS.

Got Ya



Got Ya's, a fish retention device, provides pot fishermen with significantly increased catch rates of fish. Designed by a crab fisherman, Got Ya's are permeable walls that can be fitted to crab pots to make it impossible for fish to escape once they have entered in search of bait. Got Ya's are designed primarily to catch cod fish and significantly reduce by-catch of unwanted species.

Each Got Ya is constructed of interlocking fingers made from injection molded polyethylene. The fingers swing freely inward to permit the fish to enter the pot. The fingers swing only in the inward direction so that after they swing shut, Got Ya, there is no means of escape. This is particularly noticeable on longer soaks where bait is still effective and not eaten by ocean parasites or the already entrapped fish.

Dual Action Got Ya's: The fingers are suspended from the top and bottom of a rectangular frame that is fitted to the normal pot opening. The closely aligned fingers are alternately heavier and lighter than water. Dual Action Got Ya's is a design that, whether the pot comes to rest right side up, on the steepest of slopes, or upside down, the device always provides a positive closure no matter how the pot lands. The drawing above shows how a Got Ya would look in fresh or saltwater at any angle placement. Also incorporated into Got Ya's design are strong extruder bars to keep out the largest of flatfish, bungeecord behind the fingers for springiness to hinder crab and to create strong rapid closing fingers to prevent washout of catch when in the hauling process.

The key to increasing catch of target species of any fish or crab pot, is controlling your by-catch of unwanted species or culling unwanted species or sizes back out. We already have methods for controlling by-catch in our other fisheries. **For example,** larger mesh for culling fish, smaller female and juvenile crab out of King Crab pots, tanner boards with restricted openings to utilize the crawling characteristics between king and tanner crab species, and in the case of Got Ya's, strong stainless steel extruder bars for control of Halibut by-catch, and springiness on the fingers to hinder and prevent crab from crawling in. Other methods of controlling by-catch, mesh size for release of juvenile fish, less soak time to eliminate crawling critters, use of unwanted species for bait to keep the unwanted species out. This method is very useful in ares with large numbers of octopus or starfish. **To increase catch of a target species is to decrease by-catch of other predatory species within the confined space of a pot.**

Baiting technique is especially important when fishing for cod fish. Efficient use of your new bait and old bait will increase your catch. It is my opinion that the more bait, the more fish you will attract. Remember, fish have tails so the concept of chumming the fish to an area depends of liberal use of your bait. Secure placement of bait in a pot with proper tunnel lead will also increase your catch. Should your bait get knocked to a corner by fish, away from your entrance, your catch will decrease. I'm sure you also have many opinions of your own, with local knowledge, variations to my concepts and your observations, you will also increase your catch.

So enough of my fish tales,
May all Americans eat fish.

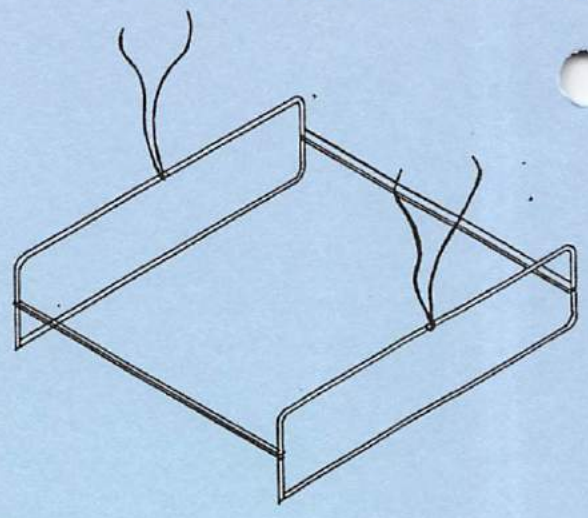
All American Made
US Patent 4,905,405
Got Ya's available thru your local dealers.
or contact (206) 286-9234 for
nearest dealer

Got Ya

Got Ya

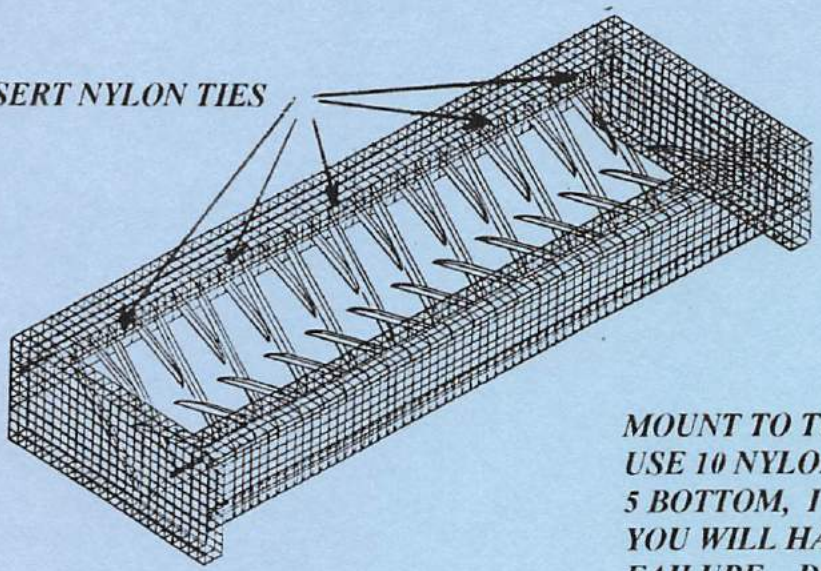
INSTALLATION PROCEDURES

TIE STRAPS TO TOP CROSS BARS

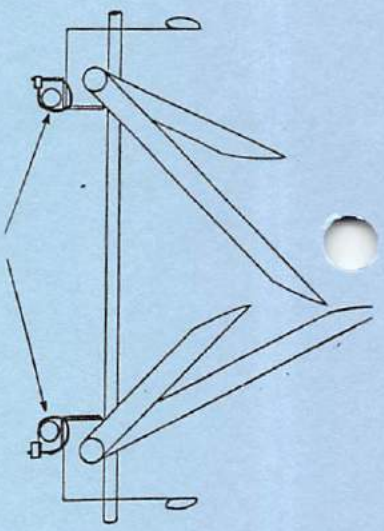


PREPARE TUNNELS TO CONFIGURATION AS PICTURED IN DRAWING ---------->

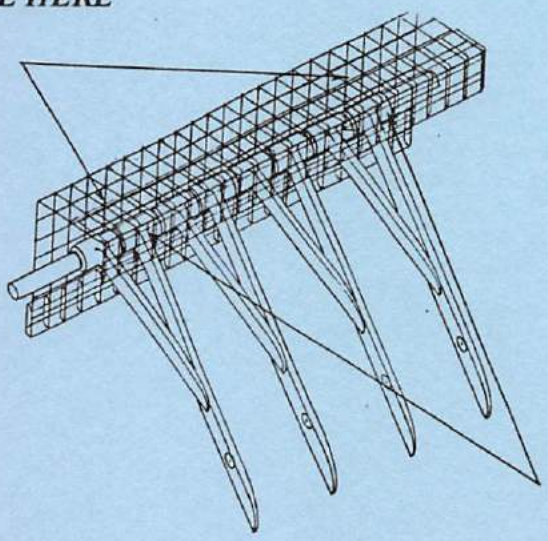
INSERT NYLON TIES



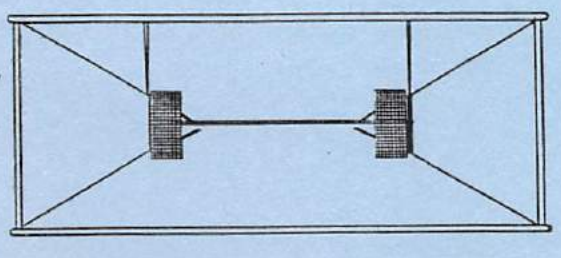
MOUNT TO TUNNEL RING
USE 10 NYLON TIES, 5 TOP, 5 BOTTOM, I HAVE FOUND YOU WILL HAVE ZERO POT FAILURE. DO NOT TIE AROUND ROD OR FINGERS



EXIT WITH NYLON TIE HERE
USE SECOND NYLON TIE FOR GUIDE OUT

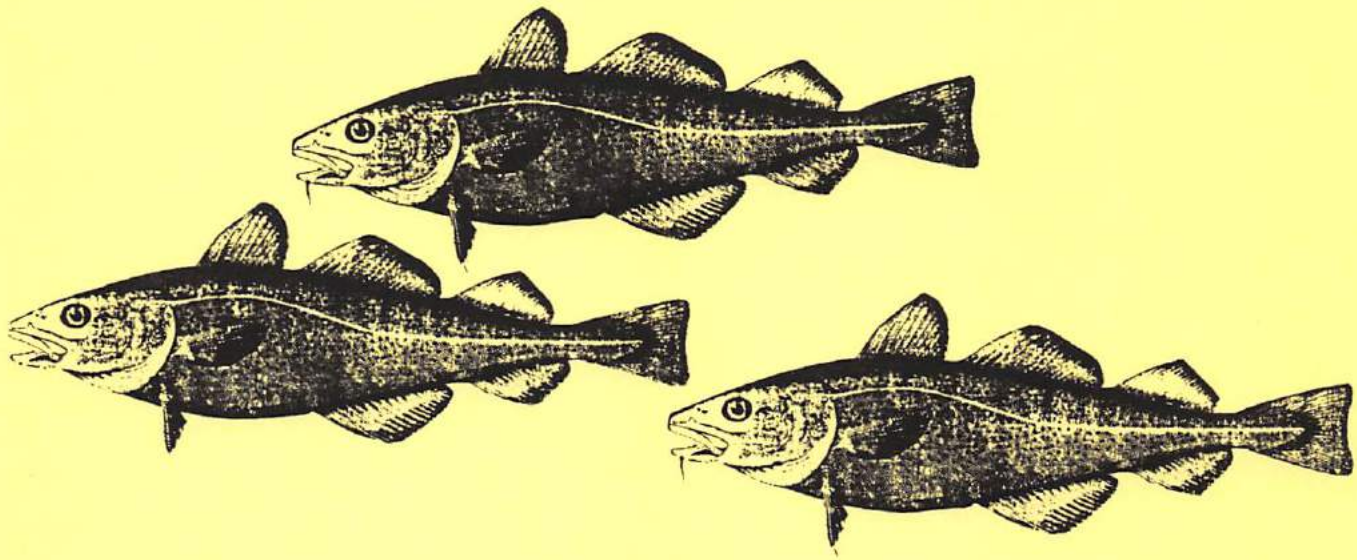


ENTER WITH NYLON TIE HERE
USE SECOND NYLON TIE FOR GUIDE OUT



VIEW OF FINISHED POT FROM DOOR END
CUSTOM SIZES ARE AVAILABLE FOR LARGER OR SMALLER ENTRANCES
BUNGEE-CORD TO BE TIGHTENED ANNUALLY OR WHEN FISHING IN AREAS WITH HEAVY CURRENT

Modifying Crab Pots to Harvest Cod



And Reduce Bycatch

March 1991

AFDF

MODIFYING CRAB POTS TO HARVEST COD AND REDUCE BYCATCH

FINAL REPORT

Submitted by:

Alaska Fisheries Development Foundation
508 West Second Avenue, Suite 212
Anchorage, Alaska 99501
Phone: (907) 276-7315
Fax: (907) 271-3450

March 1991

The information in this report was produced with
funds provided through the Alaska Science and Technology Foundation
under grant agreement 90-1-031

MODIFYING CRAB POTS TO HARVEST COD AND REDUCE BYCATCH

Executive Summary

From July 1990 through February 1991, the Alaska Fisheries Development Foundation, Inc. in cooperation with Alaska Department of Fish and Game (ADF&G) and the Alaska seafood industry was engaged in research to evaluate the effectiveness of a number of crab pot modifications for minimizing the catch of crab and halibut in pots, while increasing the catch of Pacific Cod. The use of modified crab pots to harvest cod had just begun and there was only anecdotal information about both the cod catches and the bycatch levels of critical prohibited species, specifically crab and halibut. The recent dramatic expansion in the groundfish bottomtrawl fisheries was beginning to witness reductions in catches and seasons because of catches of prohibited species. A credible research project defining the parameters of this new harvesting technique was required.

The project objectives were to engage a commercial fishing vessel and outfit it with cod pots with several modification variations. This vessel would then fish the gear under normal commercial conditions with a statistically determined sampling design. The sampling program was designed to be able to produce sufficient data to differentiate the modifications with respect to their ability to catch cod and avoid tanner crab and halibut. Once enough data was collected the field study would be completed and the data would be analyzed on shore. A final report delineating the significant results would be published in March 1991.

Most project objectives were met during the course of the project and results with significant value for both harvesters and managers was produced. We were able to identify pots which had higher cod catches and lower halibut catches. Unfortunately, we did not encounter enough tanner crab to evaluate the effect of pot modifications. Finally, we were able to determine that the condition of the halibut that were harvested in the pots was "excellent" the vast majority of the time.

This study has shed some light on the opportunity which cod pot fishing provides, both for fishermen attempting to economically expand their operation and for managers attempting to ensure the biological health of the fish stocks and the economic health of the commercial fishery. Further investigations will be required to fully understand the relationship of modified pots and tanner crab catches.

Acknowledgements

We thank the Alaska Department of Fish and Game for their excellent effort on this project. Dave Carlile, Tom Dinnocenzo, and Leslie Watson provided the data collection and analysis requirements for the project. In addition, industry support from gear manufacturers Larry Hendricks, Peter Musland and Ed Wyman was instrumental. Thor and Marius Olsen and the crew of the F/V Enterprise were all very helpful in their skill and knowledge of the fishery and handling of the gear.

Disclaimer

The participants in this project do not endorse any of the commercial products mentioned in this report. All products used in this study were supplied by the manufacturers and installed under the express instructions of their manufacturers.

Modifying Crab Pots To Harvest Cod And Reduce Bycatch

Table of Contents

Section A

Progress Report No. 1
July 1990 - August 1990

Progress Report No. 1

Project activities began immediately upon contract signing and we have been able to meet the planned schedule. The first effort was finalizing and distributing an invitation to bid for the vessel charter portion of the study. The invitation to bid was mailed out to a wide audience (including the ADF&G vessel charter mailing list) on August 3, 1990. Only three vessels responded to the ITB by the August 24, 1990 deadline. After review of the bids it was determined that none them met the charter requirements. Deficiencies included lack of space and lack of experience.

We then obtained ASTF approval to attempt to identify a charter contractor directly and proceeded to contact as many people as possible (including previous bidders) to generate interest. We received four proposals by the September 7th deadline and among them were three that were completely responsive. After review and reference checking it came down to two vessels, and final selection was made on the basis of cost. The selected vessel is the M/V Enterprise of Kodiak. This vessel is one of the pioneers of cod pot fishing in the Gulf of Alaska and is owned by Thorvold and Maruis Olsen. The skipper is Keith Klockinbrink. A contract for vessel charter was signed on September 15, 1990.

Also, we have finalized our contract with the ADF&G for data collection and analysis. The experimental design was finalized and pots modified between September 14th and 17th. The actual charter began on September 17, 1990. An advisory group meeting should be held in the near future, as the originally planned pre-charter meeting was missed due to the delays in selecting a vessel.

Section B

Progress Report No. 2
September 1990 - October 1990

Progress Report No. 2

The project continues to meet the original schedule. Gear modification began on September 15th and the M/V Enterprise left Kodiak for the fishing grounds on September 17th with crew and ADF&G personnel. Thirty-two crab pots were modified and twenty-four were fished at any one time. Fishing began on September 18th and continued through October 12th. Twenty-three days of actual fishing were completed. Three days were lost due to a combination of weather, mechanical problems, and re-supplying. The gear was turned over about forty-one times for a total of 991 pot hauls in nine different locations.

Data analysis has just begun and, because of the large number of repetitions, we expect results which will allow conclusive evaluation of the impacts of pot modifications on cod catches and bycatch reductions.

An advisory group meeting was held in Kodiak on October 26th. In attendance were members Jack Hill, Bob Pfutzenreuter, Tom Dinnocenzo, Mel Monsen and Jeff Stephan. The field effort was discussed and an unedited video tape of the vessel charter was reviewed. Tides were raised as an additional factor which could have an impact on study results. Tom felt we had collected enough data to add it in the analysis.

Note: The final advisory committee meeting was held on February 1, 1991 and consisted of a review of the draft fianl report. In attendance were Mel Monsen, Tom Dinnocenzo, Leslie Watson, Bill Nippes, Bob Pfutzenreuter, Jack Hill and Charlie Johnson.

Section C

Final Project Report

INTRODUCTION

Pot fishing for groundfish in Alaska waters began in the early 1980's with long lining of small pots for sablefish (*Anoplopoma fimbria*). The first use of crab pots for harvesting Pacific cod in the Kodiak Island area began in 1985, primarily as a means to utilize crab gear between crab seasons. However, as defined in state regulations, king and Tanner crab pots are not legal gear for harvesting groundfish nor are groundfish pots specifically defined (Alaska Department of Fish and Game 1990). Concern over the use of unmodified crab gear led ADF&G to develop a special-use permit for **modified** crab pot gear that would allow fishermen to utilize this gear inside State waters with the intent of preventing bycatch of crab. A primary condition of the permit required fishermen to modify the tunnel eye opening by dividing it into smaller, individual openings of 30 inches or less in perimeter. This modification created a pot that no longer could legally be defined as a crab pot. By late 1989 the local crab fleet began looking at the pot cod fishery as a legitimate target fishery that could supplement the declining king and Tanner crab fisheries. The cod fishery peaked in 1990 when over 13 million pounds of cod valued at almost three million dollars was landed (Figure 1).

Several retention devices, originally developed for the brown king crab (*Lithodes aequispina*) fishery to keep the crab in the pots, have also been incorporated in pots for targeting Pacific cod. Some of the retention devices included *Gotya*, *Neptune*, and *Norsol* products. The Alaska Fisheries Development Foundation (AFDF) became interested in testing these commercially-made devices for their effectiveness in retaining trapped cod. Additionally, as prohibited species bycatch concerns in the Gulf of Alaska continued to dominate groundfish management, both AFDF and ADF&G wanted to evaluate the extent of halibut and crab bycatch in this gear type. ADF&G was contacted to conduct the project and produce the final report because of previous at-sea observer work on pot vessels during 1987-89.

The purpose of this study was to compare catches of Pacific cod and prohibited species (halibut and crab) among crab pots modified with three commercial retention devices, four sizes of tunnel eye openings and two orientations of tunnel eyes.

METHODS

Experimental Design

The study was conducted as a generalized randomized block design, with three experimental units per treatment-block combination (Fig. 2., Steel and Torrie, 1980, Addelman, 1969).

Treatments - The treatments included a standard 6'x 6'x 3' Tanner crab pot and seven unique modifications to the tunnel eyes of the crab pots. The modifications were designed to 1) promote the entry and retention of Pacific cod in the pots and/or 2) prevent or minimize entry of halibut and crab (primarily King and Tanner crab) into the pots. The principal methods for promoting entry and retention of Pacific cod were to orient the pot tunnel eye vertically (rather than obliquely, as in a standard crab pot) and to install one of three types of retention devices in the openings. These devices are intended to allow cod to enter pots and minimize or prevent the fish from leaving the pots. The principal method for excluding halibut and crab was to reduce the size of the tunnel eye openings by installing rigid, vertical dividers spaced equidistantly across the tunnel eye at predetermined spacings. Specifically the treatments included:

Treatment 1 - Crab pot - A standard crab pot with an oblique tunnel eye (Figure 3) and no rigid dividers in the tunnel eye. Tunnel eye dimensions = 8" X 36".

Treatment 2 - One hole - A crab pot with a vertical tunnel eye (Figure 4) and no rigid dividers in the tunnel eye. Tunnel eye dimensions = 8" X 36".

Treatment 3 - Two holes - A crab pot with a vertical tunnel eye and one rigid divider in the tunnel eye. Dimensions of each of two holes formed by the single division of the tunnel eye = 8" X 18".

Treatment 4 - Three holes - A crab pot with a vertical tunnel eye and two rigid dividers in the tunnel eye. Dimensions of each of three holes formed by the two divisions of the tunnel eye = 8" X 11.5".

Treatment 5 - Five holes - A crab pot with a vertical tunnel eye and four rigid dividers in the tunnel eye. Dimensions of each of five holes formed by the four divisions of the tunnel eye = 8" X 7".

Treatment 6 - Three holes + 'Gotya' - Treatment 4 (Three holes) further modified by the inclusion of a 'Gotya' brand fish inclusion device (Fig. 5).

Treatment 7 - Three holes + 'Neptune' - Treatment 4 (Three holes) further modified by the inclusion of a 'Neptune' brand fish inclusion device (Fig. 6).

Treatment 8 - Three holes + 'Norsol' cod sock - Treatment 4 (Three holes) further modified by the inclusion of a net cod sock fish retention device.

Each treatment was represented in three pots, for a total of 24 pots at each location.

Blocks - The blocks for the experimental design were the nine different locations where fishing occurred (Fig. 7).

Field Methods

The study area included nine locations in the Kupreanof Strait, Viekoda Bay and Cape Uganik areas of northern Kodiak Island (Figure 7). Ocean depths fished in these areas ranged from 20 to 80 fathoms.

The charter vessel was a 78-foot steel-hulled commercial crabber equipped with facilities for three crew and 2-3 biologists and included all necessary pots, lines and buoys. Retention devices were supplied by the manufacturers.

The 24 pots used in the study were set sequentially, usually in two separate strings of twelve pots each, at the individual locations. The order of each pot in the sequence was randomly assigned, using a unique randomization for each location. At each location the pots were spaced from 0.2 to 0.3 mile apart. Pots were fished repeatedly from four to six times at a location, before being moved, one string at a time, to the next location (block). All pots at any one location were fished the same number of times. Thus, part of the "block effect" included the number of times the pots were fished. It was necessary to move the pots in 12-pot strings, because of the limited deck space aboard the vessel and to allow randomization of the pots at each new location. Pots were hauled twice daily except when prevented by weather or other factors.

Species composition and length frequency data were recorded for each pot. Halibut were counted, measured for length and returned to the sea. Pacific cod were counted, measured for length and total weights were recorded before releasing them. The crab species were sexed, counted, measured and total weights of each sex were taken before releasing them. Other species were counted and, when time permitted, weighed before disposing of them. Occasionally subsamples of the total catch of a species in a pot would be weighed to obtain average weights for later expansion if

the samplers fell behind or the catch was large. Halibut lengths were converted to weights using a length to weight conversion table after sampling was done.

In all the pots tested, one quart jars and small onion sacks were filled with herring and used for bait. Bait jars were hung in the center of the pot and rebaited each evening. The onion sacks were suspended in the center of the pot with a rubber tie and hook for attachment to the top and bottom of the pot and were changed with each set.

Pots with tunnel eye dividers (Treatments 3 - 8) were rigged using four to six strands of heavy seine twine bundled together with a separate strand. The twine was tied vertically across the 7" x 36" tunnel eyes forming equal sized individual openings. An exception to this was the gear rigged with *Gotyas* in which the *Gotya* itself had galvanized metal crossbars about one half inch wide. All retention devices used in the study were orange in color, although other colors were available.

The *Gotya* insert is constructed of interlocking injection-molded polyethylene fingers that are alternately positively and negatively buoyant in sea water. The fingers swing inward but not outward, creating a one-way opening. The frame is steel with a polyester coating custom-made to fit any tunnel eye. The *Gotya* is installed in the each tunnel eye with four hose clamps, one in each corner (Figure 5).

The *Neptune* retention device is also a one-way tunnel device constructed from flexible plastic. The interlocking fingers are attached to a black plastic tube frame which is fastened to the tunnel eye using hose clamps, plastic wire ties or seine twine (Figure 6). Both *Neptune* and *Gotya* devices are fastened flush to the inside of the tunnel eye with the fingers angled into the interior of the pot; the tunnels are then tied into the vertical position using heavy seine twine.

The *Norsol* insert consists of two triangular pieces of one-inch nylon web sewn together on the sides to form a funnel-shaped cod sock. The ends are left open, and the large end is sewn around the frame of the tunnel eye with the small end drawn inside the pot and tied into position with the smaller open end of the sock hanging loose. This lets cod into the pot but makes it difficult for them to find their way out. These devices can be rigged many different ways depending upon application and effectiveness. For the purpose of this study, the socks were shortened by about 12 inches to fit the pots. Opposing socks were then tied together with a piece of twine about 10 to 12 inches long at a point about 12 inches from the end of the sock. This left the last 12 inches hanging loose near the center of the pot creating a flap that loosely closes the end of the sock.

The fishing operation was conducted in a manner as similar to an actual pot fishing operation as possible. Specifically, the skipper of the vessel was encouraged to set the pots in locations and depths where he would expect to maximize catch of cod. The approach also entailed repeatedly fishing the pots at each specific location until the skipper deemed the catch-per-unit effort to be inadequate before moving to the next location.

Statistical Analyses

Analyses of covariance (ANCOVA) were used to test the null hypotheses:

H_{01}: No differences in the mean cumulative catch of Pacific cod among the eight treatments.

H_{02}: No differences in the mean cumulative catch of halibut among the eight treatments.

The random variable used for testing these hypotheses was the cumulative catch per pot, across the multiple sets for each pot at each location. For example, at Location 2 each pot was set four times. The variable used in the tests of hypotheses was the sum of the catches from the four, separate sets. The number of sets at each location ranged from four to six.

When results of ANCOVAs indicated significant overall treatment differences, Scheffe's tests were used to test for differences among individual treatments.

Tests of hypotheses were not conducted for crab catch because the catch of crabs was so small. Sufficient numbers of crabs were caught only at a single location, Location 8.

The linear model used for testing these hypotheses was:

$$y_{ijk} = \mu_{..} + \alpha_i + \beta_j + \alpha\beta_{ij} + \beta_0(x_{...} - x_{ijk}) + \varepsilon_{ijk}$$

where: y_{ijk} = cumulative catch of cod or halibut for treatment i ($i = 1,2,\ldots,8$), block j ($j = 1,2,\ldots,9$), pot k ($k = 1,2,3$).

$\mu_{..}$ = the overall mean catch of cod or halibut

α_i = the effect due to treatment i

β_j = the effect due to block j

$\alpha\beta_{ij}$ = the effect due to interaction between treatment i and block j.

β_0 = the regression coefficient for the relationship between catch and soak time.

$x_{...}$ = the mean soak time

x_{ijk} = the soak time for pot k, treatment i, block j.

ε_{ijk} = random error

Soak time was used as a covariate to evaluate the influence of soak time on catch of Pacific cod and halibut, and to increase the power of the tests for differences among the eight treatments. To further evaluate the influence of soak time on catch, we performed individual regression analyses for each treatment. For these treatment-specific analyses, we regressed both cumulative catch per pot per location and catch per pot, per set, per location, against soak time.

In addition to hypotheses H_{01} and H_{02}, we tested hypotheses to determine whether any of the pot modifications had an effect on the mean size of individual Pacific cod or halibut. Null hypotheses tested were:

H_{03}: No differences in mean length of individual Pacific cod among the eight treatments.

H_{04}: No differences in mean length of individual halibut among the eight treatments.

Analyses of variance (ANOVA) were used to test these hypotheses. The linear model for testing these hypotheses was:

$$y_{ijk} = \mu_{..} + \alpha_i + \beta_j + \alpha\beta_{ij} + \varepsilon_{ijk}$$

where: y_{ijk} = length of individual cod or halibut k, for treatment i ($i = 1,2,...,8$), block j ($j = 1,2,...,9$).

$\mu_{...}$ = the overall mean length of cod or halibut

α_i = the effect due to treatment i

β_j = the effect due to block j

$\alpha\beta_{ij}$ = the effect due to interaction between treatment i and block j.

ε_{ijk} = random error

As indicated by this model, and in contrast to the ANCOVAs, catch from individual pots within each treatment-block combination were

not used for the final ANOVAs. Rather, the mean weights of individual halibut, calculated as the the total weight of halibut from *all* pots within a treatment-block combination divided by the total number of halibut in that treatment-block combination, were used for the ANOVA. This approach was used because some pots within certain treatment-block combinations did not have any halibut catch; most notably Treatment 8. An initial ANOVA using multiple pots per treatment-block combination, rather than a single mean weight for each treatment block combination, resulted in an unbalanced design and the inability to estimate the (least square) mean for Treatment 8. For consistency and to allow direct comparison of results, the ANOVA for cod was conducted the same way.

Regression analyses were used to try to define the relationship between average size of Pacific cod or halibut, and the width of the tunnel eye openings. Catches from Treatments 2, 3, 4 and 5 were used for these analyses.

Bycatch rates were calculated as the ratio of halibut catch, in kg to cod catch, in metric tons.

We also analyzed data on halibut condition to determine if there were any differences among the treatments with respect to condition. Fisher's Exact Probability Test was used to test the null hypothesis:

H_{05}: No differences in the proportions of halibut in poor or excellent condition, among the eight treatments.

Although three condition categories were recorded in the field, "excellent", "poor" and "dead", we collapsed the "poor" and "dead" categories into a single category ("poor") for analysis. This collapsing was necessary to minimize the number of contingency table cells with 0 values, and to overcome computer memory limitations to allow the application of Fisher's Exact Probability Test.

Unless otherwise noted, alpha levels of 0.05 were used to determine statistical significance in tests of hypotheses. The Statistical Analysis System (SAS, 1987) was used in conducting all aforementioned statistical analyses. The GLM (general linear models), REGR (regression), NLIN (non-linear regression) and FREQ (frequency tables) procedures of SAS were used in the analyses.

Plots of cod and halibut weight per pot versus depth of pot were examined to identify relationships between catch and pot depth.

As indicated previously, analyses of crab data were limited to obtaining estimates of mean cumulative catch of Tanner crab, because crab were caught at so few locations.

RESULTS

Hypothesis H_{01} - Mean cumulative catches of Pacific cod differed significantly ($P=0.0001$, $F_{7,143}=54.1$) among the eight treatments. Mean catches ranged from a high of 149.2 kg, for Treatment 6 (Three holes + 'Gotya') to a low of 8 kg for Treatment 3 (Two holes)(Fig 8, Table 1).

Based on the ANCOVA there was no significant relationship between mean cumulative catch of Pacific cod and cumulative soak time ($P=0.98$, $F_{1,143}=0.00$). Individual regression analyses of cumulative catch versus cumulative soak time for each of the eight individual treatments also indicated no statistically significant, linear relationships between cod catch and soak time ($P=0.28$ - 0.86, $F_{1,25}=0.031$ - 1.28). Further, examination of cumulative catches plotted against cumulative soak times did not suggest well-definable, non-linear relationships between catch and soak time.

Because there was no significant relationship between mean cumulative catch and cumulative soak time, mean catches are not adjusted for soak time as a covariate. Additionally, not adjusting for the covariate permits the application of a multiple comparison test, such as Scheffe's.

With respect to cod catch, three groups of treatments emerged from the results of Scheffe's test. Treatments within the following groups did not differ significantly from one another, but did differ significantly from treatments outside the group. The group with the highest mean cumulative catches included Treatments 6 (Three holes + 'Gotya', mean = 149.2 kg; Table 1.) and 7 (Three holes + 'Neptune', mean = 116.2 kg). The second highest group included only one treatement, Treatment 8 (Three holes + cod sock, mean = 67.8 kg). The group with the lowest catches included Treatments 1 through 5. Mean cumulative catches within this group ranged from a high of 22.4 kg for Treatment 1 (crab pot) to a low of approximately 8 kg for Treatment 3 (Two holes).

In addition to significant differences among treatments, mean cumulative catch of Pacific cod differed significantly among the blocks (locations; $P=0.0001$, $F_{8,143}=5.39$). There was no significant interaction between treatment and block effects ($P=0.1$, $F_{56,143}=1.32$).

Hypothesis H_{02} - Mean cumulative catch of halibut also differed significantly among the treatments ($P=0.0001$, $F_{7,143}=21.2$). Mean catches ranged from a high of 30.92 kg for Treatment 1 (crab pot) to a low of 1.8 kg for Treatment 8 (Three holes + cod sock; Fig. 9, Table 1).

As with cod, there was no significant relationship between halibut catch and soak time (P=0.34, $F_{1,143}$=0.91), based on results of the ANCOVA. Regression analyses for individual treatments indicated a weak (r^2=0.15), but statistically significant (P=0.048, $F_{1,25}$=4.3), linear relationship between halibut catch and soak time only for Treatment 8 (Three holes + cod sock). The relationships were not significant for the other seven treatments (P= 0.28 - 0.97, $F_{1,25}$= 0.001 - 1.2). Because of the largely non-significant, linear relationships between halibut catch and soak time, mean halibut catches were not adjusted for the covariate, soak time. As with cod, plots of halibut catch versus pot soak time did not suggest any distinct non-linear relationships between the two variables.

Results of Scheffe's test for halibut catch are summarized in Table 1. Generally, those treatments with fish inclusion devices had lowest catches of halibut compared to the treatments without the devices. The exception to this tendency was Treatment 5 (Five holes), which had the second lowest catch of halibut (mean = 4.86 kg).

As with cod catch, there were significant differences in halibut catch among the nine locations or blocks (P=0.005, $F_{8,143}$=2.9). There was no statistically significant interaction between treatments and blocks (P=0.99, $F_{56,143}$=0.58).

For comaprison, mean cumulative catches for both halibut and cod are depicted in Figure 10.

Hypothesis H_{03} - A test associated with this hypothesis indicated a significant interaction (P=0.0001, $F_{56,3770}$) between treatments and locations (blocks) for cod lengths. As a result, tests of simple effects were conducted, wherein Hypothesis H_{03} was tested individually for each of the nine locations. Among the nine individual locations, mean cod lengths varied from a high of 71.3 cm for the Treatment 1 (Crab pot) at Location 2, to a low of 52.4 cm for Treatment 4 (Three holes), also at Location 2 (Table 2). Among the nine locations, no consistent order was apparent in the mean lengths of cod. At five of the nine locations (blocks) there were statistically significant differences (P=0.0002 - 0.0054) in the mean lengths of cod among the eight treatments (Table 2). In addition to the statistically significant differences among treatments at the four locations noted in Table 2 (Locations 2, 3, 8 and 9), the overall ANOVA for Location 4 indicated statistically significant differences among two or more of the treatments. However, results of Tukey's studentized range test did not indicate which treatments differed in mean cod length at Location 4.

Hypothesis H_{04} - For this analysis, Treatment 8 (Three holes + 'Norsol' cod sock) was excluded because of the small numbers of halibut retained by pots with this treatment, among the nine locations (range: 0 - 5). Among the remaining seven treatments, least square mean lengths of individual halibut varied from a high

of 72.4 cm for Treatment 1 (crab pot) to a low of 62.1 kg for Treatment 5 (Five holes). There were statistically significant differences in least square mean halibut lengths among the seven treatments ($P=0.0001$, $F_{6,554}=4.97$, Table 3). There was no statistically significant interaction ($P=0.16$, $F_{48,554}=1.21$) between treatments and locations (blocks). There were no statistically significant differences ($P=0.34$, $F_{8,554}=1.13$) in least square mean halibut lengths among the nine locations. Tests for differences among least square mean lengths (rather than arithmetic mean lengths) were used because the ANOVA was based on a randomized block design and there were unequal numbers of halibut caught in pots for the various treatments.

Hypothesis H_{05} - The percent of halibut in "excellent" condition ranged from a high of 99.3 % for Treatment 3 (Two holes) to a low of 91.7 % for Treatment 8 (Three holes + 'Norsol' cod sock). Therefore the percentage of halibut in either "poor" or "dead" condition (these two categories were combined for this analysis) ranged from a high of 8.33 % for Treatment 8 (Three holes + 'Norsol' cod sock) to a low of 0.72 % for Treatment 3 (Two holes). However, there were no statistically significant differences ($P=0.104$) among the treatments with respect to percentages of halibut in "excellent" or "poor/dead" condition.

The relationship between halibut catch and width of tunnel eye openings fit a negative exponential growth function reasonably well (Figure 11). However, we were unable to define the relationship between cod catch and tunnel eye width using the negative exponential growth function or other readily-identifiable function.

Bycatch rates of halibut ranged from a high of 2509.4 kg of halibut per metric ton of cod caught, for Treatment 3 (modified pot with two 8" x 18" tunnel eye openings) to a low of 26.5 kg of halibut per metric ton of cod caught, for Treatment 8 (modified pot with 'Norsol' cod sock and three 8" x 11.5" tunnel eye openings) (Table 4).

Mean cumulative catches of Tanner crab ranged from a high of 6.9 kg for Treatment 8 (Three holes + 'Norsol' cod sock) to a low of 0.17 kg for Treatment 3 (Two holes). Tanner crabs were caught at six of the nine locations (Locations 2, 3, 5, 7, 8 and 9). However, at most of those six locations, Tanner crabs were caught in very low numbers. Tanner crabs were caught in Treatment 1 (Crab pot) at only three locations (Locations 3, 7 and 8). Crabs were caught in in each of the eight treatments only at Location 8.

Based on examination of plots of cod and halibut catch versus pot depth, no readily discernible relationship was evident between catch and pot depth.

DISCUSSION

Catches measured in this study represent the cod and halibut that were caught *and* retained. The pot modifications used in the study may have served both functions, to varying degrees, with the two species. For example, cod catch in Treatments 6 - 8, (with fish retainers and three tunnel eye holes) significantly exceeded the catch in Treatment 4 (three tunnel eye holes). Presumably the difference in catch is attributable to the fish retention capability of the devices, the purpose for which the devices are intended.

While the primary purpose of reducing the width of tunnel eye holes was to reduce the bycatch of halibut and crab, the dividers may also promote retention of fish. This is suggested by the trend of greater cod catches with increased numbers of divisions in the tunnel eye. This is only an apparent trend however, since there were no significant differences among Treatments 2 - 5 in mean cumulative cod catch. However, it is notable that Treatment 5, with tunnel eye openings of 8" X 7" caught and retained more cod than the other three treatments with wider tunnel eye openings. Also noteworthy is the fact that Treatment 5 had the second lowest catch of halibut; second only to Treatment 8 (Three holes + cod sock).

Although the intended function of the retention devices is to keep fish in pots once they have entered, the retainers may also tend to prevent halibut from entering pots. Although the differences were not significant, the three treatments (6, 7 and 8) with retention devices and tunnel eyes with three holes had lower mean cumulative catches than Treatment 4, with three holes, but no fish retainers.

Although the difference was not statistically significant, 'Gotya' retainers had greater cod catch than 'Neptune' retainers. However, the 'Gotya' retainers also had greater halibut catch than did the 'Neptune' retainers. Again, these differences were not statistically significant. The 'Gotya' and 'Neptune' devices significantly exceeded the 'Norsol' cod sock in catch and retention of cod. However, there is inherently more variability in how the cod socks could be installed in pots. Modifications to the cod sock might result in increased catch and retention of cod.

The condition of the great majority of halibut (> 90 %) in this study was judged to be "excellent" regardless of the treatment. Several factors may have contributed to this condition. Soak times were rarely over 24 hours. Minimizing time in pots would serve to reduce injuries associated with predation (e.g. by sand fleas or octopus). In addition, cod catches were relatively low throughout the study. This may have minimized injuries to halibut associated with full pots and attendant battering in the pots. In general, measurements and condition assessment was done on any halibut before other species, serving to minimize time on deck for halibut.

Results of the ANCOVAs suggest that a critical minimum tunnel eye width, which may reduce mean cod catch, was not achieved in this study. It is possible that tunnel eye openings with dimensions less than 8" X 7" could be used without significantly reducing the total catch of cod. However results of ANCOVAs and non-linear modelling of the relationship between halibut catch and width of tunnel eye openings, suggest that a critical minimum width for halibut may have been at least bracketed by the tunnel eye widths used in this study, at least for halibut of the sizes encountered under the conditions of this study. This is suggested by the general decrease in halibut catch with decreasing tunnel eye width and the significantly lower halibut catch in Treatment 5 (Five openings) compared to Treatment 3 (Two openings). For cod, it can be assumed that there would be critical tunnel eye dimensions, less than or equal to 7" x 8", below which cod catch would be reduced.

It appeared that fish retainers enhanced the mean catch of Pacific cod and may have also tended to decrease the bycatch of halibut. Division of tunnel eyes into holes 8" X 7" may have also tended to increase catch of cod and decrease catch of halibut. However, since fish retainers were not combined with 8" X 7" tunnel eye holes, it is not clear what effect this combination would have had on cod or halibut catch. While smaller tunnel eye holes may serve some fish-retention function in the absence of specific fish retainers, the addition of fish retainers would probably override any fish retention function of the tunnel eye dividers. However, the tunnel eye holes with smaller dimensions would probably still serve to reduce bycatch of halibut.

The various treatments resulted in differing mean cumulative catches of cod, mainly by influencing the numbers of fish caught rather than the weight of individual cod caught. This is shown by the fact that there were no significant differences in mean weights of individual cod fish among the eight treatments. In contrast, the differing mean cumulative weights of halibut caught by the different treatments may be attributable, in part to differing weights of individual halibut. This is suggested by the statistically significant difference in weight of individual halibut between Treatments 1 (Crab pot) and 5 (Five holes).

Catch of Tanner crab was too low in the locations where this study was conducted to adequately evaluate the influence of the various pot modifications on catch of Tanner crab.

CONCLUSIONS

1. Pots with the fish retention devices manufactured by 'Gotya', 'Neptune' and 'Norsol', and with tunnel eye openings 7" x 8", had significantly higher catches of Pacific cod than pots without such devices.

2. Fish retention devices which relied on inter-digitating, rigid fingers (i.e. 'Gotya' and 'Neptune') to retain fish had significantly higher catches of Pacific cod than did the retention device which relied on a collapsible net funnel for retaining fish (i.e. 'Norsol' cod sock).

3. Pots with the fish retention devices and 7" x 8" tunnel eye openings tended to have the lowest catches of halibut, although differences in halibut catch between pots with and without the devices were often not statistically significant.

4. When combined with tunnel eye openings at least as small as 8" x 11.5", fish retention devices appeared to further reduce the catch of halibut beyond catch reductions displayed by 8" x 11.5" tunnel eye openings alone. Thus, in addition to their fish retention function, fish retention devices, at least when combined with reduced tunnel eye opening dimensions, may enhance the halibut bycatch reducing function of the smaller dimensions.

5. At least in the absence of fish retention devices, pots with tunnel eye openings as small as 7" x 8" did not significantly reduce the catch of Pacific cod. Unknown is whether these dimensions are a lower limit, below which catch of Pacific cod may be significantly reduced.

6. Halibut condition among the eight treatments was "excellent" the vast majority of the time and did not differ statistically significantly among the eight treatments.

7. In order to evaluate the effect of the eight treatments on catch of Tanner crab, this study would need to be repeated, perhaps in another area and/or at another time when sufficient numbers of Tanner crab are available.

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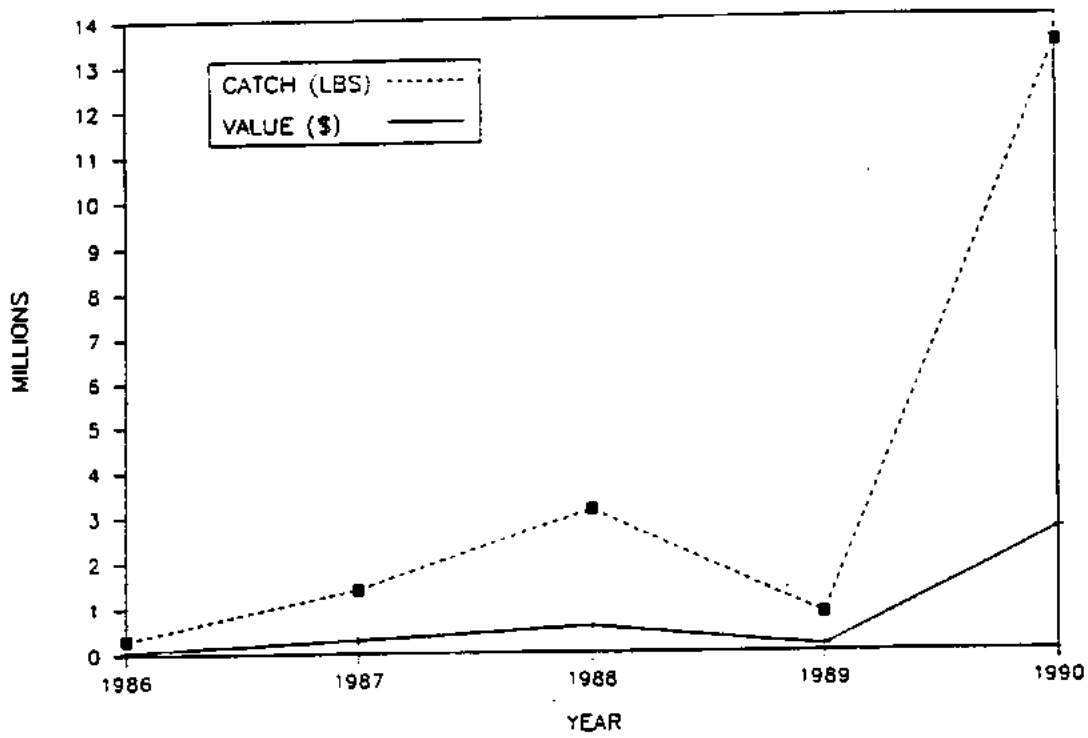

Figure 1. Catch and ex-vessel value of Pacific cod landed by pot vessels in the Central Gulf of Alaska, 1986-1990 (source: Pacific States Marine Fisheries Commission PacFIN reports, 1986-1990).

TREATMENT	LOCATION 1	2	3	4	5	6	7	8	9
1	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
2	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
3	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
4	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
5	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
6	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
7	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
8	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X

Figure 2. Schematic diagram of the experimental design for the cod pot study. Each 'X' in the body of the diagram represents an individual pot. There were 3 pots for each of the 8 treatments and 9 locations (blocks).

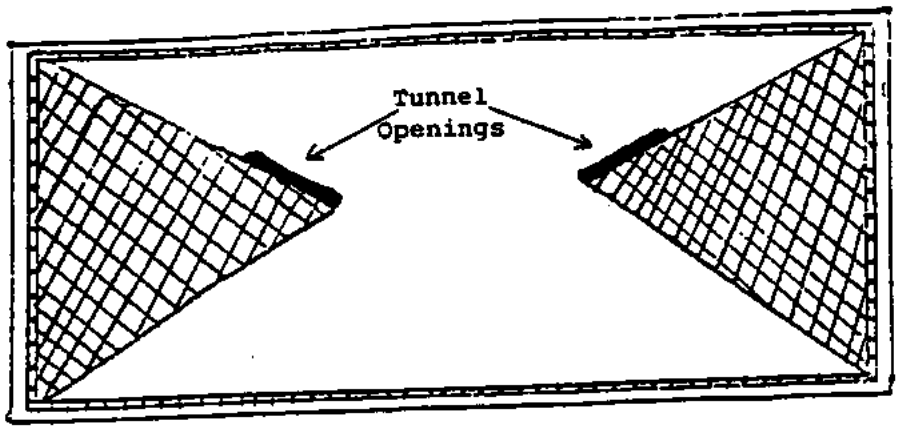

Figure 3. Standard crab pot showing tunnel eye openings set up for crab fishing. Here the openings are obliquely oriented.

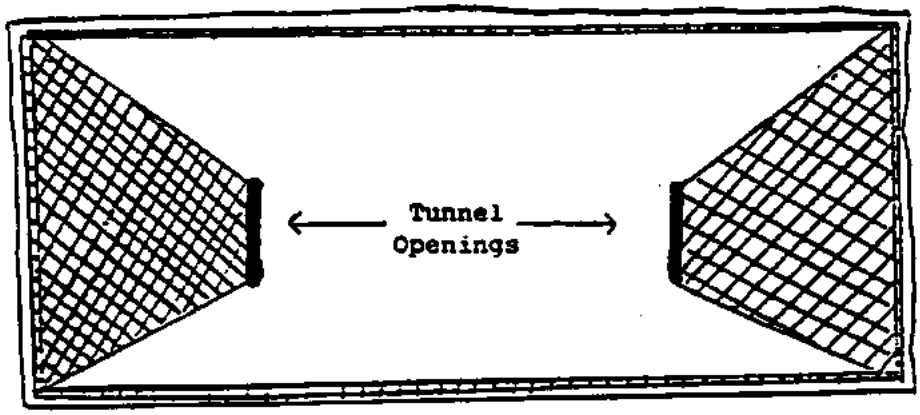

Figure 4. Modified crab pot showing tunnels set up for cod fishing. Tunnel eye openings have been moved to a vertical orientation.

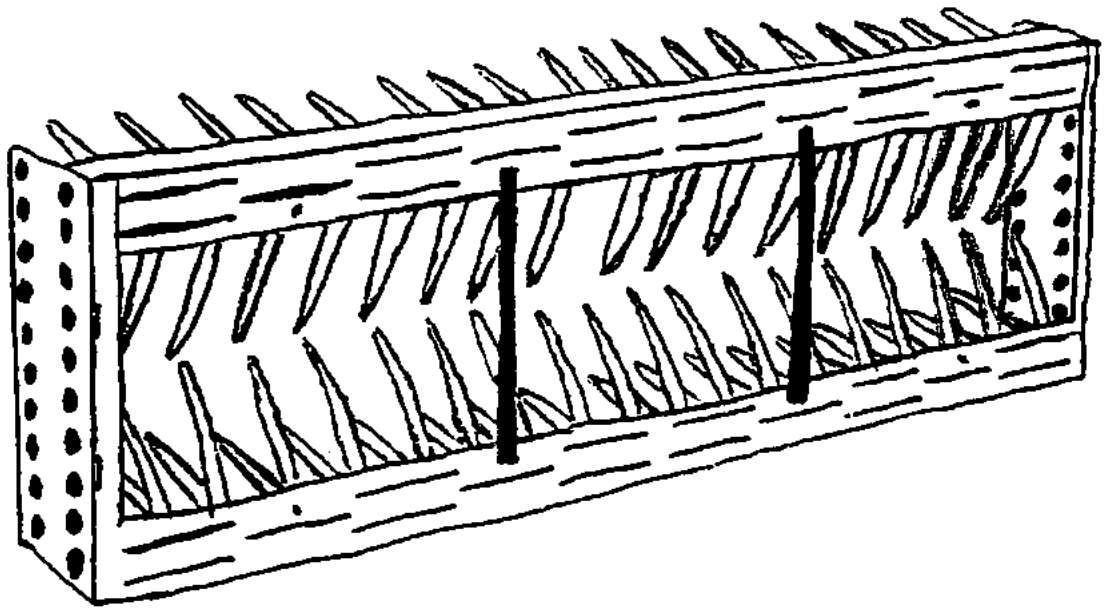

Figure 5. Diagram of a 'GOTYA' tunnel eye insert.

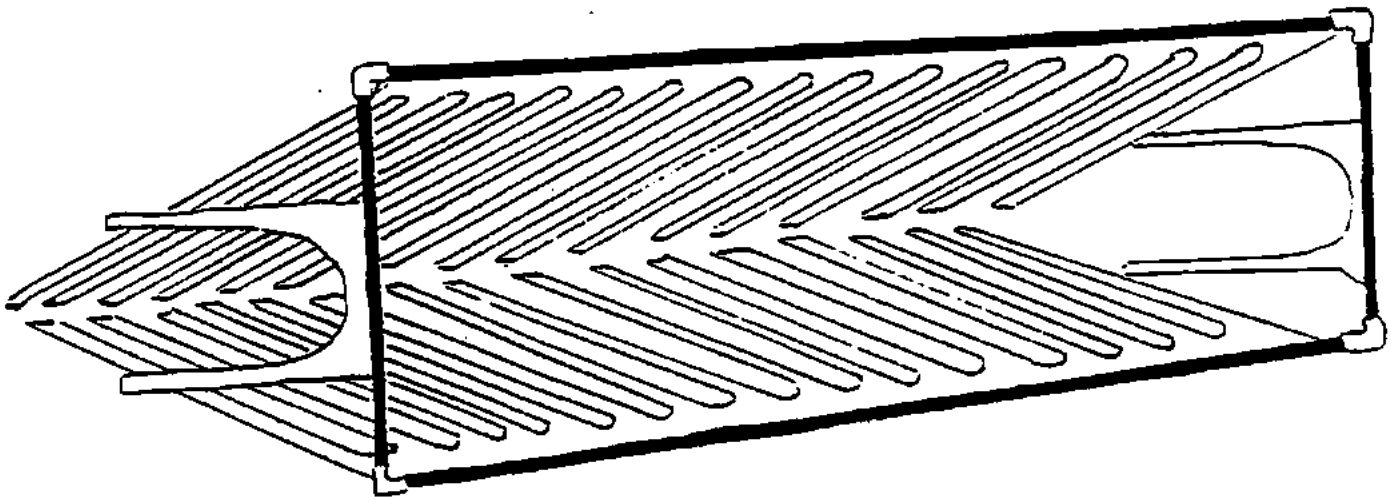

Figure 6. Diagram of a 'NEPTUNE' tunnel eye insert.

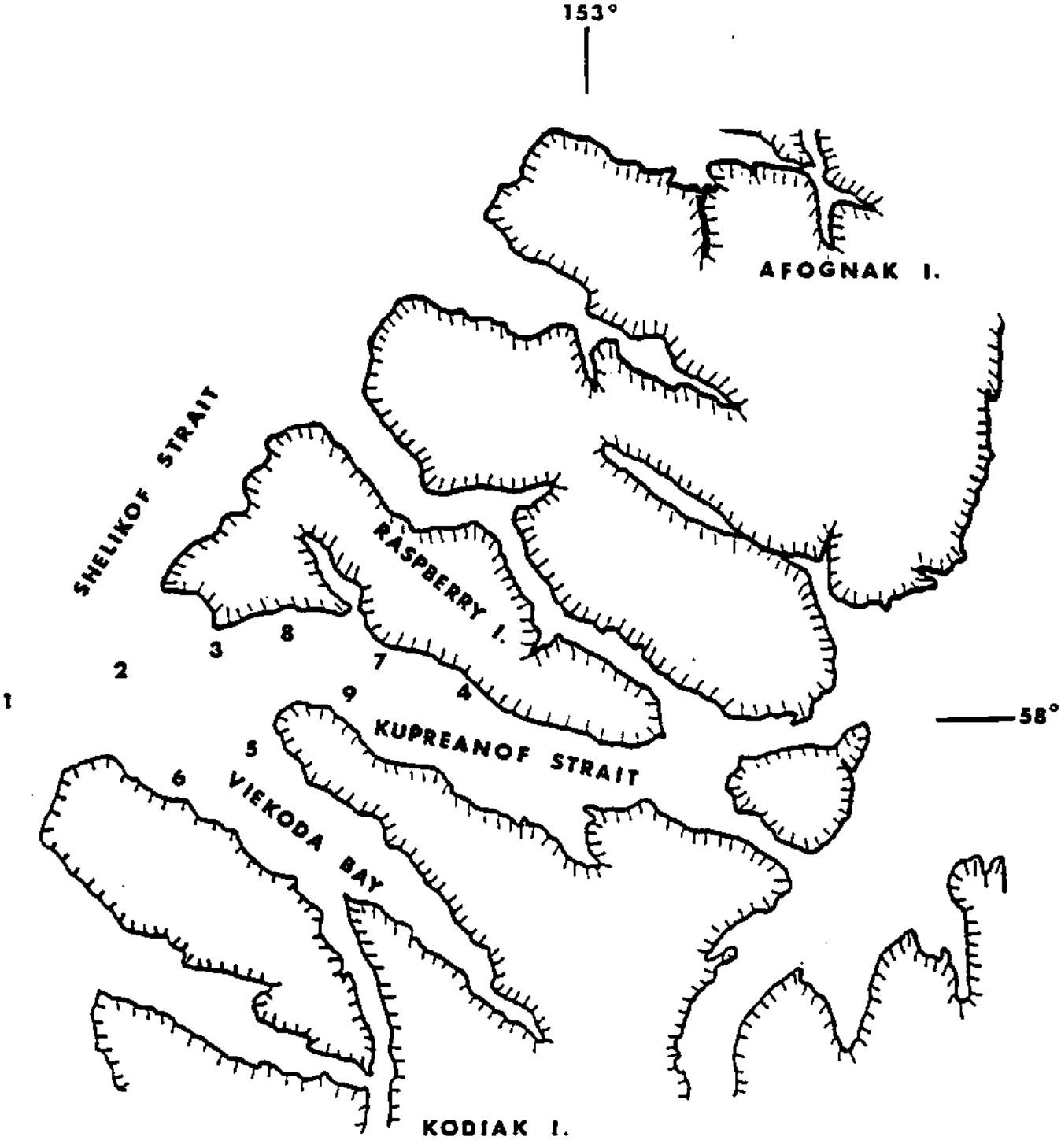

Figure 7. Pot cod study locations. Numbers represent actual sites, in chronological order, where gear was set.

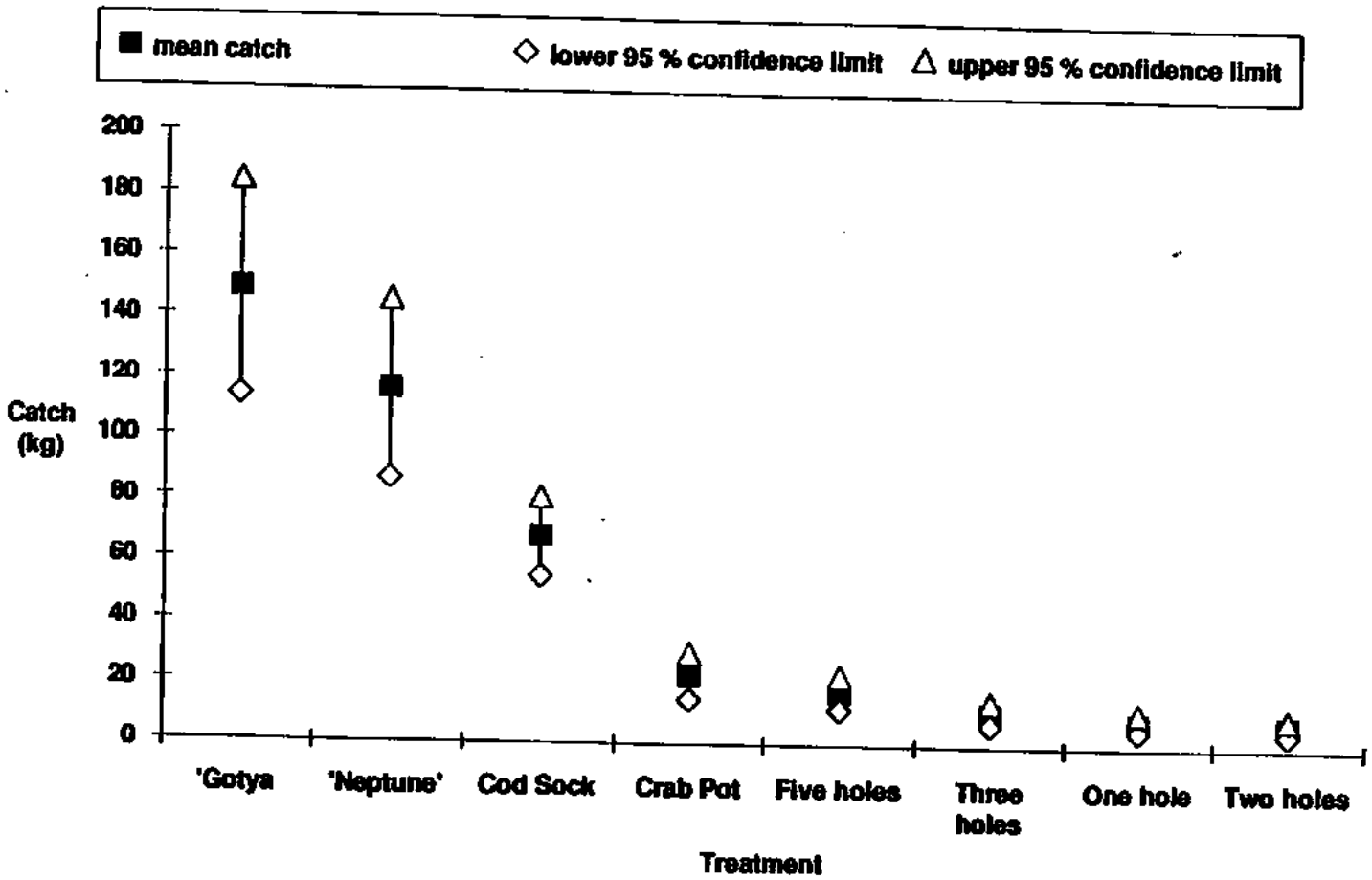

Figure 8. Mean catch of Pacific cod. Catch is cumulative catch for multiple deployments and retrievals of pots.

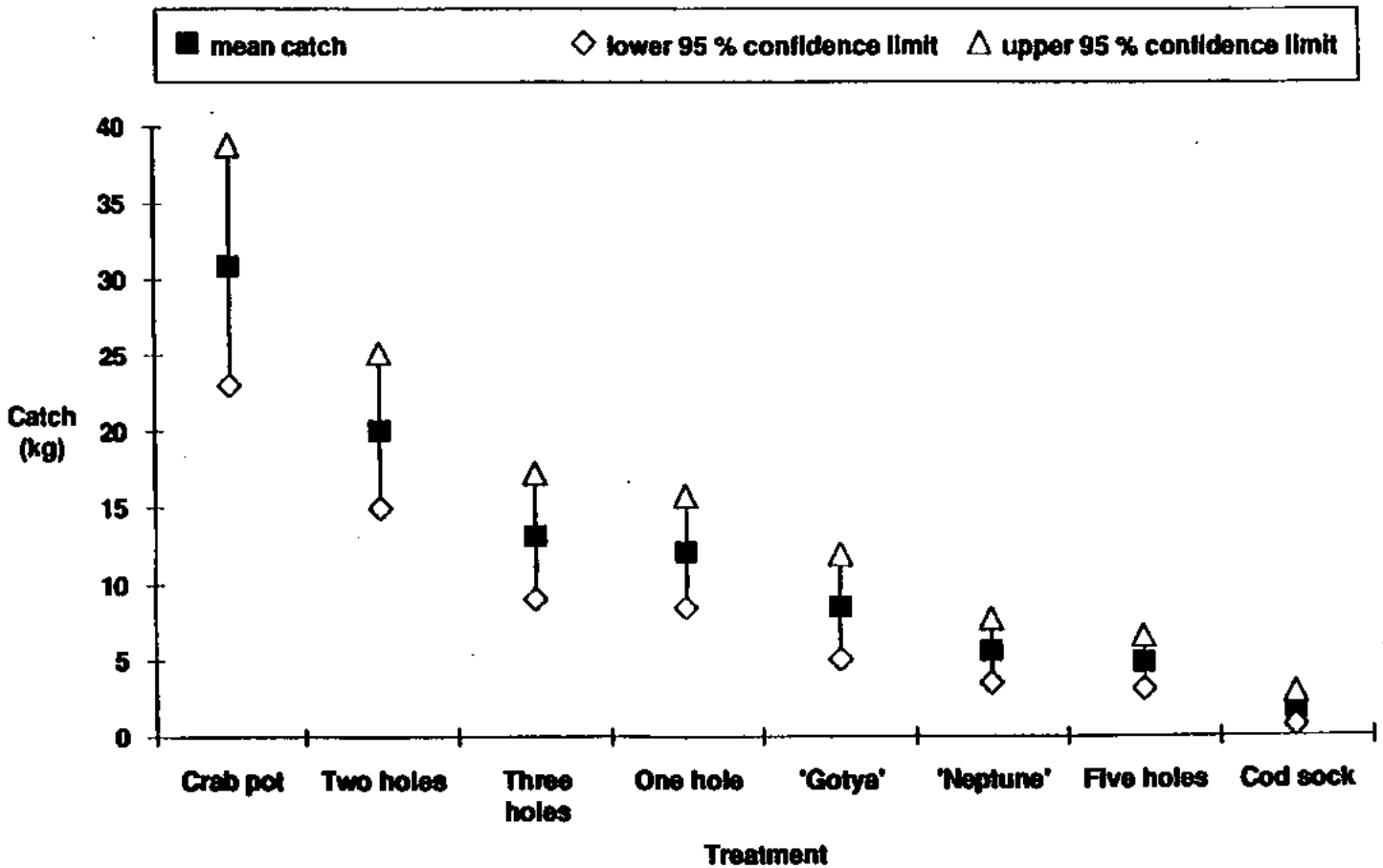

Figure 9. Mean catch of halibut. Catch is cumulative catch for multiple deployments and retrievals of pots.

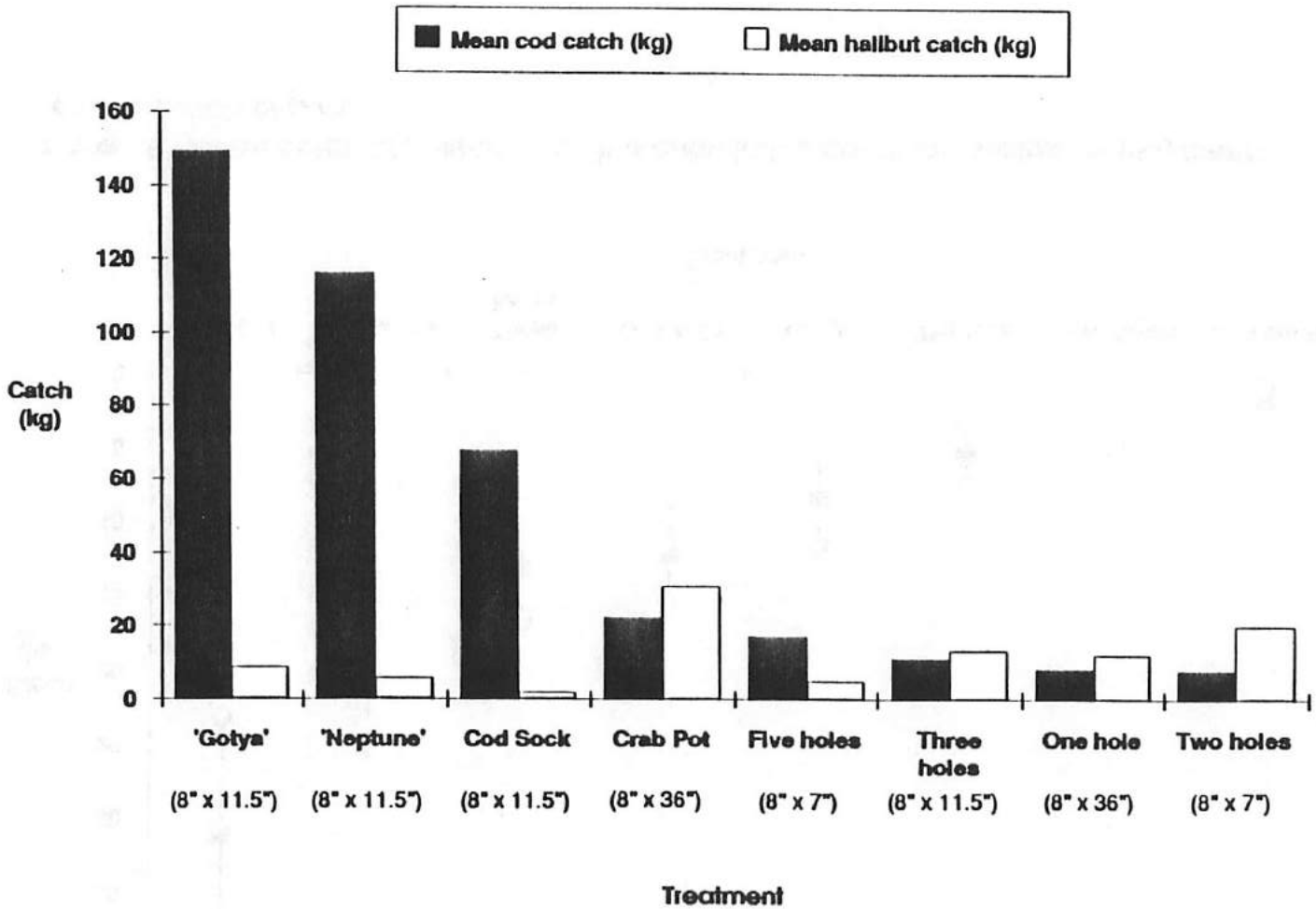

Figure 10. Mean catch of cod and halibut. Catch is cumulative catch for multiple deployments and retrievals of pots. Numbers in parentheses below treatments are dimensions (height x width) in inches.

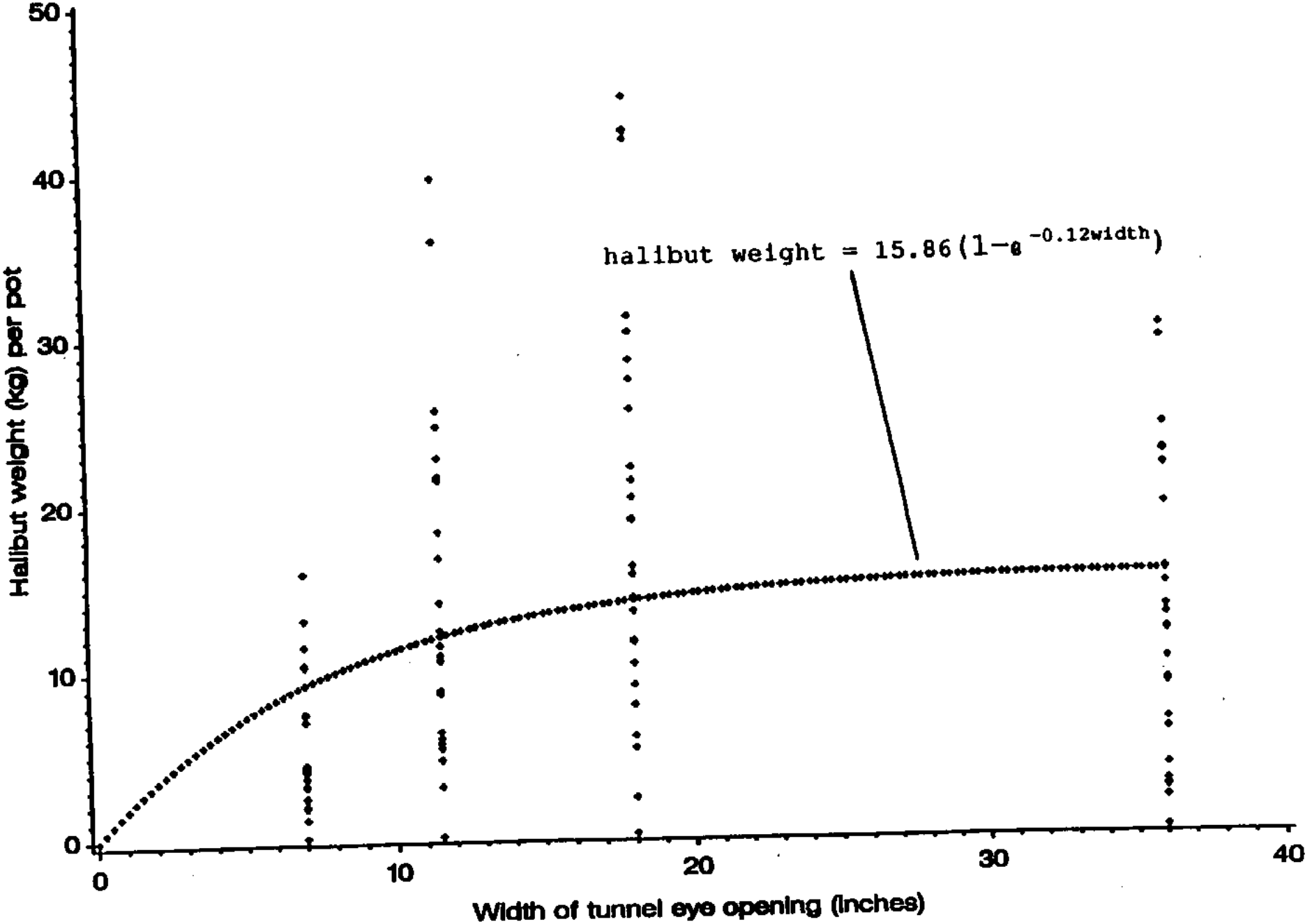

Figure 11. Total weight of halibut (kg) per pot as a function of tunnel opening width (inches).

Table 1. Summary statistics for cumulative catches of cod, halibut and Tanner crab.

Species	Treatment	Mean catch (kg)*	Statistical Difference**	Sample Size (n)	Coefficient of variation (%)	95 % Confidence Interval	
						Lower 95 % confidence limit	Upper 95 % confidence limit
Pacific cod	Three holes + 'Gotya'	149.19	a	27	59.91	113.75	184.62
	Three holes + 'Neptune'	116.24	a	27	64.07	86.71	145.76
	Three holes + cod sock	67.84	b	27	48.41	54.82	80.86
	Crab pot	22.37	c	27	85.46	14.79	29.94
	Five holes	17.24	c	27	81.28	11.69	22.8
	Three holes	11.11	c	27	84.86	7.38	14.85
	One hole	8.27	c	27	102.59	4.9	11.63
	Two holes	7.99	c	27	68.53	5.82	10.16
Halibut	Crab pot	30.91	a	27	64.55	23	38.83
	Two holes	20.05	a b	27	64.01	14.96	25.14
	Three holes	13.15	b c	27	77.85	9.09	17.21
	One hole	12.1	b c d	27	75.47	8.48	15.72
	Three holes + 'Gotya'	8.52	c d	27	101.45	5.09	11.94
	Three holes + 'Neptune'	5.62	c d	27	94.6	3.51	7.73
	Five holes	4.86	c d	27	90.96	3.11	6.61
	Three holes + cod sock	1.8	d	27	152.79	0.71	2.9
Tanner crab	Three holes + 'Neptune'	6.9	***	27	344.91	0	16.34
	Five holes	2.54		27	367.69	0	6.24
	Three holes	1.93		27	519.62	0	5.92
	Crab pot	1.57		27	455	0	4.4
	Three holes + 'Gotya'	1.21		27	467.19	0	3.45
	One hole	0.31		27	406.38	0	0.82
	Three holes + cod sock	0.26		27	351.61	0	0.62
	Two holes	0.17		27	329.47	0	0.4

* Mean of cumulative catch per pot, per site fished.

** Treatments with the same letter are not statistically, significantly different. Treatments that do not share the same letter are statistically, significantly different (alpha = 0.05).

*** Statistical tests for differences in cumulative catch of Tanner crab were not conducted because of the limited catch of Tanner crab.

Table 2. Summary statistics for lengths of Pacific cod. Individual estimates are provided for each location because of the statistically significant interaction between location and treatment, and the subsequent need to conduct individual tests for differences in mean cod length for each location.

Location	Treatment	Mean length (cm)	Statistical difference *	Sample size (n)	Coefficient of variation (%)	95 % Confidence Interval	
						Lower 95 % confidence limit	Upper 95 % confidence limit
1	Two holes	66.1	a	8	17.5	54.1	78.1
	Three holes + 'Neptune'	65.7	a	127	13.6	62.7	68.7
	Three holes + 'Gotya'	65.5	a	143	11.7	62.7	68.3
	One hole	65.1	a	19	13.0	57.3	72.8
	Three holes + 'Norsof'	64.6	a	80	11.7	60.8	68.4
	Crab pot	64.0	a	26	17.7	57.3	70.6
	Three holes	63.2	a	13	19.8	53.7	72.6
	Five holes	58.8	a	12	11.2	49.0	68.5
2	Crab pot	71.3	a	21	9.0	61.7	80.9
	Five holes	67.3	abc	8	19.0	51.7	82.8
	Three holes + 'Gotya'	67.2	a	123	17.4	63.2	71.1
	Three holes + 'Norsof'	65.2	a	63	18.0	59.6	70.7
	Three holes + 'Neptune'	64.9	ab	112	16.4	60.8	69.1
	One hole	64.2	bc	11	19.4	50.9	77.4
	Two holes	54.6	bc	8	16.5	39.1	70.2
	Three holes	52.4	c	8	16.2	36.8	67.9
3	Three holes + 'Gotya'	62.7	a	81	15.4	58.6	66.9
	Five holes	62.3	ab	8	14.7	39.0	75.5
	Crab pot	60.1	ab	17	19.8	51.1	69.2
	Three holes	59.9	ab	8	21.0	46.7	73.1
	Three holes + 'Norsof'	58.7	ab	37	14.5	52.5	64.8
	Two holes	56.8	ab	9	12.3	44.3	69.2
	One hole	56.5	ab	4	14.8	37.8	75.2
	Three holes + 'Neptune'	56.3	b	84	15.8	52.2	60.4

* Treatments with the same letter are not statistically, significantly different. Treatments that do not share the same letter are statistically, significantly different (alpha=0.05) based on Tukey's studentized range test.

Table 2. (contd.) Summary statistics for lengths of Pacific cod. Individual estimates are provided for each location because of the statistically significant interaction between location and treatment, and the subsequent need to conduct individual tests for differences in mean cod length for each location.

Location	Treatment	Mean length (cm)	Statistical difference*	Sample size (n)	Coefficient of variation (%)	95 % Confidence Interval	
						Lower 95 % confidence limit	Upper 95 % confidence limit
4	Crab pot	60.7	a	34	14.8	55.4	66.0
	Three holes + 'Neptune'	60.3	a	143	13.3	57.7	62.9
	Two holes	59.1	a	12	18.4	50.1	68.1
	Three holes + 'Norsol'	58.4	a	109	12.4	55.4	61.4
	Three holes + 'Gotya'	57.8	a	187	13.7	55.5	60.1
	Five holes	56.6	a	45	12.2	51.9	61.2
	One hole	56.0	a	17	15.6	48.4	63.6
	Three holes	53.2	a	9	10.2	42.8	63.6
5	Crab pot	61.5	a	17	18.7	52.0	71.0
	Three holes	61.1	a	8	17.5	47.3	75.0
	Three holes + 'Neptune'	60.6	a	91	17.9	56.5	64.7
	Three holes + 'Gotya'	60.1	a	96	14.5	56.1	64.1
	Three holes + 'Norsol'	59.5	a	50	15.9	53.9	65.0
	Two holes	58.2	a	6	21.6	42.2	74.2
	Five holes	55.6	a	7	12.1	40.8	70.4
	One hole	54.9	a	7	15.9	40.1	69.7
6	Two holes	65.0	a	2	0.0	38.9	91.1
	Three holes + 'Neptune'	61.4	a	105	15.2	57.8	65.0
	Five holes	61.1	a	9	18.2	48.8	73.4
	Three holes	59.0	a	4	29.1	40.6	77.4
	Three holes + 'Norsol'	58.8	a	49	12.9	53.6	64.1
	Three holes + 'Gotya'	58.4	a	86	16.1	54.5	62.4
	Crab pot	57.8	a	5	20.8	41.3	74.3
	One hole	56.5	a	2	6.3	30.4	82.6

* Treatments with the same letter are not statistically, signilicantly different. Treatments that do not share the same letter are statistically, significantly different (alpha=0.05) based on Tukey's studentized range test.

Table 2. (contd.) Summary statistics for lengths of Pacific cod. Individual estimates are provided for each location because of the statistically significant interaction between location and treatment, and the subsequent need to conduct individual tests for differences in mean cod length for each location.

Location	Treatment	Mean length (cm)	Statistical difference *	Sample size (n)	Coefficient of variation (%)	95 % Confidence Interval Lower 95 % confidence limit	Upper 95 % confidence limit
7	Crab pot	59.8	a	38	15.0	54.2	65.3
	Three holes	59.5	a	32	17.8	53.4	65.6
	Two holes	59.1	a	16	12.5	50.5	67.6
	Three holes + 'Gotya'	58.9	a	209	15.1	56.5	61.3
	Five holes	57.8	a	33	16.2	51.8	63.7
	Three holes + 'Norsol'	57.3	a	90	13.2	53.7	60.9
	Three holes + 'Neptune'	57.1	a	130	15.1	54.1	60.1
	One hole	53.5	a	12	11.1	43.6	63.4
8	Crab pot	65.9	ab	16	12.6	58.7	73.2
	Two holes	65.8	a	26	10.2	60.1	71.5
	One hole	64.7	ab	10	9.9	55.5	73.9
	Three holes + 'Norsol'	64.3	a	88	12.3	61.2	67.4
	Three holes	64.0	ab	16	8.7	56.7	71.3
	Three holes + 'Neptune'	62.7	ab	56	13.0	58.8	66.6
	Five holes	62.4	ab	15	8.1	54.9	69.9
	Three holes + 'Gotya'	61.1	b	179	11.6	58.9	63.3
9	Crab pot	63.1	a	36	18.8	57.0	69.1
	Five holes	61.5	a	38	19.2	55.6	67.4
	Three holes + 'Gotya'	61.1	a	302	14.4	59.0	63.2
	Three holes + 'Norsol'	59.4	ab	95	12.9	55.6	63.1
	Two holes	59.0	ab	11	24.7	48.0	70.0
	Three holes + 'Neptune'	58.7	ab	219	15.5	56.2	61.1
	Three holes	57.8	ab	21	16.8	49.9	65.7
	One hole	53.2	b	24	14.6	45.8	60.6

* Treatments with the same letter are not statistically, significantly different. Treatments that do not share the same letter are statistically, significantly different (alpha=0.05) based on Tukey's studentized range test.

Table 3. Summary statistics for lengths of halibut.

Treatment	Sample size (n)	Mean length (cm)	CV (%) of mean length	Least square * mean length (cm)	Statistical difference **	Standard error of least square mean length
Crab pot	164	71.8	19.9	72.4	a	0.98
Three holes + 'Gotya'	48	71.8	15.2	72.3	ab	2.23
Two holes	140	67.3	17.6	69.0	abc	1.18
One hole	79	67.9	19.4	68.7	abc	1.49
Three holes + 'Neptune'	40	67.8	16.1	67.7	abc	2.55
Three holes + 'Norsol'	14	66.9	12.1	***	bc	***
Three holes	94	65.5	14.9	66.5	bc	1.37
Five holes	52	61.6	18.5	62.1	c	1.98

*Because the number of halibut in each pot varied, the analysis of variance was based on unequal subclass numbers. Therefore, the most appropriate estimate of the mean halibut length is the least square mean. The least square mean is an estimate of the mean that would be expected assuming equal numbers of halibut for each location (block) and treatment combination. Standard arithmetic means ["Mean length (cm)"] are included here for comparison with the least square means.

** Tests for differences in least square means of halibut lengths were conducted using multiple t-tests. The alpha level chosen for the individual tests was 0.001. Therefore the maximum overall alpha level was less than or equal to 0.02. Treatments with the same letter are not statistically, significantly different. Treatments that do not share the same letter are statistically, significantly different.

*** For statistital tests of differences in halibut lengths among treatments, the treatment "Three holes + 'Norsol' " was excluded from the analysis because of the very small numbers of halibut retained in that treatment. For this treatment, four of the nine locations had no halibut retained and the numbers of halibut retained at the other five locations ranged from only two to five.

Table 4. Mean cumulative catches of cod and halibut per pot, and halibut bycatch rates based on catch of Pacific cod.

TREATMENT	Mean catch of cod (kg)	Mean catch of halibut (kg)	BYCATCH RATE * (kg halibut/metric ton cod)	BYCATCH RATE (%) (metric tons halibut/metric tons cod)*100
Crab pot	22.37	30.91	1381.8	138.2
One hole	8.27	12.1	1463.1	146.3
Two holes	7.99	20.05	2509.4	250.9
Three holes	11.11	13.15	1183.6	118.4
Five holes	17.24	4.86	281.9	28.2
Three holes + 'Gotya'	149.19	8.52	57.1	5.7
Three holes + 'Neptune'	116.24	5.62	48.3	4.8
Three holes + cod sock	67.84	1.8	26.5	2.7

* NOTE: This bycatch rate is expressed as kg of halibut per metric ton of COD caught, not per metric ton of ALL fish landed.

Section D

Project Press Releases

FOR IMMEDIATE RELEASE
June 28, 1990
Contact: Mel Monsen
(907) 276-7315

NEW STUDY TARGETS COD FISHING WITH CRAB POTS
MODIFICATIONS COULD BOOST CATCHES, CUT BYCATCH

ANCHORAGE, ALASKA -- While many of Alaska's longliners and trawlers sit out the fishery closures in the Bering Sea and Gulf of Alaska, a few fishermen are helping develop a new fishery using crab pots to catch Pacific cod. Alaska Fisheries Development Foundation (AFDF) has launched a project to boost their efforts, with the help of a $112,900 grant from Alaska Science & Technology Foundation.

AFDF, a seafood industry research and development firm, and Alaska Department of Fish and Game will test different crab pot modifications that, when applied to the cod fishery, could help increase cod catches and decrease bycatch harvests of crab and halibut. Bycatch refers to species caught incidentally while fishermen are targeting on other species. Crab and halibut are harvested incidentally in both bottom trawl and longline fisheries for cod, pollock and other groundfish, and in recent years bycatch limits have caused closures of groundfish fisheries off Alaska. If pot fishermen can economically harvest cod with a minimum of bycatch, they could increase their fishing opportunities, and possibly the value of their catch.

AFDF will work with Alaska Department of Fish & Game in Kodiak to conduct a demonstration cod pot fishery using gear with several different modifications. The study team will test pots with tunnel openings of different shapes and configurations, and with different excluder gear including commercialy available gear from "Got Yas," and Neptune Trap and Trigger.

AFDF hopes to advise crab fishermen on how to switch to cod with a minimum of risk, and to help groundfishermen who use pots to increase their cod catches. Data from the study also will help management agencies develop cod pot fishery [illegible] based on more solid information than is available now.

"It appears that crab pots are an efficient and clean method of harvesting cod," said AFDF executive director Mel Monsen. "That is, the bycatch of halibut and crab is relatively low. The possibility for crab fishermen of entering into the lucrative cod fishery would be very attractive. It's also possible that some trawlers and longliners might switch to pot gear to harvest cod, but the additional pot gear could cause some disruption of existing fishing grounds which would have to be resolved."

According to Fish & Game figures, 43 of the 289 boats that fished cod in the Western Gulf of Alaska this year used pot gear. Pot fishermen harvested 5.1 million lbs. of cod this year, nearly 8% of the 66 million lbs. harvested in the area. This year the North Pacific Fishery Management Council will consider a standard definition of pot gear. Preliminary ADF&G observer data shows that non-standardized pot fishing for cod produces only about 0.4% halibut bycatch.

Results from the project should be avaialble from AFDF by the end of 1990.

- ## -

Section E

Project Press Coverage

Chronological Bibliography of Project Press Coverage

AFDF To Aid Pot Fishery By Research. Alaska Commercial Fisherman. July 6, 1990, Page 15 and 18.

Many Applaud Cod Pot Fishery's Low Halibut Bycatch. Alaska Commercial Fisherman. July 6, 1990, Page 14.

Whitefish -- Looking For Cod In All The Wrong Places. Seafood Trend. July 9, 1990, Page 2.

Modified Crab Pots To Corral Bottomfish. Anchorage Times. July 13, 1990, Page E1 and E4.

New Crab Pot Study Begins. Lodestar. Vol. VIII, No. 2, Summer 1990, Page 1.

AFDF Cod Pot Study. Bill Atkinson's News Report. Issue 357, July 18, 1990, Page 4.

Researchers Seek Best Cod Pot. Home Port Kodiak. August 1990, Page 6.

Crab Pots To Catch Cod? Seafood International. September 1990, Page 33.

Bycatch

ır minds, pot fishing for
ın the Gulf may be the best
vest this resource without
ıg our halibut stocks."
ıpporting the idea was the
Fishermen's Marketing
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AFDF to Aid Pot Fishery by Research

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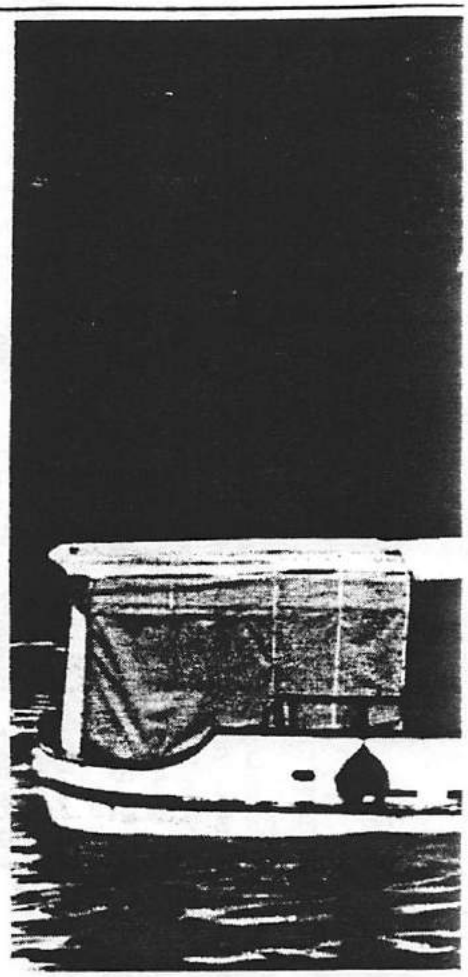
(See AFDF Help on Page 18)



Skippers can be fined if they don't have their
on their vessel at all times as the vessel abov
Trooper Terry Lovett of the Department of
digit ADF&G number should be visible thro
"The number has to be displayed on both
contrasting color with the background," says
on plywood and loosely attached boards. He
of the boat; like painted on."
In addition, it should be unobscured by raf
Draggers, longliners, crabbers, seiners, gill
under the numbering requirement. Even out-
Only sport fishing vessels, seine skiffs, and
Possible penalties for an improperly numbe
The Department of Public Safety says seven
owners may have confused the five-digit ADF
Coast Guard designation is not requi
-- Photo and story by Matt Miller

Sealaska Sells C

A diversified firm headquartered in Pekalongan, Indonesia has signed a definitive purchase agreement to buy Ocean Beauty Seafoods, Inc., Sealaska Corporation officials announced last week.

The Sealaska Corporation board of directors has approved the purchase agreement for the sale of its wholly owned subsidiary to Ika Muda, for an undisclosed

AFDF Help

(Continued from Page 15)

study also will help management agencies develop cod pot fishery guidelines based on more solid information than is available now.

"It appears that crab pots are an efficient and clean method of harvesting cod," said AFDF executive director Mel Monsen. "That is, the bycatch of halibut and crab is relatively low. The possibility for crab fishermen of entering into the lucrative cod fishery would be very attractive. It's also possible that some trawlers and longliners might switch to pot gear to harvest cod, but the additional pot gear could cause some disruption of existing fishing grounds which would have to be resolved."

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Results from the project should be available from AFDF by the end of 1990.

Reauthorization

(Continued from Page 10)

Council Composition

The House bill adds one new Council member from Oregon and one from Washington.

Council Member Qualifications

Both bills tighten qualifications to require occupational or commercial experience, scientific expertise, or academic training in fisheries management or recreational or commercial harvest, and that the Secretary ensure fair representation across the industry. The Senate requires an annual report starting January 31, 1991 on actions taken to ensure fair representation.

Council Member Terms

House limits terms to two consecutive terms for members appointed after January 1, 1986. The Senate limits terms to three previous terms for appointments or reappointments after January 1, 1991.

Council Member Compensation

House bill reduces daily compensation to $200 for members appointed or reappointed after January 1, 1991. Senate bill does not change the daily compensation.

Staff Travel Reimbursement

Both bills enable staff members to be reimbursed for actual expenses.

Council Meeting Location

Both bills allow Councils to meet in any of the constituent states.

Regional Director Minority Statement

The Senate bill requires the NMFS Regional Director to submit a minority report if he disagrees with any matter submitted to the Secretary by a Council.

Advisory Committees

Both bills limit decisions recommendations of advisory committees to being advisory only. The Senate bill clarifies SSC reports as being advisory in nature. The House bill mandates each Council to establish industry advisory panels.

Fishery Habitat

Both bills augment current habitat language by requiring an agency response to include a description of measures being considered to mitigate activities that impact the habitat of anadromous species. Both the House and Senate bills compel a Council to comment concerning any such activity.

Notice Requirements for Closed Meetings

Both bills require the Council to notify newspapers of closed meetings.

Public Comment on New Information

Both bills mandate Councils to give the public opportunity to comment or submit new information in response to new information submitted by a Federal or State agency or Council advisory body.

Testifying under Oath

The Senate bill requires all members of Councils or the public who present oral or written testimony to the Councils to be administered an oath and be subject to perjury charges. This would take effect 120 days after enactment.

Required Plan Provisions

The Senate bill requires that FMPs prevent overfishing, and protect, restore, and promote the longterm health and stability of the fishery. It also requires that conservation and management measures in plans be consistent with regulations implementing recommendations by international organizations to which the U.S. is party.

Both House and Senate bills mandate the Councils to provide for temporary adjustments in regulations to provide

Many Applaud Cod Pot Fishery's Low Halibut Bycatch

ne proposal for action – to continue exemption of cod pots in fishing for fic cod – from the halibut bycatch ts received a lot of support at last k's meeting of the North Pacific ery Management Council.

n August 13, 1990, the current rgency rule that exempts pot gear n halibut bycatch accountability ires, which would cause pot gear ing to be closed in the Gulf of Alaska he rest of the year. Those advocating xtension of the exemption so that the ery may remain open came to the ncil with much evidence to the clean ing being accomplished presently in fishery.

teven Pennoyer, regional director for National Marine Fisheries Service some good news about the uliness of that fishery as well. ording to Pennoyer, nine records of erved Pacific cod catches with pot r are in the NMFS database. With a ghted vessel catch by week ending and by statistical area, NMFS has ulated that the bycatch rate is 0.007 .7 percent of the groundfish catch.

". . . pot fishing for Pacific cod in the Gulf may be the best way to harvest this resource without jeopardizing our halibut stocks." —Linda Kovak

Pennoyer went on to tell the Council that in the Central Regulatory Area, the catch of Pacific cod with pot gear through May 26, 1990, is 2,419 metric tons. In addition, 1.3 mt of "other species" was caught. Pot groundfish catches, he concluded, appear to be fairly clean with respect to other groundfish bycatch.

Extrapolating from the history of the fishery which indicates that the amount of cod caught in the Central area with pots is 11 percent of the all-gear cod catch and that the assumed mortality rate of halibut caught with pot gear is 12 percent, Pennoyer said the amount of halibut mortality that would occur in a continued fishery would be four metric tons.

Public comment periods during the council meeting found a great deal of support for an emergency order extending the exemption and thus the fishery. Several members of the Kodiak Longline Vessel Owners Association testified, and KLVOA sent a formal request for the emergency action ahead of time.

That request noted that 38,000 metric tons of Pacific cod left unharvested in the Central Gulf and expressed the relieve that pots will be able to take that quota, much to the economic benefit of both the fishers and the processors in the fishing industry and coastal communities. The continuation of the fishery would also provide a viable alternative to longline and trawl vessels that may not otherwise be able to keep fishing and as such, a source of income for them for the remainder of the year.

"Additionally," said KLVOA director Linda Kovak, "some people believe that since conservation concerns should be foremost in our minds, pot fishing for Pacific cod in the Gulf may be the best way to harvest this resource without jeopardizing our halibut stocks."

Also supporting the idea was the United Fishermen's Marketing Association, which also sent ahead of time a request for emergency action by the Council to continue the fishery.

From KLVOA to UFMA to Pennoyer to the fishermen themselves, all agreed that the pots should be required to have appropriate halibut exclusion devices on their pots, and that observer coverage be continued.

There was not a bad word to be heard about use of pots as a clean method of fishing. There were, however, some expressions of concern about the proliferation of a fishery that, as yet, really is unrestricted. Besides wanting to be sure that such pots have exclusion devices and biodegradable panels and that they must be used as single pots rather than longlined, several people said the Council should act now to head off what could be real gear conflicts in the future between trawlers and cod pot fishermen.

lo CDQs

ntinued from Page 2)

age had intended that communities in shington and Oregon, also under the uncil's geographic jurisdiction, be eli- le for CDQs as well as Alaska commu- ies.

Councilman Larry Cotter said, however, t this intent was that people immediately acent to the fishing grounds be eligible, t people from the Panama Canal, all the y up the coast.

Fair and Equitable

"Fair and equitable?" asked Bob Alverson? "Fair and equitable that we're going to give away quota to people who have never fished it, never invested in it, away from people that have put all their life into the fishery, financed their own vessels, taken the risks as crewmen? And why? Because legislatures from certain states won't impose income tax to take

Henry Mitchell said the Secretary of Commerce would require some sort of connection between the community requesting a CDQ and the fishery. "We should leave it to the Secretary," he said.

How Much to Give?

The discussion then shifted to the percentages of the various areas' longline sablefish total allowable catch that would

Atka or the Pribilofs where there are already small fisheries in halibut and perhaps highly valued rockfish and where the allocation could help them grow. But, he said, "I doubt that you're going to realistically be able to take anyone from scratch with no other sources of support income and bring them and teach them a high seas fishery operation."

Rick Lauber asked what will happen as

WHITEFISH--Looking for Cod in all the Wrong Places

Although cod is short, most end-users have enough to last the rest of the year. A danger, becoming more acute every day, is that food service operators will take cod off menus, reducing their exposure to shortages but also shrinking next year's market.

This possibility was highlighted at the June 25-26 North Pacific Fishery Management Council meeting in Anchorage. Executives from three major seafood restaurant chains made it abundantly clear that their commitment to whitefish in general and Alaskan cod in particular is wavering. Already, Long John Silver's has pulled a summer cod promotion.

With North Atlantic cod supplies suffering through resource problems and the resulting quota reductions, Alaskan cod has taken on new importance. Thus, when the council voted, in effect, to let 75,000 tons of cod stay uncaught, food service users and their factory trawler suppliers were more than upset. Especially upsetting was the fact that the cod would stay in the water not to conserve the healthy cod stocks but to conserve halibut, an incidental catch by bottom trawlers fishing for cod.

Without minimizing the very real cod shortage, it's probably smart to take another look because the situation may not be as desperate as appearances suggest.

For one thing, you can expect that the 75,000 tons of cod left in the Bering Sea will be harvested this year. Remember, the Bering Sea is closed only to bottom trawlers, not to fixed gear (longline and pots) or to midwater trawlers. The 22 freezer longliners in the Bering Sea will take about 30,000 more tons this year. Small "ice boats" (jig, pots) will take 5,000 tons. Meanwhile, the pollock midwater fishery could haul in 10,000 tons of cod. Another 20,000 tons could be taken in a yellowfin sole joint venture fishery and as bycatch. Thus, 65,000-70,000 tons of cod are accounted for.

Next year, factory trawlers will fish more cleanly in the Bering Sea. Also, the pot fishery could expand dramatically. At least one processor and a few fishermen are successfully catching cod in pots in the Gulf of Alaska. To further the development of the pot cod fishery, the Alaska Fisheries Development Foundation will conduct a test fishery in September to study how crab pots could be easily modified for cod. All this means that Alaska cod will be more readily available next year.

For North Atlantic cod stocks, the situation may be easing somewhat as well. In the short term, for instance, Canada's Nova Scotia fishery was recently given 10,000 tons of new fish because recovery is occuring faster than expected. Also, the capelin fishery in Newfoundland, which took processing time away from cod, will be ending soon. That means fishermen and processors will get back to work on the 125,000-ton quota there.

For the long term, cod stock management may be changing in eastern Canada. While the stocks themselves are generally stressed and the overall prognosis is for "a continuation of declining quotas." At the same time, though, the rate of decline will slow. There are indications that Canadian fishery managers are going to opt for a slower recovery of cod stocks over a longer period of time. This will reduce the major hits taken by the eastern Canadian industry over the last couple of years.

The situation will remain difficult for cod users. Seafood restaurant chains are frantically looking for a cod substitute. There is a better chance of finding a cod "supplement." This could be hoki, whiting, Alaska pollock. It could also be pasta and chicken. Some major seafood restaurant chains are rethinking their basic concepts to include more non-seafood items. Supply is the main reason, but linked closely is price. Restaurants are forced to charge their diners $1 more per seafood entre than for non-seafood entres.

HALIBUT--More B.C. Fish for Fresh Market Next Year?

Because British Columbia's more recent opening (June 14-18) came so quickly on the heels of Alaska's opening (June 5-6), very little of that halibut went to the fresh market, which was still digesting a chunk of the 25 million pounds from Alaska.

Thus, the 2.9 million pounds from B.C. went to the freezer. A couple of B.C. processors tried to develop ads for the fresh market, but there was not interest. Maybe just as well. The fresh market at the time was $2.40-$2.50/lb., FOB West Coast. The frozen market is stronger, with 10-20s going for $2.35/lb., 20-40s for $2.45, 40-60s for $2.55-$2.60, and 60-ups for $2.70-$2.75.

Stocks of Alaska Interest, E-2

Times BUSINESS E

Friday, July 13, 1990

TOP OF THE TIMES

Inside business

Explosive firms combining forces

Alaska Explosives Ltd. recently joined forces with Pacific Powder Company.

The new firm will be called Alaska-Pacific Powder Company, said Paul Franger, former general manager of Alaska Explosives.

Franger will continue in the same position with the re-formed company.

Both firms supplied explosives and related products to the state's mining industry. Under the joint venture, the new company will provide IRECO products.

Franger said the new company employs 15 people and maintains offices in Anchorage, Fairbanks, Ketchikan and Juneau.

Sahlberg Equipment

Roger Morris has been named branch manager of the Anchorage office of **Sahlberg Equipment Inc.** of Seattle. Morris has been with the company for 21 years. He opened the local office on 1972.

Business people

KLEF classical radio

Federal rules catch up with lab workers

By JAY STANGE
Times Business Writer

The Alaska Department of Labor has stiffened training requirements for laboratories handling hazardous materials in the state in an effort to bring Alaska-based companies in line with new federal rules.

But the move, which is expected to take effect later this summer, is likely to raise costs and temporarily slow operations at chemical laboratories across the state, including the fast-growing environmental-testing industry.

Richard Arab, a deputy commissioner at the state agency, said universities, hospitals, geologists, chemical testing firms, oil companies and other industry labs are expected to be affected by the amendments to the Occupational Health and Environmental Control Code.

Previously, federal law exempted such businesses from having to provide structured safety training to lab workers in Alaska, he said.

The new requirements are an effort on the part of the state to bring Alaska up to new federal Occupational Safety and Health standards that came on line May 1.

Arab said the regulations are now undergoing final review by the state Department of Law, and the Department of Labor is expected to notify laboratories operating in Alaska about the changes later this summer.

Only about 20 companies are dedicated to doing 100-percent chemical analysis in Alaska but with the increased emphasis on environmental issues in Alaska since 1985, Arab said numerous businesses in the state now operate in-house laboratories.

Under the new rules, employers will be required to train their technicians in the proper use of hazardous chemicals such as benzene, carbon monoxide, and ammonia.

Arab said the burden of compliance is on the employer. He said employers will be required to provide the training, which could result only in lost time.

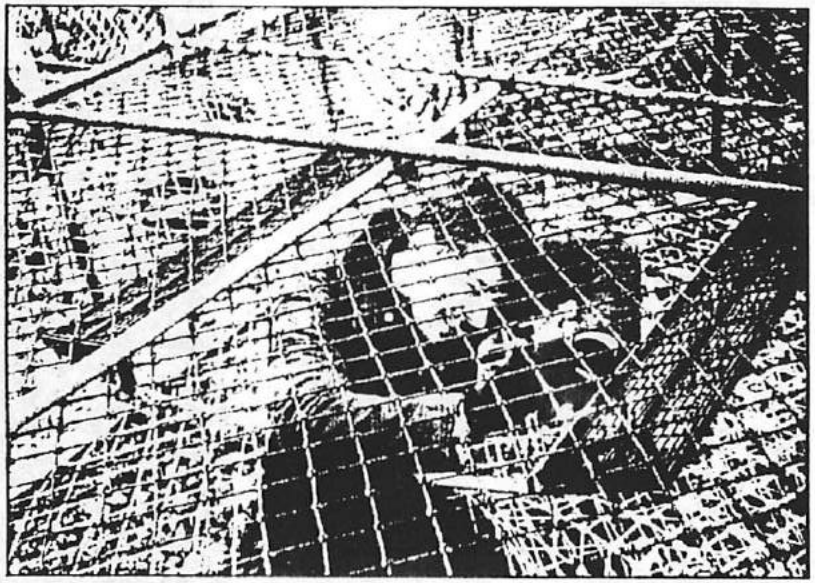
Gene Yonkin, general manager of Chemical & Geological Laboratories of Alaska Inc., said that whenever managers have to take time from their busy schedules, it hurts.

"It's probably going to be a big chunk of change," Yonkin said.

For example, providing Chemical & Geological's 37 employees with five hours of training would cost about $3,700, he estimated.

Among the new requirements:

- Conducting sessions to make employees aware of chemicals present in the workplace;
- Giving employees information about permissable levels of exposure.
- And teaching employees to recognize the symptoms of exposure (including stomach disorders and headaches), how to adequately protect themselves with clothing and gear, and how to read a materials safety data sheet, which is a list of possibly harmful effects of chemicals that appear on each hazardous materials container.



ASSOCIATED PRESS

Steve Oswald works on a crab pot in Unalaska recently. Fishermen are converting some crab pots into traps for bottomfish.

Modified crab pots to corral bottomfish

Goal is trapping cod without halibut by-catch

By IMRE NEMETH
Times Business Writer

The Alaska Fisheries Development Foundation has announced plans to study the effectiveness of converting crab pots into cod-catching bottom sea traps.

The food research organization is seeking to determine if crab pots could be an environmentally safe way to harvest bottomfish.

Alaska Fisheries said it will coordinate a test fishery in the Kodiak area to determine the merits of the conversion devices in September. The study will be conducted with a $112,900 grant from the Alaska Science and Technology Foundation.

The pots, measuring 8-by-8 feet and 3 feet wide, have an opening on each side and plastic "fingers" in the entry that allows one-way access to fish and discourages crab.

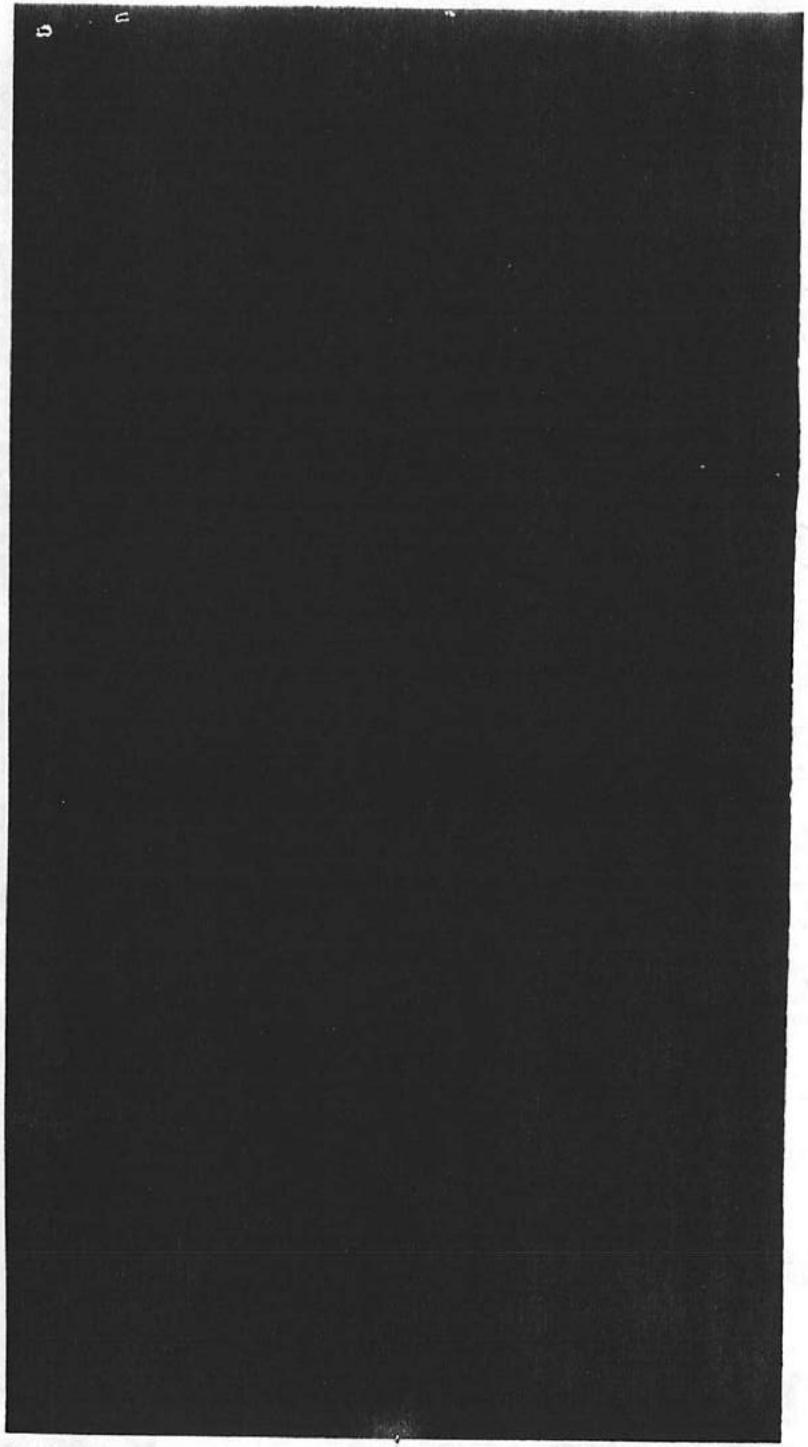
Previously, the one-way conversion inserts to the 30 to 36 inch wide entryway were wide enough to let halibut slip in. For the study, vertical dividers were added to keep the halibut out.

The relatively new style of fishing could completely change the Pacific cod fishery if found to be economically feasible, said Mel Monsen, executive director of the foundation.

"Given the current high price and demand, it looks pretty good that we'll see a gradual development of Pacific cod fishery with pots in the Gulf and the Bering Sea," said Jeff Stephan, manager of the Kodiak-based United

See Cod, back page

Inner inlet sockeye opening closed today



Air

Continued from page E-1

changes, and some of the permit requirements and steps that are required," said Isaacs.

If an agreement is signed by Thursday, Alyeska can remain in compliance with federal air quality standards and avoid fines, Isaacs said.

On Thursday negotiators were trying to resolve the last of eight questions by setting a daily limit on emissions of volatile oxygen compounds, said Verrelli. He said he expected a resolution by today.

If all the issues are not resolved by the middle of next week, Alyeska might seek a court injunction to grant the company more time, Isaacs said.

"The EPA notice of violation has essentially accomplished its purpose, which was to bring us to a resolution in a very short timeframe," she said. "We're very concerned about the July 19 cutoff deadline."

The company has already begun to deal with many of the biggest problems cited by EPA and DEC, Isaacs said. Work crews are almost through removing equipment from pump stations that allows them to operate with fewer turbines at higher speed. And the company is seeking sources of low-sulphur fuel to limit sulphur emissions from pump station generators.

The company may well apply for PSD permits, which require the company to seek the best possible pollution control technology, Isaacs said. The process can take up to a year and cost millions of dollars, plus the cost of any new equipment, Verrelli said.

"If necessary we'll go through with it, but if there's another way we can satisfy the regulators' concerns that doesn't trigger the PSD process, then we'll discuss it," Isaacs said. "The driving concern is to remain in compliance."

Alyeska, which operates the pipeline under its original 1977 permits, has not yet had to apply for PSD permits, which came into effect years later. Permit applications under the PSD standard would give regulators their first chance at extensive and detailed inspections of any Alyeska facilities related to air emissions, Verrelli has said.

OPEC

Continued from page E-1

Aqazadeh's remarks reflect confidence that OPEC members would refrain from pumping too much oil, which depresses prices. Oil produced by members of the Organization of Petroleum Exporting Countries was selling recently for $14 a barrel.

During his visit, Aqazadeh held talks with Oil Minister Mana Saeed Otaiba.

"We're expecting prices to reach $18 a barrel by the time we meet in Geneva, and then we will propose an increase of $2 in the reference price," said Aqazadeh at Abu Dhabi airport.

"U.A.E. is dropping its output by 400,000 barrels per day and Kuwait by 500,000 barrels per day, and this will lead to a (price) hike," Aqazadeh said.

Oil prices have already traded above $18 this week on New York and other markets, but OPEC determines its reference price by averaging the prices of seven separate crudes.

There was no official comment on the cutback reports from Kuwait, another OPEC member that has been producing well beyond its quota of 1.5 million barrels a day.

OPEC offered the U.A.E. a quota of 1.5 million barrels a day at its last meeting in Vienna in November, but the U.A.E. rejected the figure as too low.

At that meeting, the collective production ceiling at 22.086 million barrels a day, within which the U.A.E.'s output was calculated at only 1.095 million barrels a day.

Iran and Iraq, their economies battered by the gulf war, have been lobbying for higher prices of crude oil. Both countries have been critical of Kuwait and the U.A.E. for overproducing and causing a glut on the oil market.

State Land Commissioner Garry Mauro and Texas Water Commission Chairman B.J.

Cod

Continued from page E-1

Fishermen's Marketing Association.

Stephan said experimentation with the process has been going on since 1986 but intensified in the last six months as fishermen began looking for more efficient ways of catching single species.

More than 50 boats are registered for fishing with the new-style "cod pots", said Ron Berg, management biologist for the National Marine Fisheries Service.

He said other gear types, including hook and line and trawl fisheries, have been closed but the pot fishery remains open because of an emergency order.

The issue of catching cod without halibut generated controversy last month when the Bering Sea bottomfish fishery was closed to factory trawlers after they exceeded their incidental catch of halibut before their bottomfish quotawas reached.

Nearly half of the quota of 193,000 tons of Pacific cod, a species of bottomfish, was not harvested as a result of the closure.

National Marine Fisheries Service biologists said the pot fishery was another way of legally catching the cod.

Mauro told a news conference. "The results show that we are close to having a tool that actu-

the LODESTAR

Charting the course of fisheries development today.

Alaska Fisheries Development Foundation, Inc. Volume VIII No. 2, Summer 1990

New crab pot study begins

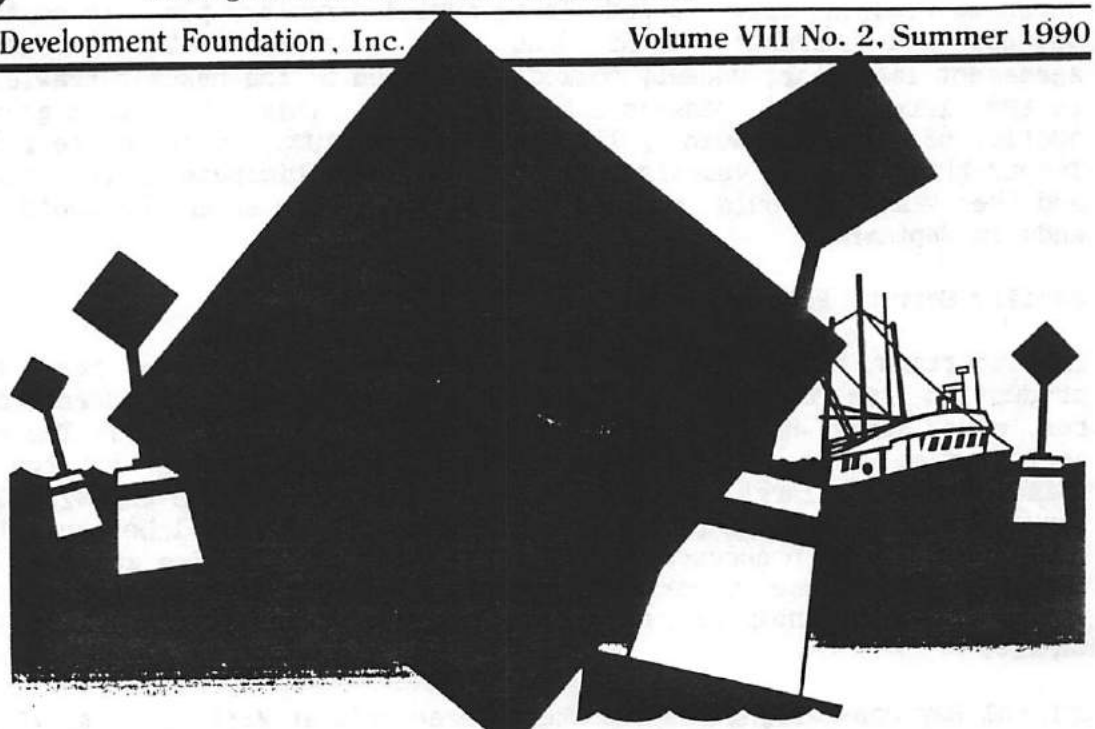
On June 15 the Alaska Science and Technology Foundation granted AFDF $167,100 to test different crab pot modifications for fishing cod. With some modifications, it's thought, pot fishermen could increase cod catches and decrease crab and halibut bycatch.

AFDF will work with the Alaska Department of Fish & Game in Kodiak to conduct a demonstration cod pot fishery using gear with 12 different modifications. Pots probably will be set in different locations within two areas near Kodiak, Cape Barnabas and Marmot Bay. The ...ly team will test pots with verti- ...and oblique tunnel openings, with Neptune, "Gotyas" and cod sock halibut excluders, and with the tunnel divided into different-sized openings to test how each modification affects cod harvests and crab and halibut bycatch. With the results, AFDF hopes to advise crab fishermen how to switch to cod with a minimum of risk, and to help groundfishermen increase cod catches and avoid bycatch. Data from the study also will help management agencies develop cod pot fishery guidelines based on solid information.

"It appears that crab pots are an efficient and clean method of harvesting cod," said AFDF executive director Mel Monsen. "That is, the bycatch of halibut and crab is relatively low. The possibility for crab fishermen of entering into the lucrative cod fishery would be very attractive. It's also possible that some trawlers and longliners might switch to pot gear to harvest cod, and the modifications could help keep their bycatch very low."

Bill Nippes, Leslie Watson and Dave Carlile of ADF&G will run the project. According to ADF&G, 43 of the 289 boats that fished cod in the Western Gulf of Alaska used pot gear. Pot fishermen harvested 5.1 million lbs. of cod this year, nearly ...of the 66 million lbs. harvested in ...area. This year the North Pacific ...shery Management Council will consider a standard definition of pot gear to encourage fishermen to switch to pots. Preliminary ADF&G observer data shows that pot fishing for cod produces only about a 0.4% halibut bycatch rate.

For more information about the project, call Mel Monsen at AFDF.



The Bycatch Blues

Eight thousand tons of halibut sent the 2.2 million metric-ton groundfish fishery into a hard list to port side this summer. By mid-June, a series of closures sent a lot of boats scrambling for other fisheries. Bottom trawling in the Gulf of Alaska closed for the month of June; longlining probably is over for the rest of the year. In the Bering Sea, bottom trawling is closed in certain areas and may be closed for the rest of the year.

Eight thousand tons of halibut, along with 4.2 million Bering Sea Tanner and red king crab, are all the groundfishermen are allowed to harvest as bycatch in their pursuit of pollock, cod, flatfish and blackcod this year. When the bycatch cap is reached, the target fisheries are closed. Under an emergency order, bycatch allowances in the Gulf were divided into quarterly allocations for each gear group, so bottom trawling probably will resume July 1 when a third bycatch allocation opens. But that emergency order expires in August, and much could happen before then.

The simple act of dividing fish allocations has become a brushpile of tough questions for fishermen and fishery managers. Should the multi-billion-dollar groundfish fishery be derailed by a few thousand tons of crab and halibut? Should trawlers forfeit millions of dollars of production during fishery closures imposed to benefit a much smaller fishery? On the other hand, how much damage should trawlers be allowed to inflict on the directed crab and halibut fisheries as they americanize the groundfish fisheries off Alaska?

Few argue with the halibut and crab bycatch caps—in theory—but some trawlers want the caps raised. Some fishermen want a phase-in program to give fishermen a chance to learn how to avoid halibut and crab in the bottom trawl and longline fisheries. Nearly all fishermen involved are screaming for some bycatch management program that rewards individual fishermen whose operations are relatively clean of bycatch, and sanctions vessels that fish dirty.

One thing you can count on: The North Pacific Fishery Management Council meeting in Anchorage June 25-30 will be hotter than a small thermonuclear exchange as fishery managers, processors, fishermen and the proud owners of multi-million-dollar banknotes on idle plants try to figure how to divide up halibut and crab in the North Pacific so everybody gets a fair piece.

"The optimal allocation of crab or halibut between the crab or halibut fishery and the groundfish fishery is the one that provides the greatest value to the Nation," reads the bycatch management amendment now before the Council. Managers hope, with industry guidance, to shift the cost of crab and halibut bycatch losses onto the groundfish trawl and longline fleets, and thereby reduce losses of these valuable species to the directed fisheries.

"Bycatch of crab and halibut by the groundfish fleets impose a cost on those directed fisheries," said Hal Weeks of the Council staff. "The most sensible controls on bycatch will be the ones that make it in the best interest of the trawlers to avoid

Story by Krys Holmes

OPERATIONS

Surimi Co-Pack

Japanese hokuten trawlers and large surimi trawlers plan to continue their at-sea processing arrangement in the donut hole this year. The two groups came to an agreement last year, whereby pollock harvested by the hokuten trawlers is transferred to the large surimi vessels for processing. This arrangement greatly improves the quality of hokuten-caught pollock, which in turn, improves their operating income. Twenty three hokuten vessels are scheduled to participate in the operation this year, and the vessels should proceed to the donut hole after the squid drift-net fishery ends in September.

Pacific Herring Roe

The importers have reportedly sold this year's herring roe, and roe-herring, production from Canada and Bristol Bay to the Japanese processors. No.1 Canadian roe, mixed sizes, have been sold at ¥4,500/kilo (US$13.91/lb). The size breakdown is estimated at large 80%, medium 15% and small 5%. This equates to ¥4,700/kilo ($14.53/lb) for large, ¥3,700/kilo ($11.44/lb) for medium and ¥2,700/kilo ($8.35/lb) for small roe. These prices are ¥500/kilo ($1.55/lb) higher than last year. While the "brand name" processors should not have any problem selling at these levels, there is still some uncertainty about the other makers; most of the "brand name" processors sell their product through direct transactions, rather than through the market.

Bristol Bay roe-herring has reportedly been sold at ¥565/kilo ($1.75/lb). Based on a recovery rate of 10%, "A" roe equates to ¥4,250/kilo ($13.14/lb) and ¥140/kilo ($0.43/lb) for the carcass. The sales price was influenced by the current strong demand for extra large herring carcasses in Japan. Prince William Sound roe-herring is being sold for the equivalent of ¥3,600/kilo ($11.13/lb) for roe, and ¥20/kilo ($0.06/lb) for the carcass.

GOVERNMENT/INDUSTRY

AFDF Cod Pot Study

The Alaska Fisheries Development Foundation (AFDF) announced last month that a study will be conducted on the feasibility of a cod fishery using crab pots. The study will concentrate on various configurations to determine whether pot fishermen can economically harvest cod with a minimum of by-catch. AFDF hopes to advise crab fishermen on how to switch to cod with a minimum of risk, and to help groundfish fishermen who use pots to increase their cod catches. It is also hoped that the study will develop better data for use by management agencies as they create guidelines for the cod pot fishery. According to the Department of Fish & Game (ADF&G), 43 of the 289 boats that fished cod in the Western Gulf this year used pot gear and harvested 5.1 million lbs (2,313 m/tons) of cod. The halibut by-catch for the pot fishery, based on observer data, was about 0.4%.

Donut Hole Regulation

Senator Murkowski (Alaska) recently called for the creation of an international (U.S. and the Soviet Union) patrol of the donut hole to protect pollock and salmon resources in the Bering Sea. In the aftermath of the "North Korean" illegal fishing

New regulations mandate placards, vessel waste di

Vessel operators will be forced to examine how they deal with trash under a new law aimed at cutting down the amount of refuse dumped overboard.

Effective July 31, the Coast Guard requires all vessels 26 feet and over to display a placard notifying all passengers and crew of MARPOL Annex V discharge restrictions and penalties for not complying with those restrictions.

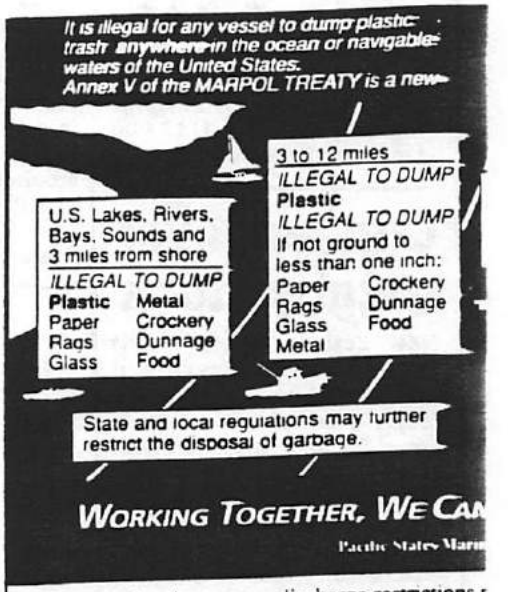
In addition, vessels 40 feet and over must carry a written waste management plan detailing the way the vessel handles refuse. The plan must also designate the person in charge of carrying out the plan.

Waste management plans can be as simple or complex as vessel operators wish. However, it is recommended that the plan include a mention of how the crew and passengers are informed of the management plan. This is because regulations prohibit a vessel from operating unless each person handling garbage follows the waste management plan.

The following example of a simple waste management plan comes from the Pacific States Marine Fisheries Commission:

"Waste Management Plan: All vessel refuse is put in garbage bags which are stored on board until they can be disposed of in dumpsters on shore. This policy is reviewed with all crew members. Name of person in charge of carying out this plan:_____."

Other examples of acceptable plans and necessary placards are available from the National Oceanic and Atmospheric Administration's Marine Debris Information Office at (415) 391- 6204 or (202) 429-5609.



Placards noting these waste discharge restrictions r July 31, 1990. Waste management plans must a placards and sample plans contact NOAA's Mari Suite 606, San Francisco, CA 94108, (415) 391

Grant will fund study of pot modifications

Researchers seek best cod pot

Groundfish and crab fishermen wanting to get into the developing cod pot fishery could get a boost from new research being conducted by the Alaska Fisheries Development Foundation.

The foundation recently was awarded a $112,900 grant from the Alaska Science and Technology Foundation to try to determine the best equipment for pot fishing. AFDF will work with the Alaska Department of Fish and Game in Kodiak to conduct a demonstration cod pot fishery using gear with several different modifications.The study team will test pots with tunnel openings of different shapes and configurations and different excluder gear, including commercially available gear from "Got Yas," and Neptune Trap and Trigger.

AFDF hopes to advise crab fishermen how to switch to cod with a minimum of risk, and to help groundfishermen who use pots to increase their cod catches. In addition, data from the study will help management agencies develop cod pot fishery guidelines.

Results from the project should be available from AFDF by the end of this year.

With Your Safety in Mind....

Hap
200

Crab pots to catch cod?

FISHERMEN in Alaska are attempting to develop a new fishery using crab pots to catch Pacific cod, and the Alaska Fisheries Development Foundation (AFDF) has launched a project to boost their efforts, with the help of a $112,900 grant from the Alaska Science & Technology Foundation.

The Foundation and the Alaska Department of Fish and Game will test different crab pot modifications which could help to increase cod catches and decrease bycatch harvests of crab and halibut. (These species are havested incidentally in both bottom trawl and longline fisheries for cod, pollock and other groundfish, and in recent years bycatch limits have caused closures of groundfish fisheries off Alaska.) If pot fishermen can economically harvest cod with a minimum of bycatch, they could increase their fishing opportunities, and possibly the value of their catch.

The two organisations will conduct a demonstration cod pot fishery using gear with several modifications. The study team will test pots with tunnel openings of various shapes and configurations, and with different excluder gear.

AFDF hopes to advise crab fishermen on how to switch to cod with a minimum of risk, and to help groundfishermen who use pots to increase their cod catches. Data from the study will also help management agencies to develop cod pot fishery guidelines based on 'more solid information'.

According to Fish & Game figures, 43 of the 289 boats that fished for cod in the western Gulf of Alaska this year used pot gear and caught 5.1m lbs of cod, nearly 8 per cent of the total 66m lbs harvested in the area. The North Pacific Fishery Management Council will consider a standard definition of pot gear – preliminary data shows that non-standardised pot fishing for cod produces only about 0.4 per cent halibut bycatch.

Concern over roughy stock

NEW Zealand fishing vessels have been fishing a resource of orange roughy on the Challenger Plateau, west of Cook Strait, for some time. This fishery had been developed through the initiative of New Zealand companies prospecting for the fish in the deeper waters on the Challenger Plateau.

Foreign fishing vessels in international waters had been observing these developments and were fishing around the edges of the Challenger area. Some vessels were reported to have fished inside the 200 mile limit illegally and transferred their catches at sea to other vessels outside the 200 mile limit.

In early May Ken Shirley, New Zealand's Minister of Fisheries, speaking at the Southern Trawl Fisheries Conference in Melbourne, suggested that Australian cooperation would be needed to reduce catches in this area to protect the fishery. Mr Shirley had emphasised that New Zealand's effort to reduce the catch inside the New Zealand EEZ would not save the fishery if catches outside the zone were continued at too high a level.

The catches of orange roughy reported from the Challenger Plateau have doubled in the last five years to reach 14,300 tonnes of which about 4,000 tonnes had been caught outside the New Zealand EEZ. In the opinion of the minister this level was double the amount that New Zealand considered the orange roughy stock, both inside and outside the zone, could support.

Mr Shirley said that there was a risk of the fishery collapsing if the current catch levels continued and this risk was further increased with additional for-

GOT YAS

COUNCIL OF KINGS

KING B. HALIBUT

LOUIE K. CRAB

WHISKERS P. COD

PICKLES D. OCTIPUS

NUGGETS FRY POLLACK

SNAPPER RED FISH

CORAL R. STILL

SABLE B. FISH

HERSCHEL S. LOIN

JONATHAN SEE GULL

SOCK RED EYE

ORCA A. WHALE

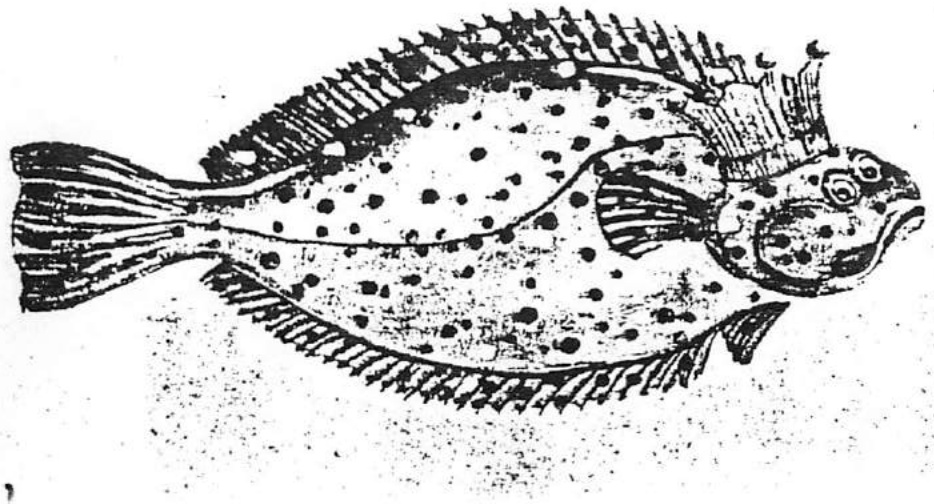
LEMON E. SOLE

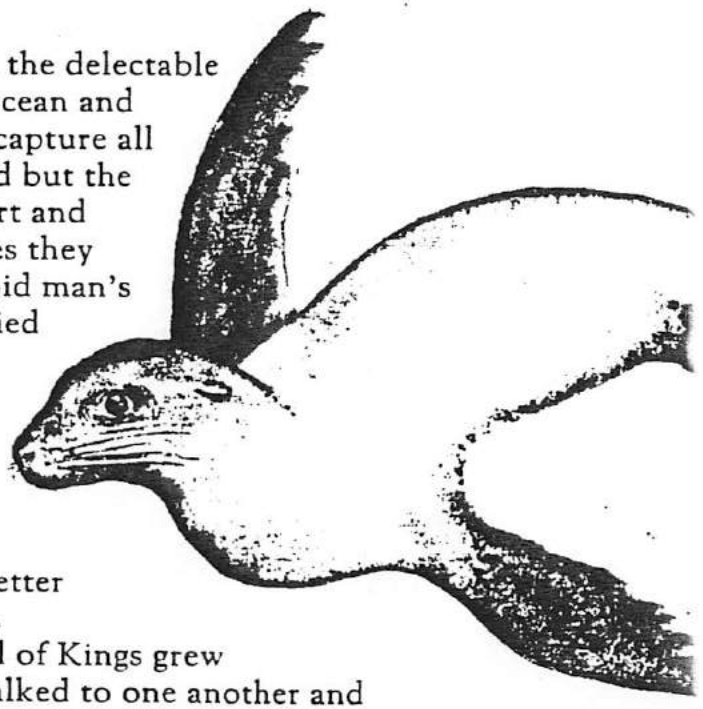
THIS STORY WAS WRITTEN IN 1989 BY LARRY O. HENDRICKS AND COPYRIGHT THE SAME YEAR. IT WAS MY BEST GUESS ON WHAT THE FUTURE MIGHT BRING. I HOPE YOU MIGHT RELATE TO THE FOLLOWING STORY AS YOU PASS LAWS CONCERNING OUR FUTURE IN THE MANY FISHERIES WITHIN THE STATE OF ALASKA.

Once upon a time, all fish roamed the oceans freely. They faced little interference, except for a few natural predators. Each species had a means of protecting itself from its enemies, but the Law of Survival prevailed. Small fish were eaten by large fish, and large fish were eaten by larger fish. The largest fish were eaten by the mammals of the sea.

Each species had a social structure, ruled by a king who was the oldest, wisest, strongest and hardiest member of his kind. Together, the kings determined the Laws of the Sea, and just how many young of each species would be allocated to the Food Chain to feed all of the animals.

The king of kings was King B. Halibut. He was the strongest, wisest and most sleek of all aquatic animals, and one that roamed every depth of the ocean. In his frequent travels, King B. Halibut met other kings. There were Louie K. Crab, Whiskers P. Cod, Pickle D. Octopus, Nuggets Fry Pollock, Snapper Red Fish, Coral R. Still, Sable B. Fish, and of course, Herschel S. Lion. There were other, lesser kings of the sea, but these comprised The Council of Kings. Together, they determined all who would be eaten and all who would survive; that is, until Man came along.

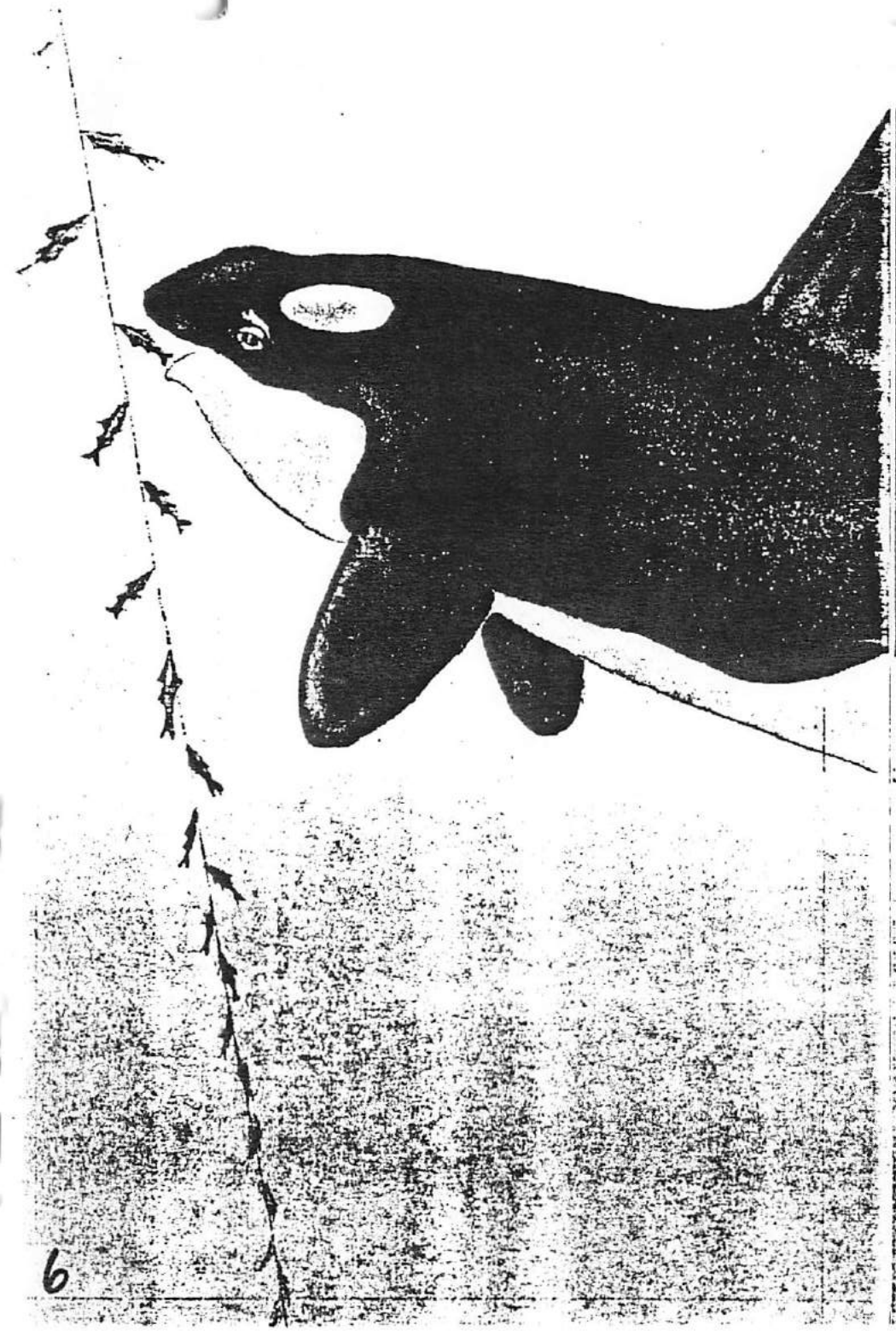


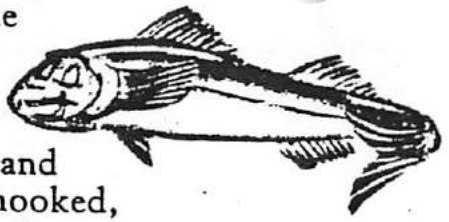


Man fanced the delectable delights of the ocean and soon wished to capture all the fish. He tried but the fish proved smart and had many refuges they could use to avoid man's assaults. Man tried spears, hooks, traps, trawls, gillnets and *Got Yas.* Lo and behold, all the methods worked, some better and some worse.

The Council of Kings grew worried. They talked to one another and asked, "How de we stoptechology? It just keeps marching on!" King B. Halibut was the most worried of all and called a meeting of all the kings of the ocean.

There was nervous banter as the meeting convened. All of the kings were worried as King B. Halibut called matters to order. Herschel S. Lion was the first to speak. "I am much troubled, for as I feed upon the ocean, Man tries to shoot me," he said. "I have done no wrong, yet my numbers are dwinding. Can't Man see that I have to feed from the sea, and if the fish are few in number, I would follow them to where they congregate, then tell my family.





"You don't have the worries that my kind has," replied Sable B. Fish. "We are always on the search for food, and sometimes we become hooked, only to feed the Whales."

"I can attest to that," interjected Orca A. Whale. "I like eating every part of you . . . except your lips! Those, I leave on the hook."

Sable B. Fish was still worried, for many times his young and the young of all the other species would feed, only, to be hooked and die upon longlines that lay discarded on the ocean floor.

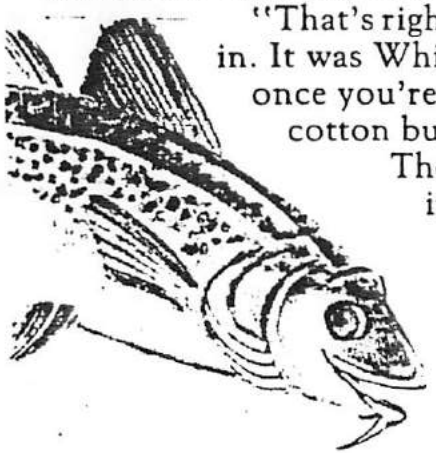
"How can Man be so stupid as to open a season during a storm," he grumbled. "If only Mother Nature would cooperate . . . or if only men spent more time working with each other to retrieve all of their gear, our numbers would continue to be stable.

"Yeah, but your young don't have the worries mine have!"

It was Louie B. Crab who had suddenly piped up. He hopped when he talked for he was missing two legs.

"My legs were lost when I got tangled in a tumbling trawl. That's a fierce predator for me and my children!"

The Council listened as Louie chattered about how easy it was to eat bait off a hook, and how he and his young were forever crawling in and outs of pots. They crawled in and out, that is, until they met *Got Yas*!.



"That's right!" another plaintive voice chimed in. It was Whiskers P. Cod. "With *Got Yas* once you're in, you're never out until the cotton busts loose.

There's even a model that keeps me in and lets my children out.

Louie complained that since the advent of *Got Yas*, he sometimes couldn't get into a pot for a free lunch at all, even when the bait was fresh. Of course, missing a meal wasn't as bad as trying to hide from the tumbling trawl.

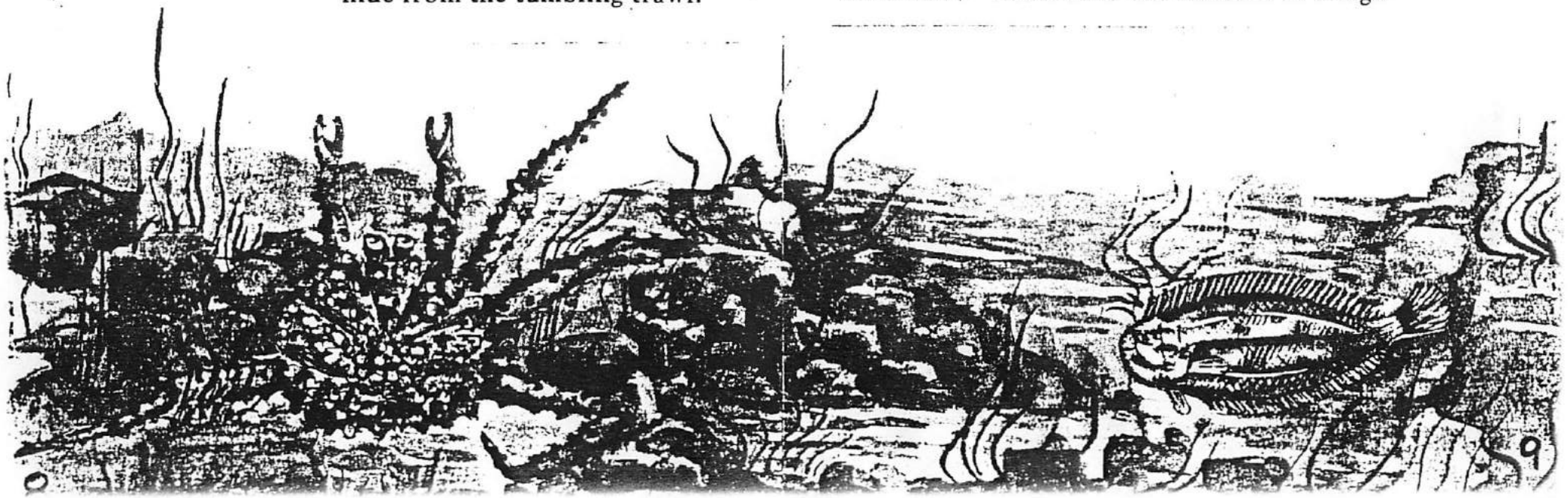
Louie knew that neither he nor his young could survive if the tumbling trawl continued to ravage the bottom. Lemon E. Sole also wished the tumbling trawl would stay off the bottom, but he feared it would never happen.

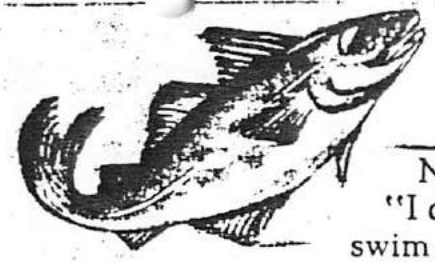
"According to the Law of Survival, every family sacrifices a few of its young in order to keep the ocean health," Lemon's grandfather had told him, but now it seemed as if far too many young were disappearing. Now, there were men who hunted each species, and other who simply discarded them and called it "by-catch".

Lemon also remembered the old fish saying before he died, "I wonder if man's hunting traditions will prevail, or if by-catch will become our way of life?"

Both Louie and Lemon knew Man was smart, but they worried that their species would be gone before technology could make fishing more selective.

"We can't just wait. We have to protect ourselves somehow," Louie told the Council of Kings.





Nuggets Fry Pollock spoke next. "I don't like to eat hooks, nor do I swim into pots," he said. "The only thing that can catch me is the tumbling trawl.

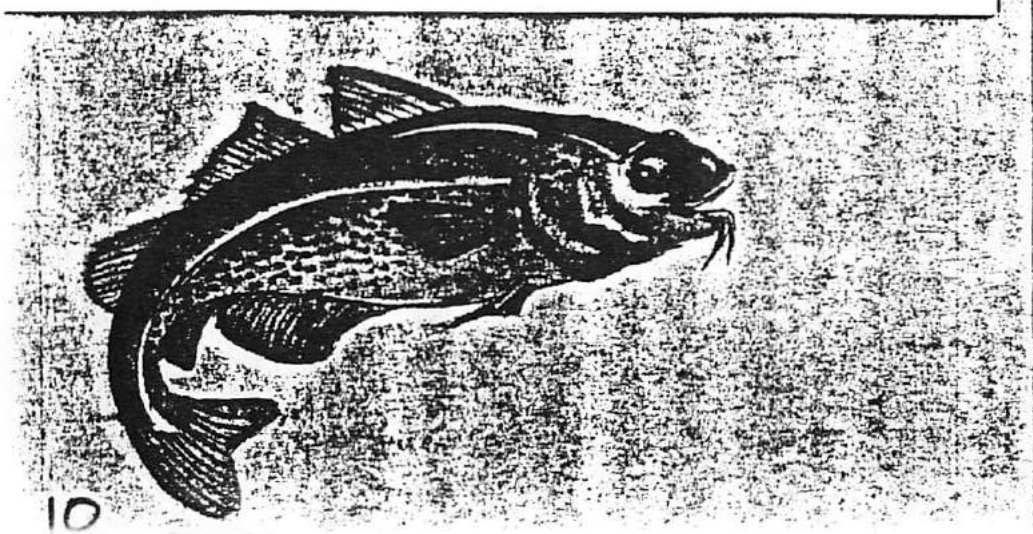
"Our family is the largest and we thought that all of us could never be caught," he continued. "But look what happened to my cousins in Shelikof!"

He shook his head. "Man claims they just swam away, but he had better keep his eye on me. I feed everyone in the Food Chain."

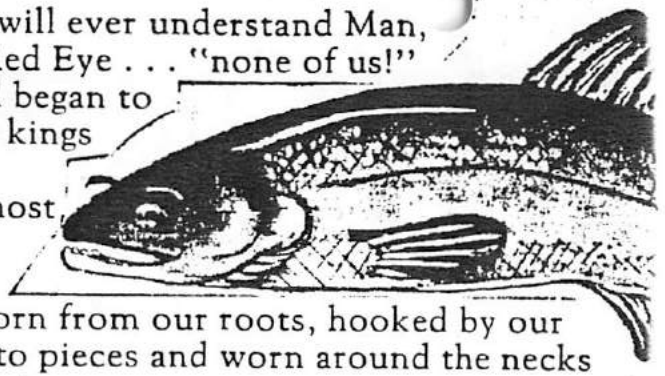
As always, Whiskers P. Cod was thinking about food. He ate everything that flashed, moved or simply tickled his fancy. An amazing stomach he had . . . and it got him in trouble. Whiskers and his young could be caught by hooks, trawls, pots or *Got Yas.*

Whiskers used to be able to hide in the rock piles where the tumbling trawl was afraid to go, but now the tumbling trawl could gobble the rocks.

"I don't understand Man!" Whiskers declared. "I don't know why he chases when we would willingly swim to him. Doesn't he understand that me and my young are *always* hungry?"



"None of us will ever understand Man, exclaimed Sock Red Eye . . . "none of us!"



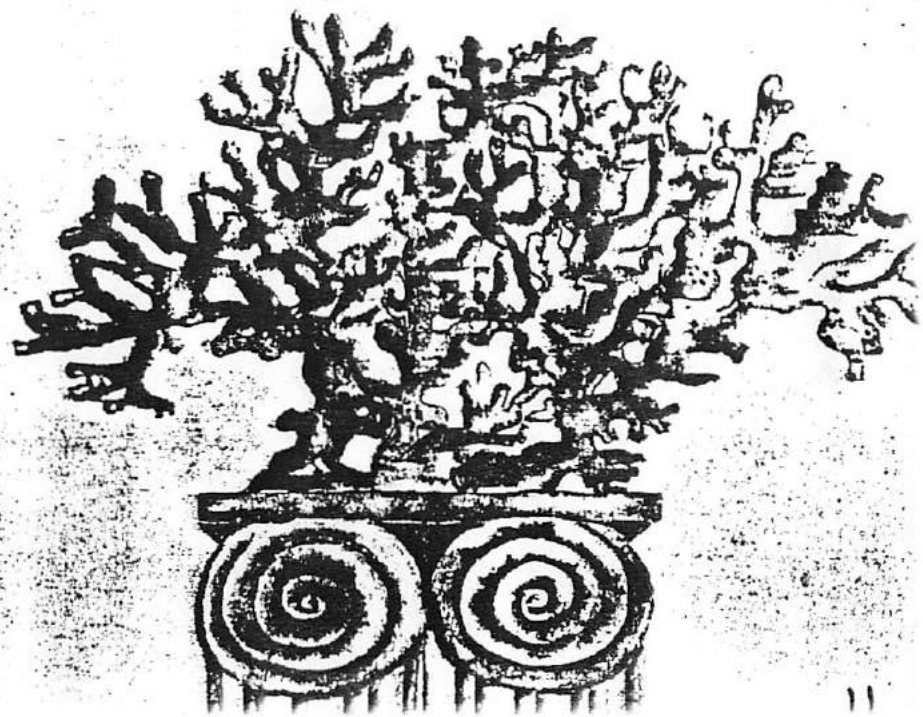
Coral R. Still began to speak, and all the kings listened.

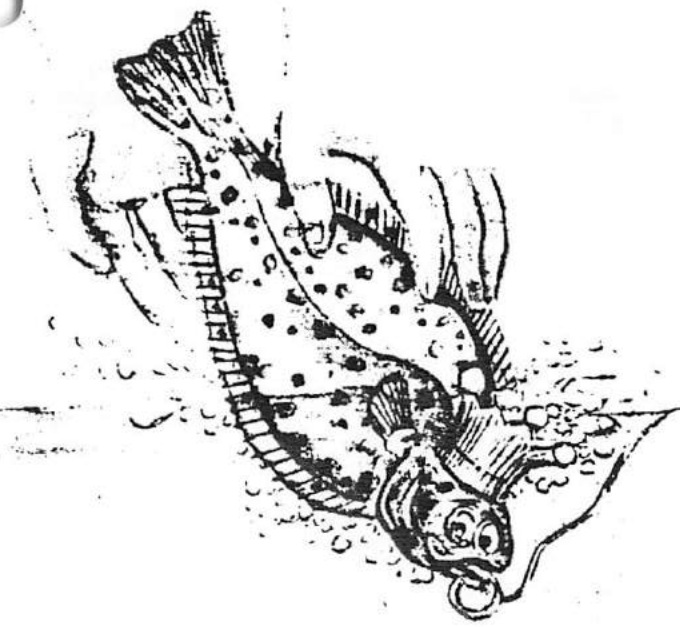
"I have the most to worry about," said Coral. "My family and I are torn from our roots, hooked by our limbs, crushed into pieces and worn around the necks and fingers of Man!

"Listen to me, my ocean friends. Without me you will have no place to hide, no way to scratch your backs and nothing pretty to look at. All of you need me, but no one seems to care. Unless we do something, all of my kinc will be gone.

"I guess Man doesn't realize how long it takes for me to grow."

All of the kings shook their heads. All would miss Coral, for he was the beauty of the sea.





With a hook adorning his lip, King B. Halibut was the last to speak.

"My young are weak and exhausted from trying to avoid capture," he said solemnly. "We have been tricked by *Got Yas*, hooked on longlines and tumbled in trawls, only to be heaved aboard boats and thrown back overboard."

Herschel S. Lion smacked his lips.

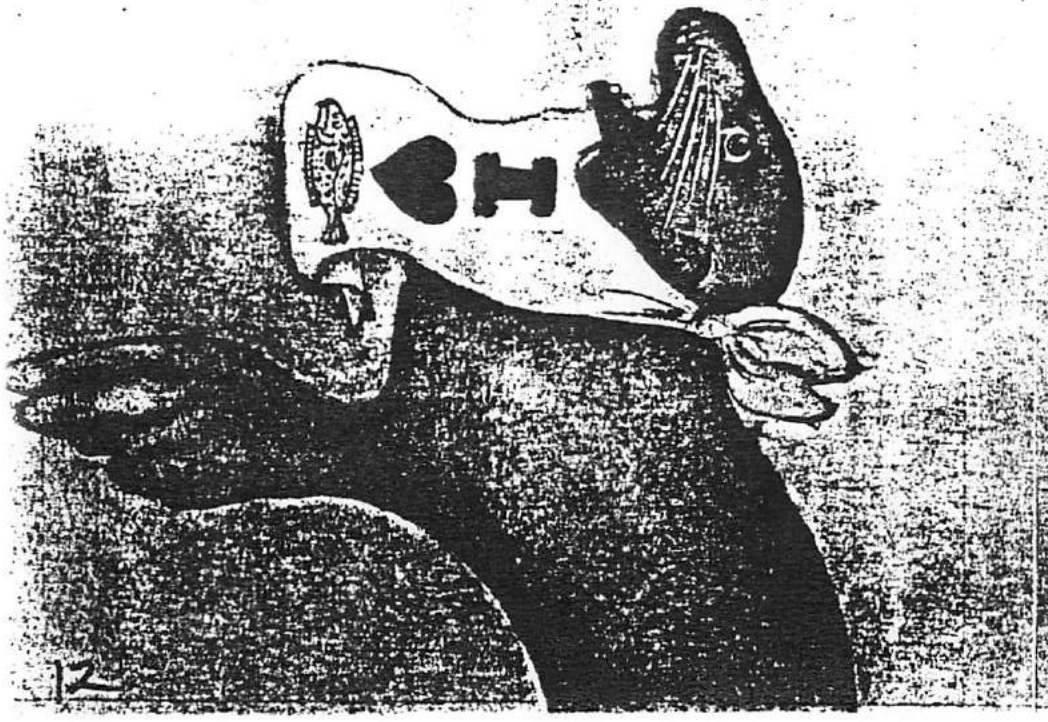
"Many of my young are dying and our numbers are dwindling," King B. Halibut cried, "What do we do?"

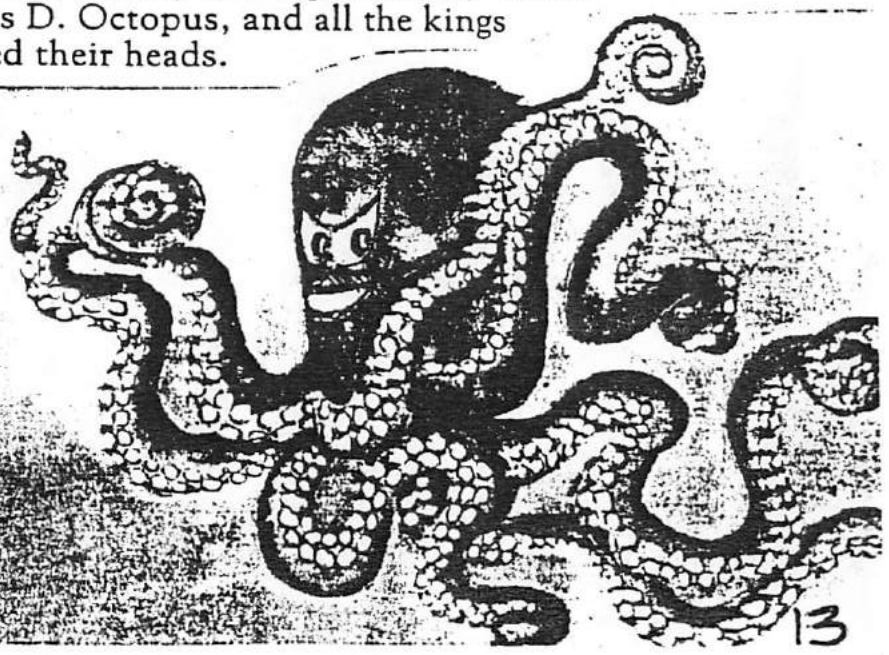
The king was frustrated. His flock was accustomed to having their numbers limited by the Law of Survival. Never had they been so hunted!

The Council of KIngs pondered the dilemma and began to debate.

"I know of no way of judging the future except by the past," said Whiskers. "Look at what has happened in all the other oceans of the world!"

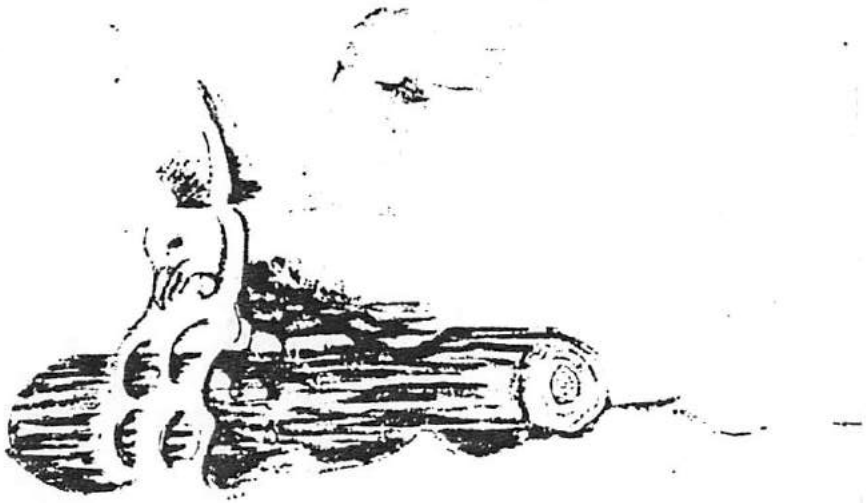
"Yes, history will repeat itself," cried Pickles D. Octopus, and all the kings nodded their heads.





"We must alert Man that wisely conserving the protein of the sea is one of the keys to world prosperity and peace," shouted Coral, and all of the kings agreed.

Snapper Red Fish soon nominated Herschel to travel far and wide and spread the message. Everyone knew that Herschel was the safest one for the journey, for he was federally protected.



Shortyly after he began, Herschel ventured upon Jonathan Seagull clinging to a log. Jonathan motioned weakly for him to come and talk.

The bird was dripping black, oozing with goo, with a new necklace that had holes for six necks at once.

"Why do you stop me?" asked Herschel. "I'm on a mission of extreme importance!"

"But I've got to tell the world about an environmental threat that will ruin the ocean!" gasped Jonathan.

"Now whatever could he be talking about?" wondered Herschel.

Got Ya!

The names in this story have been changed to protect the innocent. Anyway, no part of this fictional tale could ever be true.

CLEARANCE STRAIT FISHERY

ALASKA SABLEFISH POT PERMIT HOLDER (CLEARANCE STRAIGHT)

RICHARD BISHOP
WARDS COVE, ALASKA
PHONE (907) 247-0550

HISTORY OF FISHERY

ONE POT PERMIT ISSUED, MAXIMUM THREE TO BE ISSUED. FOUR PAST PARTICIPANTS VYING FOR REMAINING TWO POT PERMITS WITH A POINT SYSTEM DETERMINING WHO QUALIFY. EIGHT PERMANENT HOOK AND LINE PERMITS ARE TO BE ISSUED WITH TWENTY-SIX PARTICIPANTS QUALIFYING, WITH PERMITS TO BE ISSUED DEPENDENT UPON A POINT SYSTEM.

N.M.F.S.

CONTACT PERSON FOR F/V SEA STARS CATCH AND BY-CATCH RECORDS

MARTIN LOEFFLAD
N.M.F.S. SEATTLE
PHONE (206)526-4205

References:

Company	*Contact*	*Phone*
Aleutian Dragon Seafood's	Hugh Risner	(206) 784-5170
All Alaskan Seafood's	Lloyd Cannon	(206) 285-8200
Alyeska Seafood's	Frank Kelty	(907) 581-1211
JX Fisheries	Dick Johnson	(206) 783-3818
Nelbro	Mike Lee	(206) 485-7755
Peter Pan Inc.	Ron Tullis Lloyd Guffy	(206) 728-6000
Sea Catch Inc.	Robert Ressof	(206) 282-4467
Sea Catch Inc.	Jim Long	(206) 282-4467
Trident Seafood's	Chuck Bundrant	(206) 783-3818
Unisea	Rich White	(206) 881-8181

QUAKE HITS DUTCH HARBOR

Friday evening 27 February, at approximately 11:45 an earthquake measuring 6.7 shook Unalaska. The shock was strong enough that boats in 200 fathoms of water felt the shock. The epicenter of the quake was 60 miles southwest of Unalaska.

Within minutes after the quake the Unalaska Police Department ordered a Tsunami alert, the third such alert within a year. "People used wisdom instead of a lack of concern during the evacuation. I think the fact that the quake rolled them out of bed had alot to do with it," said Davis.

The evacuation traffic took no particular direction. Those living at sea level sought out friends on high ground, others just packed the family in the car, found high ground and waited for the all clear.

Those in the fleet in the harbor for the most part headed out to sea. When the quake struck, those tied to the dock reported that they felt like the boat was rammed. Some increased the number of mooring lines and went up on Ballyhoo.

John Davies is Chief Seismologist at the University of Alaska in Fairbanks. He stated that 50% of the major (over 8.0) quakes are preceded by a quake of 6.0 and over. "Based on long term statistics, a major quake is predicted in the Dutch Harbor area. It could happen tomorrow or next year."

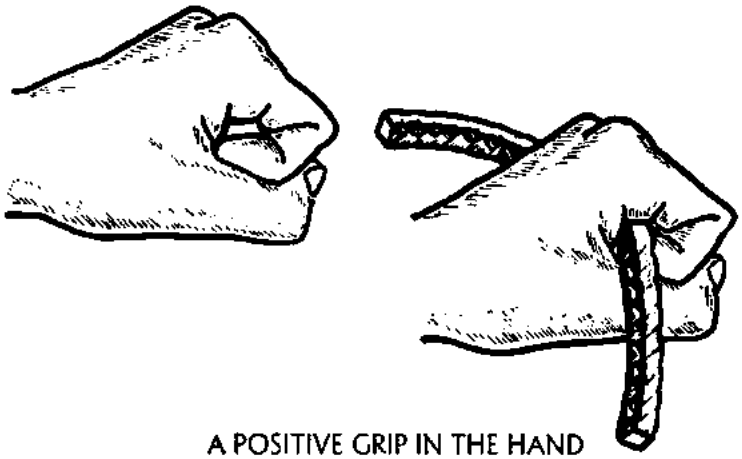
Many of us have observed the increased volcanic activity of Akutan. Davies stated that there is a relationship between earthquakes and volcanic activity, but what the relationship is remains obscure.

Reguarding a Tsunami, Davies said that a secondary Tsunami, one caused by submarine slides would be the most likely to hit Dutch Harbor. Valdez was hit by such a wave in 1964. "It was only 20 feet high when it hit Valdez but big enough to do alot of damage," said Davies.

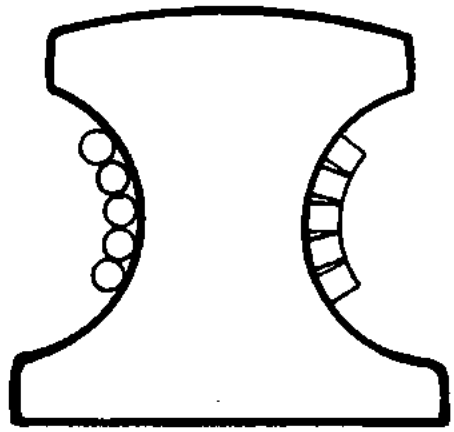
Davies advised taking long term precautions in the event of a quake. "If you have trouble standing up during a quake, don't hesitate to move to higher ground." The city of Unalaska has a pamphlet outlining what to do and where to go in the event of a Tsunami.

SQUAREHEAD ROPE

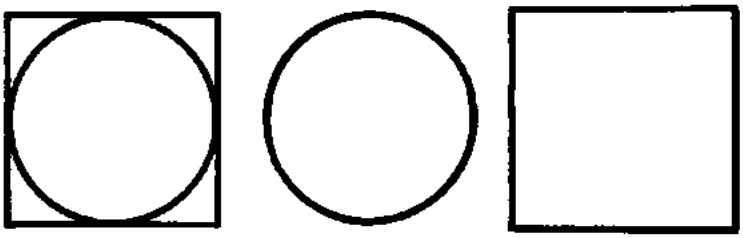
The Only Rope With Eight Corners



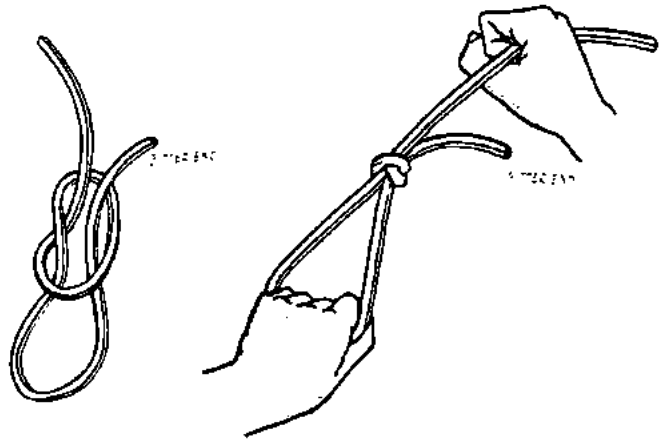
A POSITIVE GRIP IN THE HAND



FITS ANY PULLEY, CAPSTAN OR POWER BLOCK



MORE MASS, GREATER STRENGTH, SAME DIAMETER



INVENT A KNOT, GREATER FRICTION, LITTLE SLIPPAGE

(1) SQUAREHEAD ROPE CAN BE MANUFACTURED OF NATURAL OR SYNTHETIC MATERIALS. ANY COMBINATION OF MATERIALS CAN BE COMBINED TO FACILITATE THE USER'S NEEDS.

(2) ANY PLACE A ROPE OR LINE IS USED, SQUAREHEAD ROPE WILL ALWAYS HAVE A POSITIVE ADVANTAGE.

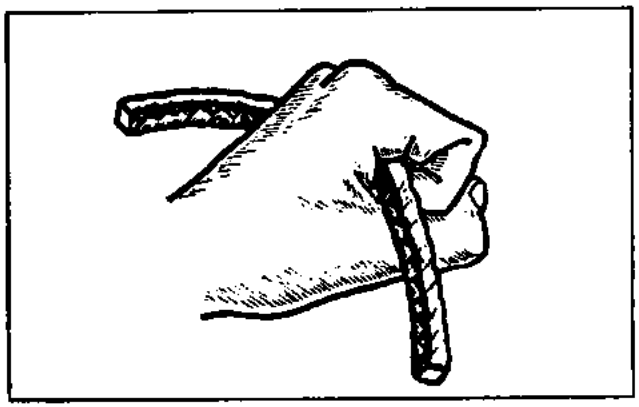
(3) LEFT AND RIGHT HAND WEAVE, A NEUTRAL COILING LINE.

(4) A SPECIALIZED LINE, FOR A SPECIALIZED NEED.

(206) 286-9234 **(206) 782-5243**

U.S. PATENT 4,803,909

Positive Hand Grip

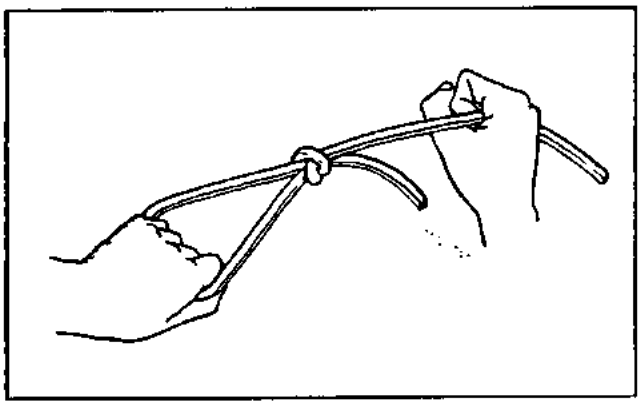


POSITIVE GRIP IN THE HAND

One of the significant advantages is the secure hand to rope grip provided by the square shape.

Square rope will always give you more surface area to grab hold of, giving you more hand pulling power.
Positive grip wet or dry.

Knots Hold More Securely

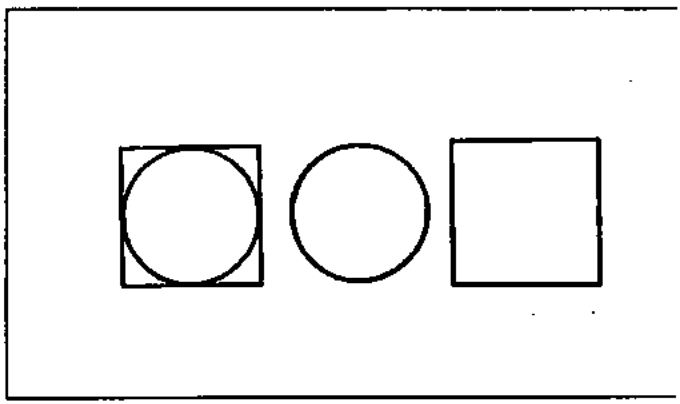


MORE FRICTION
LESS SLIPPAGE

When tying any style knot,square rope because it has more surface area will create more friction, which will make your knots hold more securely.

Knots in square rope will also untie easier wet or dry.

Better Gripping Power



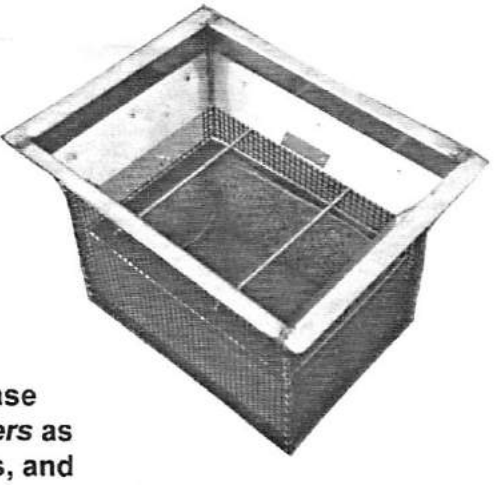
More mass, same size.
Any place a rope or line is used square rope will have a positive advantage.
Left and right hand weave.
A neutral coiling line.

A SPECIALIZED FOR A SPECIALIZED NEED

LEAD ROPES
LONG LINES
UTILITY ROPES

Gullywashers™

Catch Basin Inserts/Oil-Water Separators
For Storm Drains and Sewer Inlets



18x24 Gullywasher

Aqua-Net, Inc. **introduces the *Gullywasher* line of vinyl coated, wire baskets for placement in storm drain and sewer inlets. Install *Gullywashers* to help stop sediment, soil, debris, oil, and grease from entering surface waters or treatment systems. Use *Gullywashers* as a pre-filter for steam cleaning pads, car washes, oil-water separators, and other treatment or recycling systems. Add a sediment trap or oil-water separator to self cleaning catch basins and dry wells. Property owners service your own catch basins and help reduce expensive vactor costs. With *Gullywashers*, absorbents are stored in the catch basin for quick response to hydrocarbon spills and to help capture contaminants in stormwater runoff.**

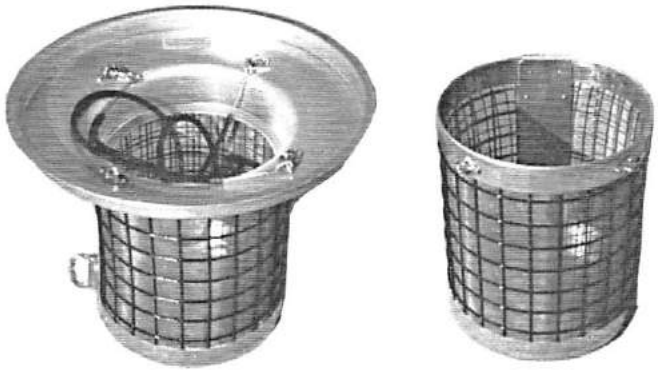
Gullywashers **have several unique features. The baskets can be fitted with our "hydrophobic" cellulose fiber absorbents for oil and grease reduction, stainless steel screens and bag filters to help reduce sediment, soil, and debris, or specialty media for site specific pollutants. *Gullywashers* are manufactured in custom widths and depths and come with fixed or removable support frames designed to channel liquid into the basket. Removable support frames are adjustable for varied or no bypass. *Gullywashers* are light-weight and have a variety of lifting options including bars, cables, and straps.**

Gullywashers **are made with durable, non-degradable AQUAMESH®, a high strength, galvanized steel wire bonded to a thick, tough, plastic coating which resists abrasion. The support frames are manufactured with stainless steel or aluminum and all baskets are assembled with stainless steel rivets and hog rings. *Gullywashers* are standardized to foundry specifications. Aqua-Net currently fits 18"X24", 20"X24", and 25" diameter frames and grates manufactured by northwest foundries and we will custom fabricate for your specific need.**

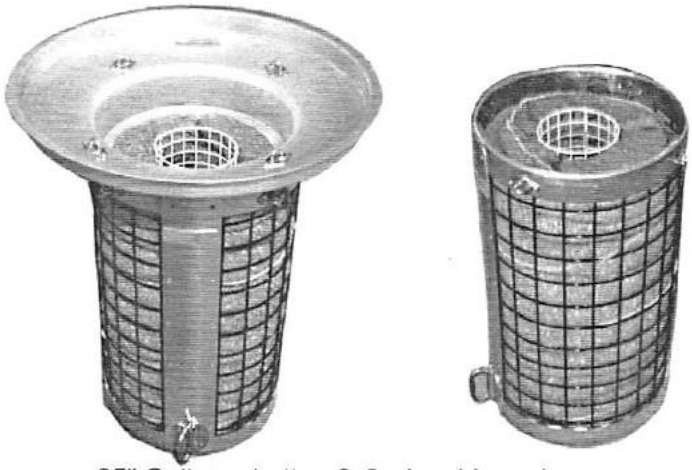
In 1994, certain industries and construction companies must implement pollution prevention plans to ensure contaminants do not enter our surface waters. *Aqua-Net, Inc.* is dedicated to helping those companies plan their pollution prevention with simple, affordable systems. We are now working with local governments, port districts, and private industries to approve *Gullywashers* as a "Best Management Practice" (BMP) to be used in conjunction with their overall pollution prevention planning. Currently, the Marine Division of the Washington State Department of Transportation has specified the *Gullywasher* as their BMP and we have an extensive list of private industrial users. If you would like to know more about our products, please contact your local dealer or call us toll free at 1 (800) 208-5447.

Aqua-Net, Inc.

Custom Water Polishing Systems
1 (800) 208-5447

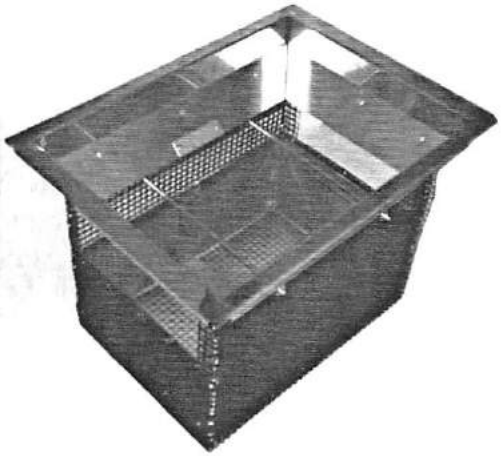


25" Gullywashette - 30 mesh stainless steel wire cloth between 2x2 and 1x1 wire sides. Removable aluminum support frame, fixed aluminum bottom pan, brass handle. Part # 12001

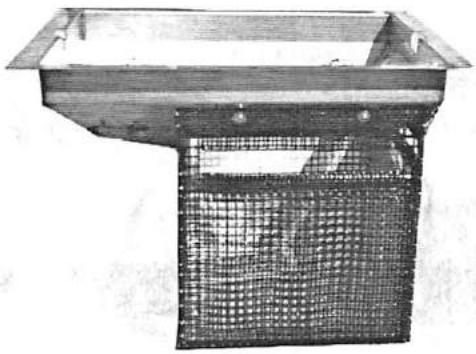


25" Gullywashette - 2x2 wire sides, wire spacer for absorbent sock, removable aluminum support frame, fixed aluminum bottom pan, brass handle. Part # 12003

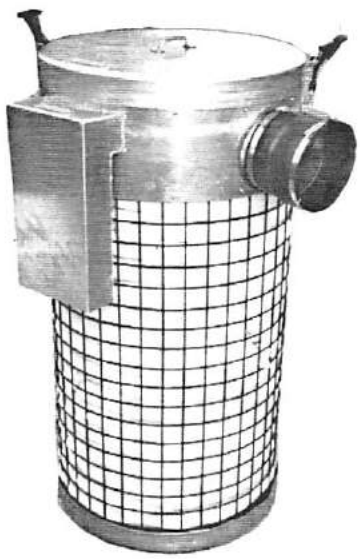
18"x24" Gullywasher - 2x2 wire basket, wire spacer for absorbent sock, removable stainless steel support frame, solid plastic bottom. Part # 10003



18"x24" Gullywasher - 1/2x1/2 wire basket, built in relief, 30 mesh stainless steel wire cloth liner. Part # 10001



18"x24" Gullywasher to fit around 90 degree downturn (left). Part # 10004. 18"x24" Gullywasher to fit curb and gutter style inlet (middle). Part # 10006



24"x44" StormLOK™ - fits inside 48"x48"x48" type I catch basin. Features 90 downturn, outlet connection for flex pipe, removable top, removable wire spacer for absorbent sock with adjustable inner tray for specialty media pack. Part # 12004.