

Tom Casey

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INTRODUCTION

The U.S. crab fleet in Alaska has the capacity and the desire to harvest the 1977 Maximum Sustainable Yield (MSY) of tanner crab (*Chionoecetes bairdi*) in the Eastern Bering Sea. No foreign harvest of bairdi tanner crab should be allowed in 1977.

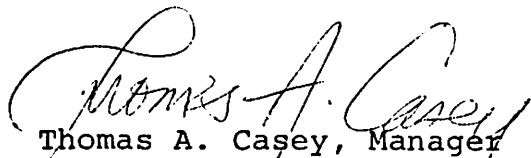
Allocation of the entire MSY to the U.S. fleet will:

- 1.) Stimulate the Alaska fishing fleets growth and development, a goal consistent with the purpose of the new, U.S. 200-mile limit law.
- 2.) Provide direct economic benefits to the U.S. economy in the form of increased earnings, investments, employment, and a decreased balance of payments deficit.

The 1977 allocation of bairdi tanner crab in the Eastern Bering Sea between U.S. and Japanese fishermen will be determined by the Secretary of Commerce, when she issues the Preliminary Management Plan (PMP) for tanner crab. As of January 1, 1977, the draft PMP included a 22 million pound allocation of bairdi tanner crab south of 58°N for the Japanese, high seas fleet. We believe this allocation is not only unjustifiable, but also harmful to the U.S. crab fleet and the U.S. economy.

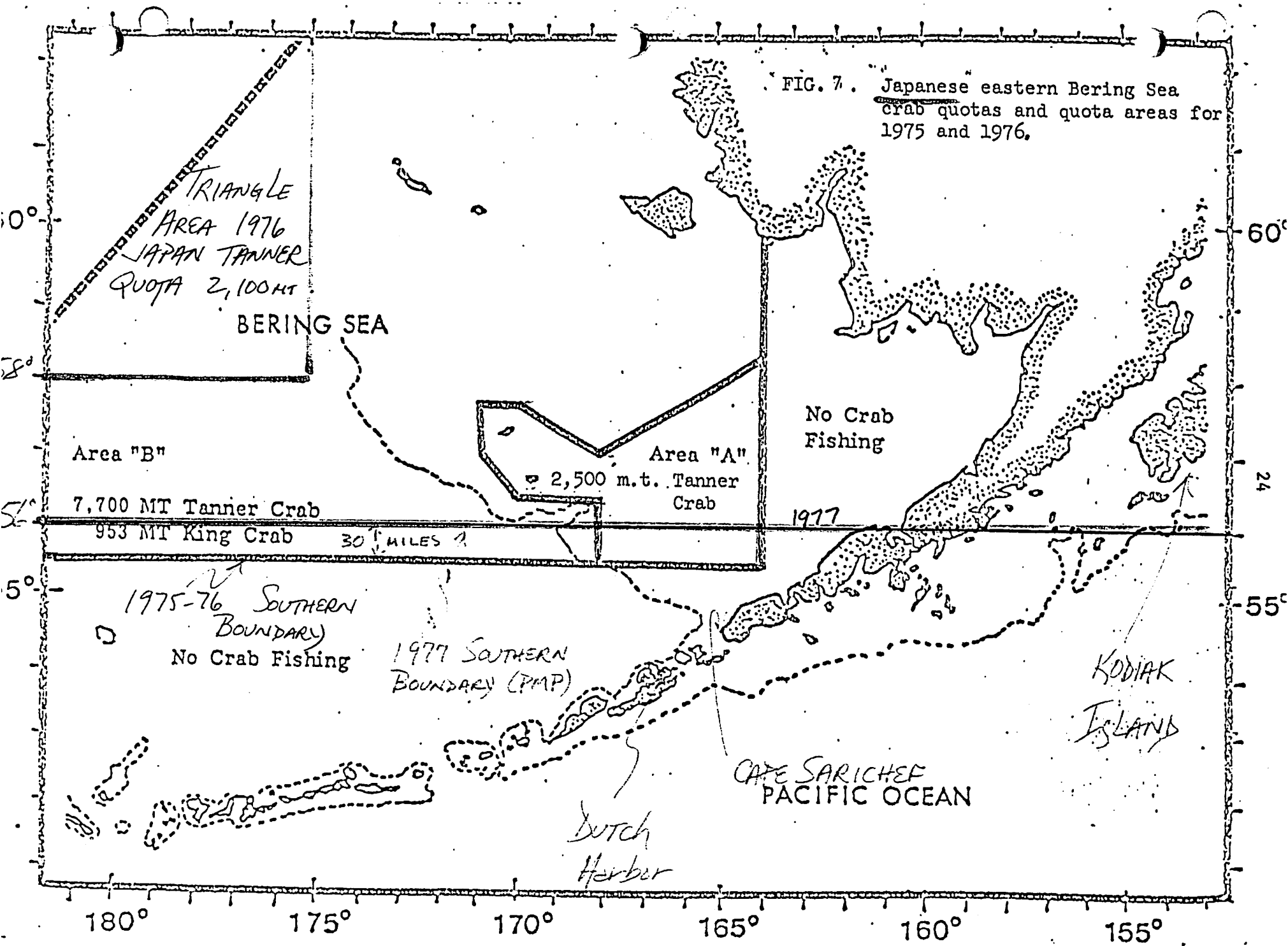
There is considerable Japanese foreign investment in the U.S. fish-processing industry in Alaska. In fact, the Japanese own many shore-based, tanner crab processing plants in Alaska to which U.S. crab fishermen deliver their catch. There is no need for the Japanese companies to dispatch entire high-seas fleets from Japan, all the way across the Pacific to the Eastern Bering Sea, to acquire tanner crab that can be purchased from U.S. fishermen by Japanese-owned, Alaska crab processing companies.

Unless the 1977 PMP is revised to move the Japanese fleet North of 58°N latitude in the Eastern Bering Sea, as recommended by the Scientific and Statistical Committee of the North Pacific Fisheries Management Council, growth of the U.S. crab fleet will be inhibited and the value of the 200-mile limit law to these fishermen will be lost.


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FIG. 7. Japanese eastern Bering Sea crab quotas and quota areas for 1975 and 1976.



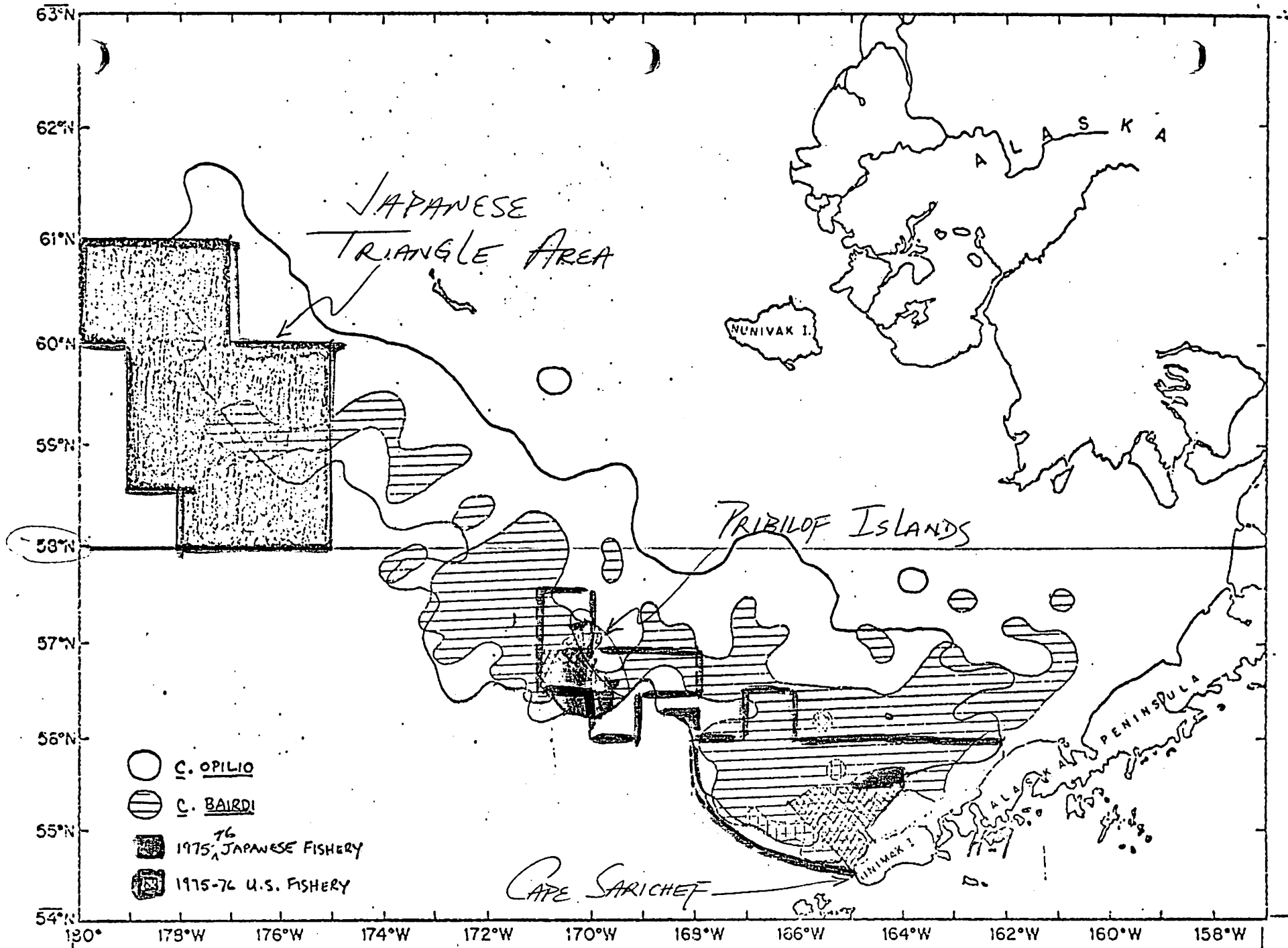


Fig 1

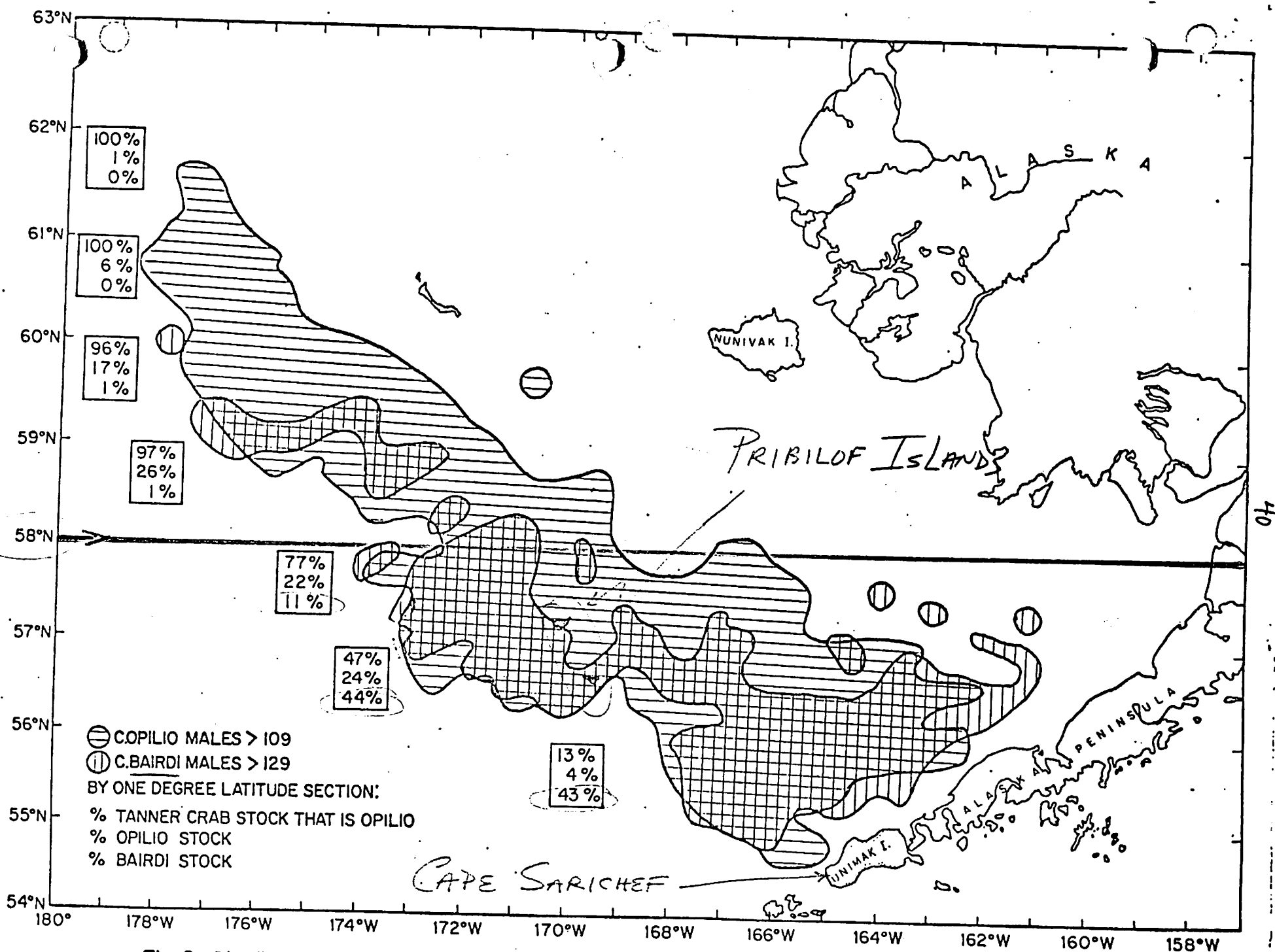


Fig. 8 Distribution of Tanner crab stocks and species composition of larger male Tanner crabs by Latitude

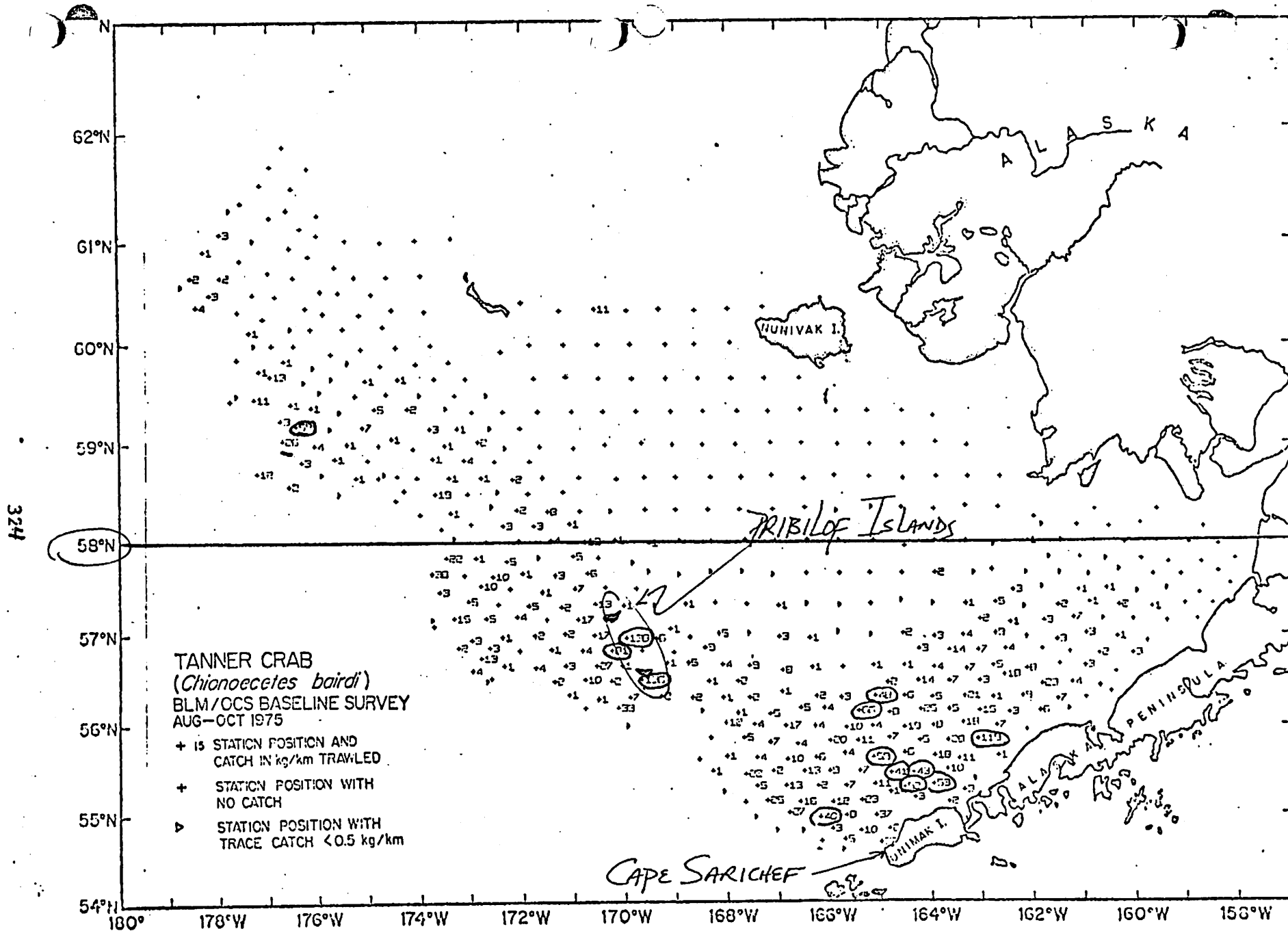


Figure IX-96.—Distribution of catch rates by weight of Tanner crab (*C. bairdi*) in the eastern Bering Sea (BLM/OCS survey, 1975).

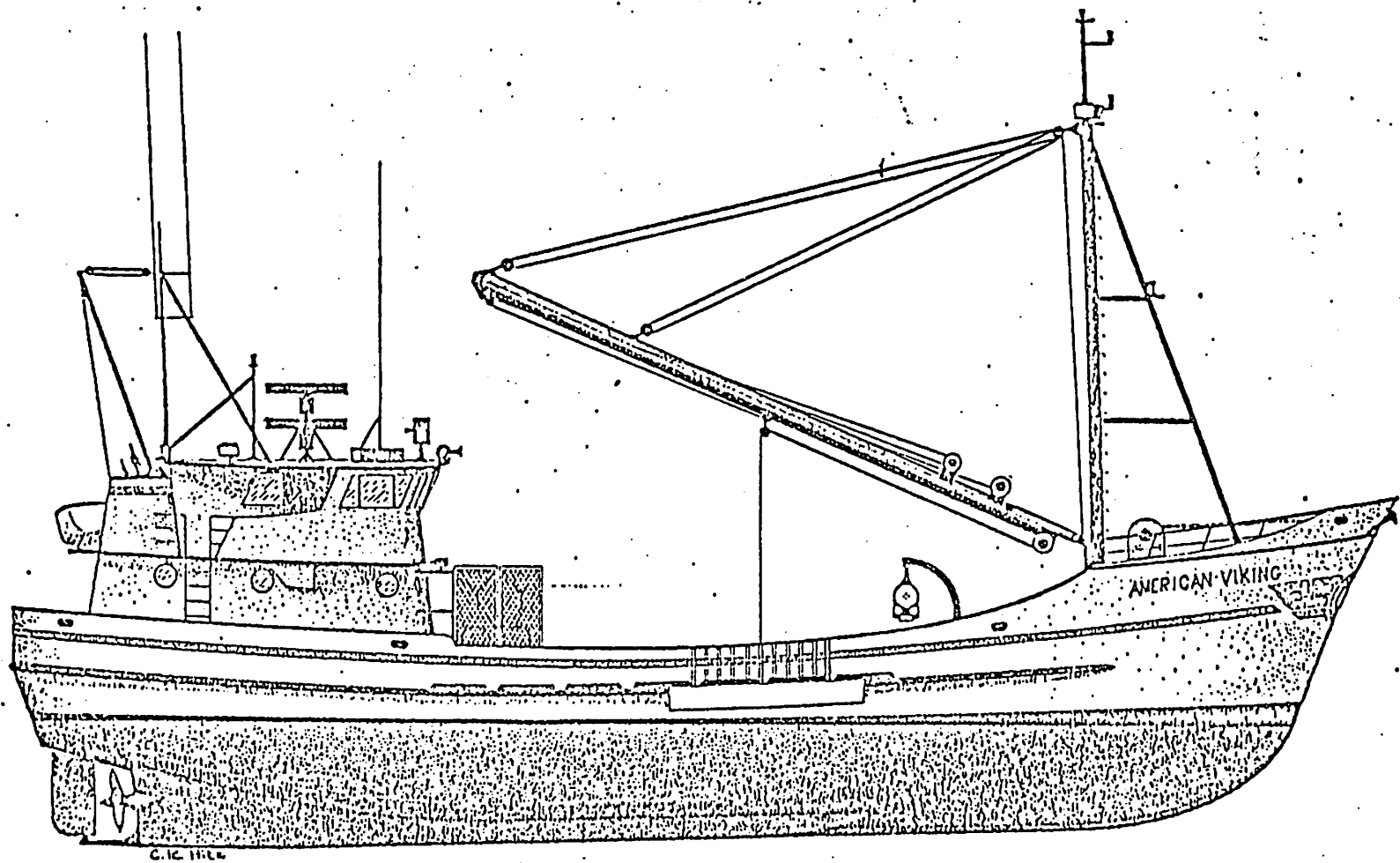


Figure 3. -- American Viking, 102' x 27' x 12', built 1973 by Harold Hansen Boat Co., Marysville, Wash. © Ricwall Publishing Co. 1975

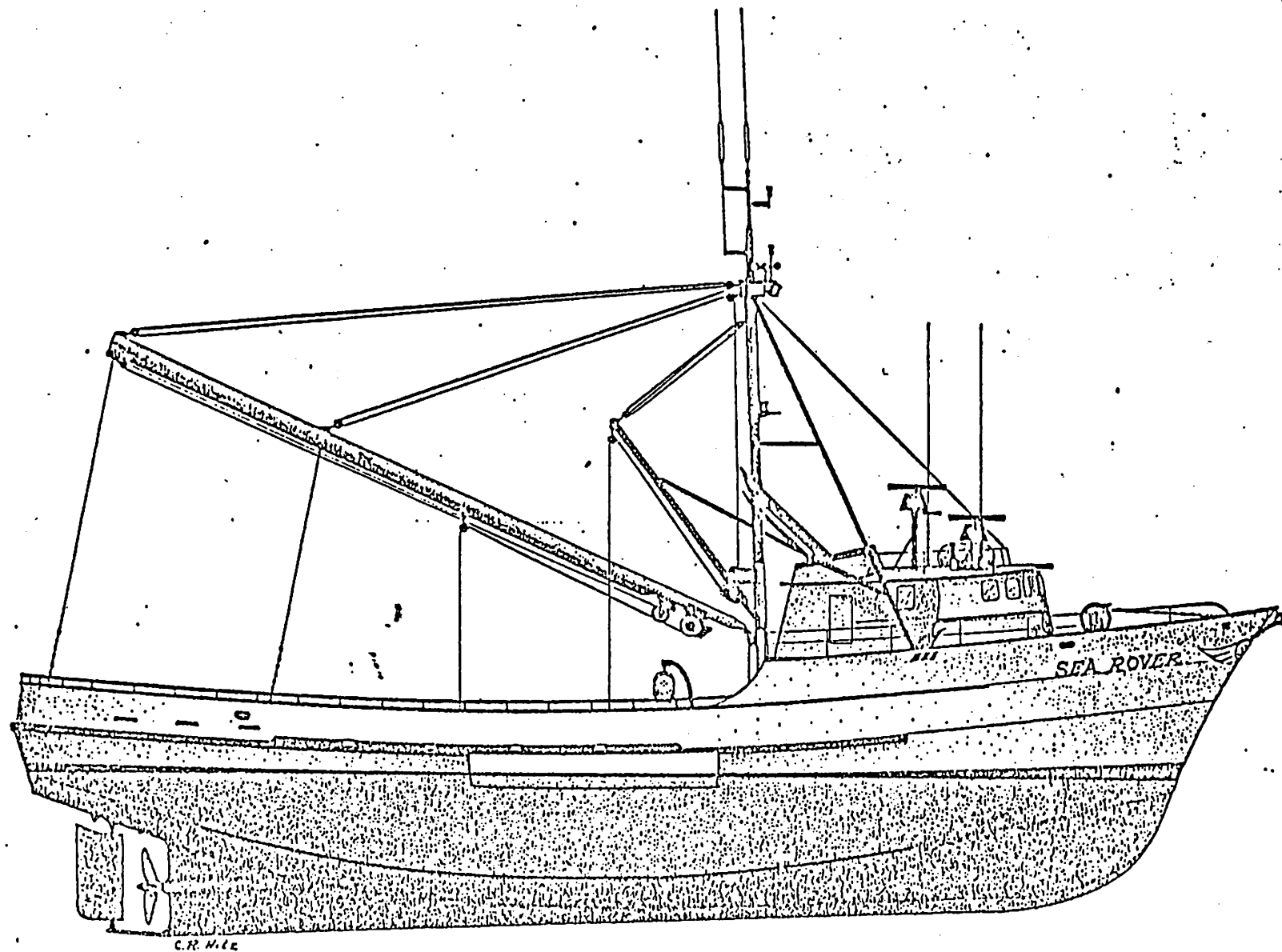
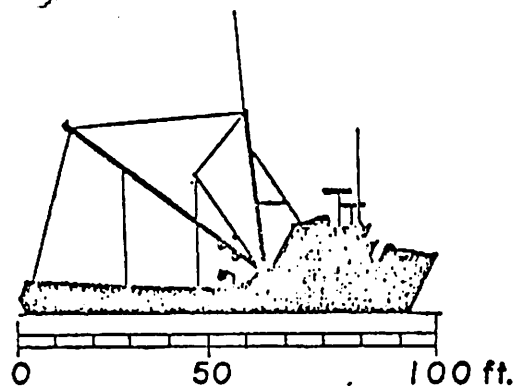
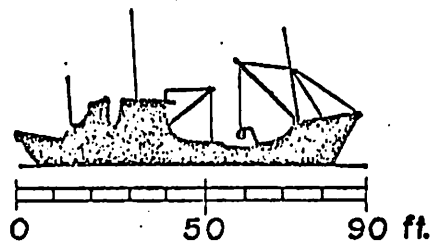


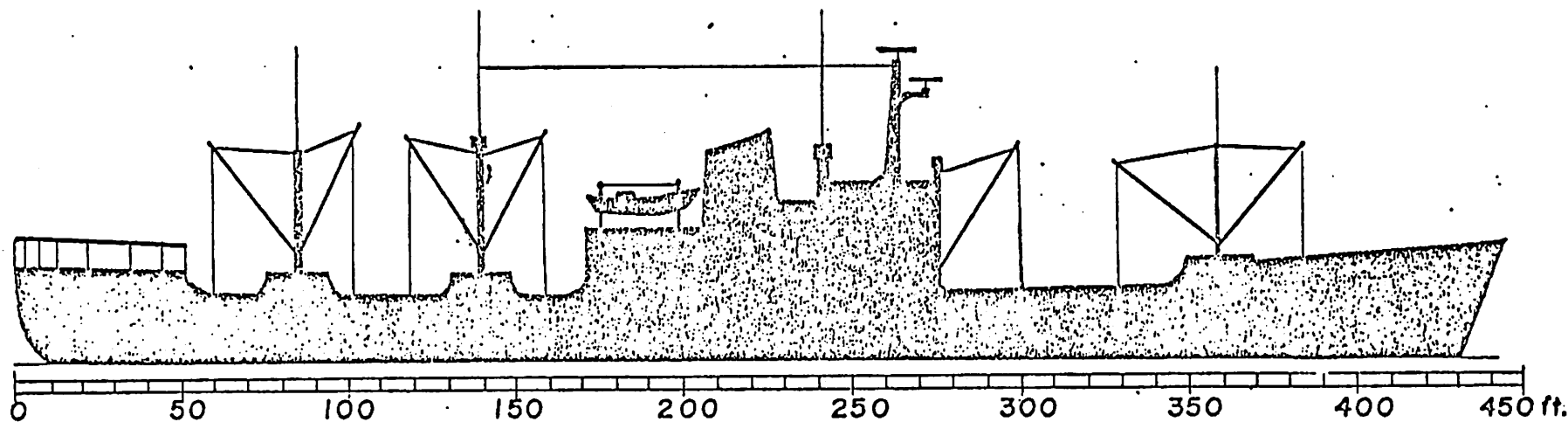
Figure 4. -- Sea Rover, 108' x 29' x 14', built 1973 by Marine Construction & Design Co., Seattle, Wash. © Ricwalt Publishing Co. 1975



UNITED STATES CRAB VESSEL



JAPANESE CATCHER VESSEL



JAPANESE CRAB FACTORSHIP

Figure 5. Relative sizes of United States and Japanese crab vessels in the eastern Bering Sea.

EXPLANATION OF THE PROBLEM

PL 94-265, the Fishery Conservation and Management Act of 1976, explicitly directs the Secretary of Commerce to develop and implement a Preliminary Management Plan (PMP) for all U.S., marine fisheries in which:

- (1) the Secretary determines that no fishery management plan for that fishery will be prepared and implemented, pursuant to Title III, before March 1, 1977.
- (2) a surplus of a U.S. fishery stock is determined by the Secretary of Commerce to be available for foreign harvest.
- (3) a foreign nation, having signed a Governing International Fishery Agreement, with the U.S. has applied for licensed-access to that fishery in which a surplus exists.

At issue is the PMP for bairdi tanner crab of the Eastern Bering Sea (EBS).

As of January 1, 1977, the PMP designated:

- (1) that the 1977 MSY for bairdi tanner crab, 5 1/2 inch carapace width and greater, in the EBS is 108 million pounds. A 5 1/2 inch carapace width is the minimum legal, size - limit for bairdi tanner crab to be harvested by U.S. fishermen in 1977.

This minimum size - limit was instituted by the Alaska Board of Fisheries at their spring 1976 meeting held in Kodiak, Alaska.

- (2) that the U.S. crab fleet in Alaska is incapable of harvesting that 108 million pounds of bairdi tanner crab in 1977, because of market limitations.
- (3) that the allowable level of foreign fishing for bairdi tanner crab in 1977 will be 10,200 metric tons, or 22,486,920 pounds.

The PMP will become effective on March 1, 1977 and will probably remain in force until at least April 14, 1977, 45 days later. The PMP will regulate the Japanese, high-seas tanner crab fishery in the EBS until the North Pacific Fisheries Management Council (NPFMC) develops a complete plan that will regulate both the 1977 foreign and domestic tanner crab fisheries. Assuming that the Secretary of Commerce accepts the NPFMC's plan, the PMP will eventually be superceded by the Council's plan.

In the interim, however, American fisherman will have been pre-empted by the Japanese crab fleet in the EBS tanner fishery, unless the PMP is modified to reflect the American fleets capacity and desire to harvest the Optimum Yield (OY) of tanner crab in the EBS. The Japanese begin fishing for tanner crab in the EBS in early March, 1977.

Except for a slight change, the PMP for tanner crab currently maintains the status quo for the Japanese tanner fishery.

Instead of maintaining the southern boundary of the Japanese fishing area at 55° 30 minutes North, the PMP moves the boundary a scant 30 miles Northward to 56°N. The impact of this change is cosmetic, in my opinion.

The 1977 quota designated in the PMP for the Japanese tanner crab fishery remains the same as it was in 1975 and 1976.

I believe the PMP should be updated to reflect the increased American tanner crab harvesting and processing capacity that has developed since 1974:

The best scientific data available on the EBS tanner stocks led the North Pacific Council to establish the MSY for bairdi tanner crab South of 58°N at 108,000,000 pounds. Likewise, the MSY for opilio tanner, a smaller, less valuable specie, was set at 333,000,000 pounds for the entire EBS.

My concern is for the allocation of the bairdi tanner crab MSY between the foreign and American fishermen. The PMP designates 22,468,920 pounds of bairdi tanner crab as the Allowable Level of Foreign Fishing. This determination is made without consideration of relevant social, economic, and ecological factors. The 200-mile limit law requires that Optimum Yield be derived for each specie using these factors.

I believe that the Secretary of Commerce and the North Pacific Council must consider the following factors as they reason from the MSY to OY for Eastern Bering Sea, bairdi tanner crab in 1977.

- I. Factors relevant to the determination of an OY for EBS, bairdi tanner crab.

- A. Biological - Ecological factors

1. Declining bairdi tanner crab recruitment:

abundance for young, bairdi tanner crab (85-129mm in carapace width) in the EBS are as follows. The data was generated from National Marine Fishery Service trawl servers.

1974 255,000,000 crabs

1975 207,000,000 crabs

1976 132,000,000 crabs

This is a 48% decline in just two years. as of January 1, 1977, the minimum legal size for EBS bairdi tanner crab harvested by U.S. fishermen is 140mm carapace width, or 5 1/2 inches. The PMP does not apply the size restriction to the Japanese fleet.

2. Declining catch-per-unit-effort (CPUE)

- A. U.S. CPUE for bairdi tanner crab in the Eastern Bering Sea.

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2. Declining catch-per-unit-effort (CPUE)

A. U.S. CPUE for bairdi tanner crab in the Eastern Bering Sea.

1975 72 crab/pot
1976 63 crab/pot

Source: Alaska Department of Fish and Game

Note: The U.S. CPUE will probably decline even further in 1977 with the advent of the 5 1/2 inch minimum size limit.

B. Japanese CPUE:

Since there are no U.S. observers aboard the Japanese catcher-vessels in the Bering Sea, a verifiable CPUE is not available. Data with U.S. observers on board the two processing motherships to which all catcher-vessels deliver, it is possible to calculate a catch per vessel day for the Japanese tanner crab fleet.

	<u>Area "A"</u>	<u>Area "B"</u>
1975	13,911 lbs/vessel day	17,905 lbs/ves. day
1976	13,990 " "	16,163 " "

Source: National Marine Fisheries Service

5,500 metric tons of the 10,200mt total Japanese 1975 and 1976 tanner quota came from Area B, where the catch per vessel day dropped 1,842 pounds.

The "Triangle Area" of the Bering Sea is bordered on the south by 58°N latitude, on the east by 175°W longitude, and on the northwest by International Date Line. The Japanese tanner crab fleet in the triangle area is composed of independent vessels that process their own catch on board. There are no U.S. observers on board these vessels to verify catch data. The average number of tanner crab caught per vessel day in this Triangle Area declined 22%. If the Japan Fishery Agency admits that a 22% decline has occurred from 1975 to 1976, it is likely that the real decline was even greater.

3. Incidental catch of tanner crab by the foreign trawl fleet in the Eastern Bering Sea.

National Marine Fisheries Service estimates that each year from 100 million to 140 million juvenile, tanner crab are caught incidentally in the nets that foreign trawlers drag along the bottom of the Eastern Bering Sea. This incidental catch is taken in the vicinity of the prime grounds for the tanner crab, pot fishery. Even though some juvenile, tanner crab are separated from the catch and returned to the sea, NMFS estimates their mortality at 70%.

The PMP states that 25 million to 30 million pounds of harvestable-size male tanner crab will be killed by the foreign trawlers during 1977. Yet the

Secretary of Commerce and the North Pacific Council have not taken any action to reduce this incidental trawl catch of tanner crab.

Their negligence occurs despite the following admission quoted from Page 29 of the January draft of the PMP.

"It is probable that this level of removal (of tanner crab by the foreign trawl), if it continues, will to some degree inhibit expansion of the domestic snow crab fishery."

The 25,000,000 pounds of harvestable tanner crab that NMFS estimates will be destroyed by the foreign trawl fleets in the Bering Sea this year, is equivalent to the 1976 tanner crab harvest in Kodiak.

The economic value of that 25,000,000 pounds of tanner crab to the Kodiak economy was at least:

1. \$5,000,000 ex-vessel value to the fishermen at last years price of 20¢ per pound, live weight. This year the ex-vessel price has risen to 30¢ per pound.
2. \$555,000 dollars in wages to tanner crab processing workers, not including supervisory personnel.

This calculation is derived using a:

1. 50,000 pound boat load of tanner crab as a reference.

2. 300 man-hours of labour as the amount necessary to process that much live crab.
3. \$3.70 per hour as the prevailing wage rate in February 1976. Since then the wage rate has risen to \$4.10 per hour.

Not included in this calculation of the over-all economic value to Kodiak's economy of the 25 million pounds of tanner crab to be destroyed by foreign trawlers in the Eastern Bering Sea this year are:

1. Increased sales of fishing equipment and mechanical parts and services associated with increased tanner crab quotes.
2. Increased sales of groceries, fuel, and bait that would occur with increased tanner crab quotes.
3. Increased sales of durable and non-durable consumer goods to the families of fishermen and processors.
4. Increased investment funds generated from increased savings by fishermen and processors.
5. A lower unemployment rate caused by more opportunities for processing workers.
6. Increased earnings for shippers and brokers of tanner crab.

In sum, the 25 million pounds of tanner crab that will be destroyed by foreign trawlers in 1977 could support a seasonal economy in Alaska's largest fishing port, Kodiak.

4. Predator-prey relationship:

Halibut, cod, and perch, now depleted in the EBS, prey upon juvenile, tanner crab as a food source. A goal of the NPFMC is to restore the halibut, cod, and perch stocks to greater abundance. Such a goal is likely to increase the natural mortality of the juvenile, tanner crab who will be preyed upon by greater numbers of halibut, cod, and perch each year.

B. Economic and Social Factors:

1. Japanese Dual-Ownership

There are two motherships that process the tanner crab caught by the Japanese in areas A and B of the EBS.

The Keiko Maru is owned by Nippon Suisan.

The Koyo Maru is owned by Taiyo Fisheries.

Nippon Suisan also owns Universal Seafoods, a tanner crab processing plant in Dutch Harbor, Alaska, and Morpac, a tanner crab processing plant in Cordova, Alaska.

Taiyo Fisheries owns B&B Fisheries one of the largest tanner crab processing plants in Kodiak, Alaska.

American fishermen pot-fishing for tanner crab in the EBS, side-by-side with the Japanese tanner crab fleet, deliver their tanner crab to processing plants in Dutch Harbor and Kodiak, controlled by Japanese fishing and trading companies.

Nippon Suisan and Taiyo can acquire their EBS tanner crab either from their own high-seas crab fleet or from American vessels delivering to Japanese-owned, shore plants in Alaska.

This arrangement is detrimental to American crab fishermen.

2. Two-tiered pricing of processed tanner crab on the Japanese wholesale market

This on-shore, off-shore Japanese, tanner crab processing combination is a distinct advantage to the Japanese fishing companies.

I believe the Japanese artificially raise the value of their mothership tanner catch while suppressing the value of processed, Alaska tanner crab exported to Japan.

NMFS price data shows that during 1976, the largest processed tanner crab sections (1/2 crab in the shell with carapace removed) taken by the Japanese fleet fishing in the vicinity of Cape Sarichef and the Pribilof Islands in the Bering Sea, processed aboard the Japanese motherships, and shipped directly to

the Japanese market, sold for \$1.80-\$2.10 wholesale. Tanner crab of the same size, harvested by U.S. crab vessels from the same area as the Japanese catch, delivered to Alaskan shore plants, where they are processed under the supervision of Japanese technicians from Nippon Suisan and Taiyo, brought only 80-90¢ per pound FOB Seattle and no more than \$1.60 per pound wholesale in Tokyo. The tanner caught in each case were identical. The finished product forms were identical. Yet, in many cases, a 20-40 cent per pound price difference existed at the wholesale level. This differential is even greater considering the 10% import duty Japan places upon processed tanner crab exported from Alaska ports.

3. Increased wages, earnings, savings investment derived from U.S. vessels harvesting an increased tanner crab quota:

On pages 9 and 10 we approximated the lost economic value to the U.S. of the 25 million pound, 1977 incidental tanner crab catch by foreign trawlers in the Bering Sea. Since the PMP sets the Japanese crab fleet's 1977 quota at over 22 million pounds, the additional economic loss to the U.S. economy is approximately the same as the loss from the incidental trawl catch of tanner crab, approximately \$5,555,000. This brings the total loss to will over \$12,000,000.

4. 1976 U.S. trade defecit with Japan:

In 1976, the U.S. suffered a \$4 billion trade defecit in its trade with Japan. By eliminating the 1977, tanner crab quota for Japanese in the Eastern Bering Sea, the U.S. can stimulate increased exports of U.S. tanner crab to Japan and, thereby, contribute to the reduction of our trade imbalance with Japan.

5. The tanner crab fishery as an investment base for development of a U.S. trawl fleet in Alaska:

U.S. fishermen's earnings from an expanded tanner crab fishery would provide capital needed to finance construction of new trawlers for American entry into the Alaska pollack fishery, one of the largest volume fisheries on earth. The pollack fishery in Alaska is now dominated by foreign fleets. Financing new, U.S. fishery investments from fishermen's current earnings would build a strong, U.S. fishing industry in Alaska, free from subsidies and other artificial factors.

6. Current strength of the U.S. King Crab Market and its favorable impact on the 1977 market for

tanner crab: Demand for king crab meat and sections (meat in the shell) was very strong during 1976. In December, king crab meat was wholesaling at approximately \$6 per pound and king crab sections at approximately \$2.60-\$3.00 per pound.

Market velocity, the speed at which the product is transferred from processor, to wholesaler, to retailer or institution, was extremely high in 1976. In fact, much of the king crab processed in Kodiak was said to have been pre-sold by the processor to a wholesaler or institution, even before the live crab were unloaded from the fishing vessels. Market demand was so strong for king crab this winter that fishermen were paid as much as \$1.06 per pound, live weight, for their crab.

Inventory back-up was not common this season. Smaller processors have already sold most of their packs. Larger processors apparently are controlling their sales so as to provide their steady customers with a supply of king crab between now and September 1, 1977, when king crab fishing will resume.

U.S. market demand for tanner crab will be stronger in 1977 than it was in 1976. No U.S. inventory of tanner meat or sections will be carried over from 1976. Strong market demand for king crab meat will "spill-over" into the tanner crab meat market. Tanner crab and king crab are interchangeable in many restaurants. Increased consumer purchasing power in 1977 caused by a low U.S. rate of inflation and a recently increased money supply will result in increased sales of tanner crab meat.

Industry confidence in the 1977 U.S. market for tanner crab has already been demonstrated by the crab processors, who have agreed to pay tanner crab fishermen 30-32¢ per pound during the 1977 season. This is a 50% increase in the exvessel price for 1976, 18-20¢ per pound.

This price increase has been accepted despite the uncertainty of the 1977 Japanese market for exported Alaska tanner crab sections.

C. Fishing Factors:

1. Reduced U.S. catch-per-unit-effort for tanner

crab caused by simultaneous fishing on the same grounds by the Japanese crab fleet.

The PMP acknowledges this factor, but ignores the consequences. Gear conflicts between U.S. crab fishermen and Japanese fishermen are sure to occur in 1977, when known concentrations of tanner crab are gear-saturated by U.S. and Japanese fishermen. As the catch rate per pot drops for U.S. fishermen, their resentment of the Japanese fishermen in the vicinity is bound to rise. Relocation of the Japanese fleet to the crab grounds north of 58°N, would diminish the possibility of conflict between the U.S. and the Japanese fleet.

2. Exploitability of the MSY

Mathematical calculation of the 1977 MSY for Bering Sea, bairdi tanner crab shows that 108 million pounds can be taken from the entire Eastern Bering Sea South of 58°N latitude. This does not mean, however, that it is commercially feasible for either the U.S. fleet or the Japanese fleet to harvest that poundage. Bairdi tanner crab are scattered throughout the Bering Sea. But they exist in commercially exploitable concentrations in a few, known areas.

Alaska Department of Fish and Game shellfish biologist, who currently manage the U.S. EBS tanner fishery, told members of the North Pacific Council's Scientific and Statistical Committee that they felt it would be Imprudent to allow a 108 million pound harvest of bairdi tanner in EBS. A 60-70,000,000 pound harvest of bairdi tanner crab seemed safer and more justifiable to them.

CONCLUSION

Preliminary Management Plan for Eastern Bering Sea, bairdi tanner crab should be revised to permit no Japanese tanner crab fishing in 1977 below 58°N latitude. This opinion is based upon the best scientific information available, as described by the Scientific and Statistical Committee of the North Pacific Fisheries Management Council.

Fishing above 58°N latitude, the Japanese will still encounter C. bairdi tanner crab concentrations. But by moving the Japanese crab fleet away from Cape Sarichef and the Pribilof Islands the Secretary of Commerce would:

1. Enhance the marketability of U.S. caught bairdi tanner crab.
2. Diminish the potential for gear conflict between the U.S. fleet and the Japanese fleet fishing simultaneously on the same grounds.

The bairdi tanner crab harvesting capability of the U.S. fleet is sufficient to exploit the entire 1977 MSY of 108 million pound.

The U.S. Bering Sea crab fleet, 147 vessels, harvested over 70 million pounds of king crab in the EBS and Dutch Harbor areas from October 13, 1976 to December 7, 1976.

It is indisputable that given better weather and sea conditions, as exist during the spring and summer months when tanner crab are harvested in the EBS, the U.S. fleet

has the capability to harvest the 108 million pound MSY for bairdi tanner crab.

However, it is probably imprudent, for the reasons listed earlier, for the Secretary of Commerce to allow the harvest level of EBS bairdi tanner crab to reach 108 million pounds.

Instead, an Optimum Yield for bairdi, tanner crab, less than 108 million pounds, should be established by the Secretary and the North Pacific Fisheries Management Council.

Reservation of this Optimum Yield of bairdi tanner crab for U.S. fishermen, only, is consistent with the purpose of the 200-mile limit law:

1. To promote domestic commercial fishing under sound conservation and management.
2. To encourage the development of fisheries which are currently underutilized or not utilized by U.S. fishermen.

The economic benefits to the United States derived from an exclusive, U.S. bairdi tanner crab fishery in EBS in 1977 are considerable. Those benefits are the fruits of the U.S. 200-mile limit law.