

# Lobsters Are Important To The Economy Of Maritimes

During the past five years lobster landings in the three Maritime Provinces and Quebec have averaged over 45 million pounds. The average landed value in this period was close to 14 million dollars.

In some years the marketed value has exceeded 20 million dollars. About 17,000 licensed fishermen derive part—in certain areas a major part—of their income from this fishery. Many others are actively associated with the fishery.

Lobsters are in very high demand and are readily caught because they are largely restricted to shallow water. Proper regulation to make the best continuing use of this extremely valuable resource is of utmost importance to all engaged in and associated with the fishery.

## HISTORY OF THE FISHERY

Lobster fishing in Canada started about 100 years ago and continued on a small scale for 20 years. About 1870, when the first official statistics were recorded, the fishery started to expand rapidly. In these early days the grounds were heavily populated with large, old lobsters that had accumulated for many years.

This accumulated stock provided excellent fishing and as new grounds were discovered, more and more boats and gear were used.

The catch rose rapidly during the next 15 years to reach a peak of almost 100 million pounds in 1885. The fishery was, however, taking more lobsters than the grounds could produce on a continuing basis. From 1885 the catch fell steadily to about 26 million pounds in 1918.

Since 1918 the fishery and the lobster stock have been in a state of balance, the average catch of about 36 million pounds representing the crop of lobsters that the grounds can produce under present regulations as they are now observed.

It is unlikely that the catch will ever again approach 100 million pounds. It is, however, probable that with the best fishery regulations, properly observed we can make better use of this valuable resource than we are now doing.

## THE FISHERY REGULATIONS

Of the various lobster fishery regulations only the following four which appear to be the most important will be considered: (1) minimum size limits, (2) protection of berried lobsters, (3) minimum lath spaces, and (4) closed seasons.

(1). Minimum size limits which prohibit the sale of lobsters under a certain size have a twofold purpose: to allow as many as possible of the lobsters to mature and spawn before they are caught and to permit the young, fast-growing lobsters to reach the sizes at which they will yield the most valuable crop.

## MARKET LOBSTER

In the Market lobster areas, the present size limit is 3 3/16 inches carapace length which corresponds to 9 1/4 inches total length. In the principal market lobster areas (southern Nova Scotia and the Bay of Fundy) few lobsters less than 11 inches are mature and even at a length of 15 inches probably only half the lobsters are mature. The catch is therefore made up principally of immature lobsters.

In the canning areas the size limit is now 2 1/2 inches carapace length (7.3 inches total length) except in Quebec where it was raised this year to 2 3/4 inches. In most of the canning area a few lobsters mature when they are as small as 7 inches but only about half are mature at a length of 9 inches.

Although the present size limits improve the chances for a lobster to reach maturity, it is obvious that most of the lobsters are caught before they have spawned for the first time.

The relationships between numbers of mature lobsters, the size of the hatch and the subsequent commercial production, are not clearly understood.

## INCREASE INADVISABLE

It would therefore be unwise with present knowledge to increase size limits further solely for the purpose of producing more mature lobsters.

To determine the growth rate of lobsters under natural conditions over 27,000 six- to ten-inch lobsters were marked and distributed over the fishing grounds at six widely separated ports. Over 2,400 of these were recovered up to a year later.

These experiments showed that in nature lobsters of this size grow about 15 percent in length each year and about 50 percent in weight. The natural mortality rate is more difficult to estimate.

The best evidence available based on extensive measurements and taggings indicates that when lobsters have reached these sizes only about 10 percent die each year from natural causes.

## PROFITABLE PROCEDURE

There is therefore good reason to believe that leaving small lobsters to the grounds to grow larger would increase the annual production. There is the added advantage that the larger market lobsters are usually worth considerably more per pound than the smaller canners.

Returning small lobsters to the grounds would however increase the growth rate or increase the natural mortality rate.

The best size limit for a particular area must therefore be determined on a trial and error basis and assessed on the actual production from the area.

## ENFORCEMENT NECESSARY

Reasonably complete enforcement is essential during the trial period in order to determine actual commercial production.

Because of natural fluctuations in abundance a minimum of five years' production is required for

a reasonably sound assessment of a particular size limit.

In Canada wherever size limits have been reasonably well observed, both the quantity and the value of the catch have increased.

All other lobster producing countries have adopted minimum size limits—all of which are larger than the one now in effect in our canning areas.

From the biological point of view, establishment of the best size limits for the various lobster populations is the most important problem facing the industry.

## BERRIED LOBSTERS

(2). It is clear that to make best use of a fishing ground enough young lobsters must be hatched to utilize fully the capacity of the ground. It is not clear, however, just how many newly-hatched larvae are required to make best use of an area.

In southern Nova Scotia, one of the best lobster producing areas berried lobsters are extremely scarce. The few larvae produced are apparently sufficient to make good use of the ground.

In Northumberland Strait where berried lobsters and larvae are abundant, there is no clear relation between the numbers of larvae which hatch and those which survive the free swimming period to settle to the bottom, good conditions for survival during the free swimming period appear to be much more important than the actual number of larvae hatched.

## MINIMUM LATH SPACES

Numerous experiments were conducted from 1943 to 1946 with the help of commercial fishermen to test the effect of lath spacing on the catch of lobsters.

These experiments showed that the proper spaces would permit the escape of a high proportion of the "shorts" without reducing the catch of lobsters. If the shorts escaped on the bottom they were less likely to be damaged in handling, eaten by predators or sold illegally. They were therefore much more likely to live and grow to the more valuable sizes.

Following these experiments lath space regulations were introduced in 1949. These regulations proved unpopular in certain areas.

The large number of traps involved and the ease with which the lath spacing could be adjusted at sea made enforcement in some areas extremely difficult. The regulations were rescinded in the spring of 1955.

## CLOSED SEASONS

Undoubtedly closed seasons were introduced originally as a

conservation measure. The fishery, however, simply adjusted to the shorter open period by using more boats and gear.

We now have clear evidence that the fishery is often more intensive during the two-month open seasons than it is in areas where fishing is permitted for four to six months.

This evidence is based on returns from over 85,000 tagged lobsters, on data showing how rapidly the catches fall off during the short seasons and on comparisons of the sizes of lobsters caught in the various areas.

In one area the two-month fishery is so intensive that fishermen return up to 85 percent of tagged lobsters liberated at the start of the season. In such areas the stock is reduced so quickly that fishing often becomes unprofitable before the end of the short season.

If in two months fishermen can fish their annual crop of lobsters to the point where it no longer pays, it is obvious that closed seasons have little if any conservation value.

With longer seasons the intensity of the fishery drops and the same total catch is spread over a longer period.

## ECONOMIC CONSIDERATIONS

Although the system appears to have little conservation value, there are important economic considerations. For example, under our present system only 20 percent of our lobsters are landed in July, August, September and October when they are soft shelled, slack meat and difficult to ship alive.

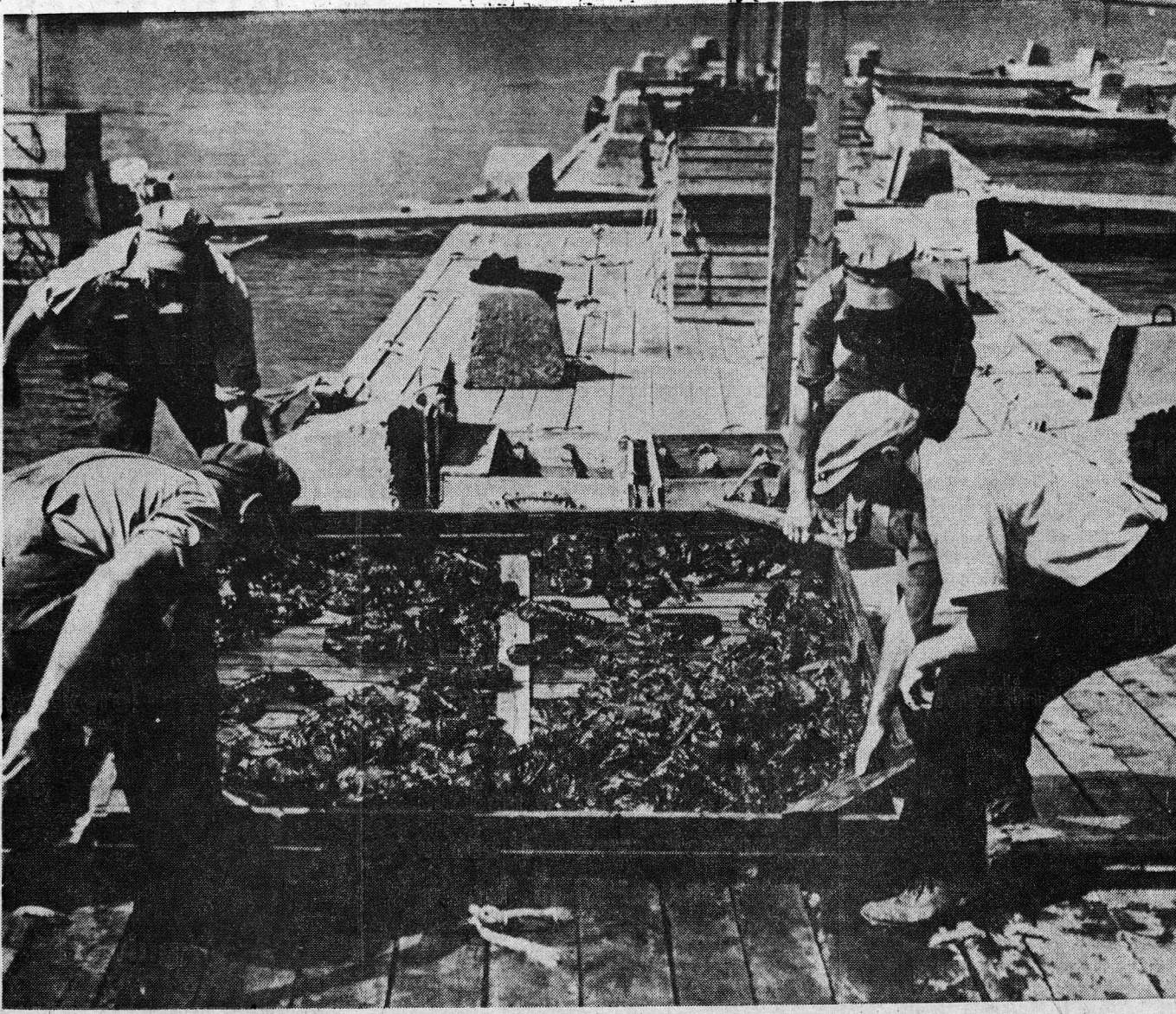
In Maine where fishing is permitted throughout the year about 66 percent of their lobsters are landed in these four months.

The best solution to the problems associated with our system of closed seasons can be reached only after careful, thorough consideration of all the factors involved—biological, economic and sociological.

## Proves Haven For Americans

"During the heavy gale of Monday, September 18, 1948, and throughout the whole of that day, a crowd of American fishing vessels, struggling under very low canvas, continued without intermission to run into the port of Georgetown."

The distant view of the harbour next morning presented a regular forest of masts, and apparently a superior class of schooners, owned by enterprising individuals of that nation. We understand there was again a large



LOBSTERS ARE KEPT ALIVE IN FLOATS

## FISH RECIPES

### FRIED SEAFOODS

pounds fillets, steaks, pan dressed fish, scallops, or shrimp or 1 quart clams or oysters

1 egg, beaten  
1 tablespoon milk  
1 teaspoon salt  
1/2 cup flour  
1/2 dry bread crumbs

Cut fish into serving-size portions. Drain shell-fish. Combine

fleet of fishing vessels got into Georgetown on Friday, the 22nd inst.

"It is good to see the hardy mariner, even of a distant land, realize some competent return for his labour, and at times this season, by common report, making a fair catch within the headlands of this harbour, while we are looking on, and evidently unable to do alike—at the same time we are without mackerel and fish of other descriptions, when wanted."

Taken from the Royal Gazette, Sept. 27, 1848.

### SEAFOOD SALAD

2 cups flaked or canned fish, crab meat, lobster meat, or shrimp

1 cup chopped celery, 1/2 cup mayonnaise or salad dressing

2 tablespoons chopped onion 2 hard-cooked eggs, chopped 1/2 teaspoon salt

Dash pepper 1/2 cup mayonnaise or salad dressing

Lettuce Tomato wedges Drain canned fish or remove any shell or cartilage from shell-

fish. Combine all ingredients except lettuce and tomato wedges, being careful not to break the seafood into too small pieces. Serve on lettuce and garnish with tomato wedges. Serves 6

### PLANKED FISH

3 or 4 pounds dressed fish 1 1/2 teaspoons salt

Dash pepper 1/4 cup butter or other fat, melted

Seasoned mashed potatoes Seasoned cooked vegetables, (Peas, carrots, cauliflower, tomatoes or onions)

If hardwood plank is used, oil well and place in a cold oven to heat while oven preheats. Clean, wash, and dry fish. Sprinkle inside and out with salt and pepper. Brush with butter. Place fish on plank or well-greased oven glass platter. Bake in a hot oven, 400 degrees F., for 35 to 45 minutes or until fish flakes easily when tested with a fork.

Remove from oven; quickly arrange border of hot mashed potatoes around fish. Place in a broiler until potatoes are slightly browned, about 5 minutes.

Remove; arrange two or more hot vegetables around fish. Serves 6.

### BAKED FILLETS

2 pounds fillets, steaks or portion fish 1 teaspoon salt

Dash pepper 1 teaspoon paprika 2 tablespoons lemon juice 1 teaspoon grated onion 1/4 cup butter or other fat, melted

Cut fillets into serving-size portions. Place in a single layer, skin side down, in a well greased baking pan. Combine remaining ingredients and pour over fish. Bake in a moderate oven, 350 degrees F., for 20 to 25 minutes or until fish flakes easily when tested with a fork. Serves 6.

### COD AND HERRING

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fisheries carried on in our neighborhood on the continent, and upon the whole there was every appearance of extensive and valuable fisheries being established to the great benefit of the Island when the late (American) war commenced; since which the fisheries have been almost given up; and our articles of export now consist of wheat, barley, oats, salt pork, butter, furs, seal oil, and oysters, to Nova Scotia, with live cattle and some timber to Newfoundland, and occasionally a few cargoes of squared timber to Great Britain.

### SHIP BUILDING

"A few people are also engaged in building ships which are generally sold in Newfoundland. This is a business which will probably be carried on to a great extent, should Newfoundland fisheries revive on the restoration of peace, as the great plenty of timber in several districts, and the reasonable rate at which the necessities of life are obtained, will enable us to build at a much cheaper rate, than they can do in Newfoundland, where the timber is now generally at such a distance from the harbours as to make it very expensive.

"Since 1792 the importation of any kind of provisions has totally ceased, and the export of these articles has gradually increased."

From "An Account of Prince Edward Island" etc. by John Stewart, Esq., 1806.

# Mackerel Fishing Profitable On The Island 100 Years Ago

From an address by I.C. Hall, Esq., at a meeting held in the Market Hall, Charlottetown, August 21, 1866, to discuss the question of free trade with the United States:

"He thought the people of this Island greatly undervalued the importance of a market for their fisheries.

No other business that could be named had succeeded so well. In order to show their great value, Mr. Hall stated that four or five hands, aided by a few boats, had not infrequently been known to take thirty or forty pounds worth of mackerel in a single day.

## AT MIMINEGASH

A man and his boy at Miminegash took in one day thirty or forty pounds worth of same description of fish. He, himself landed, at one of the stages in a single day, 55,000 mackerel, or six hundred pounds' worth.

"The entire catch of mackerel at present only amounted to

from 300,000 to 400,000 barrels annually, and the United States would consume double that quantity.

"We had the timber to build the vessels required to prosecute this fishery, and we had the men for manning them.

This was a great question, and Mr. Hall saw clearly that unless our young men found something to do besides farming, we would never be a wealthy people.

"If P. E. Island would enlist the capital and skill necessary for the successful prosecution of this business, she would not only vastly increase the value of her exports, but the value of her lands also; and her young men instead of going to build up the towns and cities of the United States would return to the Island and build a fleet of as fine, good-looking, and fast sailing vessels as could be produced in the States, and at two-thirds of the money they would cost in Essex."

# Revival In Fisheries Seen At End Of The 18th Century

"In 1792 our fisheries which had been gradually revived since 1784, promised to become again considerable, and afforded the means of recommending a trade with the West India Islands, by which we were abundantly supplied with their produce upon very moderate terms; several cargoes of fish were also annually shipped for the European market, for which British manufacturers, salt and wine were brought in return."

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