

# Trade News



*September, 1959*





# Trade News



PUBLISHED MONTHLY BY THE DEPARTMENT OF FISHERIES OF CANADA

## CONTENTS

VOL. 12 NO. 3

### FEATURES

Danish Seining at Cheticamp.....	3
Relocating a Salmon Run in Newfoundland.....	6
The Freshwater Fisheries of Manitoba.....	8
Tidewater Sport Fishing in B.C.....	11
Canadian Fisheries in July.....	13

### CANADIAN FISHERIES NEWS

Maritime Museum.....	14
New Style Gillnetter.....	14
Pink Salmon Transfer.....	14
Albacore off B.C.....	15
Ad for Anglers.....	15
Obituary: James Catt, Frank Warne.....	15
Fishery Figures For July.....	16-17

### FISHERIES NEWS FROM ABROAD

Norway: Export Table, January-March, 1959.....	18
--	----

CURRENT READING.....	19
----------------------	----

COVER PHOTOGRAPH: Trapnet boats at the new Department of Fisheries Bait Depot at Bonavista, Newfoundland. This depot began operations in September of this year.

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# Danish Seining at Cheticamp

Cape Breton Skippers Increase Production  
By Diversified Fishing

By G.J.GILLESPIE

**T**HIS IS a story of a little community nestled on the west coast of Cape Breton Island and the contribution its fishermen are making to Nova Scotia's expanding fish industry.

It is the story of the fishing folk of Cheticamp who have joined hands with a fishery co-operative to increase production four-fold within a decade. Last year the fishermen and their sturdy boats, which were built in Nova Scotia shipyards, put \$850,000 in the co-operative till and this year they hope to reach the million dollar mark. Only 10 years ago a year's business was less than \$200,000.

The success of this venture is due to the energy and progressive spirit of the fishermen and the co-operation of both federal and provincial fishery agencies, which have encouraged the fishermen to apply diversified techniques to boost their catches.

One of the latest advances has been the development of Danish seining operations which, in only a few months, has paid off far beyond the expectations of its most optimistic promoters. While this method of fishing is by no means new -- it was invented by a Danish fisherman in 1848 -- it is new in Cape Breton. Within the last few months six boats have been fitted with the gear and two more are in the process of being fitted.

An enthusiastic exponent of that method of fishing is J. Denis Aucoin, Manager of a plant at Cheticamp. Here is what he has to say: "Adoption of Danish seining has been one of the best things to happen to Cheticamp. It couldn't have come at a



The loaded bag comes over the side.

better time. With the present lack of cod in our waters, longliners are having a hard time even to make expenses. Our Danish seiners have been spared that grief. With the new gear there have been steady and large landings of flounders. It not only has brought substantial profits to the skippers and their crews, but it has enabled us to keep our plant going full bang. If we had been dependent on cod this summer, the picture would be bleak indeed."

With flounder catches remaining high, the economy is booming in the pretty community settled by Acadians who migrated nearly two centuries ago from the Isle of St. John, now Prince Edward Island.

This feeling of security created by prosperous fishing is reflected in the hearty attitudes of the village folk. Fishermen, shopkeepers, fish-plant workers, taxi drivers, hair-dressers, in fact all the community, are sharing in this wealth brought in from the sea. The fish plant's annual payroll of \$125,000 is likely to increase this year.

Credit for the development of Danish seining in Canada goes to the federal Department of Fisheries' scientific arm, the Fisheries Research Board of Canada, and the Provincial Government of Newfoundland. It was in 1951 that the Newfoundland Government conducted investigations to determine if that method of fishing could be employed in New-



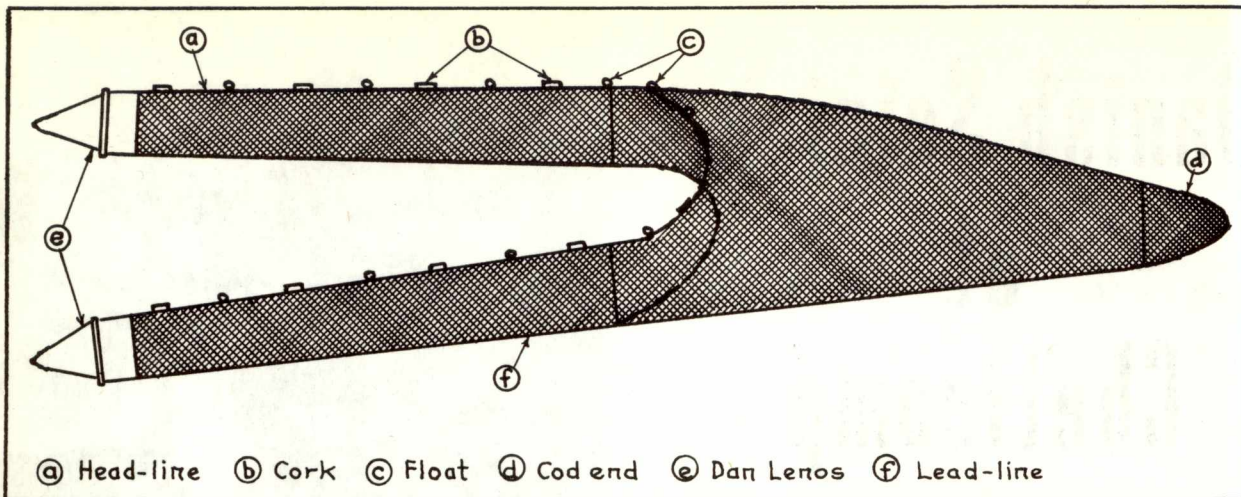


Figure 3. The net used in Danish seining. Set out with the wings stretched wide apart, the net catches fish in a manner similar to that of the otter trawl as it is drawn along the bottom.

foundland waters. A Danish seine fishing ground for witch flounder or grey sole was discovered on the province's south coast, and commercial exploitation began in 1952.

In 1953-1954 fishery scientists, using the Newfoundland exploration vessel "Matthew II", continued the research off Newfoundland and in Gulf of St. Lawrence waters west of Cape Breton. Results in the latter case were excellent. Near the shore of Cape Breton is a deep channel, the western side of which slopes gradually toward the Magdalen Islands. In the area was found a large expanse of sea bottom suitable for Danish seining. Experimental sets made in depths up to 40 fathoms produced excellent catches varying from 4,000 to 9,000 pounds of witch flounder and plaice.

Development of Danish seining by fisherman Jans Vaever in 1848 proved to be a technique so popular that it soon spread to other countries in Europe, including the British Isles, and in more recent years to Australia and New Zealand. It is now one of the more important forms of fishing, employing thousands of fishermen who catch a wide variety of fish.

The seining operation is relatively simple. It consists of surrounding a large area of sea bed with two very long ropes -- each is almost a mile in length -- and a net, in such a way that when the ropes are pulled in and the area enclosed by them becomes smaller, fish on or near the bottom are driven into the centre where they are collected by the moving net. It can be operated only on grounds that are smooth and free of strong current and obstacles.

Actually, there are two forms of Danish seining, anchor fishing and fly dragging. In the former, the gear is out from an anchor to which the boat,

after laying out the ropes and the seine, returns and ties up for hauling. This type is used by Cheticamp fishermen. In fly-dragging a buoy is used instead of the anchor and, after the gear has been set out, the boat picks up the buoy and cruises slowly ahead while hauling the seine.

It was the technological investigation that sparked Nova Scotia's interest in the seining technique. Potentiality of that type of fishing in Nova Scotia waters was immediately evident to the Industrial Development Service of the Department of Fisheries and also the Fisheries Division of the Nova Scotia Department of Trade and Industry.

Brian Meagher, a former fisherman of wide experience and now Director of Fisheries for the provincial government, started the promotion of this type of fishing.

One of the first steps was the acquisition of Danish seining equipment, and the first unit was put into operation out of Queensport, Guysboro County. The provincial department hired Rafn Josefsson, an Icelandic fisherman who is now a Canadian citizen, to instruct fishermen in the use of the gear.

#### WINCH DEVELOPED

In co-operation with the federal Department's Industrial Development Service, the provincial fishery agency successfully prosecuted the initial project. The two agencies combined to produce a suitable winch for hauling the gear. Constructed originally with two automobile rear-axle units, the winch is now being manufactured near Pictou. The original design has been modified and it is now a highly efficient piece of machinery.

The dragger "Cape St. Mary", fishing Cape Breton waters last year, charged the interest of Cheticamp fishermen. Cheticamp longliners



watched with a certain degree of envy the successful fishing by the dragger. During the summer the "Cape St. Mary" had about double the catches of the average longliner.

One of the pioneers of Danish seining in Cheticamp is Captain Moise Poirier, master of the "Lady of Fatima". He fitted his boat during the winter and when May 1 came he was off to the fishing grounds. From that date until June 13 he had landed close to 200,000 pounds of flounders.

Soon Captain Poirier's colleagues had their boats equipped with the Danish seine. By the middle of June, six Cheticamp boats were on the grounds. Right from the beginning the operations paid off. Catches have been running as high as 50,000 pounds in five days. Some boats have had daily catches as high as 25,000 pounds. At three-and-a-half cents a pound, 25,000 pounds of flounders is a profitable operation for a boat under 60 feet in length with a complement of four men.

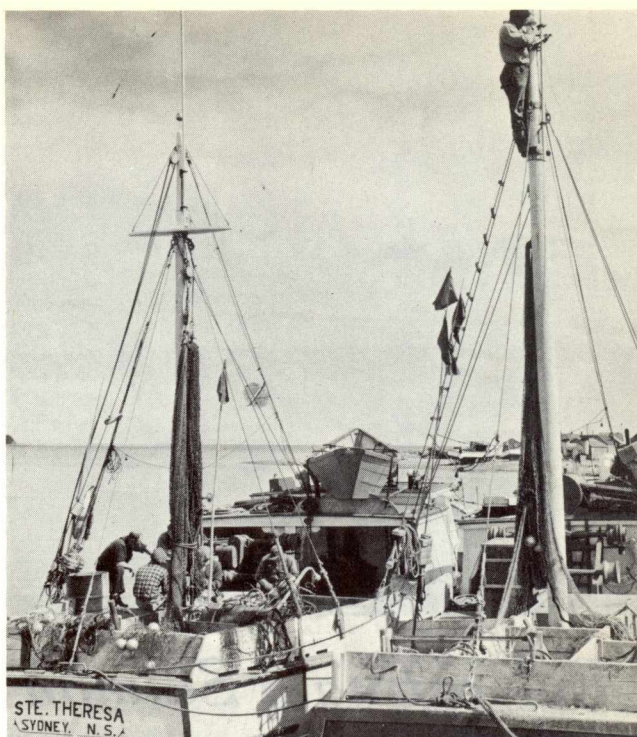
**"A GREAT WAY TO FISH"**

Capt. Henry L. Aucoin, skipper of the "St. Theresa", said it was a happy day for him when he decided to switch to Danish seining. "With the cod as scarce as they are now, we would have pretty lean pickings if we were longlining. It's a great way to fish. We have no bait problem, the risk of losing gear is remote and we can catch fish where otter trawls can't."

While Captain Aucoin and his fellow skippers are keen endorsers of the seining method, they also have a common ground in the field of conservation. Voluntarily, they have adopted a five-and-a-quarter-inch mesh which enables small fish to escape. On top of that the catch is carefully culled aboard so that unmarketable fish can be thrown back into the sea to be fished another day. As Captain Aucoin put it: "We throw the little fellows back, but we'll be looking for them next year when they have grown to market size." The mesh size adopted by the Cheticamp seiners is larger than the four-and-one-half-inch mesh adopted by the 12-member countries of the International Commission for the Northwest Atlantic Fisheries.

While seining operations have been singularly successful, the manager of the Cheticamp plant is looking ahead to bigger things. "If we can make seining work on cod and haddock, it will be wonderful for our fishermen and for the industry."

Mr. Aucoin quotes with pride the record of the seining fleet since it started. The vessels have been averaging between \$650 and \$700 a trip. Average landings have been in the vicinity of 20,000 pounds. One vessel in 10 trips landed 192,967 pounds of flounders, for a total fare of \$6,690. In seven trips another vessel landed more than 128,000 pounds to bring the skipper and crew nearly \$4,400.



Captain Aucoin's "Ste. Theresa"

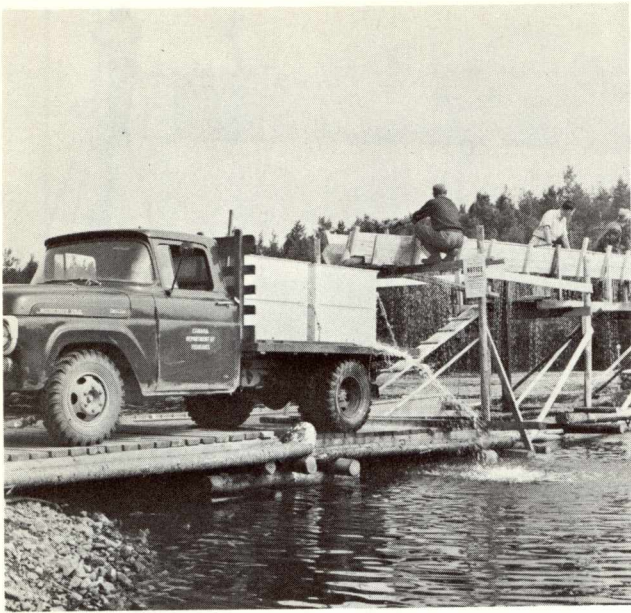


The Cheticamp seiner "Leona" hauls anchor.

Mr. Aucoin regards the seining programme as "evolutionary" rather than "revolutionary." By using that method, he says, "we are making our fishermen more conscious of the value of diversification."

"It's diversified fishing," he contends, "that holds the key to our future. By the adoption of Danish seining we have taken a big step toward bigger things. Another year will tell the tale. If we can seine for cod and haddock, then we really will have something. The future sure looks good." ✓





*Relocating a Salmon Run in Newfoundland ..*



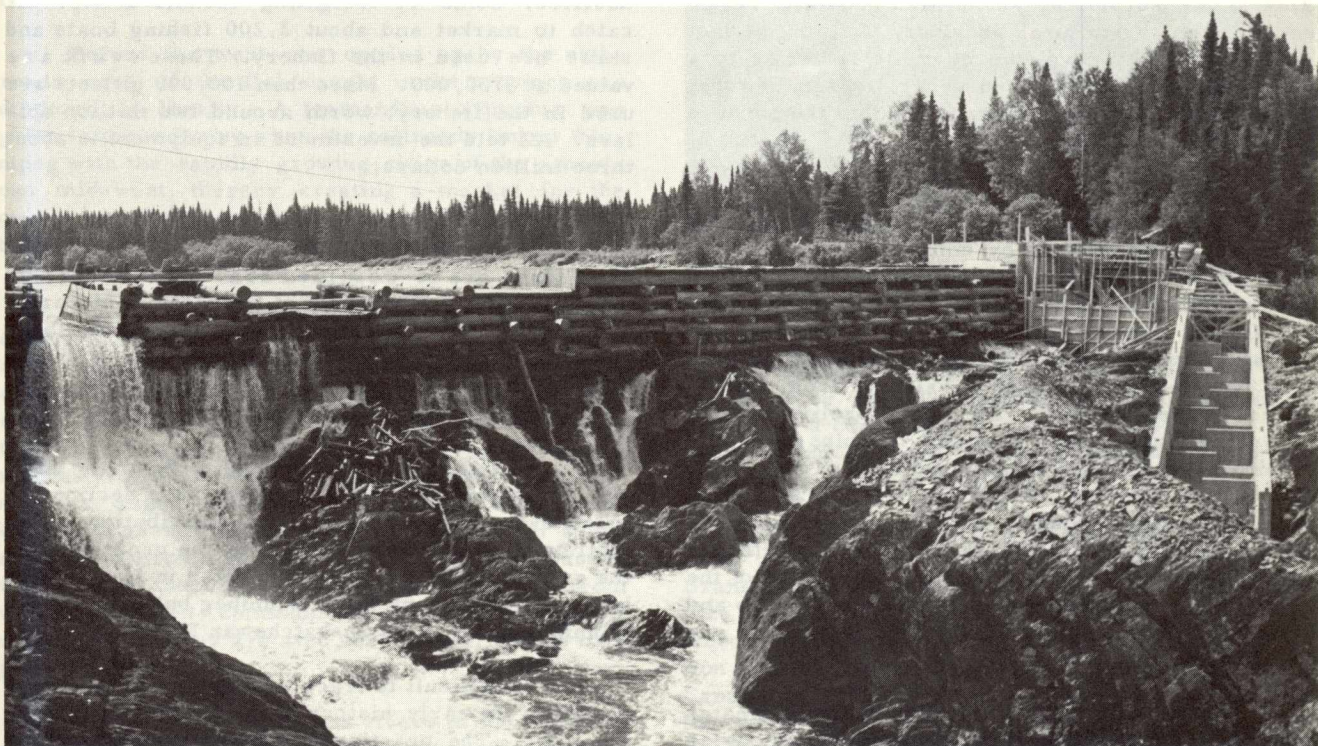




An important project of the Fish Culture Development Branch of the federal Department of Fisheries for the past three summers has been the transfer of an adult salmon run from Rattling Brook, which flows into Notre Dame Bay, Newfoundland, at Norris Arm, to Great Rattling Brook, which is a major tributary of the Exploits River. The transfer was made by means of specially designed tanks carried by truck. It was undertaken in order to prevent the loss of the Rattling Brook salmon run after completion of a hydro development on that stream. The headwaters of the two streams are in the same general area and they flow through geologically similar country. Indications are that the transferred fish have adapted well to their new lo-

cation. The photograph below shows a newly constructed fishway at Camp No. 1 Dam on Great Rattling Brook, which will allow the progeny of the relocated salmon to reach spawning grounds.

The photo at upper left of the opposite page shows the method of loading salmon by chute into the tank truck for transfer at Rattling Brook. The picture to the right of this shows a salmon being removed from the tank on the truck. At lower left one of the salmon is measured, and at the right the same fish is released in Great Rattling Brook. Above, left, fishery technician Ken Mercer is shown taking scale samples and at the right the transfer is completed. ✓





# The Freshwater Fisheries of Manitoba



Fishing near Camperville on Lake Winnipegosis, Manitoba.

By J.E. STEEN

**M**OST Canadians are unaware of the fact that Manitoba possesses one of the largest and most valuable freshwater fisheries in the world. This is not surprising since Manitoba is better known as an agricultural province. Only in the last decade, with the development of its fisheries to a near maximum, has it been generally realized that an important fishery is contained within the borders of this prairie province.

A few statistics will suffice to illustrate the scope of the province's freshwater fishery and how fully it is being utilized by commercial fishermen. Manitoba's water area is approximately 39,000 square miles of which about 22,000 square miles are fished commercially. There are between five and six thousand fishermen who land about 30 million pounds annually with a value of from five to seven million dollars. The most prolific fishing grounds are Lakes Winnipeg, Winnipegosis and Manitoba, which have a combined area of more than 13,000 square miles. Approximately thirteen, six, and five million pounds of fish respectively are landed from each of these lakes annually. Although these lakes account for more than four-fifths of the catch, there are also more than 90 small lakes and rivers where commercial fishing operations are carried on.

The pursuit of this primary industry creates jobs for other workers in such secondary industries

as transportation, processing, marketing and box manufacture. It is estimated that there are five thousand people employed in these subsidiary industries. Some 14 freighting vessels deliver the catch to market and about 2,200 fishing boats and skiffs are used in the fishery. These craft are valued at \$750,000. More than 100,000 gillnets are used in the fishery, worth around two million dollars. All told the investment in equipment is about three million dollars.

Although 75 different species of fish are known to inhabit the lakes and rivers of the province, only 15 of these are of commercial significance. In poundage, the greater part of the catch is pickerel, followed by whitefish, sauger, pike and tullibee. Other stocks fished commercially include Winnipeg goldeye, bass (sheepshead), bullheads, carp, catfish, perch, suckers, lake trout and sturgeon.

It is ironic that the landings of Winnipeg goldeye, Manitoba's most famous fish, have declined so much over the years that its contribution to the total catch is now very small. At the present time, the greater part of the goldeye catch in Manitoba no longer comes from Lake Winnipeg but rather Lake Winnipegosis and the Saskatchewan River.

It is difficult to trace with any great degree of accuracy the early history of the fishing industry in Manitoba. The practice of record keeping was not



ashighly developed in the 19th century as it is now, consequently the fishery records of the Canadian Government on early fishing ventures in Manitoba are meagre. However, it is known that a fishing operation took place in the province as early as 1872. A report of the Manitoba Fisheries Commission of 1910-1911 states that a group of Winnipeg businessmen outfitted and operated a sailing vessel on Lake Winnipeg that year with the intent of providing fish for the Winnipeg market. The report also indicates that the operation was far from successful.

Ten years later in 1882 another attempt was made to fish Lake Winnipeg and on this occasion the fishing effort shows a faint glimpse of what was to be, in a relatively short time, a fairly lucrative industry. One solitary sail boat equipped with only a few nets ranged the vast reaches of Lake Winnipeg and is reported to have landed 127,000 pounds of whitefish worth \$4,000 to its operators. This undertaking undoubtedly encouraged other far-sighted pioneers to take up the fishery, for in 1889, just seven years later, the commercial fisheries of the province were valued at \$167,000. By 1892 the industry had flourished to such an extent that there were 250 men engaged in fishing on Lake Winnipeg with equipment valued at almost a quarter of a million dollars taking landings of nearly four million pounds of all species. Lake Winnipeg got a head-start on the other fishing areas in the province as Lake Manitoba was not fished until 1885 and Lake Winnipegosis until 1890. By 1895 Manitoba's fishing industry had become firmly entrenched and has continually progressed and grown in importance up to the present time.

Before the west was opened up by the railroads, most of the fish caught in the province was disposed of locally. A tremendous stimulus was given to the industry when the railroads linked Winnipeg with the rapidly growing cities of the American mid-west, thereby creating a market for the province's fish products. This highly successful trade has continued to the present time.

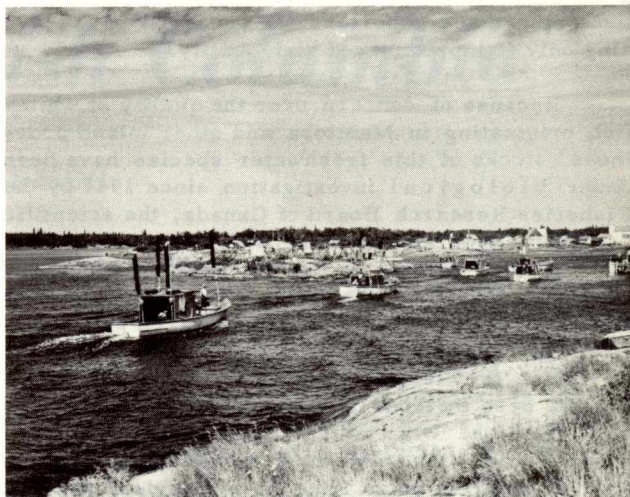
A little less than half the total catch is taken during the summer fishing operation. The most common gear used is the gillnet, and the fishermen operate motor-driven boats, 30 to 40 feet long, and skiffs generally about 20 feet long. In the winter the gillnets are set under the ice through holes cut manually with a special chisel or needle bar or with a power auger or sometimes special chain saws. On most lakes winter camps are set up on shore and the fishermen go out each day from these bases. On some of the bigger lakes fishermen work from well-established communities and return home daily. Aeroplanes are also used to haul fish to major shipping points.

The principal lakes and rivers of the province are patrolled by a variety of protection vehicles.

Four diesel-powered boats patrol Lake Winnipeg during the summer and fall commercial fishing seasons. In the winter the patrols are carried out by four "Bombardier" snowmobiles and a truck. In Lake Winnipegosis protection duties are performed by a boat and a truck during the fall season. A "Bombardier" and a truck conduct winter patrols on Lakes Winnipegosis, Dauphin and smaller lakes in that district. Other chief lakes and rivers in the province are patrolled in a similar manner.

#### PROVINCIAL SUPERVISION

As the fishing industry provides a livelihood for a substantial number of people, constant supervision of the resource must be conducted so that the fishing operation will be carried out in the best interests of all. Accordingly, the Manitoba Department of Mines and Natural Resources administers fishing regulations which are enacted under federal statutes at the request of the province. The federal Government was responsible for this supervision until 1930, when the natural resources were transferred to the province. In 1955 a separate Fisheries Branch of the provincial Department was established for this purpose. The regulations govern



Whitefish boats returning to harbour at Big Black River, a fishing port on the northeast shore of Lake Winnipeg.

fishing seasons and areas, specify types and size of gear to be used and control the numbers of fishermen by a convenient license system. All fish dealers and packers are also licensed under the Fish Dealers Act of Manitoba.

Inspection officers with the federal Department of Fisheries and the Manitoba Fisheries Branch work closely to ensure that only fish products of top-flight quality reach the consumer. The federal Department introduced a system of inspection of all export shipments of whitefish from Canada in 1951. Federal officers are stationed in the province and examine shipments of whitefish destined for U. S. markets. This inspection was



well received by the industry and now the Department of Fisheries has been asked to inspect shipments of pike, pickerel, lake trout and tullibee.

In April of 1959, the federal Department expanded its fish inspection programme. All fish processing plants which can meet the Canadian Government Specifications Board requirements for fish products are eligible for government inspection. If the fish products are of good quality, they may be stamped with either "Processed Under Government Supervision" or "Canada Inspected" seals. Although the system is not compulsory, many fish processing plants across Canada have indicated that they are willing to improve their plants so that they will be eligible for government inspection.

The Manitoba Fisheries Branch makes periodic surveys of commercial lakes fished for whitefish to determine the quality of the fish for market purposes. The data is collected by provincial conservation officers in the field and an analysis service is provided by the federal Department of Fisheries in Winnipeg. The provincial Department has also embarked upon an intensive advertising programme to impress upon fishermen, processors, fish dealers and exporters the necessity of processing only fish products of high quality.

Because of concern over the quality of whitefish originating in Manitoba and other inland provinces, stocks of this freshwater species have been under biological investigation since 1944 by the Fisheries Research Board of Canada, the scientific arm of the federal Department of Fisheries. While the whitefish is still one of its main responsibilities, the Board's scientists have extended their activities to other inland water research problems. One of the most important of these is a programme of studies to determine general principles regarding the best methods to manage lakes so that they will yield the maximum fish crop perpetually. Studies have been conducted on Lake Winnipeg, as well as on Great Slave Lake, to gather data on catch per unit of effort and the size of fish caught. Gear efficiency is also tested.

In 1958 a fisherman's representative was appointed to the Fisheries Branch of the Manitoba Department of Mines and Natural Resources. This appointment was in line with the Department's policy to improve the efficiency of the fishing operation as the official instructs fishermen in the latest fishing methods. He also advises them on current marketing problems and acts on their behalf as a liaison officer in negotiations between the provincial Government and fish companies.

No account of the Manitoba freshwater fisheries would be complete without some mention being made of its sport fishery. The growth in popularity of sport fishing has had a positive effect on the province's economy. More than 100,000 residents

and non-residents purchase angling licences annually, spending millions of dollars on fishing tackle, boats and motors, camping equipment, travelling expenses and accommodations.

As the province's more accessible waters experience greater angling pressure yearly, angling success must invariably decline. However, as angling is a relatively inefficient method of harvesting fish, serious depletions of fish stocks seldom result from such operations. Recent research has indicated that size limits may be unnecessary in regulating sport fishing, thus they were removed from the angling regulations in 1957.

#### VARIED SPECIES INTRODUCED

The stocking of lakes and streams with sport fish has become an important function of the provincial government's Fisheries Branch. The province's sport fishery has improved and become more diversified with the introduction of many different species of trout to the numerous lakes and streams scattered throughout the province. Small lakes in the Whiteshell as well as pothole lakes in the southwest of the province are producing excellent rainbow and speckled trout fishing. Also, many streams originating in the western part of the province are now good rainbow and speckled trout fishing grounds.

The seven fish hatcheries and spawning camps in the province are an integral part of the province's management programme. The Whiteshell Trout Hatchery, at the north end of West Hawk Lake in the Whiteshell Forest Reserve is primarily used for stocking various waters with trout for the sport fishery.

During the summer and fall of 1957, a distribution crew transferred 687,397 fingerling and yearling trout to sport fishing waters from this hatchery. The main function of the Dauphin River Whitefish Hatchery on Lake Winnipeg is to hatch whitefish which are to be planted in Lake Winnipeg and its tributaries. The Duck Bay Pickerel Hatchery on Lake Winnipegosis handles pickerel eggs taken from spawning fish moving into the Duke and Drake Rivers each spring. The young fish are distributed soon after they are hatched. Eggs from pickerel spawning in Swan Creek on Lake Manitoba are handled by the hatchery of the same name. There the young fish are liberated in the fry stage shortly after hatching. The Clearwater Lake Spawn Camp is of great importance in the smooth functioning of the province's fish culture division because the entire supply of trout eggs for the Whiteshell Hatchery comes directly or indirectly from the operation of the camp.

The remaining link in the province's fish culture service is a mobile spawn camp used for the collecting of pickerel eggs for distribution where needed. ✓





Sport fishermen trolling off Campbell River, B.C.

Tidewater Sport Fishing - -

## *Boom in British Columbia*

By H.A. CAMERON

A LARGE majority of Canadians are familiar with the products and the achievements of the commercial fisheries of British Columbia. The resurgence of the Adams River Sockeye run last year made news stories across the country, right up to its successful culmination in the shallow spawning grounds. Some Canadians are also aware that certain species of Pacific salmon are peerless sport fish, but it is unlikely that many of them would know of the lusty growth of the burgeoning sport fishery in recent years or of the place that tidal sport fishing for salmon holds in British Columbia.

An example of this was recorded in August, 1958, when the Department of Fisheries made a count of sport fishing craft that were moved either by trailer or car-top, from a check point on the highway leading to the waters of Howe Sound immediately to the north and west of the city of Vancouver. During this twelve hour period (between the hours of 8:00 p.m. and 8:00 a.m.) a total of 1,149 boats of every conceivable description was recorded as being transported throughout the night to be launched and to be on time on the fishing grounds for the dawn starting of one of the major salmon derbies which crowd the calendar from May through to October. By early dawn five thousand boats ranging from one-man inflated life rafts to

palatial yachts were engaged in the pursuit of trophy size spring salmon in the normally uncrowded waters of Burrard Inlet-Howe Sound. A few weeks later (during the Centennial Derby) one fortunate sport fisherman boated a 41-lb. 3-oz. "Tyee" in these same waters which won him the top award of \$10,000, or at a rate of better than \$15.00 for each ounce of the magnificent specimen of spring salmon.

The responsibility for the conservation and development of the salmon fishery resources, which encompasses both the commercial and the sport fishery, is vested in the federal Department of Fisheries. Recognizing the trend of the growing importance of the sport fishery, the Department began collecting statistics on salmon sport fishing in the tidal waters of B.C. in 1953. Since 1955, these reports, relating primarily to the catch and its distribution, have been published annually. In this year, the 1958 report was released, and forms the basis for this article. An innovation in this year's release was the publication of a supplementary report, which deals at length with the procedures in calculating the catch as well as reviewing the results of special surveys which were conducted in 1957 and 1958, to evaluate some of the economic implications of the sport fishery.



The 1958 edition of "Statistics on Salmon Sport Fishing in the Tidal Waters of B.C." records the growing relative importance of the sport fishery. There are only two species of Pacific salmon fished for by both commercial fishermen and sport fishermen, namely, spring salmon and coho. Springs and coho caught in the earlier stages of their growth, when they weigh three pounds or under, are called jacks and grilse.

The report shows that the sport catch of salmon of all species has almost doubled, from 204,550 taken in 1953 to 408,900 taken in 1958. More significant is the percentage increase in the sport catch that has taken place as compared to the total of the combined sport and commercial catch. Since 1953, the sport catch has climbed from five to nearly ten per cent of the total combined sport and commercial catch of springs, jacks, coho and the sport catch of grilse (commercial fishermen are not allowed to take grilse).



Tidewater sport fishing off Howe Sound, B.C.

Due to the nature of the resource and the increasing efficiency of commercial fishermen, the commercial effort is closely regulated in accordance with the requirements of sound conservation and development practices. A measure of the growth of the sport fishery is the steady increase in the degree of surveillance that the Department of Fisheries has felt necessary to maintain on the sport catch effort. The 1958 report lists protection regulations that were enacted to protect the resources during the year.

The supplementary report again makes the reservation that the sport catch has not kept pace with effort. As no licence is required for sport fishing in tidal waters except in certain specific areas, and as there is no registration of boats under a certain power and weight category, there is no ready measure of the number of people who enjoy this recreational asset.

As a consequence of this lack of basic information, a great deal of information on both catch and effort has to be secured through special sur-

veys. During 1957 and 1958 a total of 4,254 questionnaires were issued to sport fishermen with seventy-four per cent being returned for analysis. The supplementary report outlines how calculations based on these surveys, were used to arrive at figures of the catch. At the same time, a great deal of other information was obtained.

The 1958 surveys revealed that 303 British Columbia sport fishermen using rented boats enjoyed an average of 17 days of tidal sport fishing in the previous calendar year 1957, while 719 private boat users averaged 32 trips. August was the favourite fishing month with 24 per cent of the total fishing effort reported by 1,022 sport fishermen taking place in this month, while July, August and September made up 60 per cent of the total fishing trips reported.

Further light is cast on the increasing sport fishing pressures by information on some of the trends in boat ownership characteristics that are detailed in the report. Information is given for 825 sport fishing boats which were sorted according to whether they were B.C. owned or U.S. owned, kept moored, transported by trailer, or carried by car-top. The B.C. boats ranged in average value from \$208 for the car-toppers to \$1,440 for the "moored" boats which travel only by their own power. The astounding growth in boat ownership in B.C. is revealed by the fact that over 50 per cent of all the boats were less than two years old.

A measure of the mobility of sport fishing was reported when boat owners were asked how far they had taken their boats. The "moored" boats travelled as far as 39 miles one way, while the trailer boats had been taken an average of 126 miles by road and the car-tops 162 miles. These were six to 10 times less than the distances reported by the U.S. owned boats in the sample. When queried as to whether they planned to go as far again and farther, most fishermen said they did.

#### BOAT OWNERSHIP

One of the interesting facets of the present upward trend in boats and boating, with its direct implication on tomorrow's sport fishing was the response in the questionnaires to the question "are you planning to acquire a boat?" 27 per cent stated that they planned to acquire a new boat and 50 per cent of these indicated that this would be done in 1959 or 1960. Of the group who are presently boat owners, up to 25 per cent indicated they planned to build or buy boats that will on an average be larger and more powerful than those they are presently operating. From these figures it can readily be seen that this popular recreational activity shows every indication of continuing its spectacular expansion. It is essential that the Department of Fisheries should continue to gather and assess information to assist in evaluating conservation and management needs to ensure that the present salmon stocks are utilized and protected to a safe sustained productivity level. ✓



# Canadian Fisheries in July

**A** RATHER lean season in Pacific fisheries continued through July but the Atlantic coast prospered. In the Maritime Provinces and Quebec, landings were of about the same proportions as last summer but with unit prices higher their value was greater by over half a million dollars. In Newfoundland, although June ended with all the fisheries six weeks behind their normal schedules, July brought excellent weather and more than closed the gap. For freshwater fishermen it was a hot and humid month but landings were steady and slightly heavier than in July last year. As usual during warm weather, markets for inland fish were weak and there was a considerable build-up of cold storage holdings.

On the Pacific, halibut fishing continued good but unit prices were about 12 per cent below last summer's levels. Groundfish catches included more grey cod and less of the higher-priced sole and ling cod than last year. As herring fishermen and reduction plants still failed to agree on prices, most of the seine fleet remained at docks where it had been since May. Main cause of the drop in fishermen's income, however, was to be found in the salmon fishery. After last year's sockeye bonanza, a decline to average salmon catches was expected but actual results were considerably below normal.

June's good run of spring salmon continued into July but runs of later species were tardy in arrival and slow to increase in volume. Troll fleets, which supply the fresh fish market, reported sockeye later and smaller than usual, pinks scarce and unprofitable, coho fishing only fair. Prices for troll-caught fish rose to record levels at Vancouver. Canadian and American net fishing in Juan de Fuca Strait opened July 19 but the catch, which goes to the canneries, was only half that of last year. Weather, which had been unfavourable, and catches showed signs of improvement just prior to July 25, when salmon fishermen, and on July 29 cannery workers, were called out on strike in support of higher landed prices and wages. About 8,700 men became idle and the strike was still in effect at the end of the month. (It was settled by compromise August 9.)

The total Pacific catch was smaller than in July last year by almost two-thirds. Returns to the fishermen were cut nearly in half.

In the Maritimes, swordfish prices dropped from the high June level of 45 and 50 cents per pound to as low as 12 cents but a good many longliners continued in this fishery. Operations of trawlers and draggers were interrupted for annual refit but groundfishing yielded well for the vessels



that did fish and they were joined by an unusually large number of new boats in both the offshore and, even more, the inshore effort. Prices were good, fresh fish landings were steady and the salt bankers were out too. The fresh market was seasonably slow and the salt market at a standstill but plants were busily stockpiling. Cod landings were heavier than last summer. Trapnetters continued to supplement offshore groundfish with considerable quantities of haddock and pollock.

Local lobster seasons closed one after another, the last on July 20, with all areas reporting profitable results.

Upwards of one-third of the commercial catch of Atlantic salmon is taken on the mainland, the rest in Newfoundland. After a long decline, landings improved last year. This year July receipts in the Maritimes increased by 50 per cent.

Herring weir fishing and purse seining in the Bay of Fundy held up well but the trapnet catch on the Atlantic side of Nova Scotia was only fair.

Expected summer runs of mackerel were awaited in vain, which deprived lobstermen of their usual source of income between seasons.

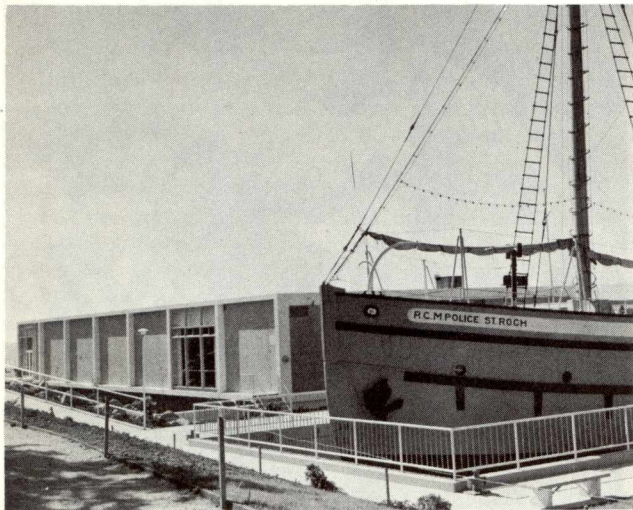
In Newfoundland large schools of cod moved inshore to the trap fishing grounds and yielded the heaviest catch since July 1954. Total landings of all species surpassed those of July last year by 45 per cent in quantity and, with higher prices for cod, haddock, salmon and lobster, by 72 per cent in landed value. Redfish and squid, however, were very scarce. Production of frozen cod was the largest in many years, especially in plants on the

(Continued on page 15)



# Canadian Fisheries News

## Maritime Museum



Vancouver's Centennial Project, the new \$600,000 Memorial Maritime Museum was officially dedicated in June. Adjoining the museum building on Vancouver's English Bay is the famed R. C. M. P. arctic schooner "St. Roch", restored to her original design and berthed in a permanent drydock.

## New Style Gillnetter



The forerunner of a possible trend in smaller size gillnet boats for the Fraser River was viewed recently. For the past few years the move has been to larger gillnetters approximately 35 feet in length; however, this isn't the case with the "Agnes T", built for Mike Takagaki by Georgia Boat Works, Steveston, B.C. The "Agnes T" is 30 feet

in length with a beam of 8½ feet, has the popular new style wheelhouse which provides more comfort and visibility, and boasts automatic steering equipment with power drum and steering controls at the stern. The vessel is powered by a 140-HP gas engine.

## Pink Salmon Tagging

A co-operative pink salmon tagging programme, the largest ever attempted for Pacific salmon is being conducted from July 15 to September 30. This programme, jointly conducted by the Fisheries Research Board of Canada, The International Pacific Salmon Fisheries Commission and the Washington State Department of Fisheries is to determine the migratory movements of pink salmon stocks which pass through convention waters on their way to spawning streams in southern British Columbia and Puget Sound.

Canada will tag up to 25,000 pinks in the Upper Johnstone Straits area, the Salmon Commission up to 30,000 in the Salmon Bank, West Beach, and Point Roberts areas and the State of Washington up to 2,000 in the Admiralty Inlet Area.

This programme stems from the requirement outlined in the 1957 Pink Salmon Protocol agreement between Canada and the United States concerning the international fisheries for pink salmon in convention waters which states in part: "the Parties shall conduct a co-ordinated investigation of pink salmon stocks which enter convention waters for the purpose of determining migratory movements of such stocks."

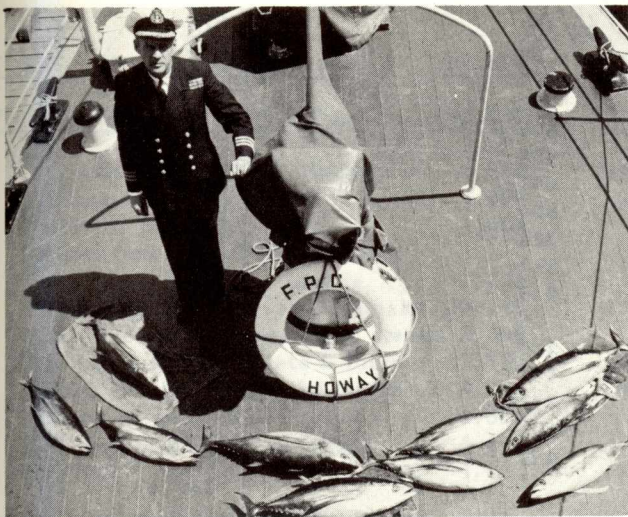
In order to fulfill this requirement, the Pink Salmon Co-ordinating Committee appointed scientists from the participating agencies to prepare a co-ordinated investigational programme based on the analysis of all available data compiled from previous pink salmon studies, some of which date back to 1929. This report, submitted in 1958, proposed for the summer of 1959 that extensive tagging programmes be conducted throughout the area under study, with the greatest effort concentrated in those areas where stocks intermingle and are fished together. Also that studies of variations in size characteristics be conducted by extensive sampling of both catches and escapements throughout the area under study and that both catches and spawning ground escapements be accurately enumerated and thoroughly examined for the presence of tags.

This survey of pink salmon populations, along with information that will enable segregation of individual stocks, should provide a description of how



various stocks migrate through the area under study and measure the contribution of each stock to the various fisheries.

## Albacore Off B.C.



Above are shown several of the Albacore tuna caught during the summer from the Canadian Fishery Protection Cruiser "Howay," which, with her sister ship, F.P.C. "Laurier," carried out exploratory fishing off the coast of British Columbia. Substantial runs of Albacore tuna occurred off the B.C. coast in 1948 and 1949, when catches of more than two million pounds were made by trollers and seiners which left their normal fishing activity. Since then tuna had not been located in offshore waters in any volume until this year. Shown in the picture is Captain C.P. Power of the "Howay."

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### James Catt

After having completed nearly half a century of fisheries work in Canada, James Catt, Saint John, N.B., died suddenly on September 16 while engaged in specialized work for the Government of New Brunswick. Mr. Catt, who was 72, served with the federal Department of Fisheries for 46 years until his retirement in 1958. For 35 of those years he was Supervisor of Fish Culture for the Maritime Provinces, with headquarters at Saint John.

At the time of his retirement Mr. Catt received a framed certificate of appreciation from the Department for his remarkable work in fish culture development. Before going to the Maritimes he had operated a fish hatchery in British Columbia for several years. During World War I he served with the Royal Navy, in which he had been a midshipman as a boy. Mr. Catt was the author of a number of brochures on the introduction of brown trout and black bass to certain Maritimes regions,

### Ad for Anglers

The advertisement on the back cover of this issue of "Trade News" was prepared for the benefit of Canadian anglers, to show them how to get most enjoyment out of their catches. To make sure that it reached the right audience, it appeared simultaneously in outdoors magazines published in Canada.

## CANADIAN FISHERIES IN JULY...

(Continued from page 13)

east and northeast coasts, where the season's earlier operations had been most curtailed. Even after meeting demands of the freezing industry, the catch supported such a heavy output of salted codfish that by the end of the month the season's production was ahead of that in 1958, 1957 and 1955. Since 1954, when 79 per cent of salted output was light salted and the rest heavy salted, there has been an uninterrupted trend away from light salting, with a sharp speed-up this year when the late spring intensified transportation and drying difficulties and the proportion of heavy salting increased to 64 per cent.

As in June, salmon fishing was better than last year. Newfoundland takes about two-thirds of Canada's Atlantic salmon catch but the fish comes ashore in such relatively remote areas that it accounts for only about half of the landed value.

Lobstering ended in mid-July with by far the smallest catch of the past five seasons. Herring also remained scarce with 1959 landings to date totalling only one-third those of last year. ✓

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### Frank Warne

Frank Warne, who retired slightly over two years ago as Assistant Director of Fisheries for the Pacific Area, died suddenly on August 31 at his home at Halfmoon Bay, B.C.

Mr. Warne, a 37-year veteran with the Department, began his fisheries career in the protection service on the Babine section of Skeena River in 1920. He served the Department in various capacities in the Nass and Skeena River areas for many years and subsequently in 1944 assumed the responsibility of District Supervisor stationed at Prince Rupert, B.C. In 1946 he was appointed Assistant Director at Vancouver, a position he held upon retirement.

This wealth of fisheries experience was preceded by a background of training as a land surveyor and five years' war service with the Canadian Army, mostly on the European battlefronts.



# Fishery Figures For July

SEAFISH: LANDED WEIGHT AND LANDED VALUE

	May - July 1958		May - July 1959	
	'000 lbs	\$'000	'000 lbs	\$'000
<b>CANADA - TOTAL</b>	686,973	38,090	660,568	37,382
<b>ATLANTIC COAST - Total</b>	561,033	22,509	595,671	26,440
Cod	295,750	6,758	347,040	9,211
Haddock	16,148	636	23,770	993
Pollock, Hake & Cusk	34,625	601	28,257	554
Rosefish	25,940	606	14,392	329
Halibut	2,116	488	2,277	509
Plaice & Other Flatfish	35,479	1,091	36,486	1,163
Herring & Sardines	70,917	809	74,526	976
Mackerel	9,097	384	3,401	174
Swordfish	1,958	541	1,934	482
Salmon	2,828	1,015	3,476	1,216
Smelts	54	5	48	4
Alewives	8,532	120	10,700	164
Other Fish	27,408	357	16,885	244
Lobsters	26,525	8,537	27,950	9,612
Clams & Quahaugs	2,148	101	2,715	125
Scallops	1,247	452	1,781	683
Other Shellfish	261	8	33	1
<b>PACIFIC COAST - Total</b>	125,940	15,581	64,897	10,942
Pacific Cods	4,003	242	3,954	254
Halibut	19,380	3,978	19,981	3,724
Soles & Other Flatfish	3,131	162	1,919	102
Herring	42,979	728	10,225	189
Salmon	52,228	10,155	24,500	6,347
Other Fish	877	25	1,165	40
Shellfish	3,342	291	3,153	286
<b>BY PROVINCES</b>				
British Columbia	125,940	15,581	64,897	10,942
Nova Scotia	162,437	8,912	152,192	10,094
New Brunswick	59,644	2,495	68,965	2,862
Prince Edward Island	15,857	2,103	19,136	2,475
Quebec	67,832	2,391	67,868	2,706
Newfoundland	255,263	6,608	287,510	8,303

MID-MONTH WHOLESALE PRICES, July 1959			PRICES PER CWT. PAID TO FISHERMEN (Week ending July 18th)		
	Montreal	Toronto	Halifax	1958	1959
	\$	\$		\$	\$
Cod fillets, Atl. fresh, unwrapped lb.	.322	.362	Halifax	3.75	3.75 - 4.00
Cod fillets, Atl. frozen, cello 5's lb.	.282	.310	Cod Steak	3.25	3.50 - 3.75
Cod fillets, smoked lb.	.353	.398	Market Cod	5.00	4.00 - 4.25
Haddock fillets, fresh, unwrapped lb.	.425	.488	Haddock	3.25	3.50
Herring kippered, Atl. lb.	.256	.297	Plaice		
Mackerel, frozen, round lb.	.243	.267	Yarmouth		
Lobsters, canned, Fancy case 48- $\frac{1}{2}$ s	41.64	42.86	Haddock	5.00	6.00
Sardines, canned case 100- $\frac{1}{4}$ s	9.04	8.93	Black's Harbour		
Halibut, frozen, dr. lb.	.387	.388	Sardines	2.00	2.00
Silverbright, frozen, dr. lb.	.417	.360	St. John's, Nfld.		
Coho, frozen, dressed lb.	.599	.573	Cod	2.00	2.25
Sockeye, canned, gr. A case 48- $\frac{1}{2}$ s	22.88	22.94	Haddock	-	3.00
Pink, canned, grade A case 48- $\frac{1}{2}$ s	13.80	13.82	Rosefish	-	2.00
Whitefish, fresh lb.	.358	.293	Vancouver		
Lake Trout, frozen lb.	.421	.405	Ling Cod	6.00-14.00	6.00-13.00
			Gray Cod	3.50- 5.00	5.00- 6.00
			Soles	6.00- 9.00	6.00- 9.00
			Salmon (Rdspg.)	40.00-56.00	L32.00-58.00



# Fishery Figures For July

## STOCKS AS AT END OF JULY

	1958	1959
	'000 lbs	'000 lbs
<b>TOTAL - Frozen Fish, Canada</b>	59,607	71,828
<b>Frozen-Fresh, Sea Fish - Total</b>	42,830	52,369
Cod, Atlantic, fillets & blocks	9,194	14,478
Haddock, fillets & blocks	1,709	6,852
Rosefish, fillets & blocks	2,064	963
Flatfish (excl. Halibut), fillets & blocks	2,273	1,855
Halibut, Pacific, dressed & steaks	10,142	13,794
Other Groundfish, dressed & steaks	2,308	2,363
Other Groundfish, fillets & blocks	3,730	2,142
Salmon Pacific, dressed & steaks	4,136	4,469
Herring Atlantic, and Pacific	1,822	548
All Other Sea Fish, all forms	4,100	3,637
Shellfish	1,352	1,268
<b>Frozen - Fresh, Inland Fish - Total</b>	4,632	5,025
Perch, round or dressed	5	238
Pickrel (Yellow), fillets	181	91
Sauger, round or dressed	4	14
Tullibee, round or dressed	296	168
Whitefish, round or dressed	1,512	1,699
Whitefish, fillets	453	448
Other, all forms	2,181	2,367
<b>Frozen-Smoked Fish - Total</b>	1,655	1,929
Cod Atlantic	759	1,072
Sea Herring, kippers	484	436
Other, all forms	412	421
<b>Frozen for Bait and Animal Feed</b>	10,490	12,505
<b>Salted and Pickled Fish, Atl. Coast</b>		
<b>Wet-salted - Total</b>	23,461	20,805
Cod	13,749	12,798
Other	9,712	8,007
<b>Dried - Total</b>	11,827	3,068
Cod	11,045	2,418
Other	782	650
<b>Boneless - Total</b>	282	332
Cod	206	301
Other	76	32
<b>Pickled - Total (barrels)</b>	24,056	18,680
Herring	5,822	2,878
Mackerel	9,574	303
Alewives	8,258	14,942
Turbot	402	557
Bloaters (18 lb. boxes)	228,107	242,305
Boneless Herring (10 lb. boxes)	10,962	4,974

## CANADIAN EXPORT VALUE OF FISHERY PRODUCTS, MAY-JUNE

(Value in Thousands of Dollars)

	1958	1959
<b>Total Exports</b>	24,684	25,489
<b>By Markets:</b>		
United States	19,274	19,245
Caribbean Area	3,064	2,859
Europe	1,778	2,932
Other Countries	568	453
<b>By Forms:</b>		
<b>Fresh and Frozen</b>	17,108	16,913
<b>Whole or Dressed</b>	5,035	4,695
Salmon, Pacific	1,173	1,122
Halibut, Pacific	894	945
Cod, Haddock, Pollock, etc.	106	81
Swordfish	0	39
Other Seafish	774	515
Whitefish	861	806
Pickrel	452	472
Other Freshwater fish, n.o.p.	775	715
<b>Fillets</b>	5,701	5,576
Cod, Atlantic	1,924	1,680
Haddock	674	1,455
Rosefish, Hake, Pollock, etc.	278	241
Flatfish	1,245	1,066
Pickrel	563	210
Other	1,017	924
<b>Shellfish</b>	6,372	6,642
Lobster (Alive & Meat)	5,979	6,212
Other	393	430
<b>Cured</b>	3,157	2,669
<b>Smoked</b>	252	261
Herring	199	177
Other	53	84
<b>Salted, Wet &amp; Dried</b>	2,601	2,112
Cod	2,182	1,486
Other	419	626
<b>Pickled</b>	304	296
Herring	179	130
Mackerel	38	69
Other	87	97
<b>Canned</b>	3,267	3,553
Salmon, Pacific	2,017	2,191
Sardines	446	591
Lobster	734	671
Other	70	100
<b>Miscellaneous</b>	1,152	2,354
Meal	377	1,620
Oil	100	132
Other	675	602



# Fisheries News From Abroad

## Norway

### EXPORTS OF PRINCIPAL FISHERY PRODUCTS

January - March, 1959

For Comparative Table See "Trade News", August 1958

Quantities in Thousands of Pounds

Value in Thousands of Kroners

DESTINATION	TOTAL EXPORTS		MAINLY COD				HERRING				CANNED FISH	OILS	OTHER PRODS
	Quan.	Value	Fresh	Frozen	Salted & Dried	Stock-fish	Fresh	Frozen	Salted	Meal			
	th.lb.	th.kr.	th.lb.	th.lb.	th.lb.	th.lb.	th.lb.	th.lb.	th.lb.	th.lb.	th.lb.	th.lb.	th.lb.
Canada	564	1,327	-	-	-	-	-	-	-	-	534	-	30
U.S.A.	17,649	25,505	-	6,690	335	22	-	-	2,700	-	4,771	216	2,915
<u>Other Western Hemisphere</u>													
Brazil	5,578	8,188	-	-	5,051	-	-	-	-	-	-	527	-
Br. W. Indies, others	148	97	-	-	-	-	-	-	-	-	-	-	148
Cuba	2,802	4,537	-	-	2,370	-	-	-	-	-	-	-	432
Dom. Republic	269	184	-	-	-	-	-	-	-	-	-	-	269
Fr. Depend. N.A.	161	112	-	-	-	-	-	-	-	-	-	-	161
Jamaica	130	85	-	-	-	-	-	-	-	-	-	-	130
Mexico	443	681	-	-	289	-	-	-	-	-	-	154	-
Netherlands W. Indies	121	183	-	-	121	-	-	-	-	-	-	-	-
Peru	48	130	-	-	48	-	-	-	-	-	-	-	-
Trinidad & Tobago	330	373	-	-	218	-	-	-	-	-	-	-	112
Venezuela	626	1,180	-	-	626	-	-	-	-	-	-	-	-
<u>Europe</u>													
Austria	2,006	1,382	-	560	-	-	-	419	-	908	-	119	-
Belgium	6,471	4,612	803	-	-	95	-	736	-	4,083	249	167	338
Bulgaria	2,774	935	-	-	-	-	-	2,774	-	-	-	-	-
Czechoslovakia	20,606	7,734	-	1,076	-	-	6,932	9,839	-	221	-	2,538	-
Denmark	5,047	2,983	-	-	-	-	-	-	245	-	-	805	3,997
Finland	215	273	-	-	-	-	-	-	-	-	-	191	24
France	20,401	10,915	3,764	264	-	-	1,772	1,177	1,808	11,226	258	68	64
Germany East	39,808	10,699	287	650	-	-	27,599	10,176	-	1,096	-	-	-
Germany West	49,783	15,148	33	2,730	-	64	37,785	5,113	1,455	-	227	322	2,054
Greece	1,629	888	-	-	-	-	-	-	-	395	-	-	1,234
Ireland	126	176	-	-	-	-	-	-	-	-	126	-	-
Italy	6,998	9,972	758	582	359	2,085	-	-	-	-	-	430	2,784
Netherlands	10,433	7,202	91	181	-	143	1,746	639	-	7,158	73	215	187
Poland	5,031	1,472	-	-	-	-	-	5,031	-	-	-	-	-
Spain	3,049	4,252	-	-	2,952	-	-	-	-	-	-	97	-
Sweden	11,649	11,786	683	1,755	-	-	-	-	2,859	3,708	73	586	1,985
Switzerland	3,259	2,338	-	741	-	-	-	-	-	223	-	-	2,295
United Kingdom	52,643	38,346	7,672	1,659	-	81	10,564	2,357	-	23,512	3,283	134	3,381
U.S.S.R.	26,585	8,349	-	-	-	-	-	16,764	9,821	-	-	-	-
<u>Other Countries</u>													
Belgian Congo	231	232	-	-	24	106	-	-	-	-	-	-	101
Fr. Cameroons	1,003	1,952	-	-	-	1,003	-	-	-	-	-	-	-
Fr. Equat. Africa	22	19	-	-	-	-	-	-	-	-	22	-	-
Ghana	150	295	-	-	-	150	-	-	-	-	-	-	-
Hong Kong	97	73	-	-	-	-	-	-	-	-	-	97	-
Israel	35	213	-	-	-	-	-	-	-	-	-	35	-
Liberia	436	449	-	-	-	134	-	-	-	-	-	-	302
New Zealand	234	394	-	-	-	-	-	-	-	-	185	49	-
Nigeria	15,170	28,459	-	-	-	14,253	-	835	-	-	82	-	-
Portuguese E. Africa	339	561	-	-	339	-	-	-	-	-	-	-	-
Portuguese W. Africa	518	824	-	-	518	-	-	-	-	-	-	-	-
Turkey	53	52	-	-	-	-	-	-	-	-	-	53	-
Union S. Africa	728	1,372	-	-	-	-	-	-	-	-	728	-	-
Others	13,162	11,275	242	565	725	279	505	1,374	1,114	4,012	1,697	1,392	1,257
TOTAL Jan.-Mar./59	329,560	228,214	14,333	17,453	13,975	18,415	86,903	57,234	20,002	56,542	12,308	8,195	24,200
TOTAL Jan.-Mar./58	297,099	211,944	13,860	11,609	24,213	15,000	65,448	51,020	7,793	(1)	16,318	8,744	83,094

(1) Figure not available, included with "other products".



# Current Reading

"Fishway Capacity Experiment," by Carl H. Elling and Howard L. Raymond, (Special Scientific Report -- Fisheries No. 299, United States Fish and Wildlife Service, Washington 25, D.C.).

From May 22 to September 7, 1956, eight tests were made involving the passage of varying numbers of fish through an overfall-type fishway. The fishway, which was six feet wide, consisted of six pools (one foot rise between pools) each 16 feet long with an average depth of 6.3 feet. In the tests, from 70 to 2,886 fish entered the fishway during one-hour periods. The median passage time for fish to ascend the six-pool fishway ranged from 12 to 35 minutes. This report discusses the effect of pattern of flow and other criteria on fish passage.

"Fishery Statistics of the United States, 1957," by E.A. Power, (United States Fish and Wildlife Service, Statistical Digest No. 44. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. \$2.00).

The yield of the commercial fisheries of the United States and Alaska in 1957 amounted to approximately 4,778,458,000 pounds valued at \$351,116,000 to the fishermen. Compared with the record catch (5.3 billion pounds) taken in 1956, the 1957 catch was down 473 million pounds or nine per cent in volume and \$18 million or five per cent in value. The average price paid to the fishermen for fishery products in 1957 was 7.3 cents per pound -- about the same as in the previous year. A sharp decline in the landings of menhaden, salmon and tuna, and a falling off in the catches of anchovies, Atlantic ocean perch, haddock, Pacific sardines and shrimp accounted for the 1957 productivity of the commercial fisheries being less than in the previous two years. The only major items taken in greater volume in 1957 were crabs, sea herring, Pacific and jack mackerel, and otter-caught industrial fish.

This report includes data not only on the volume and value of the catch of fishery products, but employment in the fisheries, quantity of gear operated, number of fishing craft employed in the capture of fishery products, and information on the volume and value of manufactured fishery products and byproducts.

The per capita consumption of fish and shellfish in the United States amounted to 10.2 pounds (edible weight) during 1957 -- the same as in the previous year. Consumption of fresh and frozen fish and that of canned products registered slight

decreases in 1957. Principal items consumed were tuna, salmon, haddock, ocean perch, and shrimp.

It is estimated that the 1957 catch was marketed as follows: 1,446 million pounds (round weight) as fresh and frozen products; 1,117 million pounds for canning; 88 million pounds for cured products; and 2,127 million pounds for manufacture into byproducts and for use as bait. About 664 million pounds of waste from filleting, canning, and otherwise preparing fish for market were also used in the manufacture of byproducts.

Canned fishery products were packed by 337 firms in the United States, Alaska, Hawaii, Puerto Rico and American Samoa in 1957.

"Decline of the Yellowtail Flounder off New England," by William F. Royce, Raymond J. Bulter and Ernest D. Premetz, (Fishery Bulletin 146, U.S. Fish and Wildlife Service, Washington 35, D.C. \$0.55).

The catch of yellowtail flounder by New England fishermen rose from slightly less than 23 million pounds in 1938 to approximately 70 million pounds in 1942. This remarkable growth of the fishery was followed by an almost equally remarkable decline. In 1944, the annual catch had been reduced by more than half and the following nine years produced no sign of recovery. The decline and scarcity of the yellowtail caused great concern, not only because this species closely paralleled the winter flounder in its decrease in the early and middle 1930's, but also because the fishermen who depended on yellowtail fishing for their principal livelihood could expect to find no other abundant species of fish of similar value within the range of their small otter trawlers.

This pronounced reduction in the catch of a species of major importance to the New England fisheries was the impetus for a more concentrated study of the yellowtail. Tagging and other evidence indicated the existence of five stocks, the most important of which to United States fishermen occurred off southern New England. The decline in this stock was drastic, but the population did not exhibit the usual symptoms of heavy fishing -- a declining average size, an increasing proportion of young fish, or an increasing growth rate. Estimates of mortality and recruitment indicated that the fishery was drawing gradually on a reserve which for unknown reasons was not replenished by young. No clear evidence was found that greater production could have been achieved by protecting fish at any size, in any area, or at any time of year.



*G. R. Clark*  
Deputy Minister.

If undelivered return to:  
Department of Fisheries of Canada  
OTTAWA



Department of Fisheries' Chief,  
Home Economics Section.

*Margaret Myer says:*

**"TAKE MORE OF THAT FRESH-CAUGHT FLAVOUR HOME!"**

"Fresh-caught"...ah...that means delicious, mouth-watering flavour, good enough to share with the best of friends back home. That's why it's so important to preserve fish quality once you've landed your catch.

**THESE HANDY PRESERVATION TIPS  
GUARANTEE YOU FISH FIT FOR A KING:**

- Kill and clean your catch quickly. Wash it thoroughly in cold, clear, running water.
- For short trips home . . . wrap your fish in wet sacking, newspaper or grass and *keep cool*.
- For greater distances *use ice*.

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