

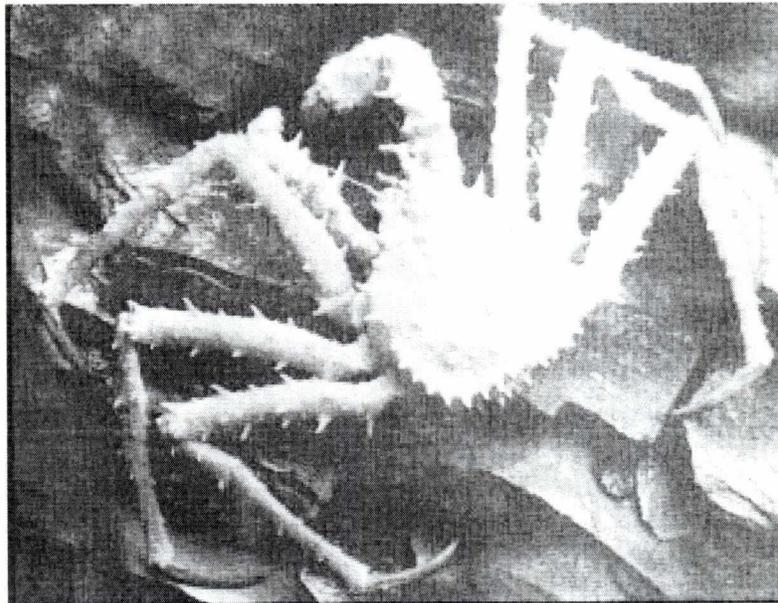
*CANADA/NEWFOUNDLAND COOPERATION AGREEMENT
FOR FISHING INDUSTRY DEVELOPMENT (CAFID)*

PROJECT SUMMARY

Development of the Atlantic King Crab Fishery

CAFID #21

1996



BACKGROUND

Since the closure of the Northern Cod Stocks to commercial fishing in 1992 there has been an increased effort by harvesters and processors in seeking alternative species. Special focus has been placed on new crab species in recent years. From the late 1960's until 1995, snow crab was the only crab species commercially harvested in the Province. It was known that other species of crab existed in coastal waters around the Province, however there had been no serious attempt to utilize these additional resources until recently. In 1995 for example a commercial rock (*Cancer irroratus*) and toad crab (*Hyas araneus*) fishery was successfully initiated. In the same year the

Provincial Department of Fisheries and Aquaculture expressed interest in the Atlantic King Crab (*Lithodes maja*) also known as the Northern Stone Crab. This crab is a true king crab, ranging in size from .45 kg (1 lb.) - 1.36 kg (3 lbs.). Its range extends from Nova Scotia, throughout Newfoundland and Labrador, and possibly into Greenland. There was a desire to determine the distribution of this species and if the resource could be commercialized. To further this objective, J. W. Hiscock Sons Ltd., Brigus were contracted by the Department of Fisheries and Aquaculture to conduct a preliminary pilot project. Approximately 3,181 kg (7,000 lbs.) of crab were obtained from the pilot harvesting project conducted near

conducted near Harbour Breton (NAFO area 3Ps). From these, Atlantic King Crab market samples were prepared at the Marine Institute in St. John's in conjunction with personnel from J.W. Hiscock Sons Ltd. Based on favourable market results, the company decided to further investigate the commercial potential of Atlantic King Crab.

PROJECT DESCRIPTION

J. W. Hiscock Sons Ltd., have been involved in the fishery, primarily as salt fish producers since 1892. The company began diversifying in 1996, to include a multispecies crab plant as part of their operation. Crab processing would help offset the lack of raw material for their traditional salt fish processing activities. Based on the initial work with the Atlantic King Crab it was felt this species provided the best initial opportunity in their diversification plan. They also examined the viability of harvesting rock and toad crab but did not feel the markets were strong enough to warrant investment at that time.

In 1996 as a result of proposals submitted by J. W. Hiscock Sons Ltd., the Canada/Newfoundland Cooperation Agreement for Fishing Industry Development (CAFID) entered into a jointly funded project to conduct an additional Atlantic King Crab harvesting/marketing project. It was decided that during the harvesting project, fishermen in the 3Ps area would undertake a limited commercial fishery for Atlantic King Crab. Crab of marketable size would be transported to Brigus to be processed and samples would be distributed to the market place.

RESULTS

Harvesting Project: From September - December, 1996, J. W. Hiscock Sons Ltd. worked closely with fishermen from Burgeo, Francois, Hermitage and Grand Bank during the harvesting phase. Vessel size used during the project ranged from 5.5m (18') to 16m (52'). The gear type consisted of conical snow crab pots with herring, squid and redfish used as bait. Boats were permitted to fish up to 300 pots, however the smaller vessels out of Burgeo used 50 pots and three vessels out of the Hermitage area used 150 pots. The fishing activity generally took place in water depths greater than 182m (600'). Any by-catch of other species were returned to the water unharmed. The general area where fishing activity took place is shown in Figure 1. Two experimental pots were tested but the results were inconclusive. All landings during the project were made in the conical snow crab pot. A typical catch of Atlantic King Crab is shown in Figure 2. The crab were size sorted on deck as shown in Figure 3 and only crab with a

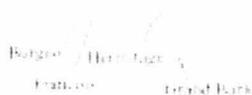


Figure 1: Atlantic King Crab fishing areas.

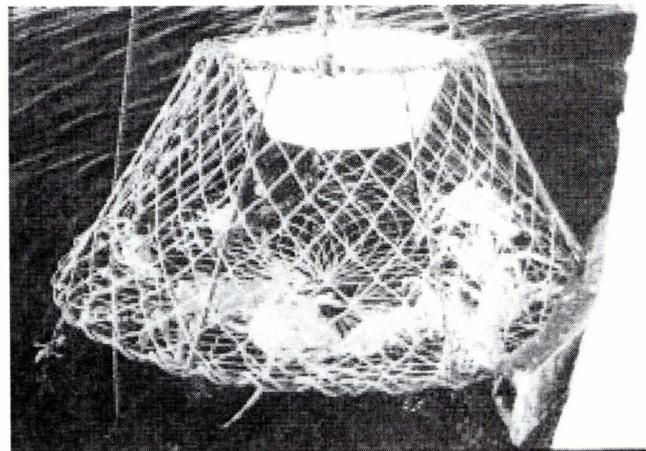


Figure 2: Typical catch of Atlantic King Crab.



Figure 3: Size sorting crab on deck.

AREA	# OF VESSELS	VESSEL SIZE	TOTAL POTS HAULED	TOTAL LANDING (LBS)	CATCH RATE (LBS/POT)
BURGEO	10	18' - 38'	4409	18230	4.13
FRANCOIS	1	42'	2100	8128	3.85
HERMITAGE	4	34' - 52'	9600	14830	1.54
GRAND BANK	2	40' - 42'	1200	2256	1.88
TOTAL	17		17309	43498	2.85

Table 1: King Crab Landings - J.W. Hiscock Project

carapace width of 95 mm (3.75"), which are considered commercial size, were kept. The average catch/pot varied with the area fished, from .12 kg (.27 lbs.)/pot to 5 kg (11 lbs.)/pot. Fishermen were paid \$2.20/kg (\$1/lb) for their catch. The overall results of the Atlantic King harvesting project are outlined in Table No. 1.

Processing - The product was butchered at Hermitage then iced and shipped to the J. W. Hiscock Sons Ltd., crab processing plant in Brigus. All secondary processing was done at this facility with the aid of a consultant, familiar with crab processing techniques. Examples of the type of products produced are shown in Figure 4.

Marketing - The marketing efforts of J. W. Hiscock Sons Ltd. for Atlantic King crab commenced in 1996 when samples were sent to brokers, restaurants, seafood traders and end users to obtain feedback from these various market segments. The original samples consisted of whole cooked crab (spine on and off), cooked sections and green spine on sections. Based on initial market response, samples were displayed at the 1996 Boston Seafood show to continue the marketing momentum. The response there was also very positive. The company followed up these efforts by attending seafood shows in Miami and Las Vegas (see Figure 5) where the product was well received.



Figure 4: Cooked frozen whole length splits.



Figure 5: J.W. Hiscock display booth at seafood show in Las Vegas.

Atlantic King Crab is a true king crab that will be positioned in the higher end of the market. The sections could compete with Alaskan king crab or Chilean king crab. The crack and split type products may compete with either snow crab or other king crab species in Asian markets. Atlantic King Crab is currently available as a shelled meat product such as:

- Frozen leg meat, frozen combo, which includes layers of white shoulder and claw arm meat with a top layer of leg meat.
- Frozen shelled meat product in vacuum packed tray in 227 gms. (8 oz.) - 2.3 kg. (80 oz.) size.

The Shell-on Products Include:

- Frozen legs and claws
- Frozen split crab
- Frozen snap n'eat (cooked or raw) with spines removed
- Frozen cocktail claws either cooked or raw with the cap on or off.

The variety of product forms available takes into account the diverse requirements of the marketplace. The company is developing suitable packaging for these products which will be ready in 1997. A U.S. broker has been engaged by J.W. Hiscock Sons Ltd. to help them market the Atlantic King Crab. It is still early in terms of marketing this new crab but initial reaction has been very good and it is expected this new product will establish a niche for itself within the competitive crab marketplace. This will help build the foundations of a new Atlantic King Crab fishery in Newfoundland and Labrador.

DISCUSSION

The Atlantic King Crab Fishery is a new undertaking in Newfoundland and Labrador. There is no historical information on catch rates, resource distribution or the harvesting season. This can only be acquired through experience over time. It is unknown if the catch rates will fluctuate throughout

the year and if they can be maintained over the long term. Several of the fishers involved in the project did experience some improvement in catch rates over time and felt their particular vessel size will allow them to viably fish for these crab. At the present time only the inshore area has been fished, however the offshore grounds may also have good potential. It is also felt that catch rates may increase if crab were fished in the early months of the year.

The marketing efforts by J. W. Hiscock Sons Ltd. are ongoing with positive initial responses from market samples sent out and also displayed at the 1996 Boston Seafood Show. The company will continue their marketing efforts by attending this show in 1997. They have developed a line of Atlantic King Crab products that should establish themselves in the marketplace over time. The Atlantic King Crab fishery is in the early stages of development but it appears to have good prospects to develop into a full scale commercial fishery.

THE CAFID PROGRAM

The Cooperation Agreement for Fishing Industry Development (CAFID) is a multi-year development agreement jointly administered and delivered through the Federal Department of Fisheries and Oceans (DFO) and the Provincial Department of Fisheries and Aquaculture (DFA). The objective of the Agreement is to assist the Newfoundland fishing industry to be self-sustaining and viable in the present resource short environment.

FOR FURTHER INFORMATION ON THIS PROJECT CONTACT:

Canada/Newfoundland Cooperation Agreement
for Fishing Industry Development
P.O. Box 2460, Station "C"
St. John's, Newfoundland, A1C 6E8

Federal (DFO):

Tel. (709) 772-2923
Fax (709) 772-2110

Provincial (DFA):

Tel. (709) 729-6999
Fax (709) 729-6082

Project Officer: Pat McDonald/Tom Dooley, DFA