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Commissioner  
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DATE: April 9, 1991

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FROM: Denby S. Lloyd *DL*  
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SUBJECT: C. bairdi observations  
in late March 1991

As you know, the Division of Commercial Fisheries issued an emergency order that closed the C. bairdi Tanner crab season in the Bering Sea on March 25, six days earlier than the regulatory closure on March 31. In conjunction with this E.O., you signed emergency regulations requiring all catcher/processors and the observers from all floating processors to return to Dutch Harbor prior to those vessels continuing to fish and process C. opilio Tanner crab. Other vessels fishing for C. bairdi were already required to deliver or check out of the registration area under existing regulatory requirements.

The E.O. closure was prompted by concerns that high levels of retention and processing of sub-legal bairdi Tanner crab (undersize males, less than 5.5 inches across the carapace) would result in undue impacts to the stocks. The emergency regulations were promulgated to assure prompt access to shipboard observers by the department and the Division of Fish and Wildlife Protection (F&WP).

Below is a summary of observations, activities, and actions related to the E.O. and emergency regulations.

#### Fleet Characteristics

During the 1990/1991 C. bairdi season in the Bering Sea there were 27 catcher/processors harvesting and processing Tanner crab. There were also 16 floating processors stationed in Dutch Harbor, Akutan, and the Pribilof Islands. In addition, there were approximately 206 fishing vessels that delivered Tanner crab to the floating processors and to shorebased processing plants in Dutch Harbor, Akutan, and King Cove.

#### Harvest Summary

The midpoint of the C. bairdi guideline harvest level (GHL) was set at 42.8 million pounds, equalling approximately 18 million male crab. This was derived from an exploitation rate of 40% of available legal-sized males estimated in the 1990 crab surveys.

As of April 7, we estimate that 38.7 million pounds were taken during the season; lag time in reporting and complete compilation of data may result in higher final catch figures. Current figures, however, represent 90% of the GHL. When combined with initial estimates of under-sized crab harvests, it is the opinion of the Westward Region

staff that total removals may well exceed the GHLL. Unfortunately, we cannot yet reliably estimate the additional removal of sublegal crab

### Observations of Sublegal C. bairdi

Department staff, sampling loads from fishing vessels delivering to shore plants, noted landings of C. bairdi that contained up to 55% undersized crab. Fish and Wildlife Protection officers, also at shore plants, noted many landings containing undersized crab. It is estimated that, of all the fishing vessels delivering to shore plants, over one quarter of the fleet had substantial retention of sublegal bairdi.

Onboard observers, stationed on catcher/processors, reported instances of up to 45% sublegal bairdi. No catcher/processor was found to have been completely clean for the entire season; in some cases, however, observers were not provided with the necessary access to retained crab.

Floating processors, also subject to onboard observer requirements, exhibited up to 87% undersized bairdi. Some measurable level of retention of sublegal bairdi was documented for all of these processing vessels.

If these late-season observations are any real indication, then the total harvest of sublegal C. bairdi may add 2 to 5 million pounds to the recorded harvest of legal bairdi crab. These sublegal crab, apparently marketed as the smaller C. opilio, represented future recruitment to the bairdi fishery and, thus, are a loss of future production.

### Enforcement Actions

Following the end of the season, 59 catcher vessels have been cited for possession of undersized bairdi and nine counts of possession of undersize crab have been filed against two floating processors. Seven catcher/processors are under investigation, and charges will be filed, for possession of undersized bairdi and other violations such as restricting observer access for measuring crab. In addition, two shorebased processing plants have been charged with possession of undersized bairdi. The Division of Fish and Wildlife Protection reports that the charges have been based on retention of between 7.4 to 85.7% sublegal C. bairdi.

Also, one vessel has been seized by F&WP, for alleged theft of crab pots, several instances of retention of undersized bairdi, and possession of bairdi later than 24 hours after the season closure.

### Staffing and Turnaround Time

Normal department staffing (which includes seasonal port samplers in Dutch Harbor, Akutan, and King Cove as well as management and observer coordination staff in Dutch Harbor) was sufficient, although stretched, to accommodate the volume of fishing and catcher/processing vessels, and observers from floating processors, returning to port. However, the additional staff deployed by the Division of Fish and Wildlife Protection at the end of the C. bairdi season were extremely helpful, and necessary, to deal with the volume of observer debriefings, sampling, and enforcement actions required.

There were 12 onboard observers briefed, prior to deployment, between March 21 and April 1. There were 13 observers debriefed, following a trip at sea, during the same time. In addition, there were 22 observers debriefed specifically due to the emergency regulations and subsequently redeployed to their original vessels. This totals to 47 observer interviews conducted by ADF&G staff at the end of the C. bairdi season. These interviews ranged from a minimum of 15 minutes to a maximum of 2 hours, with an average of 30 minutes with each observer.

The Division of Fish and Wildlife Protection also interviewed many of the observers, from a minimum time of 15 minutes to a maximum of 3 hours for an average of 45 minutes each.

It is difficult to estimate the amount of time vessels remained in port; however, many accomplished other tasks besides just waiting to have observers debriefed. We believe that only nine vessels were specifically delayed by ADF&G or F&WP longer than required to process observers; delays were necessary for the vessels to satisfy regulatory requirements, such as provision of appropriate scales onboard.

#### Summary

At about \$1.50 per pound, the ex-vessel value of this past C. bairdi season (40 million pounds) was approximately \$60 million. The C. opilio fishery, which is still ongoing, may result in a harvest of over 300 million pounds, worth a total of around \$150 million (at \$0.50 per pound). These are obviously very valuable, and lucrative fisheries and the competition appears severe.

The problem of vessels retaining undersized C. bairdi seems to revolve around a lack of sorting onboard. This problem is exacerbated by the conduct of joint fisheries for both C. bairdi and the smaller C. opilio; vessels appear to be sorting for the smaller size limit of opilio (3.1 inches by regulation, 4.0 inches by industry standard) without accounting for the sublegal bairdi (less than 5.5 inches).

In order to preserve the future productivity of the larger, less abundant, and more valuable C. bairdi crabs, size limits to protect pre-recruits must be abided by. Yet, about one quarter of the catcher fleet, several floating processors, and about one third of the catcher/processors exhibited high enough rates of retention of sublegal crab to warrant enforcement action. It is evident that continued vigilance and enforcement will be necessary to protect the stocks.

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