FOREIGN FISHERY TRADE

Imports and Exports

GROUNDFISH IMPORTS: To April 27, 16,361,672 pounds of fresh and frozen groundfish had been received under the tariff classification "fish, fresh or frozen fillets, steaks, etc., of cod, haddock, hake, cusk, pollock, and rosefish," according to a report received from the Bureau of Customs of the Treasury Department late in April. The quota entitled to the reduced tariff was increased from 15 million pounds to 20,380,724 pounds, and all imports in excess of this figure will be subject to the full tariff rate of $2\frac{1}{2}$ cents per pound.

Commodity	Apr.1-27,1946	Mar.4-30,1946	Apr.1945	Jan.1-Apr.27,1946	Jan.1-Apr.28,1945
Fish, fresh or frozen fillets, steaks, etc., of cod, haddock, hake, cusk, pollock, and rosefish	3,945,194	5,294,741	4,152,323	16,361,627	12,001,876

Canada

HERRING: Final figures released by the Chief Supervisor of Fisheries in Vancouver on March 11, 1946, show that the herring catch during the 1945-46 season by vessels operating from ports in British Columbia amounted to 94,517 tons, according to a report received by the State Department from the American Consulate General at Vancouver, B. C., Canada. Production from this catch amounted to 5,222 tons of herring meal, 454,364 Imperial gallons of herring oil, 2,237 tons of herring offal meal, 393,542 Imperial gallons of herring offal oil, and a pack of 1,297,505 cases of canned herring.

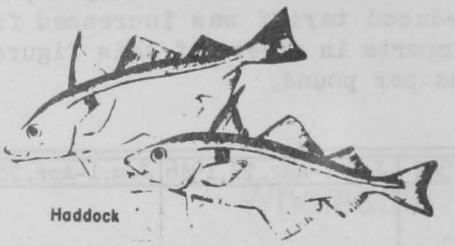
Of this season's pack, the largest on record, it is reported that the British Ministry of Food will take 230,000 cases and that the bulk of the remainder will be acquired by the United Nations Relief and Rehabilitation Association. It is also reported that Great Britain has asked for a minimum of 400,000 cases of herring in 1946. In the event that additional quantities are required for that market, it is believed that the Federal Government may continue the existing order, which requires operators to can 20 cases of herring for each ton of fish caught off the lower East Coast of Vancouver Island.

IRISH MOSS: A 9-page report on the Irish Moss Industry of Canada's Maritime Provinces was recently published as Circular G-3 by the Atlantic Biological Station at St. Andrews, New Brunswick.

The report discusses the size and growth of the industry, products, sources of supply, collection of moss, methods of handling, and inspection and marketing of products.

NEW BRUNSWICK LIVER OILS: The American Consulate at St. Stephen, N. B., Canada, has submitted a report to the State Department on the sources available for crude drugs in St. Stephen.

The only raw materials which are currently produced in St. Stephen and used as a source of drugs are fish livers. The principle sources of fish livers in southern New Brunswick are such ground fish as the cod, haddock (yielding a comparatively low vitamin content), hake, and pollock (which is the most common and yields a liver high in vitamin D, though not so high in vitamin A). Dealers receive the raw livers from the fishermen, either separated from the fish or as part of the fish, according to whether the bargain calls for delivery in the dressed or round state. Consequently, exact figures on raw fish liver production in southern New Brunswick would be difficult to calculate.


Haddock

The production of semi-refined fish liver oil in the St. Stehpen Consular District is confined to Charlotte County and particularly the islands of Grand Manan, Campobello, and Deer Island in Passamaquoddy Bay. It may be estimated that annaul production of fish liver oil averages approximately 325 drums (45 Imperial gallons each), or a total of 14,625 British Imperial gallons (1 Imperial gallon equals 1.2 gallons of U. S. measure), of which approximately one-third is destined for medicinal use and two-thirds for industrial uses such as leather tanning. Several other types of fish oils are, of course, produced. Partial figures obtained from the Office of the Supervisor of Fisheries for the District show a total production of only 495 British Imperial gallons of medicinal cod liver oil, at a marketed value of (Can.) $816, produced during the year 1944, compared with 1,306 gallons valued at (Can.) $2,156 during 1943.

It is stated, however, that the scale of prices for fish livers in Canada has averaged only three or four cents (U. S. currency) a pound. As the prices in the United States have averaged a cent higher, the tendency has been to favor the American market, with the result that a sizable proportion of the fish livers available in Charlotte County has gone to the United States, thus materially reducing amounts available for local fish oil production.

According to available information, there have been no imports of fish livers or oils into this County from any foreign country. It is stated, however, that Norway offers crude cod liver oil in Canada at much lower rates than Charlotte County producers can afford to quote.

Values fluctuated considerably before the war, but have since been held fairly steady by ceiling prices.

No laboratories or plants for the refining of fish oil for medicinal purposes exist in this District, as those engaged in the primary removal of the oil do not possess sufficient capital or technical knowledge to justify such an undertaking.

Cuba

SPINY LOBSTER FISHERY: Cuba's spiny lobster industry has expanded sharply in recent years, according to a report to the Department of State from the U. S. Embassy at Havana, Cuba. The 1945 catch is estimated at 6,700,000 lobsters, of which 80 to 85 percent were exported mostly as canned lobster meat. Exports in 1945 amounted to one million pounds, valued at $585,800.

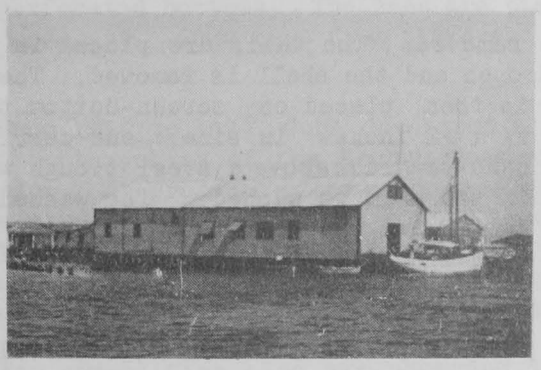
The Cuban spiny lobsters are clawless, with the outer covering equipped with spines, but otherwise, they are similar in form and size to Homarus americanus, the northern lobster. The most common species is Panilurus argus, while P. arcuatus and P. longimunus are also included in the term.

The average age at which lobsters commence to be of commercial value is about 2 or 3 years, when they are between 10 and 14 inches long. Adults of more than 3 years grow to be 2 feet long. The smallest lobster that legally may be caught must measure 15 centimeters (about 6 inches) from eye to end of the tailfins.

The young or immature lobsters stay among rocks, sponges and deep marine vegetation, but adults live under ledges or in holes and crevices of rocks in shallow water. They are carnivorous and feed on small crustacea, worms and all kinds of marine animal waste. When their food is scarce, they resort to cannibalism.

A closed season on lobster fishing is usually from March to June, but varies slightly from year to year; for example, in 1934, it was from March 16 to June 15, and in 1946 from March 3 to May 26. At no time may spawning females be caught.

Only Cuban citizens may catch lobsters in Cuban waters. Many kinds of traps are used. Some are similar to the European traps which are long and have an opening at one end, others use bag nets and screen nets. The most popular trap is a small circular net tied to a metal hoop at the end of a long pole. In shallow water near reefs, the lobsters are caught by hand. When the water surface is disturbed, wooden buckets with glass bottoms enable the fishermen to see them.



Fishing boats, as a rule, belong to private outfitters, but the larger lobster packers also have their own craft. The usual arrangement is for the fishermen to lease the boats from the outfitter or packer. The boat owner usually receives 21 to 25 percent of the catch. Although fishermen work for their own account, the outfitter contributes from his share 5 percent of the fishermen's declared yearly income to a fishermen's retirement fund. Fishermen also contribute a like amount to this fund.

Each boat is usually manned by 4 or 5 men, but the larger craft carry 7 men. The daily catch of each boat averages about 2,400 pounds of live lobsters, although the larger boats catch as much as 4,000 pounds.

About two-thirds of the total catch is taken on the south coast of Pinar del Rio Province, and about one-fifth near the Isle of Pines. At present, most of the catch is sold at La Coloma in Pinar del Río Province, where the largest of the country's nine canneries is located. Canneries also are located at Batabanó in south Habana Province, but their importance lately has declined. Another important canning center is Nueva Gerona on the Isle of Pines. Caibarien in Las Villas Province formerly was also important.

Roughly 16 percent of Cuba's total catch, or about 50,000 dozen lobsters per year, is consumed fresh locally. About 22 percent, or 70,000 dozen, is exported as fresh lobster tails, packed in ice. A small portion was exported in 1944 and 1945 as cooked lobster, also packed in ice. A new development in recent years has been the drying and packing in salt of a very small quantity of cooked tails and meat.

The most important single item of the packing industry, however, is canned tails, which accounts for about 195,000 dozen, or 62 percent of the total.

Freshly-caught live lobsters are sold at the local markets of Havana and other large towns where customers choose from a basket the individual specimens they want. The method used in cooking is to boil them in salt water for 15 minutes or half an hour, after which the meat from the tails is either broiled or served cold or used in making various other dishes.

In 1927, the Cuban tariff on canned goods was increased. This not only discouraged imports but also paved the way for Cuban canneries. The first factory for canning lobsters in Cuba was established in 1933.

The process of canning, from live lobster to sealed can, usually takes 2 hours. About 150 pounds of live lobsters reportedly are needed to produce one carton containing 16 pounds, 5 ounces net of meat. The tins are packed 48 to a carton.

On arrival at the plant, live lobsters are weighed in wooden boxes each holding 60 pounds net. They are then transferred to metal cages which fit closely into auto-claves heated by steam from wood-burning boilers.

Once cooked, the head and legs are removed. The tails are placed in steel trays and washed. Then they are cracked open and the shell is removed. The meat is then placed on screen-bottom trays, 14 x 22 inches in size, and carried by hand to a rack above a steel trough wherein the meat is washed. The washed meat is carried in trays to rustless steel tables and packed 5 to 5.5 ounces to a tin. Each portion is wrapped in vegetable paper and filled into the tin, which is then placed in a steam-propelled conveyor. On the way, water is poured into the tin which continues on the move to a vacuum chamber about 20 feet long. As the tin leaves the chamber, 25 grains of salt are dropped into it. The tin is then conveyed to the automatic sealer.

The hermetically-sealed tins are immersed in the auto-claves to eliminate any bacteria that might have remained. Thereafter, the tins are cooled in a tank of water.

Sample tins from lots processed during the day are placed in an incubator for observation and final approval. The tins are also inspected for swellings, for which a discount of $\frac{1}{4}$ of 1 percent is allowed. Very few tins reportedly are condemned; and when they are, the development of some mechanical deficiency usually is the cause.

The heads, shells and residues of the lobsters are all disposed of at sea. About 10 years ago, they were ground to make lobster meal for chicken feed and fertilizer, but the price obtained did not cover the cost of production. A large dryer and a grinding mill for this purpose are still in the warehouse of one of the packers.

Some of the cannery laborers pick the remaining meat from the bodies and claws of the lobsters and prepare a peppery concoction which they can and sell to the local trade.

One of the largest packers hired about 80 women and 25 to 30 men during the main packing season and 6 or 7 men the rest of the year. Laborers earned 30 to 40 cents per hour up to the middle of 1945 when they organized and obtained an increase of 5 cents per hour.

Prior to the war, a large quantity of raw glazed lobster tails was exported, principally to Miami; but this was discontinued owing to the lack of refrigerated vessels and the costly process involved. The raw tails still in the shell were glazed by dipping in cold water about 15° F., and were packed in cartons. At present, shipments of raw lobster consist of either the refrigerated tails with shell or the refrigerated meat, in ice-laden wooden boxes containing 100 pounds net. The principal market is Miami, but some are also shipped to New York. Lately, one exporter has been sending 3,000 to 4,000 pounds weekly of refrigerated raw tails by air to Miami.

The principal centers for processing boiled lobster are Batabanó, Habana Province; and La Coloma, Boca de Galafre and Arroyos de Mentua in Pinar del Río Privince.

The boiled lobster meat or tails, devoid of shells, are put in 1-pound cans with perforated bottoms. The cans are placed in ice-laden boxes containing about 100 pounds net. Some meat from claws and heads reportedly is included for use in soup.

From 1935 to 1939, Cuba developed a good lobster trade with France, but the import quota policy of the French Government and the war prevented its further expansion. At present, other countries which import canned lobster to any appreciable extent are Sweden, Mexico, and a number of the republics in Latin America. Recently, substantial orders have been received from Belguim, Switzerland, and Sweden. Increased production costs and price competition from South Africa reportedly may curtail Cuban exports to the United States.

Few commodities have sky-rocketed in price as much as Cuban lobster. The price of live lobster has risen from between 60 cents and $1.00 a case (60 pounds net weight) in 1932 to between $3.85 and $4.50 in 1946; and canners expect a furthur increase now that the run is over, $5.50 already being paid at Batabanó for retailing locally.

Raw refrigerated lobster tails in the shell were quoted at 7 cents in 1938 and 18 cents in 1946. Prices per pound boiled and refrigerated in 1938 were 11

cents for the whole lobster and 33 cents for the meat in 1-pound containers; as compared to the current prices of 35 and 65 cents, respectively.

The price of canned lobster also rose. The equivalent of a carton with 48 5-ounce tins in 1932 was $6.00 f.o.b. Havana. By 1943, quotations had risen to $16.00. In 1944, the sharp demand from the United States boosted the f.o.b. price to around $20.00, but the price dropped to $17.50 in 1945 when the United States price ceilings were instituted. This year, shipments have been made to Europe for as much as $21.50 per carton.

The price of the newly-developed salted and dehydrated lobster is 75 cents per pound for the tails and 55 cents for meat, f.o.b. Batabanó.

The retail price of live lobsters weighing on the average 1½ pounds ranges from 25 to 35 cents each. That of canned lobster is 60 to 65 cents per tin.

Madeira

FISH LIVERS: In a report received by the State Department from the American Consulate in Funchal, Madeira, an account is given of that Island's fish liver industry.

Many of the inhabitants of Madeira regularly gain their living from the sea; these fishermen are under the protection or patronage of the Captain of the Port of Funchal. Tunny is one of the fish found in the waters adjacent to the Islands. Each year, the Captain of the Port of Funchal, on behalf of the fishermen, sells by auction, the right to collect and dispose of the tunny fish livers brought in by the fishing boats. Sometimes only one bid is entered, sometimes two. Rights to fish livers were sold for 25,000 escudos, or about $1,000 in U. S. currency, in 1945. The money obtained from the auction is used for the welfare of the local fishermen.

Fish livers are usually landed on the beach at Funchal where the owner of the concession collects them; they are then cleaned, salted, and packed in barrels. From 1941 to 1945, from one to two long tons of fish livers were collected each year. Previous to 1945, it is believed that all the livers were exported to the United States, but none were exported to the United States in 1945. The present concession holder states that American importers are no longer interested because of the synthetic production of vitamins.

It is believed that 1946 will be a good year for tunny fish and that 6 to 7 tons of livers will be collected. The concession holder hopes to sell these livers in Europe.

Nigeria

FISHERY DEVELOPMENT: In its annual report on the fisheries of Nigeria for 1945, the Nigeria Development Branch announced the commencement of work on the formulation of a five-year plan for fisheries development in that British colony.

In early October 1945, the Fisheries Adviser to the Secretary of State for the Colonies arrived in Nigeria and spent five weeks touring the creek system and seaboard between Lagos and Calabar with the Fisheries Development Officer. Time did not permit visits to the fresh-water areas except at Onitsha. The assistance of the Fisheries Adviser enabled the Five-Year Plan of Fisheries Development to be rounded off in time for its incorporation in the Ten-Year Plan of Development and Welfare for Nigeria, which was laid on the table of the Legislative Council on December 13, 1945.

The possibilities of fish farming are being explored at a temporary station at Onikan, Lagos, where 50 tidal ponds were constructed in 1945 as nursery and fattening ponds. A naturally occurring tidal creek or backwater was also screened off from the main creek and approximately two acres of water so enclosed. The object of this work at Onikan is to discover the best species of fish to cultivate under controlled conditions, that is, when predacious fish are excluded and the food supply for the fish is increased over and above that occurring naturally. No hatching or breeding of fish has been undertaken as the number of young wild fish trapped in the Onikan ponds from the main creek has so far proved adequate for the exploratory work. Until it is known what fish are most suitable for cultivation, it is not possible to say whether hatcheries will be required.