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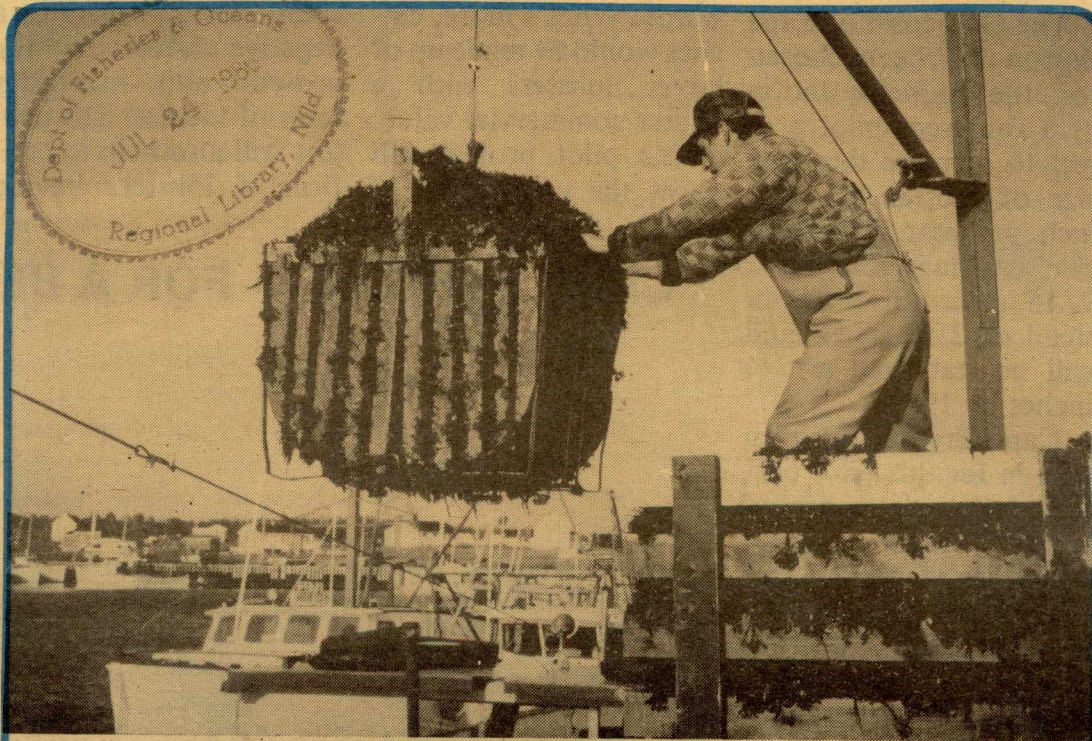
"THE GULF REGION'S NEWSLETTER"  
(Français au verso)

Volume 3 Number 2  
July-August 1986



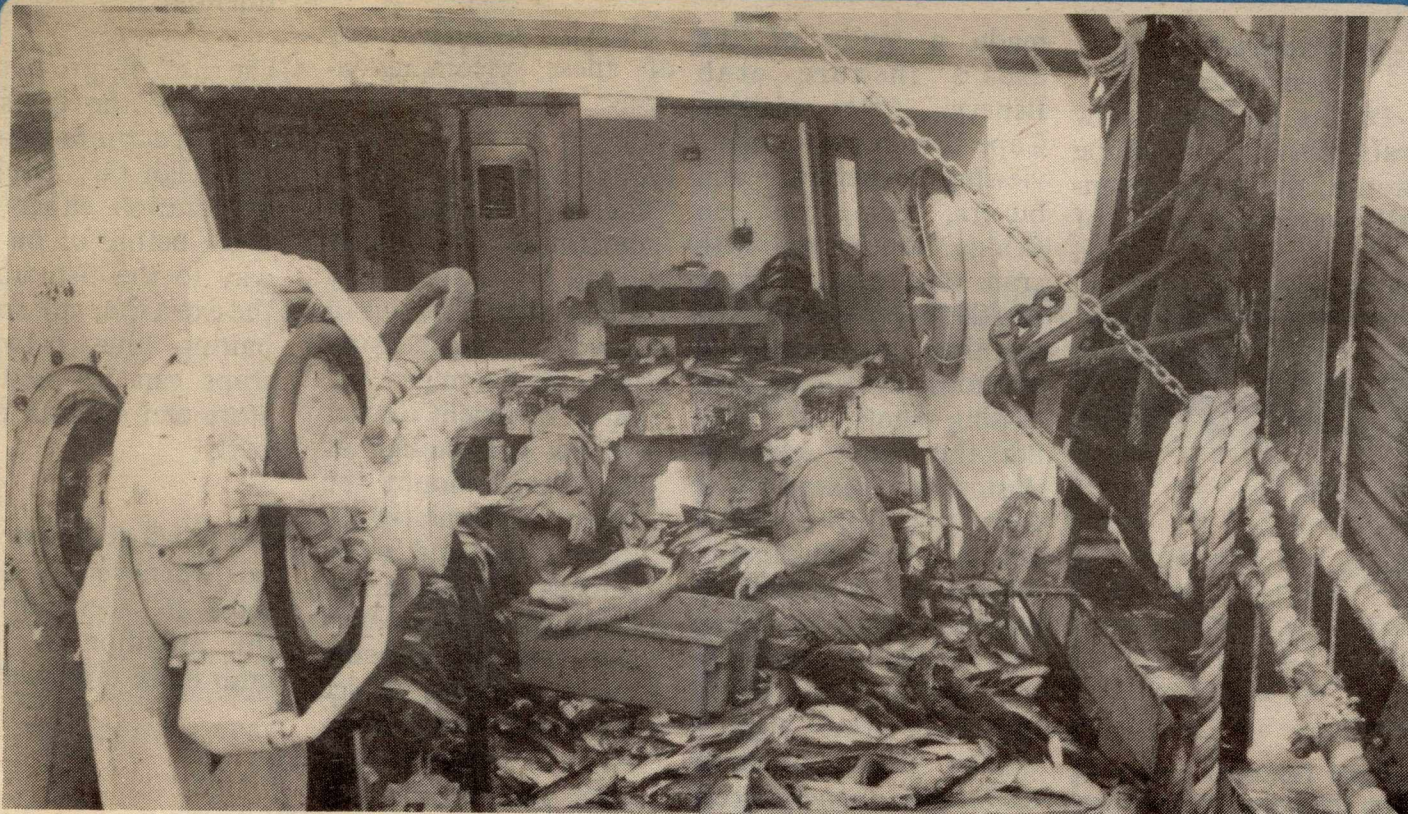
#### IT'S ON ICE

The use of ice is an important factor in landing top quality crab. A series of measures to improve the quality of this product were recommended following a study of the Cape Breton inshore fishery. See our article on page 2. (Photo P.A. Lane and Associates)



#### UNLOADING IRISH MOSS

The harvest of Irish moss is considered an important activity in many areas of the Maritimes, especially on the western coast of Prince Edward Island. The annual harvest represents a contribution of several million dollars to the Maritime economy. Carrageenans, extracts from Irish moss, are extensively used by the food and pharmaceutical industries amongst others. In our picture, unloading operations of Irish moss at Miminegash on the western coast of P.E.I. See our article on page 5. (Photo Thierry Chopin)



#### NEWFOUNDLAND WINTER FISHERY

The winter inshore fishery in Western Newfoundland is unique, with few exceptions. It gives fishermen and plant operators a supply of cod at a time of the year when the inshore fishery elsewhere is at a standstill. In our picture, fishermen are sorting fish during this fishery last winter. See our article on page 8. (Photo Keith Piercey).

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# INCREASE OF LEGAL SIZE FOR LOBSTER IN CAPE BRETON

by **Maurice Landry,**  
**Communications**  
**Officer,**  
**Memramcook**

The Gulf coast of Cape Breton has been chosen for the implementation of a four-year pilot project to increase the legal size of lobster by 1/16 inch per year. The legal size has increased to 2 9/16 inches this year (instead of 2 1/2 inches) and will be stabilized at 2 3/4 inches by 1989.

Cape Breton has been chosen for this pilot project following consultations with local fishermen. Over 80% of fishermen participating in a survey by the Nova Scotia Department of Fisheries favoured an increase. On the other hand, because of the contour of the land, the fishing grounds frequented by Cape Breton fishermen are rarely visited by other fishermen from Lobster Fishing Area 26 (formerly 7B1) either from Prince Edward Island or mainland Nova Scotia.

The pilot project, which began on May 9th, is a voluntary program until the regulations have been modified to take these changes into account.

During the first few years of the pilot project,

somewhat reduced catches are expected. However, increased catches are expected afterwards. What's more, catches would be made up of larger lobsters with a higher commercial value.

The pilot project will allow the verification of

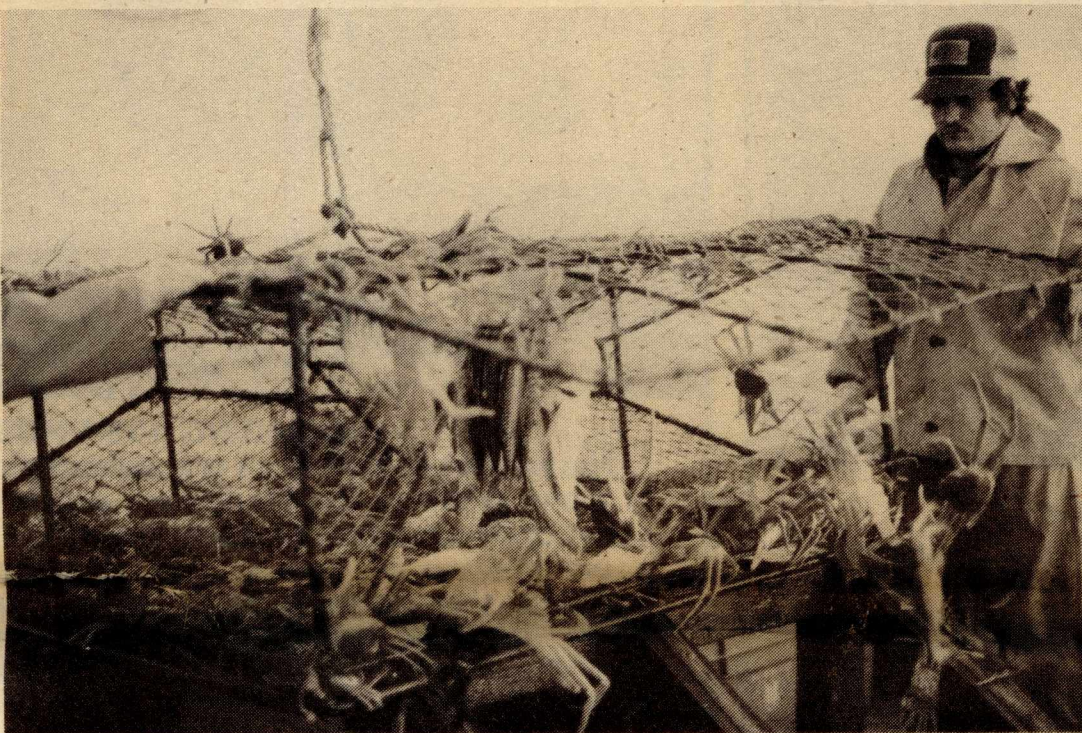
these theories in the wild. Tagging projects will make it possible to establish if a legal-size increase has a positive or a negative effect on the growth and mortality rates of lobster. The project will also help to confirm if lobster, having

reached a certain size, remain where it is or migrate out of the area. In the long term, the effect of this measure on the recruitment of small lobster in the area will be observed.

Over the next few years, biologists,

economists and resource allocation officers with DFO will closely monitor the project results. All the available information will be communicated to those persons in other areas interested in implementing similar measures.

## CAPE BRETON — FOR A BETTER QUALITY SNOW CRAB



tend to fish in a centralized location. Unconsumed bait should be stored in tote boxes and dumped in shallow waters away from the fishing ground on the return trip home.

3) Since the information compiled in log books by fishermen is of the utmost importance for fisheries biologists and managers to estimate stocks and establish quotas, the longitude and latitude of each trap should be recorded. This information would remain confidential.

4) The use of pre-baited lines for the traps is also recommended. Although this requires preparation either the night before or on the way to the fish traps, the extra time not spent baiting lines between traps can be used to store and ice crab properly.

5) Fresh bait should be used whenever possible since its scent draws the attention of the crab more effectively.

6) Lines to the trap should be weighted several meters from the second buoy. This will hold the line well below the surface and avoid many lines being cut by the propellers of passing boats.

by **Maurice Landry,**  
**Memramcook**

During the 1985 snow crab fishery in Cape Breton, the environmental consulting firm of P.A. Lane and Associates of Halifax

made a study of the area's inshore crab fishery. After visiting Cape Breton ports, interviewing fishermen and buyers, going out on fishing excursions with crab fishermen, viewing dockside procedure, examining transportation methods, inspecting processing plants and studying the snow crab industry in general, the consulting firm came up with a report which contained a number of recommendations. These recommendations are designed to improve and maintain the highest quality grades of snow crab and suggest areas for further research with regards to the biology and economics of the species.

A number of recommendations touched on the methods of fishing and handling crab at sea.

Following is a summary of these recommendations:

1) The most important factor considered to determine the quality grade of crab is the percentage of crab alive at processing time. Boats, in general, carry sufficient ice but do not use enough of it. Care should be taken, particularly on warm days and while catches are large, to turn all crabs ventral side down and put adequate amounts of ice between layers of crab. After all the traps have been emptied, a layer of ice should be placed on the top surface and the crabs should be kept covered at all times.

2) Dumping unused bait overboard may reduce catches, especially when numerous boats

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# NOTICE CONCERNING THE DISTRICT 8 LOBSTER FISHERY

by **Maurice Landry**,  
communications officer,  
**Memramcook**

This year, in Lobster Fishing District 8, the 7th of August has been designated as the day for setting traps with the season remaining open until October 8. This decision was taken by the Department of Fisheries and Oceans (DFO) following consultations with concerned fishermen and processors. Hopefully, this measure will help reduce the glut situation on the first few days of the season.

During the last few fishing seasons, DFO inspectors have reported an unusually high number of dead and weak lobster. This problem is most noticeable during the first two weeks of the season. Part of the solution to this problem lies in the implementation of better handling and holding practices at sea, at landing sites and at processing plants. During the 1986 Season, DFO inspectors will be strictly enforcing all applicable sections of the Fish Inspection Regulations. Any violations will be dealt with severely and could result in withdrawal of vessel certification, buyer's license or plant registration as well as prosecution.

At sea or at landing sites, lobster must be carefully stored out of the sun and elements, in such a way that it will not be crushed, and should be chilled. However, no fresh-water ice must be placed directly on the lobster.

Lobster must always be handled carefully and should never be dumped when transferred from one crate to another.

At the plant, lobster must be culled immediately upon arrival. Dead lobster must be discarded - never processed - while weak lobster should be processed immediately. Lobster that is

not processed right away must be stored properly until processing.

For more details on appropriate handling and holding techniques for lobster - either at sea, at landing sites or at the plant - contact your local DFO inspection office.

Moreover, due to landing patterns, the first few weeks of fishing in District 8 leads to a glut situation which causes problems for processors (Figure 1). While there is a glut at the beginning of the season, lobster is in short supply afterwards. DFO encourages processors and fishermen to negotiate agreements whereby landings would not exceed the processing capacity of fish plants.

Even though this could be seen as mostly a processor's problem, fishermen are also affected. In order for fishermen to receive the

maximum price for their lobster, there might be advantages in negotiating agreements with processors to prevent glut

situations and avoid extra processing costs and associated losses.

In order to maximize

the benefits of the lobster fishing industry in District 8, DFO asks all parties involved to co-operate to the fullest.

## LOBSTER DISTRICT 8 — 1985

(MONTH OF AUGUST)

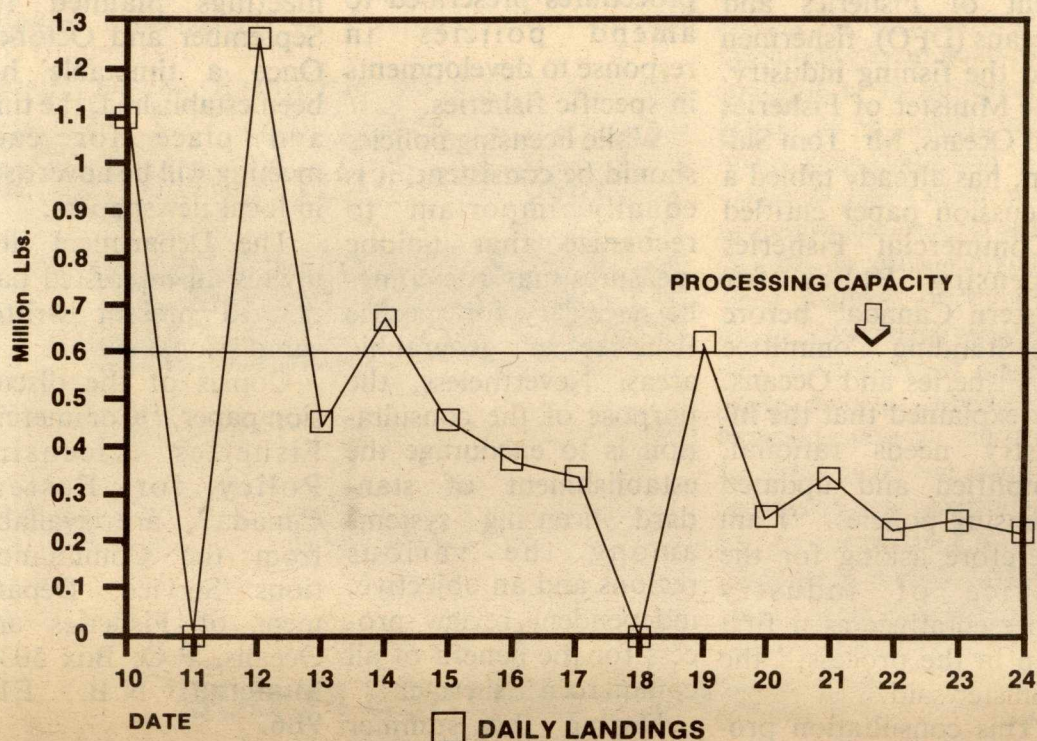


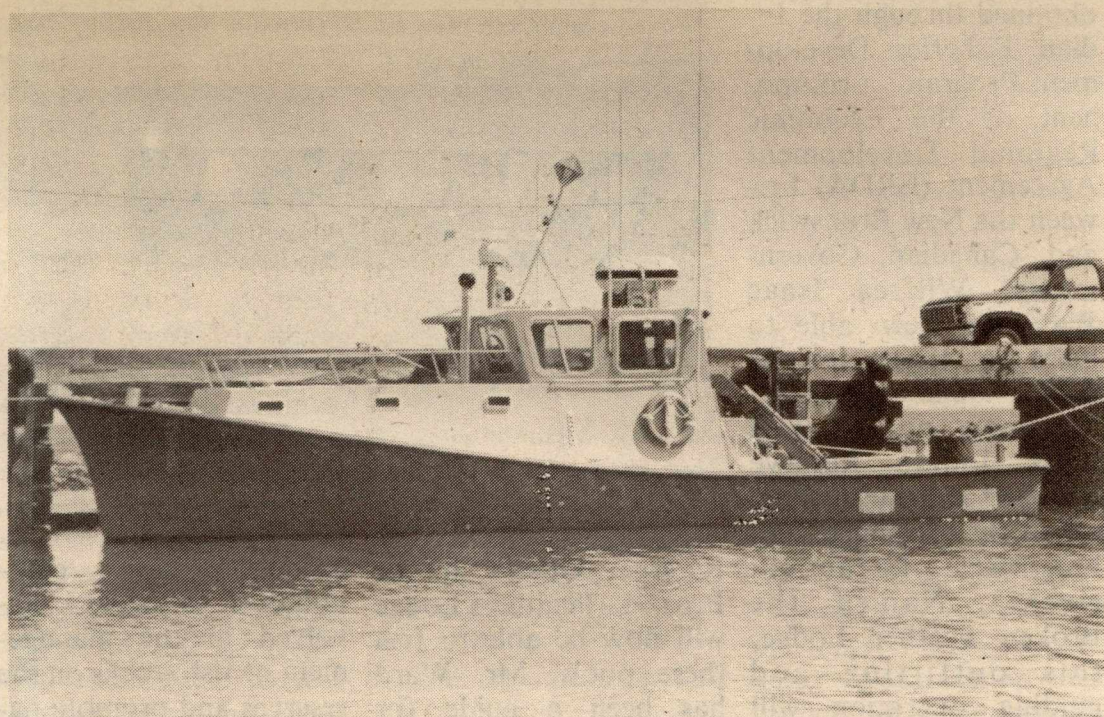
Figure 1

## TWO NEW PATROL VESSELS FOR EASTERN N.B.

Text: **Linda Hache**  
Research: **Paul Butler**

Two new fiberglass patrol vessels went into service this spring for the Department of Fisheries and Oceans (DFO) in Eastern New Brunswick. The 6C-4827 and the 6C-4828, having their home ports respectively in Richibouctou and Lower Neguac, are replacing two older boats that were in service for the past 19 years for DFO's Protection and Regulations Branch.

The two identical vessels were built in Cocagne by "Les Bateaux de la Mer" according to the "sandwich" concept which increases the resistance of the fiberglass hull. Measuring 42 feet in length, they are propelled by a 235 hp Caterpillar turbocompressor motor which enables them to reach a speed of 18 knots. A hydraulic crane for removing traps and nets



The home port for the 6C-4828 will be Lower Neguac. (Photo Paul Butler).

from the water is also part of their equipment. Patrol vessels are one of the most important working tools for DFO fishery officers. They are used daily by crews assigned to verify catches at sea, to check for illegal fishing gear and to ensure that fishery

regulations are respected. They may also be called upon to carry out search and rescue operations and to give assistance to the RCMP or Department of Natural Resources personnel.

The two crews in Richibouctou operating the 6C-4827 are made up

of Ulric Gaudet, captain, Arsene Chevarie, engineer, Ferrain Cormier, captain, and Edmond Martin, engineer. In Lower Neguac, Louis-Marie Breault and Marcellin Roussel, respectively captain and engineer, operate the 6C-4828.



## CONSULTATIVE MEETINGS ON LICENSING POLICY

by Maurice Landry

Commercial licensing systems currently used in Canada's east coast fishery will be the subject of a series of consultative meetings to be held this fall between the Department of Fisheries and Oceans (DFO), fishermen and the fishing industry. The Minister of Fisheries and Oceans, Mr. Tom Siddon, has already tabled a discussion paper entitled "Commercial Fisheries Licensing Policy for Eastern Canada" before the Standing Committee on Fisheries and Oceans. He explained that the industry needs rational, simplified and updated licensing policies. "I am therefore asking for the advice of industry representatives as a first step in the process," the Minister said.

This consultation pro-

cess is intended to produce a concise document that clearly outlines existing policies and which will be used as a framework for all licensing policies. The document would also describe procedures prescribed to amend policies in response to developments in specific fisheries.

While licensing policies should be consistent, it is equally important to recognize that unique measures may sometimes be necessary for specific fisheries or geographic areas. Nevertheless, the purpose of the consultation is to encourage the establishment of standard licensing systems among the various regions and an objective, independent review process for the benefit of all commercial fishermen.

During the summer

months, DFO's Licensing Branch will approach various fishermen's organizations and associations to inform them of the department's initiative and to set up a timetable for consultative meetings planned for September and October. Once a timetable has been established, the time and place for each meeting will be advertised in local newspapers.

The Department also invites all interested parties to present written submissions.

Copies of the discussion paper, "Commercial Fisheries Licensing Policy for Eastern Canada", are available from the Communications Service, Department of Fisheries and Oceans, P.O. Box 5030, Moncton, N.B., E1C 9B6.

## THE BROKEN FEATHER LODGE

by Maurice Landry

With the help of funds obtained through the Indian Fisheries Development Program, a component of the Economic Regional Development Agreement (ERDA) between the New Brunswick and Canadian Governments, Wilfred Isaac Ward has been able to build a log-cabin-style fishing lodge adjacent to his home on the Red Bank Indian Reserve (situated at the branching off of the Miramichi and Northwest Miramichi rivers). Named the Broken Feather Lodge, this outfitting and guiding operation will provide services on the reserve for resident and non-resident fishermen and hunters. The operation will employ up to nine persons.

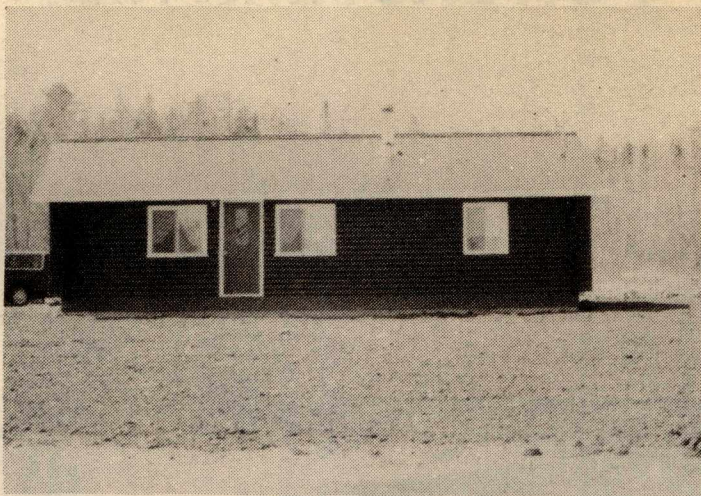
Within a few-minutes walk from the lodge are five of the best salmon pools in the area. Until now, the only fishermen that have used the pools were residents of the

Reserve. Guests at the Broken Feather Lodge will now be able to fish these pools. Mr. Ward has been a guide for fishermen and hunters for some 23 years.

The lodge consists of three double/triple bedrooms, a bath, a living room and cooking facilities. It can accommodate up to nine persons.

The Indian Fisheries Development Program has been put in place to

encourage native communities to become involved in the management of fish stocks on the reserves and promote native fishing programs and enterprises within the framework of resource conservation and the needs of other user groups. Its main objective is to decrease the effort currently placed on Atlantic salmon by altering the main thrust of the fishing effort by natives to more viable alternatives.



## 7B1 SCALLOP

by Maurice Landry

According to biological research carried out in District 7B1, there is an abundance of small scallops on the fishing grounds, which implies good recruitment for the next few years. Data obtained through surveys at sea indicate more abundance of large scallops compared to data obtained through the commercial fishery. One possible cause for this discrepancy is the use by commercial fishermen of rubber washers on scallop drags. The use of rubber washers appears to result in a change of selectivity: that is to say a catch made up of more small scallops and less large scallops.

DFO's Fisheries Research Branch is considering carrying out comparative selectivity studies on the use of rubber washers and various ring sizes on scallop drags. In addition, scientific documents already available on this subject will be reviewed. DFO biologists will provide more specific advice on this issue to the Scallop Advisory Committee in 1987.

## TUNA STOCKS ARE DECLINING

by Maurice Landry

The 1985 Tuna fishery was characterized by very low overall catches. Out of a Canadian quota of 1521 fish, only 329 were caught. In 1984, 580 fish were caught while 1,000 were caught in 1983.

According to biological reports from the International Commission for the Conservation of Atlantic Tuna (ICCAT), the overall Western Atlantic bluefin tuna stock is declining. The ICCAT is an organization representing 21 countries whose responsibilities include scientific research and the establishment of a management plan for bluefin tuna. Estimates indicate that there are 33% less bluefin tuna in the Western Atlantic than in 1970.

Since the early 1970's, the average weight of fish caught by Canada is increasing dramatically. This implies that there is below average recruitment entering the fishery; fish in this same group are getting larger but fewer in number.

In 1977, the average age of fish was 20 years but was 29 years in 1985.

## CAPE BRETON SNOW CRAB MANAGEMENT PLAN

The 1986 inshore snow crab management plan provides for a 30% reduction in the total allowable catch - from 900 tonnes in 1985 to 626 tonnes in 1986 - in Area 18 (from Margaree Harbour to south of Port Hood, formerly known as Area 7). The major impact of this measure for Area 18 fishermen will be a reduction in individual boat quotas from 80,000 to 60,000 pounds. The need for such conservation measures has been demonstrated by overall reductions in snow crab catch rates which have dropped from an average of 62 to 31 kg per trap hauled since 1982.

In Area 19 (formerly Area 1 which runs from Margaree Harbour to Cape North), the total allowable catch has been established at 1,338 tonnes with a boat quota of 50,000 pounds, unchanged from last year.



# THE USE OF CARRAGEENAN IN INDUSTRY

by **Thierry Chopin**  
Visiting Scientist with the  
Fisheries Research  
Branch

The first question that comes to mind when dealing with this topic (and having difficulty pronouncing the word!) is "what does carrageenan mean?" We have to refer to Gaelic to find the answer. "Carrageen" means "rock with red hair", which is an accurate description of what may be seen along certain coasts. Indeed, carrageenans are extracted from various red algae (Rhodophyceae class) found on the sea bottom. In the Maritime Provinces, the alga in question is commonly known as Irish Moss. Its scientific name is **Chondrus crispus**; it is a widespread alga found on both sides of the North Atlantic Ocean.

Although these algae have been used for nourishment and in medicine for more than a thousand years, the industrial use of carrageenans is much more recent and results from major research efforts in this field during the last fifty years. Carrageenans are formed by chains of sugars and compounds containing sulfur. Depending on their type and their presence or absence, various carrageenans can be identified.

Irish Moss has a life cycle of three generations and each of them produces a type of carrageenan. Even if these generations look alike to the naked eye, the properties of their different carrageenans allow various utilizations by industry. For example, one generation produces a gelling agent used to make Jello; another produces a thickener used to make Ketchup.

The basic principles for extracting carrageenans are simple. The algae are first crushed and left to soak in hot water in which carrageenans (which are constituent elements of cellular walls)

are diffusing. By filtration or hot temperature centrifugation, a syrup containing carrageenans in solution is obtained. These are recuperated in solid state either by drum drying after concentration under vacuum or by precipitation with alcohol and dehydration (the most common technique). Carrageenans are then crushed to the desired grain size.

Solubility, viscosity and gel strength depend on the chemical constitution of each of these carrageenans and the industrial processing they receive. The combination

of carrageenans with other molecules is common practice in the food processing industry; reactivity with milk proteins (to stabilize milk products) and other gums (carob, guar). The unique properties of carrageenans make them an excellent substitute for traditional additives (colloids). They are used mainly in the food (80% of applications), pharmaceutical and cosmetic industries.

The first carrageenan extraction plants were built in the 1930's and 1940's on the East coast of the United States. It is

interesting to note that, while algae suppliers are in very competitive market, producers almost hold a monopoly. Indeed, only three companies control the world market for carrageenans: Marine Colloids (United States), C.E.C.A. (France), and Copenhagen Pectin Fabrik (Denmark, known under the name Genu Products Ltd. in Canada). During several decades, the major source of carrageenans was Irish Moss, which came mainly from the Maritime Provinces (particularly Prince Edward

Island), New England and France. Some ten years ago, the Philippines joined the carrageenan market in producing them from the alga **Eucheuma**. Its extraction performance is inferior, but this seaweed is easy to grow for a low-cost of labour.

## CONTINUATION OF BONAFIDE POLICY

The Minister of Fisheries and Oceans, the Honourable Tom Siddon, announced on June 2 the continuation of the Bonafide Fishermen's Licensing Policy in the southern Gulf of Saint Lawrence.

Originally intended as a pilot project to extend for a period of three years (until the end of the 1985 season), the policy has earned widespread support from organizations representing the 11,000 inshore fishermen covered by its provisions.

Mr. Siddon said that the policy will continue to be in effect with only minor changes which have been recommended by the Bonafide Fishermen's Committee.

Fishermen in the southern Gulf who meet established criteria will continue, in 1986, to qualify under the program's unique licensing and fishing gear regulations, as they have during the past three seasons. The department will not be able to accommodate, however, requests for a relaxation of the existing Groundfish Vessel Replacement Regulations until this element of the policy has been fully reviewed. The review will look at the broader implications for other fishermen who fish common stocks and areas with fishermen from the southern Gulf.

## PRODUCTS WITH CARRAGEENANS



by **Thierry Chopin**

Carrageenans are found in many common products that we use every day. The food-processing industry uses carrageenans as additives for the following purposes:

- thickening agents (to increase the viscosity of solutions): soups, sauces, yogurts, cheeses, concentrated milks, baby foods, diet products;
- binding agents (to change the texture of solids and liquids): delicatessen, bakery-product glazes, pet foods;
- gelling agents (to induce the formation of gels or increase their rigidity): canned meats and fishes, pet foods, acid dairy products, puddings, jams, icings, reconstituted and artificial fruits;

- stabilizing agents (to disperse suspensions and emulsions): sauces, coffee whiteners, dairy and fruit drinks, ice and whipped creams, marshmallows;

- clarifying agents (to precipitate impurities in liquids); clarification of beer and wine;

- protecting agents (to preserve food from oxidation and dehydration; associated with lecithin and ascorbic acid): frozen foods.

The pharmaceutical industry uses carrageenans in a certain number of products: syrups, lotions, ointments, laxatives, treatment of hemorrhoids. But they are mainly used for ulcer therapy by acting as an antacid and by protecting stomach and intestine walls. Car-

rageenans are also known to slow the blood coagulation process. They are also used in dietary products and for making denture impressions.

The cosmetic industry uses carrageenans as thickeners (beauty products, toothpastes), gelling agents (deodorant gels) and stabilizers (hair sprays, shaving creams, shampoos).

Various other industries use these additives as binding agents (ceramics), stabilizers (latex processing, inks, insecticides, leather tanning, paints and whitewashes, photography), and covering agents for the treatment of surfaces (textile impressions, paper painting and coating).



# P.E.I. CRAB FISHERY

by Robert Arsenault,  
Communications  
Officer,  
Charlottetown

The crab fishery in P.E.I. started off slowly, due mostly to ice problems and adverse weather conditions, but things picked up around the beginning of May. Initial reports indicate that there is a high degree of

participation by the 30 crab-permit holders. Buyers in Western P.E.I. were quoting 80¢ a pound at the beginning of the season, but none would make a firm commitment to that price.

Buyers in Western P.E.I. were quoting 80¢ a pound at the beginning of the season, but none would make a firm com-

mitment to that price. Fishermen in Western P.E.I. started setting traps around the middle of April and first landings occurred in Alberton on April 14.

Fishermen in Eastern P.E.I. couldn't set their traps until around the end of April due to problems with ice in and around the fishing

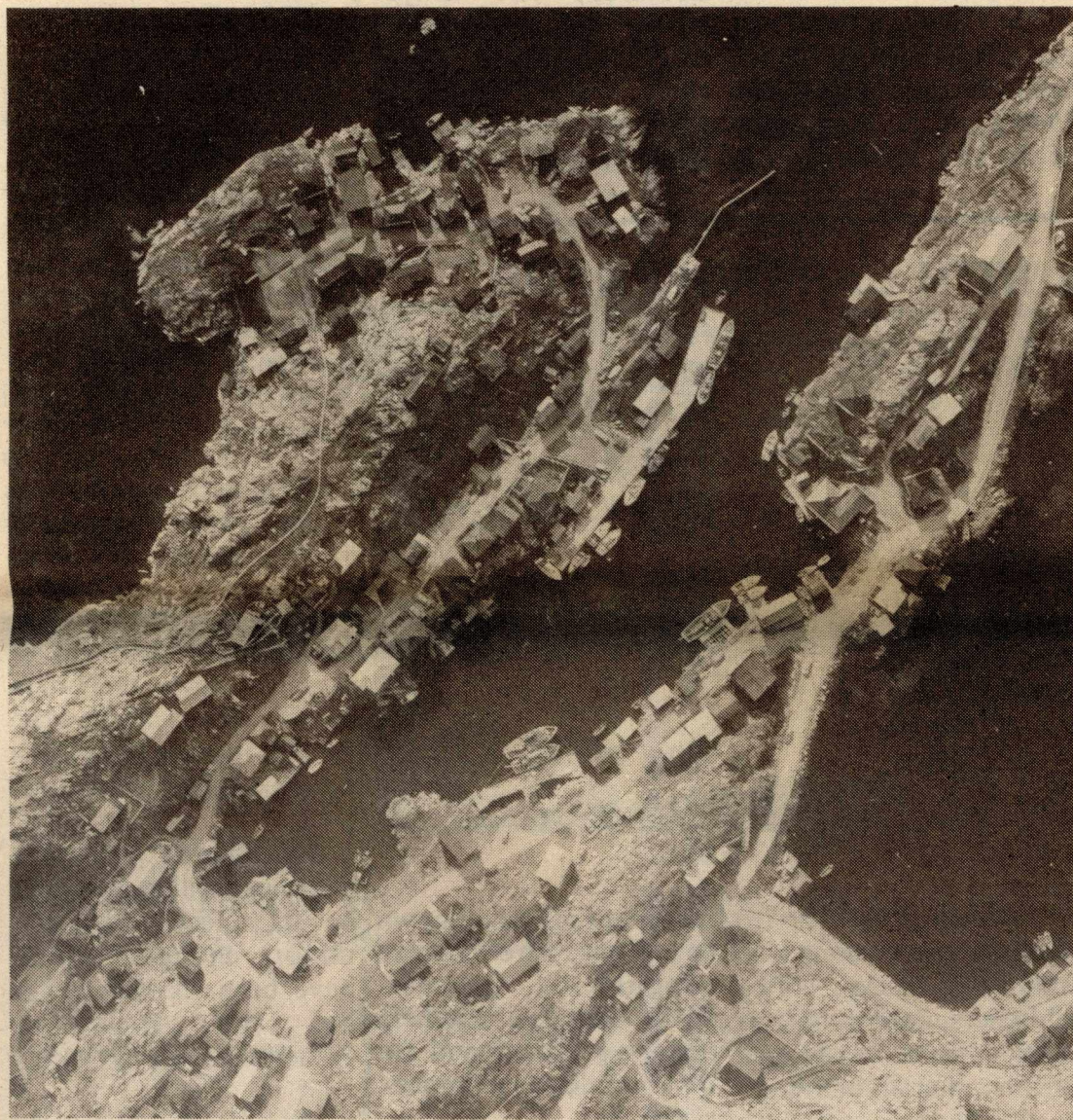
grounds.

At least six P.E.I. processors have geared up to process crab; however, as of the first week in May, only three had been able to begin operations. This is the first year that the P.E.I. industry is involved in crab processing, and the competition to buy this valuable resource from fishermen is keen. Not all crab landed by Island fishermen are being handled by local processors. A good portion is being shipped to New Brunswick plants.

The P.E.I. crab fishery promises to be the biggest ever this year. Fourteen

new permits were granted by the Department of Fisheries & Oceans this spring and over 800 fishermen cast their ballots for a chance at the draw. The P.E.I. fishery isn't under any quota, and the season runs from April 1 to November 30 with an interruption in the summer months during the moulting period. Fishermen are restricted to an exclusive inshore zone; however, a limited number of larger vessels from New Brunswick are allowed inside the zone later in the season, based on historical fishing rights.

## IDENTIFY THE HARBOUR



The Small Craft Harbours and Facilities Branch's contest, Identify the Harbour, continues. Name the Gulf Region harbour shown above and you may win one of two 16"x20" colour photos of the harbour.

A draw will be made from all correct entries received on time. Winners will be named in the next issue of SONAR. Send your entry form before July 31 to: Fisheries and Oceans Canada, Communications Service, P.O. Box 5030, Moncton, N.B., E1C 9B6. In our last contest, the only correct entry was received from Clarence Gallant of Robichaud, N.B. For more information on this last contest, see our article ROBICHAUD.

## HERRING MARKETS

Atlantic herring bloc countries. Exports of frozen roe from Eastern Canada in 1985 were approximately 4,000 tonnes. Herring landings in Atlantic Canada in 1985 are estimated at 160,000 tonnes.



## ROBICHAUD

Robichaud, N.B. is a class C harbour, located approximately 15 km east of Shediac. There are about 56 fishermen at the harbour with approximately 24 registered vessels.

The total landings for 1985 were approximately 200 tonnes of groundfish, pelagics and shellfish worth about \$568,000. Lobster is the main fishery, accounting for over 90% of the activity at this harbour.

About 45 metres of the outer end of the wharf were destroyed by fire in 1982 and rebuilt in 1983.

### CONTEST #6 - IDENTIFY THE HARBOUR

Name of harbour \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_



# TRACKING ATLANTIC SALMON

by Barbara Dunbar  
Fisheries Research  
Branch, Moncton

The underwater world is a mysterious place, likewise its inhabitants. But some ripples have been cleared as the findings of a two year study done by the Department of Fisheries and Oceans (DFO), Research Branch, in conjunction with the New Brunswick Wildlife Federation, become known. The study, conducted on the Bartholomew River, N.B., used Ultra Sonic Tracking to follow migratory patterns of Atlantic salmon.

Ultra Sonic Tracking is the process of tracing fish migration using signals from transmitters attached to the fish. This tracking method is the only one that works in both fresh and salt water. The tools required are a transmitter, receiver and of course, a fish.

Rapidly declining salmon stocks on the Bartholomew River led DFO to choose this enhancement research site. The study began in the spring of 1984 when salmon returned to freshwater from the sea to spawn. A small transmitter in the stomach of the fish sent signals back to the receiver on the river bank.

The average lifespan of a transmitter being seven months, fish were tagged at different times in order to trace movements for

the whole year. The fully computerized receiver monitored up to 32 fish at once. Clear signals were received up to one kilometre away. Interference like air bubbles, ripples and ice blocked signals and shortened tracking distance.

Checked daily, receivers indicated which fish entered and left the monitored area, indicating movements before and after spawning. The locations of remaining fish were pinpointed and charted on a map in the main Moncton office. In wintertime, holes were dug in the ice to detect signals.

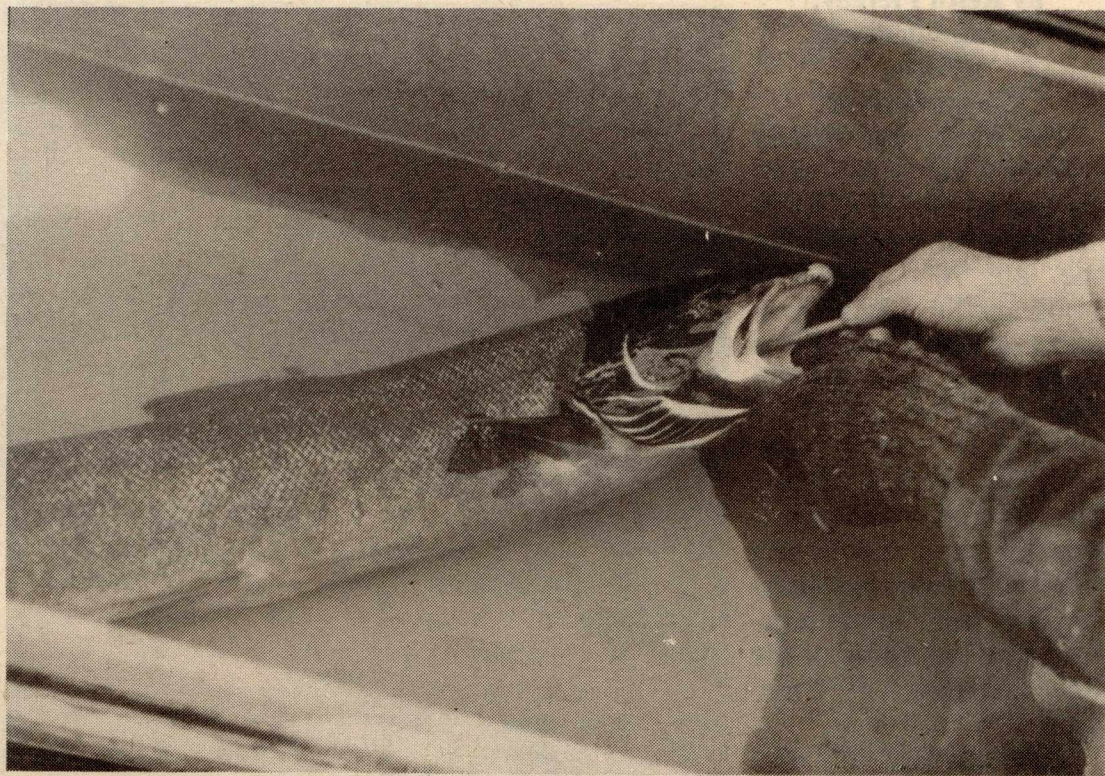
During the non-feeding interval in freshwater, the stomachs of the fish shrank and the transmitters were eventually regurgitated. By this time, however, enough data had been collected to collate and analyze the findings.

In 1973, just 150 salmon entered the Bartholomew River to spawn. By 1974, the number had fallen to 45. With fewer fish returning every year, their depletion had to be controlled. Fisheries managers used Research Branch recommendations as guidelines to set fishing regulations.

The number of salmon entering the Bartholomew River in 1985 rose to 740 due to the restrictive regulations and enhancement efforts.

The tracking study proved that early run salmon entering freshwater from May to August travel further upstream than late run fish, which enter freshwater after August. This information will allow managers to fine tune fishing plans so that early run stocks can be protected where their numbers are low.

A major breakthrough was the information acquired regarding overwintering. Until this time, little was known about salmon's winter



An Ultra Sonic tag is gently inserted into the stomach of an anesthetized fish.

habits. The tracking device showed that they spent the winter near spawning grounds and did not leave for sea until spring. Not only does this information have management-protection implications, but it also

satisfies our human curiosity of the unknown. With this information, we begin to understand more about the salmon's behavioral pattern. The study ended in March. It has yielded valuable knowledge for controlling exploitation, rebuilding and managing depleted salmon stocks. But perhaps one of the greatest benefits is the insight into the mysterious world of the salmon.



## FISHING IS GOOD IN P.E.I.

Around 1292 P.E.I. lobster fishermen set their traps in Districts 7B (23) and 7B1 (24) on April 29th, 1986.

Initial landings looked promising. Fishermen were landing 1 pound to 1½ pound per trap and most were saying initial landings were better than those of last year. There have been reports of landings of over 2 pounds per trap in Eastern P.E.I.

Overall landings of 15 million pounds showed a 10% increase compared to 1984. However, landings in District 7B (23) were down 12% with the other two districts making up the difference. The average landing per boat in District 7B (23) was 9202 pounds. District 7B1 averaged 11,678 pounds per boat while District 8 averaged 16,348 pounds. Above, the port of North Lake a few days prior to the 1985 lobster fishery. (Photo Robert Arsenault)

## DID YOU KNOW

—Egg production in salmon varies directly with fish size, averaging 1,500-1,800 eggs per kilogram of female weight.

—The chief predators of salmon at sea are the larger fish such as tuna, sharks, swordfish and even cod and pollock.

—The Atlantic salmon is native to both North American and Europe.



# INSHORE MOBILE FISHERY ON NEWFOUNDLAND'S SOUTHWEST COAST DURING THE WINTER GROWS INTO BIG BUSINESS

by Keith Piercey,  
Communications  
Officer  
Corner-Brook

The winter cod fishery (January to April) conducted in NAFO Zones 4R and 3Pn was, prior to the late 70's, primarily hook and line. Small one- and two-man boats fished from local communities and small two and three man boats from Fortune and Hermitage Bays. Harvesting was conducted on a day-to-day basis with fishermen leaving port early in the morning and returning in the late afternoon or evening.

Fish was bled and gutted immediately, thus making the quality of this fish the best in Newfoundland and Labrador. Fish was never very old when landed and because of ambient temperatures at that time of year, which were generally below freezing, the fish was of the same quality when processed as when caught.

As time passed, the fishery gradually evolved and the small vessels were replaced by larger longliners crewed by four to six men utilizing larger quantities of hook and line gear. The pattern of fishing changed very little with catches bled, gutted, and landed daily. The quality of fish was still considered top grade.

Experimental work using otter trawls by in-shore draggers conducted by the Provincial Government in 1976-77 proved eventually to be highly successful, with daily landings of 120,000 pounds round weight recorded. The success of this new technology, as related to inshore vessels, became well publicized and by the winter and spring of 1980 a number of vessels from the northern section of 4R, 3Ps, and 4Vn took part in the fishery. Catch rates experienced by these vessels were good and information compiled at that time



The winter fishery is a very important economic activity for Southwestern Newfoundland as shown by this picture taken at Port aux Basques. (Photo Keith Piercey).

indicated an increase in landings would occur.

The harvesting increase produced a number of problems which had to be dealt with; one of which was quality deterioration. Prior to 1980, no quotas had been established for the winter fishery. Vessels fished until loaded, came to port, discharged, and sailed immediately for the fishing grounds. Catches were landed in the round state, blocking processing plants and resulting in fish being placed in holding pens for five or six days before being processed. Inspection personnel with the Department of Fisheries and Oceans began to report a deterioration in the quality of fish processed. There was a large amount of bruising, the color had darkened considerably, and a large percentage of fillets had texture problems.

Companies, too, began to see a dramatic shift in product form. Previous to 1976, approximately 100% of the fillets produced during the winter fishery ended up in a

Grade "A" product, either fresh or frozen in Cello 5's, and layer pack. In 1980, over 50% of production went into block pack and a larger percentage of the balance went into second grade Cello 5's.

Recognizing the severe economic and social impact over-fishing could have through reduced landings and loss of jobs in the processing sector, the Atlantic Groundfish Advisory Committee, in 1981, recommended an upper limit of 5,500 m.t. which could be taken between January and April by the fleet.,

It was anticipated that the establishment of this allocation would discourage further expansion because there was insufficient infrastructure to accommodate the expanded fleet. This did not materialize, and the fleet expanded to forty-seven vessels in 1981. The established 5,500 mt. was taken in four weeks resulting in a reduced labor return to plant employees and other shore workers whose in-

comes were directly affected.

By 1984, following more growing pains, over five million pounds of fish was being transported to eastern and northern plants. This represented about 33% of all fish landed in the winter fishery in 3Pn. Winter fish continued to bring better prices than that paid for summer landings and this as well as ice conditions stimulated an influx of vessels from northern 4R, 3Ps, V4n and 4T.

grow with increasing numbers of eastern processors and Maritime processors expressing interest in buying and producing the product. By 1986, some eighty plus vessels were operating in Port aux Basques and vicinity and landings continued to keep plants operating. Shipments to eastern and northern plants brought some objection from the South Coast plant operators who wanted, if possible, all the fish to be handled at plants in the area.

The fixed gear fishermen mounted a lobby group to have more

say in next year's winter fishery and were promised some say in pre-fishery meetings to set guidelines for 1986. All groups involved realize that continued pressure on the cod stocks in southwestern coast waters means more stringent measures will have to be applied to ensure the profits enjoyed up to now are continued.

The winter inshore fishery in Western Newfoundland is unique, with few exceptions. It gives plant operators and fishermen a supply of cod at a time of the year when the inshore fishery elsewhere is at a standstill. It's uniqueness creates both minor and major problems that have to be dealt with on an annual basis. It has been contended that long term planning, while desirable, can only work if the resource base, number of plant operators, and the number of fishermen remains stable from year to year.

All users of this resource, and the manager of the resource, DFO, will continue to work together to attain this goal...to provide a stable economic base, maximum employment potential, and conservation of cod stocks for the future.

## DID YOU KNOW

—It is reported that prior to 1550 there were 128 European fishing ships sailing to Newfoundland to fish cod.

—By the late 1600s the catch of cod at Newfoundland had reached almost 100,000 tonnes per year. By the late 1700s the catch had reached as high as 200,000 tonnes annually.

—Of the several million eggs each female spawns, only about one egg of each million succeeds in completing the cycle to become a mature cod.