Attachment #8

Alaska Board of Fisheries Presentation to the North Pacific Fishery Management Council Concerning Tanner Crab in the Eastern Bering Sea

In April, 1976, the Alaska Board of Fisheries established a minimum size limit of 5 1/2" (140 mm) for C. bairdi Tanner crab. The Board recognized a real need existed for establishing conservation measures on this rapidly expanding fishery. A sound basis of knowledge concerning growth and reproduction had been developed by fisheries scientists from the University of Alaska, National Marine Fisheries Service and the Alaska Department of Fish and Game. Average size at maturity for Bering Sea male C. bairdi is about 4 3/5 inches (115 mm). Males from 4 3/5 to 5 1/2 inches appear to be the most important size class of males for reproductive purposes. Maturing females appear to aggregate with these newly matured males and are spatially segregated from the larger males. Maturing females are mated at the molt to maturity and do not molt thereafter. It is not known what percentage of females remate a second time. In an unregulated fishery, this size class of males would be exploited possibly to the detriment of the population as a whole. Therefore, it was apparent that a minimum size limit of 5 1/2 inches (140 mm) was needed to protect the newly matured males in the wake of present and future heavy exploitation.

Regulations specifying a minimum commercial size are intended to increase the sustained yield by having more crabs reach maturity and reproduce and by allowing young, faster growing crabs to attain a greater total weight of more valuable sizes.

The management philosophy the Board utilizes in these determinations recognizes that the fishery will often mature much more rapidly than knowledge is developed. Prudence dictates that conservation regulations be considered using available data. The Board feels that its obligations include not only preserving the resource but also maintaining an economically viable fishery. The history of the world's fisheries has too often repeated itself with the traditional boom and bust situation.

We are trying to avoid the classic intensive pulse fishery and its accompanying overcapitalization that are followed by the need for a long rebuilding process. An example of this has already occured in the Prince William Sound area. During the 1974-75 Tanner fishing season, 64% of the commercial catch was males less than 5 1/2" (140 mm). This percentage remained high during the 1975-76 fishery with 56% of the catch of crabs less than 5 1/2" (140 mm). Between 1973 and 1976, the commercial harvest declined from 14 million pounds to 4 million pounds. Data collected in 1973 revealed a sex ratio of one female to six males with 85% of the newly natured females with full egg clutches. In 1976, an identical survey revealed a decreased sex ratio of one female to two males and a corresponding 47% of the newly matured females with full egg clutches. The Prince William Sound area is now faced with rebuilding a fishery that may take several years to regain its former levels.

The aspect which concerns the Board most at this time is the rapidly expanding Tanner crab fishery in the Bering Sea. A minimum size limit of 5 1/2" (140 mm) has been established for the domestic fleet, but no minimum size is specified for the foreign fishery. The latest Preliminary Fishery Management Plan (PMP) prescribes an optimum yield (OY) of 66,300,000 pounds (30,000 MT) for C. bairdi. The PMP allows a foreign harvest of 11.2 million pounds (5,100 MT) of C. bairdi. It appears due to the area restrictions specified that the foreign effort will probably concentrate on the area adjacent to the Pribilof Islands. In addition the plan states that the trawl mortality is equivalent to 25 - 30 million pounds (11 - 14,000 MT) of harvestable size males. Of this approximately 8 - 10 million pounds are C. bairdi in the Pribilof Islands area. The 1976 trawl survey indicates that approximately 15% of the C. bairdi population greater than 5 1/2" (140 mm) occurs in this area. This results in a total allowable catch (TAC) of 10 million pounds in the Pribilof area. The foreign pot fishery coupled with the trawl fishery will apparently exceed the allowable harvest in this portion of the Bering Sea. If the domestic fleet mounts an effort in this area as they did in 1976 when they harvested 6 million pounds,

then a very real danger of overfishing exists. In order to protect the reproduction potential of the young male crab and to maintain an economically viable fishery, the Alaska Board of Fisheries feels that the 5 1/2" (140 mm) minimum size limit on C. bairdi Tanner crab should be consistently imposed on both fleets.

Nick Szabo
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